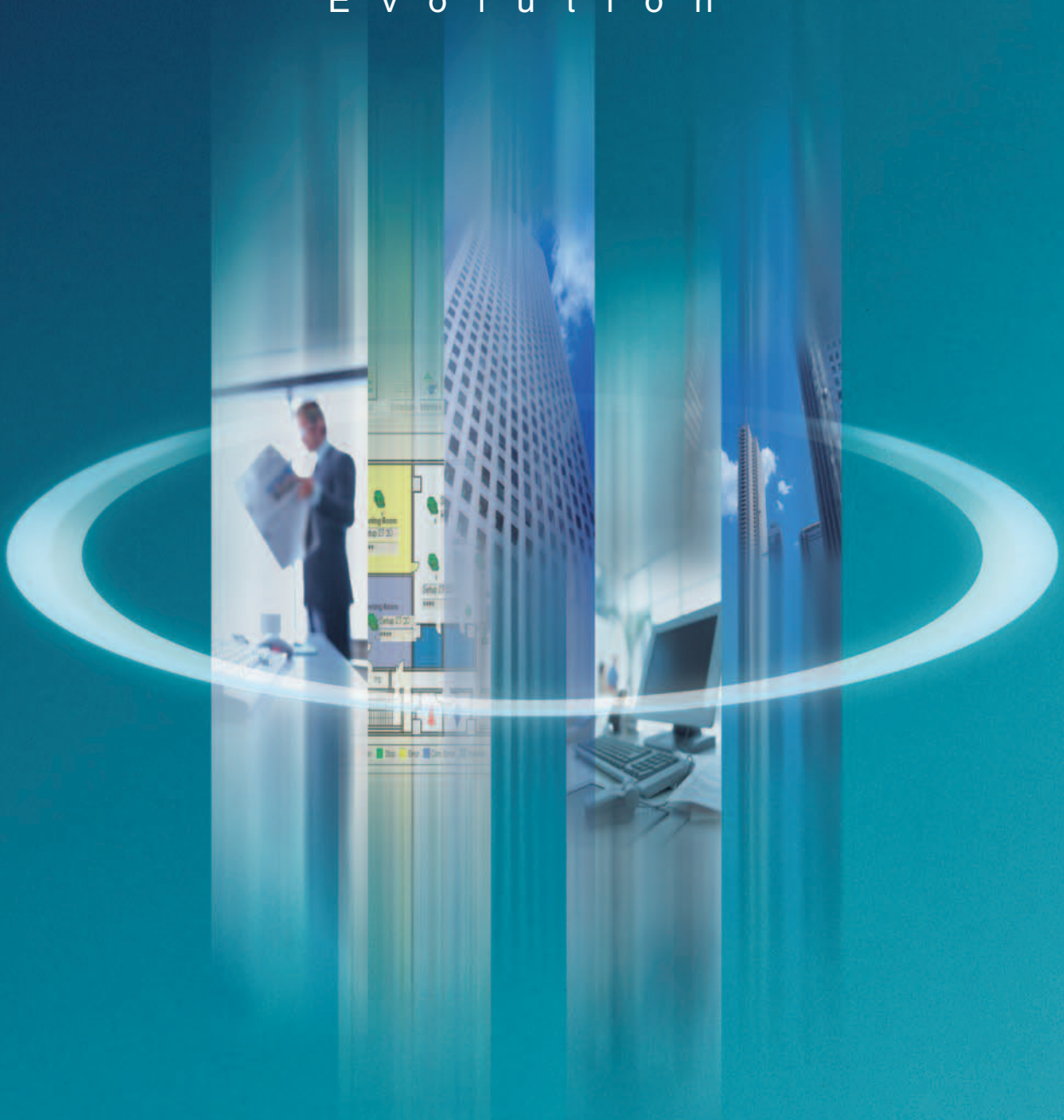
DAIKIN

ED 72 - 746

Intelligent Manager III

Even better control and efficiency.

Evolution



DAIKIN INDUSTRIES,LTD.

Part 1 Design Guide 1

1. intelligent Manager System Overview 2
   - 1.1 Features 2
2. Design of DIII Net 16
   - 2.1 Features of DIII Net 16
   - 2.2 DIII Net Design Standard 17
   - 2.3 DIII net Specifications of the Control Wiring 20
3. System Design of intelligent Manager 30
   - 3.1 System Configuration of intelligent Manager 30
   - 3.2 List of Required Devices for intelligent Manager System 30
   - 3.3 Creation of DIII Net Wiring Diagram 31
   - 3.4 Allocation of Centralized Address 32
   - 3.5 Points to Note for Design 33
   - 3.6 Use with Other Centralized Devices 34
4. PPD Design Guide 35
   - 4.1 System Architecture 35
   - 4.2 Design Precautions 36
   - 4.3 Connection other than VRV 39
   - 4.4 Conditions and Method to Exclude Calculation for Specified Indoor Unit 40
   - 4.5 Explanations of Power Proportional Distribution 41

     Appendix A. Devices which can be Connected to DIII net 47

     Appendix B. Malfunction Code List 85

Part 2 intelligent Manager III Engineering Manual 89

1. intelligent Manager New Installation Operation 90
   - 1.1 Workflow 90
   - 1.2 Operations at the Office 91
   - 1.3 Operations at the Site 125
2. intelligent Manager Upgrade Operation 148
   - 2.1 Upgrade of iPU Software 148
3. How to Use Engineering Tool 150
   - 3.1 Management Point Data Creation Tool 152
   - 3.2 PC Setup Tool 192
   - 3.3 iPU Setting Tool 197
   - 3.4 Backup/Restore Tool 201
   - 3.5 SE Function of Monitoring Board Software 215
   - 3.6 Simplified Database Maintenance Tool 239

     Appendix A. Management Point Engineering Item List 243

     Appendix B. Initial Data Tool CSV Format 245

     Appendix C. Initial Data Tool Check Item List 248

     Appendix D. iPU Data List 250

Part 3 Power Proportional Distribution (Commissioning Manual) 251

1. Configuring the Power Proportional Distribution 252
   - 1.1 Overview 252
   - 1.2 Setting up the iPU Connections 253
   - 1.3 Configuring the Distribution: 253
2. Notes 261

Part 4 ECO Option Commissioning Manual 263

1. Configuring the intelligent Manager System 264
   - 1.1 Configuring the PC Data 264
   - 1.2 Configuring Energy Saving 266
   - 1.3 Power Limit Control 267
   - 1.4 Eco Mode 267

Part 5 intelligent Manager Operation Manual 269

1. Before Use 270
   - 1.1 The features of intelligent Manager 270
   - 1.2 Important Notes 270
   - 1.3 Functional Outline of intelligent Manager 271
2. Basic Screen and Screen Directory 272
   - 2.1 Basic Screen Layout 272
   - 2.2 Screen Directory 273
3. Starting and Stopping Operation of intelligent Manager 275
   - 3.1 Starting Operation 275
   - 3.2 Stopping Operation (up to Power Supply OFF) 276
   - 3.3 Power Failure Management: Automatic Stop/Restart 276
   - 3.4 Emergency Stop Management: Fire State/Release 277
4. Logging in/Logging out 278
   - 4.1 Logging in 278
   - 4.2 Logging Out 278
5. Operation Details 279
   - 5.1 Management Groups 279
   - 5.2 Control Groups 294
   - 5.3 Visual Navigation 298
   - 5.4 Setting the Schedule 300
   - 5.5 Interlocking Function 312
   - 5.6 Data Management 322
   - 5.7 System options 338
   - 5.8 Moving between Screens 359
   - 5.9 Help 362
   - 5.10 Malfunction Display and History Management 363
   - 5.11 Energy saving Functions (Option) 366
   - 5.12 Web Functions (Option) 372
6. Database Maintenance 385
7. Troubleshooting 387

Part 6 Web Option Operation Manual 389

1. Safety Considerations 390
2. Before Starting 392
3. Web Interface of the Intelligent Manager 392
4. Overview 393
5. Basic Mode 397
6. Advanced Mode 412
7. About System Setup Menu 423
8. Schedule Menu Configuration 429
9. Menu Structure of Proportional Distribution Function 445
10. Before Contacting Us: Troubleshooting 451

Part 7 Troubleshooting 455

1. Troubleshooting by LEDs on intelligent Manager 456
   - 1.1 Diagnosis by CPU ALIVE LED,CPU ALRM (ALARM) LED 456
   - 1.2 Diagnosis by ETHER LINK LED,ETHER RCV LED 457
   - 1.3 Diagnosis by DIII-1-4 LED 458
   - 1.4 Diagnosis by RS232C-1 TxD,RxD LED 459
   - 1.5 Diagnosis by RS232C-2 TxD,RxD LED 460
2. Typical Troubles and Countermeasures 461

Part 1
Design Guide

1. intelligent Manager System Overview 2
   1.1 Features 2
2. Design of DIII Net 16
   2.1 Features of DIII Net 16
   2.2 DIII Net Design Standard 17
   2.3 DIII net Specifications of the Control Wiring 20
3. System Design of intelligent Manager 30
   3.1 System Configuration of intelligent Manager 30
   3.2 List of Required Devices for intelligent Manager System 30
   3.3 Creation of DIII Net Wiring Diagram 31
   3.4 Allocation of Centralized Address 32
   3.5 Points to Note for Design 33
   3.6 Use with Other Centralized Devices 34
4. PPD Design Guide 35
   4.1 System Architecture 35
   4.2 Design Precautions 36
   4.3 Connection other than VRV 39
   4.4 Conditions and Method to Exclude Calculation for Specified Indoor Unit 40
   4.5 Explanations of Power Proportional Distribution 41

Appendix A. Devices which can be Connected to DIII net 47
Appendix B. Malfunction Code List 85

1. intelligent Manager System Overview

1.1 Features



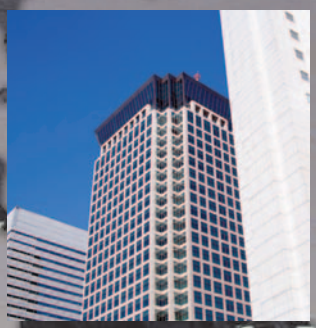
Contributing to efficient air conditioning control in facilities all over the world.



SCHOOL



SHOP



BUILDING GROUP

By combining optional functions,
we can build a control system that meets the customer's requirements.



Web Access Function

Permits control of a facility's system via a Web browser.

ECO Mode

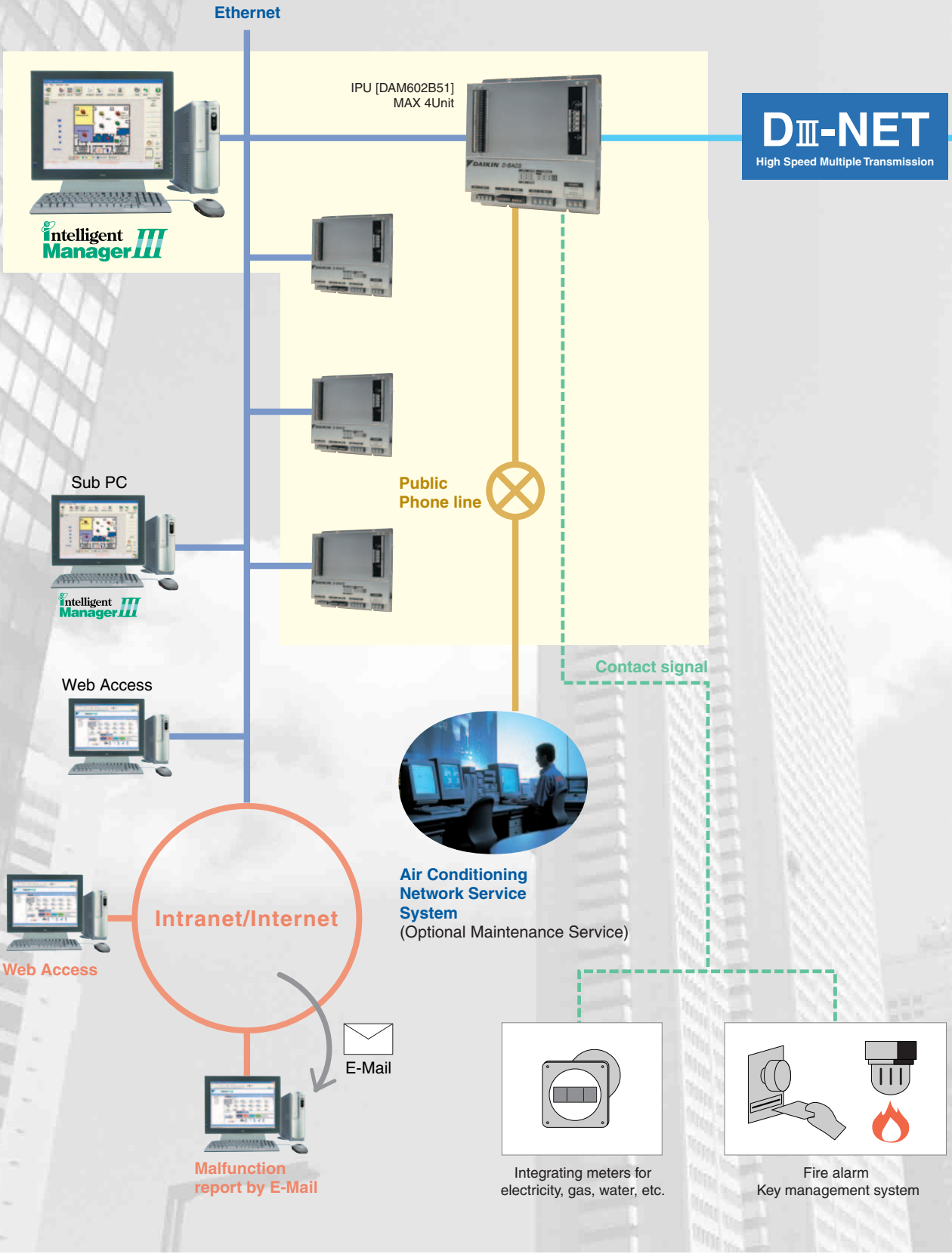
Maintains comfort while reducing power consumption of air conditioning systems.

PPD Function

Calculates the distribution of outdoor unit power consumption in response to indoor unit usage patterns.

İntelligent Manager Ⅲ System Overview

İntelligent Manager Ⅲ provides total management of a Daikin VRV system as well as equipment from other manufacturers, such as air conditioning, lighting, and water supply systems.





Main Features of intelligent Manager III

Simple Operation and Management P.06

A user-friendly interface allows even non-experts to perform building systems management easily.

Data Management P.07

Stores operation data on multiple systems and displays it in comprehensible graphical format for more effective management.

Total Building Management P.08-09

Possible to build a system to manage various types of building equipment.

Automated Operation Management P.10-11

Frees the operator from the troubles of daily operation management.

Web Access Function P.12

Allows easy management of systems in remote facilities via the Internet using a Web browser.

Open Network Support P.13

Support for large-scale buildings in conjunction with BMS.

Air Conditioning Network Service System P.13

Enhanced convenience through linkage to the Air Conditioning Network Service System

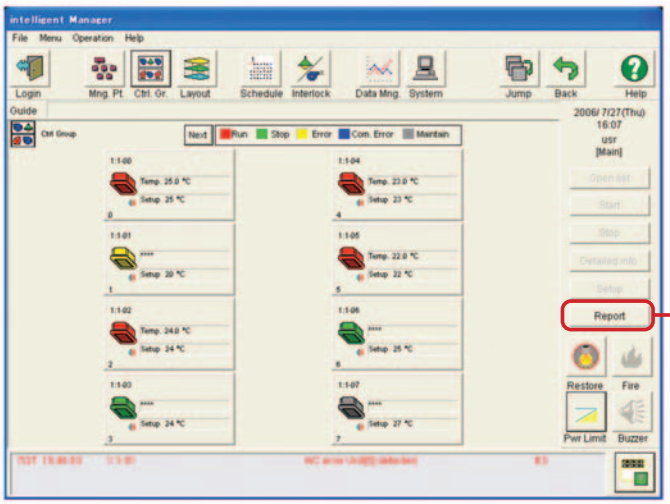
List of Monitoring and Operation Functions P.14

Specifications P.14

1.1.1 Simple Operation and Management

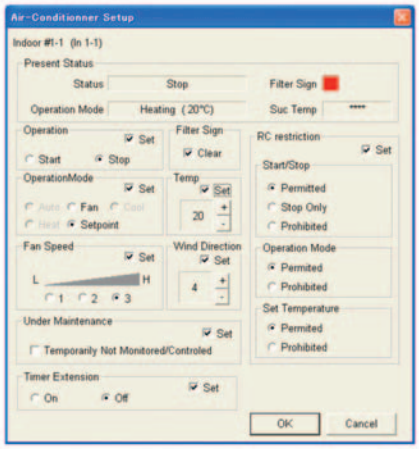
Even non-experts can monitor and operate building systems easily.

Multiple displays present a wealth of information in an easy-to-understand format.

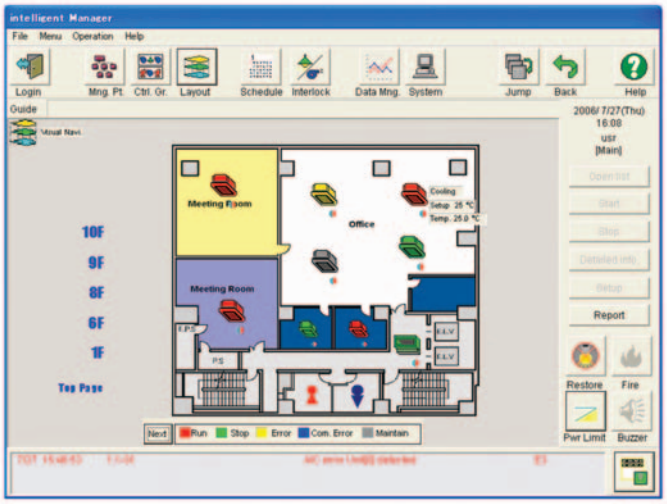


Individual detailed monitoring screen

The same detailed settings as the local remote control are available.



Setup screen



Floor layout screen

Main monitoring and operation menu

- On/Off status
- Operation mode
- Temperature setting
- Room temperature
- Malfunction
- Airflow volume
- Airflow direction
- Remote control operation restrictions

Icons and colours indicate operation status at a glance.



Note:
Colours shown can be changed.



Support for six languages

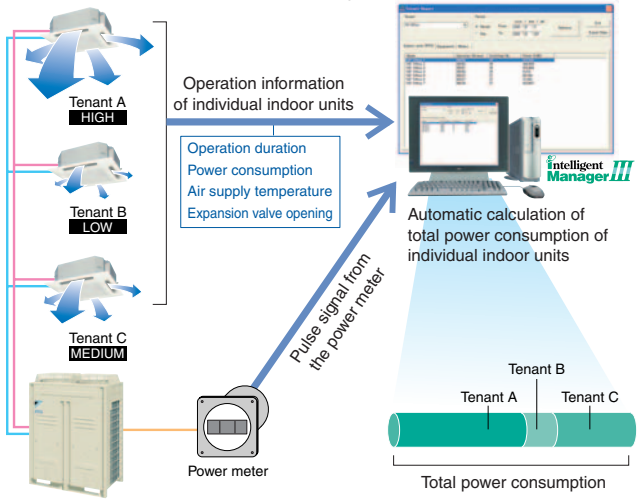


1.1.2 Data Management

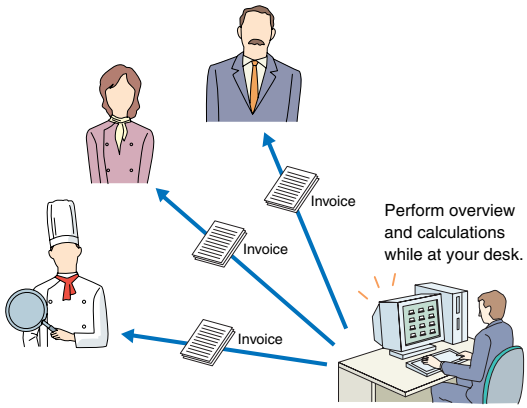
Stored data essential for improved system management is displayed in comprehensible graphical format.

PPD **Calculation of air conditioning costs and analysing usage trends(Option)**

Operation durations and the usage status of individual indoor units are monitored, allowing for highly precise automatic power distribution analysis.



Daikin's exclusive PPD system* keeps track of power distribution for each indoor unit or any specifically designated area. It performs air conditioning billing calculations quickly and automatically.



*This measurement method is exclusive to Daikin and has no legal basis.

Energy saving and maintenance management

Operation duration indication

Displays the operation time periods and cumulative operation duration for individual units. This information can be useful when determining maintenance timing, calculating the number of hours of operation, or drawing up maintenance schedules.

Meter checking function

Meter data on electricity, water, and gas usage for the entire facility can be managed centrally. This eliminates the need to check meters manually, and data can be checked in real time whenever necessary.

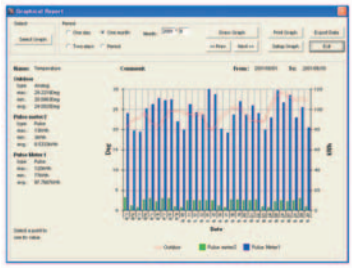
Operation history

The past operation status of individual units is displayed in chronological sequence. This basic data is useful for identifying the causes of malfunctions or analysing ways of reducing power consumption.

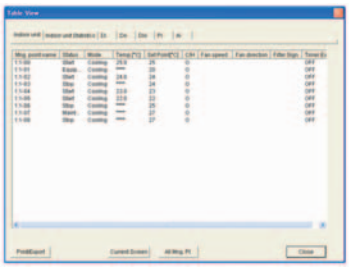
Malfunction history

This provides a record of basic data that is useful for maintenance management and planning. It can be used to check past malfunctions (details, time, etc.), to study countermeasures for the future.

Stored data is displayed in comprehensible graphical format.



Trend display: Allows tracking of transitions between time periods and analysis of trends.



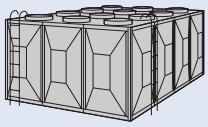
List display: Useful for comparisons between items or checking of detailed information.

1.1.3 Total Building Management

It is possible to build a system providing centralised control over many types of equipment, including a VRV system, and even to coordinate the operation of multiple utility systems.

Water tanks

The system can monitor the amount of water stored in the tanks via links with ball taps or water level sensors.



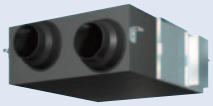
Central air conditioning system

With Daikin chilling units, the system can be connected directly without the need for interface units.



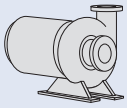
HRV

If the heat exchangers are equipped with Daikin's HRV function, the system can turn them on and off as well as changing the ventilation mode and airflow volume settings via a direct connection.



Pumps

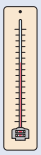
The system can turn water supply or transfer pumps on and off as well as monitor their operation status. It is also possible to interlock the operation of pumps and chilling units.



Sensors

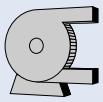
The system can collect data on temperature, humidity, CO_2 density, etc., from sensors.





Air supply and exhaust fans

The system can turn fans on and off as well as monitor their operation status.



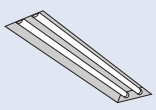
Fire alarms and security devices

The system can receive signals from fire alarms and security devices.



Lighting

The system can turn lighting on and off as well as monitor its operation status.

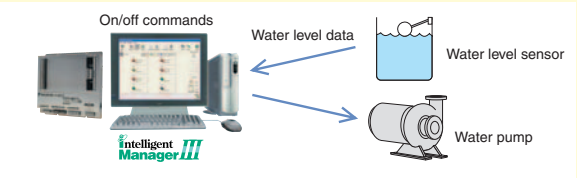


Examples of interlock control

Automated control

Interlock control of tanks and pumps

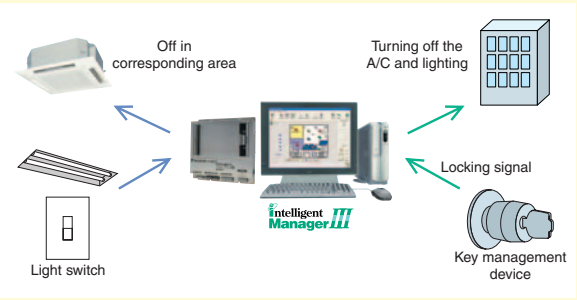
The system can turn pumps on and off based on the water storage volume, and thereby maintain a constant water level.



Turning off power when people forget

Interlock control of lighting or key management systems and air conditioning equipment

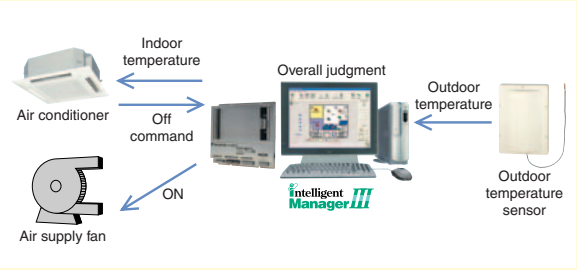
The system can monitor signals that turn off the lights or lock the key management system and shut down the air conditioning equipment in the corresponding area. This prevents wasted electricity if tenants accidentally leave the air conditioning on when they leave.



Processing of analogue data

Interlock control of outdoor temperature sensors and air conditioning and ventilation equipment

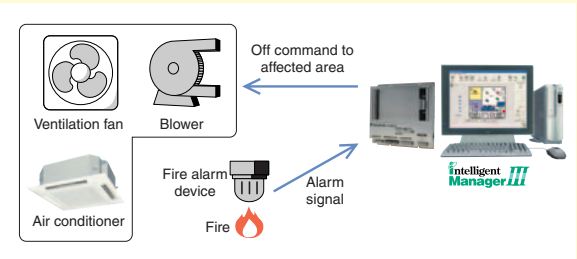
If the data from the sensors indicate the temperature is lower outside than inside, the system can automatically shut down the air conditioner and switch on the air intake fans to save electricity.



Processing of alarm signals

Interlock control of fire alarms and air conditioning or ventilation equipment

If a fire alarm signal is received, the system can automatically shut down the air conditioning or ventilation equipment in the affected area.



Adaptors to extend the equipment management capabilities of İntelligent Manager Ⅲ.

Di unit (DEC101A51)

This dedicated monitoring adaptor keeps track of the operation status and malfunctions of connected equipment.



Dio unit (DEC102A51)

In addition to the monitoring functions of the Di unit, this adaptor adds on/off and other operation capabilities.



DⅢ-Ai unit (DAM101A51)

This temperature sensor unit measures the outdoor temperature.



1.1.4 Automated Operation Management

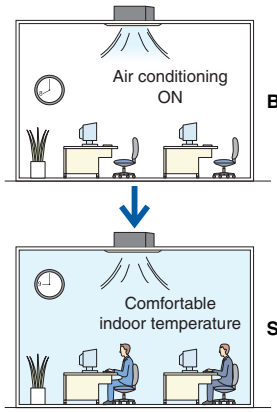
Automated control functions free the operator from the details of daily operation management.

Schedule

- **Daily operation start/stop time settings**
- **Holiday settings**
- **Automatic switching to heating (fan) mode**
- **Automatic switching of temperature settings**

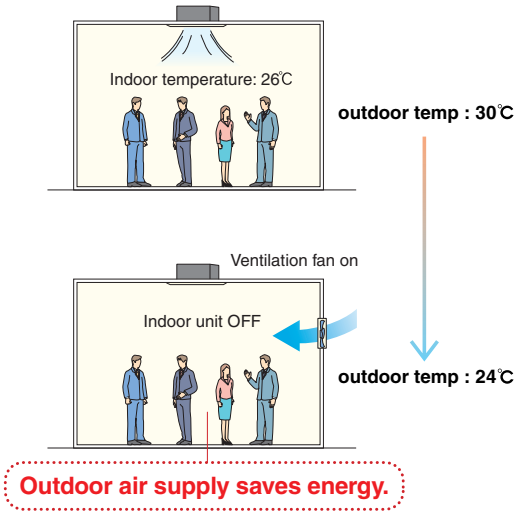
(e.g.)Pre-cooling and pre-heating control ensures comfortable temperature at the start of the day.

This function switches the air conditioning system on beforehand so that the temperature is just right when users arrive.



Analogue interlock

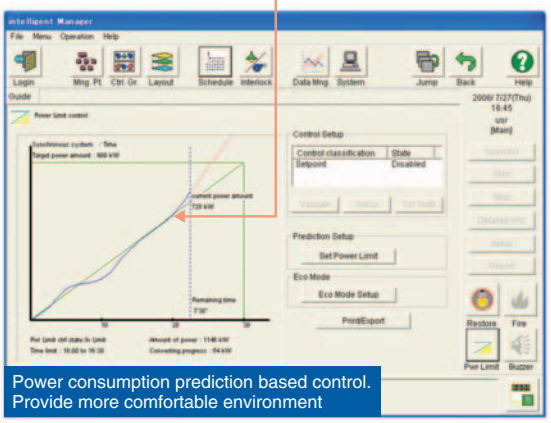
During cooling operation, this function shuts down the air conditioning equipment and brings in cool air from outside when the system determines that the outdoor temperature is lower than the temperature setting. Using outside air for cooling reduces energy consumption.



Power limit control (option)

This function estimates the power consumption and operates at the maximum level within a limited range if the set point is likely to be exceeded. This reduces power consumption while maintaining comfort as far as possible.

- **Flexible group configuration**
- **Set Point**
- **Real time control**
- **30 minutes prediction time**

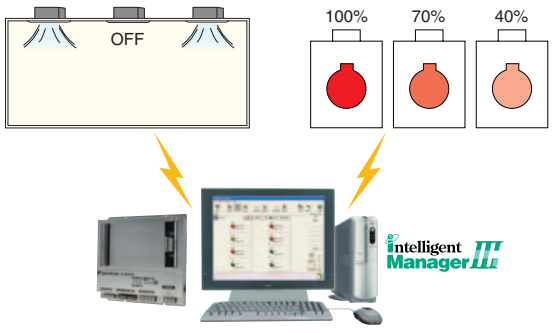


Eco mode (option)

Reduces power consumption by 10 to 40%, while maintaining room comfort.

Based on a predetermined schedule, the İntelligent Manager Ⅲ executes capacity control and intermittent operation of A/Cs so as not to increase the discomfort index.

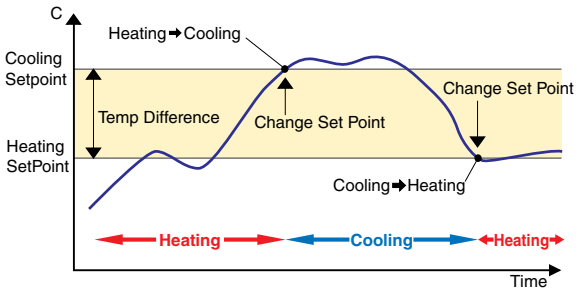
- **Alternative stop control of indoor A/C units**
- **Outdoor unit capacity control (only for VRV)**



Automatic change over

The intelligent Manager Ⅲ measures room temperature and can automatically change over between cooling and heating modes. This provides comfort by enabling selection of the appropriate mode and takes the human factor out of changeovers.

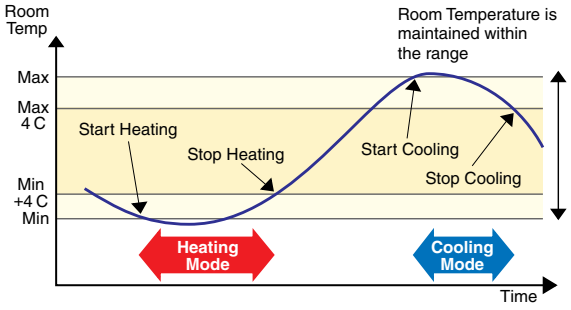
•Flexible group configuration
•3 selection methods



Temperature limit

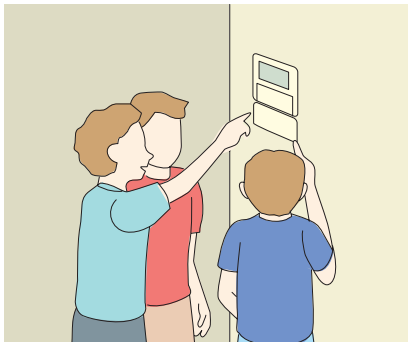
intelligent Manager Ⅲ allows users to put limitations on the maximum and minimum temperatures and ensures an appropriate room temperature via automatic control. Furthermore eliminates any unnecessary and excessive operation that may result in overcooling or overheating.

•Flexible group configuration



Remote controller restriction

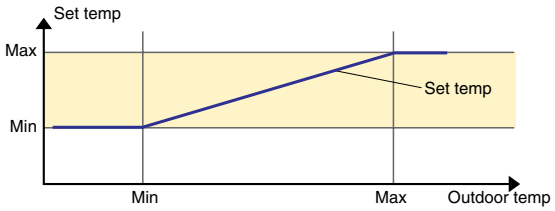
Remote control operation can be disabled for specific air conditioner units. This can prevent trouble arising from pranks or setting errors in locations such as school classrooms or entrance lobbies and other public areas.

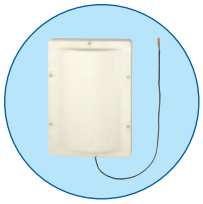


Sliding temperature

intelligent Manager Ⅲ can monitor the outdoor temperature and automatically adjust room temperature to minimize drastic temperature differences with the outdoors.
Along with energy efficiency, intelligent Manager Ⅲ also can eliminate any uncomfortable cold shock around building entrances and the like.

•Flexible group configuration





Note: Optional Dⅲ-Ai unit required
DAM101A51

1.1.5 Web Access Function (Option)

Allows easy management of systems in remote facilities via LAN using a Web browser.

1 Centralised management of multiple buildings in remote locations

intelligent Manager Ⅲ systems installed at multiple locations can be accessed using a personal computer. This makes it a simple matter to manage multiple facilities from a remote location.

2 No need for on-site technical staff

The combination of the automated operation functions of İntelligent Manager Ⅲ systems installed at multiple locations and the ability to monitor these facilities remotely over LAN using a personal computer means that it is not necessary to station technical staff on-site at each facility.

3 Operate the system from a personal computer just as you would with a remote control

The air conditioner units connected to each İntelligent Manager Ⅲ system can be operated from a personal computer with a Web browser installed. This eliminates the need to install additional remote control devices, which take up space and can be troublesome when moving to a new location.

4 E-mail alert of malfunctions

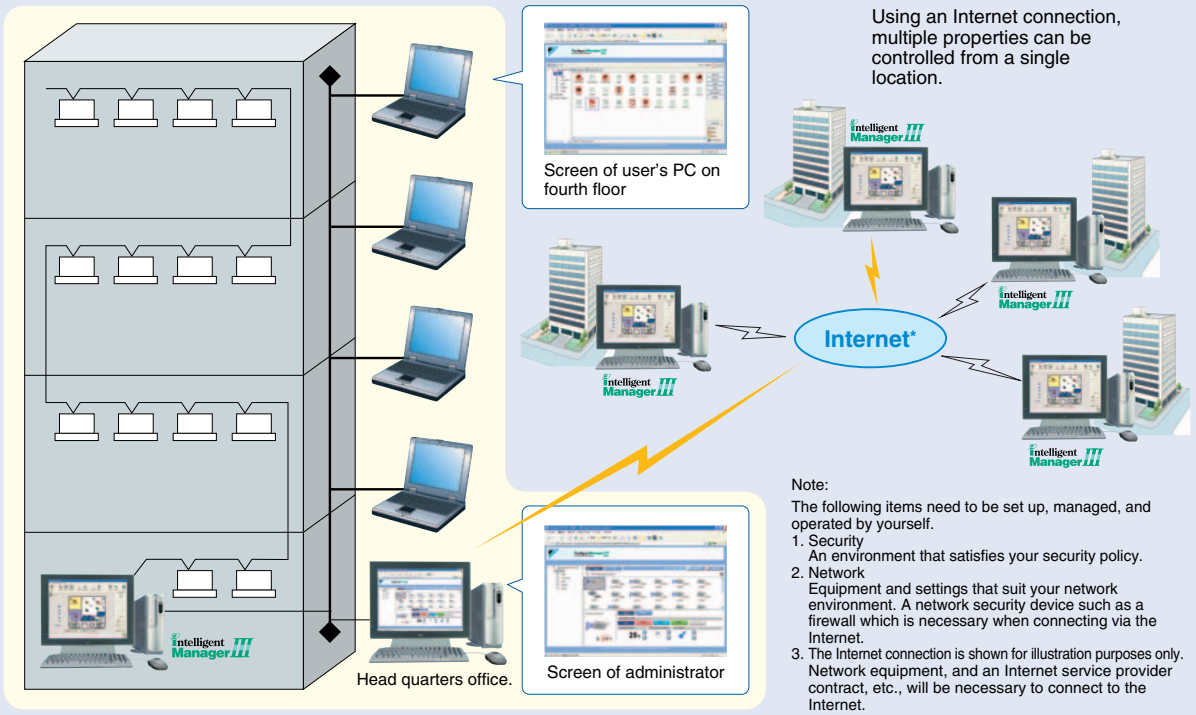
Alert and details of malfunctions are sent to a specified e-mail address.This allows for a quick response when a problem occurs without the need for technical staff to be in front of the computer at all times.

5 Centralised power management for multiple facilities

PPD data from İntelligent Manager Ⅲ systems installed at remote locations can also be accessed via LAN. Managing air conditioning control costs and energy conservation are simplified because it is not necessary to visit multiple facilities.

Ability to Control Air Conditioning Systems in Multiple Buildings from a Central Headquarters

Remote Monitoring of Multiple Properties

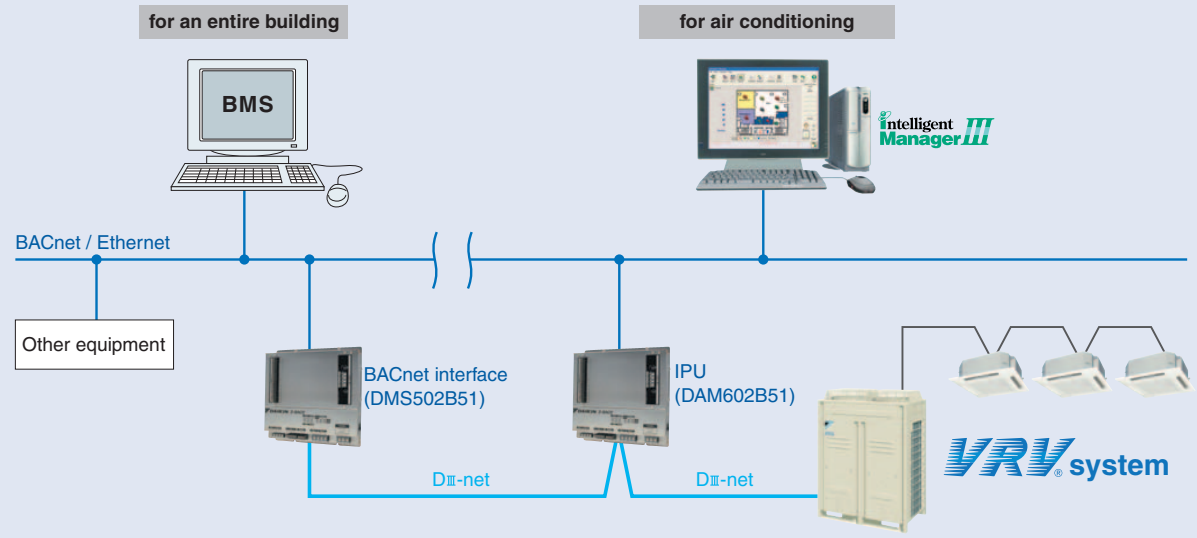


1.1.6 Open Network Support

Support for large-scale buildings in conjunction with BMS.

Air conditioning control management can be performed from either BMS or İntelligent Manager Ⅲ.

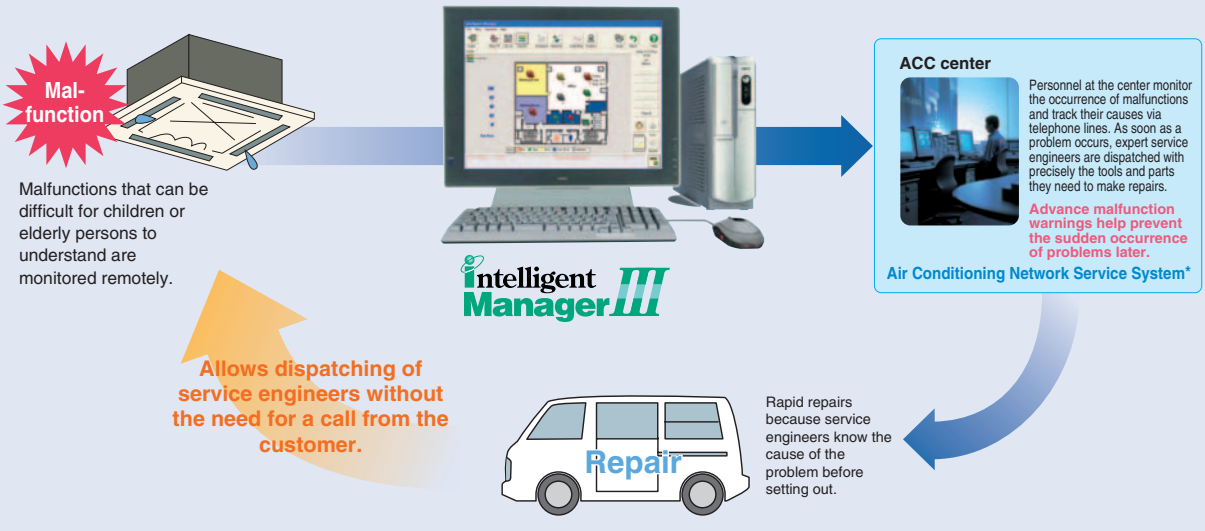
System overview



1.1.7 Air Conditioning Network Service System

Enhanced convenience through linkage to the Air Conditioning Network Service System

Can be linked to the 24-hour Air Conditioning Network Service System.



* There are restrictions in applicable areas and release times, therefore please consult us separately for details.

1.1.8 Specification

■ **İntelligent Manager Ⅲ List of Monitoring and Operation Functions**

Monitoring functions			Air conditioning status monitoring, building equipment status monitoring, cumulative value monitoring, analogue upper and lower limit monitoring, malfunction history display
Screen indications			Icon display, icon customisation, icon colour switching, layout diagram display, screen reservation, support for 6 languages
Operation functions	Individual operation		Control of max. 1,024 units
			Enable/disable lower-rank control units
	Control group (zone)		Control of max. 1,024 units divided into max. 200 groups (max. 1,024 units per group)
		Action	Simultaneous start/stop, sequential start/stop
	Management group		Guarantee of max. 10 hierarchies (guarantee of max. 1,024 units per group-internal management point), guarantee of max. 10,000 points that are the total of management groups and management points
Control	Schedule	Number of program	200
		Weekly schedule	Monday to Sunday, cyclic
		Execution schedule	7 days, beginning with current day
		Yearly calendar	13 months
		Base calendar	Yes
		Setting pattern	Weekly: 7, special days: 2
		Actions per day	20
		Actions	Start/stop, operation mode, temperature setting, ventilation volume, ventilation mode, timer extension, R/C restriction
	Interlock	Number of program	200, inputs max 128 program
		Input targets	Start/stop, malfunction, analogue comparison
		Output actions	Start/stop, operation mode, temperature setting, ventilation volume, ventilation mode, timer extension, R/C restriction
	Emergencies		Emergency stop control (fire, etc.), shutdown backup power control
	Change Over	Number of group	512 (groups per control unit), max. 128 units per group
		Temperature setting differential	1 to 7 C
	Temp. Limit	Setting values	Upper limit: 32 to 50 C, lower limit: 2 to 16 C
	Energy saving		Temperature setting limitation, power limit control (option), Eco mode (option)
	Other control functions		Heating Mode Optimization
Measurement	Measurement		Operation duration, operation start/stop count
	Power Propotional distribution (PPD)		Available as an option
	Data management		Simple tenant management, graphical display
Remote monitoring			Support for Air Conditioning Network Service System
System	User management	Number of User	255
		Access	Password (15 characters) management, capability of editing authorisations, license management
	Network		IP address setting
	History		500,000
	PC		Max. 1 master PC and 1 sub PC
	User-defined applications		Applications specified by the user can be started from the monitoring panel.
Web support (option)			Remote monitoring via the Web, individual air conditioning unit operation via the Web, e-mail alert or notification

■ İntelligent Manager Ⅲ Series and its Components

Products name *1	IM-128	IM-256	IM-512	IM-768	IM-1024
Max number indoor units	128	256	512	768	1024
Max number outdoor units	20	40	80	120	160
PC,UPS,etc.	Local Procurement				
Hardware model name	DAM602B52	DAM602B51x1	DAM602B51x2	DAM602B51x3	DAM602B51x4

*1 Products name is recognized as an order number.

■ İntelligent Manager Ⅲ Optional functions

Power Proportional Distribution	DAM002A51
ECO	DAM003A51
Web access	DAM004A51

*1 kWh meters to be locally supplied.With the PPD system, data is transferred from the indoor units and compared with reference data on the standard power consumption of air conditioning equipment under normal conditions. The results are used to estimate the power consumption of each indoor unit. Note, however, that this measurement method is exclusive to Daikin and has no legal basis.

*2 The following items need to be set up, managed, and operated by yourself. ①.Security:An environment that satisfies your security policy. ②.Network:Equipment andsettings that suit your network environment. A network security device such as a firewall which is necessary when connecting via the Internet. ③.The Internet connection is shown for illustration purposes only.Network equipment, and an Internet service provider contract, etc., will be necessary to connect to the Internet.

*3 To use optional functions with intelligent Manager, one option license must be purchased for each intelligent Manager system.

■ Specification

Item		Requirement Specification
iPU İntelligent Processing Unit DAM602B51 DAM602B52	Backup for power failure	Data are filed into nonvolatile memory
	Dİİ Port	2(DAM602B52) / 4(DAM602B51)
	Di/Pi Port	20
	Do Port	2
	RS232C Port	2 (PC, modem)
	PCMCIA slot	1 (Memory card)
	Power supply	AC100~240V±10%,50/60Hz,Max 20W
	Ambient temperature	-10~+50˚C
	Ambient humidity	0~98%(condensation is not acceptable)
	Dimension,mass	260(W)x281(H)x58.5(D)mm,4kg

Item		Requirement Specification
PC	Performance	CPU:PentiumⅢ 800MHz,Memory:256MB,HDD:4G
	Network	100Base/T Ethernet
	Operation	Keyboard/Mouse,Sound and Speaker
	Software	Windows XP(Professional SP2 or later) Windows 2000(Professional SP4 or later)
CRT	SVGA	800x600,1024x768,1280x1024
Printer		A4 Page Printer
Network Equipment		Multi Port HUB(4 or more parts)
UPS e.g. APC SU700, 1000 series	Capacity	200~250 W/20min
	Voltage	As required
	Control signals	Power failure signal (from UPS) UPS shut down signal (to UPS)
	Relay I/0 module	AP9610
WHM (kWh meter)	Pulse transmitter	•1 pulse to 1kW or 10kW pulse width must be within 40-400m/sec. •Output relay must be mercury or electronic type only. •No voltage output.

■ İntelligent Manager Ⅲ Optional adapters

Item		**Di unit** (DEC101A51)	**Dio unit** (DEC102A51)	**Dİİ-Ai unit** (DAM101A51)
Input		8pairs based on a pair of On/Off input and abnormality input	4pairs based on a pair of On/Off input and abnormality input	1external temperature sensor (mesurement of O/D temp : -10℃ to +50℃) and 1 multi-purpose sensor
Output		——	In case of normally output, 4 units are controllable. In case of instaneous output, 2 units are controllable.	——
Installation method		indoor unstallation		Outdoors, water proof case adapted.
Operating Condition	surrounding temperature	-10℃ to +40℃		-15℃ to +50℃
	humidity	10 to 85%		
Power supply		AC200V-240V,50/60Hz		
Rated power consumption		15W		
Applied standard		Safety standard : IEC730,EMC standard : CISPR22-A(EMI),CISPR(EMS)		
Mass(Weight)		2.5kg		1.5kg
Dimension		198(H) 335(W) 70(D)mm		211(H) 357(W) 75(D)mm

2. Design of DIII Net

2.1 Features of DIII Net

What is DIII Net?

DIII net is a proprietary high-speed communication method developed by Daikin, with which huge amount of information can be transmit at high speed and various facilities of a building, such as air conditioners, can be freely connected via networks in accordance with the usage, scale, and conditions.

- Various types of air conditioners installed in a whole building are integrated, and detailed monitoring and control are provided.
- The non-polar 2-wire system reduces the number of required cables inside a building. It also reduces mis-connection, facilitating the connection operation.
- Post-installation can be done easily. Wiring up to 2km in total extension is available.
- Various control devices can be freely connected, and hierarchical risk diversification system can be established as well.
- Comprehensive management of our total heat exchangers and heat source devices is also available.

Devices which can be connected to DIII Net

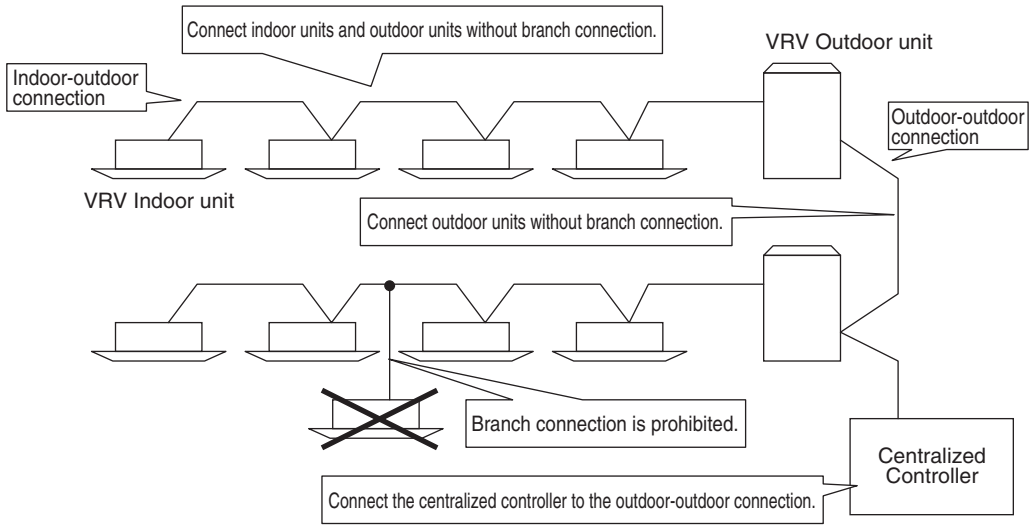
Purpose	Model No.	Description
Air conditioner	VRV	VRV after K type can be directly connected.
	Air cooling chiller	Air cooling chiller of 40HP or more can be directly connected. The one with a high outside air specification is excluded.
	Water cooling chiller	ZUW can be connected if the adapter PC board is installed.
Air conditioner connector	DTA102A52	Adapter to connect SkyAir
	DTA107A55	Adapter to connect PA
	DTA109A51	DIII-NET extension adapter
	KRP928B2S	Adapter to connect RA
Equipment connector	DTA103A51	State monitoring and operation of equipment provided by other companies Input/output are available at one point.
	DEC101A51	State monitoring of equipment provided by other companies Input/output are available at up to 8 points.
	DEC102A52	State monitoring and operation of equipment provided by other companies Input/output are available at up to 4 points.
Temperature measurement	DAM101A51	Unit for temperature measurement 0-5V general sensor input can be used.
Controlling device	DAM602B51, 52	Monitoring control unit of iPU and intelligent Manager
	DCS601C51	intelligent touch Controller
	DCS601A52	DIII-NET Plus Adapter, DIII port extension adapter for iTC
	DMS502B51	BACnet Gateway
	DMS504B51	LON Gateway
	DCS302C51	Centralized Remote Controller
	DCS301B51	Unified ON/OFF Controller
	DST301B51	Schedule Timer

2.2 DIII Net Design Standard

■ **Connection method**

- Connect VRV indoor units and outdoor units without branch connection. (indoor-outdoor connection)
- Connect VRV outdoor units without branch connection. (outdoor-outdoor connection)
- Connect the centralized controller to the outdoor-outdoor connection.

[Example]

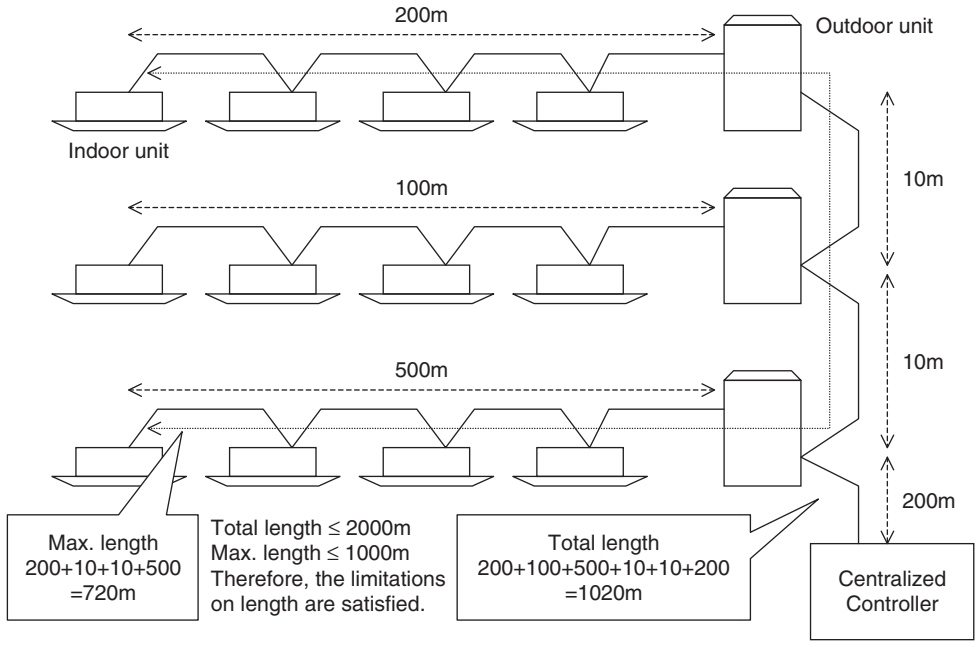


■ Wiring length

- Total length must be 2000m or less.
- Max. length must be 1000m or less.

Note: Be sure to check the total length and maximum length upon design.
If the limitations are exceeded, you need to divide the system or install a DIII net extension adapter (DTA109A51).

[Example]



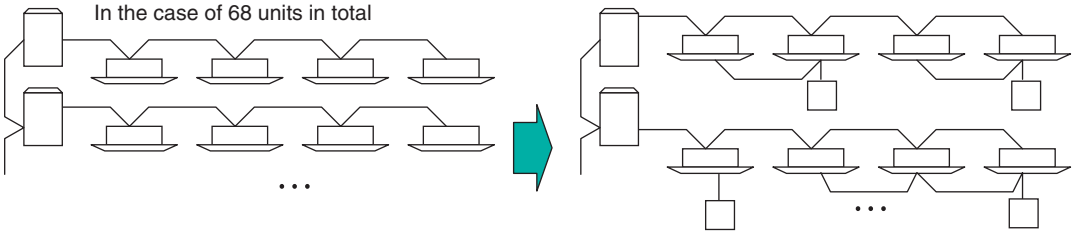
■ Number of Units to be Connected

- Up to 10 VRV outdoor units can be connected to DIII net.
  - An indoor unit which consists of multiple modules, such as 54HP, is counted as one unit.

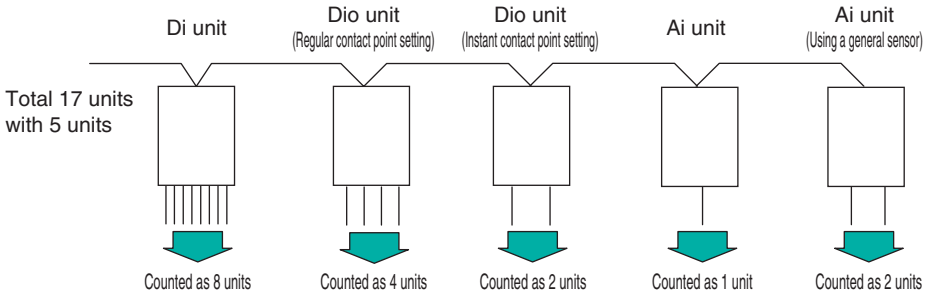


- Up to 64 VRV indoor units can be connected to DIII net.
  - If you create remote control groups of indoor units, up to 128 units can be connected. (Max. number of groups is 64.)
  - When you use proportional power, the number of indoor units that can be connected is 64 units at the maximum even if you create remote control groups.

[Example]



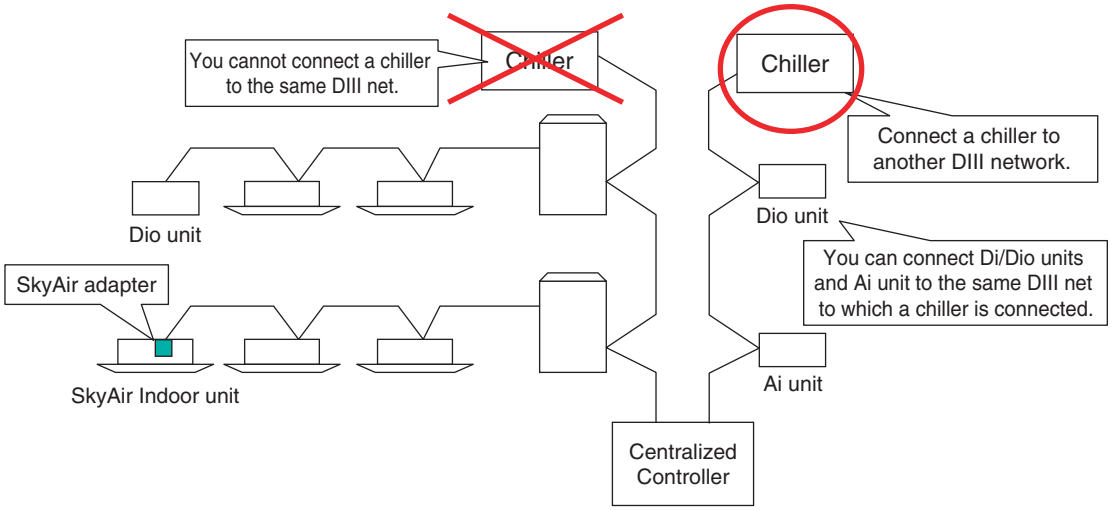
- The maximum number of adapters, except VRV indoor units, to be connected is 64 units including VRV indoor untis.
  - One air conditioner connecting adapter (SkyAir adapter, etc.) is counted as one unit.
  - One Di unit is counted as 8 units.
  - One Dio unit is counted as 4 untis.
    - When the output of a Dio unit is set to an instant contact point, one unit is counted as 2 units.
    - * Regarding Di/Dio units, if you specify the number of units to be connected to each unit, you can reduce the number of units connected to one unit.
  - One Ai unit is counted as one unit.
    - When you use a general sensor, one unit is counted as 2 units.



■ **Connection of devices other than VRV**

- You can connect adapters and other devices (SkyAir adapter, RA adapter, Di/Dio units, etc.), which are not VRV, to either indoor-outdoor connection or outdoor-outdoor connection.
- You cannot connect a chiller (which accommodates DIII net) to the same DIII net to which VRV, SkyAir, and RA are connected.
  - If you connect a chiller which accommodates DIII net to a centralized controller, divide the DIII net for VRV use and for the chiller.

[Example]

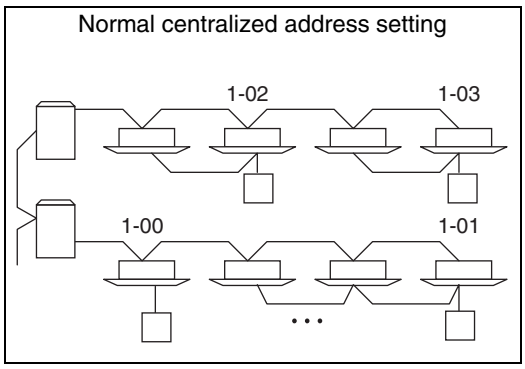


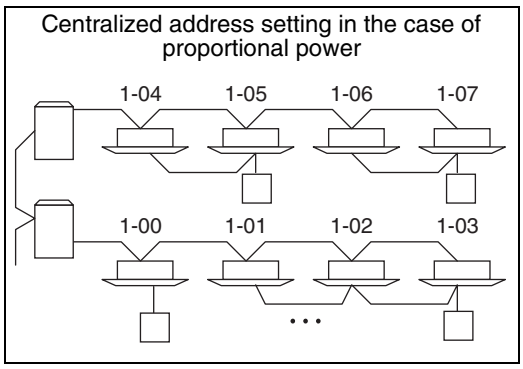
■ Address Setting

- Set a centralized address to a device to be connected to DIII net.
- The range of addresses to be set is 64 types as shown below.

1-00~1-15
2-00~2-15
3-00~3-15
4-00~4-15

- You cannot set a same address on a same DIII net.
- You do not need to set a centralized address to a child unit in a remote control group.
  - In the case of proportional power, you need to set a centralized address to a child unit in a remote control group as well.

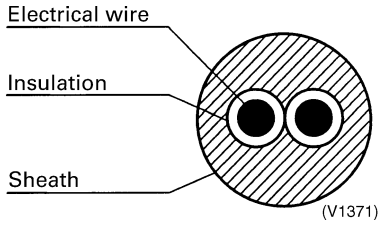




2.3 DIII net Specifications of the Control Wiring

Be sure to use either 2-core sheathed vinyl cord or cable as mentioned below.

■ Vinyl cab tire round cord	VCTF	JISC3306	<Example>Section of cord
■ Vinyl insulated, vinyl sheathed cable for control	CVV	JISC3401	
■ Round vinyl sheathed cable for control	CVS	JISC3401	
■ Round vinyl insulated, vinyl sheathed cable	VVR	JISC3342	
■ 600V vinyl cab tire cable	VCT	JISC3312	
■ Polyethylene insulated vinyl sheathed cable	CPEV(★)		
■ Mesh insulated cable	MVVS(★)		



★ When the shield wire is used, be sure to ground the one side of the shield wire.
★ Do not use the shield wire with other type of wire in the same system.

Cautions:

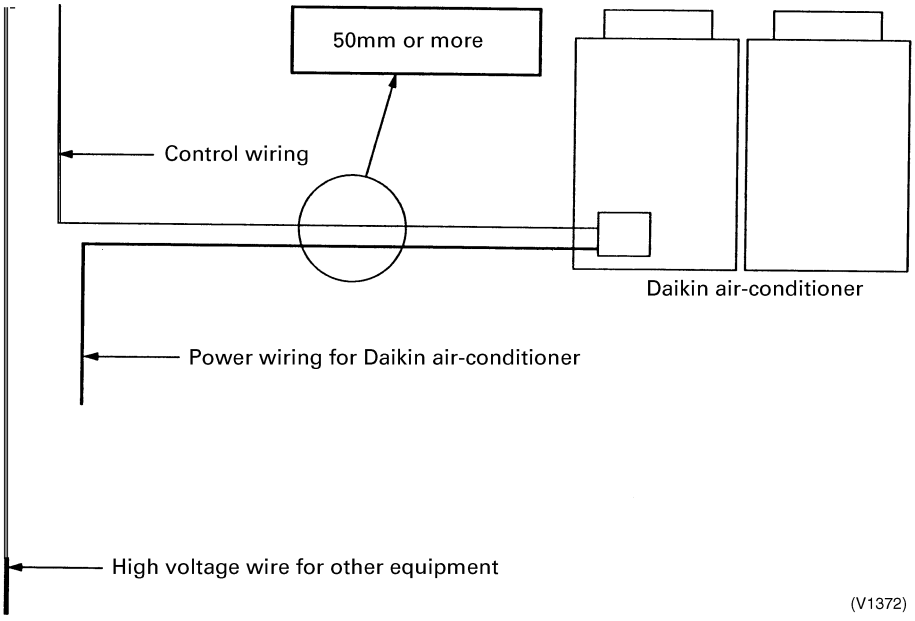
1. **Never use a 3 or more core of cord or cable.**
2. **The size of wire should be 0.75~1.25mm².**
3. **Never bundle the cable or cord of transmission line.**
4. **Be sure to keep the transmission wiring distant from power wiring as shown below to prevent electrical noise.**

Capacity of power wiring		Distance between Power wiring and control wiring	
		Daikin air-conditioner (★1)	Other air-conditioners
220V or less	10A or less	50mm or more (★2)	300mm or more
	50A or less		500mm or more
	100A or less		1000mm or more
	100A or more		1500mm or more

Note:

1. ★1 .....VRV system, SkyAir series and other air-conditioner.
2. ★2 .....VRV system or other Daikin air-conditioner produces less electrical noise, so that the distance of 50mm or more is sufficient.
3. For control wiring, never use the shield wire together with other sheathed vinyl cord in the same system, which may cause the malfunction in transmission.

[Example]



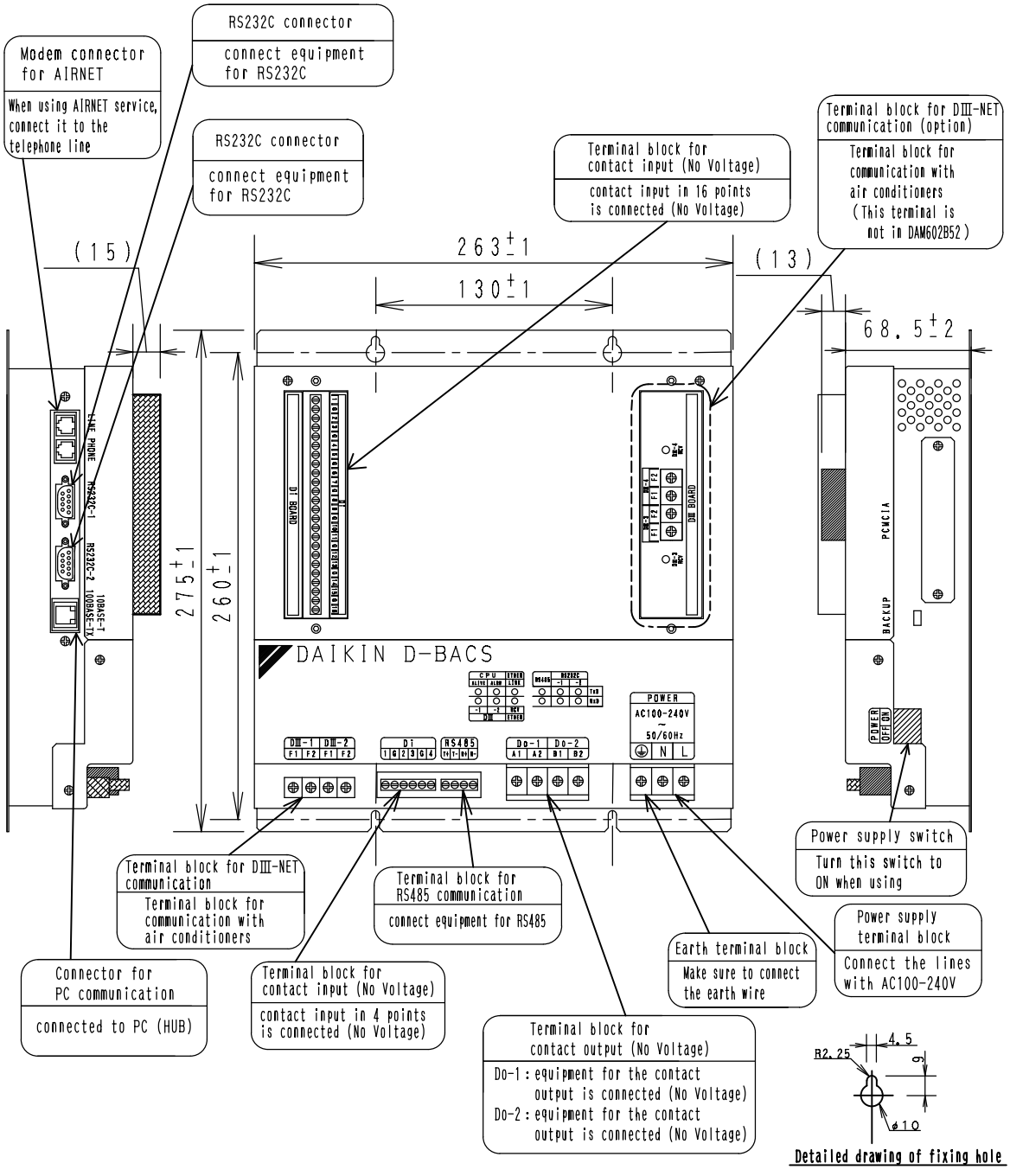
2.3.1 <DAM602B51 • 52> Installation Manual

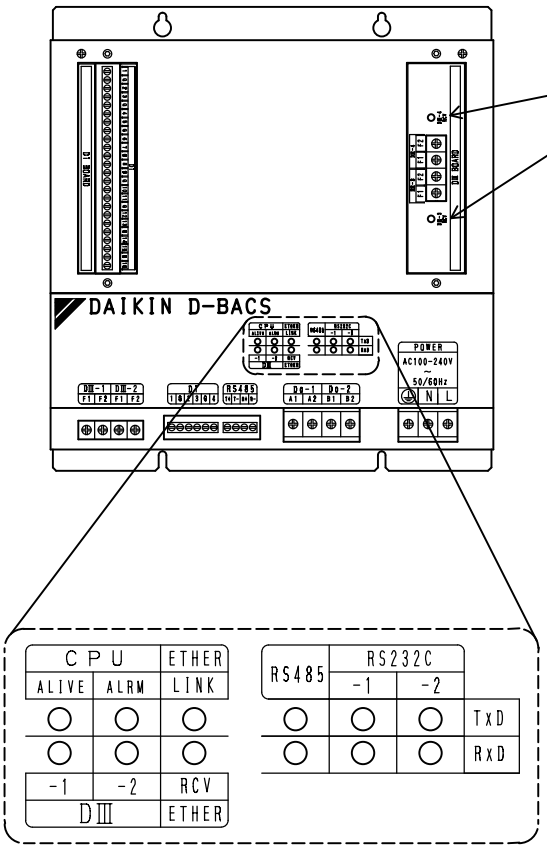
❶ Components

The following parts are attached to this unit.
Make sure to check them before installation.

intelligent Processing Unit	1 set
INSTALLATION MANUAL	1 copy

❷ Names and functions of each part





LED display

DIII－4 RCV	It flashes when it receives/transmits data from/to the equipment connected with DIII-4 such as air conditioners
DIII－3 RCV	It flashes when it receives/transmits data from/to the equipment connected with DIII-3 such as air conditioners

≪CAUTION≫
There are neither DIII-NET3, 4 in DAM602B52

LED display

CPU ALIVE	It flashes when the unit is normal operation.
CPU ALRM	It flashes when the unit is abnormal operation.
DIII－1	It flashes when it receives/transmits data from/to the equipment connected with DIII-1 such as air conditioners
DIII－2	It flashes when it receives/transmits data from/to the equipment connected with DIII-2 such as air conditioners
Ether RCV	It flashes when it receives data to PC
Ether Link	It lights when the 10BASE-T cable or 100BASE-TX cable is connected
RS485(TxD)	It flashes when it transmits data to Corresponding equipment
RS485(RxD)	It flashes when it receives data to Corresponding equipment
RS232C-1(TxD)	It flashes when it transmits data to Corresponding equipment
RS232C-1(RxD)	It flashes when it receives data to Corresponding equipment
RS232C-2(TxD)	It flashes when it transmits data to Corresponding equipment
RS232C-2(RxD)	It flashes when it receives data to Corresponding equipment

❸ Installation

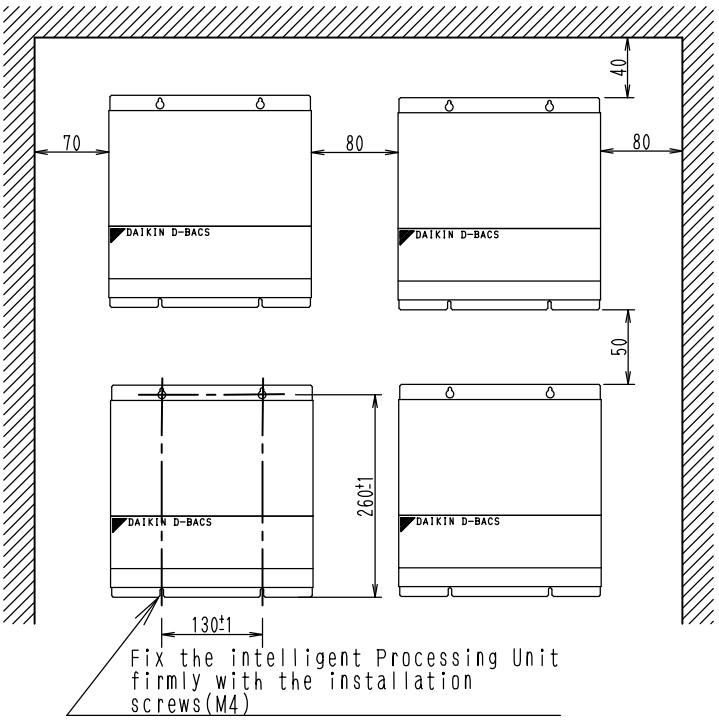
Don't fail to turn OFF the indoor unit power switch before installing intelligent Processing Unit.
Failure to observe this instruction could result in electric shock.

●Location

Make sure to install the unit on the inside of the inaccessible and lockable (or needed to use exclusive tools to open) electrical component box installed indoors where the effect of electromagnetic wave or dust can be avoided.
The minimum depth required for installation is 100mm

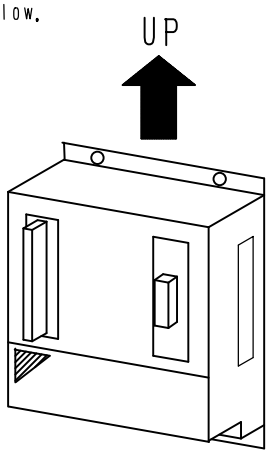
●Required installation space

Keep the minimum amount of space indicated in the below drawing from walls, and between units when installed in series.



● How to install

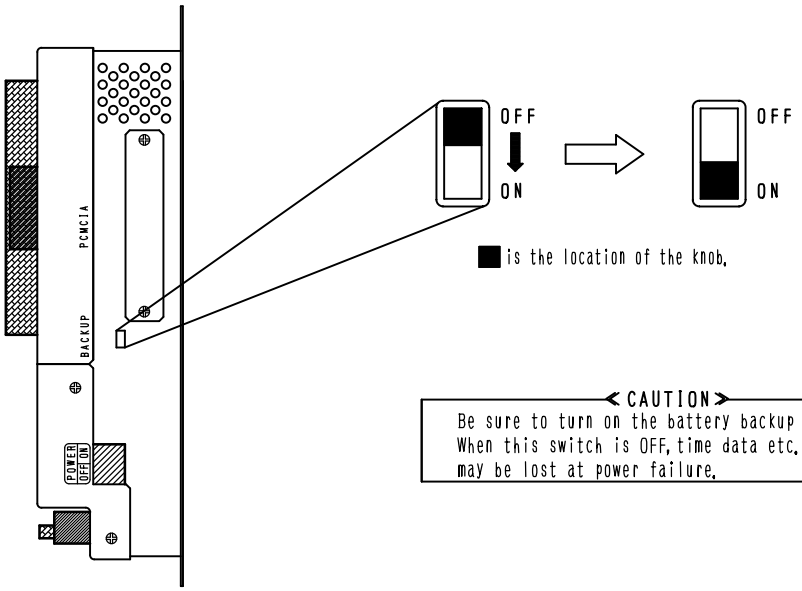
For installation direction follow the drawing shown below.



< CAUTION >

Make sure to install the unit vertically. Do not install the unit horizontally, because it may cause malfunction.

Setting "BACK-UP BATTERY VALIDATE" switch
(shifted to OFF when being shipped from the shop. -- Back-up battery set to INVALIDATE)
For the switch to back up the clock, etc. in case of any power failure, actuate it from OFF side (knob is located above) to ON side (knob is located below) as shown in the sketch below.



< CAUTION >

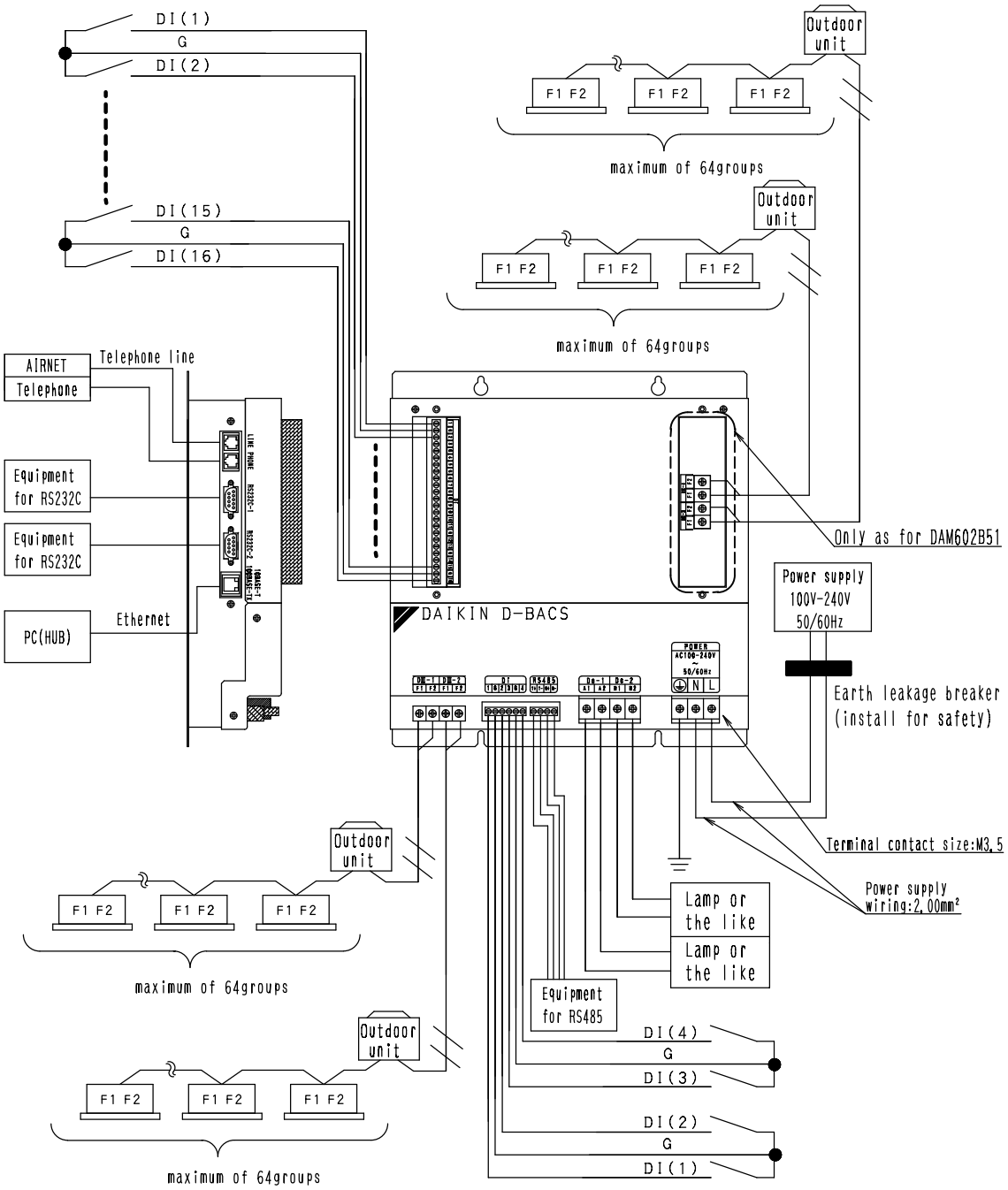
Be sure to turn on the battery backup switch. When this switch is OFF, time data etc. may be lost at power failure.

1P177851A

④「DⅢ-NET master」setting

Make sure to connect the unit with 「DⅢ-NET master」
Remove the master central setting connectors of the
intelligent Touch Controller or centralized management controller or ON/OFF controller
When using together with other centralized controllers such as
intelligent Touch Controller or centralized management controller or ON/OFF controller.

⑤Malfunction of unit

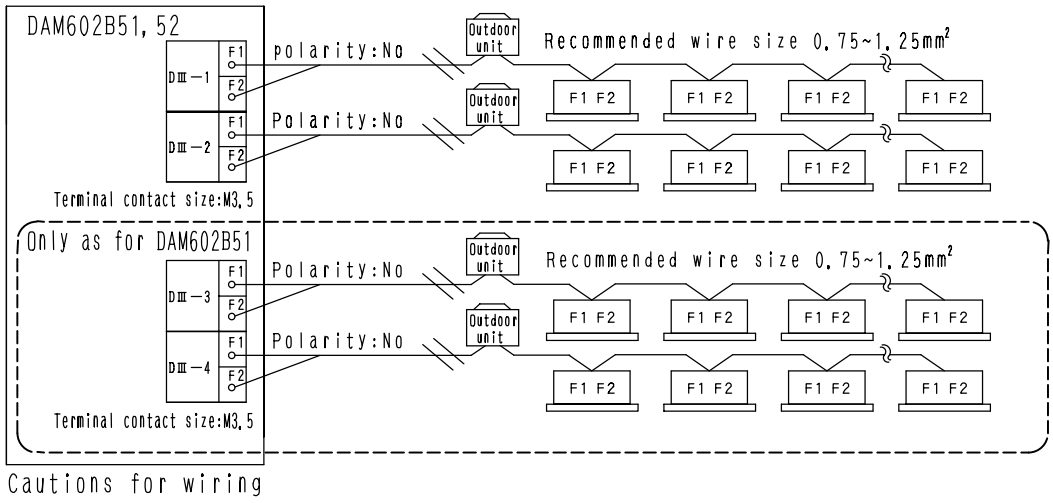


⑥ Electric Wiring Connection

Don't fail to turn OFF the indoor unit power switch before installing intelligent Processing Unit.
Failure to observe this instruction could result in electric shock.

■ Everything relating with field wiring must be supplied in the field.

● DⅢ-NET wiring

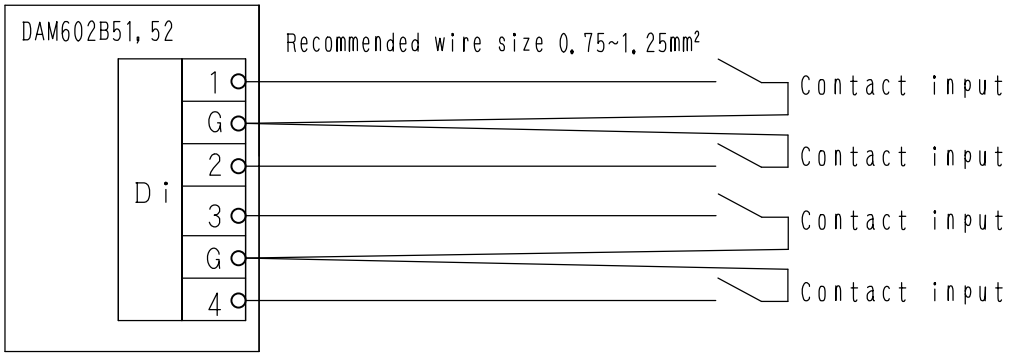


Cautions for wiring

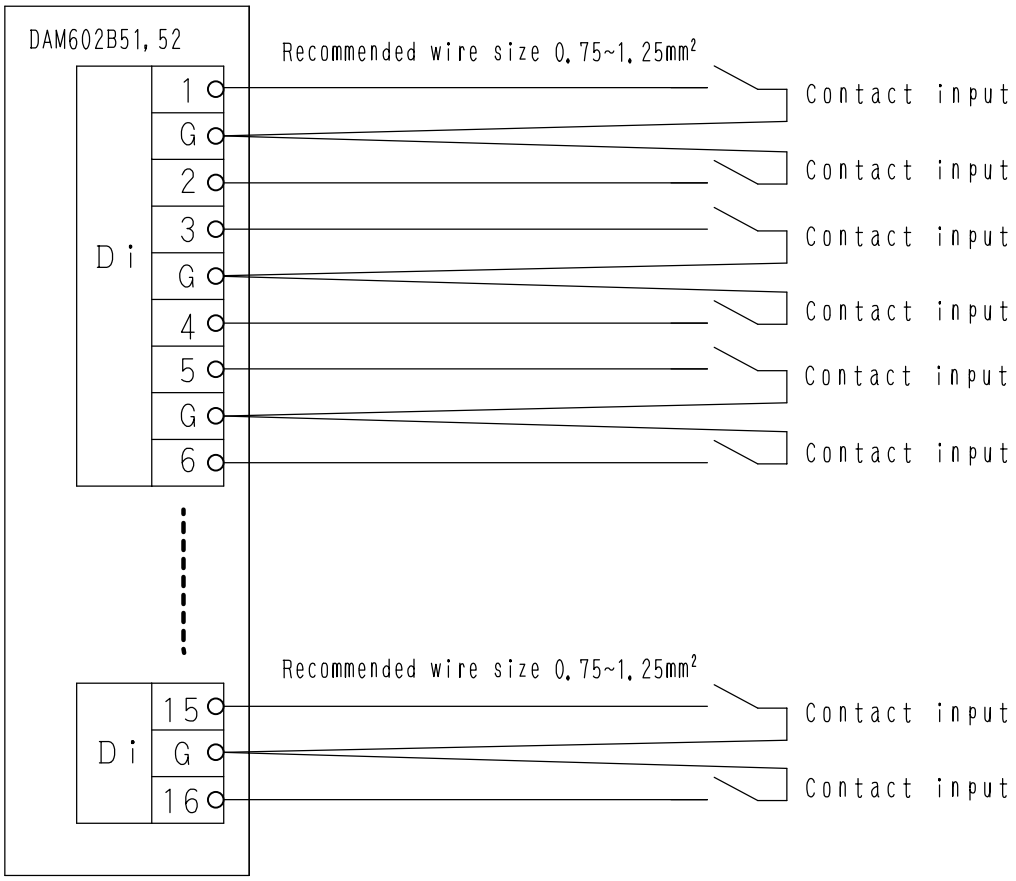
1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 1.25mm²
3. Do not bind the wire for DⅢ-NET
4. Wirings for DⅢ-NET must be isolated from the power lines
5. Wire length:Max 1000m

● No voltage contact input wiring

● Di wiring



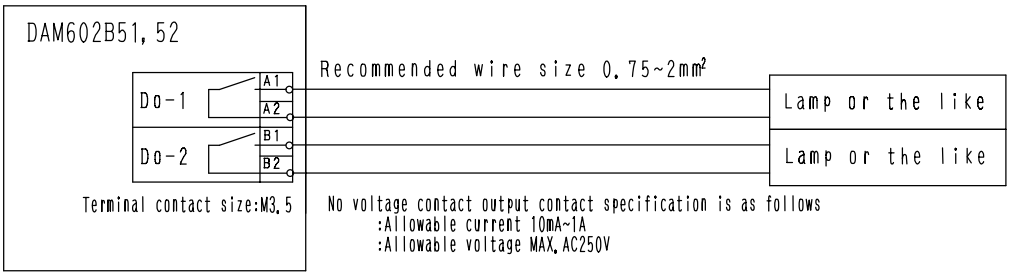
● Di BOARD wiring



Cautions for wiring

1. The input are all the no voltage contact
2. Use a contact which can guarantee minimum application load DC16V and 10mA
3. Do not use multicore cables with three or more cores
4. Use wires of sizes between 0.75mm² and 1.25mm²
5. Do not bind the wire for control
6. Wirings for control must be isolated from the power lines
7. Terminals G are inter-connected. Connecting to either one is allowed, but the number of cables connectable to one terminal is limited to 2 pieces
8. Wire length:Max 150m
9. Terminal Screw : Flat-blade screw (Do not use Phillips screwdriver)
   Acceptable recommendation tool : Flat-blade screwdriver
   (width : 3mm
   thickness : 0.5mm)

● No voltage contact output wiring

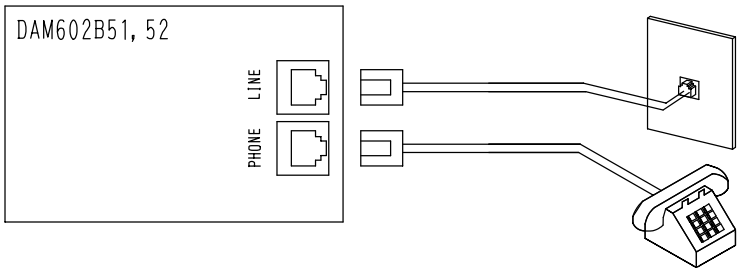


Cautions for wiring

1. Do not use multicore cables with three or more cores
2. Use wires of sizes between 0.75mm² and 2mm²
3. Do not bind the wire for control
4. Wirings for control must be isolated from the power lines
5. Wire length:Max 150m

● Connection to public telephone line

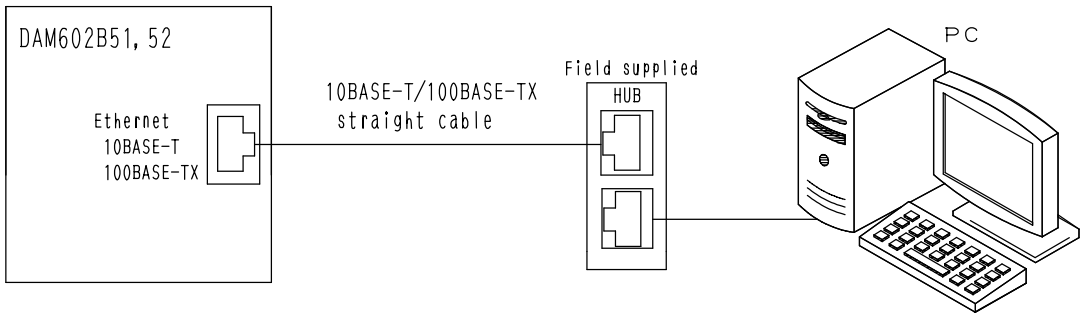
Connect to the telephone line in order to monitor
the air-conditioner via AIRNET service.
Connect to modular cable from the public telephone line to the upper connector
with a stamping of LINE, and connect the modular cable of the telephone
to the lower connector with a stamping of PHONE, as shown in the sketch below.



Cautions for wiring

1. Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.
2. When using AIRNET service, it is necessary to use a separate modem specified by us and enter into Maintenance Agreement with charge.

● Ethernet communication wiring

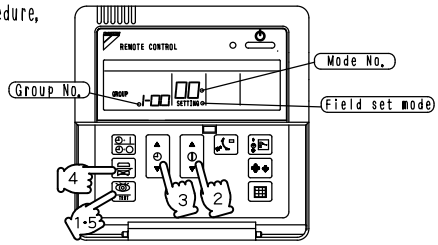


Cautions for wiring

Don't clamp these cables together with high voltage cables. Failure to observe this instruction would cause control error.

7 Setting group No. for centralized control

Turn ON the power to the intelligent Processing Unit Following the below procedure, set the group numbers for the indoor units connected to the DIII-NET.
This group number is set for each indoor unit system.
(When not using the remote controller, the remote controller is to be connected just for making settings but must be disconnected when finished.)



Pre-paration	● Check no troubles exist with installation and wiring before turning ON the power. ● Turn ON the power to the indoor unit and intelligent Processing Unit Setting is not possible with the power OFF.

● Nothing is wrong with the equipment if "88" is displayed when power is turned ON. This may happen and the unit may not respond to operation, but the situation should last only a moment.

1	Hold down TEST for 4 seconds or more to enter the field set mode.
2	Press ↕ and set the mode NO. to "00"
3	Press ↕ and set the group No. Group No. increases in the order of 1-00, 1-01 ... 1-15, 2-00,... 4-15 Set the group No. when "GROUP" on the liquid crystal display is flashing. Press the ▭ button to initiate flashing of "GROUP" on the liquid crystal display.
4	Press ▭ to set the group No.
5	Press TEST . This will return the system to the normal mode.

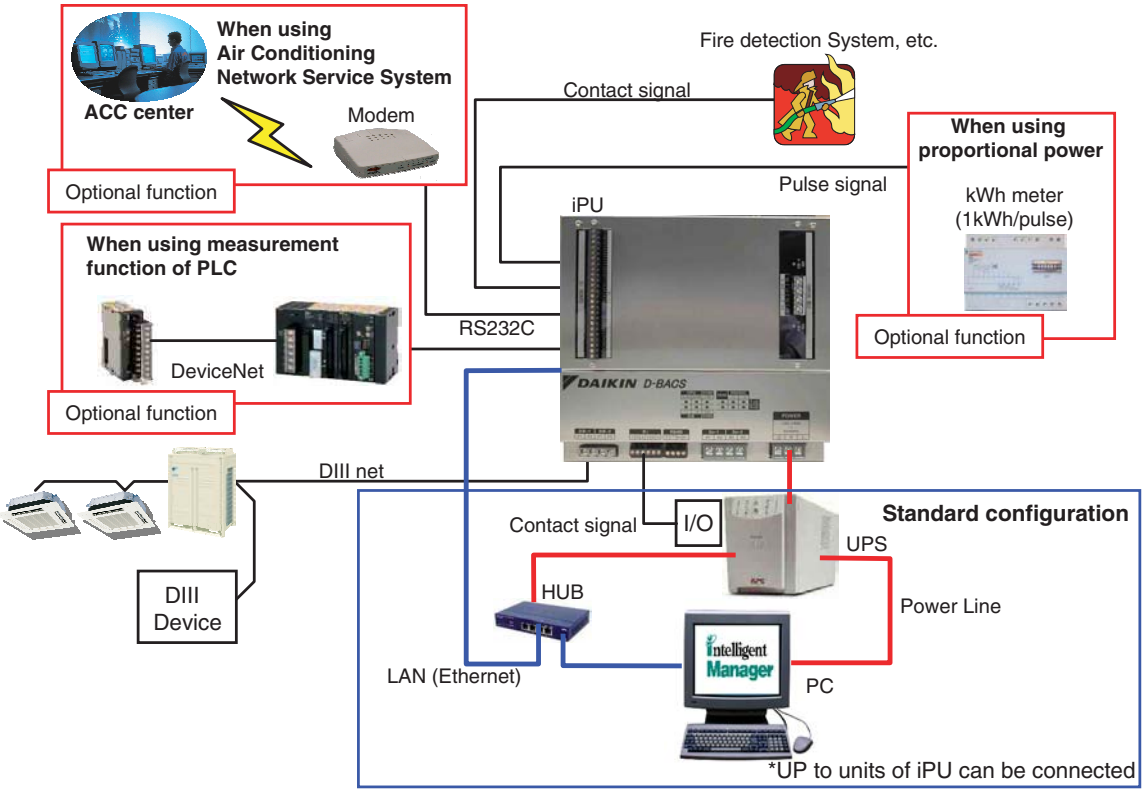
- For details on making settings from the simplified remote controller, refer to the instruction manual of the unit.
- For details on making settings of the group No. of the Ventiaire or adapters (wiring adapter for other air conditioners, etc.), refer to the instruction manual of the said unit.

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3. System Design of intelligent Manager

3.1 System Configuration of intelligent Manager

System Configuration Diagram

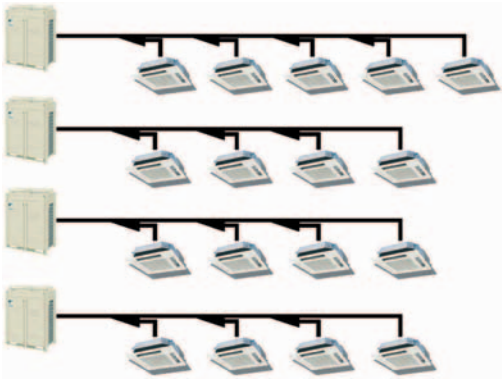


3.2 List of Required Devices for intelligent Manager System

Device	Classification	Prepared by	Model / Spec.	Remarks
iPU	Essential	Daikin	DAM602B51	Model with a 4-port D3 port
			DAM602B52	Model with a 2-port D3 port
PC	Essential	Customer	Pentium III 800MHz or faster Memory 256MB or more HD 4GB or more	PC for intelligent Manager Windows XP Professional SP2 or later Windows 2000 Professional SP4 or later Up to 2 units can be installed on LAN.
Monitor	Essential	Customer	Resolution of 800 x 600 or higher	800×600 or 1,024×768 or 1,280×1,024
HUB	Essential	Customer	100 Base/T	Used to connect iPU and PC.
UPS	Essential	Customer	APC SU700 or SU1000 series	Supplies power to iPU, PC and HUB.
	Essential	Customer	APC AP9610	Required to transmit a power failure signal of UPS to iPU.
Di/Dio	Op	Daikin	DEC101A51 (Di) DEC102A51 (Dio)	Used to connect devices of other companies.
Ai	Op	Daikin	DAM101A51	Used to measure outside air temperature.
Modem	Op	Customer	Specified by service division	Required for Airnet connection. One unit is required for each intelligent Manager system.
kWh meter	Op	Customer	Pulse output: 1kWh/pulse Pulse width: 40 - 400 msec	Required when PPD is used. The number of units will be determined in accordance with the design.
PLC	Op	Customer	OMRON SYSMAC CJ1	Used to measure analog values such as temperature, humidity, and pressure.
	Op	Customer	CJ1W-PTS	Temperature measurement terminal
	Op	Customer	CJ1W-AD etc. ...	Analog value measurement terminal

3.3 Creation of DIII Net Wiring Diagram

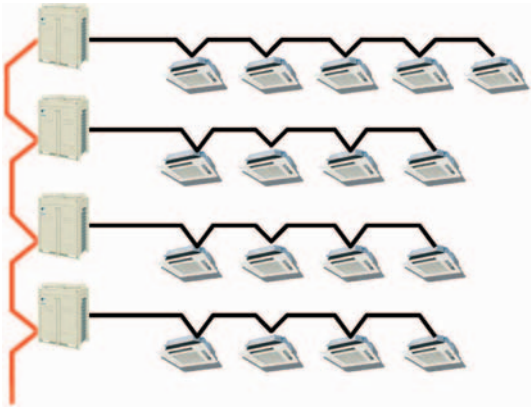
(1) Obtain the refrigerant circuit.



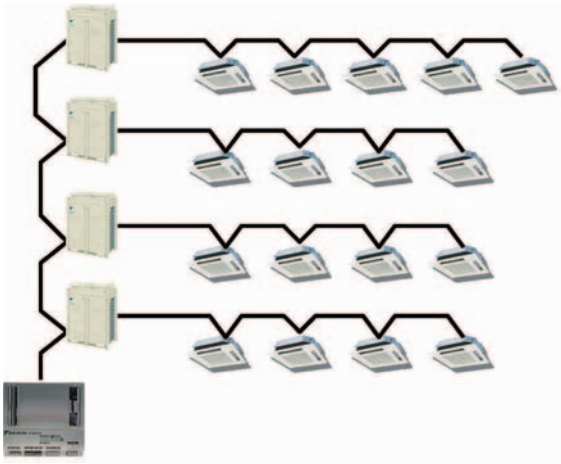
(2) Make an indoor-outdoor connection in accordance with the refrigerant circuit.



(3) Make an outdoor-outdoor connection.

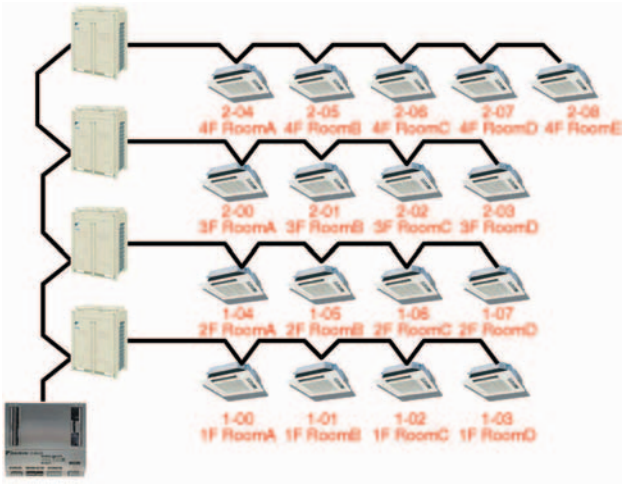


(4) Connect iPU to the outdoor-outdoor connection.

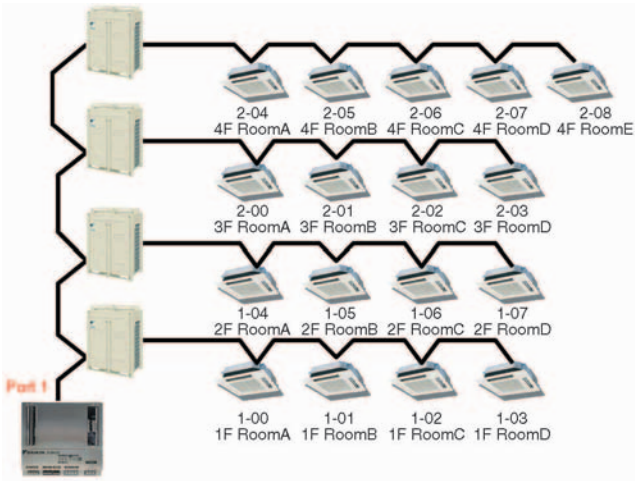


3.4 Allocation of Centralized Address

(1) Allocate a centralized address and a name to each indoor unit.

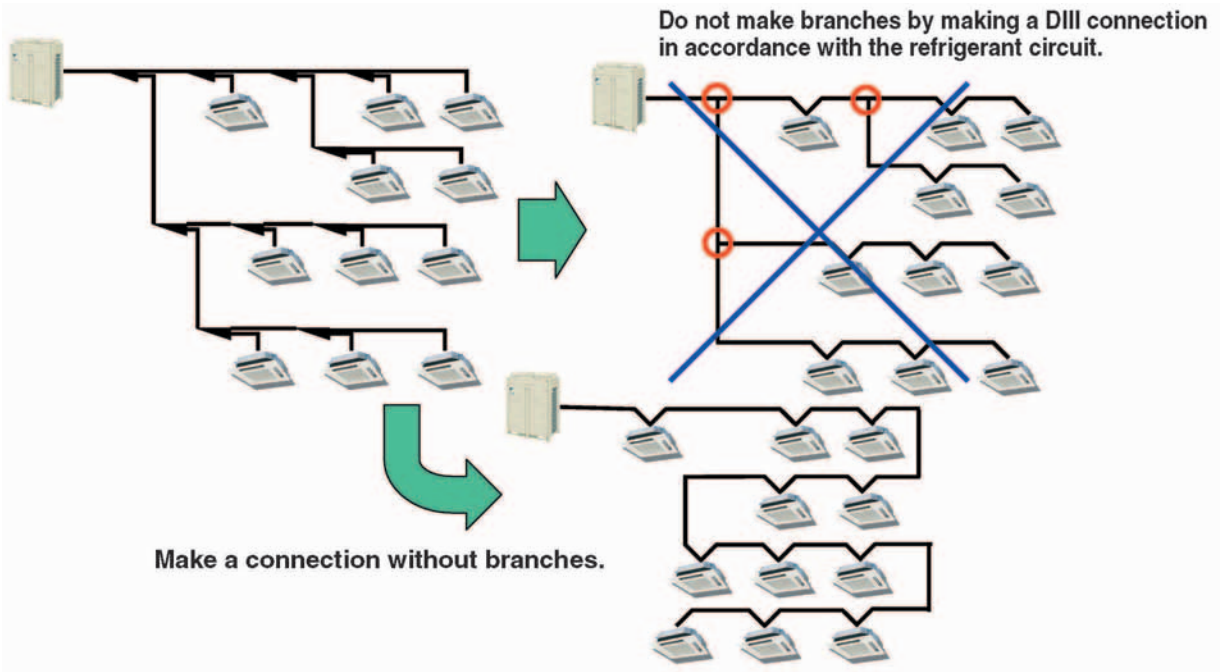


(2) Specify the port number of iPU.

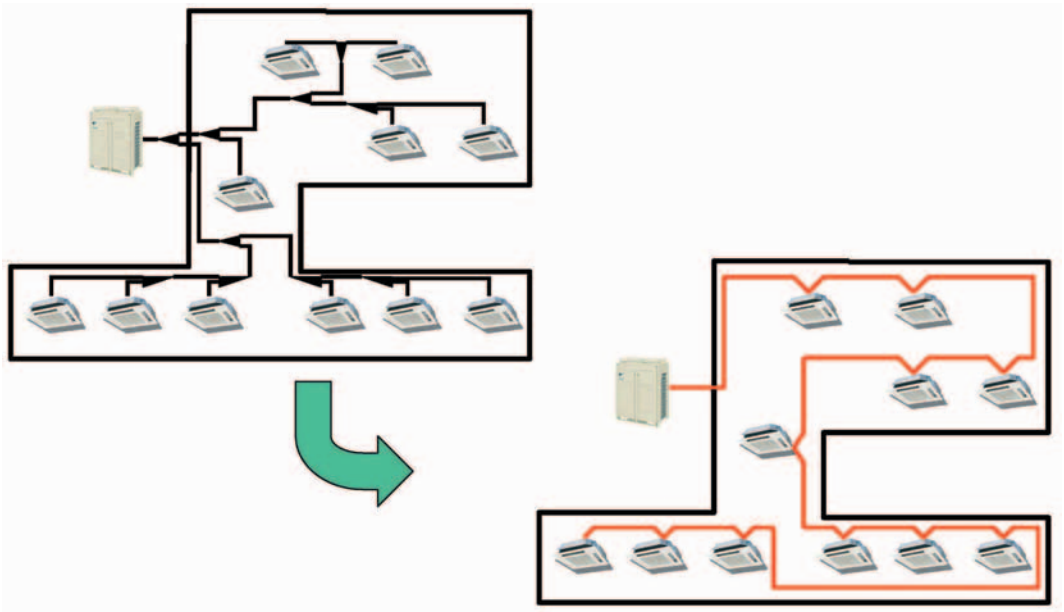


3.5 Points to Note for Design

(1) Wiring when there is a branch in the refrigerant circuit



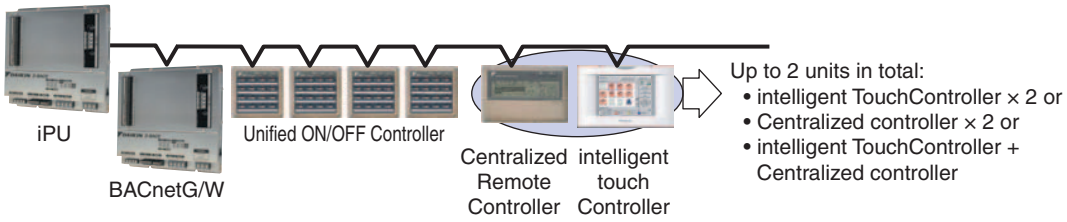
(2) Design the connection in accordance with the floor layout.



3.6 Use with Other Centralized Devices

■ **The centralized devices which can be installed with intelligent Manager are listed below:**

- intelligent TouchController
  - Up to 2 units including Centralized Remote Controller can be installed on one DIII net. (The second unit needs to have a sub-setting.)
- Centralized Remote Controller
  - Up to 2 units including intelligent TouchController can be installed on one DIII net. (The second unit needs to have a sub-setting.)
- Unified ON/OFF Controller
  - Up to 8 units can be installed on one DIII net. (4 units with a main setting, and other 4 units with a sub-setting.)
- BACnet Gateway (special inquiries for application of product)
  - One unit can be installed on one DIII net. (DMS502B51)



■ **Disconnect the parent centralized connector of each centralized device when you install other devices together with intelligent Manager.**



Parent centralized connector of each centralized device

4. PPD Design Guide

4.1 System Architecture

4.1.1 Confirmation of Watthour Meter

For distribution of electric energy, the integrating watthour meter with pulse transmitter is required.
It is important to confirm that the specifications coincide with each other, and also to confirm with the division in charge (normally, electrical work division, not air-conditioning div.).

· Specifications of watthour meter to be connected to intelligent Manager

a) To be an integrating watthour meter with pulse transmitter.
b) The output pulse unit (pulse weight) is to be 1 pulse to 1kWh (1kWh/pulse).
c) The pulse width is to be within 40 to 400 milli-sec.
d) The electronic type relay is to be used for pulse output, and it to be no-voltage output.

If the specifications are not coincident, there is a possibility that the following imperfections are caused:

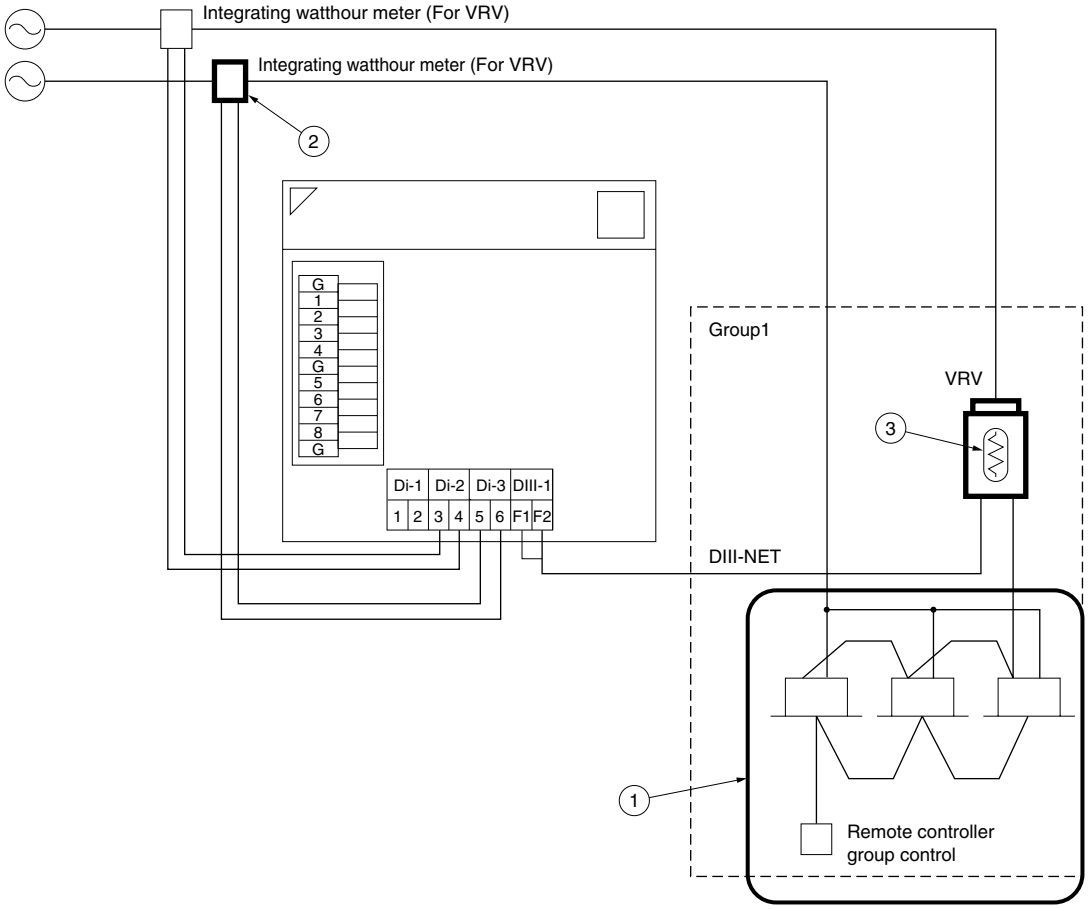
- If the output pulse unit is not 1kWh/pulse.
  It results a large difference between the reading (value) of watthour meter and the total value of distribution of electric energy.
  For the charge calculation, the number of pulse input is counted and the power consumption of the outdoor unit is monitored, therefore, for example, if the large value, 10kWh/pulse, is inputted, the electric energy calculated is the value of one tenth (1/10) times.
- If the pulse width is not within 40 to 400 milli-sec.
  If it is less than 40 milli-sec., the pulse input cannot be detected, and the result of calculation is smaller than the real value.
  In addition, if more than 400 milli-sec., more than 2 pulses is detected for 1-pulse input, and the result of calculation is larger than the real value.
- If use of contact other than electronic type relay.
  If it is a general relay, the pulse may not accurately be detected due to relay chattering.

Confirm the following items for the construction process.

- Construction of pulse signal line is kept away from power cables
  For this pulse signal line, the voltage DC24V should be applied from the intelligent Manager side. It should be constructed separating from the power cables.
- Max. distance to be 200 m
  Confirm that the distance with the watthour meter~intelligent Manager is within 200 m.

4.2 Design Precautions

4.2.1 Rate Calculation



(1) Remote controller group control ①

Also in the indoor unit (sub-unit) with remote controller group control, set the centralized address for correct electric energy distributing.

(The centralized address for sub-unit can be set in the site set mode “30” of the remote controller.

However, after setting with “30”, if set with “00”, the sub-unit address will be deleted.)

⟶ An imperfection in case collective distribution is done with main-unit running state without setting of centralized address at sub-unit

Even if the remote controller group control is done, each indoor unit has different thermostat state depending on its installation place.

Therefore, the distribution result will differ depending on the decision which indoor unit is to be as main unit.

(2) In Case power consumption of indoor unit to be distributed ②

In distributing the power consumption of the indoor unit, it is necessary to connect the integrating watthour meter to the power system of the indoor unit and input its pulse output to intelligent Manager.

If such a wiring is connected, in making equipment setting in test run, set at “To make distribution calculation for indoor fan” with intelligent Manager calculation conditions.

(3) Calculation of electric power (Crankcase heater / PC Board power consumption) at stopping ③

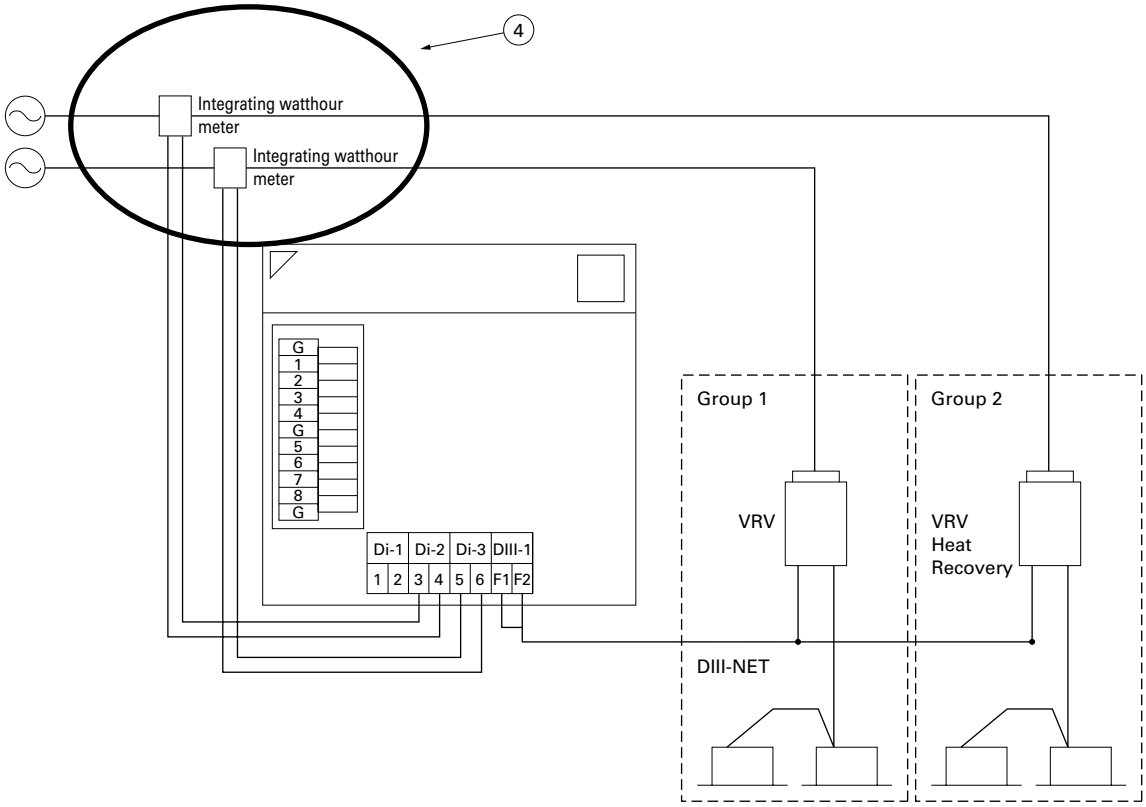
1. In the case of calculation for crank case heater and PC Board when not in operation.
   (1) The electric power consumed by crank case heater of the outdoor unit is divided by the capacity of each indoor unit.
   N.B. The calculation also includes the indoor units which are not in operation. (eg.vacant)
2. In the case of not calculating for crank case heater and PC Board when not in operation.
   (1) It is possible to exclude the power consumed by crank case heater and PC Board. Therefore the power won't be added to each indoor unit.

(4) Setting of electric power group ④

It is possible to distribute the electric energy with one kWh meter if all groups are of the same design and indoor/outdoor units are of the same size as each other group respectively. (different A.C. systems cannot be from the same meter)

4.2.2 Setting of Each Electric Power Group

Although the iPU unit allows electric energy distributing with one integrating watthour meter, if some/many integrating watthour meters are connected as shown below, the electric energy distributing accuracy can be improved.



4.2.3 The Reason why VRV Heat Recovery Must not be Included

For Heat Recovery outdoor units, the watthour meter must be independently installed.

(1) For heat recovery, there is a case that the power consumption is less than VRV and VRV Plus.

(2) However, if different systems are put on the one meter, the electric power distribution would be calculated by constant counting, and the calculation result would then more than the actual value on all indoor units.

Therefore, it is necessary to install the watthour meter independently as shown in Fig. 2.
In addition, the power port No. in Address Table must be different from others. (To be set at test run)

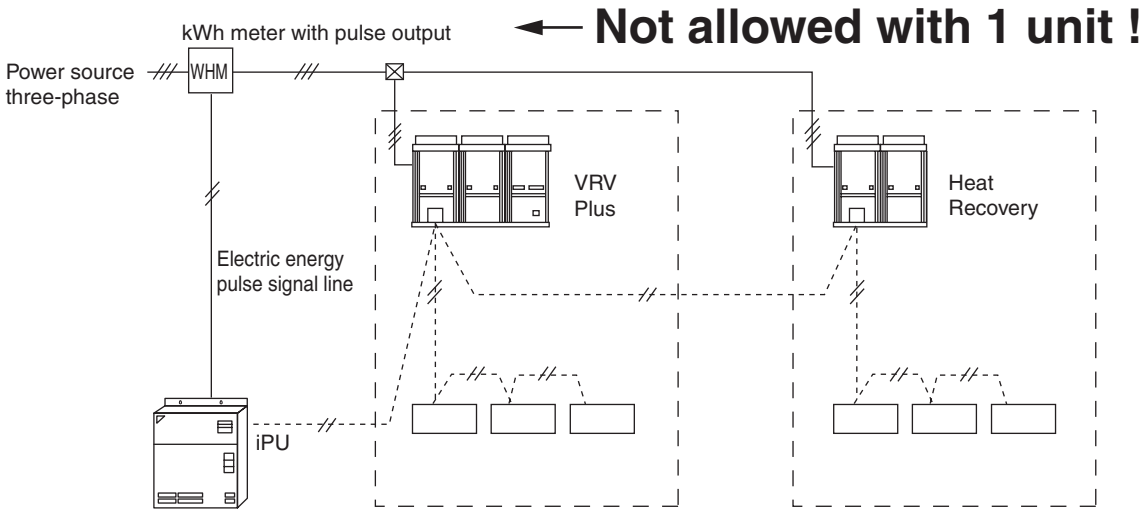


Fig.1 Not Recommended : Watthour meter is shared.

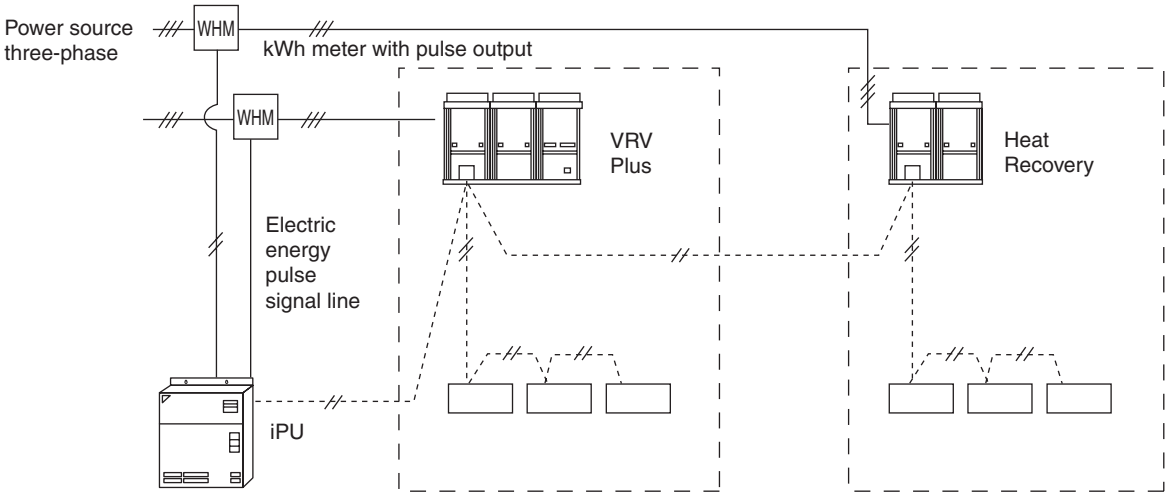


Fig.2 Recommended : Heat Recovery and other system watthour meter are separated.

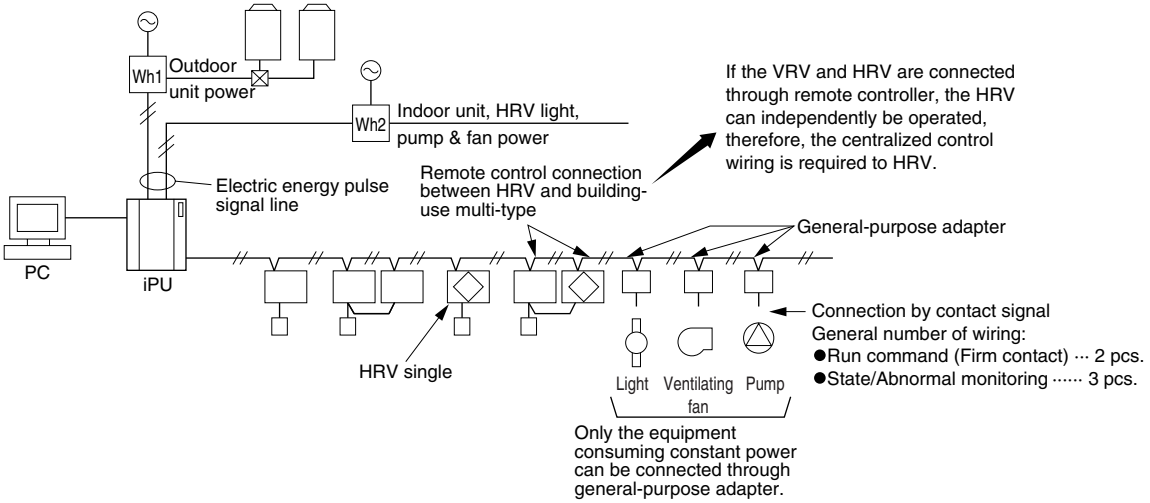
Caution: It is possible to register to the same electric power group for the following combination.
1. VRV,VRVII (R-22)
2. VRV Heat Recovery (R-22)
3. VRVII,VRVIII (R-410A)
4. VRVII Heat Recovery (R-410A)

When the combination of the above-mentioneds is not observed, a correct power proportional distribution calculation cannot be done.

4.3 Connection other than VRV

Though the models other than VRV are included in “Rate calculation applicable models”, the following system shows the example of connection of HRV Type FJ and general-purpose adapter.

4.3.1 System Example



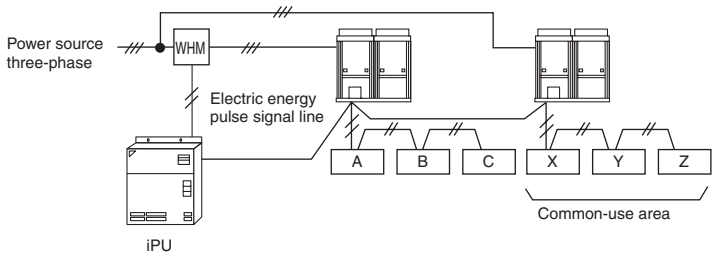
4.3.2 Requirements

- If HRV and general-purpose adapter are used, the power consumption of the indoor unit is to be distributed. Therefore, it is necessary to input the power consumption of the VRV, HRV, general-purpose adapter and constant power-consumption equipment (units) to be connected to the dues control unit. Concretely, using the watthour meter (with pulse output), the pulse signal is to be connected to the iPU.
- For HRV, the centralized control wiring is required without fail.
- Only the type consuming constant power (light, etc.) can be connected to the general-purpose adapter.
  If the power consumption varies depending on the inverter, etc., such an equipment cannot be connected.
  (Distribution calculating error is increased.)

4.4 Conditions and Method to Exclude Calculation for Specified Indoor Unit

There is a case that a part of indoor units is desired to be excluded from calculation, such as corridor, hall, etc..
Typically, there are two ways as below.

4.4.1 The Power Consumption of Common-use Area can be Separated from Other Areas

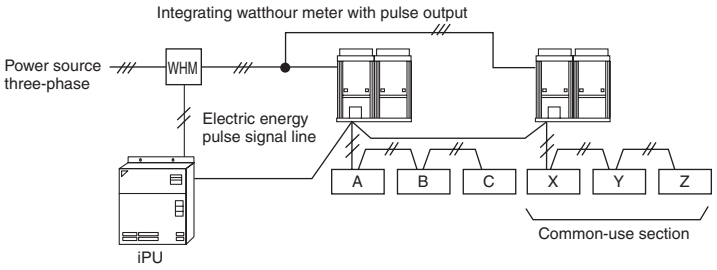


- Separating the system is required among the common-use area, outdoor units for office, etc. and the power source.
- Enter “No” in the column of electric energy distributing in Address Table.

* In calculating the common-use power independently, it is also possible to mount the watthour meter (with pulse output) for common-use area.

4.4.2 The Power Consumption of Common-use Area is Distributed to Other Area

(In this case, it cannot uniformly be distributed to other indoor units. The power consumption of the common-use section may be added to the specific indoor unit.)



- The power consumption of the common-use area is distributed to the indoor unit in the office, etc. The calculated value in the office, etc. is increased by the value distributed from the common-use area.
- The wiring work method for the common-use area is quite the same as that of the indoor unit in other offices, etc.

* Enter “No” in the column of electric energy distributing in Address Table.

Example: When the power consumption is A=B=C=10kW and X=Y=Z=5kW, the calculation result total is 45kW, and the calculated value of A, B and C is as follows:

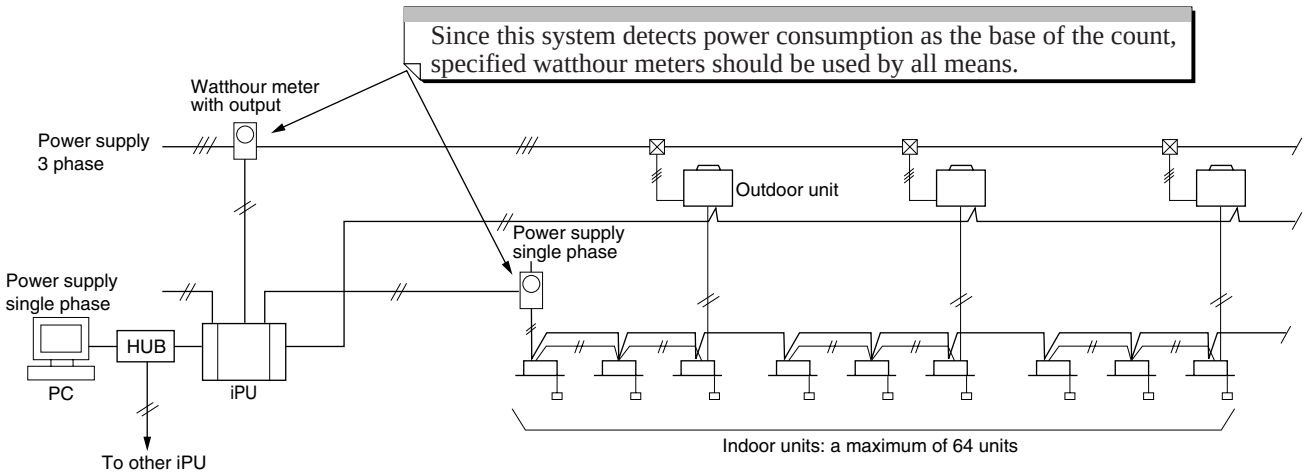
$$A=B=C=\frac{10}{10+10+10}\times 45=15kW$$

The common-use section is distributed and power consumption is more than the actual one.

4.5 Explanations of Power Proportional Distribution

4.5.1 What is the Power Proportional Distribution (PPD)

(System Ex. : Normal VRV)



- Previously the general way for requesting the electricity charge at rental buildings was that a management staff read a watthour meter and billed the tenants by manual-account based on the operation time which were counted through time-counters.
  However, this method takes a lot of time for the management staff. In addition, as airconditioning consumes much different electricity for either the operation of airconditioning (thermostat-on) or the operation of fan only (thermostat-off), it might cause to give unfair sense to the tenants inhabited in the spaces with different heat load, though “operation-time” itself is the same.
  For instance, even if a certain higher preset temperature is applied in summer for energy saving, fee for airconditioning may equal to the fee without preset temperature so far as it is counted based on the operation time.
- Electric energy distributing function of intelligent Manager carries out the proportional division computation in consideration of those thermostat-on and thermostat-off operations and saves time for building management staffs to read watthour meters, and also supplies tenants printed data useful for making the bills.
  Namely, intelligent Processing Unit (iPU) is the product created by the concept to help the assignment of bill-issuing and offers users the reasonable price of the products.
- Yet, since the iPU is constantly assuming each indoor unit’s power consumption based on the data which is transferred from indoor units, it should be noticed that the iPU is not which complies with the Weight and Measure Act as shown in the catalogue.
  The details of the cause to count error is described at chapter 2.

(1) Count method (for a conventional VRV system)

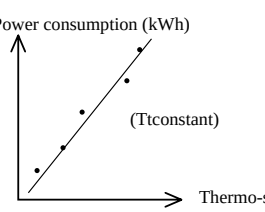
1) The following proportional division calculation is carried out every one hour and assigns the power consumption of airconditioning system to each indoor unit.

Heat load depending on the operation conditions of airconditioner = power consumption of indoor unit’s fan
+ power consumption of optional heater
+ the rated power consumption in cooling (*1) ×a
+ the rated power consumption in heating (*1) ×b

*1:The value which is registered at the test run, adapting the indoor unit’s capacity

$$a = (a1 + a2 \times T) \times \frac{\text{Thermo-step (*2)}}{10}$$

$$b = (b1 - b2 \times T) \times \frac{\text{Thermo-step (*2)}}{10}$$



As shown in the left, heat load is calcuated from an equation of the first degree which approximates the correlation, among thermo-step, indoor unit’s suction air temperature and power consumption, into the linear line under the standard conditions of the unit.

*2:“Thermo-step” signifies that an airconditioning capacity is expressed in a range of the values 0-5 mainly based on the opening grade of an electronic expansion valve in an indoor unit.

a1, a2:correction factor for cooling
b1, b2:correction factor for heating
T:indoor unit’s suction air temperature

$$\text{Indoor units N's power consumption (kWh)} = \text{total pulse input from wattmeters} \times \frac{\text{Heat load by one hour calculated through the operating of airconditioner N}}{\text{total heat load by one hour caiculated through the operating conditions of all the airconditioners}}$$

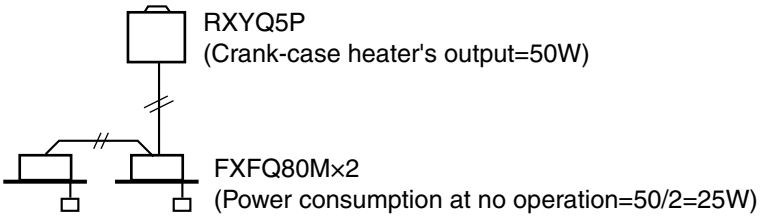
2) Calculation of the proportional division value for a dairy power consumption

The proportional division value for a dairy power consumption is stored with factors of each indoor unit's number and a calendar date as a table shown below after adding the count result of hourly power consumption from 00:00 through 23:59. (with a graduation of 10 W)

Indoor unit No. / Date	001	002	003	004
April 1st	000150	000211	000741	004402
April 2nd	002004	005202	009205	005902
April 3rd	000313	001103	000086	008173

The set data in the dues control unit is not deleted even if the electric power is turned off, because the data is stored in the non-volatile (flash) memory.

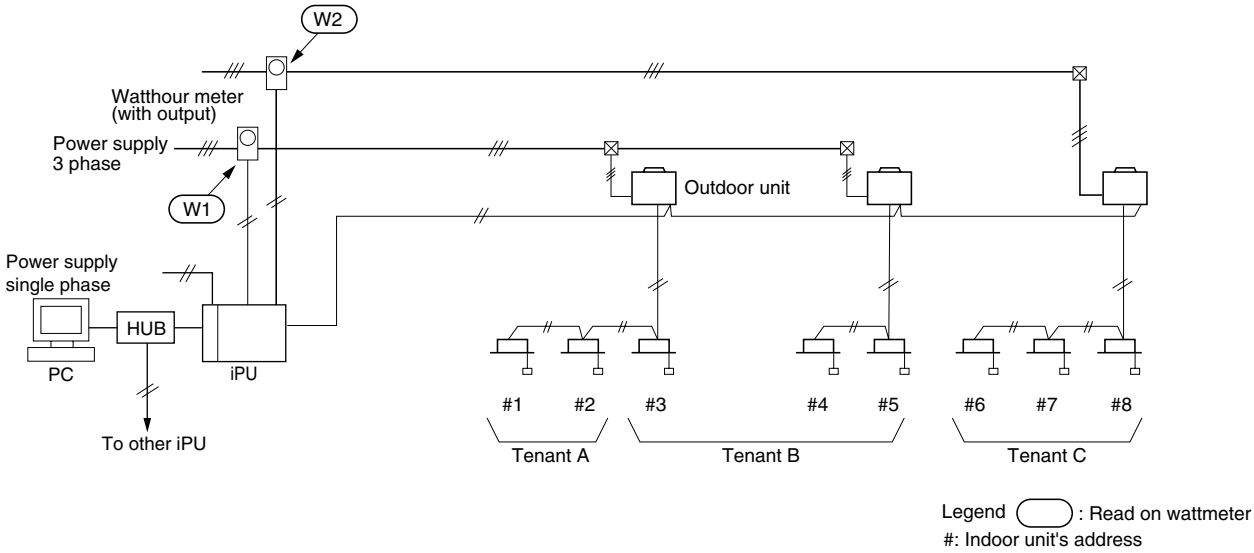
3) Counting the electricity at the ceased condition of the unit
Even if an airconditioner is stopped or in the condition of thermostat -off (the condition that the compressors are stopped as the temperature in the space where all the indoor units are installed falls down to the preset temperature), the airconditioner consumes energy due to the energy consumption mainly by the crank-case heater in the outdoor unit.
When the iPU is used, the rated power consumption of the crank-case heater is divided by the number of indoor units in usual connection (for instance, two indoor units of 2.5 HP are connected to an outdoor unit of 5 HP etc.) and the value is registered at the test run, adapting each indoor unit's capacity.
(Example)



The iPU counts the indoor unit's operating conditions every 20 seconds.
Since the indoor units send ON/OFF data of the crank-case heater to iPU, it adds one(+1) to the power counter inside iPU at no operation of the airconditioner when the crank-case heater is ON.
When this counter reaches 180, it judges that the crank-case heater was on for one hour, and in case of the above mentioned indoor unit, the counter goes back to zero after 25 Wh is added to the counting result.
This calculation process is conducted separately from the proportional division computation mentioned on this section, and this input is got rid of from the pulse input of the watthour meter. Because of this procedure, the power consumption in the space where the airconditioner is not used at all is counted constantly every month.
(However, as this airconditioning system is a multi-system, in case that one outdoor unit is shared to another tenant, the count output can be seen in lower value rather than the crank-case heater's power consumption registered, because the crank-case heater doesn't actuate when another tenant operates the airconditioner.)

4.5.2 Count Accuracy

(1) Cause of error
(System example)



<Case of arising error>

1 (W1) + (W2) ≠ Count conclusive total for indoor unit #1~#8 ⟹ Refer to the "REASON"

2 (W1) ≠ Count conclusive total for indoor unit #1~#5

(W2) ≠ Count conclusive total for indoor unit #6~#8 ⟹ Refer to the next page

1 (W1) ≠ (W2) ≠ Count conclusive total for indoor unit #1~#8* : The reason to get and the error size

■ **REASON**

iPU counts every one hour's power consumption.
Though fraction in case of computation occurs at this time, it is computed after leaving off a 1-W figure to avoid the risk for the owners. As a result, the error by the leaving-off occurs by 0.5W/ hour in average value of all indoor units.

(Calculation example)
(1) Count for errors in 8-day
Tenant A + B : 0.5 (Wh) × 8 days × 5 units = + 0.02 kWh
Tenant C : 0.5 (Wh) × 8 days × 3 units = + 0.012 kWh
total = + 0.032 kWh

(2) Assuming that the reads on watthour meters are as follows:
W1: read on watthour meter = 490 kWh
W2: read on watthour meter = 200 kWh
total = 690 kWh

(3) Finally it is concluded as total error = 0.032 / 690 × 100 = 0.0046%

2 (W1) ≠ Count conclusive total for indoor unit #1~#5 :

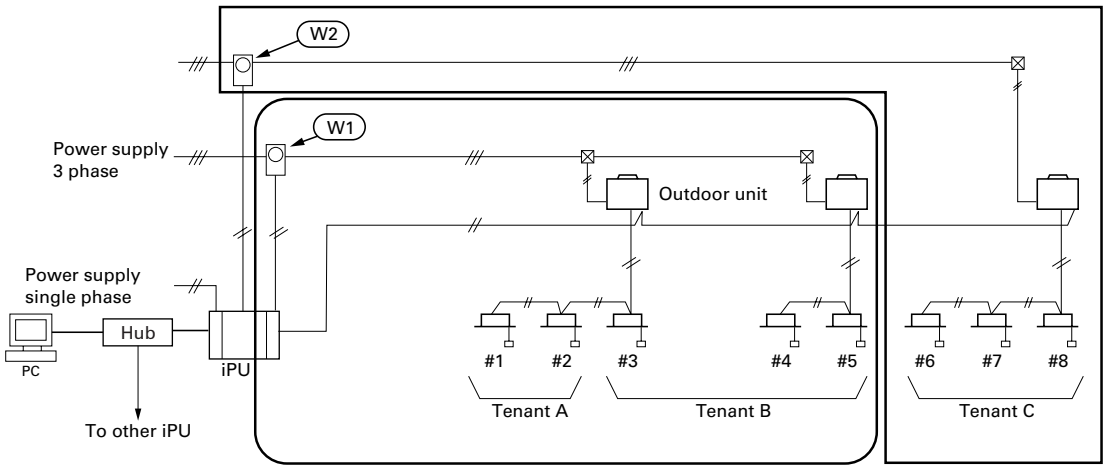
(W2) ≠ Count conclusive total for indoor unit #6~#8 :

iPU counts the power consumption as the following conditions (1)~(6) for the standards. So, the gap to be raised from these conditions may cause the error. Since these errors vary depending on the surrounded situations, the worst error value can't be drawn out from the computing.

(1) Combination rate of indoor units connected to an outdoor unit (100%)
(2) Outdoor temperature (35°C)
(3) Indoor unit's suction air temperature (19°C)
(4) Piping length (5m)
(5) Level difference (0m)
(6) Pipe diameter (ϕ22.2)

(2) The way to reduce errors

The error [1] can't be reduced, however this error is small and negligible, therefore so it can generally clear troubles if excusing the reason caused to tenants.
The way to reduce the error [2] will be described as follows.
As shown in the drawing below, when the relation between a wattmeter and indoor units are clear, "the setting to make grouping for power ports" should be carried out at the test run of intelligent Manager. (The actual site job will be conducted by persons of service dept responsible for the test run.)



The power input to iPU can be counted with the proportional division system based on every input of the wattmeter. On the above example, watts at W1 and watts at W2 are shared by indoor units #1~#5 and indoor units #6~#8, respectively. (Before the test run, it is necessary to enter the exact power port No. on the address table.)
The above setting results in the followings:

(W1) = Count conclusive total for indoor unit #1~#5

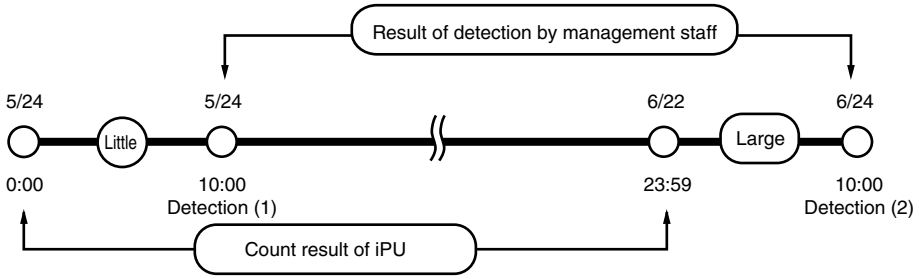
(W2) = Count conclusive total for indoor unit #6~#8

(Except for the error at [1]). However, since iPU watt input has just 18 ports, additional divisional counting is not possible.

Caution: If management staff checks the watts in the procedure mentioned below, they would find the calculation to be incorrect due to an uncomplete cycle.

(Example)

(1) May/24th, read wattmeter and records the watts at 10:00 am
(2) June/24th, read wattmeter and records the watts at 10:00 am
(3) When the count in a period of May/24th to June/23rd is printed out, the total value doesn't meet the value detected mentioned above on (2) - (1).



iPU stores the information collected in a period of 0:00 am through 23:59 pm as one day information as shown above.
It results in the fact that there are ten hours gaps between on the first day of the counting and on the last day of the count in the above mentioned column of "Result of detection by management staff" and "Count result".
As shown in the figure above, this error increases in the season from the intermediate forwarding to the season in which airconditioning is highly required.
For more accuracy, it is necessary to compare with the value detected at 0:00 am.

■ **Remarks**

Reference data of actual example are shown below.

*Power group in a lump sum style (kWh)

DCU/Name Wattmeter	Watt-hour meter Electric energy	DCU Electric energy at each port	Tolerance (%)
DCU1-1	49	29.88	-39.0%
DCU1-2	168	88.36	-47.4%
DCU2-1	135	150.17	11.2%
DCU2-2	128	33.66	-73.7%
DCU3-1	34	40.94	20.4%
DCU3-2	117	72.92	-37.7%
DCU3-3	82	193.92	**136.5%**
DCU4-1	66	38.1	-42.3%
DCU4-2	89	307.05	**245.0%**
DCU4-3	159	76.82	-51.7%
Total	1027	1031.82	**0.5%**



*Group setting for each watt-hour meter (kWh)

DCU/Name Wattmeter	Watt-hour meter Electric energy	DCU Electric energy at each port	Tolerance (%)
DCU1-1	158	158.09	0.1%
DCU1-2	305	305.96	0.3%
DCU2-1	595	595.56	0.1%
DCU2-2	291	290.9	0.0%
DCU3-1	127	127.21	0.2%
DCU3-2	167	166.91	-0.1%
DCU3-3	139	139.43	**0.3%**
DCU4-1	116	116.74	0.6%
DCU4-2	257	256.98	**0.0%**
DCU4-3	680	681.01	0.1%
Total	2835	2838.79	**0.1%**

Appendix A. Devices which can be Connected to DIII net

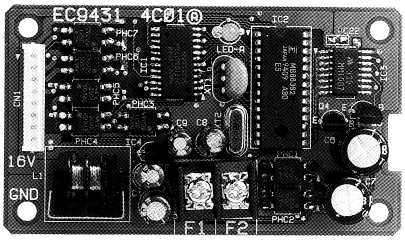
1 Air-Conditioner Connection Adaptors

The following Air-conditioning Connection Adaptors (Interface adaptor for SkyAir Series, Wiring Adaptor for other air-conditioners, Interface Adaptor for Outdoor unit control and Mix matching Adaptor for "K" indoor unit) are the interface adaptors which are required to connect the air-conditioners with D-BACS System or DIII-NET (High speed multiple transmission system).

1.1 <DTA102A52> Interface Adaptor for SkyAir Series (New type)

a. Outline / Features

This is an interface adaptor required for all SkyAir for "F" type to the subsequent models to connect to the central control equipment (Central remote controller, Unified ON/OFF controller and Schedule timer), and by combining with the central control equipment, you can set the control mode, such as unified ON/OFF control, timer operation, rejection/acceptance by remote controller operation and etc., and also display the operating status.

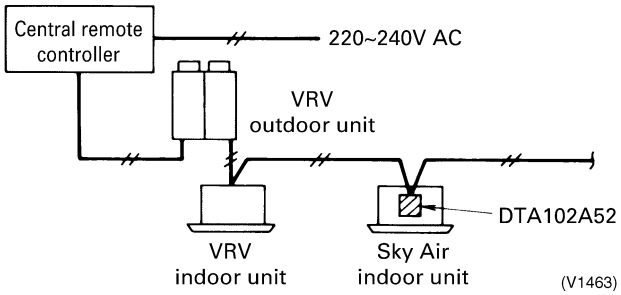


b. Applied Model

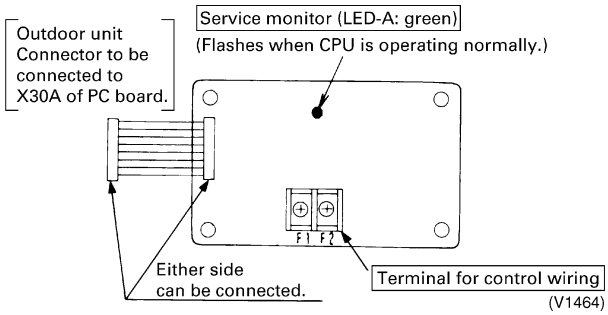
All the series of SkyAir from "F" type to the subsequent models and Packaged Air Conditioner FDYB

But, Interface adaptor for SkyAir series (old type) is used for SkyAir series "C (D)" type.

c. System Configuration



d. Names and Functions of Operating Part



e. Description of Functions

Control functions

By using this adaptor, you can control or monitor the following function from the central control equipment.

	Description of functions
1. ON/OFF operation	Turns indoor unit ON or OFF.
2. Operation / malfunction monitoring	Monitors operation or error status
3. Cool / heat changeover	
4. Temperature setting	Temperature setting is possible within the temperature setting range of SkyAir (20~35°C for cooling and 15~30°C for heating).
5. Control mode setting for remote controller	Restricts remote controller operation for ON/OFF control, cool/heat changeover and temperature setting. (Last command priority/Remote Control Rejection and etc.)
6. Test operation	Operates the indoor units by Forced thermostat “ON”.
7. Malfunction code display and reset	
8. Group control	Controls up to 16 indoor units simultaneously.
9. Room temperature monitoring	Monitors room temperature if connected to the Parallel interface or the Data station.
10. Forced thermostat “OFF”	If the central controller is equipped with the forced thermostat OFF function, it switches the SkyAir to “FAN” operation.
11. Filter sign display and reset	
12. Air flow direction and air flow rate setting	Possible to change the setting by the individual setting mode of the central remote controller. (★1)
13. Various monitoring function	Thermostat status, Compressor operation status, Indoor fan operation status, Auxiliary electric heater operation status. (★2)

Note:

★1 The central control equipment should be installed in the system.

★2 This is possible only when connected to the Data station and monitored by central monitoring panel.

Not controllable functions

This adaptor is not corresponding to the following functions.

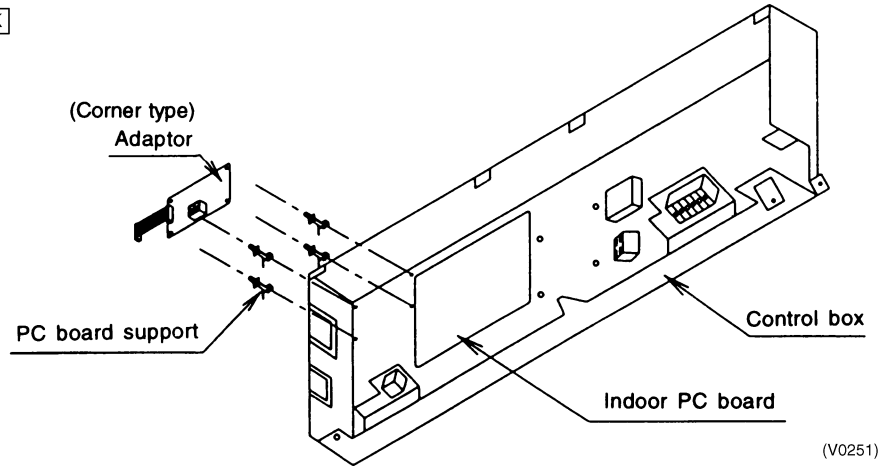
	Description of functions
1. Energy saving command	Set-back the setting temperature by 2°C. (thermostat “OFF” operation)
2. Low operating noise command	Lowering the operating noise by reducing the capacity
3. Demand control	Controls the power consumption by reducing the capacity

f. Fitting Place of Adaptor (Installed in the SkyAir)

- Installation differs according to models as shown below.
- Do not bundle low and high voltage wires together.
- Bundle any excess wires with the attached tie wraps so as to keep loose wirings off the indoor unit PC board.

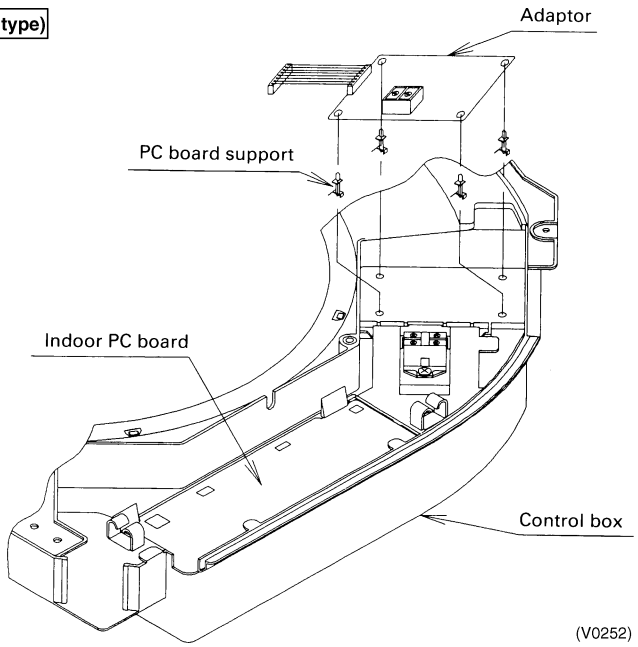
Ceiling-Mounted Cassette Corner Type

FH(Y)K

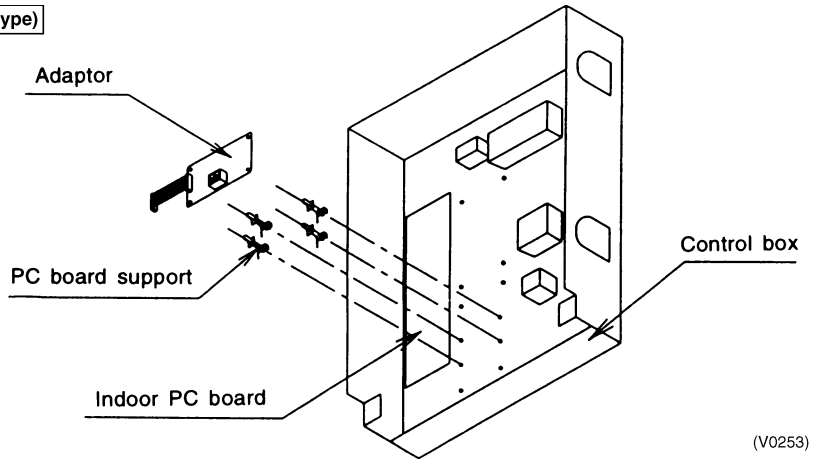


Ceiling-Mounted Cassette Type - Super Cassette -

FH(Y)C~K (Multiflow type)

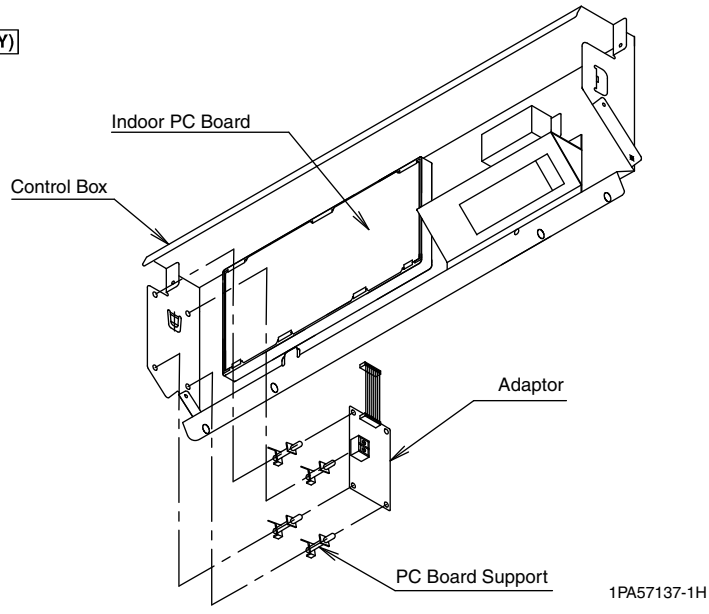


FH(Y)B (Built-in type)



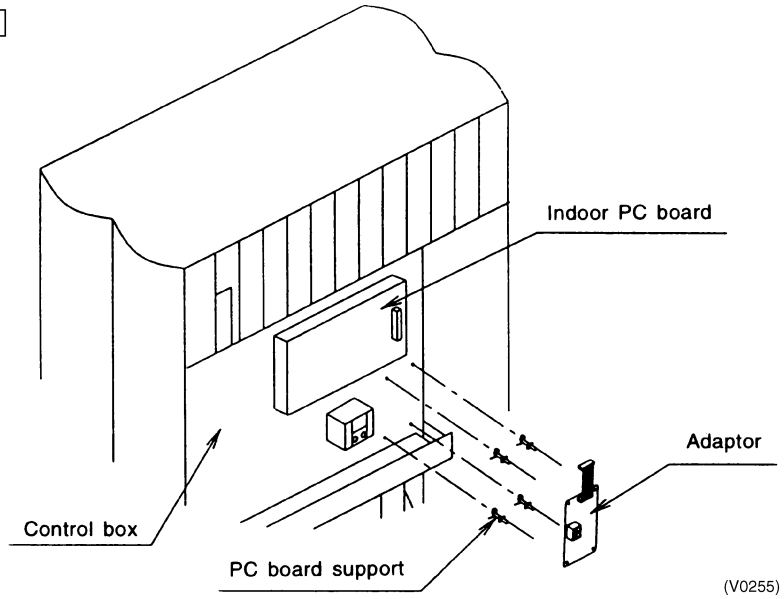
Ceiling Suspended Type

FH(Y)



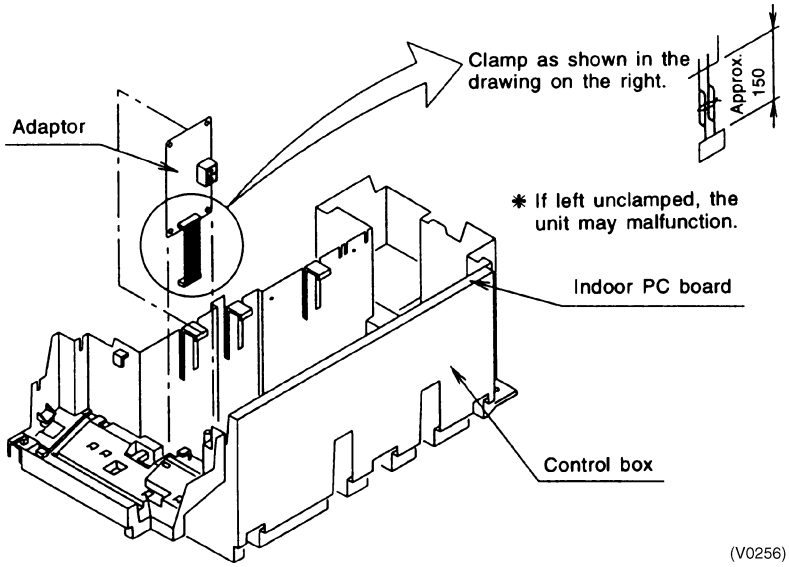
Floor Standing Type

FVY



Wall Mounted Type

FA(Y)

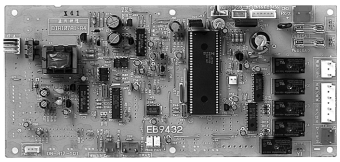


Note:
1. Installation for each type of unit is shown above. But, never bundle the power wring and control wiring.
2. Tie up the excess wiring with the attached wiring-tie so that the wring do not go over the PC board.

1.2 <DTA107A55> Central Control Adaptor Kit

a. Outline / Features

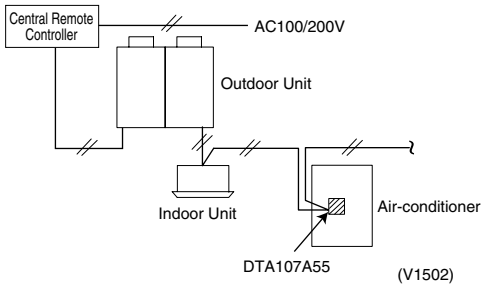
This adaptor is an interface that is necessary in interconnecting the central control system (central controller, ON/OFF controller and schedule timer) and the packaged air-conditioners. In combination with the central control devices, the interface provides for collective start/stop, timer-controlled run, remote control enable/disable and other operation modes as well as run status displays.
The adaptor is also required in setting up the remote controller for the packaged air-conditioners.



b. Applied Model

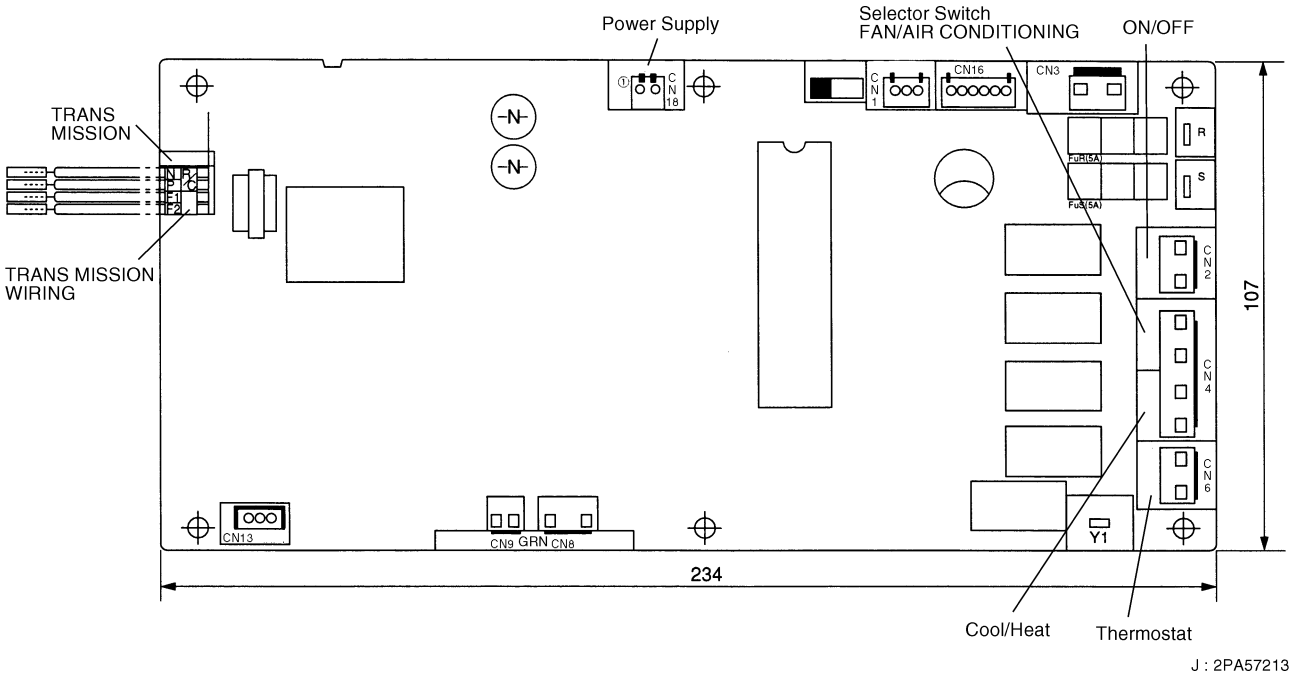
Packaged Air Conditioners

c. System Configulation



Note: For the above model, the central control adaptor set-up box is installed externally.

d. Names and Functions of Operating Part



e. Combinations of Remote Controllers and Central Control Systems

Remote Controller	Central Remote Controller (DCS302B61)	Unified ON/OFF Controller (DCS301B61)	Schedule Timer (Note 2) (DST301B61)
— (Note 1)	○	—	—
○	—	—	—
○	—	○	—
— (Note 1)	○	○	—
○	—	—	○
— (Note 1)	○	—	○

○ : Needed, — : Not necessarily needed

Note:
1. Remote controller needed only for addresses setting.
2. Schedule timer power to be connected to CN18 on central controller adaptor PC board. (Same as with the VRV series)

f. Functions

Control functions

This adaptor allows the central control system to do the following operations and monitoring.

Central remote controller	Remote controller	Air-conditioner loca / remote switching	Functions
Provided	Provided	Remote (Note 2)	Start/stop Cool/heat switching Ventilate / temp. regulation switching Temperature setting Run display Error display (collective "A0") Possible from central controller or remote controller (impossible from air-conditioner's control panel)
	Not provided (Note 1)		
Not provided	Provided		
Not provided	Not provided	Local	As ever before (above functions available on control panel)
		Remote	As ever before (Start/stop, cool/heat switching, ventilate / temp. regulation switching and error display available from remote control terminals; temperature setting available on control panel)

Note:
1. This adaptor needs address setting in order to connect it to the central remote controller. Like the VRV models, connect the remote controller and make the address setting. Be sure also to turn off the power before disconnecting the remote controller. (Otherwise the error code "U5" will be displayed in about 2 minutes and the system will be interrupted.)
2. When setting up the central control adaptor, set the air-conditioner's local / remote selector to the REMOTE position. If at the LOCAL position, the control panel still functions to run the system but the error code "UE" is displayed on the central controller. This means the remote controller and central control adaptor will be turned off.

Functions with remote controller connected

	Description
1. Two remote controllers applicable	Remote controllers placeable up to 500m away from indoor unit. (Same as with the VRV)
2. Remote control thermostat applicable	Same thermostat characteristics as with the VRV.
3. Remote sensor (KRCS01-1) applicable	Temperatures of spots up to 12m away from indoor unit detectable. (Same as with the VRV)
4. Filter sign display function	Displayed in 2500 total operating hours.
5. Group controllable	

Note:
1. Keep the following points in mind when using a room thermostat.
   (1) Connect the room thermostat in place of the thermostat output of the central control adaptor.
   (2) Note that the room thermostat's temperature setting is different from the value being displayed.
2. ★ Be careful not to confuse the handling instructions.

Meaning of warning and caution symbols

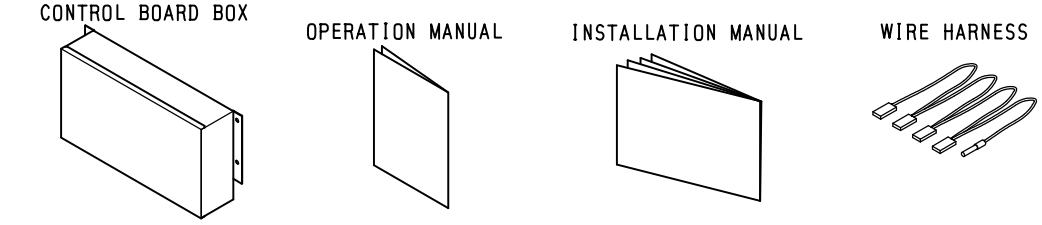
⚠ WARNING ·····Failure to observe a warning may result in death.

⚠ CAUTION ·····Failure to observe a caution may result injury or damage to the equipment.

2P042157-1

Components

Check the following components are included in this optional accessory before installation.



Give to the customer this OPERATION MANUAL certainly.

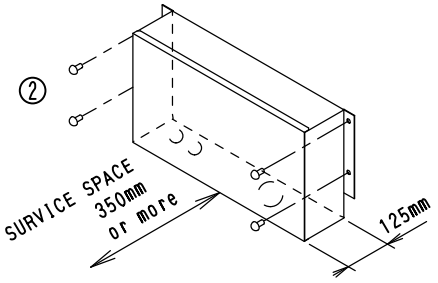
2P042157-2

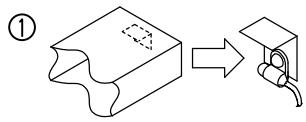
Installation

Deside the situation of Control Board Box.
It is affected the situations of the thermistor.
The length of lead wire - Thermistor:2.5m

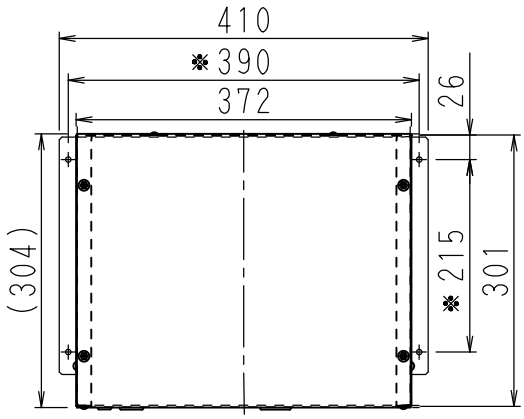
① Install the thermistor (in the control board box) at the inlet duct or the suction grille.
Use the kit:remote sensor(KRCS01-1), if you need the longer length than it.(Can use it untill 12m.)

② Install the control board box on the wall or the pillar.
Make sure the wire inlet is at the bottom of the box.
Use 4 bolts(M5) for fixing the box.
Install the box in the indoor side.
(Example:Set it in the ceiling or in the room.)
Do not install the box in the air conditioner.
Fixing situation : See right Fig. (Height:125mm)
(※ shows the fixing pich.)





Example:Set the thermistor into the inlet duct and clamped by resin clamp and fix plate.



2P042157-3

Electric Wiring

GENERAL INSTRUCTIONS

- All wiring, components and materials to be procured on site must comply with the applicable local and national codes.
- Use copper conductors only.
- All field wiring and components must be provided by licensed electrician.
- Unit shall be grounded in compliance with the applicable local and national codes.
- After wiring work, check power to the equipment shuts OFF when swich is shut OFF.

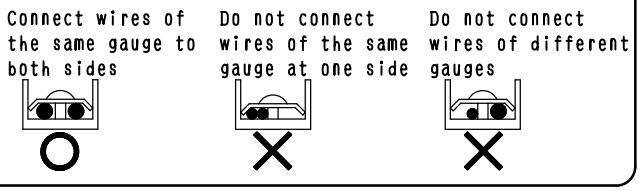
⚠ WARNING

Use ring type crimp style terminal for connection to power supply terminal block.



If is not used, satisfy the following conditions:

- Do not connect wires of different gauge to the same power supply terminal. (Looseness in the connection may cause overheating.)
- When connecting wires of the same gauge, connect them according to the righthand figure.



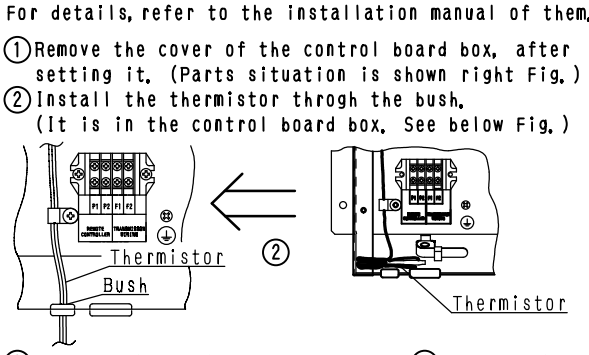
Wiring specification

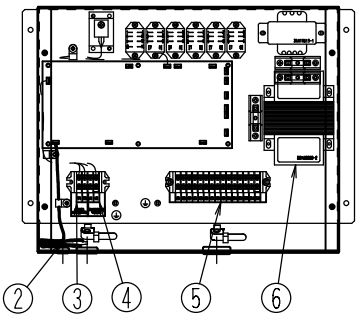
Use the wire shown right for between the unit and the control board box.

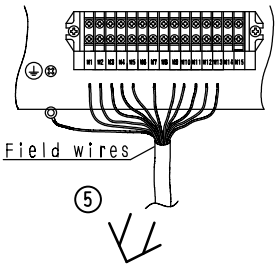
Type	Size
UL1015 AWG18 equivalent	0.75mm² each

Connect the wiring between indoor and outdoor units, central controllers and remote controller. For details, refer to the installation manual of them.

① Remove the cover of the control board box, after setting it. (Parts situation is shown right Fig.)
② Install the thermistor throgh the bush. (It is in the control board box. See below Fig.)

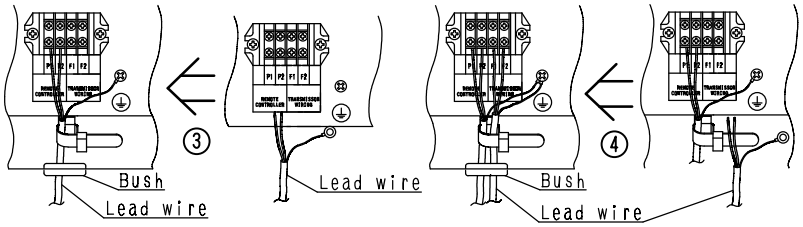


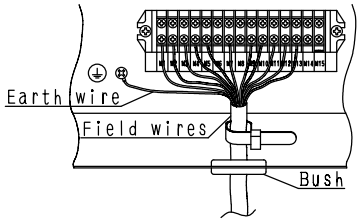




③ Connect the read wires of Remote Controller. (See the below Fig.) Ground the sheild of the cords to the control board box.

④ Connect the read wires of Central Control Unit. (See the below Fig.) Ground the sheild of the cords to the control board box.





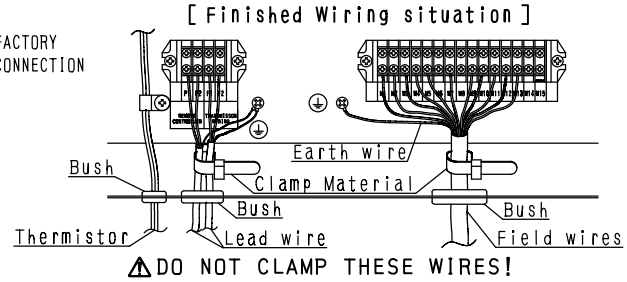
⑤ Connect the field wires to the Air Conditioner. (Details : See the back side.) Ground the control board box.

⑥ Changel the connection of transformer according to the right table. (Especially for Y1 Model.)

VOLTAGE		TERMINAL
PRIMARY	SECONDARY	
220V	200V	✱U-V1
230V	200V	U-V2
240V	200V	U-V3

✱ FACTORY CONNECTION

[Finished Wiring situation]



⚠ DO NOT CLAMP THESE WIRES!

Clamp these wires by clamp materials certainly. (Clamp the earth wire.) (See right Fig.) Do not clamp the high voltage wires (Field wires) and the low voltage wiers (Lead wire and Thermistor) both inside and outside of the control boad box.

NOTE

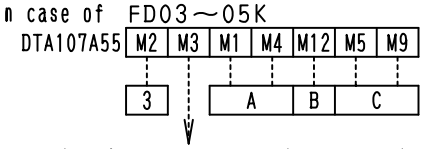
- Prepare the remote controller (BRC1A62). [BRC1A52 is also OK.]
  REASON: The remote controller is needed per each kit for setting the address.

2P042157-4

Connection of the Terminal

Connect between the air conditioner and DTA107A55 shown below.

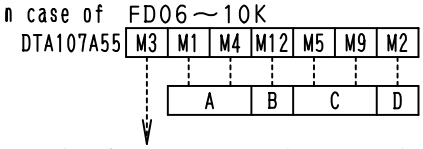
In case of FD03～05K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the indoor unit.
〔Refer to the wiring diagram of the indoor unit.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
About these models, we can only output the alarm signal of indoor fan motor.
Connect the wiring between the terminal "M3" and the terminal "96" of magnetic contactor of indoor fan motor(K1M).

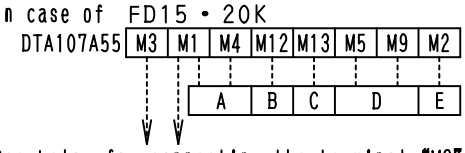
In case of FD06～10K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the indoor unit.
〔Refer to the wiring diagram of the indoor unit.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
Use the attached wire harness and change from the wire to it. The wire is connected between K1R(5), K1R(7), K2R(7), and K3R(5).
〔( ) is shown the terminal.〕
Connect the wiring between the terminal "M3" and the solderless splices butt "M3" of the wire assy.

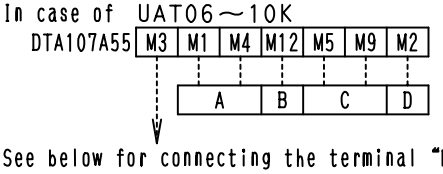
In case of FD15・20K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the indoor unit.
〔Refer to the wiring diagram of the indoor unit.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
Connect the wiring between the terminal "M1" and the terminal "6" of K4R(magnetic relay).
Connect the wiring between the terminal "M3" and the terminal "4" of K4R(magnetic relay).

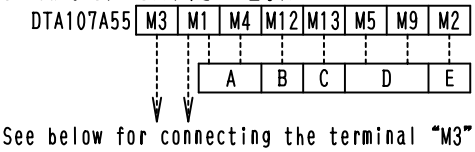
In case of UAT06～10K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the air conditioner.
〔Refer to the wiring diagram of the air conditioner.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
Use the attached wire harness and change from the wire to it. The wire is connected between K1R(5), K1R(7), K2R(7), and K3R(6).
〔( ) is shown the terminal.〕
Connect the wiring between the terminal "M3" and the solderless splices butt "M3" of the wire assy.

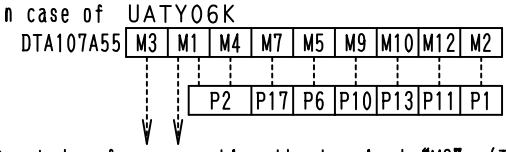
In case of UAT15・20K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the air conditioner.
〔Refer to the wiring diagram of the air conditioner.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
Connect the wiring between the terminal "M1" and the terminal "6" of K3R(magnetic relay).
Connect the wiring between the terminal "M3" and the terminal "4" of K3R(magnetic relay).

In case of UATY06K

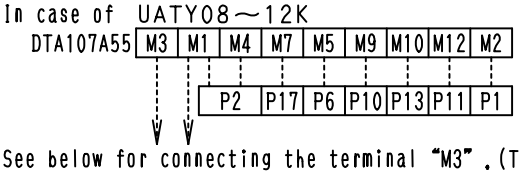


Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the air conditioner.
〔Refer to the wiring diagram of the air conditioner.〕

See below for connecting the terminal "M3". (The Output of alarm signal)
Connect the wiring between the terminal "M1" and the terminal "5" of K2R(magnetic relay).
Connect the wiring between the terminal "M3" and the terminal "3" of K2R(magnetic relay).

2P042158-1

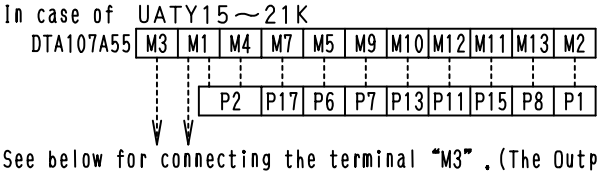
In case of UATY08～12K



Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the air conditioner. (Refer to the wiring diagram of the air conditioner.)

See below for connecting the terminal "M3". (The Output of alarm signal)
Connect the wiring between the terminal "M1" and the terminal "5" of K2R(magnetic relay).
Connect the wiring between the terminal "M3" and the terminal "3" of K2R(magnetic relay).

In case of UATY15～21K



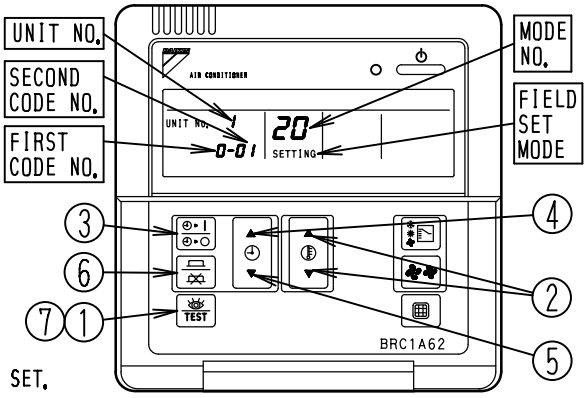
Connect the wiring between the box of this kit and the EL. COMPO. BOX ASSY of the air conditioner. (Refer to the wiring diagram of the air conditioner.)

See below for connecting the terminal "M3". (The Output of alarm signal)
Connect the wiring between the terminal "M1" and the terminal "6" of K2R(magnetic relay).
Connect the wiring between the terminal "M3" and the terminal "4" of K2R(magnetic relay).

2P042158-2

Field Setting

① When in the normal mode, press the TEST button for a minimum of four seconds, and the FIELD SET MODE is entered.
② Select the desired MODE NO. with the button.
③ During group control, when setting by each indoor unit (mode No. 20, 22 and 23 have been selected), push the button and select the INDOOR UNIT NO to be set. (This operation is unnecessary when setting by group)
④ Push the upper button and select FIRST CODE NO.
⑤ Push the lower button and select SECOND CODE NO.
⑥ Push the button once and the present settings are SET.
⑦ Push the TEST button to return to the NORMAL MODE.



□ :FACTORY SETTING

MODE NO. Note)1	FIRST CODE NO.	Description of Setting	SECOND CODE NO. 01	SECOND CODE NO. 02
10(20)	0	Filter Contamination - Heavy / Light (Setting for spacing time of display time to clean air filter) (Setting for when filter dirt is heavy, and spacing time of display time to clean air filter is to be halved)	LIGHT Approx. 2500Hrs.	HEAVY Approx. 1250Hrs.
	2	Thermostat Sensor in Remote Controller (Setting for when thermostat sensor in remote controller is not to be used)	Use	Not use
	3	Spacing Time of Display Time to Clean Air Filter Count (Setting for when the filter sign is not to be displayed)	Display	Do not Display
12(22)	5	The operation will restart automatically after power turns back again.	Not use	Use

NOTE) 1. Setting is carried out in the group mode, however, if the mode number inside the parentheses is selected, indoor units can also be set individually.
2. Do not mark any settings not given in the table on the upper.
3. When returning the normal mode, "88" may be displayed in the LCD in order for the remote controller to initialize itself.

2P042158-3

1.3 <DTA109A51> DIII-NET Adaptor

a. Outline / Features

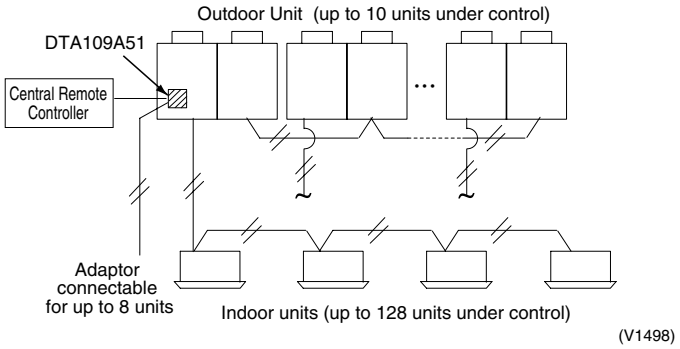
This adaptor is intended for increasing the number of indoor units under control. The scalable device helps extend from the existing 128 indoor units up to 1024 indoor units (in 64 groups under a central controller).



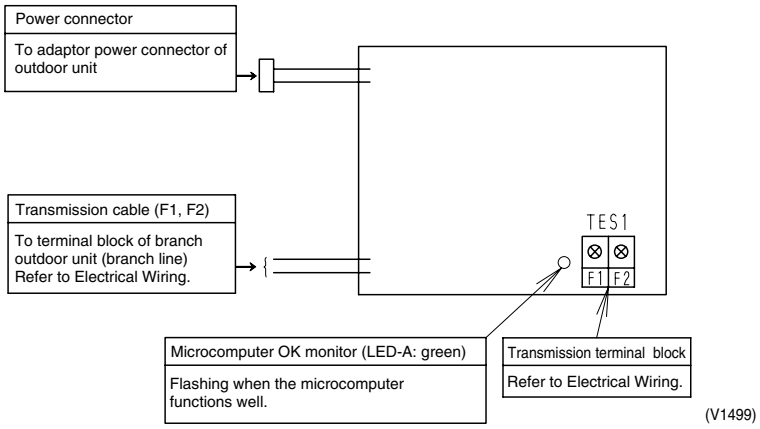
b. Applied Model

All VRV series models (after Type K)

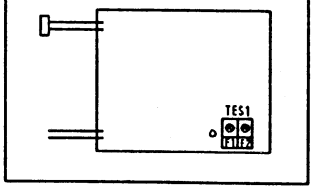
c. System Configuration



d. Names and Functions of Operating Part



Accessories Check the following accessories are included in the kit before the installation

Adaptor	
	×1

PCB support	×4
Clamp	×3
Installation Manual	×1

NOTE This adaptor does not apply to salt damege resistsnce.

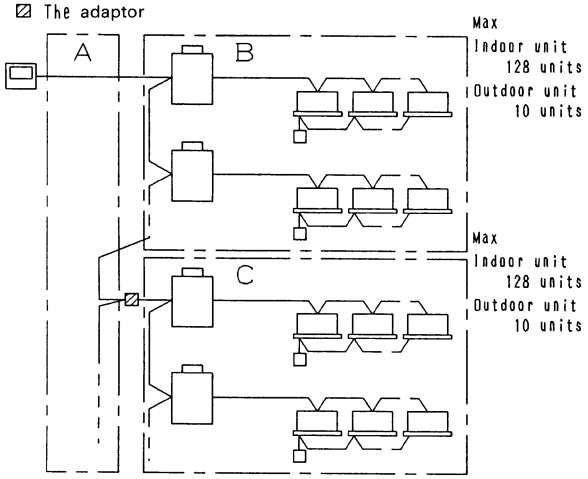
1 General description of system

The adaptor allows easy system expansion as long as restrictions are observed.

1. The below systems can be controlled on the Super Wiring System when using the adaptor.

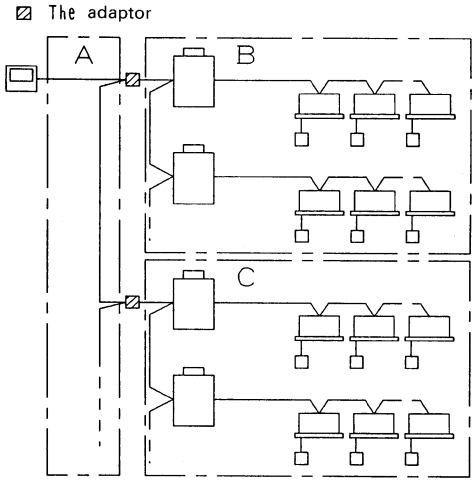
(1) Up to 1024 units can be centrally controlled in 64 different groups. (With 2 central remote controllers, up to 1024 units can be controlled in 128 groups.)

Restrictions on the number of units that can be connected to the Super Wiring System apply to each adaptor.



A maximum of 128 indoor units and 10 outdoor units can be connected in each group B and C.

(2) Wiring restrictions (max. length : 1000m, total wiring length : 2000m, max. number of branches : 16) apply to each adaptor.

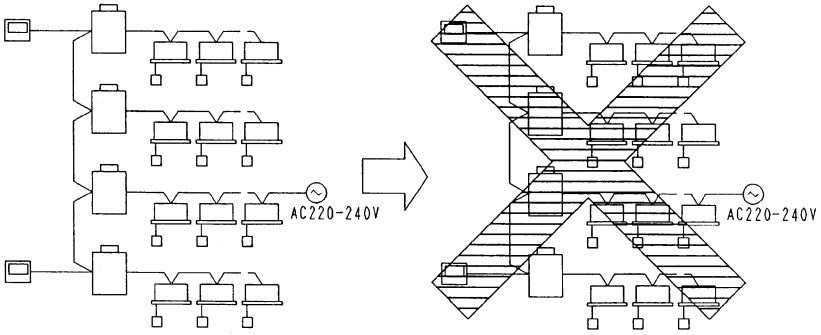


Each group A, B and C can have a maximum wiring length of 1000m, total wiring length of 2000m and a maximum 16 branches.

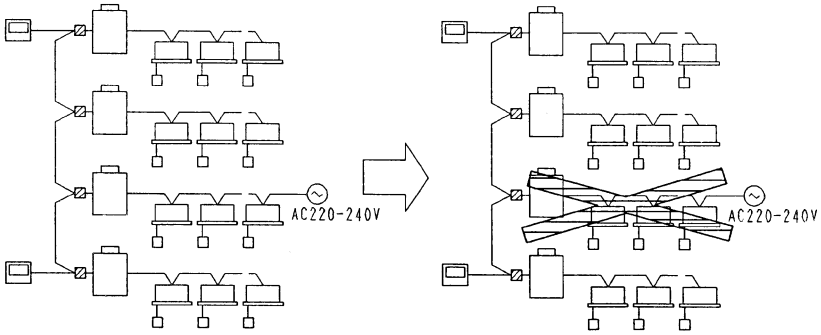
1P013360-1

(3)Setups risky for centralized control systems are possible.

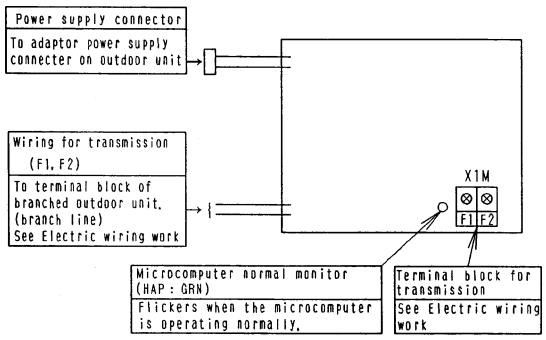
Conventional System Misswiring such as apply 220-240V to circuits could possibly shut down the entire system.



With the adaptor Should trouble occur, only units below the adaptor are shut down. Thus, it is possible to avoid a total system shutdown.



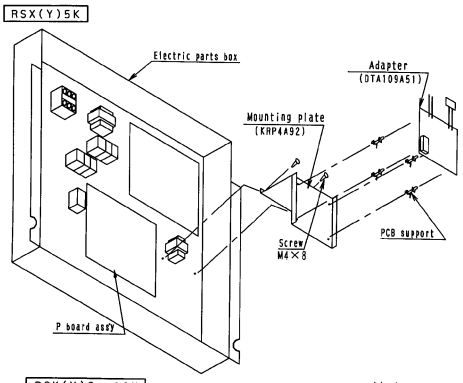
❷Names of parts and functions



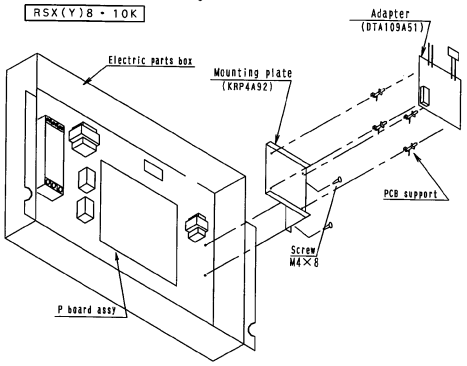
❸Installation

<Outdoor unit>

RSX(Y)5K



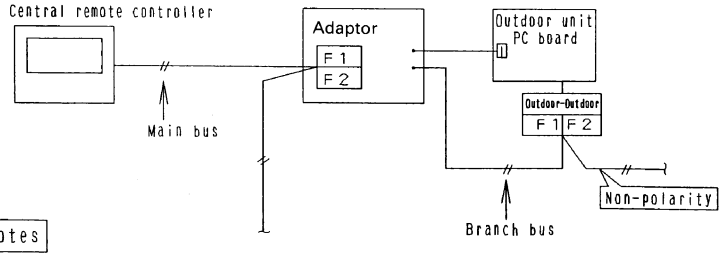
RSX(Y)8・10K



1P013360-2

4 Electric wiring work

(1)Connect the wire from the adaptor to the adaptor power connector on the outdoor unit's PC board.
(For connector Nos., see the electric wiring diagrams for the indoor and function units.)
(2)Connect transmission wires between outdoor units (Outdoor-Outdoor terminal board).
(3)Wire transmission wires to terminal boards as shown below.



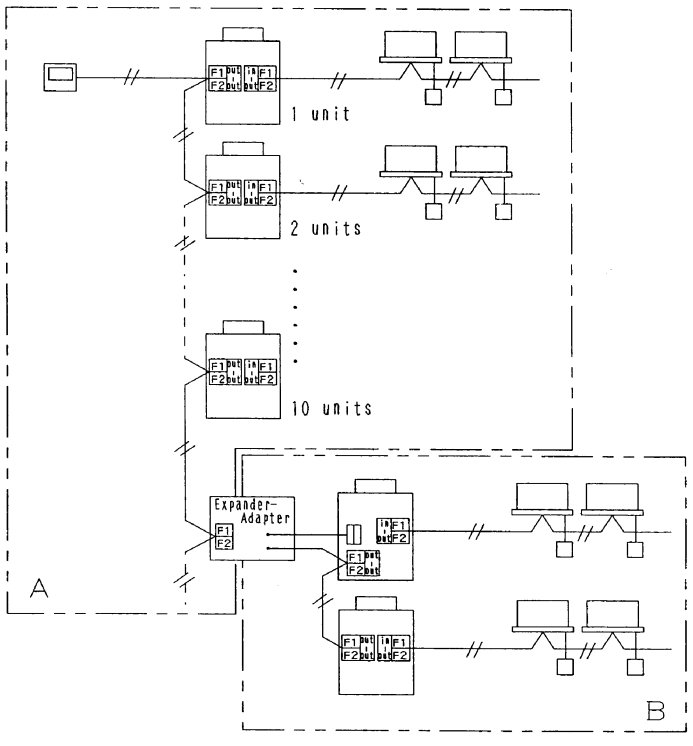
Notes

(Transmission wiring specifications)
- 0.75~1.25mm² sheathed wire (2 wire).

(Transmission wiring length)
- Observe the following limits on transmission wires. The limits apply to each adaptor. If you exceed the limits, it may cause malfunction.
  (Total length : 2000m
  Max. length···1000m
  Max. number of branches : 16)
- At least one outdoor unit and one optional controller for centralized control are required for every main bus and branch bus.
- Up to 8 adaptors can be connected in one system.
- Do not locate adaptors downstream of other adaptors (i.e. : on a branch bus).
- If not used with a central control device, the expander adaptor cannot be used with the wiring adaptor for electrical appendices(KRP2A) or the schedule timer(DST301B51).
- The external control adaptor for outdoor units controls group cooling and demand for each adaptor. (Anything beyond the expansion control falls outside the control domain.)
- Do not turn the system ON/OFF rapidly from the optional controller for centralized control. This can cause temporary erroneous displays.
- Sequential starts is controlled by each expander adaptor.

5 Wiring example

System with more than 10 outdoor units.



Note Wiring restrictions (see"Electric wiring work") apply to each group A and B.

1P013360-3

1.4 <KRP928B2S> Interface Adaptor for DIII Net Use

Safety Precautions

●Read these Safety Precautions carefully to ensure correct installation.
This manual classifies precautions into WARNING and CAUTION.

⚠**WARNING :** Failure to follow WARNING is very likely to result in such grave consequences as death or serious injury.

⚠**CAUTION :** Failure to follow CAUTION may result in serious injury or property damage, and in certain circumstances, may result in a grave consequence.

Be sure to follow all the precautions below ; they are all important for ensuring safety.

⚠ WARNING

- **Installation should be left to the dealer or another qualified professional.**
  Improper installation by yourself may cause malfunction, electrical shock, or fire.
- **Install the set according to the instructions given in this manual.**
  Incomplete or improper installation may cause malfunction, electrical shock, or fire.
- **Be sure to use the standard attachments or the genuine parts.**
  Use of other parts may cause malfunction, electrical shock, or fire.
- **Disconnect power to the connected equipment before starting installation.**
  Failure to do so may cause malfunction, electrical shock, or fire.

⚠ CAUTION

- **An earth leakage circuit breaker should be installed.**
  If the breaker is not installed, electrical shock may occur.
- **Do not install the set in a location where there is danger of exposure to inflammable gas.**
  Gas accumulated around the unit at the worst may cause fire.
- **To prevent damage due to electrostatic discharge, touch your hand to a nearby metal object (doorknob, aluminum sash, etc.) to discharge static electricity from your body before touching this kit.**
  Static electricity can damage this kit.
- **Lay this cable separately from other power cables to avoid external electrical noises.**

●After installation is complete, test the operation of the PCB set to check for problems, and explain how to use the set to the end-user.

1.Overview, Features and Compatible Models

This kit is the interface required when connecting the central controller and a Daikin Room Air Conditioner. Use of the central controller makes it possible to perform the following monitoring and operations. It is compatible with room air conditioners which have an HA connector S21.

1. Run / stop for the central controller and wired remote controller, operating mode selection, and temperature can be set.
2. The operating status, any errors, and the content of those errors can be monitored from the central controller and wired remote controller.
3. Run / stop for the central controller and wireless remote controller, operating mode selection, and the temperature setting can be limited by the central controller.
4. Zone control can be performed from the central controller.
5. The unit can remember the operating status of the air conditioner before a power outage and then start operating in the same status when the power comes back on.
6. Card keys, operating control panels, and other constant / instantaneous connection-compatible equipment can be connected.
7. The Operating / error signals can be read.
8. HA JEM-A-compatible equipment can be connected.
9. The indoor temperature can be monitored from the Ve-up controller.

Precaution
1. When reading the Operating / error signals, a separate external power source (DC 12V) is needed.
2. A separate timer power source (DC 16V) is needed when using the schedule timer independently, and not in conjunction with other central controllers.
3. The range of temperatures that can be set from the central controller is 18°C to 32°C in cooling and 14°C to 28°C in heating.
4. Fan operation cannot be selected from the central controller or wired remote controller.
5. Group control (i.e., control of multiple indoor units with a single remote controller) is not available.
6. Monitoring is not available of the thermo status, compressor operating status, indoor fan operating status, electric heater, or humidifier operating status.
7. Forced thermo off, filter sign display and reset, fan direction and speed settings, air conditioning fee management, energy savings instructions, low-noise instructions, and demand instructions cannot be made.

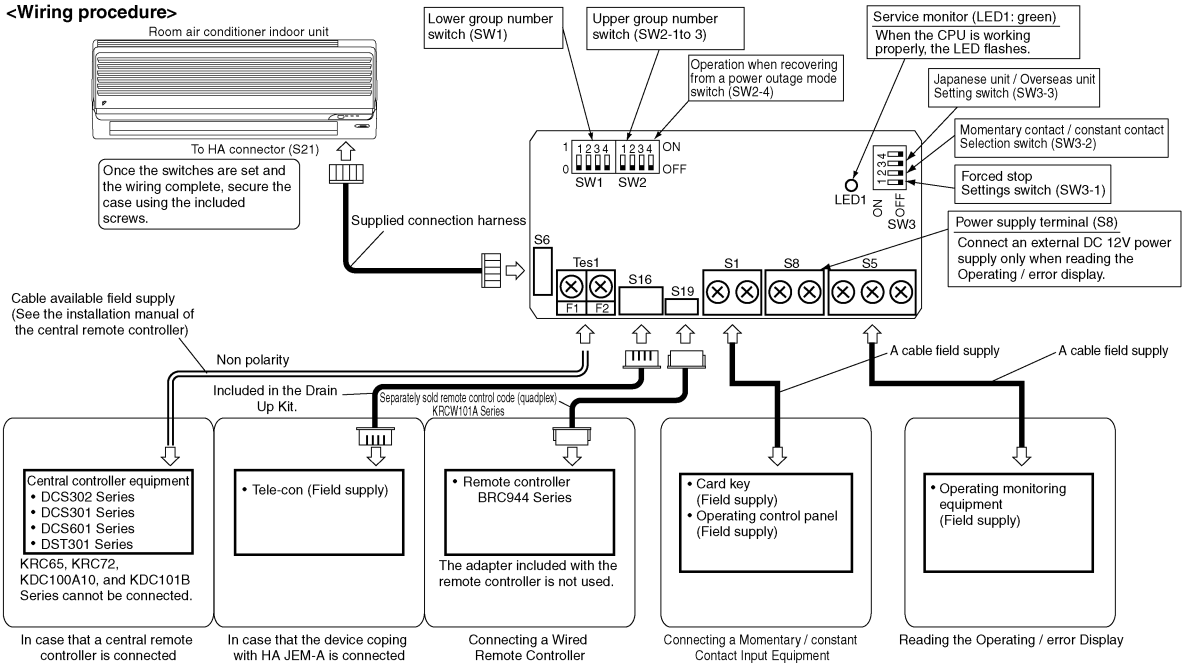
2.Component Parts and Separately-Sold Parts which are Required

This kit includes the following components. Check to ensure that none of these are missing.

Parts	Q'ty	Parts	Q'ty
Kit assy PCB is in the housing. Screw cover	1	Connection harness (about 1.6m)	1set
		Mounting screws	3pcs.
		Binding band	1pc.
		Installation manual	1set

3.Names of Parts and Electric Wiring

<Wiring procedure>



4.Switch Settings

NOTE Turn the power on after all the switches have been set. Settings made while the power is on are invalid.

Open the Kit's case and set the switches on the circuit board.

(1) For Overseas / Japanese unit setting (SW3-3)
Room air conditioners, different methods are used for setting the temperature in automatic mode, so this switch needs to be set.

Destination	SW3-3 setting	What Happens
Japan	OFF (Factory setting)	• "Automatic" operation is not available from the central controller. When using "automatic" operation using the wireless remote controller, the central controller displays automatic cooling (heating) and 25°C. Even if the temperature is changed, it will return to 25°C after a while.
Overseas	ON	• "Automatic" operation is available from the central controller.

(2) Group number settings (SW1 and SW2-1 to SW2-3)
Set these when using the central controller. (Set to the ■ side.) Do not set more than one unit to the same number.

However, these settings do not need to be made when using the schedule timer independently.
(The settings are needed when used in conjunction with another DCS Series central controller.)
In this case, the schedule timer performs an auto address after the power is turned on, so new group numbers are automatically set. Settings made using the switches will be overwritten.

SW2 setting	Upper group NO.
1 2 3	1—
1 2 3	2—
1 2 3	3—
1 2 3	4—
1 2 3	5—
1 2 3	6—
1 2 3	7—
1 2 3	8—

SW1 setting	Lower group NO.	SW1 setting	Lower group NO.
1 2 3 4	0 0	1 2 3 4	0 8
1 2 3 4	0 1	1 2 3 4	0 9
1 2 3 4	0 2	1 2 3 4	1 0
1 2 3 4	0 3	1 2 3 4	1 1
1 2 3 4	0 4	1 2 3 4	1 2
1 2 3 4	0 5	1 2 3 4	1 3
1 2 3 4	0 6	1 2 3 4	1 4
1 2 3 4	0 7	1 2 3 4	1 5

NOTE also that a separate timer power source is needed when using the schedule timer independently.
Power source specs: DC 16V, +10%, -15%, 200mA.
Recommended power source: Omron S82J-01015A. (Should be used with the output voltage adjusted to the center, DC 16V.)

(3) Settings when recovering from a power outage (SW2-4)
This selects whether to restart operation when the power comes back on after a power outage occurred during operation. This setting is given priority in cases where the indoor unit has an auto start ON / OFF jumper. Note also that regardless of whether switch SW2-4 is on or off, the operating mode, set temperature, fan direction and speed settings, and remote control prohibition status are stored.

SW2-4 setting	What Happens
OFF (Factory setting)	Stops after recovering from a power outage
ON	Stops if the unit was stopped before the power outage and runs if it was running.

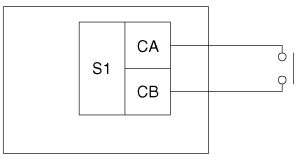
(4) Contact input function settings (SW3-1 to SW3-2)
When using contact input (S1), choose one of the following functions.

S1 operating mode	SW3-1 setting	SW3-2 setting	What Happens	Control mode
Instantaneous contact input (factory setting)	OFF	OFF	The operating status of the air conditioner is reversed by an instantaneous input of 100 msec or more.	Last command priority
Constant contact input		ON	Contact - Open to close: air condition runs. Close to open: air conditioner is stopped (NOTE 1).	ON / OFF control is rejected (operate / stop / timer prohibition) (NOTE 2).
Forced stop or remote controller permission input	ON	Invalid	Contact - Open to close: air condition stops (forced stop). Close to open: no change in operating status.	During a forced stop, all remote controller actions are prohibited.

NOTE1: Since central equipment and HA JEM-A-compatible equipment both use last command priority, the contact status and operating status of the air conditioner might not match sometimes.
Example: If the unit is run from the central controller while the air conditioner is stopped with an open contact, the contact will be open and the unit will be running.

NOTE2: Operating mode and fan direction and speed settings can be changed.

KRP928B2S



Run / stop Input
Contact specs
No-voltage minute electric current contact
(Minimum applicable load DC 12V, 1mA or lower)

Total wire length max: 100m

5.Control Codes

When using a central remote controller, the operating codes can be used to limit operation from wireless remote controllers.
○ : permitted; × : prohibited

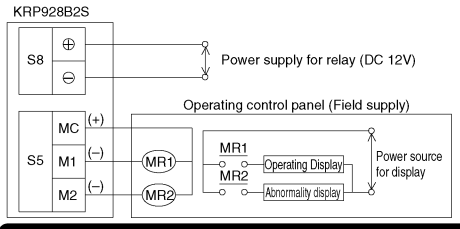
S1 operating mode	Control mode	Control code	Operations from the remote controller: "Run" control from the central controller: Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	"Stop" control from the central controller: Run / timer	Stop	Operating mode temperaturet	Fan direction and fan speed	Operations from central controller, contact input and HA JEM-A input
Instantaneous contact mode	ON / OFF control is rejected	0,1,3	×	×	○		×	×	○		
		10,11	×	×	×		×	×	×		
	Only OFF control is accepted	2 12–19	×	○	×		×	○	×		
	Central priority	4	○	○	○		×	○	×		
		5	○	○	○	○	×	×	○	○	○
	Last command priority	6,7	○	○	○		○	○	○		
	Timer operation is accepted by remote controller	8	○	○	○ (Only during timer operation)		×	○	×		
		9	○	○	○ (Only during timer operation)		×	×	○		
Constant contact mode			×	×	○		×	×	○		
Forced stop			×	×	×	×	×	×	×	×	

The remote controller permission / prohibition settings using the Ve-up controller are as follows.
○ : permitted; × : prohibited

S1 pin operating mode	Ve-up controller settings: Start / stop	Change operating mode	Change set temperature	Operations from the remote controller: Run / timer	Stop	Operating mode temperature	Fan direction and fan speed	Operations from central controller, contact input and HA JEM-A input
Instantaneous contact mode • Constant contact mode	ON / OFF control is rejected	permitted	permitted	×	×	○	○	○
			prohibited	×	×	○		
		prohibited	permitted	×	×	×		
			prohibited	×	×	×		
	Only OFF control is accepted	permitted	permitted	×	×	○		
			prohibited	×	○	×		
		prohibited	permitted	×	○	×		
			prohibited	×	○	×		
Instantaneous contact mode	Last command priority	permitted	permitted	○	○	○		
			prohibited	○	○	○		
		prohibited	permitted	×	○	×		
			prohibited	×	○	×		
Constant contact mode		permitted	permitted	×	×	○		
			prohibited	×	×	○		
		prohibited	permitted	×	×	×		
			prohibited	×	×	×		
Forced stop	Does not affect settings			×	×	×	×	

6.Read Operating / Error Display Signal

The Operating / error signals can be read from the contact output (S5).
Output specs
M1: Turn MR 1 ON when the air conditioner is running.
M2: Turn MR 2 when a communication error has occurred between the KRP928B2S and the air conditioner, or MR 1 is ON and the unit has stopped after an error.
MR 2 is not turned ON during a warning.



Relay specs (MR1 and MR2)
Coil voltage: DC 12V
Coil resistance: 160Ω ± 10%
(Matsushita Electric HC Relay, Omron MY Relay)
Wiring length
Max: 100m

7.Combining Equipment

The central controller can be combined with the following devices.

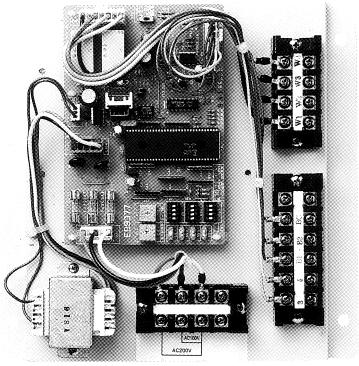
	Central Remote Controller	ON / OFF controller	Schedule timer	D-BIPS	Forced stop contact input	Constant contact input	Instantaneous contact input	HA JEM-A-compatible equipment	Wired Remote Controller	Wireless Remote Controller
Central Remote Controller	○	○	○	○	○	○	○	○	○	○
ON / OFF controller	○	○	○	○	○	○	○	○	○	○
Schedule timer	○	○	×	×	○	○	○	○	○	○
D-BIPS	○	○	×	×	○	○	○	○	○	○
Forced stop contact input	○	○	○	○	×	×	×	○	○	○
Constant contact input	○	○	○	○	×	×	×	○	○	○
Instantaneous contact input	○	○	○	○	×	×	×	○	○	○
HA JEM-A-compatible equipment	○	○	○	○	○	○	○	×	○	○
Wired Remote Controller	○	○	○	○	○	○	○	○	×	×
Wireless Remote Controller	○	○	○	○	○	○	○	○	×	○

3P157704-2A

1.5 <DTA103A51> Wiring Adaptor for Other Air-Conditioners

a. Outline / Features

This is a interface adaptor required for other equipment, such as room air-conditioner and other air-conditioner or equipment to connect to the central control equipment (Central remote controller, Unified ON/OFF controller and Schedule timer), and by combining with the central control equipment, you can set the control mode, such as unified ON/OFF control, timer operation, remote controller rejection / acceptance and etc., and also display the operating status. Especially, this adaptor is designed with wide usage to be able to connect the air-conditioner of other manufacturer.

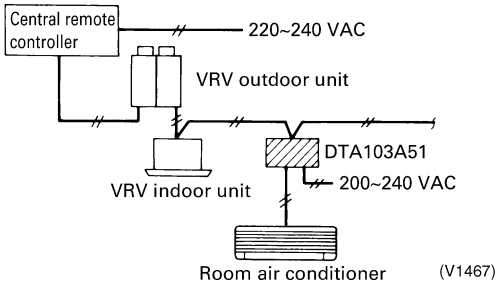


b. Applied Model

Applied model	Remark
1. Room air-conditioner	
2. Other equipment, such as fan etc.	
3. Air-conditioner of other manufacturer	

Note: The adaptor should be installed in the electrical box (local supply), which be installed outside of the indoor unit.

c. System Configuration



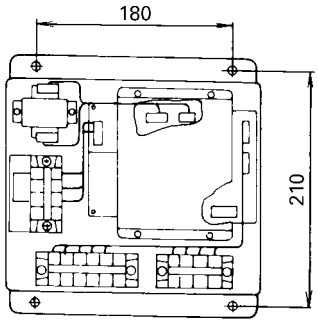
d. Specifications and Dimension

Specifications

	Specifications
Rated voltage	220~240V±10% (50Hz), 220VAC±10% (60Hz)
Power consumption	Max. 2.4W
Operating temperature	-10 ~ + 50°C
Humidity	95% RH or less
Weight Approx.	1060g
Installation method	Outside of the unit (with box)

Note: The electric box (local supply) for the adaptor is required for the installation, which should be installed outside of the indoor unit.
Size : 230 (W) × 230 (D) × 60 (H)

Dimension

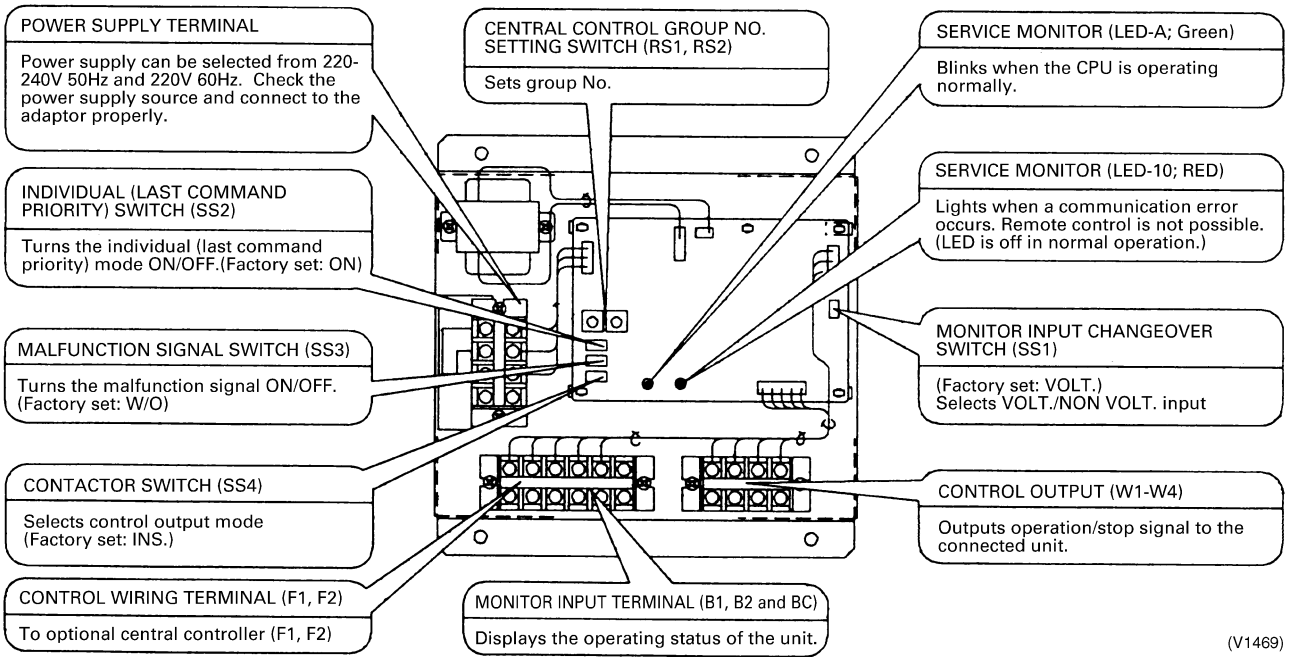


(V1468)

Specifications of contacts

[Input signal]	[Output signal]
■ Normal operation signal and error input signal (Normally open contact) Use a contact for micro-current (Max. 12VDC, 1mA) ■ Voltage and non-voltage can be changeover by switch. In case of voltage : Power supply specifications : DC12~24V, 10mA	■ Non-voltage constant normally open contact and instantaneous normally open contact (500ms pulse duration) can be changeover by the switch. ■ Contact rating AC voltage 100~240V; current 1mA~2A DC voltage 5~24V ; current 1mA~3A

e.Names and Functions of Operating Part



(V1469)

■ Central group No. setting
Set by RS1 setting switch from among 1~4
Set by RS2 from among 0~9, A~F
Set other equipment group No. is not duplicated.

f. Description of Functions

Control functions

By using this adaptor, the following control and monitoring can be carried out from central controllers.

1. Start/Stop operation
   Outputs a non-voltage contact signal to start or stop other air-conditioner, etc..
2. Operation monitor, error monitor
   Receives a contact signal and monitors operation and error status.
   Enables you to select whether voltage/non-voltage and whether start/stop error is detected.

Switch setting and its functions

By setting the switches, you can select the operation according to the applications.

Note: All the switch is set at “OFF” side when shipped from factory.

■ Switch setting of the wiring adaptor for other air-conditioner

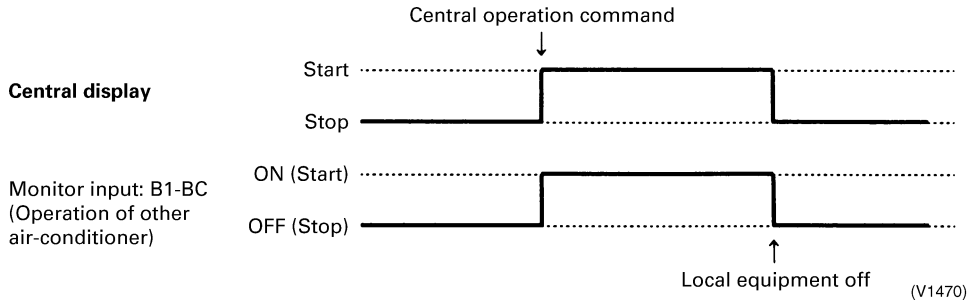
	Name	Operation	OFF	ON
SS1	Monitor input switch	Changeover VOLT. / NON-VOLT.	Non-voltage	Voltage
SS2	Last command priority	Possible to operate ON/OFF from other air-conditioner	Using	Not using
SS3	Start/stop error	Start/stop error detection	Not using	Using
SS4	Output switch	Changeover of control output	Instantaneous	Constant

Details of functions

1. Last command priority (SS2)

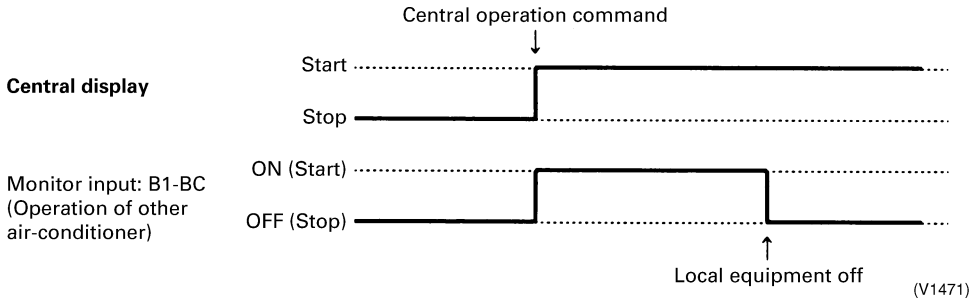
■ Using last command priority

The operation display of the central control equipment complies with the monitor input from other air-conditioner, etc..



■ No last command priority

The operation display of the central controller shows the output status of central control equipment, and has no relation with monitor input.

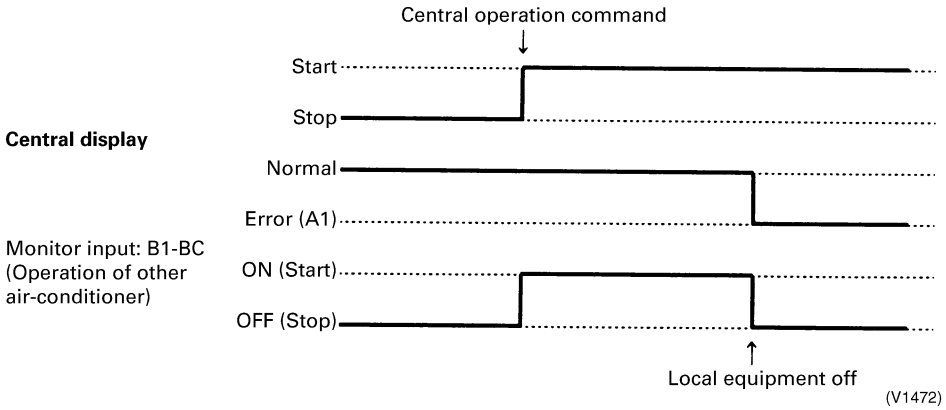


2. Start/Stop error

This is set whether the error monitor should be displayed, when other air-conditioner, etc. are not operated notwithstanding of ON command from the central control equipment. If the last command priority is effective (SS2 : OFF), start/stop error is not displayed.

■ Display start/stop error (SS3 : ON)

If the monitor input is not received even if ON command is sent from the central control equipment, an error is displayed on the central control equipment. (error code A1)



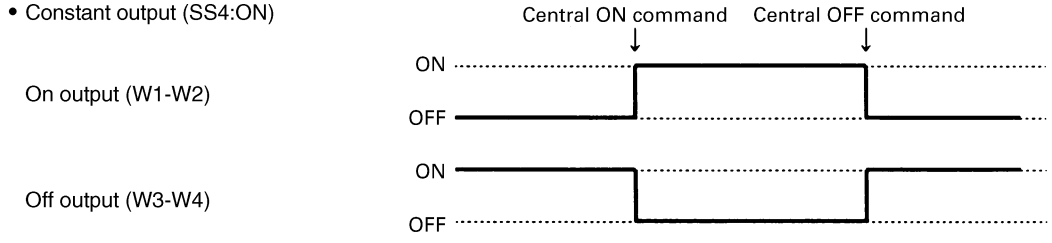
■ No display of start/stop error (SS3 : OFF)

The above error is not displayed.

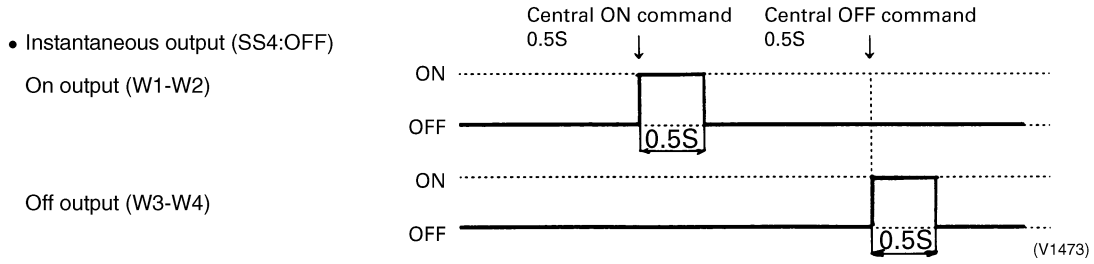
3. Output switch (SS4)

Alternately switches control output (W1-W2, W3-W4) between instantaneous and constant output.

• Constant output (SS4:ON)



• Instantaneous output (SS4:OFF)



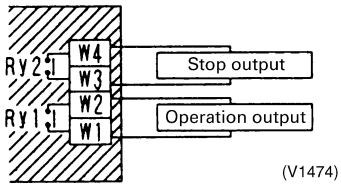
g. Wiring and Setting Instructions

Instructions for switch setting

Output for control

Both ON output terminals (W1, W2) and OFF output terminals (W3, W4) are non-voltage contact output.

Specifications of contact of Ry1 and Ry2		
Voltage specifications	Max. current	Min. current
50Hz 220-240V 60Hz 220V	2A	1mA
DC 5-24V	3A	1mA

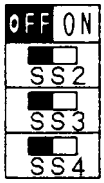


(V1474)

Output mode has both instantaneous and constant output.
Mode is changed by the contactor switch (SS4). (Factory set : INS.)

Setting by switch ON/OFF

	Setting	OFF	ON
SS2	Individual	ON	OFF
SS3	Mal. signal	W/O	W
SS4	Contactor	INS.	Con.

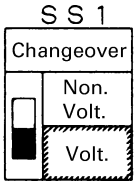


(V1475)

Note: All the switch is set at “OFF” side when shipped from factory.

Monitor input

Connect the wiring as follows depending on whether input carries a voltage (VOLT.) or non-voltage (NON-VOLT.).
Use the monitor input changeover switch (SS4) to switch the mode. (Factory set: VOLT.)



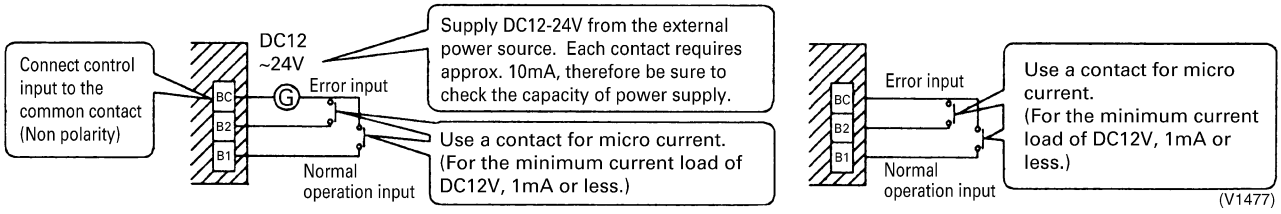
(V1476)

(For voltage input)

Set the monitor input changeover switch to VOLT. (Factory set: Volt.)

(For non voltage input)

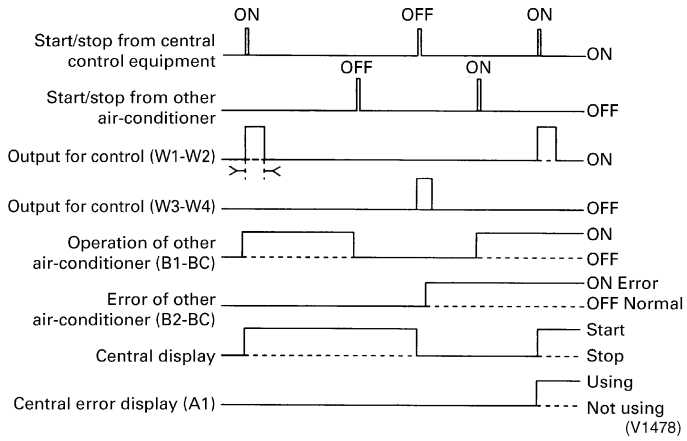
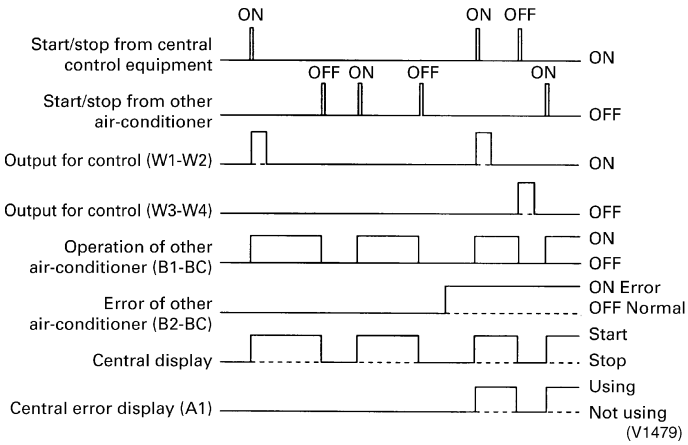
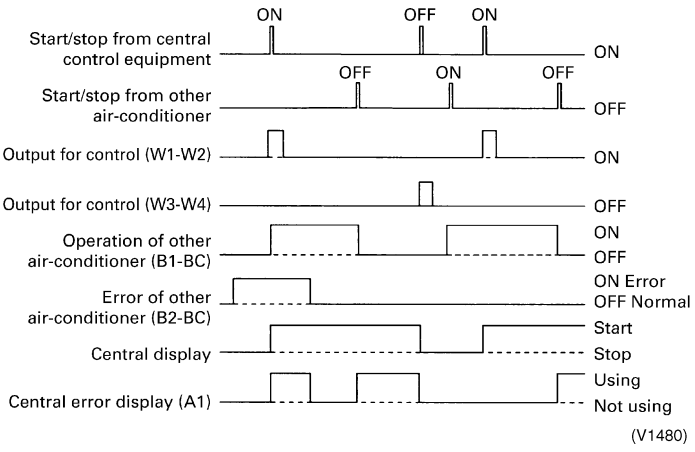
Set the monitor input changeover switch to NON VOLT. (Factory set: VOLT.)

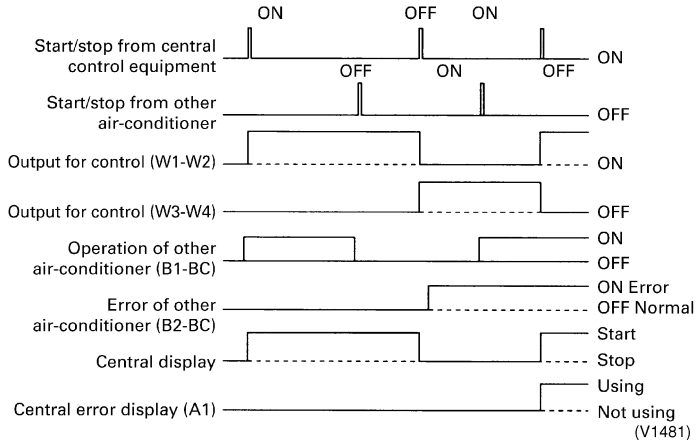
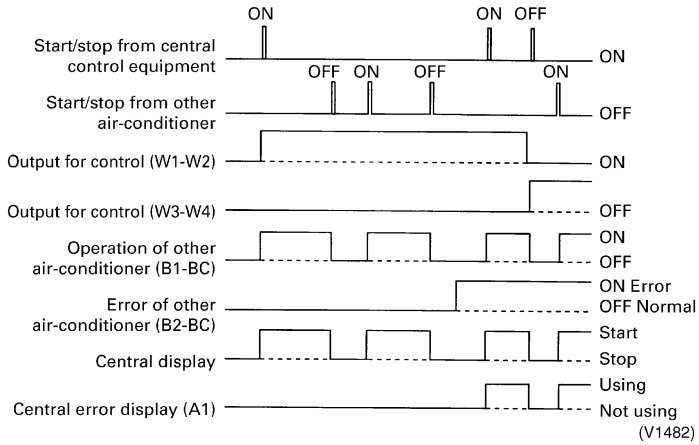
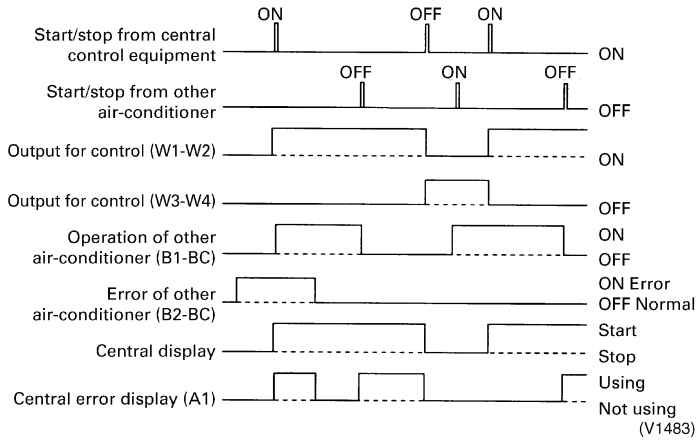


(V1477)

- If you use the normally open contact, which is turned ON when the equipment is in normal operation, remove the short-circuit wire between B2 and BC and connect the output of equipment.
- If you use the normally open contact, which is turned ON when the equipment is malfunctioned, connect the output of the equipment between B2 and BC. (If there is a switch for selecting start/stop error, it is possible to detect the start/stop error.)
- When you operate from the central control equipment, the central control equipment displays error (Malfunction code A), if contact between B2 ~ BC is “ON” or if the contact between B1~BC is “OFF” when the switch (SS3) is set to detect the start/stop error.
- When turned ON by central control equipment, it takes 10~30 seconds to monitor an error display.

Operation of each switch settings

SS4 Output switch : OFF (Instantaneous output)	Description of operation	
1. SS2 : ON (No last command priority), SS3 : OFF (No start/stop error) 	Output for control :	Instantaneous output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when the operation is controlled by the central control equipment and when an error is input from other air-conditioner.
2. SS2 : OFF (Last command priority) ; SS3 : ON or OFF 	Output for control :	Instantaneous output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when an error is input from other air-conditioner, when other air-conditioner is in operation.
3. SS2 : ON (No last command priority) ; SS3 : ON 	Output for control :	Instantaneous output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when the operation is controlled by the central control equipment and when an error is input from other air-conditioner, or other air-conditioner is not in operation against the operation command from the central control equipment.

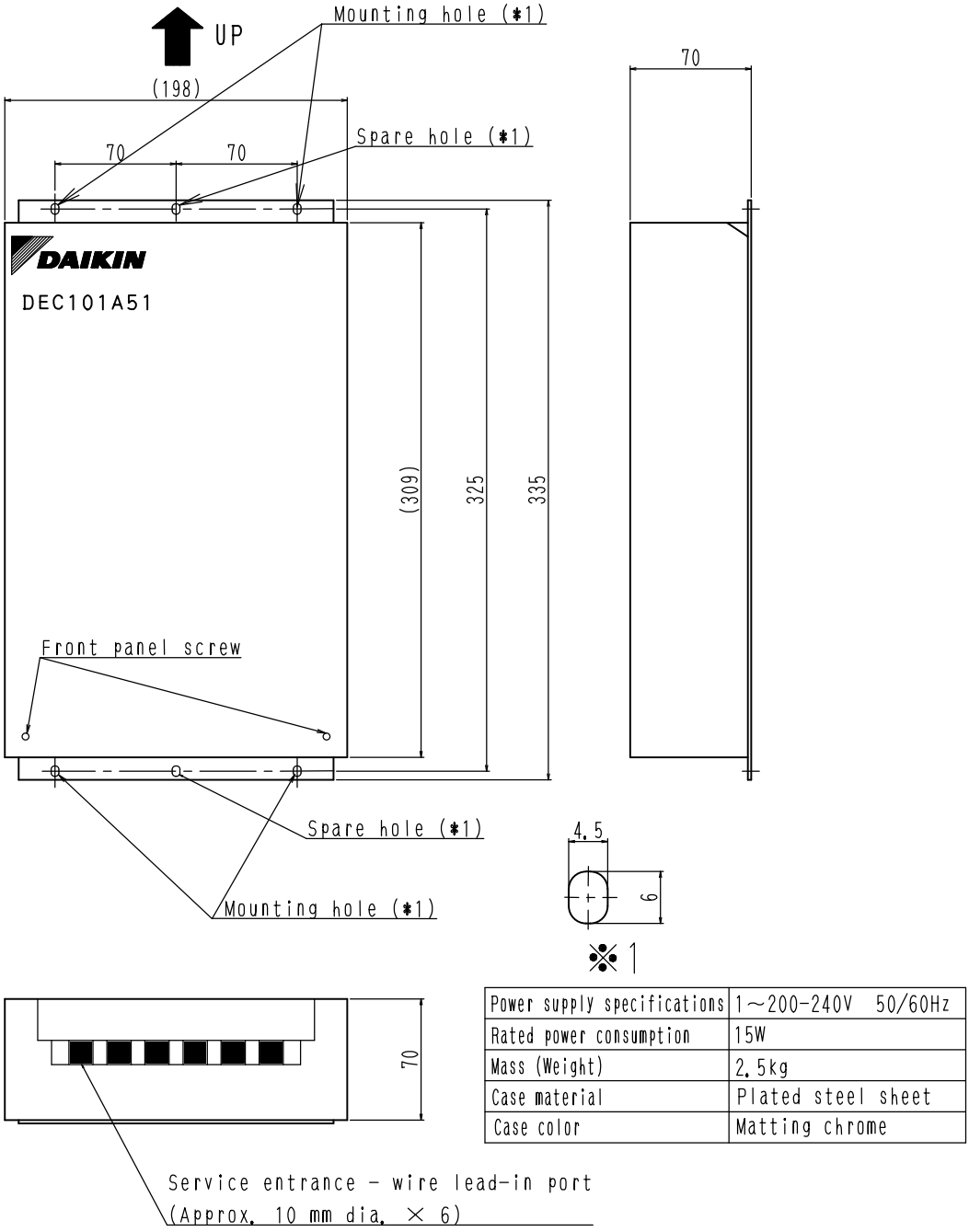
SS4 Output switch : OFF (Instantaneous output)	Description of operation	
4. SS2 : ON (No last command priority) ; SS3 : OFF (No start/stop error) 	Output for control :	Constant output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when the operation is controlled by the central control equipment and when an error is input from other air-conditioner.
5. SS2 : OFF (Last command priority) ; SS3 : ON or OFF 	Output for control :	Constant output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when an error is input from other air-conditioner, when other air-conditioner is in operation.
6. SS2 : ON (No last command priority) ; SS3 : ON (Start/stop error) 	Output for control :	Constant output
	Central operation display :	According to the instruction from central control equipment
	Central error display :	Error is displayed only when the operation is controlled by the central control equipment and when an error is input from other air-conditioner, or other air-conditioner is not in operation against the operation command from the central control equipment.

Note: You should avoid using modes **1~4**.
<Reason>
Because even though operation is being carried out from the central control equipment, it can't perceive whether other air-conditioner, etc. are actually operating or not.

2 Di/Dio Unit

2.1 <DEC101A51> Di Unit

a. Dimensions



Power supply specifications	1～200-240V 50/60Hz
Rated power consumption	15W
Mass (Weight)	2.5kg
Case material	Plated steel sheet
Case color	Matting chrome

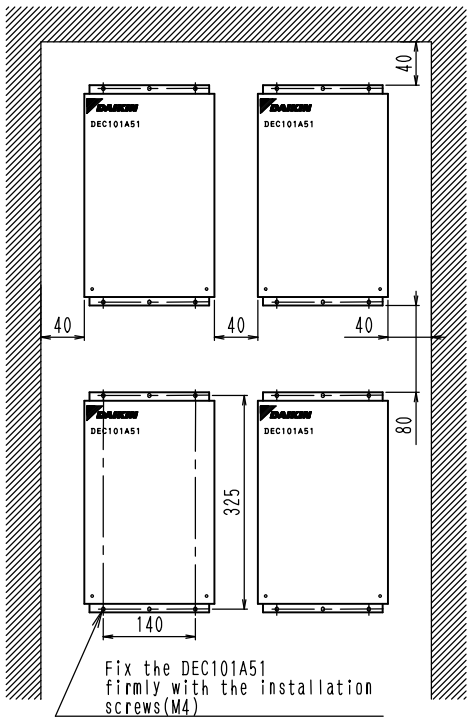
(Installation Place)
- ●Install the unit indoors where it is not exposed to water and dust or dirt.
- ●Install the unit where both temperature and humidity do not become high.
  (Operating (available) temperature: -10 ～ +40℃
  Operating (available) humidity: 10 ～ 85%)
- ●Connect the wiring to be connected in the field from the lower surface side.
  It is, therefore, necessary to make arrangements so as not to attach other equipment within 80 mm from the lower surface of this equipment.
- ●Install this equipment in a place in which only the authorized personnel can touch it.

(Installation Direction)
- ●Install this equipment vertically to the floor surface. It should be noted that if it is installed in the horizontal direction, a malfunction or failure may result.

(Installation Method)
- ●Ensure that this equipment is installed with 4 screws (screw size M4 min.).

Restrictions in Continuous Installation

In case where several devices are set up and installation inside the power board is carried out, each equipment installation space and space between the wall surface and this equipment should be left at least as shown below.



3D047630

b. System Wiring Diagram

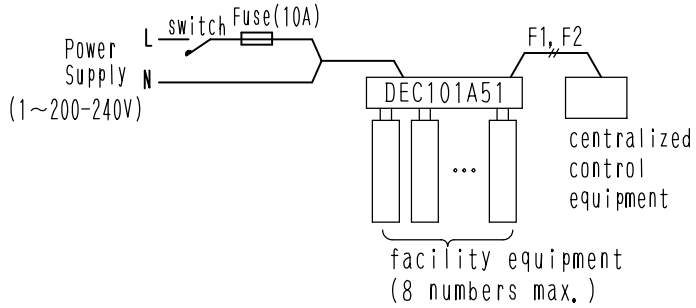
Wiring Procedure

①<F1/F2> wiring between this equipment and centralized control equipment is required.

② The connection to the facility equipment and setting of various switches are required
See the "Wiring with Facility Equipment" paragraph

③ Connect the power supply and earth.
See the "Power Supply & Earth Wiring" paragraph.

④ For the wiring connection and clamping method, refer to the "Wiring Lead-in" paragraph.



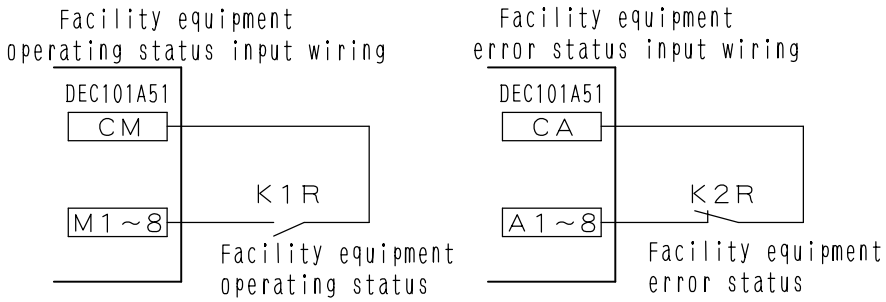
Wiring with Facility Equipment

<CAUTION>The length of wiring between this equipment and facility equipment is 100 m max.

Abnormal input

When the contact is "Open" or "Closed", "Error" is produced.

Input specifications: No-voltage "a" contact
(The welding current is approx. 10 mA when the applied voltage is 20 to 30 V DC and the contact is "Closed".)
For input, use the contact for micro current. (12VDC, 1mA max.)



Power Supply & Earth Wiring

- For power supply, 1 ~ 200 - 240 V is used. The wiring to the power terminal block (L/N) is required. The electric wire used should be 1.25 to 2.0 mm^2. After checking the power supply specifications, make correct connections.
- Connect the earth wiring to the "⏚" terminal. Use a 2.0 mm^2 wire.

3D047631

c. Initial Setting

Initial setting ① ~ ⑤ is required before the power is turned ON.

① Set the top address of this equipment with the DⅢ-NET setting switch (DS1/RS1). Using the DⅢ-NET setting switch (DS1), set the range of Address No. that is set in this equipment. Address Nos. 1-00 to 1-15 are factory controlled before shipment.

Control range DS1	1-00～1-15	2-00～2-15	3-00～3-15	4-00～4-15
Control range DS1 (high order) setting (Address range)				

when a product is discharged from the factory

This indicates the switch knob.

Set Address No. (low order) with the centralized address setting switch (RS1). Referring to the table below, set the address number low order.

(Address Nos. are 1-00, 1-01, --- 1-15, 2-00, --- 4-15.)

RS1 Switch Setting Table

Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
Address No.	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	(low order)

<when a product is discharged from the factory>

<Example> When Address No. is set to 1-08



Address No. indicates the following portion in this case.

1-08

High order Low order

In this case, it follows that this equipment uses Address Nos. 1-08 to 1-15. (8 numbers max.)

* Number of centralized addresses used

The number of centralized addresses used is determined by the top address set in this item and the number of facility equipment connected that is set in "(6) Quantity Change".

Example 1: When the top address was set to "1-00" and the number of facility equipment was set to "2", it follows that "1-00" and "1-01" are being used.

Example 2: When the top address was set to "3-15" and the number of facility equipment was set to "8", it follows that "3-15", "4-00", "4-01", "4-02", "4-03", "4-04", "4-05" and "4-06" are being used.

<CAUTION>

This equipment can use the addresses between "1-00" and "4-15". (It is impossible to use Address 5-00 and subsequent addresses, and use any address in duplication.

Example: When the top address was set to "4-14", the number of facility equipment cannot be set to "8". In this case, set it to "1" or "2".)

② DS2 & DS3 Setting

This switch selects whether the input is abnormal with the abnormal input contact (A1 to A8) open or closed.

OFF (factory preset before shipment) --- Abnormal in the open condition

ON ---------- Abnormal in the closed condition

The relationship between each switch and abnormal input is as described below.

Input A1: DS2, 3-1
Input A2: DS2, 3-2
Input A3: DS2, 3-3
Input A4: DS2, 3-4
Input A5: DS2, 3-5
Input A6: DS2, 3-6
Input A7: DS2, 3-7
Input A8: DS2, 3-8

③ DS6-1 Setting

The mask time for abnormal input after the operation input was applied is set

OFF (factory preset before shipment) --- The abnormal inputs (A1 to A8) are masked for 10 seconds after the operation input was applied.

ON ---------- The abnormal inputs (A1 to A8) are masked for 30 seconds after the operation input was applied.

④ DS6-2 Setting

The operation in case where the facility equipment was reset from the abnormal condition is switched

OFF (factory preset before shipment) --- If the facility equipment error is recovered, automatic reset is carried out.

ON ---------- Even when the facility equipment error is recovered, no reset operation is performed if no operation input is turned "OFF".

3D047632

Initial setting ① ~ ⑤ is required before the power is turned ON.

⑤ DS6-3 Setting

The display on the centralized control equipment in case where abnormal inputs (A1 to A8) were applied when the facility equipment is stopping (M1 to M8 "OFF") is changed over

OFF (factory preset before shipment) - - - The error is displayed in case where an abnormal input was applied even when the facility equipment is stopping.

ON ---------- No error is displayed even when an abnormal input is applied in case where the facility equipment is stopping

⑥ TP1 Setting (Facility equipment quantity change)

This function is used to set the number of facility equipment controllable with this equipment. (The number of controllable facility equipment factory preset before shipment is 8.)

(Setting Method)

1. Turn the power "ON" with TP1 short-circuited and change the quantity of facility equipment according to the DS4, 5 setting.
   The relation between DS4, 5 setting and facility equipment quantity is as per the table below.
2. Turn the power OFF.
3. Open the TP1 and turn all DS4, 5 switches "OFF".
4. Turn the power ON gain.
5. Short-circuit the TP1, and check to see if the setting coincides with the number of facility equipment connected to this equipment.
6. Finally, open the TP1.

TP1	Shortcircuit (with power "ON")			
DS4 DS5				
Setting Contents	1 unit	2 units	3 units	4 units
TP1	Shortcircuit (with power "ON")			
DS4 DS5				
Setting Contents	5 units	6 units	7 units	8 units

 ←This indicates the switch knob.

By short-circuiting the quantity change TP1 in the normal operating condition, the setting status can be confirmed.

operation monitor

1 unit	2 units	3 units	4 units
☼○○○○○○○	○☼○○○○○○	○○☼○○○○○	○○○☼○○○○

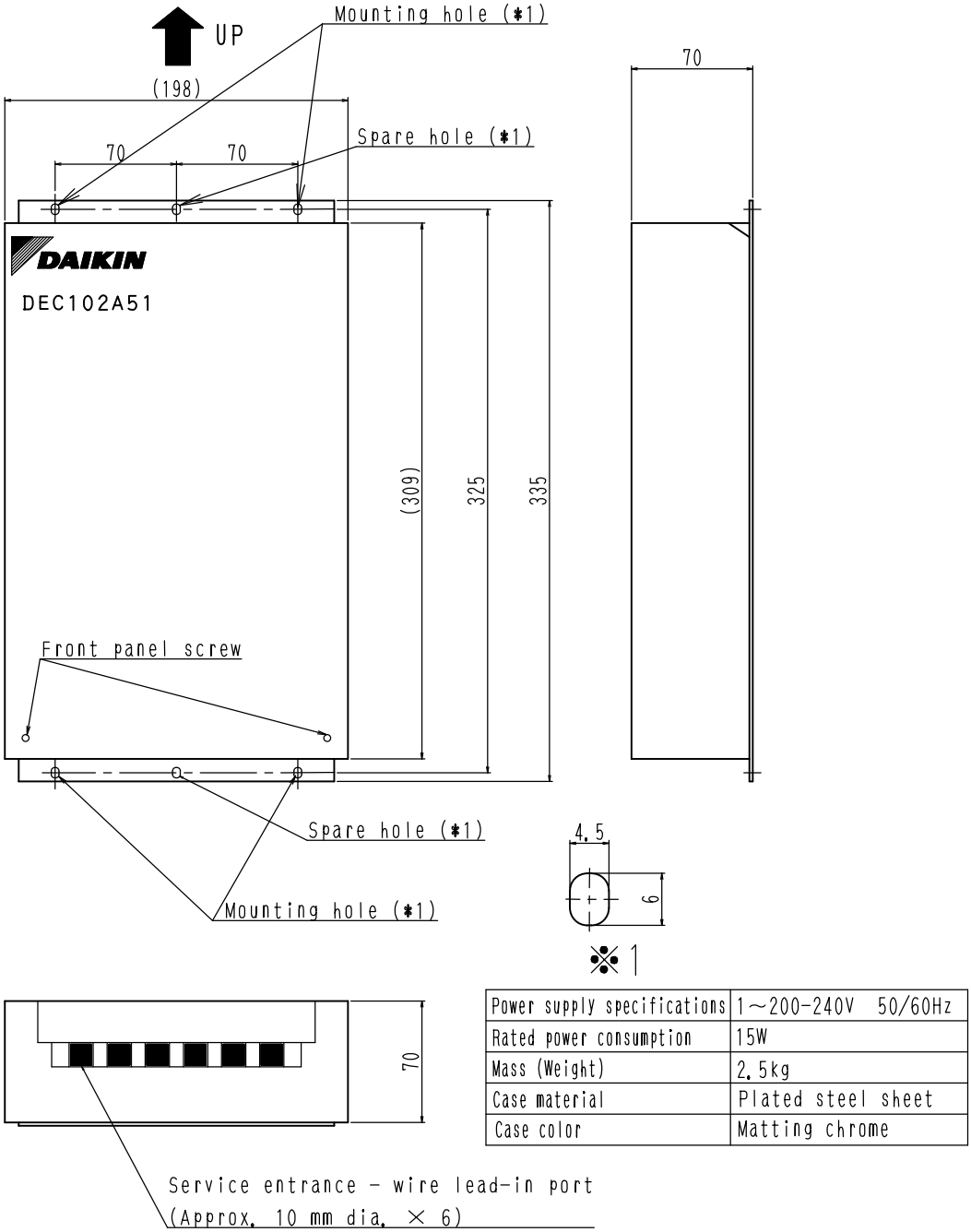
5 units	6 units	7 units	8 units
○○○○☼○○○	○○○○○☼○○	○○○○○○☼○	○○○○○○○☼

☼ This indicates LED lighting.

3D047633

2.2 <DEC102A51> Dio Unit

a. Dimensions



Power supply specifications	1～200-240V 50/60Hz
Rated power consumption	15W
Mass (Weight)	2.5kg
Case material	Plated steel sheet
Case color	Matting chrome

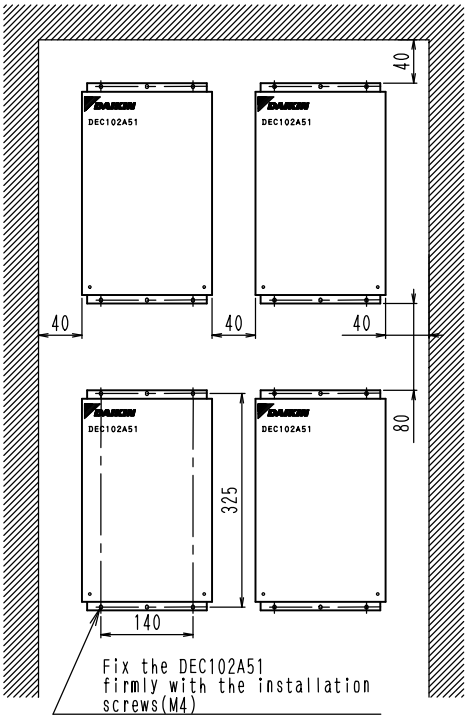
(Installation Place)
- ●Install the unit indoors where it is not exposed to water and dust or dirt.
- ●Install the unit where both temperature and humidity do not become high.
  (Operating (available) temperature: -10 ～ +40℃
  Operating (available) humidity: 10 ～ 85%)
- ●Connect the wiring to be connected in the field from the lower surface side.
  It is, therefore, necessary to make arrangements so as not to attach other equipment within 80 mm from the lower surface of this equipment.
- ●Install this equipment in a place in which only the authorized personnel can touch it.

(Installation Direction)
- ●Install this equipment vertically to the floor surface. It should be noted that if it is installed in the horizontal direction, a malfunction or failure may result.

(Installation Method)
- ●Ensure that this equipment is installed with 4 screws (screw size M4 min.).

Restrictions in Continuous Installation

In case where several devices are set up and installation inside the power board is carried out, each equipment installation space and space between the wall surface and this equipment should be left at least as shown below.

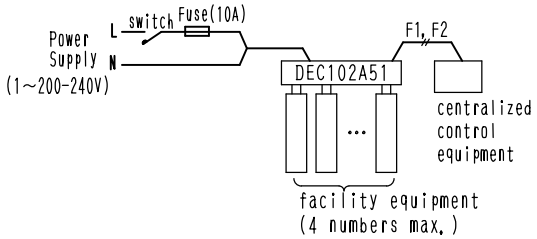


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b. System Wiring Diagram

Wiring Procedure

① <F1/F2> wiring between this equipment and centralized control equipment is required.
② The connection to the facility equipment and setting of various switches are required. See the "Wiring with Facility Equipment" paragraph.
③ Connect the power supply and earth. See the "Power Supply & Earth Wiring" paragraph.
④ For the wiring connection and clamping method, refer to the "Wiring Lead-in" paragraph.



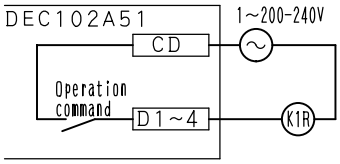
Wiring with Facility Equipment

<CAUTION>The length of wiring between this equipment and facility equipment is 100 m max.

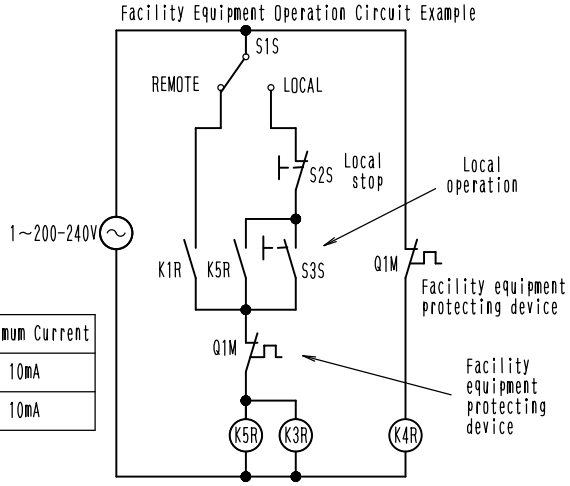
Operation output

It is possible to select continuous 1 output (4 points) or instantaneous 2 output (ON/OFF pair - 2 points).

● Wiring at Continuous Output (Up to 4 facility equipments can be connected.)



Facility Equipment Operation Circuit Example

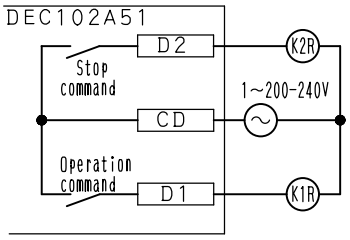


Output SPEC: No-voltage "a" contact

Voltage SPEC	Maximum Current	Minimum Current
200-240V	1.5A (Resistive Load)	10mA
DC5~24V	2A (Resistive Load)	10mA

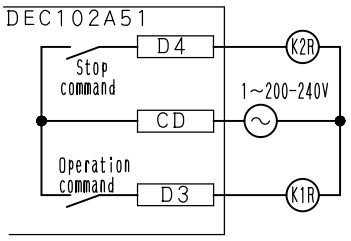
● Wiring at Instantaneous Output (Up to 2 facility equipments can be connected.)

Output wiring for facility equipment 1



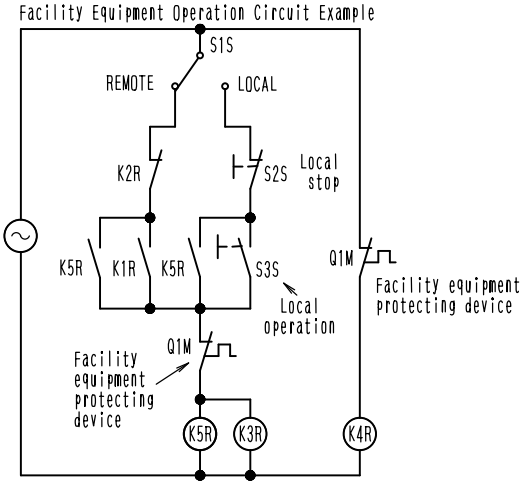
(Terminal size: M3.5)

Output wiring for facility equipment 2



(Terminal size: M3.5)

Facility Equipment Operation Circuit Example



Output SPEC: No-voltage "a" contact

Voltage SPEC	Maximum Current	Minimum Current
200-240V	1.5A (Resistive Load)	10mA
DC5~24V	2A (Resistive Load)	10mA

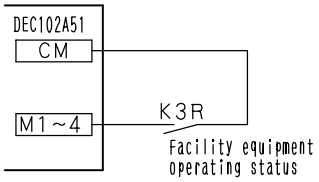
Operation input

When the contact is "Closed", "Run" is to be inputted. Input SPEC: No-voltage "a" contact (When the applied voltage is 20 to 30 V DC and the contact is "Closed", the welding current is approx. 10 mA.) For input, use a contact for micro current. (12 V DC, 1 mA max.)

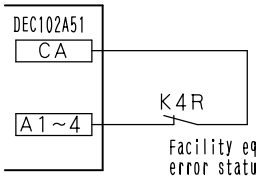
Abnormal input

When the contact is "Open" or "Closed", "Error" is produced. Input specifications: No-voltage "a" contact (The welding current is approx. 10 mA when the applied voltage is 20 to 30 V DC and the contact is "Closed".) For input, use the contact for micro current. (12 V DC, 1 mA max.)

Facility equipment operating status input wiring



Facility equipment error status input wiring



When the switch was set to "Ins." (Instantaneous Output), the operation input terminals M3, M4 and abnormal input terminals A3, A4 are not used.

Terminal used in case where the switch was set to "Continuous Output" (Con.) or "Instantaneous Output" (Ins.)

Facility equipment (Up to 4 units can be connected to single DEC102A51.)	Terminal used in the case of setting to "Continuous Output"					
	Run/Stop output terminal		Operation input terminal		Abnormal input terminal	
1st equipment	CD	D1	CM	M1	CA	A1
2nd equipment	CD	D2	CM	M2	CA	A2
3rd equipment	CD	D3	CM	M3	CA	A3
4th equipment	CD	D4	CM	M4	CA	A4

Facility equipment (Up to 2 units can be connected to single DEC102A51.)	Terminal used in the case of setting to "Instantaneous Output"							
	Operation output terminal		Stop output terminal		Operation input terminal		Abnormal input terminal	
1st equipment	CD	D1	CD	C2	CM	M1	CA	A1
2nd equipment	CD	D3	CD	C4	CM	M2	CA	A2

When the switch was set to "Ins." (Instantaneous Output), the operation input terminals M3, M4 and abnormal input terminals A3, A4 are not used.

Power Supply & Earth Wiring

- For power supply, 1 ~ 200 - 240 V is used. The wiring to the power terminal block (L/N) is required. The electric wire used should be 1.25 to 2.0 mm^2. After checking the power supply specifications, make correct connections.
- Connect the earth wiring to the "⏚" terminal. Use a 2.0 mm^2 wire.

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c. Initial Setting

Initial setting ① ~ ⑬ is required before the power is turned ON.

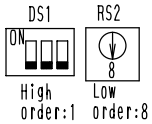
① Set the top address of this equipment with the DIII-NET setting switch (DS1/RS1). Using the DIII-NET setting switch (DS1), set the range of Address No. that is set in this equipment. Address Nos. 1-00 to 1-15 are factory controlled before shipment.

Control range DS1	1-00～1-15	2-00～2-15	3-00～3-15	4-00～4-15
Control range DS1 (high order) setting (Address range)	ON ※	ON	ON	ON

※when a product is discharged from the factory

This indicates the switch knob.

<Example>
When Address No. is set to 1-08



In this case, it follows that this equipment uses Address Nos. 1-08 to 1-11. (4 numbers max.)

※Number of centralized addresses used The number of centralized addresses used is determined by the top address set in this paragraph and the number of facility equipment connected that is set in "⑭ Quantity Change" paragraph.

Example 1: When the top address was set to "1-00" and the number of facility equipment was set to "2", it follows that "1-00" and "1-01" are being used.
Example 2: When the top address was set to "3-15" and the number of facility equipment was set to "4", it follows that "3-15", "4-00", "4-01" and "4-02" are being used.

<CAUTION>
This equipment can use the addresses between "1-00" and "4-15". (It is impossible to use Address 5-00 and subsequent addresses, and use any address in duplication.
Example: When the top address was set to "4-14", the number of facility equipment cannot be set to "4". In this case, set it to "1" or "2".)

Set Address No. (low order) with the centralized address setting switch (RS1). Referring to the table below, set the address number low order. (Address Nos. are 1-00, 1-01, --- 1-15, 2-00, --- 4-15.)

RS1 Switch Setting Table ※when a product is discharged from the factory

Position	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Address No.	00 ※	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15

(low order)

② DS2 Setting
This switch selects whether the input is abnormal with the abnormal input contact (A1 to A4) open or closed.
OFF (factory preset before shipment) --- Abnormal in the open condition
ON --- Abnormal in the closed condition
The relationship between each switch and abnormal input is as described below. Input A1: DS2-1 Input A2: DS2-2 Input A3: DS2-3 Input A4: DS2-4

③ DS4-1 Setting
This switch selects the control output status after power failure occurred in this equipment and the power was recovered.
OFF (factory preset before shipment) --- The control power after power recovery is handled as stop output.
ON --- The control output after power recovery is handled as output before power failure.

④ DS4-2 Setting
This switch selects the control output in case where the communication between this equipment and centralized control equipment is abnormal.
OFF (factory preset before shipment) --- The control output in case where the communication is abnormal is handled as stop output. (When this switch was set to "Later Push Priority" during setting in step below, this setting is disregarded.)
ON --- The control output in case where the communication is abnormal holds the output before a communication error arises.

⑤ DS4-3 Setting
This switch selects later push priority or centralized control only.
OFF (factory preset before shipment) --- The facility equipment Run/Stop input contacts (M1 to M4) and abnormal input contact status is followed.
ON --- The command from the centralized control equipment is followed.

⑥ DS4-4 Setting
This switch selects whether an abnormal condition is displayed or not in the centralized control equipment in case where the facility equipment is not operated for the operation command from the centralized control equipment.
OFF (factory preset before shipment) --- Even if the facility equipment does not follow the operation command from the centralized control equipment, no abnormality is displayed on the centralized control equipment.
ON --- If the facility equipment does not follow the operation command from the centralized control equipment, an abnormal condition is displayed on the centralized control equipment. (When the switch was set to "Later Push Priority" during setting in step ⑤ above, this setting is ignored.)

⑦ DS5 Setting
This switch selects whether the control output is interrupted or held when there occurred an error in the facility equipment.
OFF (factory preset before shipment) --- When an abnormality occurred in the facility equipment, the control output is turned "OFF"
ON --- Even when an abnormality occurred in the facility equipment, the control output is held.

⑧ DS6-1 Setting
The mask time for abnormal input after operation from the centralized control equipment is set.
OFF (factory preset before shipment) --- For 10 seconds after the operation was performed from the centralized control equipment, abnormal input (A1 to A4) is masked.
ON --- For 30 seconds after the operation was performed from the centralized control equipment, abnormal input (A1 to A4) is masked.

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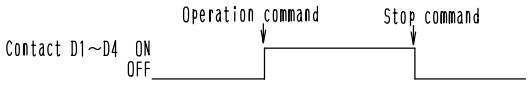
Initial setting ① ~ ⑬ is required before the power is turned ON.

⑨ DS6-2 Setting
The operation in case where the facility equipment was reset from the abnormal condition is switched.
OFF (factory preset before shipment) --- If the facility equipment error is recovered, automatic reset is carried out.
ON --- Even when the facility equipment error is recovered, no reset operation is performed if no stop command is given from the centralized control equipment.

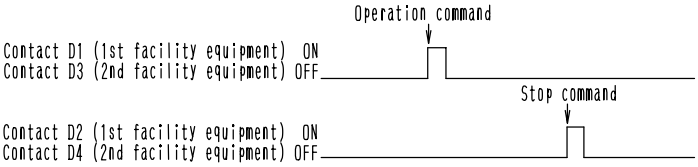
⑩ DS6-3 Setting
The display on the centralized control equipment in case where abnormal inputs (A1 to A4) were applied when the facility equipment is stopping (M1 to M4 "OFF") is changed over.
OFF (factory preset before shipment) --- The error is displayed in case where an abnormal input was applied even when the facility equipment is stopping.
ON --- No error is displayed even when an abnormal input is applied in case where the facility equipment is stopping.

⑪ DS6-4 Setting
The operation in case where the forced stop command was received through communication from the centralized control equipment is changed over.
OFF (factory preset before shipment) --- When the forced stop command was received from the centralized control equipment, the facility equipment operation is stopped.
ON --- No facility equipment is stopped even if the forced stop command is received from the centralized control equipment.

⑫ SS1 Setting
This switch selects continuous output or instantaneous output for control outputs (D1 to D4) commanded to the facility equipment.
Set to "Con." side (factory preset before shipment) --- Continuous output
(Contacts D1 to D4 at the time of operation command from the centralized control equipment: ON - Contacts D1 to D4 at stop command: OFF)



Set to "Ins." side --- Instantaneous output (Contact D1 or D3 at the time of operation command from the centralized control equipment: ON for one second only - Contact D2 or D4 at stop command: ON for one second only)



⑬ Output inverting function
This function is used for changeover to "a" or "b" contact with the relay output adjusted to the facility equipment specifications.
For the setting method, refer to the figure below. (Factory set to "a" contact before shipment)

At the time of TNa♦ connection (when a product is discharged from the factory)	Relay output ON → D♦ output closed	
At the time of TNb♦ connection	Relay output ON → D♦ output open	

⑭ TP1 Setting (Facility equipment quantity change)
This function is used to set the number of facility equipment controllable with this equipment. (The number of controllable facility equipment factory preset before shipment is 4.) (Setting Method)
1. Turn the power "ON" with TP1 short-circuited and change the quantity of facility equipment according to the DS3 setting.
The relation between DS3 setting and facility equipment quantity is as per the table below.
2. Turn the power "OFF".
3. Open the TP1 and turn all DS3 switches "OFF".
4. Turn the power ON gain.
5. Short-circuit the TP1, and check to see if the setting coincides with the number of facility equipment connected to this equipment.
6. Finally, open the TP1.

※The number of connectable facility equipment is 4 max. at continuous output, and 2 max. at instantaneous output

TP1	Shortcircuit (with power "ON")			
DS3				
Setting Contents	1Unit	2 Units	3 Units	4 Units

 ←This indicates the switch knob.

By short-circuiting the quantity change TP1 in the normal operating condition, the setting status can be confirmed.



☼ This indicates LED lighting.

3D047627

3 Ai Unit
3.1 <DAM101A51> DIII-Ai

① Component parts

The components of the kit are as follows.
Before installing, be sure to check whether they are supplied.

Name	Quantity
Main unit	1
Installation Manual	1
External temperature sensor	1
Harness pressure terminal	2

Name	Quantity
Ferrite core (large)	1
Ferrite core (small)	1
Clamp material with snaps	2
Clamping material	3

Name	Quantity
Hole cover (large)	1
Hole cover (small)	1
Harness for multi-purpose sensor	1

② Attachment

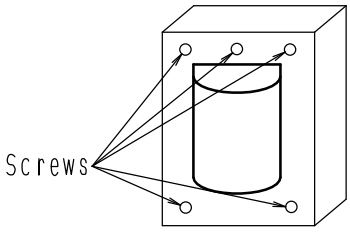
Failure to observe this installation could result in electric shock.
This device is a precision instrument, so caution must be exercised with static electricity. (Static electricity can be avoided by touching a grounded control panel, etc.)

Attachment location

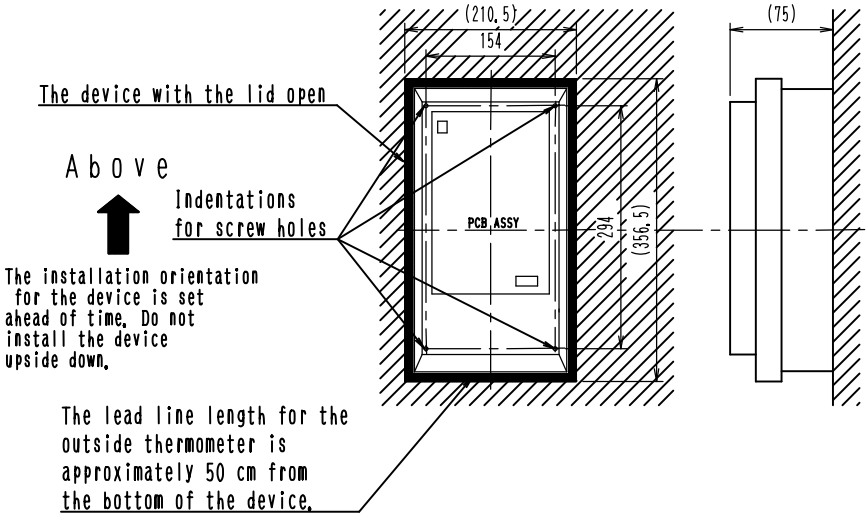
Install this device outside in a location out of direct sunlight and rain. The set height should have at least 30 cm between the floor and the device. The pull-out length of the outdoor thermometer from the bottom of the device is approximately 50 cm. The installation location for the device should be selected with the above in mind.

2－1. Installing the main unit.

First, remove the lid from the main unit. (5 screws) Do not lose the removed screws. You will need them when you close the lid after all work is done.



This device is mounted with 4 screws.
Open the four indentations for the screw holes with self tapping screws or drill them and secure them with the 4 screws.
(The recommended screw size is M4. Screws should be procured locally.)

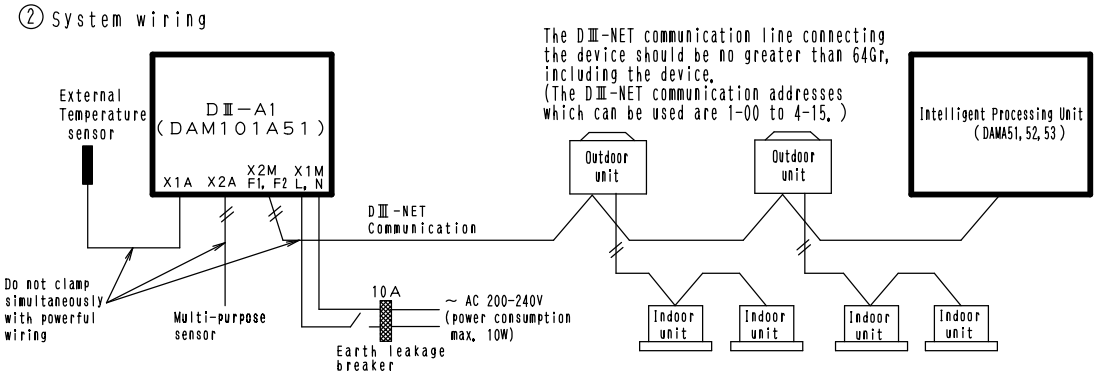


2－2. Wiring connections

① There are 4 types of wiring for the device.

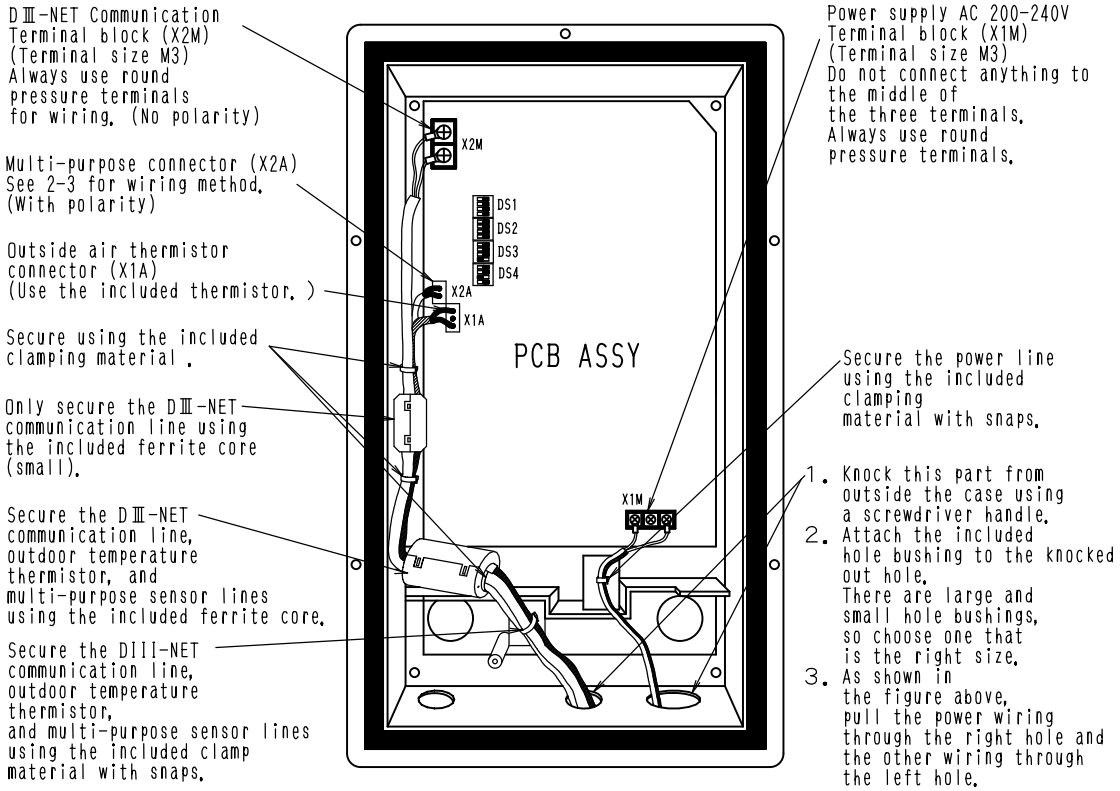
Name	Specifications for electric wiring used	Remarks
Power wiring	1.25mm²	Power supply voltage: max. 200-240V (50/60Hz)
Communication wiring	Sheathed vinyl cord or cable 0.75～1.25mm² (balanced-type) --- max. length 1000m (up to total extension 2000m) (Total extension length 1500m when using shield wire)	No polarity
External temperature sensor	Use the included sensor	-
Multi-purpose sensor	When extending the included harness --- max 15m	DC 0-5V sensor can be connected (procured locally)

② System wiring



Connecting and clamping the wiring (Be sure not to force screws. This may break them.)

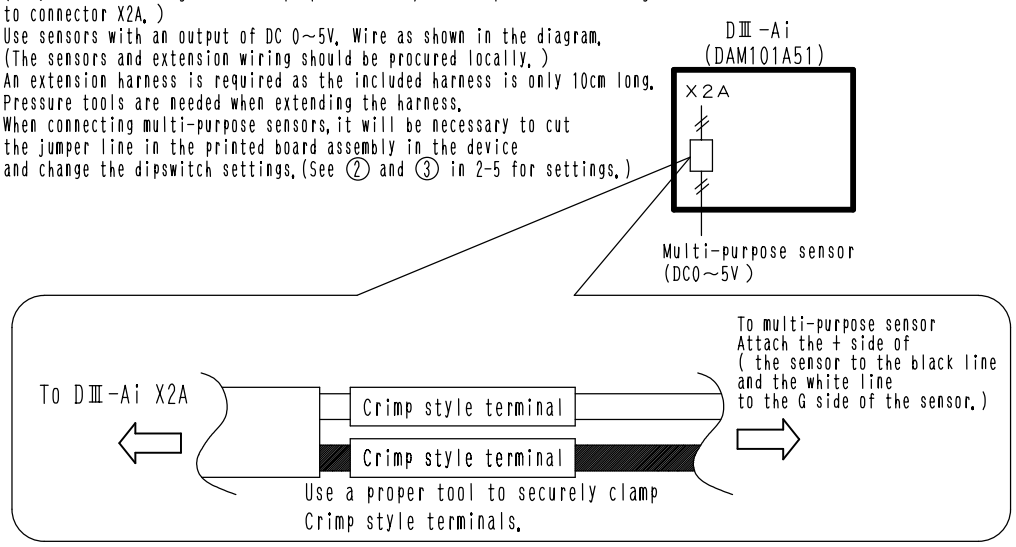
Names and functions of each part



2－3. How to connect the multi-purpose sensors and settings

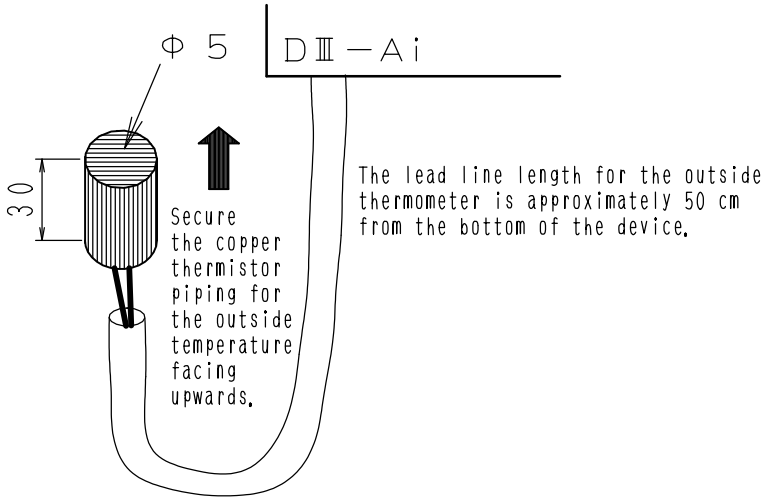
Other than the supplied outdoor temperature sensor, it is also possible to connect other brand multi-purpose sensors to the device.

This section describes the wiring when connecting the multi-purpose sensors.
(If you are not using the multi-purpose sensors, do not perform the wiring connection to connector X2A.)
Use sensors with an output of DC 0～5V. Wire as shown in the diagram.
(The sensors and extension wiring should be procured locally.)
An extension harness is required as the included harness is only 10cm long.
Pressure tools are needed when extending the harness.
When connecting multi-purpose sensors, it will be necessary to cut the jumper line in the printed board assembly in the device and change the dipswitch settings. (See ② and ③ in 2-5 for settings.)



2－4. Attaching the outside temperature sensor

Securing the sensor
Always secure the sensor downwards as shown in the diagram. Install in a well-ventilated location where the unit will not be subject to direct rain or sunlight. (If the unit receives direct sunlight, it might detect a temperature higher than the actual temperature.)

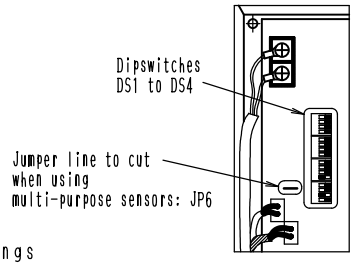


2－5. Setting the dipswitches and cutting the jumper line

Meaning of each dipswitch and jumper line

Number	Meaning
DS1	DⅢ-NET Communication address last digit
DS2	DⅢ-NET Communication address first digit
DS3	Enabling and disabling the sensor
DS4	Switching sensor uses
JP6	When using multi-purpose sensors, cut the main jumper line.

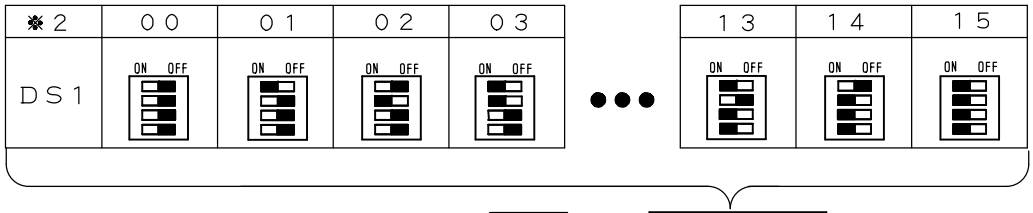
Dipswitch and jumper location

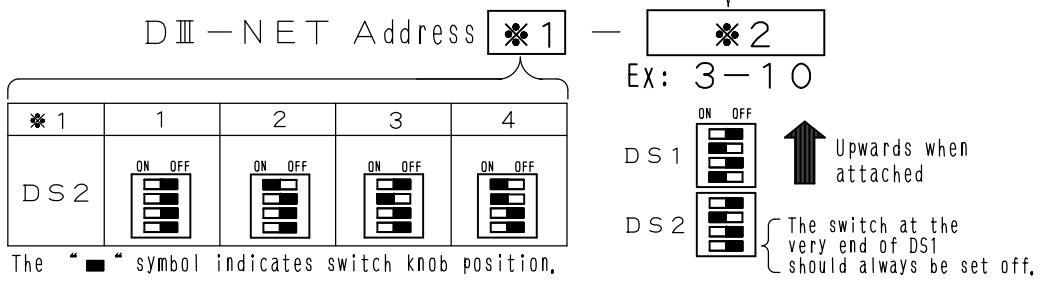


① DS1 and DS2 (DⅢ-NET communication address) settings

Setting DS1 and DS2" sets the DⅢ-NET communication address.
Set the DⅢ-NET communication address between 1-00 and 4-15.
Normally only one address is used per unit. The factory default is 1-00.
However, when using the settings below in ② to use multi-purpose sensors, two addresses are used per unit.
(For example, if the address is set to 2-10 using the DS1 and DS2 settings, 2-10 and 2-11 are thereby used and cannot be set on other AC units.
If the setting is for using the multi-purpose sensors, do not set DS1 and DS2 to 4-15. The multi-purpose sensor detection data cannot be properly monitored by I-Manager.)

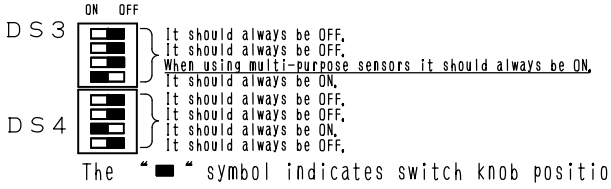
Dipswitch settings for each address



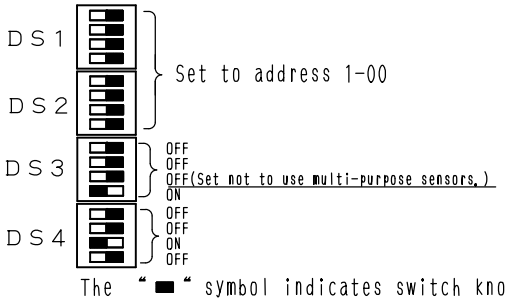


② DS3 and DS4 (sensor-related) settings

DS3 should only have its setting changed if locally-procured sensors are being used.
When using locally procured sensors, set the third switch from the front on.
(The factory default settings are for not using multi-purpose sensors.)
NB: When using multi-purpose sensors, cut the jumper line ③ at the same time as the settings are being done.
There is no need to change the factory default setting for DS4.



The following settings should be done for the factory default DS1 to DS4 settings.



③ Cutting JP6

When using multi-purpose sensors, cut jumper JP6 on the printed board using nippers, etc.
※: When using multi-purpose sensors, set DS3 at the same time as these settings are being done.
※: Be sure to get rid of line cuttings when cutting the jumper. Failing to remove them may cause the printed board to malfunction.

2－6. Once all settings are complete, Replace the removed cover in 2-1 using the screws.

1P108833

Appendix B. Malfunction Code List

Operation lamp	Maintenance display	Unit No.	Malfunction code	Error content
☼	●	◑	**64**	Indoor air thermistor error
☼	●	◑	**65**	Outdoor air thermistor error
☼	●	◑	**68**	HVU error (Ventiair dust-collecting unit)
☼	●	◑	**6A**	Dumper system error
◑	◑	◑	6A	Dumper system error + Thermistor error
☼	●	◑	**6F**	Simple remote controller error
☼	●	◑	**6H**	Door switch (Ventiair dust-collecting unit), relay harness fault (Ventiair dust-collecting/humidifier unit)
◑	◑	◑	94	Ventiair internal transmission error (between total enthalpy – fan unit)
◑	◑	◑	A0	Indoor unit · external safety device error
◑	◑	◑	A1	Indoor unit · BEV unit (Sky-Air connection unit) PC board assembly fault
☼	●	◑	**A1**	Indoor unit · PC board assembly fault
◑	◑	◑	A3	Indoor unit · Drain level error (33H)
◑	◑	◑	A6	Indoor unit · Fan motor (51F) lock, overload
☼	●	◑	**A7**	Indoor unit · Fan direction adjustment motor (MA) error
◑	◑	◑	A9	Indoor unit · BEV unit, electric expansion valve motor (20E) error
☼	●	◑	**AF**	Indoor unit · Malfunctioning drain
☼	●	◑	**AH**	Indoor unit · Dust-collector error
◑	◑	◑	AJ	Indoor unit · Insufficient capacity setting, address setting fault

3P124623-3A

Operation lamp	Maintenance display	Unit No.	Malfunction code	Error content
◑	◑	◑	C4	Indoor unit · Liquid piping thermistor (Th2) Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	C5	Indoor unit · BEV unit, gas piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	C9	Indoor unit · Intake air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	CA	Indoor unit · Outlet air thermistor (Th4) Error (faulty connection, cut wire, short circuit, fault)
☼	●	☼	**CJ**	Indoor unit · remote controller sensor error
◑	◑	◑	E0	Outdoor unit · Safety device operation
◑	◑	◑	E1	Outdoor unit · PC board assembly fault
☼	●	◑	**E1**	Outdoor unit · PC board assembly fault
◑	◑	◑	E3	Outdoor unit · High-pressure switch fault
◑	◑	◑	E4	Outdoor unit · Low-pressure switch fault
◑	◑	◑	E9	Outdoor unit · Electric expansion valve motor (20E) error
☼	●	◑	**EC**	Heat source unit · Intake water temperature inter-lock operation (fan operation)
◑	◑	◑	EF	Outdoor unit · Ice thermal storage unit error
◑	◑	◑	F3	Outdoor unit · Discharge piping temperature error
☼	●	◑	**H3**	Outdoor unit · High-pressure switch operation
◑	◑	◑	H4	Outdoor unit · Low-pressure switch operation
◑	◑	◑	H9	Outdoor unit · Outdoor air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
☼	●	◑	**H9**	Outdoor unit · Outdoor air thermistor (Th1) Error (faulty connection, cut wire, short circuit, fault)
☼	●	◑	**HC**	Outdoor unit · Water temperature sensor system error
☼	●	◑	**HF**	Ice thermal storage unit error, ice thermal storage controller error, error in outdoor unit during ice thermal storage operation
◑	◑	◑	HJ	Outdoor unit · water system fault
◑	◑	◑	J1	Outdoor unit · pressure sensor error
◑	◑	◑	J3	Outdoor unit · Discharge piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
☼	●	◑	**J3**	Outdoor unit · Discharge piping thermistor (Th3) Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	J5	Outdoor unit · Intake piping thermistor (Th4) Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	J6	Outdoor unit · Heat exchange thermistor (Th2) error
☼	●	◑	**J6**	Outdoor unit · Heat exchange thermistor (Th2) error Error (faulty connection, cut wire, short circuit, fault)
◑	◑	◑	J7	Outdoor unit · Header thermistor (Th6) error
◑	◑	◑	JA	Outdoor unit · Discharge piping pressure sensor error
◑	◑	◑	JC	Outdoor unit · Intake piping pressure sensor error
◑	◑	◑	JF	Outdoor unit · Oil temperature sensor (Th5) system error
☼	●	◑	**JH**	Outdoor unit · Oil temperature sensor (Th5) system error
◑	◑	◑	L0	Outdoor unit · Inverter system fault
◑	◑	◑	L4	Outdoor unit · Inverter cooler fault
◑	◑	◑	L5	Outdoor unit · Ground circuit for compressor motor, short circuit, or power unit short circuit

3P124623-3A

Operation lamp	Maintenance display	Unit No.	Malfunction code	Error content
◑	◑	◑	L6	Outdoor unit · Ground circuit for compressor motor, short circuit
☼	◑	◑	L8	Outdoor unit · Compressor overload, compressor motor wire disconnection
◑	◑	◑	L9	Outdoor unit · Compressor lock
◑	◑	◑	LA	Outdoor unit · Power unit error
◑	◑	◑	LC	Outdoor unit · Transmission error between inverter and outdoor control unit
☼ or ●	◑	◑	M1	Central controller: PC board fault
☼ or ●	◑	◑	M8	Transmission error between central controllers
☼ or ●	◑	◑	MA	Central controller: Incorrect combination
☼ or ●	◑	◑	MC	Central controller: Address setting fault
◑	●	◑	**P0**	Insufficient gas (thermal storage)
◑	◑	◑	P1	Outdoor unit · Power voltage imbalance, phase loss
◑	◑	◑	P4	Outdoor unit · Power unit temperature sensor error
☼	●	◑	**U0**	Pressure drop due to insufficient refrigerant, electric expansion valve fault, etc.
◑	◑	◑	U1	Reversed or lost phase
◑	◑	◑	U2	Power voltage error, momentary electrical stoppage
◑	◑	◑	U4	Transmission error between indoor unit/BEV unit and outdoor/BS unit, Transmission error between outdoor unit and BS unit
◑	◑	◑	U5	Transmission error between remote controller and indoor control unit
●	☼	●	U5	Remote controller board fault or remote controller setting fault
◑	◑	◑	U6	Transmission error between indoor units
◑	◑	◑	U7	Transmission error between outdoor units Transmission error between outdoor unit and ice thermal storage unit
☼	●	◑	**U7**	Transmission error between outdoor units (cooling/heating batch, low-noise operation)
◑	◑	●	U8	Transmission error between master remote controller and slave remote controller (slave remote controller error) Incorrect combination of indoor unit and remote controller within a single system (model)
◑	◑	◑	U9	Transmission error between indoor unit/BEV unit and outdoor unit within a single system Transmission error between BS unit and indoor unit/BEV unit and outdoor unit within a single system
◑	◑	◑	UA	Incorrect combination of indoor, BS, and outdoor units within a single system (model, number of units, etc.) Incorrect combination of indoor unit and remote controller (remote controller in question) BS unit connection position fault
☼	●	☼	**UC**	Central control group numbers overlap
◑	◑	◑	UE	Transmission error between indoor unit and central controller
◑	◑	◑	UF	Unset system, incorrect settings between BEV unit and indoor unit
◑	◑	◑	UH	System fault

▬ error codes (in outline font) do not display “maintenance” and the system will run, but please check the content of the display and contact your dealer.

3P124623-3A

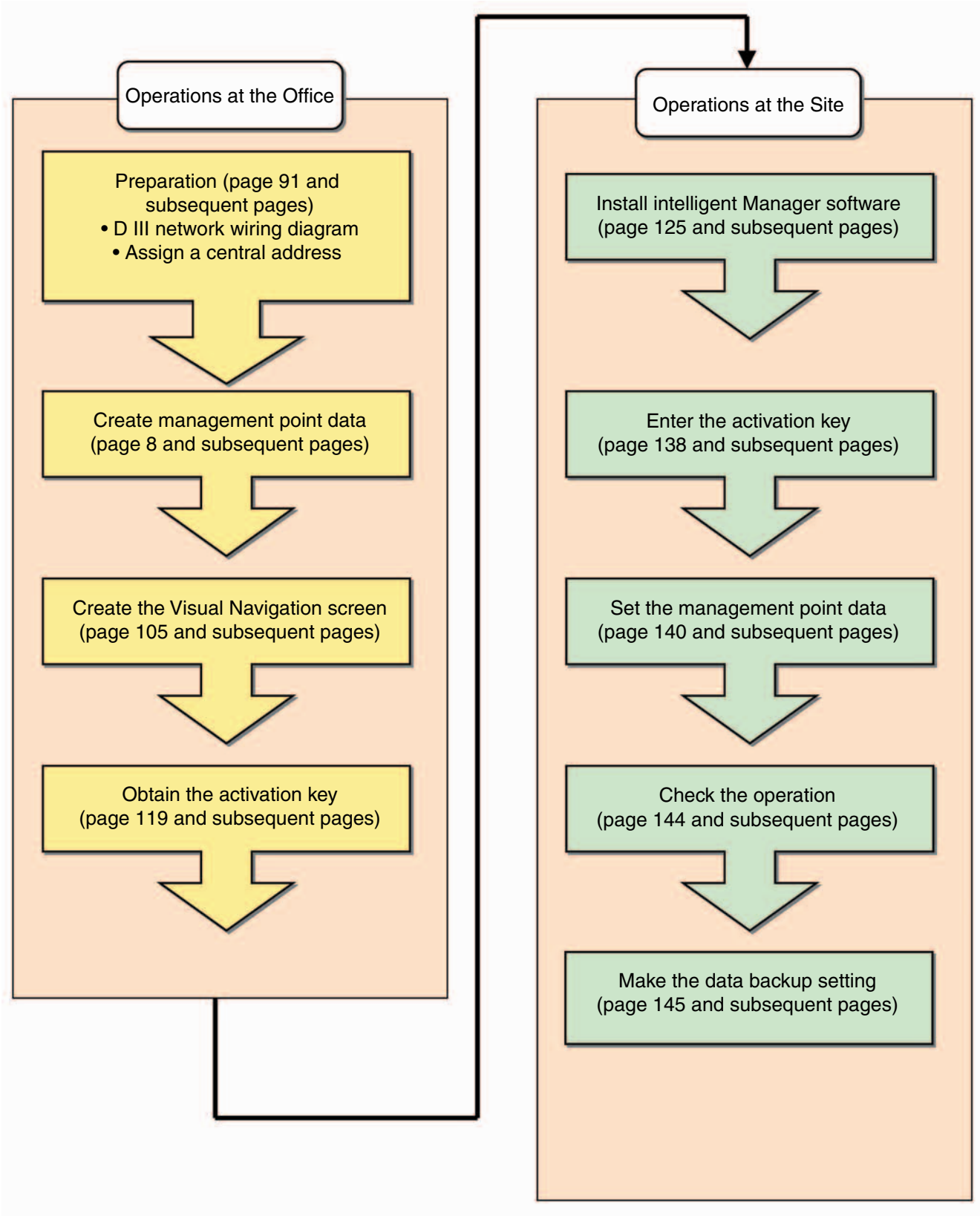
Part 2 intelligent Manager III Engineering Manual

1. intelligent Manager New Installation Operation.....90
1.1 Workflow.....90
1.2 Operations at the Office.....91
1.3 Operations at the Site.....125
2. intelligent Manager Upgrade Operation.....148
2.1 Upgrade of iPU Software.....148
3. How to Use Engineering Tool.....150
3.1 Management Point Data Creation Tool.....152
3.2 PC Setup Tool.....192
3.3 iPU Setting Tool.....197
3.4 Backup/Restore Tool.....201
3.5 SE Function of Monitoring Board Software.....215
3.6 Simplified Database Maintenance Tool.....239

Appendix A. Management Point Engineering Item List.....243
Appendix B. Initial Data Tool CSV Format.....245
Appendix C. Initial Data Tool Check Item List.....248
Appendix D. iPU Data List.....250

1. intelligent Manager New Installation Operation

1.1 Workflow

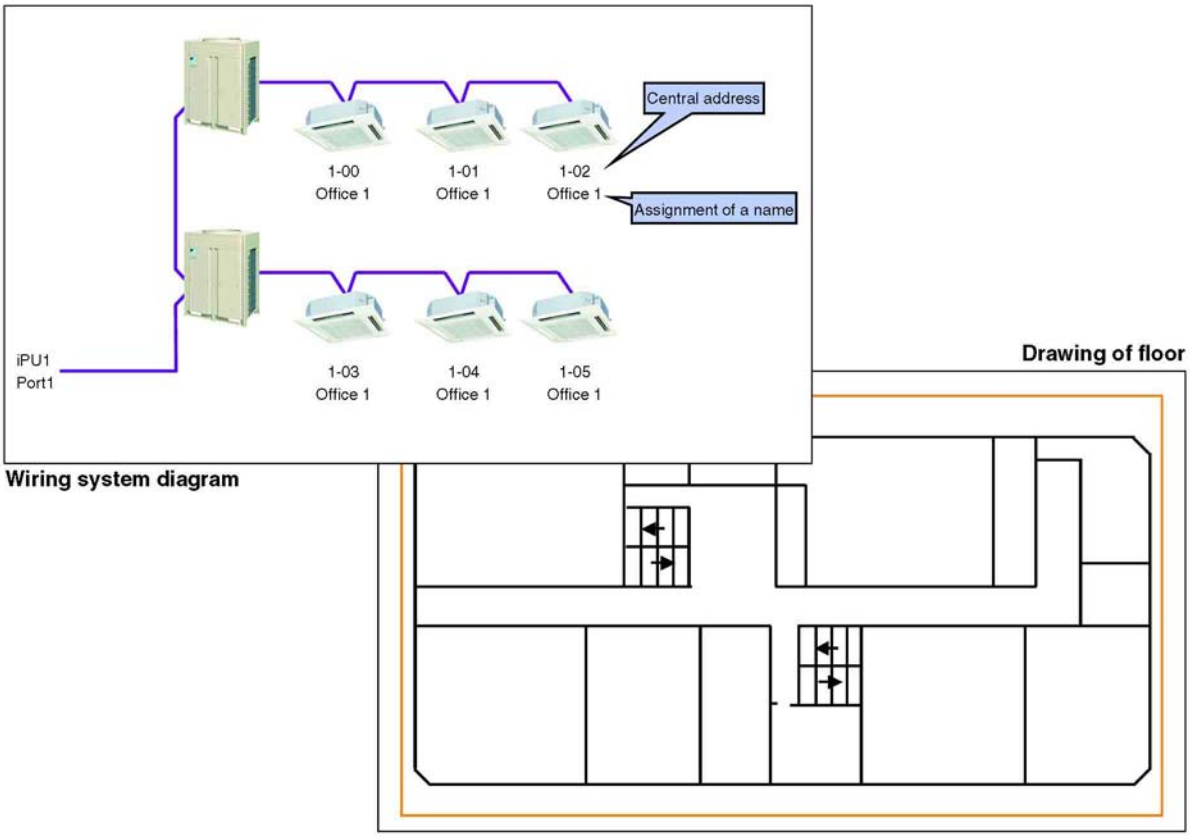


1.2 Operations at the Office

1.2.1 Preparations

a. Acquisition of Drawing for Air Conditioners

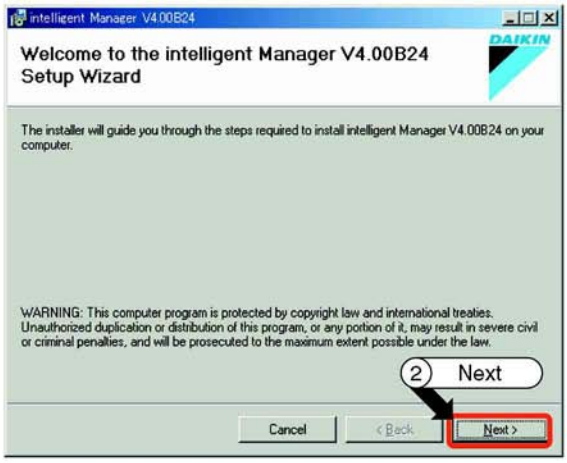
Firstly, you need to obtain the drawing and wiring diagram of the floor to which you will implement this system. For the details of the drawing and wiring system diagram of the floor, see intelligent Manager Design Guide.

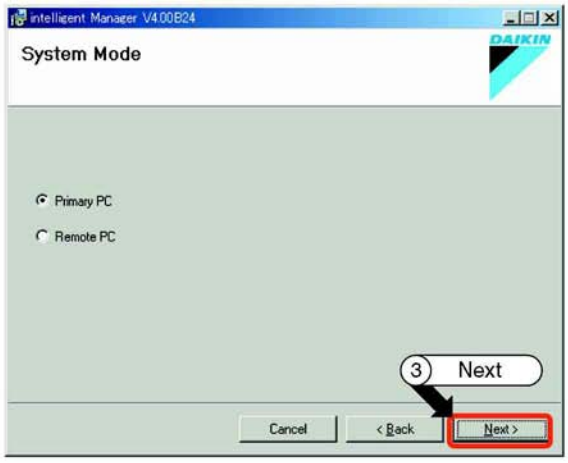


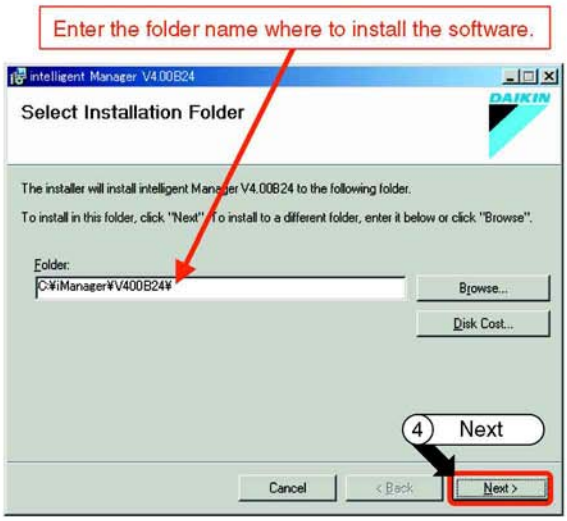
b. Installation of intelligent Manager Software to Operation PC

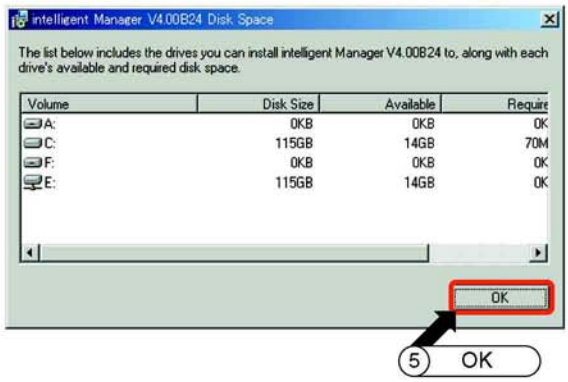
Install the intelligent Manager software to the operation PC to create intelligent Manager data.
You need to obtain the intelligent Manager software first.
(If you have access to Distributor's Page of DAIKIN, download the software from the pages. If not, ask your distributor directly how to obtain the software.)
The procedure to install the software to the PC for the data creation operation is given below.

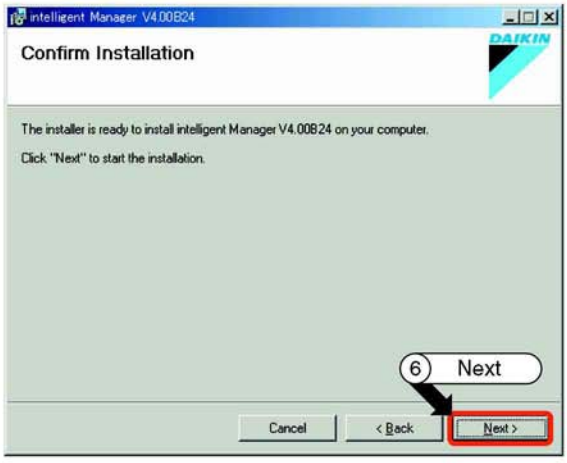


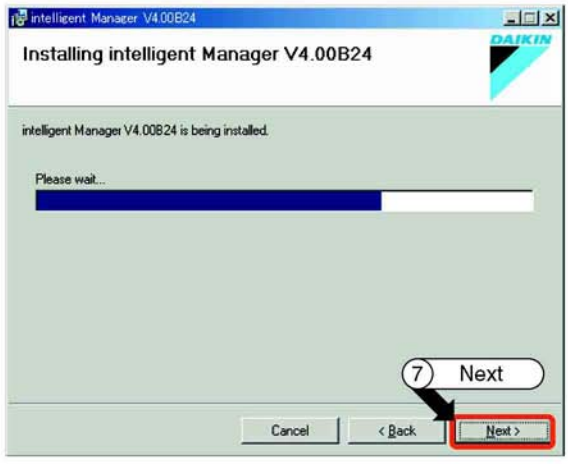






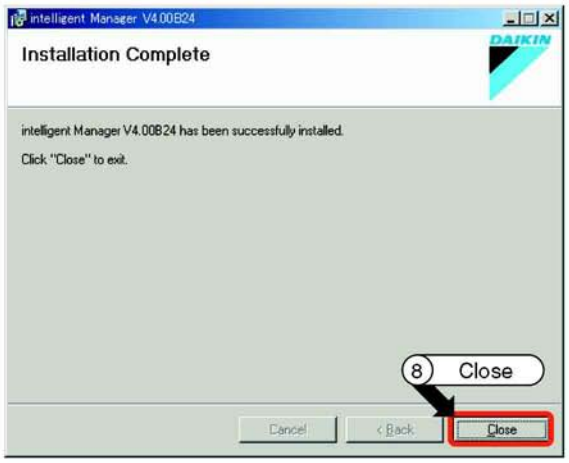






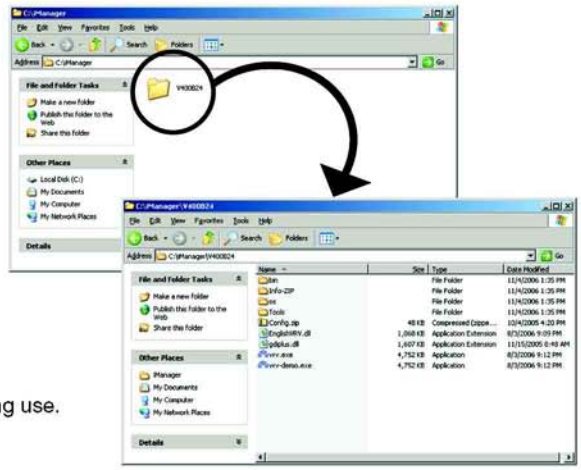
Go to Next Page

Continued from Previous Page



Installation is completed.

9 Check the installed files.



Check that the files are installed in the specified path (c:¥iManager¥V400B24¥in this manual).

10 Delete the shortcut key.

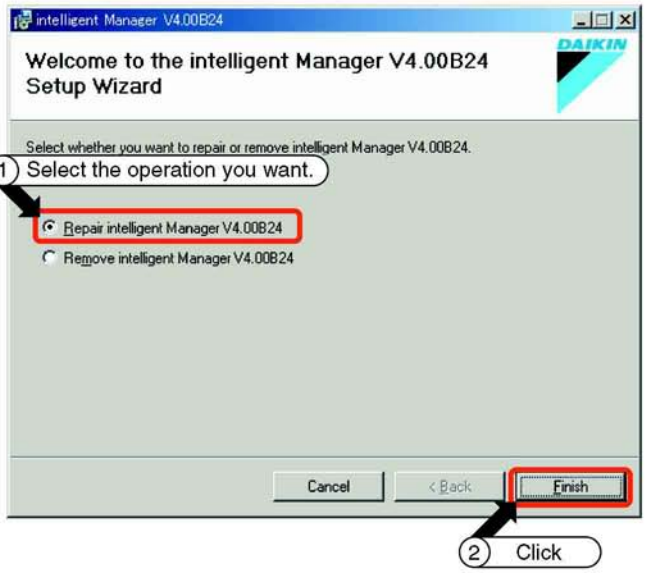


Imanager.lnk

A shortcut for i-Manager is created on the desktop.
→ A shortcut on the desktop is not required for the PC for setting use.
Delete the shortcut.
This is the end of the installation to the operation PC.

Note:

To repair or remove the installed system, select an appropriate item, and then click Finish. The operation will automatically start.

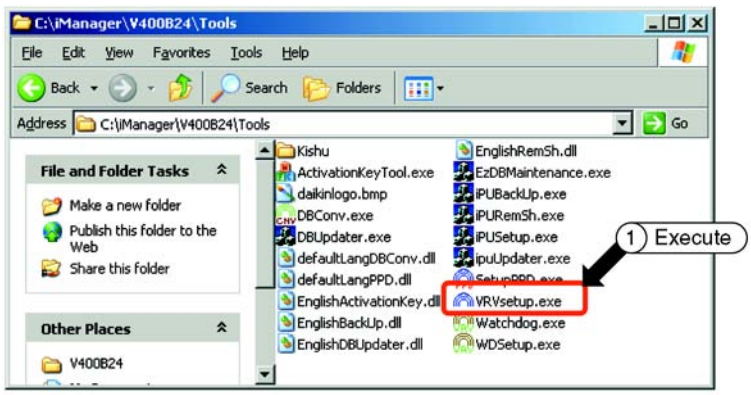


1.2.2 Creating Management Point Data

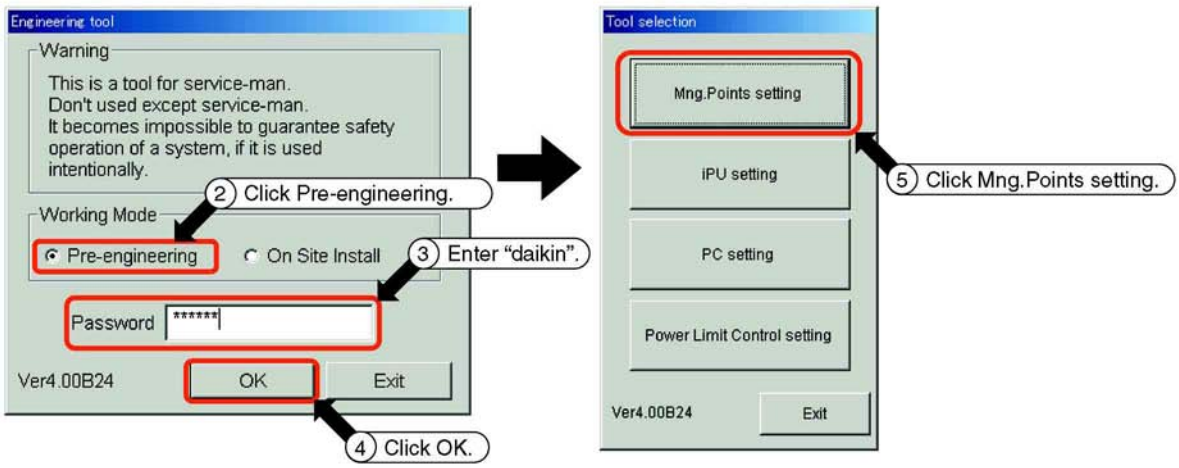
There are two methods of creating management point data: one uses the "management point data creation tool", and the other creates the data in a CSV file using Excel, etc. This section explains these two methods.

a. Method of Using Management Point Creation Tool

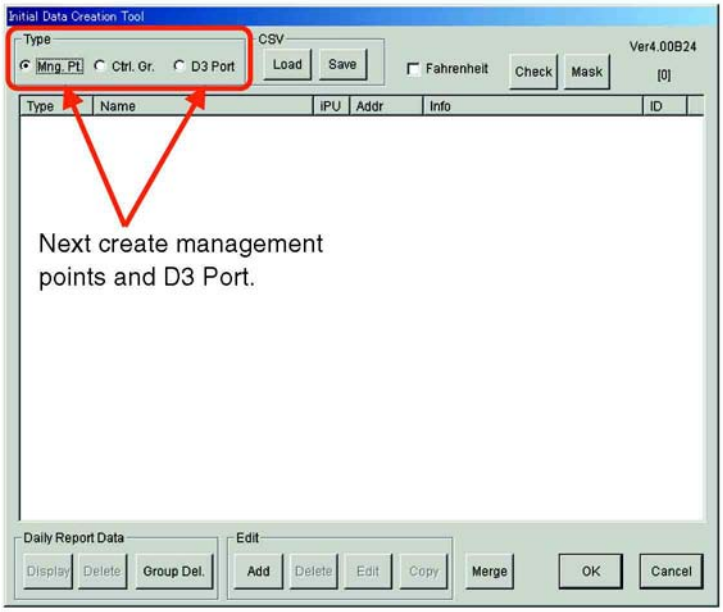
Execute ¥VRV Setup in the Tools folder.



Select Pre-engineering, enter daikin as a password, and then select Mng.Points setting.



Initial Data Creation Tool window is activated.

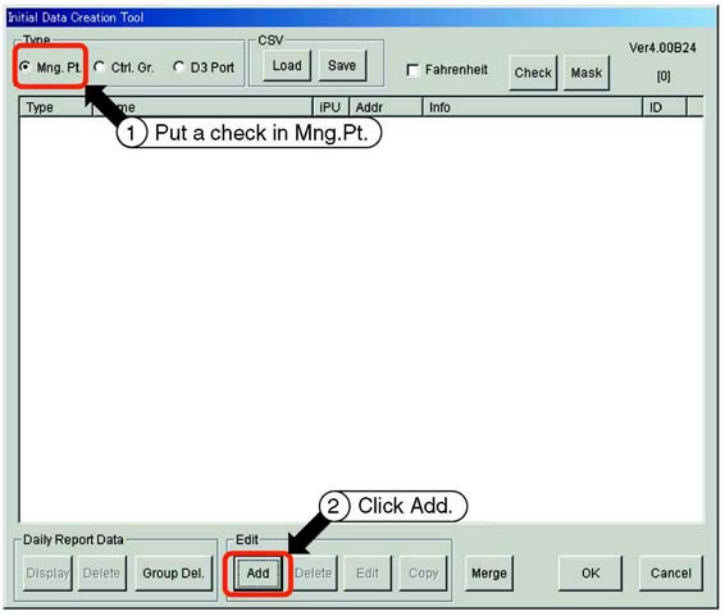


Note:

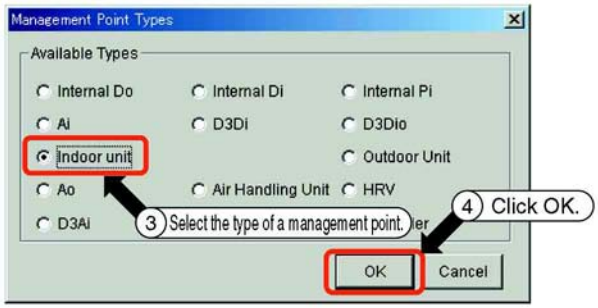
What is a management point?
One indoor unit is regarded as one management point.

Creation of a management point

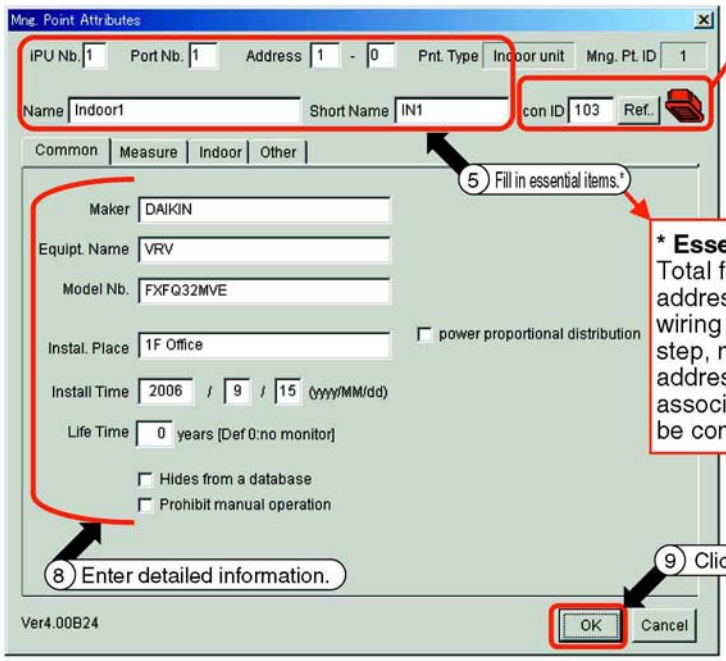
To create a management points, put a check in Mng.Pt and click Add.



When the Management Point Types window appears, select the type of a management point you want to create.



The Mng. Point Attributes window appears. Enter the detailed information of each management point.

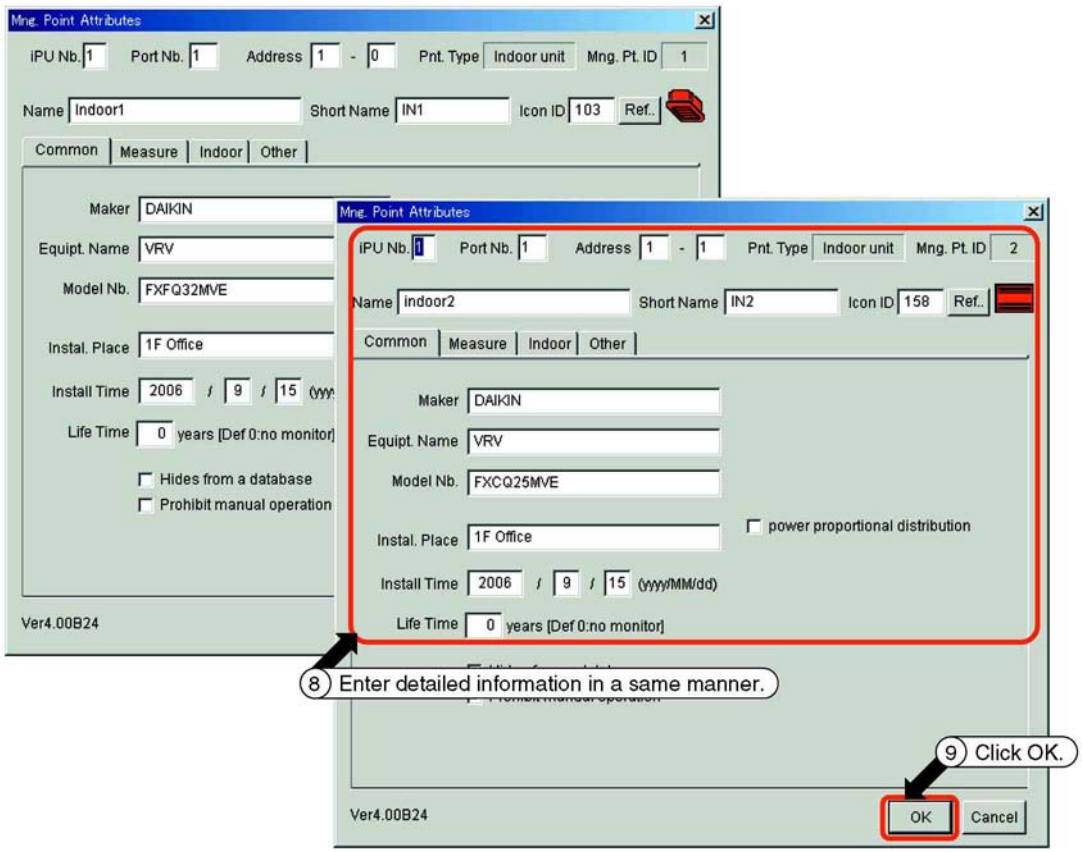




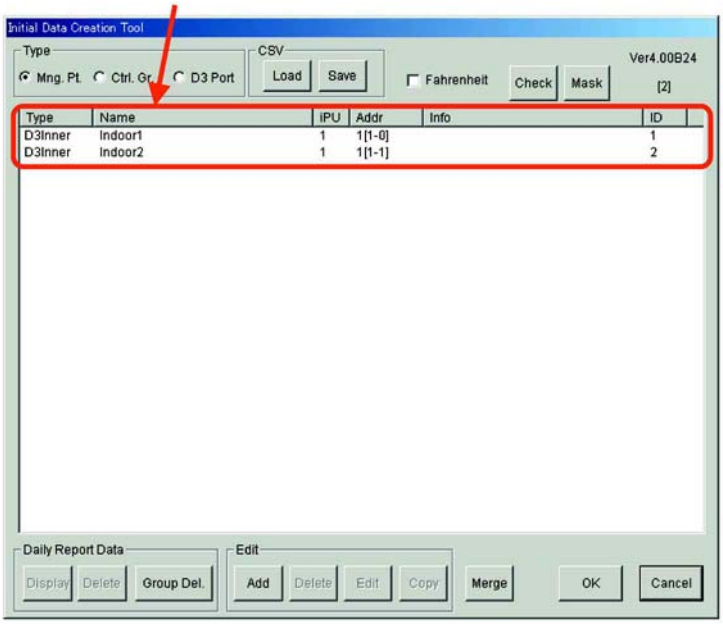
You can select any icon corresponding to the shape of the device.

*** Essential items**
Total five items including the iPU No., Port No., address, name, and abbreviation name. (The wiring diagram, which you obtained in the first step, must have the iPU No., Port No., and address.) The name and abbreviation should associate with an actual room and should not be complicated.

Repeat this procedure to create necessary management points.

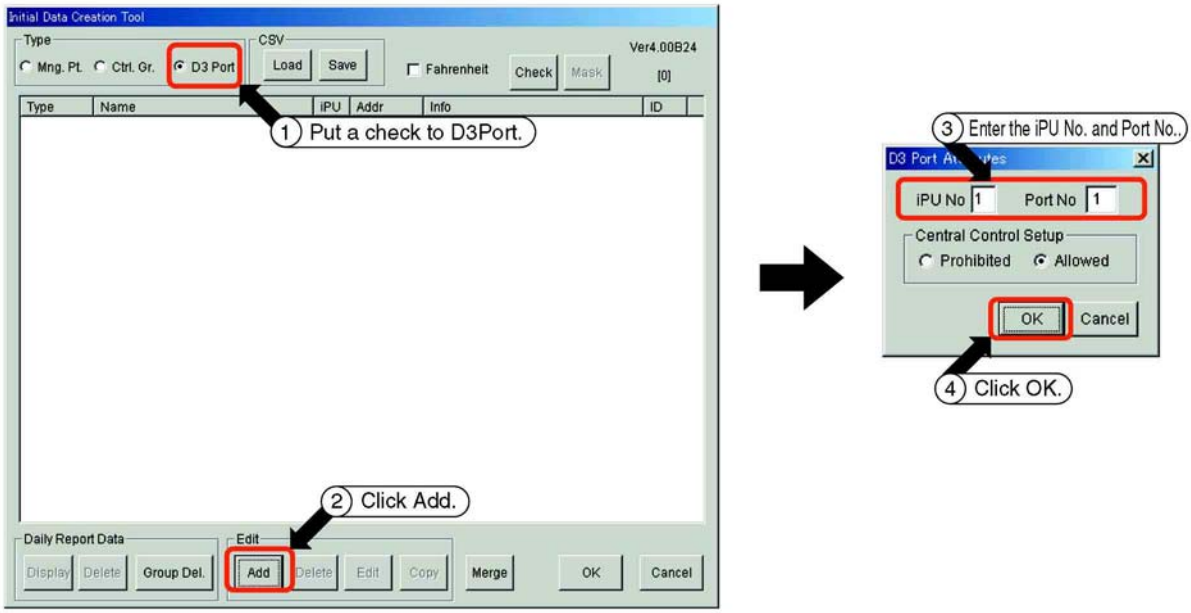


Verify that another management point is created.

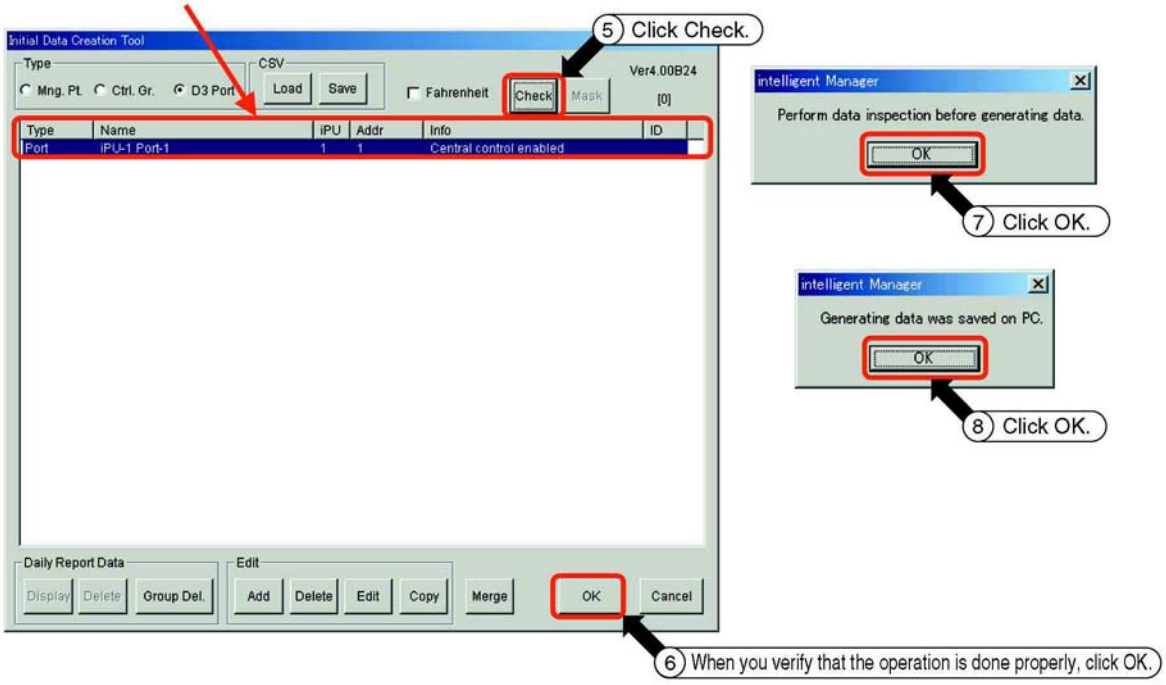


Creation of D3 Port

Create D3 Port which is used by a management point.



D3 Port is created. Check if data is correctly created. If an error is not displayed when you press the Check button, the management point data creation is completed.



Example of error window



Note:

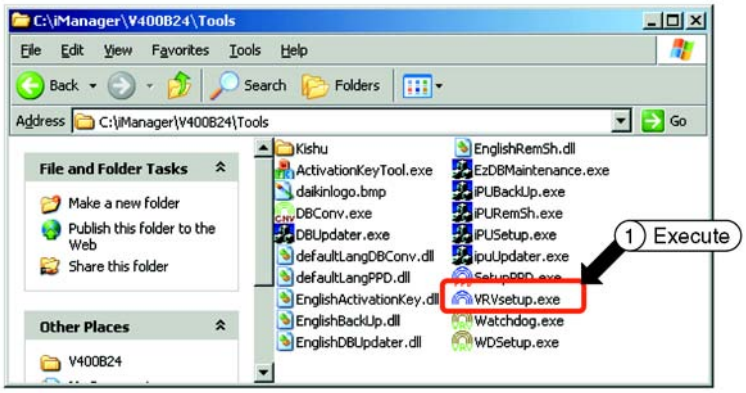
Major reasons of errors
(1) Duplication of an address or a name
(2) Failure to create D3 Port

b. Method of Creating Data in a CSV File

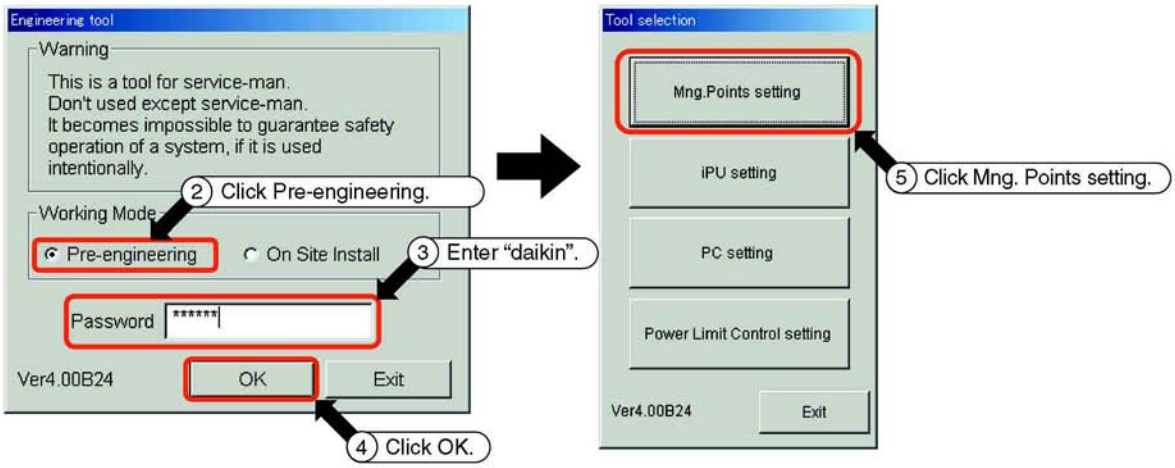
Creating CSV files has an advantage that input can be made efficiently when you have many floors and management points.
First, you need create a template of CSV files using the same tool as the aforementioned **a. Method of Using Management Point Creation Tool** (page 94).

Creation of a CSV File

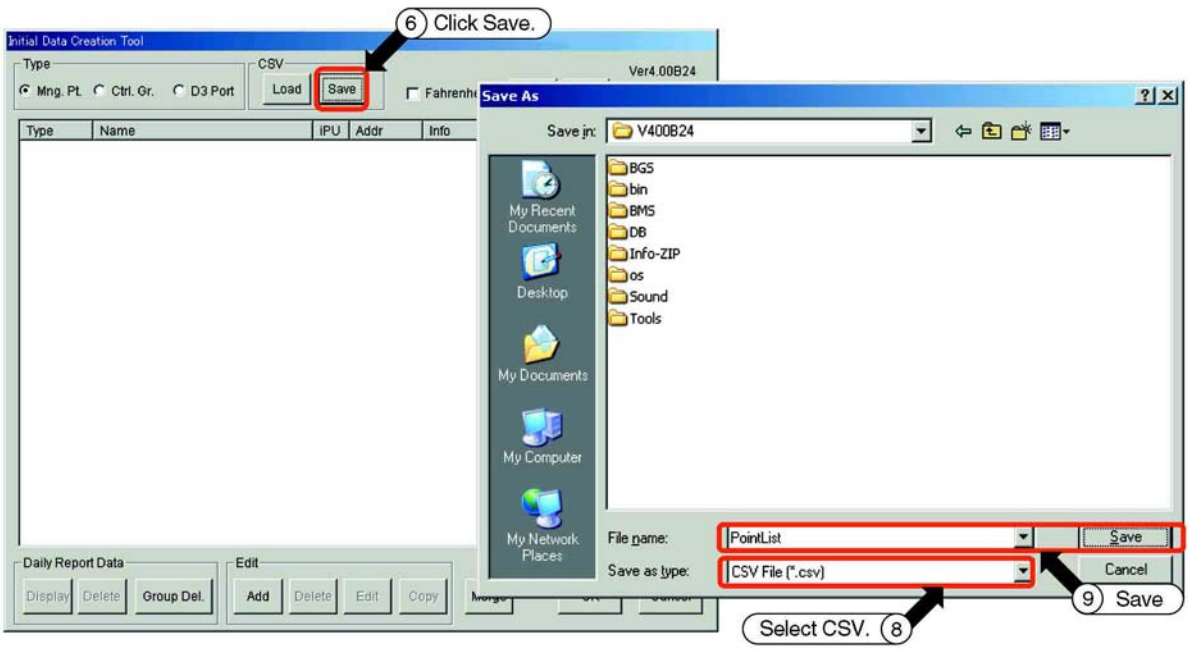
Execute ¥VRV Setup in the Tools folder.



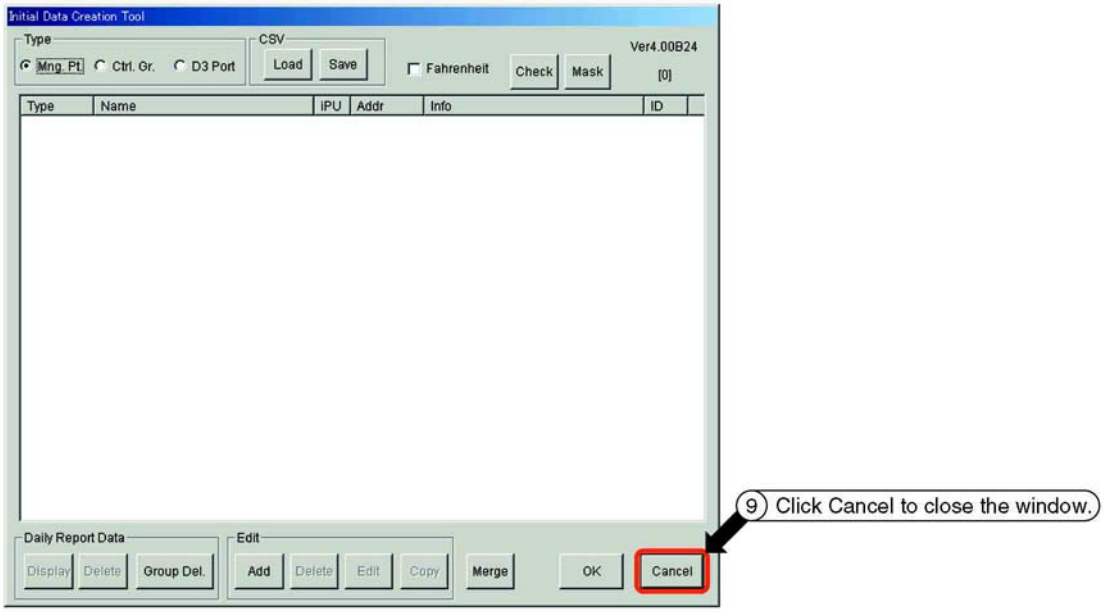
Select Pre-engineering and enter daikin as a password.

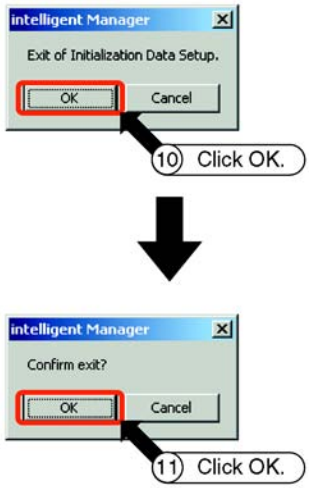


Click Save for CSV, and the data save window is opened. Enter a file name and save the file.
Select CSV for the type of the file.



After saving the CSV file, close Initial Data Creation Tool.

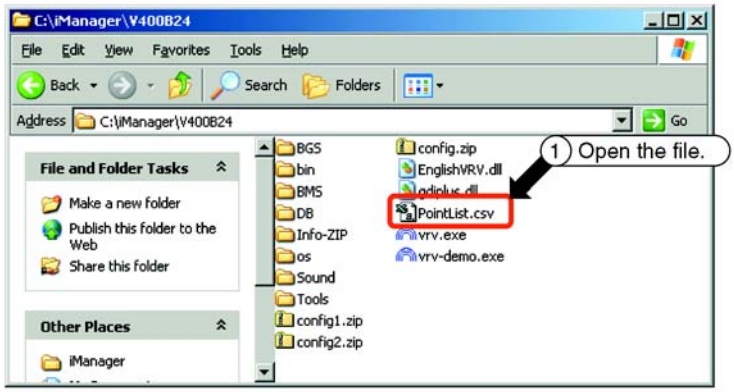




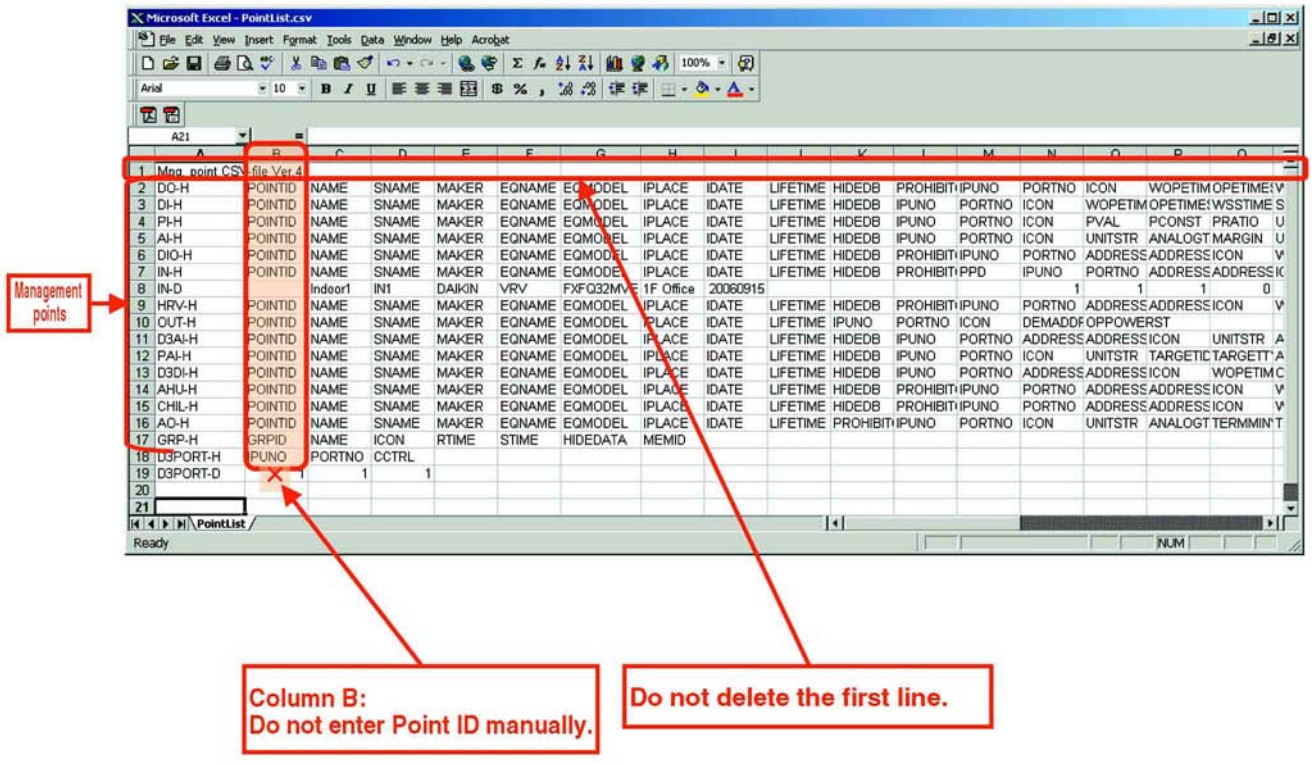
This is the end of creation of a CVS file template.
Next, enter and edit necessary information of this file.

Edit of a CSV file

Open the saved CSV file.



Edit the CSV file.
You can delete lines of which information is not for connected devices. (You may keep them.)
Be sure not to delete the first line.
(For more details of editing items, see **3.1.6 CSV Input/Output Function** (page 187).)
In the default setting, 15 types of management points are displayed from the 2nd line to 16th line in the column A.
Each line contains data items of each management point.
The list of names of management points is given in the next page.



Next, add the management point data (○○-D) line below each management point (○○-H).
○○-H means the Header line of each device.
(e.g.: In the case of indoor units, add the IN-D (Indoor Data) line below IN-H (Indoor Header) as many as the number of management points.)

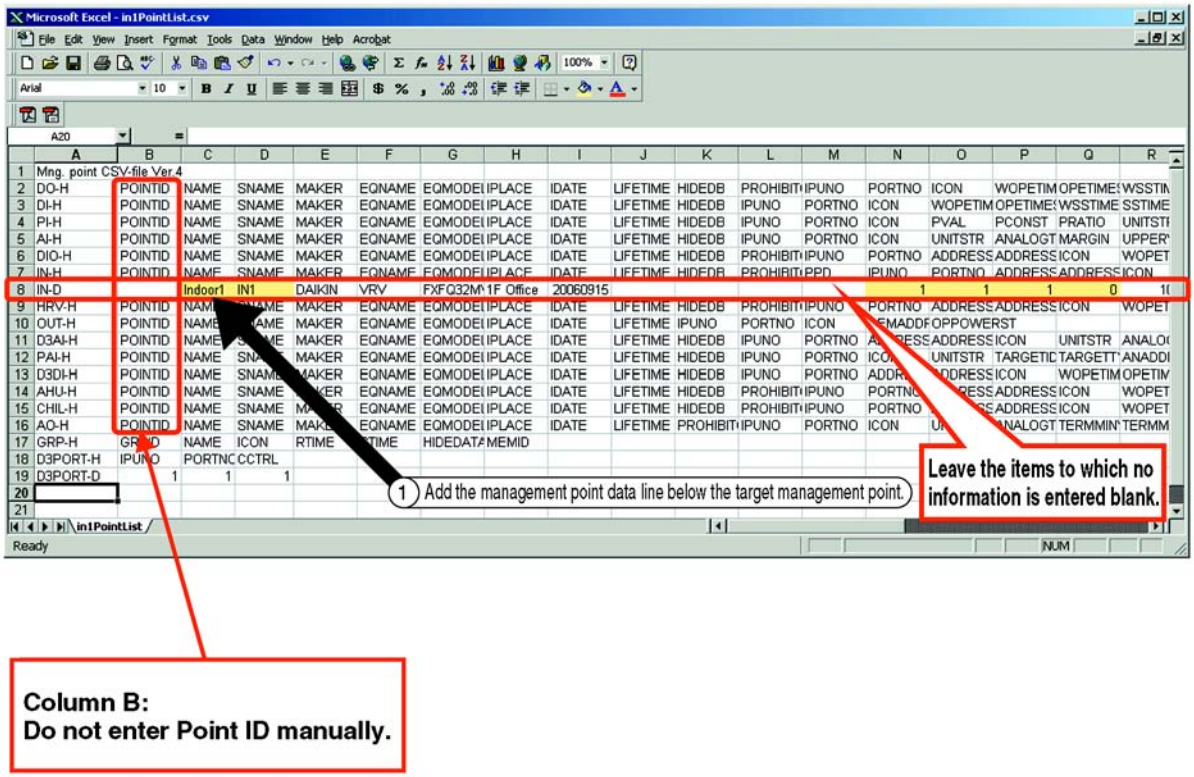
Be sure to enter **essential input items.**
(Regarding the description of each item, see the table below.
For more details, see **3.1.6 CSV Input/Output Function** (page 187).)

Essential input items

Mng.point	:Type of management point
NAME	:Name
SNAME	:Abbreviation name
IPUNO	:iPU No.
PORTNO	:Port No.
ADDRESS1,2	:Address No.

⚠ The column of input items varies according to the type of a management point. Before starting the input operation, be sure to verify the alphabets set in the cell.

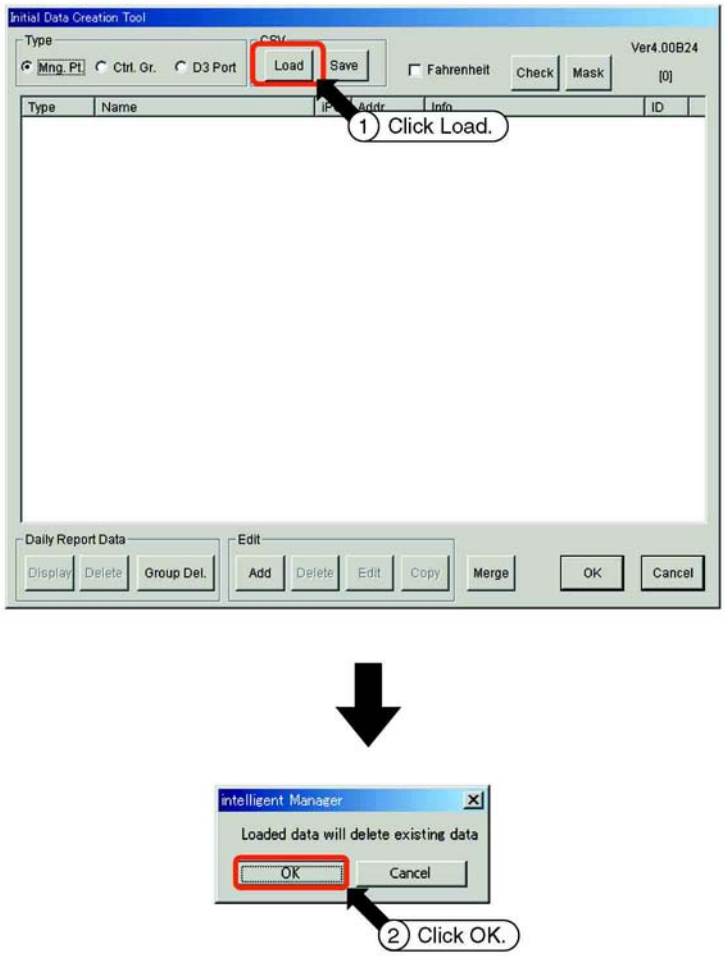
Type of management point	Header notation	Data notation
Internal Do	DO-H	DO-D
Internal Di	DI-H	DI-D
Internal Pi	PI-H	PI-D
Ai	AI-H	AI-D
D3Dio	DIO-H	DIO-D
Indoor unit	IN-H	IN-D
HRV	HRV-H	HRV-D
Outdoor unit	OUT-H	OUT-D
D3Ai	D3AI-H	D3AI-D
Pseudo Ai	PAI-H	PAI-D
D3Di	D3DI-H	D3DI-D
AHU	AHU-H	AHU-D
Chiller	CHIL-H	CHIL-D
Ao	AO-H	AO-D
Control Group	GRP-H	GRP-D



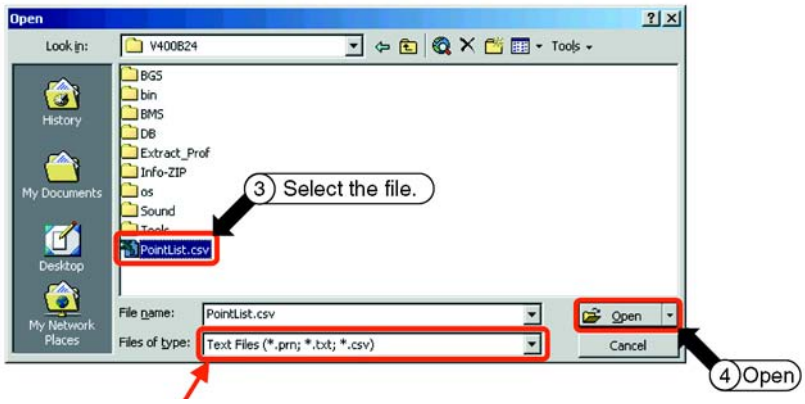
When you finish entering essential items, save the file. (You may overwrite the file.)
This is the end of creation of a CSV file.

Data Conversion of CSV File

Execute ¥VRV Setup in the Tools folder.
Select Pre-engineering and enter daikin as a password. Click Mng. Points setting to activate Initial Data Creation Tool window. (The procedures are the same as ① to ⑤ in page 97.)
Then, load the CSV file that you created in advance.

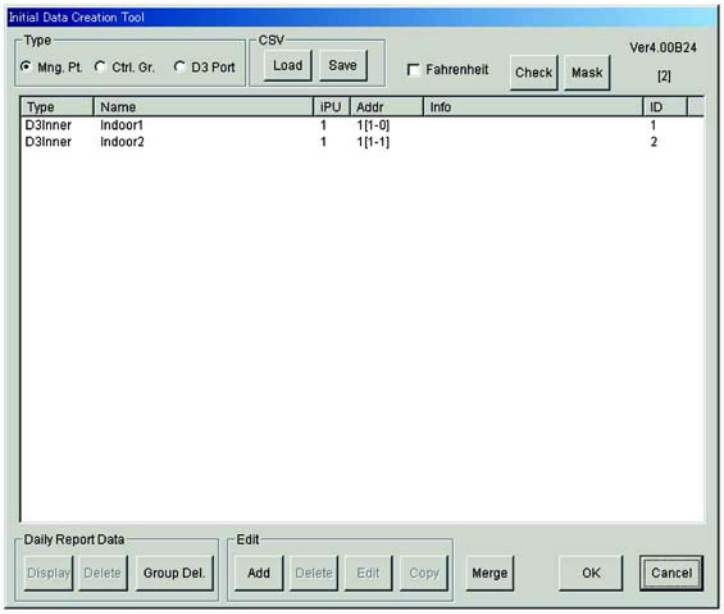


Press the Load button with the aforementioned procedure and select the CSV file.



Check that the type of the file is CSV.

The management point data created by the CSV file is loaded to Initial Data Creation Tool.

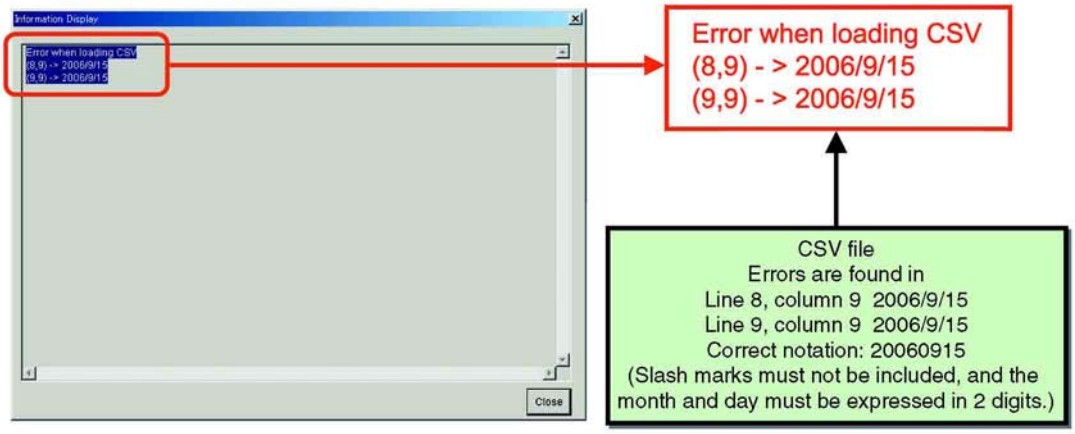


Add D3 Port. (The procedures are the same as those described in page 98.)

Note:

If the CSV file is inadequate, an error window appears when Initial Data Creation Tool loads it. In this case, correct the CSV file, and the reload it.

In the example given below, slash marks in dates are errors.



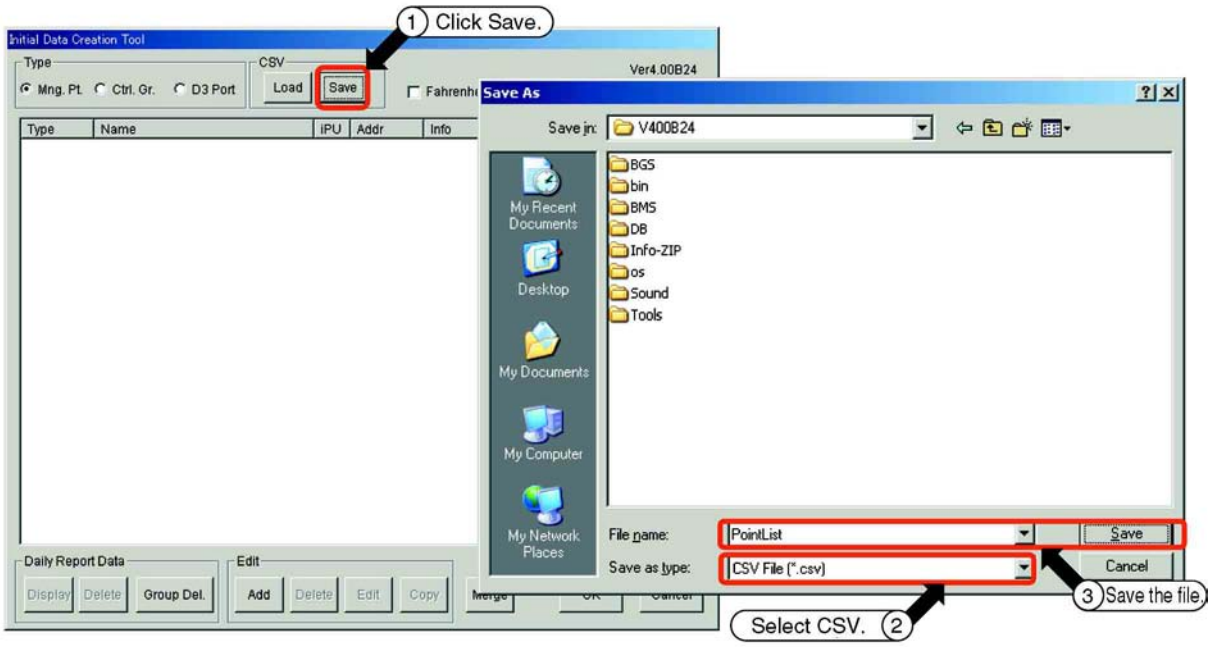
This is the end of the management point data creation operation.

How to Modify Created Management Point Data

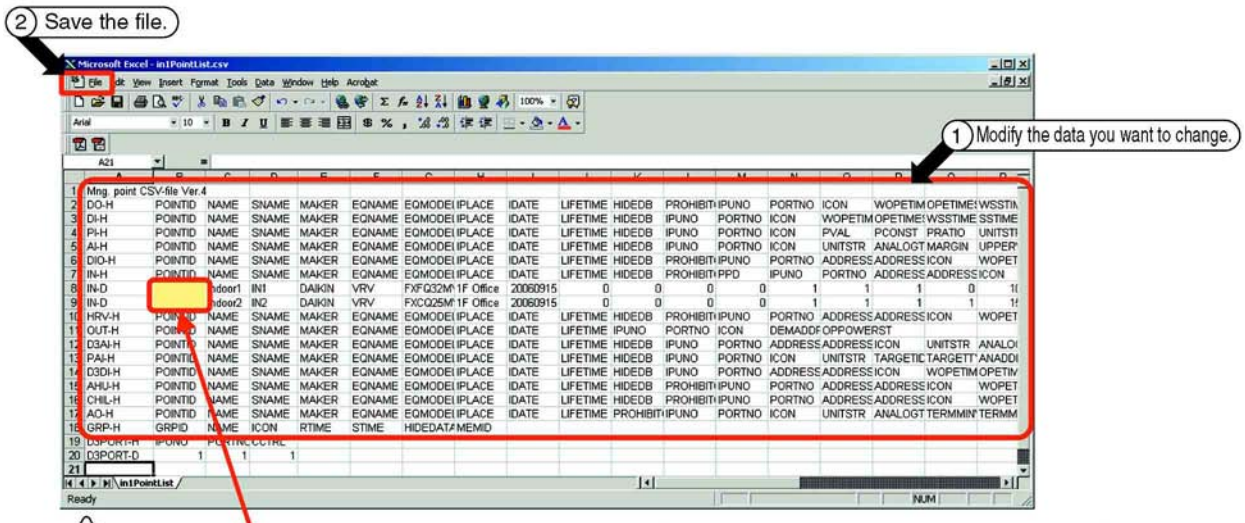
There are two ways to modify created management point data.
① Modification on Tool, and
② Modification in the CSV file.

This section explains ② **Modification in the CSV file.**

To modify data in the CSV file, you need to output data from Tool in the CSV format first. Regarding the procedure, see **Creation of a CSV File** (page 98).



Next, open the output CSV file in Excel, etc.
In this CSV file, a management point ID (POINT ID) is assigned to each management point. **Do not change this management point ID (POINT ID) in the CSV file.**
① Open the CSV file and modify data you want to change.
② When you finish modification, save it in the CSV format.
Conduct the data conversion of the saved CSV file in accordance with the data conversion procedure described in page 16 and subsequent pages.



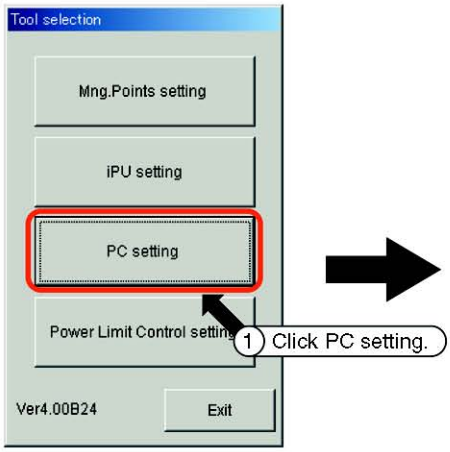
Do not change the assigned management point IDs. If you change them, data might not be loaded correctly. When you add a management point, leave its management point ID blank.

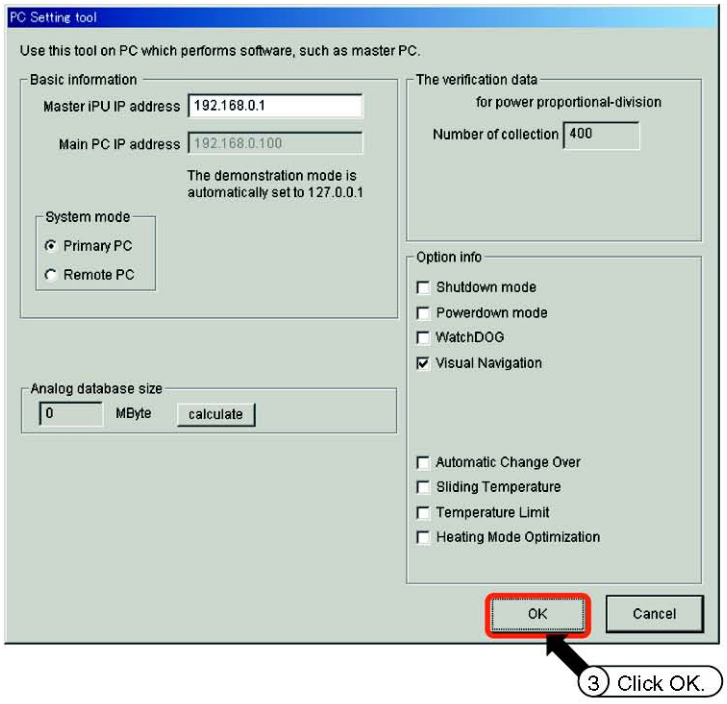
1.2.3 Creation of Visual Navigation Screen

a. Window Creation Flow

Preparation

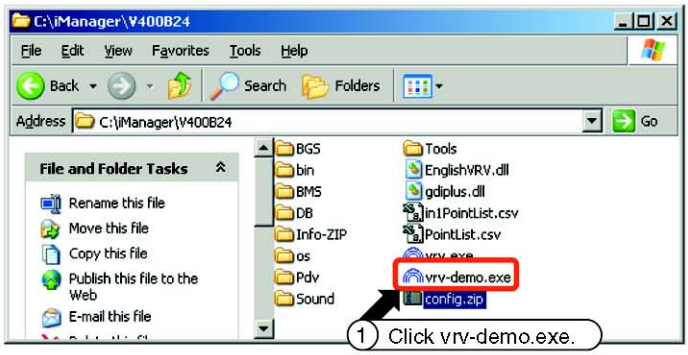
Before actually starting to create the window, enable the Visual Navigation window using the PC Setting tool.



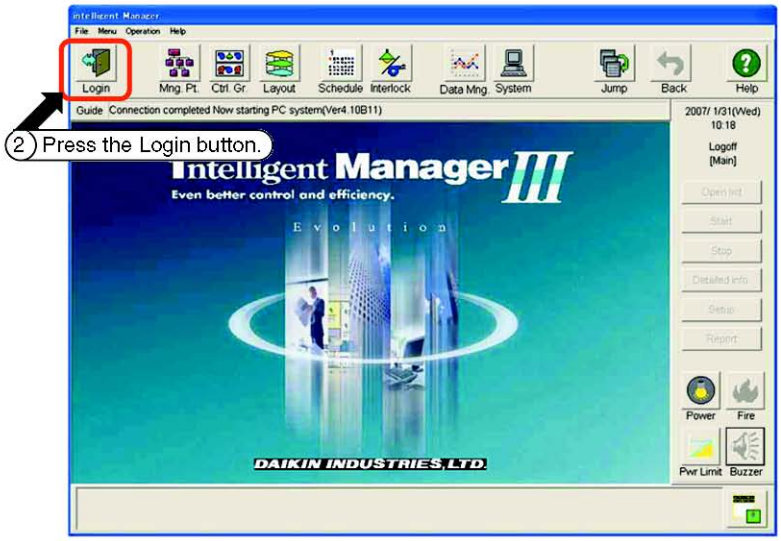


Creation of Window

Execute vrv-demo.exe.



When i-Manager is opened, press the Login button.



Note:

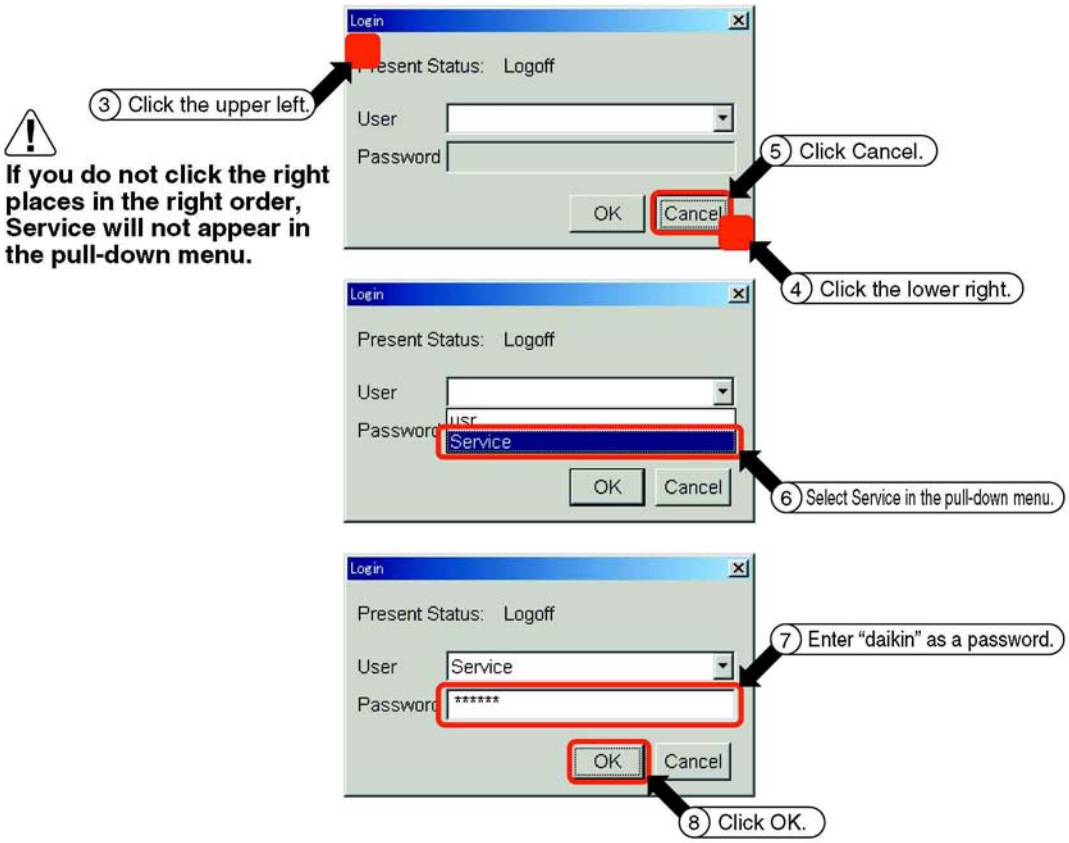
Points to Note for Windows XP

If the firewall setting is set on Windows XP, the dialog box shown below appears. If it appears, select “Reset Block.” Then, this dialog box will not appear any longer.

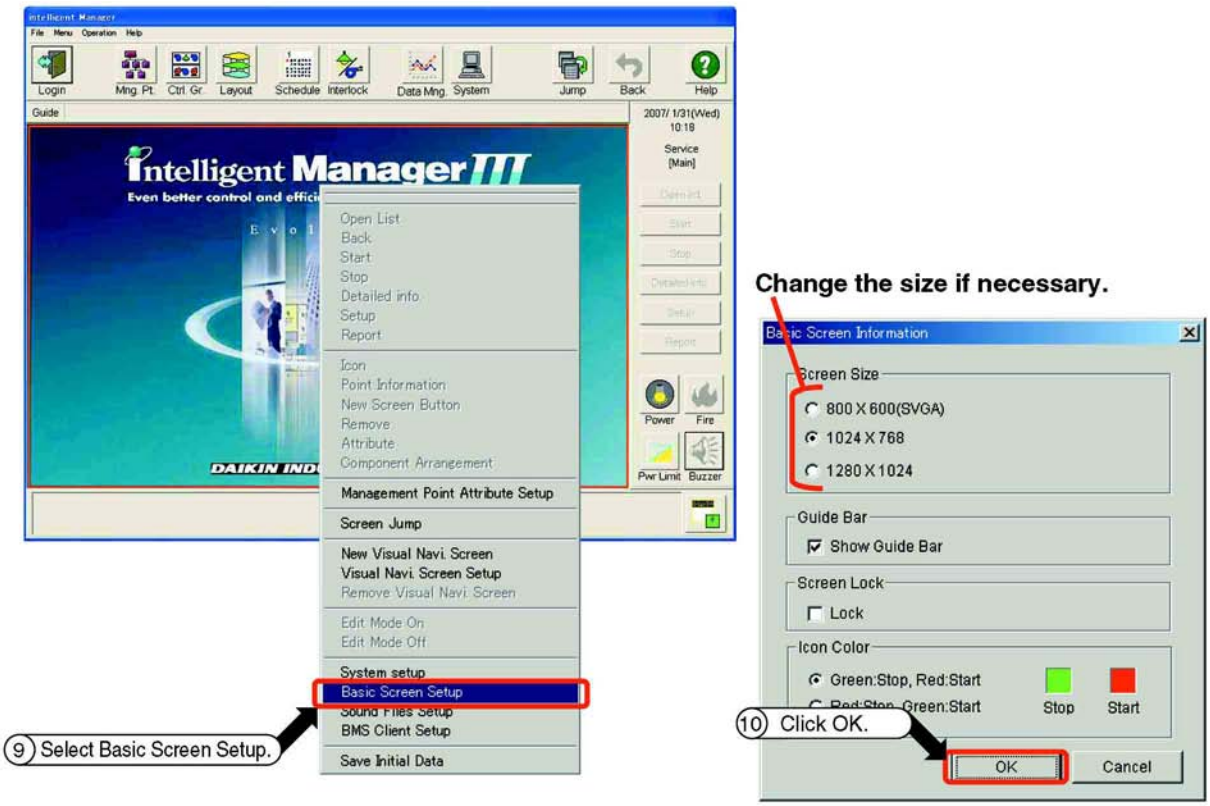


Reset the block.

Log in as Service. (**When you log in with other user account level, you cannot conduct the setting operation.**)
Click the **upper left, lower right, and Cancel button** in this order in the login window, and Service is displayed in the User pull-down menu. The password is "daikin".



The login window is opened. **If it has a red frame, the operation is done correctly. You have logged in with the Service account.**
Next, set the screen size.
Right-click anywhere in the red frame to open a menu, and then select Basic Screen Setup from it.



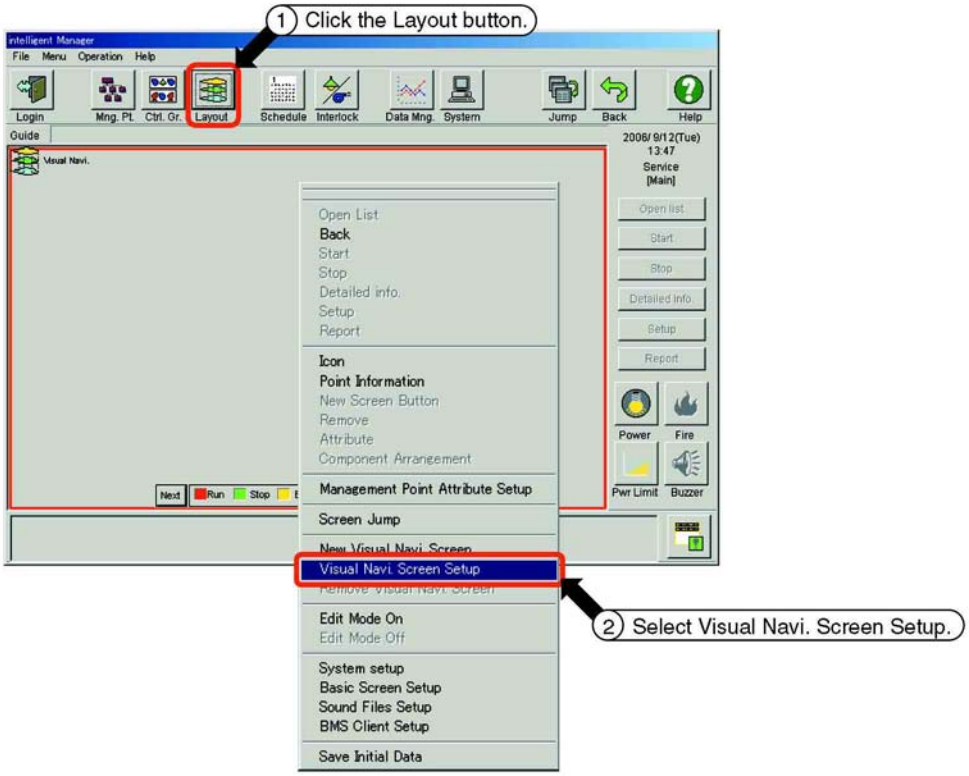
b. Creation of Background Screen

b-1. How to Draw Background Screen

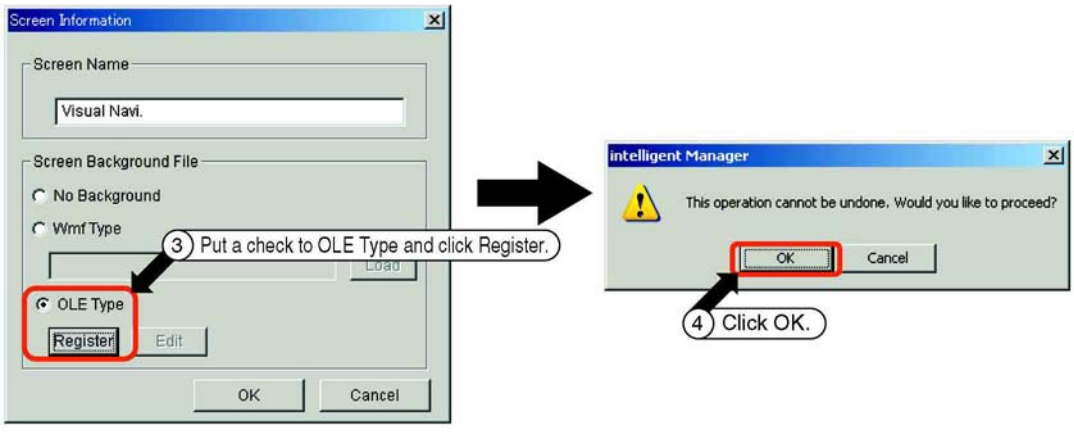
(in the case of creating a new screen using PowerPoint)

This section explains how to create a new screen using PowerPoint.

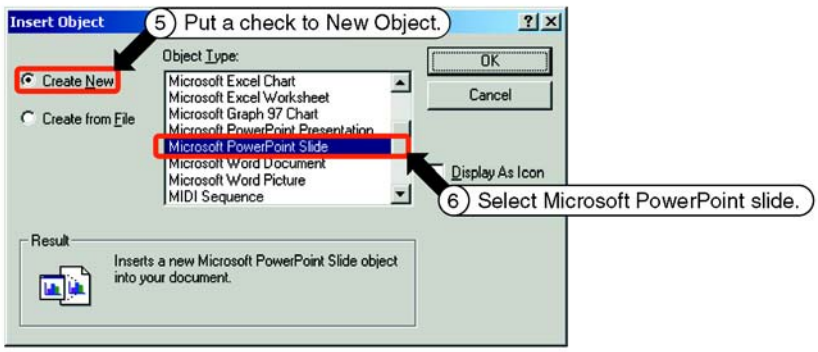
Verify that it is the layout window, right-click anywhere in the red frame to open a menu, and select Visual Navi. Screen Setup.



The Screen Information window is opened. Put a check to OLE Type and click Register.

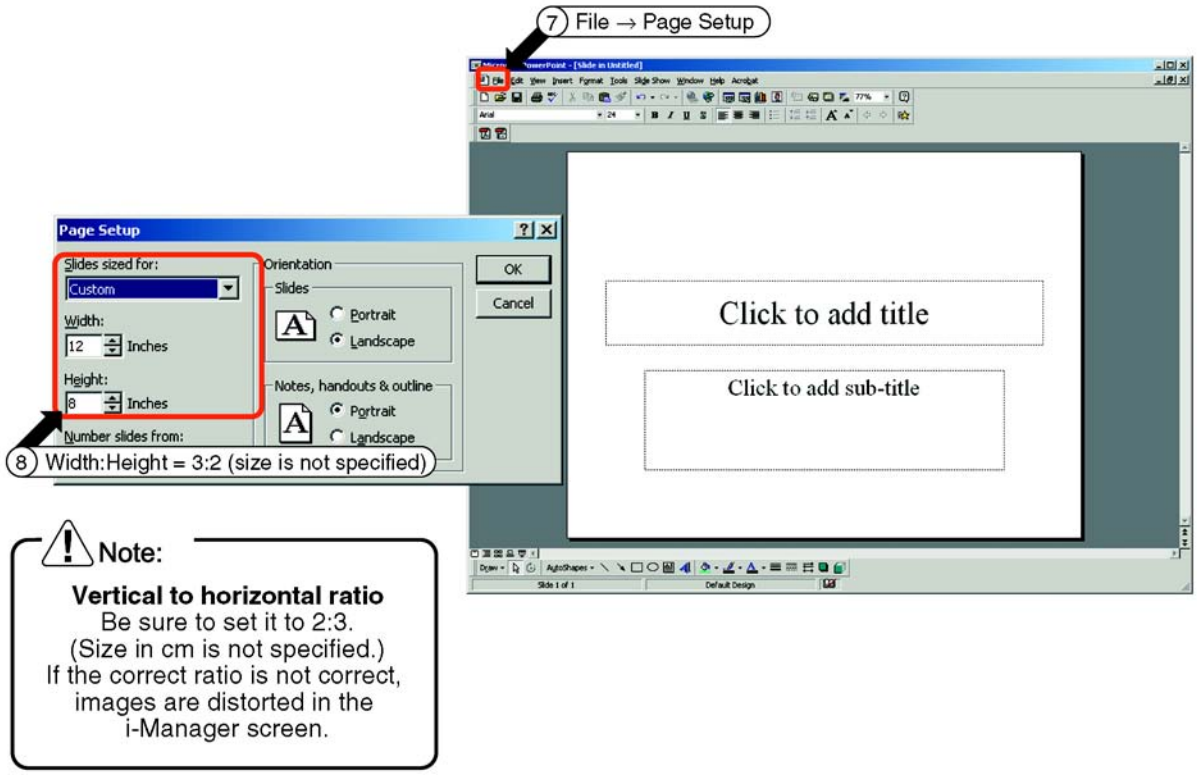


The object insertion window is opened. Select New Object and PowerPoint from the window.



PowerPoint is activated.

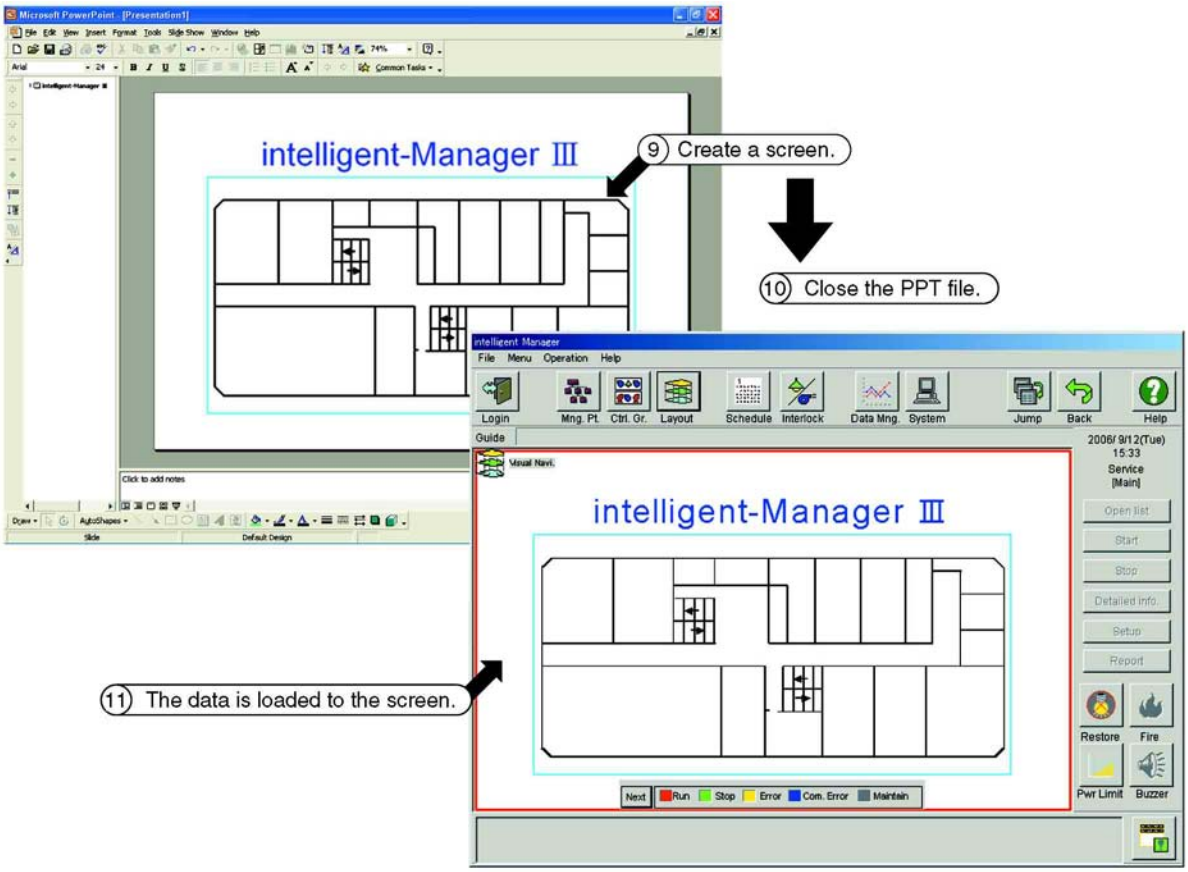
At this point, **be sure to set the vertical to horizontal ratio of the screen to 2:3** in order to match it with the intelligent Manager screen.



Note:

Vertical to horizontal ratio
Be sure to set it to 2:3.
(Size in cm is not specified.)
If the correct ratio is not correct, images are distorted in the i-Manager screen.

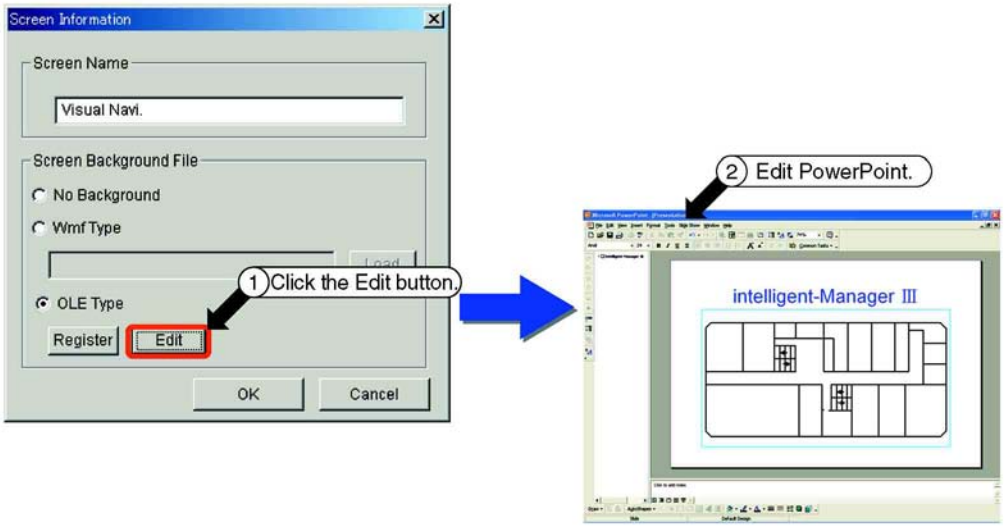
When you finish the creation of the background with PowerPoint, close the window. (You do not need to save it with PowerPoint.)



Note:

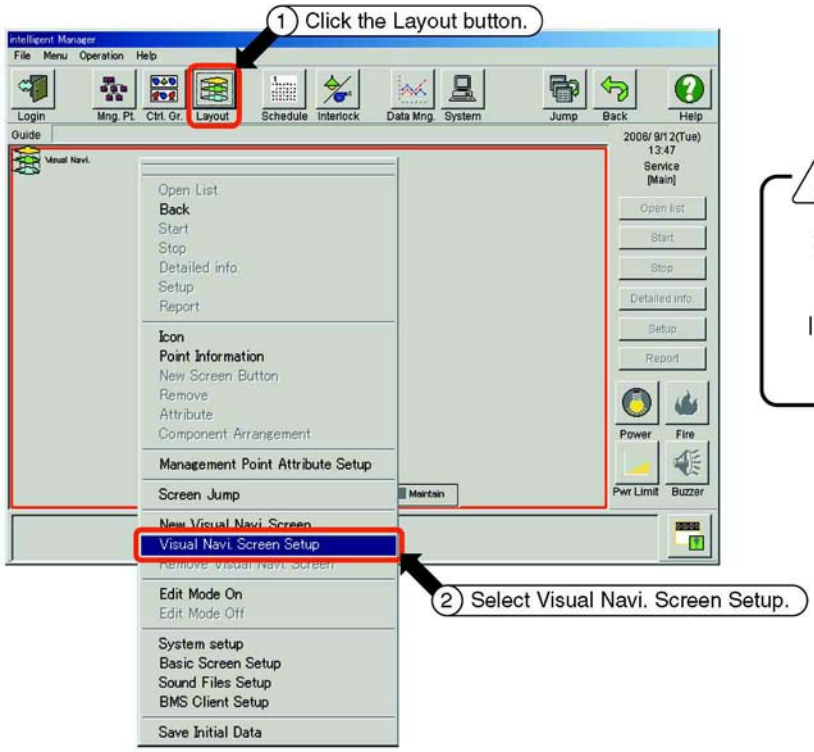
When modifying the created background screen

Select Visual Navi. Screen Setup and click the Edit button of the Screen Information window, and PowerPoint is activated and you can edit the background screen. When you finish the edit, close PowerPoint, and the screen is updated.



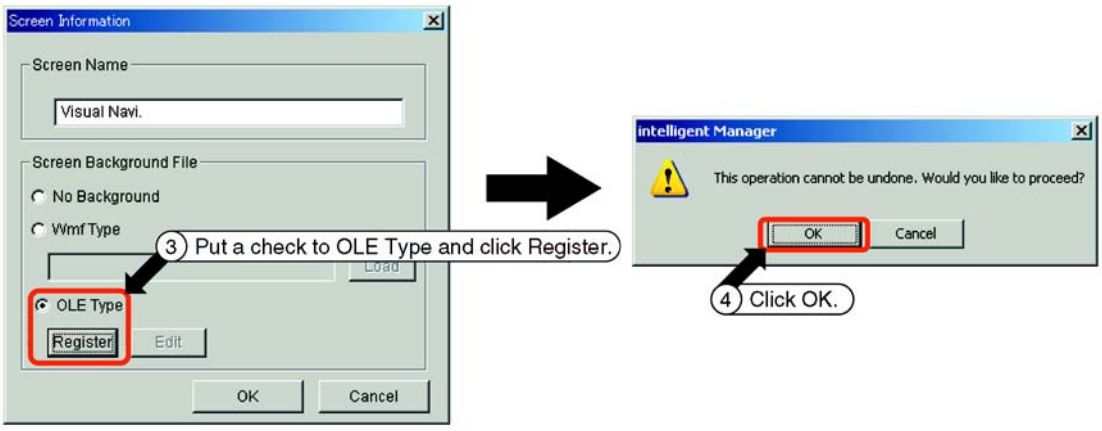
b-2. How to Draw Background Screen

This section explains how to load images created in advance to intelligent Manager.
You should prepare background data in advance. (**Do not forget to set the vertical to horizontal ratio to 2:3.**)
Verify that it is the layout window, right-click anywhere in the red frame to open a menu, and select Visual Navi. Screen Setup.

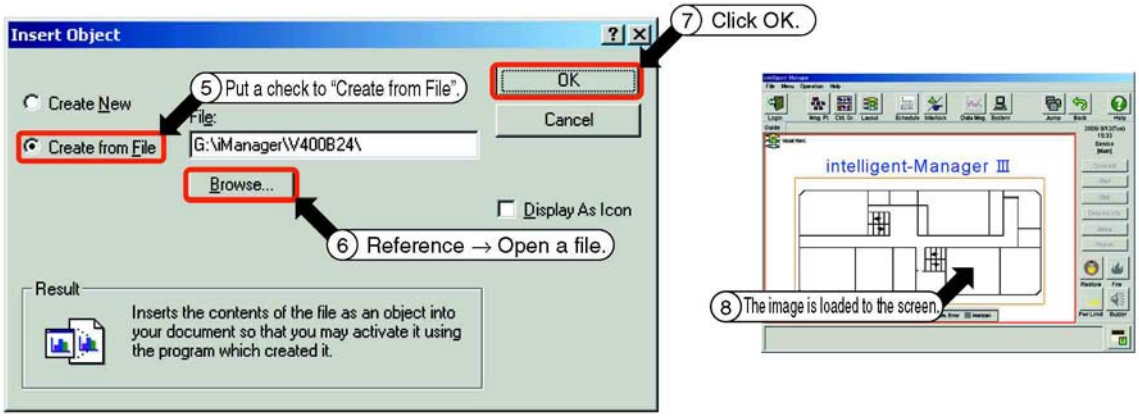


Note:
Vertical to horizontal ratio
Be sure to set the image to be prepared to 2:3.
(Size in cm is not specified.)
If the correct ratio is not correct, images are distorted in the i-Manager screen.

The Screen Information window is opened. Put a check to OLE Type and click Register.



The object insertion window is opened. Put a check to "Create from File" and select a file you want to use from "Reference", and the selected image is loaded to the screen.

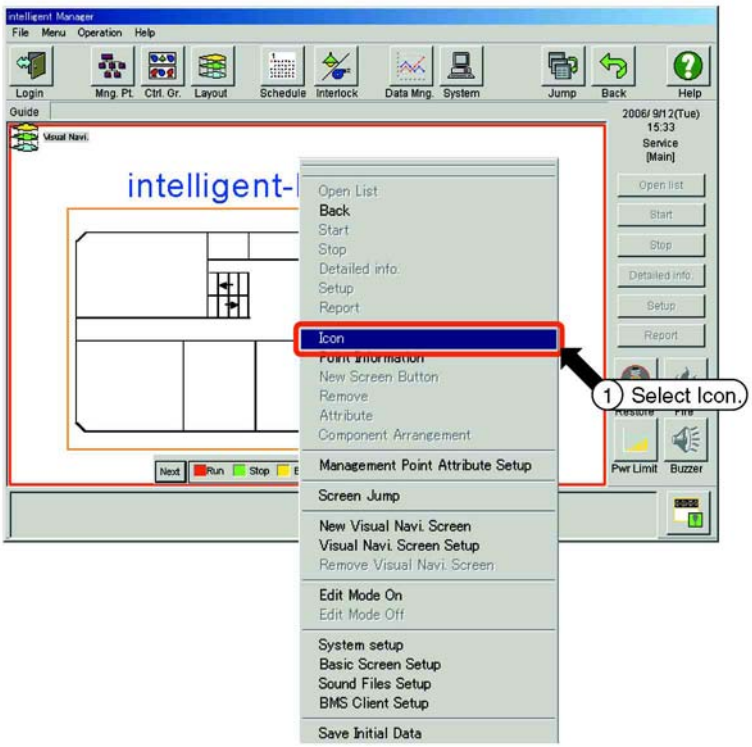


This is the end of the creation of the background screen.

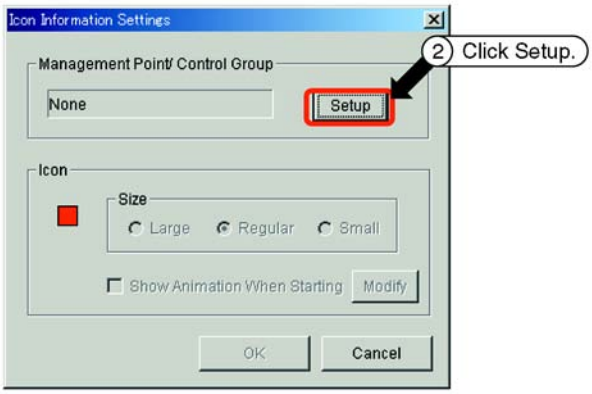
c. Screen Layout

Allocation of Management Point Icons

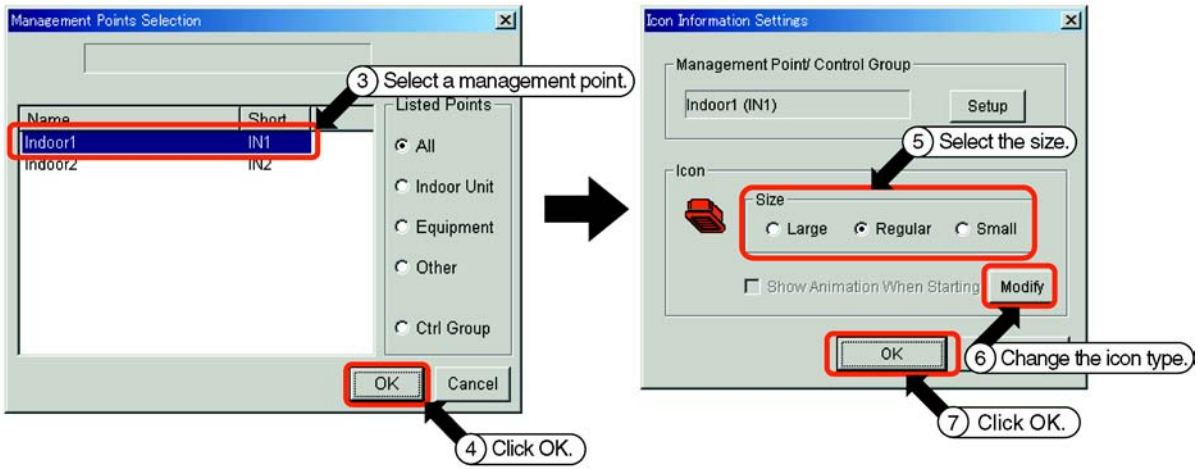
Affix icons of management points to the Visual Navigation Screen.
Check that the Layout window is opened, right-click anywhere in the red frame to open a menu, and select Icon from the menu.



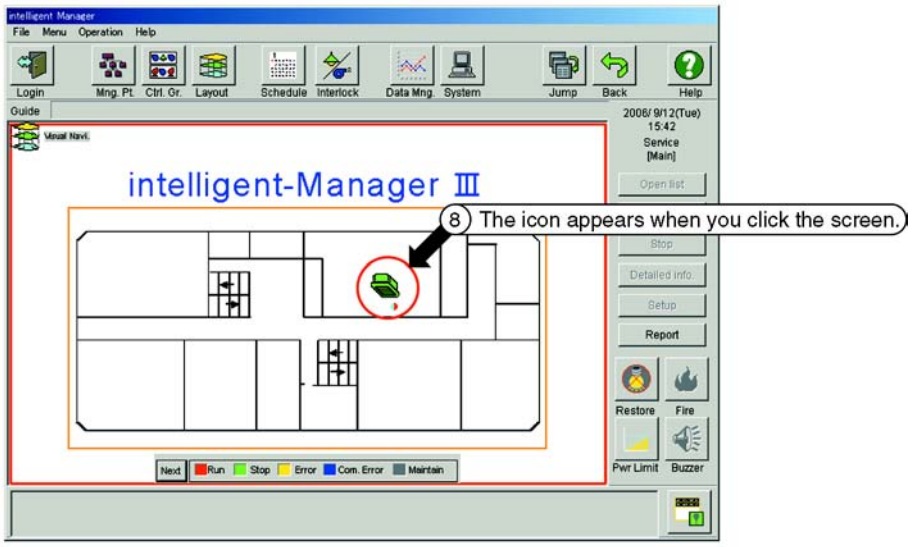
Click Setup in the Icon Information Settings window.



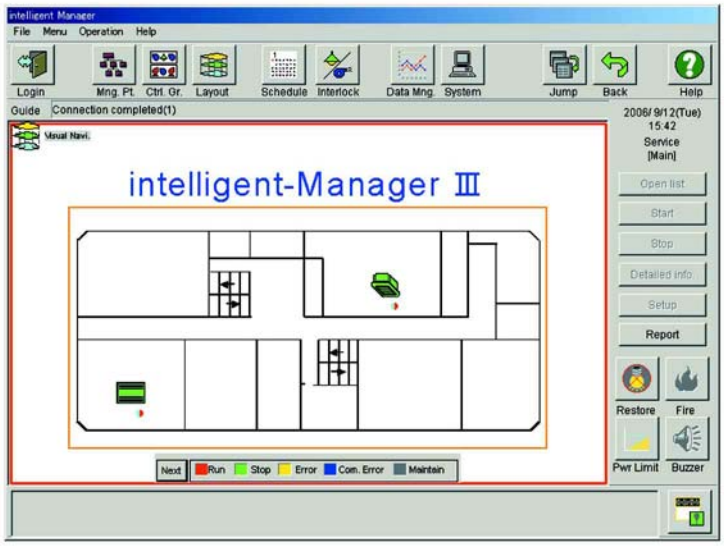
Select a management point corresponding to the icon you want to create in the Management Point Selection window. Set the size, etc. in the Icon Information Settings window.



Click the location where you want to place the icon.



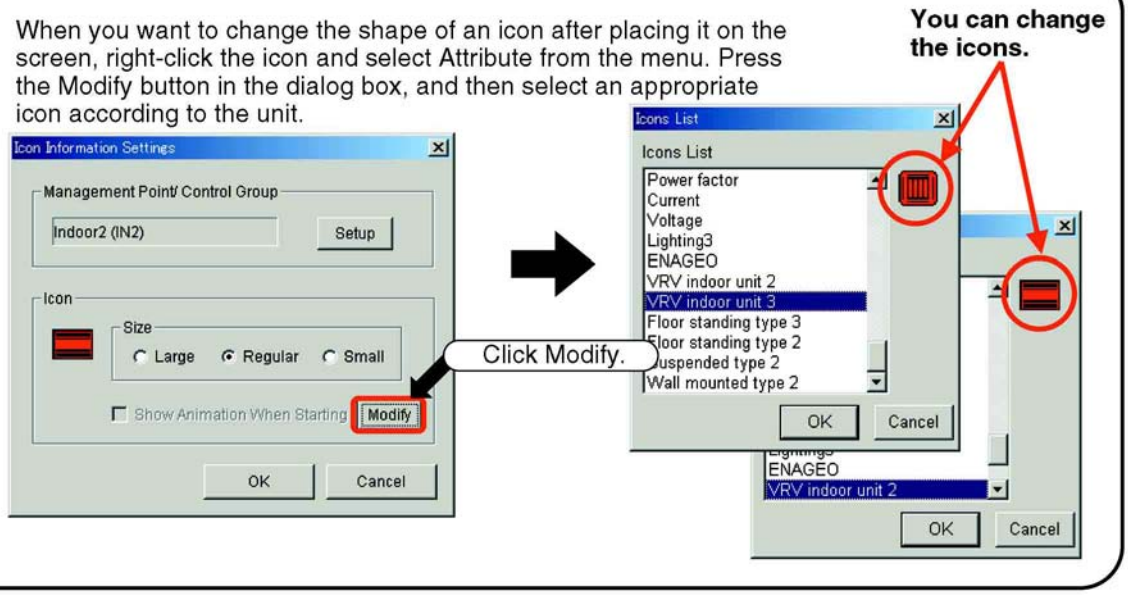
Create icons for other management points on the screen in the same way.



This is the end of allocation of management point icons.

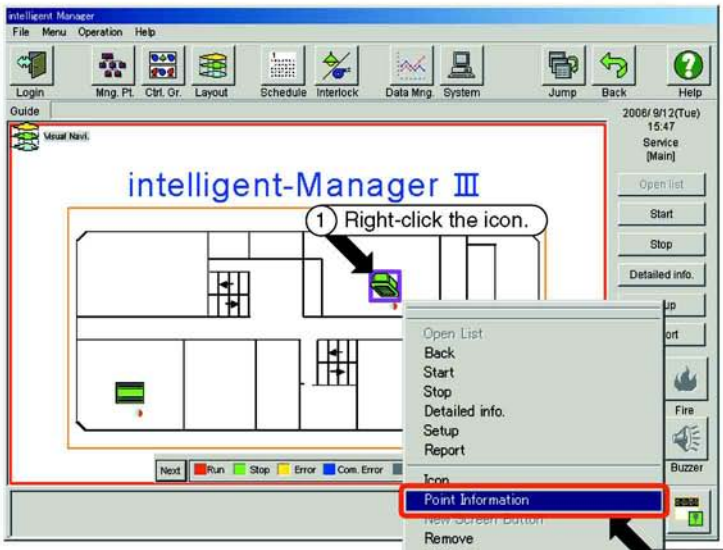
Note:

When you want to change the shape of an icon after placing it on the screen, right-click the icon and select Attribute from the menu. Press the Modify button in the dialog box, and then select an appropriate icon according to the unit.

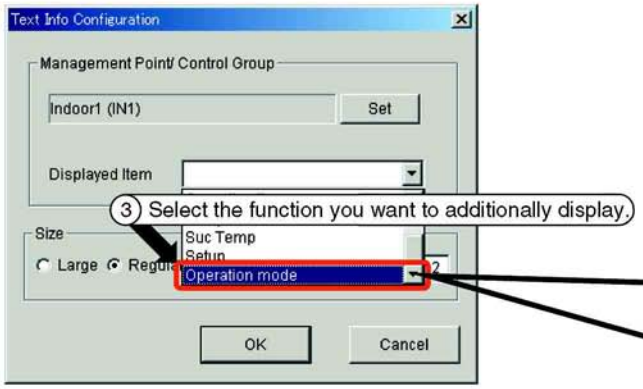


Setting of Information about Management Point

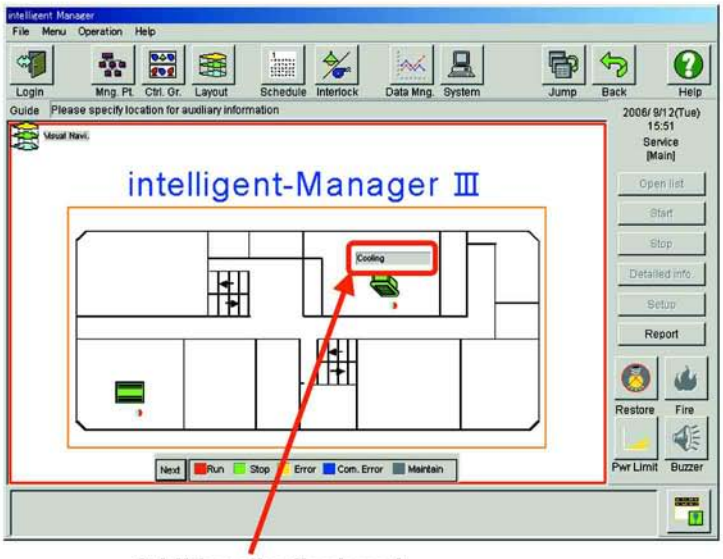
You can add the name, designated temperature, and suction temperature to management point icons on the Visual Navigation screen.
Right click the icon to which you want to add information to open a menu, and select Point Information from it.



Select the function you want to additionally display on the Text Info Configuration window.
Select the function you want to additionally display.



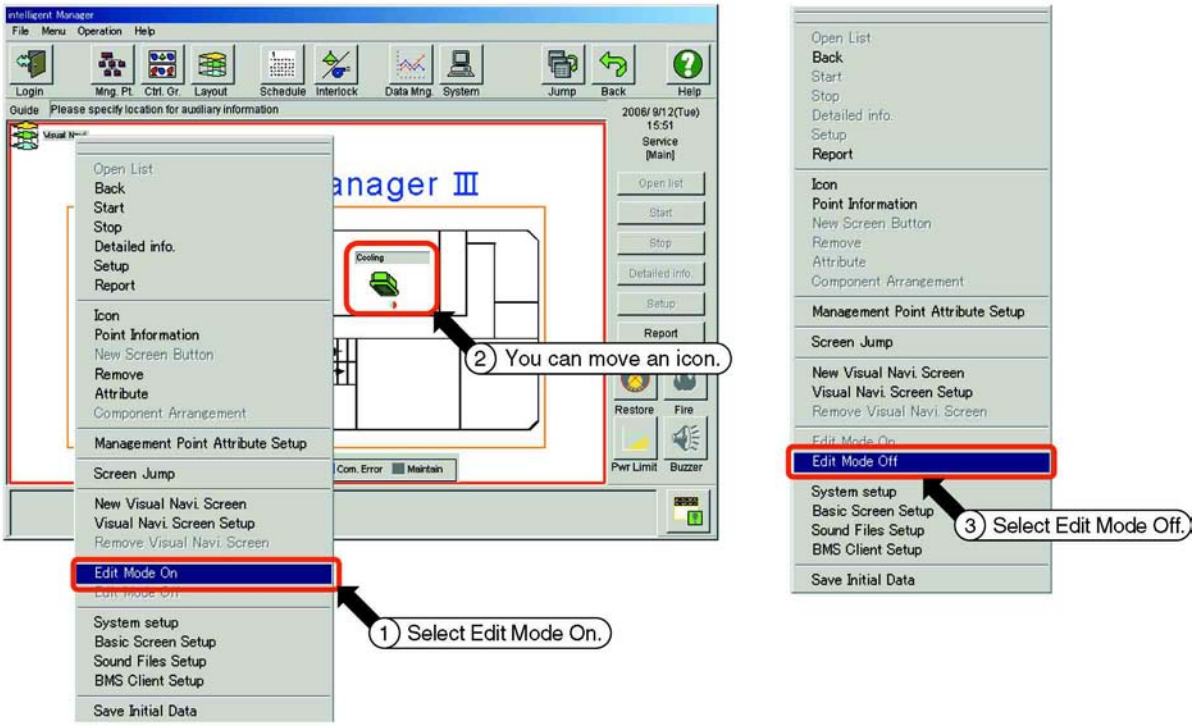
Details of Display Item
(in the case of an indoor unit)
- Mng. point name
- Short name
- Switching state
- Nb.of switching times
- Operation time
- Temp.
- Suc Temp
- Setup
- Operation mode



Repeat ①, ② and ③ as many times as you need.

Edit of Position of Icons and Information

You can move icons and information to any place you want.
Right-click the screen to display a menu and select Edit Mode On from it.
When you finish the edit, select Edit Mode Off to restore the previous state.



Note:

Points to Note for Moving Icons/ Information

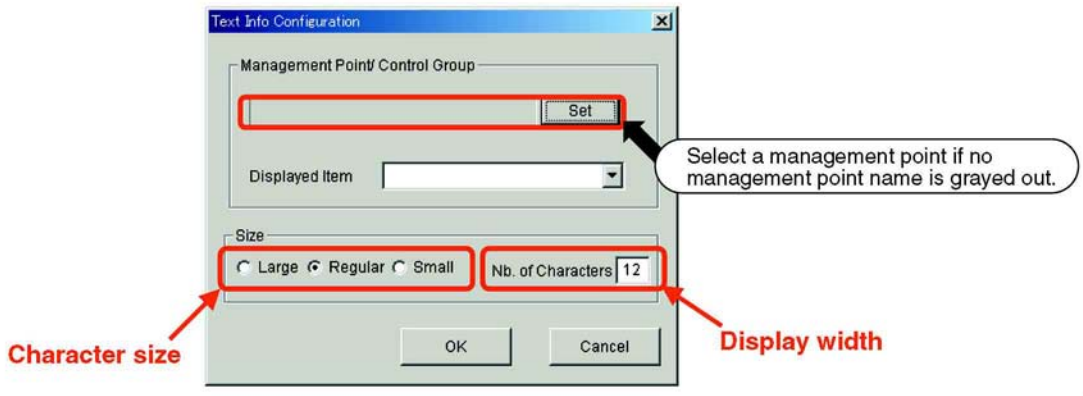
An icon and information is moved on grid lines when you move it as pressing the SHIFT button. (Grid lines are not displayed.)

Points to Note for Display of Information on Management Points

If you do not select a management point icon before right-clicking the screen, no management point is selected.
In this state, you cannot edit information. Click Set and select a management point.

Detailed Setting of Information of Management Points

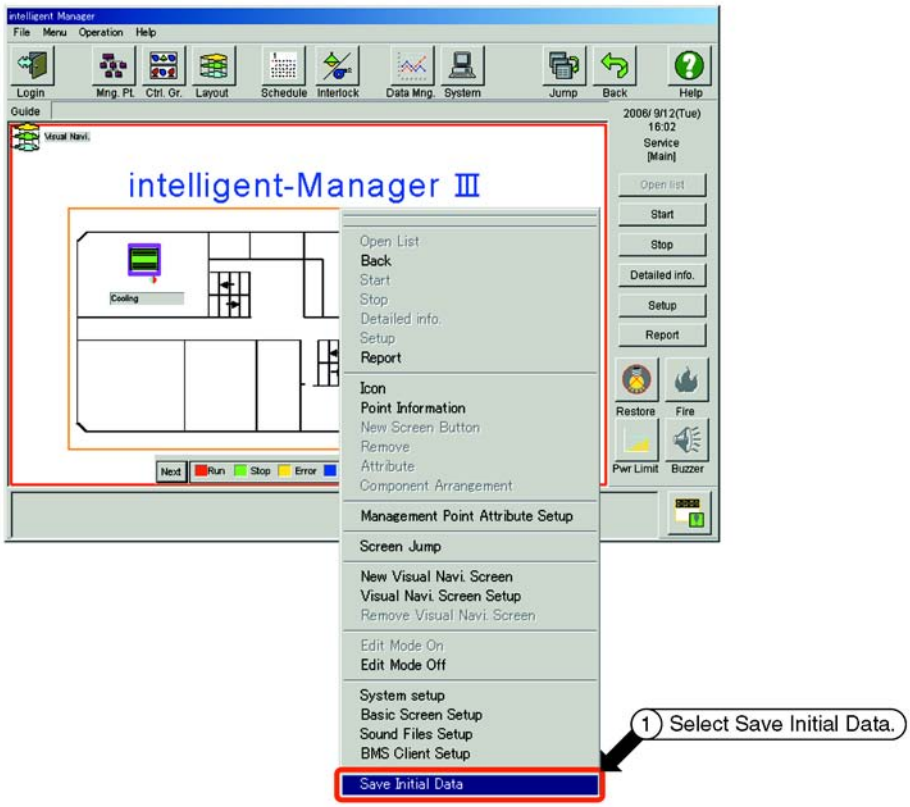
Set the character size and display width with Size in the Text Info Configuration window.



Saving Created Visual Navigation Screen

Save the settings.

Right-click anywhere within the red frame to open a menu, and select Save Initial Data from it.

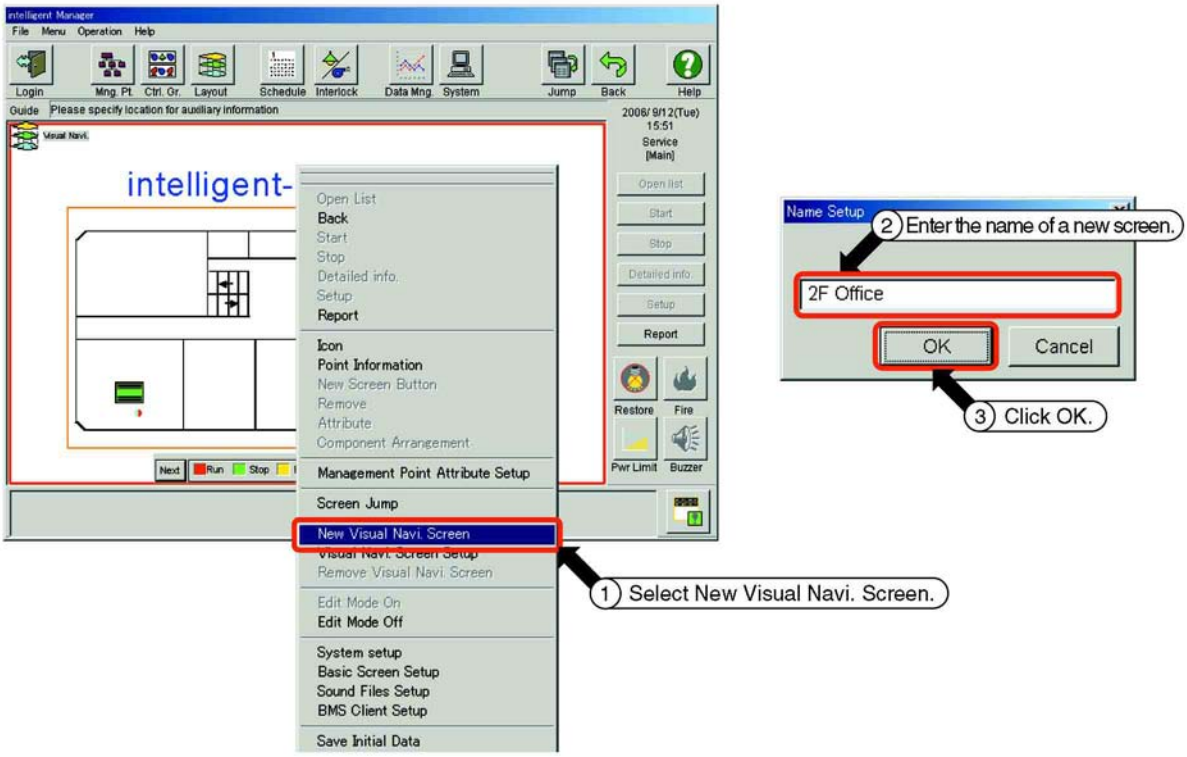


The created Visual Navigation screen has been saved.

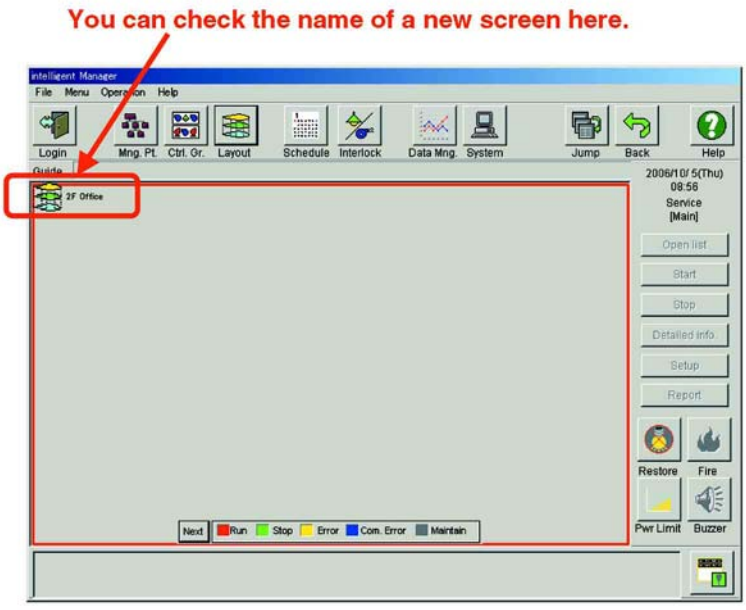
d. Creation of New Screen

Using intelligent Manager, you can create multiple Visual Navigation screens. If you control a building with several floors using intelligent Manager, create screens with the number of the floors you need to control, and add buttons which allow the user to jump between the screens so that control can be done easily.

Right-click anywhere within the red frame in the Visual Navigation screen to open a menu, and select New Visual Navi. Screen from it.

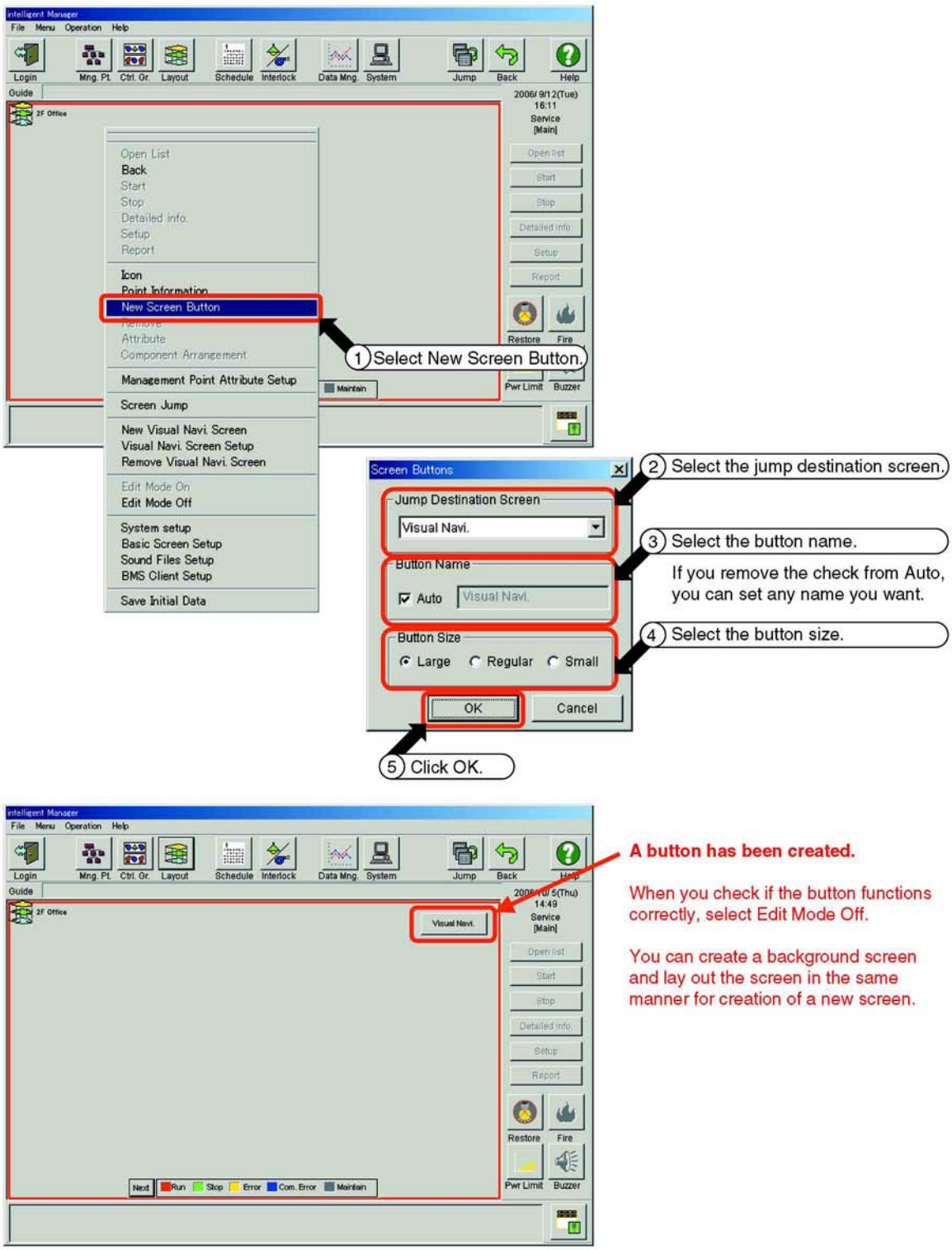


A new screen is created.
The way to load the background screen to a new screen is the same as **b. Creation of Background Screen** (page 107 and subsequent pages).



e. Creation of Screen Jump Button

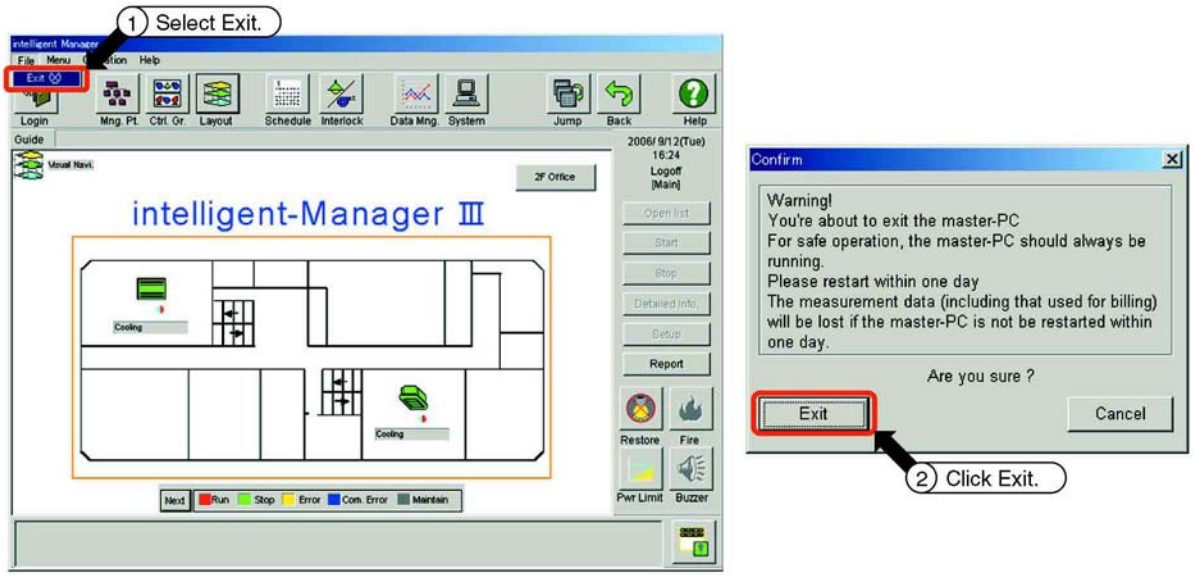
If you create a jump button in each screen, you can easily jump to other screens.
Right-click anywhere within the red frame to open a menu, select New Screen Button from it, and make the settings such as the jump destination screen and button name.



This is the end of creation of a screen jump button.
You can save the created screen data in the same manner for **Saving Created Visual Navigation Screen** (page 115).

f. How to Exit

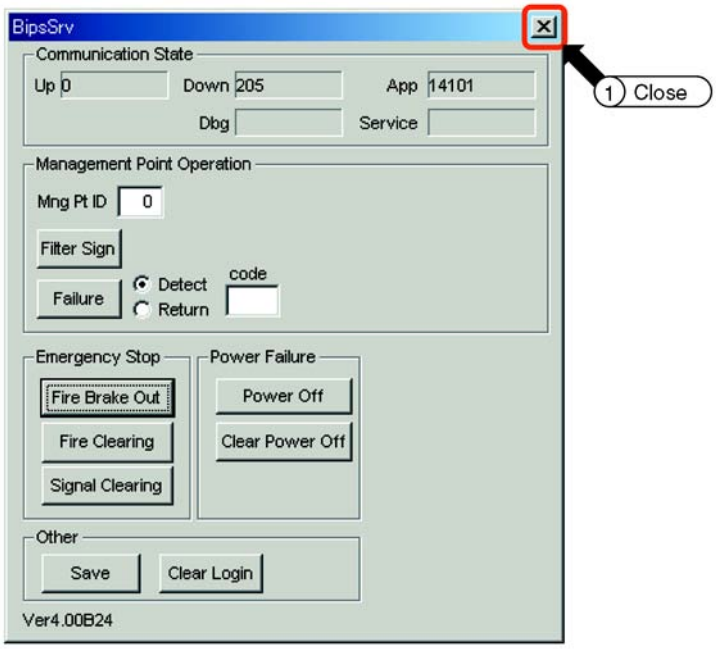
When you finish creating all data, save them and finish intelligent Manager.
Select Exit from the pull-down menu in File.



You have finished intelligent Manager.
This is the end of the basic operations at the office.

BipsSrv

BipsSrv is a dummy server to operate demonstration software.
When you activate intelligent Manager, BipsSrv will be automatically activated in the screen.
Do not terminate it during activation.
When you finish (Exit) intelligent Manager, be sure to close the BipsSr screen as well.



1.2.4 Acquisition of Activation Key

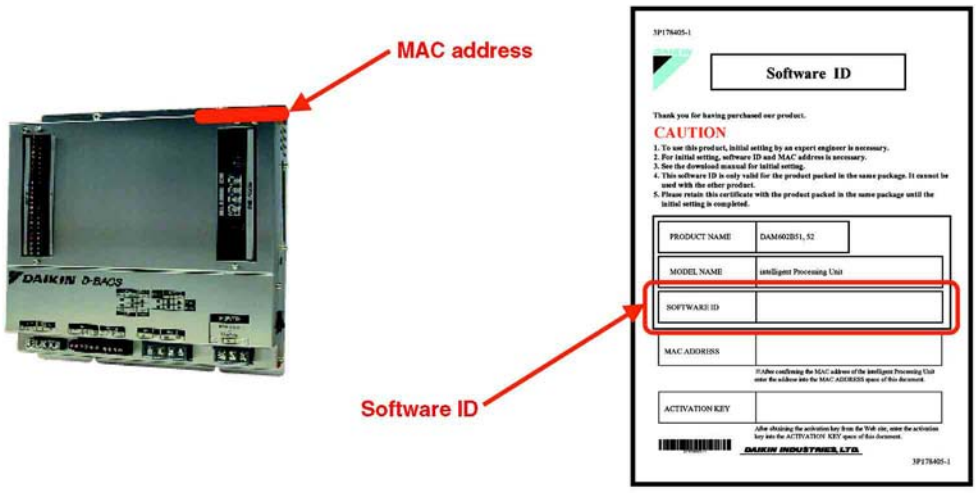
When you install intelligent Manager at the site, you need an activation key.
This section explains how to access Distributor's Page and how to obtain an activation key. (If you do not have access to the Distributor's Page, you need to make inquiries with your distributor directly.)

a. Necessary information to acquire activation key

You need to prepare necessary information to obtain an activation key.

1. **MAC address** (assigned to the main unit)
2. **Software ID** (presented in the warranty card supplied with the main unit)

⚠ Activation requires the MAC address and software ID of the master iPU.

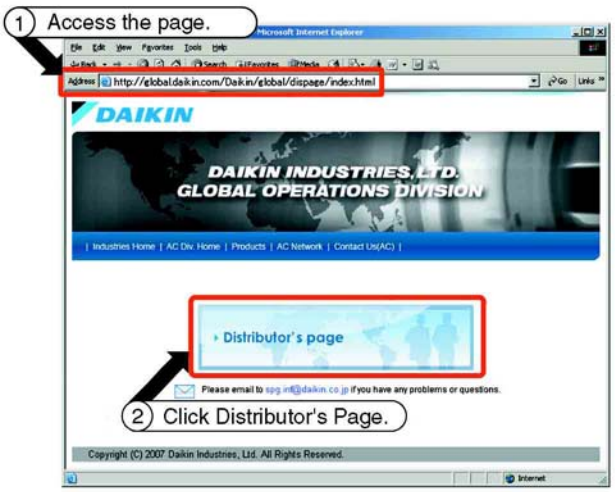


b. How to obtain activation key

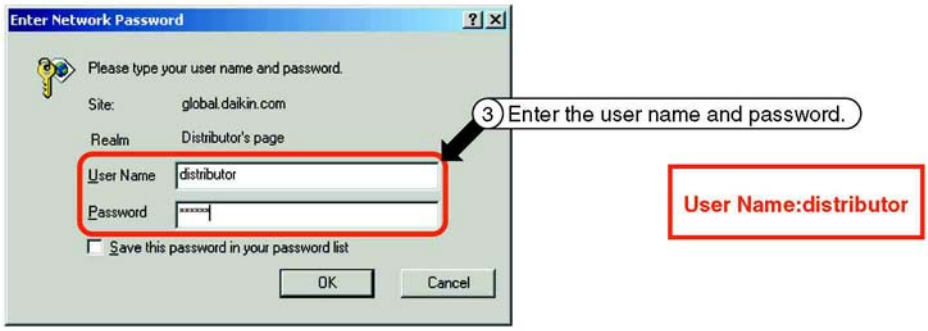
Access the activation key issuance page.

⚠ You need the environment in which you have access to the Internet.

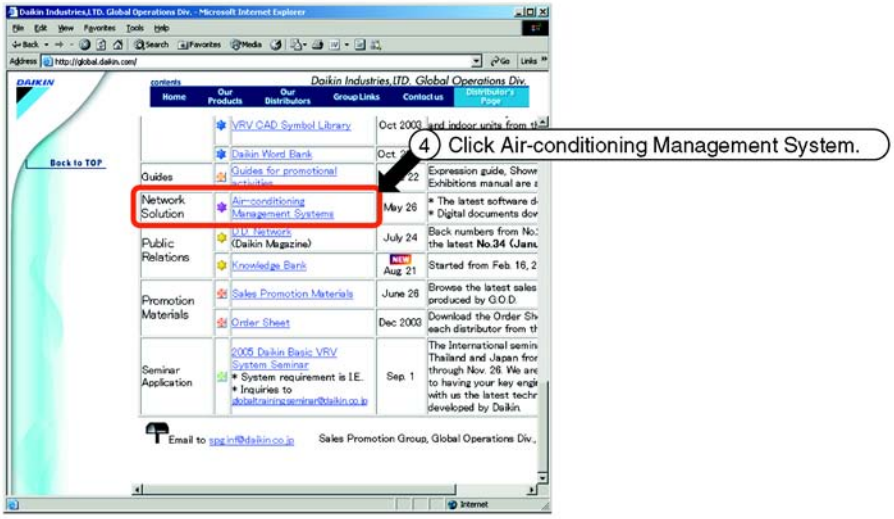
Access **http://global.daikin.com/Daikin/global/dispage/index.html** and enter the Distributor's Page.



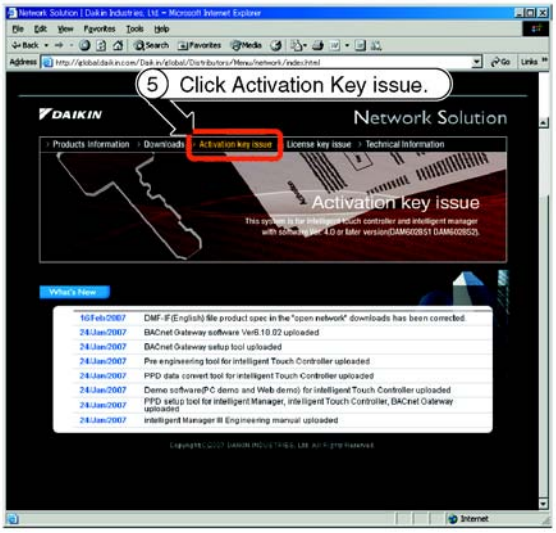
Enter the user name and password.



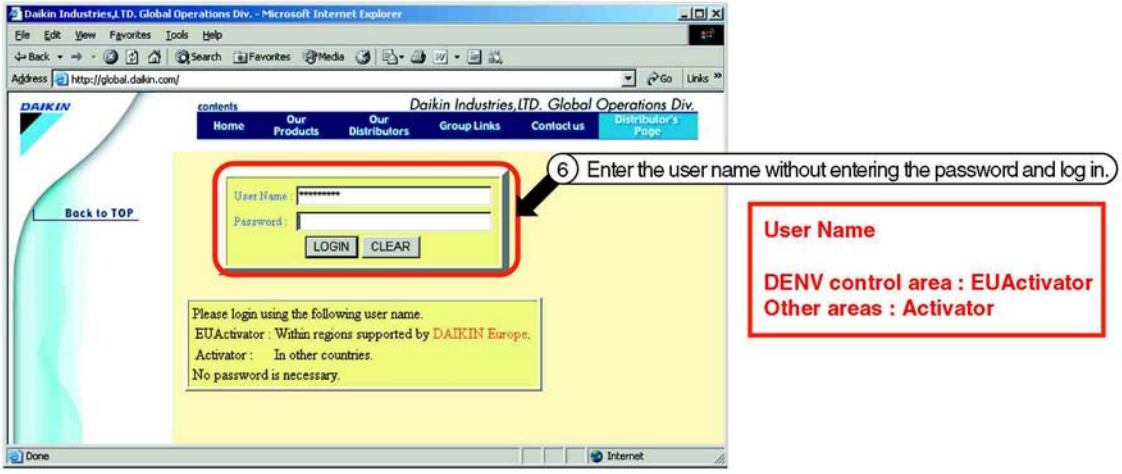
The Distributor's Page is opened.
Click Air-conditioning Management System to enter Network Solution page.



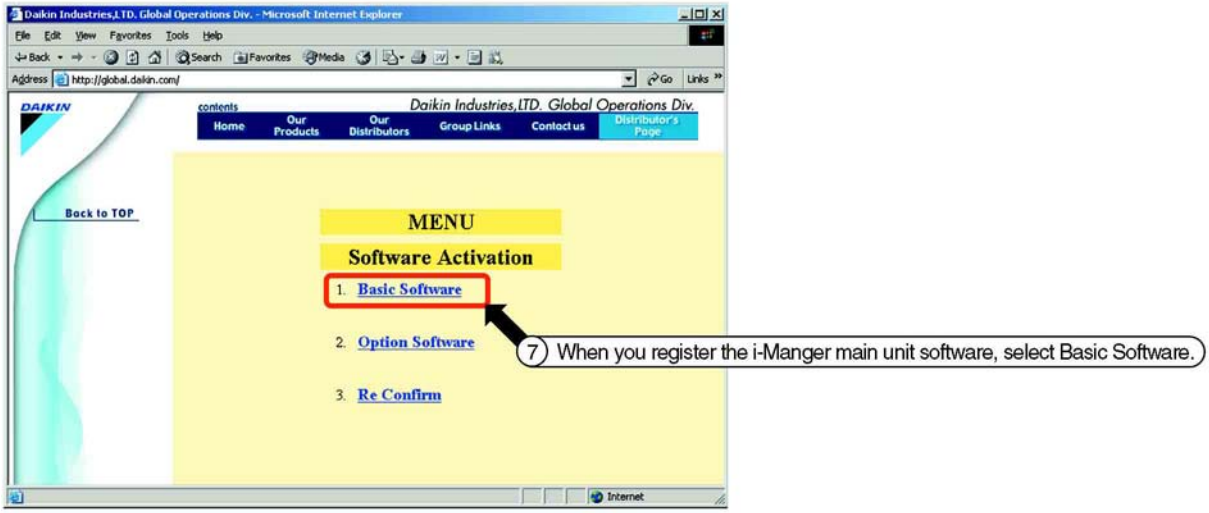
Click Activation Key issue in Network Solution page.



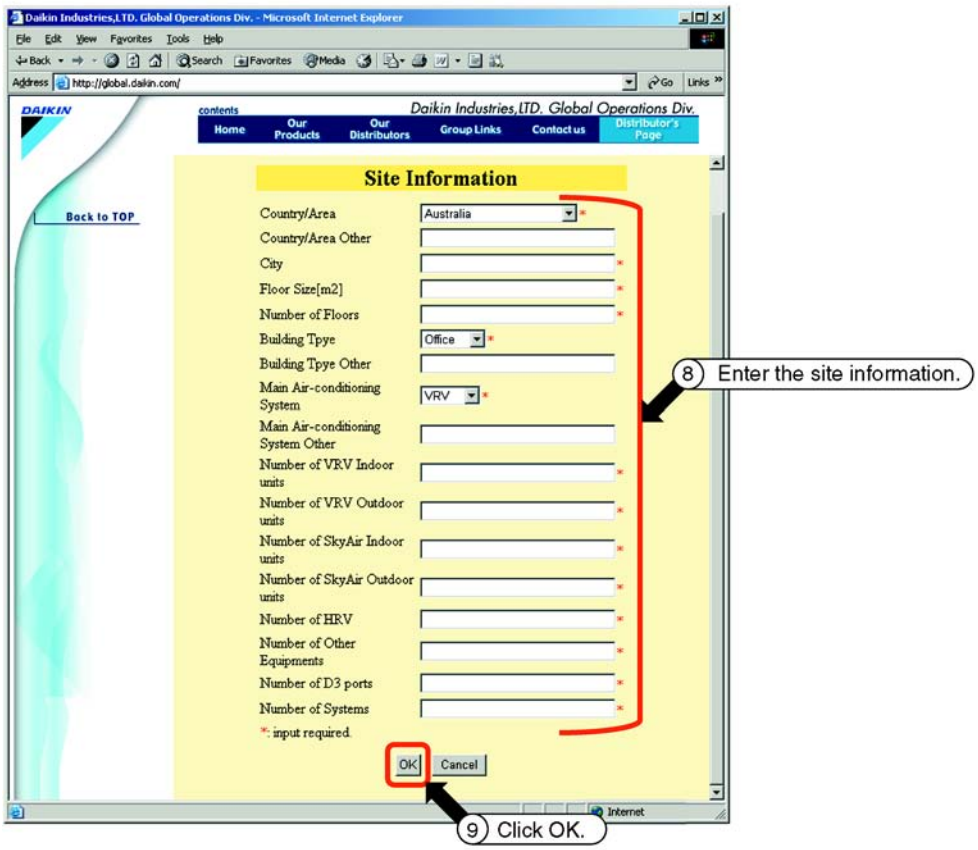
The activation key issuance window is opened. Enter the user name and log in.



The MENU window is opened. When you register the i-Manger main unit software, select Basic Software.



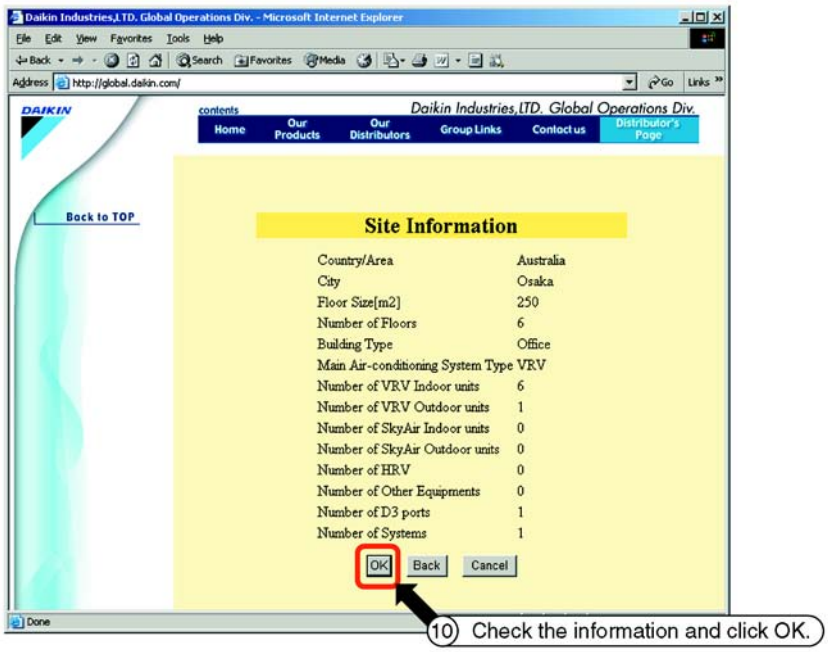
The Site Information window is opened. Enter the site information and press the OK button at the bottom of the window.
(The items with * mark are essential input items.)



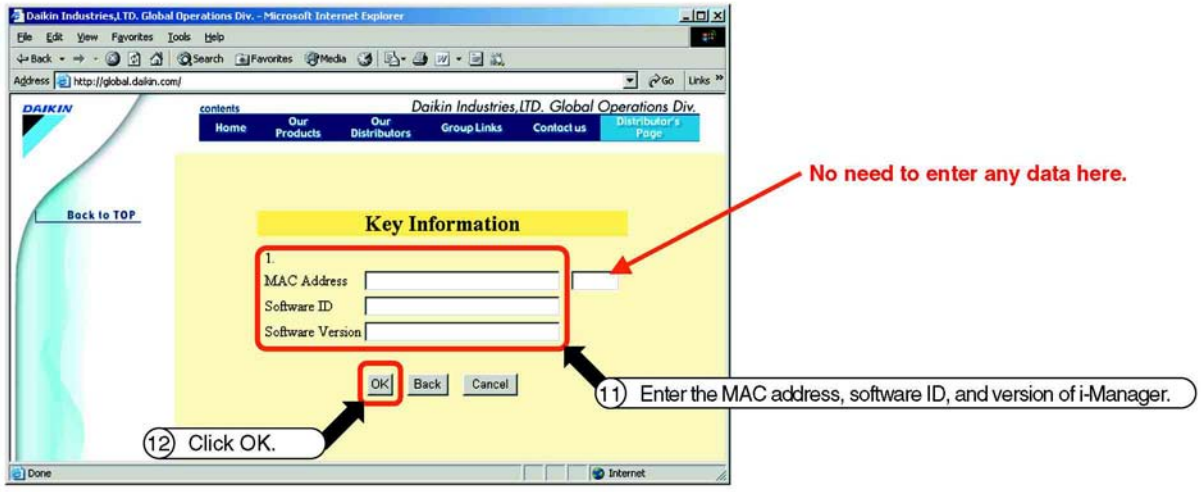
The items with * mark are essential input items.

Site information input items	Description
Country/Area *	Select the country where the site is located.
Country/Area Other	Enter the country/area if it is not included in the above list.
City *	Enter the location (city) of the site.
Floor Size[m2] *	Enter the floor size of the site.
Number of Floors *	Enter the number of floors of the site.
Building Tpye *	Select the building type.
Building Tpye Other	Enter the building type if it is not included in the above list.
Main Air-conditioning System *	Select the main air-conditioning system.
Main Air-conditioning System Other *	Enter the main air-conditioning system if it is not included in the above list.
Number of VRV Indoor units *	Enter the number of VRV indoor units to be installed at the site.
Number of VRV Outdoor units *	Enter the number of VRV outdoor units to be installed at the site.
Number of SkyAir Indoor units *	Enter the number of SkyAir indoor units to be installed at the site.
Number of SkyAir Outdoor units *	Enter the number of SkyAir outdoor units to be installed at the site.
Number of HRV *	Enter the number of HRV to be installed at the site.
Number of Other Equipments *	Enter the number of other devices to be installed at the site and managed by intelligent Manager.
Number of D3 ports *	Enter the number of D3 Ports to be used at the site.
Number of Systems *	Enter the number of intelligent Manager systems to be installed at the site. * Not the number of iPU units.

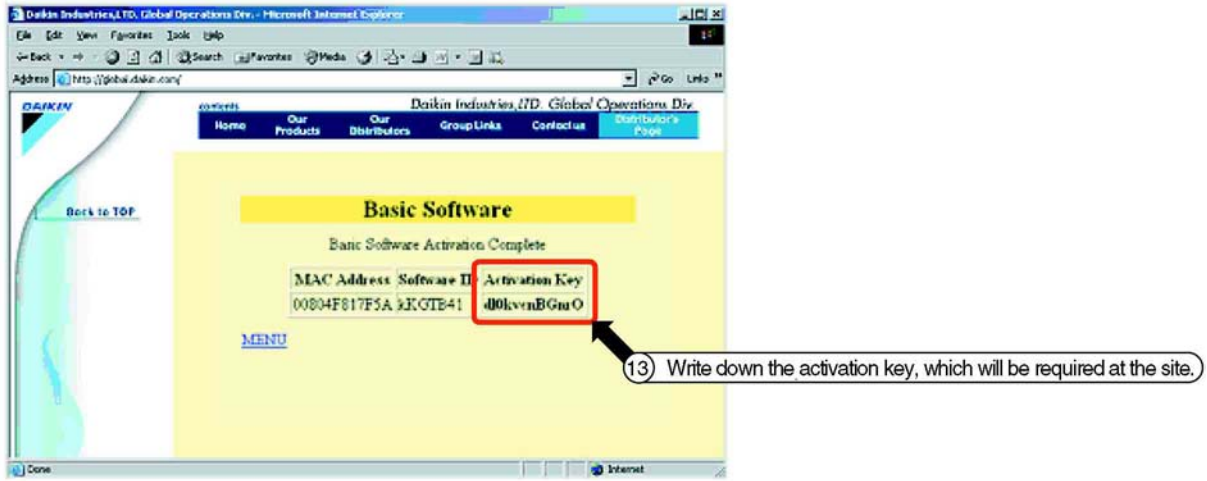
The input confirmation window of the Site Information window is opened. Check if the information is correct.



The Key Information window is opened. Enter the MAC address, software ID, and version of intelligent Manager.



After the confirmation window is displayed, an activation key is displayed. Write down this key and bring it to the site upon installation. It is recommended to print out this window.



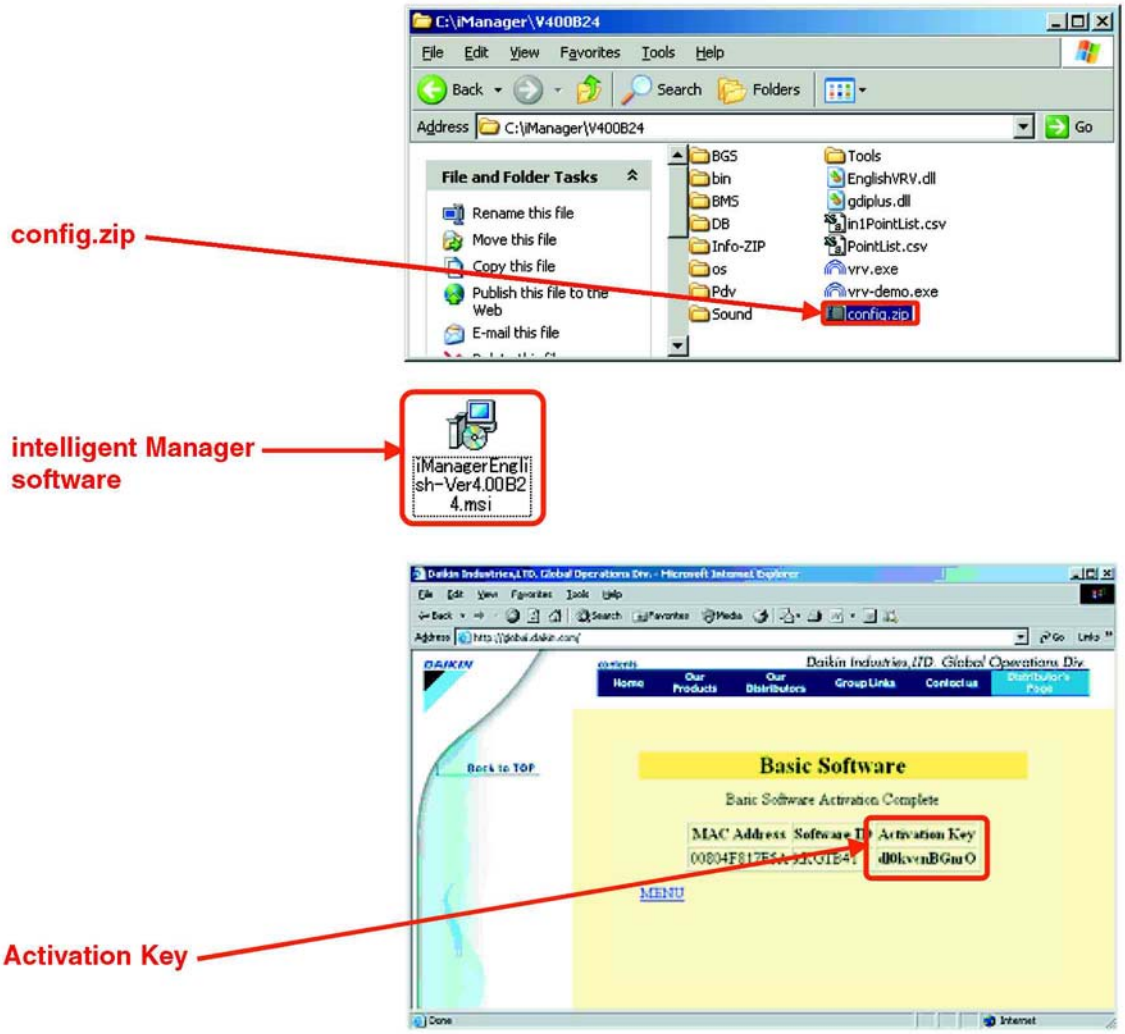
This is the end of the activation key acquisition operation.

1.2.5 Preparation for Operations at the Site

Data to be prepared

You need to bring the following items to the site where intelligent Manager will be installed:

1. config.zip
2. intelligent Manager software package
3. Activation key



1.3 Operations at the Site

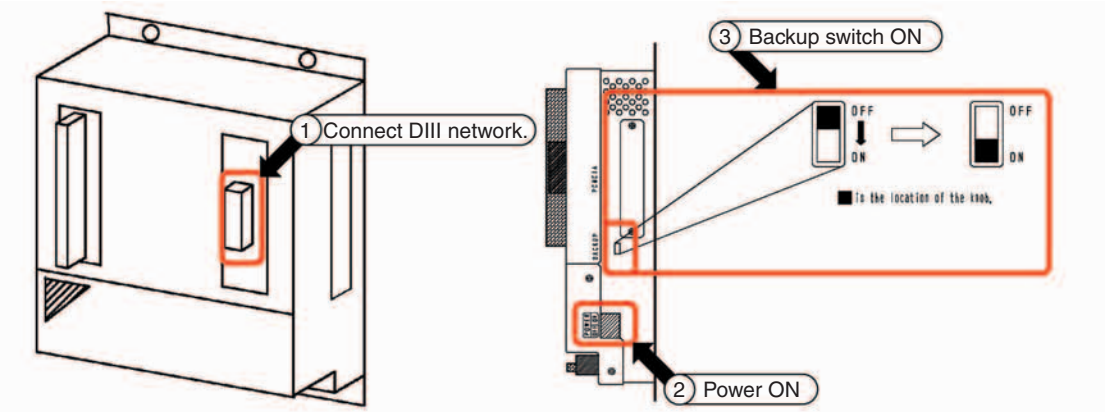
1.3.1 Installation of PC and iPU

a. Connection of Devices

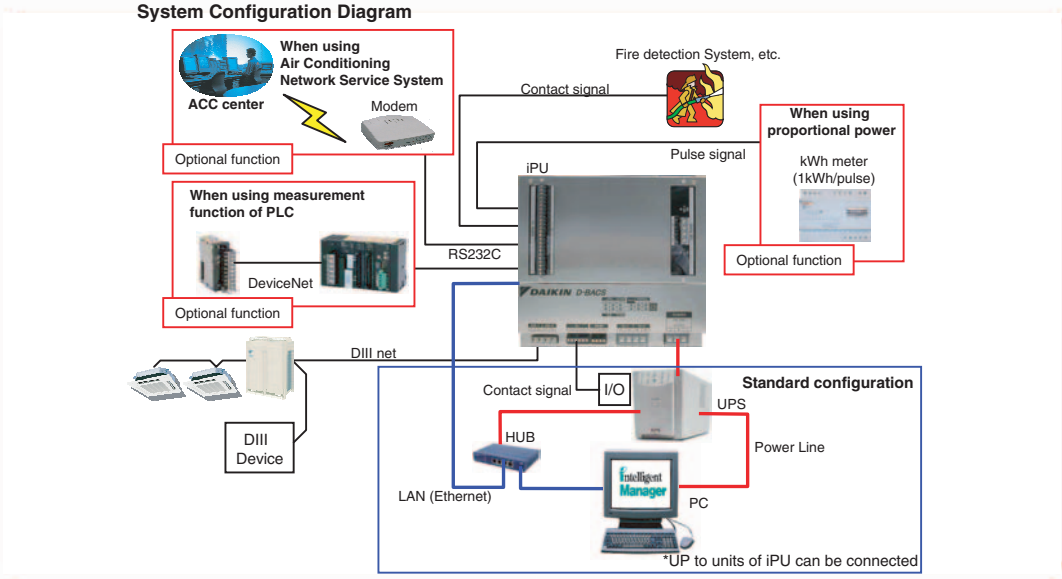
Connect the cables such as DIII to the iPU in accordance with the wiring diagram. (For more details, see Installation Manual, etc.)

Connect the PC and UPS, etc. as shown in the figures below, and turn on the power of each device.

At this point, **be sure to turn on the Backup switch** of the iPU. If you continue the installation as it remains OFF, an error occurs, and the installation cannot be done correctly.



System Configuration Diagram



Caution:

Points to Note when Installing intelligent Manager III

- **Be sure to turn on the battery backup switch before you start installing iPU.**
  There are the following two measures when you have installed iPU with the backup switch turned OFF according to the situation:
  (1) When you realize it before turning off the power of iPU after installation
  Turn ON the backup switch and continue the installation.
  (2) When you realize that the power of iPU is turned off after installation
  1. Turn OFF the power of iPU and the backup switch and leave them for 5 minutes.
  2. Turn ON the backup switch and install iPU again.

- **Do not enter space in the installation path name for intelligent Manager software.**
  If the installation path includes space, an ftp error occurs during installation of the iPU software.
  If the error occurs, delete the space in the installation path, and redo the operation.

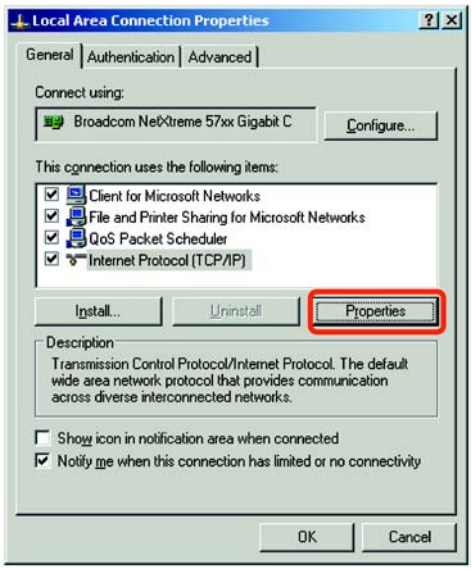
b. Setup of PC

Installation of intelligent Manager software

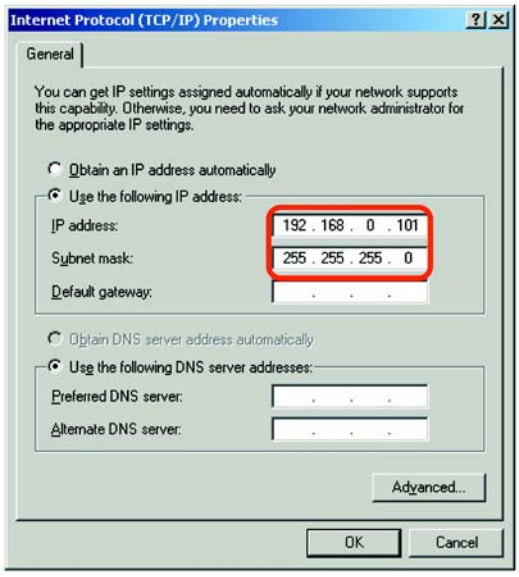
Install the intelligent Manager software you have prepared to the PC to which intelligent Manager will be installed.
The methods of acquiring and installing the software are same as those for **1.2.1 b Operations at the Office** (page 92).

Setup of Network

1. Choose [Control Panel] from the [Start] button and double-click the [Network connections] icon.
2. Choose the [Local Area Connection] icon, click the right button of the mouse, and choose [Properties].
3. Choose [Internet Protocol(TCP/IP)] and press the [Properties] button.



4. Type [192.168.0.101] in the IP address field and [255.255.255.0] in the Subnet mask field.
   * Configure [Default gateway] and [DNS] if necessary. (They do not have to be configured for a network exclusively for the intelligent Manager system.)



Auto startup/Login/Startup setting

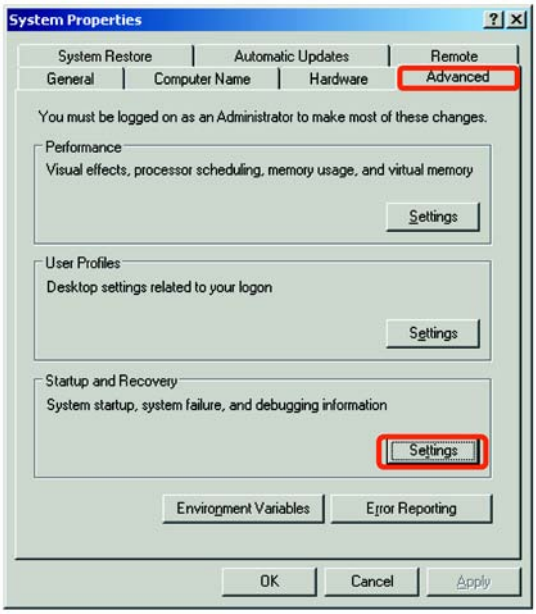
The intelligent Manager system is designed to run continuously.
However, in case of trouble(power failure, etc.), it has integrated features to stop and restart in a safely and smoothly.
To do so, Microsoft Windows system settings are needed to perform the following steps:

[Automatic Reboot]
[Automatic Logon]
[Automatic Start-up]

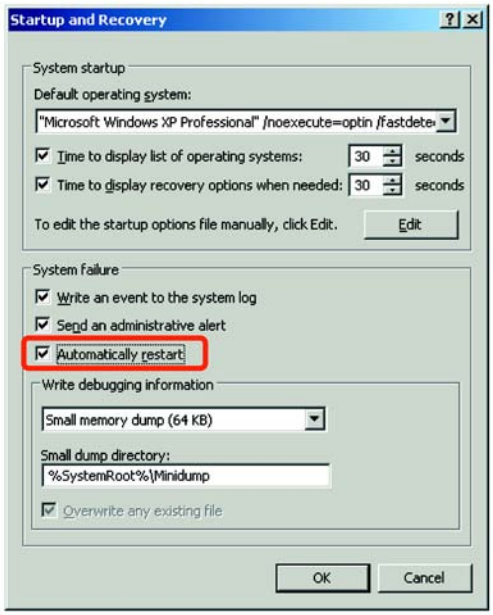
[Automatic Reboot]

Set to automatically reboot Windows when it ends abnormally.

1. Choose [Control Panel] from the [Start] button and double-click the [System] icon.
2. On the [Advanced] tab, press the [Settings] button under [Startup and Recovery].



3. Place a checkmark to the left of [Automatically restart].



[Automatic Logon]

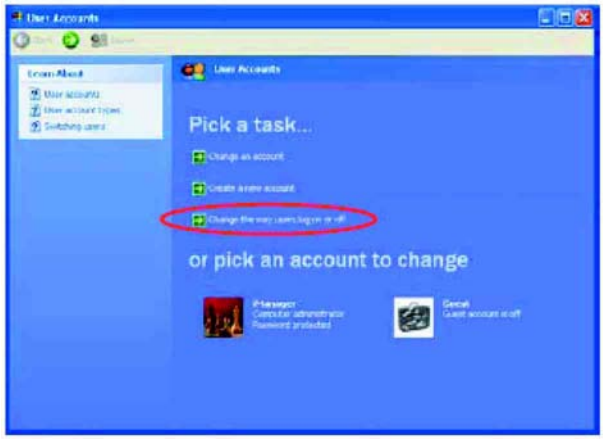
Windows XP

To start Windows XP, which is the OS of the monitoring PC, it is normally necessary to log on to it.
The automatic logon configuration allows Windows XP to start without the logon after the monitoring PC is powered on.
To logon automatically when Windows XP starts, the following conditions have to be met.

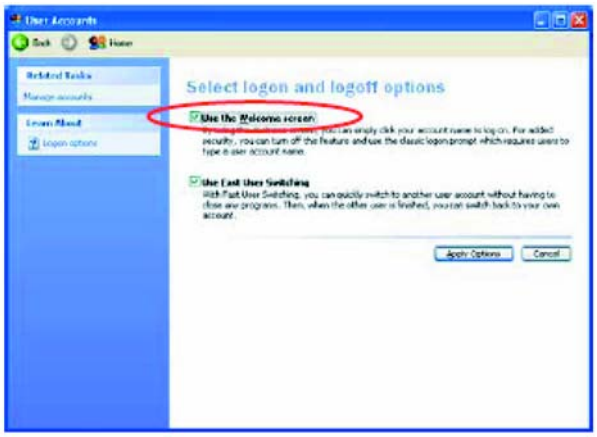
*"Welcome screen" is available.
*Access with guest account is disabled.
*Two or more user accounts have not been set up.
*The password for the user account has not been set.

To make "Welcome screen" available,

1. Choose [Control Panel] from the [Start] button and double-click the [User Accounts] icon.
2. Click [Change the way users log on or off].

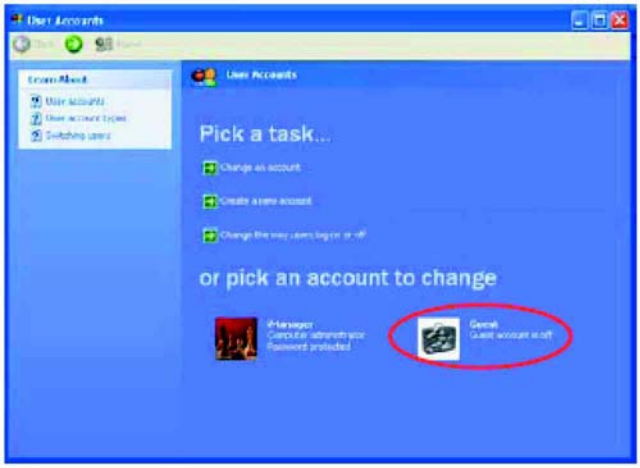


3. Place a checkmark to the left of [Use the Welcome screen].

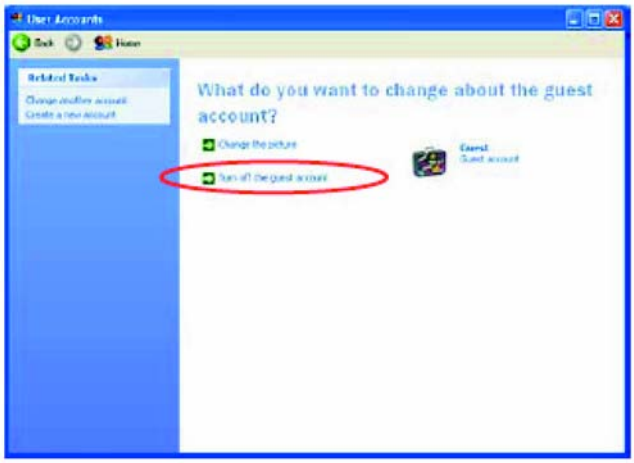


To disable access with the guest account,

1. Choose [Control Panel] from the [Start] button and double-click the [User Accounts] icon.
2. Click [Guest].

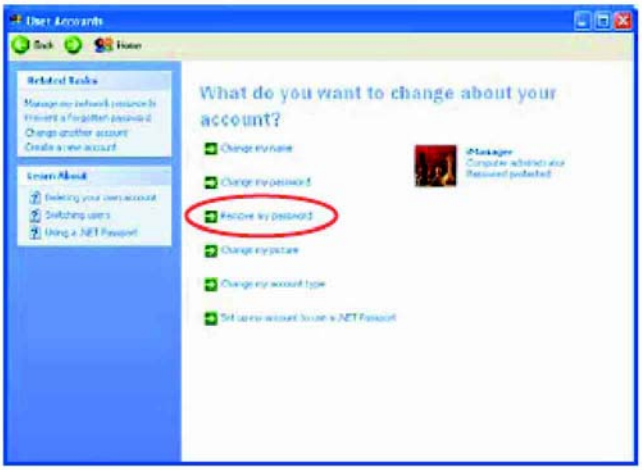


3. Click [Turn off the guest account].

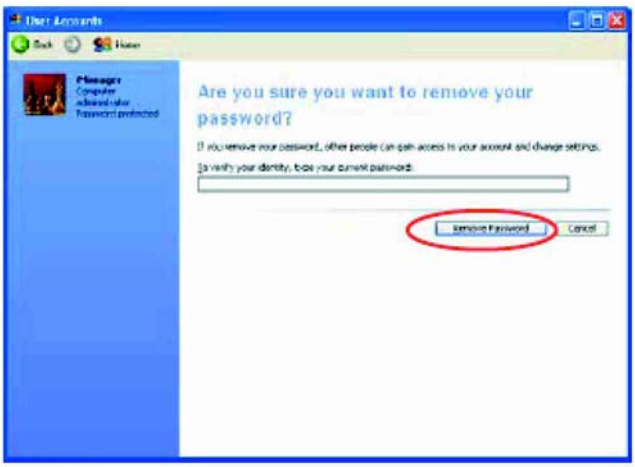


To remove the password for the user account,

1. Choose [Control Panel] from the [Start] button and double-click the [User Accounts] icon.
2. Choose the user account, the password of which is to be removed.
3. Click [Remove my password].



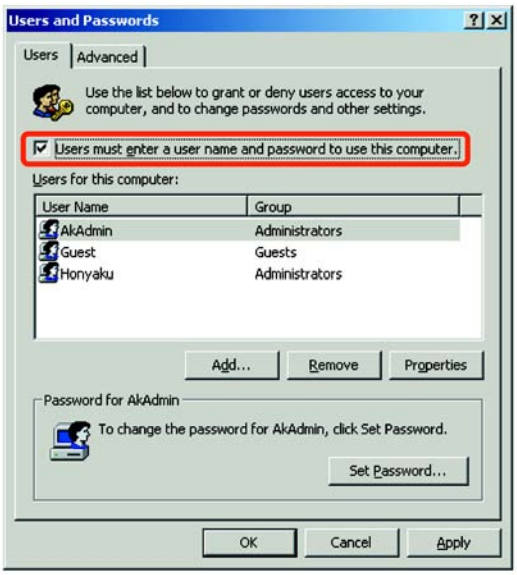
4. Type the current password and click [Remove Password].



Windows 2000

To start Windows 2000, which is the OS of the monitoring PC, it is normally necessary to log on to it.
The configuration of automatic logon allows Windows 2000 to start without the logon after the power-on of the monitoring PC.

1. Choose [Settings]/[Control Panel] from the [Start] button and double-click the [Users and Passwords] icon.
2. Remove the checkmark from the [Users must enter a user name and password to use this computer.] checkbox.



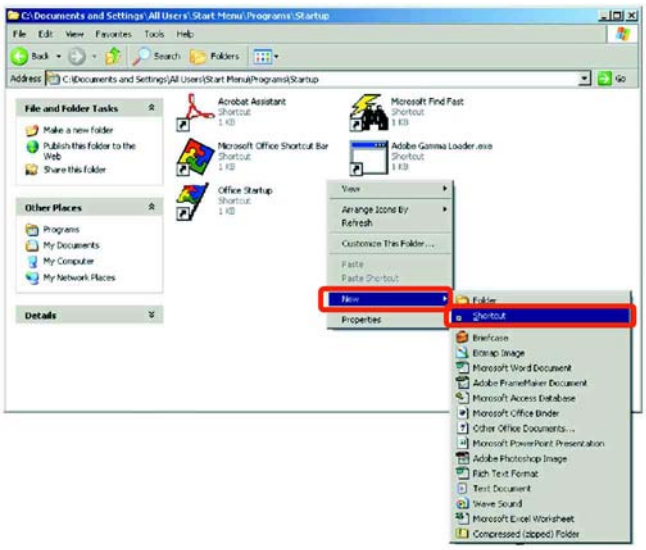
3. Click the [Advanced] tab.
4. Remove the checkmark from the [Require users to press Ctrl-Alt-Delete before logging on.] checkbox.



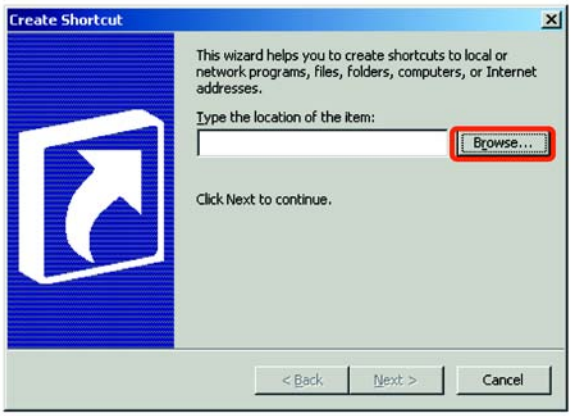
[Automatic Start-up]

The following describes the configuration with which to start the monitoring PC software automatically after Windows starts after power-on.

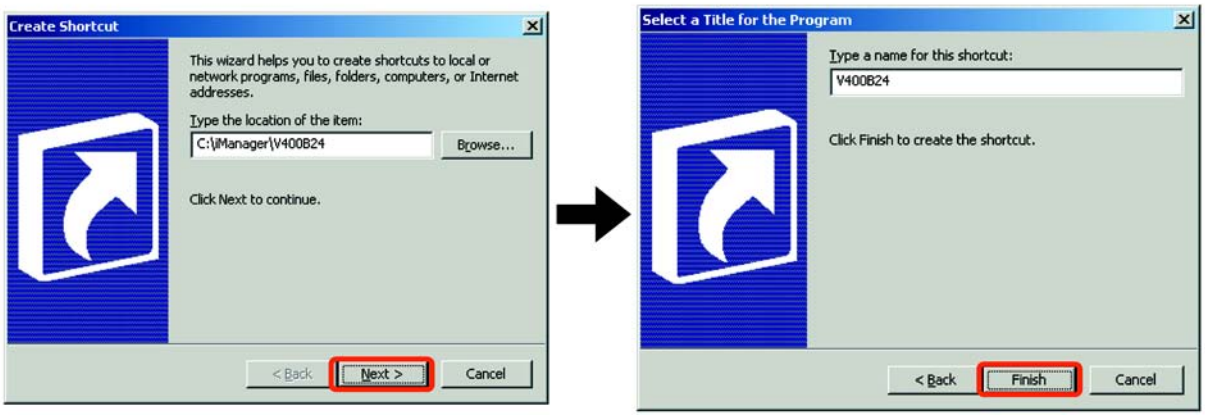
1. Open the folder [C:¥Documents and Settings¥All Users¥Start Menu¥Programs¥Startup].
2. Click the right button of the mouse and choose [New]->[Shortcut].



3. Press the [Browse] button in the window to create the shortcut. Then, choose the monitoring PC software (e.g., C:¥iManager¥V400B24¥VRV.exe).



4. Press the [Next] button, then [Finish] button.



5. Reboot the monitoring PC and check whether the monitoring PC software starts automatically.

Setup of UPS

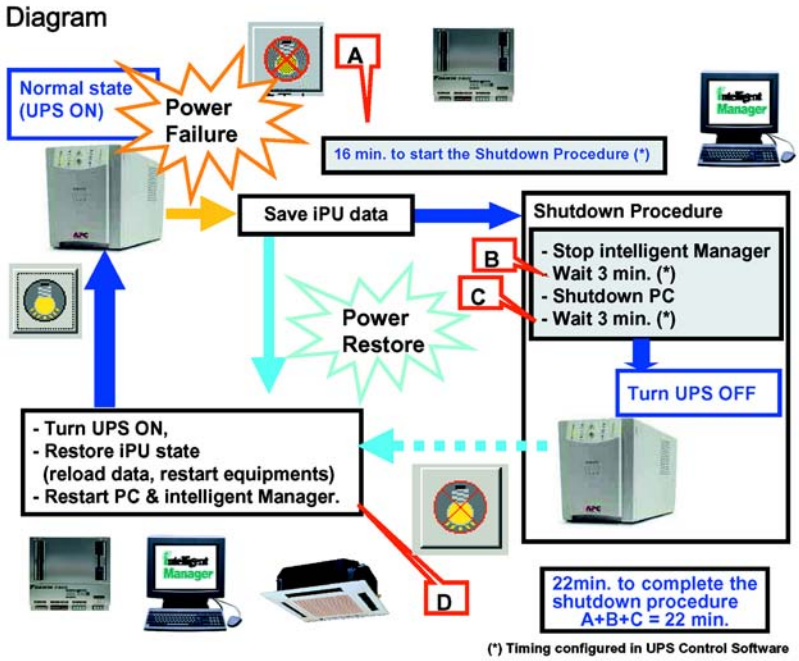
Fundamentals

The intelligent Manager is designed for continuous operation. Therefore, automatic shutdown is carried out in the case of power failure, and automatic restart is carried out when the power is restored.
When the intelligent Manager detects a signal of power failure, the data of the iPU are locally saved in the memory (state of management points, etc).
When the power is restored, the data are read out from the memory so that the system can be restarted in its previous state.
During this time period, the interlocking automatic control function of the intelligent Manager system is deactivated.

Failure/Restore detection

The intelligent Manager system is equipped with an un-interruptible power supply (UPS) which power failure output signal is connected on the internal Di #1 of the master iPU. As well, in order to preserve the UPS battery, an optional shutdown input signal is connected to the internal Do #1 or #2 of the master iPU. If this option is not present, the iPU will automatically resume operation within 30 minutes from the power failure breakout.
However, in the case of a software controlled UPS, this internal Do should not be connected.

Note: The master iPU and the network hub should always be connected to the same UPS.

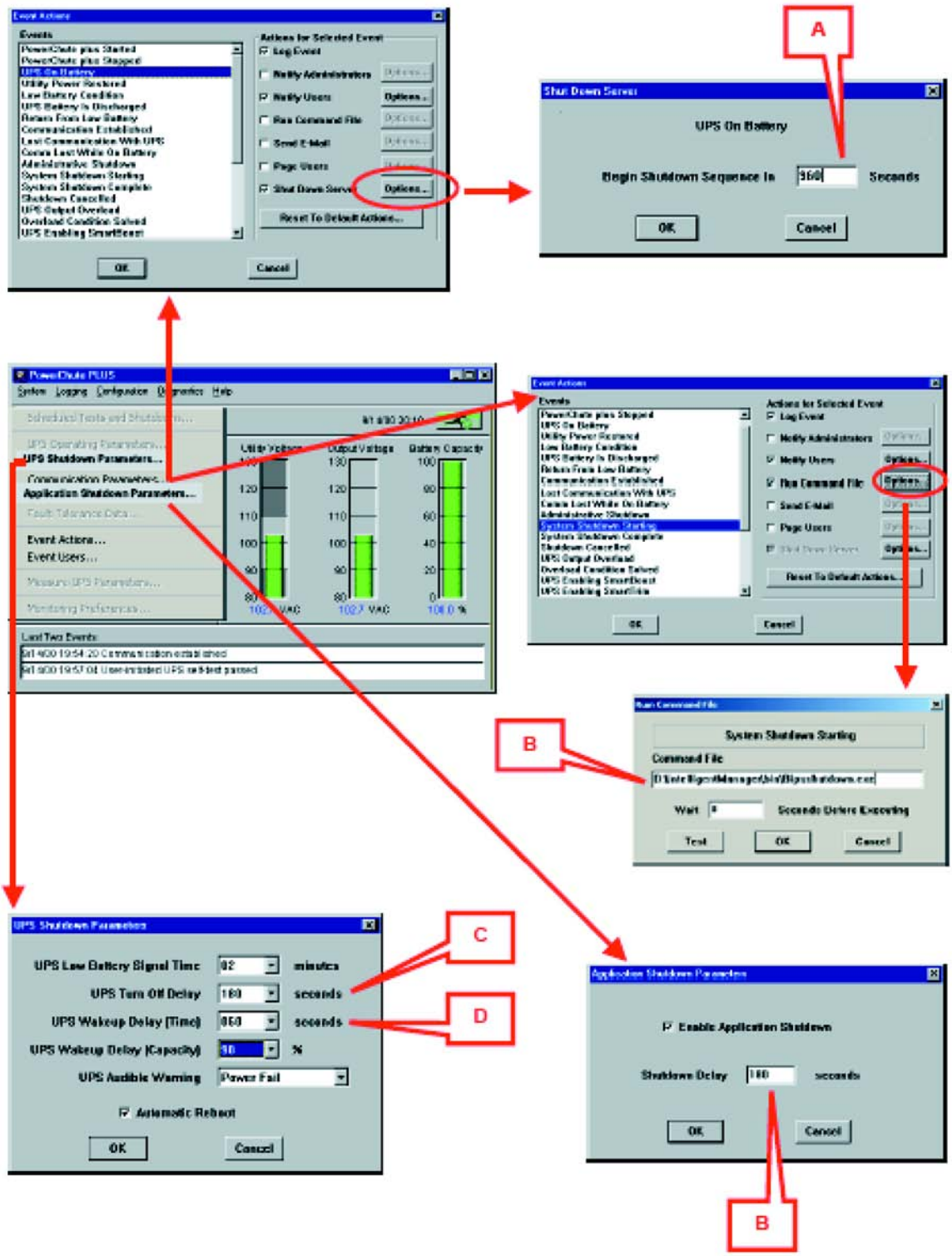


1. Connect Di-1 to UPS output terminal (see in UPS documentation which terminal corresponds to "Power Failure" or "On battery" signal).
2. Install and Setup UPS control software(Power Chute Plus) and reboot the PC.
   [1] Insert this control software in the Automatic Start-up of WindowsXP(2000).
   [2] Configure the parameters as shown in the next page.
   [3] Register the BipsShutdown.exe module to be carried out when the UPS control software starts the shutdown procedure.

Power Chute Plus settings

Perform configuration as illustrated bellow (recommended model: UPS made by APC with the PowerChute control software).

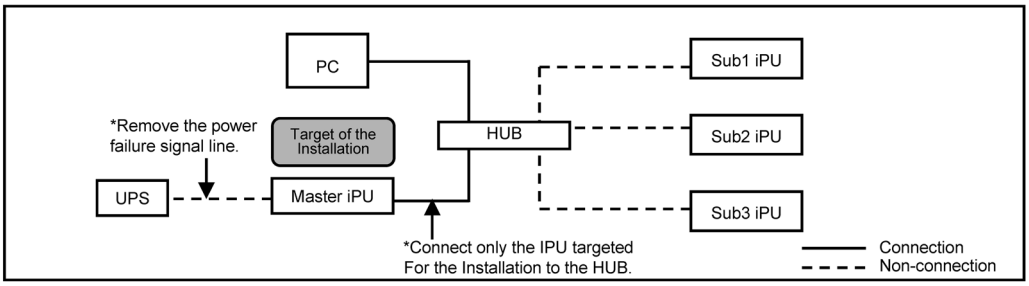
The values of steps A to D are compulsory.



1.3.2 Installation of iPU

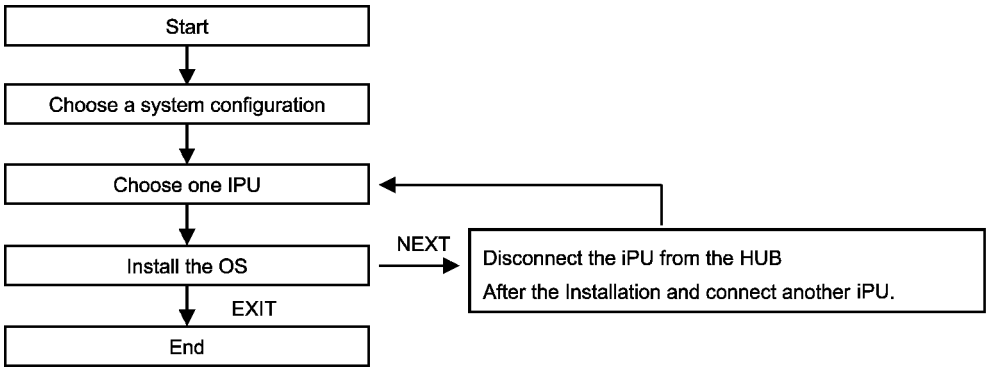
Before the Installation

1. The installation tool installs the OS on iPUs.
2. Confirm that “Automatically adjust clock for daylight savings changes” box in the time zone setting of Windows has been checked, for areas that change to daylight savings time. (If this box has not been checked, the time during the summer time at the time of the installation may not be accurate.)
3. If a power failure signal line has been connected to the Di1 port of the Master iPU remove it.
4. One iPU is installed at a time. If there are two or more iPUs, connect only one iPU to the HUB.



Installation Flowchart

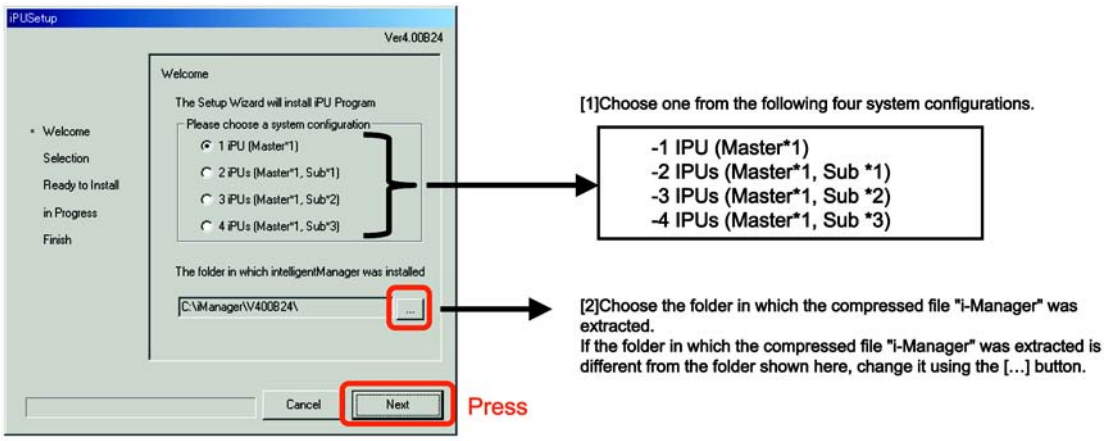
The flow for the installation is as follows.



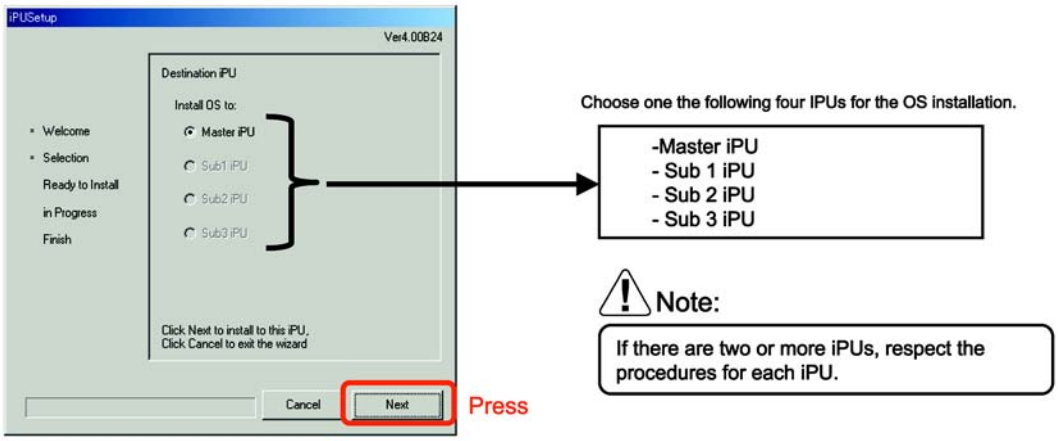
Installation method

Start iPUSetup.exe in the Tools subfolder of the folder that was extracted from the compressed file “intelligent Manager”.

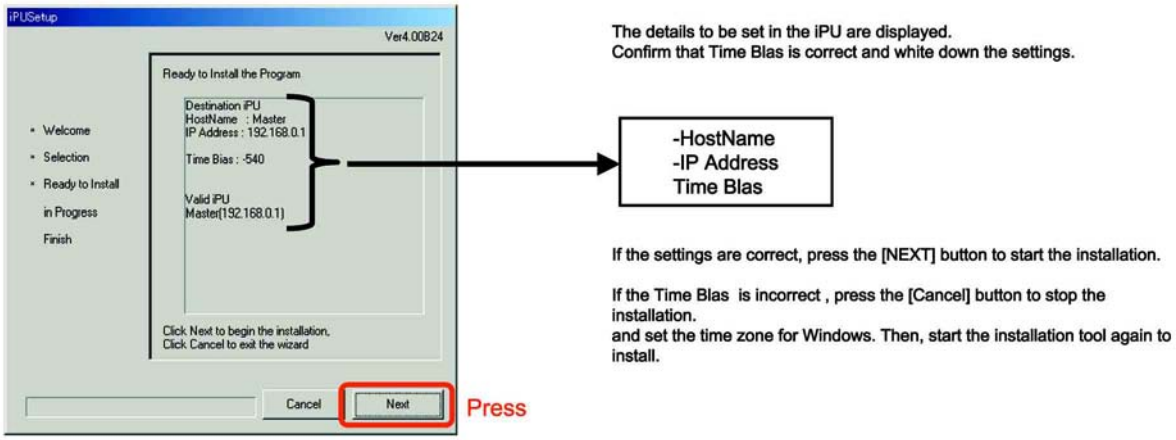
1. Choose a system configuration



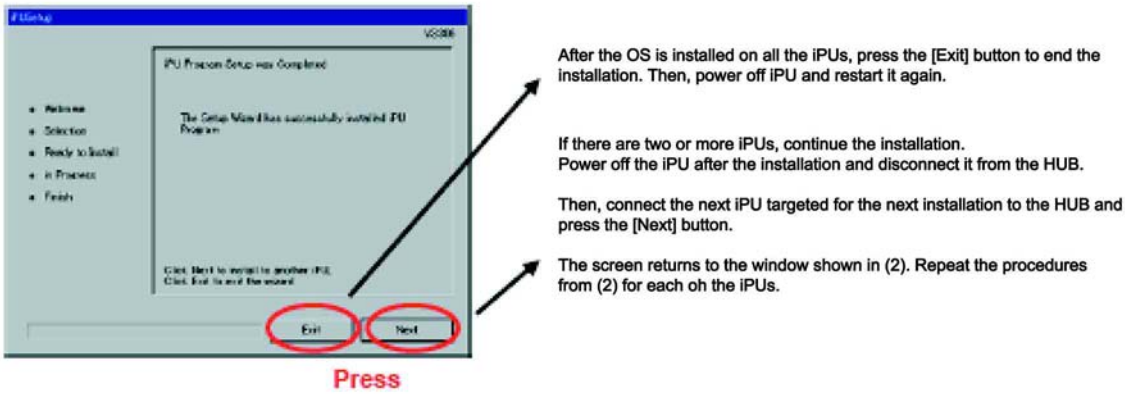
2. Choose an iPU for the OS installation



3. Check the iPU settings

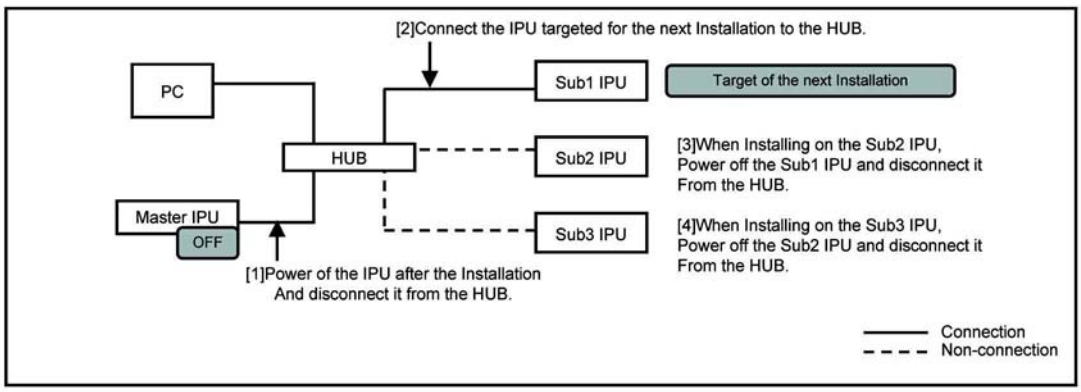


4. Proceed to the next step after the installation is complete



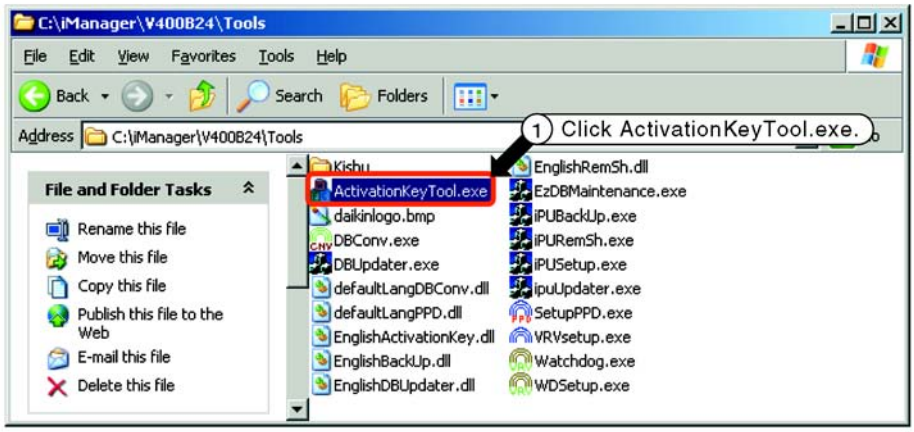
Note:

When the OS is installed on all the iPUs, the screen returns to the window shown in (2) even if the [Next] button is pressed.
Press the [Cancel] button in the window shown in (2) to exit the installation tool.
The installation stops when pushing the [EXIT] button. If there are iPUs on which the OS is not installed.
Start the installation tool again, choose the iPU on which the OS is not installed, and install the OS.

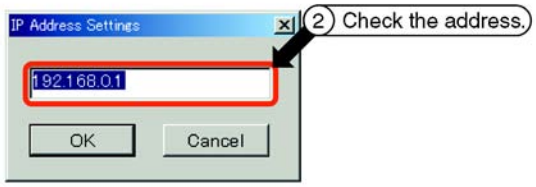


1.3.3 Input of Activation Key

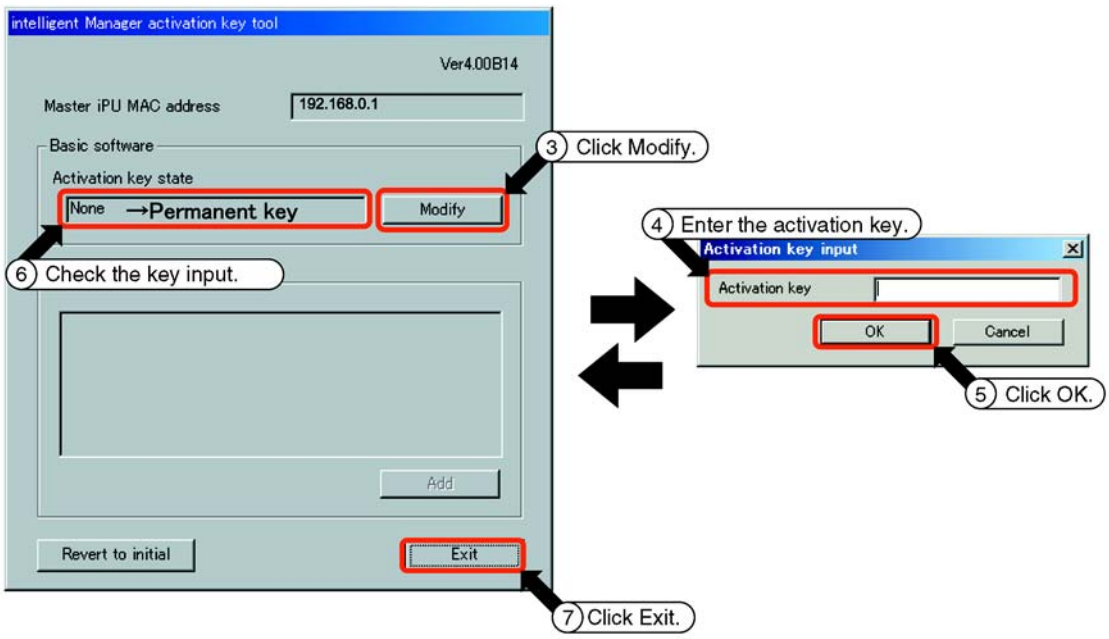
Enter the activation key that you obtained in advance.
Open ActivationKeyTool.exe in the Tools folder.



Check that the master iPU address is set.

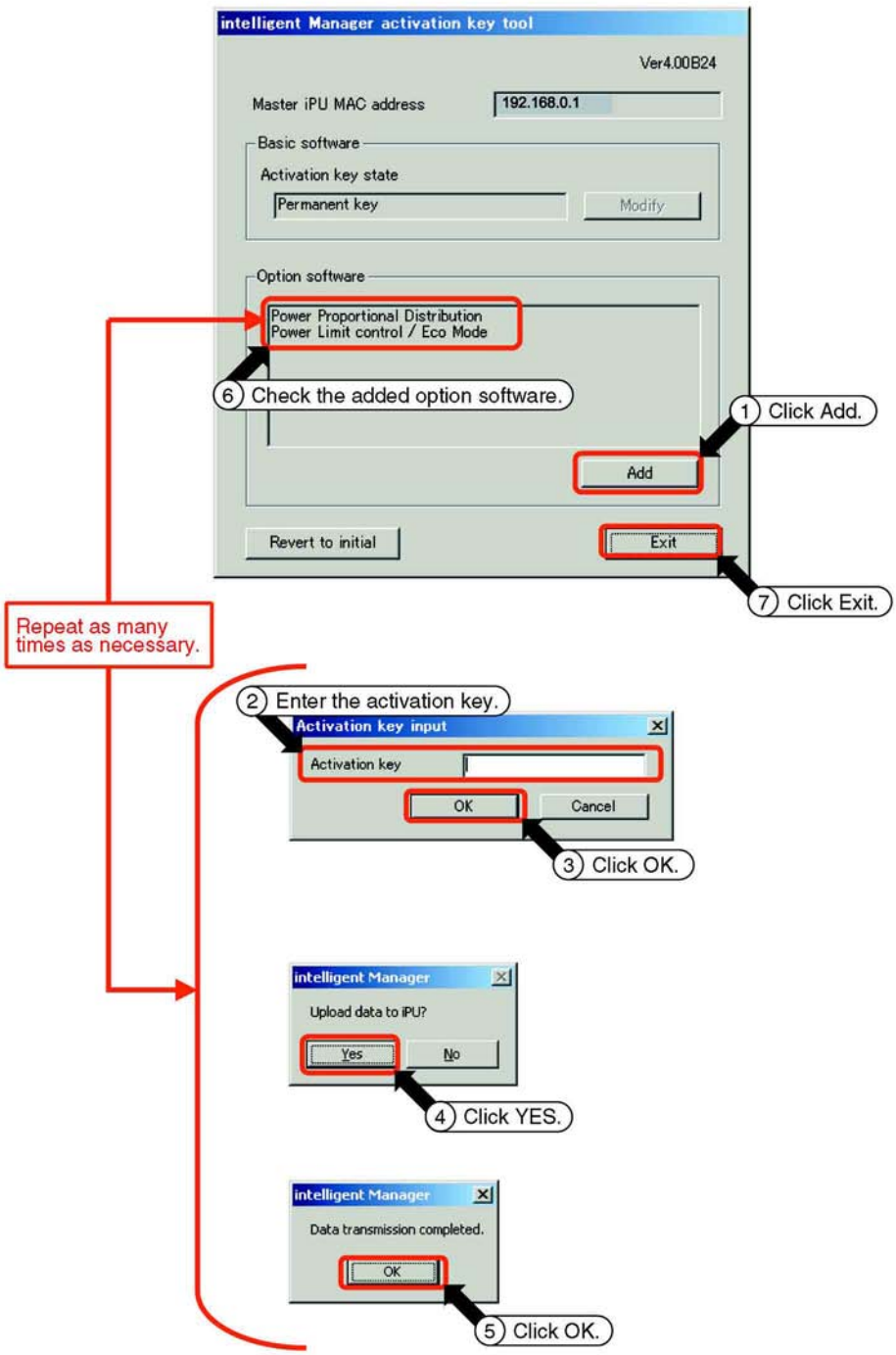


Press the Modify button and enter the activation key in the Activation key input window.



When adding option software

When you add option software, ActivationKeyTool.exe in the Tools folder is used.
Press the Add button and enter the activation key for the option software.

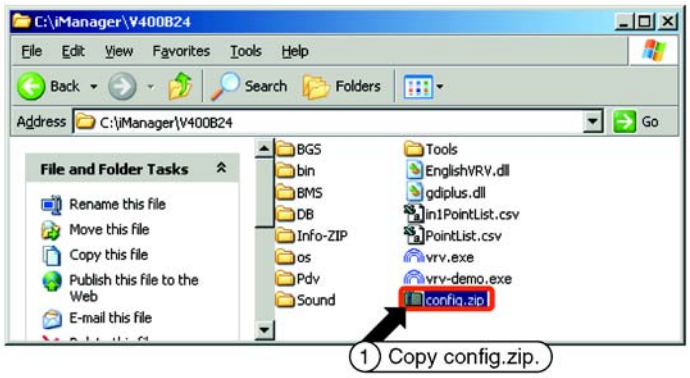


This is the end of addition of option software.
When you finish the setting, turn off the power, and then turn it on again.

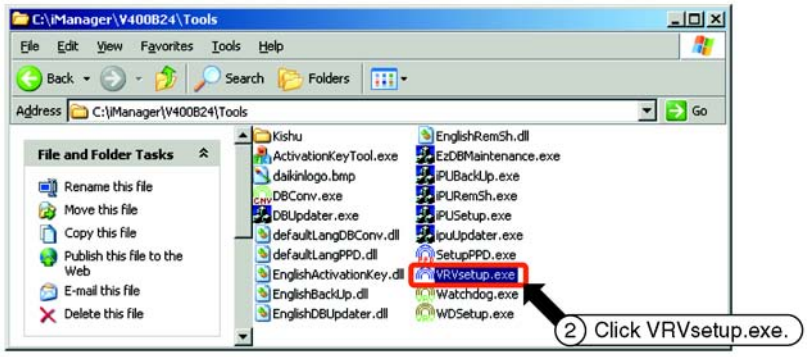
1.3.4 Management Point Data Setting

Load the management points which were created at the office to the PC to which the system will be installed.

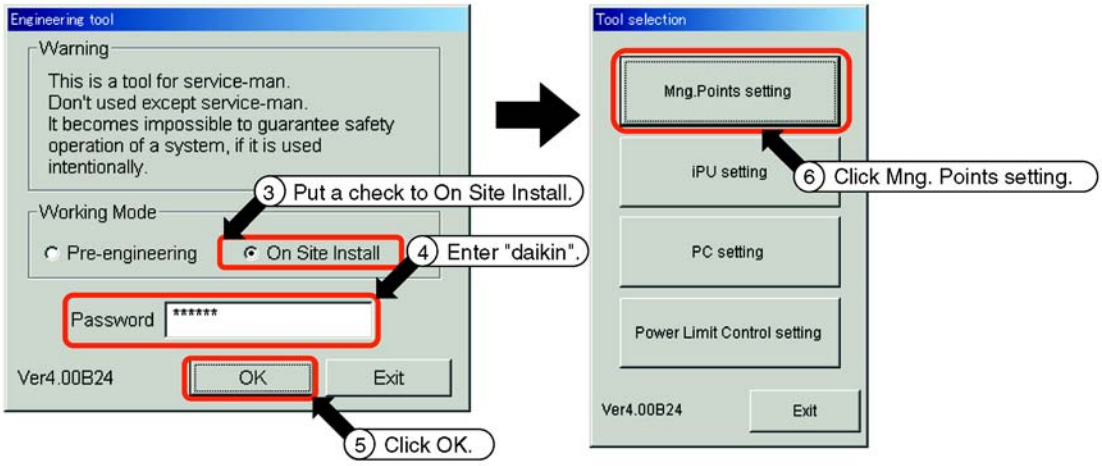
Copy config.zip to the intelligent Manager folder, which was created in the PC at the site.



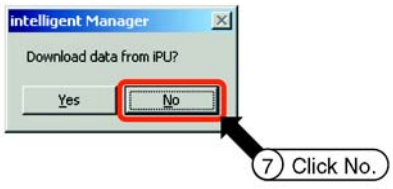
Open VRVsetup.exe in the Tools folder.

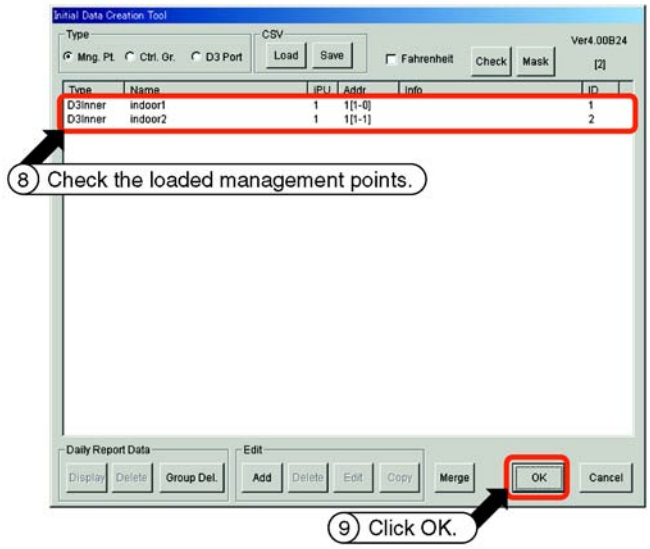


Put a check to On Site Install, enter "daikin" as a password, and select Mng. Points setting.

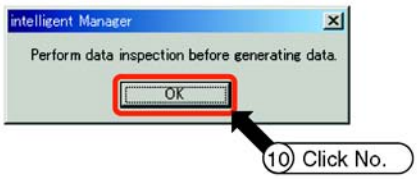


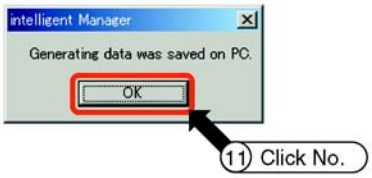
Select No for Download data from iPU.
The management points created at the office are loaded.





Data transmission starts.

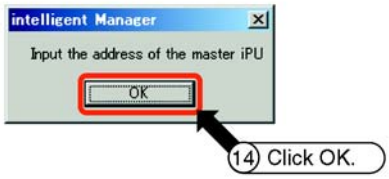


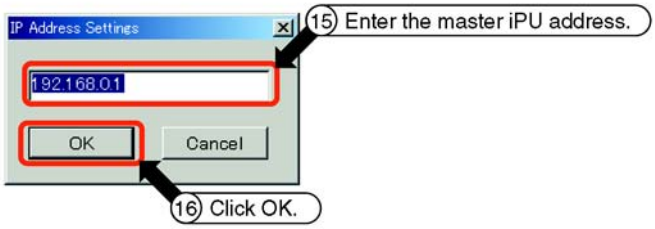






Enter the master iPU address.



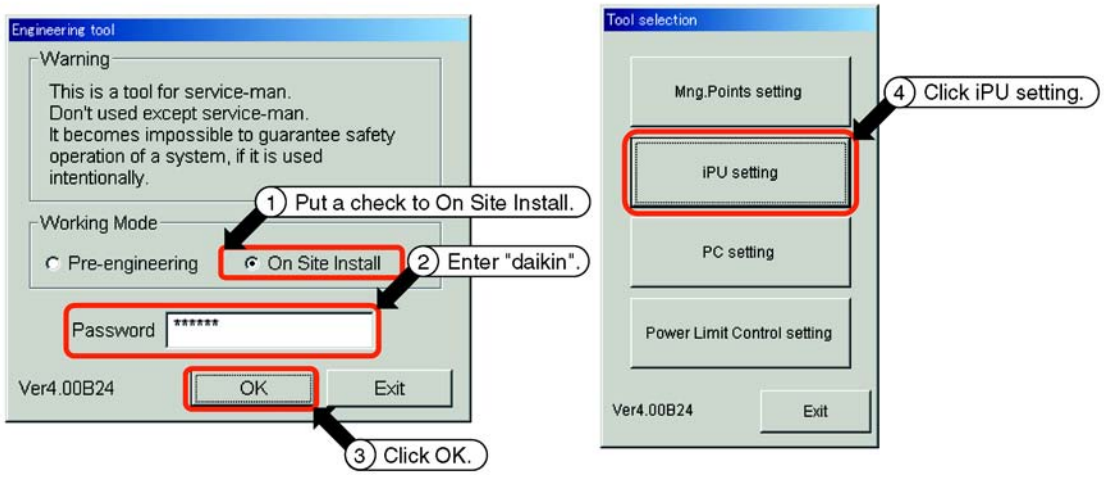


Data transmission is completed. Click OK.

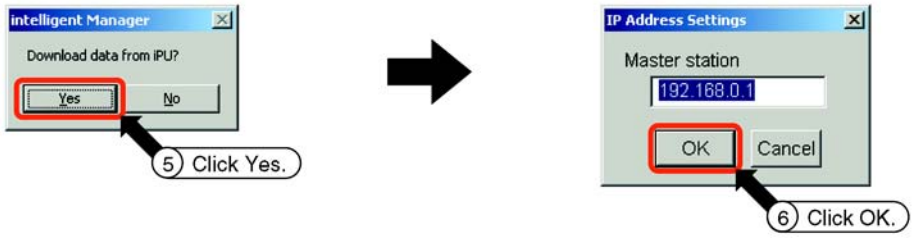


Change of Network Setting when Connecting to the Existing LAN

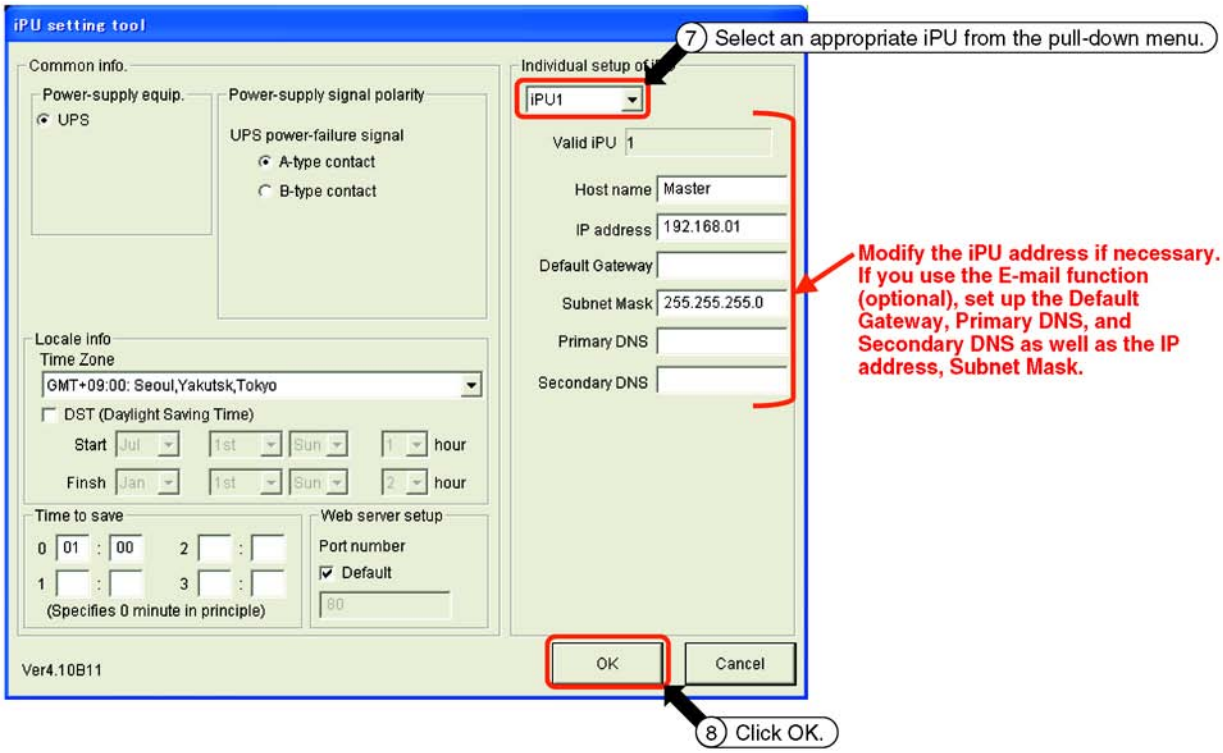
You need to set the iPU network information in accordance with the LAN. The network setting of the PC is also required.
Open VRVsetup.exe in the Tools folder, put a check to On Site Install, enter "daikin" as a password, and select iPU setting.



Select "Yes" for "Download data from iPU?" in the dialog box.

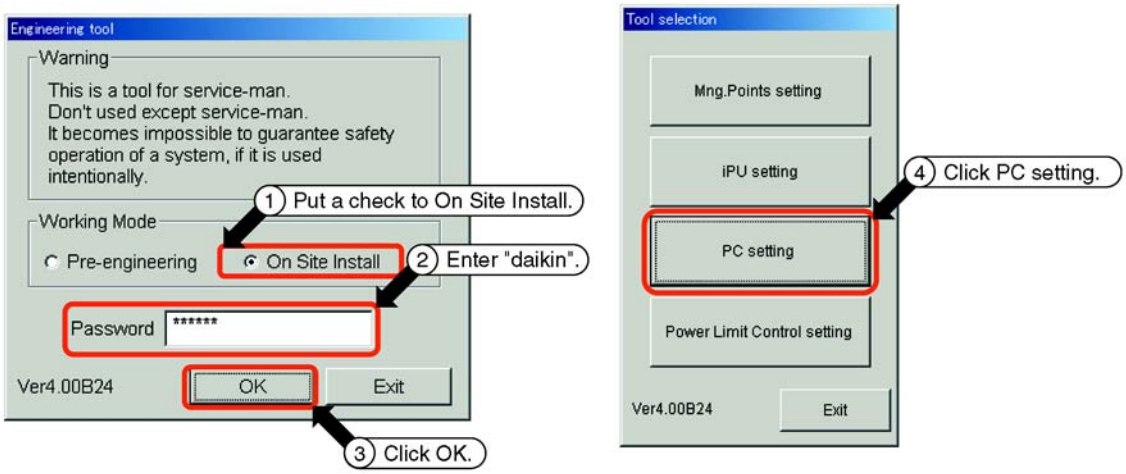


The iPU setting tool window is opened. Select an appropriate iPU from the pull-down menu and modify the iPU address if necessary.



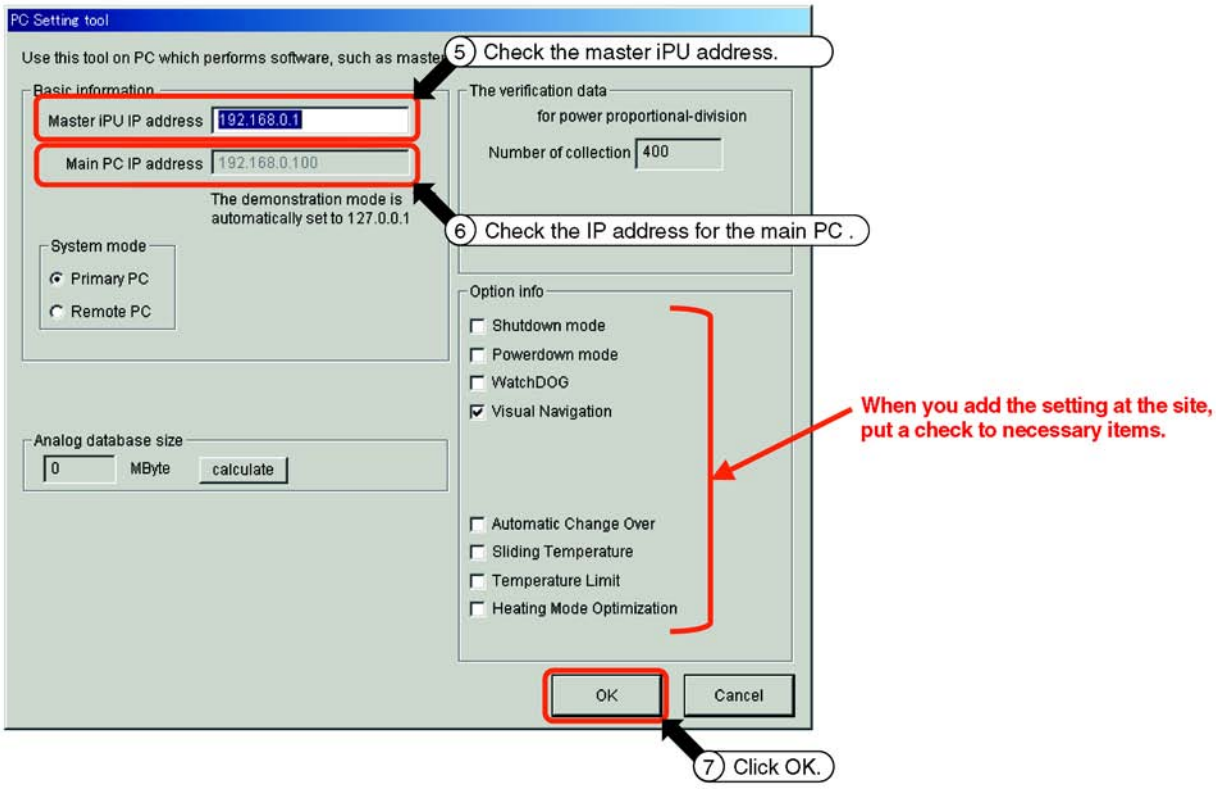
PC setting

Open VRVsetup.exe in the Tools folder, put a check to On Site Install, enter "daikin" as a password, and select PC setting.



Verify the conditions.

When you change the master iPU address, be sure to change the address in this window as well.

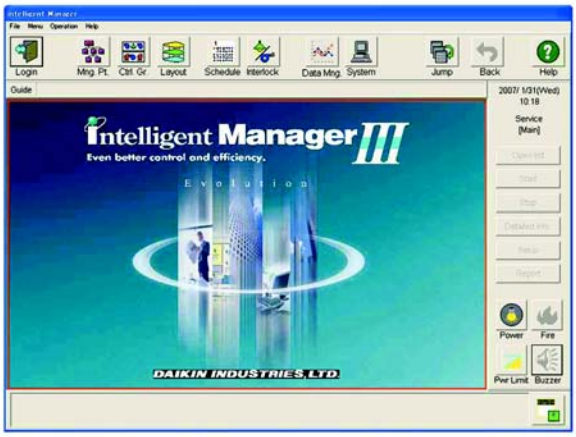


This is the end of settings of the PC at the site.

1.3.5 Operation Check

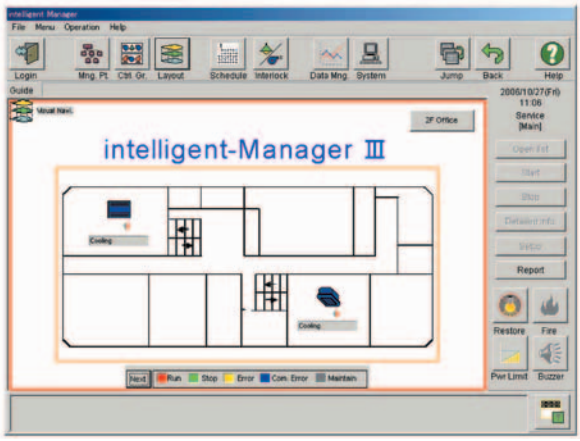
Check if the intelligent Manager of which setting is done works property.
Double-click the intelligent Manager icon on the desktop to start it up.





a. Communication Failure

Check if all management points correctly communicate with all air conditioners.
The point at which communication fails is displayed in a blue icon.



Note:
Possible causes of communication failure
- Address is not set.
- The specified address and the actual address do not match.
- The air conditioner is not connected.
- The D3 Port setting is incorrect.
- The wiring of the DIII cable is incorrect.

b. Operation

Check if a corresponding air conditioner responds when you operate an icon on the screen.
If an inappropriate air conditioner responds, find out the cause and take necessary measure.

Note:
Possible causes of operation failure
- The central address is incorrect.
- The wiring of the DIII cable is incorrect.

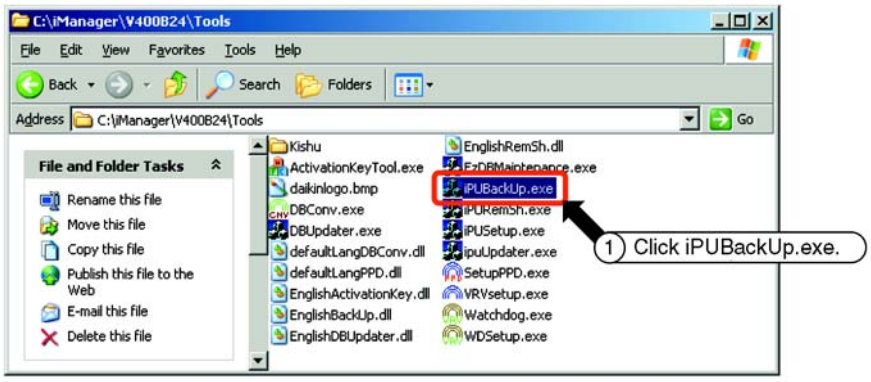
c. Check of Power Meter Reading

Check if the meter reading of the power meter and that of the intelligent Manager match.
If they do not, find out the cause and take necessary measure.

Note:
Possible causes of the problem
- The pulse width of the power meter does not match the specified pulse width.
- The pulse cable from the power meter is 200m or more.
- The specifications of the power meter are out of the scope.

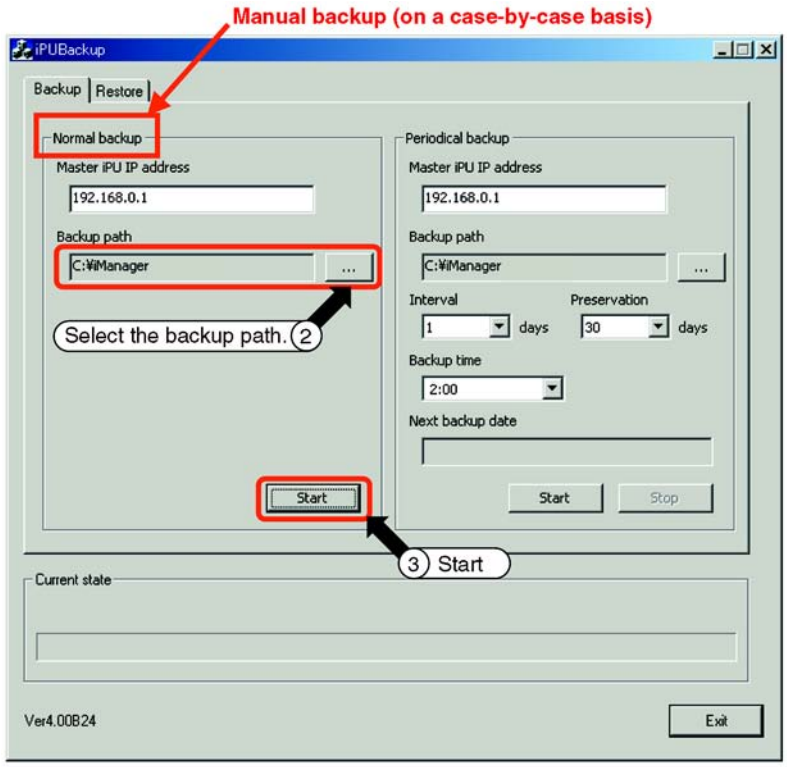
1.3.6 Data Backup Setting

Make the setting to take a backup of the data in the iPU to the PC. The backup operation can be done manually and automatically.
Execute iPUBackUp.exe in the Tools folder.



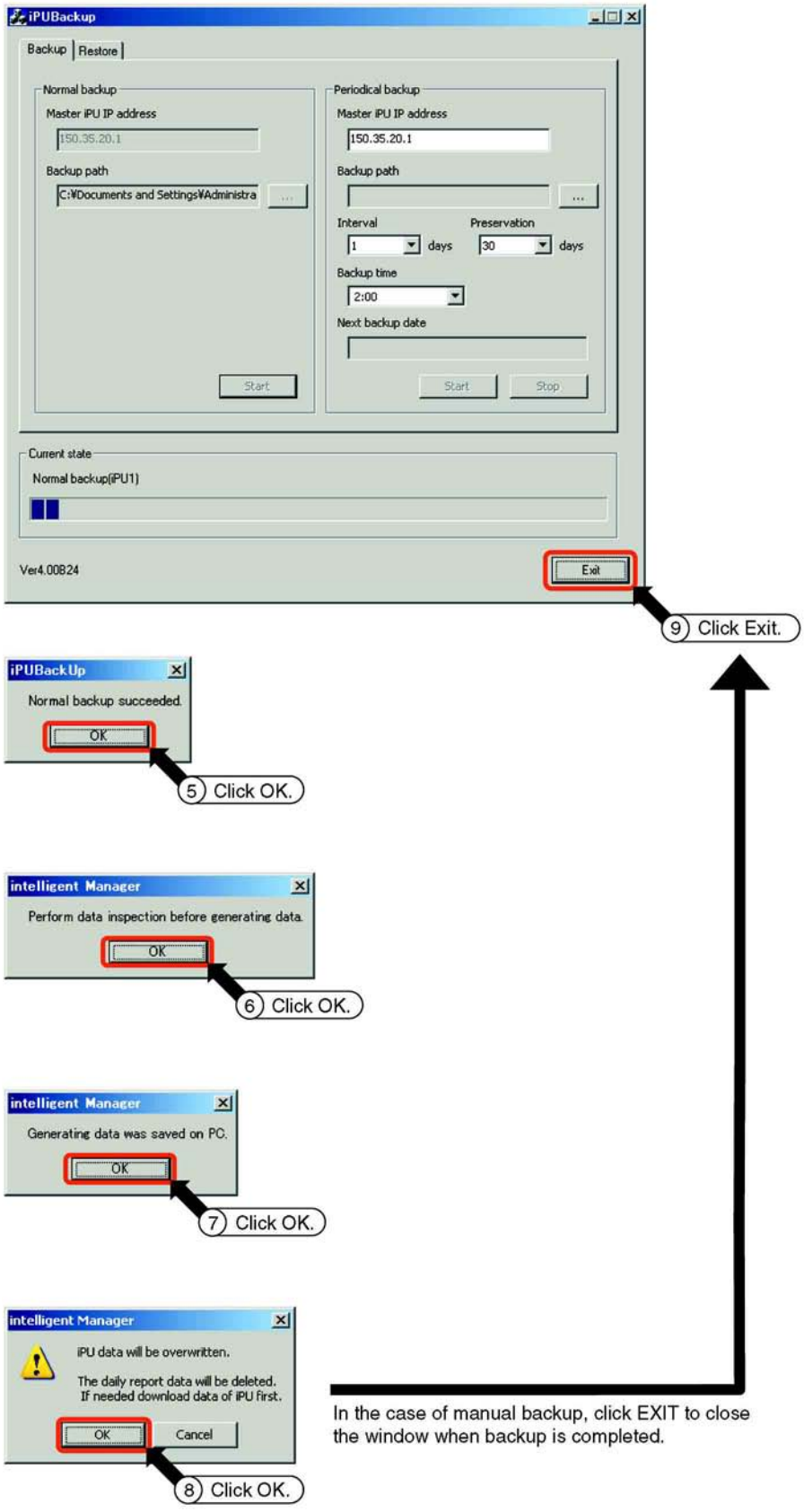
In the case of manual backup

Select the location where to store backup data and click the Start button.



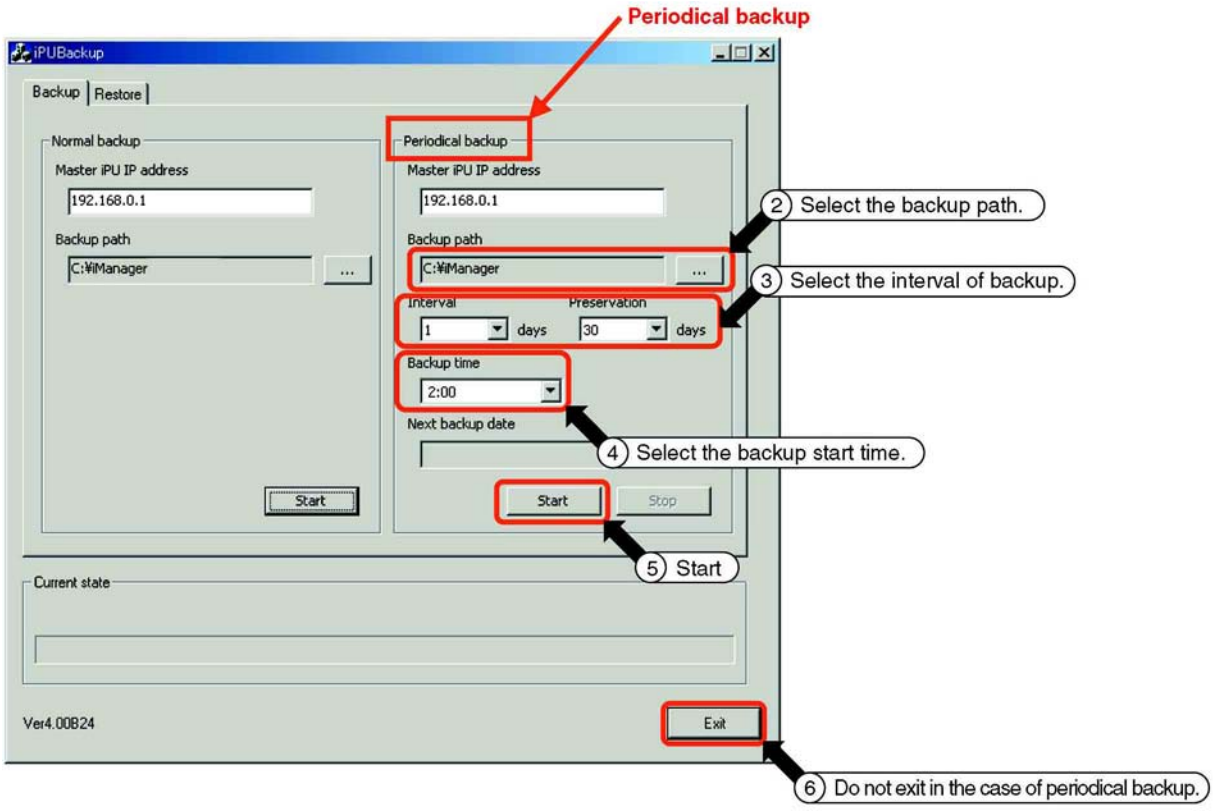


The backup operation starts.



In the case of automatic backup (on a periodical basis)

Select the location where to store backup data, select the interval of backup, backup start time, and then click the Start button.



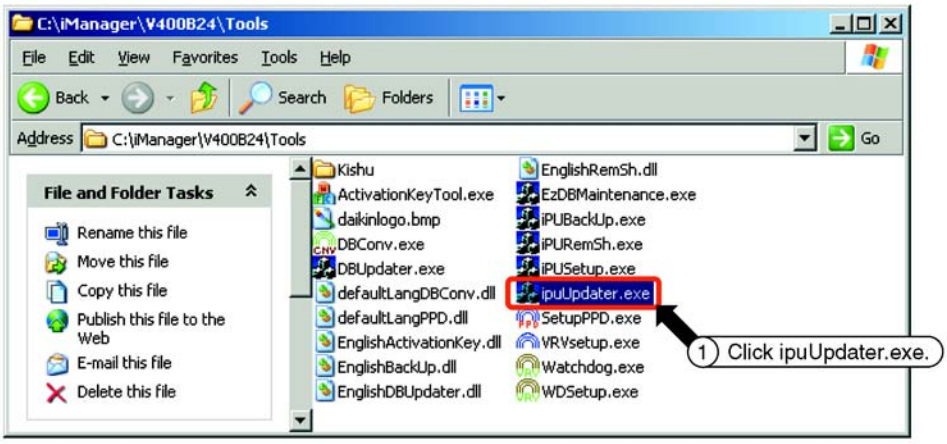
Do not click the Exit button.
To conduct the periodical backup, this window must be always activated.

2. intelligent Manager Upgrade Operation

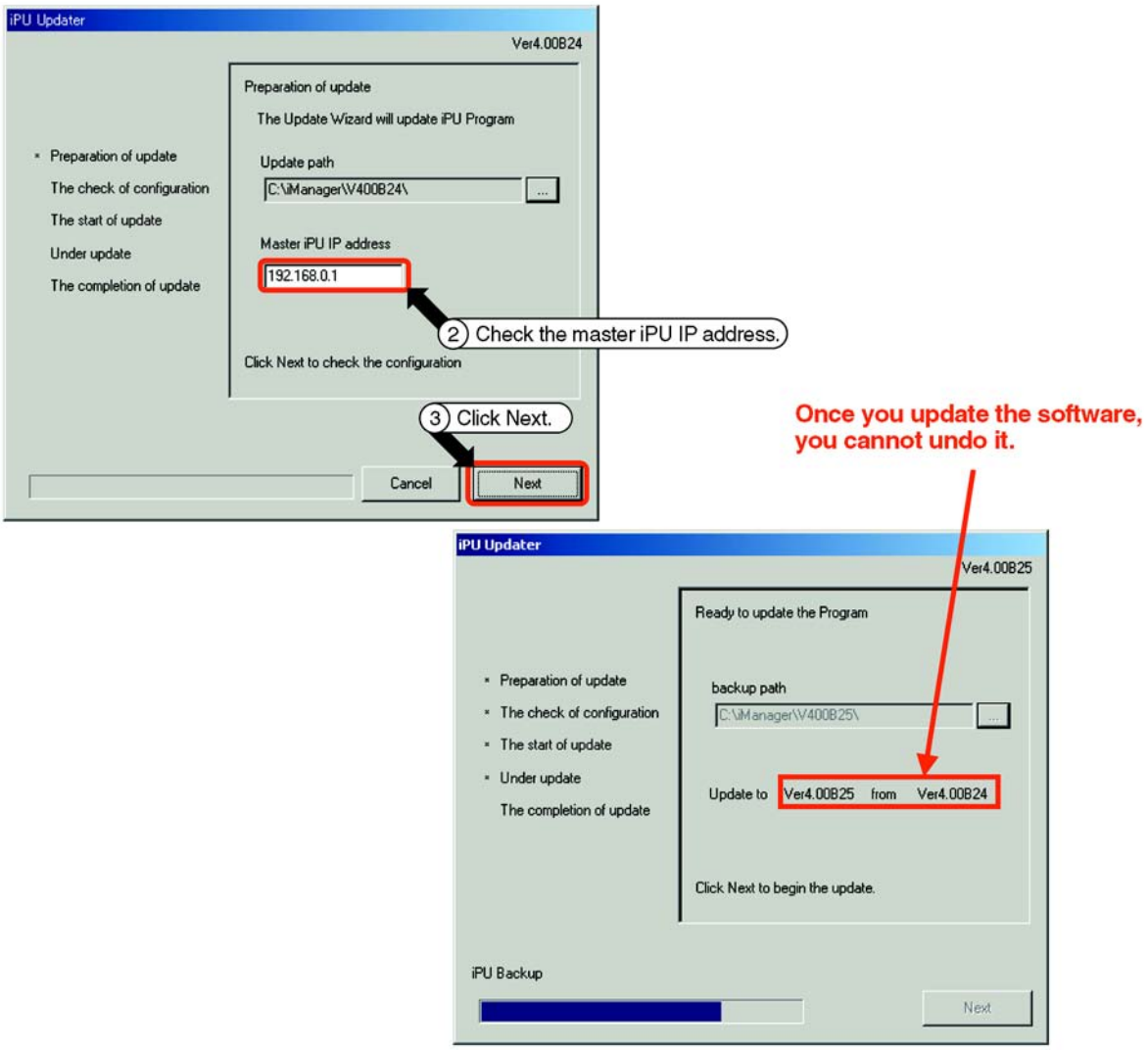
2.1 Upgrade of iPU Software

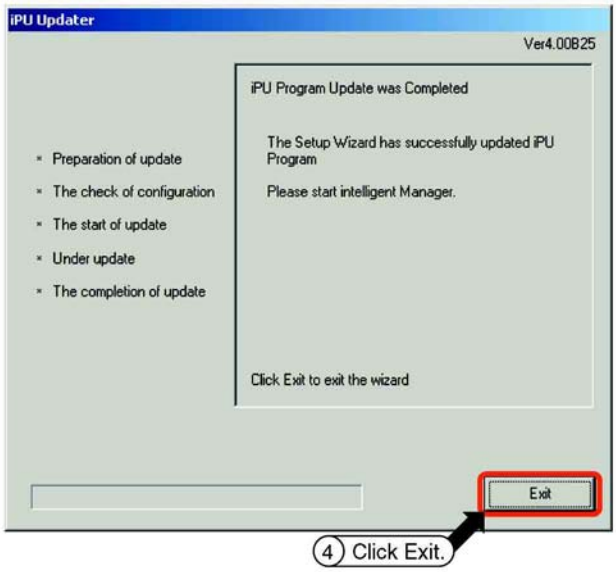
Upgrade of Software

When the iPU software is updated, the upgrade operation is required.
Install the new software to the PC and execute ipuUpdater.exe in the Tools folder.



Check the master iPU IP address. (You should pay attention if you change the address upon network connection.)
Press Next, and information is loaded from the iPU, and necessary upgrade is started.





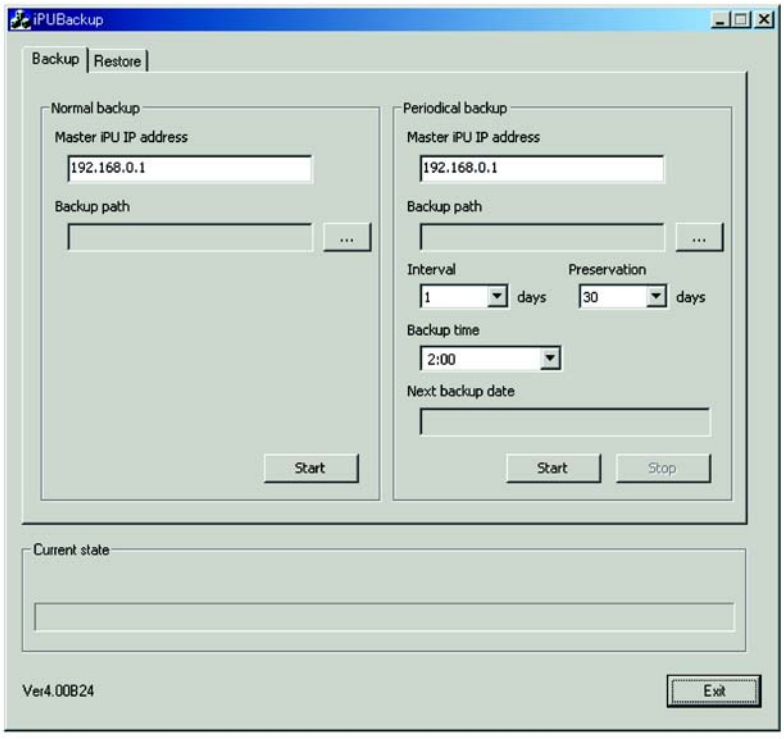
When you finish update, turn off the power.

Copying config.zip

Copy config.zip from the original folder to the newly installed folder.

Changing backup folder

Since the backup path is changed, change the folder to store backup data to the new folder.



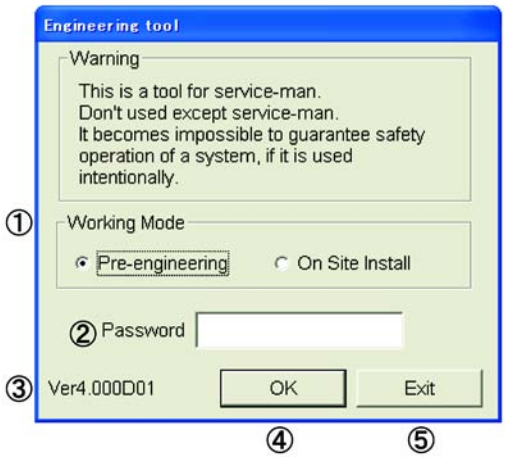
When you finish the operation, restart the PC.
This is the end of the upgrade operation.

3. How to Use Engineering Tool

This section explains the details of each tool.
First, an explanation of the main window is given before explanations of each window are provided.

Main Window

The image of the main window of the intelligent Manager setup tool is given below.



① [Working Mode] radio button

- Set the operation mode of each tool to **[Pre-engineering]** or **[On Site Install]**.
- Regarding the specifications of each tool depending on the operation mode, see a relevant chapter of each tool.
- In the default setting, **[Pre-engineering]** is selected.

② [Password] text field

- Prompting the user to enter a password before each tool is activated prevents general users from operating tools improperly.
- An authentication password is fixed (**"daikin"**).
- In the default setting, this field is blank.

③ Version information field

- The version of the monitoring board software is displayed.

④ [OK] button

- When this button is pressed, the password entered in the [Password] text field is checked if it is correct.
- If the password is correct, the window goes to the [Tool Selection] dialog box.
- If the password is not correct, a message dialog box is displayed, and the window returns to the main window.



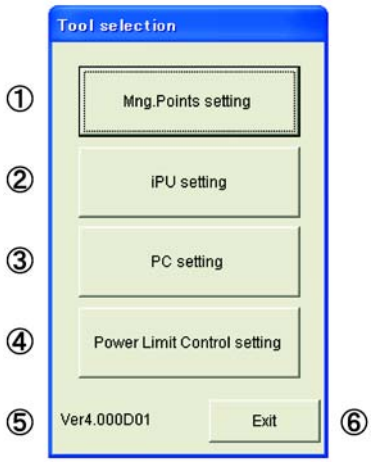
<When the password is incorrect>

⑤ [Exit] button

- When this button is pressed, this window is closed, and this tool is terminated.

[Tool selection] dialog box

This dialog box is used to activate setup tools.



① [Mng. Points setting] button

- When this button is pressed, the initial data setup tool is opened.

② [iPU setting] button

- When this button is pressed, the iPU data setup tool is opened.

③ [PC setting] button

- When this button is pressed, the monitoring board software setup tool is opened.

④ [Power Limit Control setting] button

- When this button is pressed, the target power control setup tool is opened.

⑤ Version information field

- This shows the monitoring board software version.

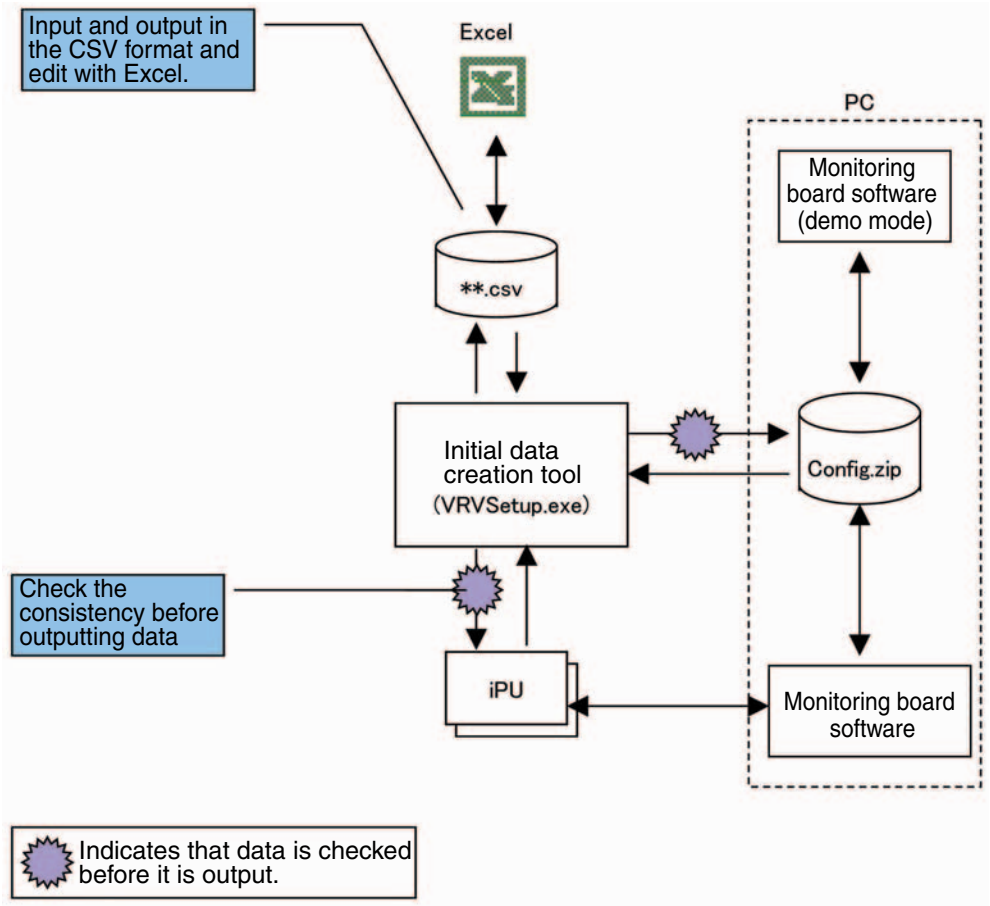
⑥ [Exit] button

- When this button is pressed, this window is closed, and this tool is terminated.

3.1 Management Point Data Creation Tool

3.1.1 Function Overview

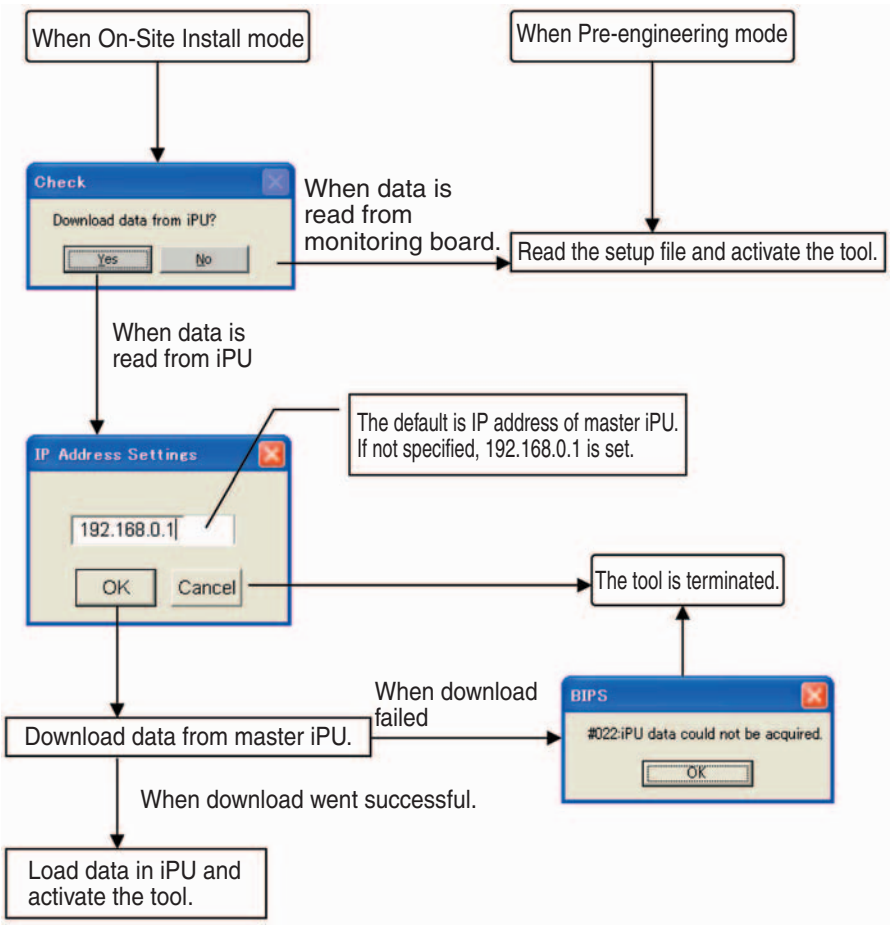
- Data of management points and control groups, etc., which are used by intelligent Manager, are created using the **initial data creation tool**.
- The initial data creation tool **creates data of management points, control groups,** and **D III ports**.
- Data can be created without iPU.
  (In the case that data are created in advance and later uploaded to iPU at the site.)
- Based on the created data, you can activate the monitoring PC in the demo mode without iPU.
- The tool has a function to input and output the created data as CSV files.
  You can create data with tools such as Excel.
- The tool has a function to check the consistency of the created data before saving it to the iPU or monitoring PC.
  This prevents a failure of the iPU and monitoring PC from occurring due to incorrect data.
  For more details of check items, see **Appendix C** (page 248 and subsequent pages).



Operation when Tool is Activated

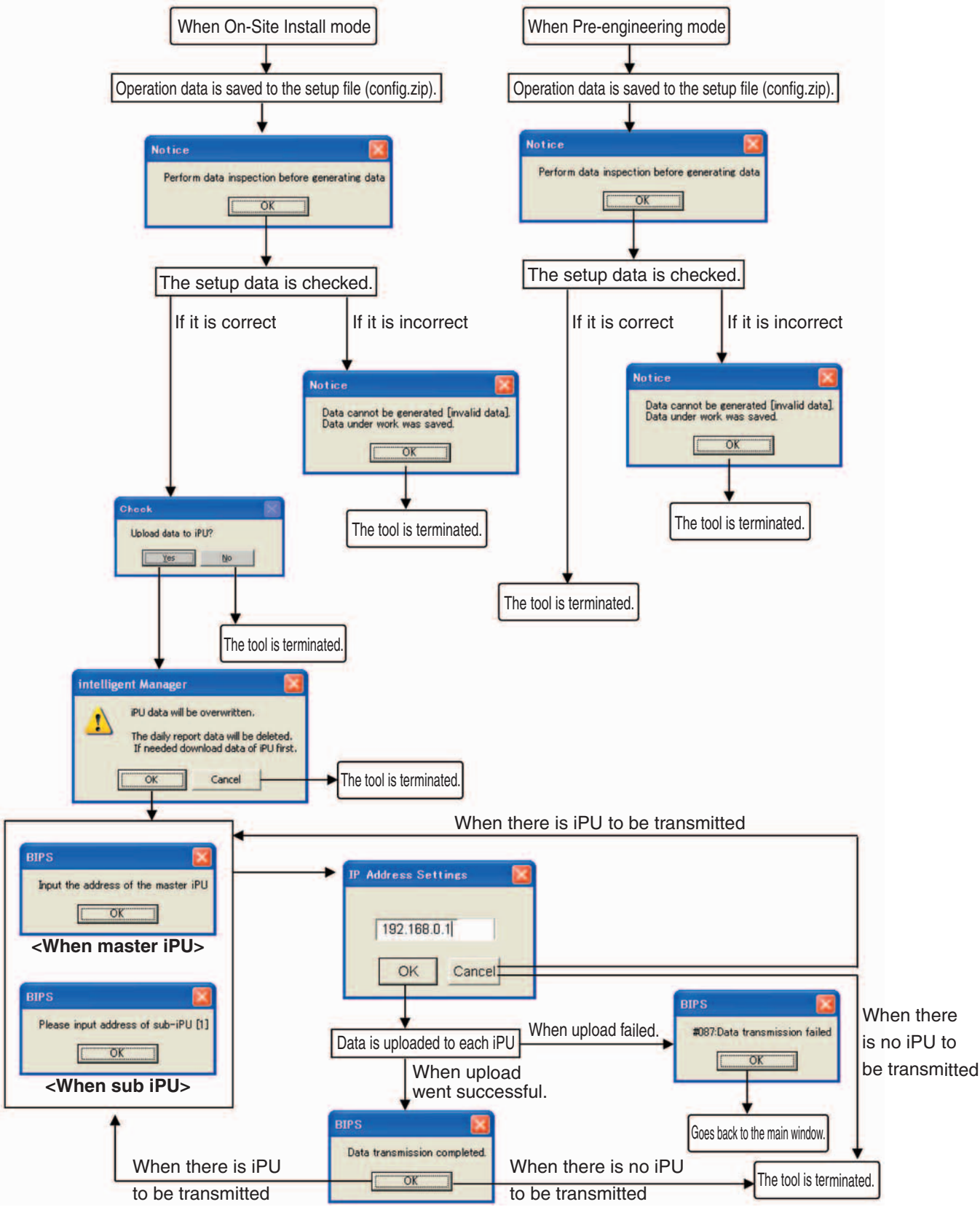
- If the operation mode is **[Pre-engineering]**, the setup data of the setup file (config.zip) in the intelligent Manager system folder is read, and then the tool is activated.
- If the operation mode is **[On Site Install]**, the setup data is read from the iPU, it is merged with the setup file in the intelligent Manager system folder, and then the tool is activated.
- Regarding the merge of data, the setup data in the iPU has priority.
  In other words, if data (management points and control groups) with a same ID as the setup data in the iPU exists in the setup file in the intelligent Manager system folder, priority is given to the setup data in the iPU.

Operation upon activation of the tool by operation mode



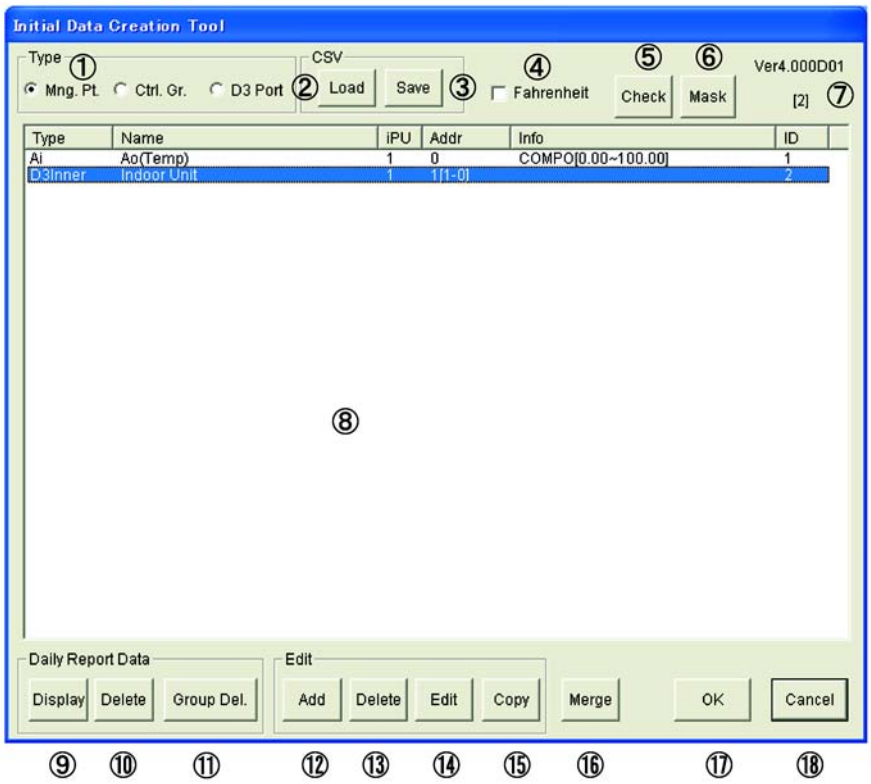
Operation upon Termination of Tool

- When you press the OK button of the tool, the input data is checked and data is saved according to the operation mode.
  Each operation according the operation mode when the OK button is pressed is shown below.



3.1.2 Main Window

The image of the main window of the **Initial Data Creation Tool** is shown below.



① **[Type] radio button**

- Specify the type of data **(Mng. Pt., Ctrl. Gr, or D3 Port)** to be displayed in the list.
- In the default setting, **Mng. Pt.** is selected.

② **[CSV: Load] button**

- CSV files are loaded when this button is pressed. For more details about this function, see **3.1.6 CSV Input/Output Function** (page 187).

③ **[CSV: Save] button**

- Data is saved in a CSV file when this button is pressed.
  For more details about this function, see **3.1.6 CSV Input/Output Function** (page 187).
- After displaying the file dialog box and specify the file name, save the data.

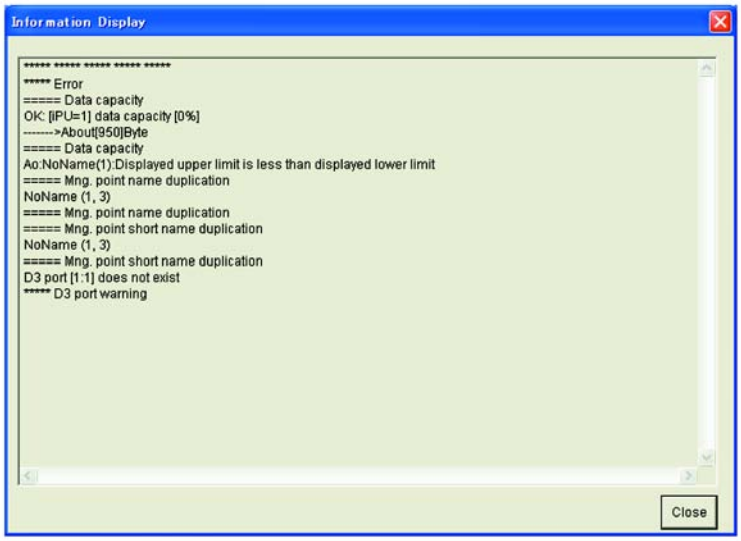
④ [Fahrenheit] checkbox

- When you put a check in this checkbox, temperatures are expressed in Fahrenheit.
- The items which can be expressed in Fahrenheit are given in the table below.
- In the default setting, the state of the loaded data is displayed. If no data exists, a check is not put (i.e., data are expressed in Celsius.)

Type of management point	Category	Item	Max/Min values in Celsius (default)	Max/Min values in Fahrenheit (default)	Max/Min values in analog (default)	Remarks
Indoor unit	Specified temperature limit	Upper limit of cooling	-127~127 (-127)	-197~261 (-197)	—	
		Lower limit of cooling	-127~127 (127)	-197~261 (261)	—	
		Lower limit of heating	-127~127 (-127)	-197~261 (-197)	—	
		Upper limit of cooling	-127~127 (127)	-197~261 (261)	—	
Ai	Monitoring of abnormal upper/lower values	No-reaction zone	0~512 (0)	0~922 (0)	0~9999.99(0)	Only when the analog type is "Temperature"
		Lower limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Upper limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
	Analog value	Minimum value	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Maximum value	-512~512 (100)	-890~954 (100)	-9999.99~9999.99(0)	
Ao	Analog value	MIN terminal value	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	Only when the analog type is "Temperature"
		MAX terminal value	-512~512 (100)	-890~954 (100)	-9999.99~9999.99(0)	
		MIN instruction value	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		MAX instruction value	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Instruction accuracy	-1 or 0	0	-2~3	
D III Ai	Monitoring of abnormal upper/lower values	No-reaction zone	0~512 (0)	0~922 (0)	0~9999.99(0)	Only when the sensor type is "Temperature" or "General", or the analog type is "Temperature"
		Lower limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Upper limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
	Analog value	Minimum value	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Maximum value	-512~512 (100)	-890~954 (100)	-9999.99~9999.99(0)	
Pseudo Ai	Monitoring of abnormal upper/lower values	No-reaction zone	0~512 (0)	0~922 (0)	0~9999.99(0)	When the targets for measurement are those listed below: Indoor unit: suction temperature Chiller: cooling water inlet temperature, cooling water outlet temperature AHU: Return temperature, outside air temperature, supply temperature
		Lower limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	
		Upper limit	-512~512 (0)	-890~954 (0)	-9999.99~9999.99(0)	

⑤ [Check] button

- When this button is pressed, the consistency of the setup data is checked, and the result is displayed in a message dialog box.

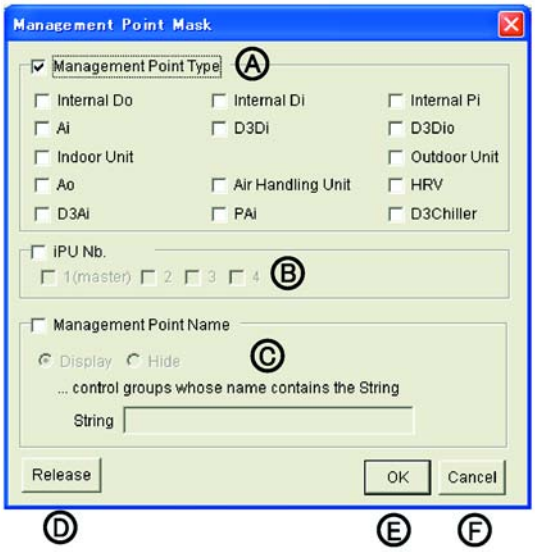


⑥ [Mask] button

- When this button is pressed, a dialog box to mask the data to be displayed in the list appears.
- When [D3 Port] is selected with the [Type] radio button, this button is grayed out.

Management Point Mask Dialog Box

This dialog box is used to make the settings to mask the data type to be displayed in the list. This is also used in the [Analog Point Selection] dialog box in Pseudo Ai.



Ⓐ [Management Point Type] field

- Only the management point types with a check are displayed. If no check is put, all management points are displayed.
- If no check is put, the Management Point Type checkbox is grayed out.
- In the default setting, no check is put.

Ⓑ [iPU Nb.] field

- Only the management points which belong to the iPU Nos. with a check are displayed. If no check is put, all management points are displayed.
- If no check is put, the iPU Nb. checkbox is grayed out.
- In the default setting, no check is put.

Ⓒ [Management Point Name] field

- Only the management points including (or not including) a specific string in the name are displayed. If no check is put, all management points are displayed.
- When the [Display] radio button is selected, only the management points including the string specified in the [String] field are displayed.
- When the [Hide] radio button is selected, only the management points not including the string specified in the [String] field are displayed.
- If no check is put, the radio buttons and text field in this field are grayed out.
- In the default setting, no check is put.

Ⓓ [Release] button

- When this button is pressed, remove checks from all the settings in Ⓐ ~ Ⓒ, and reset the mask. (All management points are displayed.)

Ⓔ [OK] button

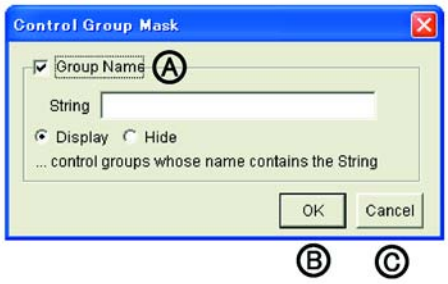
- When this button is pressed, the edit results are reflected to the system, and this window is closed.

Ⓕ [Cancel] button

- When this button is pressed, the edit results are discarded, and this window is closed.

Management Point Mask Dialog Box (Control Group)

This dialog box is used to make the settings related to the display when the control groups are displayed in the list of the main window.



Ⓐ [Group Name] field

- When a check is put in this field, only the control groups including (or not including) a specific string are displayed. If no check is put, all control groups are displayed.
- When the [Display] radio button is selected, only the control groups including the string specified in the [String] field are displayed.
- When the [Hide] radio button is selected, only the control groups not including the string specified in the [String] field are displayed.
- If no check is put, the radio buttons and text field in this field are grayed out.
- In the default setting, no check is put.

Ⓑ [OK] button

- When this button is pressed, the edit results are reflected to the system, and this window is closed.

Ⓒ [Cancel] button

- When this button is pressed, the edit results are discarded, and this window is closed.

⑦ Information display area

- The version number of this tool and the number of data in the list are displayed.

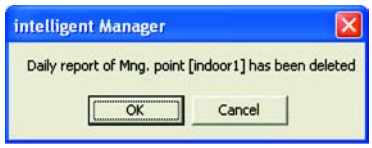
⑧ List of data

- The list of data in accordance with the data type specified with the [Type] radio button is displayed.
  Type: Type of data. When the data type is Management Point, the type of management point is displayed.
  Name: Name of data.
  iPU: iPU No. When the data type is Control Group, it becomes blank.
  Addr: Port No. or D III address. When the data type is Control Group, it becomes blank.
  Info: Detailed information about data.
  ID: Management point ID or control group ID. When the data type is D III port, it becomes blank.
- When you double click any item in the list, the same operation is performed as when you select the item and press the [Edit] button.

Type	Type (English)	Info	Info (display example)
Internal Do	Internal Do	Operation mode, instruction acceptable power supply state	Normal, Shutdown [Uninterruptable powered Mng. Point]
Internal Di	Internal Di	Di operation mode	Normal:, Power failure:, Error:
Internal Pi	Internal Pi	None (blank)	None (blank)
Ai	Ai	Upper/lower limits	COMPO [(Min val)~(Max val)]
Ao	Ao	Terminal Max/Min limits, instruction upper/lower limits, instruction acceptable power supply state	[(Term. Min)~(Term. Max)] : [Min of op. → Max of op.)], [Uninterruptable powered Mng. Point]
D3Di	D3Di	None (blank)	None (blank)
D3Dio	D3Dio	Instruction acceptable power supply state	[Uninterruptable powered Mng. Point]
Indoor unit	D3Inner	Wind direction, HMO (when enabled), wind "in steps" (when enabled), warning monitoring (when enabled), specified cooling temperature limit (when enabled), specified heating temperature limit (when enabled), instruction acceptable power supply state	[Fan direction], [HMO], Fan [in steps] , [Warning], [Restriction <Cool>], [Restriction <Heat>], [Uninterruptable powered Mng. Point]
Outdoor nit	D3Outer	Demand, instruction acceptable power supply state	[Demand:0],[Uninterruptable powered Mng. Point]
AHU	D3Airhan	Supply temperature, return temperature, return humidity, outside air temperature, outside air humidity, specified humidity, instruction acceptable power supply state, warning monitoring (when enabled)	[SA Temp.], [RA Temp.], [RA Hum.], [OA Temp.], [OA Hum.], [Set Hum.], [Uninterruptable powered Mng. Point], [Warning]
HRV	D3Vent	Ventilation mode (when enabled), warning monitoring (when enabled), instruction acceptable power supply state	[FFU], [Ventilation mode], [Warning], [Uninterruptable powered Mng. Point]
D3Ai	D3Ai	Sensor type (upper/lower limits in the case of general type)	Temp sensor.General [(Min val). (Max val)]
Pseudo Ai	Pseudo Ai	(When a measurement target is a management point) Measurement target management point (When a measurement target is an air network) Measurement target air network	(When a measurement target is a management point) Reference Mng. Point: (management point ID, measurement type) (When a measurement target is an air network) Reference A/N Data: (iPU Nb., Port Nb., A/N address, measurement type)
Chiller	D3Chiller	Cooling water inlet temperature, cooling water outlet temperature, instruction acceptable power supply state, warning monitoring (when enabled)	[Inlet temp.], [Outlet temp.], [Uninterruptable powered Mng. Point], [Warning]
Control group	Group	The number of management points	Member Nb. = (The number of management points)
D3Port	Port	Lower central setting	Central control enabled, Central control operation disabled

⑨ **[Daily Report Data: Display] button**

- When this button is pressed, the daily report data of the management point is displayed.
- In the following cases, this button is grayed out.
  - When the type of displayed data is Control Group or D III port
  - When no control point is selected in the list



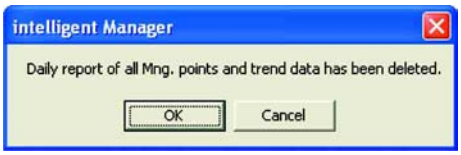
<Confirmation dialog box upon deletion of daily report data >

Display Items	Display Items (English)
Memory data Nb.	Memory data Nb.
Ring buffer pointer index	Ring buffer pointer index
Cumulated operation time	Cumulated operation time
Cumulated switching Nb. of times	Cumulated switching Nb. of time
Max. running time	The maximum running time
Pulse value	Pulse value
Invalid data	Invalid data

Type	Example of Display (English)
Internal Do, Internal Di, D3Di, D3Dio, indoor unit, HRV, AHU, chiller	Daily report of Mng. point [Name of the management point] Memory data Nb. 4 Ring buffer pointer index 1 Repeat the following operation 4 times. 0: 2000/01/07 00:00 Cumulated operation time: [value] sec Cumulated switching Nb. of time: [value] times The maximum running time: [value] sec When there is no data 0: Invalid data
Internal Pi	Daily report of Mng. point [Name of the management point] Memory data Nb. 4 Ring buffer pointer index 1 Repeat the following operation 4 times. 0: 2000/01/07 00:00 Pulse value [value] When there is no data 0: Invalid data
Ai, D3Ai, Pseudo Ai (When data is saved in iPU)	Daily report of Mng. point [Name of the management point] Memory data Nb. 576 Ring buffer pointer index 1 Repeat the following operation 576 times. 0: 2000/01/07 00:00 Analog value When there is no data 0: Invalid data
Ai, D3Ai, Pseudo Ai (When data is not saved in iPU)	Daily report of Mng. point [Name of the management point] Memory data Nb. 0 Ring buffer pointer index 0
Ao	Daily report of Mng. point [Name of the management point] #196:No daily report data
Outdoor unit	Daily report of Mng. point [Name of the management point]

⑩ **[Daily Report Data: Delete] button**

- When this button is pressed, the daily report data of the management point is deleted. Before deletion of the data, a confirmation dialog box appears.
- In the following cases, this button is grayed out.
  - When the type of displayed data is Control Group or D III port
  - When no control point is selected in the list



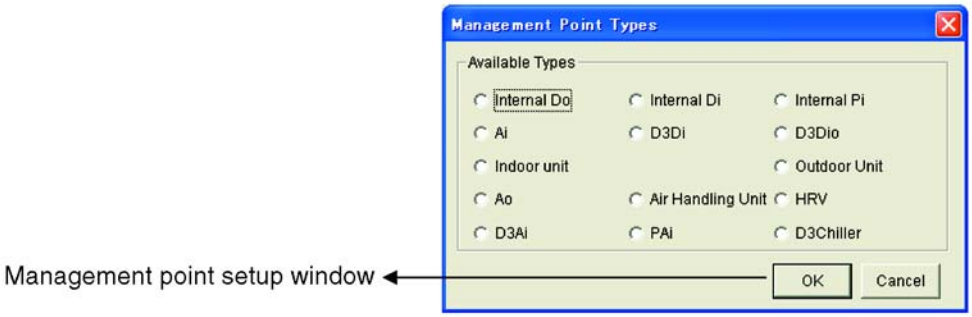
<Confirmation dialog box upon deletion of all daily report data>

⑪ **[Group Del] button**

- When this button is pressed, the daily report data and trend data of all management points are deleted. Before deletion of the data, a confirmation dialog box appears.

⑫ **[Edit: Add] button**

- When this button is pressed, a dialog box to add the new data is displayed according to the data type.
  For the management point data, the dialog box is displayed to select the management point type.
  In the default setting, [Indoor unit] is selected.



⑬ **[Edit: Delete] button**
- When this button is pressed, the data selected in the list are deleted.
- When no data is selected in the list, this button is grayed out.

⑭ **[Edit: Edit] button**
- When this button is pressed, a dialog box to edit the data selected in the list is displayed in accordance with the data type.
- When no data is selected in the list, this button is grayed out.

⑮ **[Edit: Copy] button**
- When this button is pressed, a copy of the data selected in the list is created.
- When no data is selected in the list, this button is grayed out.

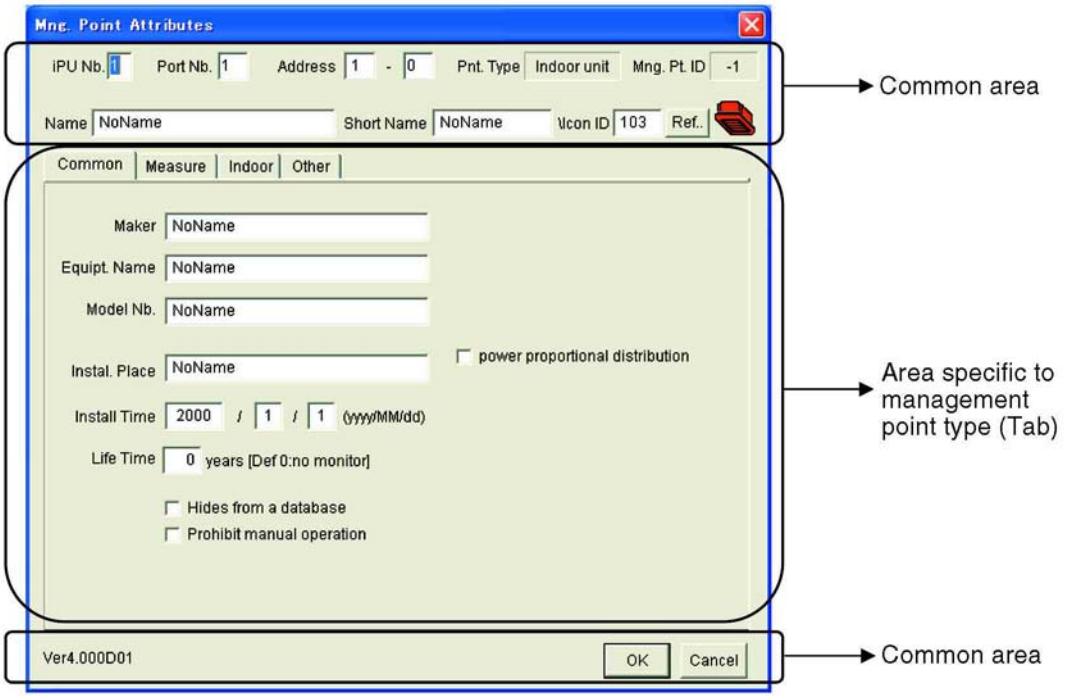
⑯ **[Merge] button**
- When this button is pressed, the confirmation dialog box and file dialog box shown below are displayed, and then the management point data in the file (config.zip) specified in the file dialog box are merged with the data that the system is currently loading.
- When merging data, priority is given to the data that the system is currently loading. That is, when the data with the same ID is included in both of the data that the tool is loading and the file specified in the file dialog, priority is given to the data that the system is currently loading.
- When the data have a same ID but a different data type, an error log dialog box is displayed, and the data will not be merged.

⑰ **[OK] button**
- When this button is pressed, the setup data is saved, and then this tool is terminated. For more details of this function, see the section of "Operation Upon Termination of Tool".

⑱ **[Cancel] button**
- When this button is pressed, this tool is terminated without saving the setup data.
- The confirmation dialog box shown below is displayed before the tool is terminated.

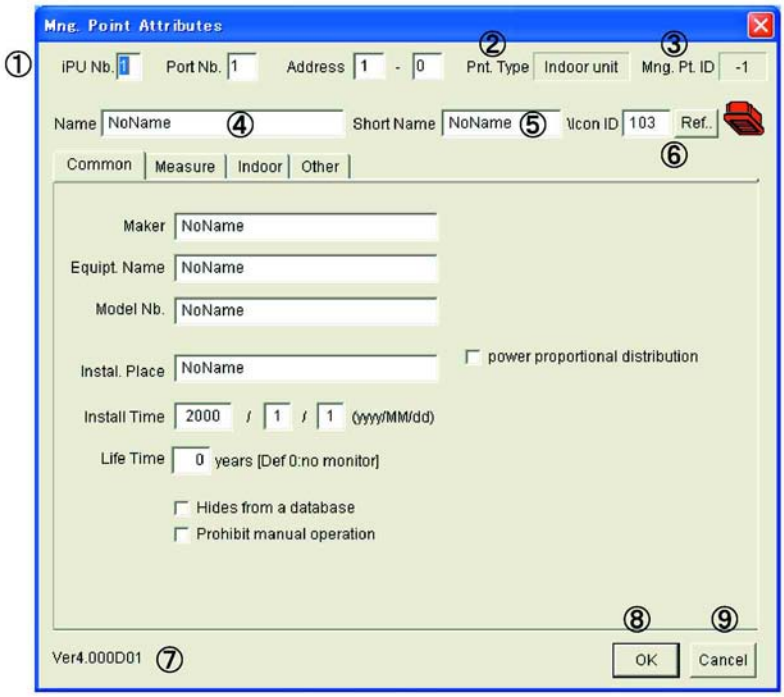
3.1.3 Management Point Setup Window

In this window, you can set the attributes of a management point when adding a new management point or editing an existing one.
As shown below, the independent setup window contains common setup items for all management points and those for each management point type.



3.1.3.1 [Common] Area

In this area, you can make the settings of the common items for management points.



① [iPU Nb.], [Port Nb.], [Address] text field

- Display and make the settings of the iPU No., port No., and D3 network address to which the management point belongs.
- The items to be displayed vary according to the management point type.

Management point type	iPU No.		Port No.		D3 network address	
	Display ON/ OFF switch	MAX/MIN value (default value)	Display ON/ OFF switch	MAX/MIN value (default value)	Display ON/ OFF switch	MAX/MIN value (default value)
Internal Do	○	1~4 (1)	○	1~2 (1)	×	—
Internal Di	○	1~4 (1)	○	1~20 (1)	×	—
Internal Pi	○	1~4 (1)	○	1~20 (1)	×	—
Ai	○	1~4 (1)	○	0~49 (0)	×	—
D3Di	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
D3Dio	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
Indoor unit	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
Outdoor nit	○	1~4 (1)	○	1~4 (1)	×	—
Ao	○	1~4 (1)	○	0~49 (0)	×	—
AHU	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
HRV	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
D3Ai	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)
Pseudo Ai	Δ*1	1~4 (1)	×	—	×	—
Chiller	○	1~4 (1)	○	1~4 (1)	○	1-0~4-15 (1-0)

★1: This item depends on the iPU No. to which a target management point of pseudo Ai belongs (grayed out).

② **[Pnt. Type] field**
- The management point type is displayed.

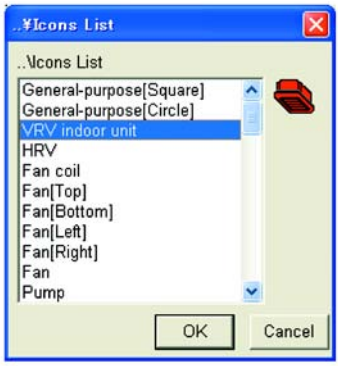
③ **[Mng. Pt. ID] field**
- The management point ID is displayed. The management point ID is automatically assigned by the system.

④ **[Name] text field**
- You can display and specify a management point name in this field.
- You cannot specify a management point name exceeding the maximum number of characters (i.e., 24 characters).

⑤ **[Short Name] text field**
- You can display and specify an abbreviated name of the management point in this field.
- You cannot specify an abbreviated name of the management point exceeding the maximum number of characters (i.e., 8 characters).

⑥ **[Icon ID] field**
- You can display and specify an icon in this field.
- You can input an icon ID or select an icon from the icon selection dialog box.
- The default values of the icon types for new management points are shown in the table below.
- When you press the [Ref.] button, a dialog box from which you can select an icon appears.
- When you double-click an item in the list, the item is selected, and the same operation when the [OK] button is pressed is conducted.

Management point type	Icon ID	Name of icon
Internal Do	102	General-purpose [Circle]
Internal Di	102	General-purpose [Circle]
Internal Pi	124	Meter
Ai	126	Temperature
D3Di	102	General-purpose [Circle]
D3Dio	102	General-purpose [Circle]
Indoor unit	103	VRV indoor unit
Outdoor unit	143	VRV outdoor unit
Ao	146	Slide
AHU	137	Air-handler
HRV	104	HRV
D3Ai	126	Temperature
Pseudo Ai	126	Temperature
Chiller	157	ENAGEO



<Icon selection dialog box>

⑦ **Version display field**
- The version No. of this tool is displayed.

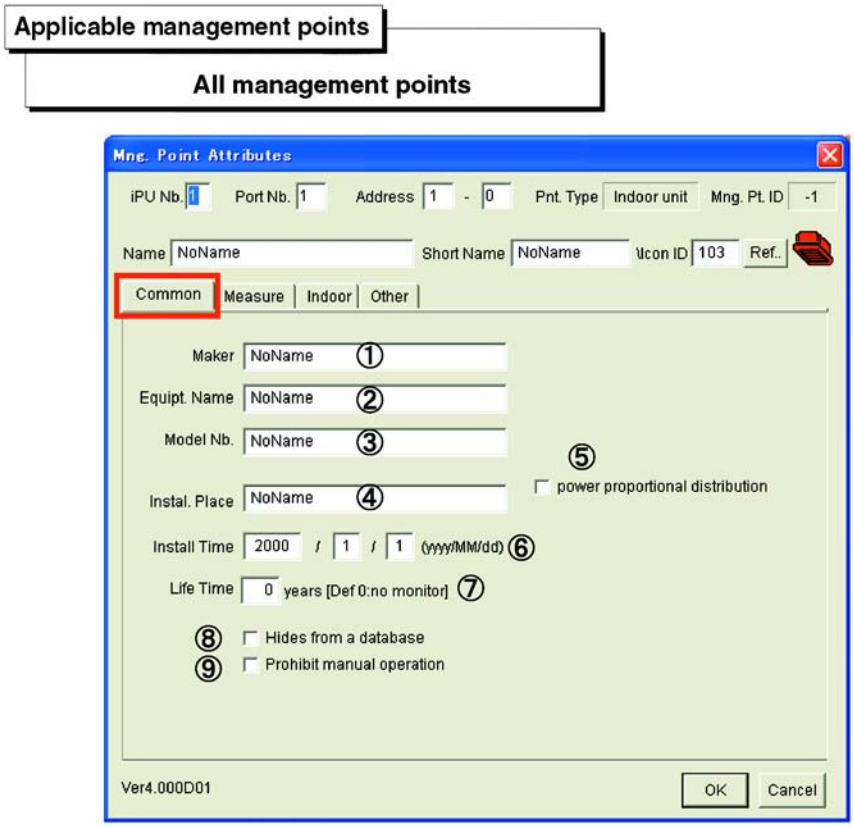
⑧ **[OK] button**
- When this button is pressed, the edit results are reflected to the system, and this window is closed.
- Before the edit results are reflected to the system, the maximum and minimum values of the input data are checked.
  If the data are out of the scope, a dialog box indicating to that effect, and the results will not be reflected.

⑨ **[Cancel] button**
- When this button is pressed, the edit results are discarded, and this window is closed.

3.1.3.2 Area Specific to Management Point Type (Tab)

[Common] tab

You can make common settings for all management points in this tab.



Some items are not displayed according to the management point type.

Management point type	⑤ Power proportional distribution	⑧ Hides from a database	⑨ Prohibit manual operation
Internal Do	×	○	○
Internal Di	×	○	×
Internal Pi	×	○	×
Ai	×	○	×
D3Di	×	○	×
D3Dio	×	○	○
Indoor unit	○	○	○
Outdoor unit	×	×	×
Ao	×	×	○
AHU	×	○	○
HRV	×	○	○
D3Ai	×	○	×
Pseudo Ai	×	○	×
Chiller	×	○	○

① **[Maker] text field**
- You can display and specify the name of the maker.
- You cannot specify the name exceeding the maximum number of characters (i.e., 24 characters).

② **[Equipt. Name] text field**
- You can display and specify the name of the equipment.
- You cannot specify the name exceeding the maximum number of characters (i.e., 24 characters).

③ **[Model Nb.] text field**
- You can display and specify the name of the model number.
- You cannot specify the name exceeding the maximum number of characters (i.e., 24 characters).

④ **[Instal. Place] text field**
- You can display and specify the installation place.
- You cannot specify the installation place name exceeding the maximum number of characters (i.e., 24 characters).

⑤ **[power proportional distribution] checkbox**
- When a check is put to this checkbox, the management point is set as a target of power proportional distribution.
- In the default setting, a check is not put in this checkbox.

⑥ **[Install Time] field**
- You can display and specify the date of installation.
- The available range of the date is from January 1, 1975 to December 31, 2035.

⑦ **[Life Time] field**
- You can display and specify the durable years.
- The available range is from 0 to 99.
- In the default setting, 0 is set (no monitoring).

⑧ **[Hides from a database] checkbox**
- When a check is put to this checkbox, the management point is excluded from the data management.
- In the default setting, a check is not put in this checkbox.

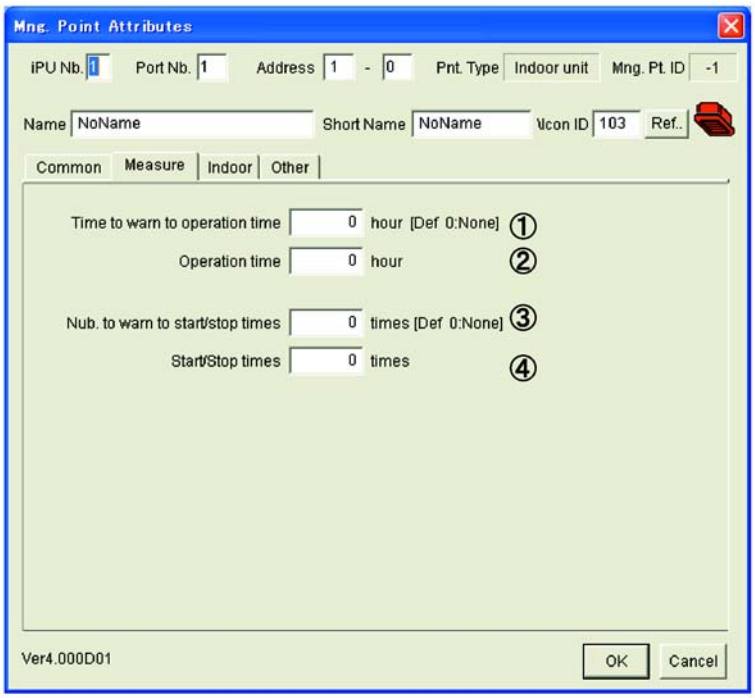
⑨ **[Prohibit manual operation] checkbox**
- When a check is put to this checkbox, manual operation is prohibited.
- In the default setting, a check is not put in this checkbox.

[Measure] tab

You can make the settings related to accumulated values in this tab.

Applicable management points

Internal Do, Internal Di, D3Di, D3Dio, indoor unit, AHU, HRV, chiller



① [Time to warn to operation time] text field

- You can display and specify the warning time for the accumulated operation time.
- The available range is from 0 to 500000 hours.
- The default setting is 0 (no warning).

② [Operation time] text field

- You can display and specify the accumulated operation time.
- The available range is from 0 to 500000 hours.
- The default setting is 0.

③ [Nub. To warn start/stop times] text field

- You can display and specify the warning time for the accumulated number of times of operation.
- The available range is from 0 to 999999 times.
- The default setting is 0 (no warning).

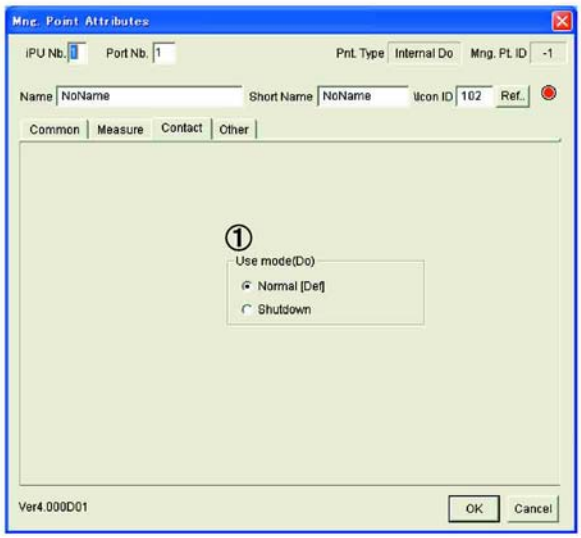
④ [Start/Stop times] text field

- You can display and specify the accumulated number of times of operation.
- The available range is from 0 to 999999 times.
- The default setting is 0.

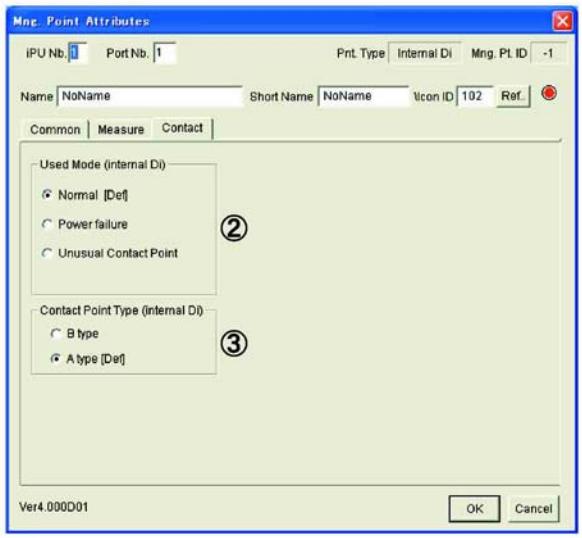
[Contact] tab

You can make common settings related to contact points (Dio) in this tab.

Applicable management points
Internal Do, Internal Di



<In the case of Internal Do>



<In the case of Internal Di>

① [Use mode (Do)] radio button

- You can display and settings related to the operation mode of Do.
- You can select either [Normal] (general) or [Shutdown] (for the shutdown signal to UPS).
- The default setting is Normal.

② [Used Mode (internal Di)] radio button

- You can display and settings related to the operation mode of Di.
- You can select either [Normal] (general) or [Power failure] (for the power failure signal input).
  You can select [Unusual Contact Point] (error signal from the facility).
- The default setting is [Normal].

③ [Contact Point Type (internal Di) radio button

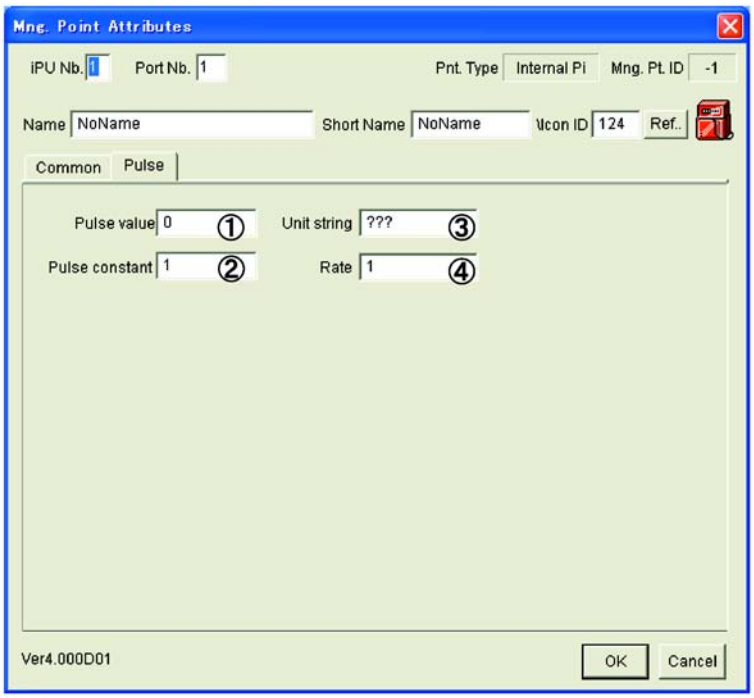
- You can display and settings related to the contact type of Di.
- You can select either [B type] (contact point B: ON when it is open) or [A type] (contact point A: ON when it is closed).
- The default setting is [A type].

[Pulse] tab

You can make settings related to the pulse value in this tab.

Applicable management points

Internal Pi



① [Pulse value] text field

- You can display and specify the pulse value.
- The available range is from 0 to 999999999.
- The default setting is 0.

② [Pulse constant] text field

- You can display and specify the pulse constant.
- The available range is from 0 to 999999999.
- The default setting is 1.

③ [Unit string] text field

- You can display and specify the unit string.
- You can enter a string with 0 to 8 digits.
- The default setting is "???".

④ [Rate] text field

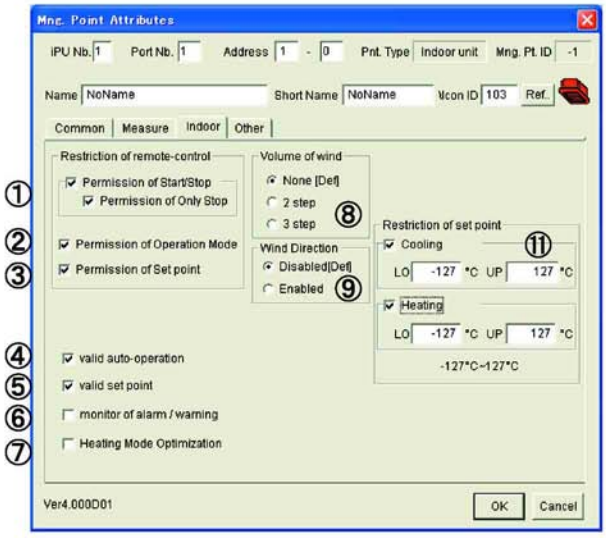
- You can display and specify the multiplication rate.
- The available range is from 0.01 to 99999.99.
- The default setting is 1.

[Indoor] tab

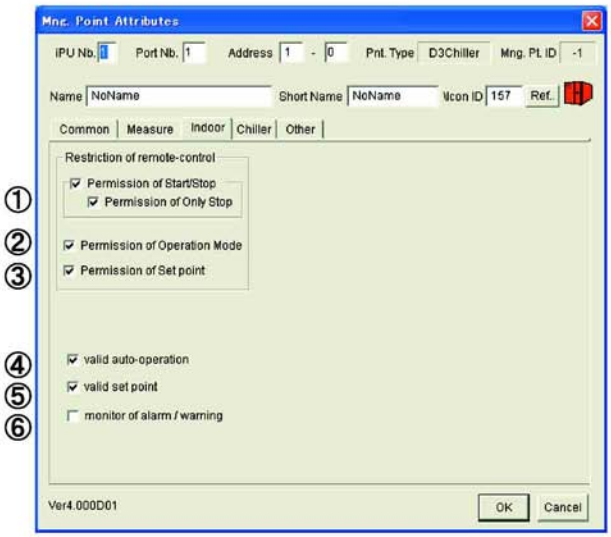
You can make settings related to the indoor unit in this tab.

Applicable management points

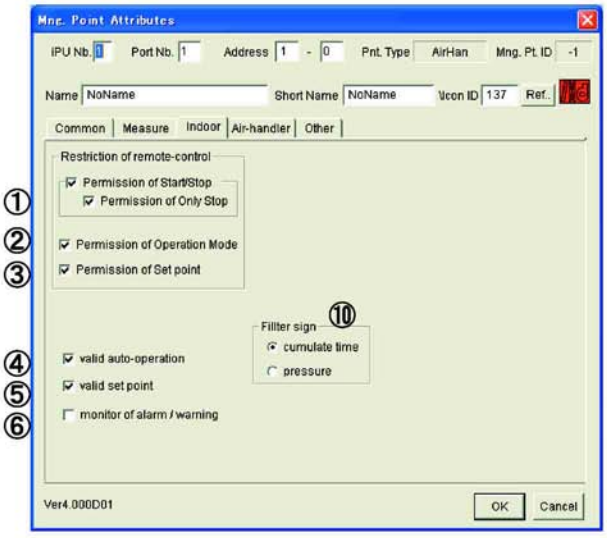
Indoor unit, chiller, AHU, HRV



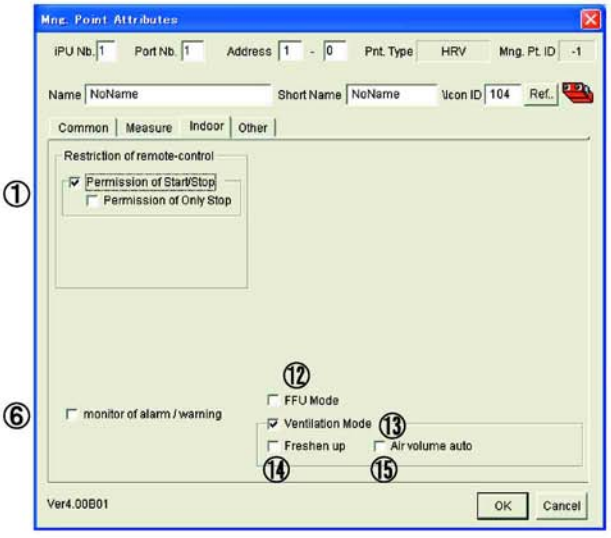
<In the case of indoor unit>



<In the case of chiller>



<In the case of AHU>



<In the case of HRV>

① **[Permission of Start/Stop], [Permission of Only Stop] checkbox**
- You can set [Permission of Start/Stop] and [Permission of Only Stop] regarding the operation of the remote control.
- If a check is not put to the [Permission of Start/Stop] checkbox, the [Permission of Only Stop] checkbox is grayed out.
- In the default setting, both start and stop are permitted.

② **[Permission of Operation Mode] checkbox**
- You can set [Permission of Operation Mode] regarding the operation of the remote control.
- In the default setting, a check is put in this checkbox.

③ **[Permission of Set point] checkbox**
- You can set [Permission of Set point] regarding the operation of the remote control.
- In the default setting, a check is put in this checkbox.

④ **[valid auto-operation] checkbox**
- When a put is check in this checkbox, the auto operation mode is enabled.
- In the default setting, a check is put in this checkbox.
- If an air conditioner does not support the auto operation mode, this setting is invalid.

⑤ **[valid set point] checkbox**
- When a put is check in this checkbox, the set point is enabled.
- In the default setting, a check is put in this checkbox (the set point is enabled).

⑥ **[monitor of alarm/warning] checkbox**
- When a put is check in this checkbox, the D3 alarm and warning are enabled.
- In the default setting, a check is not put in this checkbox (the function is disabled).

⑦ **[Heating Mode Optimization] checkbox**
- When a put is check in this checkbox, the Heating Mode Optimization function is enabled.
- In the default setting, a check is not put in this checkbox (the function is disabled).

⑧ **[Volume of wind] radio button**
- You can specify the volume of wind to be monitored (None, 2 step, or 3 step).
- In the default setting, None is selected.
- If an air conditioner does not support the volume of wind setting, this setting is invalid.

⑨ **[Window Direction] radio button**
- You can specify the wind direction to be monitored (Disabled or Enabled).
- In the default setting, Disabled is selected.
- If an air conditioner does not support the wind direction setting, this setting is invalid.

⑩ **[Filter sign] radio button**
- You can specify the filter sign setting (cumulate time/differential pressure type) of AHU.
- In the default setting, cumulate time is selected.

⑪ **[Restriction of set point] field**
- You can set the limitation of the set point.
- When a check is put in the [Cooling] and [Heating] checkboxes, the upper and lower limits of the set point restriction in the case of cooling or heating are limited within the specified range.
- When a check is not put in the [Cooling] and [Heating] checkboxes, the upper and lower limit value text fields are grayed out.
- In the default setting, a check is not put in either the [Cooling] or [Heating] checkboxes (no restriction of set point).

⑫ **[FFU Mode] checkbox**
The intelligent Manager does not use this checkbox.

⑬ **[Ventilation Mode] checkbox**
- When a check is put in this checkbox, the ventilation mode is enabled.
- When a check is not put in this checkbox, both the [Freshen up] and [Air volume auto] checkboxes are grayed out.
- In the default setting, a check is not put in this checkbox (disabled).

⑭ **[Freshen up] checkbox**
- When a check is put in this checkbox, the freshen-up mode is enabled.
- In the default setting, a check is not put in this checkbox (disabled).

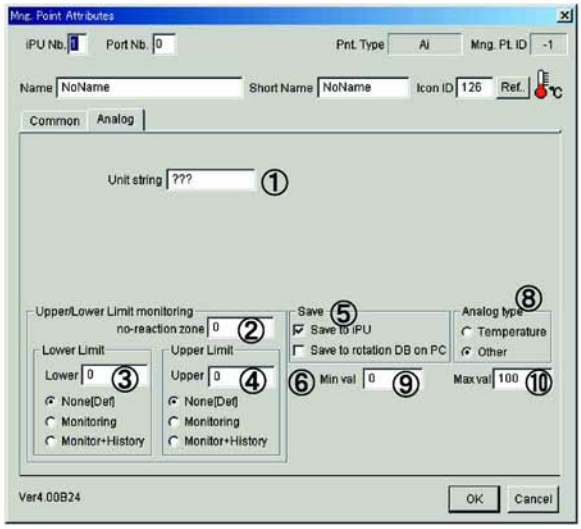
⑮ **[Air volume auto] checkbox**
- When a check is put in this checkbox, the auto air volume mode is enabled.
- In the default setting, a check is not put in this checkbox (disabled).

[Analog] tab

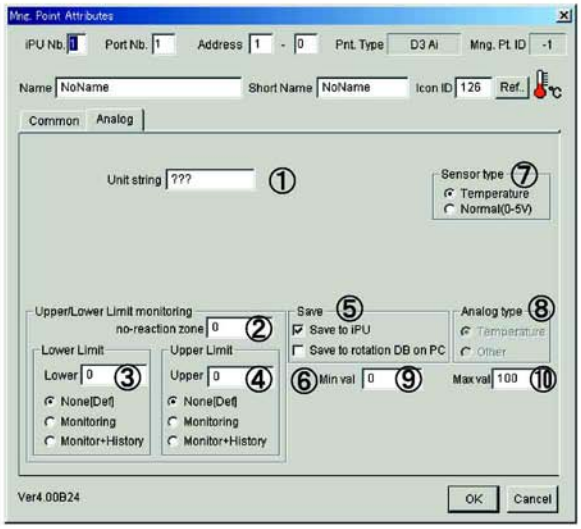
You can make settings related to the analog values (Ai and Ao) in this tab.

Applicable management points

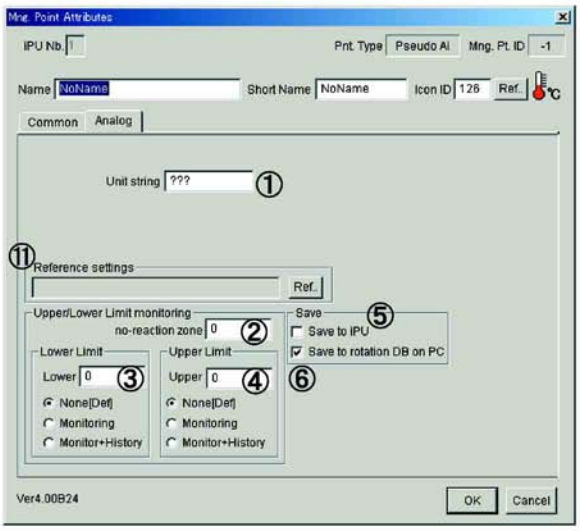
Ai, D3Ai, Pseudo Ai, Ao



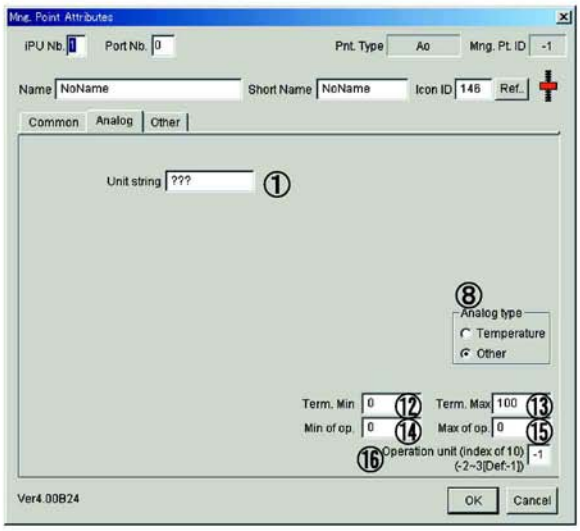
<In the case of Ai>



<In the case of D3Ai>



<In the case of Pseudo Ai>



<In the case of Ao>

① **[Unit String] text field**
- You can display and specify the unit string.
- You can enter a string with 0 to 8 digits.
- The default setting is "???".

② **[no-reaction zone] text field**
- You can display and specify the no reaction zone.
- Regarding the available input range, **see page 156.**
- The default setting is 0.

③ **[Lower Limit] field**
- You can display and specify the monitoring of abnormal lower limit.
- You can select either None, Monitoring, or Monitor + History using radio buttons.
- Regarding the available input range for the lower limit, **see page 156.**
- In the default settings, the lower limit is 0, and the monitoring state is None.

④ **[Upper Limit] field**
- You can display and specify the monitoring of abnormal upper limit.
- You can select either None, Monitoring, or Monitor + History using radio buttons.
- Regarding the available input range for the upper limit, **see page 156.**
- In the default settings, the upper limit is 0, and the monitoring state is None.

⑤ **[Save to iPU] checkbox**
- When a check is put in this checkbox, the trend value is saved to the iPU.
- In the default settings, a check is not put in the case of Pseudo Ai (the value is not saved), and a check is put in the case of other management points (it is saved).

⑥ **[Save to rotation DB on PC] checkbox**
- When a check is put in this checkbox, rotation saving to the database in the monitoring PC.
- In the default settings, a check is put in the case of Pseudo Ai (rotation is done), and a check is not put in the case of other management points (rotation is not done).

⑦ **[Sensor type] radio button**
- You can specify the sensor type of D3Ai.
- The default setting is Temperature (temperature sensor).
- When Temperature is selected, the [Analog type] radio button is grayed out.

⑧ **[Analog type] radio button**
- You can specify the type of the analog value (for general use or temperature use).
- When you select Temperature, analog values are treated as temperature.
  For more details, see the [Fahrenheit] checkbox section in the main window.
- The default setting is Other.

⑨ **[Min val] text field**
- You can display and specify the minimum value of analog values.
- Regarding the available input range, **see page 156.**
- The default setting is 0.

⑩ **[Max val] text field**
- You can display and specify the maximum value of analog values.
- Regarding the available input range, **see page 156.**
- The default setting is 100.

⑪ [Reference Target] field

- You can display and specify the target analog values and target management points of Pseudo Ai.
- The following items are displayed in the display area according to the setting of the target analog values.

Target analog value	Display item	Display example
Management point (indoor unit, AHU, chiller) measurement items	Management point ID, measurement target	PntID: (management point ID), Type: (measurement item)
Air network data measurement items	iPU No, port No., A/N address, measurement target	iPU Nb. (iPU No.), Port Nb. (port No.), A/N Address: (A/N address), Type: (measurement item)
No settings	None (blank)	None (blank)

- In the default setting, no target analog value is specified.
- When the [Ref.] button is pressed, the [Analog Point Selection] dialog box to select analog values appears.
- When you set the target analog values, the dialog box shown below appears.
  When you press the [OK] button, the following items of this management point are updated with the management points which include the target analog values.
  Maker, Equipt. Name, Model Nb., Instal. Place, Install Time, Life Time



⑫ [Term. Min] text field

- You can display and specify the minimum terminal value of Ao.
- Regarding the available input range, **see page 156**.
- The default setting is 0.

⑬ [Term. Max] text field

- You can display and specify the maximum terminal value of Ao.
- Regarding the available input range, **see page 156**.
- The default setting is 100.

⑭ [Min of op.] text field

- You can display and specify the minimum instruction value of Ao.
- Regarding the available input range, **see page 156**.
- The default setting is 0.

⑮ [Max of op.] text field

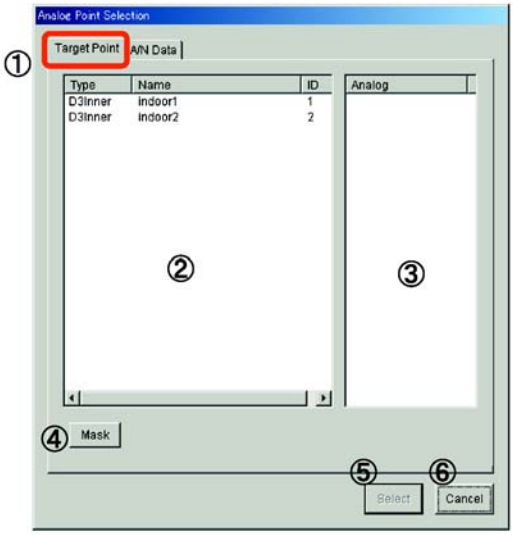
- You can display and specify the maximum instruction value of Ao.
- Regarding the available input range, **see page 156**.
- The default setting is 100.

⑯ [Operation unit] text field

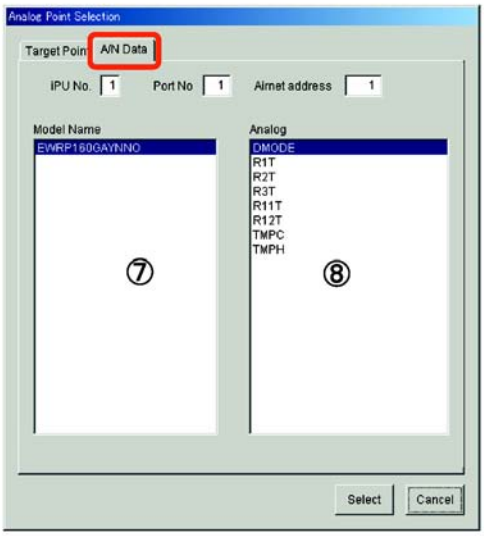
- You can display and specify the instruction accuracy (10 exponent) of Ao.
- Regarding the available input range, **see page 156**.
- The default setting is -1.

Analog Point Selection Dialog Box

- In this dialog box, you can specify the reference end for the Pseudo Ai and set analog values of target management points or target air network measurement items.
- When you set target air network measurement items, verify that the air network trial operation has done.
  If you run the air network again and change its configuration after the settings of the Pseudo Ai are done, remember that you need to make the settings of the Pseudo Ai again.
- The display of the Pseudo Ai is updated within 1 minute after the reference end is updated.



<Display of Target Point tab>



<Display of A/N Data tab>

① Display tab

- You can select targets of the Pseudo Ai among management points or air network data.
- In the default setting, the management points which are currently selected (Target Point tab) or air network data (A/N Data tab) are selected.
  When a check is not put in this checkbox, the management point (Target Point tab) is selected.
- In the On Site Install mode, the A/N Data tab is not displayed.
  (The air network data cannot be specified as a target of the Pseudo Ai.)

② Management point list

- In this field, a list of the management points (indoor units, chillers, AHU) with analog values is displayed.
- The items to be displayed are as follows:
  Type: management point type
  Name: name of a management point
  ID: management point ID
- In the default setting, the list of target management points is selected. If there is no target management point, no list is selected.

③ Analog value list

- A list of analog values, which can be targets of the Pseudo Ai, of the management points selected in the management point list.
- In the default setting, the list of target analog values is selected. If there is no target analog value, no list is selected.
- The types of selectable analog values by management point type are as follows:

Management point type	By analog values of Pseudo Ai
Indoor unit	Suction temperature
AHU	Specified temperature
	Supply temperature
	Return temperature
	Return humidity
	Outside air temperature
	Outside air humidity
Chiller	Cooling water inlet temperature
	Cooling water outlet temperature

④ [Mask] button

- When this button is pressed, a dialog box to mask the management points to be displayed in the list appears.

⑤ [Select] button

- When this button is pressed, the items selected in the list are saved as analog values of the Pseudo Ai, and this window is closed.
- If no analog value is selected in the analog value list, this button is grayed out.

⑥ [Cancel] button

- When this button is pressed, the edit results are discarded, and this window is closed.

⑦ Air network cooling medium system candidate list

- A list of air network cooling medium systems which can be measured by the Pseudo Ai is displayed.
- The items to be displayed are as follows:
  iPU Nb.: iPU number
  Port Nb.: Port number
  A/N Addr.: Air network address
  Model Name: Model name
- No candidate of the list is displayed until the air network data is loaded from the iPU. Once the data is loaded, it will be retained until the tool is terminated.
- In the default setting, the currently selected air network cooling medium system is selected. If there is no selected system, no list is selected.

⑧ Air network measurement item candidate list

- A list of target air network measurement items for Pseudo Ai in the items selected in the air network cooling medium system list is displayed.
- No candidate of the list is displayed until the air network data is loaded from the iPU. Once the data is loaded, it will be retained until the tool is terminated.
- In the default setting, the currently selected air network measurement item is selected. If there is no selected system, no list is selected.
- Regarding the selectable air network measurement items, see the table below.

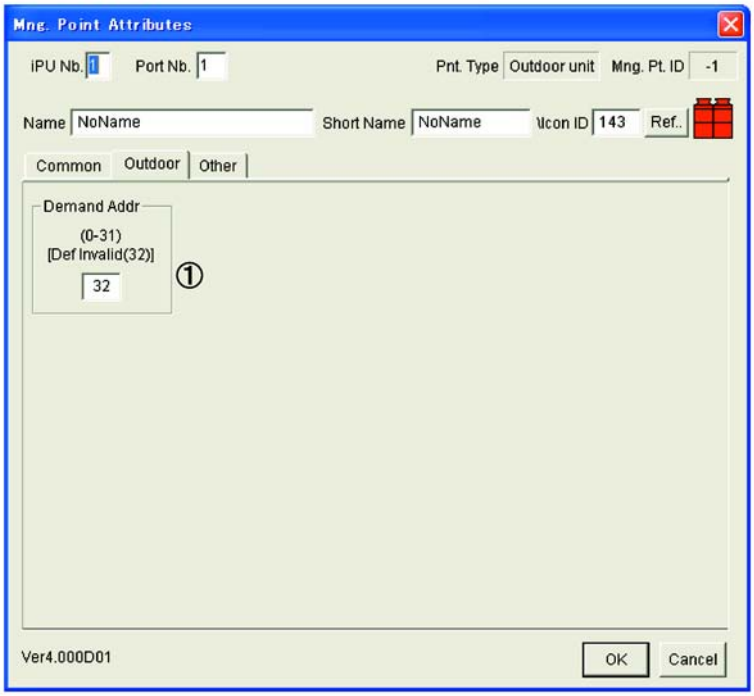
Air network model	Air network measurement items	Mark
CHESBAC (Model name: UWRYP*)	Outside air temperature	R3T
	Cooling water inlet temperature	R1T
	Cooling water outlet temperature	R2T
	Operation mode	DMODE
	Cooling water inlet temperature (outdoor unit 1)	R11T
	Cooling water outlet temperature (outdoor unit 1)	R12T
	Cooling set temperature	TempC
	Heating Set temperature	TempH

[Outdoor] tab

You can make the settings related to outdoor units.

Applicable management points

Outdoor units



① **[Demand Addr] text field**

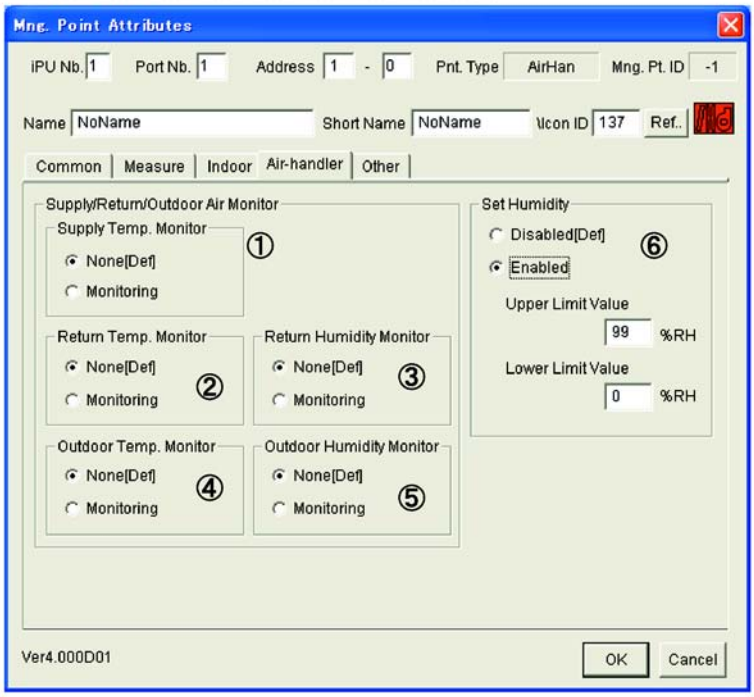
- You can display and specify the demand address.
- The available input range is from 0 to 32.
- The default setting is 32 (no setting).

[Air-handler] tab *The adaptor P plate for AHU is required to use this management point.

You can make the settings related to AHU.

Applicable management points

AHU



① [Supply Temp. Monitor] radio button

- You can specify whether or not to monitor the supply temperature.
- In the default setting, monitoring is disabled.

② [Return Temp. Monitor] radio button

- You can specify whether or not to monitor the return temperature.
- In the default setting, monitoring is disabled.

③ [Return Humidity Monitor] radio button

- You can specify whether or not to monitor the return humidity.
- In the default setting, monitoring is disabled.

④ [Outdoor Temp. Monitor] radio button

- You can specify whether or not to monitor the outdoor air temperature.
- In the default setting, monitoring is disabled.

⑤ [Outdoor Humidity Monitor] radio button

- You can specify whether or not to monitor the outdoor air humidity.
- In the default setting, monitoring is disabled.

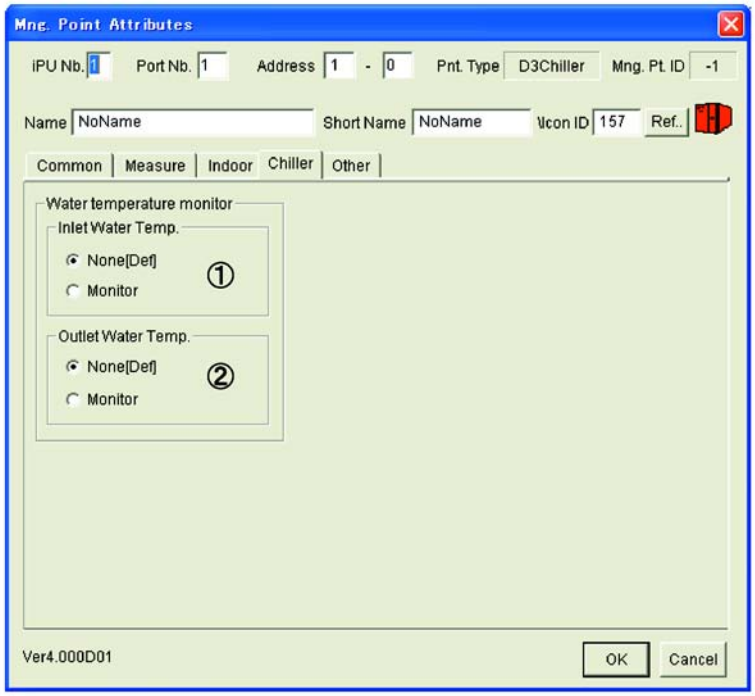
⑥ [Set Humidity] radio button

- You can specify whether or not to monitor/control the humidity setting.
- In the default setting, monitoring/control is disabled.
- When you select the Disabled radio button for Set Humidity, the text fields for Upper Limit Value and Lower Limit Value are grayed out.
- The input range for the upper and lower limits of the humidity setting is from 0 to 99%.
- In the default settings, the upper limit is 99%, and the lower limit is 0%.

[Chiller] tab

You can make the settings related to chillers.

Applicable management points
Chillers



① [Inlet Water Temp.] radio button

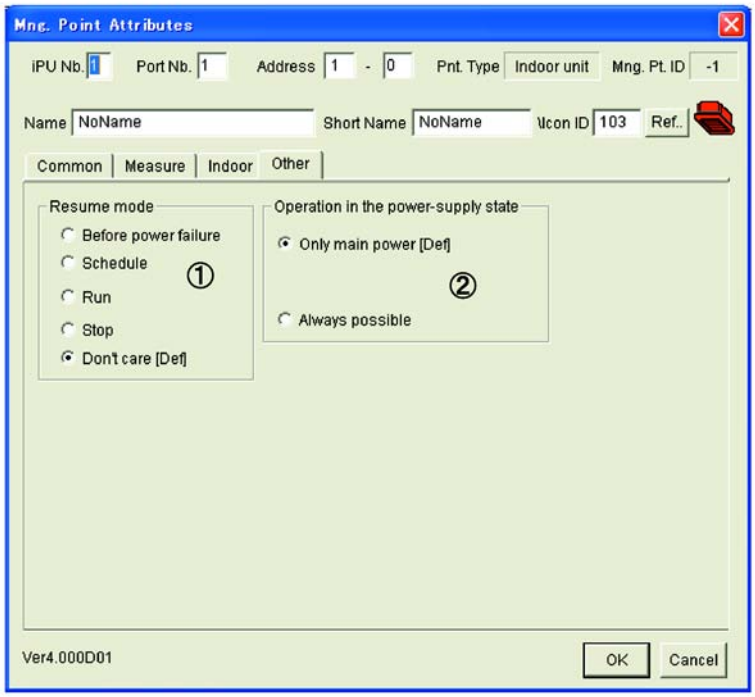
- You can specify whether or not to monitor the inlet water temperature.
- In the default setting, monitoring is disabled.

② [Outlet Water Temp.] radio button

- You can specify whether or not to monitor the outlet water temperature.
- In the default setting, monitoring is disabled.

[Other] tab

You can make the settings related to power failure/recovery of management points.



Some items are not displayed depending on the management point type. The details are shown in the table below.

Management point type	①Resume mode	②Operation in the power-supply state
Internal Do	×	○
D3Dio	○	○
Indoor unit	○	○
Outdoor unit	×	○
Ao	○	○
AHU	○	○
HRV	○	○
Chiller	○	○
Others	×	×

① [Resume mode] radio button

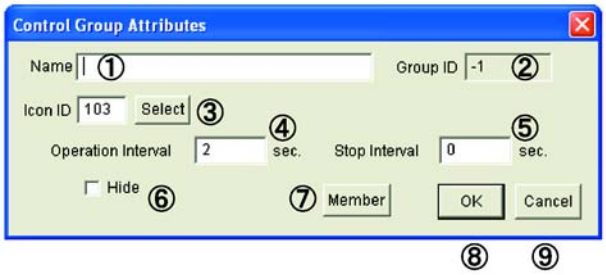
- You can set the mode upon power recovery.
- If the management point type is Ao, the [Run] and [Stop] buttons are grayed out.
- In the default setting, no power recovery control is set.

② [Operation in the power-supply state] radio button

- You can specify the power supply state which can be operated.
- In the default setting, the state can be operated only when power is supplied.

3.1.4 Control Group Setup Window

In this window, you can set the attributes of a control group when adding a new group or editing an existing one.



① [Name] text field

- You can display and specify the name of the control group.
- The default setting is blank (no string entered).
- You cannot specify the control group name exceeding the maximum number of characters (i.e., 24 characters).

② [Group ID] field

- The control group ID is displayed. The control group ID is automatically assigned by the system.

③ [Icon ID] field

- You can display and specify an icon in this field.
- You can input an icon ID or select an icon from the icon selection dialog box.
- The icon ID of a new control group is 103 (VRV indoor unit).
- When you press the [Select] button, a dialog box to select an icon appears.

④ [Operation Interval] text field

- You can display and specify the intervals of sequential startup.
- The input range is from 0 - 180 sec.
- The default setting is 2 sec.

⑤ [Stop Interval] text field

- You can display and specify the intervals of sequential stop.
- The input range is from 0 - 180 sec.
- The default setting is 0 sec.

⑥ [Hide] checkbox

- When a check is put in this checkbox, this control group will not be displayed in the "Control Group List" window of the monitoring board.
- In the default setting, a check is not put (the control group is displayed).

⑦ [Member] button

- When this button is pressed, a dialog box to edit management points belonging to this control group appears.

⑧ [OK] button

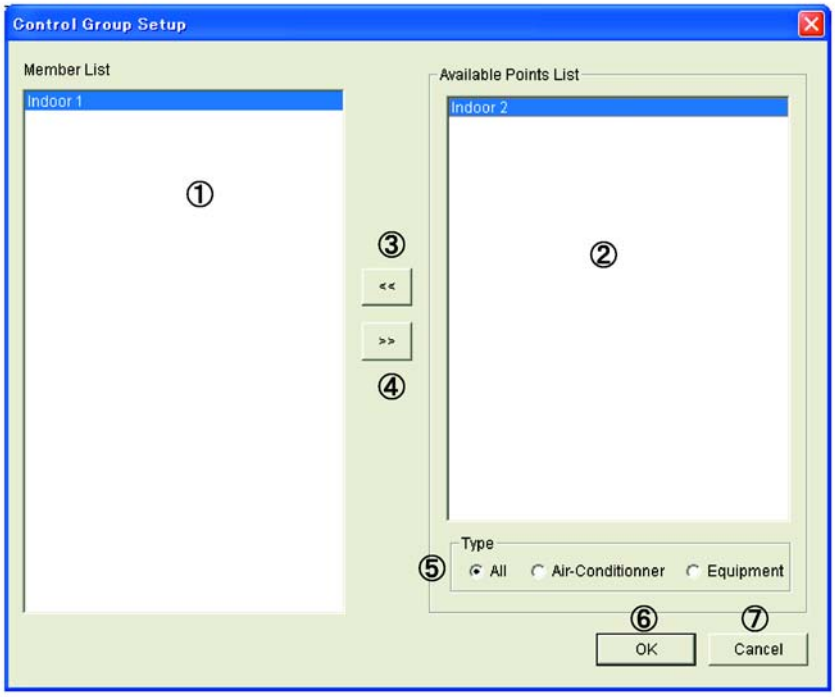
- The edited results are reflected to the system, and this window is closed.

⑨ [Cancel] button

- The edited results are discarded, and this window is closed.

Control Group Setup Dialog Box

You can edit the management points belonging to the control group.



① [Member List] list

- A list of the management points belonging to the control group is displayed.
- In the default setting, no member list is selected.

② [Available Points List] list

- A list of the management points which can be registered to the control group is displayed.
- In the default setting, no management point is selected.

③ [<<] button

- When you press this button, the management points selected in the [Available Points List] list are added to the end of the [Member List] list.
- When no management point is selected in the [Available Points List] list, this button is grayed out.

④ [>>] button

- When you press this button, the management points selected in the [Member List] list are deleted from the control group.
- When no management point is selected in the [Member List] list, this button is grayed out.

⑤ [Type] radio button

- When you select this button, the management points displayed in the [Available Points List] list are controlled by type. The control methods are shown below:
  All: All management points (excluding Ai, D III Ai, Pseudo Ai, Internal Pi, and outdoor units) are displayed.
  Air-Conditioner: Indoor units, HRV, chiller, and AHU
  Equipment: D III Di, D III Dio, Di, and Do.
- In the default setting, [All] is selected.

⑥ [OK] button

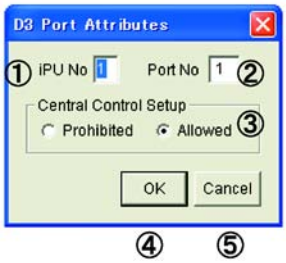
- The edited results are reflected to the system, and this window is closed.

⑦ [Cancel] button

- The edited results are discarded, and this window is closed.

3.1.5 DIII Port Setup Window

In this window, you can set the attributes of a D III port when adding a new port or editing an existing one.



① [iPU No.] text field

- You can display and specify the iPU number to which the D III port belongs.
- The available input range is from 1 to 4.
- The default setting is 1.

② [Port No.] text field

- You can display and specify the port number to which the D III port belongs.
- The available input range is from 1 to 4.
- The default setting is 1.

③ [Central Control Setup] radio button

- You can specify whether you allow or prohibit the lower central control setting
- The default setting is Allowed.

④ [OK] button

- The edited results are reflected to the system, and this window is closed.

⑤ [Cancel] button

- The edited results are discarded, and this window is closed.

3.1.6 CSV Input/Output Function

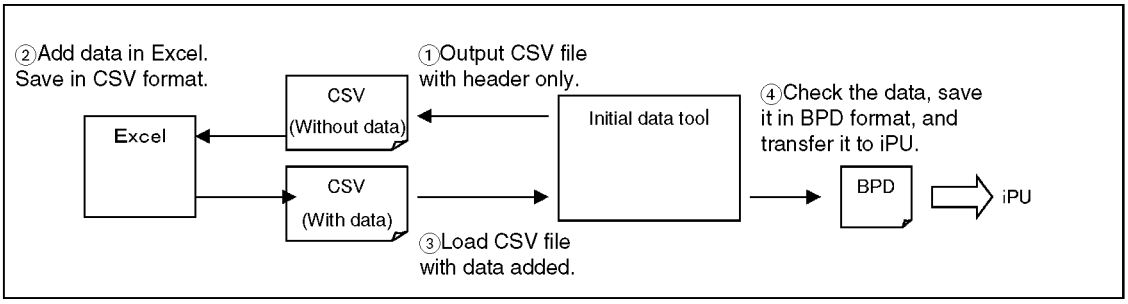
3.1.6.1 Overview

The initial data tool supports input and output of CSV files of management point data in order to reduce the man-hour of data creation. Also, a function to output a CSV file with a header only as a template is offered so that load upon initial setting can be reduced.

The expected operation methods are given below:

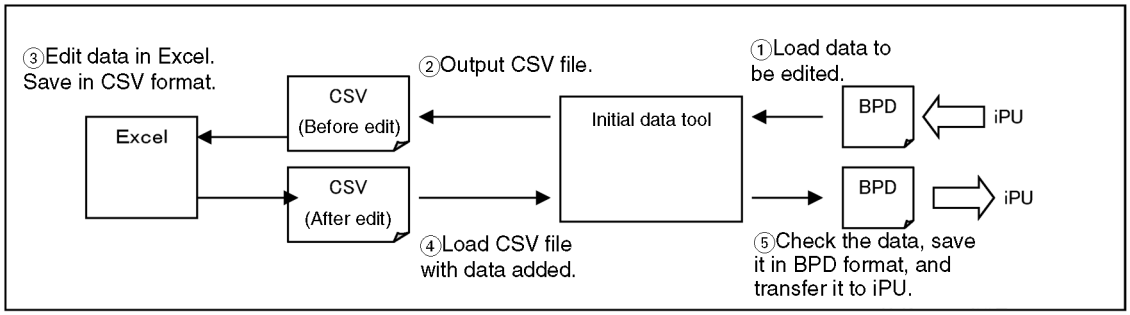
Upon initial setting

① The initial data tool outputs a CSV file which does not contain management point data and only has a header as a template file.
② Data is added to the template file in Excel, and the file is saved in the CSV format.
③ The initial data tool reads the CSV file to which the data is added.
④ The tool checks the data, outputs it in the BPD format, and transfers it to the iPU.



Upon editing

① The initial data tool loads the data to be edited (BPD file) from the HDD or iPU.
② All the items of the intelligent Manager are output in a CSV file.
③ Only the data to be changed in Excel are edited and saved in the CSV file.
④ The initial data tool loads the CSV file of which data has been edited.
⑤ The data is checked, saved in BPD format, and transferred to iPU.



3.1.6.2 CSV File Format

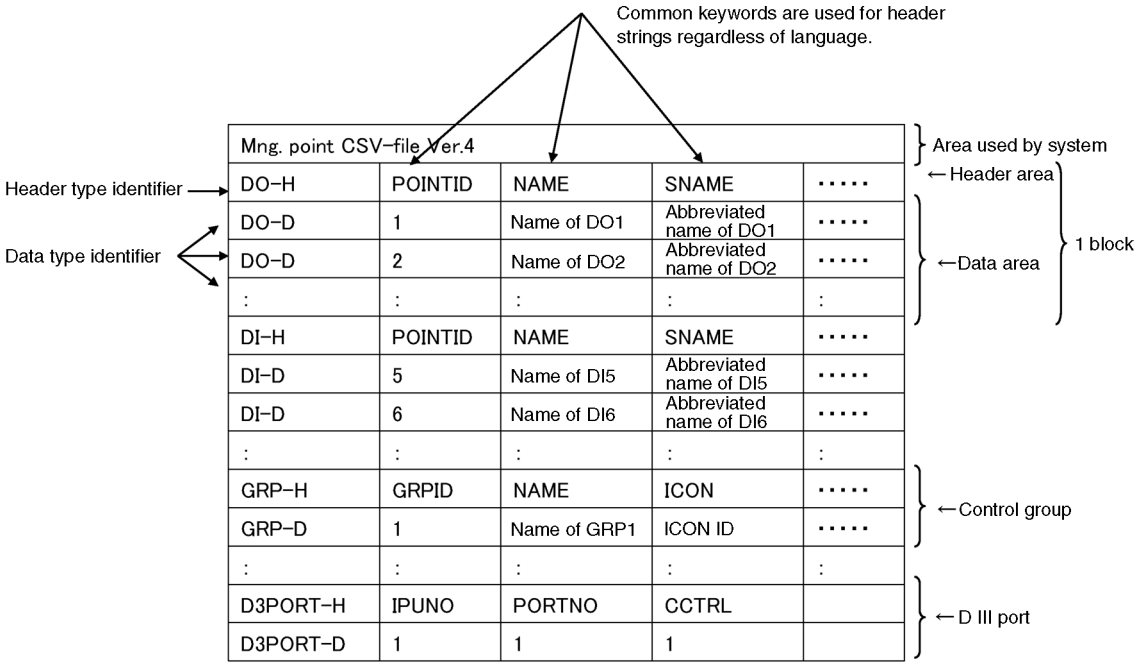
- The CSV file format which is supported by the initial data tool is described below:
  - The delimiter is "," (comma).
  - The decimal marker is "." (period).
  - The digit delimiter is not be used.
  - Strings with commas

- Since CSV files which are output from the initial data tool are to be output only in the local character code of the PCs at the site, do not use them on OS in other languages.
- The numeric marks (decimal point, delimiter, etc.) of Windows might be different, and there are cases where the initial data tool might not be able to read the data if it is edited in Excel as it is.

  e.g.) In the case of France, the decimal marker is "," (comma) and delimiter is ";" (semi-colon) in the default settings. In this case, you need to set the "Decimal marker" to "." (period) and "Delimiter" to "," (comma) in "Regional Options" of Windows to set the format supported by the initial data tool.

3.1.6.3 CSV Output Specifications

- All the items, control groups, and DIII port information of all the management points supported by the intelligent Manager are output.
- When the Celsius setting is selected in the initial data tool, values are output in Celsius.
- If you output a CSV file without data included as a template when you create new data, a CVS file only with headers of all the management point types, control groups, and DIII port is output.
- The data format of the CSV file is shown below. (For more details of the format of each data, see the Appendix B.)



Mng. point CSV–file Ver.4				
DO–H	POINTID	NAME	SNAME	·····
DO–D	1	Name of DO1	Abbreviated name of DO1	·····
DO–D	2	Name of DO2	Abbreviated name of DO2	·····
:	:	:	:	:
DI–H	POINTID	NAME	SNAME	·····
DI–D	5	Name of DI5	Abbreviated name of DI5	·····
DI–D	6	Name of DI6	Abbreviated name of DI6	·····
:	:	:	:	:
GRP–H	GRPID	NAME	ICON	·····
GRP–D	1	Name of GRP1	ICON ID	·····
:	:	:	:	:
D3PORT–H	IPUNO	PORTNO	CCTRL	
D3PORT–D	1	1	1	

- **Area used by system**
  This area contains the file version and control data for ID automatic assignment. The user must not to delete this area.
- **Header area and data area**
  The head area and data area are regarded as one block, and the data area is handled as the data in the row of the present header until the next header appears. Common keywords are used for the header items regardless of language.
  A unique string is used in a same type.

Header Type Identifier and Data Type Identifier

To identify the data type, identifiers are added to the top of the header area and data area respectively.

Management point type	Header type identifier	Data type identifier
Internal Do	DO-H	DO-D
Internal Di	DI-H	DI-D
Internal Pi	PI-H	PI-D
Ai	AI-H	AI-D
D3Dio	DIO-H	DIO-D
D3Di	D3DI-H	D3DI-D
Indoor unit	IN-H	IN-D
Outdoor unit	OUT-H	OUT-D
D3Ai	D3AI-H	D3AI-D
Ao	AO-H	AO-D
AHU	AHU-H	AHU-D
Chiller	CHIL-H	CHIL-D
HRV	HRV-H	HRV-D
Pseudo Ai	PAI-H	PAI-D
Control group	GRP-H	GRP-D
D3Port	D3PORT-H	D3PORT-D

3.1.6.4 CSV Input Specifications

- Input of all the items of all the management points supported by the intelligent Manager is supported.
- The merge function is not supported, and management point data is created in accordance with input data. (This is not applied when input data is incorrect.)
- This function is expected to be used when the system is newly installed to a site.
  (If this is used when management points are updated, trend data, etc. will be discarded.)
- The specifications of the data format (file header, management point header + management point data) are the same as the output format.

  Handling of blank
  - If the management point ID and group ID are blank, unique IDs are automatically assigned.
  - If the string data is blank, a string of which length is 0 is set.
  - If the numeric value data is blank, the default value is set.

  Input of management point ID and group ID
  - It is recommended, from the aspect of operation, that you should leave the IDs blank and let the system automatically assign them when you add a management point and a group.
  - When you add an air conditioner management point and a virtual Ai management point at the same time, make the initial data tool read the management point and virtual Ai management point as leaving "TARGET ID" blank, output a CSV file after the management point ID is assigned, set the assigned air conditioner management point ID to "TARGET ID" of the virtual Ai management point, and make the initial data tool read it again.

  Handling of temperature (Fahrenheit)
  - When the initial data tool reads CSV files, it considers numeric values regarding temperature as Celsius/Fahrenheit according to the Celsius/Fahrenheit setting in the initial data tool, and reads them accordingly.
    When it reads CSV files in which temperature values are saved in Fahrenheit, set Fahrenheit to the temperature setting of the initial data tool.

  Handling of prohibited characters
  - Since "," (comma) is regarded as a delimiter, if comma is included in string data, the number of rows becomes incorrect, resulting in a reading error.
  - When data is read, double quotations (") are not ignored.
    For instance, the string data 'ab"cd' is read as "abcd".

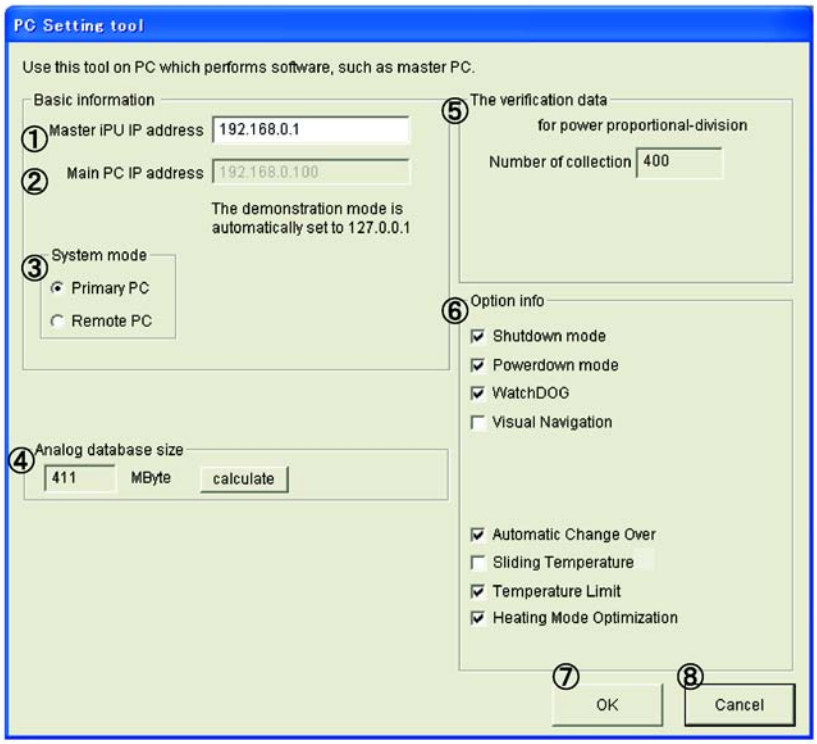
- The check items for input data and the operation in the case of an error are shown below:
  List of check items

Check items	Error display	Operation
File version is incorrect.	ON	Restore the previous management point data.
Length of sting is out of the specified range.	ON	Restore the previous management point data.
Not a numeric value.	ON	Restore the previous management point data.
Numeric value is out of the range.	ON	Restore the previous management point data.
Same ID (management point, control group) already exists.	ON	Restore the previous management point data.
Data type identifier is incorrect.	OFF	Skip the row and continue loading (regard it as a comment).

  Error display
  - When the file version is incorrect, "File format error". is displayed regardless of language.
    In other cases, no message is displayed, the column and row in which the error occurred are simply indicated, and incorrect data is displayed as it is.
    Display: (row number, column number) -> Contents of the cell
    e.g.) (10,5) -> aaaaaaaaaaaaaaaaaaaaaaaaa
    (10,6) -> 9999999999.99
    (11,2) -> 1

3.2 PC Setup Tool

The image of the main window of the monitoring board PC setup tool is shown below.



① [Master iPU IP address] edit box

- This is used to set the IP address of the Master iPU.
- The default setting is "192.168.0.1".
- When [Remote PC] is selected in the [System mode] selection area, you cannot change the IP address.

② [Main PC IP address] edit box

- This is used to set the IP address of the Master iPU.
- The default setting is "192.168.0.100".
- When [Primary PC] is selected in the [System mode] selection area, you cannot change the IP address.

③ [System mode] selection area

- This is used to set the operation mode of the monitoring board PC.
- If the PC you want to set is the main monitoring board PC, select the [Primary PC] radio button.
- If the PC you want to set is the sub monitoring board PC, select the [Remote PC] radio button.
- In the default setting, the [Primary PC] radio button is selected.

④ [Analog database size] setup area

- This is used to set the upper limit size of an analog management points (Ai, D III Ai, and Pseudo Ai) database file.
- The upper limit size is enabled when "Save to rotation DB on PC" is set upon creation of an analog management point.
- The upper limit size can be set only from the "Calculate Required Volume dialog box".
- When the [Calculate] button is pressed, the "Calculate Required Volume dialog box" is displayed.
- The default setting is "0".

⑤ [The verification data for power proportional-division] setup area

- This is used to make the save setting for data files for power proportion inspection.
- In the [Number of collection] text box, the number of days to collect data files for power proportion inspection is displayed.
- On the intelligent Manager, the number of collection is fixed to 400 days, and you cannot change the setting.
- Data files for power proportion inspection are stored in the "Pdv" folder under the monitoring board software execution path.
- In the "Pdv" folder, files as many as the number of days for collection are stored, and when the number of files reaches the number of days for collection, the files are overwritten from the oldest one.

⑥ [Option info] setup area

- This is used to set the options to be enabled on the monitoring board PC.
- The available options are listed below.

[Shutdown mode]	:	When this option is set, the monitoring board PC is shut down when the monitoring board software is terminated. If it is enabled, the [Shutdown] button is displayed when the monitoring board software is terminated.
[Powerdown mode]	:	When this option is enabled while [Shutdown mode] is set, the power is turned off at the time when the monitoring board PC is shut down upon termination of the monitoring board software. (The BIOS of the monitoring board PC must support the power-off function.)
[WatchDOG]	:	Select this option when you want to enable the Watchdog function.
[Visual Navigation]	:	Select this option when you want to use VisualNavigation.
[Power Proportional Distribution]	:	Select this option when you want to enable the power proportional distribution function.
[Power Limit control]	:	Select this option when you want to enable the target power control function.
[Eco mode]	:	Select this option when you want to enable the energy saving control function.
[Automatic Change Over]	:	Select this option when you want to enable the automatic cooling/heating changeover function.
[Sliding Temperature]	:	Select this option when you want to enable the Sliding Temperature function.
[Temperature Limit]	:	Select this option when you want to enable the upper/lower limit room temperature guarantee function.
[Heating Mode Optimization]	:	Select this option when you want to enable the heating optimization control function.

- In the default setting, no check is put in the check box.

⑦ **[OK] button**

- The settings are saved, and the monitoring board PC tool is terminated.
- When the "System mode" is "Primary PC", if "Master iPU IP address" is incorrect, an error dialog box appears.
- When the "System mode" is "Remote PC", if "Main iPU IP address" is incorrect, an error dialog box appears.



<Error dialog box>

⑧ **[Cancel] button**

- The monitoring board PC tool is terminated without saving the settings.
- The dialog box A is displayed before the tool is terminated.
- When the [Cancel] button is pressed in the dialog box A, the dialog box A is closed, and the monitoring board PC tool is not terminated.
- When the [OK] button is pressed in the dialog box A, the dialog box A is closed, and the dialog box B is displayed.
- When the [Cancel] button is pressed in the dialog box B, the dialog box B is closed, and the monitoring board PC tool is not terminated.
- When the [OK] button is pressed in the dialog box B, the dialog box B is closed, and the monitoring board PC tool is terminated.



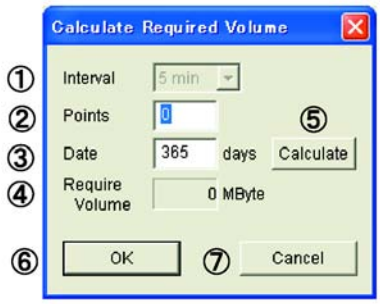
<Dialog box A>



<Dialog box B>

[Calculate Required Volume] dialog box

The image of the Calculate Required Volume dialog box is shown below.



① [Interval] text box

- The interval to save analog data are displayed.
- The interval is fixed to 5 minutes on the intelligent Manager. You cannot change the setting.

② [Points] edit box

- This is used to set the number of management points to be saved.
- In the [Points] edit box, you can set only 1-byte numerals from 0 to 1000.
- If nothing is input in the [Points] edit box, an error dialog box A is displayed.
- If any input other than 1-byte numerals is made in the [Points] edit box, an error dialog box A is displayed.
- If a value entered in the [Points] edit box is out of the designated range, an error dialog box B is displayed.
- The default setting is "0".
- The setting value is checked at the time when the [Calculate] button is pressed.



<Error dialog box A>



<Error dialog box B>

③ [Date] edit box

- This is used to set the number of days for which data is saved.
- In the [Date] edit box, you can set only 1-byte numerals from 0 to 5000.

- If nothing is input in the [Date] edit box, an error dialog box A is displayed.
- If any input other than 1-byte numerals is made in the [Date] edit box, an error dialog box A is displayed.
- If a value entered in the [Date] edit box is out of the designated range, an error dialog box B is displayed.
- The default setting is "365".
- The setting value is checked at the time when the [Calculate] button is pressed.



<Error dialog box A>



<Error dialog box B>

④ **[Require Volume] text box**

- The file size required to save analog data is displayed.
- The display is updated at the time when the [Calculate] button is pressed, and you cannot input the value directly.
- In the default setting, "0" is displayed.

⑤ **[Calculate] button**

- [Require Volume] is calculated based on the specified [Points] and [Date].

- The result of the formula given below is rounded up at the first decimal place and set as the [Require Volume] value.
  In this calculation, the header size is 276 bytes, 1-data size is 16 bytes, and the number of saving times per day is 288.

$$\frac{\text{<Header size> + (<1-data size> × <Days of saving> × <Number of management points to be saved> × <Number of saving times>)}}{1024 \times 1024}$$

⑥ **[OK] button**

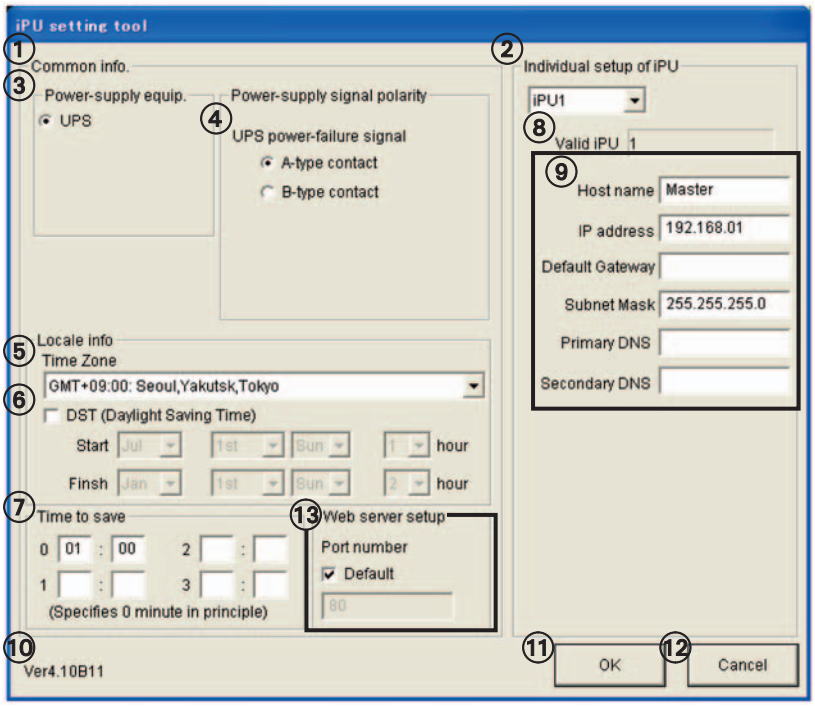
- The calculated [Require Volume] value is reflected to [Analog database size] in the main window, and the Calculate Required Volume dialog box is closed.

⑦ **[Cancel] button**

- The Calculate Required Volume dialog box is closed without performing any operation.

3.3 iPU Setting Tool

[iPU Setting Tool] dialog box



① **Common setting area**
- This is used to set the common items for all iPUs.

② **iPU individual setting area**
- This is used to make the setting of a selected iPU.
- In the default setting, iPU #1 is selected.

③ **[Power-supply equip.] selection area**
- This is used to select a power failure signal.
- On the intelligent Manager, UPS only can be selected.

④ **[UPS power-failure signal] selection area**
- This is used to select the polarity (A-type contact or B-type contact) of the power failure signal.
- In the default setting, A-type contact is selected.

⑤ **[Time-zone] selection area**
- This is used to select the time zone.
- In the default setting, PC's time zone is selected.
- "GMT + 13:00" is not supported.

⑥ **DST setting area**
- This is used to set the daylight saving time.
- When a check is put in the checkbox, the daylight saving time setting is enabled. When a check is removed, the setting is disabled.
- In the default setting, the daylight saving time setting is enabled.

⑦ **[Time to save] setting area**
- This is used to set the time to save daily report data in the iPU. (Up to 4 times a day can be set.)
- The input format is "hour: minute", and if these fields are blank, no setting is made.
- In the default setting, data is saved once a day at 1:00.

⑧ iPU list

- The list of the iPUs which can be set is displayed. (The host names of the iPUs are divided by comma.)
- If the host name of iPU is entered, that iPU is considered as valid and displayed. If the host name is blank, the iPU is considered as invalid and not displayed.

⑨ Network setting area

- This is used to set the following network items:

Host name	:	Host name (default value: none) (default value: none, Max. number of string: 64 characters)
IP address	:	IP address (default value: 192.168.0.1)
Default Gateway	:	Gateway (default value: none)
Subnet Mask	:	Subnet mask (default value: 255.255.255.0)
Primary DNS	:	Primary DNS (default value: none)
Secondary DNS	:	Secondary DNS (default value: none)

* If you use the E-mail function (optional), set up the Default Gateway, Primary DNS, and Secondary DNS as well as the IP address, Subnet Mask.

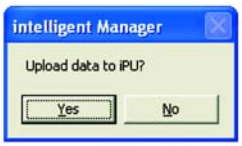
⑩ Version display area

- The version number of the iPU setting tool is displayed.

⑪ [OK] button

- In the case of the Pre-engineering mode, the setting data is saved, and the setting tool is terminated.
- In the case of the On Site Install mode, the setting data is saved, and then a **transmission confirmation dialog** box to confirm the transmission of setting data is displayed.
- When confirmation is made in the transmission confirmation dialog box, the settings are transmitted to the iPU which is specified in the **[iPU setting tool] dialog** box, and then the tool is terminated.
- When the transmission confirmation dialog box is canceled, the tool is terminated without transmitting the settings.
- When this button is pressed, if any of the following errors is found in the specified settings, a **setting error dialog** box is displayed, and the setting dialog box is displayed again.

Error condition	Message in the setting error dialog box
Invalid time (other than 00:00 to 23:59) is specified as the regular save time.	Time to save is invalid
The host name of the main iPU is not specified.	#268:Name of the Master iPU is empty
The IP address of the main iPU is not specified.	#269:IP address of the Master iPU is empty
Invalid characters (other than alphabets, numbers, minus, and underline) are entered in the host name.	iPU[1-4] #270:Host name is invalid
The same host name as other iPU is entered.	iPU[1-4] #271:Host name overlaps
Invalid address (other than 0.0.0.0 to 255.255.255.255) is entered in the IP address.	iPU[1-4] #049:IP address format is not correct
The same IP address as other iPU is entered.	iPU[1-4] #047:IP address already exists
Invalid address (other than 0.0.0.0 to 255.255.255.255, blank is acceptable) is entered in the subnet mask.	iPU[1-4] #077:Subnet mask setting value is invalid
Invalid address (other than 0.0.0.0 to 255.255.255.255, blank is acceptable) is entered in the primary DNS.	iPU[1-4] Invalid primary DNS
Invalid address (other than 0.0.0.0 to 255.255.255.255, blank is acceptable) is entered in the secondary DNS.	iPU[1-4] Invalid secondary DNS
Invalid value (see Table 1 in the next page) is entered in the port number of the Web server setting.	Failed in the setting of the port number Please set it to other numbers



<Transmission confirmation dialog box>



<Setting error dialog box>

⑫ [Cancel] button

- The setting is discarded, and the setting tool is terminated.

⑬ Web server setting

- This is used to set the port number to be used by the Web server.
- When a check is put in [Default], the default value (80) is set to the port number.
- The port number is displayed in the edit box.
- When a check is put in [Default], the edit box is grayed out.
- You can enter 1-byte numerals up to 5 digits in the edit box.
- Whether or not a value is out of the range is checked at the time when the [OK] button is pressed.

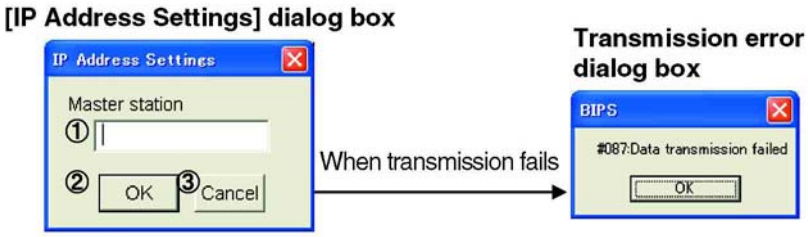
Settable values as port numbers to be used by the Web server

- The settable values in the Web server setting are shown in the table on the right.

Settable values in the Web server setting

Settable values
80
1024~8081
8083~11999
14000~16999
18000~29999
31000~59999
60001~65535

[IP Address Settings] dialog box



① **Address input area**
- The address of iPU is entered.
- In the default setting, a value entered in the [iPU settings tool] dialog box is set as an input value.
- In the default setting, if no value is entered in the [iPU settings tool] dialog box, "192.168.0.1" is used as an input value.

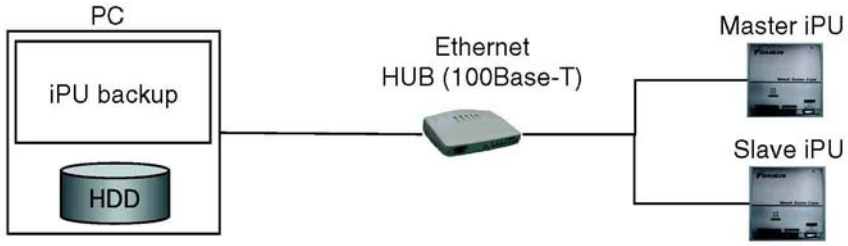
② **[OK] button**
- The setting data is transmitted to the iPU with the specified address.
- When transmission fails, a transmission error dialog box appears.

③ **[Cancel] button**
- Transmission of the setting data is canceled.

3.4 Backup/Restore Tool

3.4.1 Function Overview

- The iPU backup (iPUBackup.exe) is a tool to back up and restore the data in the FLASH and BBRAM of the iPU.
- You cannot activate multiple iPU backups at the same time.
- When you restore the data, you must terminate the monitoring board software.
- You must not terminate the iPU backup during backup or restore.
- The iPU backup is expected to be used in the environment shown below.

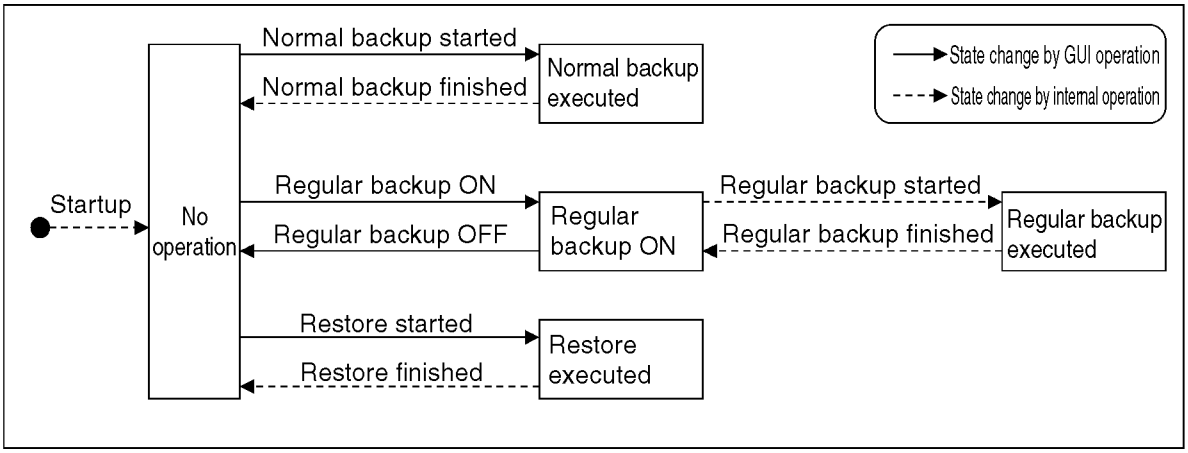


[Restrictions on Use of iPU Backup]

- The master iPU and slave iPU must be referenced through the network from the PC on which the iPU backup is used.
- If there is a firewall between the PC on which the iPU backup is used and the master iPU and slave iPU, the following ports must be available.
  - 20000
  - 20002

[Change in Stage of iPU Backup]

- The iPU backup has five different states, and the state is changed as shown below. (Regarding the periodical backup and normal backup, see **3.4.1.1 Backup.**)



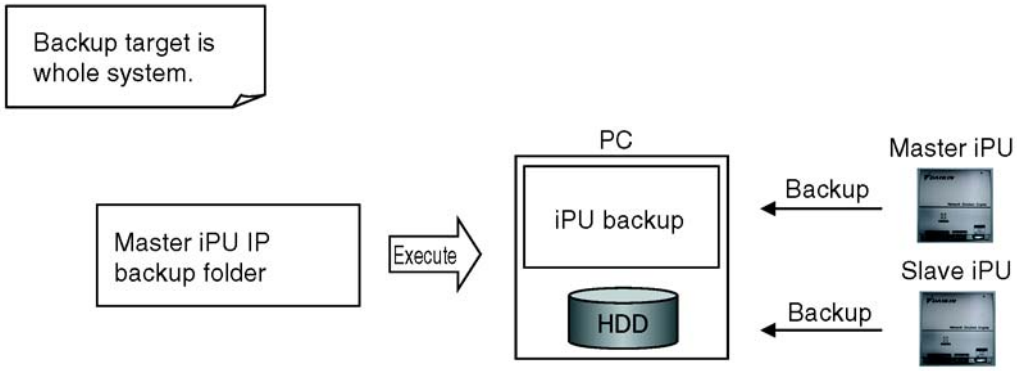
- You cannot conduct the following operations in each state of the iPU backup.

Operation / State	Start normal backup	Set periodical backup	Start restore
While normal backup is executed	Not available (multiple activation)	Not available	Not available
While periodical backup is executed (including while periodical backup is ON)	Not available	Not available (multiple activation)	Not available
While restore is executed	Not available	Not available	Not available (multiple activation)

3.4.1.1 Backup

Target of Backup

- When you specify the master iPU, the iPU backup backs up the data of the slave iPU as well.
- You cannot back up only the master iPU or slave iPU.

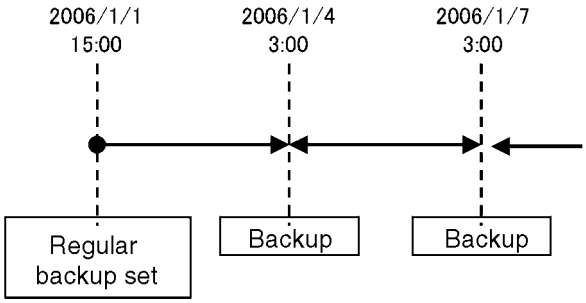


* Backup folder: Folder to store backed up data.

Normal backup and periodical backup

- The iPU backup supports the two backup methods:
  - Normal backup: Backup is executed at the timing when the user executes the operation.
  - Regular backup: Backup is executed at regular intervals specified in advance.
- When you conduct the periodical backup, the iPU backup needs to be always activated.
- The periodical backup is conducted at the specified time of the backup date. (It depends on the state of the PC, and the backup time might be shifted.)
- You cannot execute the normal backup while the periodical backup is executed.

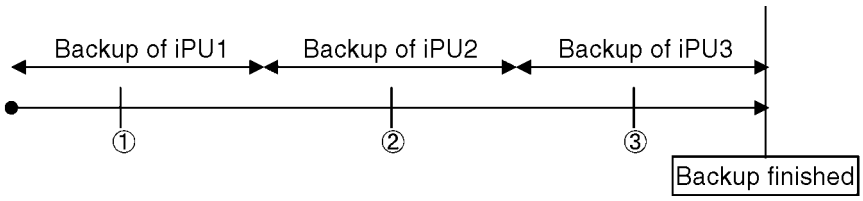
Example: When the backup interval is set to every 3 days, and the periodical backup time is set to 3 a.m.



When backup fails

- When the network is disconnected while backup is executed, the system considers that an error occurs and stops the backup.
- When an error occurs while the backup is executed, and the backup fails, the backup operation will not be resumed.

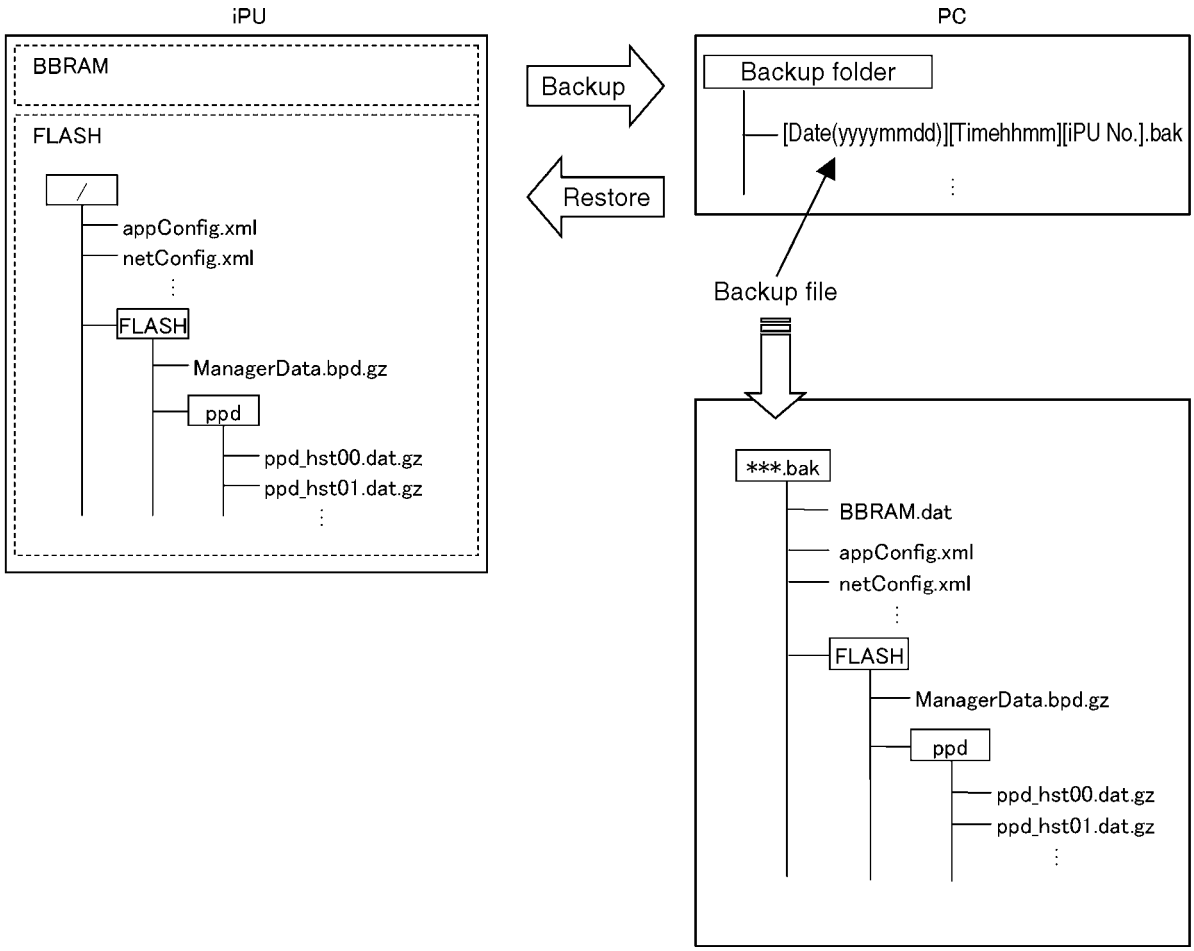
Example: When the system consists of 3 iPU units



Timing of error occurrence	iPU1	iPU2	iPU3
①	Backup is not done	Backup is not done	Backup is not done
②	Backup is done	Backup is not done	Backup is not done
③	Backup is done	Backup is done	Backup is not done

Backup files

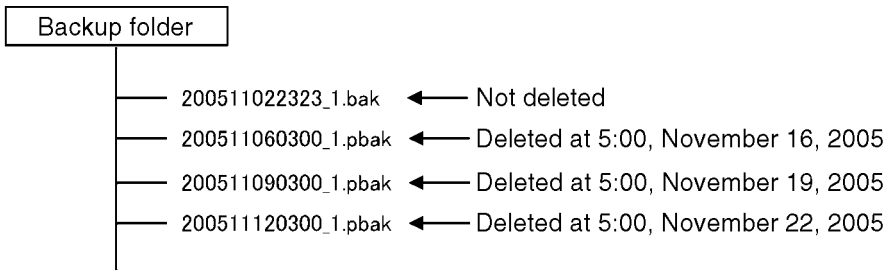
- Backed up files are integrated into one compressed file per iPU unit.
  This file is called a backup file.
- The name of a backup file is [Date (yyyymmdd)] [Time (hhmm)]_[iPU No.].bak.
  (The date and time are taken from the internal clock of the PC.)
  e.g.) The name of a backup file of the iPU 1, which is backed up on 11:23 (p.m.) of Nov. 2, 2005 will be 200511022323_1.bak.
- The extension of backup files created upon periodical backup will be "pbak".
- The backup files that the iPU backup can use are only those created by the iPU backup, and the operation is not guaranteed if the name or contents of backup files are modified manually.
- The data in BBRAM is saved in "BBRAM.dat".



Period to keep backup files

- You can set the period to keep backup files created by the periodical backup on the iPU backup.
- Backup files of which storage period is expired are deleted when the periodical backup goes successful.
- Backup files created by the normal backup will not be deleted even if their storage period is expired.
- Backup files which are not stored in the backup folder will not be deleted even if their storage period is expired.
- When "No Limit" is set to the storage period, backup files will not be deleted.

Example: When the storage period is set to 10 days, and the periodical backup time to 5:00



Execution results of periodical backup

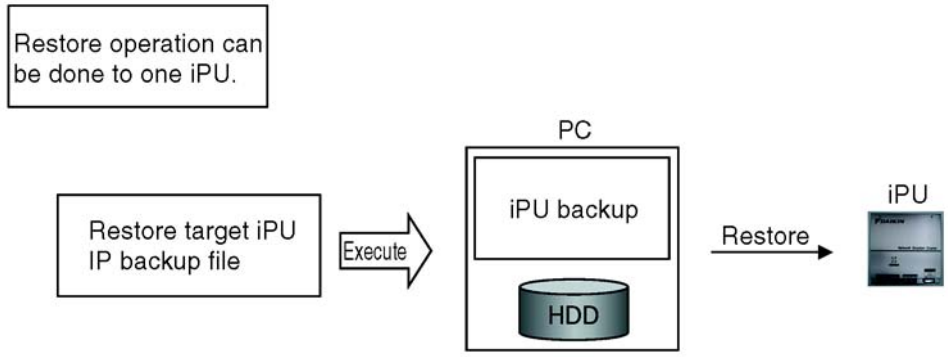
- Execution results of the periodical backup are added to "Backup.log" in the backup folder.
- If there is no "Backup.log" file, it is newly created.
- The format of "Backup.log" is shown below.

[Date (yyyy/mm/dd)] [Time (hh/mm)] periodical backup succeeded …When succeeded
[Date (yyyy/mm/dd)] [Time (hh/mm)] periodical backup failed …When failed

3.4.1.2 Restore

Target of Restore

- The iPU backup restores data to only one iPU which has the specified IP.
- When you want to restore data to multiple iPUs, you need to repeat the restore operation.
- The iPU backup restores the data in a specified backup file to the iPU.
  (You cannot use other files except backup files.)
- **When you restore data, all the data currently stored in the FLASH and BBRAM of the iPU are overwritten.**



State of iPU during the restore operation

- During the restore operation, the control is stopped.
- After the restore operation is finished, the iPU is restarted.

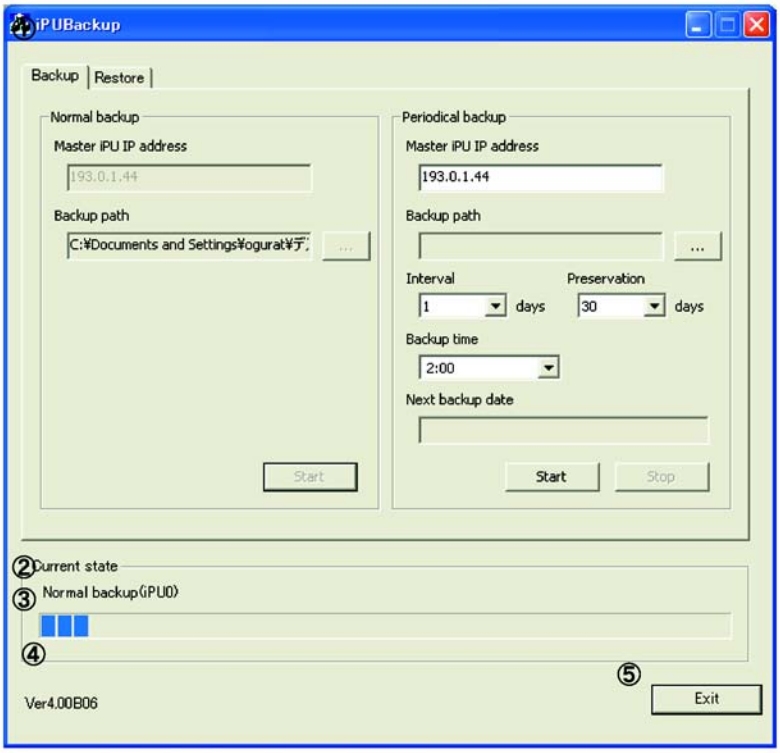
When restore fails

- When the network is disconnected while restore is executed, the system considers that an error occurs and stops the restore operation.

3.4.2 GUI Specifications

3.4.2.1 Main Window

- The main window of the iPU backup is shown below.



① [Backup] / [Restore] tab

- In the [Backup] tab, you can set and execute the backup operation.
- In the [Restore] tab, you can set and execute the restore operation.
- When the iPU is activated, the [Backup] tab is selected.

② Current state

- The current state is displayed.
- Nothing is displayed when the backup or restore operation is not executed.
- Nothing is displayed when the activation operation is executed.
- The following messages are displayed while the backup or restore operation is not executed.
  - During normal backup : "Normal backup ([iPU No.])"
  - During periodical backup : "Periodical backup ([iPU No.])"
  - During switching of maintenance mode : "Reboot in maintenance mode"
  - During restore operation : "Restore"

③ Progress bar

- The progress is indicated while the backup or restore operation is executed.
- The progress is indicated until the backup or restore operation is finished while the backup or restore operation is executed.

④ Version information

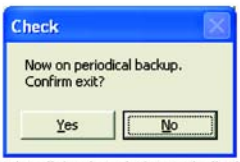
- The version number of the iPU backup is displayed.

⑤ **[Exit] button**

- When you press this button, the iPU backup is terminated.
- When you press the [Exit] button while the backup or restore operation is executed, a confirmation dialog box appears.
- When you press the [Cancel] button in the confirmation dialog box, the iPU backup is not terminated.



<Confirmation dialog box during normal backup>



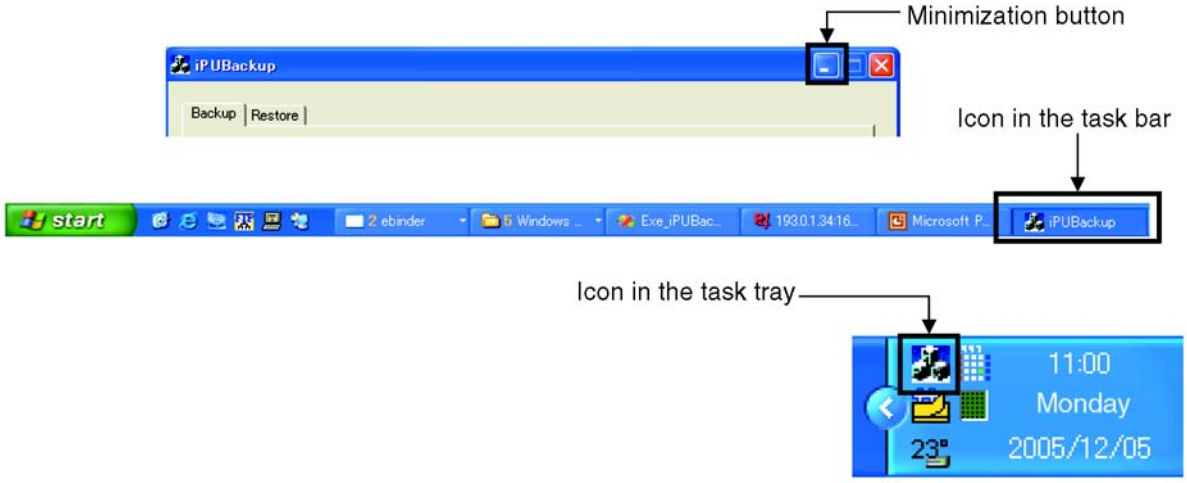
<Confirmation dialog box during periodical backup>



<Confirmation dialog box during restore operation>

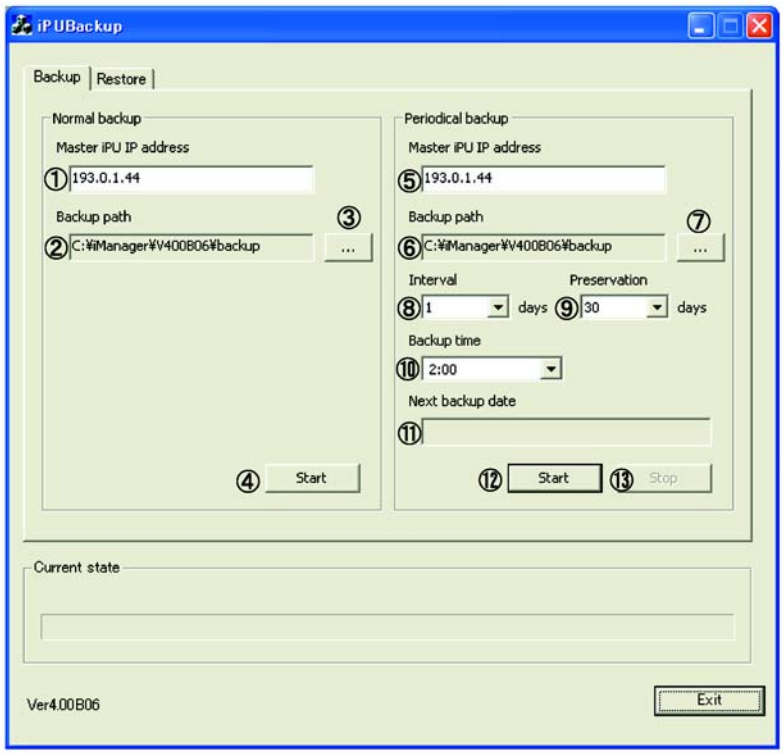
Minimization button

- When you press the minimization button of the backup/restore tool, the iPU backup is not displayed in the task bar, but in the task tray.
- To take it out from the task tray, double-click the icon in the task tray.



3.4.2.2 [Backup] tab

- In the [Backup] tab, you can set and execute the backup.



① [Master iPU IP address] edit box

- Enter the IP address of the master iPU for normal backup.
- In the default setting, the IP address of the master iPU specified in the "iPU setting tool" is displayed.
- When any string other than "xxx.xxx.xxx.xxx" (xxx is 1-byte numerals from 0 to 255) is entered, it results in an error.
- When the string is "255.255.255.255", it results in an error.
- Whether or not the entered string is correct is checked when the [Start] button is pressed.
- During the normal backup, this box is grayed out, and you cannot edit it.

② [Backup path] text box

- The backup folder for normal backup is displayed.
- In the default setting, no information is displayed.
- You cannot directly enter strings in the [Backup path] text box.
- When no check is put in the text box, it results in an error.
- Whether or not there is an error is checked when the [Start] button is pressed.

③ […] button

- When you press this button, the "Browse for Folder" dialog box to select a backup folder for normal backup appears.
- Select the folder in the Browse for Folder dialog box and press the [OK] button to close the dialog box. Then, the selected folder is set in the [Backup path] text box.
- When you press the [Cancel] button in the Browse for Folder dialog box, it is closed, and the setting in the [Backup path] text box remains unchanged.
- During the normal backup, this box is grayed out, and you cannot select it.



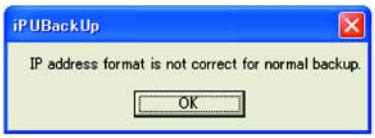
<"Browse for Folder" dialog box>

④ **[Start] button**

- When you press this button, the normal backup is started.
- Before the normal backup is started, a confirmation dialog box appears.
- If the values in the [Master iPU IP address] edit box and [Backup path] text box are incorrect, an error dialog box is displayed, and the backup is not started.
- If the value in the [Master iPU IP address] edit box is incorrect, an error dialog box A is displayed.
- If the value in the [Backup path] text box is incorrect, an error dialog box B is displayed.
- While the normal backup, periodical backup, or restore is executed, or while the periodical backup is set, the [Start] button is grayed out, and you cannot perform the normal backup.
- When the normal backup fails, an error dialog box C is displayed.



<Confirmation dialog box>



<Error dialog box A>



<Error dialog box B>



<Error dialog box C>

⑤ **[Master iPU IP address] edit box**

- Enter the IP address of the master iPU for periodical backup.
- In the default setting, the IP address of the master iPU specified in the "iPU setting tool".
- When any string other than "xxx.xxx.xxx.xxx" (xxx is 1-byte numerals from 0 to 255) is entered, it results in an error.
- When the string is "255.255.255.255", it results in an error.
- Whether or not the entered string is correct is checked when the [Start] button is pressed.
- While the periodical backup is set, or while the periodical backup is executed, this box is grayed out, and you cannot edit it.

⑥ **[Backup path] text box**

- The backup folder for periodical backup is displayed.
- In the default setting, no information is displayed.
- You cannot directly enter strings in the [Backup path] text box.
- If nothing is entered in the text box, it results in an error.
- Whether or not there is an error is checked when the [Start] button is pressed.

⑦ **[…] button**

- When you press this button, the "Browse for Folder" dialog box to select a backup folder for periodical backup appears.
- Select the folder in the Browse for Folder dialog box and press the [OK] button to close the dialog box. Then, the selected folder is set in the [Backup path] text box.
- When you press the [Cancel] button in the Browse for Folder dialog box, it is closed, and the setting in the [Backup path] text box remains unchanged.
- While the periodical backup is set, or while the periodical backup is executed, this box is grayed out, and you cannot select it.



<"Browse for Folder" dialog box>

⑧ **[Interval] combo box**

- This is used to specify the interval (the number of days) to perform the periodical backup.
- In the [Interval] combo box, you can select 1 to 50 (approx. 1.5 months).
- In the default setting, 1 is selected.
- While the periodical backup is set, or while the periodical backup is executed, this box is grayed out, and you cannot select it.

⑨ **[Preservation] combo box**

- This is used to specify the storage period of the periodical backup files.
- In the [Preservation] combo box, you can select 1 to 400 (approx. 13 months) or "No Limit".
- In the default setting, 30 is selected.
- While the periodical backup is set, or while the periodical backup is executed, this box is grayed out, and you cannot change it.

⑩ **[Backup time] combo box**

- This is used to specify the time to perform the periodical backup.
- In the [Backup time] combo box, you can select 00:00 to 23:00 (in increments of 1 hour).
- In the default setting, 02:00 is selected (1 hour after the default regular save time).
- While the periodical backup is set, or while the periodical backup is executed, this box is grayed out, and you cannot change it.

⑪ **[Next backup date] text box**

- The date when next periodical backup is executed is displayed.
- In the default setting, no information is displayed.
- The [Next backup date] text box is updated when the [Start] button is pressed or when the periodical backup is started.
- When you press the [Stop] button, the setting in the [Next backup date] text box is cleared.

⑫ **[Start] button**

- When you press this button, the periodical backup is started.
- While the periodical backup is set, or while the periodical backup or restore operation is executed, this box is grayed out, and you cannot select it.
- If the values in the [Master iPU IP address] edit box and [Backup path] text box are incorrect, an error dialog box is displayed, and the backup is not started.
- If the value in the [Master iPU IP address] edit box is incorrect, an error dialog box A is displayed.
- If the value in the [Backup path] text box is incorrect, an error dialog box B is displayed.



<Error dialog box A>



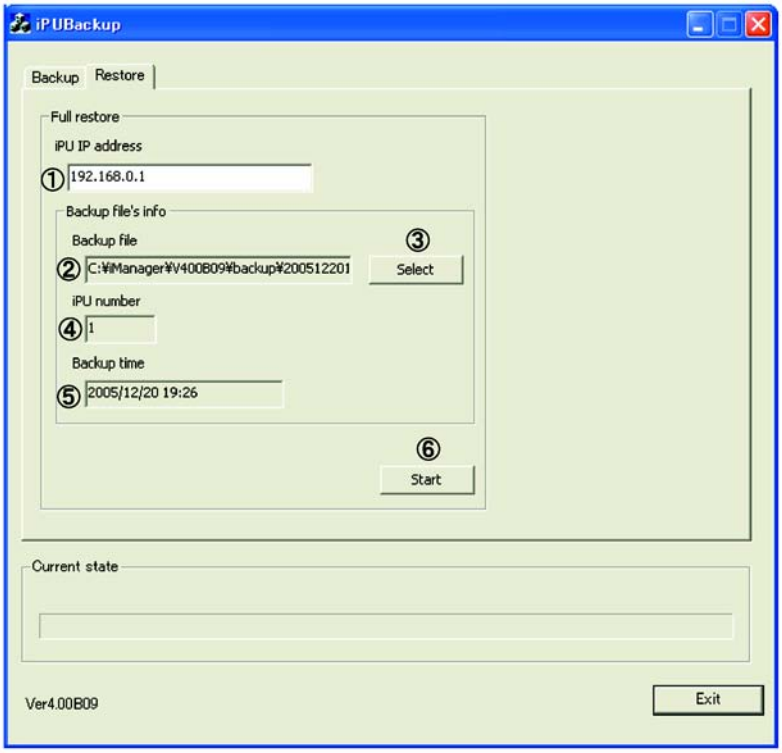
<Error dialog box B>

⑬ **[Stop] button**

- When you stop this button, the periodical backup is turned off.
- You can select this button only while the periodical backup is set.
- While the periodical backup is executed, the [Stop] button is grayed out, and you cannot select it.

3.4.2.3 [Restore] Tab

In the [Restore] tab, you can set and execute the restore operation.



① [Master iPU IP address] edit box

- Enter the IP address of the master iPU for restore.
- In the default setting, no information is entered.
- When any string other than "xxx.xxx.xxx.xxx" (xxx is 1-byte numerals from 0 to 255) is entered, it results in an error.
- When the string is "255.255.255.255", it results in an error.
- Whether or not the entered string is correct is checked when the [Start] button is pressed.
- During the restore operation, this box is grayed out, and you cannot edit it.

② [Backup file] text box

- The backup folder to be restored is displayed.
- In the default setting, no information is displayed.
- You cannot directly enter strings in the [Backup file] text box.
- If nothing is entered in this text box, it results in an error.
- Whether or not there is an error is checked when the [Start] button is pressed.

③ [Select] button

- When you press this button, the "Browse for Folder" dialog box to select a backup file appears.
- While the restore operation is executed, this box is grayed out, and you cannot select it.

④ [iPU number] text box

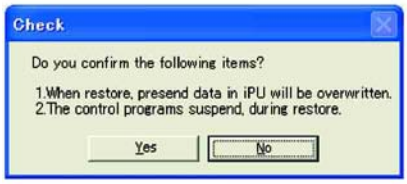
- The iPU number of the file displayed in [Backup file] is displayed.
- In the default setting, no information is displayed.
- When the setting in the [Backup file] is changed, this setting is also changed.
- You cannot directly enter a string in the [iPU number] text box.

⑤ [Backup time] text box

- The date and time when the file displayed in [Backup file] is backed up are displayed.
- In the default setting, no information is displayed.
- When the setting in the [Backup file] is changed, this setting is also changed.
- You cannot directly enter a string in the [Backup time] text box.

⑥ [Start] button

- When you press this button, the restore operation is started.
- Before the restore operation is executed, a confirmation dialog box appears.
- If the values in the [iPU IP address] edit box and [Backup file] text box are incorrect, an error dialog box is displayed, and the restore operation is not started.
- If the value in the [iPU IP address] edit box is incorrect, an error dialog box A is displayed.
- If the value in the [Backup file] text box is incorrect, or when no set file exists, an error dialog box B is displayed.
- While the normal backup, periodical backup, or restore is executed, or while the periodical backup is set, the [Start] button is grayed out, and you cannot perform the restore operation.
- When the restore operation fails, an error dialog box C is displayed.



<Confirmation dialog box>



<Error dialog box A>

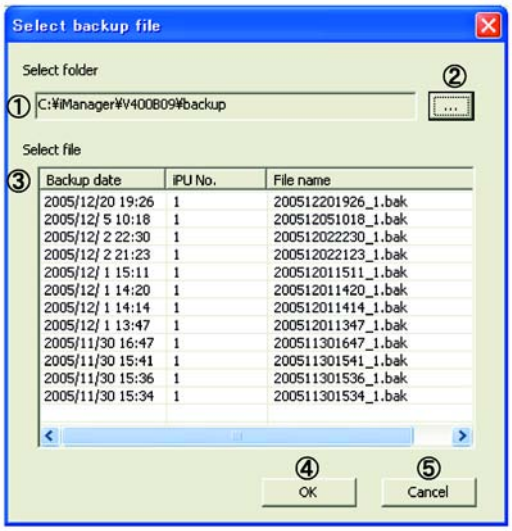


<Error dialog box B>



<Error dialog box C>

[Select backup file] dialog box



① Folder Select text box

- The folder which contains backup files is displayed.
- In the default setting, no information is displayed.
- You cannot directly enter strings in the Folder Select text box.
- Whether or not there is an error is checked when the [OK] button is pressed.

② […] button

- When you press this button, the "Browse for Folder" dialog box appears.
- Select the folder in the Browse for Folder dialog box and press the [OK] button to close the dialog box. Then, the selected folder is set in the Folder Select text box.
- When you press the [Cancel] button in the Browse for Folder dialog box, it is closed, and the setting in the Folder Select text box remains unchanged.



<"Browse for Folder" dialog box>

③ Folder Select List

- A list of backup files in the folder selected in the Folder Select text box is displayed.
- In the default setting, no information is displayed.
- In the Folder Select List, the following information is displayed.
  - Backup date: Date and time when the file is backed up.
  - iPU number: iPU number upon backup.
  - File name: Backup file name
- The File Select List is updated at the timing when the setting of the Folder Select text box is updated.
- The items are not selected when the initial state and the file select list are updated.
- Backup files with incorrect names are not displayed in the File Select List.

④ **[OK] button**

- The selected file is enabled, and the File Select dialog box is closed.
- If no item is selected in the File Select List, an error dialog box is displayed.



<Error dialog box>

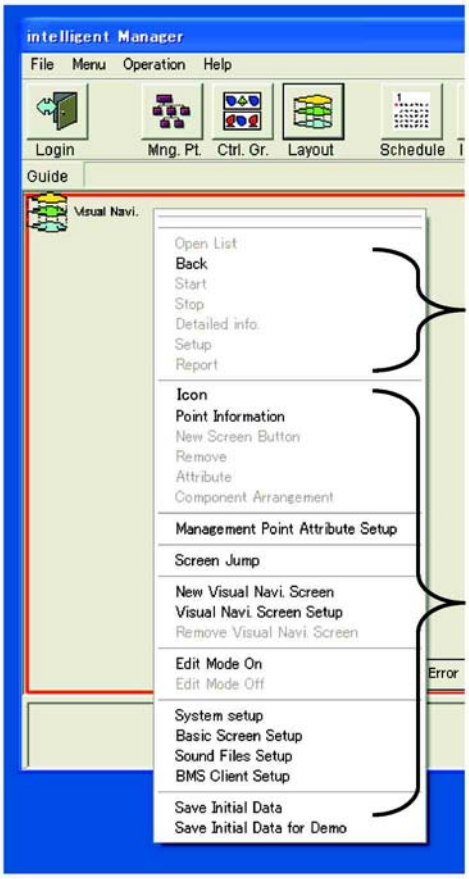
⑤ **[Cancel] button**

- The selected file is disabled, and the File Select dialog box is closed.

3.5 SE Function of Monitoring Board Software

3.5.1 Function Overview

You can activate the SE function from the SE mode menu.
The SE mode menu is displayed by clicking the right button of the mouse in the contents display area after logging in with the Service account.



① **[Icon]**
② **[Point Information]**
③ **[New Screen Button]**
④ **[Remove]**
⑤ **[Attribute]**
⑥ **[Component Arrangement]**

- Menu for VisualNavigation screen only. For more information, see **3.5.2 VisualNavigation Window Creation Support Tool** (page 217).

⑦ **[Management Point Attribute Setup]**

- A dialog box to set the display specifications for management points is displayed. For more information, see **3.5.3 Management Point Data Setting Function** (page 228).

⑧ **[Screen Jump]**

- A dialog box to switch screens is displayed. For more information, see **3.5.4 Screen Switching Function** (page 233).

⑨ **[New Visual Navi. Screen]**
⑩ **[Visual Navi. Screen Setup]**
⑪ **[Remove Visual Navi Screen]**
⑫ **[Edit Mode On]**
⑬ **[Edit Mode Off]**

- Menu for VisualNavigation screen.
  For more information, see **3.5.2 VisualNavigation Window Creation Support Tool** (page 217).

⑭ **[System setup]**

- A dialog box to set Watchdog and target power control is displayed.
  For more information, see **3.5.5 System Setup Function** (page 234).

⑮ **[Basic Screen Setup]**

- A dialog box to set the screen size and icon color of the monitoring board is displayed.
  For more information, see **3.5.6 Monitoring Screen Setup Function** (page 235).

⑯ **[Sound Files Setup]**

- A dialog box to set sound to be used as buzzer is displayed.
  For more information, see **3.5.7 Sound Files Setup Function** (page 236).

⑰ **[BMS Client Setup]**

- A dialog box to make the setting to activate applications specific to certain users from the monitoring. board is displayed.
  For more information, see **3.5.8 User Defined Application Setup Function** (page 237).

⑱ **[Save Initial Data]**

- The setting data is saved in the setup file (Config.zip).

3.5.2 VisualNavigation Window Creation Support Tool

- This is a tool (function) to create the VisualNavigation screen and has the following parts and functions to operate them.

Background screen file

A file of background of the layout. You can set a wmf-format or OLE-format file.
(The recommended OLE formats are Microsoft PowerPoint and Microsoft Visio)
The background screen must be a rectangle with 3 (horizontal) x 2 (vertical) ratio.
The VisualNavigation screen is configured by placing the following icons, supplemental information, and screen buttons on this background.

Icon part

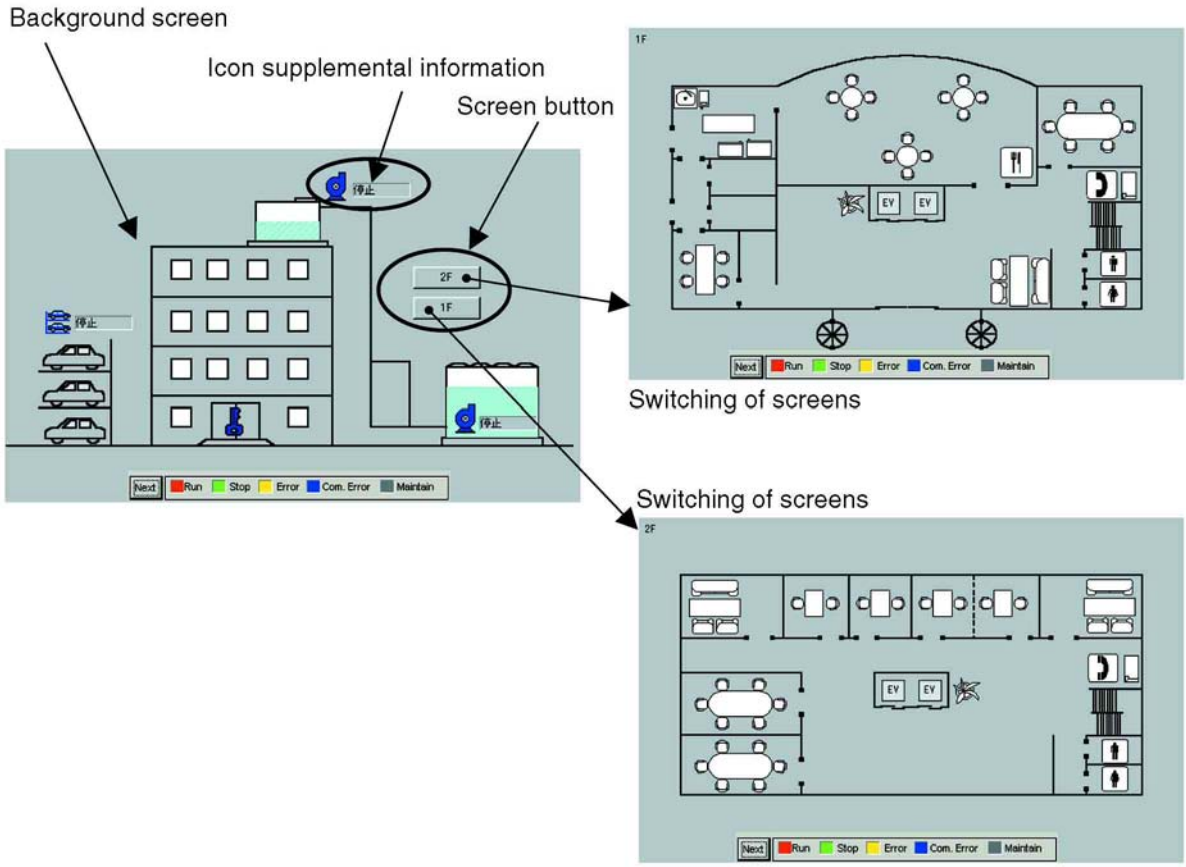
This part displays the state of management points and control groups.
The color of icons indicates the state.
You can select any icon to be assigned to each management point.

Supplemental information part

This part displays the information of a management point.
The information to be displayed varies according to the management point type. (For the content, see the monitoring)
The information of variable values, such as the Pi counter value, is automatically updated in association with change in values.

Window button

When multiple VisualNavigation screens are opened, a correlation diagram (hierarchy structure, etc.) of the VisualNavigation screens is created.
When you press a screen button, you can switch the screen to the one to which this button is assigned.
This function is expected to be used to display each floor of a multi-story building from the VisualNavigation screen.



- You can create a VisualNavigation screen from the SE mode menu.

The following explains the specifications for the menus in the SE mode menu related to the creation of a VisualNavigation screen.
For more information of functions related to the VisualNavigation screen, see related material [21] "3-1-3. Monitoring from VisualNavigation Window".

① [Icon]
- The [Icon Information Settings] dialog box to affix an icon of a management point to the VisualNavigation screen is displayed.
- This menu is grayed out when the screen is not the VisualNavigation screen.

② [Point Information]
- The [Text Info Configuration] dialog box to affix supplemental information of a management point to the VisualNavigation screen is displayed.
- This menu is grayed out when the screen is not the VisualNavigation screen.

③ [New Screen Button]
- The [Screen Buttons] dialog box is displayed to affix the button (screen button) that jump other VisualNavigation screens to the VisualNavigation screen.
- This menu is grayed out in the following cases.
  When the screen is not the VisualNavigation screen.
  When there is only one VisualNavigation screen.

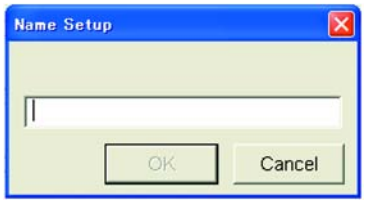
④ [Remove]
- This is used to delete the icons, supplemental information, and screen buttons on the VisualNavigation screen.
- Before deletion is executed, a confirmation dialog box is displayed.
- While the SE mode menu is displayed, if any icon, supplemental information, or screen button is not selected, this menu is grayed out.

⑤ [Attribute]
- The dialog boxes ([Icon Information Settings], [Text Info Configuration], and [Screen Buttons]) to change the attributes of the icons, supplemental information, and screen buttons on the VisualNavigation screen are displayed.
- While the SE mode menu is displayed, if any icon, supplemental information, or screen button is not selected, this menu is grayed out.

⑥ [Component Arrangement]
- The [Component Arrangement] dialog box to adjust the display positions of the icons, supplemental information, and screen buttons on the VisualNavigation screen is displayed.
- This menu is grayed out in the following cases:
  Other than the VisualNavigation screen.
  When [Edit Mode] is OFF (⑬).
  While the SE mode menu is displayed, if any icon, supplemental information, or screen button is not selected.

[Limits on VisualNavigation screen]
- When you create a VisualNavigation screen, it is recommended that it is created within the following limits:
  - Number of VisualNavigation screens : Up to 100 screens
  - Number of icons in one screen : Up to 100 icons
  - Background screen file size : Up to 5 Mbytes per VisualNavigation screen, Up to 10 Mbyte of all VisualNavigation screens

⑨ **[New Visual Navi. Screen]**



<[Name Setup] dialog>

- The [Name Setup] dialog box to create a new VisualNavigation screen is displayed.
- Specifications of the [Name Setup] dialog box
  In the default setting, no string is entered in the text field.
  If no string is entered in the text field, the OK button is grayed out.
  You can enter 1 to 32 characters in the text field.
  When you press the [OK] button, the [Name Setup] dialog box is closed, and a new VisualNavigation screen is created.
  When you press the [Cancel] button, input is discarded, and the [Name Setup] dialog box is closed.
- When a new VisualNavigation screen is created, the contents display area is switched to the newly created screen.

⑩ **[Visual Navi. Screen Setup]**

- The [Screen Information] dialog box to set the attributes of the VisualNavigation screen is displayed.
- This menu is grayed out when the screen is not the VisualNavigation screen.

⑪ **[Remove Visual Navi Screen]**

- The [Screen List] dialog box to delete a VisualNavigation screen is displayed.

⑫ **[Edit Mode On]**

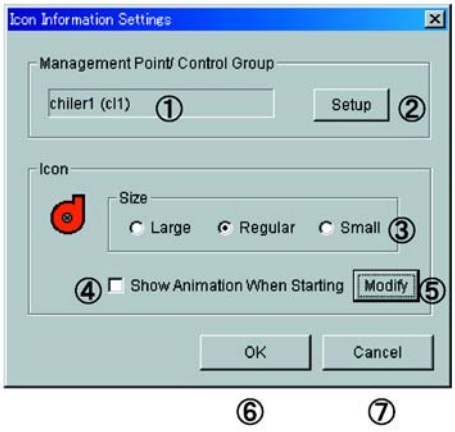
- The edit mode of the VisualNavigation screen is turned ON.
- When the edit mode is ON, you cannot jump screens.
  Change in the VisualNavigation screen by pressing the screen button.
- This menu is grayed out in the following cases:
  When the screen is not the VisualNavigation screen.
  When the edit mode has been already ON.
- When the edit mode is ON, you can move within the VisualNavigation screen by dragging an icon, supplemental information, or screen button with the mouse.
  The moving range is not limited.

⑬ **[Edit Mode Off]**

- The edit mode of the VisualNavigation screen is turned OFF.
- You cannot perform the following operations when the edit-mode is OFF:
  Movement within the VisualNavigation screen by dragging an icon, supplemental information, or screen button with the mouse
  Deletion of supplemental information and screen buttons using the [Remove] menu
  Setting of attributes using the [Attribute] menu.
- This menu is grayed out in the following cases:
  When the screen is not the VisualNavigation screen.
  When the edit mode has been already OFF.

[Icon Information Settings] dialog box

This is used to add an icon of a management point to the VisualNavigation screen or change the icon.



① Name field

- The name (abbreviated name) of the management point/control group is displayed.
- When the management point/control group is not set (when a new icon is added), None is displayed.

② [Setup] button

- When you press this button, the [Management Points Selection] dialog box to select a management point/control group is displayed.

③ [Size] radio button

- You can select the icon size.
- When the management point/control group is not set, this radio button is grayed out.

④ [Show Animation When Starting] checkbox

- When a check is put in this checkbox, animation of the icon is conducted during operation.
- This checkbox is grayed out in the following cases:
  When no management point/control group is set.
  When the icon does not support animation.

⑤ [Modify] button

- When you press this button, the [Icons List] dialog box to select an icon is displayed.
- When no management point/control group is set, this button is grayed out.

⑥ [OK] button

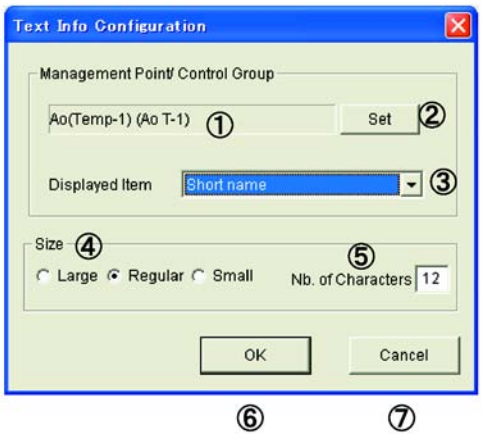
- When you press this button, the edit results are reflected to the system, and this window is closed.
- When no management point/control group is set, this button is grayed out.

⑦ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

[Text Info Configuration] dialog box

This is used to add supplemental information of a management point to the Visual Navigation screen or change the information.



① Name field

- The name (abbreviated name) of the management point/control group is displayed.
- When the management point/control group is not set (when supplemental information is newly added), None is displayed.

② [Set] button

- When you press this button, the [Management Points Selection] dialog box to select a management point/control group is displayed.

③ [Displayed Item] combo box

- This is used to select appropriate supplemental information according to the management point type/control group.
- The default value when a management point/control group is selected using the [Set] button is "Name".
- When any management point/control group is set, this combo box is grayed out.
- The items that can be set to the supplemental information are shown in the table below:

Type	Name	Abbreviated name	Switching state	No. of switching	Operation time	Pulse counter	Pulse value	Analog value (Ai, Ao)	Suc Temp. (*1)	Setup temperature (*1)	Operation mode (*2)	Outdoor unit capacity
Displayed Item	Mng. point name	Short name	Switching state	Nb. of switching times	Operation time	Pulse counter	Pulse value	Analog value	Suc Temp. or Temp.	Setup	Operation mode	Outdoor unit capacity
Internal Do	○	○	○	○	○	×	×	×	×	×	×	×
Internal Di	○	○	○	○	○	×	×	×	×	×	×	×
Internal Pi	○	○	×	×	×	○	○	×	×	×	×	×
Ai	○	○	×	×	×	×	×	○	×	×	×	×
D3Di	○	○	○	○	○	×	×	×	×	×	×	×
D3Dio	○	○	○	○	○	×	×	×	×	×	×	×
Indoor unit	○	○	○	○	○	×	×	×	○	○	○	×
Outdoor unit	○	○	×	×	×	×	×	×	×	×	×	○
Ao	○	○	×	×	×	×	×	○	×	×	×	×
AHU	○	○	○	○	○	×	×	×	×	○	○	×
HRV	○	○	○	○	○	×	×	×	×	×	○	×
D3Ai	○	○	×	×	×	×	×	○	×	×	×	×
Pseudo Ai	○	○	×	×	×	×	×	○	×	×	×	×
Chiller	○	○	○	○	○	×	×	×	×	○	○	×
Control group	○	×	×	×	×	×	×	×	×	×	×	×

★1: You cannot select supplemental information on the suction temperature and specified temperature during a communication error.

★2: The ventilation mode is displayed on HRV.

④ **[Size] radio button**
- You can select the font size for supplemental information.
- When the management point/control group is not set, this radio button is grayed out.

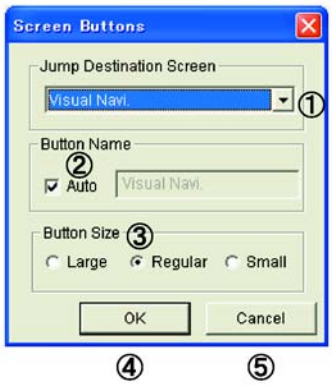
⑤ **[Nb. of Characters] text field**
- You can set the number of characters of supplemental information.
- The input range is 1 to 32.

⑥ **[OK] button**
- When you press this button, the edit results are reflected to the system, and this window is closed.
- When no management point/control group is set, this button is grayed out.

⑦ **[Cancel] button**
- When you press this button, the edit results are discarded, and this window is closed.

[Screen Buttons] dialog box

This is used to add a screen button to the VisualNavigation screen or change an existing button newly.



① [Jump Destination Screen] combo box

- You can select the VisualNavigation screen to which you want to jump.
- A list of other screens is displayed.
- In the default setting, the top screen is selected.

② [Button Name] field

- You can set the string to be displayed in a screen button.
- When a check is put in the [Auto] checkbox, the name of the VisualNavigation screen to which you jump is used as the string.
  When no check is put in the checkbox, the string of the text field is used as a string.
- The input range of the text field is 0 to 32 characters.
- When a check is put in the [Auto] checkbox, the text filed is grayed out.
- In the default setting, a check is put in the [Auto] checkbox.

③ [Button Size] radio button

- You can select the screen button size.
- In the default setting, [Regular] is selected.

④ [OK] button

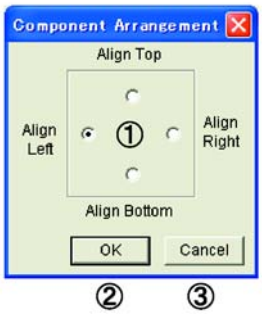
- When you press this button, the edit results are reflected to the system, and this window is closed.

⑤ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

[Component Arrangement] dialog box

This is used to adjust the display position of icons, supplemental information, and screen buttons.

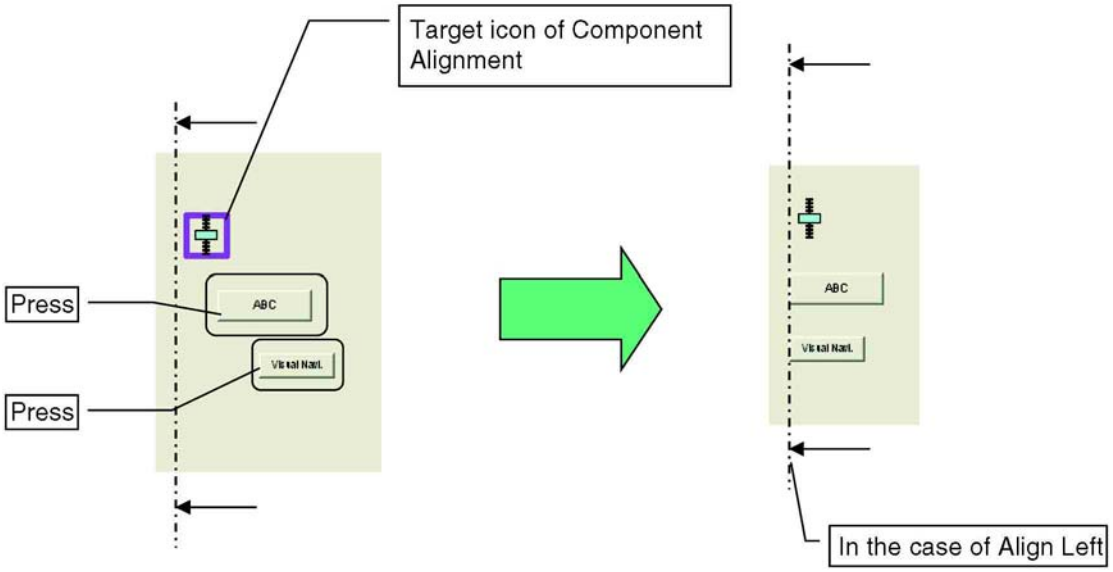


① [Align] radio button

- This button is used to determine the direction of positioning.
- In the default setting, [Align Left] is selected.

② [OK] button

- When you press this button, this window is closed.
- When you press any icon, supplemental information, or a screen button in the VisualNavigation screen, the display position of that component is adjusted to the position specified with the [Align] radio button. See the below.

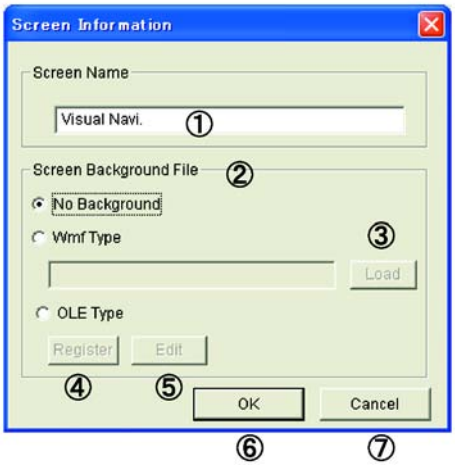


③ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

[Screen Information] dialog box

This is used to set the attributes of the VisualNavigation screen.



① [Screen Name] text field

- You can display and specify the screen name.
- The input range is 1 to 32 characters.

② [Screen Background File] radio button

- You can select the file type of the background screen.
- When you select [No Background], [Load], [Register], and [Edit] buttons are grayed out.
- When you select [Wmf Type], [Register] and [Edit] buttons are grayed out.
- When you select [OLE Type], [Load] button is grayed out. If no OLE-type file is registered, the [Edit] button is grayed out.

③ [Wmf Type] field

- When you press the [Load] button, a file dialog box to register a wmf file is displayed.
- The registered wmf file is displayed in the text field.

④ [Register] button

- A dialog box to register an OLE-type file is displayed.
- When the OLE type is not a figure, its icon only is displayed on the VisualNavigation screen.

⑤ [Edit] button

- An application to edit a registered OLE-type file is opened.

⑥ [OK] button

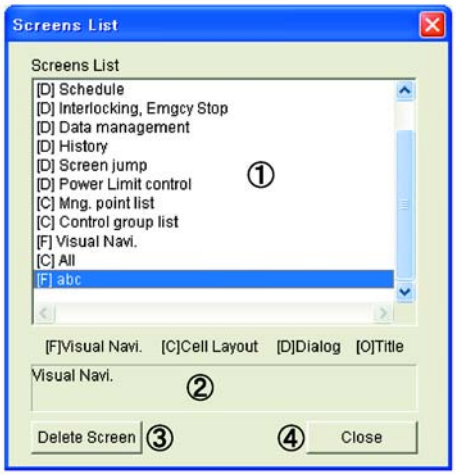
- When you press this button, the edit results are reflected to the system, and this window is closed.

⑦ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

[Screens List] dialog box

This is used to delete a VisualNavigation screen.



① [Screens List] list

- A list of screens is displayed.
- In the default setting, the currently activated screen is displayed.

② Screen information display area

- The information of the screen selected in the [Screens List] list is displayed.
- The details of the display information are shown in the table below:

Screen type	Display information (English)
[D]: Dialog screen	Dialog screen Standard screen [cannot be deleted]
[F]: VisualNavigation screen (root screen)	Visual Navi. Standard screen [cannot be deleted]
[F]: VisualNavigation screen (other screens)	Visual Navi.
[C]: Cell screen	Cell layout Standard screen [cannot be deleted]
[O]: Title screen	Title Standard screen [cannot be deleted]

③ [Delete Screen] button

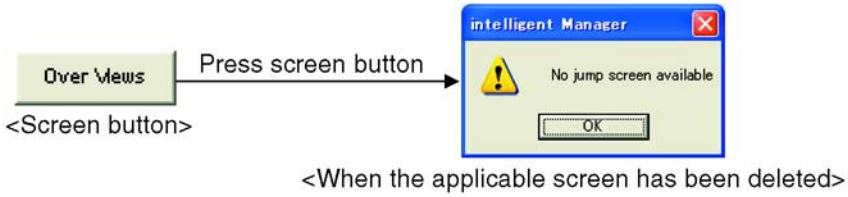
- When you press this button, the screen selected in the [Screens List] list is deleted after confirmation is made with a confirmation dialog box, and this window is closed.
- When the currently displayed screen is deleted, the screen goes to the title screen after this window is closed.
- When the screen selected in the [Screens List] list is not a VisualNavigation screen (excluding the default screen), this button is grayed out.

④ [Close] button

- This window is closed.

Operation of the screen button of the deleted screen

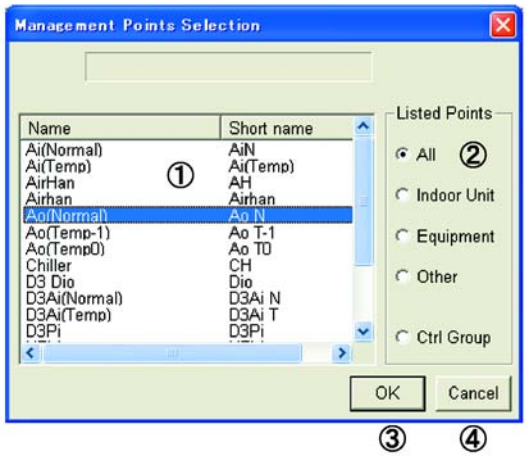
- After you delete a screen, if you press the screen button of that deleted screen, a warning dialog box is displayed.



<When the applicable screen has been deleted>

[Management Points Selection] dialog box

This is used to select a management point/control group.



① Management point/control group list

- A list of management points/control groups is displayed. You can select only one item.
- The items to be displayed are shown below:
  Name: name
  Short name: abbreviated name

② [Listed Points] radio button

- The management point/control group type to be displayed on the management point/control group list is determined in accordance with the selection of the radio button.
  The available selections are shown below:
  All: all management points
  Indoor Unit: indoor units, HVR, chillers, AHU
  Equipment: D III Di, D III Dio, Di, Do
  Other: Ao, D III Ai, Ai, Pi, outdoor units, Pseudo Ai
  Ctrl Group: control groups
- In the default setting, [All] is selected.

③ [OK] button

- When you press this button, the edit results are reflected to the system, and this window is closed.
- When no management point/control group is set in the management point/control group list, this button is grayed out.

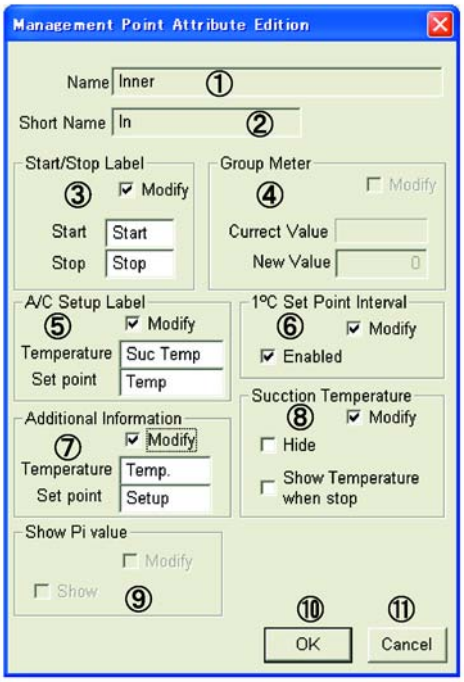
④ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.5.3 Management Point Data Setting Function

[Management Point Attribute Edition] dialog box

This is used to set the display specifications of management points.



① [Name] text field

- The name of the management point is displayed.

② [Short Name] text field

- The abbreviated name of the management point is displayed.

③ [Start/Stop Label] field

- The labels for [Start] and [Stop] are set.
- When a check is put in the [Modify] checkbox, the settings are reflected to the system.
- When a check is not put in the [Modify] checkbox, [Start] and [Stop] text fields are grayed out.
- The input range of the [Start] and [Stop] text fields is 0 to 8 characters.

④ [Group Meter] field

- The meter value (value applying the multiplication rate to the counter value) is set.
- When a check is put in the [Modify] checkbox, the value in the [New Value] text field is reflected to the system.
- The current value is displayed in the [Current Value] text field.
- When a check is not put in the [Modify] checkbox, the [New Value] text field is grayed out.
- The input range of the value is 0 to 999999999.

⑤ [A/C Setup Label] field

- The labels for [Set point] and [Suction Temperature] are set.
- When a check is put in the [Modify] checkbox, the settings are reflected to the system.
- When a check is not put in the [Modify] checkbox, [Temperature] and [Set point] text fields are grayed out.
- The input range of the [Temperature] and [Set point] text fields is 0 to 8 characters.

⑥ [1°C Set Point Interval] field

- The increment of the temperature setting is set.
- When a check is put in the [Modify] checkbox, the setting is reflected to the system.
- When a check is not put in the [Modify] checkbox, the [Enabled] checkbox is grayed out.
- The increment is 1°C when a check is put in the [Enabled] checkbox, and 0.1°C when a check is not put.
- When the Fahrenheit setting is specified, this field is not displayed.

⑦ [Additional Information] field

- The label when the temperature display (default: Temp.) and specified temperature display (default: Setup) are done with the supplemental information of the layout and cell screens is set.
- When a check is put in the [Modify] checkbox, the setting is reflected to the system.
- When a check is not put in the [Modify] checkbox, [Temperature] and [Set point] text fields are grayed out.
- The input range of the [Temperature] and [Set point] text fields is 0 to 6 characters.

⑧ [Suction Temperature] field

- The setting of the suction temperature display in the supplemental information of the layout and cell screens is made.
- When display OFF is selected, the supplemental information field is not displayed in the cell screen.
  In the Visual Navigation screen, [****] is displayed.
- When a check is put in the [Modify] checkbox, the setting is reflected to the system.
- When a check is not put in the [Modify] checkbox, [Hide] and [Show Temperature when stop] checkbox are grayed out.
- When a check is put in the [Hide] checkbox, the suction temperature is not displayed.
- When a check is not put in the [Hide] checkbox, the [Show Temperature when stop] checkbox is grayed out.
- When a check is put in the [Show Temperature when stop] checkbox, the suction temperature is displayed even when the system is stopped.

⑨ [Show Pi value] field

- The setting whether or not to display the meter (Pi) value in the supplemental information of the layout and cell screens is made.
- When display OFF is selected, the supplemental information field is not displayed in the cell screen.
  In the VisualNavigation screen, [****] is displayed.
- When a check is put in the [Modify] checkbox, the setting is reflected to the system.
- When a check is not put in the [Modify] checkbox, the [Show] checkbox is grayed out.
- When a check is put in the [Show] checkbox, the meter (Pi) value is displayed.

⑩ [OK] button

- When you press this button, the edit results are reflected to the system, and this window is closed.

⑪ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

The settable items by management point type are shown in the table below:

Management point type	③ Start/ Stop Label	④ Group Meter	⑤ A/C Setup Label	⑥ 1°C Set Point Interval *1	⑦ Additional Information	⑧ Sucction Temperature	⑨ Show Pi value
Internal Do	○	×	×	×	×	×	×
Internal Di	○	×	×	×	×	×	×
Internal Pi	×	○	×	×	×	×	○
Ai	×	×	×	×	×	×	×
D3Di	○	×	×	×	×	×	×
D3Dio	○	×	×	×	×	×	×
Indoor unit	○	×	○	○	○	○	×
Outdoor unit	×	×	×	×	×	×	×
Ao	×	×	×	×	×	×	×
AHU	○	×	Δ*1	○	Δ*1	×	×
HRV	○	×	×	×	×	×	×
D3Ai	×	×	×	×	×	×	×
Pseudo Ai	×	×	×	×	×	×	×
Chiller	○	×	Δ*1	○	Δ*1	×	×

○ : Displayed, ×: Grayed out, Δ*1: [Specified temperature display] only can be set.

★1 : When the Fahrenheit setting is selected, these items are not displayed.

[Analog management point setting] dialog box

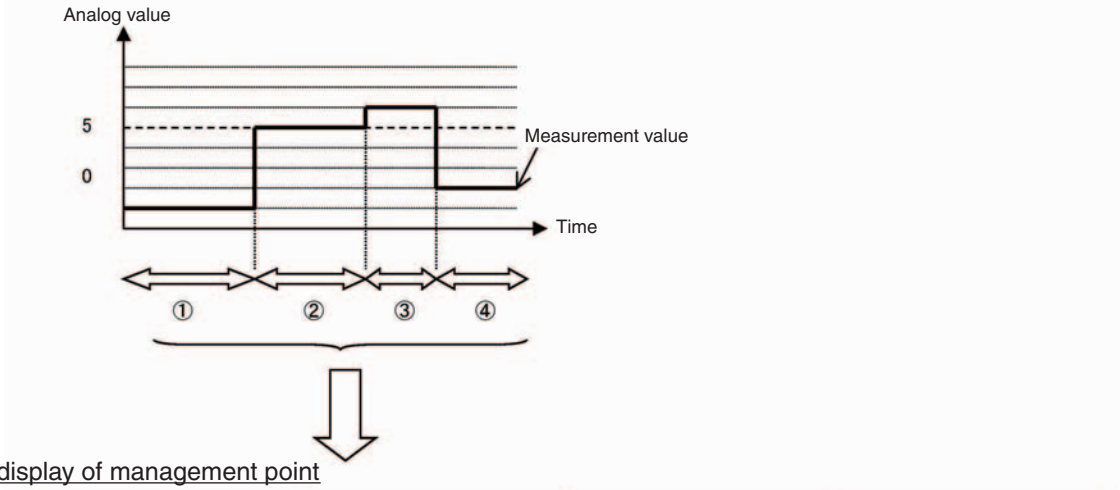
- In the analog management point setting dialog box, you can set the string to be displayed in a cell of an analog management point in the monitoring board.
  The string is displayed in the area where analog values are displayed.
- The string is registered together with the display conditions (management points > constant), and it will be displayed in the supplemental information in the cell when the conditions are satisfied.
- You can register up to 8 display settings (combination of conditions and string), and the string of the setting which is satisfied first is displayed in the order of registration.
- When no condition is satisfied, an analog value is displayed as it is.
- This function can be also used when you monitor the operation mode of the CHESBAC with the Pseudo Ai and when you display the string of the operation mode in the screen.
  The setting in this case is shown below:

Setting of Pseudo Ai management point

No.	Condition	String
1	< 1.1	Heating
2	< 2.1	Cooling
3	< 4.1	Cooling Heat Recovery
4	< 5.1	Heating Heat Recovery
5	< 6.1	Auto Heat Recovery

Relation between CHESBAC operation mode and numeric values
0 :
1 : Heating
2 : Cooling
3 :
4 : Heat recovery when priority is given to cooling
5 : Heat recovery when priority is given to heating
6 : Auto heat recovery
7~ :

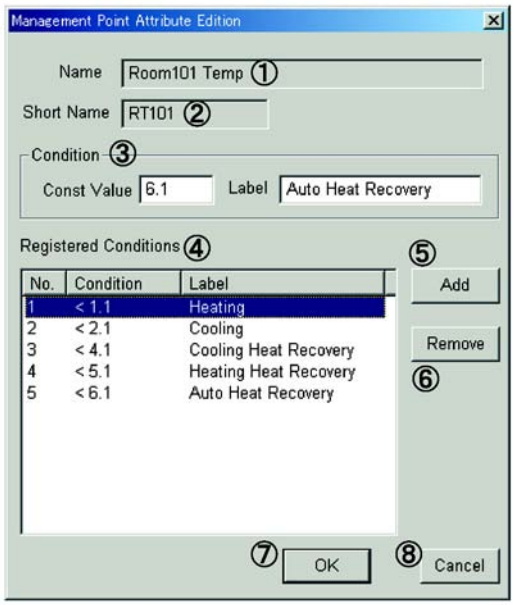
Change in management point value



Cell display of management point



- The screen image of the analog management point setting dialog box is shown below.



① [Name] text field

- The name of the management point is displayed.

② [Short Name] text field

- The abbreviated name of the management point is displayed.

③ [Condition] field

- You can input the constant value (Const Value) and label (Label) of the display condition.
- The input range of the constant value varies according to the analog type of the specified management point as shown below.

Analog type		Input range
Temperature	Celsius	-512~512
	Fahrenheit	-890~954
General		-9999.99~9999.99

- The input range of the label is 0 to 32 characters.
- In the default setting, the constant value is 0, and the label is blank.

④ [Registered Conditions] list

- A list of the registered display settings is displayed.
- The items in the list are sorted in the ascending order of constant values.
- In the default setting, no setting is selected.

⑤ [Add] button

- You can add the display setting entered in the [Condition] field.
- If the constant value in the [Condition] field is out of the input range, blank, or the number of registered display settings reached the upper limit, this button is grayed out.

⑥ [Remove] button

- You can delete the selected display setting from the list.
- When no display setting is selected in the list, this button is grayed out.

⑦ [OK] button

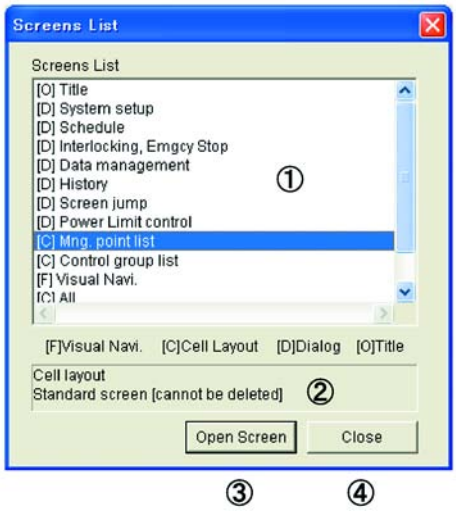
- When you press this button, the edit results are reflected to the system, and this window is closed.

⑧ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.5.4 Screen Switching Function

This function is used to switch screens.



① [Screens List] list

- A list of screens is displayed.
- In the default setting, the currently activated screen is selected.

② Screen information display area

- The information of the screen selected in the [Screens List] list is displayed.
- The details of the display information is same as the screen information display area of the [Screens List] dialog box.

③ [Open Screen] button

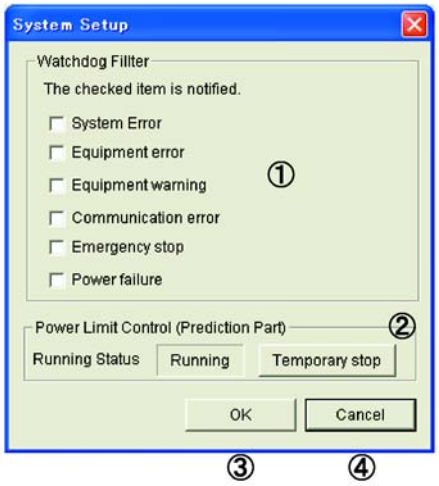
- When you press this button, the screen selected in the [Screens List] list is opened, and this window is closed.

④ [Close] button

- This window is closed.

3.5.5 System Setup Function

This function is used to set Watchdog and target power control.

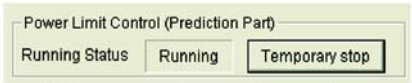


① [Watchdog Filter] checkbox

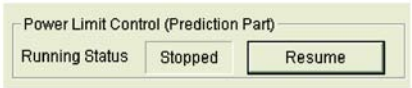
- When a check is put in a checkbox, the specified error information type is notified to the Watchdog Notifier.
- In the default setting, a check is not put any checkbox at all.

② [Power Limit Control (Prediction Part)] field

- When the [Temporary stop] button is pressed, the control unit of the target power control is temporarily stopped, and the label of the button is changed to [Resume].
- When the [Resume] button is pressed, the control unit of the target power control is resumed, and the label of the button is changed to [Temporary stop].
- In the default setting, "Running" ([Temporary stop] button) is selected.



<When control unit running>



<When control unit stopped>

③ [OK] button

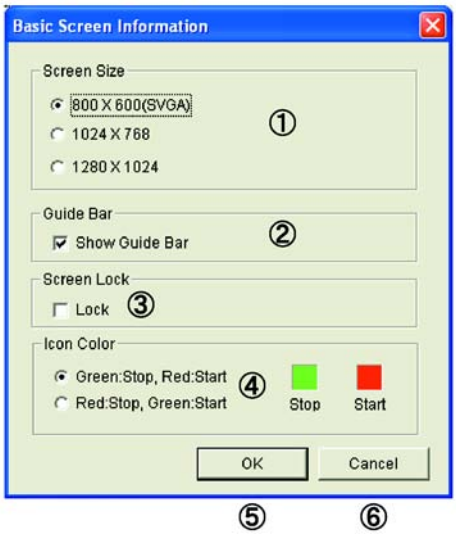
- When you press this button, the edit results are reflected to the system, and this window is closed.

④ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.5.6 Monitoring Screen Setup Function

This function is used to make the settings related to the monitoring screen.



① [Screen Size] radio button

- You can set the screen size of the monitoring screen.
- The default setting is 800 x 600.

② [Guide Bar] checkbox

- When a check is put in this checkbox, the guide display area is displayed.
- In the default setting, a check is put in this checkbox. (The guide display area is displayed.)

③ [Screen Lock] field

- When a check is put in the [Lock] checkbox, the monitoring board is fixed to the currently displayed coordinate position.
  (Consequently, you cannot move the monitoring board screen.)
- In the default setting, a check is put in this checkbox. (The monitoring board screen is not fixed.)

④ [Icon Color] button

- You can select the icon colors for operation and stop.
- The default setting is "Green: Stop, Red: Start".

⑤ [OK] button

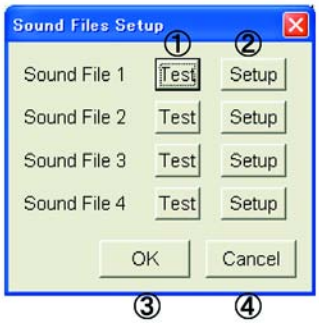
- When you press this button, the edit results are reflected to the system, and this window is closed.

⑥ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.5.7 Sound File Setup Function

This function is used to make the setting of the sound to be used as a buzzer.
The screen image is shown below. Sound File 1 to File 4 correspond to Buzzer 1 to Buzzer 4.



① [Test] button

- When you press this button, the selected sound file is sounded as a test.

② [Setup] button

- When you press this button, a file dialog box to set the sound file (sound1.wav ~ sound 4.wav in the Sound folder) is opened.

③ [OK] button

- When you press this button, the edit results are reflected to the system, and this window is closed.

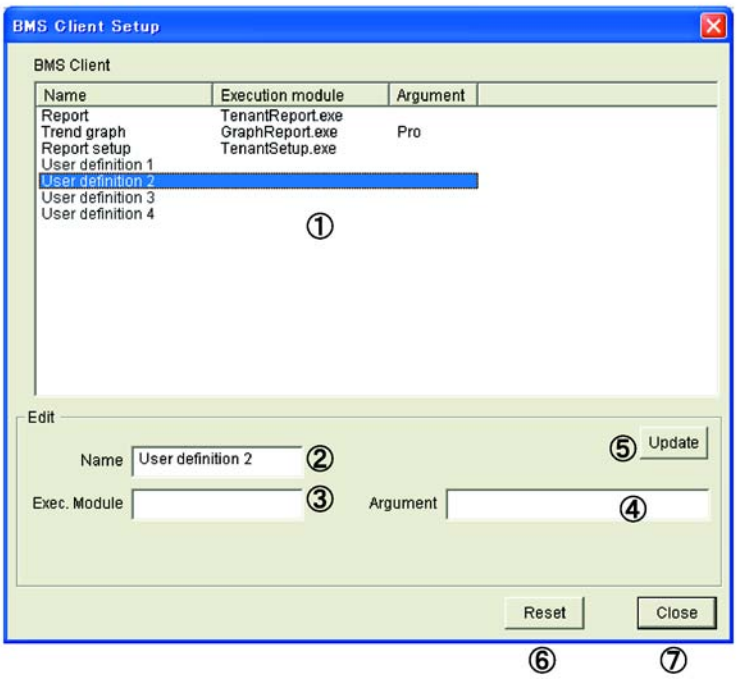
④ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.5.8 User Defined Application Setup Function

- A dialog box to make the setting to activate applications specific to certain users from the monitoring board is displayed.
- An application is activated in the following format.
  **.exe IP address of data base Specified date and time (time_t) Argument

The screen image is shown below.



① Application list

- A list of applications is displayed.
- [Report], [Trend graph] and [Report setup] show the applications defined by the intelligent Manager, and User definition 1 to 4 show the user defined applications.
- The display items are shown below:
  Name: A name of the application
  Execution module: An execution file name of the application
  Argument: An argument to be passed to the application
- In the default setting, nothing is selected.

② [Name] text field

- You can display and specify the name of the application selected in the application list.
- The input range is 0 to 24 characters.

③ [Exec. Module] text field

- You can display and specify the execution file name of the application selected in the application list.
- The input range is 0 to 64 characters.

④ [Argument] text field

- You can display and specify the argument of the application selected in the application list.
- The input range is 0 to 64 characters.

⑤ [Update] button

- When you press this button, the name, execution file, and argument are passed on to the application selected in the application list.
- When no application is selected in the application list, this button is grayed out.

⑥ [OK] button

- When you press this button, the edit results are reflected to the system, and this window is closed.

⑦ [Cancel] button

- When you press this button, the edit results are discarded, and this window is closed.

3.6 Simplified Database Maintenance Tool

3.6.1 Function Overview

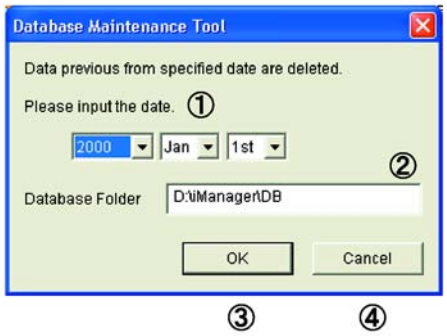
- The simplified database maintenance tool (EzDBMaintenance.exe) is a tool to reduce the database size by deleting old data in the intelligent Manager database.
- Data with the data prior to the specified data are deleted from the database.
- The data deletion target databases among those in the DB folder are listed below:

Accumulated data	: Sekisan.db
Pulse data	: Puls.db
Analog trend data	: Analog.db
Air conditioner power hourly report	: PowerACHour.db
Demand data	: Demand.db
Demand prediction data	: DmdPredict.db

- Since this tool does not back up the databases, the deleted data are completely eliminated from the disk. For security reasons, you need to back up the database files before using this tool.

3.6.2 GUI Specifications

Main window



① Date field

- You can specify the date.
- The settable range is from Jan 1, 2005 to Dec 31, 2037.
- The default setting is Jan. 1, 2000.

② [Database Folder] text field

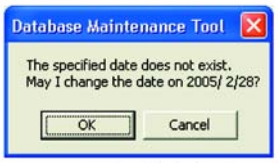
- You can specify the folder of the database to be deleted.
- The default setting is the DB folder under the intelligent Manager system folder in which this tool is installed.

③ [OK] button

- When you press this button, a confirmation window is displayed.
- If a nonexistent date is entered in the date field, a confirmation window is displayed, and the setting in the date field is changed to an existing date.

④ [Cancel] button

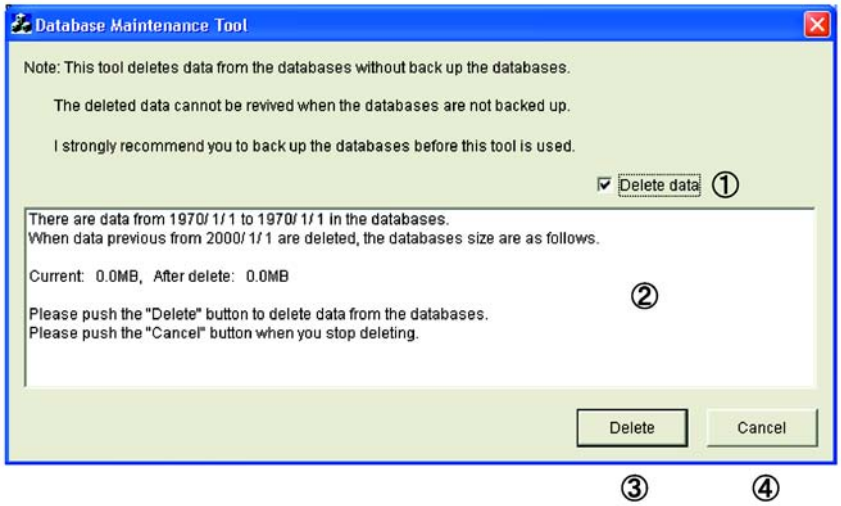
- When you press this button, this window is closed.



<When a nonexistent date is entered>

Confirmation window

This window is used to confirm deletion of a database.



① [Delete data] checkbox

- You are prompted to confirm deletion of the database.
  If a check is not put in this checkbox, you cannot delete databases.
- In the default setting, a check is not put in this checkbox.

② Deletion information text field

- The storage period of the data in the database, and how much the database size will be reduced if you delete the data prior to the specified data are displayed in MB.

③ [Delete] button

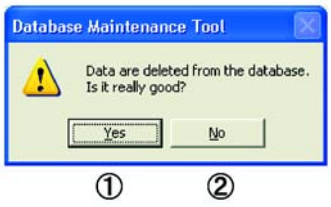
- When you press this button, a final confirmation dialog box is displayed.
- When a check is not put in the [Delete Data] checkbox, this button is grayed out.

④ [Cancel] button

- When you press this button, the screen returns to the main window.

Final confirmation dialog box

This dialog box is used to make final confirmation of database deletion.



① [Yes] button

- When you press this button, the data with the date prior to the specified date are deleted from the database.
- After deletion, the result is displayed in the message dialog box.

② **[No] button**

- When you press this button, the screen returns to the confirmation window.



<Message dialog box for database deletion>

Appendix A. Management Point Engineering Item List

A list of management point engineering items is displayed in the table below.
You can make the settings using the initial data tool.

Category	No.	Item (English)	Value	iManager	BIPS	Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Indoor unit	Fan coil (indoor unit)	Outdoor unit	D3Ai	P Ai	HRV	AHU	Chiller	Remarks
Common	1	Management point ID	Positive integer	○									○								
	2	Name	Character string(24word)	○									○								
	3	Short name	Character string(8word)	○									○								
	4	Maker name	Character string(24word)	○									○								
	5	Equipment name	Character string(24word)	○									○								
	6	Model number	Character string(24word)	○									○								
	7	Install Place	Character string(24word)	○									○								
	8	Install Time	Character string (YYYYMMDD)	○									○								
	9	Life Time	Year (0: Not monitored)	○									○								
	10	Power proportional distribution	OFF [Def]/ON	○	○								○	○							
	11	Hides from a database	Yes/No [Def]	○	○	○	○	○	○		○	○	○	○		○	○	○	○	○	
	12	Prohibition of manual operation	Allowed/Prohibited [Def]	○	○	○				○		○	○	○				○	○	○	
	13	iPU number	int	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
	14	Port number	int	○	○	○	○	○	○	○	○	○	○	○	○	○		○			
	15	Upper address (group)	int	○	○						○	○	○	○		○		○			
	16	Lower address (unit)	int	○	○						○	○	○	○		○		○			
	17	Icon ID	int	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
Stop/ resume power	18	Operation in the power supply state	Only when power is supplied [Def]/Always available (Power supply is not stopped)	○	○	○					○	○	○	○	○			○	○	○	
	19	Resume mode	Return to state before power failure/ Follow schedule/ Run/Resume/No operation [Def]	○	○							○	○	○				○	○	○	
Monitoring	20	Comm.Err.Monitor.Level	Monitoring only [Def]/ Monitoring + history	○	○																Monitoring only
	21	Equipt. Err.Monitor.Level	Monitoring only / Monitoring + history [Def]	○	○																Monitoring + history
	22	Time limit monitor	Not monitored [Def]/ Monitoring only/Monitoring + history	○	○																Not monitored
	23	Time limit	Second	○	○	○	○				○	○	○	○				○	○	○	
Accumulation	24	Time to warn to operation time	Time (0 [Def]: Not monitored)	○	○	○	○				○	○	○	○				○	○	○	
	25	Operation time	Time	○	○	○	○				○	○	○	○				○	○	○	
	26	Nub. to warn to start / stop times	Number of times (0 [Def]: Not monitored)	○	○	○	○				○	○	○	○				○	○	○	
	27	Start / Stop times	Number of times	○	○	○	○				○	○	○	○				○	○	○	
Dio	28	Use mode(Do)	Normal [Def]/Shutdown	○	○	○															
	29	Use mode(Internal Di)	Normal [Def]/Power stoppage (UPS/private power generation/main power supply)/abnormal contact	○	○		○														
	30	Contact Point Type(Di)	Contact B/Contact A	○	○		○														
Pi	31	Pulse value	int	○	○			○													
	32	Pulse constant	int	○	○			○													
	33	Power ratio	float	○	○			○													
	34	Unit string	Character string (8word)	○	○			○													
	35	Pulse width	10msec[Def] or 00msec	○	○			○													
Ai / Ao	36	Unit installation place	Character string (24word)	○	○				○	○						○	○				
	37	Unit string	Character string (8word)	○	○				○	○						○	○				
	38	No-reaction zone	float	○	○				○							○					
	39	Upper limit	float	○	○				○							○	○				
	40	Lower limit	float	○	○				○							○	○				
	41	Level of upper limit error monitoring	Not monitored [Def]/ Monitoring only/Monitoring + history	○	○				○							○	○				
	42	Level of lower limit error monitoring	Not monitored [Def]/ Monitoring only/Monitoring + history	○	○				○							○	○				
	43	Type	Compo-BUS [Def]/BA-BUS	○	○				○												Compo-Bus fixed
	44	Sensor type	Temperature (thermistor)/ general (0 - 5 V)	○	○											○					
	45		Temperature/others						○	○						○					Added to support Fahrenheit

Category	No.	Item (English)	Value	iManager	BIPS	Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Indoor unit	Fan coil (indoor unit)	Outdoor unit	D3Ai	P Ai	HRV	AHU	Chiller	Remarks
Ai / Ao	46	P Ai measurement target management point ID	int	○	○												○				
	47	P Ai measurement point	Suction temperature	○	○												○				
	48	Target point type	Not available/temperature	○	○												○				
	49	Save to iPU	Yes [Def]/No	○	○				○							○	○				
	50	Save to rotation DB on PC	Yes/No [Def]	○	○				○							○	○				
	51	Minimum value	float	○	○				○							○					
	52	Maximum value	float	○	○				○							○					
	53	Minimum terminal value	float Def:0		○					○											
	54	Maximum terminal value	float Def:100		○					○											
	55	Minimum instruction value	float Def:0		○					○											Added by Ao support
	56	Maximum instruction value	float Def:0		○					○											Added by Ao support
	57	Instruction accuracy (10 exponent)	-2~3(Def:-1)		○					○											Added by Ao support
Air conditioner	58	Restriction of remote-control:Permission of Start/stop	Available [Def]/Not available	○	○								○	○				○	○	○	
	59	Restriction of remote-control: Permission of only stop	Available [Def]/Not available	○	○								○	○				○	○	○	
	60	Restriction of remote-control: Permission of operation mode	Available [Def]/Not available	○	○								○	○					○	○	
	61	Restriction of remote-control: Permission of set point	Available [Def]/Not available	○	○								○	○					○	○	
	62	The child unit of a remote control group	Parent [Def]/Child	○	○								○	○				○	○	○	
	63	Valid auto operation	Available [Def]/Not available	○	○								○	○					○	○	
	64	Valid set point	Available [Def]/Not available	○	○								○	○					○	○	
	65	Monitor of alarm/warning	Yes [Def]/No	○	○								○	○				○	○	○	
	66	Heating mode optimization	Yes [Def]/No	○	○								○	○							
	67	Volume of wind	None [Def]/2 step/3 step	○	○								○	○							
	68	Wind direction	Yes [Def]/No	○	○								○	○							
Specified temperature limit	69	Cooling temperature limit	Yes [Def]/No	○	○								○	○							
	70	Cooling lower limit	int	○	○								○	○							
	71	Cooling upper limit	int	○	○								○	○							
	72	Heating temperature limit	Yes [Def]/No	○	○								○	○							
	73	Heating lower limit	int	○	○								○	○							
	74	Heating upper limit	int	○	○								○	○							
Outdoor unit	75	Demand address	Invalid [Def]/0 - 31	○	○										○						
AHU	76	Filter Sign	Different pressure/time accumulation [Def]	○	○														○		
	77	Supply Temp. Monitor	Yes [Def]/No	○	○														○		
	78	Return Temp. Monitor	Yes [Def]/No	○	○														○		
	79	Return Humidity Monitor	Yes [Def]/No	○	○														○		
	80	Outdoor Temp. Monitor	Yes [Def]/No	○	○														○		
	81	Outdoor Humidity Monitor	Yes [Def]/No	○	○														○		
	82	Set Humidity	Yes [Def]/No	○	○														○		
	83	Upper Limit Value	int	○	○														○		When "Specified humidity monitoring control" is enabled
	84	Lower Limit Value	int	○	○														○		When "Specified humidity monitoring control" is enabled
Chiller	85	Water Temperature Monitor(Input)	Yes [Def]/No	○	○															○	
	86	Water Temperature Monitor(Output)	Yes [Def]/No	○	○															○	
HRV	87	FFU Mode	Yes [Def]/No	○	○													○			
	88	Ventilation Mode	Yes [Def]/No	○														○			
	89	Freshen Up	Yes [Def]/No	○														○			When "ventilation mode" is enabled
	90	Air Volume Auto	Yes [Def]/No	○														○			When "ventilation mode" is enabled

Appendix B. Initial Data Tool CSV Format

- The CSV format for the initial data tool is shown in the table below.
- The numeric value of each item refers to the row number. (The first one is fixed to the data type identifier.)
  Blank items indicate that there are no relevant data.

Category	Keyword	Contents	Value	Management point														Control group	DIIIPort
				Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Air conditioner	Outdoor unit	D3Ai	P Ai	HRV	AHU	Chiller		
Common	—	Header type identifier	—	DO-H	DI-H	PI-H	AI-H	AO-H	D3DI-H	DIO-H	IN-H	OUT-H	D3AI-H	PAI-H	HRV-H	AHU-H	CHIL-H	GRP-H	D3PORT-H
	—	Data type identifier	—	DO-D	DI-D	PI-D	AI-D	AO-D	D3DI-D	DIO-D	IN-D	OUT-D	D3AI-D	PAI-D	HRV-D	AHU-D	CHIL-D	GRP-D	D3PORT-D
	POINTID	Management point ID	1~1,000,000	2															
	GRPID	Control group ID	1~1,000,000															2	
	NAME	Name	Character string(ASCII 24byte)	3														3	
	SNAME	Abbreviated name	Character string(ASCII 8byte)	4															
	MAKER	Maker name	Character string(ASCII 24byte)	5															
	EQNAME	Equipment name	Character string(ASCII 24byte)	6															
	EQMODEL	Equipment No.	Character string(ASCII 24byte)	7															
	IPLACE	Installation location	Character string(ASCII 24byte)	8															
	IDATE	Installation date	Character string (YYYYMMDD)	9															
	LIFETIME	Durable years	0~99(0: Not monitored)	10															
	HIDEDB	Exclusion from data management	0: Not excluded 1: Excluded	11	11	11	11		11	11	11		11	11	11	11	11		
	PROHIBITOP	Prohibition of manual operation	0: Not prohibited 1: Prohibited	12				11		12	12				12	12	12		
	PPD	Application of proportional charge	0: Not applied 1: Applied								13					13	13		
	IPUNO	iPU No.	1~4	13	12	12	12	12	12	13	14	11	12	12	13	13	13		2
	PORTNO	Port No.	1~20	14	13	13	13	13	13	14	15	12	13		14	14	14		3
	ADDRESS1	Upper address (group)	1~8						14	15	16		14		15	15	15		
	ADDRESS2	Lower address (unit)	0~15						15	16	17		15		16	16	16		
	ICON	Icon ID	0~999	15	14	14	14	14	16	17	18	13	16	13	17	17	17	4	
Monitoring	COMMONLV	Communication error monitoring level	1: Monitoring, 2: Monitoring + History																
	EQMONLV	Equipment error monitoring level	1: Monitoring, 2: Monitoring + History																
	LMTIME	Continuous running time limit	0~9999999(sec)																
	LMMONLV	Continuous running time limit monitoring level	0: None, 1: Monitoring, 2: Monitoring + History																
Accumulation	WOPETIME	Accumulated running time warning value	1 to 500000 (hours) (0: Not monitored)	16	15				17	18	19				18	18	18		
	OPETIMES	Accumulated running time	0 to 1800000000 (sec)	17	16				18	19	20				19	19	19		
	WSSTIMES	Accumulated running/ stop times warning value	1 to 999999 (hours) (0: Not monitored)	18	17				19	20	21				20	20	20		
	SSTIMES	Accumulated running/ stop times	1 to 999999 (times)	19	18				20	21	22				21	21	21		
Dio	DOMODE	Do operation mode	0: Normal, 1: Shutdown signal	20															
	OPPOWERST	Instruction acceptable power supply state	0: Only power is supplied 2: Always available	21															
	DIMODE	Di operation mode	0: Normal, 1: Power stoppage, 3: Abnormal contact		19														
	CPTYPE	Contact type	0: Contact B, 1: Contact A		20														
Pi	PVAL	Pulse value	0~999999999			15													
	PCONST	Pulse constant	1~999999			16													
	PRATIO	Multiplication rate	0.01~99999.99			17													
	UNITSTR	Unit string	Character string (ASCII 8byte)			18													
	PWIDTH	Pulse width	10 or 100																

Category	Keyword	Contents	Value	Management point														Control group	DIIIPort
				Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Air conditioner	Outdoor unit	D3Ai	P Ai	HRV	AHU	Chiller		
Ai/Ao	UNITPLACE	Unit installation location	Character string (ASCII 24byte)																
	UNITSTR	Unit string	Character string (ASCII 8byte)				15	15					17	14					
	TARGETID	Measurement target management point	ID											15					
	TARGETTYPE	Measurement item	0: Invalid, 1: Suction temperature											16					
	ANALOGTYPE	Analog type	0: Normal, 1: Temperature				16	16					18						
	MARGIN	No reaction zone	0~9999.99				17						19	17					
	UPPERVAL	Upper limit	-9999.99~9999.99				18						20	18					
	LOWERVAL	Lower limit	-9999.99~9999.99				19						21	19					
	ULMMONLV	Upper limit error monitoring level	0: None, 1: Monitoring, 2: Monitoring + History				20						22	20					
	LLMMONLV	Lower limit error monitoring level	0: None, 1: Monitoring, 2: Monitoring + History				21						23	21					
	BUSTYPE	Type	0:Compo-BUS, 1:BA-BUS																
	SENSOR	Sensor type	0: Temperature, 1: General										24						
	SAVEIPU	Save in iPU	0: Not save 1: Save				22						25	22					
	SAVEPC	Save in PC	0: Not save 1: Save				23						26	23					
	MINVAL	Minimum value	-9999.99~9999.99				24						27						
	MAXVAL	Maximum value	-9999.99~9999.99				25						28						
	TERMMINVAL	Minimum terminal value	float Def:0					17											
	TERMMAXVAL	Maximum terminal value	float Def:100					18											
	OPMINVAL	Minimum instruction value	float Def:0					19											
	OPMAXVAL	Maximum instruction value	float Def:0					20											
	OPUNIT	Instruction accuracy (10 exponent)	-2~3(Def:-1)					21											
Air conditioner	PERMITSS	Remote control operation and stop	0: Prohibited, 1: Allowed								23				22	23	23		
	PERMITOS	Remote control stop only	0: Prohibited, 1: Allowed								24				23	24	24		
	PERMITOM	Switch of remote control operation modes	0: Prohibited, 1: Allowed								25					25	25		
	PERMITSP	Remote control temperature setting	0: Prohibited, 1: Allowed								26					26	26		
	RCMODE	Remote control group	0: Parent, 1: Child																
	AUTOOPE	Auto operation mode	0: Invalid, 1. Valid								27					27	27		
	SETPOINT	Temperature setting	0: Invalid, 1. Valid								28					28	28		
	ALARMMON	D3 warning/alarm monitoring	0: Invalid, 1. Valid								29				24	29	29		
	HEATOPTIMIZ	Heating optimization	0: Invalid, 1. Valid								30								
	WNDVOL	Wind volume monitoring/control	0: None, 1: 2 step, 2: 3 step								31								
	WNDDIRECT	Wind direction monitoring/control	0: Invalid, 1. Valid								32								
	COOLLIMIT	Specified cooling temperature limit	0: Invalid, 1. Valid								33								
	CLOWLIMIT	Lower cooling limit	-127~127								34								
	CUPLIMIT	Upper cooling limit	-127~127								35								
	HEATLIMIT	Specified heating temperature limit	0: Invalid, 1. Valid								36								
	HLOWLIMIT	Lower heating limit	-127~127								37								
	HUPLIMIT	Upper heating limit	-127~127								38								

Category	Keyword	Contents	Value	Management point														Control group	DIII Port
				Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Air conditioner	Outdoor unit	D3Ai	P Ai	HRV	AHU	Chiller		
HRV	FFU	FFU mode	0: Invalid, 1. Valid												25				
	VMODE	Ventilation mode	0: Invalid, 1. Valid																
	FRESHENUP	Fresh-up	0: Invalid, 1. Valid												26				
	AUTOVOL	Auto wind volume	0: Invalid, 1. Valid												27				
AHU	FILTERSIGN	Filter sign	0: Accumulated time, 1: Different pressure													30			
	SATEMP	Monitoring of supply temperature	0: Invalid, 1. Valid													31			
	RATEMP	Monitoring of return temperature	0: Invalid, 1. Valid													32			
	RAHUMI	Monitoring of return humidity	0: Invalid, 1. Valid													33			
	OATEMP	Monitoring of outside air temperature	0: Invalid, 1. Valid													34			
	OAHUMI	Monitoring of outside air humidity	0: Invalid, 1. Valid													35			
	SETHUMI	Humidity setup	0: Invalid, 1. Valid													36			
	MAXHUMI	Specified humidity lower limit	0~99													37			
	MINHUMI	Specified humidity upper limit	0~99													38			
Chiller	IWTEMP	Monitoring of inlet water temperature	0: Invalid, 1. Valid														30		
	OWTEMP	Monitoring of outlet water temperature	0: Invalid, 1. Valid														31		
Outdoor unit	DEMADDR	Demand address	(32: invalid)									14							
Stop/ resume power	RESUME	Power resume mode	0: Return to state before power is resumed, 1: Schedule, 2: Run, 3: Stop, 4: No operation							22	39					39	32		
	OPPOWERST	Instruction acceptable power supply state	0: Only when power is supplied 1: Always available							23	40	15				40	33		
Control group	RTIME	Sequential activation interval	0~999999															5	
	STIME	Sequential stop interval	0~999999															6	
	HIDEDATA	Hide display	0: Not hid, 1: Hid															7	
	MEMID	ID of management point that it belongs to	ID															8 or later	
DIII Port	CCTRL	Lower central setting	0: Invalid, 1. Valid																4

Appendix C. Initial Data Tool Check Item List

- The initial data tool supports the function to check the relevancy of the data before saving created data in the iPU or the monitoring board PC.
  This check can be conducted at any timing by pressing the [Check] button.
- A list of check items by data type is shown in the table below.
  "○" indicates an error (transmission to iPU is not available) and "△" indicates warning (transmission to iPU is possible).

Category	Message (English)	Conditions	Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Indoor unit	Fan coil (indoor unit)	Outside unit	D3Ai	P Ai	HRV	AHU	Chiller	Control group	DIII Port
Common	#234:Name not setup.	When a name with the character length of 0 or blank is entered	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
	Mng. point name duplication	When an existing management point name is entered								○									
	#242:Short name not setup	When a name with the character length of 0 or blank is entered	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
	Mng. point short name duplication	When an existing management point short name is entered								○									
	#025:iPU Nb. error	When 1 ≤ iPU No. ≤ 4 is not satisfied	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○		
DIII	Port number error	When 1 ≤ Port No. ≤ 4 is not satisfied						○	○	○	○	○	○		○	○	○		
	#035:D3 address error	When [1 - 0] ≤ address ≤ [8 - 15] is not satisfied						○	○	○	○		○		○	○	○		
	D3 address duplication	When there are multiple management points with same iPU No., port No., and D3 address						○	○	○	○		○		○	○	○		
Di,Pi	Port number error	When 1 ≤ Port No. ≤ 20 is not satisfied		○	○														
	Internal Di / internal Pi address duplication	When there are multiple Di and Pi with same iPU No. and port No.		○	○														
	#277:Fail of Di-port:1 [power failure signal]	When the iPU No. = 1 and the port No. = 1		○	○														
	#278:Incorrect setup of power signal [connect UPS signal to master-iPU]	When [Used Mode] is set to [Power failure] and 1 ≤ iPU No. ≠ 1 is satisfied		○															
	#279:Incorrect setup of power signal [connect UPS signal to port 1]	When [Used Mode] is set to [Power failure] and 1 ≤ Port No. ≤ 4 is not satisfied		○															
	#099:Pulse constant setup error	When 0 ≤ [Pulse constant] < 999999 is satisfied			○														
Do	Port number error	When 1 ≤ Port No. ≤ 2 is not satisfied	○																
	Internal Do address duplication	When there are multiple Do with same iPU No. and port No.	○																
Ai	Port number error	When 1 ≤ Port No. ≤ 49 is not satisfied				○													
	Analog address duplication	When there are multiple Ai with same iPU No. and port No.				○													
	#125:Illegal maximum/minimum value	When [Min val] ≥ [Max val] is satisfied				○							○						
	Analog type error [Unfixed]	When the analog value type is unfixed												○					
	The reference Mng. point is inaccurate	When the Ai measurement target management point is unfixed												○					
	iPU number differs from the Reference Mng. point's iPU number.	When the Ai measurement target management point does not match the iPU No.												○					
	Analog type error [Invalid]	When the analog type is not a target of analog value acquisition												○					

Category	Message (English)	Conditions	Internal Do	Internal Di	Internal Pi	Ai	Ao	D3Di	D3Dio	Indoor unit	Fan coil (indoor unit)	Outside unit	D3Ai	P Ai	HRV	AHU	Chiller	Control group	DIII Port
Ao	Port number error	When 0 ≤ Port No. ≤ 49 is not satisfied					○												
	Analog address duplication	When there are multiple Ao with same iPU No. and port No.					○												
	#126:Maximum Value lower than minimum value	When [Term Min.] ≥ [Term Max.] is satisfied					○												
	Displayed upper limit is less than displayed lower limit	When [Max of op.] ≥ [Min of op.] is satisfied					○												
	Displayed upper limit is more than maximum value	When [Max of op.] > [Term Max.] is satisfied					○												
	Displayed lower limit is less than minimum value	When [Min of op.] < [Term Min.] is satisfied					○												
	#282:Step of analogue point is too small	When analog type temperature and Celsius and instruction accuracy < -1					○												
	#281:Step of analogue point is too large	When analog type temperature and Celsius and instruction accuracy > 0					○												
	#282:Step of analogue point is too small	When analog type temperature and Fahrenheit and instruction accuracy < 0					○												
	#281:Step of analogue point is too large	When analog type temperature and Fahrenheit and instruction accuracy > 0					○												
	#281:Step of analogue point is too large	See *1.					○	*1: When ((([Term.Max] - [Term.Min]) / 0xfff) / 10^ [instruction accuracy]) > 9.0, 0xfff is a resolution of COMPO-BUS. *2: When ((([Term.Max] - [Term.Min]) / 0xfff) / 10^ [instruction accuracy]) > 1.1, 0xfff is a resolution of COMPO-BUS.										
	#282:Step of analogue point is too small	See *2.					Δ												
Indoor unit	#273:Incorrect temperature-restriction in cooling [max<min]	When the minimum cooling value > maximum cooling value								○	○								
	#274:Incorrect temperature-restriction in heating [max<min]	When the minimum heating value > maximum heating value								○	○								
Outdoor unit	#089:Demand address error	When 0 ≤ demand address ≤ 32 is not satisfied										○							
	Outdoor unit demand address duplication	When there are multiple outdoor units with same demand address										○							
Air handling unit	Setting humidity upper /lower limit err	When the humidity upper limit ≤ humidity lower limit														○			
Control group	Control group name duplication	When an exiting control group name is entered																○	
	#160:Invalid Mng. Pt. in the control group :	When there is no management point which belongs to the control group member																○	
DIII Port	Mng. point does not exist on D3 port	When a management point does not exist on the D III port																	Δ
	D3 port does not exist	When the D III port does not exist while the management point exists																	○
	Equipment and A/C are sharing a D3 port	When an air conditioner and equipment co-exist on the same port *3																	Δ
	Central and A/C are sharing a D3 port	When an air conditioner and central equipment co-exist on the same port *3																	Δ
	Equipment and Central are sharing a D3 port	When equipment and central equipment co-exist on the same port *3																	Δ
	D3 port address duplication	When a D III port with same iPU No. and port No. exists																	○

*3: Air conditioner: indoor unit, outdoor unit, HRV
Equipment: D3Di, D3Dio, D3Pi, D3Ai
Central equipment: AHU, chiller

Appendix D. iPU Data List

■ A list of data to be set by the iPU setup tool is shown below.

Item	Sub item	Default value
Host name	Master	—
	Slave 1	—
	Slave 2	—
	Slave 3	—
IP address	Master	192.168.0.1
	Slave 1	192.168.0.2
	Slave 2	192.168.0.3
	Slave 3	192.168.0.4
Sub network mask	Master	255.255.255.0
	Slave 1	255.255.255.0
	Slave 2	255.255.255.0
	Slave 3	255.255.255.0
Default gateway	Master	—
	Slave 1	—
	Slave 2	—
	Slave 3	—
Primary DNS	Master	—
	Slave 1	—
	Slave 2	—
	Slave 3	—
Secondary DNS	Master	—
	Slave 1	—
	Slave 2	—
	Slave 3	—
Web port number		80
Temperature display type		Celsius
UPS power failure signal		Contact A
Periodical save time 1		1:00
Periodical save time 2		—
Periodical save time 3		—
Periodical save time 4		—
Time zone		Following the time zone setting of the PC in which the trial operation tool is activated.
Availability of DST		
Weekly DST	Start month	
	Start week	
	Start day	
	Start time	
	End month	
	End week	
	End day	
	End time	

Part 3
Power Proportional Distribution (Commissioning Manual)

1. Configuring the Power Proportional Distribution 252
   1.1 Overview 252
   1.2 Setting up the iPU Connections 253
   1.3 Configuring the Distribution: 253
2. Notes 261

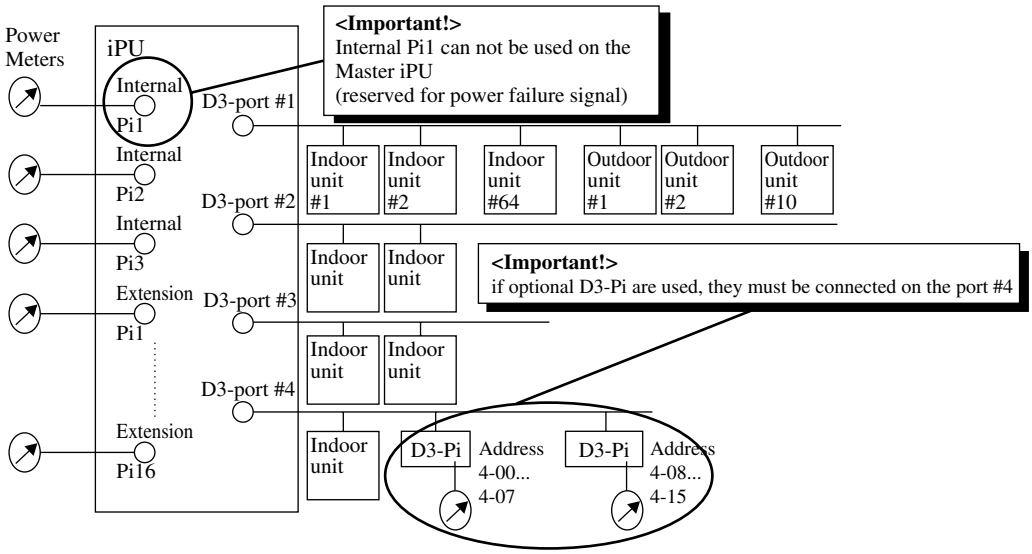
1. Configuring the Power Proportional Distribution

1.1 Overview

Note: In this chapter, the term distribution stands for power proportional distribution.

This function distributes the power used by outdoor units between the connected indoor units and equipment.
The power consumption of the outdoor units is measured on Pulse Input management points.
The relative power consumption of the indoor units is calculated from their operation time and mode, level-headed with model related coefficients.

The figure bellow illustrates the wiring capacity and constraints for the distribution function:



Although most of the distribution configuration is carried out by using the dedicated engineering tool, some configuration steps are performed during the configuration of the intelligent Manager system:

- in Step 1 for intelligent Manager system and management point attributes: this step should have been already performed in Step 1,
- in Step 2 for distribution scheduling: for operational execution, the days and hours where distribution is performed must be set up; this step can be performed later when configuring the intelligent Manager application in Step 2.

1.2 Setting up the iPU Connections

Setting up the Pulse input units (Pi)

To set the measurement of the pulse input in accordance with the intelligent Manager software computation function, the following steps must be performed:

- Set the pulse constant,
- Set the pulse meter initial value.

1.3 Configuring the Distribution:

The remainder of this chapter reviews the settings required for the distribution. Please refer to the related documentation for detailed explanation.

1.3.1 Setting up the intelligent Manager System

When setting up the intelligent Manager system in Step 1, some attributes must have specific values:

- Power supply,
  - Check the **UPS** box,
- iPU Option Info,
  - check the **Power Proportional Distribution** box,
- calculation result backup frequency,
  - in the **Time to Save frame**, enter time at which backup time is perform (up to four times a day; default value is midnight),
- iPU attributes and DIII-Net ports,
  - See wiring diagram a the beginning of the chapter,

1.3.2 Registering the Management Points

When registering the management points in Step 1, some attributes must have specific values:

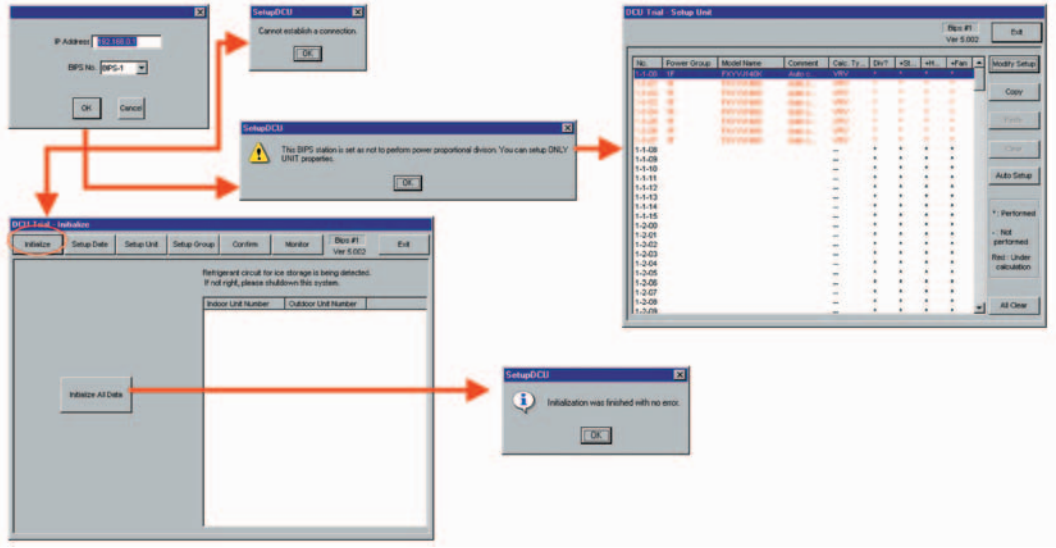
- Indoor units:
  - Check the **Power Proportional Distribution** box,
- Internal Pulse Input:
  - Value Multiplier: must be set to **1**,
  - Unit Rate: must be set to **1** or **10**,
  - Signal Length: must be set to **100ms**.

1.3.3 Using the Distribution Engineering Tool

Note: Repeat the following procedure for each iPU

The procedure below performs steps for configuring of the distribution environment, executing the distribution calculation and checking the result.

1.3.3.1 Starting and connecting the engineering tool



Use Microsoft Windows Explorer to access the bin\ folder of intelligent Manager and double-click on the SetupDCU.exe module to start the engineering tool. Then perform as follows:

- Enter the IP address of the master iPU,
- Select which iPU you want to configure (iPU 1= master, iPU 2-4= sub-iPUs),
- Click the Ok button; the main screen displays with the top menu,
- Perform the distribution engineering stages as explained below by clicking the top menu buttons.

Caution: **Always connect to the master iPU. Never connect directly to a sub-iPU.**

1.3.3.2 Initializing the engineering data

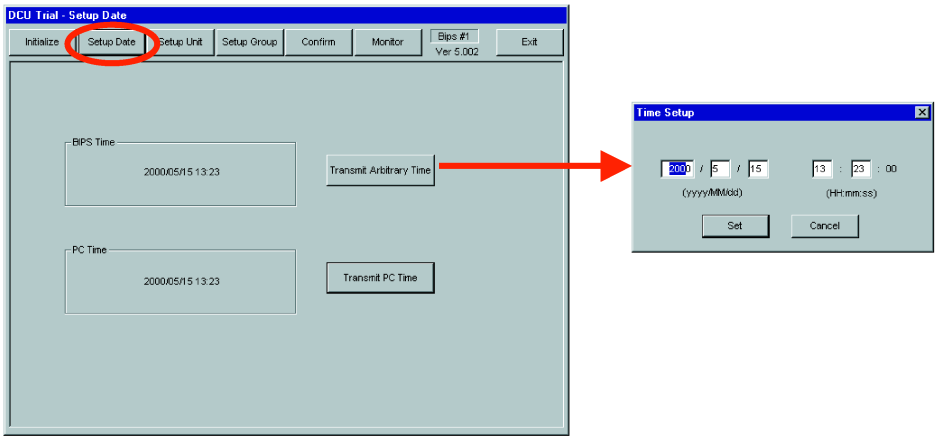
Click the **Initialize Data** button of the top menu. The **Data Initialization** screen displays. This procedure automatically scans the installed indoor and outdoor units and recognizes their addresses.

When engineering the system for the first time, click the **Initialize All Data** button.

Caution: Clicking the Initialize All Data button will reset all the previously created distribution configuration data. This button should be used precociously.

Note: The list on the right side of the window is intended only for ice-storage equipment. Normal A/C equipment is not to be displayed in this list.

1.3.3.3 Adjusting the iPU time

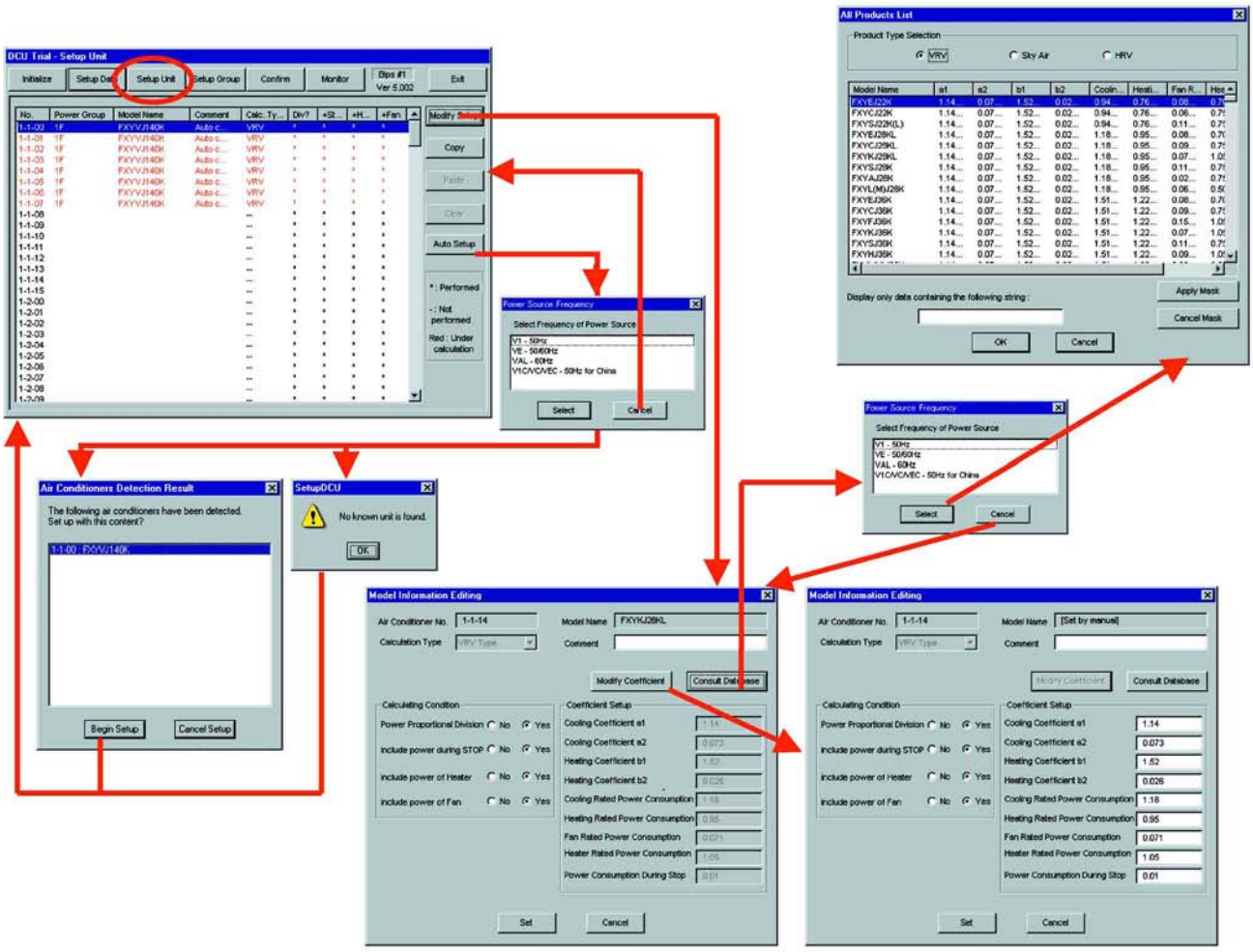


Click the **Setup Time** button of the top menu. The **Setup Time** screen displays.
This procedure adjusts the iPU time either from the PC time, or from an arbitrary entered time:
* Click the Transfer PC Time button
or

- Click the Transfer Arbitrary Time button; the Time Setup dialogue displays,
  - Enter the date and time,
  - Click the OK button; the **Time Setup** dialogue closes,
- End of time procedure.

Important A substantial modification of the time in the iPU may affect the stability of the automatic control functions: schedule, etc.

1.3.3.4 Setting up the units



Click the **Setup Units** button of the top menu. The **Units Setup** screen displays.
This procedure automatically browses the model knowledge data base (provided with intelligent Manager) to set the distribution coefficients of the detected units according to their model. Moreover, manual setup is possible for tuning or for units which model is not in the database.

Important As the power frequency must be selected before setting up the units (either automatically or manually), a dialogue box displays for this purpose. Please refer to the actual site conditions to select the relevant value.

Caution: The power frequency cannot be changed after selection. In case of wrong selection, exit completely from the engineering tool and restart.

1.3.3.4.1 Setting up Automatically

- Click the Automatic Setup button; the engineering tool browses the data base and displays the result of the search in the Detection Result dialogue box,
- Click the Begin Setup; the tool affects the data base coefficients to the detected units,

Note: As the coefficients can not be overwritten, click beforehand the Clear button to reset them if necessary.

1.3.3.4.2 Setting up Manually

If some units models were not detected, they can be set up individually:

- Select the unit from the list,
- Click the **Modify Setup** button; the Manual Setup dialogue displays,
- Enter the coefficients of the unit;
  - If coefficients of an existing model are to be reused:
    - Click the Browse Database button; the All Products List dialogue displays,
    - Select a model,
    - Click the Ok button; the product list closes and the coefficients are displayed in their fields
  - Click the **Setup Coefficients** button; the unit name is automatically replaced by the **Manual Input** label,
  - Enter or modify the coefficients of this unit,
- Select the options for distribution when:
  - operating,
  - Idling (see note below),
  - Heating mode,
  - Fan only mode,
- Select the calculation method option (please refer to the relevant technical documentation when necessary):
  - VRV (normal),
  - HRV (Heat Reclaim Ventilation)
  - General Purpose Adapter,
- End of manual setup procedure.

Caution: Entering invalid coefficients may affect the reliability of the distribution calculation.

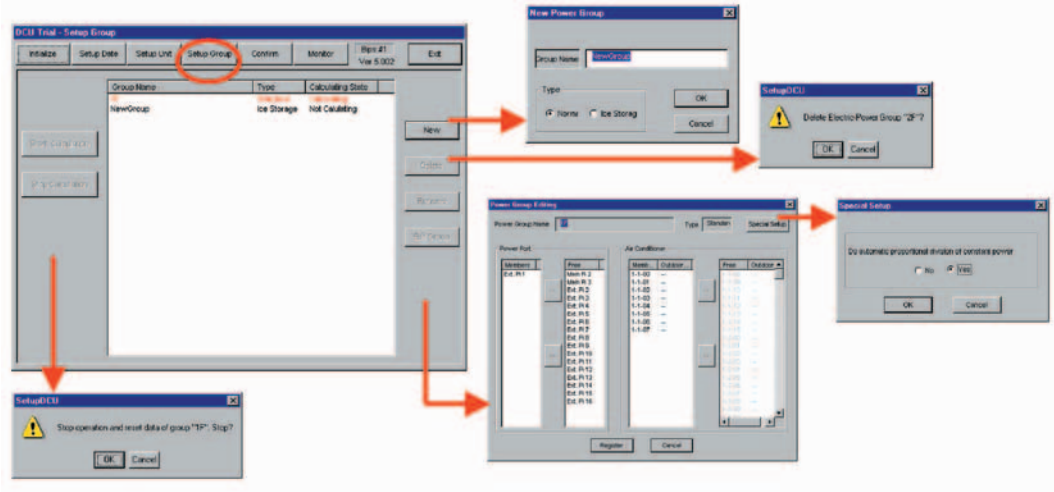
Note: If the **Idling** option is checked, the power consumed during **Stop** state is append to the calculation result. But if not checked, it is stored individually as "power during **Stop** state".

1.3.3.5 Setting up the power groups

This procedure performs configuration of groups of units related to the same distribution power source.

Click the **Setup Groups** button of the top menu. The **Groups Setup** screen displays.

Important Only the points connected to the targeted iPU can be registered in its power groups.



- If necessary, create a group:
  - Click the **Create Group** button; the **Group Name Setup** dialogue displays,
  - Select the type of group (intelligent Manager makes use only of the Normal type and does not support ice-storage type), enter the name of the group, then click the **Ok** button; the dialogue closes,
- Select a group from the list, then click the **Edit Group** button; the **Power Group Edition** dialogue displays,
  - Select ports from the **Available** and **Registered** Power Ports list and click the << and >> buttons to add and remove them in this group,
  - Select units from the **Available** and **Registered** Indoor Units list and click the << and >> buttons to add and remove them in this group (unconnected units are grayed out and can not be selected),
  - Select the **Special Setup** option, whether or not to perform automatic power distribution for equipment with constant consumption type (HRV, General Purpose Adapter):
    - Click the **Special Setup** button, the **Special Setup** dialogue displays,
    - Select the **Yes** or **No** option,
  - Click the **Register** button; the **Power Group Edition** dialogue closes,
- End of group configuration.

Note: Availability of power groups is as follows: internal=1-3, extension=1-16. Moreover, with the additional DIII board, 16 pi points are available (a/c address is 4-00 to 4-15 of DIII-port #3)

1.3.3.6 Calculating the power groups data

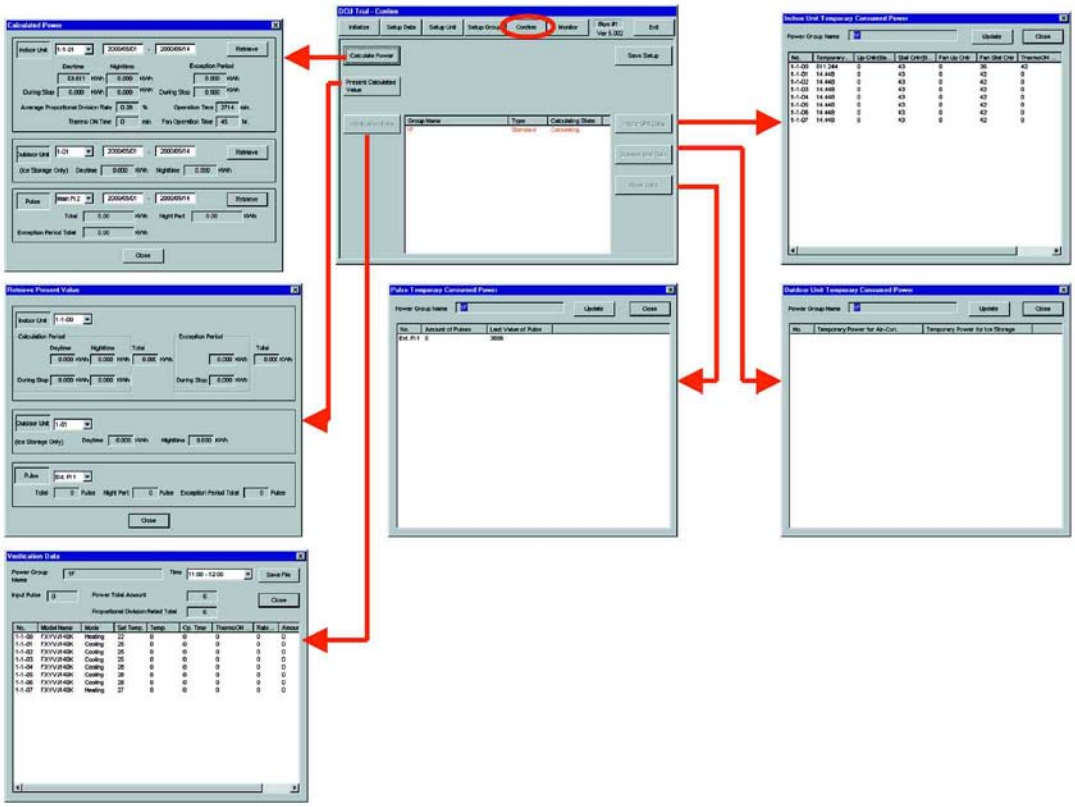
Click the Start / and Stop calculation buttons

Caution: When stopping the calculation of a power group, the calculated data of the last day will be cleared when starting the next calculation.

Note: The groups under calculation are displayed in red color.

1.3.3.7 Checking the calculation result

This procedure allows inspection of the calculation result of a power group items.
Click the **Confirm** button of the top menu.

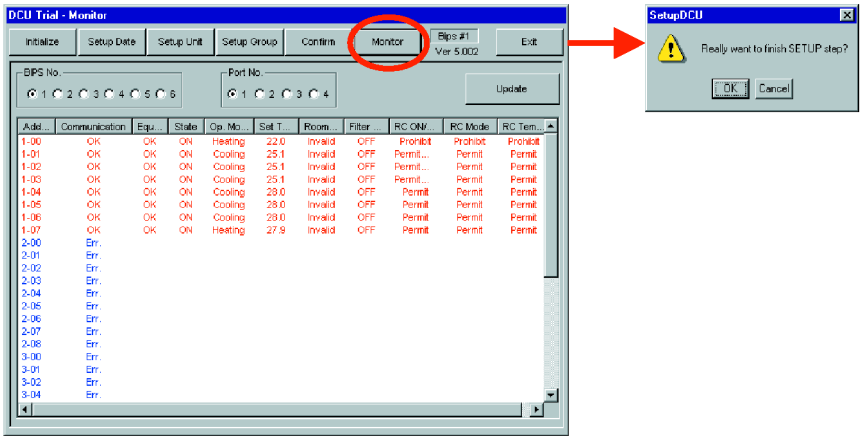


This procedure performs configuration of groups of units related to the same distribution power source.
Click the **Setup Groups** button of the top menu. The **Groups Setup** screen displays.

Note: The **Total** of Indoor Unit in **Present Calculated Value** is the total amount of power consumed since the start of calculation.

Note: The values of **Indoor Unit Data, Outdoor Unit Data** and **Pulse Data** are internal information intended for developers only. Therefore, they should be used only to confirm result increasing.

1.3.3.8 Other trial functions



1.3.3.8.1 Monitoring air-conditioners

1.3.3.8.2 Adjusting Pulse Input Measurement

1.3.4 Configuring the Distribution Schedule

When setting up the system options of intelligent Manager application in Step 3, some attributes of the scheduling for operational distribution exclusion must have specific values:

- In the calendar: the special days when distribution is performed (no exclusion at all during each of these days),
- for every day of the week : distribution exclusion option and period.

Caution: If an exclusion schedule is set, the amount of consumed power is not equal to the amount of input pulse. This is because indoor units consume power during distribution exclusion periods.

2. Notes

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2. Any part of this document may be changed in the future without prior notice.
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Part 4
ECO Option Commissioning Manual

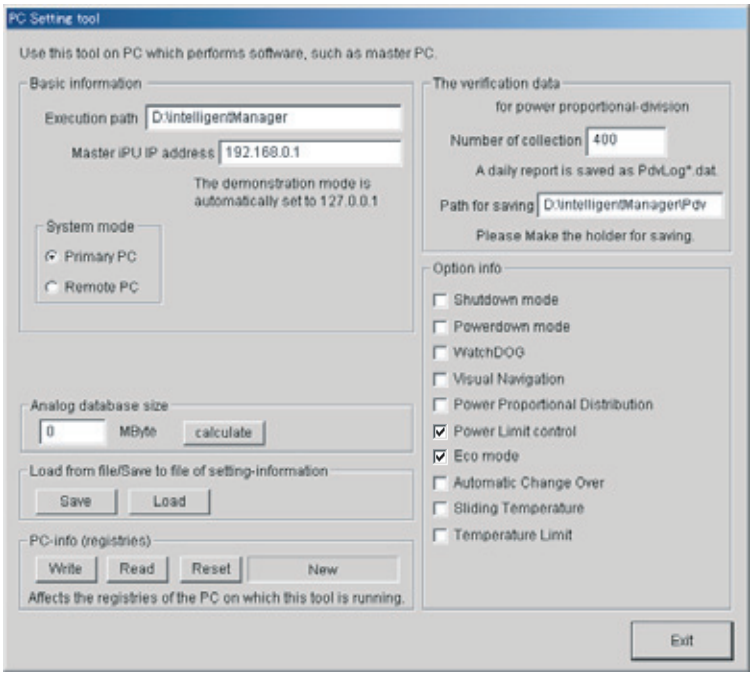
1. Configuring the intelligent Manager System 264
1.1 Configuring the PC Data 264
1.2 Configuring Energy Saving.....266
1.3 Power Limit Control 267
1.4 Eco Mode 267

1. Configuring the intelligent Manager System

1.1 Configuring the PC Data

This section describes the configuration for the start of the monitoring PC.

1. Double-click VRVSetup.exe and press the [PC setting] button from the [Engineering tool] dialog.
2. The following [PC Setting tool] dialog opens.



3. Configure the necessary items. (Please refer to the following for the configuration details of each item.)

Basic information

[1] Execution path : Location folder of the binary files of intelligent Manager VRV.exe and VRV-Demo.exe.
(.e.g., D:¥intelligentManager.)

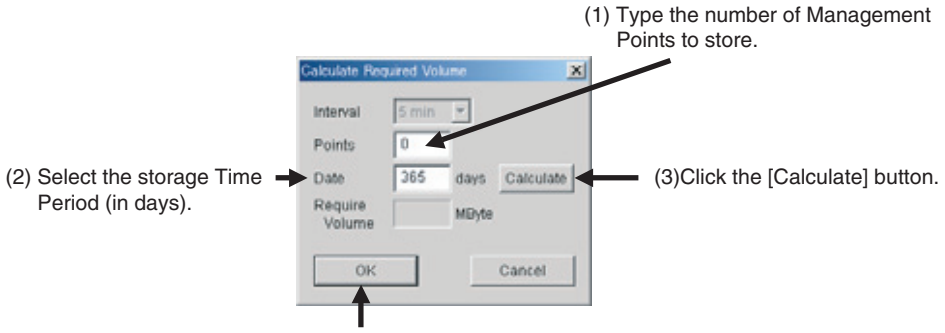
[2] Master iPU IP address : should be 192.168.0.1, except for the demo mode (127.0.0.1).

[3] System mode : Select the PC Master/Remote option.
should be Master (Remote only for PC running the separate option intelligent Manager-Remote over telephone line or sub-PC over Local Area Network).

Analog database (the rotation database) size : Reserve the size for the rotation database of analogue data.

There are two types of databases used to save the analog management point data.
One does not have an upper limit on the database size, the other is the rotation database which has an upper limit.
With the rotation database, the old data is deleted and new data is added when exceeding the upper limit.

The size of the rotation database can be configured as shown below.

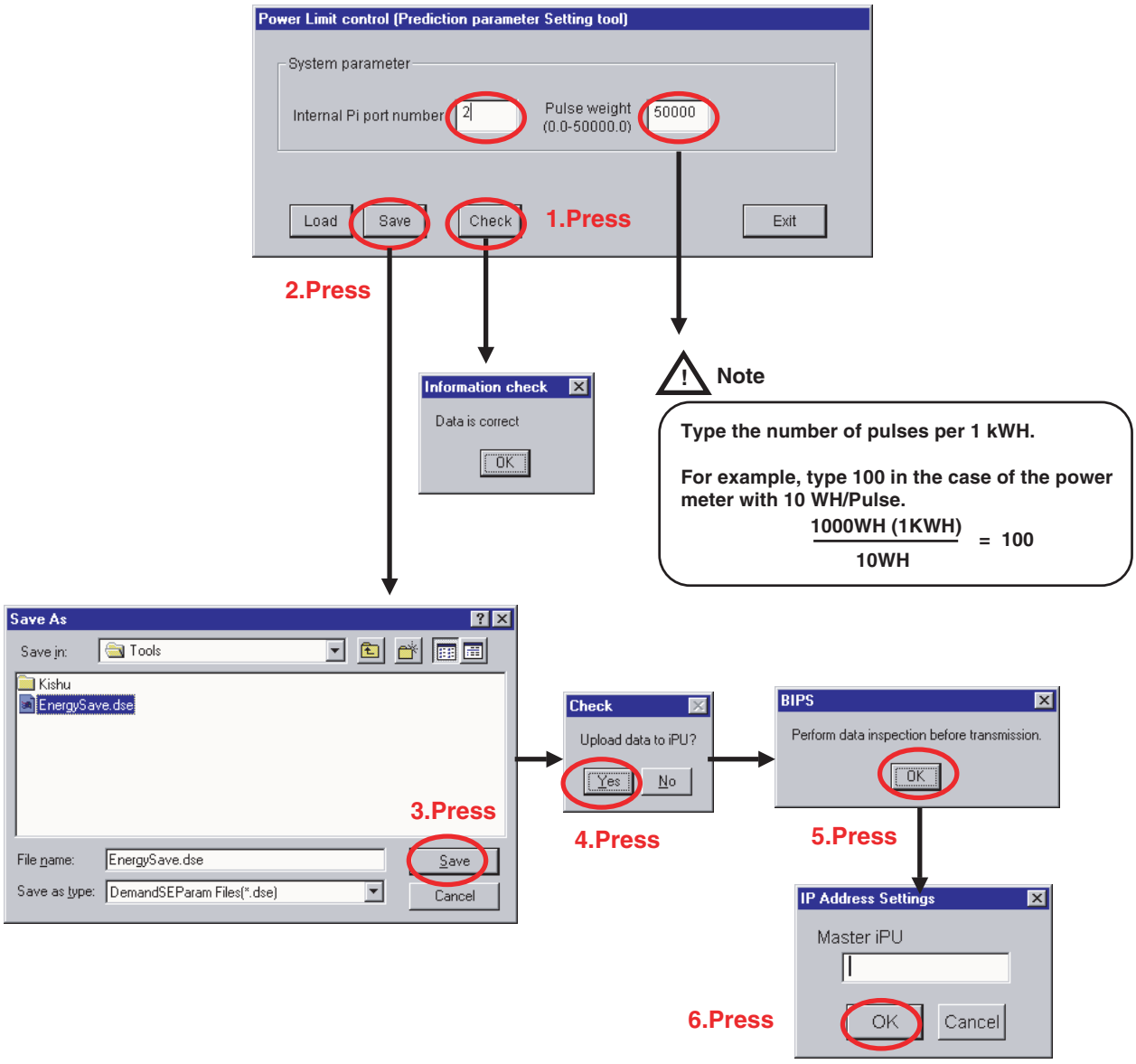


To save the analog management point data to the rotation database, please refer to (4)Ai[26], (8)D3Ai[28], and (9)PAi[25] of [Appendix F: Configuration items for management point data].

1.2 Configuring Energy Saving

This procedure performs definition of the Pulse Input management point used to measure the power trend for the energy saving function(Power Limit Control).

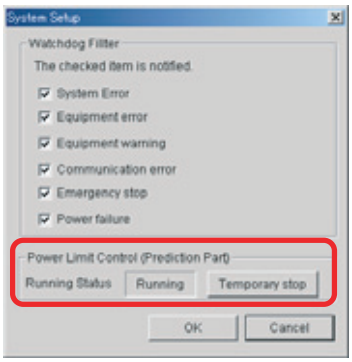
1. Double-click VRVSetup.exe and press the [Power Limit Control setting] button from the [Engineering tool] dialog.
2. Enter the port number of the Pulse Input point used to measure the power consumption, and the pulse weight (weight of an pulse in kWh).
3. After inputting these data, click the [Check] button to verify their validity and then the [Save] button to transfer them to the iPU.



Note: You can also import an existing configuration of PPD parameters settings.
Click the [Load] button and specify the path to a management points file(extension .dse)

1.3 Power Limit Control

This optimizes power consumption based on a target power by changing settings of indoor units (set temperature and Start/Stop).
The function can be temporarily deactivated from the System Setup menu as shown below (accessible only from the mouse right button click when logged in as Service as explained in **8.1 Login in intelligent Manager**).



Please see operation manual for details of operation.

1.4 Eco Mode

This switches indoor units Off and On intermittently, and modifies the capacity of outdoor units.
Please see operation manual for details of operation.

Part 5 intelligent Manager Operation Manual

1. Before Use 270
1.1 The features of intelligent Manager 270
1.2 Important Notes 270
1.3 Functional Outline of intelligent Manager 271
2. Basic Screen and Screen Directory 272
2.1 Basic Screen Layout 272
2.2 Screen Directory 273
3. Starting and Stopping Operation of intelligent Manager 275
3.1 Starting Operation 275
3.2 Stopping Operation (up to Power Supply OFF) 276
3.3 Power Failure Management: Automatic Stop/Restart 276
3.4 Emergency Stop Management: Fire State/Release 277
4. Logging in/Logging out 278
4.1 Logging in 278
4.2 Logging Out 278
5. Operation Details 279
5.1 Management Groups 279
5.2 Control Groups 294
5.3 Visual Navigation 298
5.4 Setting the Schedule 300
5.5 Interlocking Function 312
5.6 Data Management 322
5.7 System options 338
5.8 Moving between Screens 359
5.9 Help 362
5.10 Malfunction Display and History Management 363
5.11 Energy saving Functions (Option) 366
5.12 Web Functions (Option) 372
6. Database Maintenance 385
7. Troubleshooting 387

1. Before Use

1.1 The features of intelligent Manager

Most operations are possible by a mere click of the left mouse button!
Although intelligent Manager may be operated via keyboard input of characters or numerals onto a set-up screen, all usual monitoring and control can be carried out using only the mouse. All operations – indicated on the screen by clicking a button, partially displaying a management point list, displaying a pull-down menu, selecting one icon or a single item from a detailed menu – may be carried out by moving the mouse pointer to the appropriate place and single-clicking the left mouse button.
If intelligent Manager is started up from a desktop computer screen, some operations may need to be accessed by a double-click (two clicks in quick succession).

Hereafter throughout this document, buttons displayed on the screen will be depicted enclosed within a rectangle, ex: **Start**.

1.2 Important Notes

Please ensure that the PC software is always started up and that the energy-saving mode has not been enabled.
If the energy-saving mode has been set up, information generated may not be recorded in intelligent Manager.

Do not install other application software.
intelligent Manager software is designed exclusively for monitoring. Please be aware that, as the installation of other OA software may cause interference, we would be unable in such a case to guarantee correct functioning.

Switchover to UPS (Uninterruptible Power Supply) and Automatic Shutdown in the case of power failure.
If the system has switched over to UPS and usual power supply has not been restored after a predetermined duration, intelligent Manager automatically shuts down. However, if other application software is started up, the PC power supply may be cut off before the correct shutdown procedure has been carried out, resulting in operational data not being properly saved.

Use ‘small font’ size.
intelligent Manager requires that a ‘small font’ be used. (To set up and check: click the right mouse button in the background of Windows > select properties > display details > font size > select ‘small font’).

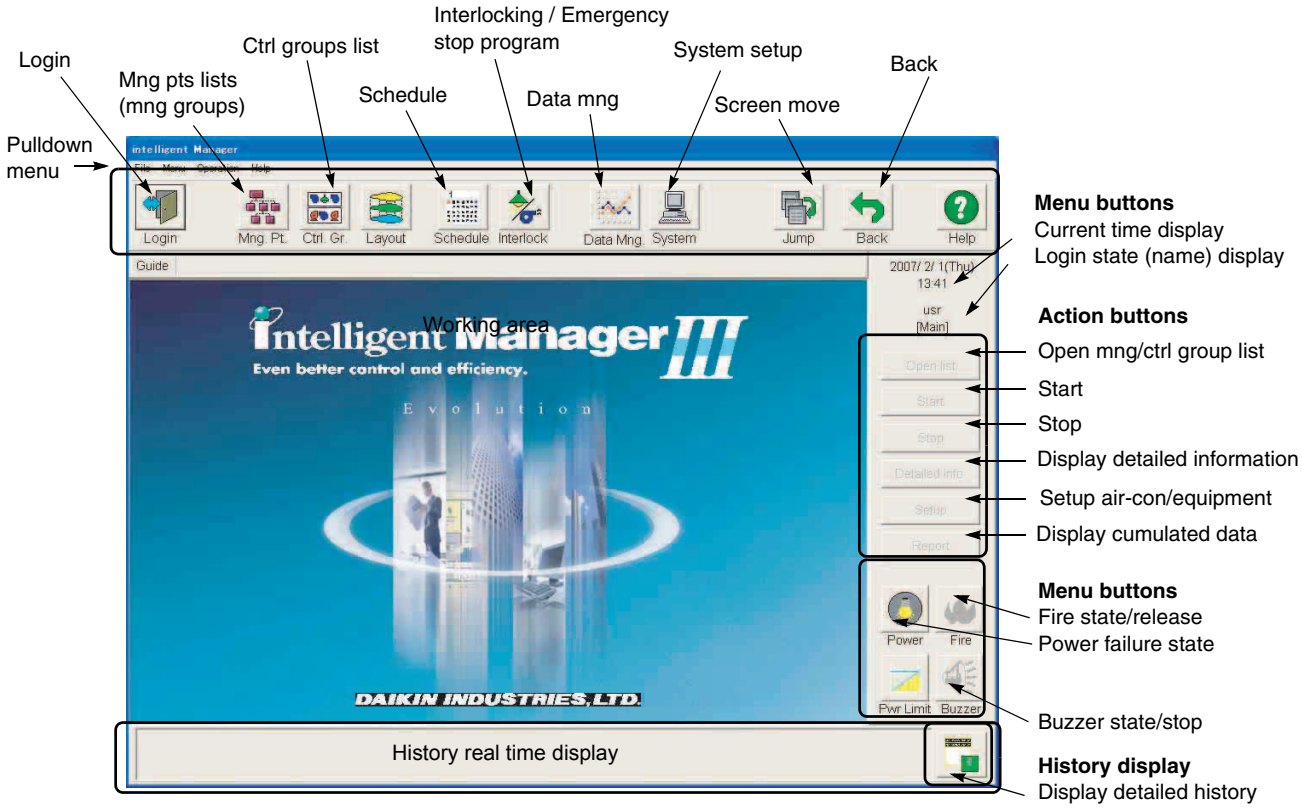
1.3 Functional Outline of intelligent Manager

Note: Depending on the organization of your system, some functions may be inaccessible.

Type	Name	Outline
Monitoring	■ Management Point State Monitoring ■ Analog Maximum/Minimum Limit Monitoring	■ Monitors state of management points (operation mode, abnormalities). ■ Monitors any excess of the pre-determined maximum/minimum measured values of analog management points.
Display	■ Management Point State Display ■ Control Group Display ■ History Display	■ Displays information related to management points. ■ Displays the history of malfunctions detected in the system, warnings, conditions, start/stop operations. ■ Displays each control group.
Operation	■ Individual Start/Stop ■ Control Group Collective Start/ Stop ■ Operation Mode Setup ■ Temperature Setup ■ Remote Control Operation Setup ■ Reset Filter Sign ■ Centralized Control Setup	■ Starts/stops each management point individually. ■ Collects more than one management point together (control group) and performs collectively starts and stops a control group. ■ Sets up air-conditioner operation mode (fan, cooling, heating). ■ Sets up temperature of air-conditioner. ■ Sets up air-conditioner action mode via remote control instructions. ■ Resets air-conditioner filter sign. ■ Sets up permission/prohibition of user operation via centralized control equipment.
Control	■ Schedule Control ■ Interlocking Control ■ (In case of fire etc.) Emergency Stop Control ■ Power failure release control	■ Carries out control of management points in accordance with a setup schedule. ■ Interlocks operation state, error state etc. of a given management point to control other management points and groups. ■ When the emergency signal is received, carries out (emergency stop) control for emergency alert and to prevent spread of fire etc. ■ Carries out management point control in accordance with the state and setup before power failure when power is restored.
Measuring	■ Automatic Meter Reading ■ Operation Time & Cumulative Number of Start/Stop ■ Analog Measuring (projected)	■ Deals with cumulative pulse values of electric power, water, gas meters etc. ■ Cumulates equipment operation time, number of Start/Stop to facilitate maintenance. ■ Measures, displays and monitors temperature, humidity, pressure, voltage, amperage etc.
Client Data Management	■ Simple Tenant Management ■ Collected Measurement Data	■ Links management points with tenants. ■ Retrieves itemized data of tenant-linked management points.
Misc.	■ Screen Movement ■ Password Setup ■ Support Function for Creation of Management Groups ■ Support Function for Creation of Control Groups ■ Switching between Celsius and Fahrenheit	■ Enables reservation for movement between screens at will. ■ Carries out password setup/confirmation to confirm operation authority. ■ Enables creation/deletion of management groups and registration/modification of management points within a management group. ■ Enables creation/deletion of control groups and registration/modification of management points within a control group. ■ Temperature can be displayed in either Celsius or Fahrenheit.
Remote access	■ Web function (option)	■ Air conditioner can be monitored and operated via Web browser on PC in the network. ■ Schedule can be set via Web browser. ■ Notifies by mail when any malfunction is found.
Monitor malfunction remotely	■ E-mail function (option)	■ If a malfunction occurs, the occurrence date and time, the air conditioner, and the malfunction code are sent to the preset E-mail address. You can set up to three E-mail addresses.

2. Basic Screen and Screen Directory

2.1 Basic Screen Layout



This consists of: menu buttons, action buttons, the message window and the working area.

Menu buttons: buttons used to call up various functions. They are operational at all times and in any screen menu.
Action buttons: buttons used to govern operations such as ‘start’ and ‘stop’.
Message window: the window in which history abnormalities are displayed in real time.
Working area: the area in which the functions called up by the menu buttons are displayed.

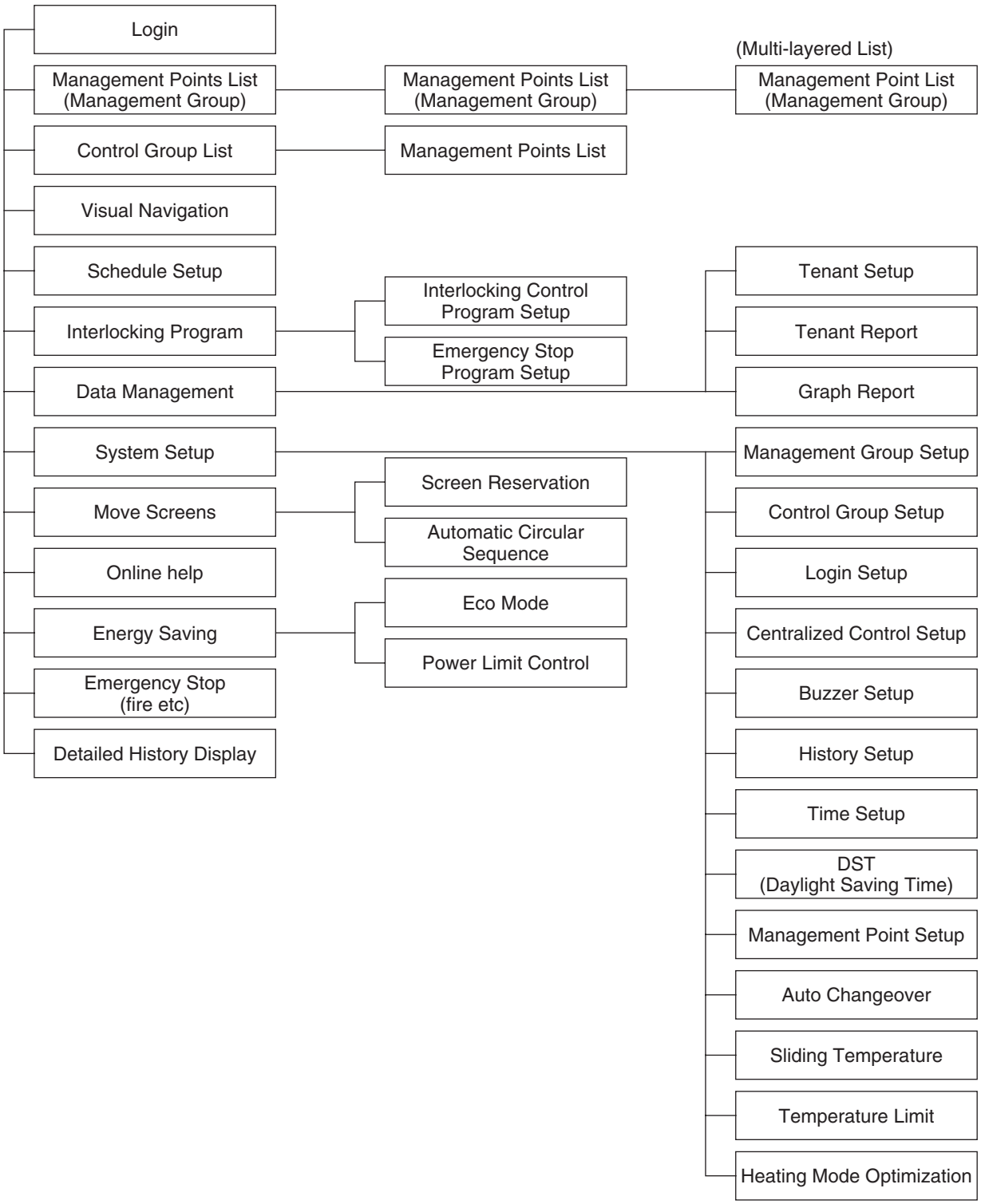
The pull-down menu may be used to execute the functions of menu buttons and action buttons.

Action Buttons
An action button is enabled only when it can be operated according to a selected management point, control group or management group. When it is not operational, it is displayed in light gray, thereby indicating the operation’s disabled state (gray-out).
An action button can be clicked, but not operated without operation authority (a warning will appear).
When an action button is clicked and an operation applied to an air-conditioner or equipment (start, stop, setup), a confirmation dialog appears to prevent incorrect operation (this dialogue display can be deactivated by initial setup).
If the **Back** button is clicked, it will revert to the screen displayed immediately beforehand.

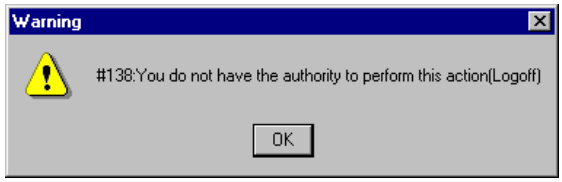
2.2 Screen Directory

In a dialog, when **OK** and **Cancel** buttons exist, the operation may be cancelled. However, when an operation within a dialog may not be cancelled a warning appears to this effect. If the operation is pursued, the **Cancel** button is grayed out and cancellation is no longer an option.

If buttons such as **Open list** or **Detail** are selected from a functional menu screen, the screen will appear as in the structure shown below.



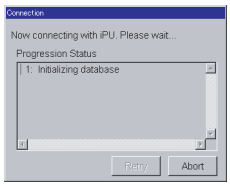
Note: Depending on the organization of your system (user login and function access restriction), some functions shown in the figure below may be inaccessible. Those buttons with functions that cannot be used are either grayed out or will display the warning below.



3. Starting and Stopping Operation of intelligent Manager

3.1 Starting Operation

intelligent Manager starts up automatically when the PC power supply is turned on, as shown below.

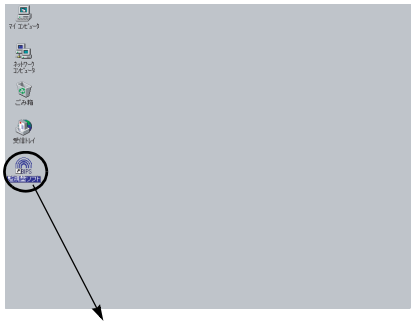


During the booting procedure, a progression status window appears. The booting time is function of the configuration (number of automatic control programs, etc.) and can last from a few seconds up to more than one minute.

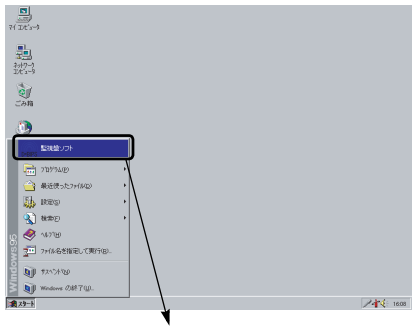


(Screen immediately after start up)

In the case of manual start up, double-click on the 'intelligent Manager' icon of the desktop or select 'intelligent Manager' from the Start Menu.



Double-click on the icon

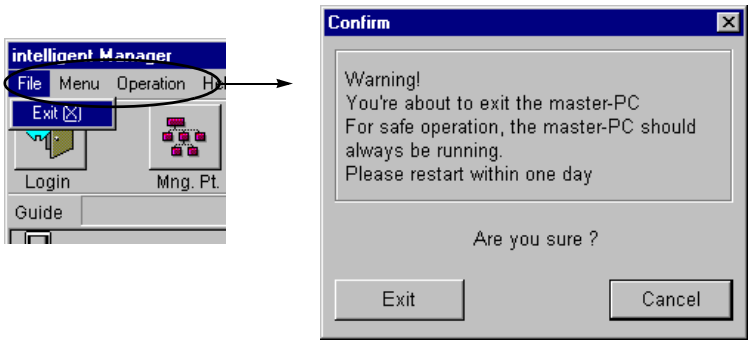


Select 'intelligent Manager'

3.2 Stopping Operation (up to Power Supply OFF)

Turning off the PC power supply must be done in two stages: exiting intelligent Manager and exiting Windows.

To exit intelligent Manager
Select **Exit intelligent Manager** from the File Menu.

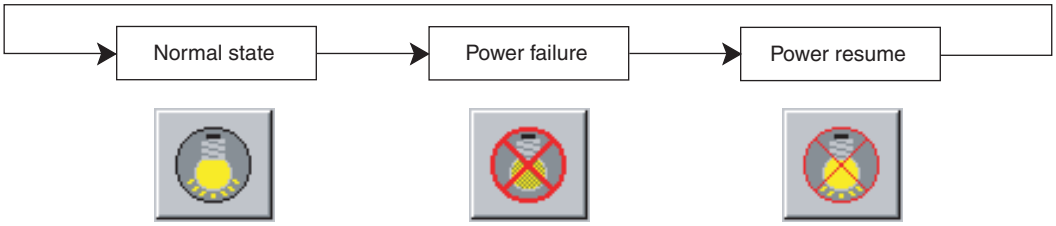


A dialog box will be displayed as shown above.
Click on the **Exit** button to exit intelligent Manager.
As the system is intended to operate constantly, if exited it should be restarted within one day.

Windows can then be exited.

3.3 Power Failure Management: Automatic Stop/Restart

The intelligent Manager is designed for continuous operation. Therefore, automatic shutdown is carried out in the case of power failure lasting more than about 10 minutes. As well, automatic restart can be carried out when the power has been restored.
When the iManager detects a signal of power failure, the state of the power indicator changes as shown below:



When the power failure occurs, the data of the Station are saved locally (operation state of management points, etc.). When the power is restored, the data are read out from the memory so that the system can be restarted in its previous state. During this time period (about 10 minutes), automatic control functions of the intelligent Manager system are deactivated (scheduling, interlocking and emergency stop programs).

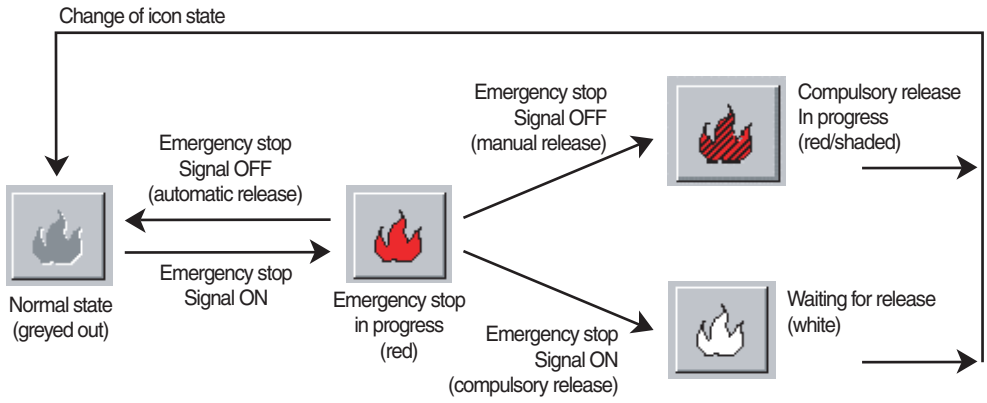
3.4 Emergency Stop Management: Fire State/Release

When an Emergency Stop signal is received, the state of the fire icon will change.
During an emergency, clicking on the fire icon will display the dialog for carrying out forced release.

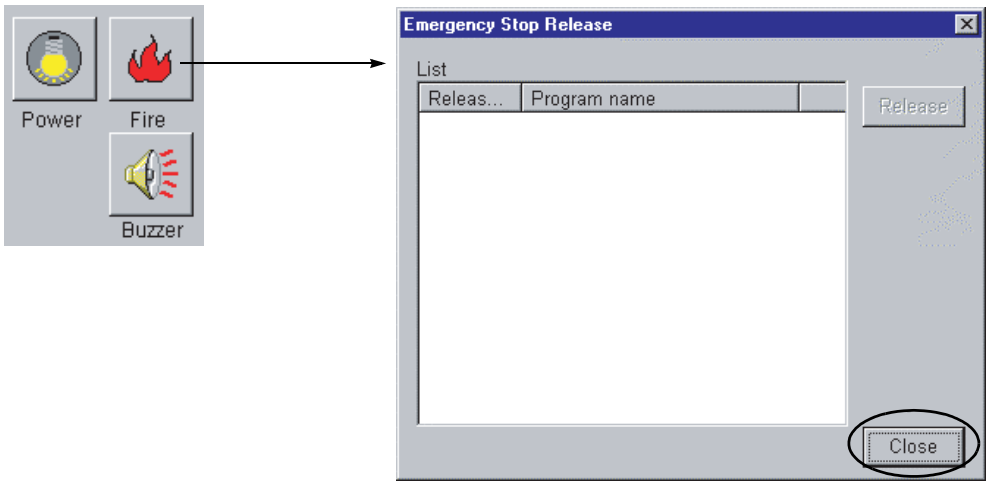
[Forced Release]

If the Emergency Stop signal turns out to be a false alarm (such as test run or under maintenance), a forced release function can be used.
If the Emergency Stop program is specified from the monitoring software and the [forced release] performed manually, the Emergency Stop program will be canceled irrespective of the release mode (automatic/manual) setup.

In the case of a program monitoring multiple input, even if a separate monitoring signal appears after forced release has been carried out, the emergency stop will not be started up.
(If all signals have not been turned off following the forced release, the emergency stop will not be restarted up).
Operation authority is required to carry out release (forced/manual) operations.
Please refer to **5.7.3 Configuring user Login** (p. 345).



To execute release, select activated Emergency Stop program and click **Release** button.

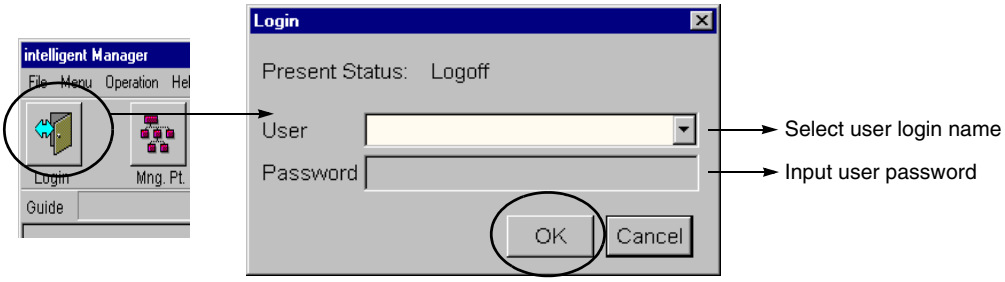


4. Logging in/Logging out

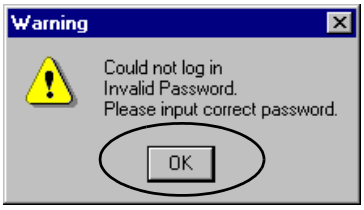
intelligent Manager may be operated in accordance with the range of authority selected by the user when logging in. (If login is not carried out, functions are confined to monitoring). For details on login setup, please refer to **5.7.3 Configuring user Login** (p. 345).

4.1 Logging in

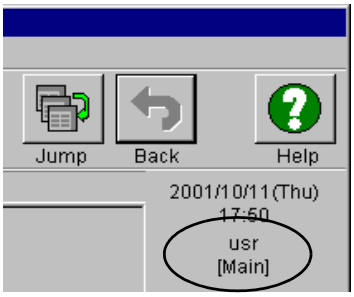
Login is carried out according to user classification settings.



Click on the **Login/out** menu button to display the login dialog box.
Select a login name and enter password
Click on **OK** button to log in.

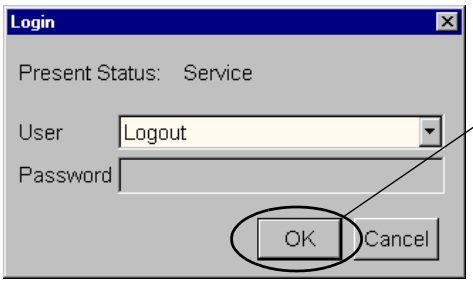


(if the password is incorrect, a message box is displayed.)



4.2 Logging Out

Logs out from login status.



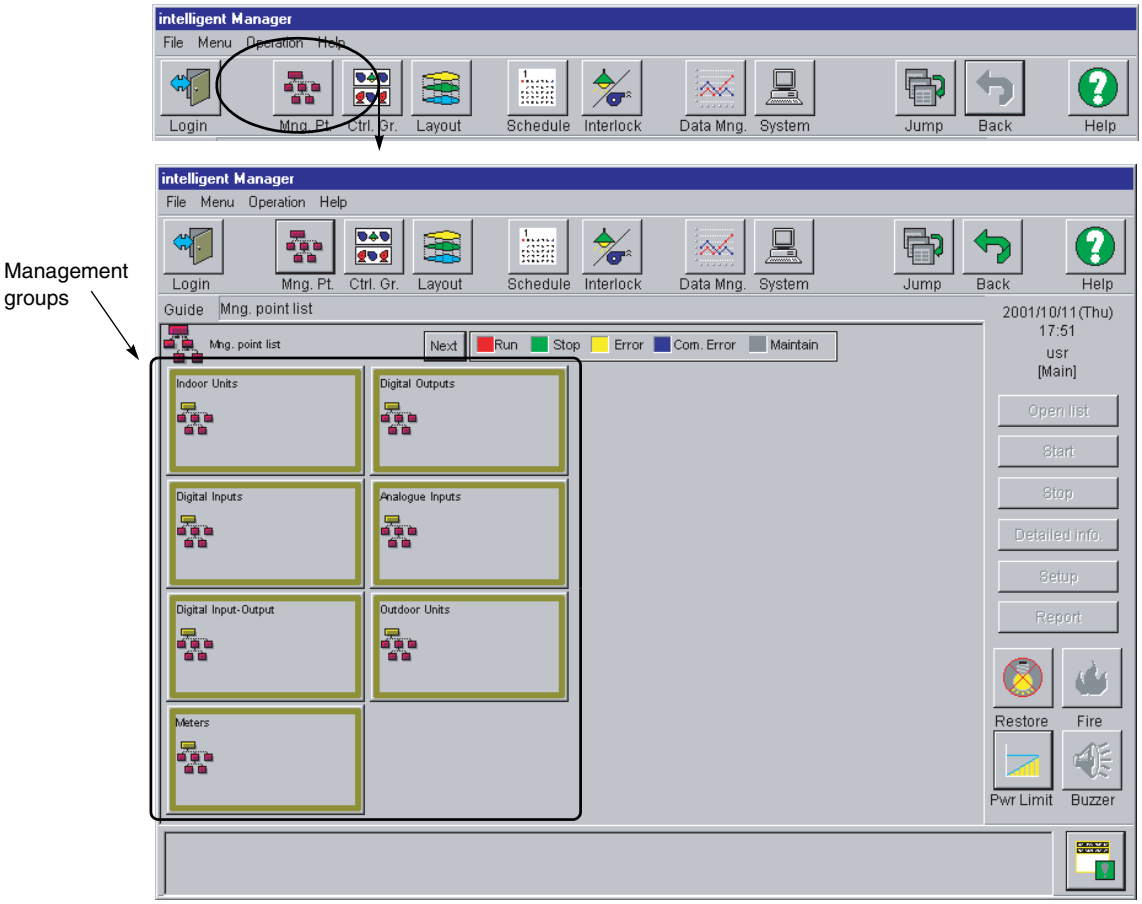
While logged in, click on **Logout** button of the menu button. A dialog box will appear as shown in the above figure.
Click on **OK** button to log out.

5. Operation Details

5.1 Management Groups

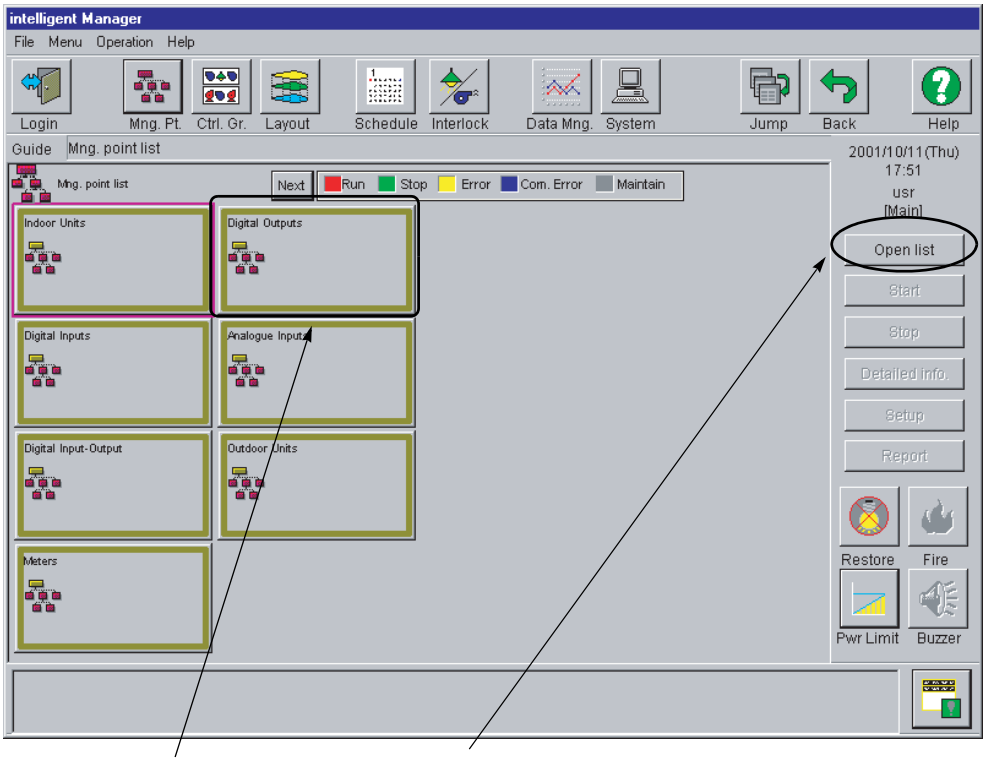
- A management group is a group of management points collected together for ease of management.
- A management group is able to collect together both management groups and management points, thereby making it possible to constitute multi-layered management groups.
- A single management point may belong to more than one management group.
- You are able to create new management groups at will and modify them. Please refer to **5.7.1 Configuring Management Groups** (p. 339).
- A management group is only able to manage collective layers of management points and cannot be used for individual monitoring and operating.

Click the **Management Points** button from the menu buttons.



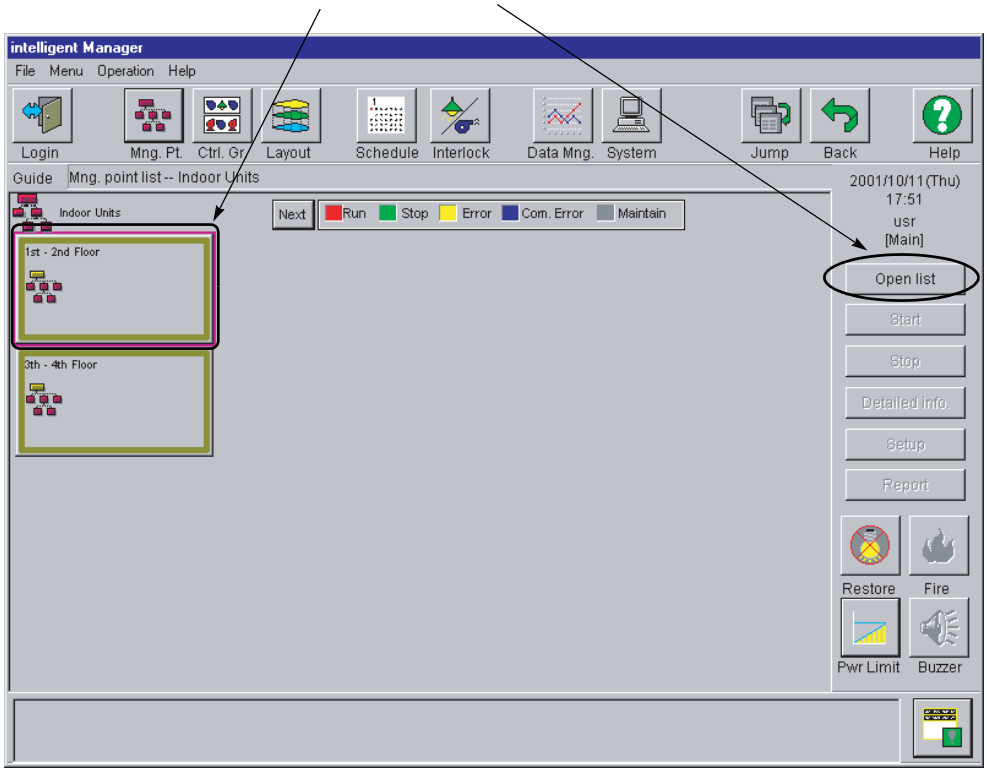
5.1.1 State Monitoring List

The state of management points (Start/Stop, Malfunction) may be understood from the list displayed.
As the monitoring of equipment is not displayed in the group, to access it click the button corresponding to the group to be checked.



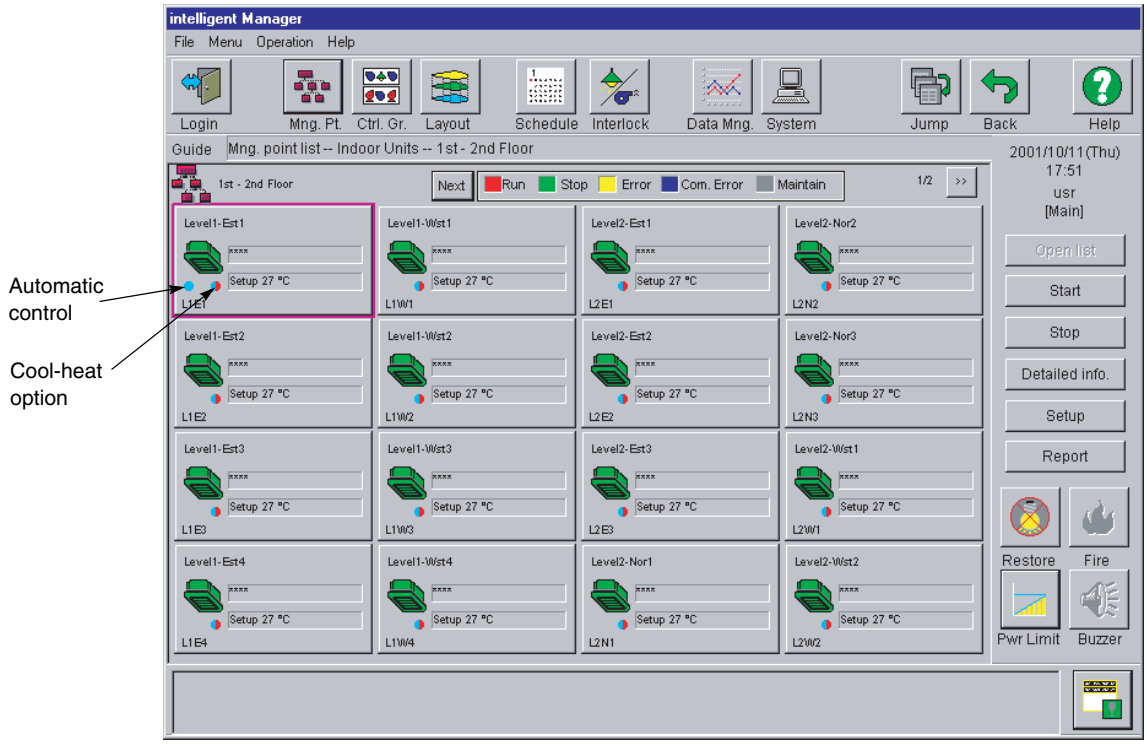
Click the group button to enable the **Open list** button. Then click the **Open list** button to display the list within the group.

The management groups will appear listed as shown in the above screen.
Click once more on the sub-group and **Open list** buttons.



The management groups and management points will appear listed as displayed in the above screen. This shows how both management points and management groups can be collected within a management group. Henceforth the list within a management group may be displayed and opened in the same way.

The points of the group list are displayed.

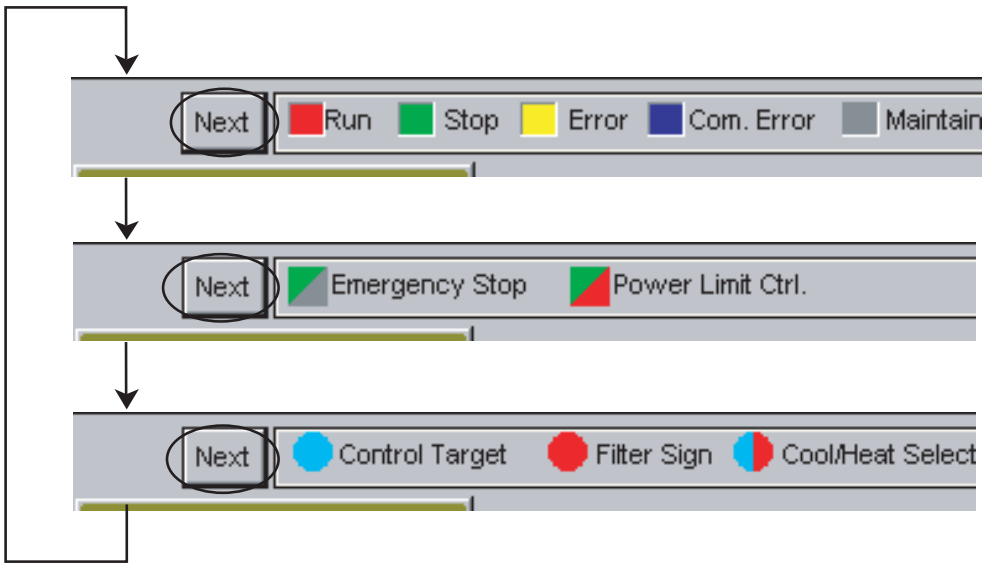


The state of a management point is shown by the color of its icon.
Red: Running
Green: Stop
Green blinking: Emergency stop
Yellow blinking: Malfunction
Blue: Communication error
Gray: Under maintenance
The marks for the filter sign, cooling/heating options and automatic control (interlocking and scheduling) are also displayed.

Note: An asterisk (*) after the operation mode indicates that the system is in defrost state.
Icon color Red and Green can be switched.

State Monitoring (legend)
The state of a management point is shown by the color of its icon.

Legend



Click the **Next** button to display the legend corresponding to the upper and lower parts of the icon respectively.

The marker to the lower right of the main icon
Blue/red: Management point with cooling/heating option
Red: Filter sign
Blue: Under automatic control (Management points connected with Interlocking and Scheduling)

Changes in Icon State
Changes in icon state - Start/Stop/Malfunction - are displayed as follows:

Equipment Malfunction: Indicates abnormal state of air-conditioner or equipment

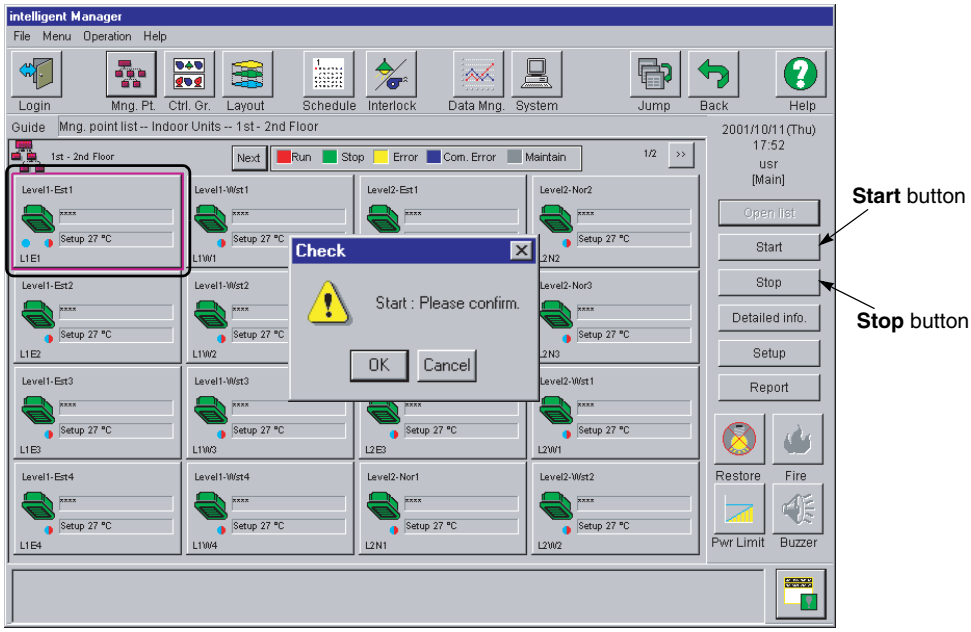
Monitoring Error:	Inconsistency error
	Abnormal Start/Stop failure
	Abnormal Maximum/Minimum limits
	Abnormal duration of continuous operation
Communication error:	Communication error state of DIII-Net
	Communication error state of Sequencer
Under maintenance:	Indicates that equipment is under maintenance
Emergency stop:	Indicates control state of emergency stop

The icons indicating the control group display the representative states of management points belonging to the control group in descending order of priority.

Priority: Stop < Running < Communication Error < Equipment Malfunction (Monitoring Error) < Under maintenance

5.1.2 Start/Stop Operation

Start/Stop operation can be performed only on management points for which there is a Start/Stop/Setting authority. Please refer to **5.7.3 Configuring user Login** (p. 345).



First select the management point to be started up.
Then click on the cell of a management point.
If the management point has Start/Stop capability, the **Start** and **Stop** buttons will be enabled.
Click the **Start** button to display the confirmation dialog box.

Click **OK** to start the operation or **Cancel** to cancel.

Similarly, if the **Stop** button is clicked, the confirmation dialog box will be displayed.

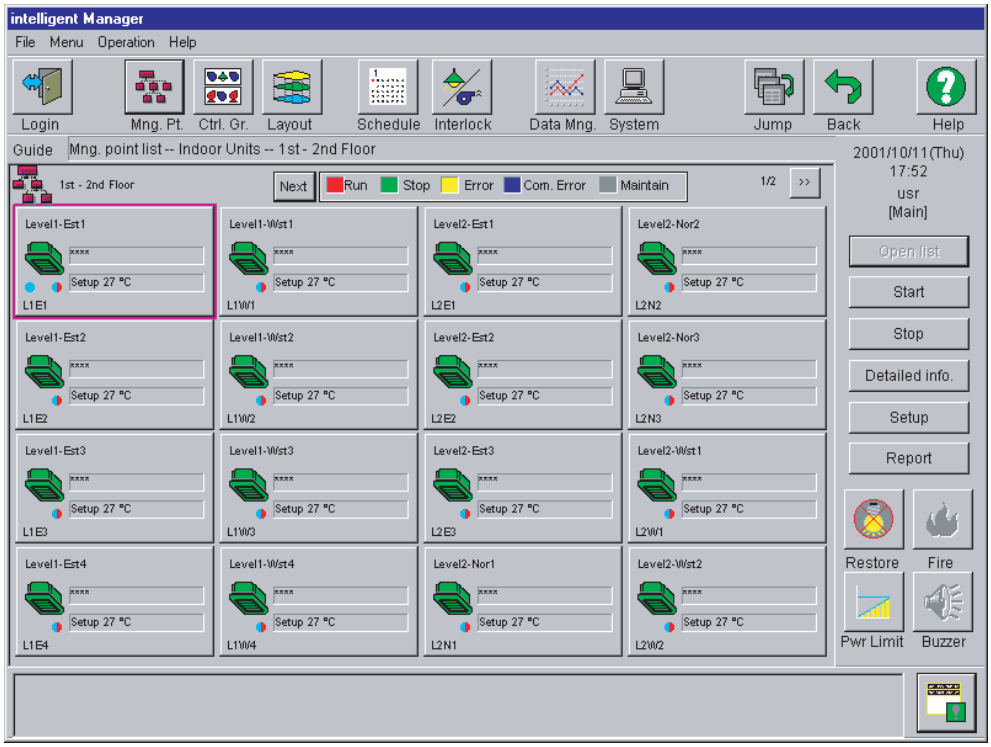
Click **OK** to stop the operation and **Cancel** to cancel.
If a management point without startup capability is selected, the **Start** and **Stop** buttons will gray out (that is, clicking has no effect on them), and Start/Stop operation cannot be performed.

5.1.3 Displaying Detailed Information

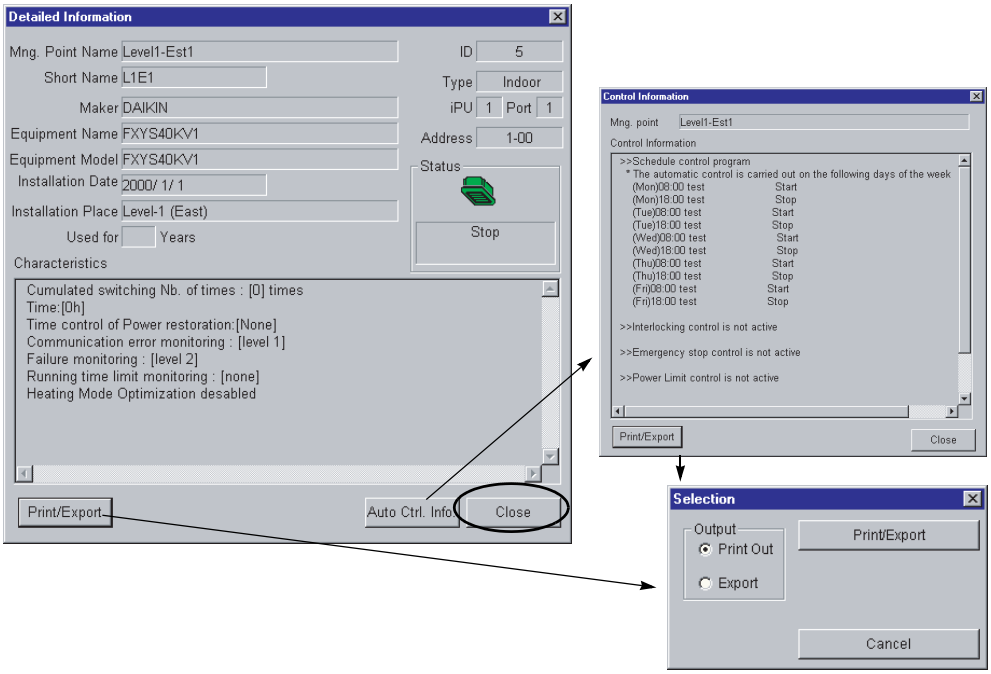
This displays detailed information on management points.

To check detailed information, click on the management point you wish to check, followed by a click on **Detailed Information**.

In the example below, click on the cell of a management point, followed by a click on the **Detailed Info** button.



The detailed information dialog box will appear.



Click on the **Print/Export** button to print the detailed information on the system printer or to save them in a CSV (comma separated) format file.

Click on the **Auto Ctrl. Info** button to display the dialogue with information of this management point related with automatic control programs (schedules, interlocking). Click on the **Print/ EXport** button of this dialogue to print the automatic control information on the system printer or to save them in a CSV (comma separated) format file.

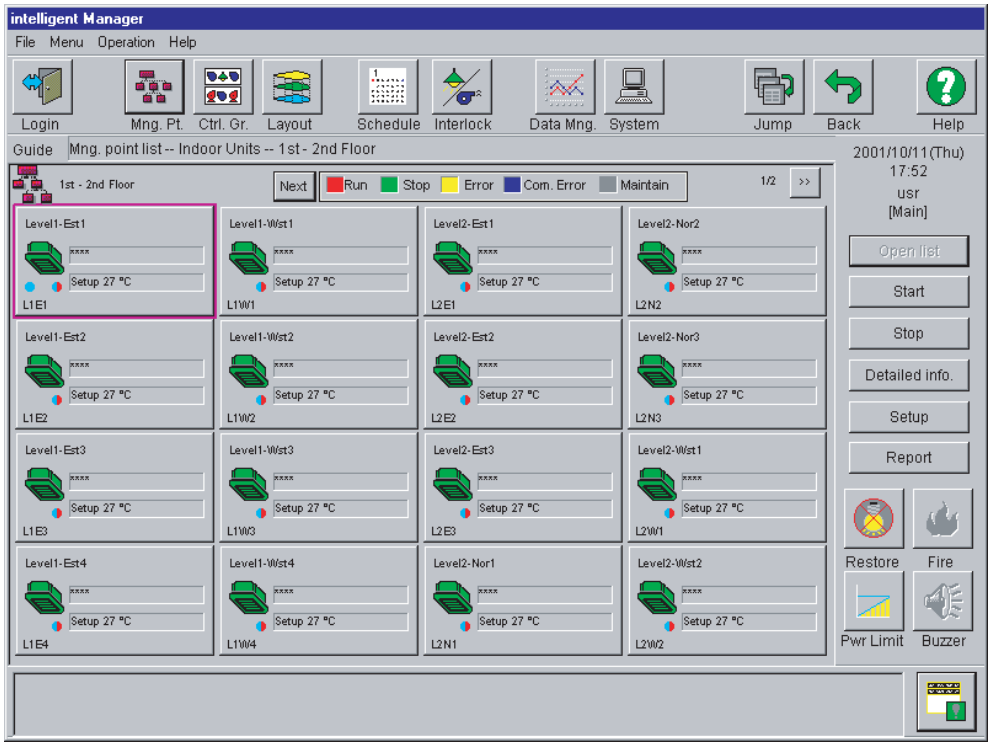
To close the dialog box, click on the **Close** button.

5.1.4 Setting up Equipment

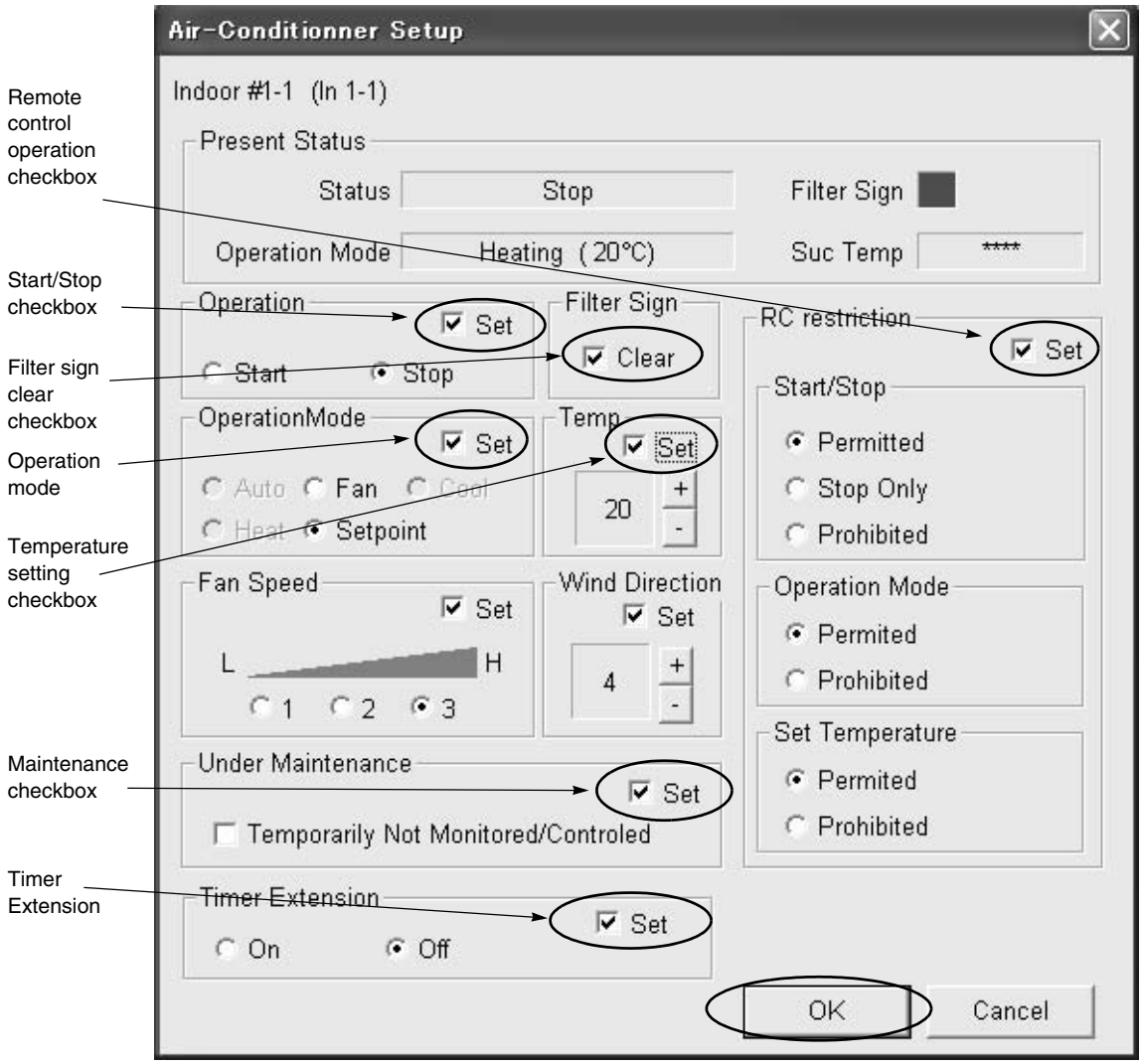
Various setups can be performed only on management points for which there is a Start/Stop/ Setup authority. Refer to **5.7.3 Configuring user Login** (p. 345).

First select the management point whose setup you wish to modify.
Click on the **Setup** button to display the setup dialog box.
The items that may be set up will vary according to the management points.

5.1.4.1 In the case of Daikin Air-conditioner (DIII Air-conditioner)



An air-conditioner setup dialog box is displayed.



Note: An asterisk (*) after the operation mode indicates that the system is in defrost state.

The following setup is then possible.

The items that may be set up will vary according to air-conditioner compatibility.

- Start/Stop
  If the **Setup** check box has been checked, **Start** and **Stop** will be enabled and can therefore be selected. The same setup can be performed as in **5.1.2 Start/Stop Operation** (p. 283).

- Operation Mode Setup
  Check the **Setup** check box to enable the modes to be set up. Select the desired Operation Mode.

- Fan Speed and Direction Setup
  Check the **Setup** check box to enable the fan speed and direction options. Select the desired intensity and direction of airflow.

- Timer Extension
  Check the **Timer Extension** check box to display the setup items of 2 hours limitation control operation (this indoor unit will be stopped automatically 2 hours after start). Select Timer Ex-tension On / Off.

- Clear Filter Sign
  If the filter sign appears, the **Clear** check box will be automatically enabled. Check this box to clear the filter.

- Temperature Setup
  For temperature setup, the **Setup** check box is enabled only when the Operation mode check box has been checked and the temperature setup mode has been enabled.
  In this case, if the check box has been checked, temperature setup and the **+** and **-** buttons are enabled.
  Click these buttons to modify the temperature setup.

The possible setup range is limited by the operation mode.

- Remote-control Operation
  Check the **Setup** check box to display the setup items of remote-control operation. Select Permission/Prohibition for each of these items.

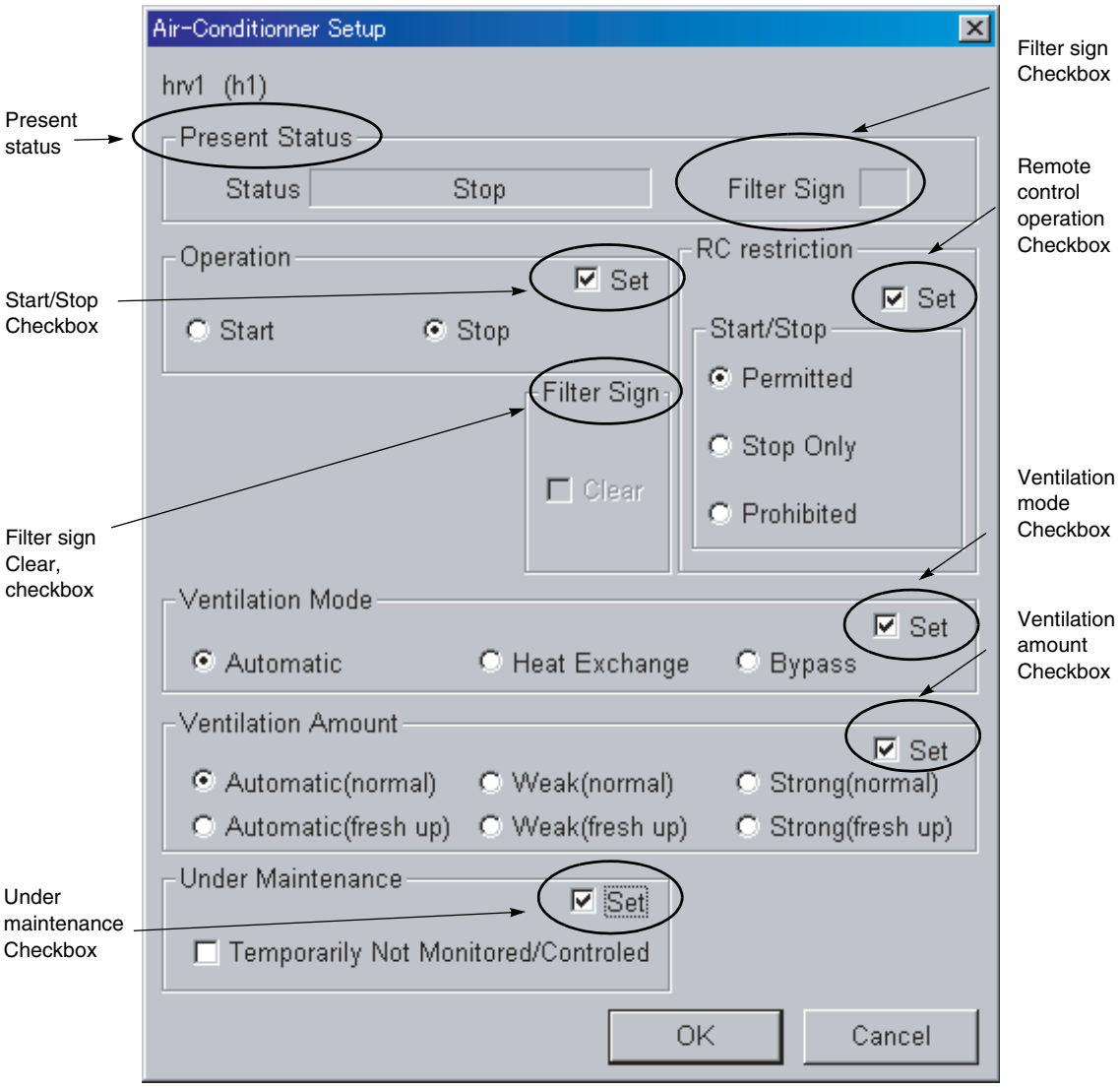
- Under maintenance
  Check the **Setup** check box to enable the **Temporarily Out of Monitoring/Control** check box. By checking this check box, the management point in question is set up/released from under maintenance.

When the management point is under maintenance
All monitoring and control pertaining to a management point under maintenance are disabled.
Under maintenance appears on the monitoring screen.
Only the Setup/Release of the check mode remains in the history. (Changes of state while under maintenance etc. are not recorded).



Click the **OK** button to display a confirmation dialog box once all setups have been modified.
Click **OK** to carry out modifications to the setup or **Cancel** to cancel.

5.1.4.2 HRV



Setting is available as follows.

Setup of HRV is shown below

- Present status
  Displays whether the unit is operating or is stopped now.

- Filter sign
  Displayed in red when filter sign appears.

- Start/Stop
  Place a check in setup of checkbox to choose start or stop.

- Filter sign clear
  When a filter sign appears, checkbox of clearing is displayed automatically. Check the checkbox of clearing.

- Remote controller operation
  Check the setup of checkbox to enable setting of remote controller operation. Start/Stop allows setting of Permit/Prohibit and Stop only.

- Ventilation mode
  Check the setup of checkbox to enable setting of ventilation mode.
  Automatic, total heat exchanger, and bypass are available for selecting.

- Ventilation amount
  Check the setup of checkbox to enable setting of ventilation mode.
  Automatic, weak, and strong (normal and fresh-up) are available for selecting.

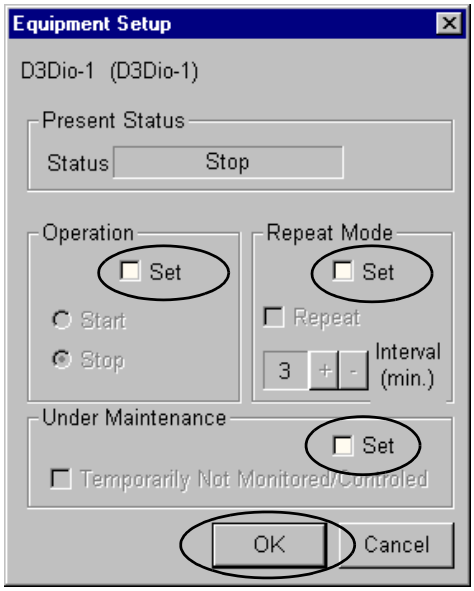
- Under maintenance
  Check the **Setup** check box to enable the **Temporarily Out of Monitoring/Control** check box. By checking this check box, the management point in question is set up/released from under maintenance.

When the management point is under maintenance
All monitoring and control pertaining to a management point under maintenance are disabled.
Under maintenance appears on the monitoring screen.
Only the Setup/Release of the check mode remains in the history. (Changes of state while under maintenance etc. are not recorded).



Click the **OK** button to display a confirmation dialog box once all setups have been modified.
Click **OK** to carry out modifications to the setup or **Cancel** to cancel.

5.1.4.3 For equipment with Start/Stop capability





The following setups are possible in this case.

- Start/Stop
  Check the **Setup** check box to enable **Start** and **Stop**. They can then be selected.

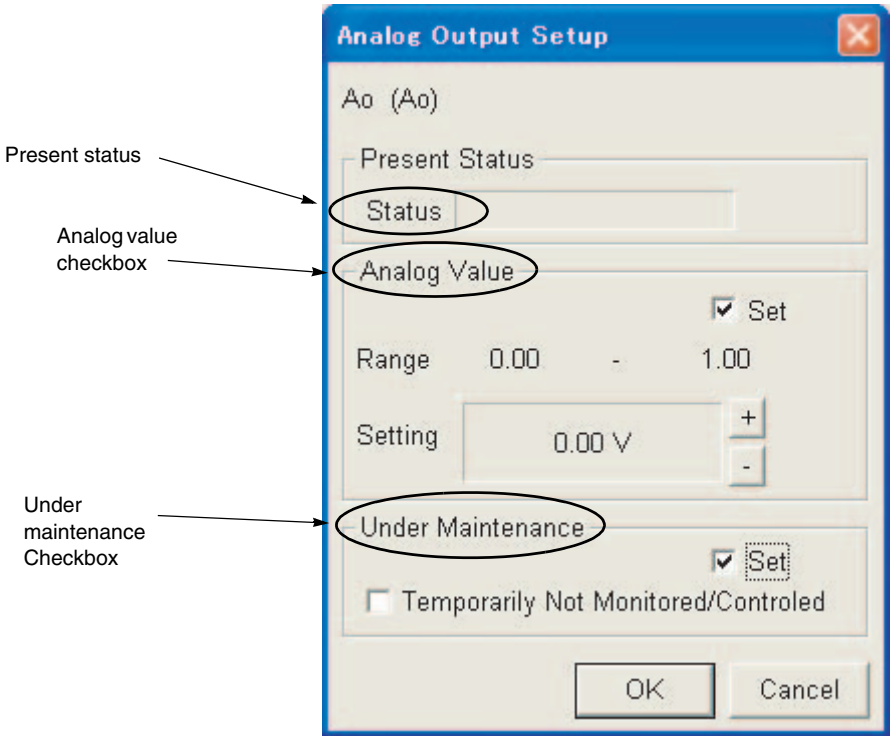
- Repeat Mode
  Check the 'Set' check box to enable the **Repeat** checkbox. When the **Repeat** check box is checked, the time interval and **+** and **-** buttons are enabled.
  The repeated time interval can then be altered by means of these buttons.

Start/Stop instructions are given within a fixed interval (specific value) so that the Start/Stop state of the equipment can be executed as indicated, regardless of manual operation etc.

- Under maintenance
  Check the **Setup** check box to enable the **Temporarily out of Monitoring/Control** checkbox. When this box is checked, the setup changes to 'under maintenance'.

Click the **OK** button to display a confirmation dialog box once all setups have been modified. Click **OK** to carry out modifications to the setup or **Cancel** to cancel.

5.1.4.4 Ao



Setting is available as follows:

- Present status
  Displays whether the unit is operating or is stopped now.

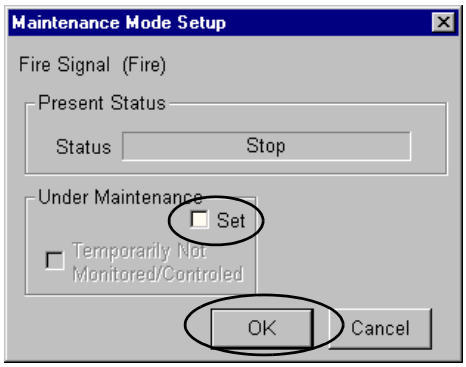
- Analog value
  Check "setup" (Set) of checkbox, then the button "+" and "-" are displayed.
  Press "+" and "-" to set an analog value.

- Under maintenance
  Check the **Setup** check box to enable the **Temporarily out of Monitoring/Control** checkbox. When this box is checked, the setup changes to 'under maintenance'.

Click the **OK** button to display a confirmation dialog box once all setups have been modified.
Click **OK** to carry out modifications to the setup or **Cancel** to cancel.

5.1.4.5 For other equipment

When setting up, check the **Setup** checkbox to display the items, which may be set up.
In this case setup is only possible when **under maintenance**.



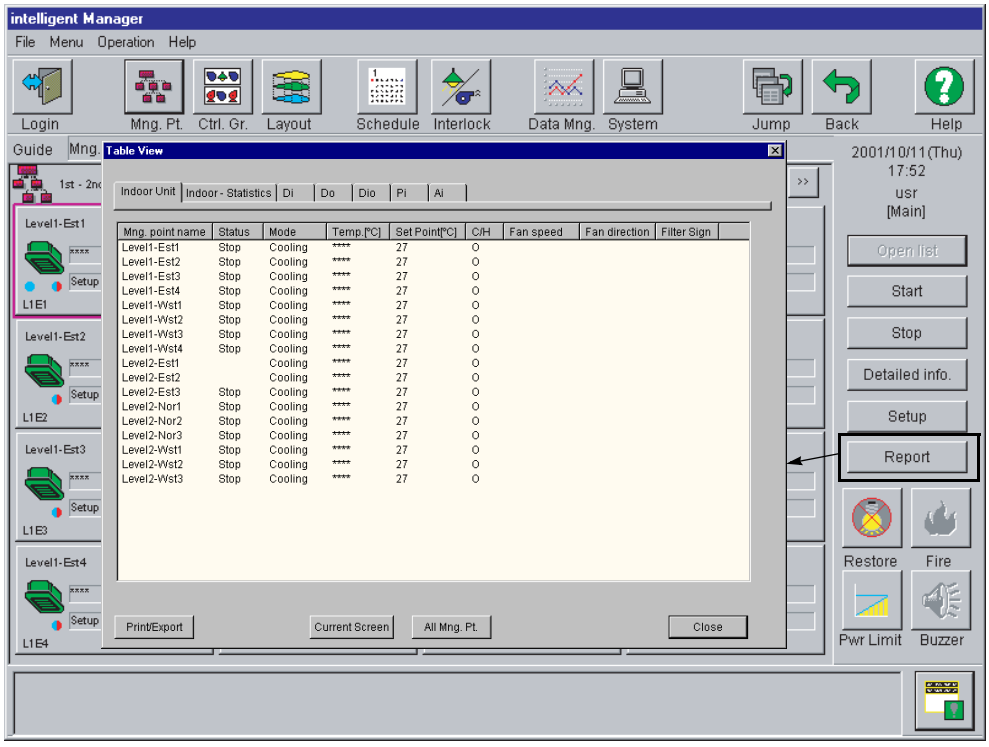


Under maintenance

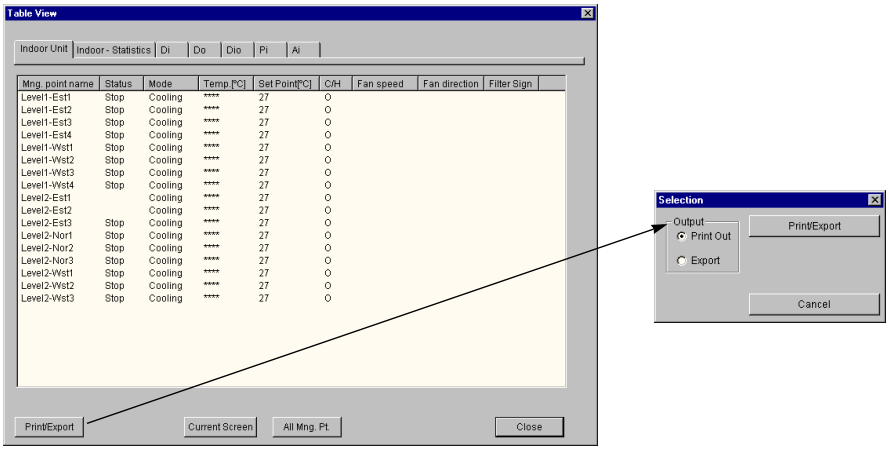
Check the **Setup** check box to enable the **Temporarily out of Monitoring/Control** checkbox.
When this box is checked, the setup changes to **under maintenance**.

5.1.5 Table View Function

This gives a list of statistical information about the management points on display.
Click the **Report** button.



The Table View dialog box is displayed.



Click on the **Print/Export** button to print the detailed information on the system printer or to save them in a CSV (comma separated) format file.
The meaning of each item is shown below:

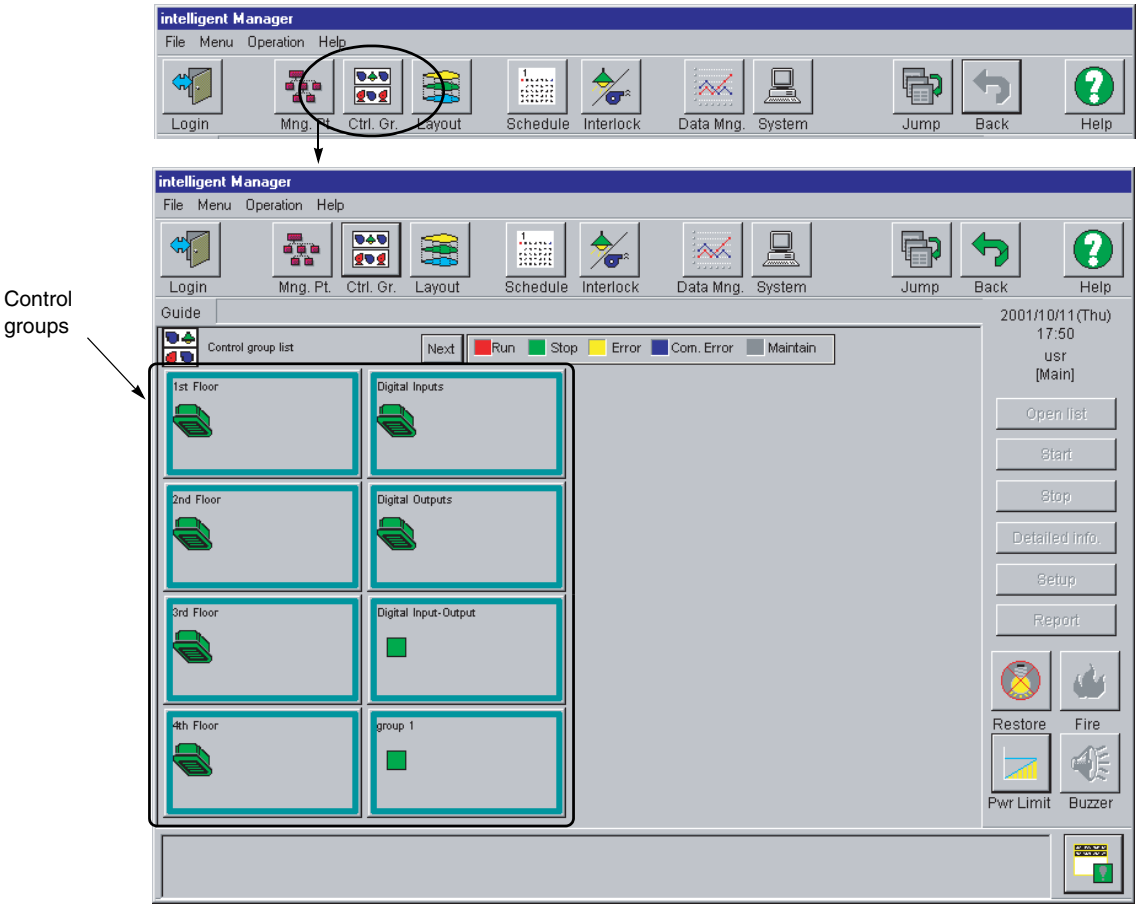
- Mng. point name : Name of management point
- Status : Status of management point
- Mode : Operation mode of management point
- Temp. [°C] : Suction temperature at the management point (When it is invalid or indefinite, "****" is displayed.)
- Set Point [°C] : Set temperature at the management point (When it is invalid or indefinite, "****" is displayed.)
- C/H : When this management point is a cool/heat master, "0" is displayed.
- Fan Speed : Wind volume at the management point (1 - 3 or empty when it is invalid or indefinite.)
- Fan Direction : Wind direction at the management point (0 - 6, Swing or empty when it is invalid or indefinite.)
- Filter Sign : When filter sign is on, "*" is displayed.
- Timer Extension : Timer extension setting status "ON/OFF" is displayed.
- Switch Nb. : Accumulated number of Start/Stop (the number of times where the unit changed from stop to start)
- Warning Nb. : Upper limit of the number of Start/Stop
- Ratio [%] : Switch Nb. / Warning Nb. x 100
- Operating Time [h] : Accumulated operating time
- Warning Time [h] : Upper limit of operating time
- Ratio [%] : Operation time (h) / Warning time (h) x 100
- Pulse Value : Pulse value of management point
- Used Amount : Use quantity
- Value : Analogue value
- Unit : Preset unit character

Note: An asterisk (*) after the operation mode indicates that the system is in defrost state.

5.2 Control Groups

- A control group is a group of management points brought together for collective control.
- In a control group list, control and state display of control group units are carried out. Control and state display of individual management point units is possible in a lower layer screen. As the operation method is identical to that of management point lists, please refer to **5.1 Management Groups** (p. 279).
- A management point may belong to more than one control group.
  This supposes that a given management point will take the appropriate form when belonging both to a normal control group and to the control group used in the case of emergency stop.

Click the **Ctrl. Gr.** button from the menu buttons.



5.2.1 Monitoring Control Groups

It is possible to monitor the states and malfunctions of the collective control groups. Moreover, control and state display of management point units is possible in a lower layer screen.

Color of Control Group Icons

Priority	Color	Description
1	yellow blinking	Malfunction detected in one or more of the management points within the control group
2	blue	Communication error detected in one of more of the management points within the control group
3	red	No malfunction detected in the management points within the control group and at least one management point is operational
4	green	No malfunction detected in the management points within the control group and they have been stopped

Order of priority is 1>2>3>4.

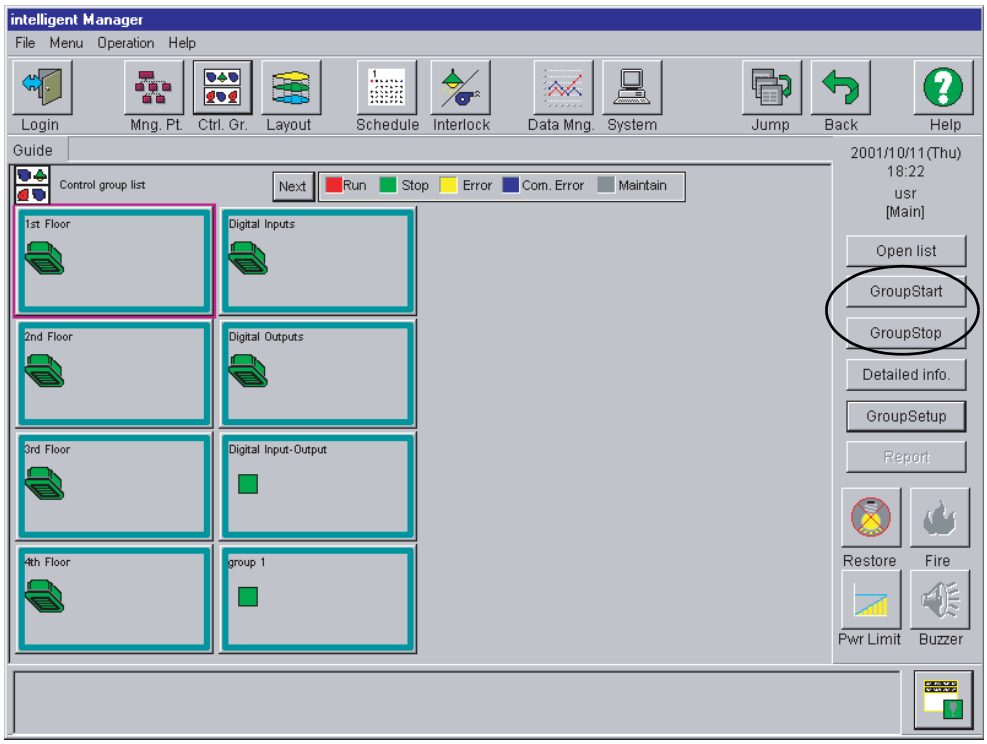
Note: The attributes displayed with a control group (room temperature, etc.) are these of the top management point of the groups list.
Icon color Red and Green can be switched.

5.2.2 Collectively Controlling with Control Groups

[Group Start/Group Stop]

Collective Start / Collective Stop operation can be performed only on control groups which contain management points for which there is a Start/Stop/Setting authority. Please refer to **5.7.3 Configuring user Login** (p. 345).

Furthermore Start and Stop of individual management point are possible in a lower layer screen.



First select the control group to be started up.

Click the button.

If the control group contains a management point with Start/Stop capability, the **GroupStart** and **GroupStop** buttons operation will be enabled.

Similarly, if the **GroupStop** button is clicked, the confirmation dialog box will be displayed.





Click **OK** to stop the operation and Cancel to cancel.

Click the **GroupStart** button to display the confirmation dialog box.

Click **OK** to start the operation or **Cancel** to cancel.

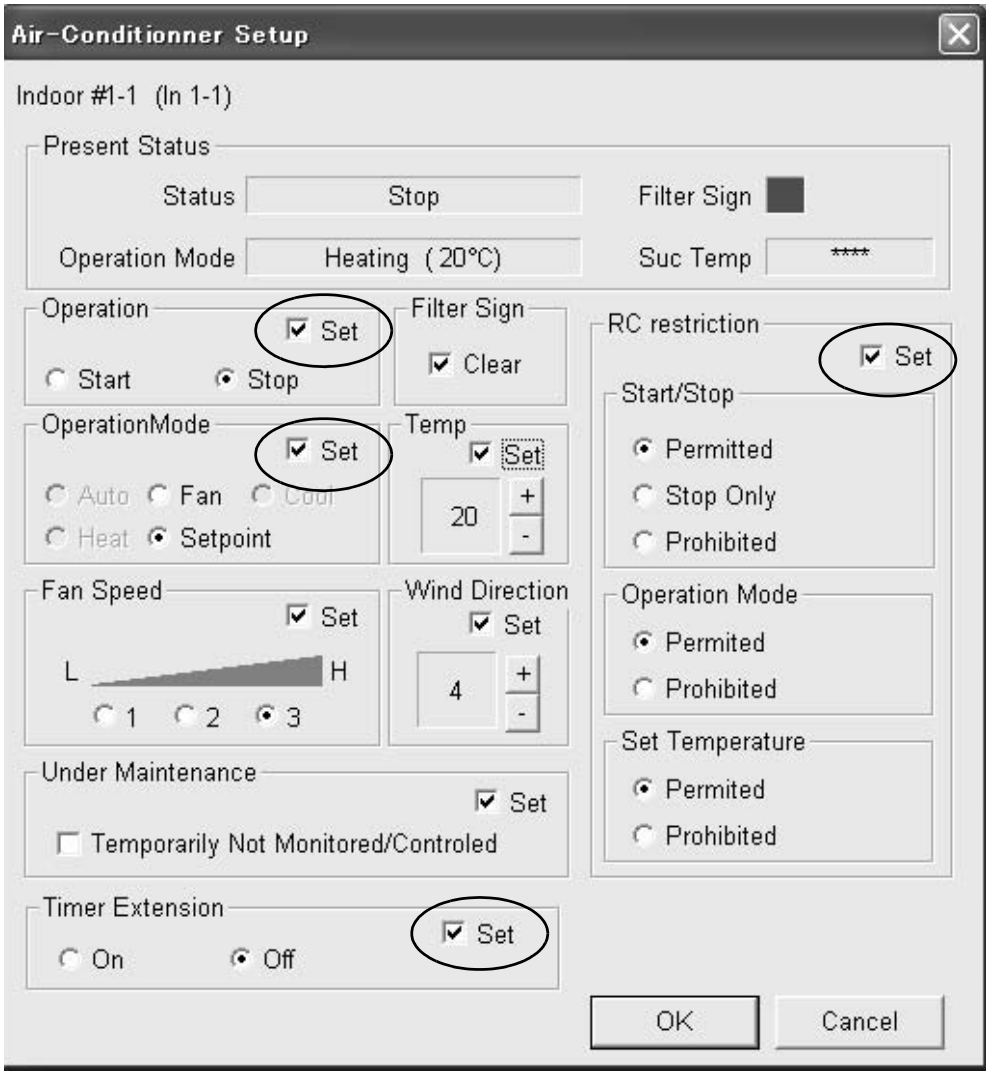
[Group Setup]

By carrying out a collective setup of a control group, more than one management points may be set up simultaneously.

Furthermore setup of management point units is possible in a lower layer screen.

As the operation method is identical to that of management point lists, please refer to **5.1 Management Groups** (p. 279).

First select the control group whose setup is to be modified.
Click on the **GroupSetup** button to display the setup dialog box.
The items that may be set up will vary according to the management points belonging to the control group.
If the management points in the control group belong to only one type of equipment (Daikin DIII Air-conditioner, equipment with Start/Stop capability or other equipment), the respective dialog box will be displayed in each case and setup is possible.



If there are two or more types of management points belonging to a control group, the other equipment setup dialog box will be displayed and setup will be possible only within a common range.
Therefore, in the case of Daikin DIII Air-conditioner and equipment with Start/Stop capability, it is necessary to carry out individual setups, using the management point list of the lower layer screen.

5.3 Visual Navigation

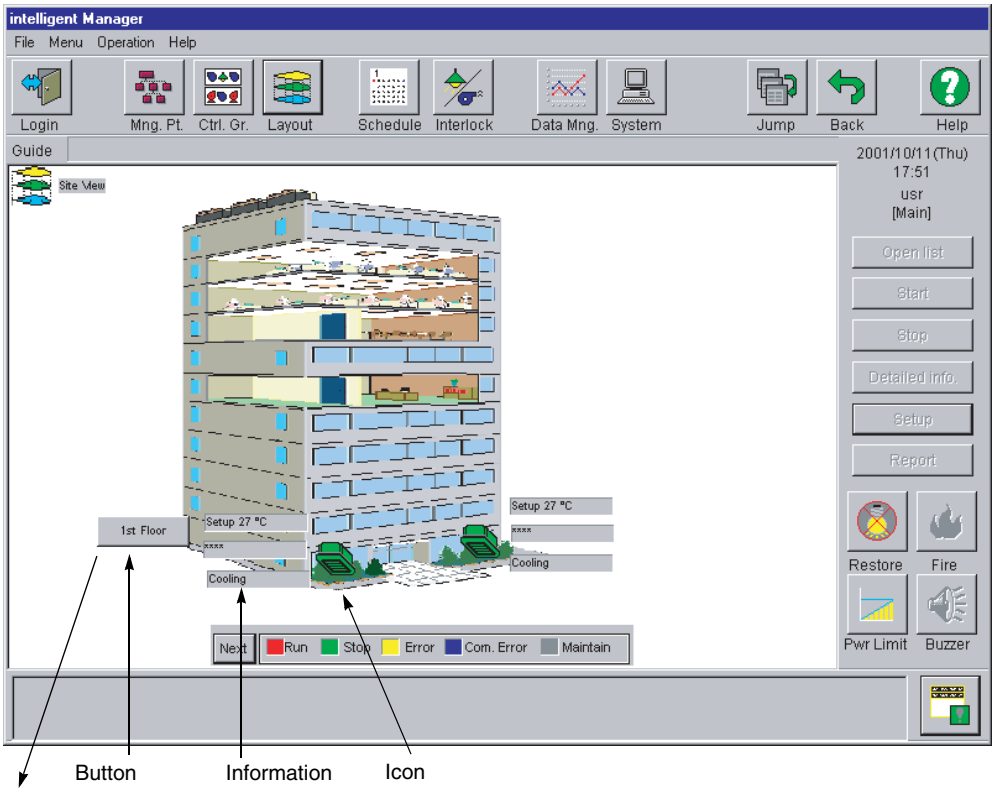
This function allows visual navigation through the site equipment.

5.3.1 Fundamentals

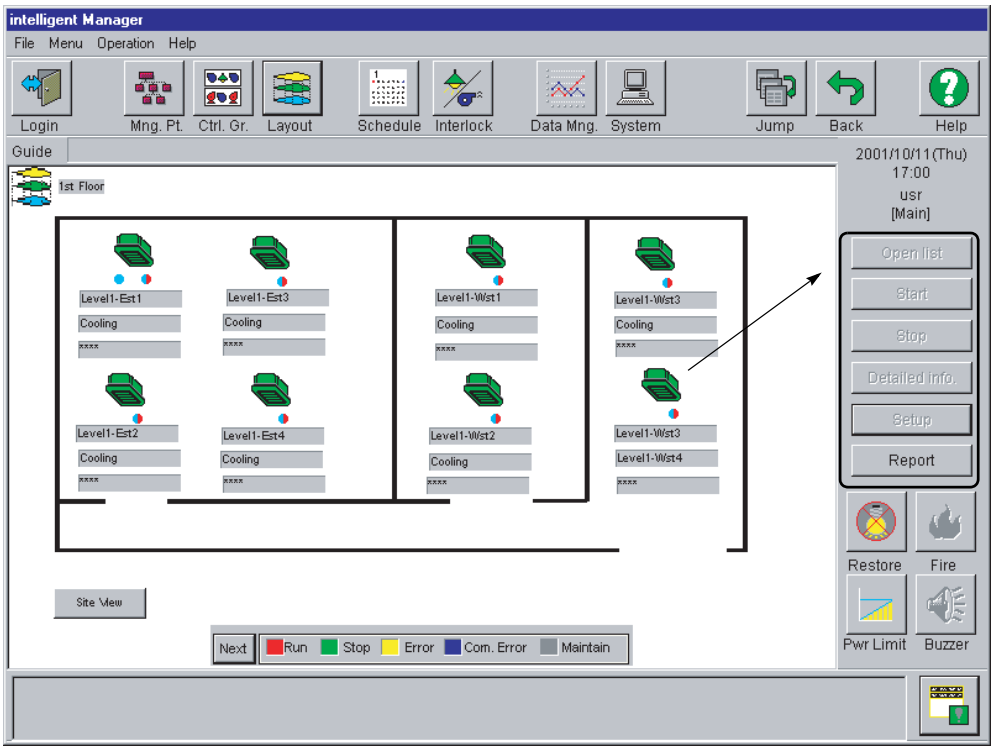
The system components (management points or control groups) are displayed (and dynamically refreshed) on a background image (plan or elevation view). They appear as :

- Attributes: same information as cells of a management point (operation state, room temperature, etc.)
- Icons: same icon as in cell of a management point or control group; in this case, the same color states and actions as corresponding cell are supported (start, stop, detailed information, setup, etc.)
- Buttons: navigation links to other Visual Navigation screen.

Main Screen



1st Floor Screen



5.3.2 State Monitoring

This is performed by the icons and attributes.
Attributes can be of a management point only (see **5.1.1 State Monitoring List** (p. 280) and **5.1.5 Table view Function** (p. 292) for details).

Icons can be of a management point or control group.
As in management points and control groups, the colors are explained in the legend (see **5.1.1 State Monitoring List** (p. 280) and **5.2.1 Monitoring Control Groups** (p. 295) for details).

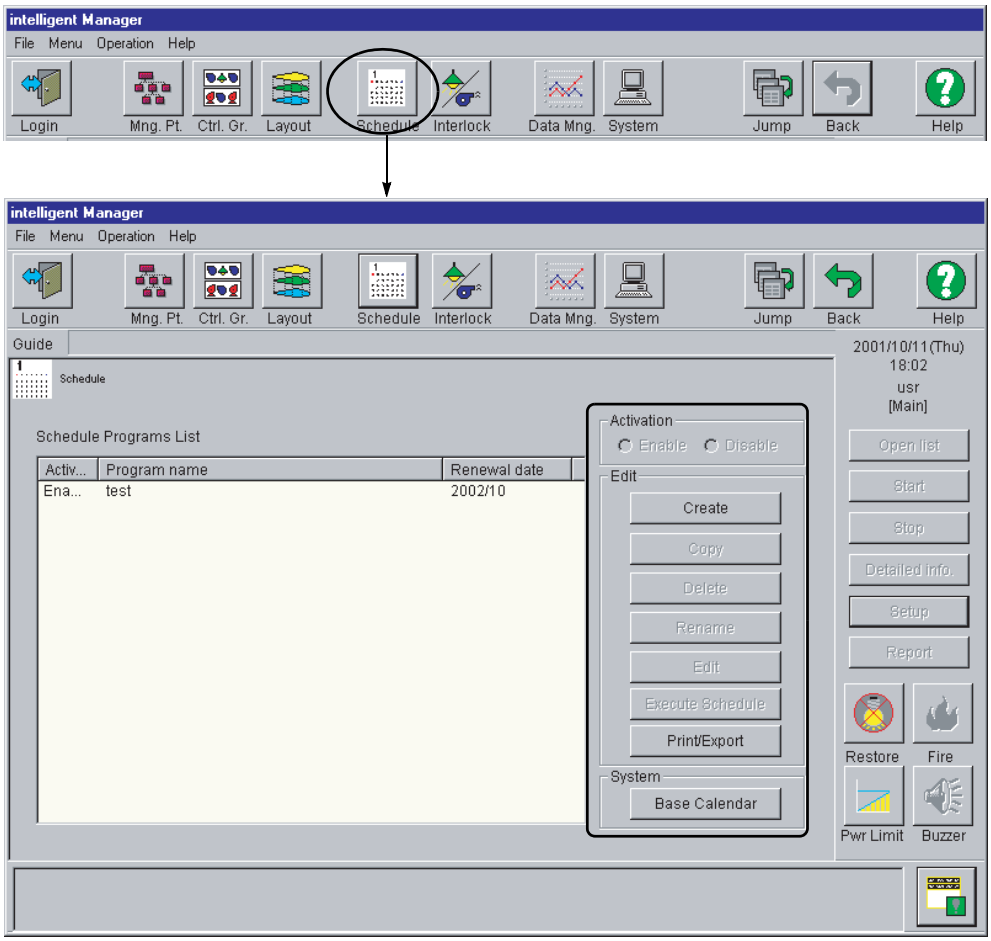
5.3.3 Controlling Points and Groups

This is performed by the icons only.
Click on an icon to select it, then operation is can be performed with the action buttons, pull-down menu or popup-menu as in management points and control groups (see **5.1.2 Start/Stop Operation** (p. 283) to **5.1.4 Setting up Equipment** (p. 285) and **5.2.2 Collectively Controlling with Control Groups** (p. 296) for details)

5.4 Setting the Schedule

- Time schedules may be defined in advance so that control of the equipment (Start/Stop, operation mode switchover as well as temperature setup) and permission/prohibition of remote controller can be carried out automatically.
- Schedule programs are registered in weekly blocks and the type of operation to be performed on every day of the week is specified.
  Moreover, holidays and special days over a one-year period (13 months) may be specified within the schedule program in the Yearly block. Operation method during special days and holidays may also be specified in the same way as the operational schedule of any day of the week.
- Up to 200 schedule programs may be registered. Please be careful that a higher number of schedule programs make start up procedure of the intelligent Manager system last longer.
- The appropriate authority is required to set up a schedule program.
  Please refer to **5.7.3 Configuring User Login** (p. 345). Without this authority, consultation only is possible.
- When a scheduled operation is carried out, it is reported and saved in the history record.

Click the **Schedule** button from the menu buttons.

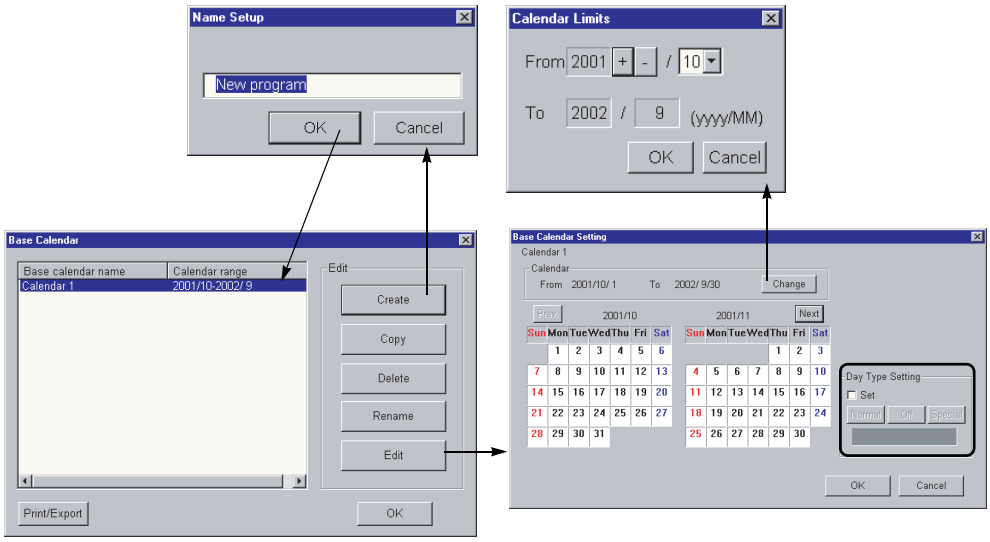


5.4.1 Schedule fundamentals

A schedule **Program** is a set of time stamped actions.
These Actions are grouped in a **Weekly Schedule** organized in daily patterns (**Sunday to Saturday, Day Off** and **Special Day**).
These weekly schedules are repeated in a **Yearly Schedule**. The yearly calendars can be shared between programs, using the **Base Calendar** facility.
As well, schedules and programs management is facilitated by editing functions (Copy, etc.).

5.4.2 Managing Base Calendars

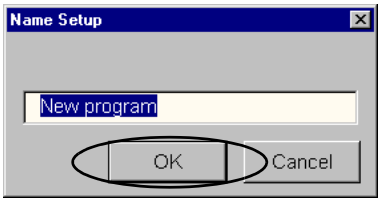
A base calendar may be given the name of your choice. The name can be a row of up to 32 characters.
Up to 6 base calendars can be created.
Click on the **Base Calendar** button to display the dialogue shown below.
Create a Base Calendar and set the limits, and the types of the days as shown below.
First decide on the range to be setup in the annual calendar.
Click the **Change** button to display the calendar setup range dialog box.
Use the **+ -** buttons to modify the range of the annual calendar and click the **OK** button to apply the desired modification.
When the range is modified, the overlapping portion before modification will be carried forward. Other months will have initial state formats.
(Initial state: Only Sundays are set up as holidays).



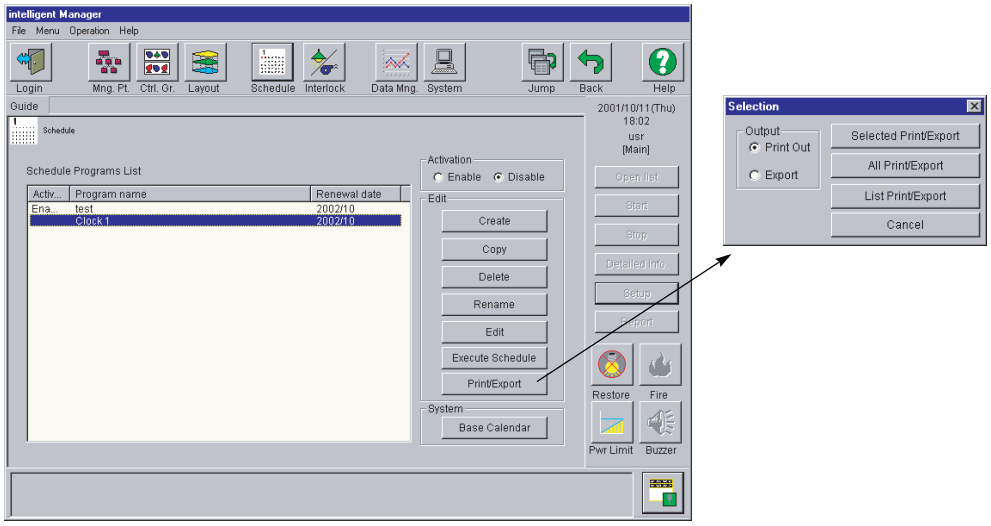
5.4.3 Creating a Schedule Program

A schedule program may be given the name of your choice. The name can be a row of up to 32 characters and must not overlap with other schedule programs.

Click the **Create** button to create a new schedule program.
The name setup dialog box is displayed as shown below.



Enter the schedule name to be created onto the name setup screen. Check the contents entered for errors and then click the **OK** button.



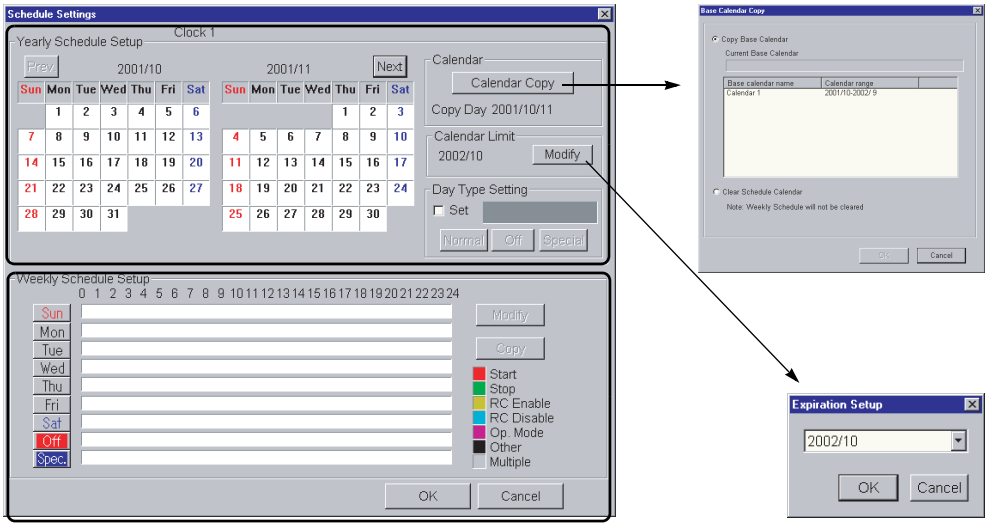
The schedule program list in the above figure shows the previously entered schedule.
Select the desired schedule to be set up on the annual calendar from the schedule list using the mouse.

Schedules (either one schedule, all schedules, or the list only) can be printed out (to the system printer) or exported into CSV (comma separated) format files.

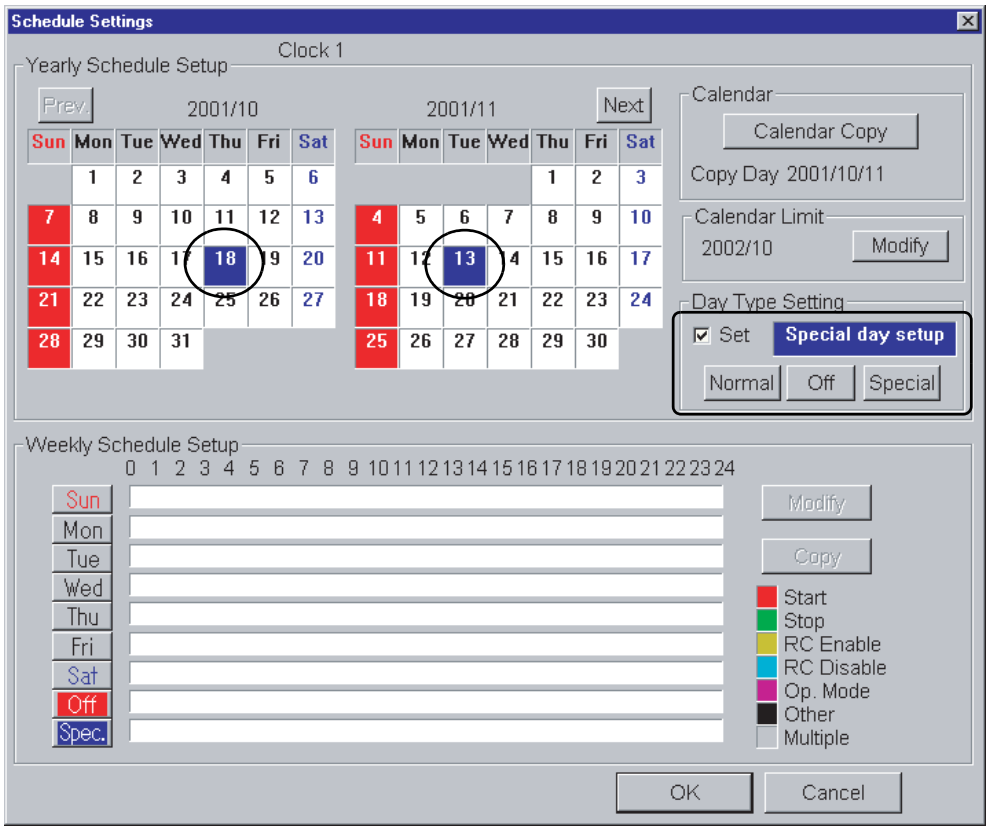
5.4.4 Annual Calendar

The annual calendar is a calendar divided into 13 months (from the first day of the starting month to the last day of the same month the following year). It can be customized with any days of your choice - such as holidays or special days.
Holiday and special day set on the calendar are discarded when corresponding month has passed, and must be updated regularly.
Warning of calendar-out is issued in the updating month (calendar limit) of prepared calendar.

To define the annual calendar, it is possible to copy it from a base calendar: click the **Calender Copy** button and select a Base Calendar from the list (see above for Base Calendar management). Then, adjust if necessary the annual calendar by modifying its limits and the days as shown below.
Updating month of calendar is normally the final month of prepared calendar. It can also be set by pressing the modifying button.



When the **Modify Limits** button is clicked, the dialog box will be displayed as above. In the screen of the above figure, the annual calendar setup is shown at the top and the weekly schedule setup below.
A 13-month setup is possible for the calendar (from the first day of the starting month to the last day of the same month the following year).
By clicking the previous month **Prev** and the next month **Next** buttons, the month before or after the month on current display will be shown.



Setting up day types

In the initial state, Schedule set on each day of the week can be shifted.
Day type setting is used when the schedule of holiday and special day is used.
Click the selection buttons to modify the type of day to be set up. The selected day type will then be displayed and its color will change. White is used for weekdays, red for holidays and blue for special days.
In the above figure, Holidays have been set and special days are being selected.

Click the cell containing the date to be set up to carry out the setup.
In the case of the above figure, some days have been set up as holidays. As well, some days are being set up as special days.
When the setup of the month on current display is completed, click the next month **Next** button to display the following month.

When the following month is displayed, set up the day type. This should be done for each of the 13 months.

5.4.5 Weekly Schedule

The weekly schedule indicating the type of operations to be performed during one day is specified in nine day area units: each day of the week, holidays and special days.

- Selection to undergo control
  The management point or control group to undergo schedule control is selected.

- Time of Execution
  The time at which an action is executed is set up.

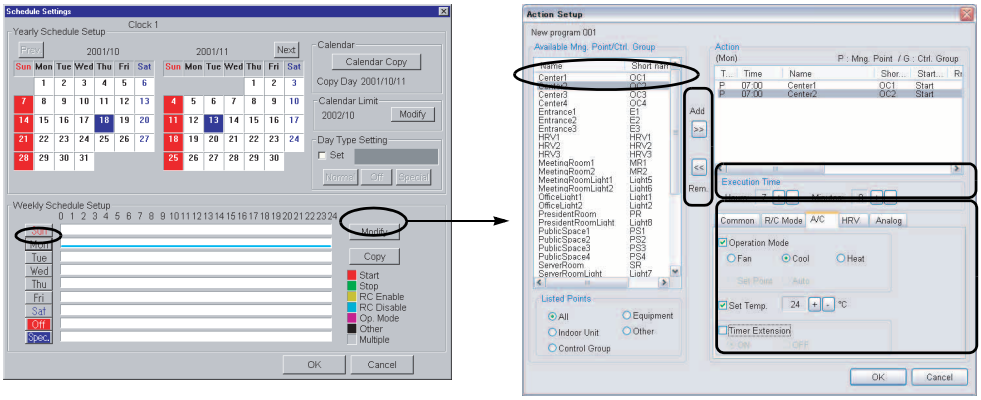
- Action

[Action] list

- Displays a list of schedule action. It is a single selecting list.
- Displayed items are as follows:
  Type: Type of management point/control group. P: Management point, G: Control group
  Time: Execution time of schedule action. 00:00 - 23:59
  Name: Name of management point/control group
  Short name: Abbreviation of management point/control group
  Start/Stop: Start/Stop
  R/C Mode start/stop: Permission/Prohibition of start/stop from remote controller
  R/C Mode operation mode: Permission/Prohibition of operation mode from remote controller
  R/C Mode Set Temp.: Permission/Prohibition of temperature setting from remote controller
  Setpoint: Set temperature
  Operation mode: Operation mode
  Ventilation mode: Ventilation mode
  Ventilation amount: Ventilation amount
  Analog value: Analog value
- No selection in initial condition

Please refer to **5.1.4 Setting up Equipment** (p. 285) for detailed explanation of these actions.

Click the button corresponding to the day on which the schedule is to be set up (ex: **Monday**) and then click the **Modify** button as shown below.



From the available management point or control group, click on the management point or control group to undergo schedule control.
Click the **Add >>** button to display the action.

Click on the added management point or control group.
Select the action to be set up and set up the execution time using the **+ -** buttons.
More than one action can be set at a time.

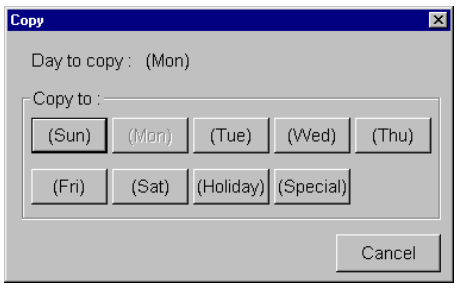
Repeat this operation to set up the schedule for Monday.
When the schedule is completed, click the **OK** button.
Click the **Cancel** button to cancel the setup.

The schedule content is shown above. The schedule for Monday has been set up.

Repeat the same operation to set up other days.

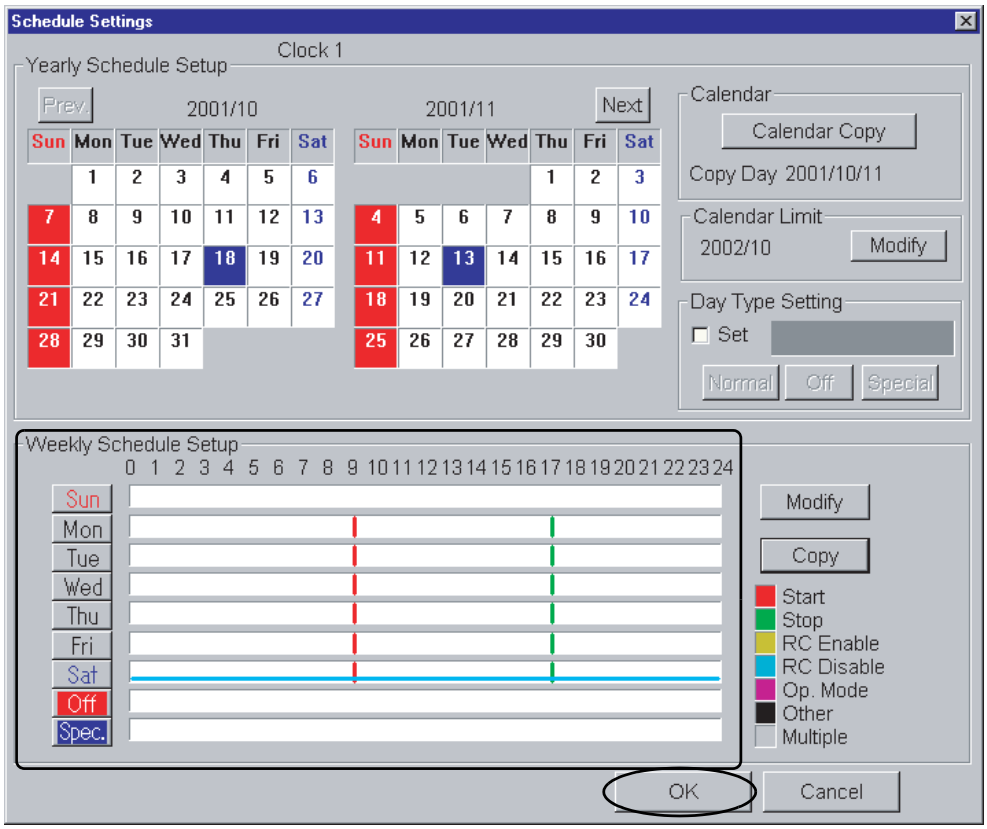
To set up the same schedule on other days of the week, click on the day to be copied, followed by a click on the **Copy** button. A dialog box will appear. Click on the day to be copied to.

For example, click the **Tuesday** button.



Tuesday has been set up with the same schedule as Monday.

Repeat the same operation to copy the schedule to other days of the week.

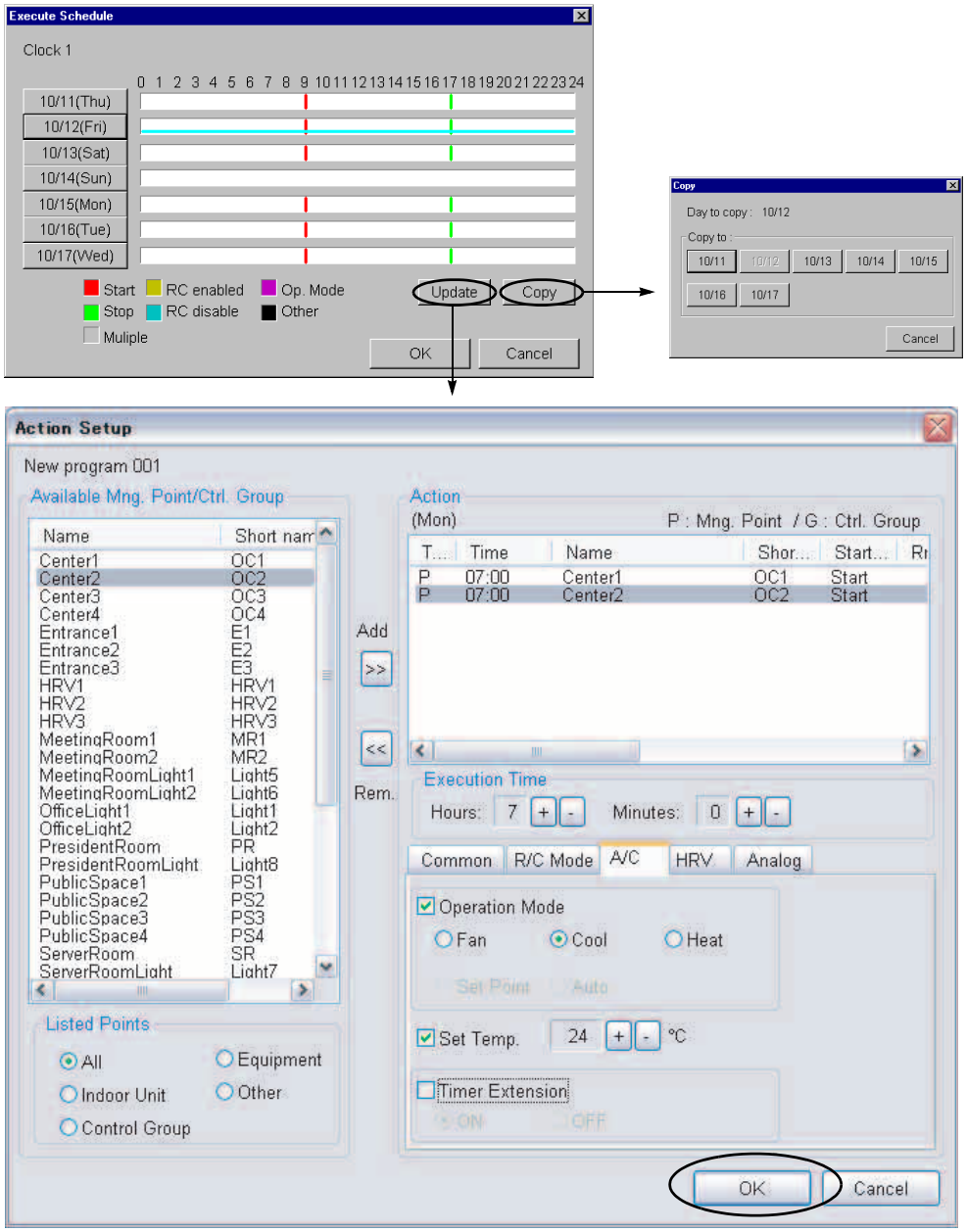


Click the **OK** button to record the setup content on completion of a schedule setup.

5.4.6 Executing Schedule

Actual schedule control may be checked from the dialog box as shown below. Furthermore, for temporary schedule changes at less than one week's notice, modifications may be carried out via the Executing Schedule dialog box.

Click the **Execute Schedule** button to display this dialog box.

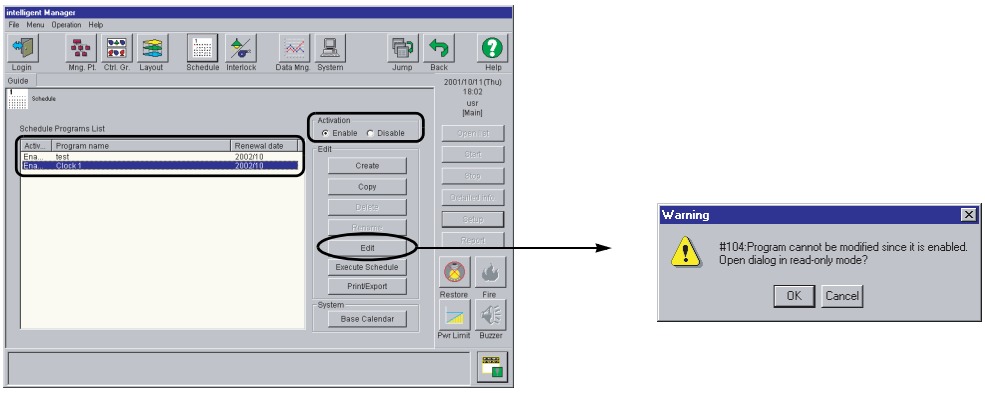


By executing schedule, based on the annual calendar and weekly schedule, the coming week's period is generated automatically. Actual schedule control is conducted according to this executing schedule.

Temporary schedule changes at less than one week's notice for the coming one-week period may be made by the execution schedule.
Click on the day whose schedule is to be modified and use the **Update** and **Copy** buttons to modify it.

5.4.7 Enable/Disable Instructions

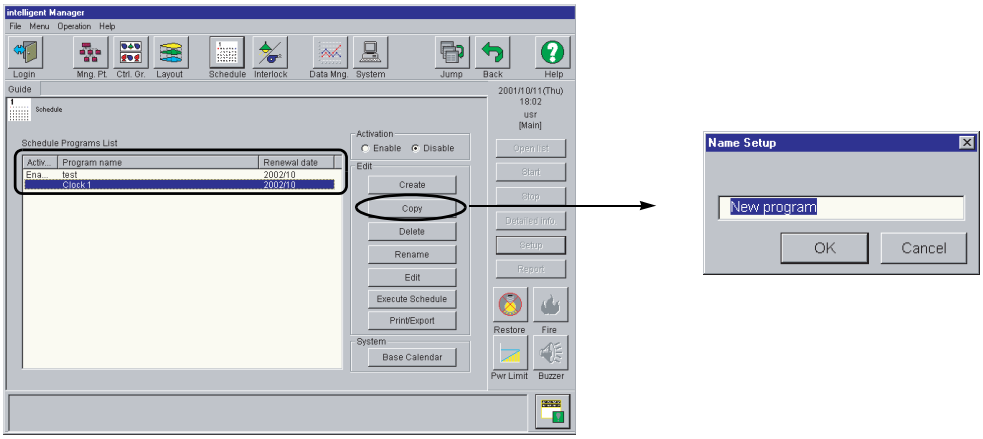
Once the set-up of the annual calendar and weekly schedule has been completed, the created schedule must be enabled via the schedule setup dialog box.
Furthermore, if the contents of the schedule program need to be modified, the schedule in question must first be disabled.
Schedule programs may be enabled and disabled individually. When disabled, a program will not execute.



Click on the schedule program name to turn it over and it will switch over from enabled to disabled.
If the schedule program is enabled, the valid mark will be displayed before its name.
If it is disabled, the mark will disappear.

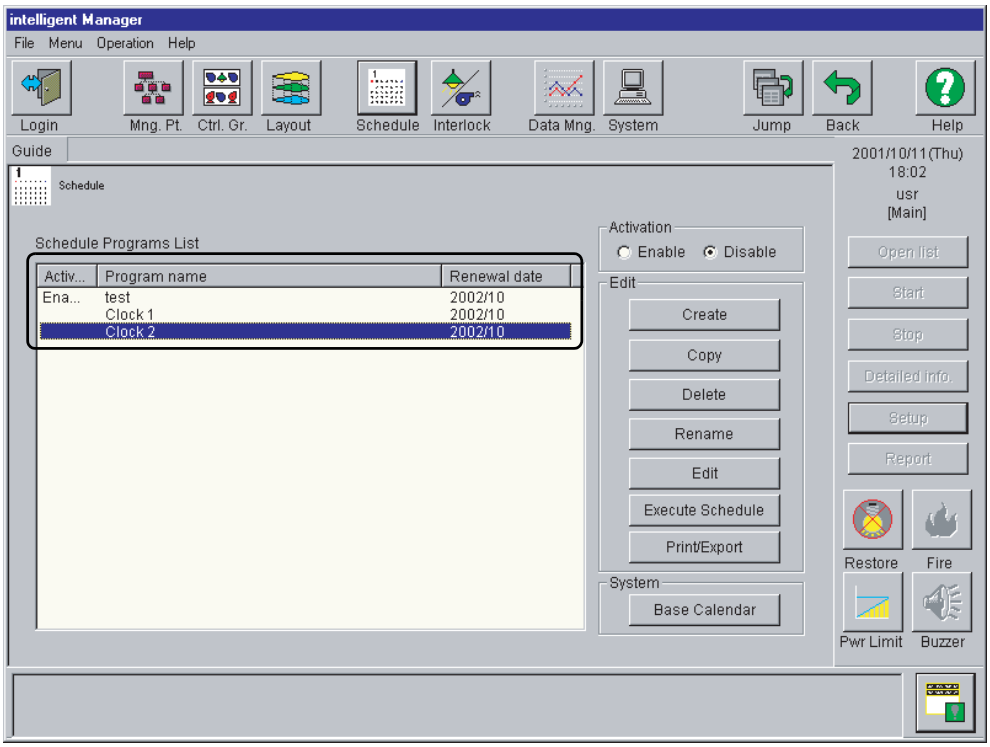
5.4.8 Copying a Schedule

An existing schedule may be copied in the following way.



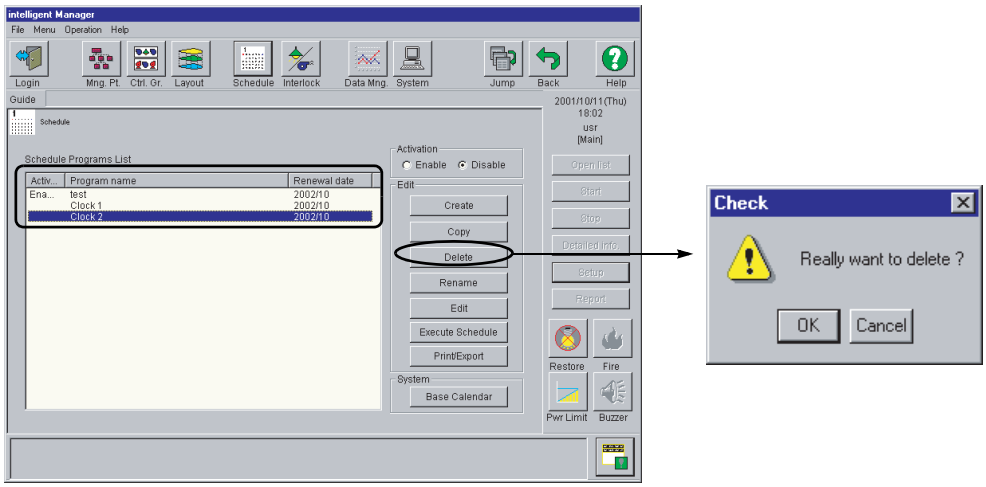
Select the name of the schedule to be copied and click the **Copy** button.

The name setup dialog box will then appear. Enter the new schedule program name and click the **OK** button.



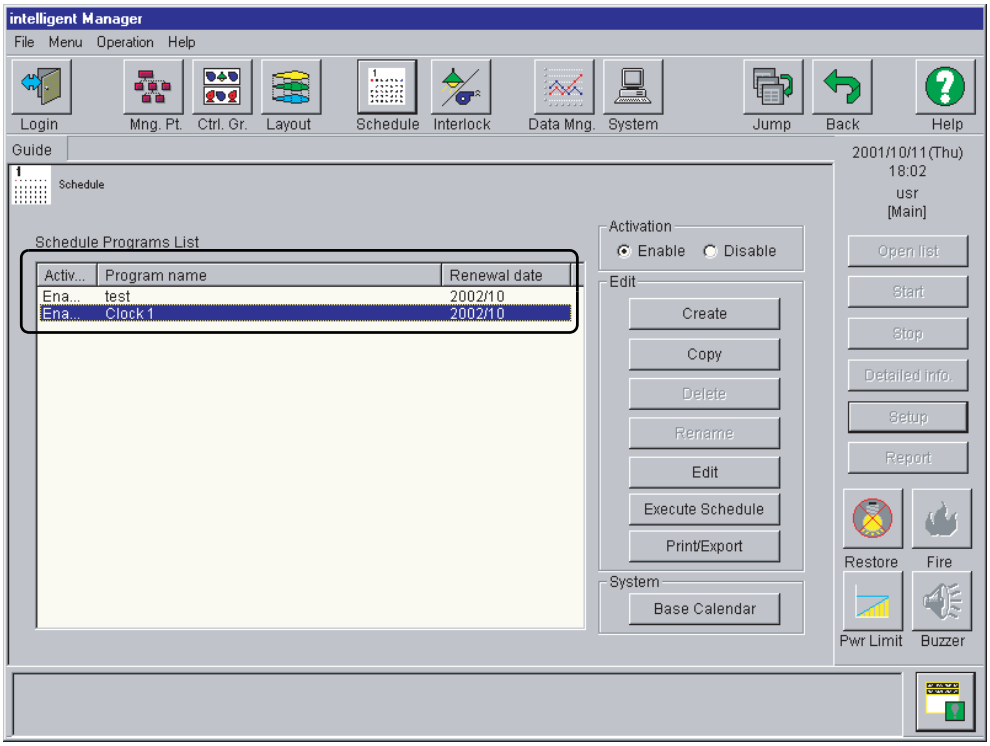
5.4.9 Deleting a Schedule

An existing schedule may be deleted in the following way.



Select the schedule to be deleted and click the **Delete** button.
A confirmation dialog box will then appear.
Click the **OK** button to delete the schedule.

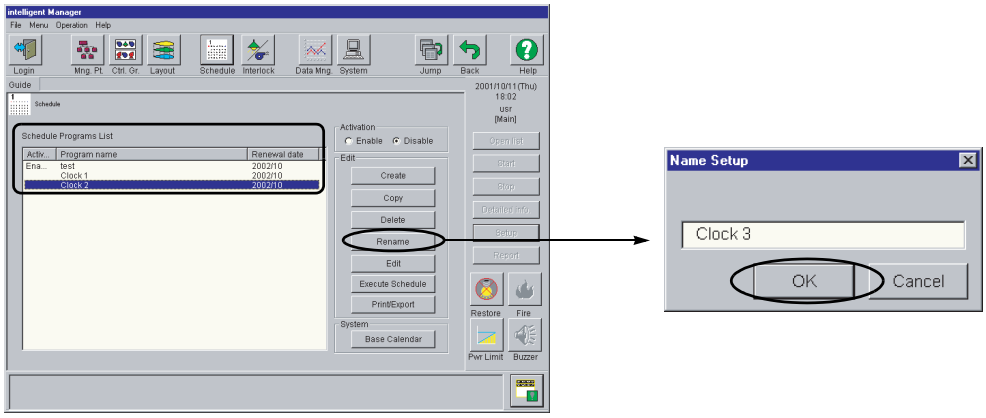
A schedule cannot be deleted when it is "enabled". First disable the schedule.



The schedule has been deleted.

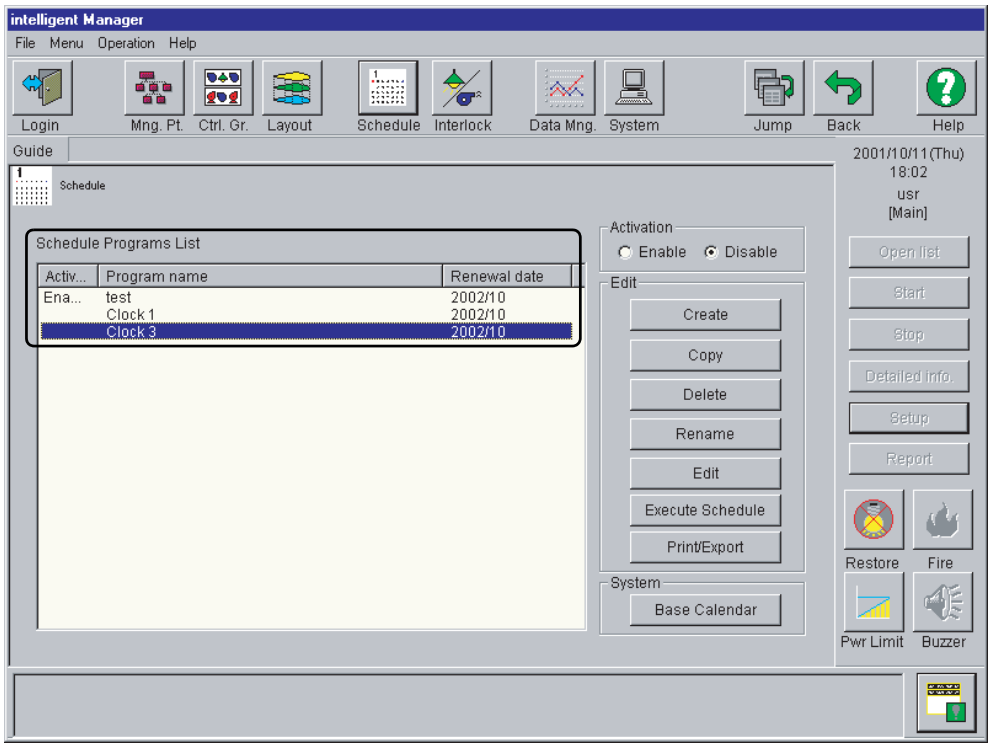
5.4.10 Renaming a Schedule

A schedule may be renamed in the following way.



Select the schedule to be renamed and click the **Rename** button.
The name setup dialog box will then appear. Enter the new name and click the **OK** button.

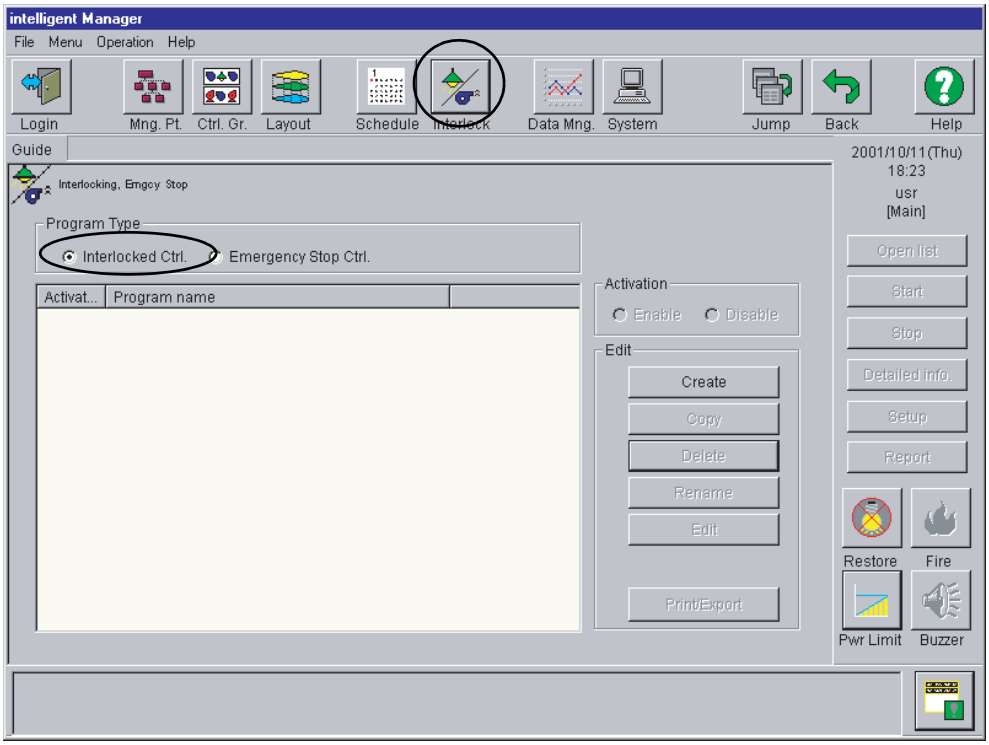
A schedule cannot be renamed when it is "enabled". First disable the schedule.



The schedule has been renamed.

5.5 Interlocking Function

- The interlocking function enables the cooperative action of the management points in accordance with the input conditions and output instructions defined by the interlocking program.
  When monitoring changes of state in the management points, if a change in setup state is detected in the input conditions, relevant output instructions (Start/Stop) are conveyed to the output management points.
- By means of the interlocking function, Start/Stop etc. forwarded to more than one piece of equipment - for interlocking when entering and exiting rooms, key management interlocking etc. - may be carried out.
- When interlocking control is executed, that operation is reported and registered in the history.
- The emergency stop may be set up along with the interlocking program.
- Up to 200 interlocking programs may be registered.

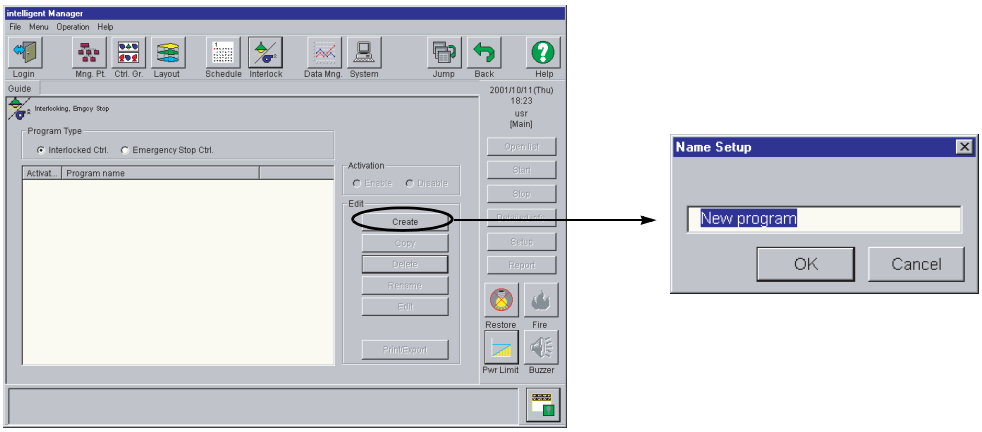


Click the **Interlocking** button from the menu buttons.
The interlocking menu screen will appear.

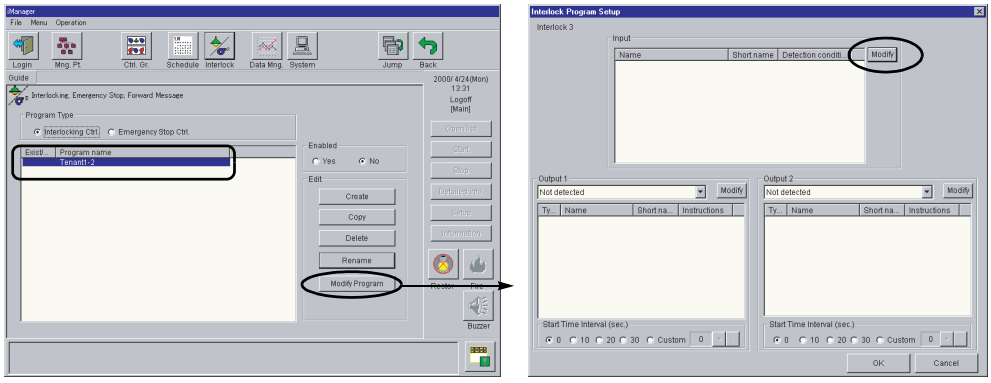
5.5.1 Setting up an Interlocking Program

For every interlocking program, up to 128 input management points to be monitored and a maximum of 50 output items (management points or control groups) may be registered.

Select the interlocking program from the interlocking menu at the top of the screen.
Click the **Create** button to newly register the program.

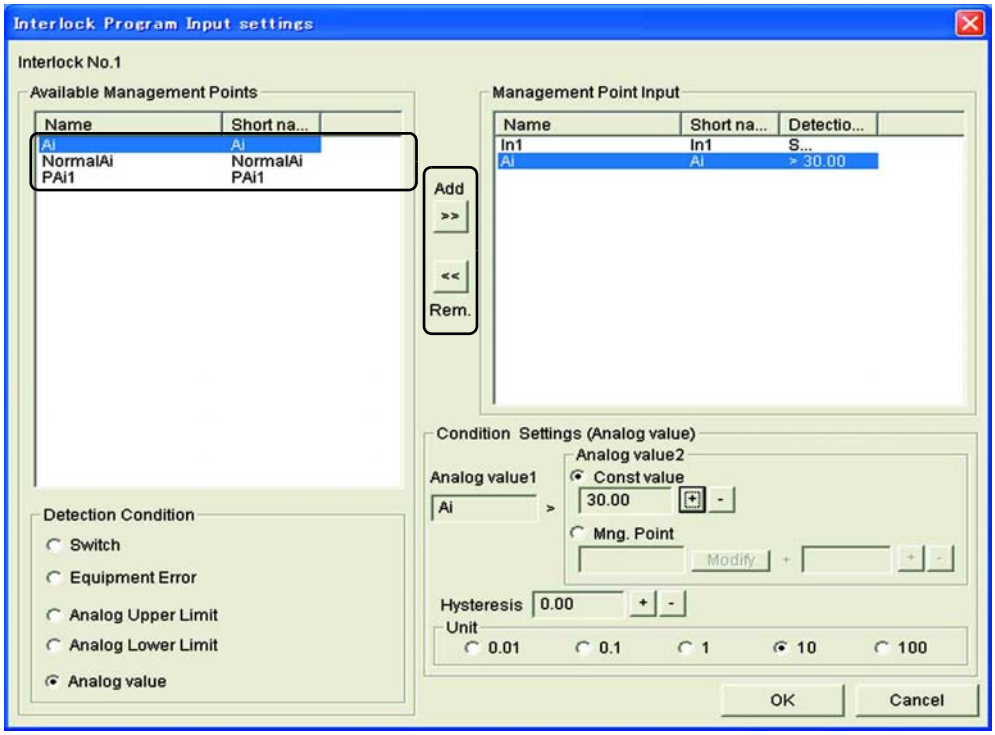


The name setup screen will appear. Enter the name and click the **OK** button. To cancel the name setup, click the **Cancel** button.
The newly registered program name is displayed on the screen.
Next set up the contents by clicking on the program name (click the scroll bar if necessary). The operation options button will be enabled on the right-hand side.
Click the **Modify Program** button to display the interlocking program setup screen.
An interlocking program name or contents registered previously can also be modified via the same procedure. However the program to be modified should be disabled. (Refer to next page for details of enabling/disabling switchover).



Click the **Modify** button in the Input frame.

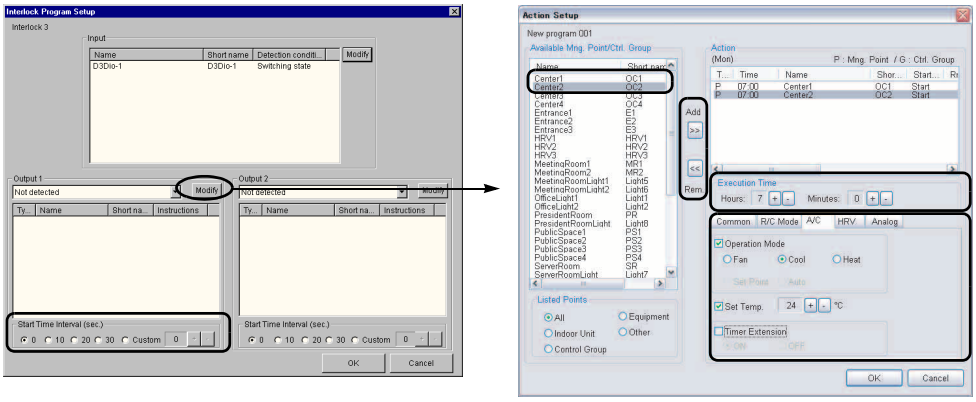
First select the detection condition.



Select a management point/control group. (Click the scroll bar if necessary). When satisfactory, click the **Add >>** button. A list of the input management points registered will appear on the right.
Input management points can be removed by selecting the points to be removed from the list on the right-hand side (click the scroll bar if necessary) and clicking the **Remove <<** button.
If the setup is satisfactory, click the **OK** button. The interlocking program setup is cancelled by clicking the **Cancel** button.
The previous interlocking program setup screen (see next page) will be restored.
Five operating conditions of interlocked program are available as shown below.

- Switch (when started/stopped)
- Equipment error (when any trouble occurs)
- Analogue upper limit (when preset upper analogue limit is exceeded)
- Analogue lower limit (when preset lower analogue limit is exceeded)
- Analogue value (when preset condition formula is satisfied, where condition is judged at an interval of 1 minute.)

Output is then registered. Click the **Modify** button in the Output1 frame.



Select a management point/control group. (Click the scroll bar if necessary).
When satisfactory, click the **Add >>** button. A list of the output management points registered will appear on the right.
Select the output action from the bottom right action buttons.
It is also possible to modify only the action of previously registered output management points.

Click on the output management point name to be modified to enable action switchover.
Input management points can be removed by selecting the points to be removed from the list on the right-hand side (click the scroll bar if necessary) and clicking the **Remove <<** button.

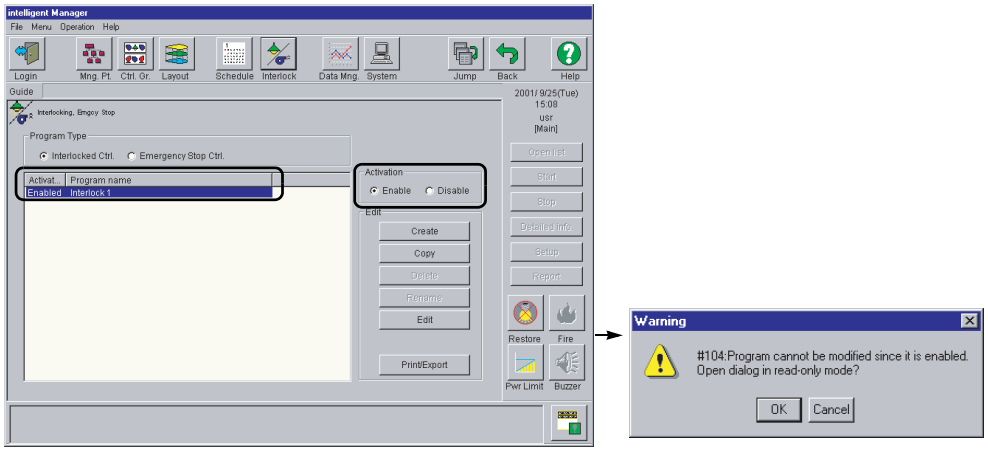
Use the **+** and **-** buttons to modify the order of the output management point display.
If everything is satisfactory, click the **OK** button. Clicking the **Cancel** button cancels the registration and the interlocking program setup screen is restored.

Next set up the output action. Select the condition from the drop-down list.
If "Not Detected" is selected, interlocking control cannot be carried out on the management point groups registered in Output1.
Sequential start time may be set up for multiple registrations of management points.

A similar procedure is used to register Output2.
If everything is satisfactory, click the **OK** button. Clicking the **Cancel** button cancels the interlocking program setup.
The interlocking/emergency program setup screen is restored.

Newly registered contents and modified contents are not saved if the operation is cancelled.

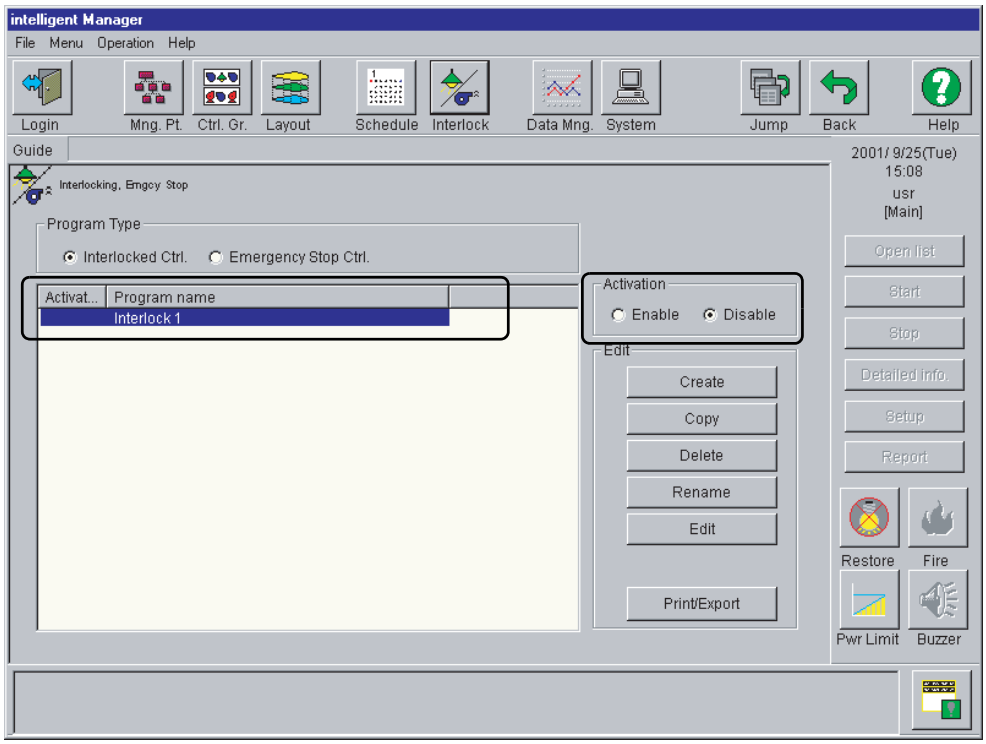
When "activated", the registered interlocking program executes.
To execute the program, click on the program name displayed in the interlocking/emergency program screen (click the scroll bar if necessary). Then select the "Yes" option in the Activate frame.



When modifying the content of a previously set up program, the program must be deactivated to allow modifications to take place.

Click on the program name and the **Copy Delete Rename** buttons to copy, delete and modify name respectively.

Set to "Disable" in the Activate frame when deleting or modifying names.

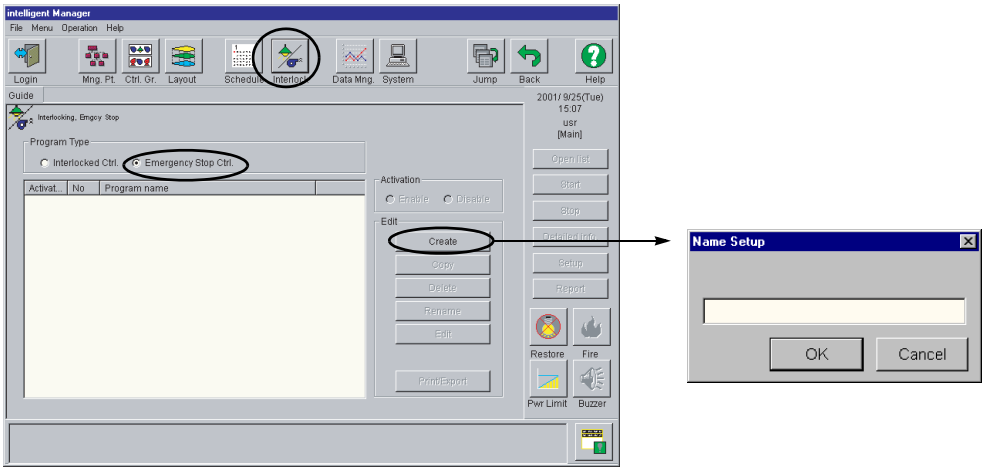


Enter the correct name and click the **OK** button. Cancel by clicking the **Cancel** button.

5.5.2 Setting up Emergency Stop Programs

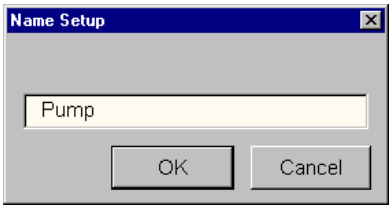
Up to 32 Emergency Stop Programs may be registered.
Up to 6 input management points for monitoring and any number of output management points may be registered for every Emergency Stop Program.
The only output action of the Emergency Stop Program is to stop action.

Operation authority is required to edit the Emergency Stop Program.
The Emergency Stop Program may not be edited during an emergency stop.



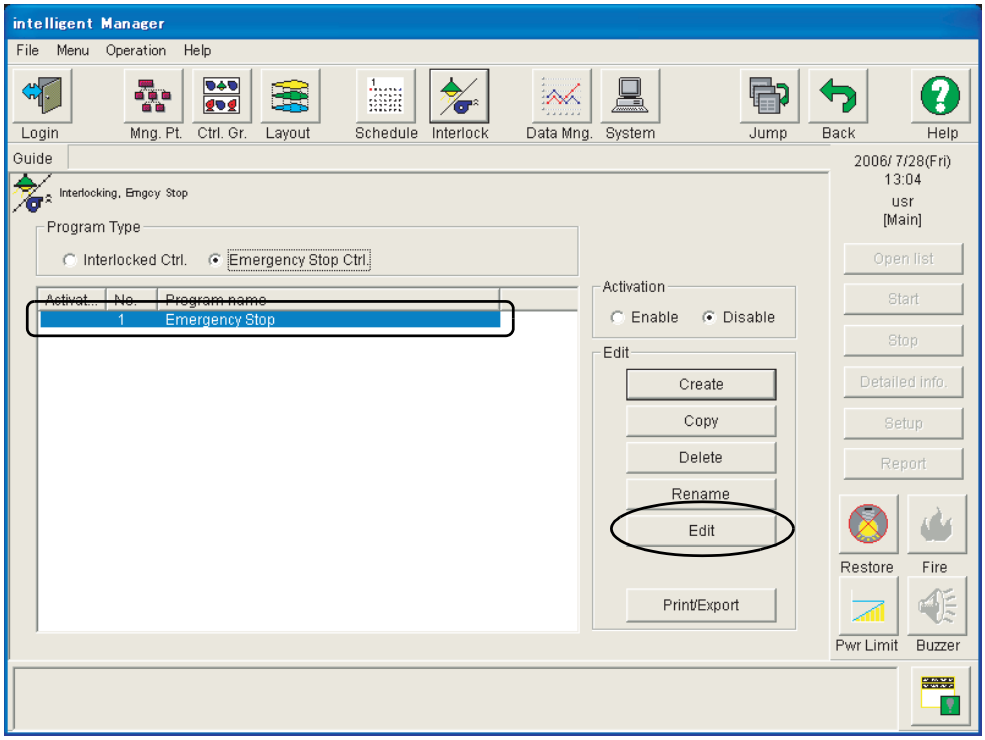
Select the Emergency Stop Program from the interlocking menu at the top of the screen.
Click the **Create** button to newly register the program.

The name setup screen will appear. Enter the name and click the **OK** button. To cancel the name setup, click the **Cancel** button.

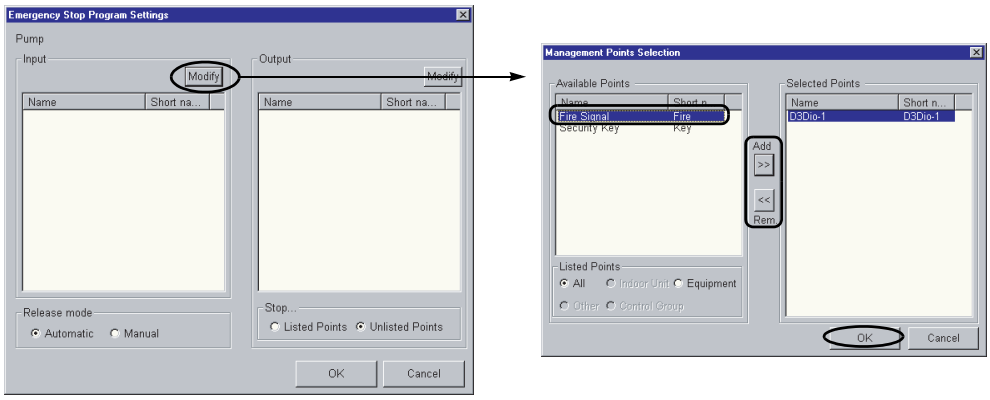


The newly registered program name is displayed on the screen.

Next set up the contents by clicking on the program name - click the scroll bar if necessary - to enable the operation buttons on the right-hand side.
Click the **Edit** button to display the Emergency Stop Program setup screen.
An interlocking program name or contents registered previously can also be modified via the same procedure. However the program to be modified should be disabled. (Refer to next page for details of enabling/disabling switchover).

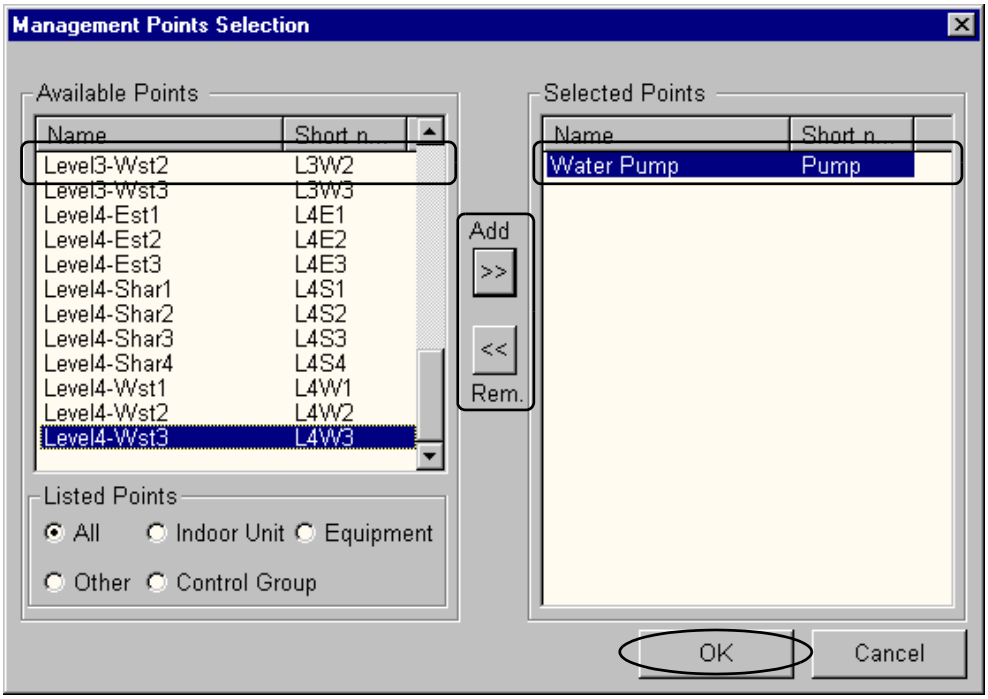


Click the **Edit** button in the Input frame to display the following management point selection screen.



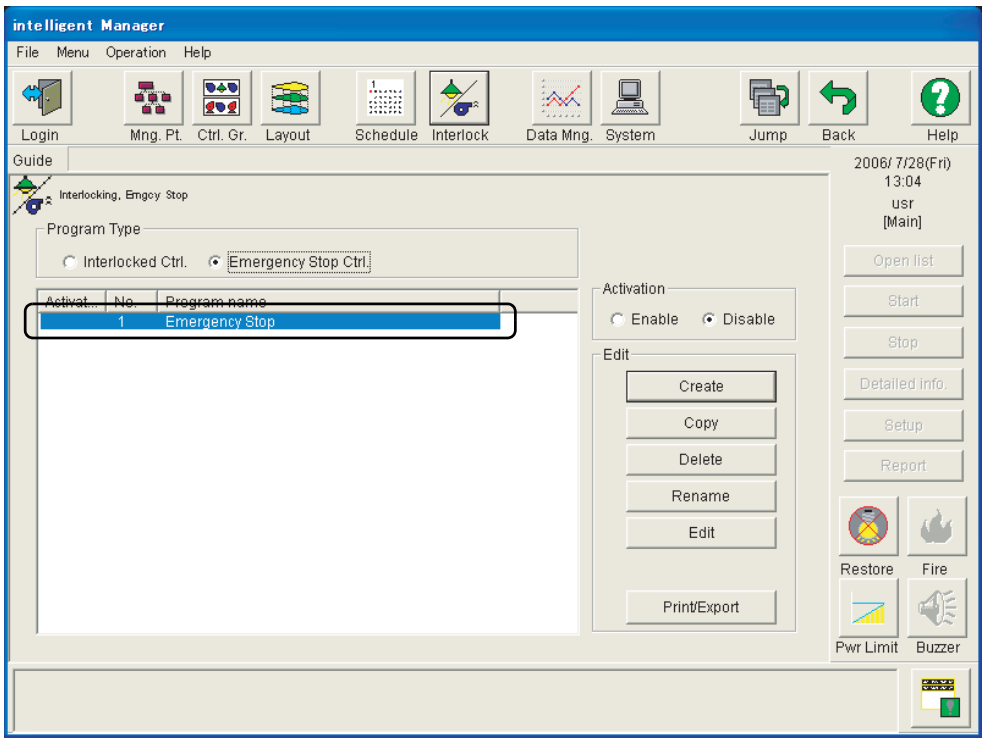
First select the detection condition.
Select a management point/control group. (Click the scroll bar if necessary). When satisfactory, click the **Add >>** button. A list of the input management points registered will appear on the right.
Input management points can be removed by selecting the points to be removed from the list on the right-hand side (click to roll down) and clicking the **Remove <<** button.
The previous interlocking program setup screen (see below) will be restored.

Output is then registered. Click the **Modify** button in the Output frame.



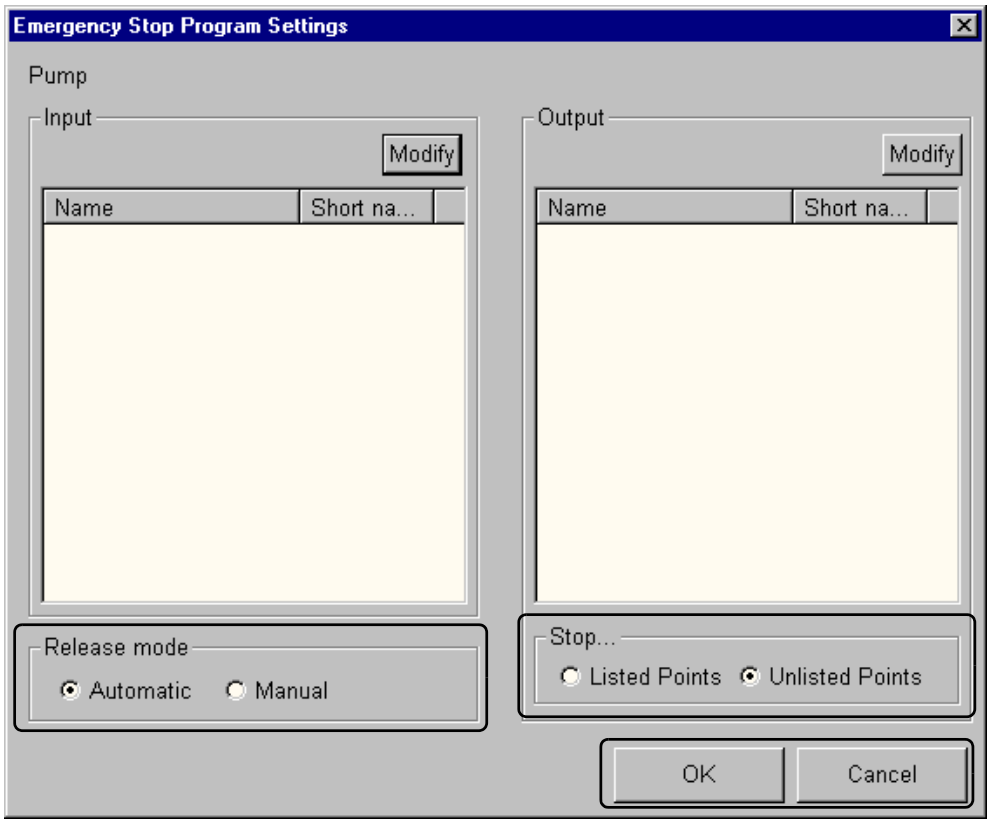
Select a management point from the available list. (Click the scroll bar if necessary).
When satisfactory, click the **Add >>** button. A list of the input management points registered will appear on the right.
Input management points can be removed by selecting the points to be removed from the list on the right-hand side (click the scroll bar if necessary) and clicking the **Remove <<** button.
If the setup is satisfactory, click the **OK** button. The interlocking program setup is cancelled by clicking the **Cancel** button.

The previous Emergency Stop Program setup screen (see below) will be restored.



Setting up the Release Mode
Automatically: emergency stop signals are automatically released when they are switched off.

Manually: once all emergency stop signals have been switched off, the specified program may be released manually.



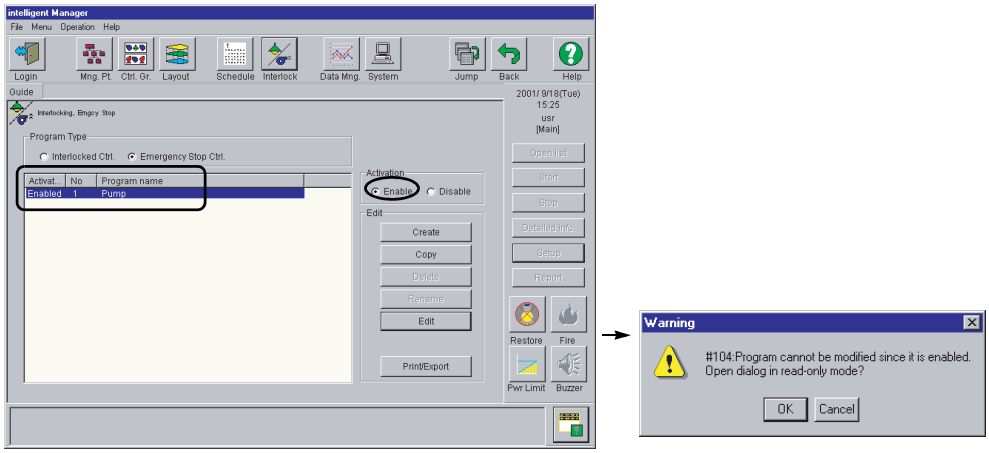
Set up the specified Output Emergency Stop method
Depending on the Emergency Stop option selected, all listed output points or all output points other than those listed are stopped.
Listed points: specifies all the output management points to be stopped.
Unlisted points: all output management points other than those listed are to be stopped.

If the setup is satisfactory, click the **OK** button.
The Emergency Stop program setup is cancelled by clicking the **Cancel** button.

The previous Interlocking/Emergency Stop Program setup screen will be restored.

When "activated", the registered Emergency Stop program executes.
To execute the program, click on the program name displayed in the interlocking/emergency program screen (click the scroll bar if necessary). Then select the "Yes" option in the Activate frame.

When modifying the content of a previously set up program, the program must be deactivated to allow modifications to take place.
The program may not be deactivated during an emergency stop. Therefore the emergency stop must be released before deactivating the program.



Click on the program name and the **Copy Delete Rename** buttons to copy, delete and modify name respectively.

Set to "No" in the Activate frame when deleting or modifying names.

Enter the correct name and click the **OK** button. Cancel by clicking the **Cancel** button.

5.6 Data Management

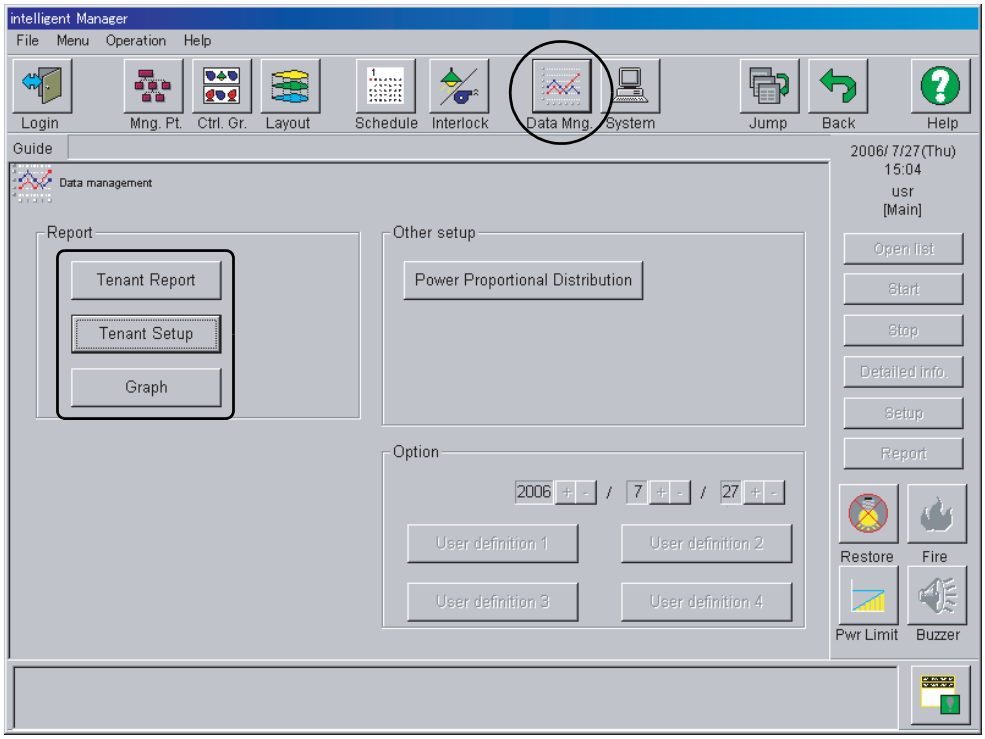
Caution: This function of determining individual electrical power consumption is an ESTIMATION based on individual indoor units distribution load ratio and operating hours. It is not based on legal regulations from any governing body (such as "JIS" Japanese Law of Weighing calculation) and cannot stand up in a court of law. Collected data are saved in a daily report around midnight.

5.6.1 The Building Management Applications

This function supports Building Management Business.
External applications can be launched from the customizable buttons of this screen. When shipping, intelligent Manager is provided with an application for retrieving operational data from the intelligent Manager database. This application called intelligent Manager **Tenant Report Management** has two modules that are launched by the buttons **Tenant Setup** and **Tenant Report** as described in the two next sections.

Note: The customization of the buttons (label as well as launched module) should have been performed beforehand by the installer (System Engineer) and is not explained in the current document.

Click the **Data Mng.** button from the menu buttons.
The Data Management menu screen will be displayed.

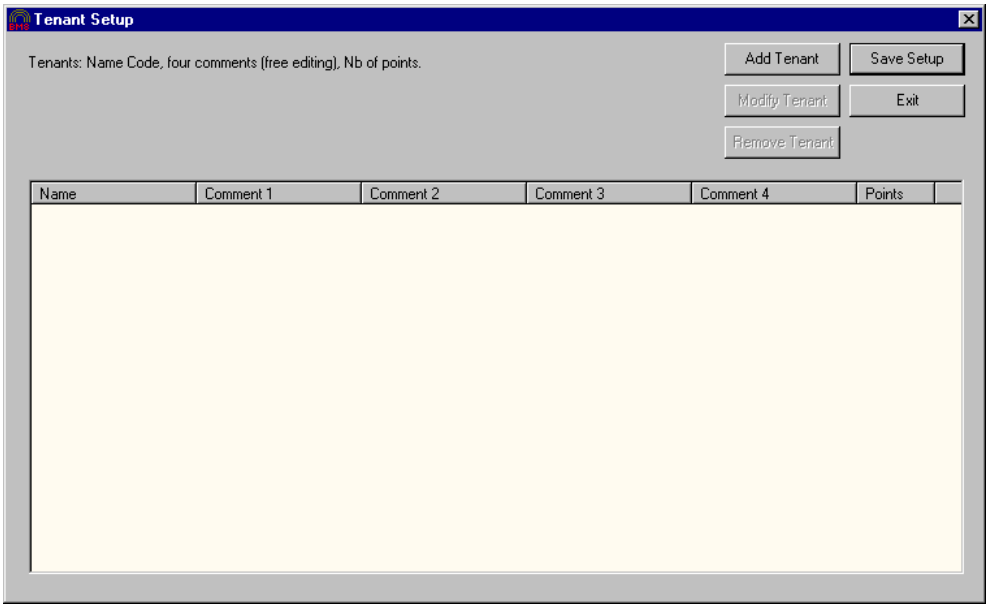


The reports are created in two steps, each with one of the modules of the application:

- **Step1:** configure the tenants (this step can be performed once and then be reused)
  - Create the tenants
  - Associate to each tenant management points which data will be included in his report
- **Step 2:** retrieve the report data (this step can be performed on a regular basis on demand)
  - For each tenant, select the report limit dates and retrieve the operational data from the intelligent Manager database

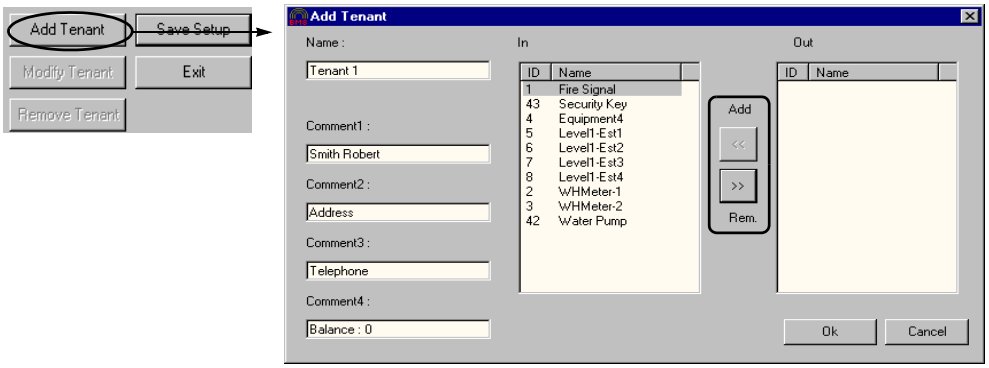
5.6.2 Configuring the Tenants

Click the **Tenant Setup** button to launch the tenant configuration module. The tenants with their information and management points' configuration setup are stored within the intelligent Manager database. Therefore, it is important to click the **Save Setup** button before exiting with the **Exit** button.



5.6.2.1 Creating a Tenant

1. Click the **Add Tenant** button that will display the tenant configuration dialogue. The max number of tenants that can be registered is 100.



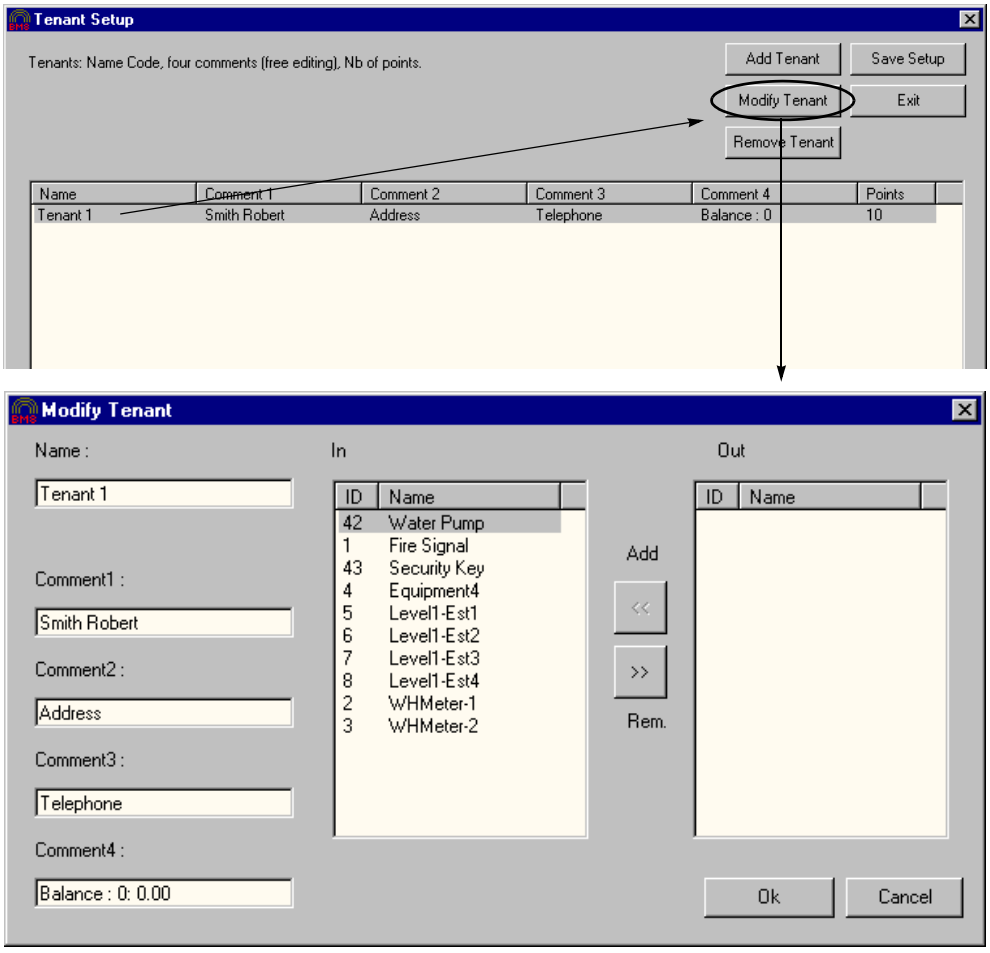
2. Enter the personal information of the tenant: its **name** (name duplication is not allowed) and its **comments** (up to 4 arbitrary values),
3. Select the points of this tenant from the **Out** list and click the **<<** button to add them to his In list, click the **>>** button to remove them (a management point can belong to more than one tenant),
4. Click the **OK** button to validate this tenant.

The tenant with its personal information as well as the number of associated management points is displayed in a list as shown in the figure below.

5.6.2.2 Modifying a tenant

It is possible to modify at any time both the personal information of a tenant (including its name) as well as his management points configuration.

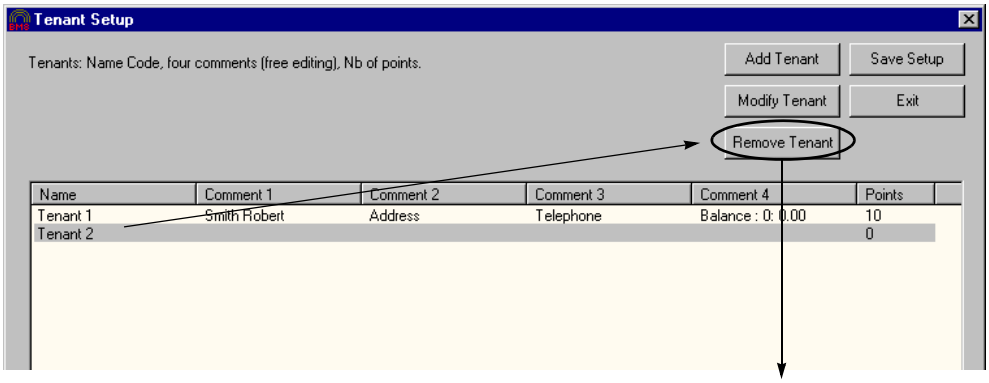
1. First select an existing tenant from the displayed tenants list, then click the **Modify** button (if no tenant has been selected, an error message is displayed);



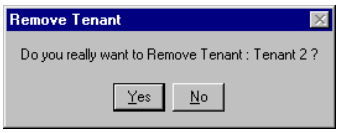
2. Perform as above from (2) to (4).

5.6.2.3 Removing a tenant

It is possible to delete a tenant from the list. Its personal information as well as management points configuration will be removed from the configuration file.

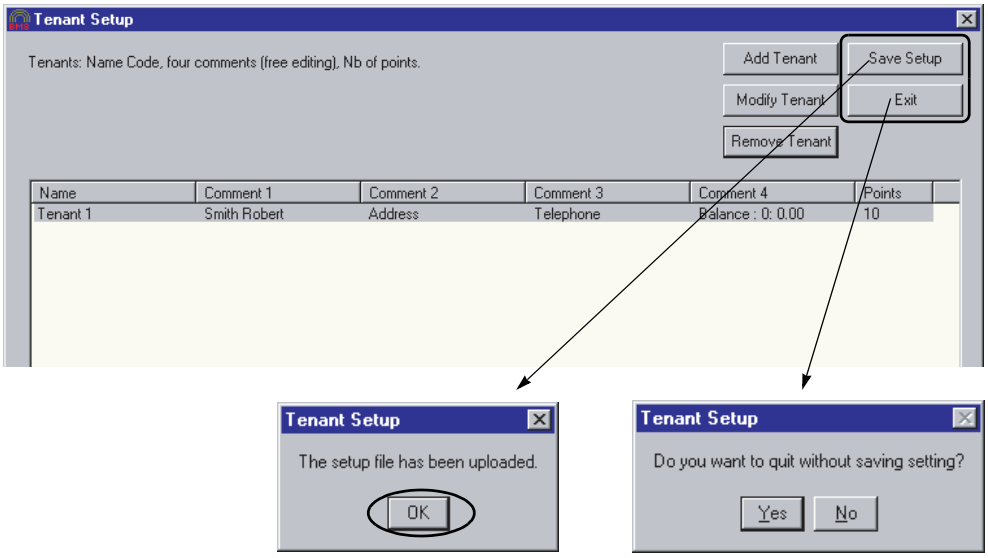


1. Select a tenant as above in (1);
2. Click the **Remove Tenant** button;
3. Confirm in the warning message box to validate the deletion.



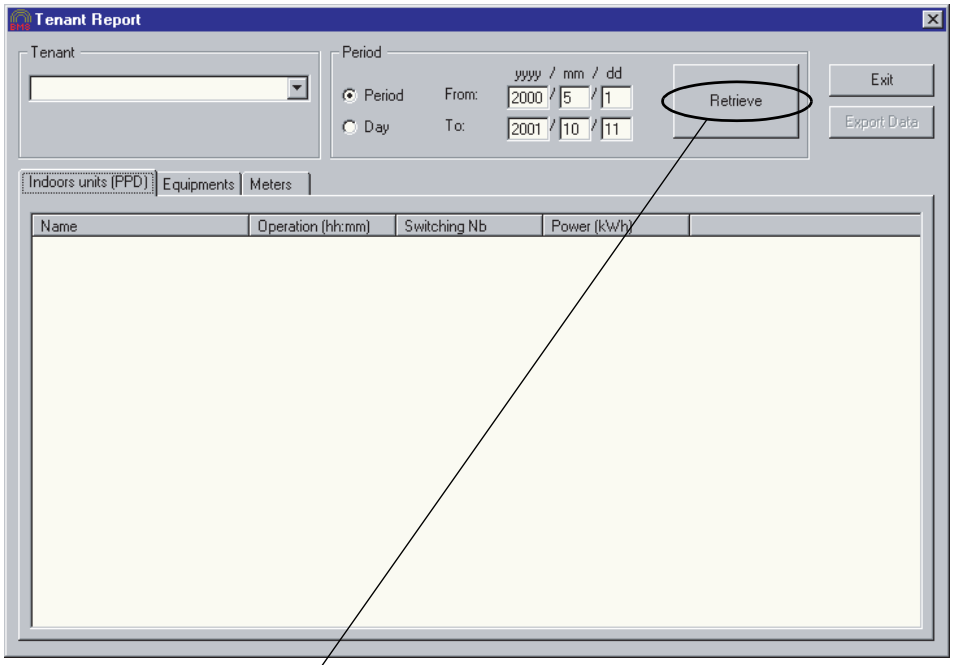
5.6.2.4 Exiting the report setup application

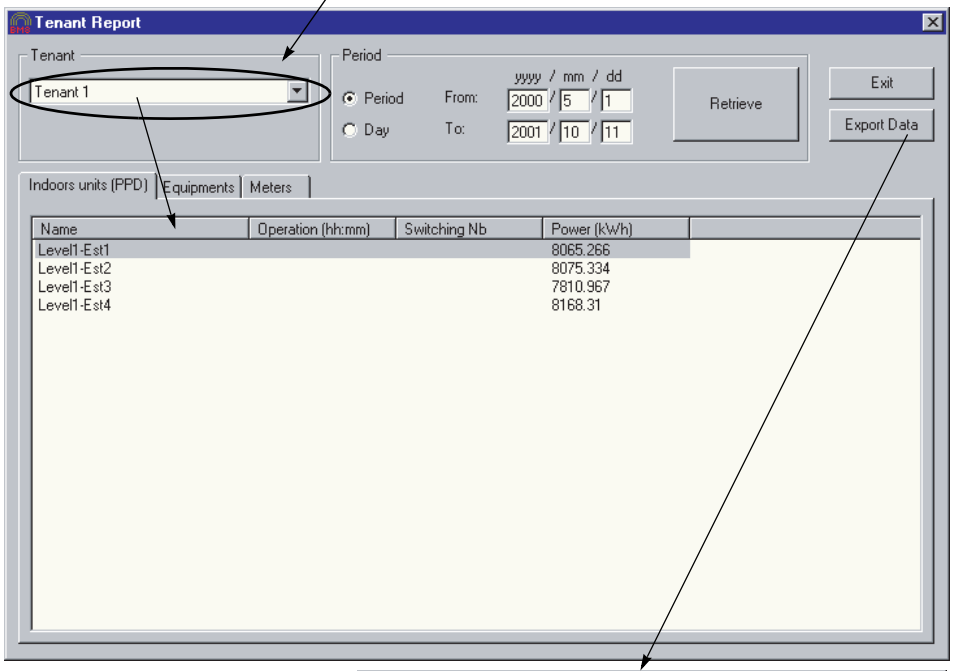
The configuration file is stored within the intelligent Manager database. Click the **Save Setup** button as shown in the figure below to update it. Then, the operation buttons are deactivated until transfer completion is notified. Click the **OK** button to acknowledge the backup completion. After the configuration has been saved, click the **Exit** button. A confirmation box appears warning if the configuration has not been saved.
Click the Yes button to exit, or the else click the **No** button to return to the tenant setting application.

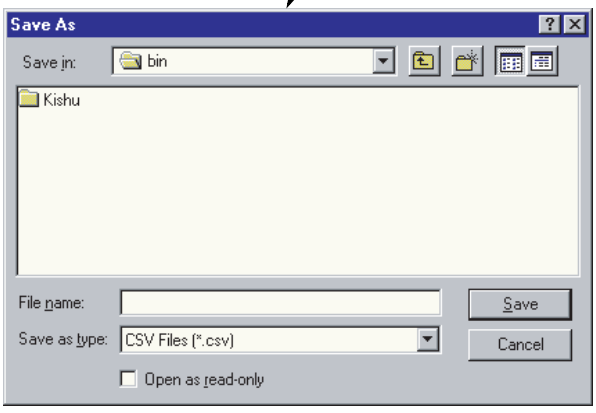


5.6.2.5 Creating a report

This module extracts from the intelligent Manager database the operational data for the management points of the tenant, making use of the previously set up configuration.
Click the **Report** button to launch under **Tenant Report** module.







For each tenant and each period, perform as follows:

1. Select a report type from the option and enter the appropriate period:
   - **Daily:** the date of the data to be retrieved;
   - **Period:** the date of the first and last day of the data to be retrieved (and cumulated).
2. Click the **Retrieve** button, then the list of tenants displays;
3. Select the **Tenant** from the drop-down list;
4. **Export** the data in csv format, then making use of a worksheet editor, manipulate the retrieved data at will (select/copy/paste, save in an other worksheet, etc.).

After retrieving the data of each tenant for the period, click the Exit button to close the application

5.6.3 Graphical Report

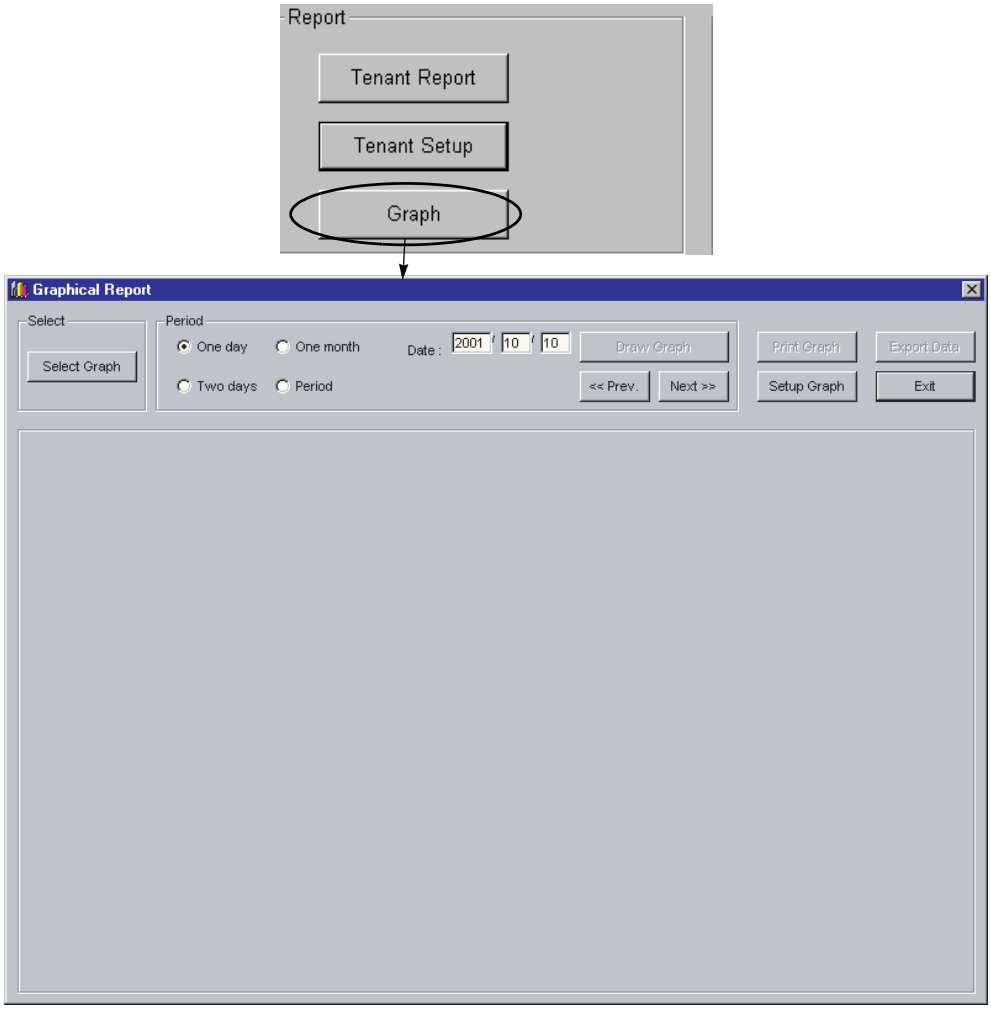
5.6.3.1 Introduction

The purpose of the Graphical Report function is to visualize graphically the daily evolution of pulse value and equipment or indoor unit running time. The graphical Report function makes also possible the graphical visualization of trend and daily value of analog management points.

In addition the function also makes possible printing of graphics and export of graphics data under the CSV format for further processing.

5.6.3.2 Starting the Graph function

Click on the **Data Mng.** button of the intelligent Manager software to display the **Data Management** screen. In this screen's Option frame click on the Graph button to launch the Graphical Report function.
The Graphical Report function's main screen is as shown bellow.

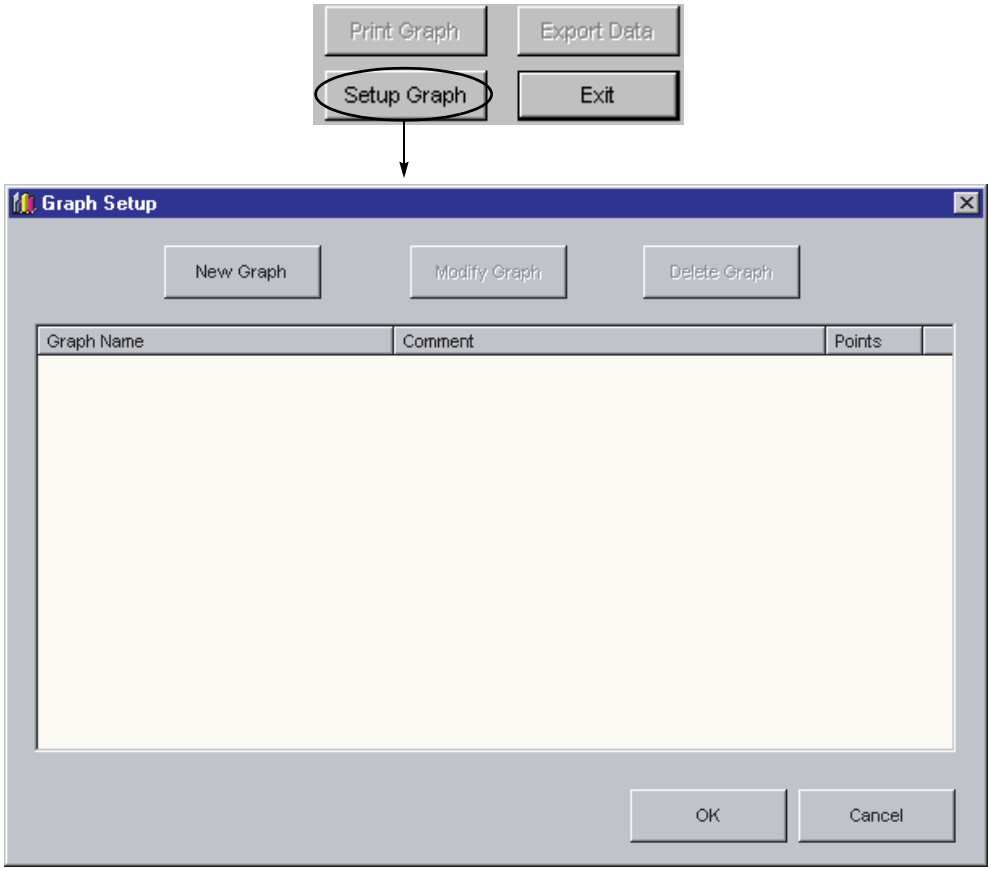


5.6.3.3 Setting up "Graphs"

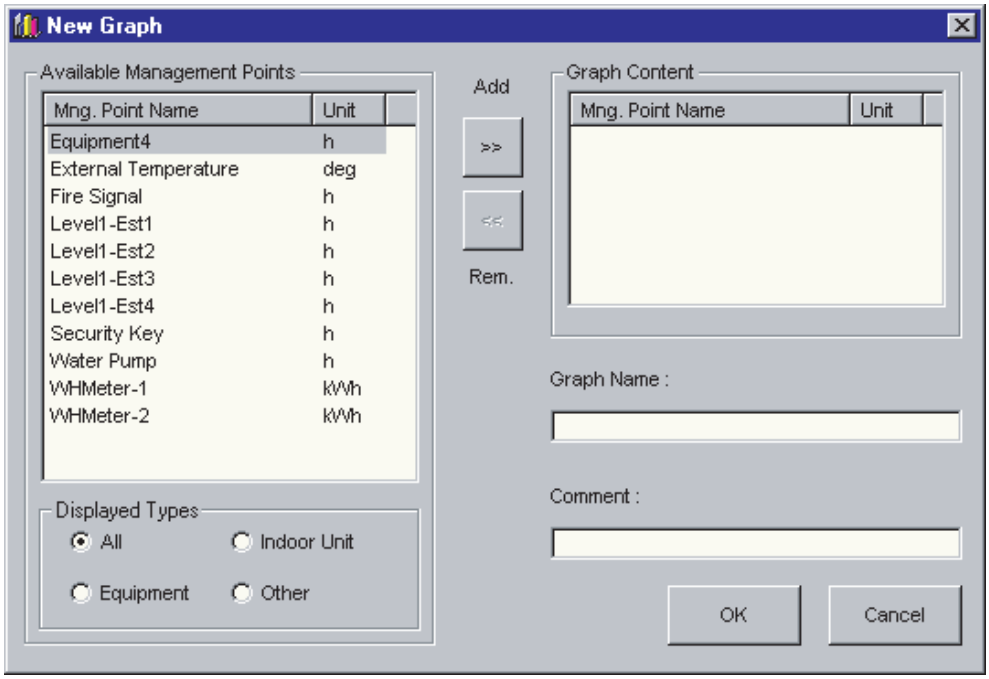
When using the function for the first time, it is necessary to setup "Graphs".

- A "Graph" is a bundle of management points whose values will be displayed on the same graphic.
- A single management point may belong to more than one "Graph".
- The number of management points in a "Graph" is limited to 4.
- The number of different types of point (i.e. with different units) in a "Graph" is limited to 2.
- The number of "Graphs" is limited to 500.

To set up "Graphs", click on the **Setup Graph** button. The Graph Setup dialog displays, as shown below.



(i) Creating a new "Graph"
To create a new graph, click on the **New Graph** button. The **New Graph** dialog displays as shown below.

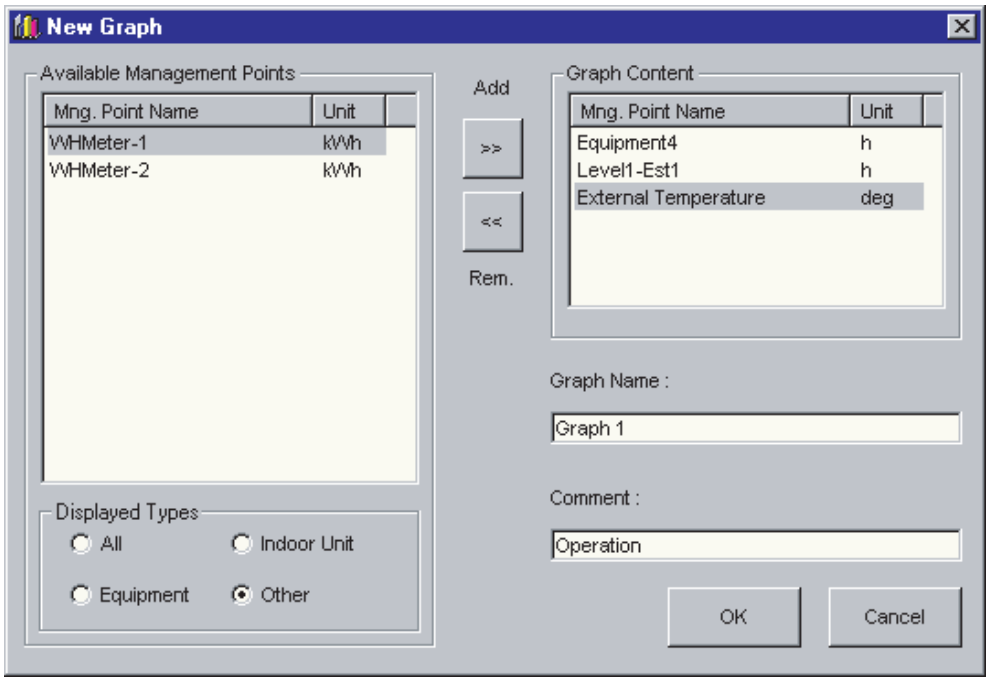


Input the graph name in the **Graph Name** text box. Also input an optional comment in the **Comment** text box.

Note: Both Graph Name and Comment are limited to 32 characters.

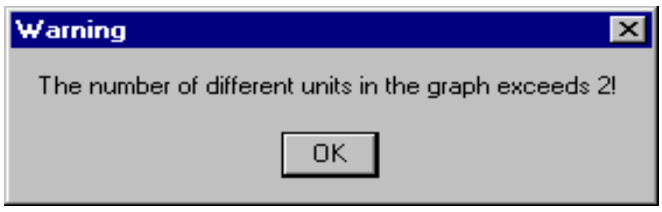
The management points belonging to a Graph are selected from the list of available management points and added by clicking the **Add >>** button.

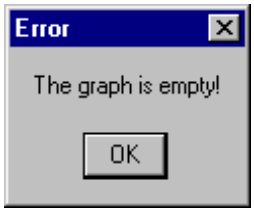
To remove a management point from the Graph, select the management point to be removed from the Graph content list and click the **Rem. <<** button.



Use the option button to modify the type of the points displayed in the list of available management points. **Equipment** includes Di, Do and Dio management points. **Other** includes Ai, Ao and Pi management points.

If the there is no management point, or if limit of number of management points, different types of point (i.e. different units) is exceeded, a warning message displays as shown below.

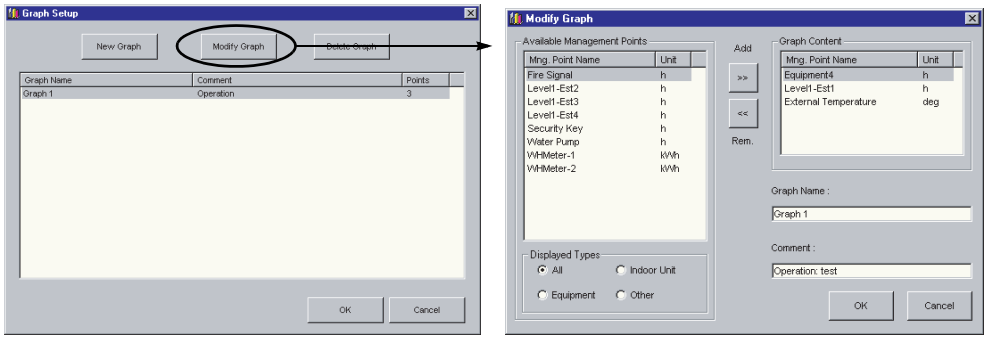




Click the **OK** button to save the new graph as shown in the figure below, or click the **Cancel** button to exit the dialog without saving the new graph settings

(ii) Modifying a graph

To modify a graph, first select it in the list, and then click on the **Modify Graph** button.

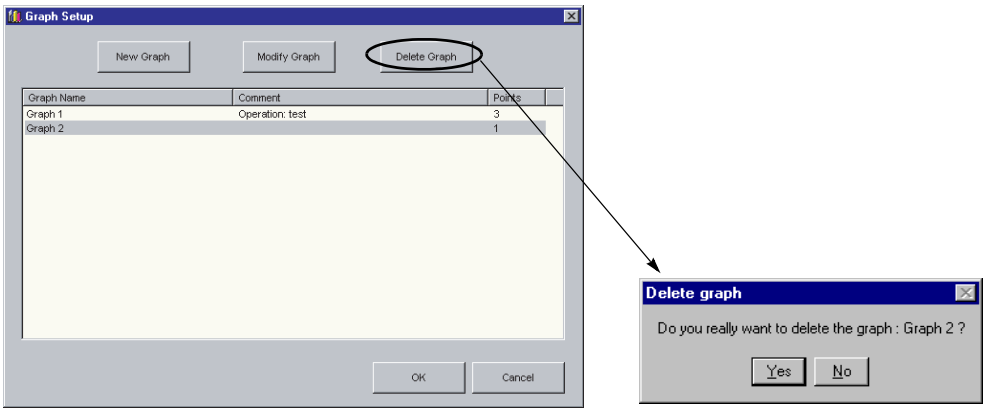


Perform as explained in **(i) Creating a new "Graph"** (p. 329) to modify the selected graph parameters.

After modifying parameters, click the **OK** button to save the graph new parameters, or click the **Cancel** button to leave the parameters unchanged.

(iii) Deleting a graph

To delete a graph, first select it in the list, and then click the **Delete Graph** button. A confirmation dialog displays as shown below. Click **Yes** to confirm the deletion or **No** to cancel it.



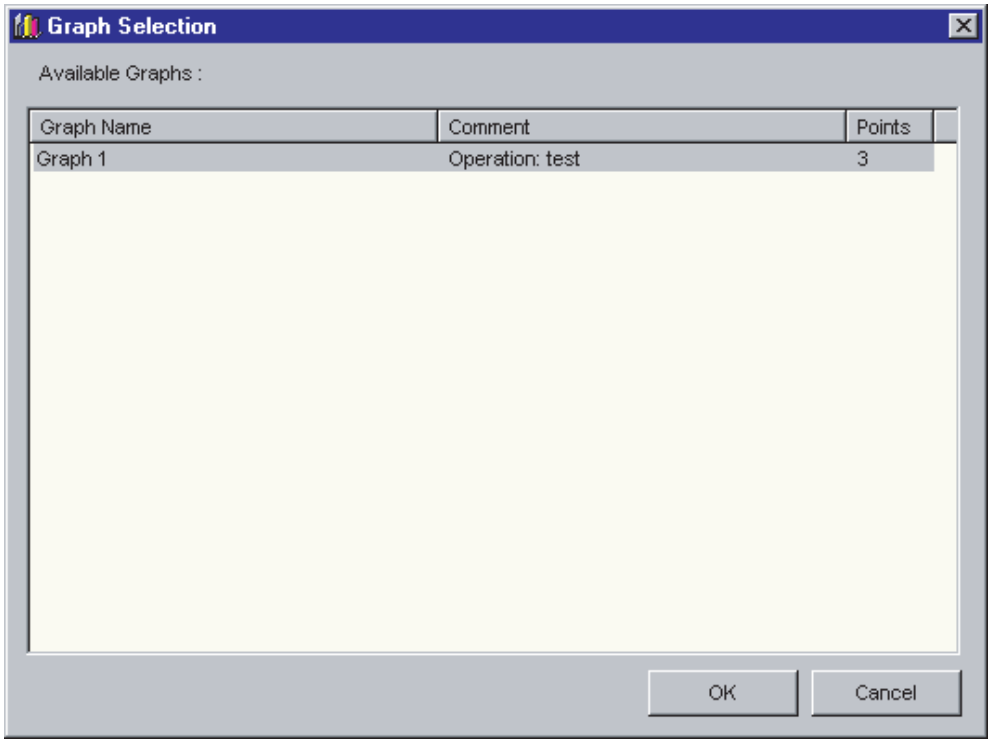
(iv) Exiting Graph Setup tool

Click on the **OK** button to save the modifications of the Graphs by updating the Graphs setting file. Click the **Cancel** button if you which to cancel the modifications and leave the Graphs setting unchanged.

5.6.3.4 Drawing a graph

(i) Selecting a graph

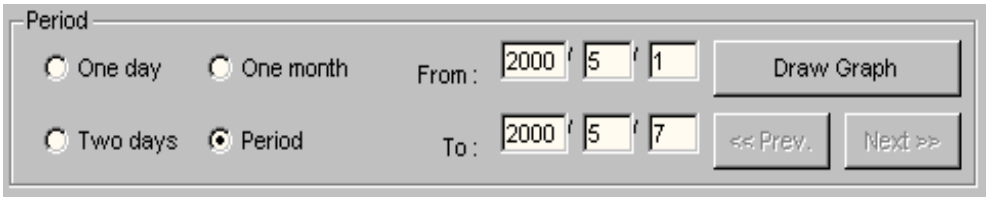
Select the graph to be drawn. Click on the **Select Graph** button to display the list of available graphs as shown below.



Select a graph in the list and click the **OK** button to update current selection. To exit the dialog without updating the current selection, click on the **Cancel** button.

(ii) Selecting a period

Select the period for which the data have to be displayed. This can be a **One Day** period, a **Two Days** period, a **One Month** period or a free **Period**. Use the option button to select the period type as shown below.



Input the date or month, the starting date, or the start and end dates according to the period type in the corresponding fields (YYYY/MM/DD).

Use the **<< Prev.** and **Next >>** buttons to remove or add one day to the date or starting date, in the case the period is a one day or a two days period.

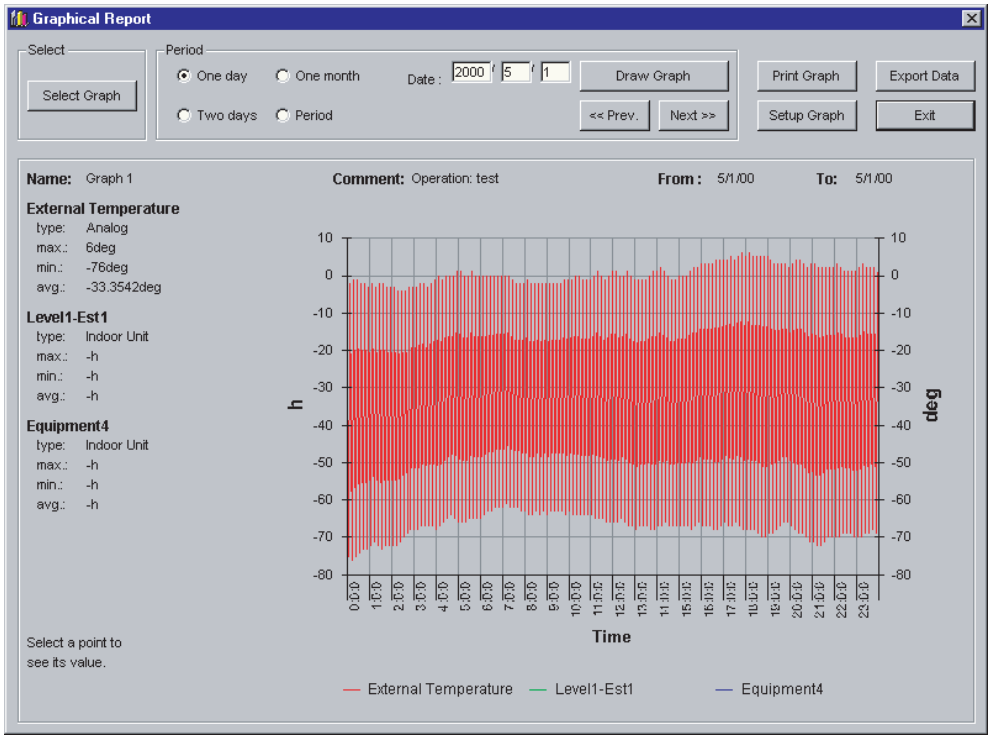
Use the **<< Prev**. and **Next >>** buttons to remove or add one month to the month in the case the period is a one month period.



Note:

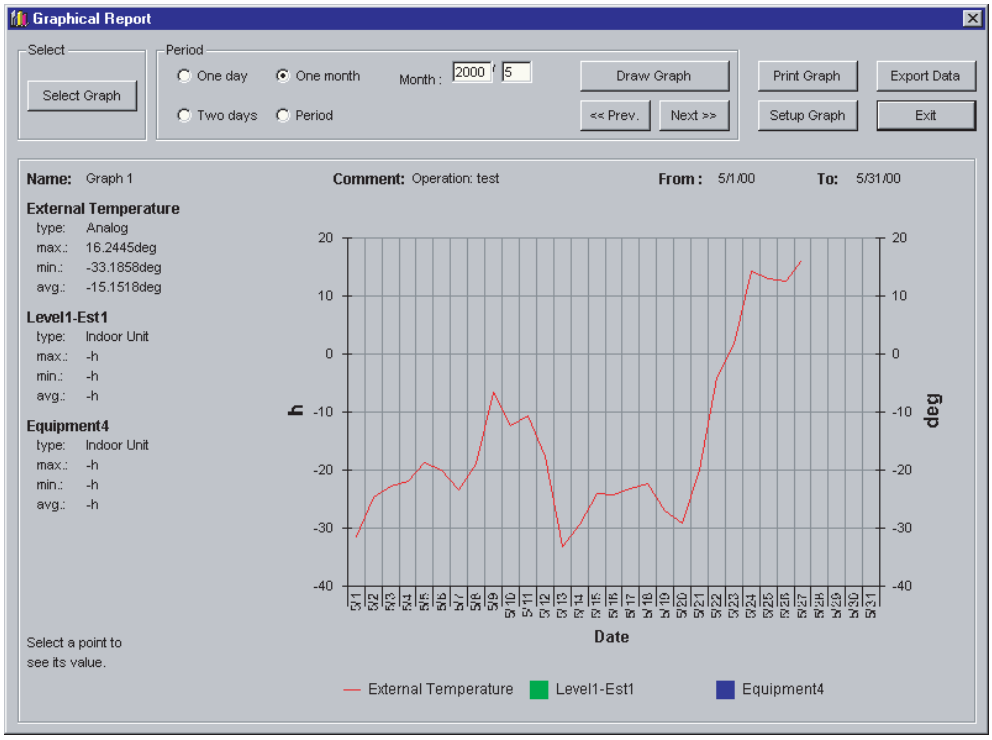
- A One Day period is a 24 hours period starting at midnight of the inputted date.
- A Two Days period is a 48 hours period starting at midnight of the inputted date.
- A One Month period is a period starting at midnight of the first day of the inputted month and ending at 23.59 of the last day of the inputted month.
- A Period is a period starting at midnight of the inputted start date and ending at 23.59 of the inputted end date.

(iii) Drawing the graph
To draw the graph, click on the **Draw Graph** button.



Analog management point and indoor units - one-day period

Indoor units - one-month period



The top part of the graphic frame displays the Name and comment of the Graph as well as the data, start date and end date, depending on the period type.

The left part of the graphic frame displays information about each management point in the graph: its name, its maximum and minimum value over the period as well as its average value over the period.
In the case of a pulse management point, a equipment or a indoor unit, if the period type is a one day period only the value for the day is displayed, as the maximum, minimum and average are all equal.

Note:

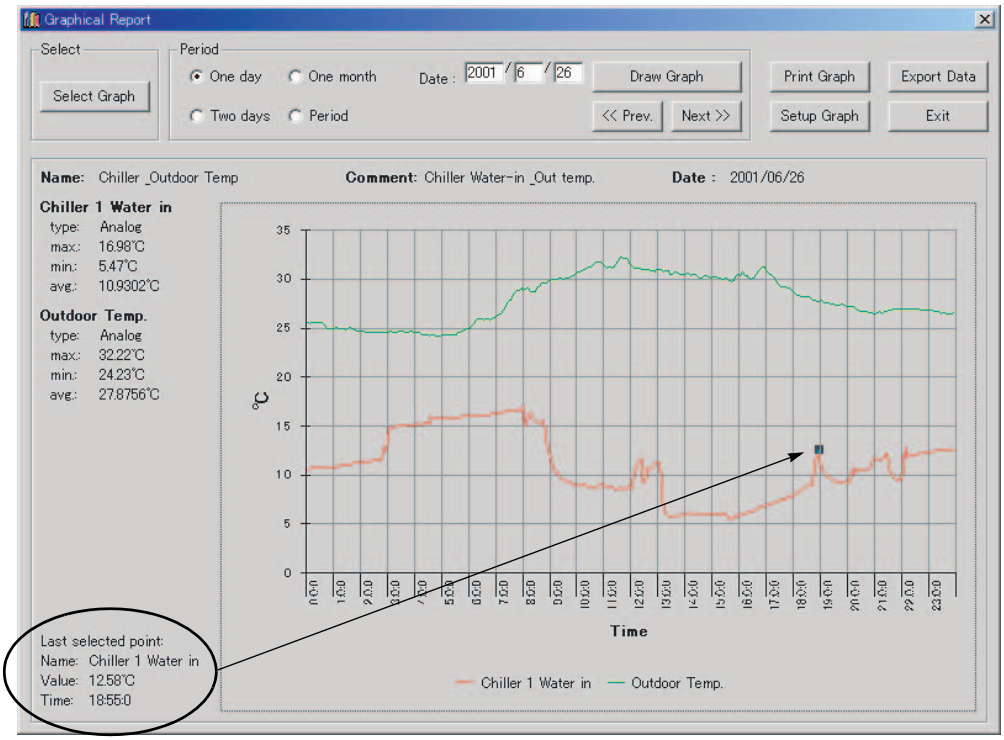
- If no data could be retrieved for the period or if all data for the period are invalid, a "-" is displayed instead of the value.
- After modification of the period type or range, or after modification of the current selection, click the **Draw Graph** button to update the display graphic.

- X Axis scale is:
  - 1 mark & 1 label / hour in case of a one day or two day period.
  - 1 mark & 1 label / day in case of a one month period or free period more than 2 days and less or equal to 31 days.
  - 1 mark & 1 label / 2 days in case of a free period of more than 31 days and less or equal to 61 days.
  - 1 mark & 1 label / 4 days in case of a free period of more than 61 days and less or equal to 122 days.
  - 1 mark & 1 label / 7 days in other cases.
  - Analog values are displayed using lines for every type of period.
  - Pulse, equipment and indoor units are displayed using bars for period of longer than 2 days and lines for period shorter or equal to 2 days.
  - Displayed values (See table below):
    - For analog points, trend value is displayed for period less or equal to 2 days.
    - For period longer than 2 days, daily average value is displayed.
    - For other type of management points daily value is displayed for every type of period.

	1 day	**2 days**	**1 month**	**period > 2 days**
Analog	Trend value	Trend value	Daily value	Daily value
Pulse	Daily value	Daily value	Daily value	Daily value
Equipment/Indoor Unit	Daily value	Daily value	Daily value	Daily value

(iv) Displaying a point value

To display the exact value of a point at a given time, click on the point of the curve you want to know the exact value as shown below.

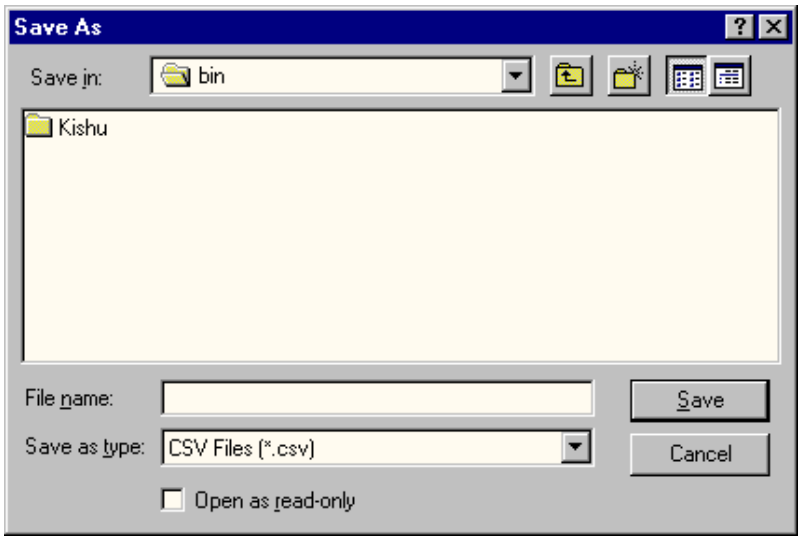


5.6.3.5 Printing a graph

To print a graph, click on the **Print Graph** button. The graphic will be printed on the system printer.

5.6.3.6 Exporting a graph data

To export a graph data in the CSV file format (which can be opened with text editor or Microsoft Excel for example), click on the **Export Data** button. The following dialog displays. Choose the folder, input the file name and click the **Save** button.



The CSV file contains information about the Graph (Name, Comment), the period (From, To). It also contains information about every member management point (Point Name, Point ID, Point Type, Unit).

Note: Point Type:
1 = Equipment (Di, Do, Dio)
2 = Pulse (Pi)
3 = Analog (Ai)
4 = Indoor Unit, HRV, Chiller, AHU

Maximum, Minimum and Average value over the period are also displayed for every management point as well a data (Date/Time, Value and Validity).

5.6.4 Setup of Power Proportional Distribution (option)

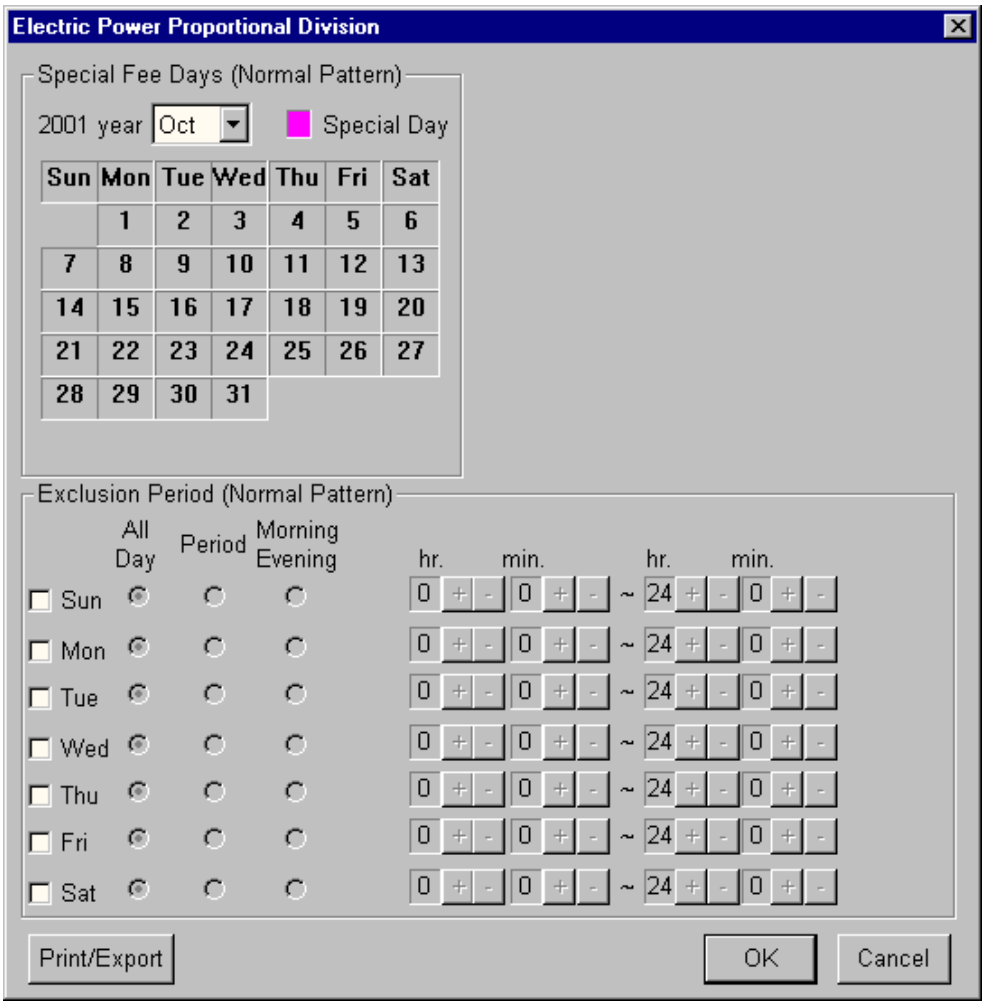
Note: When you use this function, be sure to inform the person in charge of system setting in advance. When this function is used, power proportional distribution cannot be calculated.

If this optional function is present in your configuration, the power used by the outdoor units can be divided between the indoor units and equipment as initially configured in the engineering procedure. By using this dialogue, it is possible to determine when this proportional division should be performed or not.

- Exclusion time zones (time zones in which power division is not calculated proportionally) may be set up on any day of the week.
- Regardless of exclusion time zone setup, special days may be set up on the calendar (in this case the whole day is calculated, regardless of normal setup).

Click the **Power Proportional Division Setup** button.

The screen will appear as shown below.



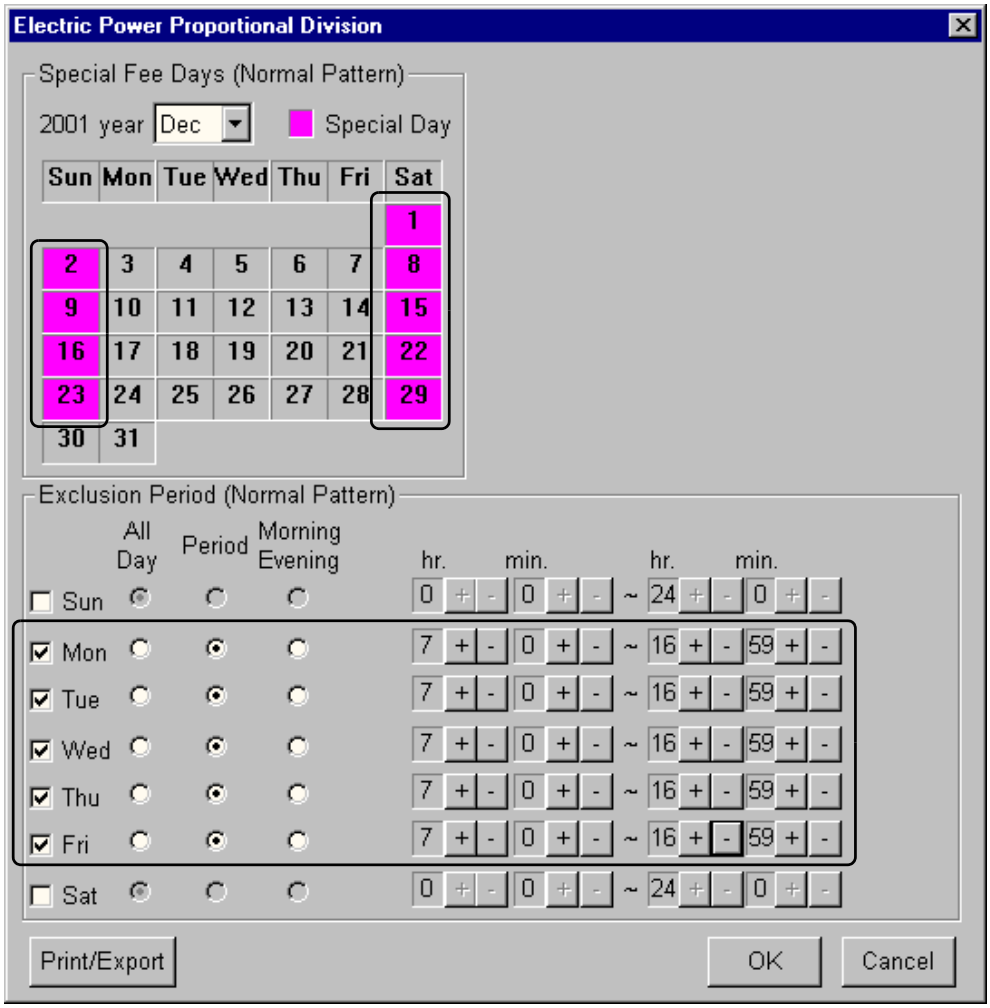
Exclusion Time Zones (usual format)

Check the Exclusion Time setup day check box. Use the radio buttons to select the day, time zone option (whole day, within the time zone, or outside of the time zone) and set the time zone if necessary with the **+ -** buttons.

Special Day Setting (usual format)

Calendar can be set up with special days for which the exclusion time zone setup does not apply. Click on a date to set it up as a special day to be displayed in red. Clicking again cancels the setup.

Example of setup screen.



Click the **OK** button to validate the setup content. Clicking the **Cancel** button invalidates the setup content.

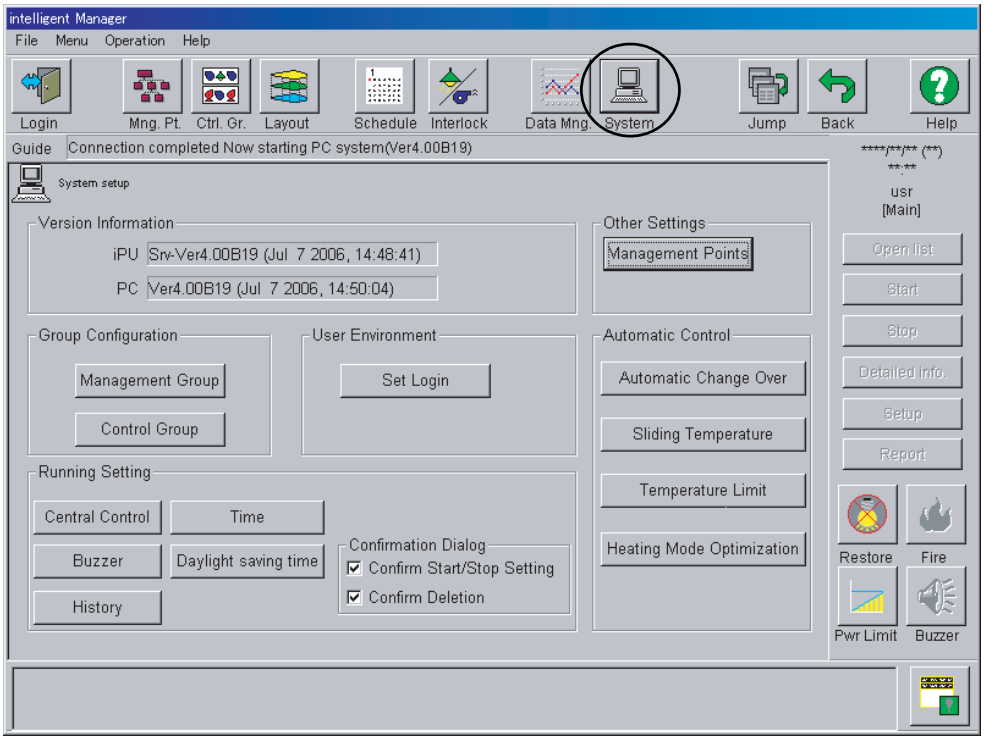
Important This dialogue set up the period when the power is NOT proportionally divided. Therefore, unchecked boxes as well as the special days of the calendar mean that the division is carried out all day.

5.7 System options

In order to meet the requirements of every user in the best possible way, various setup functions are available.
These are known as the system setup.
To carry out a system setup, the appropriate authority - such as "system setup authority" - is required.
The system setup has the following setup functions.

- Points Management:
  - Management group setup;
  - Control group setup;
  - Management point attribute setup.
- User environment:
  - Login setup;
  - Confirmation dialog setup;
  - Buzzer setup;
  - History setup.
- System Time:
  - Time (clock) setup;
  - Daylight saving Time setup.
- Automatic control:
  - Centralized control setup;
  - Automatic Change Over;
  - Sliding Temperature;
  - Temperature Limit.

Click the **System** menu button. The system shown below will be displayed.



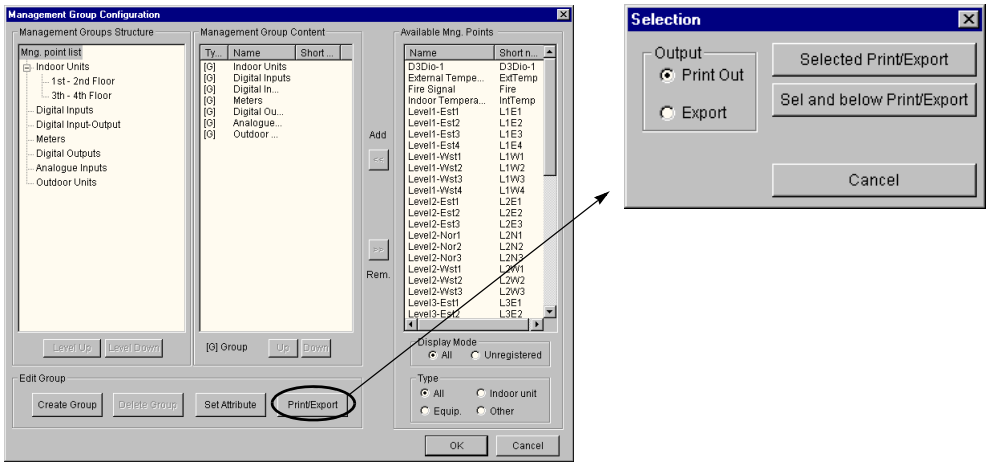
Click the button of the item to be setup to display the setup dialog.

5.7.1 Configuring Management Groups

- Management groups can be named at will.
- Icons indicating a management group is automatically assigned a group icon. (No modification possible).
- The layered structure of the management groups is automatically displayed in the management group list.
- Management group operation authority is required to operate a management group.
- Management Groups can be printed out either (on the default printer) or exported into CSV (comma separated) format files.

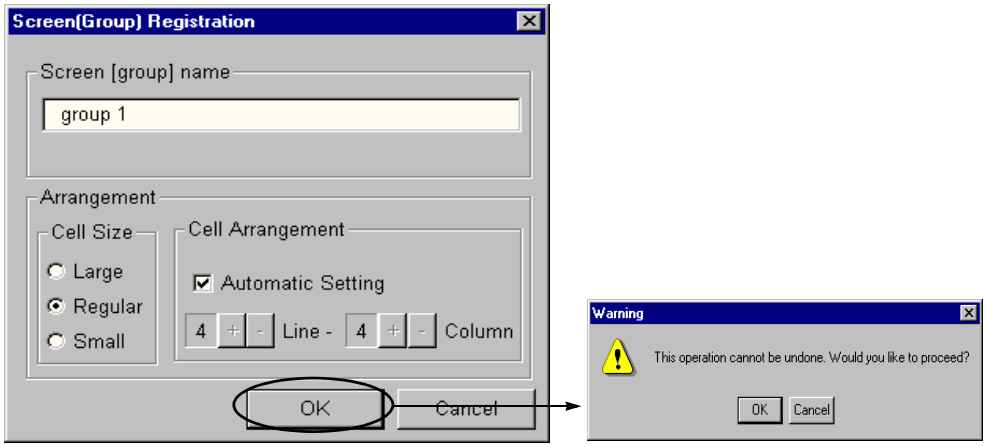
★ As cell size and arrangement are similar to those of a control group, refer to **5.7.2 Configuring Control Groups** (p. 341).

Operational Procedure



Select the management group to which the group to be created will belong.
Click on the **Print/Export** button to print on the system printer or export to a text file either the currently selected group or all the groups.

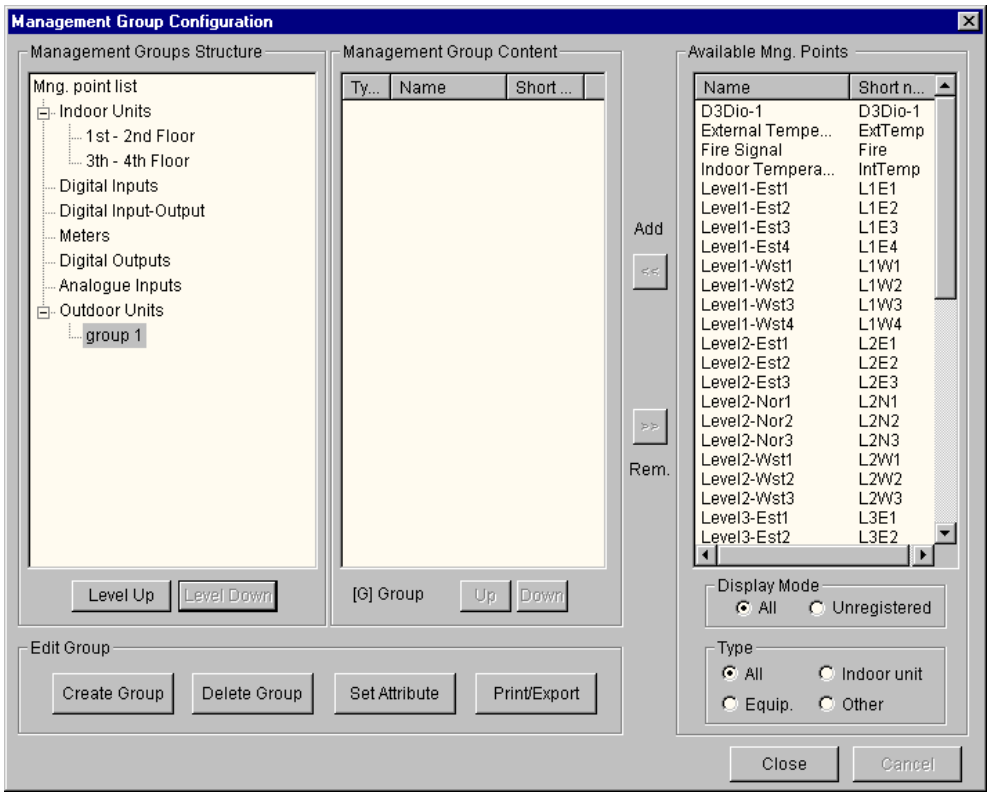
Enter the group name and click the **OK** button.



A warning box will appear at the time of the first operation.
Click the **OK** button to proceed with the operation or the **Cancel** button to cancel it.

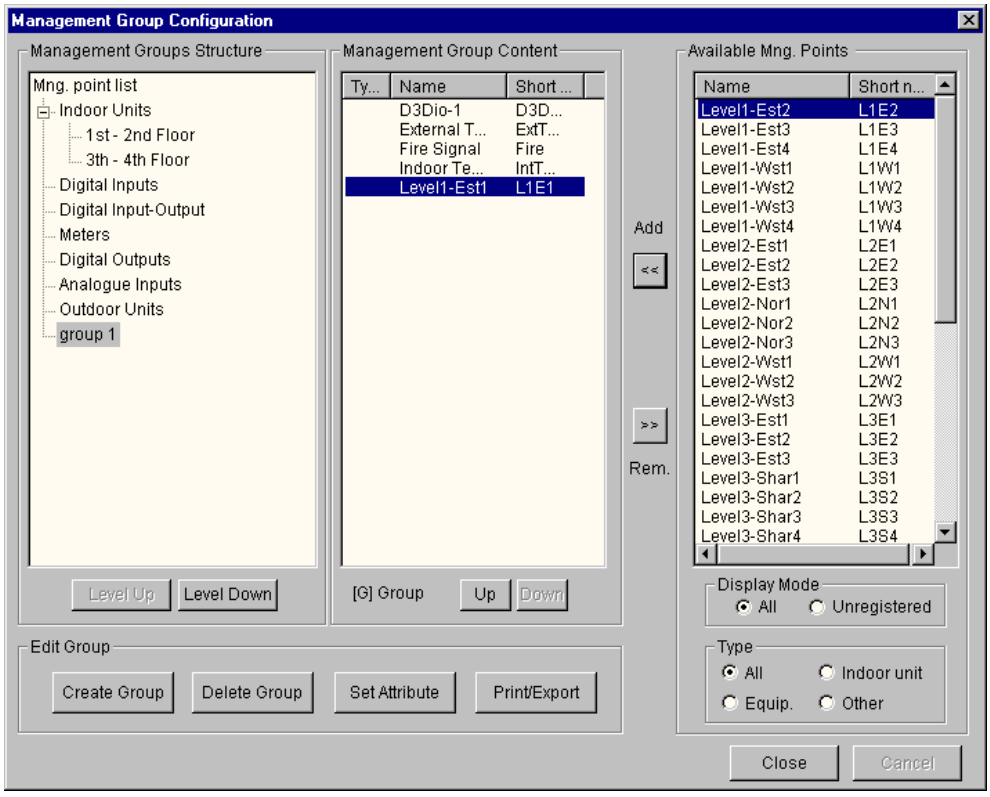
The new group will then be displayed in the management group structure.
The level of this group in the tree structure can be modified by clicking the **Level Up** and **Level Down** buttons.

As well, the position in the sub-tree can be modified by clicking the **Up** and **Down** buttons.



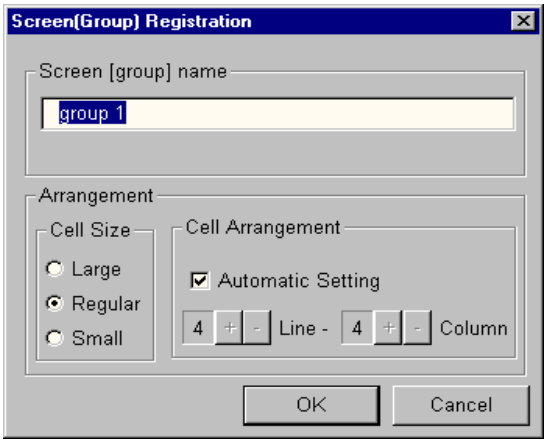
The management points belonging to this group are selected from the list of available management points and added by clicking the **Add <<** button.
To remove a management point, select the management point to be removed from the management group content list and click the **Remove >>** button.

When a management point is registered, it will be displayed as in the screen below.



When all registrations have been completed, click the **Close** button.

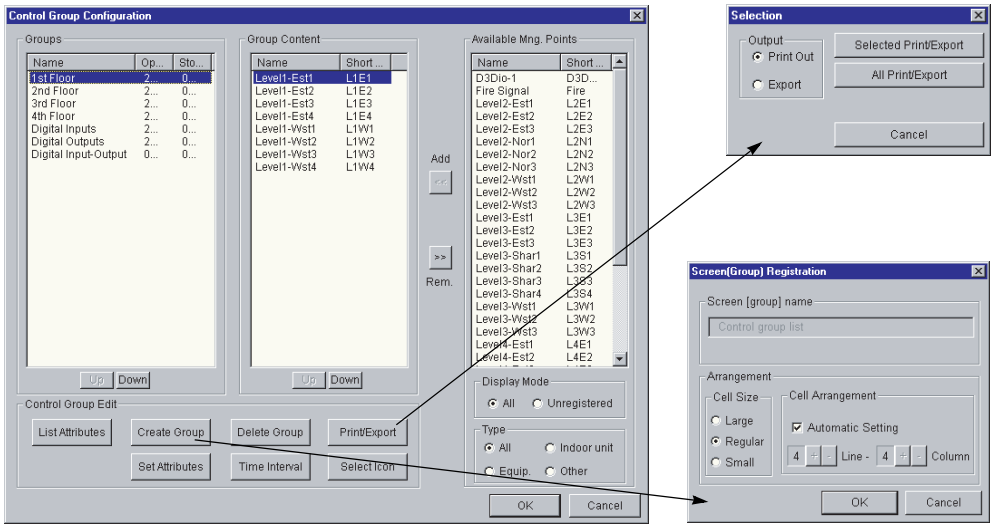
Additionally, if a management point group needs to be deleted, select the management point group to be deleted and click the **Delete Group** button.
If a management point group needs to be renamed, select the management point group to be modified and click the **Set Attributes** button. A group registration dialog box will appear, thereby allowing name and arrangement specification to be modified.



5.7.2 Configuring Control Groups

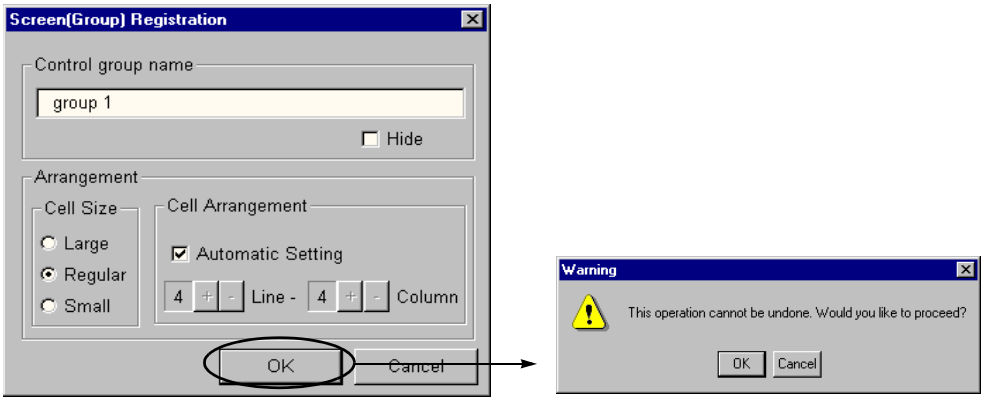
- It is allowed to prepare 200 control groups at the maximum. It is allowed to register 1024 management points at the maximum in each control group.
- Control groups can be named at will.
- Icons indicating a control group can be setup at will as representative icons.
- The control groups created by the control group operation are automatically displayed in the control group list.
- Control group operation authority is required to operate a control group.
- The order of the registered management points, the sequential startup time interval at the time of collective start and the sequential stop time interval at the time of collective stop (0, 10, 20, 30 or any number of seconds from 0-180) can be specified in a control group. A sequential startup (stop) time interval is the time elapsed between instructions.
  * This assumes that if collective running time is started up sequentially, the peak electric electrical power load required at startup will be reduced.
- Both management points with Start/Stop capability and management points for monitoring only can be set up as control group members.
- If an instruction - such as collective startup - is issued to a control group while it is being edited (registration/deletion of management points or modifications of the time interval), the modification will come into effect for subsequent instructions only.
- Control Groups can be printed out either (on the default printer) or exported into CSV (comma separated) format files.

Operational Procedure



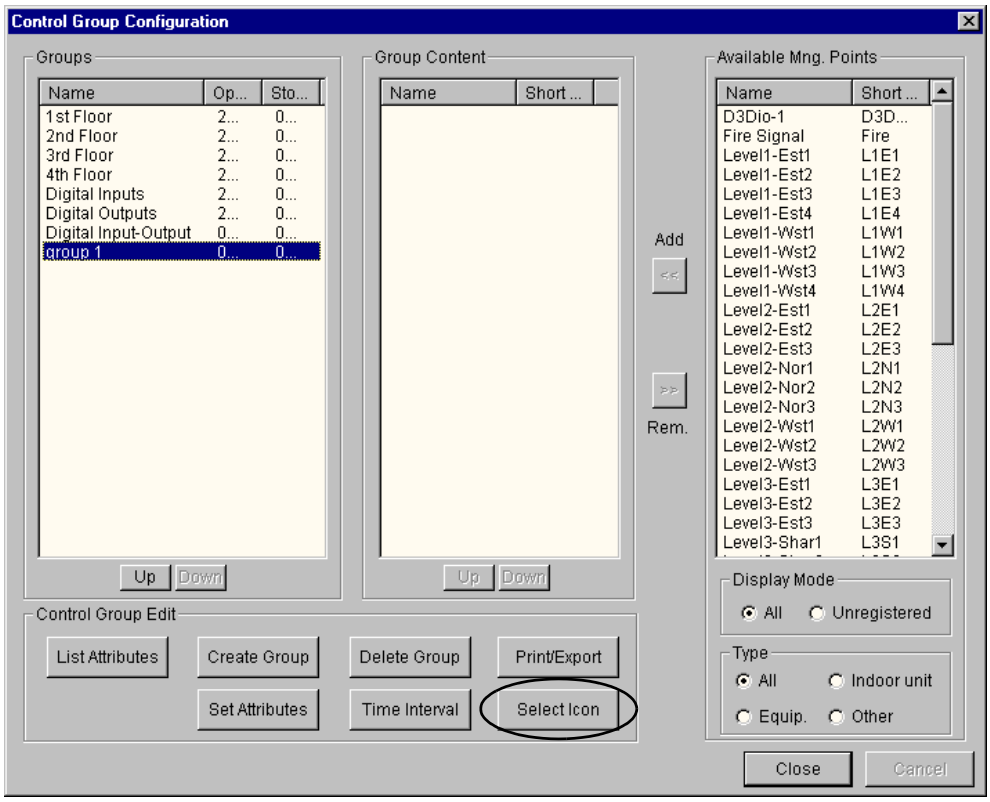
Default attributes of new groups can be preset as shown above.

Click on the **Create Group** button to display the group screen registration dialog box.

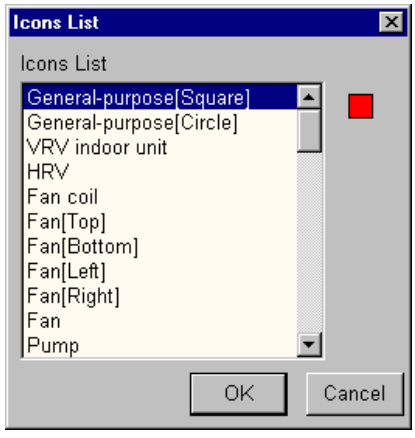


Enter the group name and click the **OK** button.
A warning box will appear at the time of the first operation.
Click the **OK** button to proceed with the operation or the **Cancel** button to cancel it.

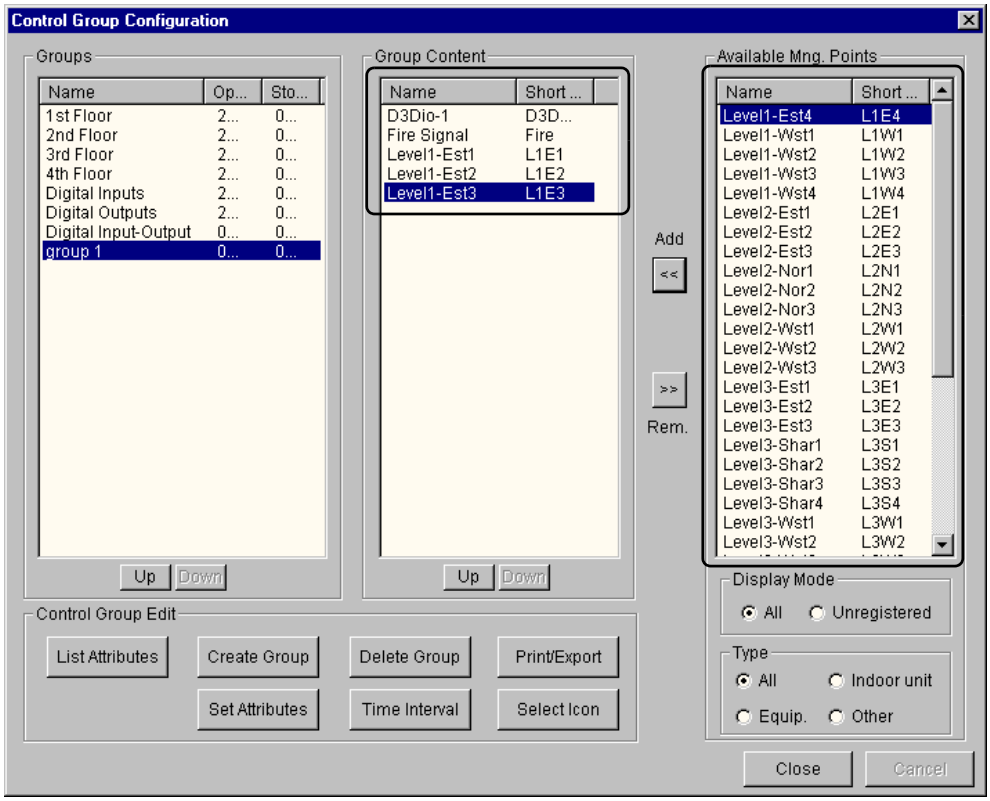
The control group will then be displayed in the control group structure.



Select the group from the control group structure and click the **Select Icon** button to select the icon.



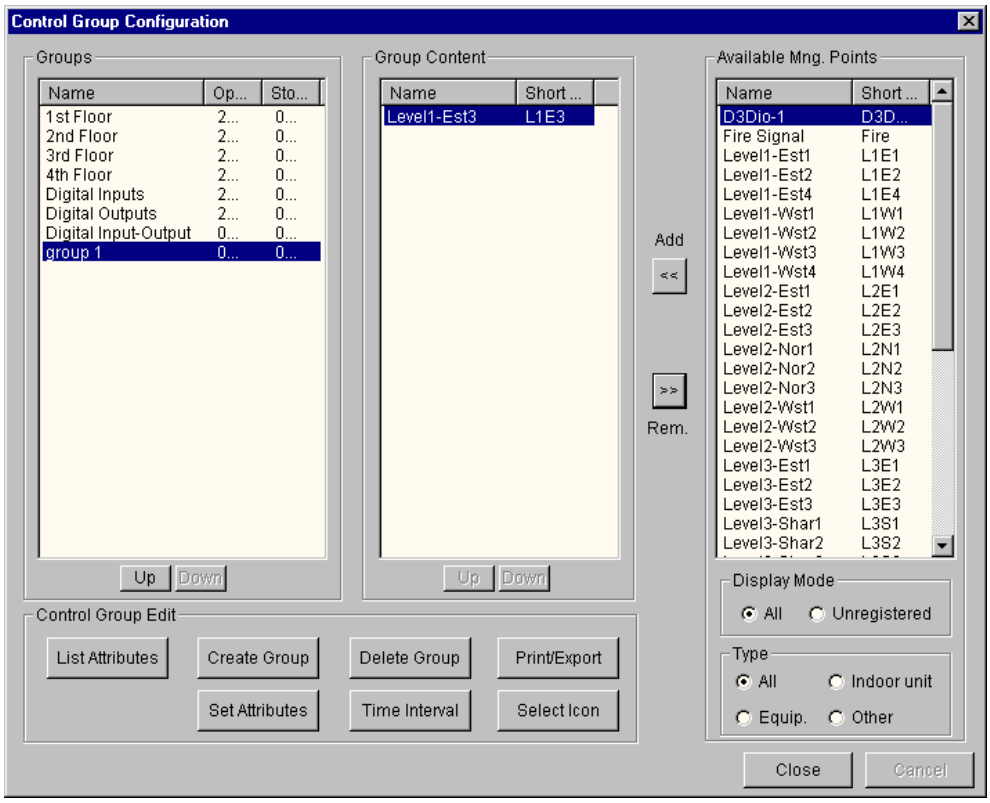
The management points belonging to this group are selected from the list of available management points and added by clicking the **Add <<** button.
To remove a management point, select the management point to be removed from the management group content list and click the **Remove >>** button.



When a management point is registered, it will be displayed as in the screen above.

Sequential Start/Stop intervals may be set up for Start and Stop.

Select the group to be set up and click the **Time Interval** button to display a dialog box. Then set the sequential Start/Stop intervals.



When all registrations have been completed, click the **Close** button.

Additionally, if a control group needs to be deleted, select the control group to be deleted and click the **Delete Group** button.
If a control group needs to be renamed, select the control group to be modified and click the **Set Attributes** button. A group registration dialog box will appear, thereby allowing name and arrangement specification to be modified.

5.7.3 Configuring User Login

5.7.3.2 Fundamentals

A user's execution authority may be set up in order to restrict the range of operation and consultation.

Note: Administrators only can perform this procedure. An administrator is an operator whose profile includes authorization to Regist Users.

User Management

- By logging in, a user may operate within the range of authority granted to him.
- A single user may not log in simultaneously from more than one connected monitoring PC.
- The items for which authority can be set up are shown as follows.

Authority	If authority is granted	If authority is not granted
Start/Stop Setup	Start/Stop/Setup operation is possible	Start/Stop/Setup operation is not possible
Schedule Registration	Consultation and registration/editing of schedule is possible	Schedule consultation only is possible
Interlocking Control Registration	Consultation and registration/editing of interlocking control is possible	Interlocking control consultation only is possible
Emergency Stop Registration	Consultation and registration/editing of emergency stop is possible	Emergency stop consultation only is possible
Emergency Stop Release	Forced release of emergency stop is possible	Operation cannot be performed
History Operation	Consultation and setup of history is possible	History consultation only is possible
System Setup	System setup is possible	Operation cannot be performed
Centralized Control Setup	Centralized control setup is possible	Operation cannot be performed
User Registration	User registration and authority may be set up	Operation cannot be performed
Under Maintenance Mode	Under maintenance mode may be set up	Operation cannot be performed
Register Power Limit	Consultation and editing of Power Limit parameters is possible	Power Limit consultation only is possible
Register Eco Mode	Consultation and editing of Eco Mode parameters is possible	Eco Mode consultation only is possible

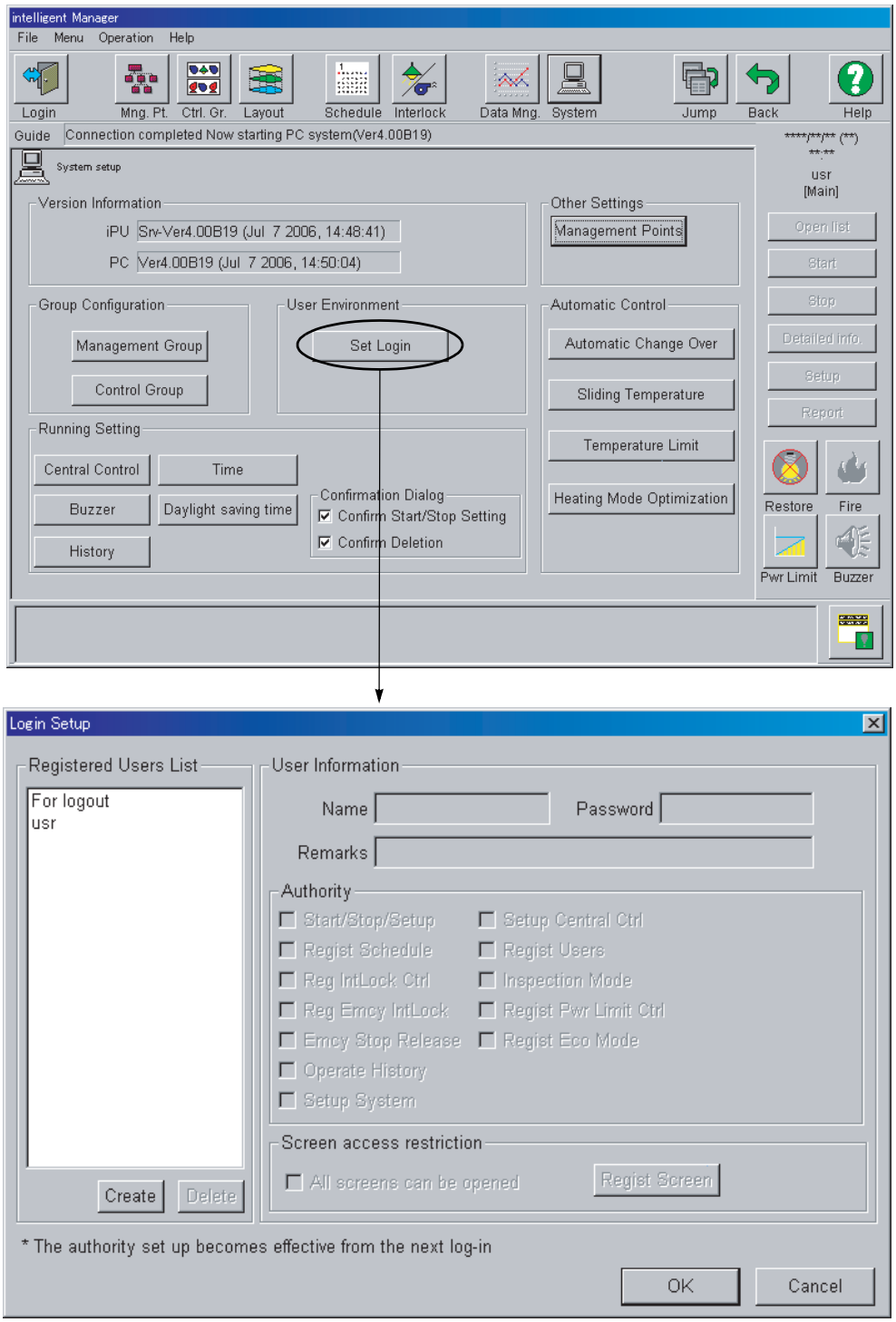
Screen Authority

It is possible to set up an authority able to open all screens or an authority able to open only those screens as specified in the screen registration.

Even if a screen may be opened, if the operation authority for that screen has not been granted, the authority takes precedence and operation will not be possible.

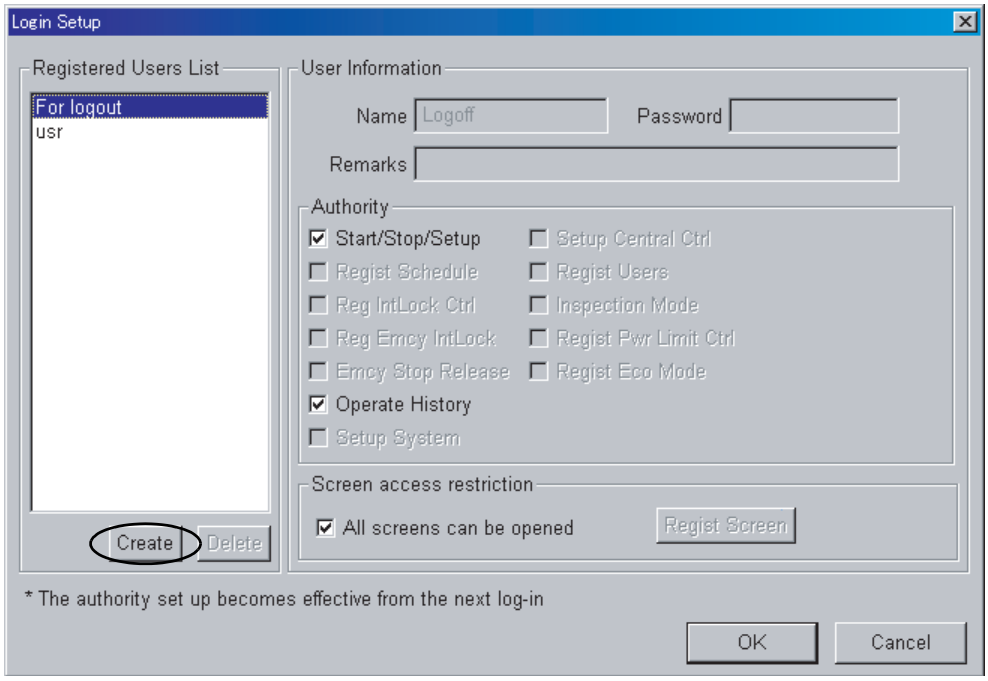
Operational Procedure

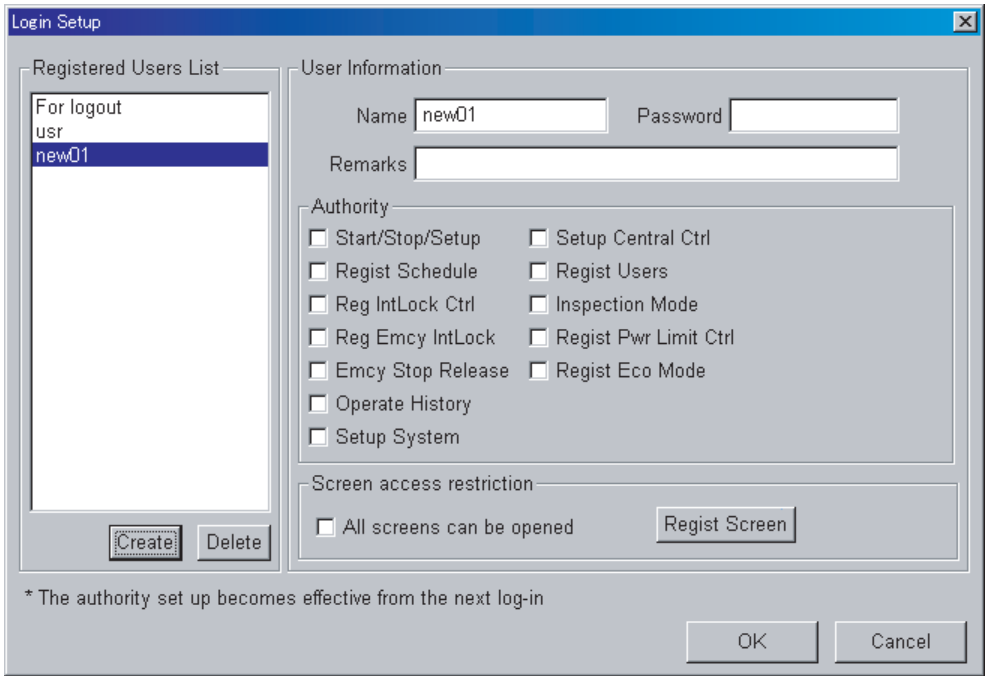
- Start intelligent Manager, then login as an administrator user,
- Click the **System** menu button; the **System Setup** screen displays,
- Click the **Set Login** button; the **Login Setup** screen displays,
- The list of users already registered is displayed as in the figure below,
- Perform as explained hereafter.



5.7.3.2 Creating a user

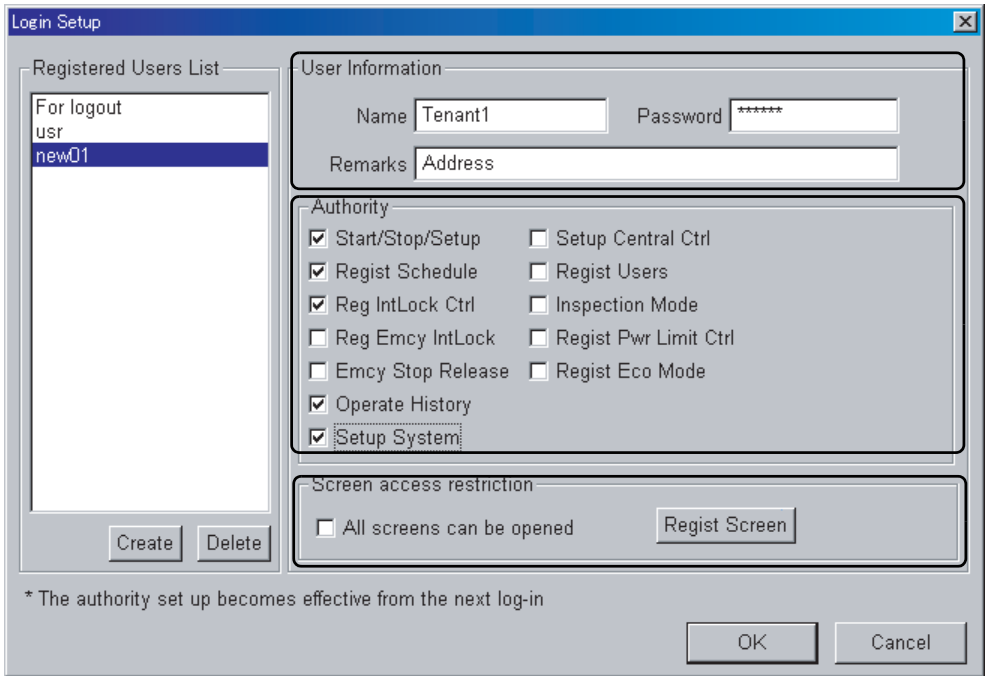
Click on the **Create** button to register a new user.
It is allowed to prepare 255 users at the maximum.



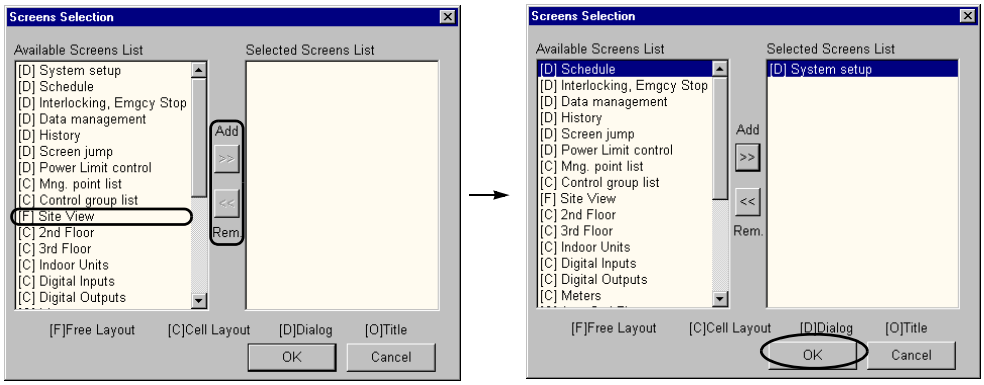


Once a new user has been registered, the user name, password, remarks, authority and screen restrictions may be set up.

Enter the user name and password.
Check the check boxes to indicate those items for which authority setup will be granted.

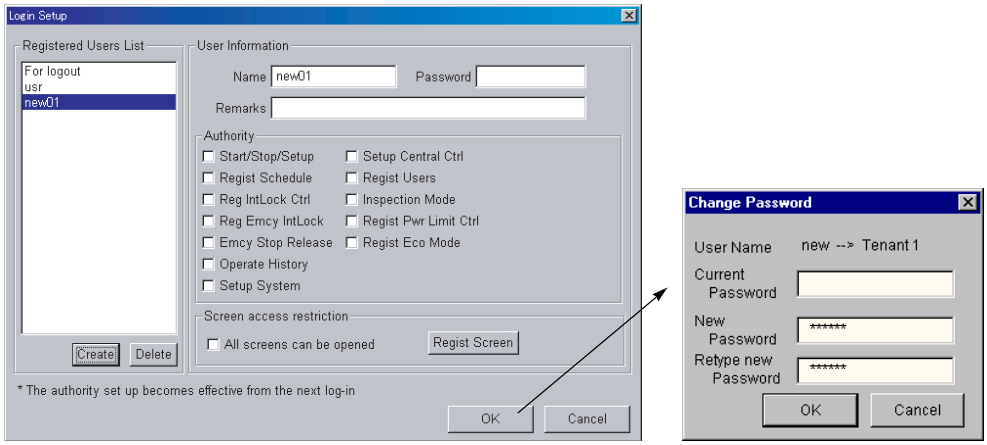


If the user is to be granted the authority to open all screens, check the appropriate checkbox.
If the screens that may be opened are to be restricted, click the **Regist Screen** button to display the screen selection dialog box.
The screens that may be opened are selected from the list of available screens and added by clicking the **Add >>** button.
To remove a screen, select the screen to be removed from the screen selection list and click the **Remove <<** button.



Click the **OK** button when selection is completed.

When all registrations have been completed, click the **OK** button.



If the **Set Login** button from the **System Setup** menu is clicked again, the user will be seen to have been added as shown in the above figure.

1. Click the **Create** button; the fields for input enable.
2. Input the profile of the user:
   - Name: as used for Login,
   - Password: idem,
   - Remarks: freely describes the profile of the user,
   - Authority: check the boxes for the operation which this user can perform,
   - Screen Access:
   - Check the **All Screens** box

   or
   - Click the **Regist Screen** button; the **Screen Selection** screen appears, then:
   - Select the screens which you want the user to have access to from the left side list and click the **Add** button,
   - Select the screens which you want the user NOT to have access to from the right side list and click the **Remove** button,
   - Click the **OK** button; the Screen Selection screen closes,
   - Click the **OK** button will display the **Password** confirmation screen:
   - Enter the **Current** password and the **New** password (twice),
   - Click the **OK** button to confirm.

5.7.3.3 Modifying a user

1. Select a user from the list; the fields for input enable.
2. Perform input as above step (2).

5.7.3.4 Deleting a user

1. Select a user from the list; the confirmation dialogue box appears.
2. Click the **Yes** button.

Click the **OK** button; the **Login Setup** screen closes. The modifications are immediately effective.

5.7.4 Editing Management Points

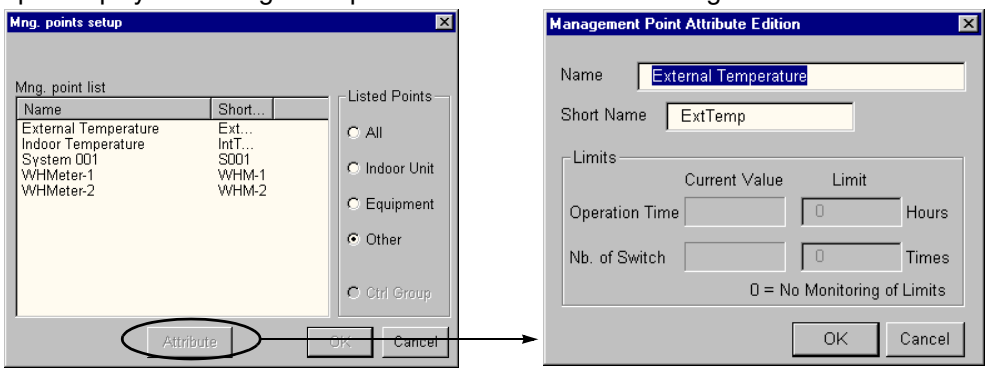
It is possible to modify the following information contained within a management point.

- Name of management point.
- Short name of management point.
- Setup of maximum values of operation time and number of Start/Stop.

System setup authority is required for operation.

Operational Procedure

Select the management point whose information needs to be modified and click the **Attribute** to group to display the management point attribute modification dialog box.



Modify the name, short name and maximum values as required. Click **OK** to return to the management point setup dialog box.

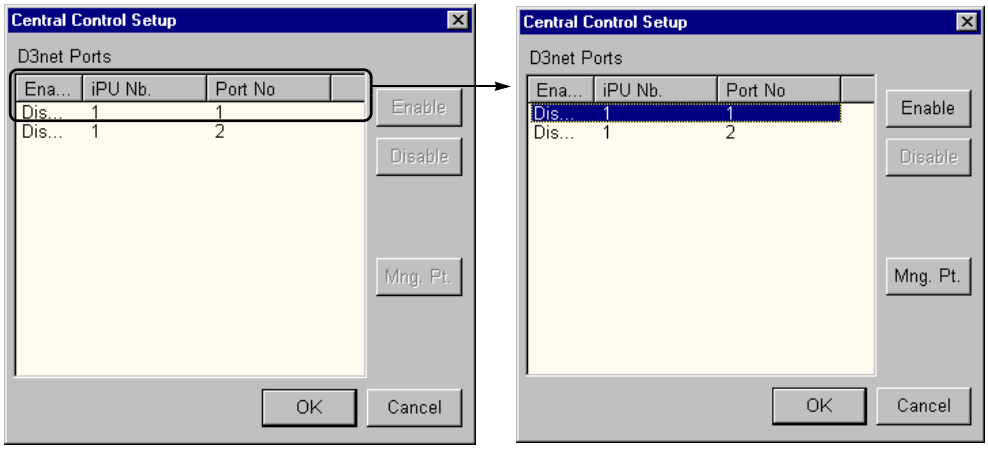
If the cumulative maximum value is set to 0, it may not be possible to monitor maximum values.

When all modifications have been completed, click the **OK** button of the dialogue box for the management point setup.

5.7.5 Setting up Central Control

It is possible to set centralized control for permission/prohibition for every DIII-net port.
Central control permission/prohibition is used to indicate whether or not permission is to be granted for an operation from a connected Daikin centralized control unit (for example: remote controller etc.).
System setup authority is required to operate it.

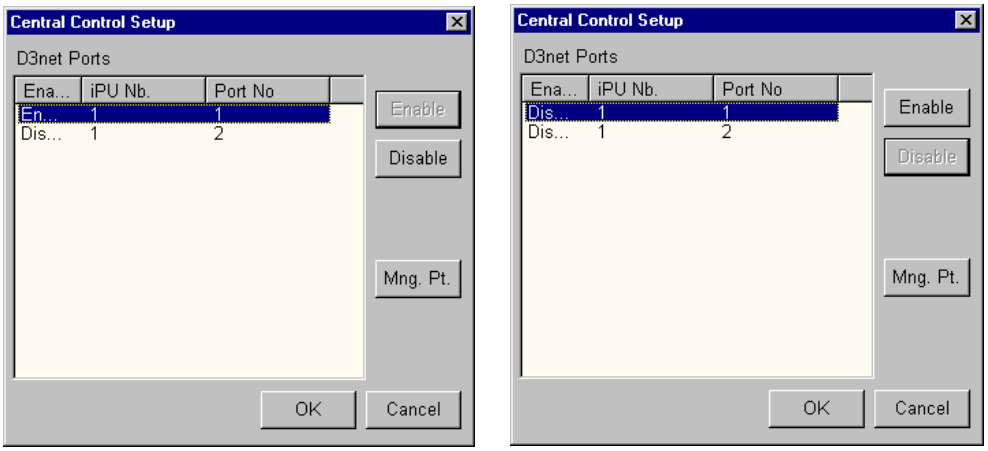
Operational Procedure



The state of permission or prohibition of the Station numbers and Port numbers connected to the main system is displayed.

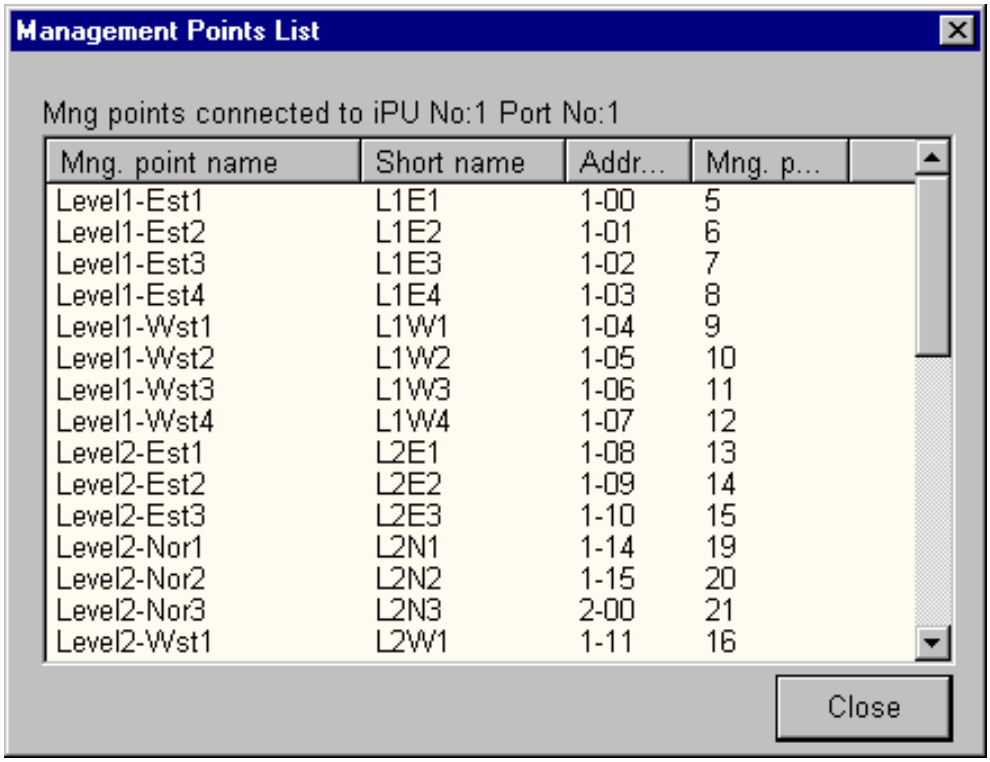
Permission/prohibition is used to define whether or not permission is to be granted for an operation from a connected Daikin centralized control unit.
If permission is granted for the Start/Stop operation, priority will be given to other Daikin central control units. If permission is denied, operation will only be possible from intelligent Manager.

Select the line of the Station and port number to be modified.



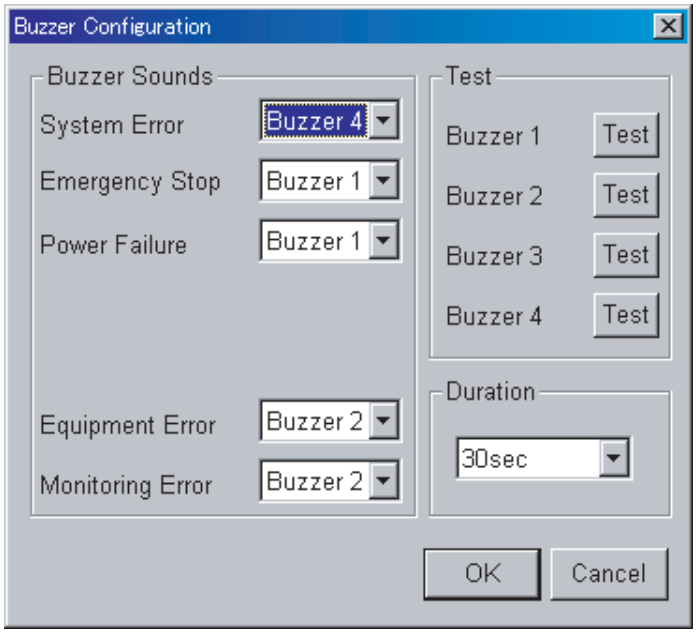
The selected line is displayed in reverse field and the button showing the reverse of the current state is displayed.(If permission has been granted for the current state, the **Disable** button will be enabled and vice-versa the **Enable** button will be enabled if permission has been denied).
In the screen above click the **Enable** button.
The state of Port 1 has been modified to prohibition.

To display the management points, select the Port number to be displayed and click the **Management Points** button to display a dialog box.



5.7.6 Configuring the Buzzers

- Buzzers may be assigned as required to various types of alarm.
- Four types of sound are available for the alarm buzzer.
- It is possible to disable any particular buzzer.
- The duration of the buzzer sounding may be specified.
- The icon changes in accordance with the state of the buzzer.
- When the buzzer sounds, any screen saver in current operation is simultaneously stopped.
- System setup authority is required for the buzzer setup.





Buzzer Off



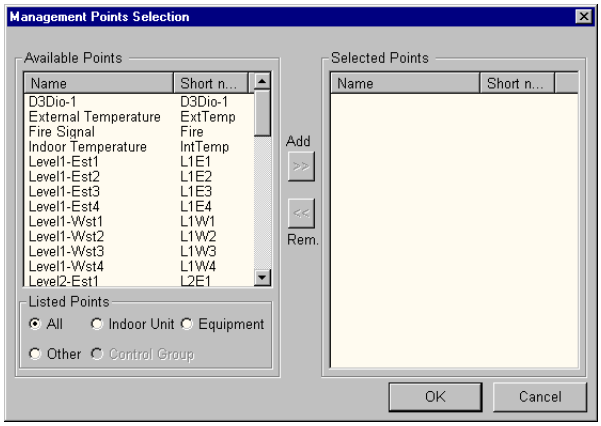
Buzzer On
(can be turned
Off if clicked)

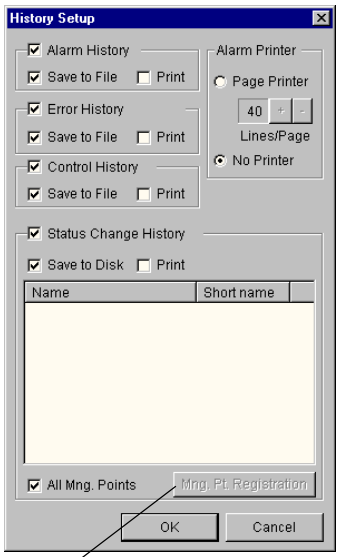
5.7.7 Configuring History Options

The following history setups are possible, depending on data type:

- Display - Yes/No,
- Print by alarm printer - Yes/No,
- Save as File - Yes/No,

Keep history of a limited selection of Management points (default setting is all points)





5.7.8 Adjusting the Time

- The Station clock is set to the PC (personal computer) time.
- The PC clock may be set to the Station time.
- System setup authority is required to set the PC clock.
- Time modifications should be avoided between 23:30 and 2:30 as the Station is engaged in data management.

Modifying Station time

When time is put forward, scheduled operations for the intervening period are skipped.
When time is put back, control that has already been executed is repeated and the data collected before the modification is updated and managed.
When time is to be modified, the Station time setup is performed once the programs of running control etc. have been deactivated.

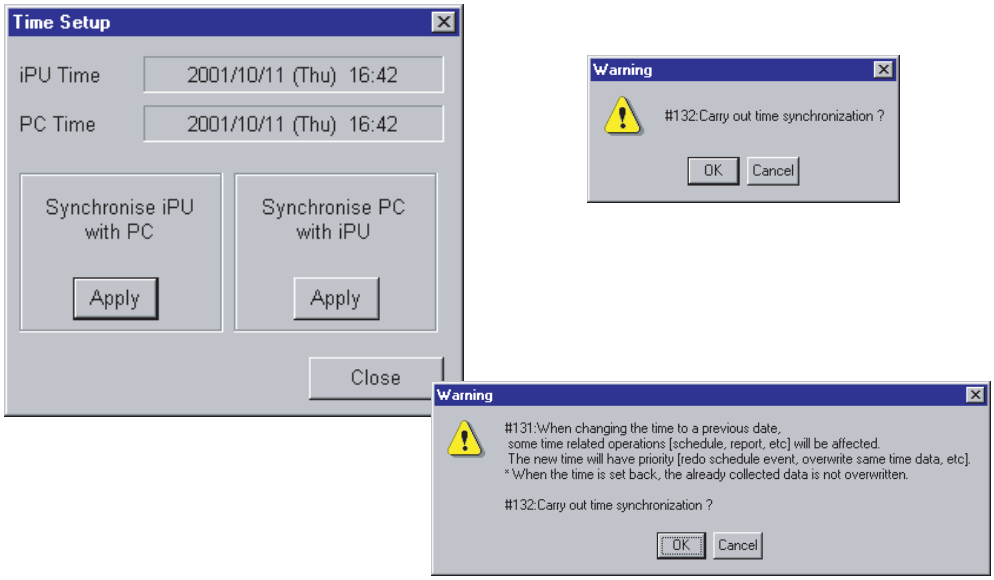
Data management setup (in particular billing-related matters) should be completed before time modifications are made.

Major time modifications should be avoided. (This can lead to inaccuracies in billing management data, daily report data etc.).

To ensure accurate monitoring, time should be correctly adjusted on a monthly basis (particularly in the case of billing management).

Operational Procedure

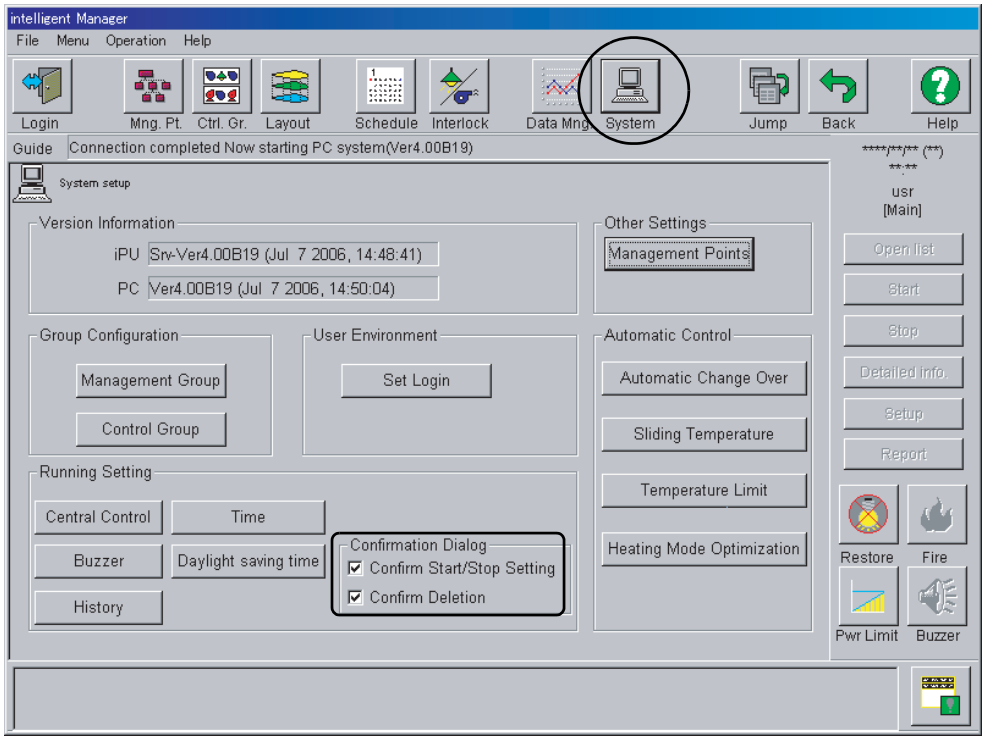
Click the **Setup** button to select method of time setup.



5.7.9 Enabling Confirmation Dialog

Serves to confirm the execution or cancellation of an operation (Start, Stop, Setup).

Operational Procedure

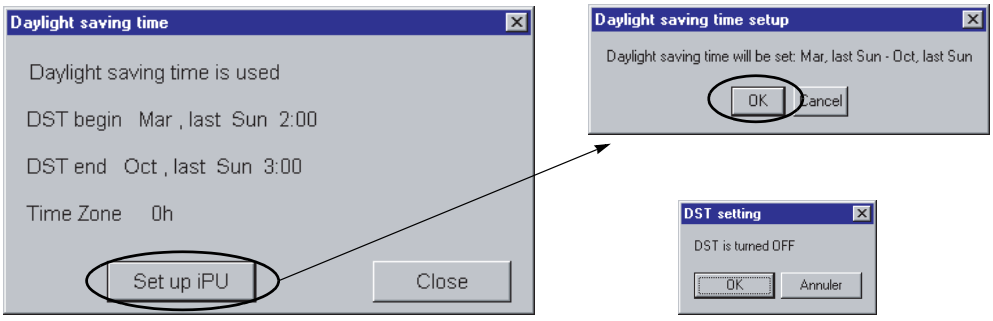


Check the appropriate "Confirmation dialog - yes/no" checkbox to make use of the confirmation dialog as required.
Check the checkbox to enable the dialog - leave the checkbox blank to disable the dialog.

5.7.10 Setting up the Daylight Saving Time

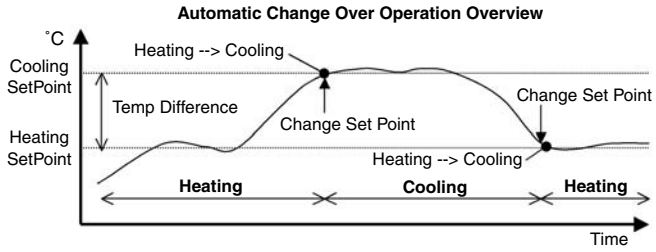
Serves to configure the date and time for the shift when daylight saving time is used (summer time).

Operational Procedure

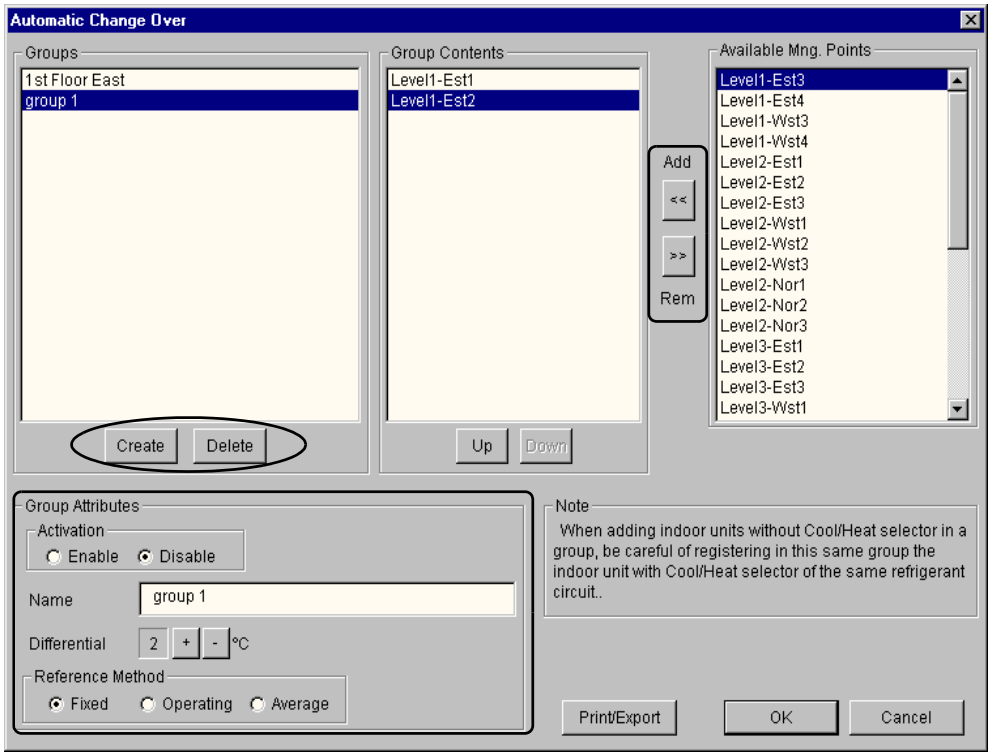


5.7.11 Automatic Change Over

Serves to configure the function that change the operation mode of a group of indoor units according to the room temperature as shown on the figure below.



Operational Procedure



- Create the group;
- Enter the group name;
- Add/Remove indoor unit members of the group (with the referential one at first);
- Select the selection method between:
  - Fixed (the first indoor unit of the group);
  - Running (the first indoor unit in operation of the group);
  - Average (average value of all indoor units of the group).
- Enter the Differential temperature (between Cooling and Heating Set Point);
- Enable the group.

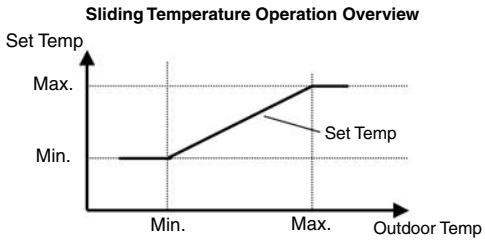
Click on the **Print/Export** button to print all groups settings on the system printer or to save them in a CSV (comma separated) format file.

Note: Up to 512 groups can be created for this function, each group registering up to 128 management points.

Important In order to ensure a correct operation always register in a same group the "slave" indoor units (i.e. without Cool/Heat Selector) with the "master" indoor unit (i.e. with Cool/Heat Selector) of the same refrigeration circuit. Always register the "slave" indoor units after the "master" indoor units, because the selection method (Operating) is performed in order of the group list.

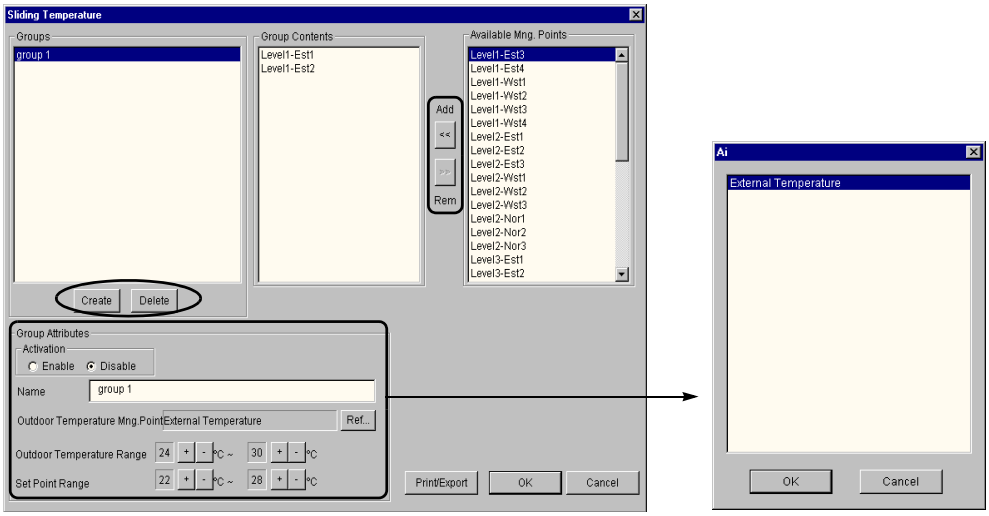
5.7.12 Sliding Temperature

Serves to configure the function that change the Cooling Set Temperature of a group of indoor units according to the outdoor temperature as shown on the figure below.



Note: This function requires a separate sensor for the outdoor temperature.

Operational Procedure



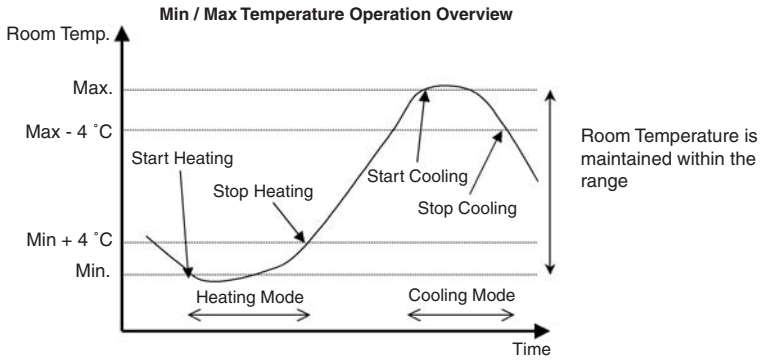
- Create the group;
- Enter the group name;
- Add/Remove indoor unit members of the group;
- Select the outdoor temperature management point (Ai);
- Select the min and max for:
  - Outdoor temperature;
  - Set Temperature;
- Enable the group.

Click on the **Print/Export** button to print all groups settings on the system printer or to save them in a CSV (comma separated) format file.

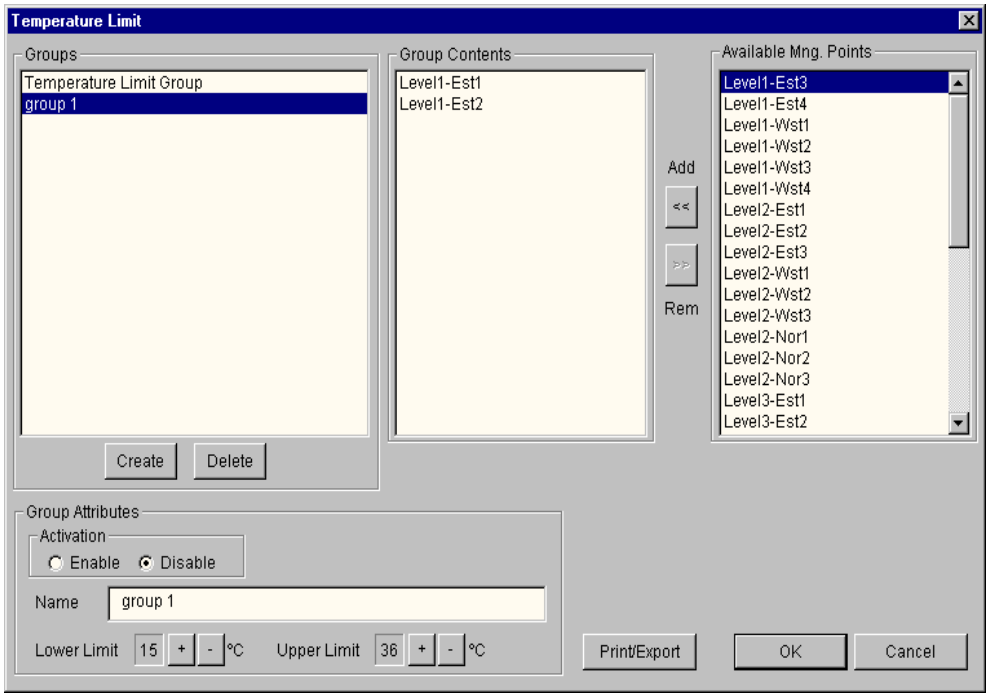
Note: Up to 8 groups can be created for this function, each group registering up to 128 management points.

5.7.13 Temperature Limit

Serves to configure the function that starts automatically (and individually) the indoor units in heating mode (when the temperature is too low) or in cooling mode (when the temperature is too high) as shown on the figure below.



Operational Procedure



- Create the group,
- Enter the group name,
- Add/Remove indoor unit members of the group,
- Select the min and max Room temperature,
- Enable the group.

Click on the **Print/Export** button to print all groups settings on the system printer or to save them in a CSV (comma separated) format file.

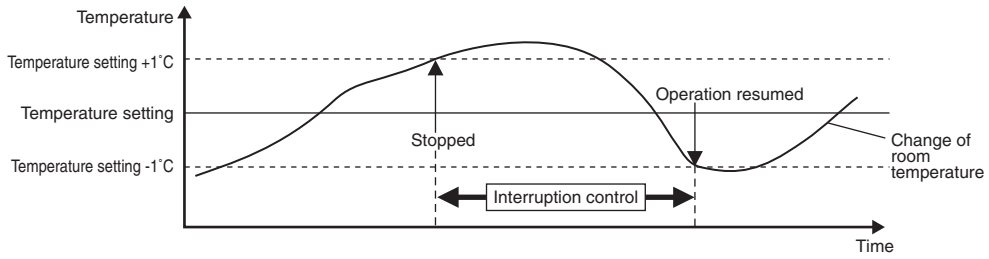
Note: Up to 8 groups can be created for this function, each group registering up to 128 management points.

Important In order to ensure a correct operation always register in a same group the "slave" indoor units (i.e. without Cool/Heat Selector) with the "master" indoor unit (i.e. with Cool/Heat Selector) of the same refrigeration circuit. Always register the "slave" indoor units after the "master" indoor units, because the selection method (Operating) is performed in order of the group list.

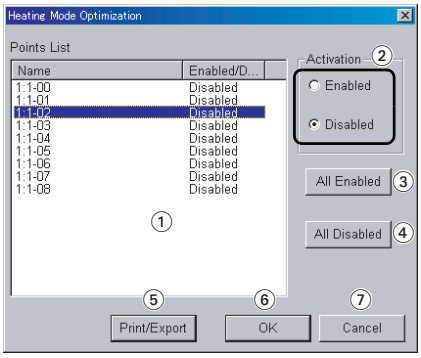
5.7.14 Heating Mode Optimization

Heating Mode Optimization (HMO) function stops the indoor unit in order to suppress wasteful rise of room temperature during heating operation (energy saving) and to suppress uncomfortable draft. While HMO is being operated, the remote controller is held to the stop state but on the intelligent Manager, the unit looks like running. In the event that room temperature drops from the temperature setting, the unit automatically resumes heating operation. This function is activated during heating only. However, this is not activated in the automatic heating mode.

Heating Mode Optimization Operation Overview



Operation Procedure



- Select indoor unit from the list.
- With the Activation radio button, select Valid/Invalid.

Pressing ALL Enable button enables HMO setting of all the indoor units in the list.
Pressing ALL Disable button disables HMO setting of all the indoor units in the list.

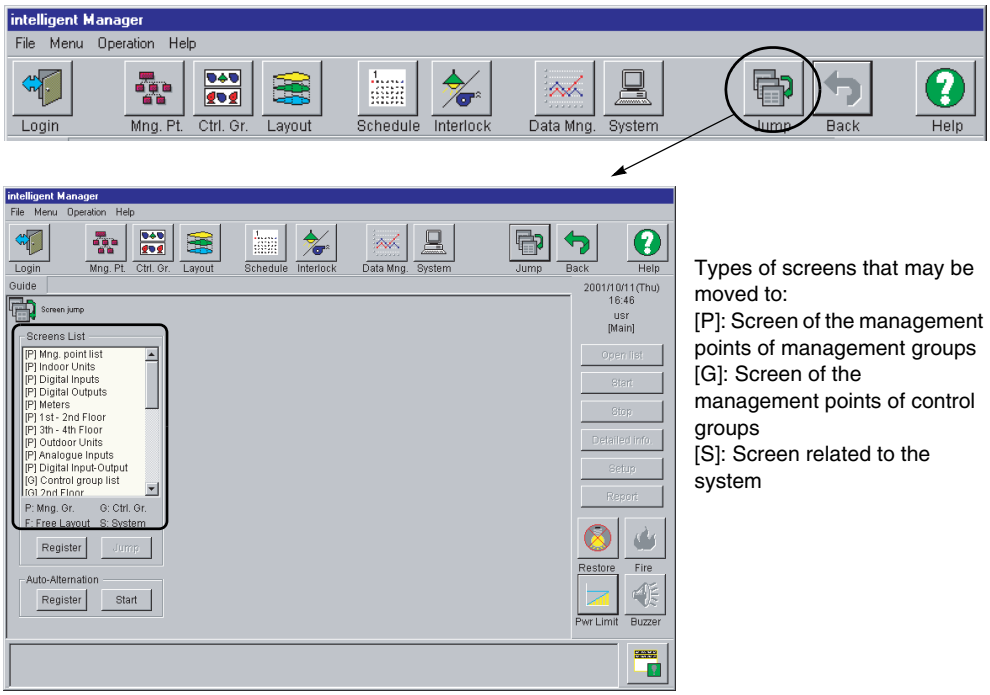
Click on the Print/Export button to print all setting on the system printer or to save them in a CSV (comma separated) format file.

Note: In order to indicate indoor units on the list, setting by the management point setting tool is required.

5.8 Moving between Screens

It is possible to move between screens at will and there are two ways of doing so: 'simple movement' and 'movement by the reservation button'.
Moreover, if the automatic circular sequence function is used, multiple registered screens will be displayed and automatically switched over at a predetermined frequency.

Click the **Jump** button.

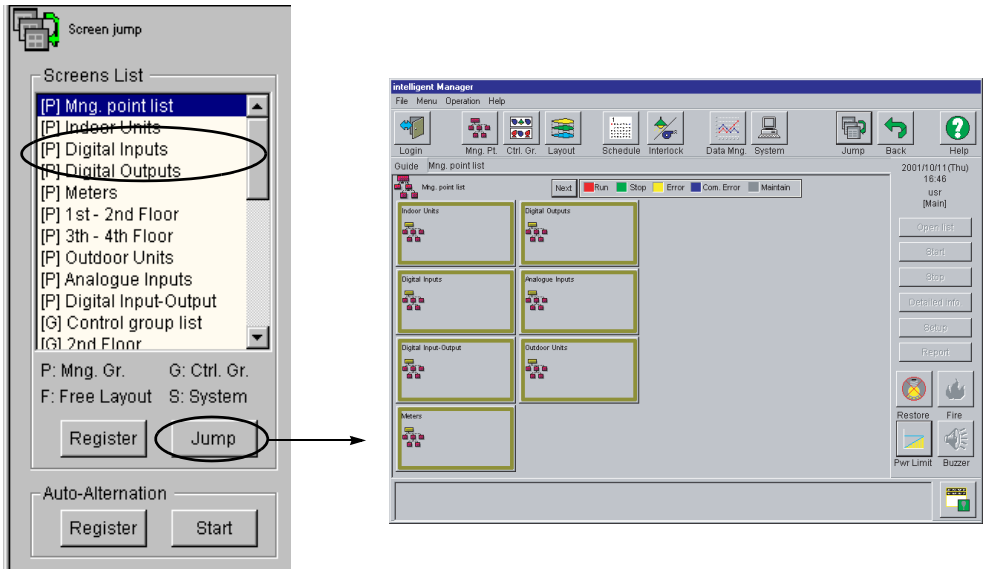


Types of screens that may be moved to:
[P]: Screen of the management points of management groups
[G]: Screen of the management points of control groups
[S]: Screen related to the system

5.8.1 Simple Movement

A list of the screens that may be moved to is displayed.
Select the screen to be moved to from the screen list and click on Jump button to move to this screen.

Screens to be moved to.



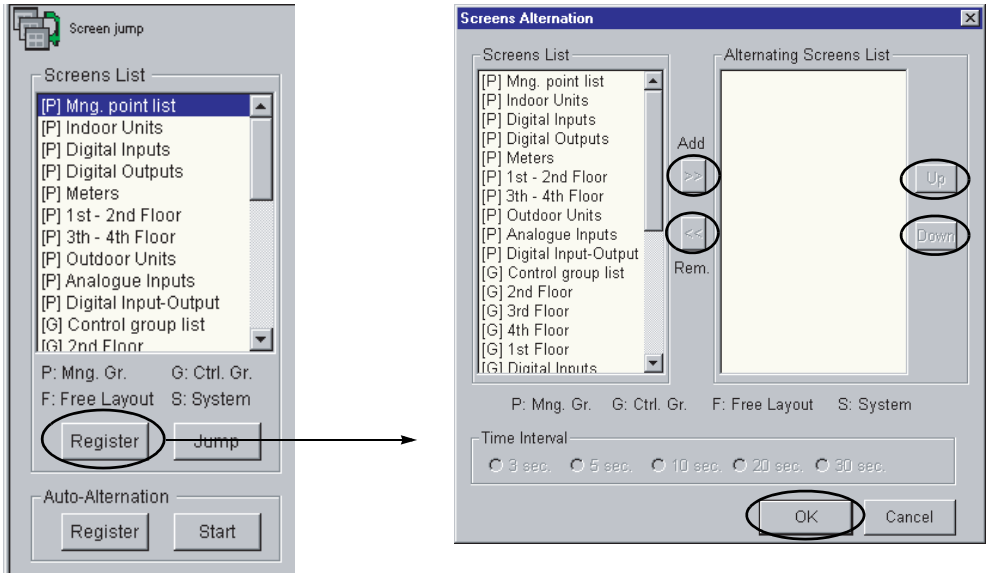
5.8.2 Movement by Reservation Button

Click the **Register** button to display the following dialog box.

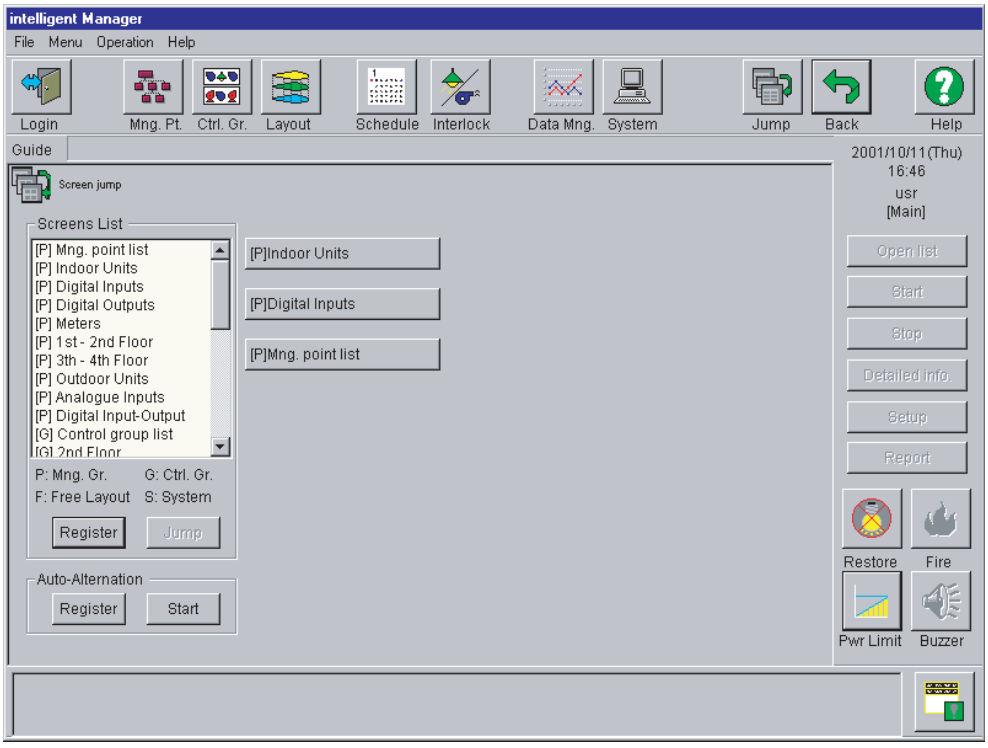
Select the screen to be reserved from the screen list and click the **Add >>** button to register it in the list of reserved screens. To remove from the registered area, click the **Remove <<** button.

Select the order of the buttons: select the button screen from the reserved screen list and click the **Up** button to move the button to the top.
To move the button to the bottom, click the **Down** button.

Finally click the **OK** button.



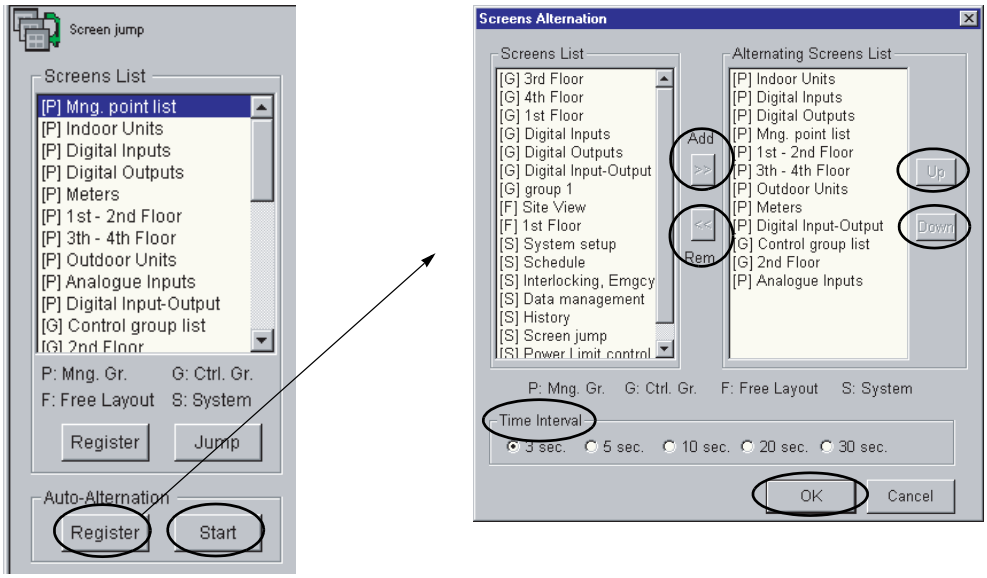
The buttons are generated.
Click the respective button to jump to the corresponding screen.



5.8.3 Automatic Circular Sequence

Pre-registered multiple screens may be displayed and made to switch over at a pre-determined frequency.

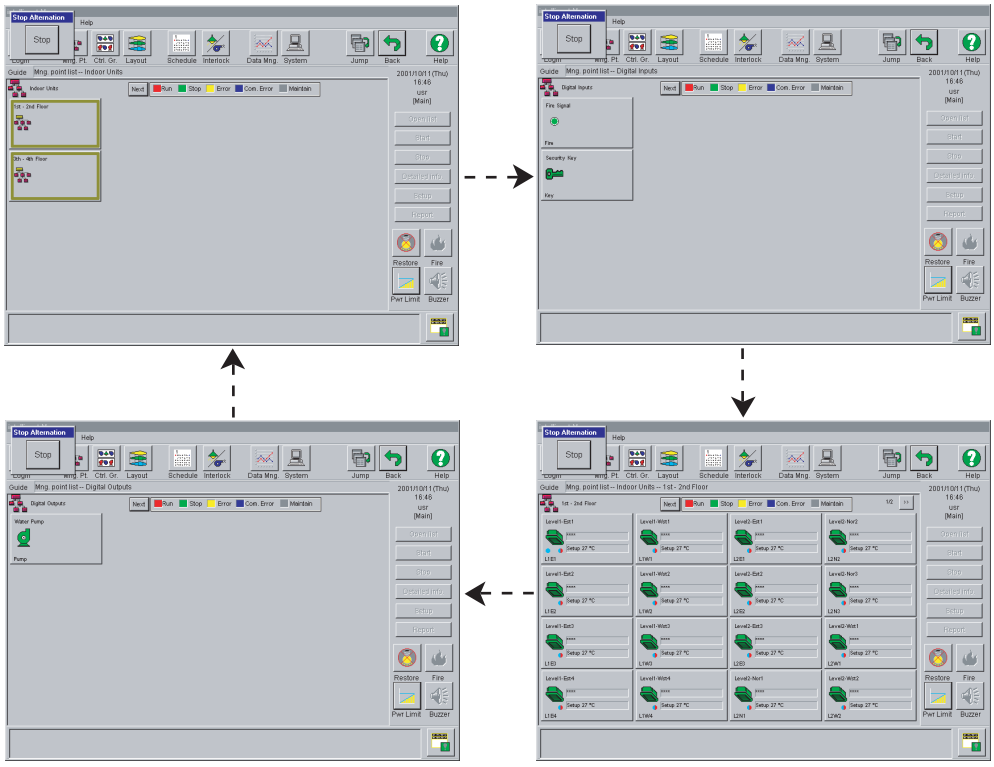
Click the **Register** button to display the following dialog.



Select the screen to be reserved from the screen list and click the **Add >>** button to register it in the list of reserved screens. To remove from the registered area, click the **Remove <<** button. Select the screen **Switchover Time Interval** from the radio buttons.

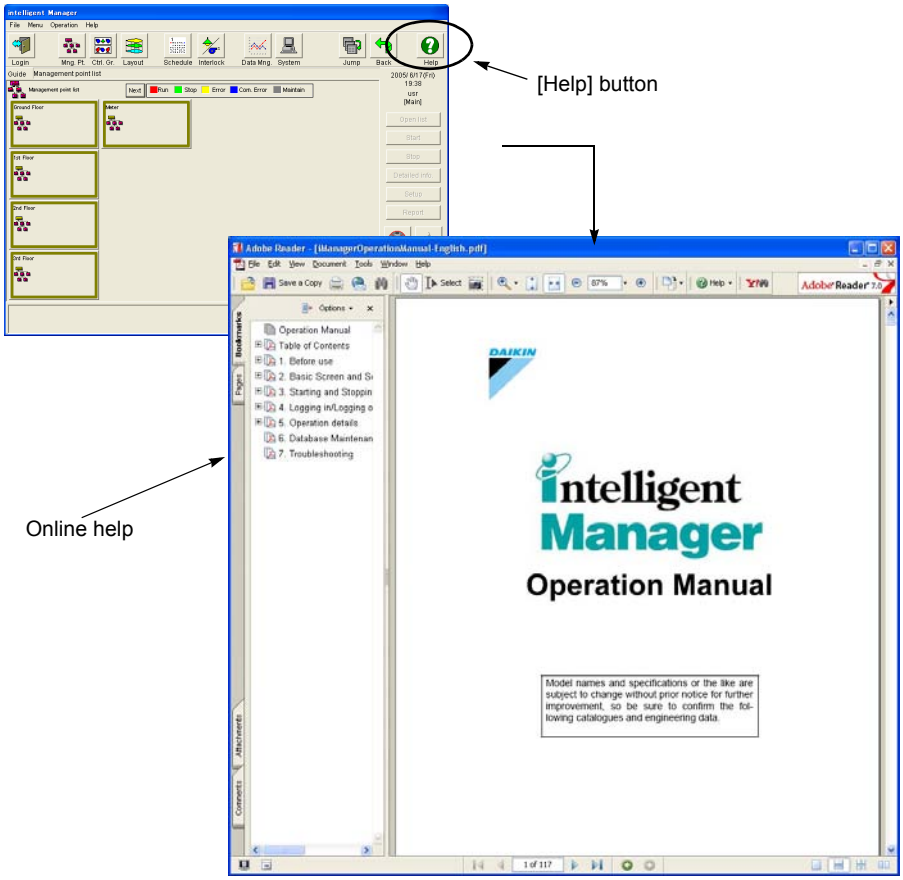
Finally click the **OK** button.

Click the **Start** button to activate the automatic circulation of screens in their registered sequence.



Click the **Stop** button to stop the automatic circular sequence.

5.9 Help



It is enabled to see online help of all functions of intelligent Manager.

■ Online help

Press "Help" button at the right top. Screen of online help opens.

■ Adobe reader

Adobe Reader is required to view the online help. Install Adobe Reader. Adobe Reader 7.0 is recommended.

5.10 Malfunction Display and History Management

If the monitored equipment malfunctions, details of the content will be displayed in the **[Malfunction history real-time display area]** at the bottom of the screen. At the same time, in accordance with system settings, an alarm buzzer will sound.



After the equipment malfunction has been confirmed/ dealt with, the **[Detailed history screen]** is able to color-code and manage whether the confirmed malfunction has been acknowledged.

The 20 most recent cases of malfunction messages are displayed in the **[Malfunction history real-time display area]** and the100 most recent cases of malfunction and change in Equipment State (such as Start/Stop) are displayed in the **[Detailed history screen]**.
Moreover, a direct switchover function makes it possible to jump to the **[Management point list screen]** on which the management point responsible for generating the error is displayed.

In addition to the above real-time data, data of the malfunctions and changes in state from over approximately the past one-year period can be saved separately in a file on the hard disk. This saved data may also be consulted on the **[Detailed history screen]**.

5.10.1 Displaying Malfunction Messages

If a malfunction or breakdown forecast is generated in the monitoring equipment, details of the content will be displayed in the **[Malfunction history real-time display area]** at the bottom of the screen. At the same time, if the alarm buzzer has been set to ON (set up on the system setup screen), an alarm buzzer will sound.

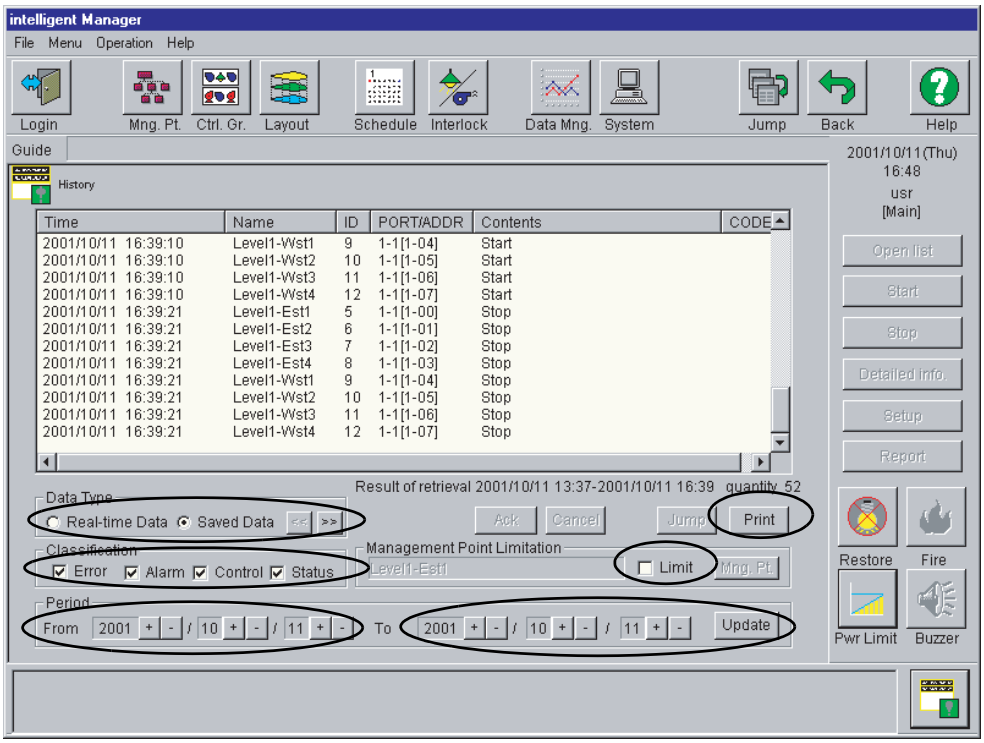
Above is an example extracted of the main screen. However, **[Malfunction history real-time display area]** can appear on any screen and if a malfunction or breakdown forecast is generated, details of the content will be displayed in this area.

5.10.2 Detailed History Screen

In addition to malfunction of management points, changes in state (such as Start/Stop) brought about by automatic control (scheduling etc.) may be managed on the detailed history screen.

Information displayed on the detailed history screen may be either real-time data or information saved in a file on the hard disk.

[Detailed History Screen (saved data)]

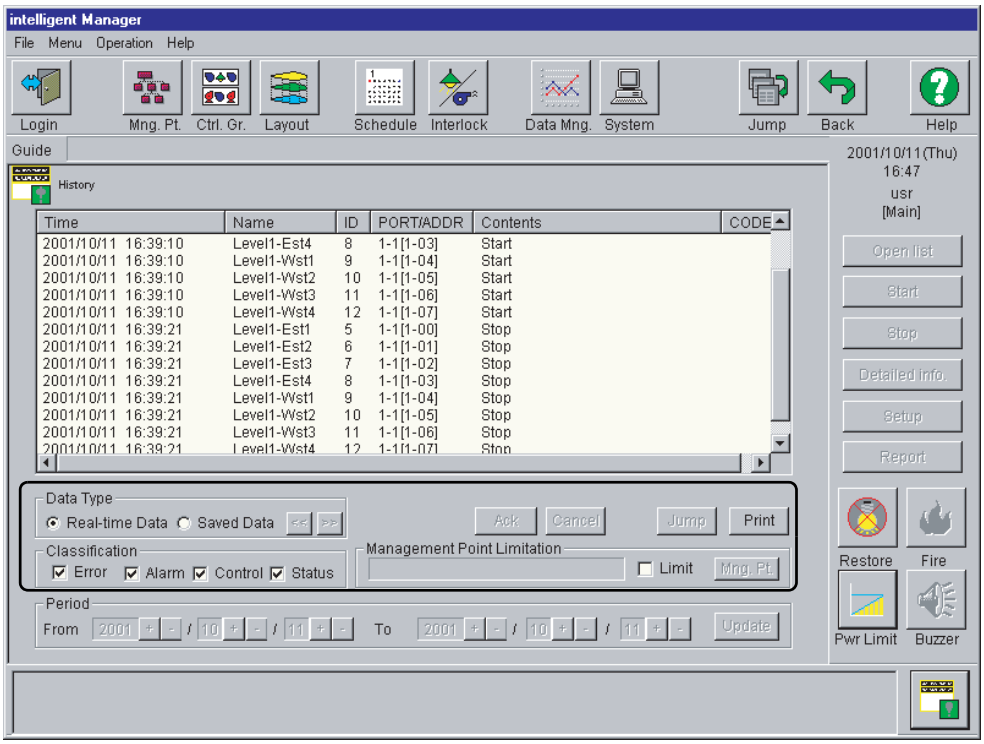


By means of the detailed history screen, it is possible to search and display selections from100 items of real-time data and approximately 500,000 items of saved data.

It is possible to restrict the types of error and management points displayed in both real-time and saved data. Moreover, fixed term searches can be made in the case of saved data. 100 items of search results can be displayed on the screen at any one time and the search can be continued using Next >> and Previous <<.

Various setups are possible according to the type of data in the content of the history display. Please refer to **5.7.7 Configuring History Options** (p. 352).

[Detailed History Screen (real time data)]



The color of the message display varies according to the type of history.

The color of a message that has been confirmed is indicated in brackets ( ).

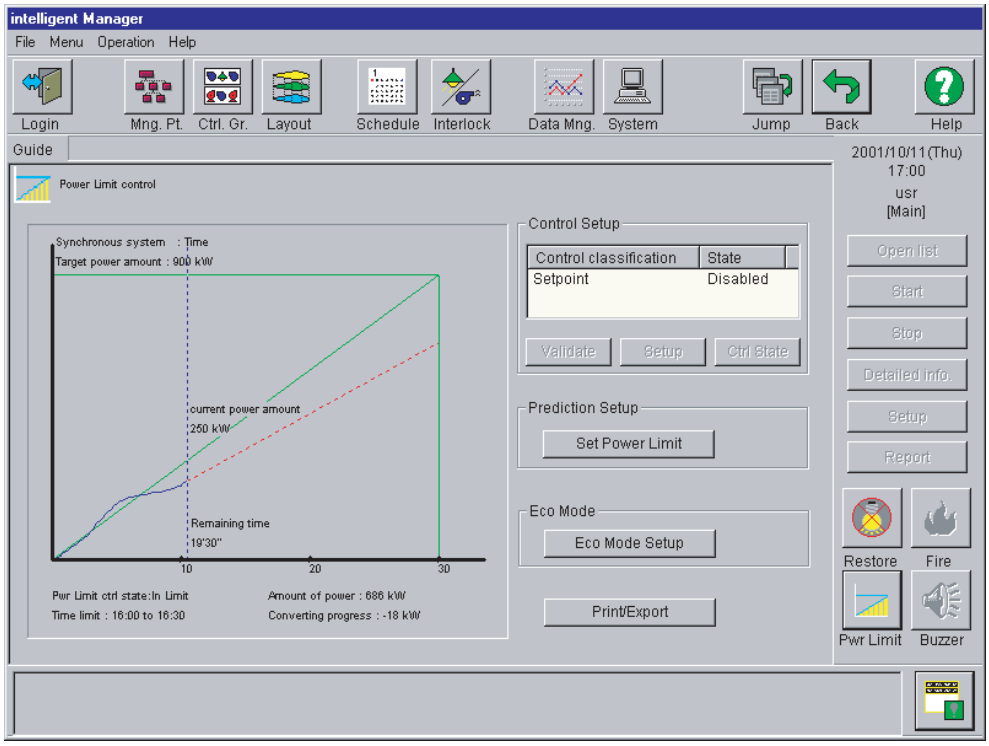
Malfunction	Red (purple)
Warning	Blue (gray)
Release	Green
Other	Black

5.11 Energy saving Functions (Option)

These functions automatically control the indoor and outdoor units to lower power consumption.

There are 2 possible controls methods:

- Power Limit Control (recommended for high-demand season, i.e. summer): optimizes the power consumption trend and adjust set temperature of indoor units to remain below the target consumption;
- Eco mode: calendar based, stops indoor units intermittently or lowers capacity of outdoor units to lower the power consumption.



5.11.1 Power Limit Control

This limits based on target power measured on a pulse meter.
The setup is carried out in two steps:

- Set the power limit;
- Configure the control classifications:
  - Set temperature of indoor units;

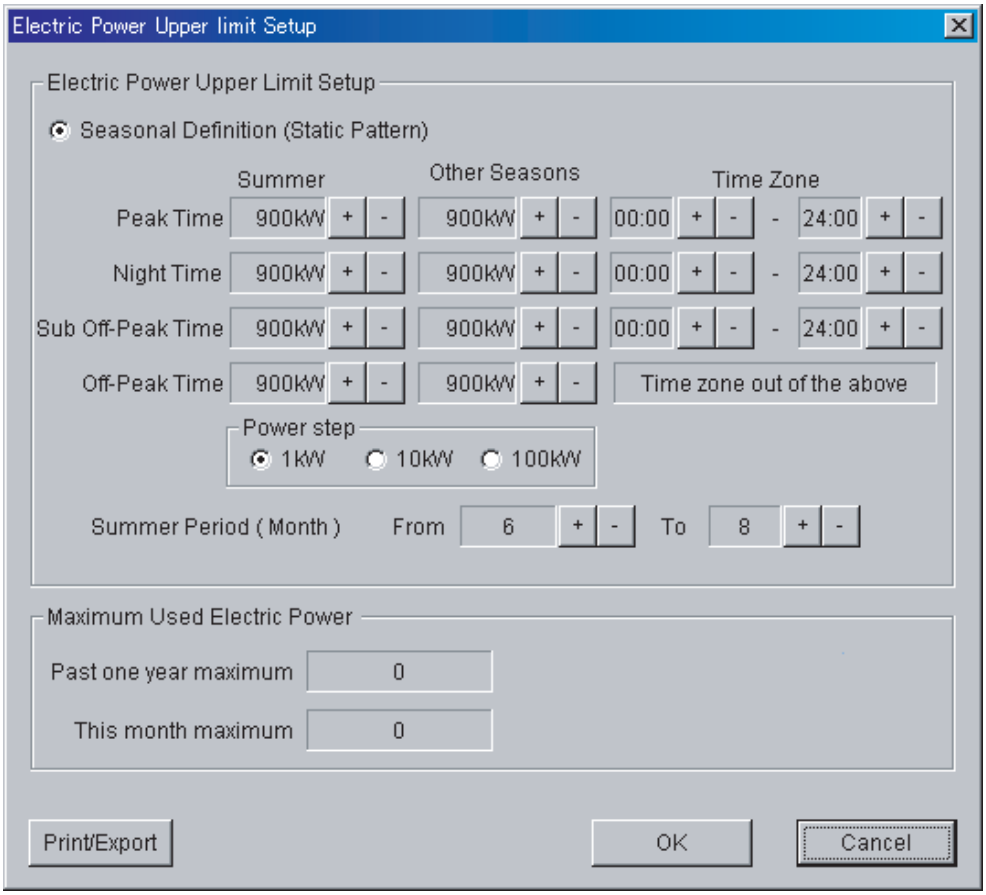
5.11.1.1 Setting the power limit

This procedure set up the calendar of the power limit values (measured on the pulse input management point configured by the system engineer beforehand) as shown below.

The value can differ for the summer period and for other seasons in order to provide specific control for higher demand.
As well, it can change daily according to up to 4 time zones. The time zones can overlap, but the current time is evaluated in priority from top (Peak Time) to down (Off-Peak Time).

According to the level of power consumption, increment/decrement of power value can be of 1, 10 or 100 kWh.

The maximum value of past year and month are displayed as shown below (see as well Power Graph section for display of actual data).



Operational procedure:

- Click the **Set Power Limit** button;
- Select the **Power Step**: 1 kW (small demand), 10 (medium demand), or 100 kW (large demand);
- Enter the limits of the **Summer Period** (from beginning of first to end of last month);
- Enter for each necessary time interval:
  - **Power Values** (for summer and other seasons);
  - daily **Time Zone**;
  - click on the **Print/Export** button to print all power limit data on the system printer or to save them in a CSV (comma separated) format file;
- Click the **OK** button.

5.11.1.2 Setting the control parameters

This procedure set up the control groups, priorities and actions (set temperature of indoor units according to power demand: raise in cooling mode, lower in heating mode).
8 control groups are composed of indoor units are available and 8 levels of action are already configured in intelligent Manager:

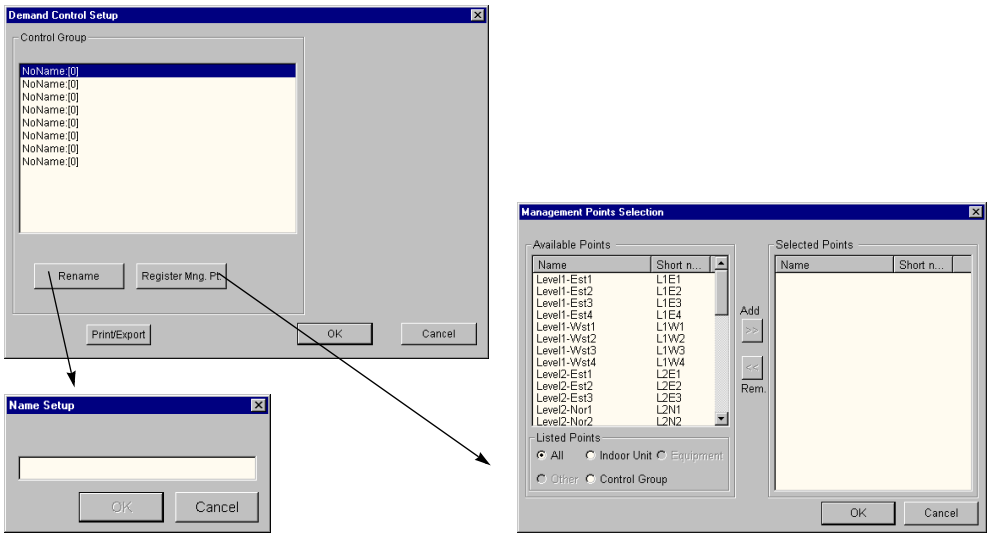
- Level 1, 2: shift set temperature by 2 degrees,
- Level 3, 4: shift set temperature by 4 degrees,
- Level 5, 6: shift set temperature by 6 degrees,
- Level 7, 8: stop the indoor units (Thermostat Off).

Levels correspond to the power consumption trend compared with the target power consumption.
When the trend is aiming above the target, the level is incremented and action of this level is taken for each group

Operational procedure

Click the **Validate** button to activate/deactivate the control;

- Initially, click the **Setup** button and perform settings of groups as explained below (control must be deactivated);
- At any time, Click the **Control State** button to check the adjustment on groups as explained bellow.



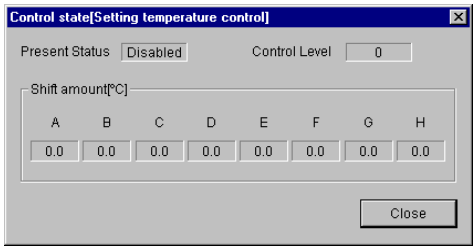
Setting up the control parameters

Order of groups cannot be changed, however you can **Rename** the groups.
Proceed setup as explained below for each group:

- Register the indoor units (a same indoor unit cannot belong to more than one group):
  - click the **Register Mng. Pt** button:
  - select an indoor unit;
  - click the **>>** and **<<** buttons;
  - click the **OK** button to validate, or the **Cancel** button to abort;
- Click on the **Print/Export** button to print setting data on the system printer or to save them in a CSV (comma separated) format file;
- Click the **OK** button to validate, or the **Cancel** button to abort.

Controlling the execution state

The control level of power limit, the status of the classification, and the temperature shift of each group is indicated.

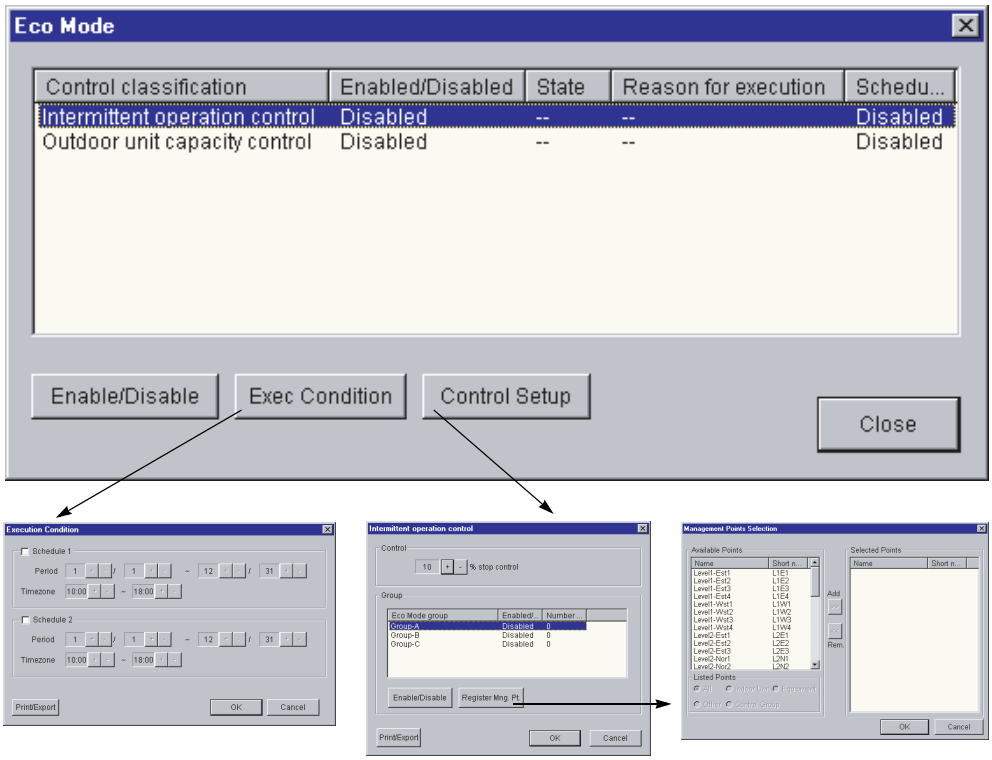


5.11.2 Setting up Eco Mode

Click the **Eco Mode Setup** button and select one of the two control classifications as shown below.

5.11.2.1 Setting up Intermittent operation control

This intermittently switches Off and On registered indoor units based on a calendar as shown below.
3 groups of indoor units can be defined, to be stopped for a ratio of 10 to 40% evenly within a 30 minutes cyclical interval during the calendar based seasons.

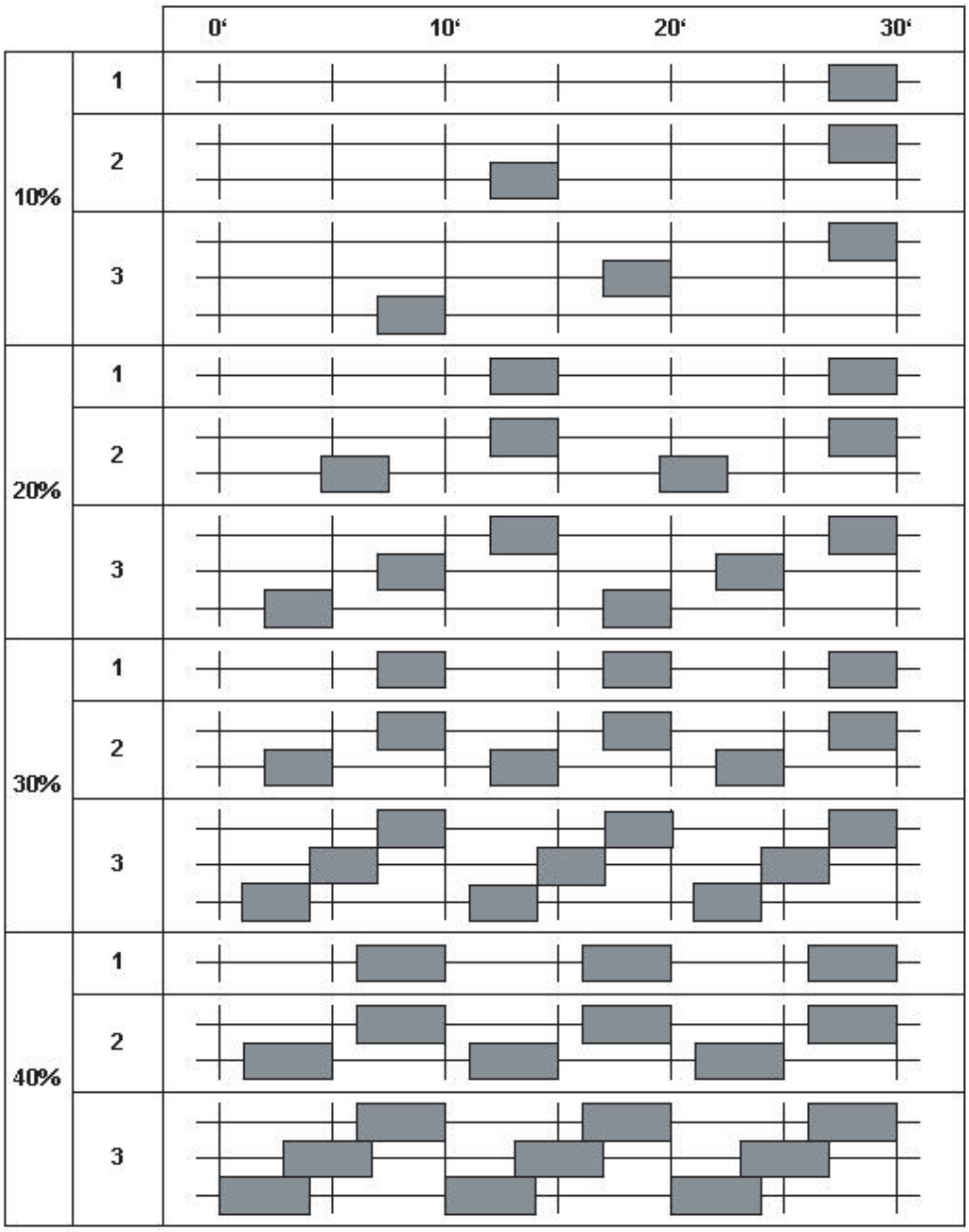


Operational Procedure:

- **Execution conditions:** Setup the calendars (2 seasons available with daily activation period) and check their box to **Enable** them, then click the **OK** button;
  - click on the **Print/Export** button to print all calendars settings on the system printer or to save them in a CSV (comma separated) format file;
- Control setup:
  - select the interruption rate **Control** (10%, 20%, 30% or 40%): see example of interruption patterns below;
  - select each of the 3 available groups and **Register management points** of indoor units to be stopped (a same indoor unit cannot belong to more than one group);
  - **Enable** the groups;
  - click on the **Print/Export** button to print all groups settings on the system printer or to save them in a CSV (comma separated) format file;
  - click the **OK** button;
- **Enable** the selected control classification;
- Click the **Close** button.

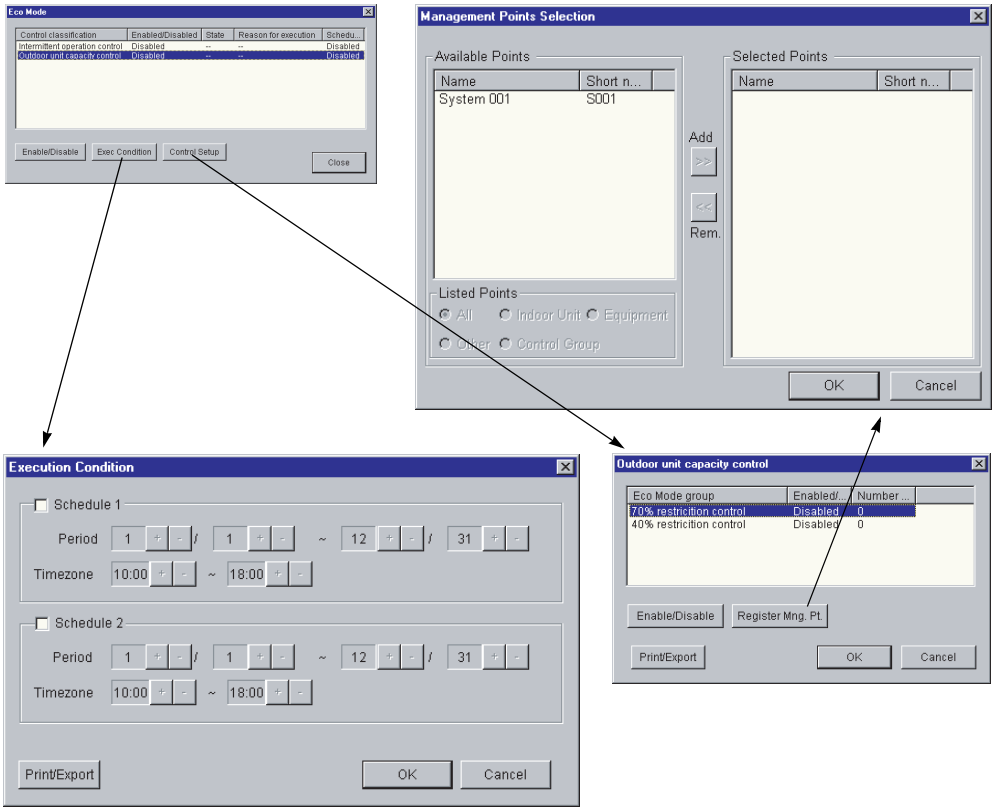
Note: For a better result, do not register (i.e. stop at the same time) all indoor units of a same refrigeration circuit.

Examples of interruption patterns (grayed out) within 30 minutes (from 0' to 30') for rates of 10% to 40% in case of 1, 2, or 3 activated groups (approximate timing):



5.11.2.2 Setting up outdoor unit capacity control

This intermittently lowers capacity of registered outdoor units based on a calendar as shown below.
2 groups of outdoor units can be defined, for the capacity to be lowered for a ratio of 40 or 70% within the daily interval during the calendar based seasons.



Operational Procedure:

- **Execution conditions:** Setup the calendars (2 seasons available with daily activation period) and check their box to **Enable** them, then click the **OK** button;
  - Click on the **Print/Export** button to print all calendars settings on the system printer or to save them in a CSV (comma separated) format file;
- **Control setup:**
  - select each of the 2 available groups and **Register management points** of outdoor units which capacity will be lowered;
  - **Enable** the groups;
  - click on the **Print/Export** button to print all groups settings on the system printer or to save them in a CSV (comma separated) format file;
  - click the **OK** button;
- **Enable** the selected control classification;
- Click the **Close** button.

5.12 Web Functions (Option)

5.12.1 Web Setting

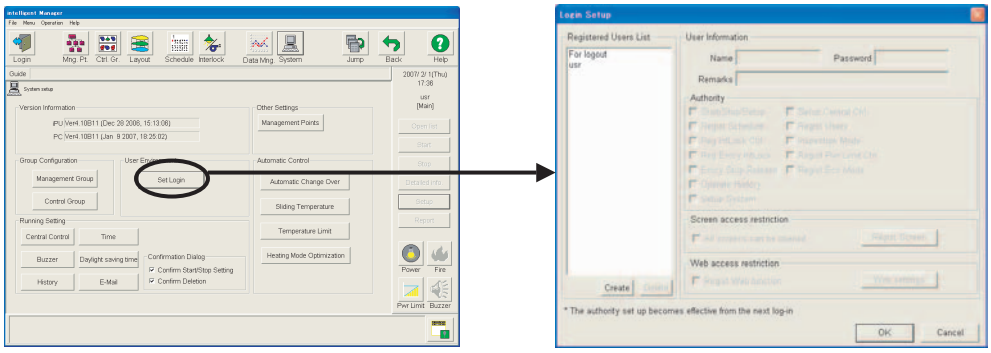
- Set up the operation authority of the Web functions for each user ID.
- The user ID without operation authority cannot use the Web functions.
- If the Web option is invalid, the Web access restriction group box will not be displayed.
- The operation authority of the Web functions can be set up as follows:
- Control functions authority
  - Regist Schedule
  - Regist Sum up Power Proportional Distribution's Data
  - Operate History
- Control Group Edit
  - Control group to monitoring setting
- Only Web Administrator*1 can set up the Control functions authority.
- The number of control groups you can register is 0 - 1024 groups per user (however, up to 10,000 groups for all users).

*1 A Web Administrator is the user who has been granted the authority to operate all management points using the Web functions.

Operational Procedure

- Start intelligent Manager, then login as an administrator user
- Click the System menu button, the System Setup Screen displays
- Click the Set Login button, the Login Setup Screen displays
- The list of users already registered is displayed as in the figure below
- Perform explained hereafter

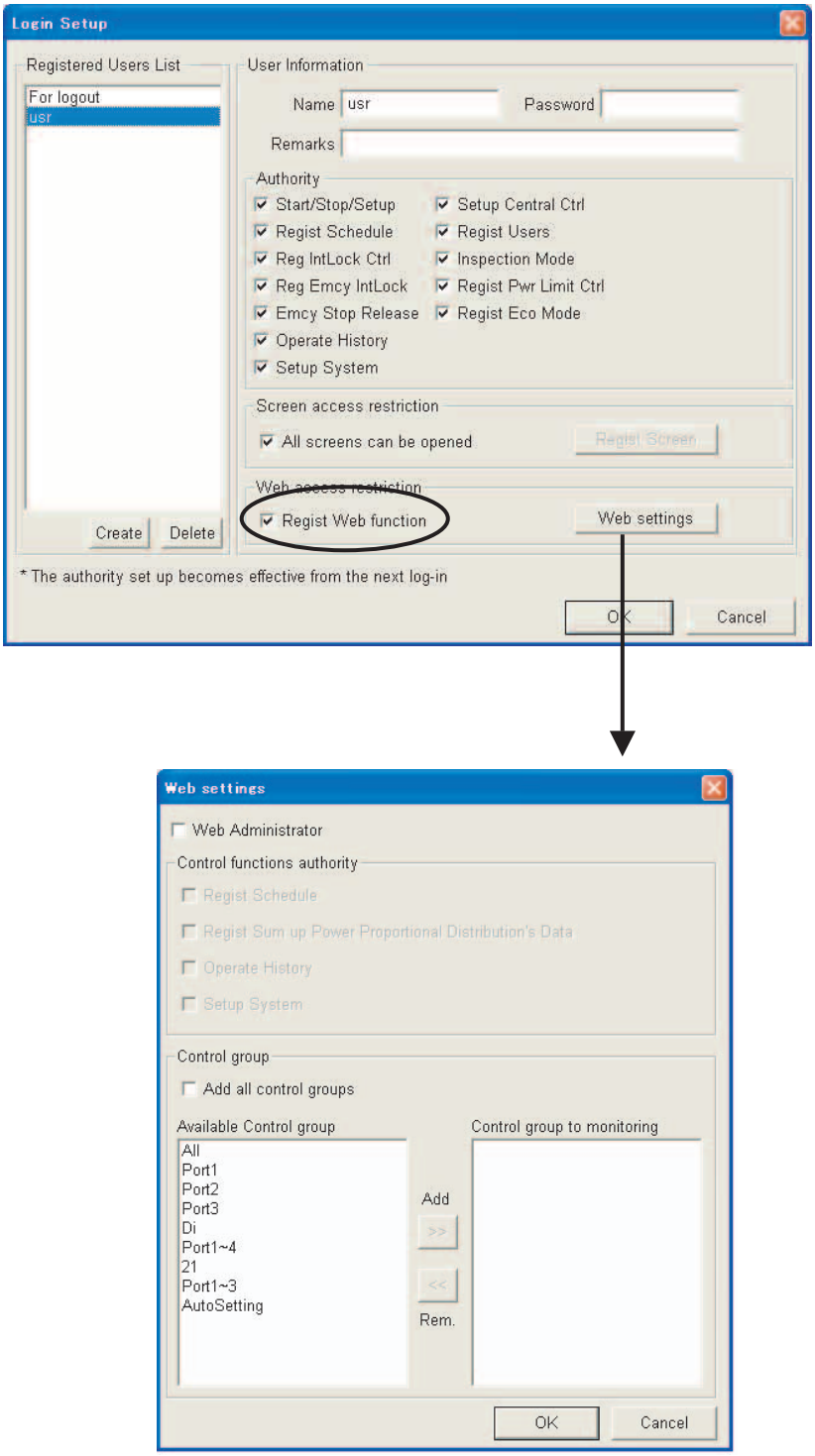
* The Web access restriction group box is displayed only when the Web Option is enabled.



5.12.1.1 Web Access Restriction Setting

- Select user IDs whom you want to grant the Web operation authority in the Registered Users List,
  check the Regist Web function check box, and then click the Web settings button.
  The Web Setting screen appears.

* If no user ID is selected in the Registered Users List, or if For Logout is selected in the Registered Users List, the Regist Web function check box is grayed out.

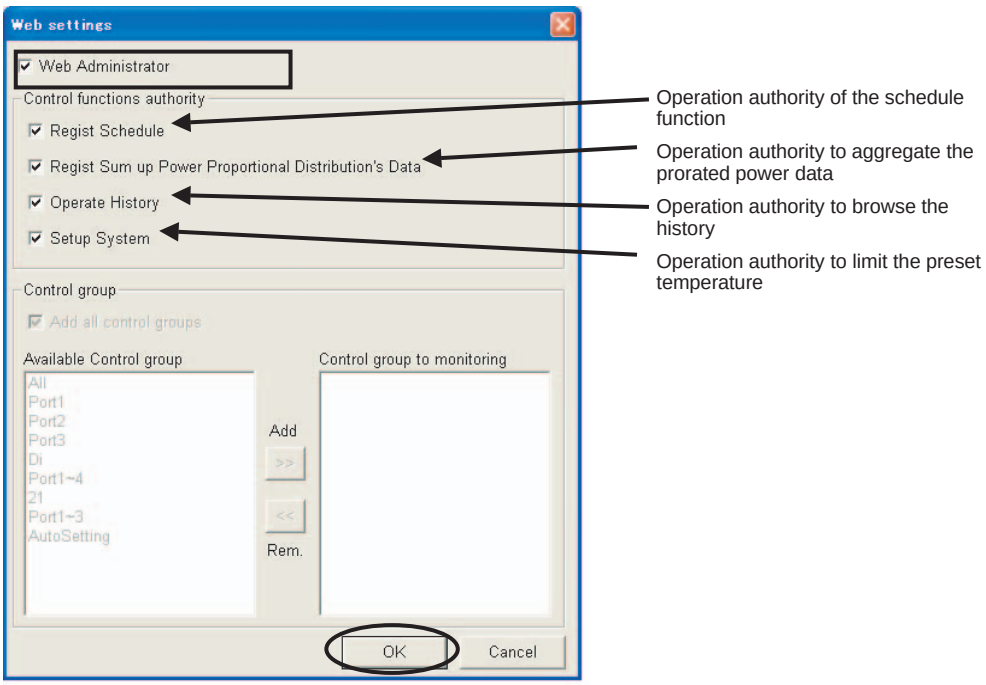


5.12.1.2 Web Setting

- To designate the selected user IDs for the Web Administrator, enable the Web Administrator check box. Set up the Control functions authority group box. If designated for the Web Administrator, the user IDs can operate all control groups, so the Control group group box is grayed out.

- To designate the selected user IDs for the normal user authority, set up the Control Group Edi group box. If the Add All Control Group check box is enabled, the user IDs are enabled to operate all control groups using the Web functions. To set up the operational control groups using the Web functions, select the control groups whom you want to grant from the Available Control Group list, and click the Add button. The selected control groups are displayed in the Control group to monitoring list. To delete control groups from the Control group to monitoring list, select the control groups and click the Rem. button.

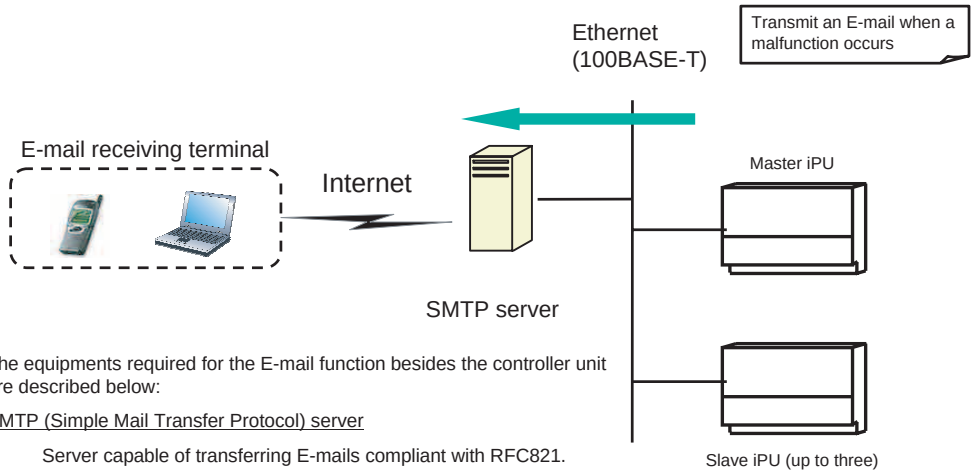
* Only the Web Administrator can set up the Control functions authority group box.
* If the Add AII Control Group check box is enabled, the Available Control Group list, the Control group to monitoring list, the Add button, and the Rem. button are grayed out.



If the setup is completed, click the OK button.

5.12.2 E-Mail Setting

- When a malfunction occurs at a certain management point, an E-mail function sends the state such as an occurrence date and time, a malfunction code by E-mail to the preset E-mail address.
- A master iPU transmits the E-mails.



The equipments required for the E-mail function besides the controller unit are described below:

SMTP (Simple Mail Transfer Protocol) server

Server capable of transferring E-mails compliant with RFC821.

E-mail receiving terminal

Terminal capable of receiving E-mails compliant with RFC822.

Management point type and transmission details

The malfunctions transmitted by the E-mail function are as follows:

Malfunction type	Malfunction transmitted by the E-mail function
Equipment malfunction	○
Communication malfunction	×
Analogue upper/lower limit malfunction	○
Excessive cumulative start/stop count	×
Excessive cumulative operation time	×

The relationships, which can be registered as an object of the E-mail function, between the management point type and the malfunction type are as follows:

Management point type	Indoor Unit	AHU	Chiller	HRV	Internal Di *1	D3Di
Equipment malfunction	○	○	○	○	○	○
Analogue upper/lower limit malfunction						

Management point type	D3Dio	Pseudo Ai	D3Ai	Ai	Ao
Equipment malfunction	○		○	○	
Analogue upper/lower limit malfunction		○	○	○	○

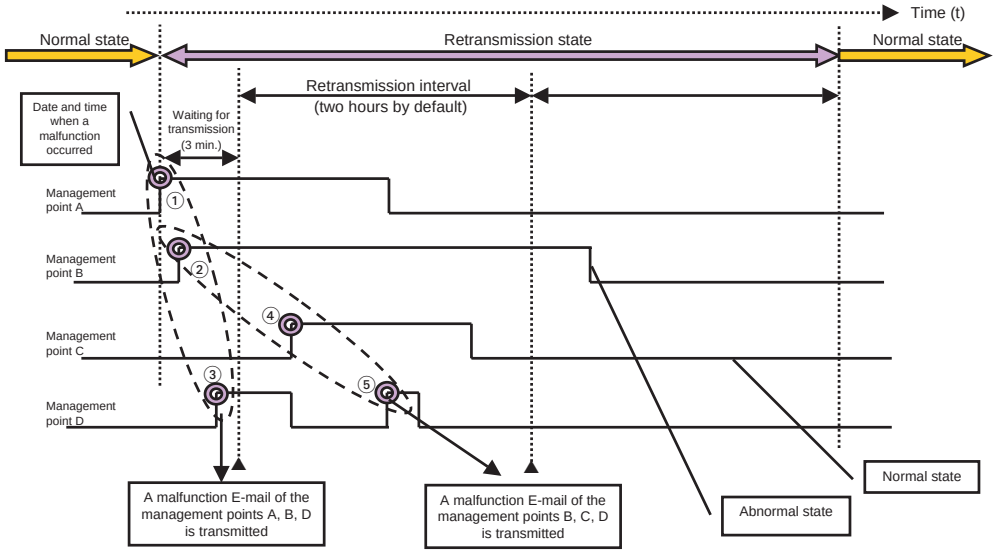
*1. You can register Internal Di only when the operation node "Used Mode" is set to an abnormal signal "Unusual Contact Point".

5.12.2.1 Setup items for the E-mail transmission

Category	Item		Number of characters, restrictions	Factory defaults	Description
Whole	Enable/disable E-mail function			Disabled	If disabled, E-mails will not be transmitted
SMTP server	SMTP server address		Up to 128 single-byte characters.	Blank	Specify a SMTP server URL (IP address)
	SMTP server port number		1 – 65535	25	Specify a SMTP server port number
	Enable/disable "POP before SMTP" function			Disabled	Specify whether to access the specified POP server before the E-mail transmission
	Setup items when the "POP before SMTP" function is enabled	POP server address	Up to 128 single-byte characters.	Blank	Specify the POP server URL (IP address)
		POP server port number	1 – 65535	110	Specify the POP server port number
		POP user ID	Up to 64 single-byte characters.	Blank	User ID used for the POP authentication
		POP password	Up to 64 single-byte characters.	Blank	Password used for the POP authentication
Transmission condition	Transmission destination			None	Specify the management point to which an E-mail is transmitted when a malfunction occurs
	Retransmission interval		1-72 hours. In hours	Two hours	Retransmit interval of an E-mail
	Site name		Up to 20 double-byte/single-byte characters.	Blank	Specify the text displayed in the Subject field of the E-mail
E-mail	E-mail address 1, 2, 3		Up to 128 single-byte characters	Blank	Specify an E-mail address (aaa@bbb.co.jp). Optional.

5.12.2.2 E-mail transmission timing

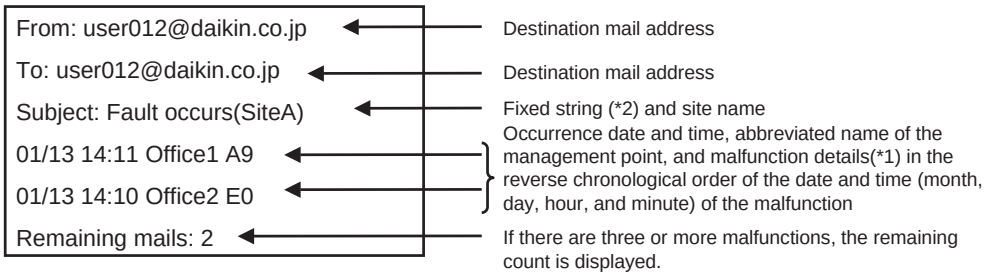
- When a malfunction occurs in the target groups for the E-mail transmission, an E-mail is transmitted after the transmission waiting time elapsed (three minutes) since the malfunction occurrence ((1) in the figure). The abnormal detection is carried out by polling the abnormal information of the target group every one minute.
- If a malfunction occurs at another management point in the transmission waiting state, the multiple malfunctions are grouped into one E-mail and then transmitted ((2), (3) in the figure).
- After the retransmission interval time (two hours by default) elapsed since the first E-mail transmission, if the malfunction last transmitted by the E-mail still continues, the E-mail is retransmitted ((2) in the figure).
- If an equipment malfunction occurs at another management point during retransmitting the E-mail, an E-mail is transmitted after the retransmission interval time elapsed ((4) in the figure).
- If the normal/abnormal state changes within the next retransmission interval in the management point whose E-mail has already been transmitted, the latest occurrence date and time and a malfunction code are transmitted ((5) in the figure).
- The retransmission state will change into the normal state, if any E-mail transmission item in the E-mail setting is changed. However, the E-mail which is ready for transmission is transmitted.
- The retransmission state will change into the normal state, if the system time is changed. However, the E-mail which is ready for transmission is transmitted.



<E-mail transmission timing>

5.12.2.3 E-mail format

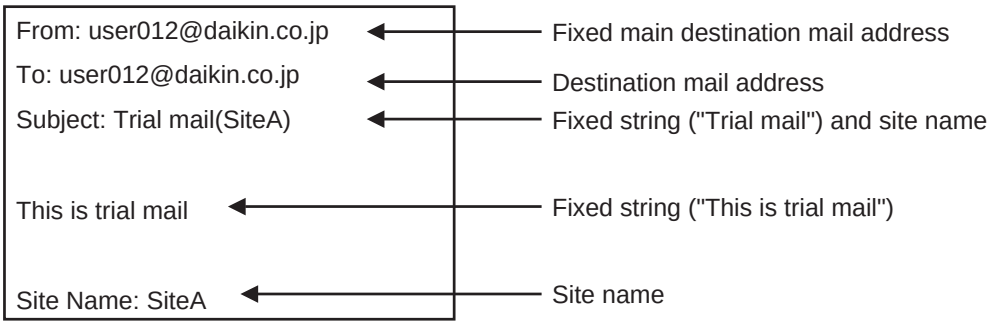
- The E-mail format is as follows: If three or more malfunctions are transmitted at the same time, two with the newest occurrence date and time are displayed and only the count is displayed for the remaining malfunctions.



*1: The malfunction details as follows:
[Equipment malfunction]
Malfunction code (nothing displayed if the code does not exist)
[Analogue upper limit malfunction]
"Upper limit"
[Analogue lower limit malfunction]
"Lower limit"

5.12.2.4 Trial mail

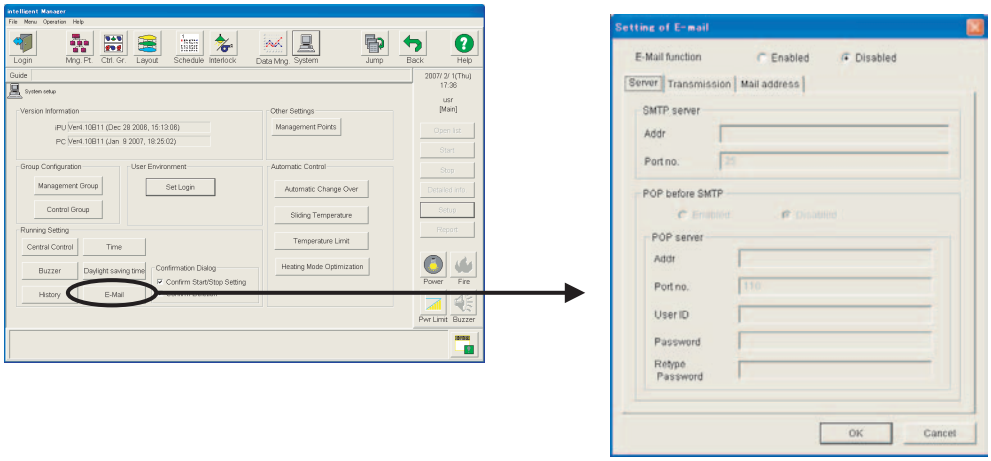
- In order to check the E-mail transmission setting, you can send a trial mail to the destination E-mail address. The trial mail format is as follows:



5.12.2.5 Operational Procedure

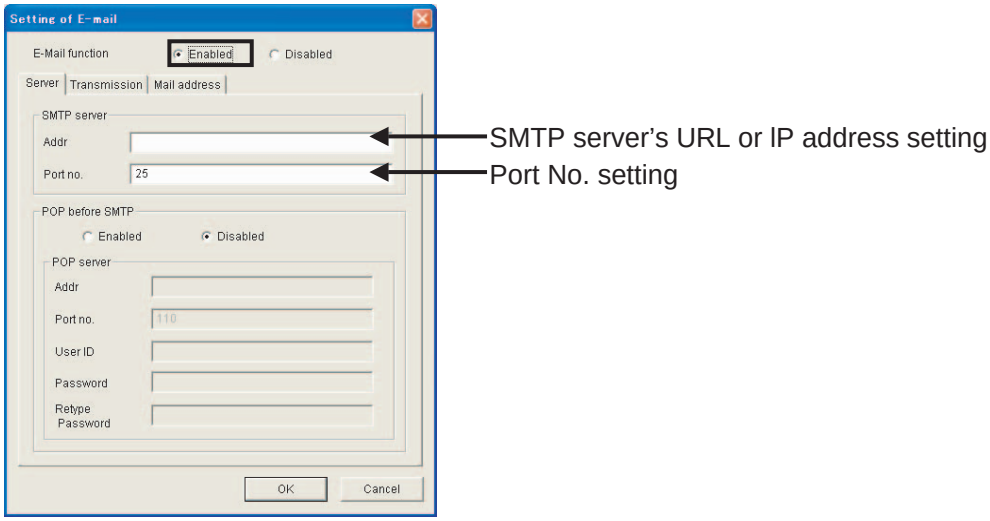
- Start intelligent Manager, then login as an administrator user
- Click the System menu button, the System Setup Screen displays
- Click the Set E-Mail button, the Setting of E-mail Screen displays
- Perform explained hereafter

* The E-Mail button appears only when Web Option is enabled.



5.12.2.6 Setting of E-mail - SMTP sever setting -

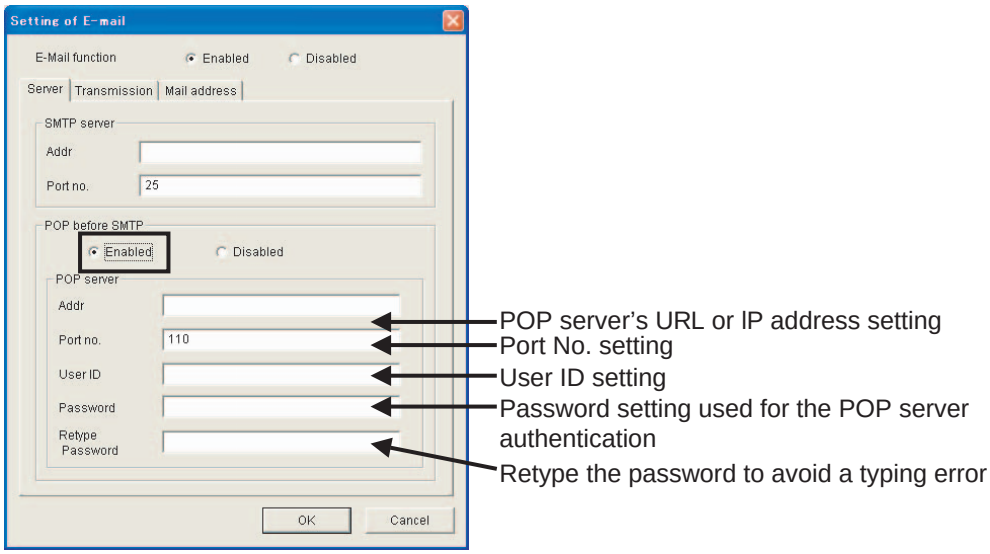
- Enable the E-Mail function radio button, and then set up a SMTP server Addr (SMTP server's URL or IP address) and the Port No.
  (Port No. default setting is 25.)



5.12.2.7 Setting of E-mail - POP before SMTP setting -

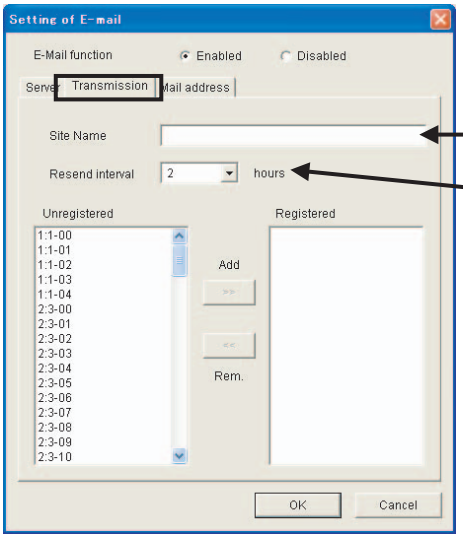
- To connect to a POP server before the E-mail transmission, enable POP before SMTP and then set up the POP server's Addr (POP server's URL or IP address), Port No., User ID, Password, and Retype Password.
  (Port No. default setting is 110.)

* If POP before SMTP is disabled, the POP before SMTP group box will be grayed out.
* The asterisk [*] characters are displayed instead of the typed Password, Retype Password.



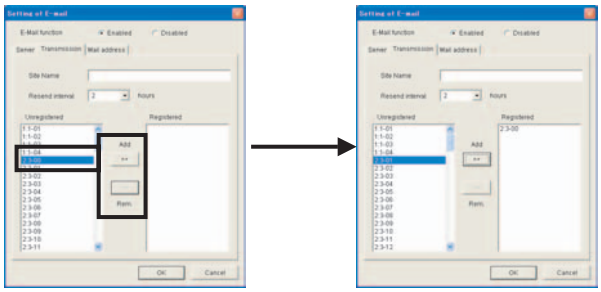
5.12.2.8 Setting of E-mail - Transmission setting -

- Carry out a setting for the E-mail transmission.
- Click the Transmission tab. The Transmission setting screen appears.
- Set up a site name (Subject) used when sending E-mails in the Site Name edit box. (up to 20 characters)
- Set up an E-mail's retransmission interval in the Resend interval combo box.
  The valid range is 1-72 hours in steps of one hour.
  (The default interval is two hours.)
- The management points not yet monitored for malfunctions are listed in the Unregistered list, and the management points being monitored for malfunctions are listed in the Registered list.
  To monitor points for malfunctions, select the management points appeared in the Unregistered list, and click the Add button. They are added to the Registered list.
  To release the malfunction monitoring, select the management points appeared in the Registered list, and click the Rem. button. They are deleted from the Registered list and moved to the Unregistered list.
  (The management points added to the Registered list are not displayed in the Unregistered list.)



Enter a site name (Subject filed) (up to 20 characters)

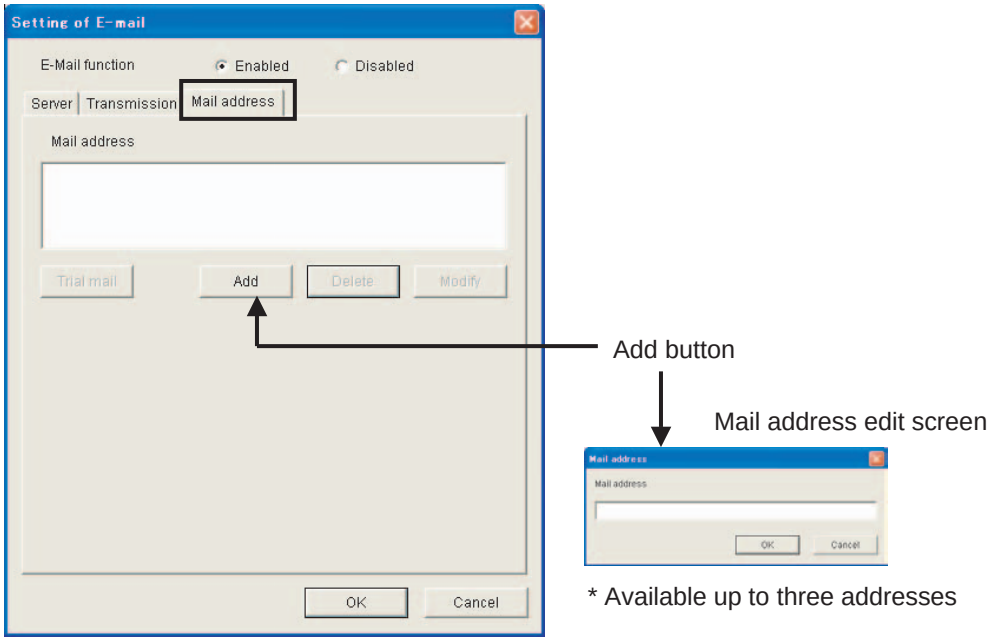
Set up a retransmission interval



To monitor points for malfunctions, select the management points appeared in the Unregistered list, and click the Add button. They are added to the Registered list.
To release the malfunction monitoring, select the management points appeared in the Registered list, and click the Rem. button.

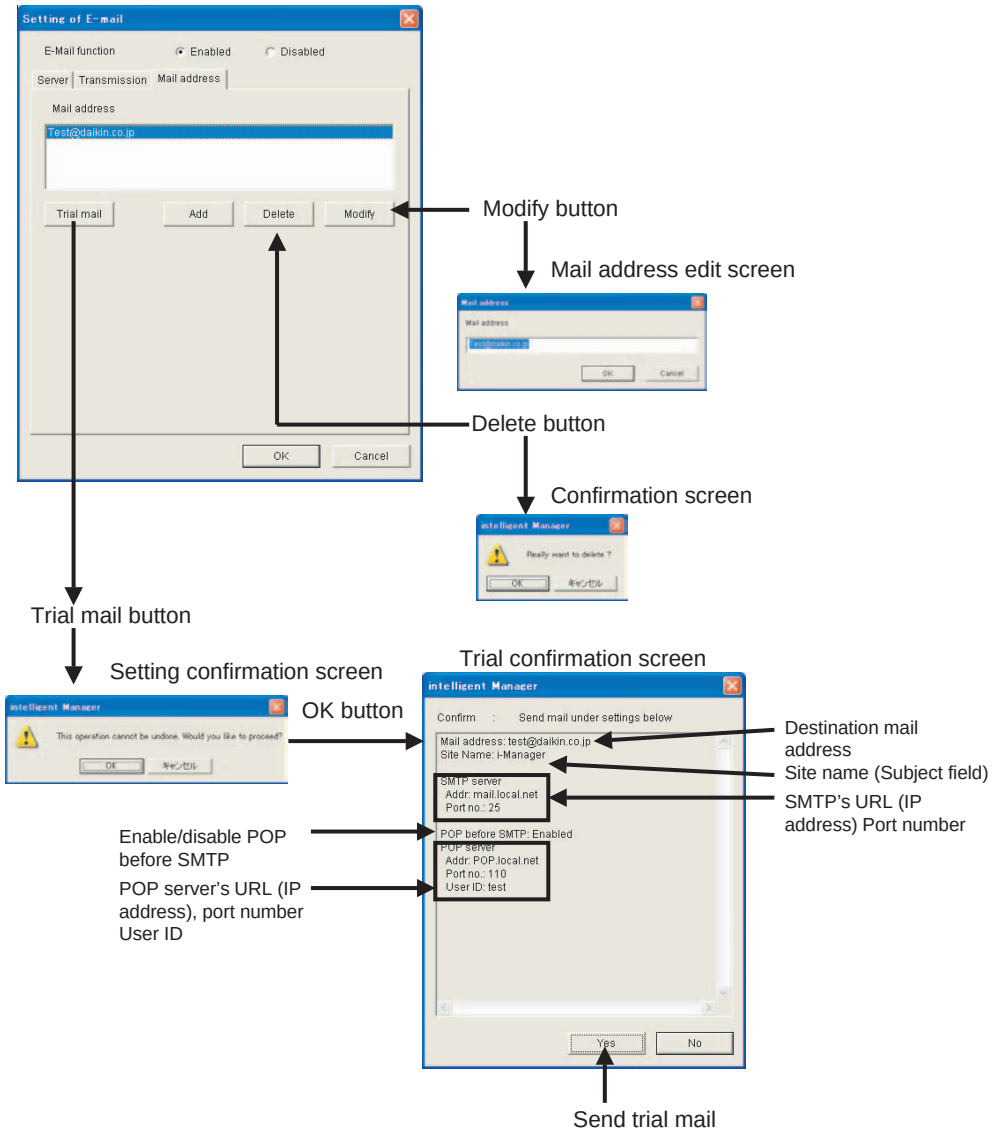
5.12.2.9 Setting of E-mail –Mail address setting -

- Carry out a destination setting for the E-mail transmission.
- Click the Mail address tab. The Mail address screen appears.
- Click the Add button. The Mail address edit screen appears.
  Enter an address to which you want to send an E-mail, and click the OK button.
  The mail address is added to the Mail address list.
  To send an E-mail to other receiving terminals, click the Add button and add a mail address.
  You can set up to three mail addresses.
- To edit a mail address, select the mail address which you want to edit in the Mail address list, and then click the Modify button.
  Since the Mail address edit screen appears, edit the mail address.
- To delete the registered mail addresses, select mail addresses which you want to delete from the Mail address list, and click the Delete button. When a confirmation screen is displayed, click the OK button. The selected mail addresses are deleted.
  To cancel, click the Cancel button. The screen returns to the Mail address screen without deleting the selected mail addresses.
- To check whether an E-mail can reach the receiving terminal at the defined mail address, select a mail address which you want to send and click the Trial mail button. A setup confirmation screen appears. Click the OK button. When a transmission confirmation screen is displayed, check the settings and click the Yes button. If the setting is correct, the receiving terminal will receive the trial mail.
  If the trial mail is not received, check the setting on pages 379- 381.



* Available up to three addresses

5.12.2.10 Setting of E-mail

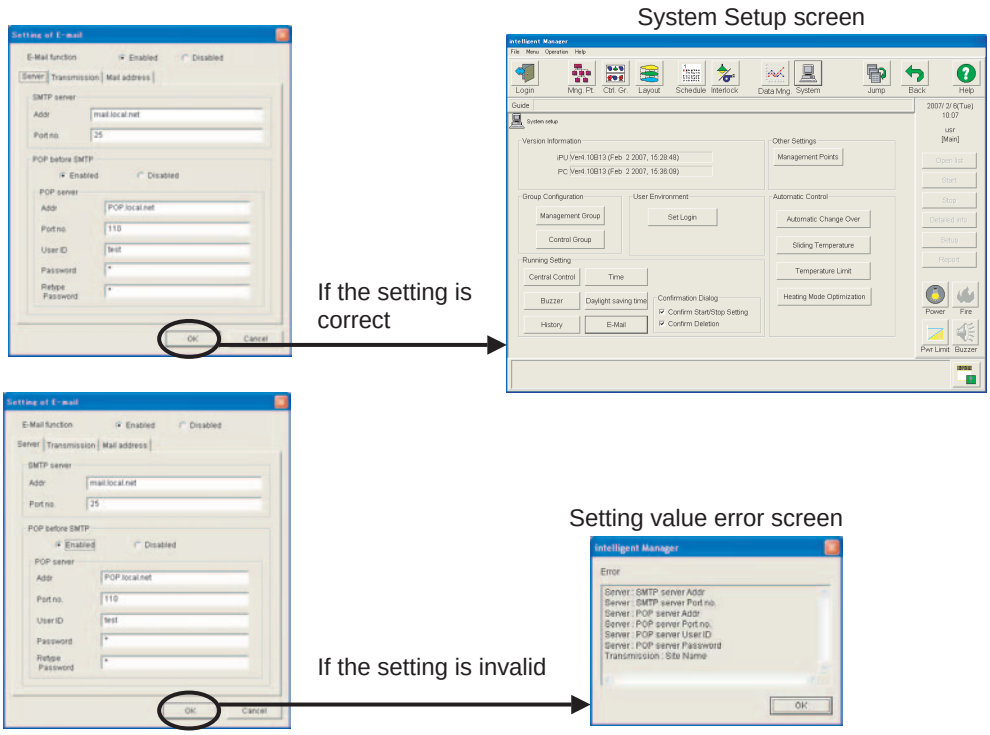


If the trial mail is successfully sent to the receiving terminal, it will receive the following mail (example).

From: user012@daikin.co.jp	Fixed main destination mail address
To: user012@daikin.co.jp	Destination mail address
Subject: Trial mail(SiteA)	Fixed string ("Trial mail") and site name
This is trial mail	Fixed string ("This is trial mail")
Site Name: SiteA	Site name

- If each setup is completed, click the OK button to exit the Setting of E-mail. The screen returns to the System Setup screen.
- If there is any error on setting values of the SMTP server, POP server, and so on, the setting value error screen appears.

* If you disabled the E-mail function and then clicked the OK button, the SMTP server value and so on specified when the function is enabled are reset to the initial values. However, if the function is switched from disabled to enabled while displaying the Setting of E-mail screen, values specified when the function is enabled are displayed.



<Correspondence table between error descriptions and error messages>

Tab	Error location	Error condition	Error message
Server	(1)[Addr] edit box	When the input string exceeds 128 characters, or it contains any character other than single-byte characters	Server : SMTP server Addr
	(2)[Port no.] edit box	When any character other than numeric characters is entered, or out of the numeric range 1-65535	Server : SMTP server Port no.
	(4)[Addr] edit box	When the input string exceeds 128 characters, or it contains any character other than single-byte characters	Server : POP server Addr
	(5)[Port no.] edit box	When any character other than numeric characters is entered, or out of the numeric range 1-65535	Server : POP server Port no.
	(6)[User ID] edit box	When the input string exceeds 64 characters, or it contains any character other than single-byte characters	Server : POP server User ID
	(7)[Password] edit box [Retype Password] edit box	When the input string exceeds 64 characters, it contains any character other than single-byte characters, or two passwords do not match	Server : POP server Password
Transmission	(1)[Site Name] edit box	When the input string exceeds 20 characters	Transmission : Site Name

6. Database Maintenance

This section explains which action should be taken when the size of the intelligent Manager database becomes excessive.
The capacity of the intelligent Manager database is limited only by the available space on the hard disk of the computer.
When this limit becomes close (less than 10 Megabytes), intelligent Manager issues a warning in the History screen.

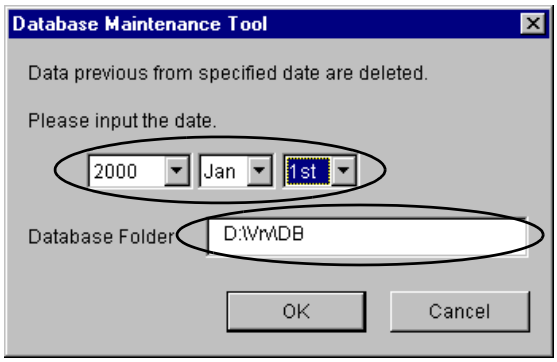
The procedure consists in deleting the oldest items from the database by making use of the ezDBMaintenance tool as described below.

Warning: Always backup the current database (on a separate hard-disk, on CD-Rom, etc.) before performing any maintenance operation.

Step 1: exit from intelligent Manager.
See details of this operation in the section 3. Starting and Stopping operation of intelligent Manager.

Step 2: backup the database.
This operation can be performed either by using an external device (CD writer, serial connection to another PC, etc.) and will not be discussed in details in the present document. Please refer to your support engineer for advice.

Step 3: start the ezDBMaintenance.exe module (located in the same folder as intelligent Manager VRV.exe module) as shown below.

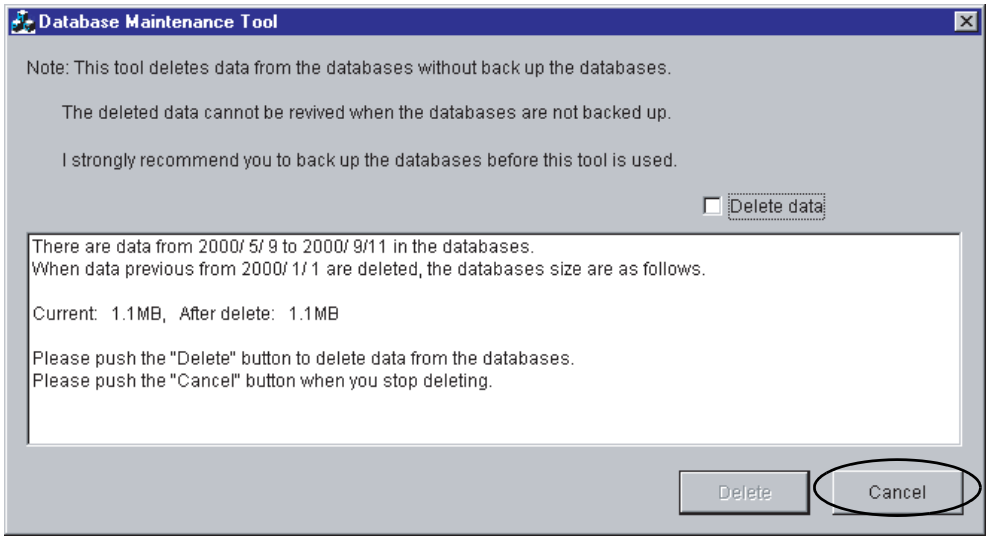


Step 4: input the parameters as shown above:
- Database Folder: the path of database folder (absolute path is recommended);
- Date: all the items until the day BEFORE this date will be deleted.

Then click the **OK** button. The confirmation dialogue displays as shown below.

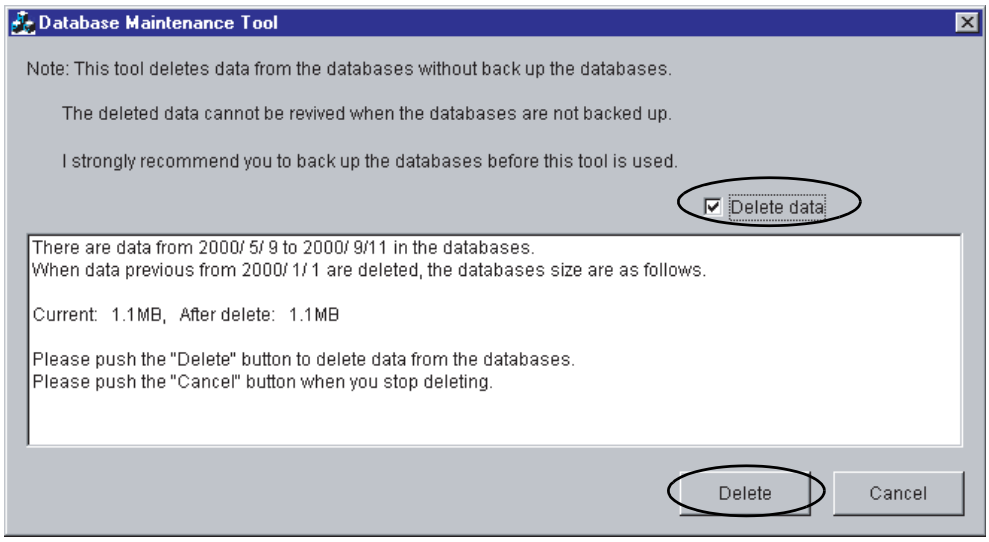
Step 5: carefully check the date and size of both deleted and remaining data.

- To change the parameters, click the **Cancel** button. The previous dialogue displays again as shown above.



If the parameters are correct, then go ahead for data deletion:

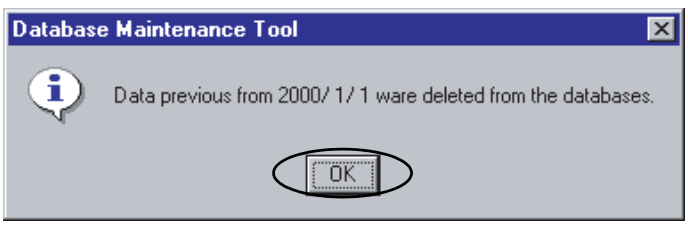
- check the Delete Data box; the **Delete** button is now enabled as shown below;



- click the **Delete** button; the confirmation dialogue displays as shown below.



Step 6: click the **Yes** button; the result message displays as below.



Step 7: Click the **OK** button.

End of procedure.

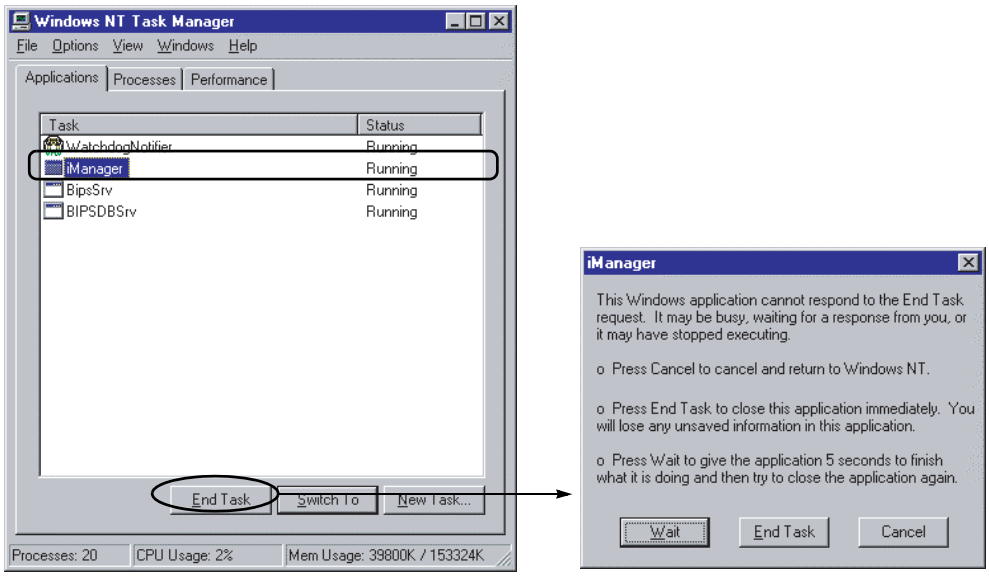
7. Troubleshooting

What to be careful of and what to do when operations cannot be performed
Depending on the type of problem - related to Windows XP (or Windows 2000) or the internal working of the system - the present system might display an error message window of total operation inability.

Warning: If this happens, part of the data, cumulative values etc. may be lost
Furthermore once intelligent Manager has been shut down, the error message display area is cleared.

If the following troubleshooting strategies have been carried out and problems persist after the system has been restarted, please contact the Daikin service counter.

Forcing Windows shutdown
While holding down simultaneously the Ctrl and Alt keys on the keyboard, press the Delete key (Ctrl+Alt+Del).
Click the **Task Manager (T)** button on the Windows security screen to display the screen shown below.



Select the intelligent Manager icon and click the **End Task (E)** button.

Warning: End only intelligent Manager.
If other programs are ended, the computer should be restarted.

All inquiries about after sales service etc. should be addressed to Daikin.

Note:
1. Illegal reproduction of this document or of any part thereof is strictly prohibited.
2. Any part of this document may be changed in the future without prior notice.
3. Every effort has been made to ensure the accuracy of this document. However please do not hesitate to contact us in the case of any missing, erroneous or unclear information.
4. No liability can be assumed for any loss etc. resulting from customer misuse of our products, failure to comply with the instructions contained in this manual, repairs or modifications carried out by a third party other than Daikin etc.

Part 6
Web Option
Operation Manual

1. Safety Considerations 390
2. Before Starting 392
3. Web Interface of the Intelligent Manager 392
4. Overview 393
5. Basic Mode 397
6. Advanced Mode 412
7. About System Setup Menu 423
8. Schedule Menu Configuration 429
9. Menu Structure of Proportional Distribution Function 445
10. Before Contacting Us: Troubleshooting 451

1. Safety Considerations

Please read these “SAFETY CONSIDERATIONS” carefully before installing air conditioning equipment and be sure to install it correctly.
After completing the installation, make sure that the unit operates properly during the start-up operation.
Please instruct the customer on how to operate the unit and keep it maintained.
Also, inform customers that they should store this installation manual along with the operation manual for future reference.
This air conditioner comes under the term “appliances not accessible to the general public”.

Meaning of warning, caution and note symbols.

⚠ **WARNING** .....Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION** ..... Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

⚠ **NOTE** ..... Indicates situation that may result in equipment or property-damage-only accidents.

Keep these warning sheets handy so that you can refer to them if needed.
Also, if this equipment is transferred to a new user, make sure to hand over this operation manual to the new user.

⚠ WARNING

In order to avoid electric shock, fire or injury, or if you detect any abnormality such as smell of fire, turn off power and call your dealer for instructions.

Ask your dealer for installation of the air conditioner.
Incomplete installation performed by yourself may result in a water leakage, electric shock, and fire.

Ask your dealer for improvement, repair, and maintenance.
Incomplete improvement, repair, and maintenance may result in a water leakage, electric shock, and fire.

Improper installation or attachment of equipment or accessories could result in electric shock, short-circuit, leaks, fire or other damage to the equipment. Be sure only to use accessories made by Daikin which are specifically designed for use with the equipment and have them installed by a professional.

Ask your dealer to move and reinstall the air conditioner or the remote controller.
Incomplete installation may result in a water leakage, electric shock, and fire.

Never let the indoor unit or the remote controller get wet.
It may cause an electric shock or a fire.

Never use flammable spray such as hair spray, lacquer or paint near the unit.
It may cause a fire.

Never replace a fuse with that of wrong ampere ratings or other wires when a fuse blows out.
Use of wire or copper wire may cause the unit to break down or cause a fire.

Never inspect or service the unit by yourself.
Ask a qualified service person to perform this work.

Cut off all electric waves before maintenance.

Do not wash the air conditioner or the remote controller with excessive water.
Electric shock or fire may result.

Do not install the air conditioner or the remote controller at any place where flammable gas may leak out.
If the gas leaks out and stays around the air conditioner, a fire may break out.

Do not touch the switch with wet fingers.
Touching a switch with wet fingers can cause electric shock.

CISPR 22 Class A Warning:
This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

⚠ CAUTION

After a long use, check the unit stand and fitting for damage.
If they are left in a damaged condition, the unit may fall and result in injury.

Do not allow a child to mount on the unit or avoid placing any object on it.
Falling or tumbling may result in injury.

Do not let children play on and around the unit.
If they touch the unit carelessly, it may result in injury.

Do not place a flower vase and anything containing water.
Water may enter the unit, causing an electric shock or fire.

Never touch the internal parts of the controller.
Do not remove the front panel. Some parts inside are dangerous to touch, and a machine trouble may happen.
For checking and adjusting the internal parts, contact your dealer.

Avoid placing the controller in a spot splashed with water.
Water coming inside the machine may cause an electric leak or may damage the internal electronic parts.

Do not operate the air conditioner when using a room fumigation - type insecticide.
Failure to observe could cause the chemicals to become deposited in the unit, which could endanger the health of those who are hypersensitive to chemicals.

Safely dispose of the packing materials.
Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
Tear apart and throw away plastic packaging bags so that children will not play with them. If children play with a plastic bag which was not torn apart, they face the risk of suffocation.

Do not turn off the power immediately after stopping operation.
Always wait at least five minutes before turning off the power. Otherwise, water leakage and trouble may occur.

The appliance is not intended for use by young children or infirm persons without supervision.

The remote controller should be installed in such away that children cannot play with it.

⚠ NOTE

Never press the button of the remote controller with a hard, pointed object.
The remote controller may be damaged.

Never pull or twist the electric wire of the remote controller.
It may cause the unit to malfunction.

Do not place the controller exposed to direct sunlight.
The LCD display may get discolored, failing to display the data.

Do not wipe the controller operation panel with benzine, thinner, chemical dustcloth, etc.
The panel may get discolored or the coating peeled off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. And wipe it with another dry cloth.

Dismantling of the unit, treatment of the refrigerant, oil and eventual other parts, should be done in accordance with the relevant local and national regulations.

2. Before Starting

To use the web interface of the intelligent Manager, the target PC should meet the following requirements. Check them before starting.

Requirements for the PCs

CPU	CPU Pentium III 800MHz or higher or equivalent
OS	OS Windows 2000 Service Pack 4 or later Windows XP Service Pack 1 or later
Memory	256MB or more
Free Disk Space	100MB or more (required for installing Java plug-in)
Network Speed	10 Base-T or higher
Display	Resolution: 1024 × 768 (XGA) or more, Maximum color development simultaneosly 65536 colors or more
Browser	Internet Explorer 6.0SP1 or more *1
Java plug-in	J2SE (Java2 Platform Standard Edition) V1.4.2 *2

∗1: If IE6.0SP1 or later is not installed, obtain it from the Microsoft website. It is downloadable for free. Other browsers, such as Netscape, may not work correctly. Be sure to use IE6.0SP1 or later.

∗2: Be sure to use J2SE (Java2 Platform Standard Edition) V 1.4.2. Other versions are not qualified. Download it from the SUN website (for free) or contact the dealer from which you purchased this product.

3. Web Interface of the Intelligent Manager

- **Restricted Function for each login name**
  These vary depending on the authority which is set for the user ID which is logged in. If the logged-in user ID does not have the required authority, then that web function cannot be operated.
  → See page 394

- **Two Display Modes**
  You can select the display mode from two modes during login process: the Basic mode which provides a simple and easy-to-use interface and the Advanced mode which allows you to use advanced setting options.
  → Basic Mode See page 397 Advanced Mode See page 412

- **Start/Stop Operation**
  Operation can be started and stopped for each management points and control groups.
  → Basic Mode See page 407 Advanced Mode See page 413

- **Advanced Settings for Air Conditioners**
  The temperature setting, operating mode, air direction, fan speed, and remote controller mode can be set for each management point and control group.
  → Basic Mode See page 408 Advanced Mode See page 414

- **Various Operation Modes**
  You can operate devices from a web interface, the intelligent Manager console, or a local remote controller. Also the Administrator can permit or prohibit remote controller operations of devices in a specified management point or control group using the web interface.
  → Advanced Mode See page 418

- **System Setup**
  The Administrator can set passwords for user IDs, browse the history, and limit temperature settings for air conditioners controlled by the user IDs.
  → See page 423

- **Schedule Setup**
  The Administrator can precisely schedule operations for a specific management point or control group of devices. Weekly schedule and 2 extra schedules can be created.
  → See page 429

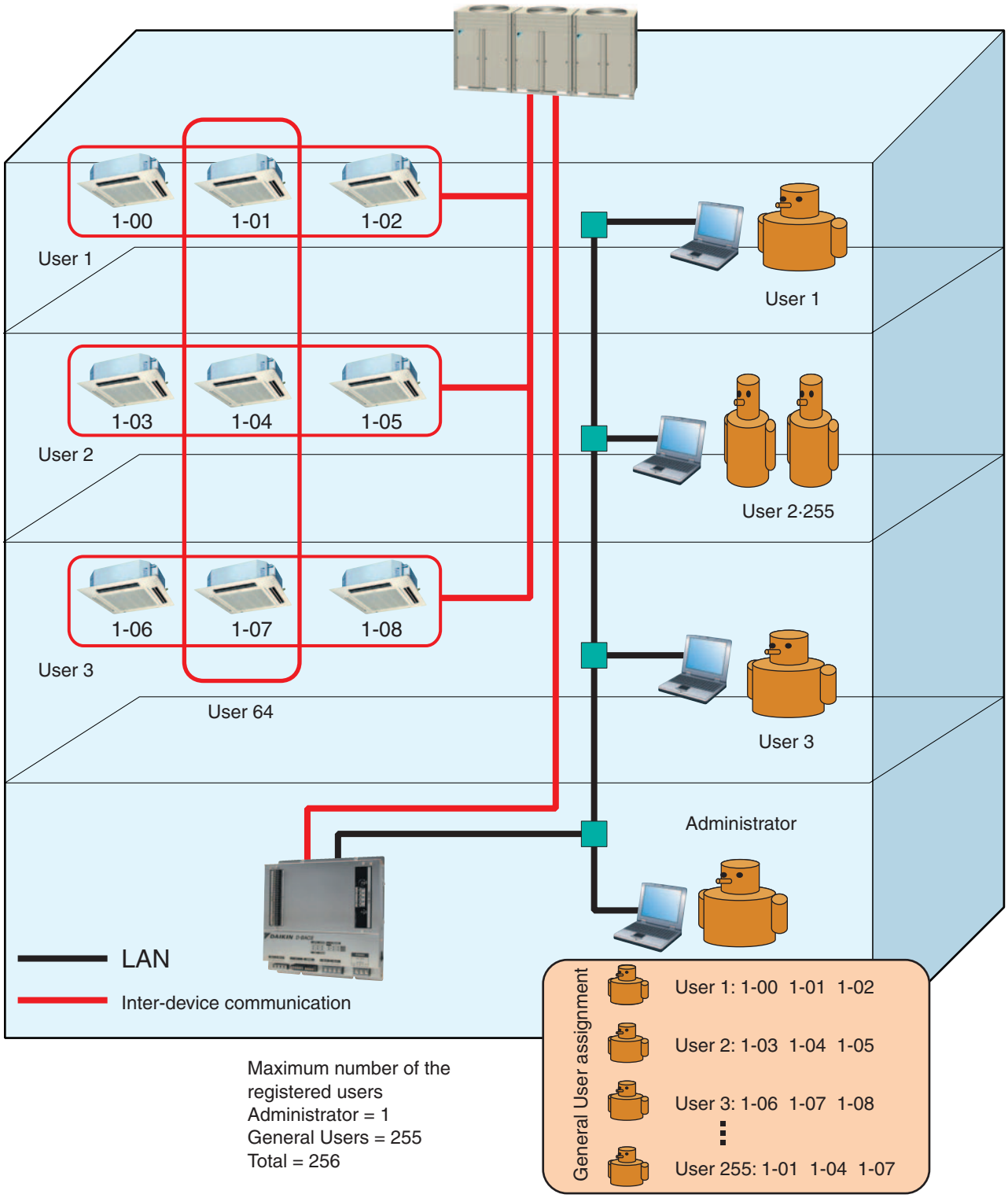
- **Pwr Prp Dist Setup**
  This function makes it possible to measure the total power consumption of the air conditioners of facilities, such as a tenant building, with a meter and calculate the power consumption of each air conditioner on a tenant basis.
  → See page 445

4. Overview

4-1 Web system of the intelligent Manager

The Administrator can assign (restrict) one or more air conditioners to each General User. In the following Figure 1, User 01, User 02, and User 03 can operate and monitor only their local air conditioners. However User 255 can operate/monitor air conditioners that other General Users can also operate/monitor.

Figure 1: Example of user setting



4-2 Function restrictions determined by the login ID

The web functions which can be operated are different depending on the authority (*1) which is set for the user ID which is logged in. If the logged-in user ID does not have the required authority, then that web function cannot be operated.
The relationships between web function authorities and their corresponding functions are shown below.

Function	Web function authority required for operation	Simultaneous operation*2	Authority for the corresponding monitoring panel*3
Temperature setting restriction function	System Setup	Not permitted	System Setup
Password change function			
Schedule function	Schedule Setup	Not permitted	Schedule Setup
Pwr Prp Dist Setup	Pwr Prp Dist Setup	Not permitted	–
View function	Operation history	Permitted	–

*1 The authority which is set for the user ID is the user authority that is set from the monitoring panel system settings. Refer to intelligent Manager Operation Manual for details.

*2 Simultaneous use:
- This indicates whether or not two web function users (or a monitoring panel user and web function user) can operate the function at the same time.
- When two web function users (or a monitoring panel user and web function user) cannot operate a function simultaneously, the user who logged in first acquires the authority.
- Authority is retained from login to logout. After logout, the user releases the authority.

*3 Although the setting screens for the web function authority and monitoring software authority are different, the authority indicated here is the same in terms of restricting simultaneous operation.
Example 1: While a user with system setting authority for web functions is logged in from the web it is not possible to make system settings from the monitoring software.
Example 2: While a user with schedule registration authority for the monitoring panel is logged into the monitoring software, it is not possible to operate the schedule functions from the web.

*4 **The maximum number of PCs where web functions can be operated simultaneously is 50.**

*5 The proportional distribution function (optional) is required in order to utilize the collection of power proportional distribution data.

4-3 Two display modes of the web interface

In the login process of the intelligent Manager web interface, users can select either of the following two modes.

- Basic Mode
- Advanced Mode

This section provides the description of the difference between these two modes.

■ **Basic Mode:**
- Monitor air conditioners.
- Operate air conditioners.

■ **Advanced Mode:**
- Monitor air conditioners.
- Operate air conditioners.
- Permit and/or prohibit local remote controller operations.
- Change the password.
- View the history. *1
- Temperature setting restriction function *1
- Schedule Setup *1
- Pwr Prp Dist Setup *1, 2

*1 The web functions which can be operated are different depending on the authority (refer to chapter 4-2.) which is set for the user ID which is logged in. Viewing the history, restricting the temperature settings, setting a schedule, and collecting power proportional distribution data require user authority that is set from the monitoring software system settings.

*2 The proportional distribution function (optional) is required in order to utilize the collection of power proportional distribution data.
- The following units (marked with "○") can be monitored and controlled in web function basic or advanced mode.

Applicable unit	Control/ Monitor	Applicable unit	Control/ Monitor
Indoor unit	○	Main unit Di	×
HRV	○	Main unit Do	×
Outdoor unit	×	Main unit Pi	×
Chiller	×	Ao	×
Air handler	×	Ai	×
D3Dio	○	Universal device Ai	×
D3Di	○	D3Ai	×

In the above table, "×" marks refer to units that cannot be monitored or controlled, in which case the units will not be displayed on the web screen in basic or advanced mode.

*3 **The maximum number of PCs where web functions can be operated simultaneously is 50.**

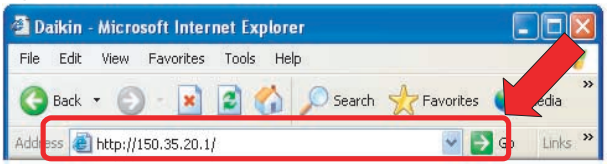
4-4 Logging into the web interface

1. Start Internet Explorer, and input the IP address of the intelligent Manager into the address bar.

   http:// followed by the address of the intelligent Manager

   In the case of the example on the figure 1, the IP address of the intelligent Manager is 150.35.20.1.

figure 1



2. The Security warning screen (Screen 1) appears.

   The software includes the proportional distribution function and others, with which a collection file of proportional distribution is output onto the hard disk of the PC.
   No usual Java applets can output the file onto the hard disk of the PC. Therefore, the security warning screen appears.

   - If Yes Always is selected, all the web functions are available.
   - If More Details is selected, detailed information on authentication appears.

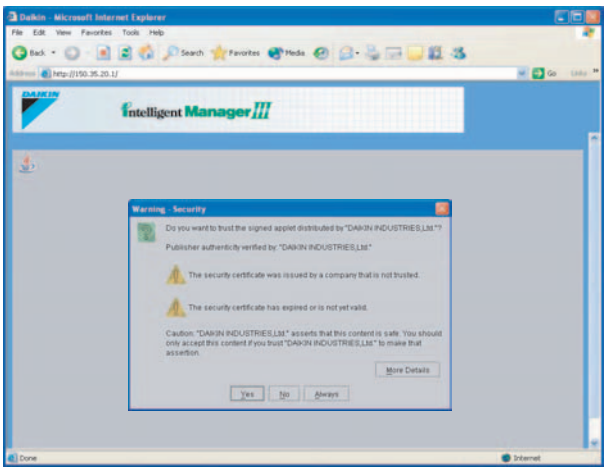
   * If Always is selected, the Java applet is always authenticated, and the security warning screen (Screen 1) no longer appears.

   Select Yes Always and press the button.

⚠ CAUTION

If No is pressed, the screen will be closed without Java applet authentication. Be sure to select Yes Always and press the button.

Screen 1: Security warning screen



3. The Main screen (Screen 2) appears.

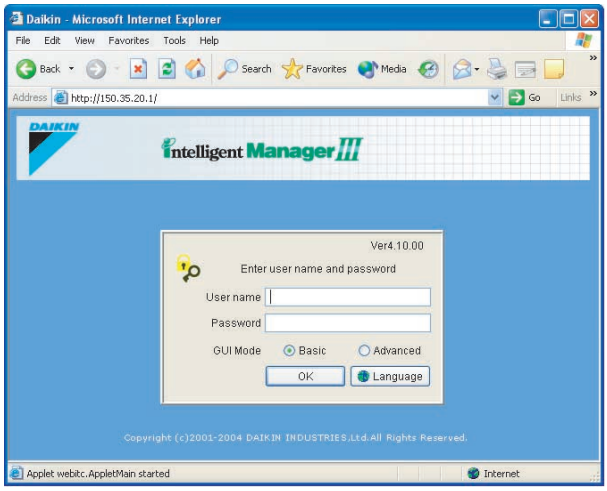
   User name: Input the user name given by the administrator.

   Password: Input the password corresponding to the user name.

   GUI Mode: Select the basic mode or advanced mode by checking the radio button.
   Basic mode (See page 397)
   Advanced mode (See page 412)

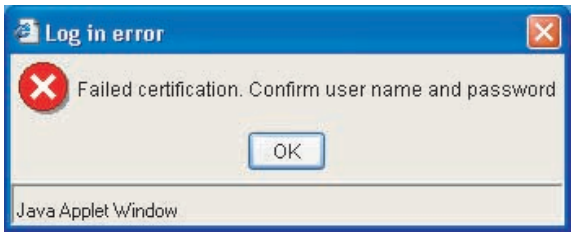
   After input, press OK to log in.

Screen 2: Main screen



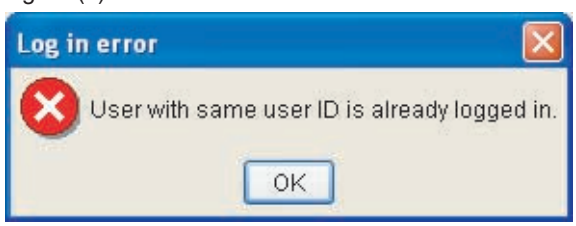
If you are not authenticated, the error message ((1) in the figure) appears. Check your user name and password.

figure (1)



If the entered user ID is already in use (currently logged in at the monitoring panel or from another web browser), the error screen shown in figure (2) appears. Either log in with a different user ID, or else log out from the monitoring panel or the other web browser before logging in.

figure (2)



If it was not possible to acquire the authority that is set for the entered user ID, the warning screen shown in figure (3) appears. Either log in without acquiring the authority, or else log out from the monitoring panel or the other web browser where authority has been acquired before logging in.

figure (3)

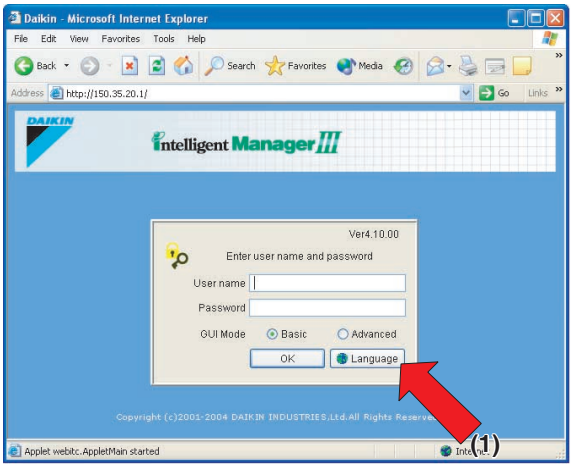


4-5 Selecting display language

To select a display language to be used for the web interface:

1. Click the " Language " button (1) to display the Display language setting screen (Screen 2).
2. Click the " << " or " >> " button to select a language to be used in this screen.
   Select a language to be used in the web interface by clicking a radio button (2).
3. To reflect your selection, click the " OK ".
   To cancel your selection, click the " Cancel ".

Screen 1: Authentication screen



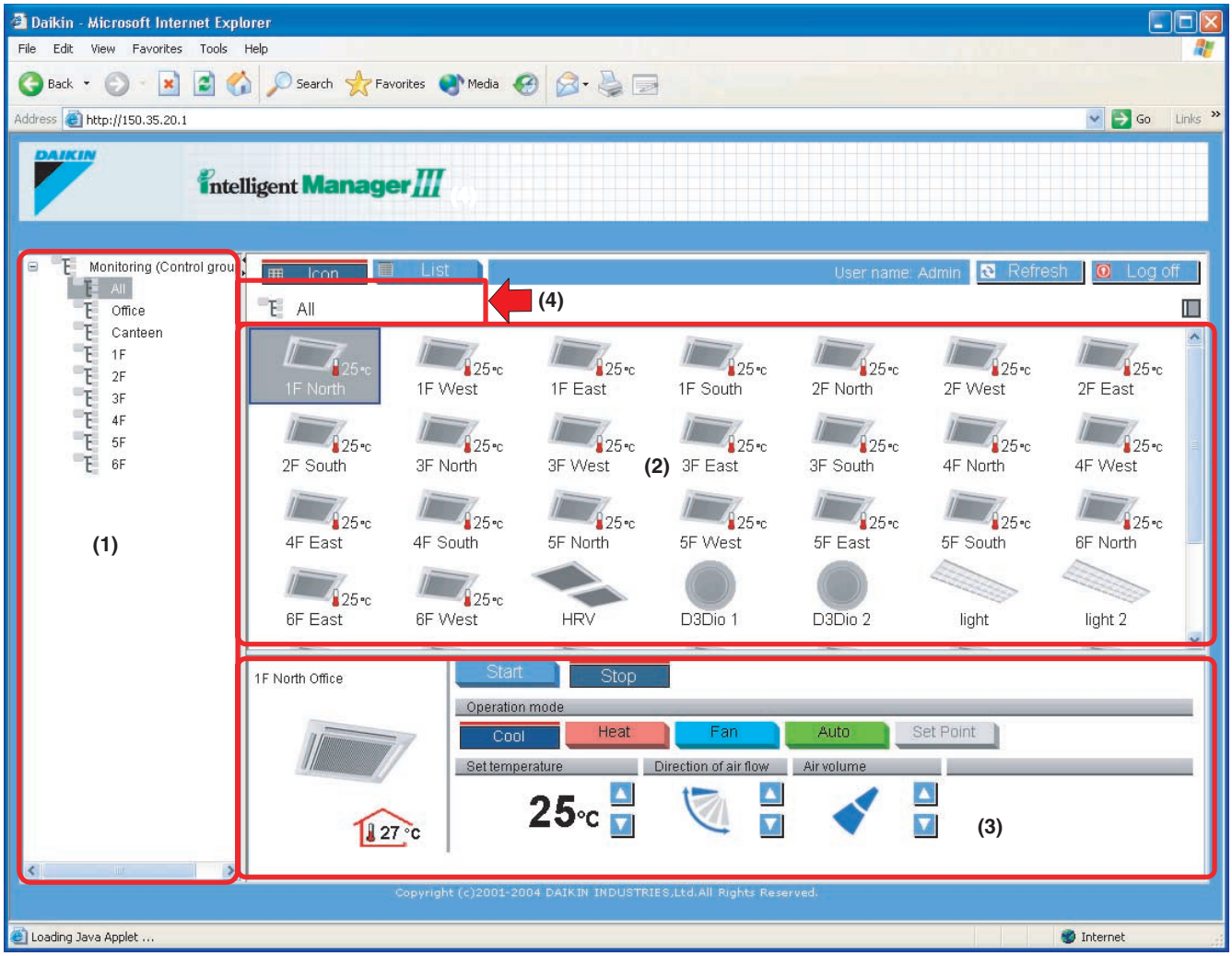
Screen 2: Display language setting screen



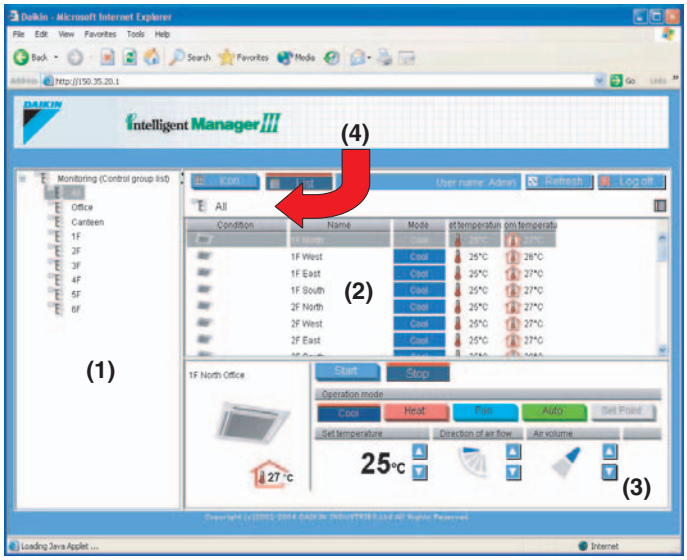
5. Basic Mode

5-1 Main Screen

You will see the following screen when logging into the web interface in the Basic mode. This section describes the Main screen shown in the figure. See the next page for more information on each item on this screen.



The above figure shows the Main screen displayed in the Icon display mode.



← The figure to the left shows the Main screen displayed in the List display mode.

■ Display Areas on the Main Screen

(1) ⟨Function tree area⟩
This displays a list of the control groups which can be controlled with the user ID that you are currently logged in with.

(2) ⟨Main display area⟩
Displays the devices in the management point or control group selected in the function tree area (1).

(3) ⟨Setting area⟩
This displays the current status and available control items for each management point or control group.
The contents of this area vary depending on the type of the devices selected in the main display area.

- Management point (Air conditioner) (See page 402)
- Management point (HRV) (See page 403)
- Management point (Lighting device) (See page 404)
- Management point (Universal device) (See page 405)
- Control group (See page 406)

For more information, see the appropriate page.

(4) ⟨This displays the control group name⟩
Displays the name of the control group selected in the function tree area (1). Otherwise displays the status report, “Monitoring (Control group List)”.

■ Buttons and Other Displays

User name: admin ⟨User Name⟩
Displays the login name of the user currently logging into the web interface.

Icon Changes the main display area to the Icon display mode.

List Changes the main display area to the List display mode.

*Control/monitoring are possible both when the status display area is set to icon display and when it is set to list display.

Refresh Updates management point or control group status information in the main display area with the most recent data of the intelligent Manager.

Log off Allows a user to log off the interface and return to the authentication screen.

⟨Increase/reduce button⟩
Increases or reduces the status display area.
Increase: → Displays the status display area.
Reduce: → Hides the status display area.

⟨Increase button⟩

⟨Reduce button⟩

5-2 Icons on the screen

The displayed icons are those shown at right, selected according to the type of device that was registered in the Intelligent Manager unit.
Icon assigned to each device cannot be changed via the web interface. This section explains features of each icon.

[Indoor Units]
A device registered as an “indoor unit” appears as an indoor unit icon (see Figure 1).
∗In the Icon display mode, a temperature value next to each icon in the main display area represents the set temperature of the device.

Icons in the setting area	Icons in the main display area

Figure 1: Indoor unit icon



[HRV Devices]
A device registered as an “HRV device” appears as an HRV device icon (Figure 2).

Icons in the setting area	Icons in the main display area

Figure 2: HRV icon



[D3Di or D3Dio Unit]
When a device is registered as a D3Di or D3Dio unit and a lighting device icon is assigned to it using the group setting function of the intelligent Manager console, it appears as a lighting device icon (Figure 3).
When a device is registered as a D3Di or D3Dio unit and an icon other than the lighting device icon is assigned to it using the group setting function of the intelligent Manager console, it appears as a universal device icon (Figure 4).

Icons in the setting area	Icons in the main display area

Figure 3: Lighting device icon



Figure 4: Universal device icon



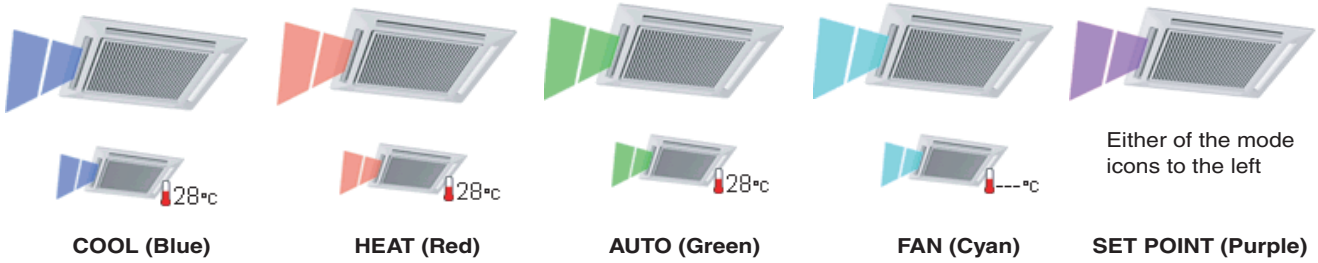
[Control group]
Each control group appears as a control group icon (Figure 5).
∗In the Icon display mode, a temperature value next to each icon in the main display area represents the set temperature of the representative unit.
Refer to page 411 for more information on the representative unit.

Icons in the setting area	Icons in the main display area
No control group icon appears in the setting area.	

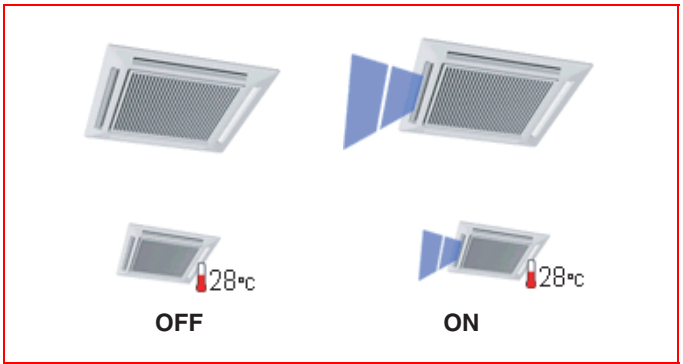
Figure 5: Control group icon

5-3 Information provided by indoor unit icons

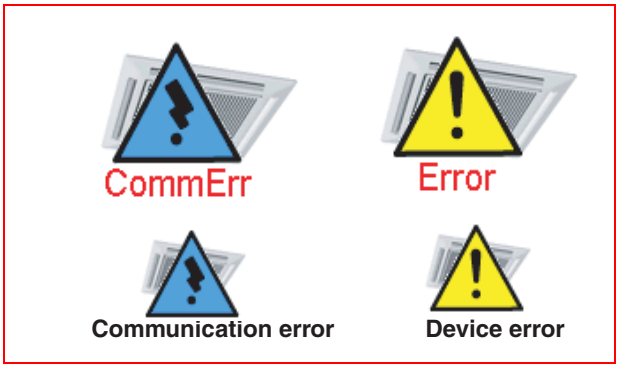
[OPERATION MODE]



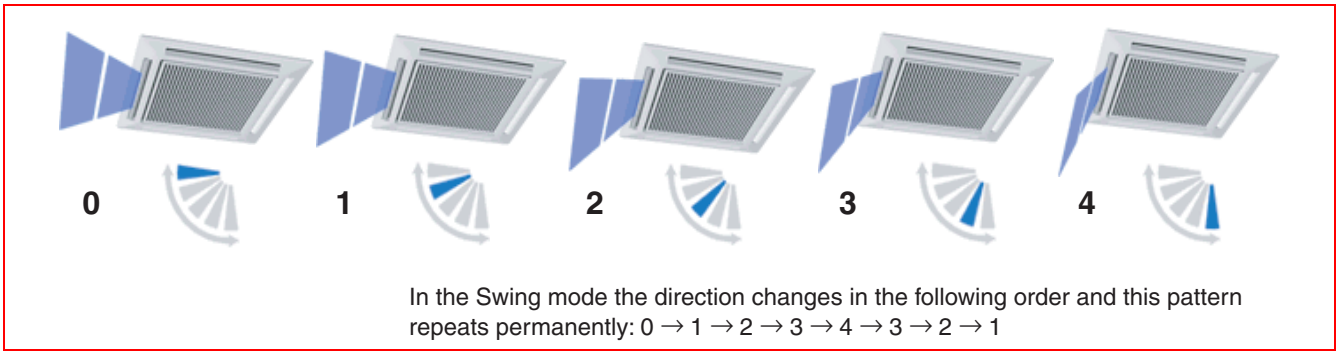
[Start/Stop state]



[Error]

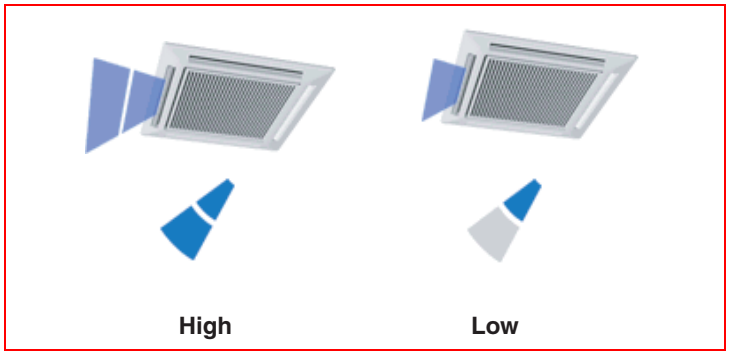


[Direction of air flow]



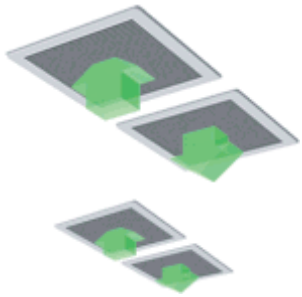
In the Swing mode the direction changes in the following order and this pattern repeats permanently: 0 → 1 → 2 → 3 → 4 → 3 → 2 → 1

[Air volume]



5-4 Information provided by HRV icons

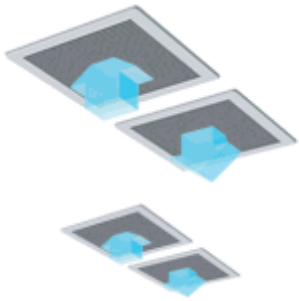
[Ventilation mode]



Automatic ventilatio (Green)

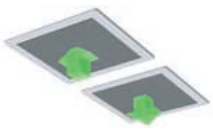


All heat exchanger ventilation (Red)

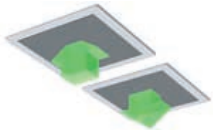


Normal ventilation (Cyan)

[Ventilation Amount]



Low



High



AUTO



Low (Fresh up)

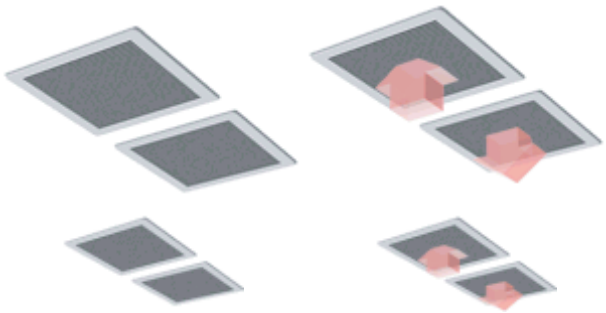


High (Fresh up)



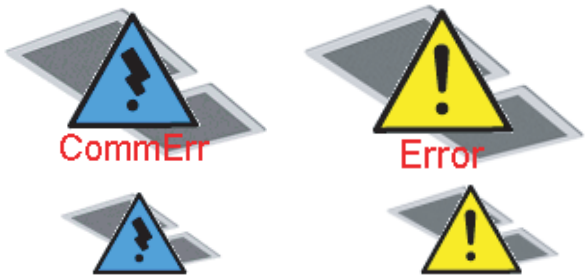
AUTO (Fresh up)

[Start/Stop state]



OFF **ON**

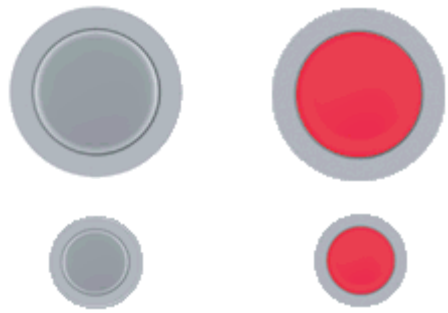
[Error]



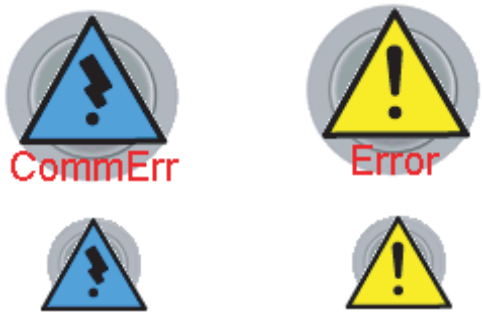
Communication error **Device error**

5-5 Information provided by lighting device, universal device, and control group icons

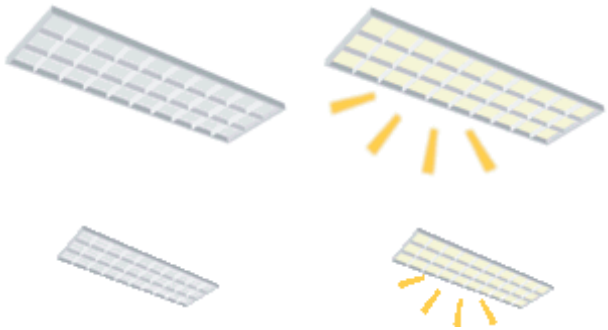
[Universal device: Start/Stop state]



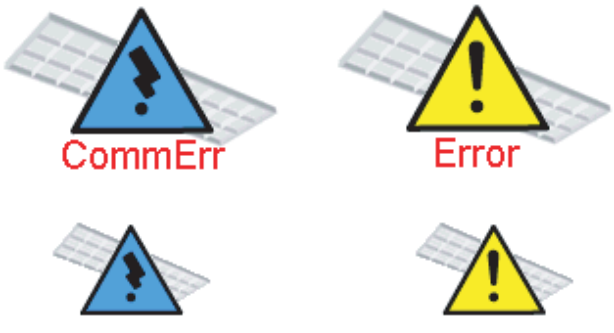
[Universal device: Error]



[Lighting device: Start/Stop state]



[Lighting device: Error]



[Control group: Start/Stop state]



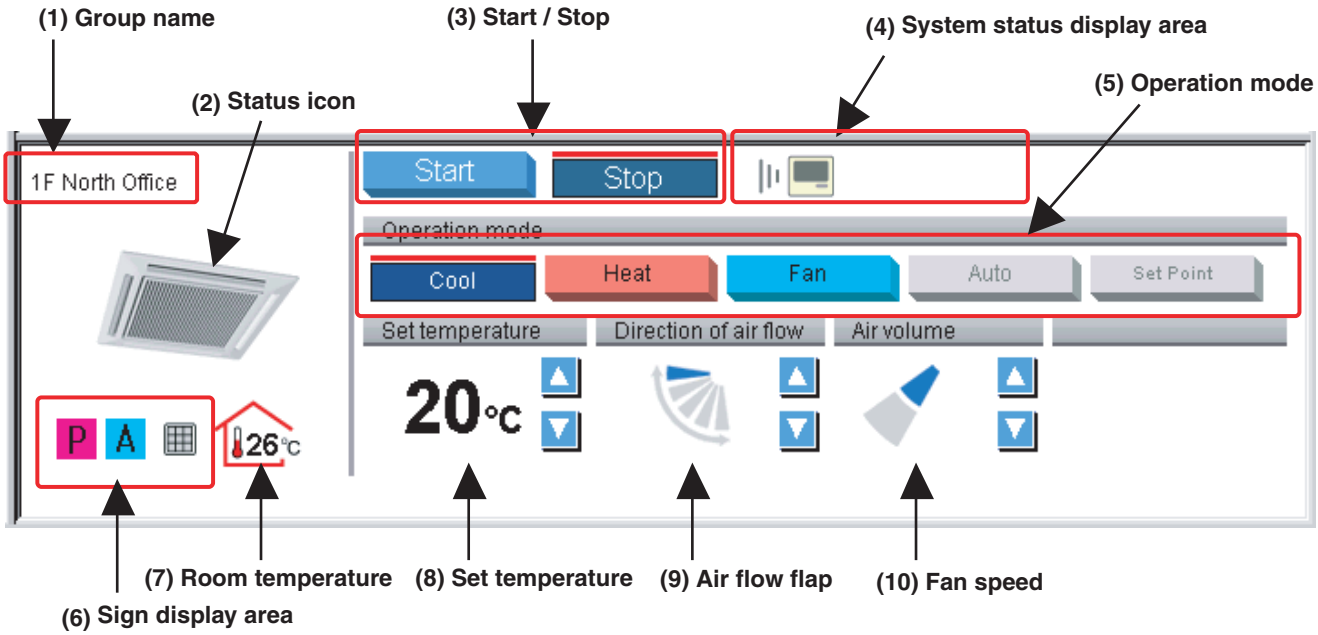
[Ccontrol group: Error]



∗1 The icon color of an operational device depends on the setting on the intelligent Manager console.

5-6 Information provided by the setting areas

■ **Air Conditioner Group:**



(1) Group name
Displays the exact name of the selected management point.

(2) Status icon
Displays the current status. (See page 399)

(3) Start / Stop
Displays the Start/Stop state of the air conditioners. You can start or stop the air conditioners, if required. (See page 407)

(4) System status display area
Displays the system status.


:Indicates that transmission to the intelligent Manager is in progress.

(5) Operation mode
Displays the operation mode of the air conditioners. You can select a desired mode, if required. (See page 408)

(6) Sign display area
This displays information about the A/C unit status, such as automatic operation and the filter sign.


This indicates that target power control is currently in effect at the selected management point.


This indicates that the selected management point is subject to automatic control.


Indicates that the selected management point has one or more illuminated filter/element signs.

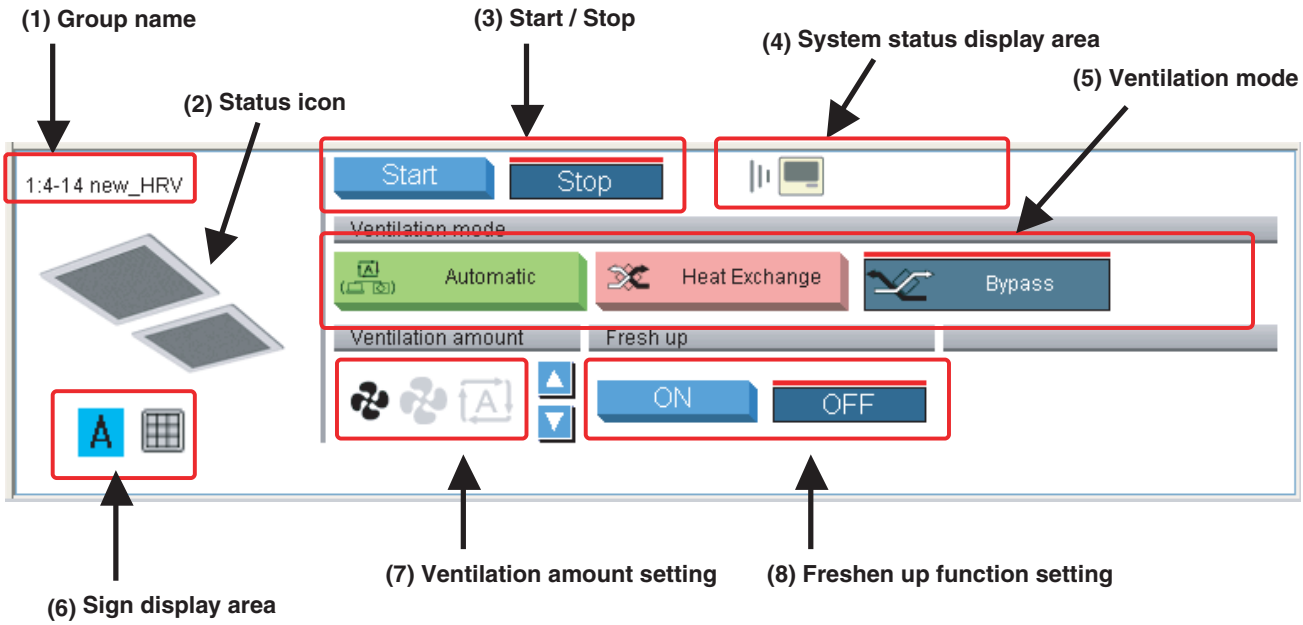
(7) Room temperature
Displays the current room temperature. Since the suction temperature of air conditioners is used, this may not correspond to the actual room temperature.

(8) Set temperature
Displays the temperature setting of air conditioners. You can change this value, if required. (See page 409)

(9) Air flow flap
Displays the direction of air flow of air conditioners. You can change this setting, if required. (See page 409)

(10) Fan speed
Displays the air volume of air conditioners. You can change this setting, if required. (See page 409)

■ **HRV Group:**



(1) Group name
Displays the exact name of the selected group.

(2) Status icon
Displays the current status. (See page 400)

(3) Start / Stop
Displays the Start/Stop state of the HRVs. You can start or stop the HRVs, if required. (See page 407)

(4) System status display area
Displays the system status.

	:Indicates that transmission to the intelligent Manager is in progress.

(5) Ventilation mode
Displays the ventilation mode of HRVs. You can select a desired mode, if required. (See page 408)

(6) Sign display area
This displays information about the HRV status, such as automatic control and the filter sign.

A	This indicates that the selected management point is subject to automatic control.
	Indicates that the selected management point has one or more illuminated filter/element signs.

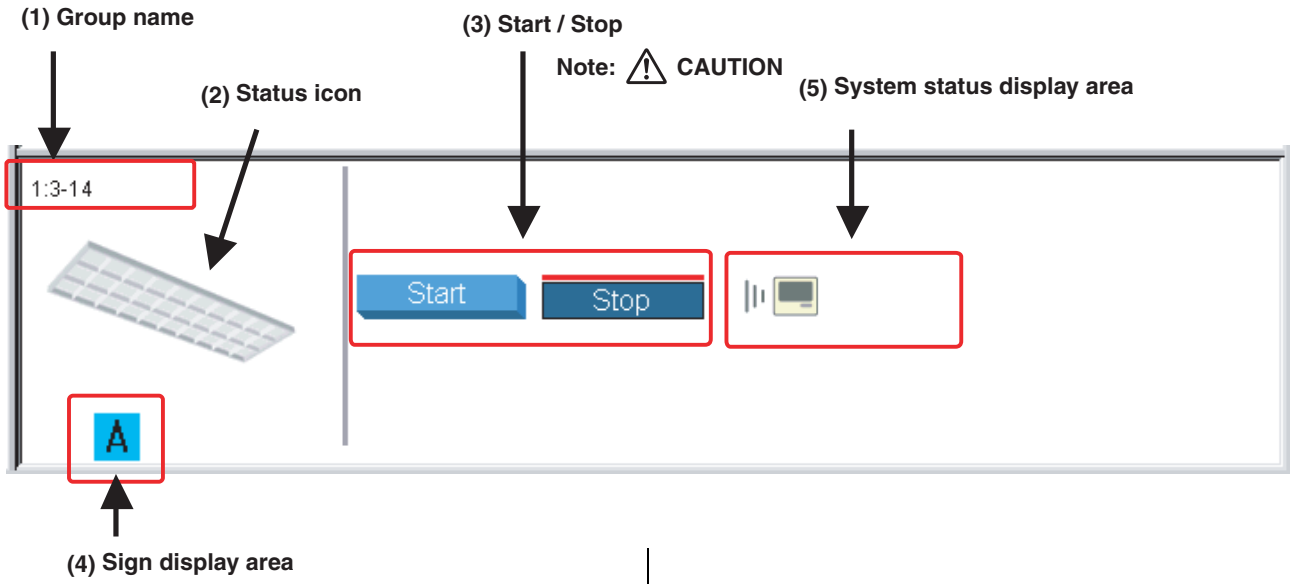
(7) Ventilation amount setting
Displays the Ventilation amount setting. You can change the setting, if required. (See page 410)

(8) Freshen up function setting
Displays Start/Stop state of the Freshen up function. You can turn the function on or off, if required. (See page 410)

⚠ CAUTION

For some HRV models, (5), (7), and/or (8) may not be configured. In this case, unavailable buttons are grayed out.

■ **Lighting Device Group:**



(1) Group name
Displays the exact name of the selected group.

(2) Status icon
Displays the current status. (See page 401)

(3) Start / Stop
Displays the Start/Stop state of devices. You can start or stop devices, if required. (See page 407)

(4) Sign display area
This displays the system status.

A	This indicates that the selected management point is subject to automatic control.

(5) System status display area
Displays the system status. One of the following five icons may appear.

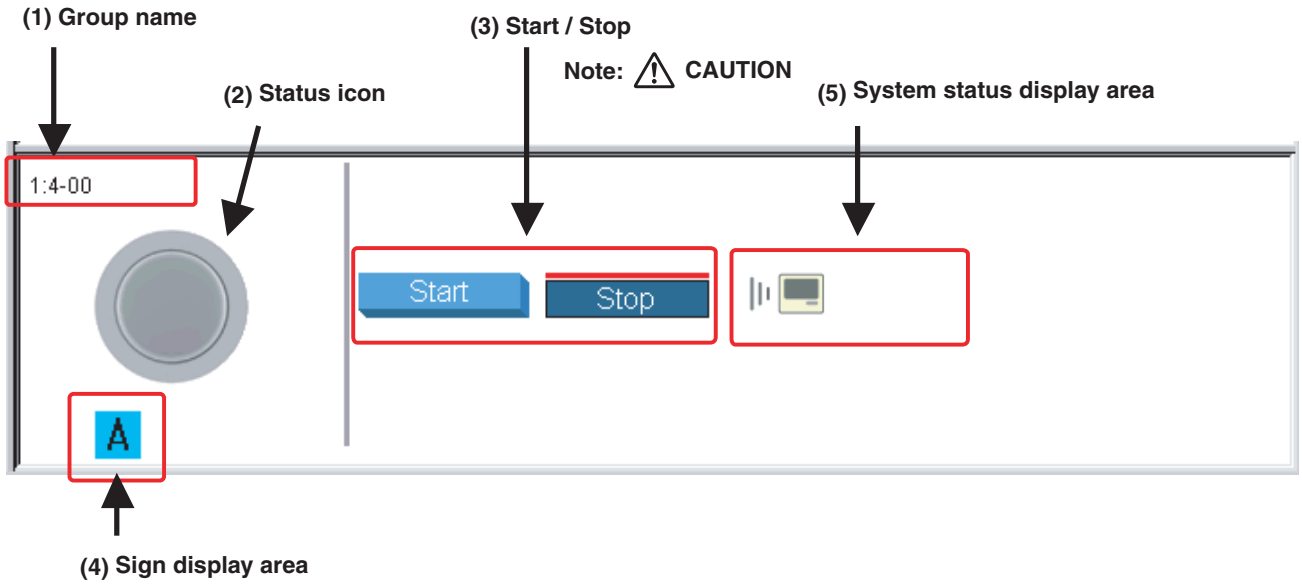
	:Indicates that transmission to the intelligent Manager is in progress.

CAUTION

When lighting devices are connected via D3Dio units:
The Start/Stop buttons (3) can be used.

When lighting devices are connected via D3Di units:
The Start/Stop buttons (3) are not displayed.

■ **Universal Device Group:**



(1) Group name
Displays the exact name of the selected group.

(2) Status icon
Displays the current status. (See page 401)

(3) Start / Stop
Displays the Start/Stop state of devices. You can start or stop devices, if required. (See page 407)

(4) Sign display area
This indicates whether or not the group is subject to automatic control.



This indicates that the selected management point is subject to automatic control.

(5) System status display area
Displays the system status.



:Indicates that transmission to the intelligent Manager is in progress.

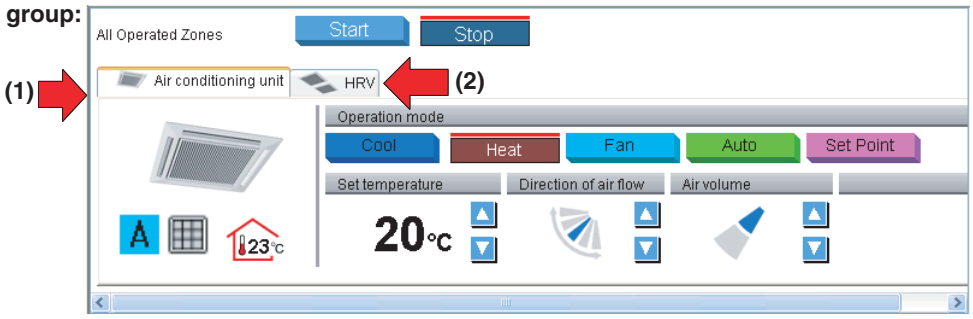
CAUTION

When lighting devices are connected via D3Dio units:
The Start/Stop buttons (3) can be used.

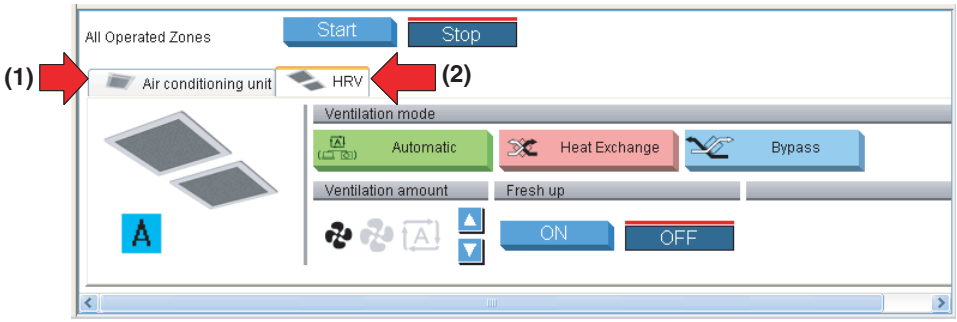
When lighting devices are connected via D3Di units:
The Start/Stop buttons (3) are not displayed.

■ **Control group:**

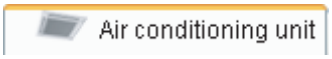
Air conditioner control group:



HRV control group:



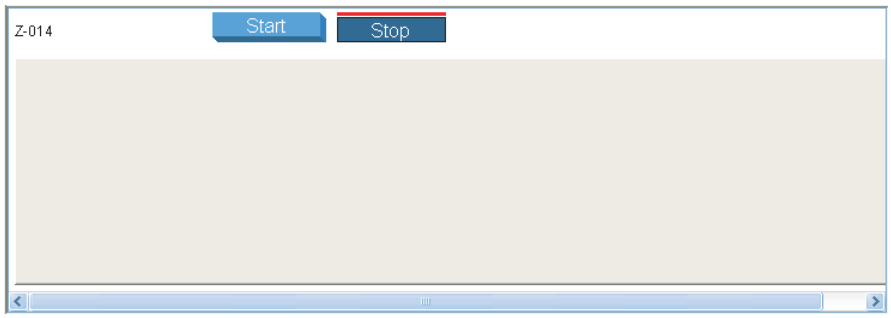
(1) Clicking this tab provides air conditioner control group information.



(2) Clicking this tab provides HRV control group information.



D3Di/D3Dio control group:
(see Note)



Note: When connecting via D3Di units, the " Start " and " Stop " buttons are grayed out.

Notes on Control group Display:

- **If one or more management point in the selected control group are operational,** the Start/Stop state for the control group is "On." **If one or more management point in the selected control group are in an error state**, the operation state for the control group is "Error."

  If one or more management point in the selected control group have an illuminated filter/element sign " **",** the filter/element sign for the control group also illuminates.

- The automatic control sign " A " is displayed when **that control group is registered for automatic control**.
- The control in progress sign " P " is displayed when **that control group is registered for target power control**.
- In the air conditioner control group area, information on the room temperature, set temperature, operation mode, air volume, and direction of air flow is provided. In the HRV control group area, information on the Ventilation mode, Ventilation amount, and Freshen up setting is provided. **Data of the representative unit is displayed, rather than that of the entire control group.**

Representative Unit:

In a control group monitoring process, the following management point is selected as the representative unit.

- In the Icon display mode: the management point displayed at the upper left corner
- In the List display mode: the top management point in the list.

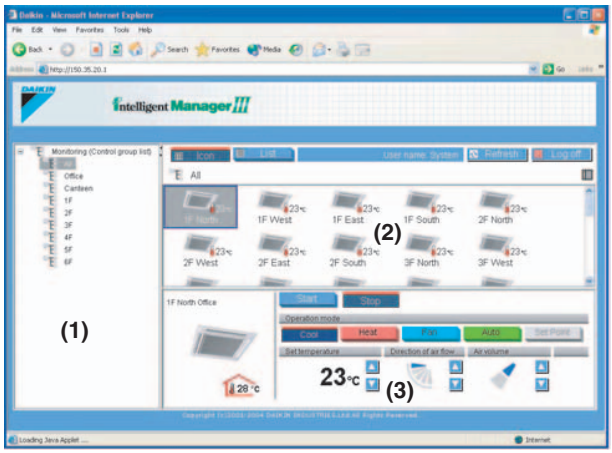
5-7 Starting/stopping all the devices in a specific management point

■ Procedure for starting/stopping all the devices in a specific management point

Start or stop all the air conditioners included in a specific management point.

This procedure can be used when devices in the selected group are registered as “indoor unit,” “HRV,” or “D3Dio unit.”

Screen 1: Main screen



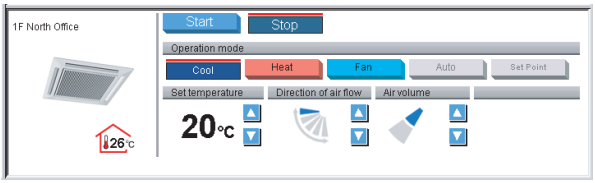
[Procedure]

1. On the Main screen (Screen 1) select the control group which includes a desired management point from the function tree area (1).
2. In the main display area (2) the management point belonging to that control group appear. Select the management point in this area.
3. The settings of the selected management point appear in the setting area (3). Displayed items vary depending on the category of the group. For more information, see pages 402 to 405.

In the figure (Screen 2), an air conditioner group is selected.

Click the “ Start ” or “ Stop ” button.

Screen 2: Management point setting area (air conditioners)



CAUTION

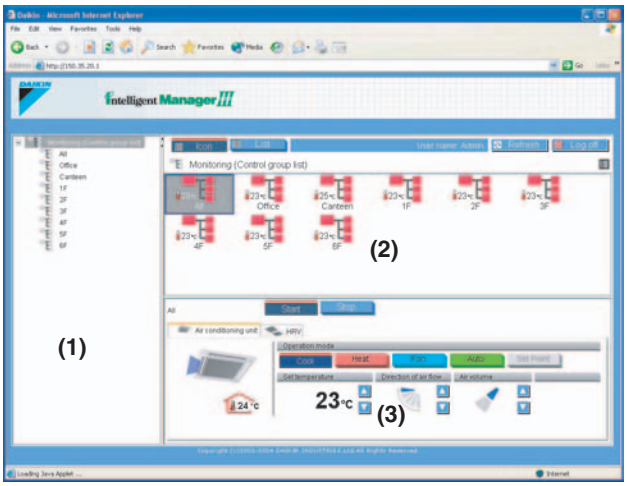
In the Basic mode, clicking a button, such as the “ Start ” and “ Cool ”, immediately sends your request to air conditioners and you cannot undo your operation. Therefore be sure to click only an appropriate button, especially when your operation target is a control group.

5-8 Starting/stopping all the devices in a specific control group

■ Procedure for starting/stopping all the devices in a specific control group

Start or stop all the devices included in a specific control group.

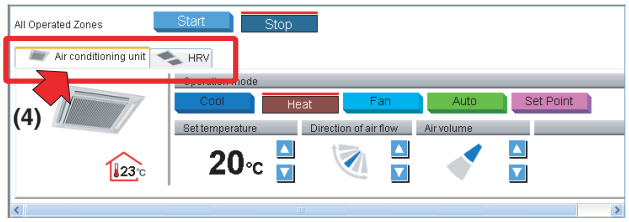
Screen 1: Main screen



[Procedure]

1. On the Main screen (Screen 1), select the “Monitoring (Control group list)” item from the function tree area (1).
2. The control group list appears in the main display area (2). Select a desired control group in this area.
3. The setting area (3) changes to the control group setting area (Screen 2).

Screen 2: Control group setting area



- If A/C units are included in the control group setting, then the “ Air conditioning unit ” tab is displayed.
- If HRV units are included, the “ HRV ” tab is displayed.
  (When both types of devices are not included, no tab is displayed.)

4. Click the “ Start ” or “ Stop ” button.

CAUTION

Start Stop

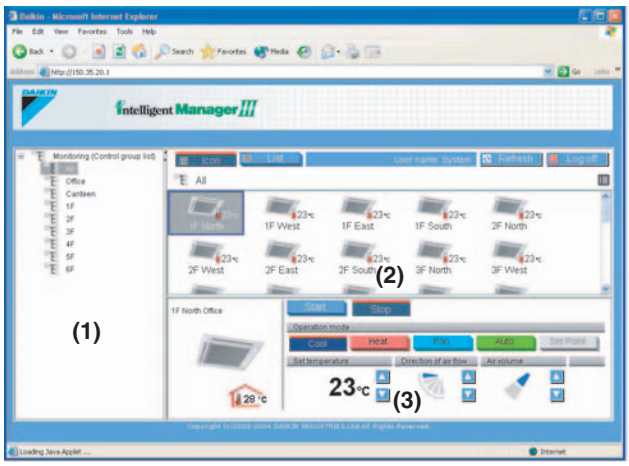
Clicking the selected button does not send your request. If you want to send the Start request, click Stop and then Start.

5-9 Switching the operation mode

■ Procedure for switching the operation mode

Switch the operation mode of the air conditioner.

Screen 1: Main screen



The operation mode can be switched by control group or by management point.

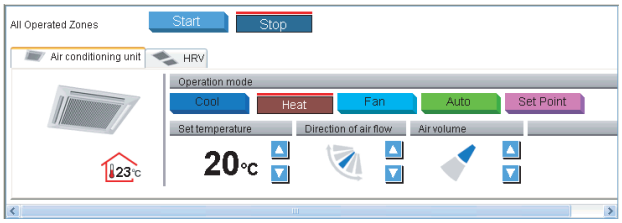
[Procedure]

1. To change the setting for all the devices in a control group, select the “Monitoring (Control group list)” item from the function tree area (1), and select the control group from the main display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).
2. Change the operation mode in the setting area (3). The steps required for indoor units are different from ones for HRVs. See the appropriate section.

[Indoor Units]

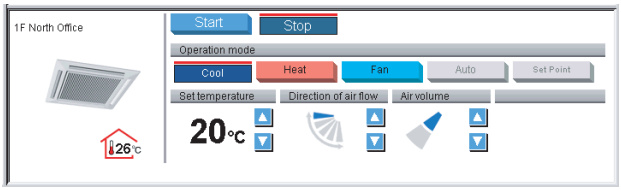
Click the “ Air conditioning unit ” tab in the control group setting area (Screen 2) to change the setting of all the devices in a control group.

Screen 2: Control group setting



Use the group setting area (Screen 3) to change the setting of all the devices in a management point.

Screen 3: Management point setting (air conditioners)



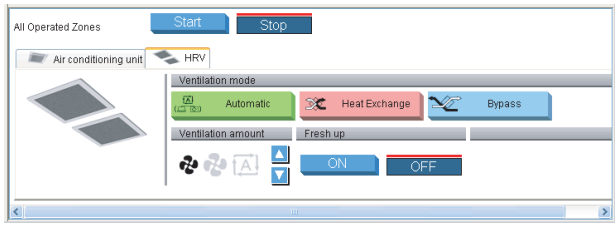
Click one of the following buttons according to your requirement.

Cool	Changes the operation mode to Cool.
Heat	Changes the operation mode to Heat.
Fan	Changes the operation mode to Fan.
Set Point	Changes the operation mode to Set Point.
Auto	Changes the operation mode to Auto.

[HRV Devices]

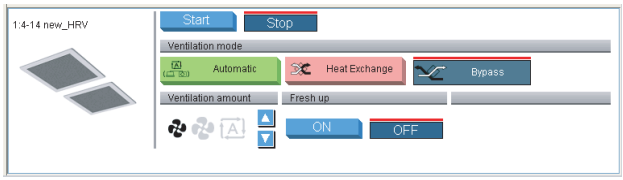
Click the “ HRV ” tab in the control group setting area (Screen 4) to change the setting of all the devices in a control group.

Screen 4: Control group setting



Use the management point setting area (Screen 5) to change the setting of all the devices in a group.

Screen 5: Management point setting (HRV)



Click one of the following buttons according to your requirement.

Automatic	Changes the operation mode to Automatic ventilation.
Heat Exchange	Changes the operation mode to All heat exchanger ventilation.
Bypass	Changes the operation mode to Normal ventilation.

CAUTION 1

Some of the above setting options may not be used depending on the model of the HRVs. In this case, unavailable buttons are grayed out.

CAUTION 2

Mode setting buttons that cannot be used for the selected control group or management point are grayed out.

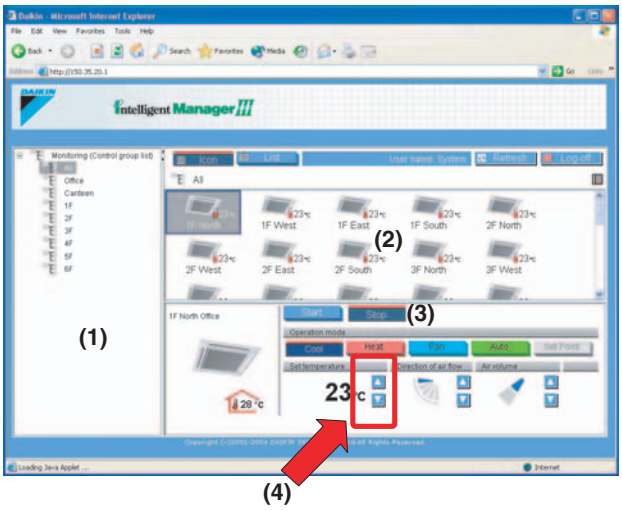
Ex.: Cool Heat

5-10 Changing the temperature setting

■ Procedure for changing the temperature setting

Change the temperature setting of air conditioners.

Screen 1: Main screen



The temperature setting can be switched by control group or by management point.

If all of the air conditioners in the management point selected are in Fan operation, temperature setting cannot be changed.

[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Click the “ ▲ or ▼ ” button (4) to change the temperature setting.

   Ex.: For the Figure 1 control group setting, the temperature settings available are between 20 °C and 30 °C inclusive.

Figure 1:

Control group name	Management point name	Range of temperature settings available (see NOTE)
Canteen	1 F North	25-30˚C
	1 F West	20-25˚C

When the temperature setting is 30 °C, the actual temperature settings for air conditioners are as shown Figure 2:

Figure 2:

Control group name	Management point name	Temperature setting
Canteen	1 F North	30˚C
	1 F West	25˚C

NOTE

Range of temperature settings available is the range specified in accordance with the following.

- Range of temperature settings inherent to the air conditioner main unit.
- Range of temperature as a result of the restriction by temperature setting limit set on the intelligent Manager console.

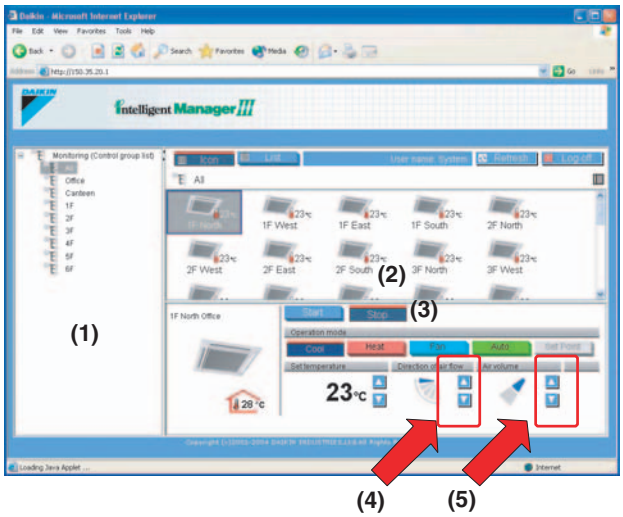
For more information, refer to the intelligent Manager Software manual.

5-11 Changing the direction of air flow and air volume

■ Procedure for changing the direction of air flow/air volume

Change the fan direction or volume of air conditioners.
The fan direction or volume can be changed by control group or by management point.

Screen 1: Main screen



[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Click the “ ▲ or ▼ ” button (4) to change the direction of air flow.

   Click the “ ▲ or ▼ ” button (5) to change the air volume.

⚠ CAUTION

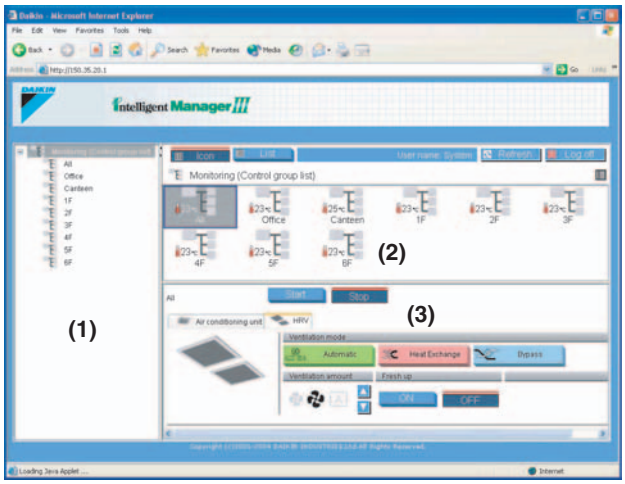
For some air conditioner models, the direction of air flow and/or air volume cannot be changed. In this case these buttons ((4) and (5)) are grayed out.

5-12 Changing the ventilation amount and the freshen up function

■ Procedure for changing the HRV settings

Change the Ventilation amount and the Freshen up settings for HRVs.
The Ventilation amount and the Freshen up settings can be changed by control group or by management point.

Screen 1: Main screen

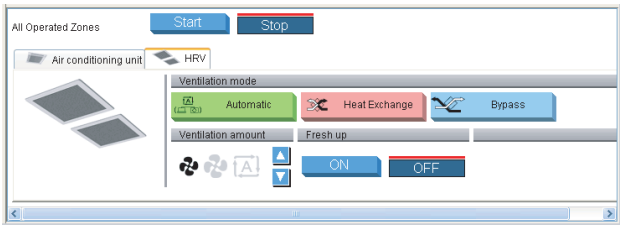


[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

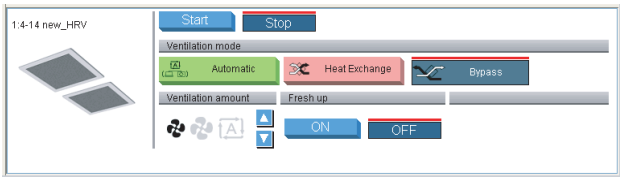
2. Click the “ HRV ” tab in the control group setting area (Screen 2) to change the settings for HRVs in a control group.

Screen 2: Control group setting area



Use the management point setting area (Screen 3) to change the settings for HRVs in a group. Use the following buttons on each screen.

Screen 3: Group setting area (HRV)



ON — Turns the Freshen up function On.

OFF — Turns the Freshen up function Off.

Adjusts the Ventilation amount.

Indicates the Automatic ventilation amount setting.

Indicates the Strong ventilation amount setting.

Indicates the Weak ventilation amount setting.

⚠ CAUTION

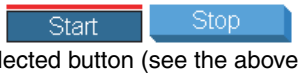
For some HRV models, the Freshen up and/or Ventilation amount settings cannot be changed. In this case unavailable buttons are grayed out.

5-13 Notes on the basic mode

⚠ CAUTION

In the Basic mode, clicking a button, such as “ Start ”, “ ▲ ”, or “ Auto ”, immediately sends your request to air conditioners and you cannot undo your operation. Therefore be sure to click only an appropriate button, especially when your target is a control group.

⚠ CAUTION



Clicking the selected button (see the above figure) does not send your request. If you want to send the Start request, click Stop and then Start.

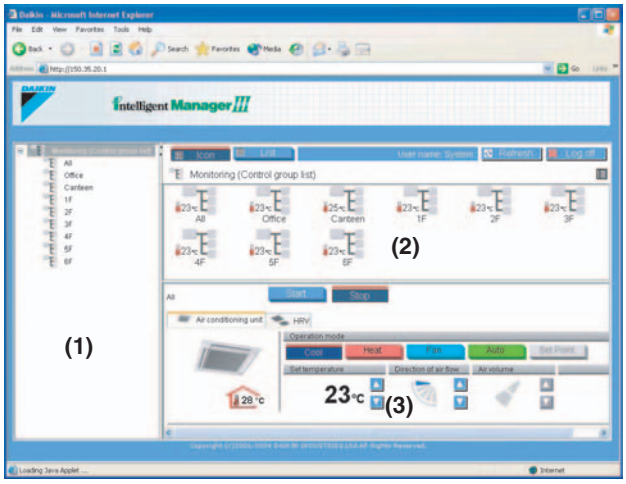
5-14 Monitoring operations of all the devices in a specific control group or management point

■ Procedures for monitoring control group or management point operations

Monitor operations in both the Icon and List display modes.

Click the " Icon " or " List " button to switch the display mode.

Screen 1: Main screen (Icon display mode)



Operations can be monitored by control group or by management point. To monitor operations of devices in a control group, select the "Monitoring (Control group list)" item from the function tree area (1). The operation status appears in the main display area (2).
To monitor operations of devices in a management point, select the control group including the management point from the function tree area (1). The operation statuses for all the management point included in the selected control group appear.

[In the Icon Display Mode]
In the main display area (2), information on the Start/Stop state, temperature setting, and error status for the selected control group or management point is provided.

∗About control group:

- **If one or more management point in the selected control group are operational,** the Start/Stop state for the control group is "On." **If one or more management point in the selected control group are in an error state**, the operation state for the control group is "Error."
  If one or more management point in the selected control group have an illuminated filter/element sign, the filter/element sign for the control group also illuminates.
- An illuminated Auto Control sign informs that **the selected control group is associated with one or more schedule programs.**
- The under-control sign will be displayed **if the applicable control group is registered as an object of target power control.**
- In the air conditioner control group area, information on the room temperature, set temperature, operation mode, air volume, and direction of air flow is provided. In the HRV control group area, information on the Ventilation mode, Ventilation amount, and Freshen up function is provided.

Data of the representative unit is displayed, rather than that of the entire control group.

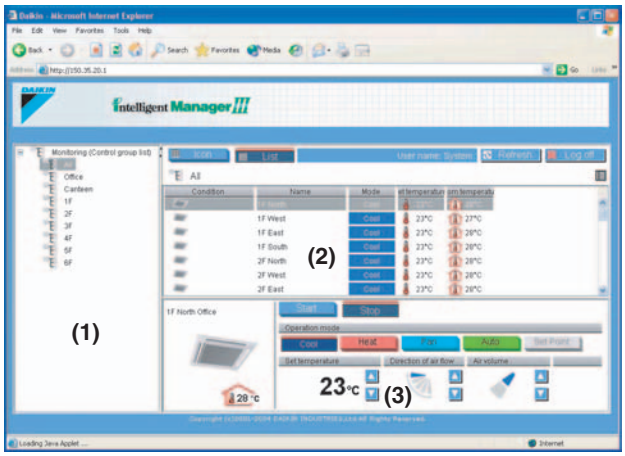
∗For more information on **the control group representative unit** is follow on.

[In the List Display Mode]

In the main display area (2), information on the Start/Stop state, presence/absence of malfunction, Auto Control setting, and
filter/element sign, temperature setting, operation mode, and room temperature for that control group or management point is provided.

When a control group is selected, the setting area (3) (Screen 2)
displays the settings of the representative unit.

Screen 2: Main screen (List display mode)



⚠ CAUTION

〈Control group representative unit〉
In a control group monitoring process, the following management point is selected as the representative unit.

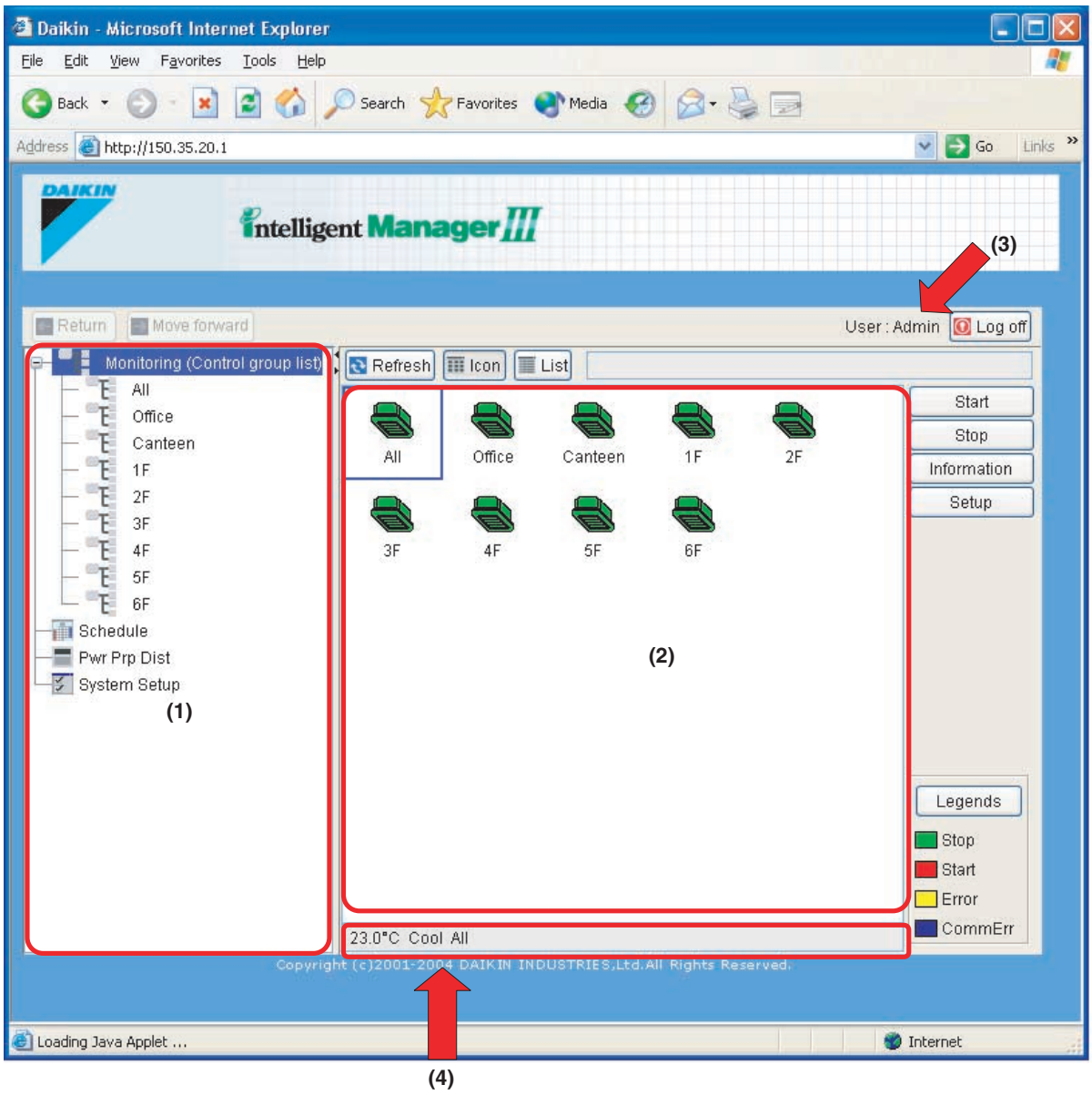
- In the Icon display mode: the management point displayed at the upper left corner
- In the List display mode: the top management point in the list.

〈For control groups including HRVs〉
For control groups including both air conditioner and HRV groups: Clicking the " HRV " tab displays status data of HRVs. For the purpose of status indication in the control group setting area, data of the representative unit is displayed, rather than that of the entire control group. The HRV group displayed at a higher position than any other HRV groups is selected as the representative unit.

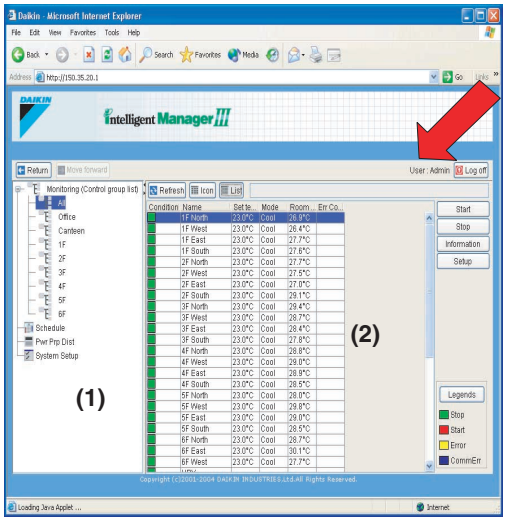
6. Advanced Mode

6-1 Main Screen

This section provides the description of the Main screen for the Advanced mode. When logging into the application in the Advanced mode, you will see the following screen.



The above figure shows the Main screen displayed in the Icon display mode.



← The figure to the left shows the Main screen displayed in the List display mode.
In the List display mode the area (4) is not provided.

■ Display Areas on the Main Screen

(1) ⟨Function tree⟩
This displays a list of the control groups and setting functions which can be operated with the user ID that is currently logged in.

(2) ⟨Main display area⟩
Displays devices in the control group selected in the function tree area (1). Also setting functions related to the control group is provided.
*In the Icon display mode, the icons set in the intelligent Manager console are used.

(3) ⟨User Name⟩
Displays the login name of the user currently logging into the web interface.

(4) ⟨Status display area in the Icon display mode⟩
Provides device status information. This bar is displayed only in the Icon display mode.

■ Action Buttons

Icon	Changes the main display area to the Icon display mode.
List	Changes the main display area to the List display mode.
Start	Starts all the devices included in the selected control group or management point. (See page 413)
Stop	Stops all the devices included in the selected control group or management point. (See page 413)
Information	Launches a dialog box displaying detailed information on the selected control group or management point. (See page 420)
Setup	Launches a dialog box where you can set up the selected control group or management point. (See page 414)
Legends	Launches a dialog box describing detailed information on items displayed in the Icon/List display modes. (See page 419)
Return	Returns to the screen specified by the previous function tree setting. You can return to the screen up to 20 generations (maximum).
Move forward	Undoes your return operation.
Refresh	Updates control management point or group status information in the main display area with the most recent data of the intelligent Manager.
Log off	Allows users to log off and returns to the login authentication screen.

6-2 Starting/stopping all the devices in a specific group

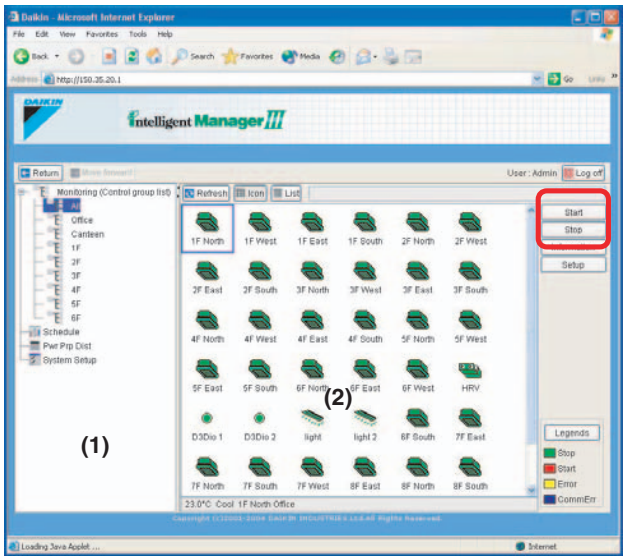
■ Procedure for starting/stopping all the devices in a specific management point

Start or stop all the air conditioners included in a specific management point.

[Procedure]

1. On the Main screen (Screen 1) select the control group which includes a desired management point from the function tree area (1).

Screen 1: Main screen



2. Management point assigned to the selected control group appear in the main display area (2). Select the management point in this area.
3. Click the " Start " or " Stop " button.

6-3 Starting/stopping all the devices in a specific control group

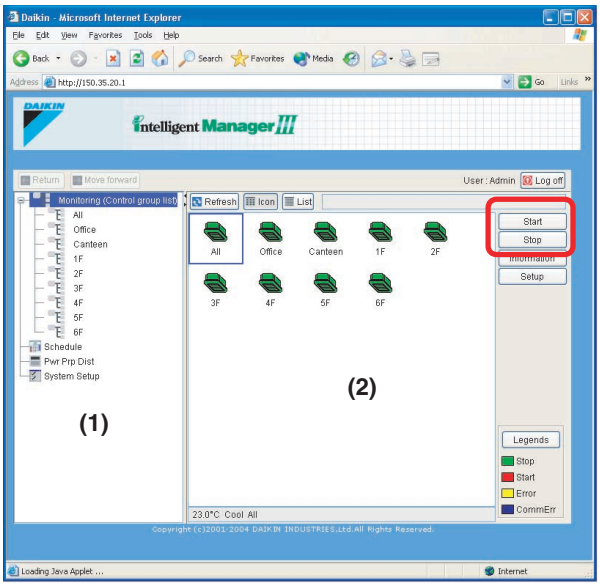
■ Procedure for starting/stopping all the devices in a specific control group

Start or stop all the devices in air conditioner groups assigned to a control group all together.

[Procedure]

1. Select the "Monitoring (Control group list)" item from the function tree area (1) in the Main screen (Screen 1).

Screen 1: Main screen



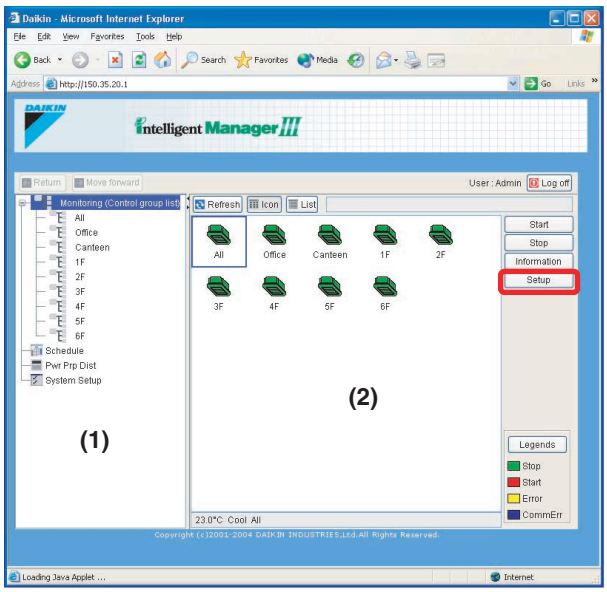
2. A control group list appears in the main display area (2). Select a desired control group in this area.
3. Click the " Start " or " Stop " button.

6-4 Switching the operation mode

■ Procedure for switching the operation mode

Switch the operation mode of the air conditioner.

Screen 1: Main screen



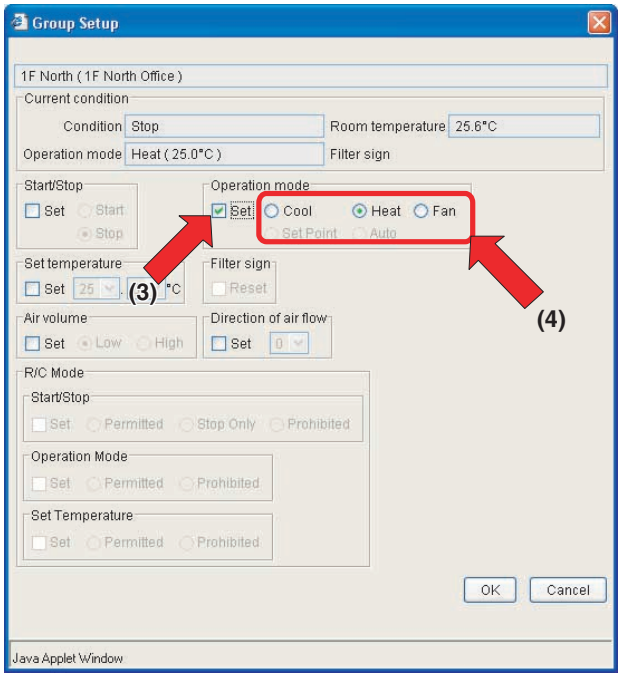
The operation mode can be switched by control group or by management point.

[Procedure]

1. To change the setting for all the devices in a control group, select the “Monitoring (Control group list)” item from the function tree area (1), and select the control group from the main display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Press the Setup . Screen 2 Operation appears.

Screen 2: Setup screen



3. Select the Set checkbox (3) in the Operation mode frame. Check one of the radio buttons (4) to select a desired operation mode.

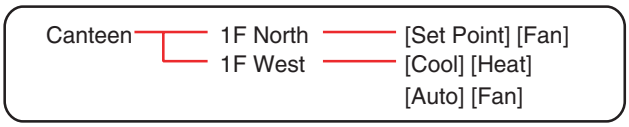
   On the menu, operation modes available for air conditioners in the control group are displayed if the switching is to be made by control group. See the following example.

4. Press the OK .

   To cancel the setting, press the “ Cancel ”.

Ex.: For the control group of the figure 1 you can set the operation mode to “Fan”, “Cool”, “Heat”, “Set Point”, or “Auto”. When one or more air conditioners in the control group do not have Cool/Heat option, you can select only “Fan” or “Set Point” mode.

Figure 1

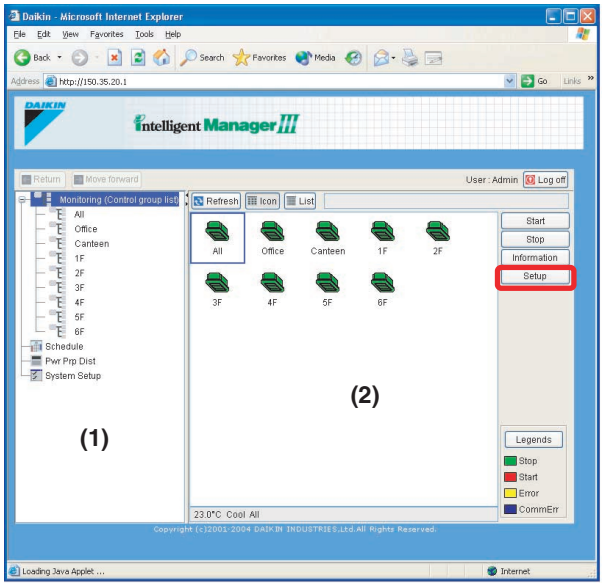


6-5 Changing the temperature setting

■ Procedure for changing the temperature setting

Change the temperature setting of air conditioners.

Screen 1: Main screen



The temperature setting can be switched by control group or by management point.

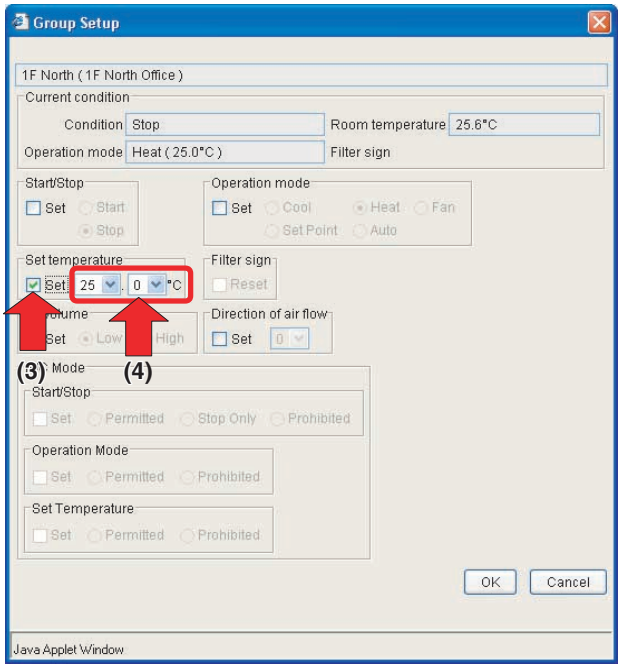
When all the air conditioners in the selected management point or control group are in the Fan mode, the temperature setting cannot be changed.

[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Press the Setup . Screen 2 Group Setup appears.

Screen 2: Group Setup screen



3. Select the Set checkbox (3) in the Set temperature frame, and set the integral and decimal parts using the pull-down menus (4).

   In a control group setting, the pull-down menus are pre-populated with allowable temperature values for the air conditioners in the control group. See the following example.

4. Press the OK .

   To cancel the setting, press the " Cancel ".

Ex.: For the control group setting in the figure 1, the temperature settings available are between 20°C and 30°C inclusive.

Figure 1

Control group name	Management point name	Range of temperature settings available (see NOTE)
Canteen	1F North	25 - 30˚C
	1F West	20 - 25˚C

When the temperature setting is 30°C, the actual temperature settings for air conditioners are as shown in the figure 2.

Figure 2

Control group name	Management point name	Range of temperature settings available (see NOTE)
Canteen	1F North	30˚C
	1F West	25˚C

NOTE

Range of temperature settings available is the range specified in accordance with the following.

- Range of temperature settings inherent to the air conditioner main unit.
- Range of temperature as a result of the restriction by temperature setting limit set on the intelligent Manager console.

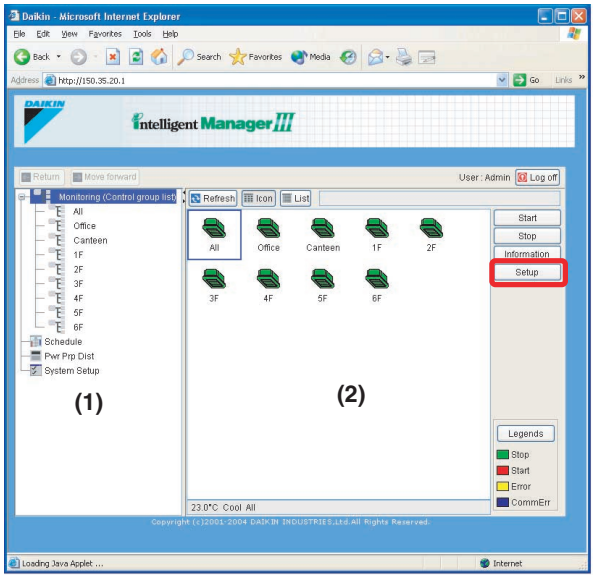
For more information refer to the intelligent Manager manual.

6-6 Resetting filter/element signs

■ Procedures for resetting filter signs

When one or more air conditioner provide filter/element signs, clean the specified filters or elements, and then reset the filter/element sign.

Screen 1: Main screen



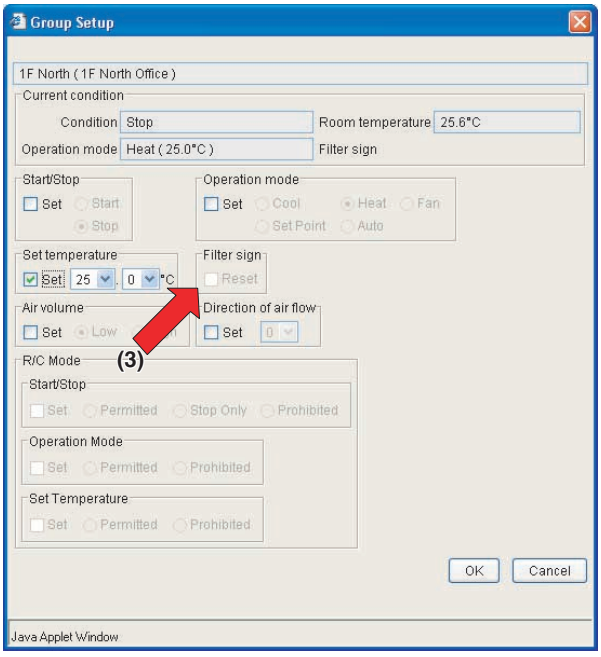
You can reset all the signs displayed on air conditioners in a management point or control group all together.

[Procedure]

1. To change for a control group, select "Monitoring (Control group list)" from the function tree (1), then select the control group that you want to change from the status display area (2). To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Press the Setup . Screen 2 Group Setup appears.

Screen 2: Group Setup screen



3. Select the Reset checkbox in the Filter sign frame.

4. Press the OK .

   To cancel the setting, press the " Cancel ".

⚠ CAUTION

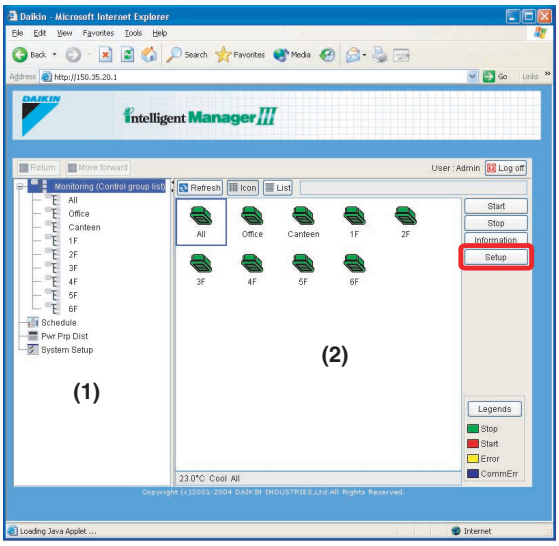
In a control group setting, if one or more devices in the control group do not provide the filter/element sign, the Reset checkbox is grayed out.

6-7 Changing the direction of air flow and air volume

■ Procedure for changing the direction of air flow/air volume

Change the fan direction or volume of air conditioners.

Screen 1: Main screen



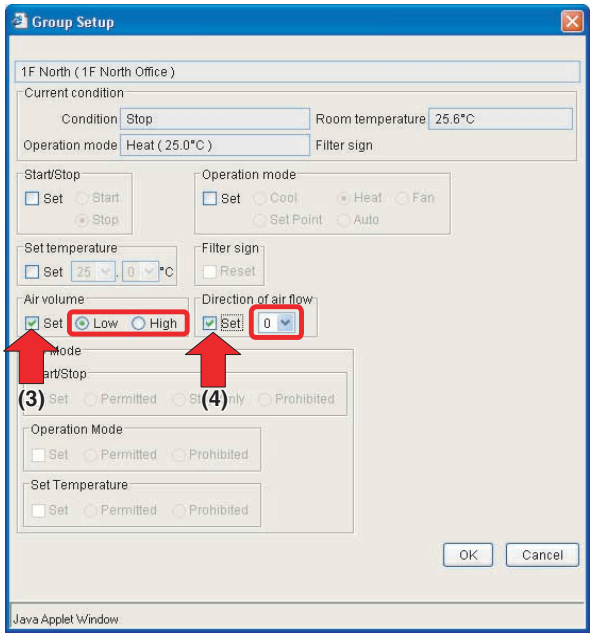
The fan direction or volume can be changed by control group or by management point.

[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the group from the main display area (2).

2. Press the Setup . Screen 2 Operation appears.

Screen 2: Group Setup screen

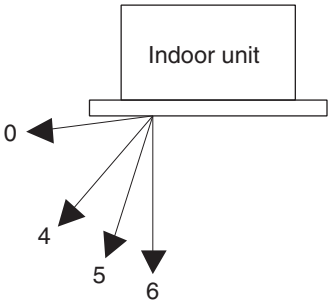


3. When setting the air volume, select the Set checkbox in the Air volume frame (3), and check one of the radio buttons, Low or High, to select desired air volume.
   When setting the direction of air flow, select the Set checkbox in the Direction of air flow frame (4) and select your desired value using the pull-down menu. Any integer value from 0 to 7 can be selected.

4. Press the OK .

   To cancel the setting, press the “ Cancel ”.

∗Guideline for determining the direction of air flow and air volume



7: Auto Swing mode

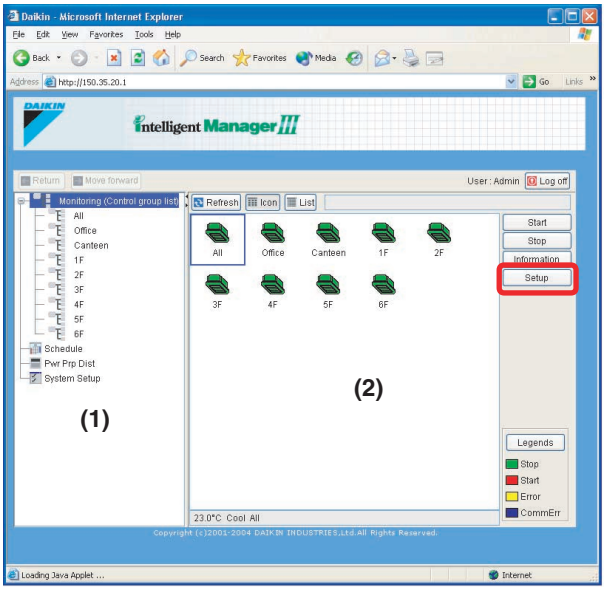
Selecting a higher number results in a more vertical direction. The value “7” indicates the Auto Swing mode. However some models may not support this setting. Check the direction of air flow displayed on the local remote controller screen after setting.

6-8 Changing the HRV settings

■ Procedure for changing the HRV settings

Change HRV settings.

Screen 1: Main screen



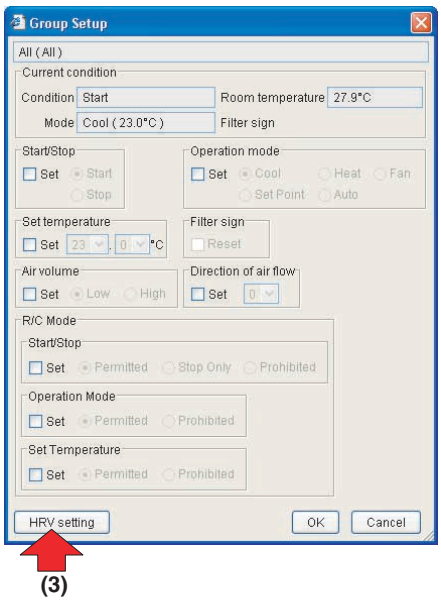
You can change settings of all the HRVs included in a control group or management point all together.

[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Press the Setup . Screen 2 Operation appears.

Screen 2: Group Setup screen

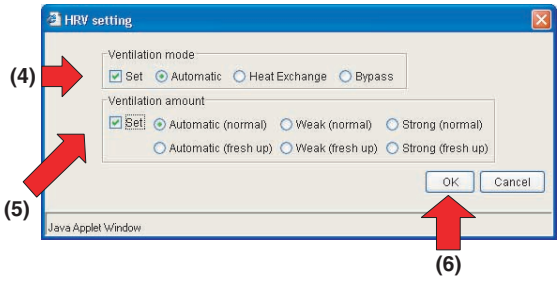


[When Selecting a Control group Including HRVs]

When selecting a control group including HRVs, the Group Setup screen (Screen 2) appears.

Click the “ HRV setting ” button **(3)** to display the HRV setting screen (Screen 3). You can set up the following two items.

Screen 3: HRV setting screen



Ventilation mode (4)

In this frame the Ventilation mode can be changed. Select the Set checkbox, and check a desired radio button.

Ventilation amount (5)

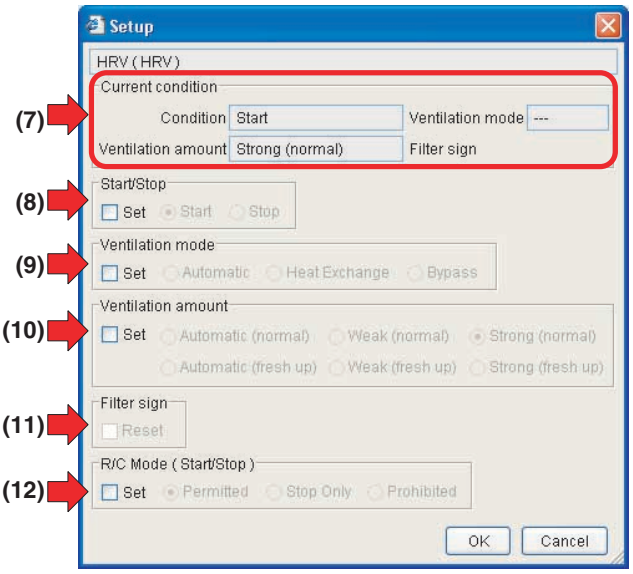
In this frame the Ventilation amount setting can be changed. Select the Set checkbox, and check a desired radio button.

Upon completion, click the “ OK ” button (6) and return to the Main screen.

[When Selecting an HRV Management Point]

When selecting an HRV management point, the Setup screen (Screen 4) appears. This dialog box offers the following items.

Screen 4: Setup screen



Current Condition (7)

Displays the current HRV status. The following four data items are provided.

- Start/Stop state
- Ventilation mode
- Ventilation amount
- Filter sign

Start/Stop (8)

In this frame you can start or stop the devices. Select the Set checkbox and check a desired radio button.

Ventilation mode (9)

In this frame you can select a Ventilation mode. Select the Set checkbox and check a desired radio button.

Ventilation amount (10)

In this frame you can select a Ventilation amount setting. Select the Set checkbox and check a desired radio button.

Filter sign (11)

When the Reset indicator is not grayed out, one or more filter signs illuminate. (In the Screen 4 the indicator tells that no sign illuminates.)
To reset the filter signs, select the Reset checkbox.

R/C Mode (Start/Stop) (12)

In this frame you can permit or prohibit the start/stop operation through remote controllers. Select the Set checkbox and check a desired radio button.

Upon completion, click the “ OK ” button on each screen and return to the Main screen.

⚠ CAUTION

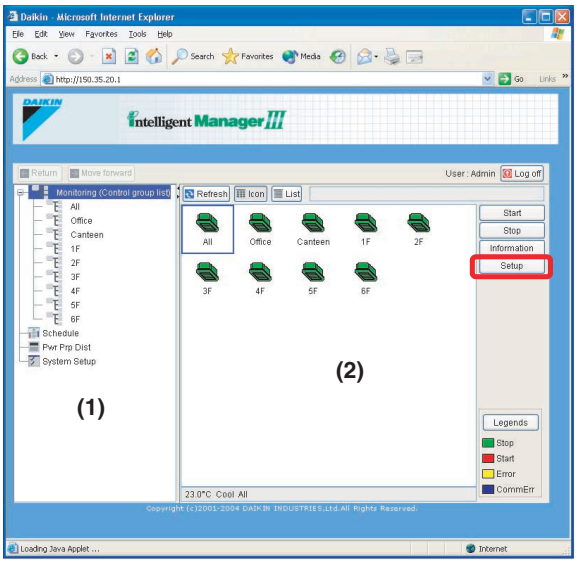
Some HRV models may not support the Freshen up and/or Ventilation amount setting options. In this case unavailable buttons are grayed out.

6-9 Permitting/prohibiting remote controller operations

■ Procedure for permitting/prohibiting remote controller operations

Permit or prohibit operations through remote controllers.

Screen 1: Main screen



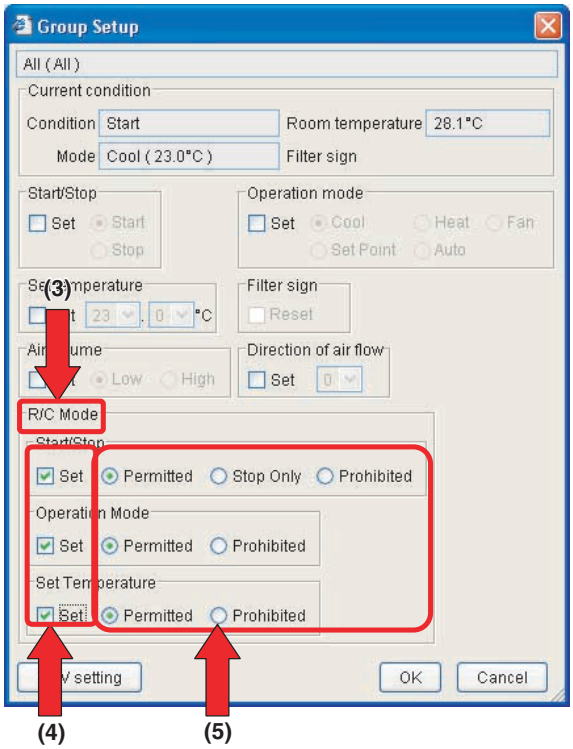
You can change the settings of all the devices included in a management point or control group.

[Procedure]

1. To change for a control group, select “Monitoring (Control group list)” from the function tree (1), then select the control group that you want to change from the status display area (2).
   To change the setting for all the devices in a management point, select the control group including the management point from the function tree area (1), and select the management point from the main display area (2).

2. Press the Setup . Screen 2 Operation appears.

Screen 2: Group Setup screen



For an HRV group setting, see the previous page.

3. The area under the R/C Mode heading (3) includes three frames to permit/prohibit operations through remote controllers. Select the Set checkbox in each frame to set.
   - Start/Stop
     “Permitted”
     “Stop Only”
     “Prohibited”
   - Operation Mode
     “Permitted” or “Prohibited”
   - Set Temperature
     “Permitted” or “Prohibited”

4. Upon completion, click the “ OK ” button.

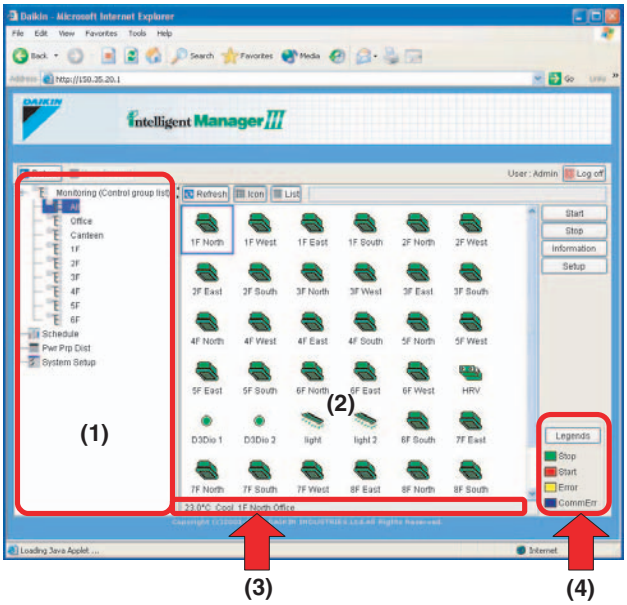
   To cancel your settings, click the “ Cancel ” button.

6-10 Monitoring operations of all the devices in a specific control group or management point

■ Procedures for monitoring control group or management point operations

Operations can be monitored by control group or by management point.

Screen 1: Main screen (Icon display mode)



To monitor operations of devices in a control group, select the “Monitoring (Control group list)” item from the function tree area (1). The operation status appears in the main display area (2).
To monitor operations of devices in a management point, select the control group including the management point from the function tree area (1). The operation statuses for all the management point included in the selected control group appear.

[Displayed Items in the Icon Display Mode]

You can monitor the Start/Stop state and presence or absence of error, Auto Control setting, and filter/element sign for each management point or control group in the main display area (2).

In the Icon display mode, the bottom bar ((3) in the Screen 1) displays information on the selected control group or management point. The following information is offered.

〈When all the devices operate normally〉

- Temperature setting

  For a control group, the operation mode of the representative unit is shown.

- Operation mode

  For a control group, the temperature setting of the representative unit is shown.

- Management point name

  For a control group, the control group name is shown.

〈When any of the devices failed〉

- Error code

  For a control group, the error code that explains the status of the failed device is shown.

- Management point name

  For a control group, the control group name is shown.

∗For more information on the representative unit, see the following.

[Displayed Items in the List Display Mode]

In the main display area (2) the following control group or management point information is displayed.

- Start/Stop state

  For a control group, see the following section.

- Presence/absence of error

  For a control group, see the following section.

- Presence/absence of Auto Control setting

  For a control group, see the following section.

- Presence/absence of filter/element signs

  For a control group, see the following section.

- Temperature setting

  For a control group, the temperature setting of the representative unit is shown.

- Operation mode

  For a control group, the operation mode of the representative unit is shown.

- Room temperature

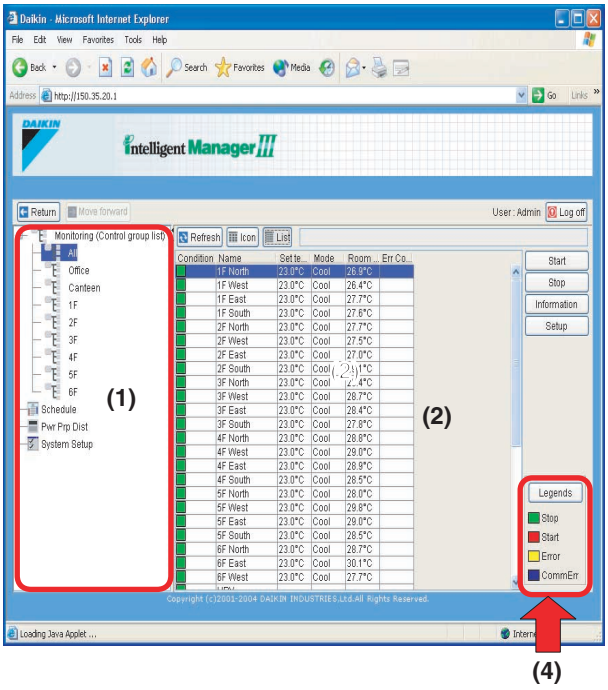
  For a control group, the room temperature of the representative unit is shown.

- Error code

  For a control group, the error code that explains the status of the failed device is shown.

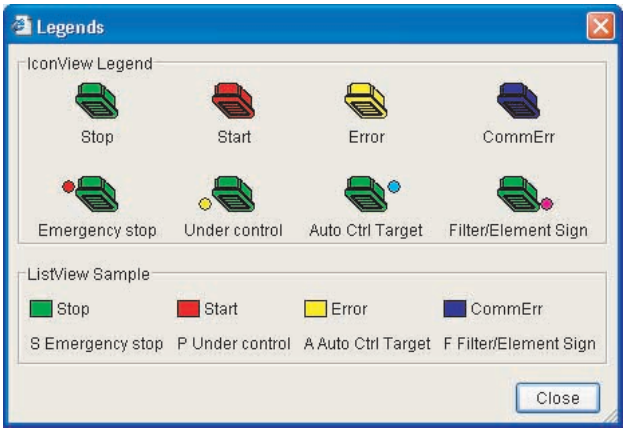
The frames ((4) in the Screen 1 and 2) at the lower right corner show legends.

Screen 2: Main screen (List display mode)



To see the detailed legend information shown in the Screen 3, click the " Legends " button.

Screen 3: Legends screen



To return to the Main screen, click the " Close " button.

⚠ CAUTION 1

Representative unit:
In a control group monitoring process, the following management point is selected as the representative unit.

- In the Icon display mode: the management point displayed at the upper left corner
- In the List display mode: the top management point in the list.

[Notes on Control Group Display]

- **If one or more management point in the selected control group are operational,** the Start/Stop state for the control group is "On." **If one or more management point in the selected control group are in an error state**, the operation state for the control group is "Error."

  If one or more management point in the selected control group have an illuminated filter/element sign, the filter/element sign for the control group also illuminates.
- The automatic control sign is displayed when **that control group is registered for automatic control.**
- The control in progress sign is displayed when **that control group is registered for target power control.**
- In the air conditioner control group area, information on the room temperature, set temperature, operation mode, air volume, and direction of air flow is provided. In the HRV control group area, information on the Ventilation mode, Ventilation amount, and Freshen up setting is provided.

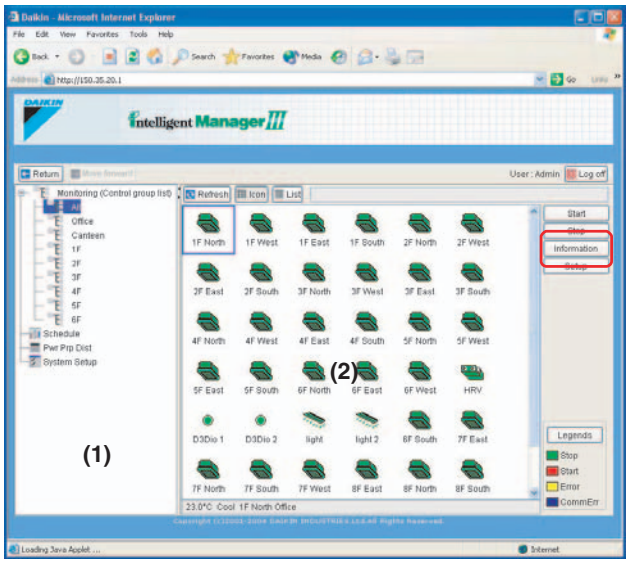
  Data of the representative unit (⚠ CAUTION 1) is displayed, rather than that of the entire control group.

6-11 Monitoring detailed information

■ Procedures for monitoring detailed information

Detailed operation status can be monitored by control group or by management point.

Screen 1: Main screen

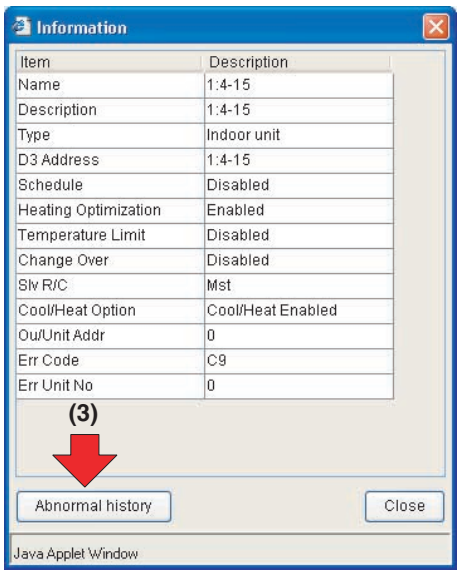


[Procedure]

1. To view information on a control group, select the "Monitoring (Control group list)" item from the function tree area (1). To view information on a management point, select the control group including the management point from the function tree area. Then select the target control group or management point in the main display area (2).

2. Click the " Information " button. The Information screen (Screen 2) appears and provides the following data items.

Screen 2: Information screen



[A/C management point]

1) Name : Management point name
2) Description : Management point description
3) Type : Air conditioner or device
4) iPU NO. : iPU No.
5) D3 Address : Central address
6) Slv R/C : Master/Slave
7) Cool/Heat Option : With/Without
8) Disable manual operation of the Mng. Point : With/Without
9) Ou/Unit Addr : Address of outdoor unit
10) Err Code : Error code
11) Err Unit No : Error unit number

NOTE

Neither Err Code nor Err Unit No are displayed under a normal operation.

[For a control group]

12) Name : Control group name
13) Start1by1 : Enabled/Disabled
14) Interval : Interval when Enabled is set for the above
15) Nb of Regist Grp : Numbers of registered groups

Click the " Close " button to return to the Main screen.

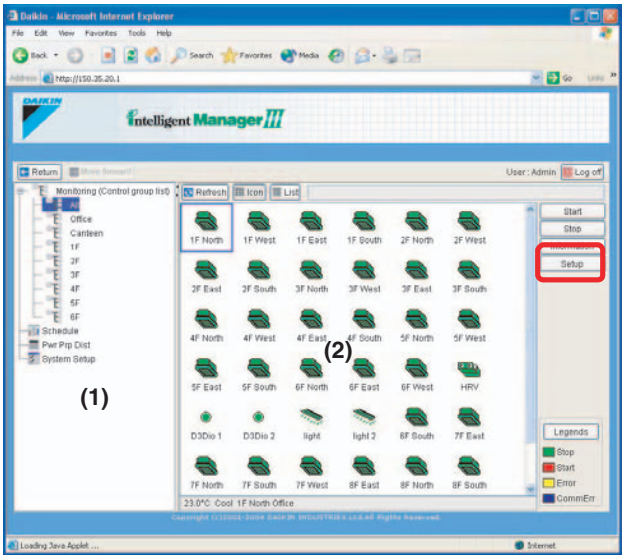
On the Information screen for HRV management point, items 1), 2), 3), 4), 5), 6), and 8) (plus 10) and 11) in an error state) are displayed. For D3Dio/D3Di groups, items 1), 2), 3), 4), 5), 8), and 10) (plus 10) and 11) in an error state) are displayed.

6-12 Monitoring detailed operation status

■ Procedure for monitoring detailed operation status

Detailed operation status can be monitored by control group or by management point.

Screen 1: Main screen

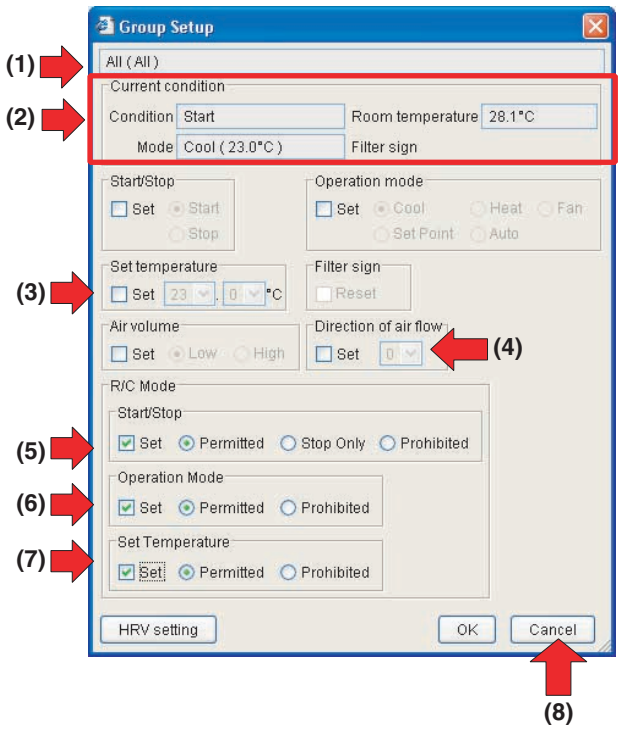


[Procedure]

1. To view information on a control group, select the “Monitoring (Control group list)” item from the function tree area (1). To view information on a group, select the control group including the management point from the function tree area. Then select the target control group or management point in the main display area (2).

2. Click the “ Setup ” button to display the Group Setup screen (Screen 2).
   This screen provides the following information.

Screen 2: Group setup screen



(1) Name (Description)
Displays the name and description of a control group or group.

(2) Current Condition
- Start/Stop state
- Operation Mode
- Room temperature
- Presence or absence of filter signs

(3) Air volume
Displays current air volume.

(4) Direction of air flow
Displays current direction of air flow.

The area under the R/C Mode heading includes three frames to display the setting for permission/prohibition of operation through remote controller. In each frame one of the following options are highlighted.

(5) Start/Stop
“Permitted”
“Stop Only”
“Prohibited”

(6) Operation Mode
“Permitted” or “Prohibited”

(7) Set Temperature
“Permitted” or “Prohibited”

3. Upon completion, click the “ Cancel ” (8) button to return to the Main screen.

⚠ CAUTION

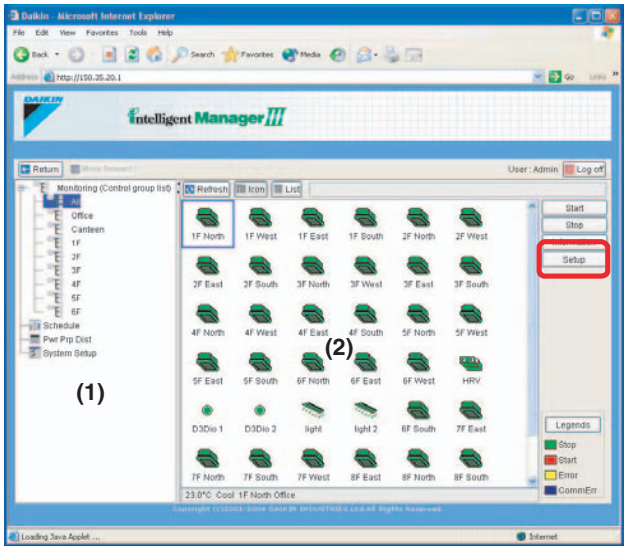
This screen can be used for both setting and monitoring. When using it only for monitoring, be sure to click the “ Cancel ” button, rather than the “ OK ” to close it.
This prevents you from inadvertently changing existing settings.

6-13 Monitoring operation status of HRVs

■ Procedure for monitoring HRV operation

The operation of all the HRVs can be monitored by control group or by management point.

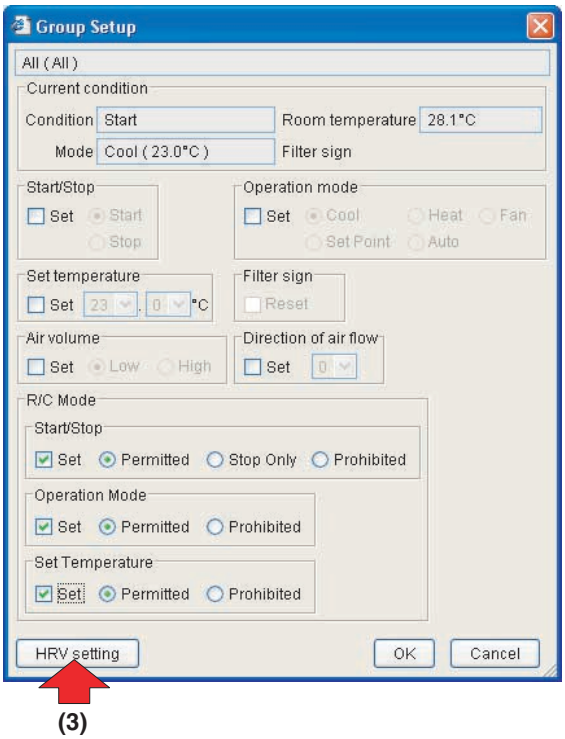
Screen 1: Main screen



[Procedure]

1. To view information on a control group, select the “Monitoring (Control group list)” item from the function tree area (1). To view information on a group, select the control group including the management point from the function tree area. Then select the target control group or management point in the main display area (2).
2. Press the “ Setup ” button. Screen 2 Operation appears.

Screen 2: Group Setup screen

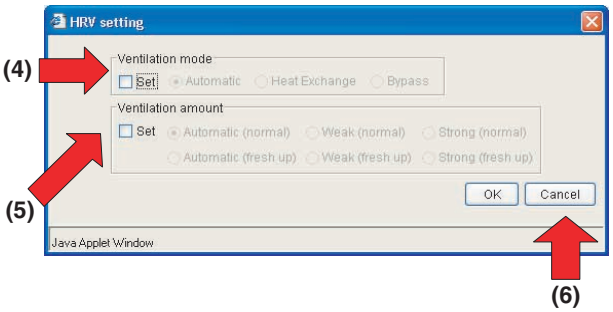


[When Monitoring a Control Group of HRVs]

When selecting a control group including HRVs, the Group setup screen (Screen 2) appears.

Click the “ HRV setting ” button (3) to display the HRV setting screen (Screen 3).

Screen 3: HRV setting screen



You can view the following two items.

Ventilation mode (4)
Displays the current Ventilation mode.

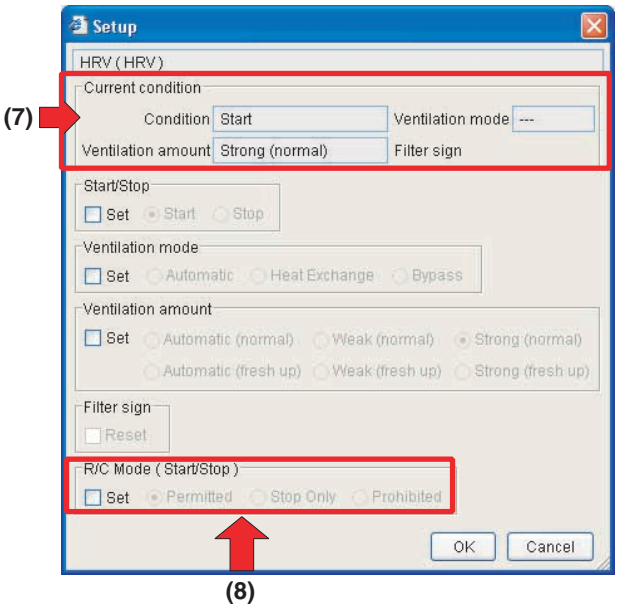
Ventilation amount (5)
Displays the current Ventilation amount.

Upon completion, click the “ Cancel ” (6) button to return to the Main screen.

[When Monitoring a Management Point of HRVs]

When selecting an HRV management point, the Setup screen (Screen 4) appears. You can view the following items in this screen.

Screen 4: Setup screen



Current Condition (7)
- Start/Stop state
- Ventilation mode
- Ventilation amount
- Filter sign

R/C Mode (Start/Stop) (8)
Displays the setting for permitting/prohibiting start/stop operations through remote controllers.

Upon completion, click the “ Cancel ” button on each screens to return to the Main screen.

⚠ CAUTION

This screen can be used for both setting and monitoring. When using it only for monitoring, be sure to click the “ Cancel ” button, rather than the “ OK ” to close it. This prevents you from inadvertently changing existing settings.

7. About System Setup Menu

The System Setup menu is provided in the function tree area displayed in the Advanced mode. This menu provides the following menu items.

Function	Web function authority required for operation	Simultaneous operation*2	Authority for the corresponding monitoring panel*3
Temperature setting restriction function	System Setup	Not permitted	System Setup
Password change function			
Schedule function	Schedule Setup	Not permitted	Schedule Setup
Pwr Prp Dist Setup	Pwr Prp Dist Setup	Not permitted	–
View function	Operation history	Operation history	–

The web functions which can be operated are different depending on the authority (*1) which is set for the user ID which is logged in. If the logged-in user ID does not have the required authority, then that web function cannot be operated.

*1 The authority which is set for the user ID is the user authority that is set from the monitoring panel system settings.

*2 Simultaneous use:
- This indicates whether or not two web function users (or a monitoring panel user and web function user) can operate the function at the same time.
- When two web function users (or a monitoring panel user and web function user) cannot operate a function simultaneously, the user who logged in first acquires the authority.
- Authority is retained from login to logout. After logout, the user releases the authority.

*3 Although the setting screens for the web function authority and monitoring software authority are different, the authority indicated here is the same in terms of restricting simultaneous operation.

Example 1: While a user with system setting authority for web functions is logged in from the web it is not possible to make system settings from the monitoring software.

Example 2: While a user with schedule registration authority for the monitoring panel is logged into the monitoring software, it is not possible to operate the schedule functions from the web.

*4 The proportional distribution function (optional) is required in order to utilize the collection of power proportional distribution data.

The details of each function are shown below.

<table>
<tr><th>System Setup Menu Name</th><th>Functional outline</th><th>Reference</th></tr>
<tr><td>Password Setting</td><td>This can be used to change the password for the user ID that is currently logged in.
The password that can be set is up to 15 alphanumeric characters.</td><td>See page 427</td></tr>
<tr><td>History view</td><td>This can be used to view the history (maximum 5000 entries) that is maintained by the master iPU.
The history utilizes a different text color for each history category, as shown below.
<table>
<tr><th>History category</th><th>Text color</th><th>Example of display</th></tr>
<tr><td>Error history</td><td>Red</td><td>Emergency stop</td></tr>
<tr><td>Alarm history</td><td>Blue</td><td>Indoor</td></tr>
<tr><td>Control history</td><td>Black</td><td>Indoor</td></tr>
<tr><td>Cancel history</td><td>Green</td><td>Emergency stop</td></tr>
<tr><td>Status change history</td><td>Black</td><td>Indoor</td></tr>
</table></td><td>See page 427</td></tr>
<tr><td>Temperature setting restriction function</td><td>This can be used to set restrictions on the temperature settings for A/C unit heating/cooling, and to make temperature settings.

Example:
If the temperature setting restrictions are set to “Cooling 25°C - 30°C,” then if the temperature setting is set to 20°C using the hand-held remote controller, then after a few seconds intelligent Manager automatically changes the temperature setting to 25°C.</td><td>See page 428</td></tr>
</table>

<table>
<tr><th>System Setup Menu Name</th><th>Functional outline</th><th>Reference</th></tr>
<tr><td>Overview: Schedule Creation Procedure</td><td>The Schedule menu item allows you to create operation schedules and link it to one or more control group or management point.
You can automatically start/stop air conditioners at a point in time. The time value (Year, Month, Day, Day of week, Hour, Minute) is set in advance on the intelligent Manager according to the usage of the air conditioners.
The options provided for creating schedule events are:
• Start/Stop
• Permitting/prohibiting local remote controller operations
• Operation mode
• Setting temperature
• Ventilation mode (∗)
• Ventilation amount (∗)
∗ Only for HRVs
The following describes the steps required to make a plan to create scheduling patterns.
• 9 types of days can be registered: weekday settings “Sunday – Saturday,” and special settings “holidays,” and “special days.”
The above 9 types of days are incorporated into the below “calendar settings.”
• Do the setting of “calendar setting” : “weekly setting”, “extra schedule patterns”.
Ex.: Regular schedule patterns are for normal business days and extra schedule patterns are for a special period such as summer holidays.
You can create schedule programs for the next 13 months.
• Finally, make an “event setting” for each of the above 9 types of days: weekday settings “Sunday – Saturday,” and special settings “holidays,” and “special days.”
(Example: Set Zone 1 to start operating at 9:00, stop at 17:00.)
→ Up to 16 actions can be set for each day.
The above is considered 1 schedule, and a maximum of 200 schedules can be set.</td><td>See page 429</td></tr>
<tr><td>Create schedule program</td><td>This can be used to create a new schedule program.
A maximum of 200 schedule programs can be created.</td><td>See page 431</td></tr>
<tr><td>Copy schedule program</td><td>This can be used to copy a created schedule program.</td><td>See page 432</td></tr>
<tr><td>Delete schedule program</td><td>This can be used to delete a created schedule program.</td><td>See page 432</td></tr>
<tr><td>Control group Setting</td><td>1. [Floor usage]
1F: Reception counter Names this control group “1F.”
2F: Office Names this control group “2F.”
3F: Canteen Names this control group “3F.”</td><td>–</td></tr>
<tr><td>Schedule Calendar Setting</td><td>2. [Makes weekday and special day “calendar settings” for the above zones.]
<table>
<tr><th colspan="2">Control group name / Day of week</th><th>1F</th><th>2F</th><th>3F</th></tr>
<tr><td colspan="2">SUN</td><td>Holiday</td><td>Holiday</td><td>Holiday</td></tr>
<tr><td colspan="2">MON</td><td>9:30-18:00
Duty hours</td><td>8:30-17:00
Duty hours
12:00-13:00
Lunch break
17:00-22:00
Overtime hours
22:00
Closing office</td><td>9:00-14:30
Duty hours</td></tr>
<tr><td colspan="2">TUE</td><td>ditto</td><td>ditto</td><td>ditto</td></tr>
<tr><td colspan="2">WED</td><td>9:30-17:00
Duty hours</td><td>ditto</td><td>ditto</td></tr>
<tr><td colspan="2">THU</td><td>same as Mon</td><td>ditto</td><td>ditto</td></tr>
<tr><td colspan="2">FRI</td><td>same as Mon</td><td>ditto</td><td>ditto</td></tr>
<tr><td colspan="2">SAT</td><td>Holiday</td><td>Holiday</td><td>Holiday</td></tr>
<tr><td>Holiday</td><td>Third Sat of every month</td><td>Concerned as a working day</td><td>Concerned as a working day</td><td>Concerned as a working day</td></tr>
<tr><td>Special days</td><td>1st Aug to 20th Aug
29th Dec to 4th Jan</td><td>Holiday</td><td>Holiday</td><td>Holiday</td></tr>
</table></td><td>–</td></tr>
</table>

<table>
<tr><th>System Setup Menu Name</th><th>Sample Schedule</th><th>Reference</th></tr>
<tr><td>Determining Schedule Events</td><td>
3. [In this step you will determine schedule events for the zone “2F.”]
Note: These events are provided only for reference. Create customized schedules based on your actual requirements.
Example: event settings for Mon to Fri
<table>
<tr><th>Time</th><th>Target Zone</th><th>Start/Stop</th><th>Operation mode</th><th>Set temperature</th><th>Remote Controller Code</th></tr>
<tr><td>8:30</td><td>Zone 2F</td><td>ON</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>12:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Null</td></tr>
<tr><td>13:00</td><td>Zone 2F</td><td>ON</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>17:00</td><td>Zone 2F</td><td>Null</td><td>Null</td><td>Null</td><td>Permits only stopping</td></tr>
<tr><td>22:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Prohibits remote controller operations</td></tr>
</table>
Example: event settings for Sat and Sun
<table>
<tr><th>Time</th><th>Target Zone</th><th>Start/Stop</th><th>Operation mode</th><th>Set temperature</th><th>Remote Controller Code</th></tr>
<tr><td>9:00</td><td>Zone 2F</td><td>Null</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>17:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Prohibits remote controller operations</td></tr>
</table>
Example: event settings for (third Sat of each month)
<table>
<tr><th>Time</th><th>Target Zone</th><th>Start/Stop</th><th>Operation mode</th><th>Set temperature</th><th>Remote Controller Code</th></tr>
<tr><td>8:30</td><td>Zone 2F</td><td>ON</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>12:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Null</td></tr>
<tr><td>13:00</td><td>Zone 2F</td><td>ON</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>17:00</td><td>Zone 2F</td><td>Null</td><td>Null</td><td>Null</td><td>Permits only stopping</td></tr>
<tr><td>22:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Prohibits remote controller operations</td></tr>
</table>
Example: event settings for (for example, summer holidays)
<table>
<tr><th>Time</th><th>Target Zone</th><th>Start/Stop</th><th>Operation mode</th><th>Set temperature</th><th>Remote Controller Code</th></tr>
<tr><td>9:00</td><td>Zone 2F</td><td>Null</td><td>Null</td><td>Null</td><td>Override</td></tr>
<tr><td>17:00</td><td>Zone 2F</td><td>OFF</td><td>Null</td><td>Null</td><td>Prohibits remote controller operations</td></tr>
</table>
* “Null” indicates that no change is made.
</td><td>See page 434</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>Set execution schedule</td><td>Can be used to set the schedule for the next week, based on the yearly schedule or weekly schedule.
The schedule is automatically renewed from the system at the time the date changes.
If automatic renewal occurs while settings are being made, the system warns the user that this has occurred. The data which has been set to that point cannot be saved.</td><td>See page 439</td></tr>
<tr><td>Set base calendar</td><td>This can be used to set a common calendar for use in the system.
By copying the base calendar, it is possible to simplify/share calendar settings.
Patterns (weekday/holiday/special day) can be set for a period of 12 months, including the calendar start month.
The start month can be set from January 2005 to December 2036.
Up to 6 base calendars can be created.
A name of up to 32 characters can be entered for each base calendar.</td><td>See page 443</td></tr>
</table>

System Setup Menu Name	Functional outline	Reference
Proportional distribution function Outline explanation	The proportional distribution calculation of the power consumption of each air conditioner is made, displayed, and output in files. This function makes it possible to measure the total power consumption of the air conditioners of facilities, such as a tenant building, with a meter and calculate the power consumption of each air conditioner on a tenant basis. • Normal Type .... The amount of power consumption can be divided proportionally. ∗ The function is available on the website if it is used together with the proportional distribution software as an optional application. The following web setting and control items of the proportional distribution function are available. <Setting items> • Exclusion Periods (Normal Type) • Special Calculation Days (Normal Type) <Control items> • Setting/Display of collection result • File output of collection result A procedure for proportional distribution control is explained below. • Exclusion Periods (Normal Type) You can set the desired time zone between 0:00 and 24:00 and the day of the week for not performing proportional distribution calculation. • Special Calculation Days (Normal Type) Proportional distribution calculation between 0:00 and 24:00 is possible for holidays (public holidays and national holidays) other than regular closing days (e.g., Saturdays and Sundays). You can set the desired time zone and day of the week in the exclusion period zone as well. • Setting/Display of collection result Set the period to display the result of proportional distribution. The display of either the period or month is possible. • File output of collection result You can save the result of proportional distribution calculation in CSV file format into the hard disk of the PC. ∗ Proportional data is collected and added up through the monitor panel software. Collect the data while the software is running. ∗ Refer to intelligent Manager Operation Manual for details.	See page 445

7-1 System setup

This menu item provides the following functions:

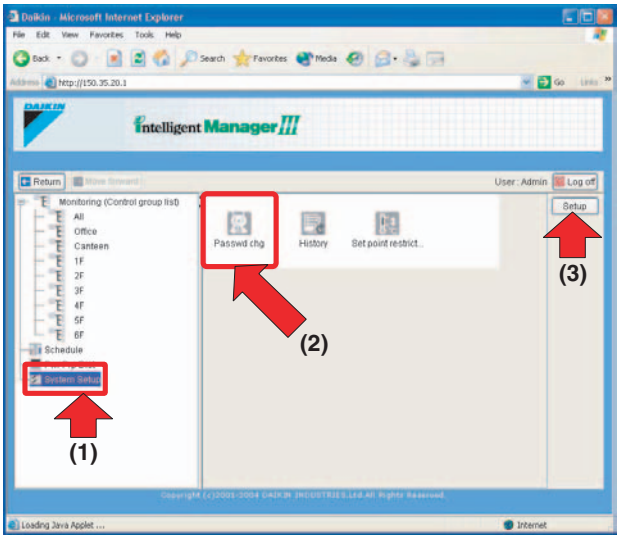
- Changing passwords
  (This page)
- History view
  (This page)
- Temperature setting restriction function
  (See page 428)

[To Change Your Own Password]

The password can be changed for the user ID that is currently logged in.

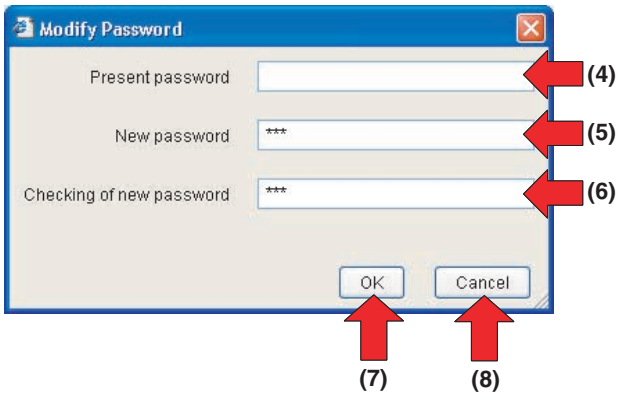
1. Select the System Setup node from the function tree area (1) to display the System setup main screen (Screen 1).

Screen 1: System setup main screen



2. Select “Password change” (2), then press “ Setup ” (3). Screen 2, the “Modify Password” screen appears.

Screen 2: Modify Password screen



3. Enter the existing password into the Present password (4) field. If you have no password, skip this field.
4. Enter a new password into the New password field (5). Then enter the password again into the Checking of new password field (6) for confirmation. These two fields accept up to 15 characters.
5. Upon completion, click the “ OK ” button (7).
   If the set password is correct, the “Password change completed” screen appears and the password change is completed. To cancel the password change, press
   “ Cancel ” (8).

⚠ CAUTION

Administrator passwords for web interface and console

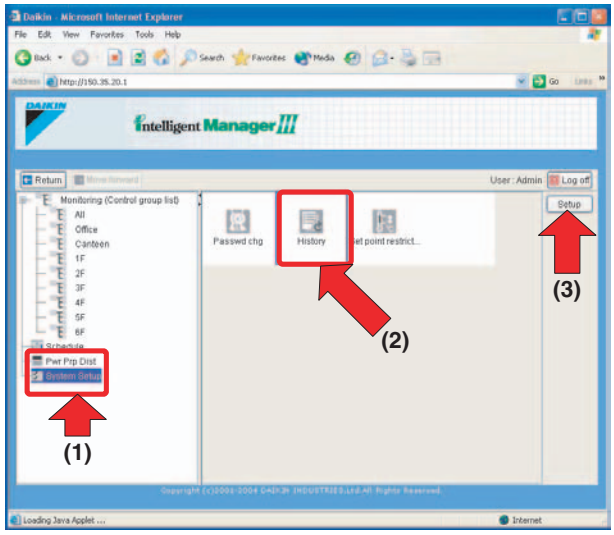
A new Administrator password set in this screen is also used for the system console menu and you will not be able to use the system console menu without entering the new password. On the other hand, setting an Administrator password on the system console not only makes the console unavailable without entering the password, but also replaces the existing Administrator password for the web interface with the password set on the console.

[Checking the history]

This can be used to view the history (maximum 5000 entries) that is maintained by the master iPU.

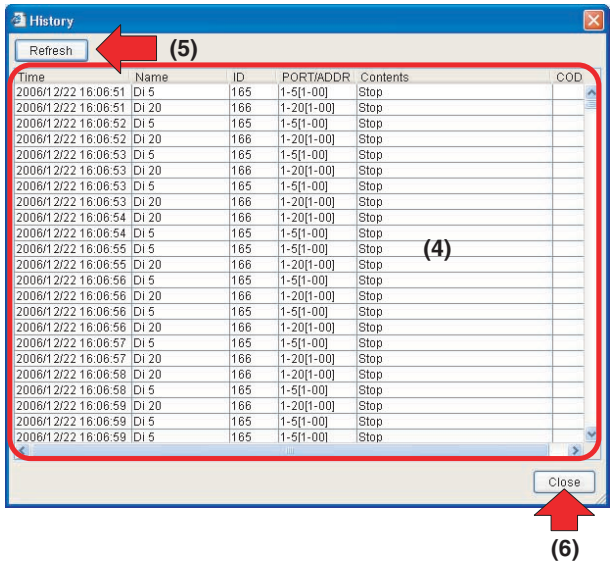
1. Select System Setup (1) from the function tree. Screen 1, the System setup main screen, appears.

Screen 1: System setup main screen



2. Select History (2), then press “ Setup ”. Screen 2, the History screen, appears.

Screen 2: History screen



3. The history display area (4) displays the history that was acquired from the iPU. The history display utilizes a different text color for each history category, as shown below.

History category	Text color	Example of display
Error history	Red	Emergency stop
Alarm history	Blue	Indoor
Control history	Black	Indoor
Cancel history	Green	Emergency stop
Status change history	Black	Indoor

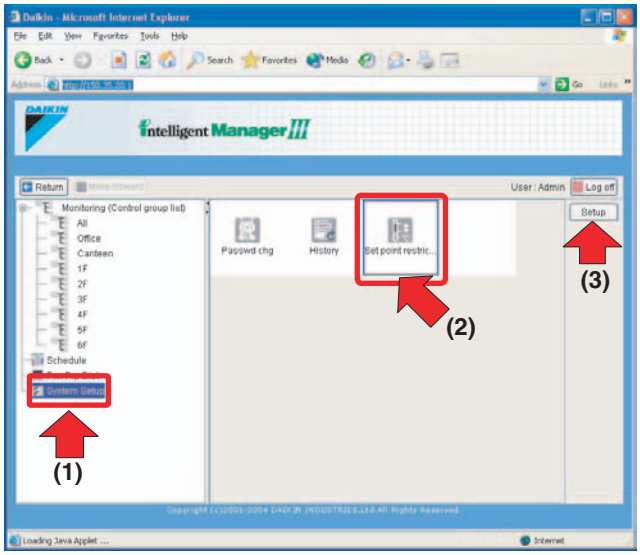
4. To acquire the most recent history, press " Refresh " (5). This acquires the most recent history from the iPU.
5. After you have finished checking the history, press " Close " (6). The history viewing Screen 2 closes and Screen 1, the System setup main screen, appears.

[Temperature setting restriction function]

This can be used to set restrictions on the temperature settings for A/C unit heating/cooling, and to set a range for temperature settings.

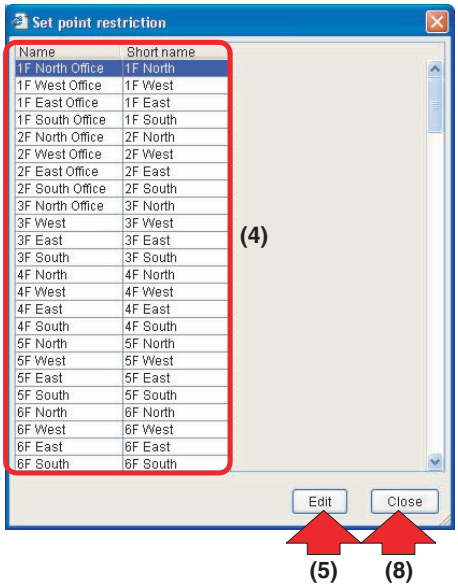
1. Select System Setup (1) from the function tree. Screen 1, the System setup main screen, appears.

Screen 1: System setup main screen



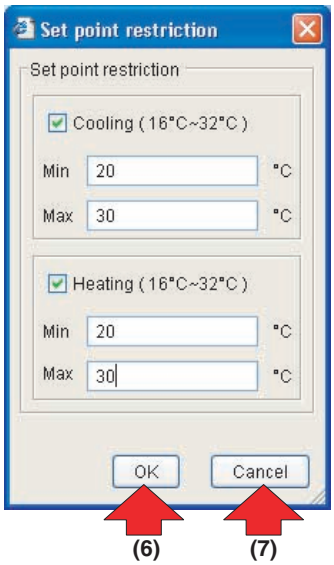
2. Select Set point restriction (2), then press " Setup " (3). Screen 2, the Set point restriction screen appears.

Screen 2: Set point restriction screen



3. Select the A/C unit where you want to restrict temperature settings from the A/C unit list (4), then press " Edit " (5). Screen 3, the Set temperature setting restriction screen, appears.

Screen 3: Set temperature setting restriction screen



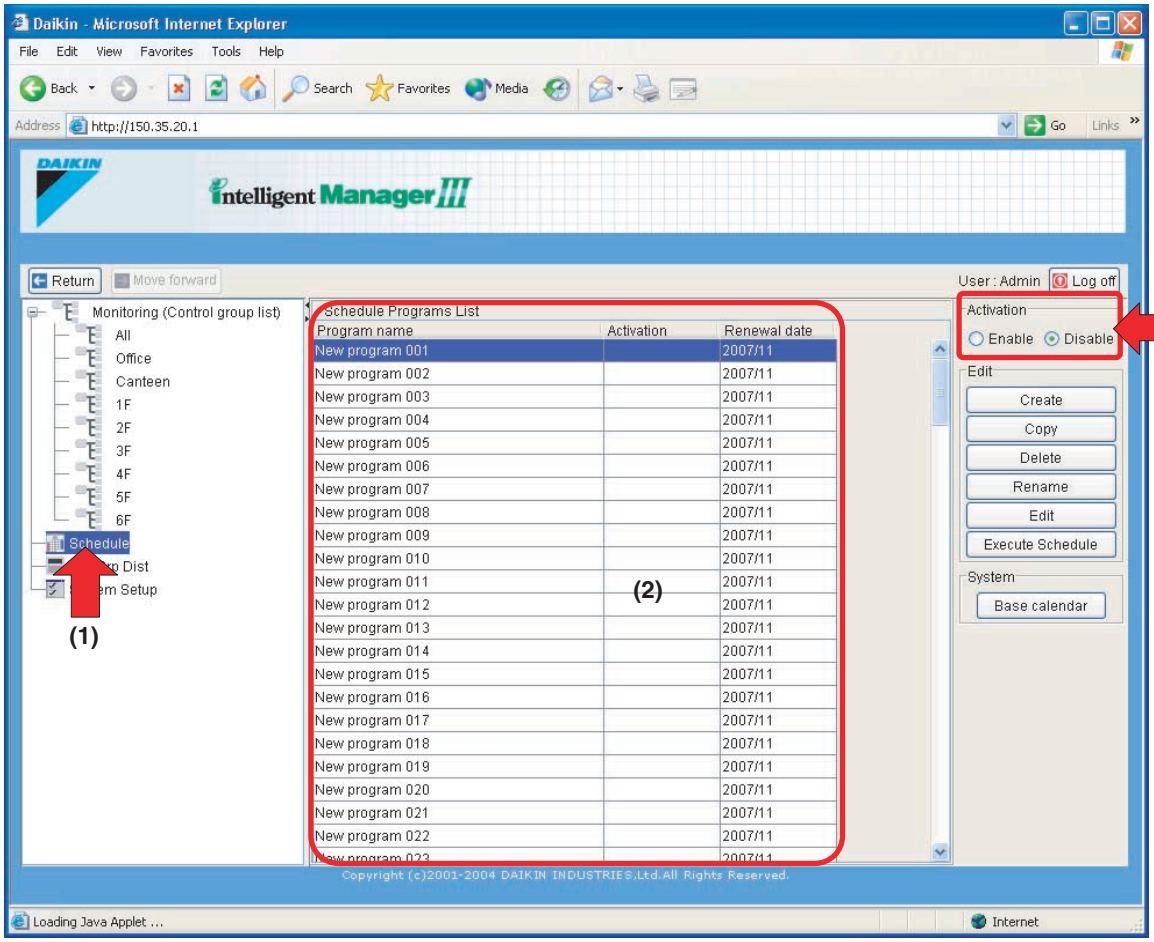
4. To restrict temperature settings for cooling, place a checkmark in the "Cooling" checkbox. To restrict temperature settings for heating, place a checkmark in the "Heating" checkbox. The Min/Max edit boxes for cooling/heating appear.
   To cancel a temperature setting restriction, remove the check from the operating mode which you want to cancel the restriction for.
5. The temperature setting upper/lower limits for heating and cooling are displayed. Set the Min/Max within the range of the temperature setting upper/lower limits.
6. When the settings are completed, press " OK " (6). To cancel the settings, press " Cancel " (7).
   Screen 2, the Set point restriction screen, appears.
7. To set restrictions for another A/C unit, repeat steps 3 – 6 above.
   To exit the settings, press " Close " (8).

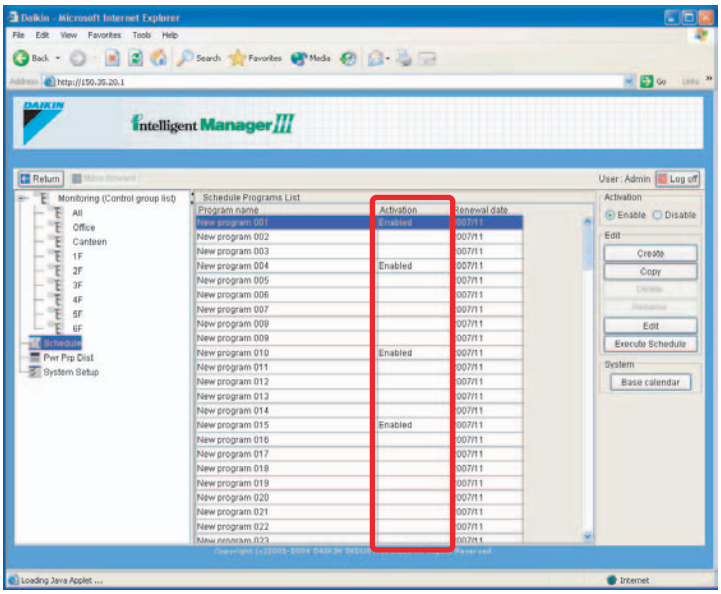
8. Schedule Menu Configuration

8-1 Main schedule screen

This section describes the components of the main scheduling screen.

When selecting the “Schedule” node (1) from the function tree area, you will see the following screen (the “main scheduling screen”).





← If the schedule program is enabled, “Enabled” is displayed in the “Activation” list. If the program is disabled, nothing is displayed.

■ **Display Area**

(1) Schedule node in the function tree area
Selecting this node displays the main scheduling screen.

(2) Schedule program list
This displays a list of the schedule programs.
Program name:
This displays the schedule program name.
Activation:
This indicates whether the schedule program control is enabled or disabled (blank).
Renewal data:
This displays the renewal month.
If there is no renewal month, this display is blank.

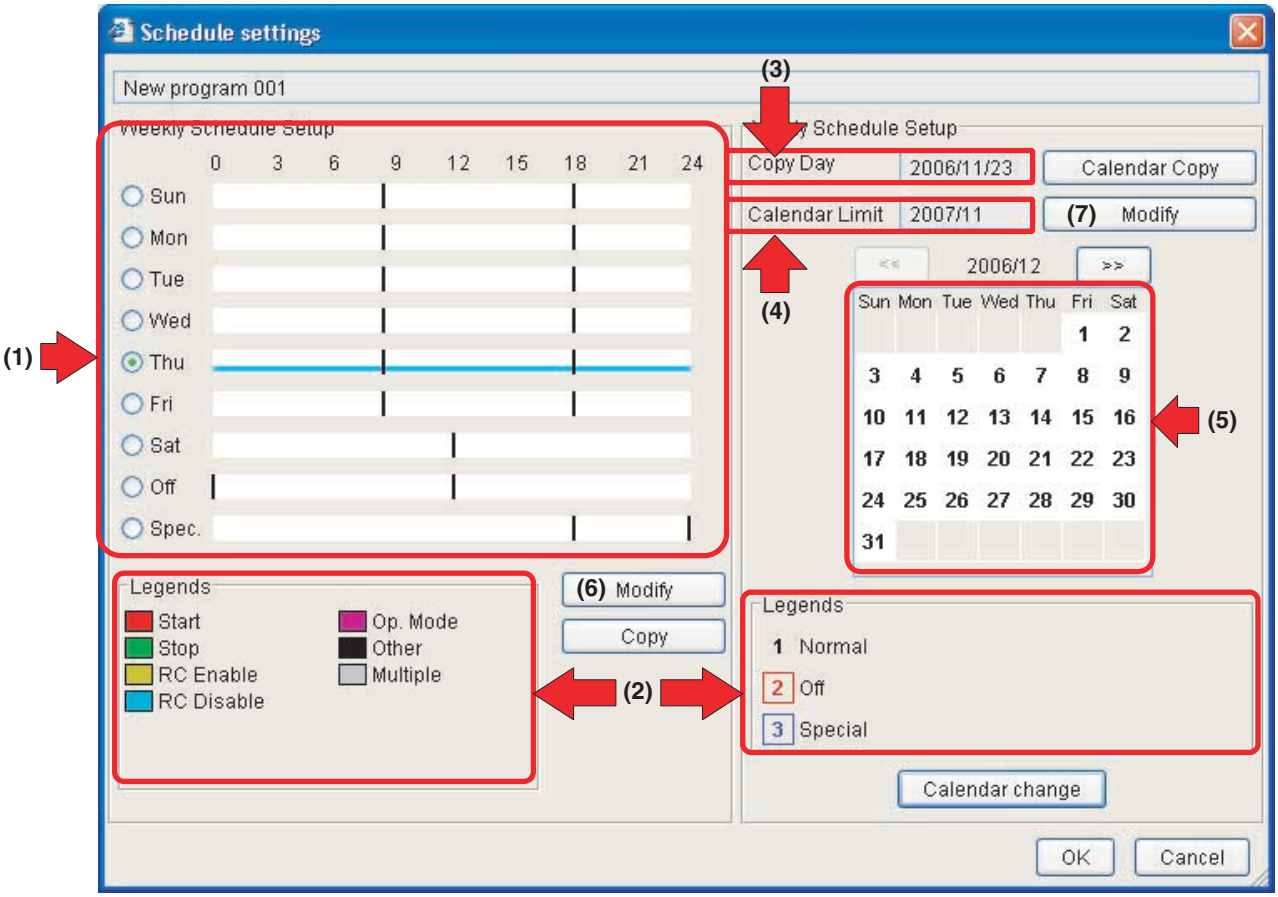
(3) Enable/Disable radio buttons
Displays the status of the program selected in the list. You can enable or disable it using these buttons.

■ **Buttons**

Create	This can be used to create a new schedule program.
Copy	This can be used to copy the selected schedule program.
Delete	This can be used to delete the selected schedule program.
Rename	This can be used to change the name of the selected schedule program.
Edit	This can be used to set a yearly schedule or weekly schedule.
Execute Schedule	This can be used to set a daily schedule for the next week, based on the yearly schedule or weekly schedule.
Base calendar	By setting a common calendar for the system and copying the base calendar, it is possible to simplify/share calendar settings.

8-2 Schedule Menu Configuration

Schedule Setup screen



■ **Display Area**

(1) Weekly schedule radio buttons and schedule display
The schedule display shows an overview of the schedule for each weekday, and for holidays, and special days. The weekly schedule radio buttons are used to select the schedule to edit. (=> Page 434)

(2) Legends area
This displays the legend for the schedule display and settings calendar.

(3) Base calendar display
If a base calendar was copied, this displays the final date when the calendar was copied. If a base calendar was not copied, this displays the date when the schedule was created.

(4) Renewal month
This displays the current renewal month.

(5) Settings calendar
This displays the schedule program calendar settings.

■ **Buttons**

Modify	This sets a schedule action. (=> Page 434)
Copy	This copies the weekday, holiday, or special day schedule that was selected with the weekly schedule radio button to another weekday, holiday, or special day. (=> Page 432)
Calendar Copy	Displays the Base Calendar screen. (=> Page 437)
Modify	Displays the Expiration Setup screen. (=> Page 438)
>>	This moves the calendar forward by 1 month.
<<	This moves the calendar back by 1 month.
Calendar change	Displays the Calendar Change screen. (=> Page 438)

8-3 Using the schedule menu

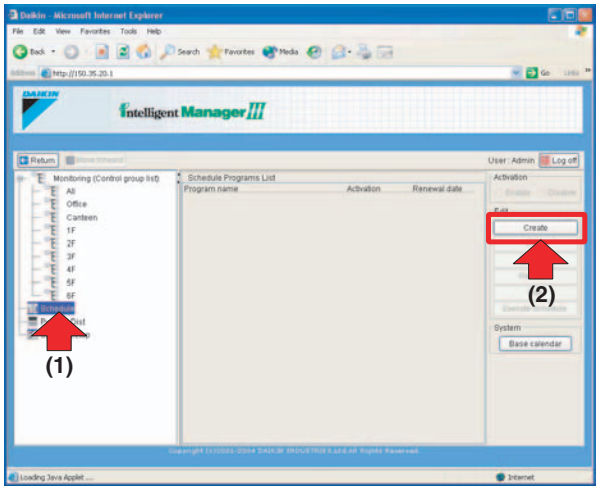
■ **To edit a schedule program**

Create a new schedule program.

[Procedure]

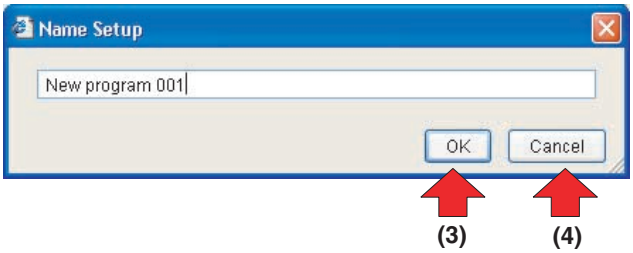
1. Select the Schedule node (1) from the function tree area.
Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



2. Press “ Create ” (2).
Display the Name Setup screen (Screen 2).

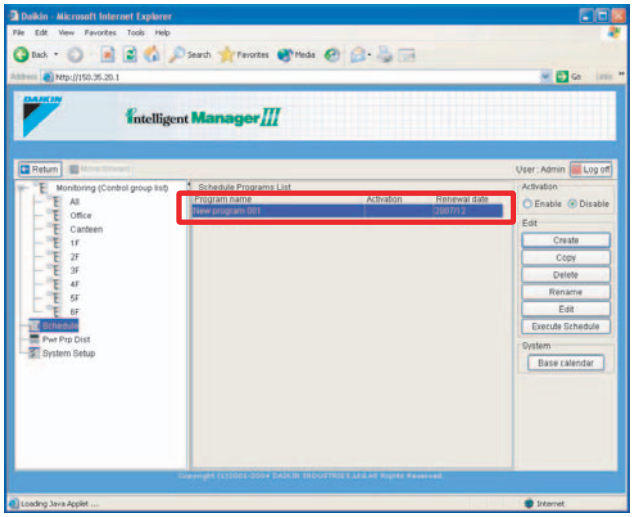
Screen 2: Name Setup screen



3. Enter the schedule program name. 0 – 32 characters can be entered.
The default name is [New program xxx] (xxx is a unique serial number).

4. After you have finished entering the name, press “ OK ” (3). To cancel, press “ Cancel ” (4).
Display the Main scheduling screen (Screen 3).

Screen 3: Main scheduling screen



5. A new schedule program is created in the schedule program list.
If “Cancel” is selected, no schedule program is created.

The schedule program default settings are shown below.

Name: Name which was set on Screen 2, the “Name Setup” screen.
Renewal month: 12 months after the date of registration
Weekly/execution schedule: None set
Calendar: None

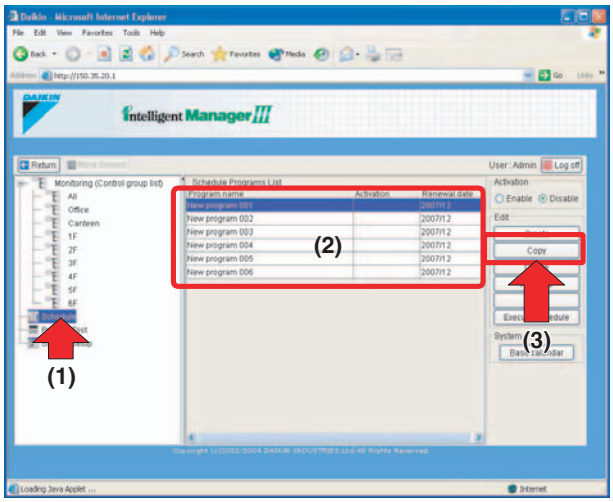
■ Copying a schedule program

Copy the schedule program which was selected from the schedule program list.

[Procedure]

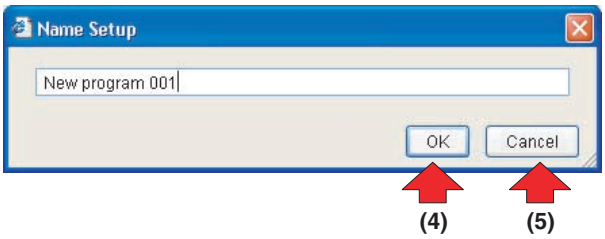
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



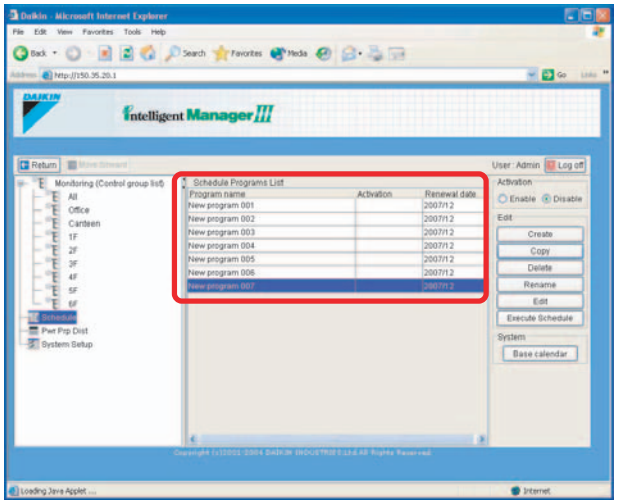
2. Select the schedule program to copy from the schedule program list (2), then press " Copy " (3).
Display the Name Setup screen (Screen 2).
If no schedule program has been selected from the schedule program list, " Copy " (3) is grayed out.

Screen 2: Name Setup screen



3. Enter the schedule program name. 0 – 32 characters can be entered.
The default name is [New program xxx] (xxx is a unique serial number).
4. After you have finished entering the name, press " OK " (4). To cancel, press " Cancel " (5).
Display the Main scheduling screen (Screen 3).

Screen 3: Main scheduling screen



5. The schedule program which was selected from the schedule program list is copied.
If "Cancel" is selected, no schedule program is created.

The schedule program default settings are shown below.

Name: Name which was set on Screen 2, the "Name Setup" screen.

Other settings: Settings for the schedule program which was selected from the schedule program list

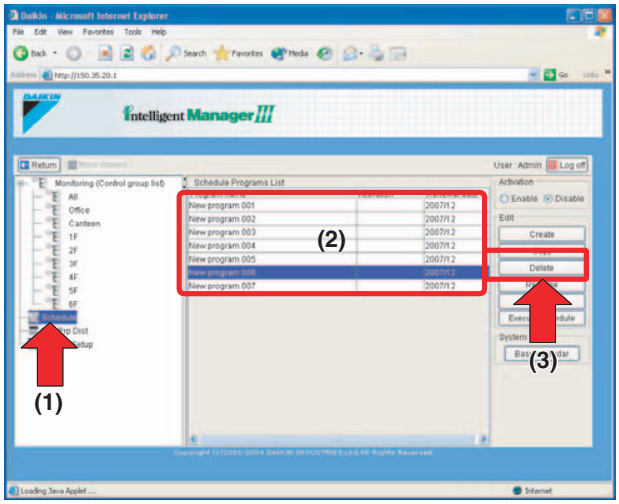
■ Deleting a schedule program

Delete the schedule program which was selected from the schedule program list.

[Procedure]

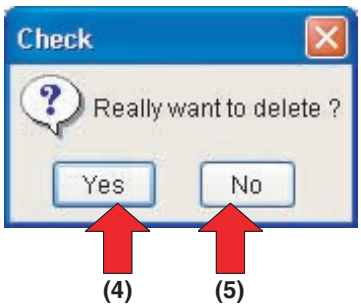
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen (Screen 1).

Screen1: Main scheduling screen



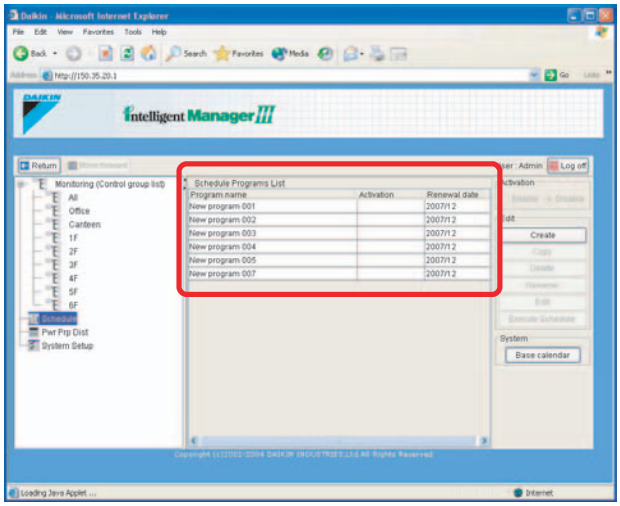
2. Select the schedule program to delete from the schedule program list (2), then press " Delete " (3).
Display the check screen (Screen 2).
If no schedule program has been selected from the schedule program list, " Delete " (3) is grayed out.

Screen 2: Check screen



3. To delete the selected schedule program, press " Yes " (4). To cancel, press " No " (5).
Display the Main scheduling screen (Screen 3).

Screen 3: Main scheduling screen



4. The selected schedule program is deleted.
If "Cancel" is selected, the schedule program is not deleted.

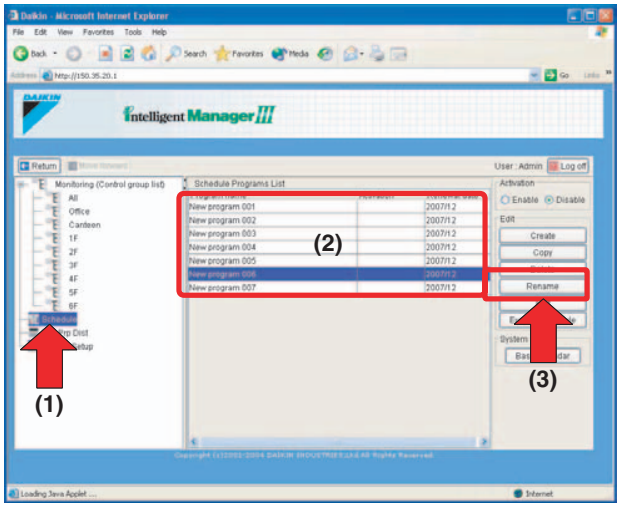
■ Changing a schedule program name

Change the name of the schedule program which was selected from the schedule program list.

[Procedure]

1. Select the Schedule node (1) from the function tree area.
Display the Main scheduling screen (Screen 1).

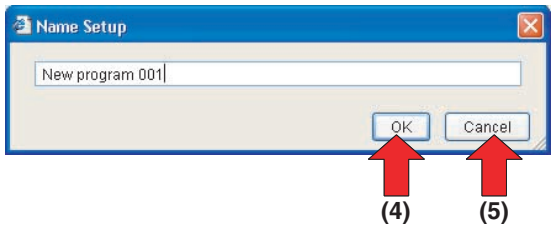
Screen 1: Main scheduling screen



2. Select the schedule program to change from the schedule program list (2), then press " Rename " (3).
Display the Name Setup screen (Screen 2).

If no schedule program has been selected from the schedule program list, " Rename " (3) is grayed out.

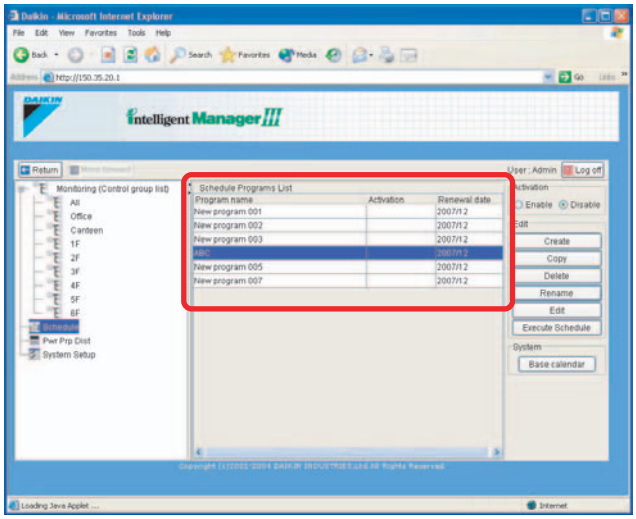
Screen 2: Name Setup screen



3. Enter the new name. 0 – 32 characters can be entered.

4. After you have finished entering the name, press " OK " (4). To cancel, press " Cancel " (5).
Display the Main scheduling screen (Screen 3).

Screen 3: Main scheduling screen



5. The name of the schedule program which was selected from the schedule program list is changed.
If "Cancel" was selected, the schedule program name is not changed.

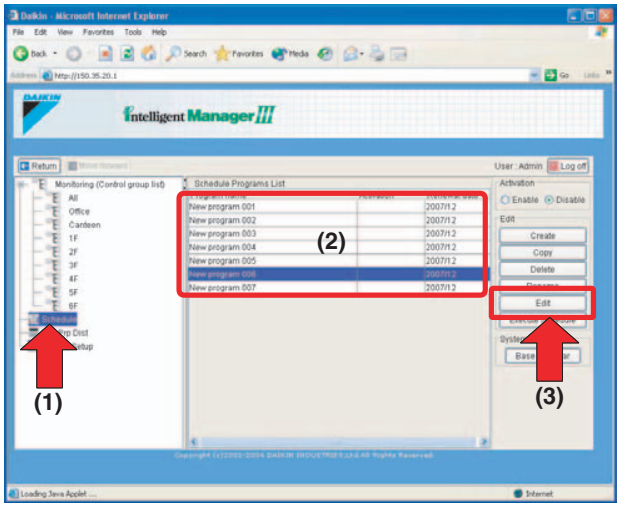
■ Setting schedules

Set the weekly schedule and calendar.

[Procedure]

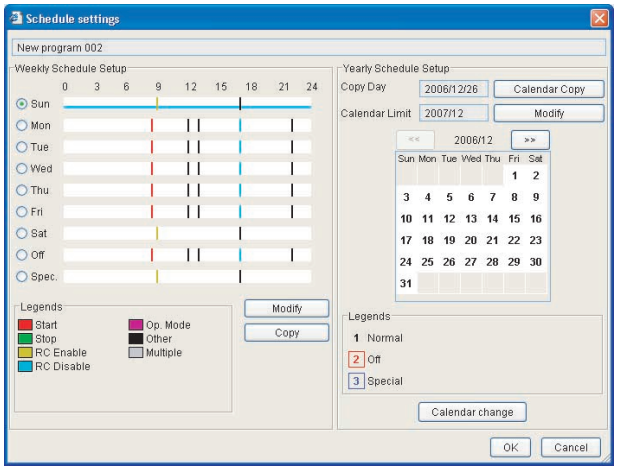
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



2. From the schedule program list (2), select the schedule program which you want to set a schedule for, then press " Edit " (3).
   Display the Schedule Setting screen (Screen 2).
   If no schedule program has been selected from the schedule program list, " Edit " (3) is grayed out.

Screen 2: Scedule Setting screen



3. On Screen 2, the "Schedule Setting" screen, set or change the weekly schedule or calendar.

   For the setting procedures, refer to the following pages.

   - Setting a weekly schedule (=> This page)
   - Setting the calendar (=> Page 443)

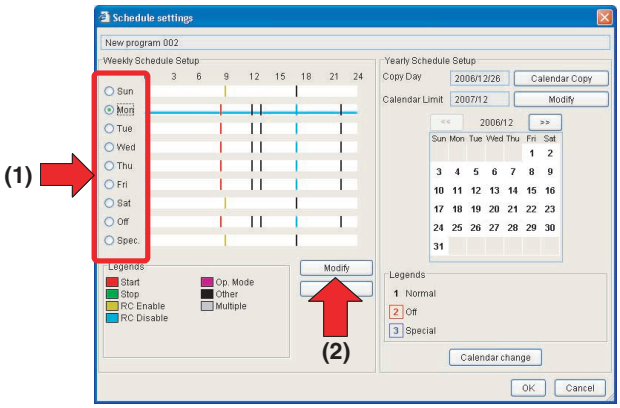
■ Setting weekly schedules and special day schedules

Set the weekly schedule for one week, from Sunday to Saturday, and make settings for holidays and special days.
The maximum number of schedule actions which can be set for 1 day is 20.
If the same A/C unit is controlled at the same time by multiple schedule programs, the program with the higher schedule number takes priority.

[Procedure]

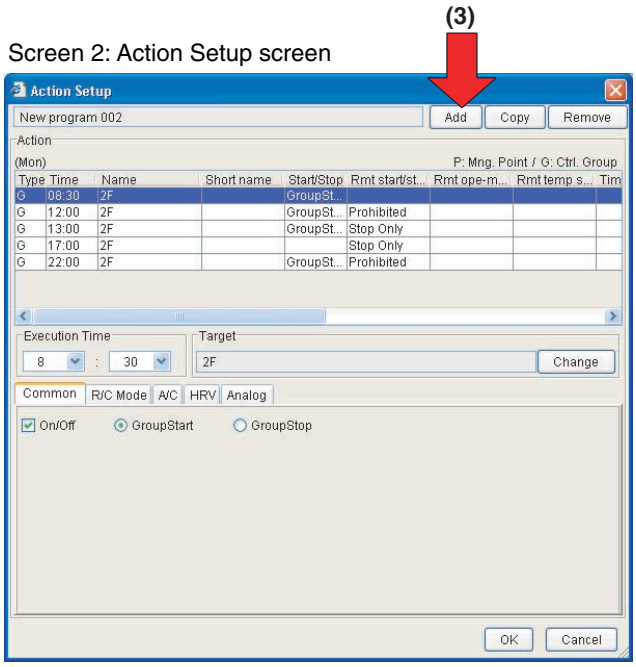
1. On Screen 1, the Schedule Setting screen, use the weekly schedule radio buttons (1) to select the weekday, holiday, or special day to set the schedule for.

Screen 1: Schedule Setting screen



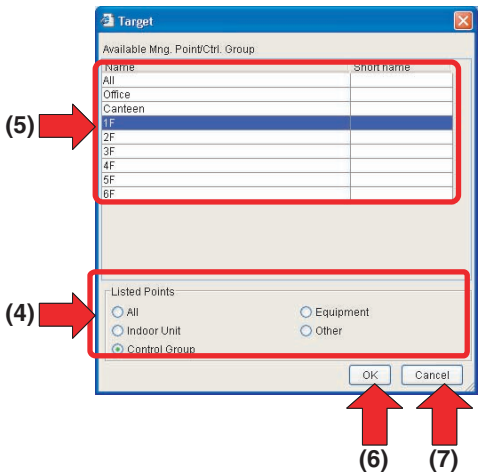
2. Press " Modify " (2).
   Display the Action Setup screen (Screen 2).

Screen 2: Action Setup screen



3. To create a new schedule action, press " Add " (3).
Display the Target screen (Screen 3).

Screen 3: Action Setup screen



4. Under "Listed Points" (4), select the control target which you want to set the schedule action for. Then select the management point or control group in the "Available Mng Point/Ctrl Group" list (5).

5. When the selection is completed, press " OK " (6).

To cancel, click " Cancel " (7).
Display the Action Setup screen (Screen 2).

6. When the setting is completed, press " OK " (11).

To cancel, click " Cancel " (12).
The screen returns to Screen 1, the "Schedule Setting" screen.

7. If a new schedule action was created, the selected management point or control group is added to the top of the "Action" list (8).
From the "Action" list, select the management point or control group to set a schedule action for.

8. Set the start time for the schedule action in the "Execution Time" combination box (9).
The setting range for the start time is 00:00 – 23:59.
Set the schedule action (10). The different tabs display the different categories of actions shown below.

"Common" tab	Common action settings
ON/OFF	Start/stop settings
For a management point, this action is "Start/Stop." For a control group, this action is "Group Start/Group Stop."	
"R/C Mode" tab	Remote controller permit/prohibit setting
Start/Stop	Start/stop permit/prohibit setting
Operation Mode	Operating mode permit/prohibit setting
Set Temp	

"A/C" tab	Indoor unit settings
Operation Mode	Operating mode setting
Set Temp	Temperature setting
Timer Extension	Timer extension setting

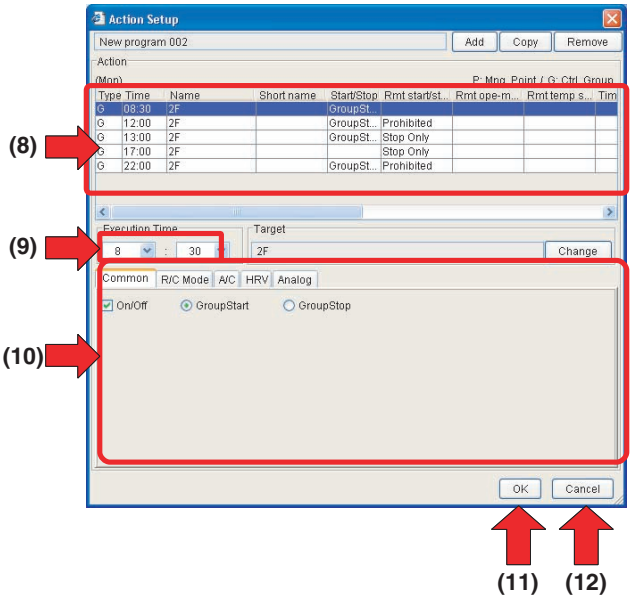
"HRV" tab	HRV settings
Ventilation mode	Ventilation mode setting
Ventilation amount	Ventilation amount setting

"Analog" tab	Analog value setting
Analog	Analog value setting
Analog Type	Analog type setting
Unit	Unit setting for increasing/decreasing the analog value

9. When the setting is completed, press " OK " (11).

To cancel, click " Cancel " (12).
Display the Schedule Setting screen (Screen 1).

Screen 1: Schedule Setting screen



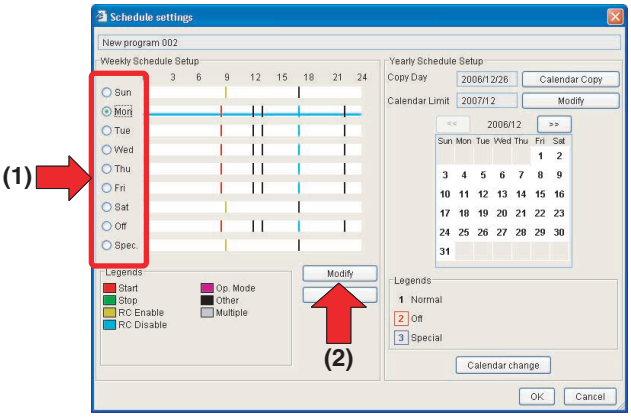
■ Changing a weekly schedule or special day schedule

Change a weekly schedule that was previously set.

[Change procedure]

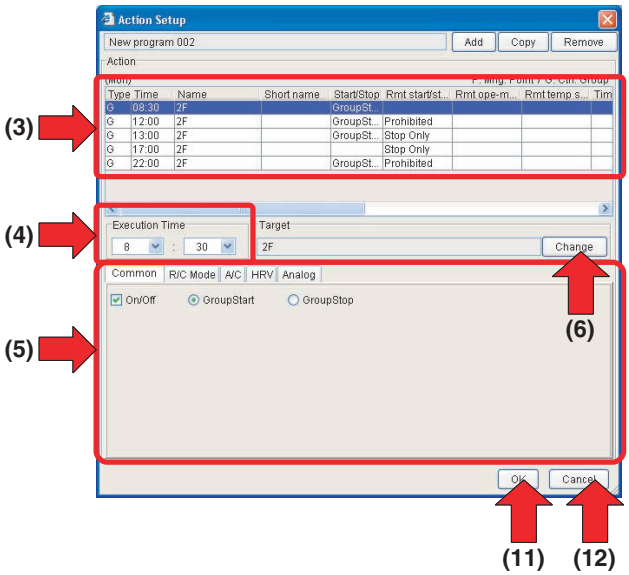
1. On Screen 1, the "Schedule Setting" screen, use the weekly schedule radio buttons (1) to select the day that you want to change the schedule for.

Screen 1: Schedule Setting screen



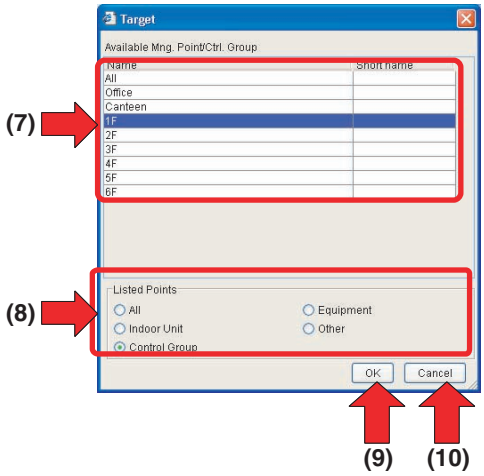
2. Press " Modify " (2).
Display the Action Setup screen (Screen 2).

Screen 2: Action Setup screen



3. Select the schedule action to change from the "Action" list (3).
To change the start time, change the schedule action start time in the "Execution Time" combination box (4).
The setting range for the start time is 00:00 – 23:59.
To change the schedule action itself, change the schedule action in the action setting field (5).
To change the management point or control group, press " Change " (6).
Display the Action Setup screen (Screen 3).

Screen 3: Action Setup screen



4. Under "Listed Points" (7), select the control target to change, then select the management point or control group from the "Available Mng Point/Ctrl Group" list (8).

5. When the selection is completed, press " OK " (9).
To cancel, click " Cancel " (10).
Display the Action Setup screen (Screen 2).

6. When the desired schedule action has been changed, press " OK " (11).
To cancel, click " Cancel " (12).
The screen returns to Screen 1, the "Schedule Setting" screen.

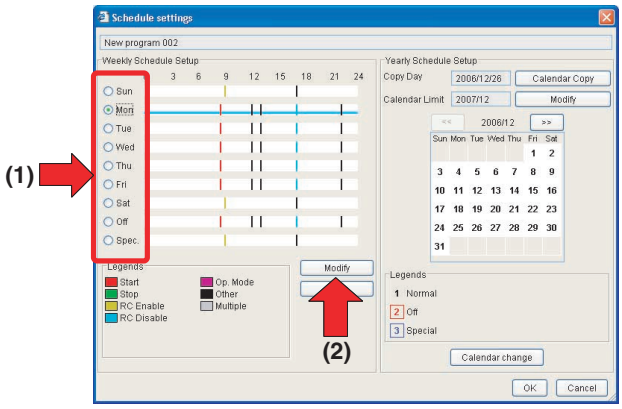
■ Copying or deleting a schedule action

Copy or delete a schedule action which was previously set.

[Copying procedure]

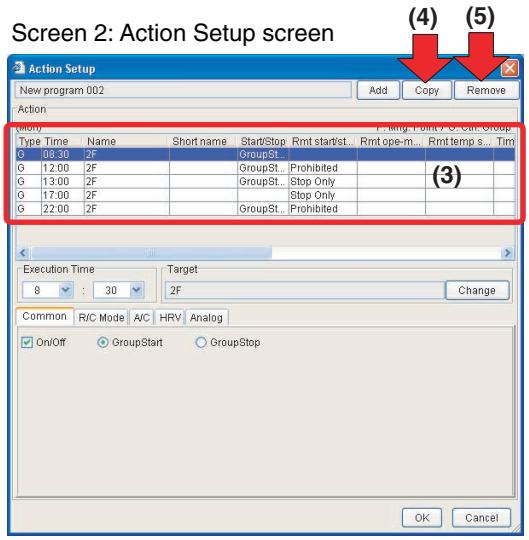
1. On Screen 1, the "Schedule Setting" screen, use the weekly schedule radio buttons (1) to select the day that you want to change the schedule for.

Screen 1: Schedule Setting screen



2. Press " Modify " (2).
Display the Action Setup screen (Screen 2).

Screen 2: Action Setup screen



3. Select the schedule action to copy from the "Action" list (3), then press " Copy " (4).
The selected schedule action is copied.

4. When copying is completed, press " OK " (11).
To cancel, click " Cancel " (12).
The screen returns to Screen 1, the "Schedule Setting" screen.

[Deleting procedure]

1. On Screen 1, the "Schedule Setting" screen, use the weekly schedule radio buttons (1) to select the day that you want to change the schedule for.

2. Press " Modify " (2).
Display the Action Setup screen (Screen 2).

3. Select the schedule action to delete from the "Action" list (3), then press " Remove " (5).
The selected schedule action is deleted.

4. When deleting is completed, press " Copy " (11).

   To cancel, click " Cancel " (12).

   The screen returns to Screen 1, the "Schedule Setting" screen.

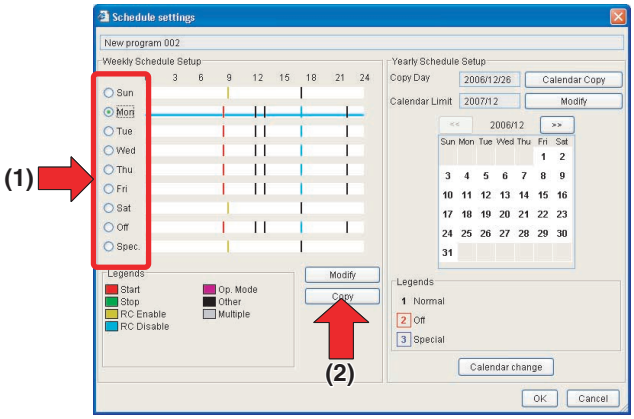
■ Copying a weekly schedule or special day schedule

Copy a weekly schedule to a different day, holiday, or special day.

[Procedure]

1. From Screen 1, the "Schedule Setting" screen, use the weekly schedule radio buttons to select the weekday, holiday, or special day schedule for copying.

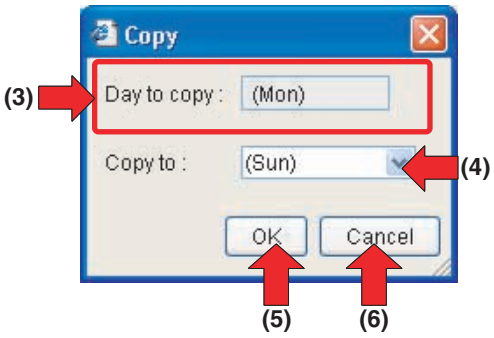
Screen 1: Schedule Setting screen



2. Press " Copy " (2).

   Display the Copy screen (Screen 2).

Screen 2: Copy screen



3. The weekly schedule that was selected for copying appears in the "Day to copy" field (3).
   From the "Copy to" combination box (4), select the weekly schedule for the copy destination.

   The weekly schedule that was selected for copying does not appear in the "Copy to" combination box.

4. When the selection is completed, press " OK " (5).

   To cancel, click " Cancel " (6).

   Display the Schedule Setting screen (Screen 1).

5. The weekly schedule which was selected for copying is copied to the copy destination weekly schedule.

■ Copying a calendar

Copy a base calendar to a schedule program, or else clear the schedule program.

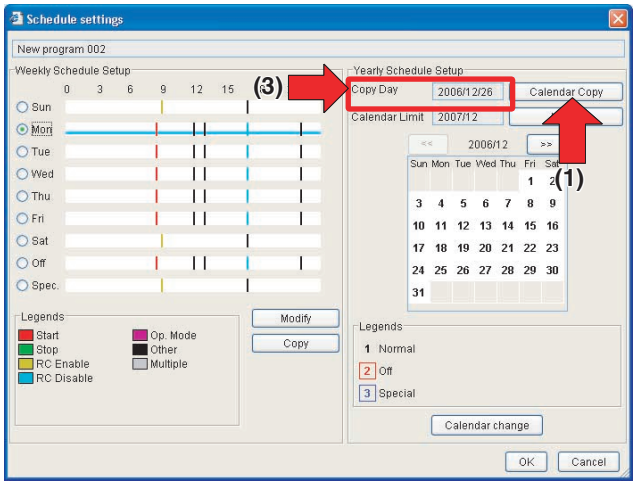
For information about how to set a base calendar, refer to page 443.

[Procedure]

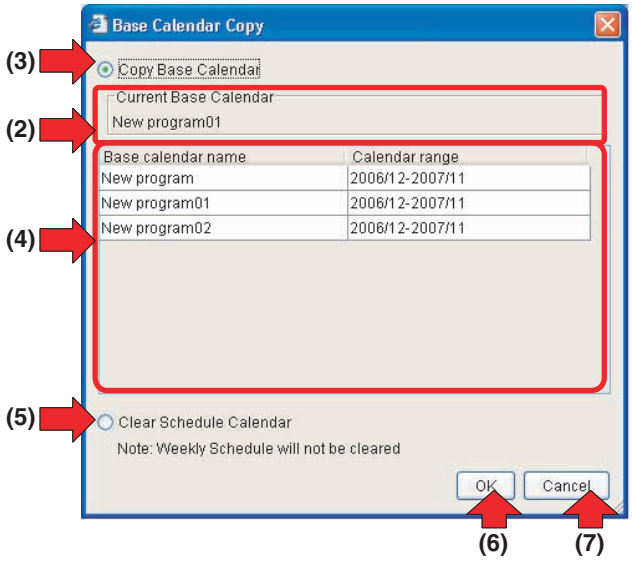
1. On Screen 1, the "Schedule Setting" screen, press " Calendar Copy " (1).

   Display the Base Calendar Copy screen (Screen 2).

Screen 1: Schedule Setting screen



Screen 2: Base Calender Copy screen



2. The name of the base calendar which was last copied appears in the "Current Base Calendar" field (2). If no base calendar has been copied, then this field is blank.
   To copy a base calendar, select "Copy Base Calendar" (3), then select a base calendar from the base calendar list (4).
   To clear the base calendar, select "Clear Schedule Calendar" (5).

   If "Clear Schedule Calendar" (5) is selected, it is not possible to select a base calendar from the base calendar list.

3. When the selection is completed, press " OK " (6).

   To cancel, click " Cancel " (7).

   Display the Schedule Setting screen (Screen 1).

4. If a base calendar was copied, "Copy Day" (8) displays the final date when the calendar was copied. If the base calendar was not copied, it displays the date when the schedule was created.

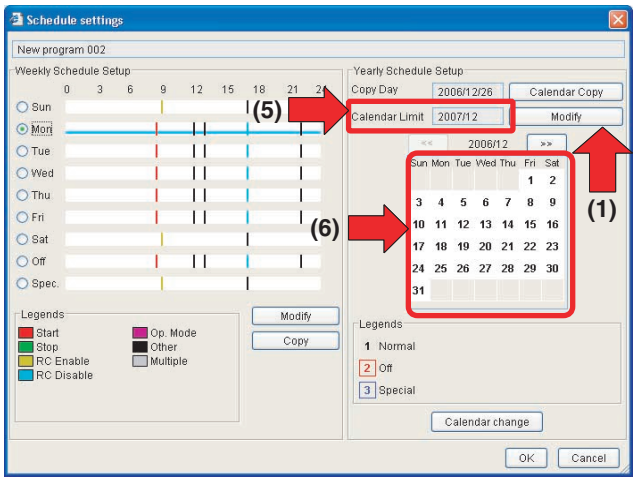
■ Setting the renewal month

Set the calendar renewal month.
The renewal month is the month in which the user is reminded to renew the calendar settings.
When the renewal month is reached, the calendar expiration warning appears.
When a new calendar is created, the last month of the created calendar becomes the renewal month.

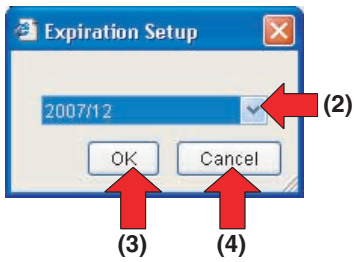
[Procedure]

1. On Screen 1, the “Schedule Setting” screen, press “ Modify ” (1).
   Display the Expiration Setup screen (Screen 2).

Screen 1: Schedule Setting screen



Screen 2: Expiration Setup screen



2. Select the renewal month from the renewal month combination box (2).
   The renewal month can be selected from the 12 months beginning from the following month. If “None” is set for the renewal month, the calendar expiration warning will not be displayed.

3. When the selection is completed, press “ OK ” (3).
   To cancel, click “ Cancel ” (4).
   Display the Schedule Setting screen (Screen 1).

4. “Calendar Limit” (5) displays the selected renewal month.

⚠ CAUTION

If the calendar expiration warning has been displayed, the calendar display (6) is surrounded by a red outline.
Press “ Modify ” (1) to set the renewal month.

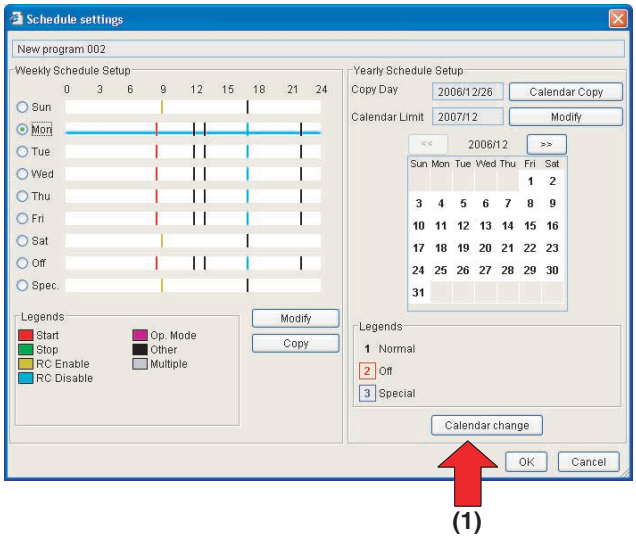
■ Editing a schedule calendar

Set normal days, holidays, and special days in the calendar.
Calendar settings can be made for a period of 13 months, including the current month.

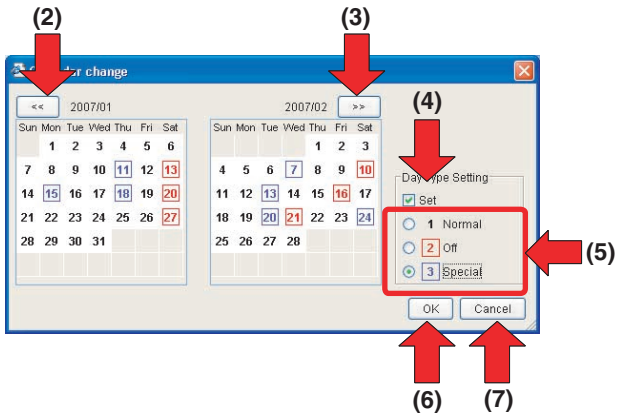
[Procedure]

1. On Screen 1, the “Schedule Setting” screen, press “ Calendar change ” (1).
   Display the Calender Change screen (Screen 2).

Screen 1: Schedule Setting screen



Screen 2: Calendar Change screen



2. Use “ << ” (2) and “ >> ” (3) to select the calendar of the month to set.
   Press “ >> ” (2) to move the calendar forward 1 month.
   Press “ >> ” (3) to move the calendar back 1 month.
   When the schedule calendar reaches the end, “ >> ” (2) is grayed out.
   When the schedule calendar reaches the start, “ << ” (3) is grayed out.

3. Place a checkmark next to “Set” (4) in the “Day Type Setting” area. Then select the “Normal,” “Off,” or “Special” radio button (5), and select the calendar date to set.

   The color of the date and presence/absence of a border indicates whether the date is a normal day, holiday, or special day.

	Date	Border
Normal day	Black	No
Holiday	Red	Yes
Special days	Blue	Yes

4. When the selection is completed, press “ OK ” (6).

   To cancel, click “ Cancel ” (7).
   Display the Schedule Setting screen (Screen 1).

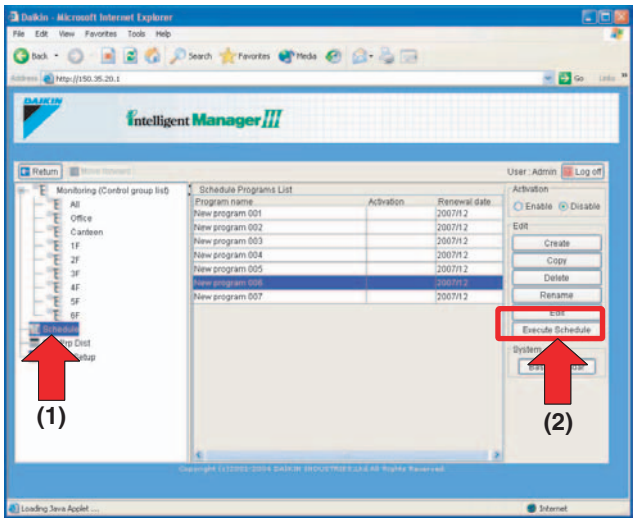
■ Setting an execution schedule

A schedule for the next week can be provisionally set based on the yearly schedule or weekly schedule.
The schedule is automatically renewed by the system when the date changes.
If automatic renewal occurs while editing is in progress, the system warns the user that this has occurred. It is then not possible to save the results of editing to that point.

[Procedure]

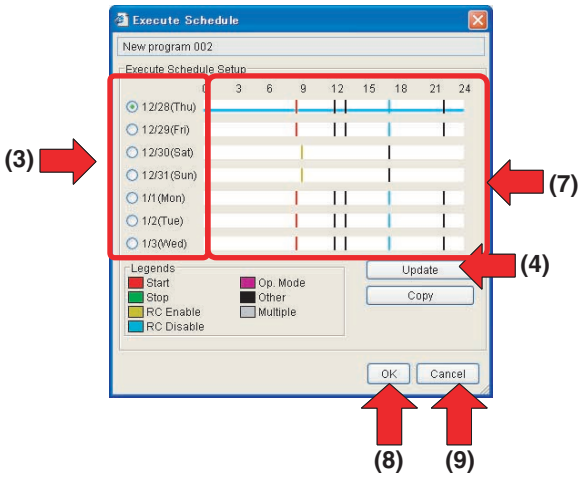
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



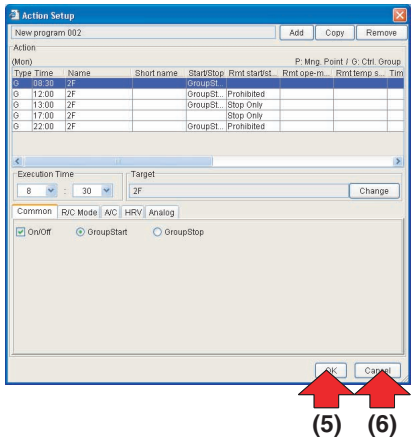
Select the schedule program to set as the execution schedule from the schedule programs list, then press
“ Execute Schedule ” (2).
Display the Execute Schedule screen 2.

Screen 2: Execute Schedule screen



2. The schedule for 1 week from the current date appears. Use the execution schedule setting radio buttons (3) and select the day to set, then press “ Update ” (4).
   Display the Action Setup screen (Screen 3).

Screen 3: Action Setup screen



3. Set the schedule action. (Refer to page 434.)
   When the selection is completed, press “ OK ” (5).
   To cancel, click “ Cancel ” (6).
   Display the Excute Schedule screen (Screen 2).
4. The schedule display field (7) for the set day is updated.

   Even when an execution schedule is set, it is not applied to the yearly schedule or weekly schedule.

   To set another day, repeat step 3 above.
5. When the selection is completed, press “ OK ” (8).
   To cancel, click “ Cancel ” (9).
   Display the Main scheduling screen (Screen 1).

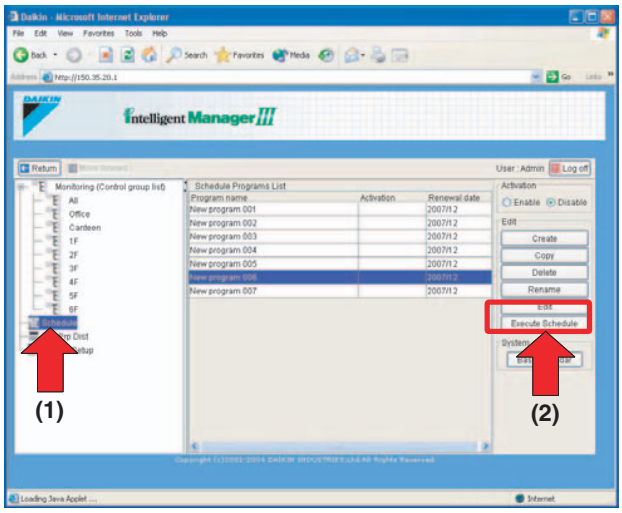
■ Copying an execution schedule

It is possible to take a schedule which was provisionally set for the next week based on the yearly schedule or weekly schedule and copy it to a different day.

[Procedure]

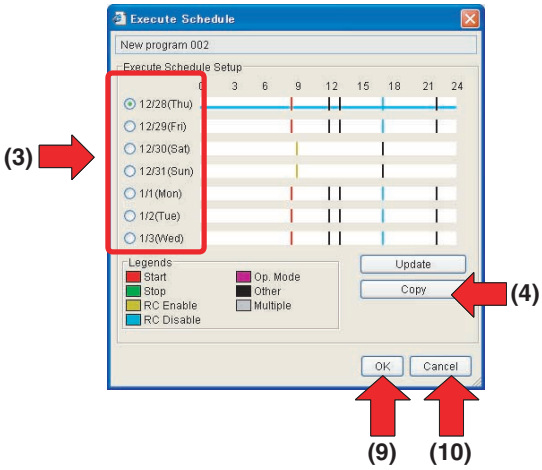
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



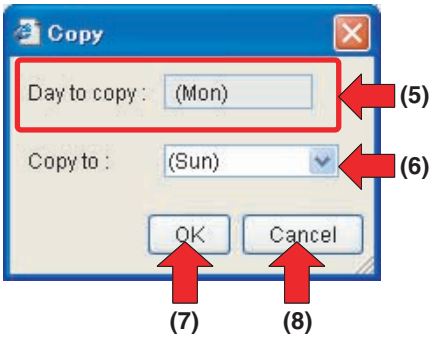
Select the schedule program to set as the execution schedule from the schedule programs list, then press " Execute Schedule " (2).
Display the Execute Schedule screen (Screen 2).

Screen 2: Execute Schedule screen



2. The schedule for 1 week from the current date is displayed. Use the execution schedule setting radio buttons (3) and select the day to copy, then press " Copy " (4).
Display the Copy screen (Screen 3).

Screen 3: Copy screen



3. The weekly schedule that was selected for copying appears in the "Day to copy" field (5).
From the "Copy to" combination box (6), select the weekly schedule for the copy destination.

The weekly schedule that was selected for copying does not appear in the "Copy to" combination box.

4. When the selection is completed, press " OK " (7).

To cancel, click " Cancel " (8).
Display the Execute scheduling screen (Screen 2).

5. The weekly schedule which was selected for copying is copied to the copy destination weekly schedule.

To copy to another day, repeat steps 3 and 4 above.

6. When the selection is completed, press " OK " (9).

To cancel, click " Cancel " (10).
Display the Main scheduling screen (Screen 1).

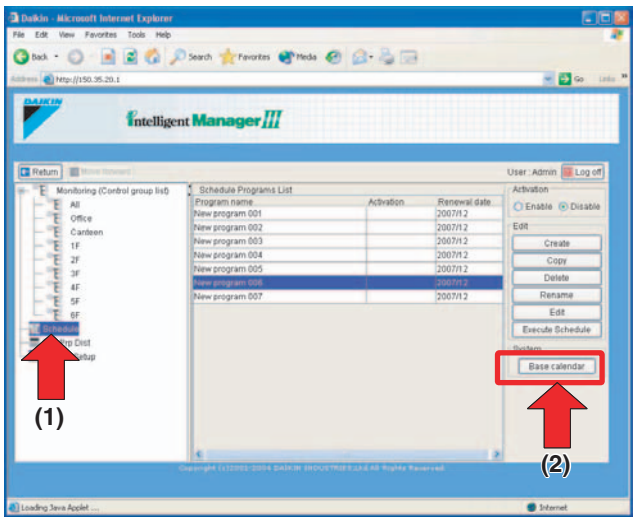
■ Creating a base calendar

Create a base calendar.
A maximum of 6 base calendars can be created.

[Procedure]

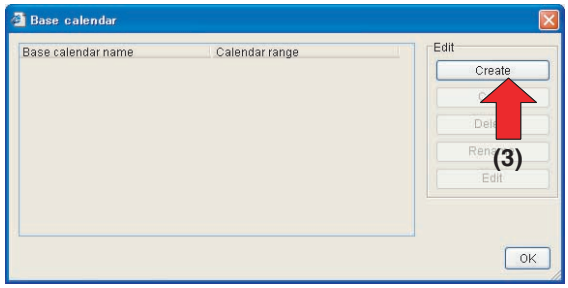
1. Select the Schedule node (1) from the function tree area. Display the Main scheduling screen.

Screen 1: Main scheduling screen



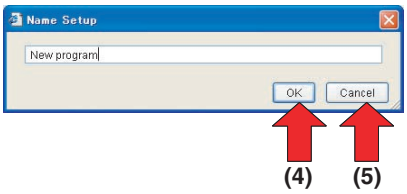
Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
Display the Base Calendar screen (Screen 2).

Screen 2: Base Calendar screen



2. Press " Create " (3).
Display the Name Setup screen (Screen 3).

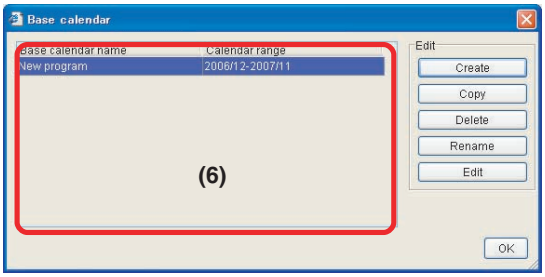
Screen 3: Name Setup screen



3. Enter the base calendar name. 0 – 32 characters can be entered.
The default name is [New program xxx] (xxx is a unique serial number).

4. After you have finished entering the name, press " OK " (4). To cancel, press " Cancel " (5).
Display the Base Calendar screen (Screen 4).

Screen 4: Base Calendar screen



5. The new base calendar is created in the base calendar list (6).
If "Cancel" is selected, the base calendar is not created.

The base calendar default settings are shown below.

Name:	Name which was set, the "Name Setup" screen.
Renewal month:	12 months after the current month
Type:	None set
Calendar:	All normal days

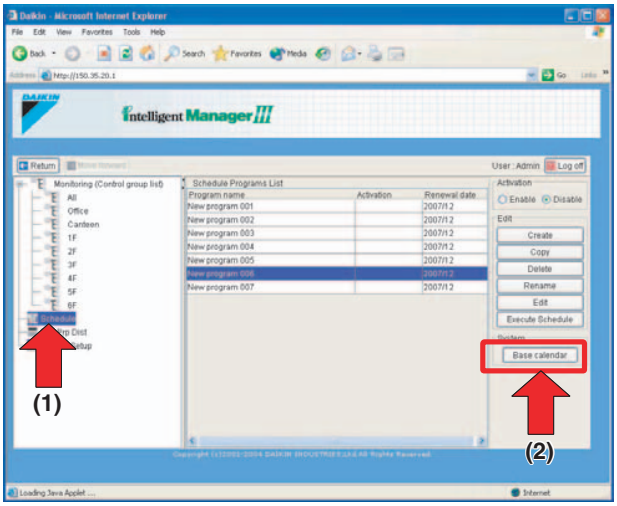
■ Copying a base calendar

Copy the base calendar that is selected from the base calendar list.

[Procedure]

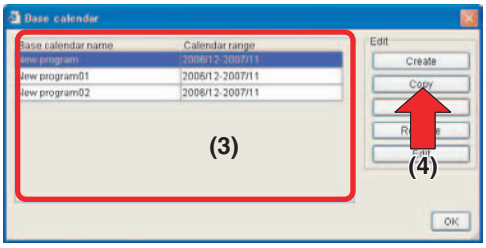
1. Select the Schedule node (1) from the function tree area.
Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



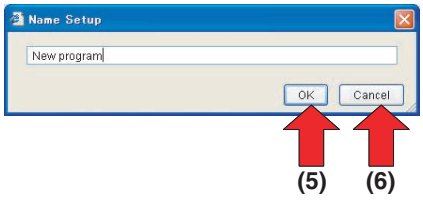
Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
Display the Base Calendar screen (Screen 2).

Screen 2: Base Calendar screen



2. Select the base calendar to copy from the base calendar list (3), then press " Copy " (4).
Display the Name Setup screen (Screen 3).

Screen 3: Name Setup screen

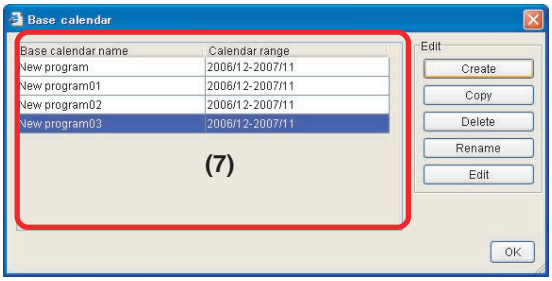


If no base calendar is selected from the base calendar list, then " Copy " (3) is grayed out.

3. Enter the base calendar name. 0 – 32 characters can be entered.
The default name is [New program xxx] (xxx is a unique serial number).

4. After you have finished entering the name, press " OK " (5). To cancel, press " Cancel " (6).
Display the Base Calendar screen (Screen 4).

Screen 4: Base Calendar screen



5. The base calendar that was selected from the base calendar list is copied and added to the base calendar list (6).
If "Cancel" is selected, the base calendar is not copied.

The default settings for the copied base calendar are shown below.

Name:	Name which was set, the "Name Setup" screen.
Other settings:	Base calendar list settings selected from the base calendar list

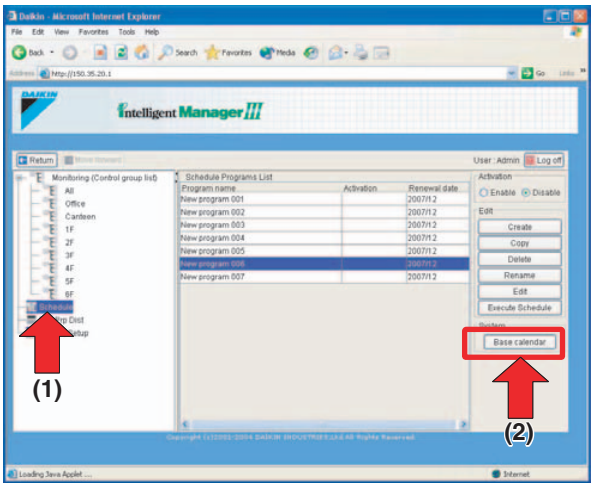
■ Deleting a base calendar

Delete the base calendar that is selected from the base calendar list.

[Procedure]

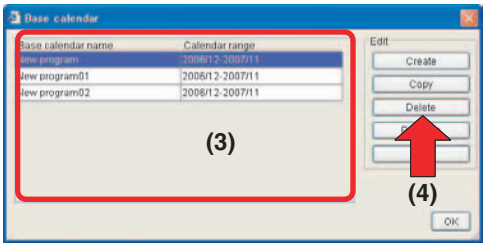
1. Select the Schedule node (1) from the function tree area.
   Display the Main scheduling screen 1.

   Screen 1: Main scheduling screen



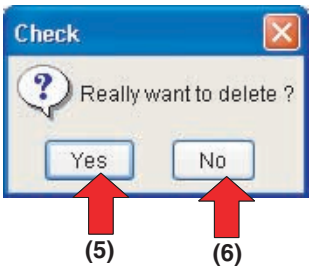
   Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
   Display the Base Calendar screen (Screen 2).

   Screen 2: Base Calendar screen



2. Select the base calendar to delete from the base calendar list (3), then press " Delete " (4).
   Display the Check screen (Screen 3).

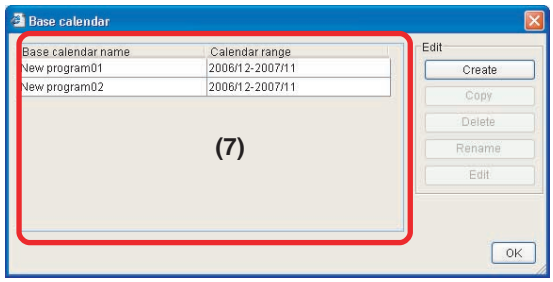
   Screen 3: Check screen



   If no base calendar is selected from the base calendar list, then " Delete " (4) is grayed out.

3. To delete the selected base calendar, press " Yes " (5).
   To cancel, press " No " (6).
   Display the Base Calendar screen (Screen 4).

   Screen 4: Base Calendar screen



4. The base calendar that was selected from the base calendar list (7) is deleted.
   The selected base calendar is deleted.
   If "Cancel" was selected, the base calendar is not deleted.

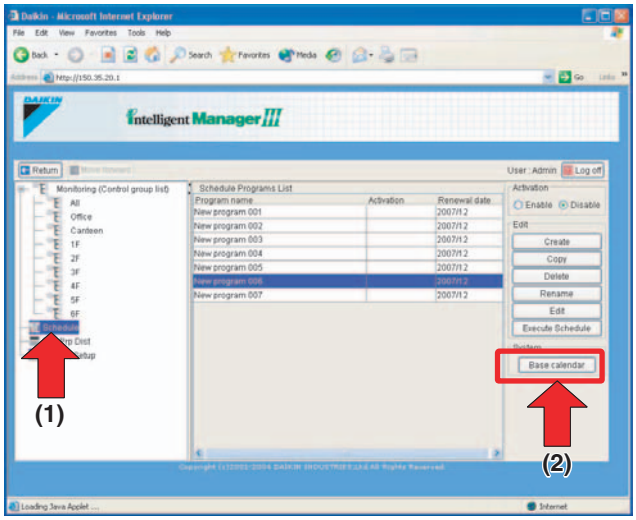
■ Changing the base calendar name

Change the name of the base calendar that is selected from the base calendar list.

[Procedure]

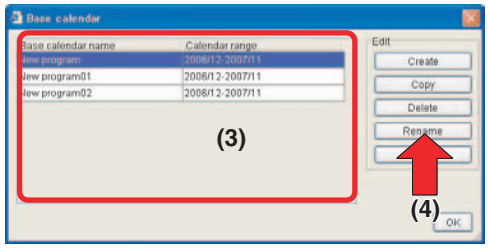
1. Select the Schedule node (1) from the function tree area.
   Display the Main scheduling screen (Screen 1).

   Screen 1: Main scheduling screen



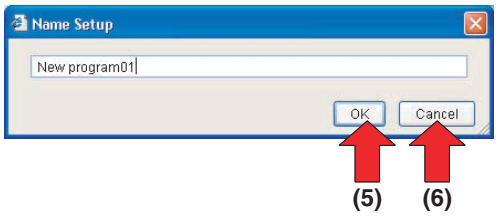
   Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
   Display the Base Calendar screen (Screen 2).

   Screen 2: Base Calendar screen



2. From the base calendar list (3), select the base calendar to change the name of, then press " Rename " (4).
Display the Name Setup screen (Screen 3).

Screen 3: Name Setup screen

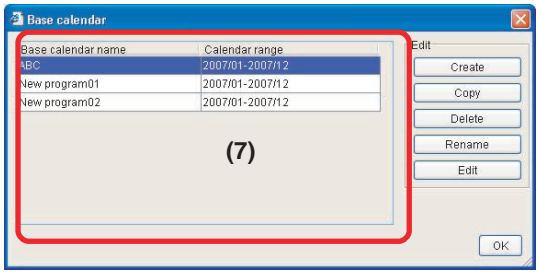


If no base calendar is selected from the base calendar list, then " Rename " (4) is grayed out.

3. Enter the base calendar name. 0 – 32 characters can be entered.

4. After you have finished entering the name, press " OK " (5). To cancel, press " Cancel " (6).
Display the Base Calendar screen (Screen 4).

Screen 4: Base Calendar screen



5. The name of the base calendar that is selected from the base calendar list (7) is changed.
If "Cancel" was selected, the base calendar name is not changed.

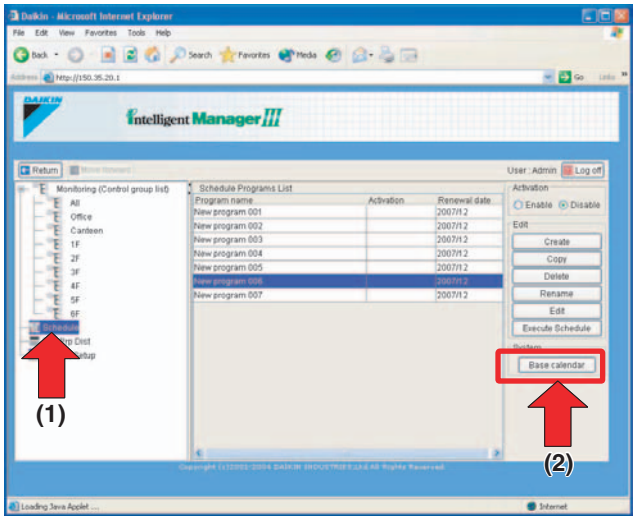
■ Setting a base calendar

By setting a common calendar for the system and copying the base calendar, it is possible to simplify/share calendar settings.
Calendar patterns (normal days, holidays, special days) can be set for a period of 12 months, including the starting month.

[Procedure]

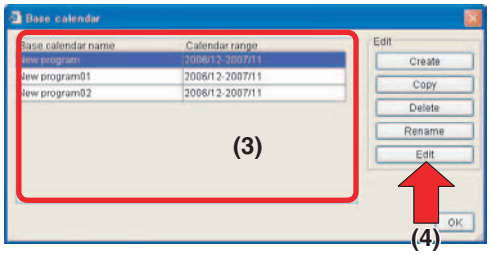
1. Select the Schedule node (1) from the function tree area.
Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



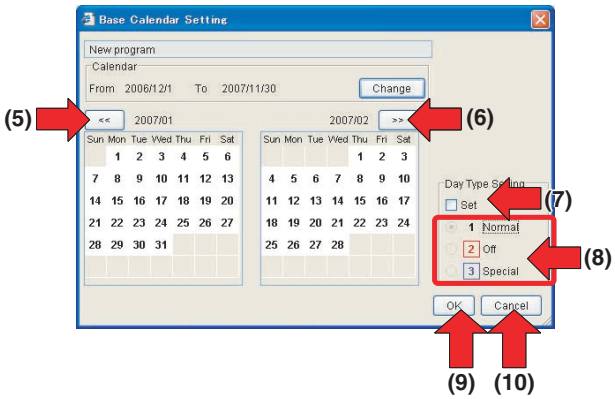
Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
Display the Base Calendar screen (Screen 2).

Screen 2: Base Calendar screen



2. Select the base calendar to set from the base calendar list (3), then " Edit " (4).
Display the Base Calendar Setting screen (Screen 3).

Screen 3: Base Calendar Setting screen



3. Use " << " (5) and " >> " (6) to select the calendar of the month to set.

Press " >> " (5) to move the calendar forward 1 month.

Press " << " (6) to move the calendar back 1 month.

4. Place a checkmark next to "Set" (7) in the "Day Type Setting" area. Then select the "Normal," "Off," or "Special" radio button (8), and select the calendar date to set.

The color of the date and presence/absence of a border indicates whether the date is a normal day, holiday, or special day.

	Date	Border
Normal day	Black	No
Holiday	Red	Yes
Special days	Blue	Yes

5. When the selection is completed, press " OK " (9).

To cancel, click " Cancel " (10).
Display the Base Calendar screen (Screen 2).

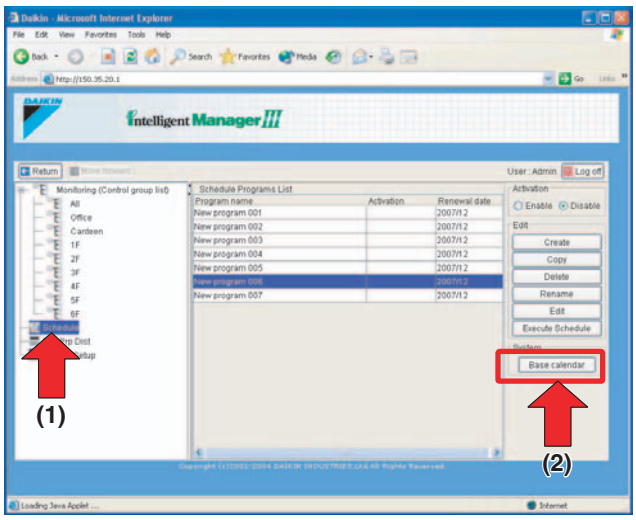
■ Setting the base calendar period

Set base calendar start month.
The base calendar period can be set from January 1998 – December 2036.

[Procedure]

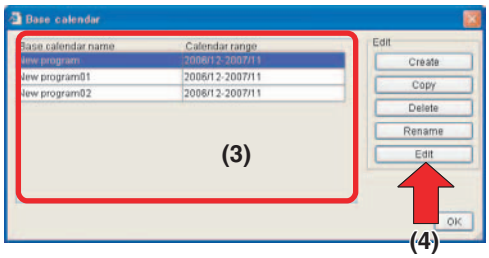
1. Select the Schedule node (1) from the function tree area.
Display the Main scheduling screen (Screen 1).

Screen 1: Main scheduling screen



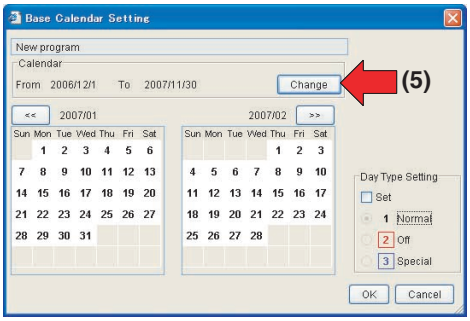
Select the schedule program to set as the execution schedule from the schedule programs list, then press " Base calendar " (2).
Display the Base Calendar screen (Screen 2).

Screen 2: Base Calendar screen



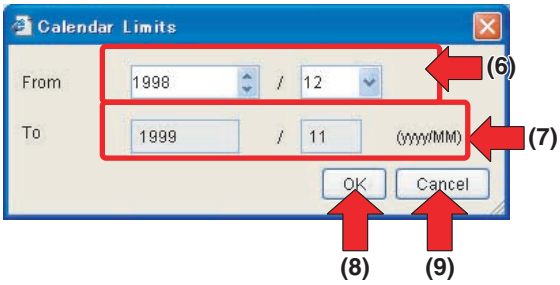
2. Select the base calendar to set from the base calendar list (3), then " Edit " (4).
Display the Base Calendar Setting screen (Screen 3).

Screen 3: Base Calendar Setting screen



3. Press " Change " (5).
Display the Calendar Limit screen (Screen 4).

Screen 4: Calendar Limit screen



4. In the "From" field (6), use the spinner button to select the year, and use the combination box to select the month in order to select the year and month to set.
The values in the "To" field (7) change automatically to match changes in the "From" values.

5. When the selection is completed, press " OK " (8).

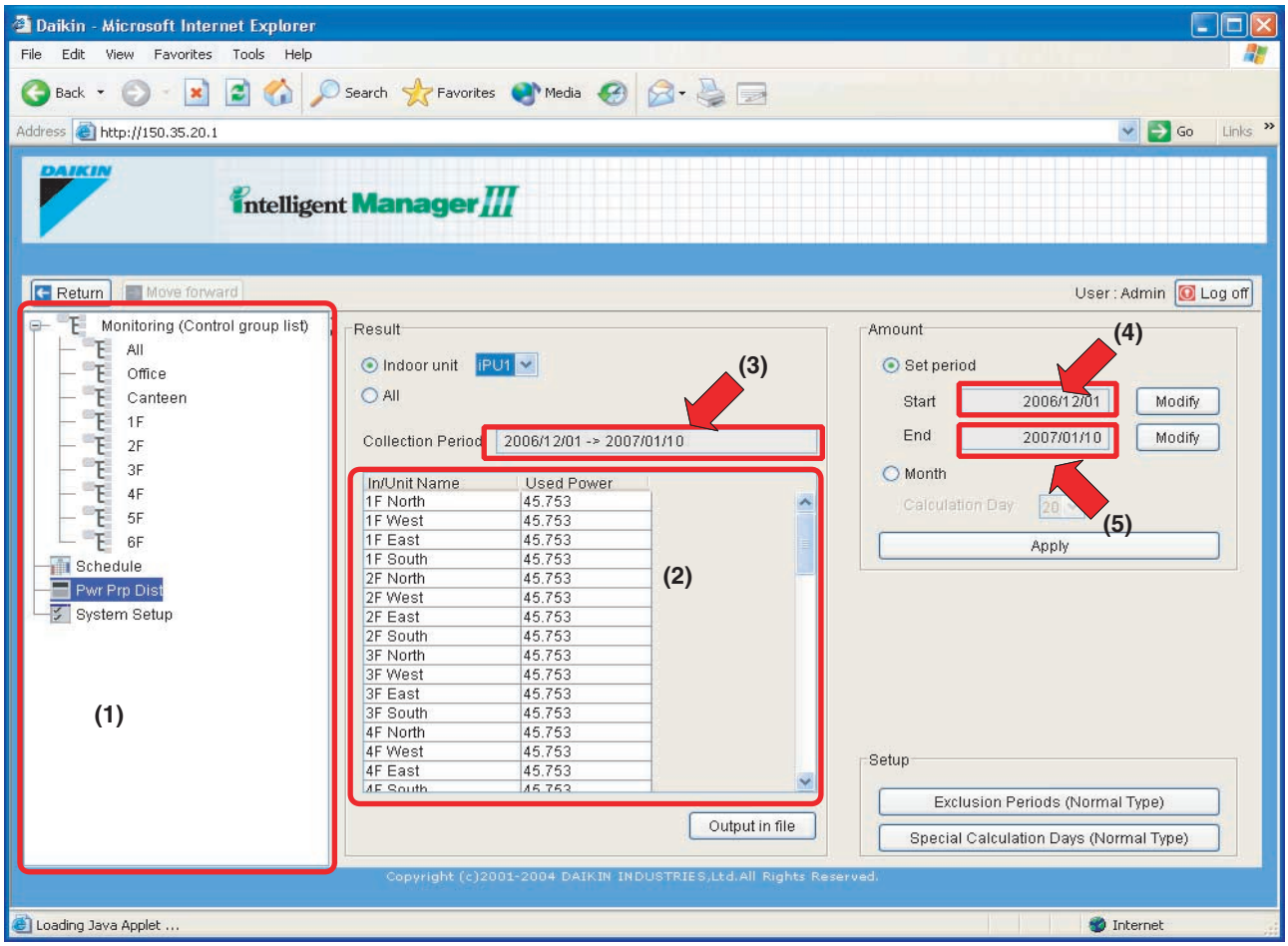
To cancel, click " Cancel " (9).
Display the Base Calendar Setting screen (Screen 3).

9. Menu Structure of Proportional Distribution Function

9-1 Main screen

This page explains the screen displayed when the schedule menu is selected.

When (1) Pwr Prp Dist is selected, the following Main screen of proportional distribution appears.



■ Display Area

(1) Function tree are
When Pwr Prp Dist is selected, the Main screen of proportional distribution appears.

(2) Total result list
The collection result of proportional distribution is distributed as a list.

(3) Collection Period
The collection period of proportional distribution appears.

(4) Start
The start date of the collection period of proportional distribution appears.

(5) End
The end date of the collection period of proportional distribution appears.

■ Buttons

Apply
Proportional distribution data on the period or month set is collected and distributed in the collection result list in the display area (2).

Set period
You can select the desired set period of proportional distribution.
* When the Set period radio button is selected, the Month radio button is grayed out.

Modify
You can set the start and end dates of the collection of proportional distribution.

Month
You can select the desired month of proportional distribution.
* When the Month radio button is selected, the Set period radio button is grayed out.

20
You can set the desired calculation date of the collection month of proportional distribution.

Exclusion Periods (Normal Type)

Set the desired time control group and the day of the week for not performing proportional distribution calculation.

Special Calculation Days (Normal Type)

Proportional distribution calculation is possible for holidays (public holidays and national holidays) other than regular closing days (e.g., Saturdays and Sundays).

Indoor unit — The list of collection results for the proportional distribution data can be displayed for each management point.

iPU1 — The list of collection results for the proportional distribution data can be displayed for all management points which are included in the iPU.

All — The display of the total of the collection result list of proportional distribution data.

Output in file — You can save the result list of proportional distribution data in CSV file format on the hard disk of the PC.

Return — Press this button to return to the previous screen displayed in the function tree. (You can return to a maximum of 20 screens.)

Move forward — Moves the function tree display forward after it was previously returned with the “Return” button.

Log off — Press this button to log off and return to the login screen.

9-2 Settings for Exclusion Periods (Normal Type)

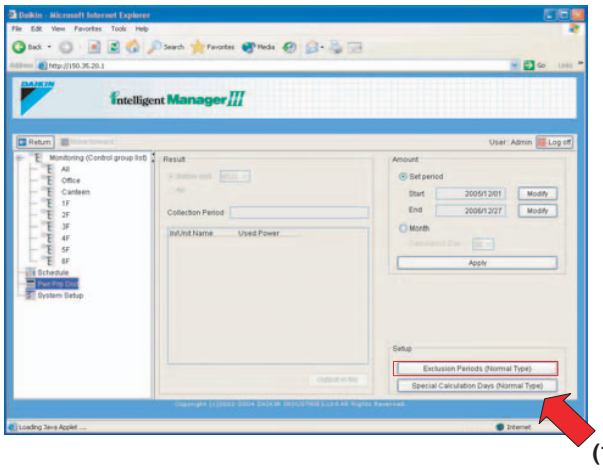
You can set the desired time control group between 0:00 and 24:00 and the day of the week for not performing proportional distribution calculation.

Example — You can use this screen if you want to collect a fixed amount charge for normal business hours on weekdays and calculate the proportional distribution of power consumption only for overtime and holidays.

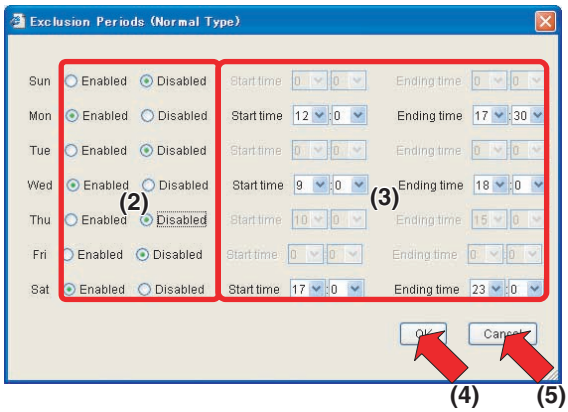
∗ You can make exclusion period settings on a time control group basis (between 0:00 and 24:00) or on a day-of-the-week basis.
These settings are made for the whole system, and you can make individual settings on a group or control group basis.

1. Press (1) Exclusion Periods (Normal Type) in the Main screen (Screen 1) for proportional distribution.
Screen 2 for exclusion periods appears.

Screen 1: Main screen for proportional distribution



Screen 2: Screen for exclusion periods



2. Set the desired day of the week for the target exclusion period.
Check the corresponding radio button in the Enable/Disabled field (2).
The start time and ending time appear in the Start/Ending time field (3).

3. Press the 0 buttons for the start time and ending time and set the period.
Check that the set start time and ending time are displayed in the Start/Ending time field (3).

4. If you want to disable any exclusion period already set, select the corresponding day of the week and press the Disabled radio button in the Enable/Disabled field (2).
The Start/Ending time filed (3) is grayed out and the settings are disabled.

5. If you want to make an exclusion period for a different day of the week, repeat steps 2 and 3 of the above.
Go to step 6 to finish the settings.

6. Press (4) OK on completion of the settings.
Press (5) Cancel to cancel the settings.
The Main screen (Screen 1) for proportional distribution appears.

9-3 Setting Special Calculation Days (Normal Type)

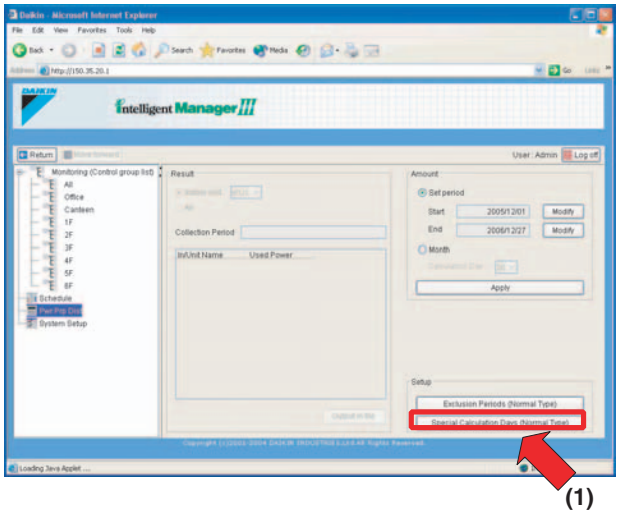
Take the following steps to set special calculation days.
It is possible to make exceptional settings so that you can make the proportional distribution calculation of the already-set exclusion period of any full day (i.e., 0.00 to 24:00) of the week.

Example You can make the above exceptional settings if you want to make the proportional distribution calculation of the 24-hour periods of specified holidays (public holidays and national holidays), other than regular closing days (e.g., Saturdays and Sundays).

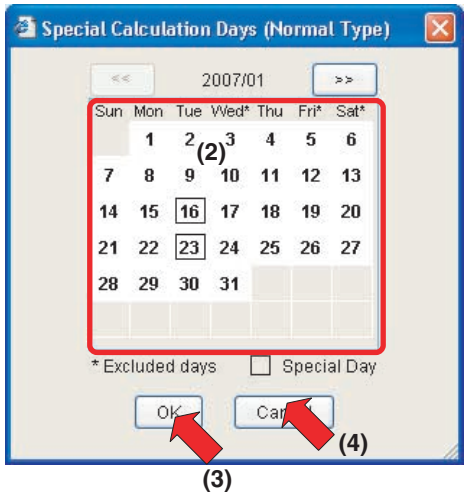
∗ You can make settings on a year basis, and the month and date that are set will be valid in the next year as well.
If settings are made for February 29 of a leap year, the same setting will be effective on February 29 in the next leap year.
This function has a setting range up to December 2037.

1. Press (1) [Special Calculation Days (Normal Type)] in the Main screen (Screen 1) for proportional distribution.
Screen 2 for special calculation days appears.

Screen 1: Main screen for proportional distribution



Screen 2: Screen for special calculation days



2. Press [<<] or [>>] to select the desired month to be set.
3. Select the desired special calculation day of the month in the calendar field (2). When the date is selected, a square appears around the date.
   ∗ If an exclusion period is set for any day, the day will be marked with an asterisk.
4. If you want to cancel the proportional distribution calculation of a Special Calculation Days of the month, select the date in the Calendar field.
The square box around the day disappears and the setting is canceled.
5. If you want to set another special calculation day, repeat steps 2 and 3 of the above. Go to step 6 to finish the settings.
6. Press (3) [OK] on completion of the settings.
Press (4) [Cancel] to cancel the settings.
The Main screen (Screen 1) for proportional distribution appears.

9-4 Setting Collection Periods of Proportional Distribution Result (Period Settings)

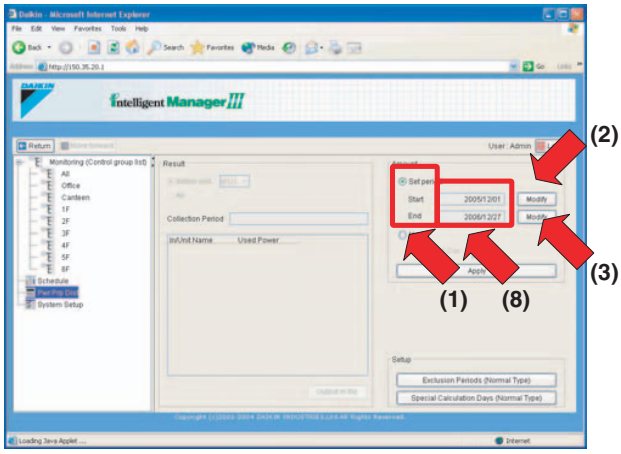
Period settings enable you to make arbitrary settings for the period of collecting the result of proportional distribution.

Example Use this function if you want to make a control group change or increase the number of air conditioners during a month and you want to see the proportional distribution results before and after the change or increment.

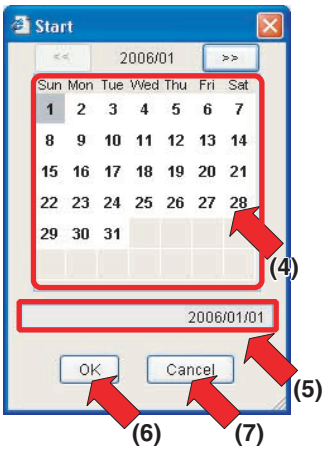
∗ The possible setting range of the start date is from the first day of the month of the previous year to the last day of the month and that of the end date is from the first day of the month of the previous year to the day before the last day of the month.

1. Select the Set period radio button from the collection field (1) in the Main screen for proportional distribution (Screen 1).
The collection start date and end date appear.
   ∗ If the Month radio button is selected in the collection field (1), the collection start date, end date, and modify buttons are grayed out.

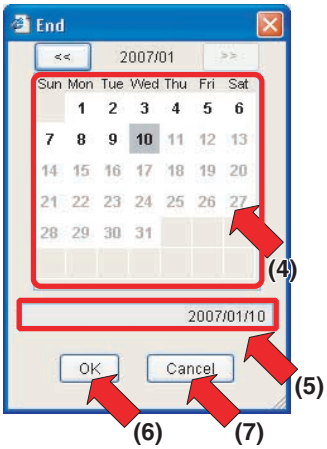
Screen 1: Main screen for proportional distribution



Screen 2: Screen for collection start date



Screen 3: Screen for collection end date



2. Press (2) Modify to change the collection start date.

Press (3) Modify to change the collection end date.
When you select the collection start date, Screen 2 for the collection start day appears. When you select the collection end date, Screen 3 for the collection end date appears.

3. Select the collection start month or end month. Select the desired month with the << or >> in Screens 2 or 3.

∗ If the change to the previous month is not possible, the << is grayed out. If the change to the next month is not possible, the >> is grayed out.

4. Select the collection start date or end date. Select the date in the calendar field (4) in Screen 2 or Screen 3. The selected date is grayed out.

5. Check that the collection start date and end date in the Date field (5) in Screens 2 and 3 are correct.

If the selected date is incorrect or if you want to make changes, take steps 2 to 4 of the above.

6. Press (6) OK in Screen 2 and Screen 3 on completion of the settings.

Press (7) Cancel to cancel the settings.
The Main screen (screen 1) for proportional distribution appears.

Check that the start date and end date are properly set in the Start/End field (8).
If they are incorrect, take steps 2 to 5 of the above.

9-5 Setting Collection Periods of Proportional Distribution Result (with Month Specified)

You can display the result of proportional distribution on a monthly basis with the desired month specified. Moreover, by specifying the calculation dates, you can display the result of proportional distribution between the specified calculation dates of the previous month and the next month.

Example You can use this function to see the result of power proportional distribution of in-building facilities (e.g., tenants).

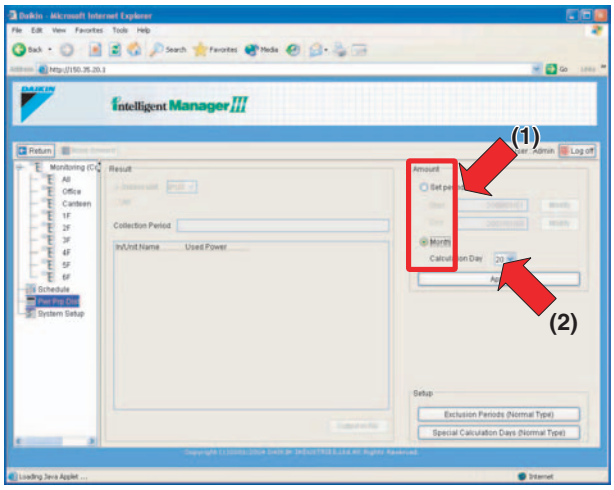
∗ The collection period is from 0:00 of the specified calculation date of the previous month to the 0:00 of the specified calculation date of the present month.

Example If the calculation date is set to 20 while the date displayed on the intelligent Manager is October 20, the result of proportional distribution displayed covers a period from September 20 to October 19.

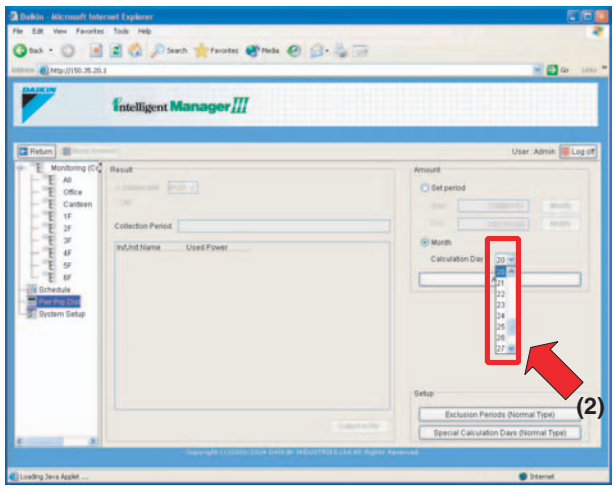
1. Select the Month radio button from the collection filed (1) in the Main screen (Screen 1) for proportional distribution. The Calculation date combination box appears.

∗ If the Set period radio button is selected in the Collection field (1), the Calculation date combination box is grayed out.

Screen 1: Main screen for proportional distribution



Screen 2: Screen for calculation date



2. Open the Calculation date combo box and set the target date. (Refer to Screen 2 for calculation date.)
   If the date settings are completed, check that the selected dates appear in the Calculation date field (2).

   * This function has a setting range from the first day to 31st day of the month.
   If you set the calculation date to 31st but the month has no 31st day, the calculation period will start from the end of the month. In the case of February, the calculation period will start February 28.
   (In the case of a leap year, a total period will start February 29.)

9-6 Display Method of Proportional Distribution Result-1

You can display and check the collection result of proportional distribution data in the list of the Collection result field. Moreover, you can save the result of proportional distribution in CSV format on the hard disk of the PC.

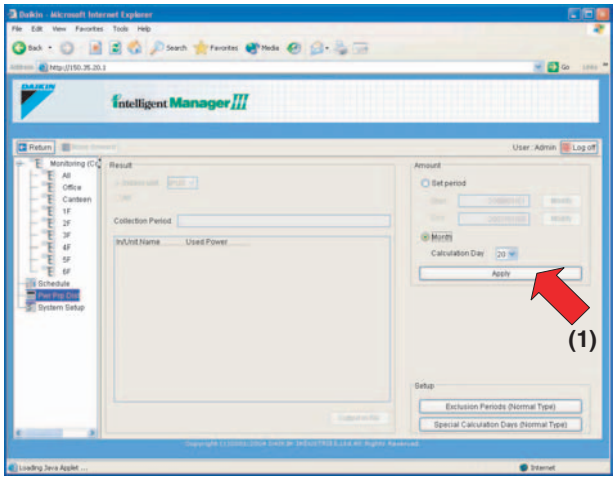
* If you select “No” in the security warning screen (see page 395), you cannot save the file on the hard disk of the PC. If you want to save the file on the hard disk of the PC, once quit Internet Explorer, start Internet Explorer, and select “Yes” and “Always” in the security warning screen.

Before displaying the result of proportional distribution, make exclusion period, special calculation day, and calculation period (period and month) settings.

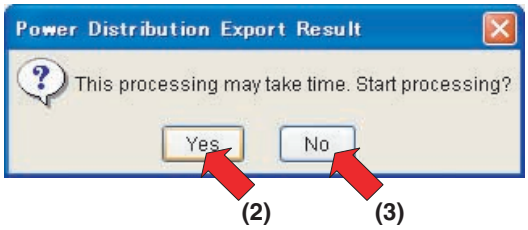
- Exclusion Periods (Normal Type)..... (See page 446)
- Special Calculation Days (Normal Type).... (See page 447)
- Calculation period
  Set period..... (See page 447)
  Month..... (See page 448)

1. Before displaying the result of proportional distribution, make exclusion period (normal type), special calculation day (normal type), and collection period (period and month) settings.
   Press the (1) Apply in the Main screen (Screen 1) for proportional distribution. Screen 2 for power distribution export result appears.

Screen 1: Main screen for proportional distribution



Screen 2: Screen for Power Distribution Export Result



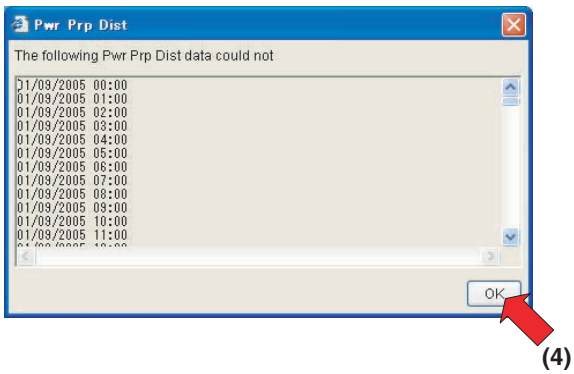
2. The message “This processing may take time. Start processing?”
   To start processing, press (2) Yes .
   If you do not want to start processing, press (3) No .

   * The Main screen (Screen 1) appears when you press No .

3. If there were periods when no collection data was obtained, Screen 3 for Pwr Prp Dist appears.
   Press (4) OK .

   * The periods when no collection data was obtained are displayed in the format of [YMD][H]:00.

Screen 3: Screen for Pwr Prp Dist



Go to the following.

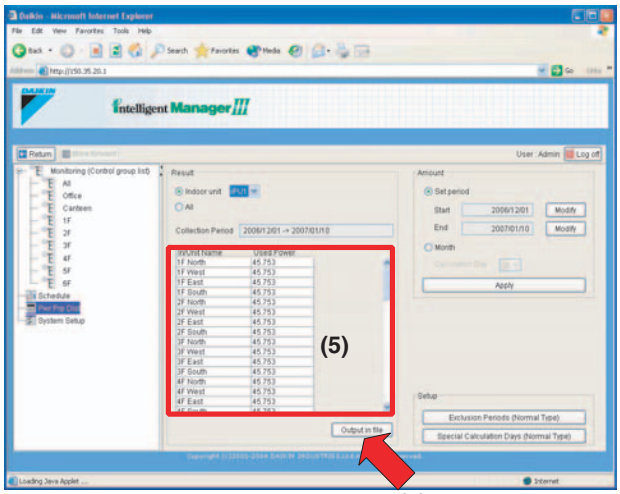
9-7 Display Method of Proportional Distribution Result-2

4. The collection result list (5) shows the result of proportional distribution.
   The contents of the display are explained below.

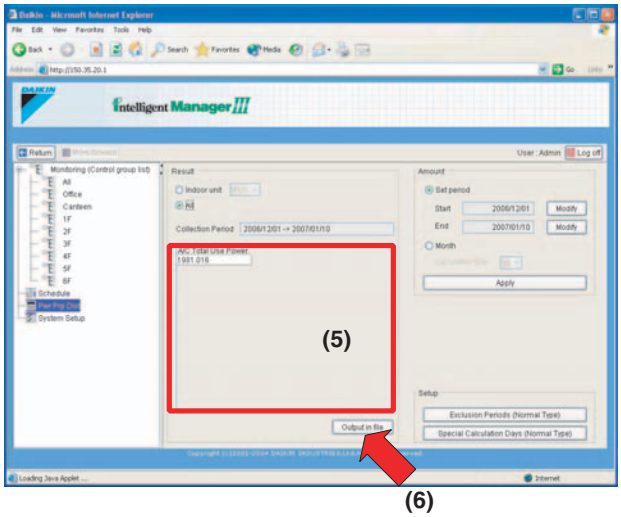
- Indoor unit check button
  The result of proportional distribution is displayed on an indoor unit basis.
  “In/Unit Name” and “Used Power” are displayed in the collection results list.
- iPU No. combination box
  The collection results list displays only the management points which are included in the iPU which was selected from the iPU combination box.
  The iPU numbers which can be selected are iPU1 – iPU4.
  iPU numbers which are not included in the system configuration cannot be displayed.
- All check button
  Press this button to display the sum total of the results of proportional distribution of all the indoor units.
  The “A/C Total Use Power” is displayed in the collection results list.

- Calculation period
  The period displayed shows the collection start year, month, and date and the collection end year, month, and date.

Screen 4: Screen for collection result of indoor units



Screen 5: Screen for total collection result



5. Screen 4 or 5 appears as explained below, depending on the button selected.
Indoor unit check button: Screen 4 for the collection result of indoor units.
All check button: Screen 5 for the total collection result.

6. To save the collection result on the hard disk of the PC, press (6) Output in file button in screen 4 to 5.

∗ The collection result is saved in CSV format.
Two files, i.e., HOURLY.CSV, and a file containing data on the collection period (collection start date_end date) with the delimiter and extension (.CSV), are saved.

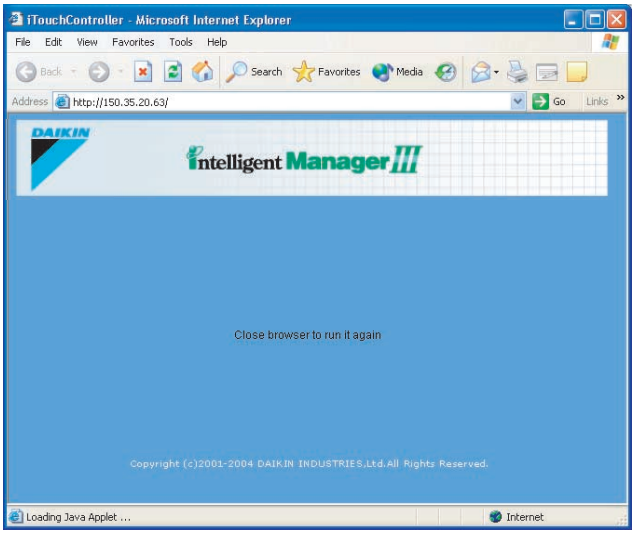
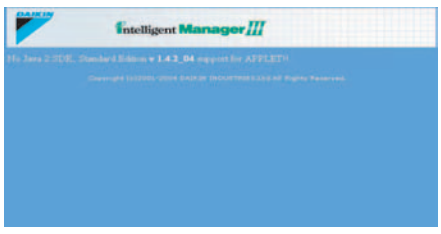
7. If you want to display and save the result of proportional distribution of a different period, repeat steps 1 to 6.

⚠ CAUTION

Proportional data is collected and added up through the monitor panel software. Collect the data while the software is running.

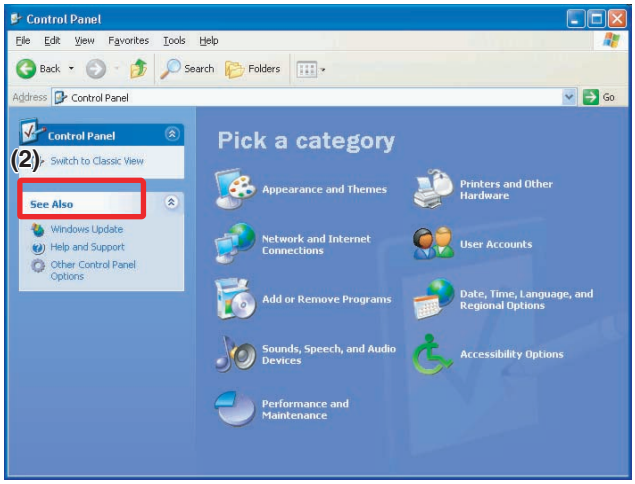
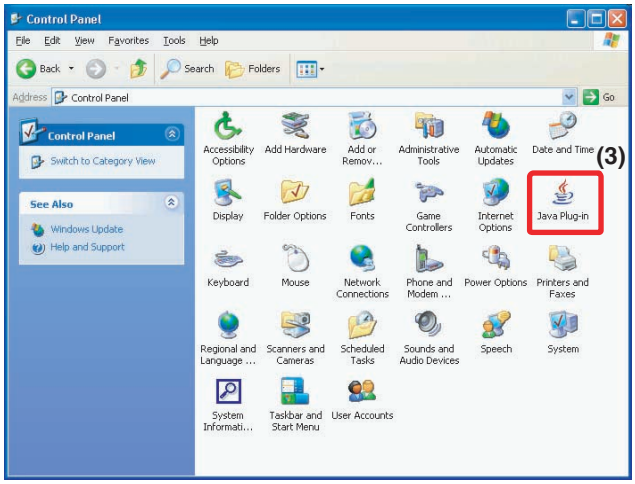
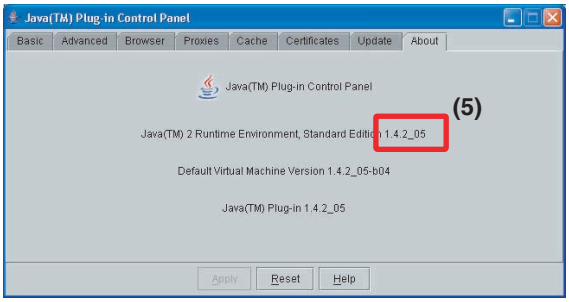
10. Before Contacting Us: Troubleshooting

Problems	Possible Reasons and Solutions
Air conditioners are not operational, although I did not click the stop button on the web interface.	The most likely causes are: 1. The air conditioners were stopped using the local remote controllers. 2. The air conditioners were stopped from the intelligent Manager console or any centralized controller. 3. A power failure occurred. 4. A schedule program set via the web interface stopped the air conditioners. 5. The Heating Optimization function of the intelligent Manager stopped the conditioners. In the HEAT operation mode room temperature may increase if thermostats do not work. The function prevents this problem by automatically stopping air conditioners. For more information, refer to the intelligent Manager operation manual.
Air conditioners are operational, although I did not click the start button on the web interface.	The most likely causes are: 1. The air conditioners were started using local remote controllers. 2. The air conditioners were started from the intelligent Manager console or any centralized controller. 3. A schedule program set via the web interface started the conditioners. 4. The Temperature Limit function of the intelligent Manager started the air conditioners. This function prevents room temperature from becoming extremely high or low by automatically starting air conditioners when a specified temperature threshold is exceeded. For more information, refer to the intelligent Manager operation manual.
The temperature setting and/or operation mode of the air conditioner were changed, although I did not change these settings on the web interface.	The most likely causes are: 1. The settings were changed using the local remote controllers. 2. The settings were changed from the intelligent Manager console or any centralized controller. 3. A schedule program set via the web interface changed the settings. 4. The Change Over function of the intelligent Manager changed the settings. This function maintains optimal room temperature by automatically changing the operation mode and/or temperature setting according to the changing environment conditions. For more information, refer to the intelligent Manager operation manual.
The user cannot log in and an error screen appears.	The most likely causes are: • The login user ID may not be authorized to perform website control. Contact the administrator. • Do you attempt to log into the monitor panel software? Both website functions (i.e., the monitor panel software and website) cannot be used simultaneously. Log out of the monitor panel software. Then log into the website function.

Problems	Possible Reasons and Solutions
When the user logs in with a user ID authorized to be in schedule, PPD, view function, and temperature setting restriction, the user ID is not displayed in the function tree in advanced mode.	The most likely causes are: • Both website functions (i.e., the monitor panel software and website) cannot be used simultaneously. Log out of the monitor panel software. Then log into the website function. • When the user authorized to be in control of monitor panel software (e.g., schedule control) has already logged into the monitor panel software, the user cannot use website functions. Log out of the monitor panel software. Then log into the website function.
The user cannot collect and add up proportional data.	• Proportional data is collected and added up through the monitor panel software. Collect the data while the software is running.
The following dialog box appears stating that a communication error occurred, and I cannot operate the air conditioners from my PC. Screen 1  Screen 2 	The most likely causes are: 1. Your PC is not cabled correctly to the intelligent Manager. 2.The intelligent Manager is turned off. Clicking the OK button on the dialog box (Screen 1) displays the Screen 2. Close your browser software and then restart it.
I cannot access the intelligent Manager web interface.	• Your PC is not correctly connected to the network. • The intelligent Manager address entered in the browser is incorrect. • The intelligent Manager is turned off. • The network is congested for any reason. In this case wait for a while and then access it again.
When accessing the intelligent Manager web interface, the following screen appears. 	• This message informs you that Java plugin is not installed or the version of the installed Java plugin is not supported. Install the correct version of Java plugin. Refer to “BEFORE STARTING” for more information. (See page 392)

Problems	Possible Reasons and Solutions
When accessing the intelligent Manager web interface, the following screen appears. 	• This message informs you that your browser does not support the frame function. Check you browser's specifications. Refer to "BEFORE STARTING" for more information. (See page 392)

Problems	Possible Reasons and Solutions
I can access the intelligent Manager web interface. However it takes too much time to refresh the screen.	• The network may be congested for any reason. In this case wait for a while and then access it again.
The room temperature value on the intelligent Manager web interface does not match the actual measurement value.	• Since the suction temperature of air conditioners is used, this may not reflect the actual measurement value, especially when the indoor unit's fans are stopped. This temperature value should be considered as a rough indicator.
Java plugin does not work correctly.	• Java plugin is not installed correctly. • The version of the installed Java plugin is not supported. * The latest version may not be supported. Refer to "BEFORE STARTING" for more information. (See page 392)

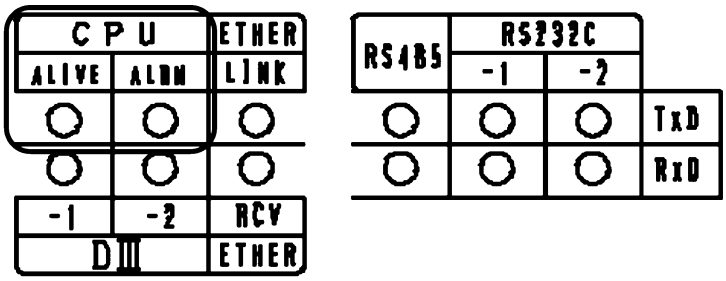
Problems	Possible Reasons and Solutions
  	**Checking the Java Plug-in** **1.** Open the Windows Control Panel. **2.** If “Category View” is active, switch to “Classic View.” **3.** If the Java plug-in is installed, the “Java Plug-in” icon is displayed. **4.** Double-click on the “Java Plug-in” icon to open the Java plug-in control panel. **5.** Click on the “About” tab and check the version number.

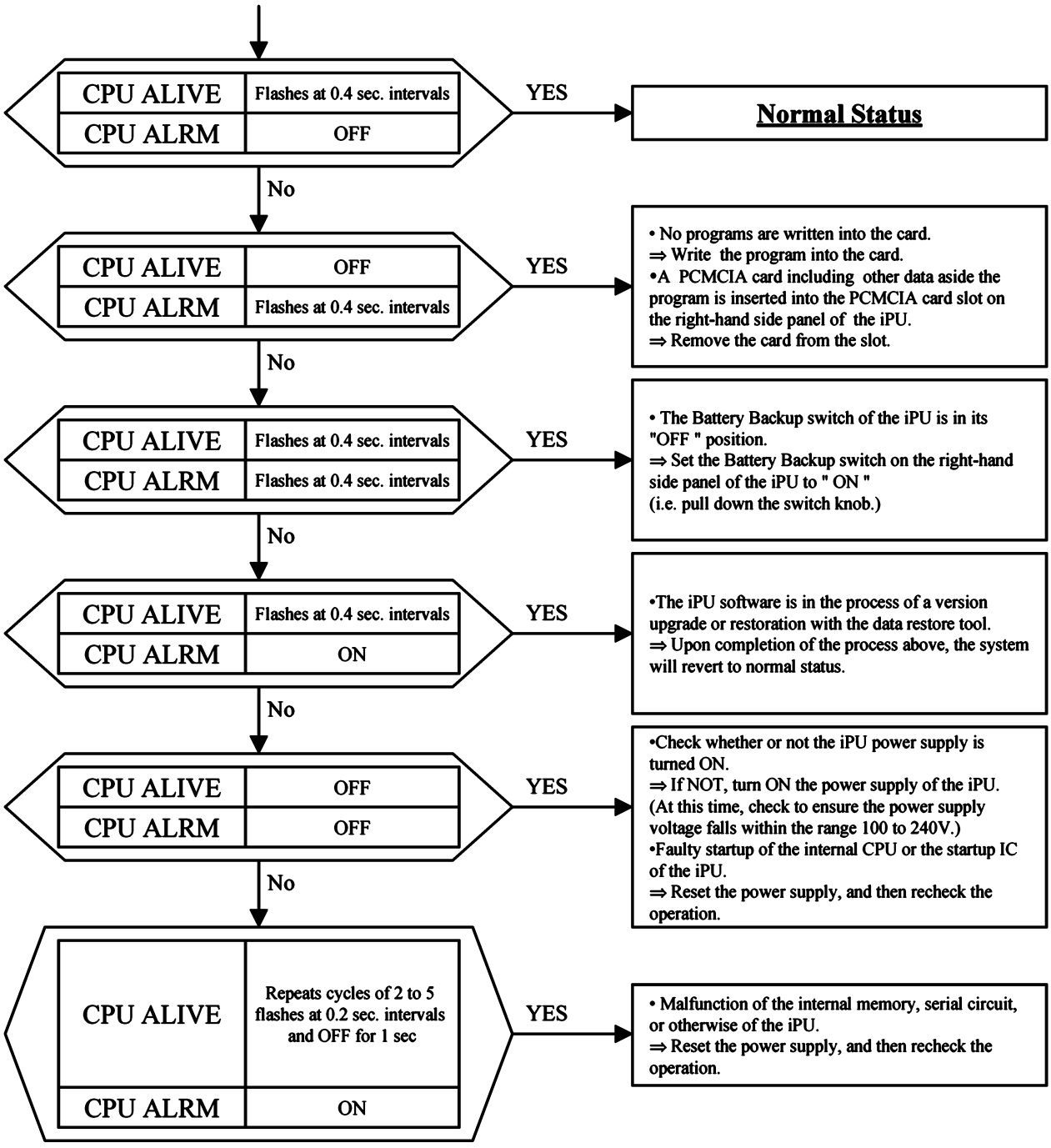
Part 7
Troubleshooting

1. Troubleshooting by LEDs on intelligent Manager 456
   1.1 Diagnosis by CPU ALIVE LED,CPU ALRM (ALARM) LED.....456
   1.2 Diagnosis by ETHER LINK LED,ETHER RCV LED.....457
   1.3 Diagnosis by DIII-1-4 LED.....458
   1.4 Diagnosis by RS232C-1 TxD,RxD LED 459
   1.5 Diagnosis by RS232C-2 TxD,RxD LED 460
2. Typical Troubles and Countermeasures 461

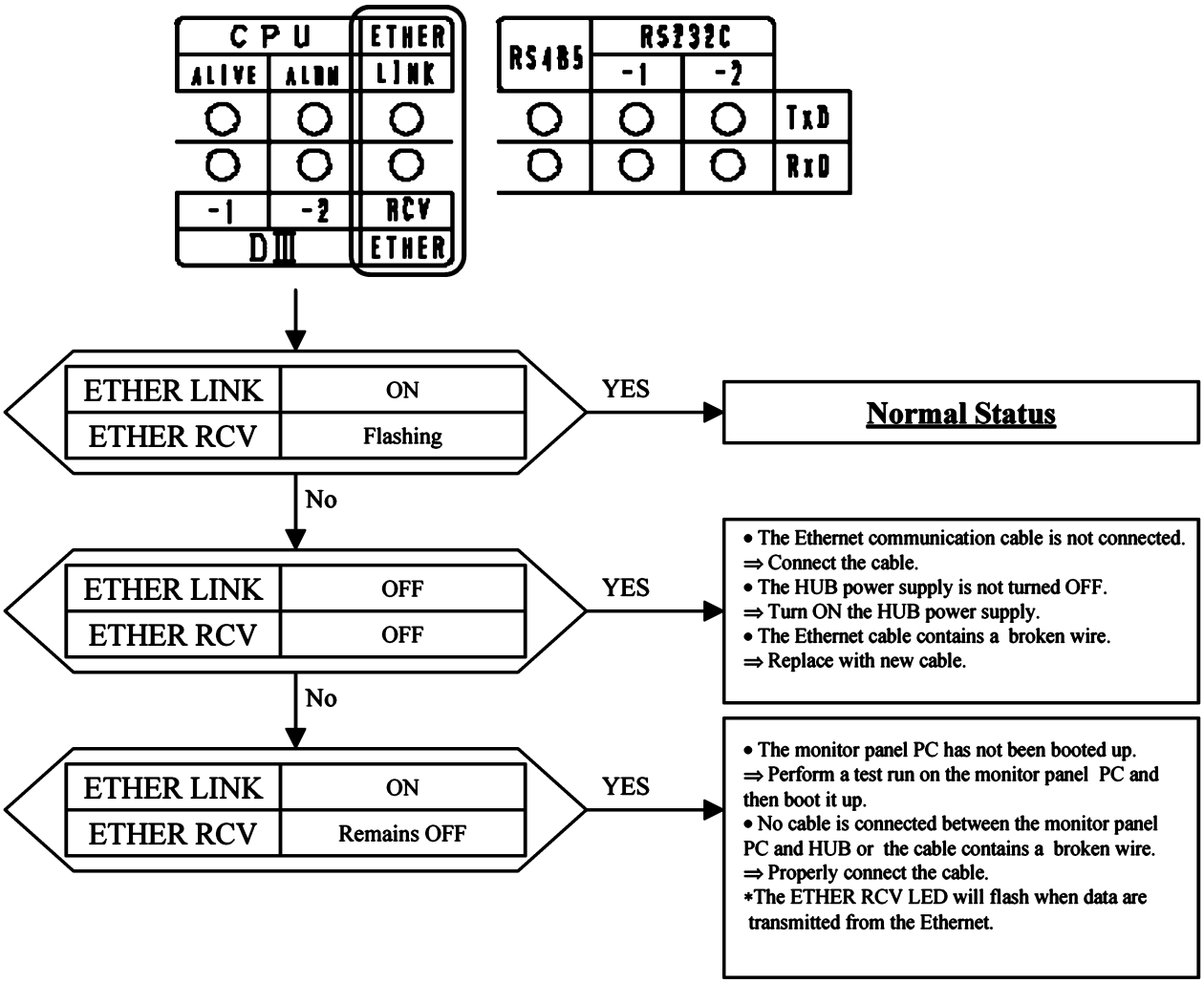
1. Troubleshooting by LEDs on intelligent Manager

1.1 Diagnosis by CPU ALIVE LED,CPU ALRM (ALARM) LED

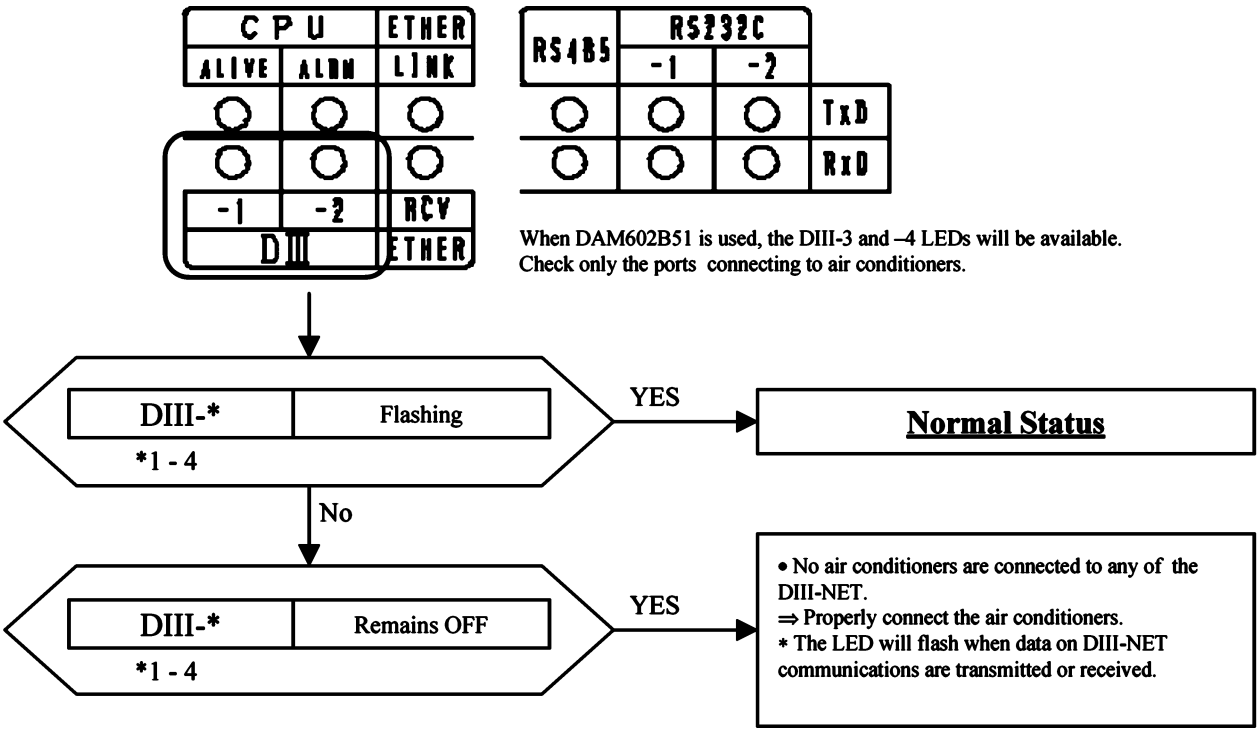




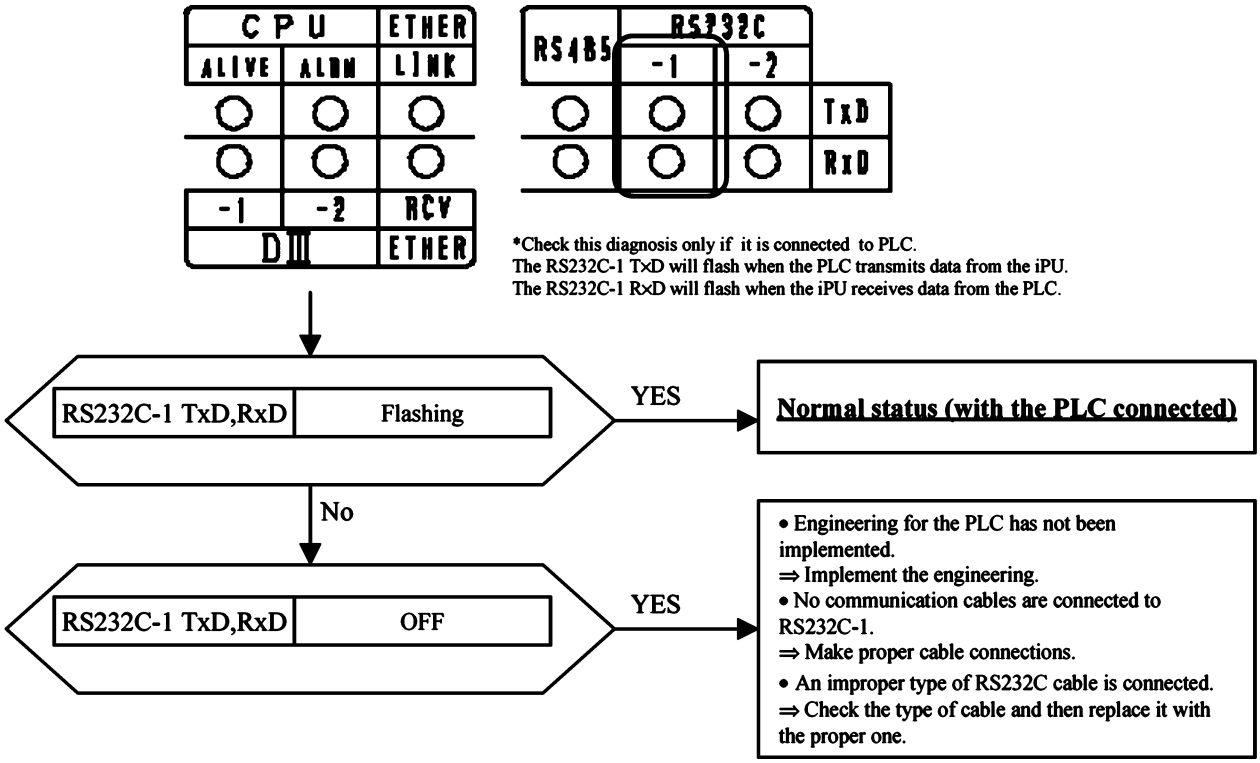
1.2 Diagnosis by ETHER LINK LED,ETHER RCV LED



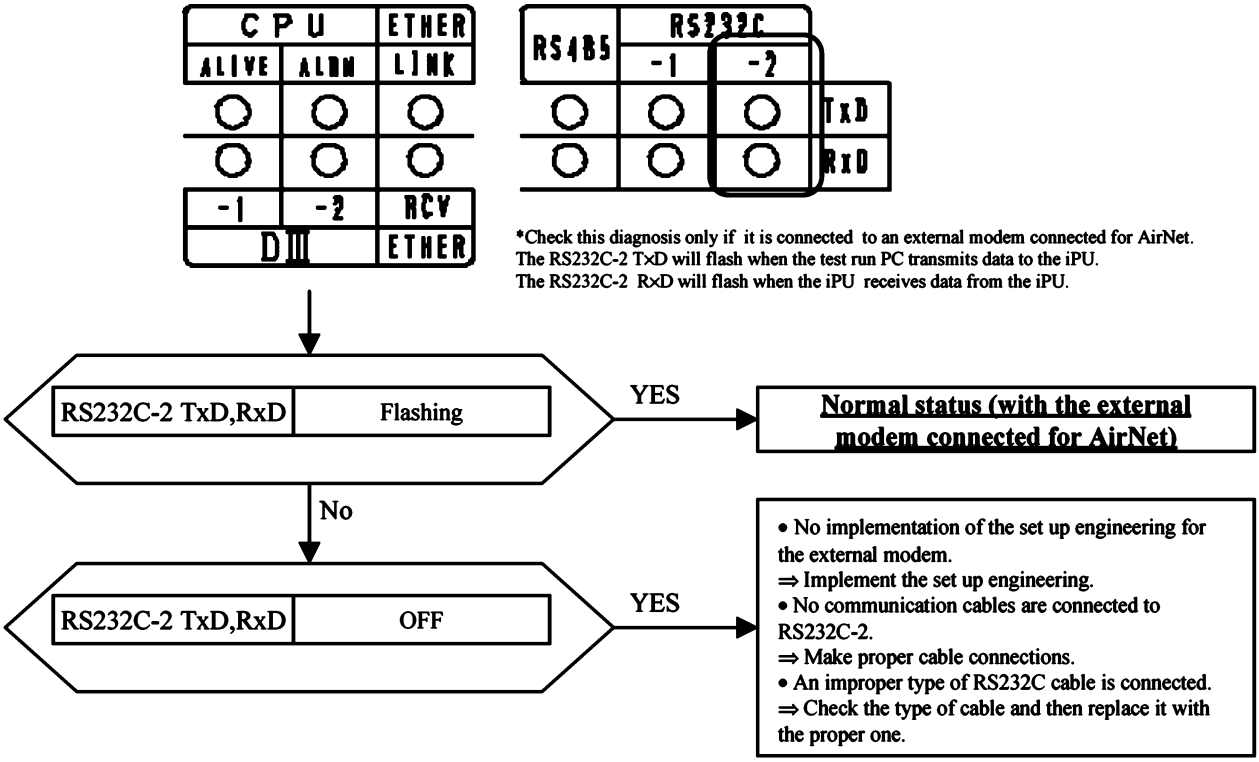
1.3 Diagnosis by DIII-1-4 LED



1.4 Diagnosis by RS232C-1 TxD,RxD LED



1.5 Diagnosis by RS232C-2 TxD,RxD LED



∗ Since RS485 is not used, it is normal for the LEDs to be in the "OFF " status.

2. Typical Troubles and Countermeasures

	Trouble (Symptom)	Check Point / Method	Supposed Cause	Countermeasure
Installation	iPU cannot be installed.	Check to ensure the PC and iPU are connected via the HUB.	No physical connection between the PC and the iPU	Connect between the PC and the iPU with the LAN cable via the HUB.
		Check to ensure the power supply for the HUB is turned ON.	No power supply to the HUB	Turn ON the HUB power supply.
		Check to ensure the power supply for the iPU is turned ON.	No power supply to the iPU	Turn ON the iPU power supply.
		Check to ensure the PC network settings are made as specified in the Engineering Manual.	Erroneous setting of PC network	Make the network settings of PC according to the Engineering Manual.
		Check the method of connection between the PC and iPU.	Direct connection between the PC and the iPU via the LAN cable	Connect between the PC and the iPU with the LAN cable via the HUB.
		Connect between the PC and iPU using a straight cable that is to be separately procured.	Crossing cable used as LAN cable	Use straight cable as the LAN cable to connect between the PC and HUB and between the iPU and HUB.
			Non-observance of procedures specified in the Engineering Manual	Implement installation from the beginning, according to the Engineering Manual.
Startup	The intelligent Manager software cannot be connected to the iPU.	Check to ensure the PC and iPU are connected via the HUB.	No physical connection between the PC and the iPU	Connect between the PC and the iPU with the LAN cable via the HUB.
		Check to ensure the power supply for the HUB is turned ON.	No power supply to the HUB	Turn ON the HUB power supply.
		Check to ensure the power supply for the iPU is turned ON.	No power supply to the iPU	Turn ON the iPU power supply.
		Check to ensure the PC network settings are made as specified in the Engineering Manual.	Erroneous setting of PC network	Make the network settings of PC according to the Engineering Manual.
		Check the method of connection between the PC and iPU.	Direct connection between the PC and the iPU via the LAN cable	Connect between the PC and the iPU with the LAN cable via the HUB.
		Connect between the PC and iPU using a straight cable that is to be separately procured.	Crossing cable used as LAN cable	Use straight cable as LAN cable to connect between the PC and HUB and between the iPU and HUB.
			Firewall installed on the PC	
	The message “#002: [Warning] Failed to read system data” is displayed.	Check to ensure none of the files contained in the BGS folder has a Read-only attribute.	Files with a Read-only attribute contained in the BGS folder	Eliminate the Read-only attribute from the files contained in the BGS folder.
		Check to ensure none of the files contained in the Sound folder has a Read-only attribute.	Files with a Read-only attribute contained in the Sound folder	Eliminate the Read-only attribute from the files contained in the Sound folder.
		Check to ensure the intelligent Manager install folder contains the config.zip file.	config.zip file not contained in the intelligent Manager install folder	Copy the created config.zip file to the intelligent Manager installation folder.
				Edit management group and control group after booting up the intelligent Manager.
DIII-NET	Control points on the same DIII-NET all result in communication errors.	Check to ensure the DIII wiring is connected to the iPU.	No DIII wiring connected to the iPU	Connect the DIII wiring to the proper DIII port of the iPU.
		Check to ensure the DIII wiring is connected to the right DIII port.	DIII wiring connected to the wrong port	Connect the wiring to the proper DIII port.
		Check to ensure the DIII wiring is connected from the iPU to the outdoor unit.	No DIII wiring from the iPU connected to an outdoor unit	Connect the DIII wiring to the outdoor unit.
	Some of the control points always result in communication errors.	Check to ensure the centralized control group address are set to the equipments.	No centralized control group address settings made with indoor units	Make settings of centralized control group address to the equipments.
		Check to ensure the centralized control group address of the control points are the same as those of the equipments.	Centralized control group address set at control point differing from those of corresponding equipments.	Reset centralized control group address of the equipments in order to correspond to that of control points.
		Make a comparison between the indoor units connected on the wiring diagram and the data on the control points.	DIII wiring is connected to the wrong port.	Connect wirings to the proper DIII port.
	The control points occasionally result in communication errors.	Check the wirings in use.	Cables with three or more core wires used for the DIII wirings	Change to specified wirings.
		Check the wiring diagram and the actual wiring conditions.	Sub-branches in the DIII wirings	Implement the DIII wiring connection again to have no sub-branches.
		Check all terminal/pins for their connection conditions.	DIII wirings not tightly connected to the terminals/pins	Connect the DIII wirings tightly to terminals/pins.
		Check other equipments for its installation conditions.	Noise source present in the vicinity of DIII wirings	Keep the DIII wirings away from the noise source.

	Trouble (Symptom)	Check Point / Method	Supposed Cause	Countermeasure
DIII-NET	The message “D3 port master duplication error” is displayed.	Check other building management equipments for its connection conditions and the connector for setting master control.	Master central connector connected to multiple units of building management equipments	Disconnect the master central connector from all the building management equipments other than the iPU.
	The message “D3 port transmission buffer overflow” is displayed.	Check the wirings in use.	Cables with three or more core wires used for the DIII wirings.	Change to specified wirings.
		Check the wiring diagrams and the actual wiring conditions.	Sub-branches in the DIII wirings.	Implement the DIII wiring connection again to have no sub-branches.
		Check all terminal/pins for their connection conditions.	DIII wirings not tightly connected to the terminals/pins	Connect the DIII wirings tightly to terminals/pins.
		Check other equipments for its installation conditions.	Noise source present in the vicinity of DIII wirings.	Keep the DIII wirings away from the noise source.
Control of air conditioners	Even though the temperature of the Temp Limit falls below the lower temperature limit, the air conditioner continues its cooling operation.	Check to ensure the indoor unit subject to control is the master unit for heat/cool selection.	Indoor units subject to control are not set to the master unit for heat/cool selection.	Check the Temp Limit function specification.
	Even though the temperature of the Temp Limit exceeds the upper temperature limit, the air conditioner continues its heating operation.	Check to ensure the indoor unit subject to control is the master unit for heat/cool selection.	Indoor units subject to control are set to master unit for heat/cool selection.	Check the Temp Limit function specification.
	An indoor unit operating in automatic mode switches spontaneously to heating (cooling) operation.	Check with the history function whether or not the Temp Limit function is activated.	The subject indoor unit is controlled by the Temp Limit function.	Check the Temp Limit function specification.
		Check with the history function whether or not the Automatic Changeover function is activated.	The subject indoor unit is controlled by the Automatic Changeover function	Check the Automatic Change Over function specification.
		Check with the history function whether or not the Cool/Heat selection is made according to the schedule function.	Cool/Heat selection made by schedule.	
		Check with the history function whether or not the Cool/Heat selection has been made in the past.	Cool/Heat selection made while in manual mode.	
	Cool/Heat selection of the air cooled chiller (UWY) cannot be made from the intelligent Manager.	Check the chiller for its settings.	Chiller set to prohibit Cool/Heat selection from DIII	Set Chiller itself to permit Cool/Heat selection from DIII
PPD	The PPD setting tool cannot be connected to the iPU.	Check to ensure the PC and iPU are connected via the HUB.	No physical connection between the PC and the iPU	Connect between the PC and the iPU with the LAN cable via the HUB.
		Check to ensure the power supply for the HUB is turned ON.	No power supply to the HUB	Turn ON the HUB power supply.
		Check to ensure the power supply for the iPU is turned ON.	No power supply to the iPU	Turn ON the iPU power supply.
		Check to ensure the PC network settings are made as specified in the Engineering Manual.	Erroneous setting of PC network	Make the network settings of PC according to the Engineering Manual.
		Check the method of connection between the PC and iPU.	Direct connection between the PC and the iPU via the LAN cable	Connect between the PC and the iPU with the LAN cable via the HUB.
		Connect between the PC and iPU using a straight cable that is to be separately procured.	Crossing cable used as LAN cable	Use straight cable as the LAN cable to connect between the PC and HUB and between the iPU and HUB.
			Firewall installed on the PC	
	No pulse ports are displayed on the PPD setting tool.	Check to ensure the control points are registered with the intelligent Manager.	No pulse control points registered	Register the pulse control points.
	Some indoor units cannot be automatically recognized when making an attempt to make model settings with the PPD test run tool.	Check the intelligent Manager to ensure that none of the control points have communication errors.	Indoor units having resulted in communication errors	Prove and solve the causes of communication errors.
		Check to ensure the indoor units are included in the model database.	Indoor units are not included in the model database.	Give notice to the supporting department to inquire about the capabilities and the current status of the model.
		Log into the intelligent Manager-anager as service mode to open detailed data on the indoor units concerned, and then confirm the model codes KCD1 and KCD2.	Model code returned from the indoor unit is different from that contained in the model database.	Give notice to the supporting department to inquire about the capabilities and current status of the model.

	Trouble (Symptom)	Check Point / Method	Supposed Cause	Countermeasure
PPD	Power consumption measured by the intelligent Manager comes to 1/10 of the kWh meter reading.	Check whether or not the Pulse Rate at the pulse control point is at "10".	Pulse control point set to 1 kWh/ pulse despite using a kWh meter with power consumption of 10 kWh/pulse	Reset pulse control points to 10 kWh/pulse.
	Power consumption measured by the intelligent Manager is 10 times that of the kWh meter reading.	Check whether or not the Pulse Rate at the pulse control point is at"1".	Pulse control point set to 10 kWh/ pulse despite using a kWh meter with power consumption of 1 kWh/ pulse	Reset pulse control points to 1 kWh/pulse.
	The indicated pulse control point value does not increase at all.	Check the port number that the pulse signal wiring is connected.	Pulse signal wiring not connected to the proper Pi port	Connect the pulse signal wiring to the proper Pi port.
		Check the increase of the kWh meter reading.	No increase on kWh meter reading	Check if the kWh meter is connected correctly.
	The total of power pulses does not match with that of the PPD results.	Check with the history function whether or not the power interruption signal was input while resetting the iPU.	Part of pulse values lost due to iPU resetting	Provide explanations to users.
		Check the setting with thePPD test run tool.	PPD set to NOT divide power consumption while the system stops running	Check the PPD specification. If there are any problems, engage in consultation with users, and then make setting so that power will be divided also when the system stops running.
	Power consumption is allocated to an indoor unit with the operating hours set to “0”.	Check the setting with the PPD test run tool.	PPD set to divide power consumption while the system stops running	Check the PPD specification. If there are any problems, engage in consultation with users, and then make setting so that power will NOT be divided also when the system stops running.
	Even though the subject indoor unit is in operation, the power division results in “0”.	Check the indoor unit for its operation mode.	The operation mode was in Fan Mode	Check the PPD specification.
			Even though the cooling or heating operation is in progress, the thermostat was always OFF.	Check the PPD specification.
Web	No connections can be made to the iPU from the Web browser.	Check to ensure the PC and iPU are connected via the HUB.	No physical connection between the PC and the iPU	Connect between the PC and the iPU with the LAN cable via the HUB.
		Check to ensure the power supply for the HUB is turned ON.	No power supply to the HUB	Turn ON the HUB power supply.
		Check to ensure the power supply for the iPU is turned ON.	No power supply to the iPU	Turn ON the iPU power supply.
		Check to ensure if the URL is correct.	The URL of iPU input into the browser was incorrect.	Enter the proper URL.
		Check whether or not the Web option is activated.	Web option of the intelligent Manager not yet enabled (valid).	Activate the Web option.
		Check with the LAN management personnel.	Access to the iPU is prohibited from the LAN with PC connection.	Engage in consultation with the LAN management personnel.
	The Monitoring screen is not displayed on the Web browser.		Java not installed in the PC.	Install Java.
		Check to ensure Windows is used.	OS other than Windows used.	Use Windows.
		Check to ensure IE is used.	Browser other than IE used	Use IE.

Using Intelligent Manager Ⅲ

WARNING

1. To use intelligent Manager, it is necessary to purchase additional equipment, such as a personal computer and a UPS. Contact your distributor or the manufacturer for details.
2. Installation of intelligent Manager must be performed by a Daikin-trained engineer.
3. Do not install additional software, such as games, on the personal computer used to run intelligent Manager.
4. Changing the system settings of the personal computer used to run intelligent Manager could cause intelligent Manager to malfunction. Do not change the personal computer's system settings under any circumstances.
5. Once a month, adjust the clock of the personal computer and iPU used to run intelligent Manager.

•The contents within this catalogue are effective as of Sep 2006. Note that changes to the content due to product improvements and the like may be conducted without prior notice.
•Please contact a Daikin representative before using an Intelligent Manager Ⅲ.
•Besides Intelligent Manager Ⅲ, Daikin also markets various other A/C management devices. Feel free to contact Daikin for catalogues or any necessary information.
•Ethernet is a registered trademark of Xerox corporation.

JMI-0107 JQA-1452

About ISO 9001

ISO 9001 is a plant certification system defined by the International Organization for Standardization (ISO) relating to quality assurance. ISO 9001 certification covers quality assurance aspects related to the "design, development, manufacture, installation, and supplementary service" of products manufactured at the plant.

EC99J2044

About ISO 14001

ISO 14001 is the standard defined by the International Organization for Standardization (ISO) relating to environmental management systems. Our group has been acknowledged by an internationally accredited compliance organisation as having an appropriate programme of environmental protection procedures and activities to meet the requirements of ISO 14001.

Dealer

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