MITSUBISHI ELECTRIC

Mitsubishi Electric Air-conditioner Network System

Maintenance Tools for MN converter & G-50A (AG-150A/GB-50ADA/PAC-YG50ECA)

- Advanced –
Operating Manual

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Before using Maintenance Tools, read this manual thoroughly to ensure correct operation.

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1 Foreword

1.1 Introduction of Maintenance Tools

The Maintenance Tools are comprised of the **On-Line Monitor** and the **Off-Line Monitor**.
The following two connection methods are available in the Online Monitoring.

(1) Monitoring by connecting the maintenance tool to MN converter (CMS-MNF,CMS-MNF-B,CMS-MNG-E) via RS-232C.
(2) Monitoring by connecting the maintenance tool to MN converter (CMS-MNG-E) via USB.
(3) Monitoring through the central controller (G-50A,AG-150A, GB-50ADA, PAC-YG50ECA) by connecting the maintenance tool to LAN. A brief explanation of each of their function is provided here.

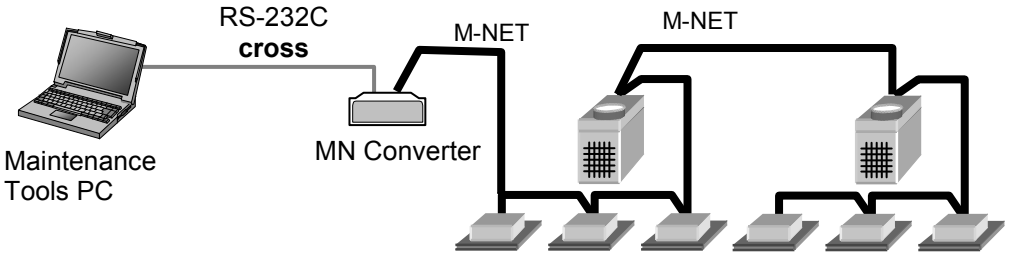
* To use the maintenance tool via G50A(AG-150A/GB-50ADA/PAC-YG50ECA) (Network), license registration for the G50A(AG-150A/GB-50ADA) to be used is necessary. Purchasing the license No. for each G50A(AG-150A/GB-50ADA) to be used, conduct the license registration through the Web browser (http://[IP address of the G50A(AG-150A/GB-50ADA)]/ administrator.html). After selecting "Maintenance tool" of the optional function on the Web Browser Screen displayed, enter the purchased license No..
For the detail of the license registration, see Chapter 4 [Registering a License for Optional Functions] of Central Controller Model: G50A(AG-150A/GB-50ADA) Web Browser Operation Manual (For System Maintenance Engineer).
When connecting maintenance tool via Expansion Controller,register the license in AG-150A connected by the Expansion Controller. (Only when AG-150A that registers the license is normally connected, it is possible to connect via Expansion Controller.)

1.1.1 On-Line Monitor(via MN converter)

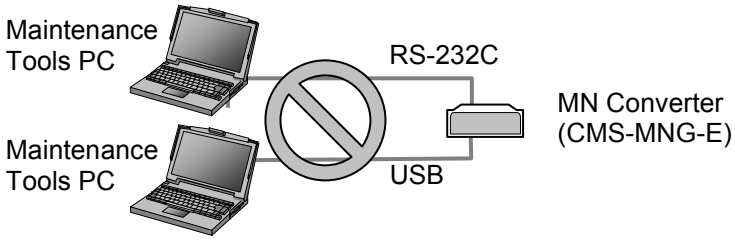
The **On-Line Monitor** is connected to the unit by a MN Converter (CMS-MNF,CMS-MNF-B,CMS-MNG-E) and can monitor such areas as system data, unit data and operating data.

(1) In case for local connection (via RS-232C)

Connecting PC installed with the maintenance tool to M-NET transmission line via MN Converter allows conducting various monitoring and setting from the Maintenance Tool.



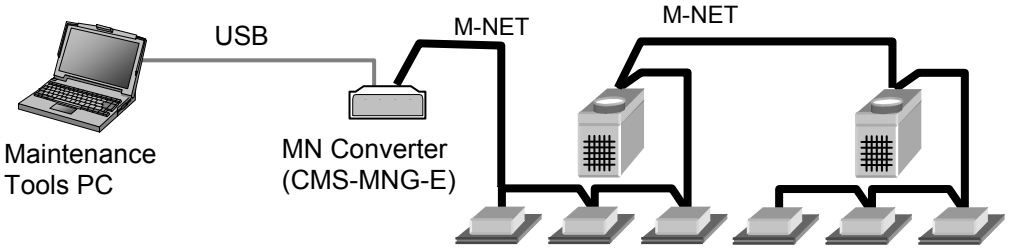
NOTE:
- When the MN Converter (CMS-MNG-E) is being used in Remote Error Notification mode (see section 3.13), you cannot connect to the MN Converter (CMS-MNG-E) via RS-232C. Connect viaUSB.



NOTE:
- You cannot connect to the MN Converter (CMS-MNG-E) via RS-232C and USB at the same time.Doing so may result in malfunctions.

(2) In case for local connection (via USB) (CMS-MNG-E)

Connecting PC installed with the Maintenance Tool to M-NET transmission line via MN Converter allows conducting various monitoring and setting from the Maintenance Tool.

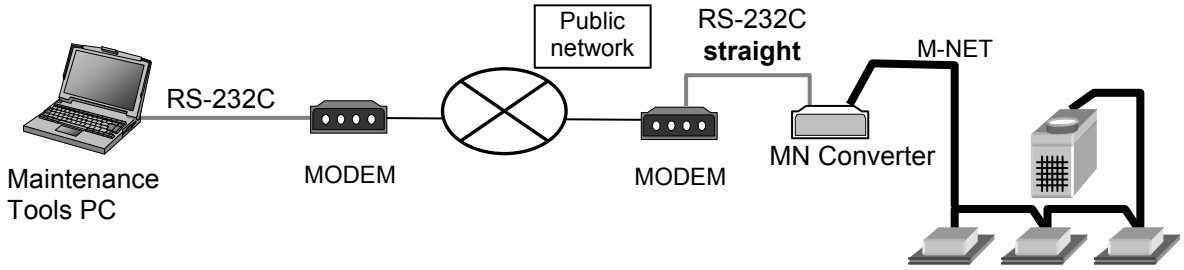


NOTE:
- To connect to the MN Converter via USB, the USB serial driver must be installed on the Maintenance Tools PC. [Refer to 1.3.5.]

NOTE:
- You cannot connect to the MN Converter (CMS-MNG-E) via RS-232C and USB at the same time. Doing so may result in malfunctions.

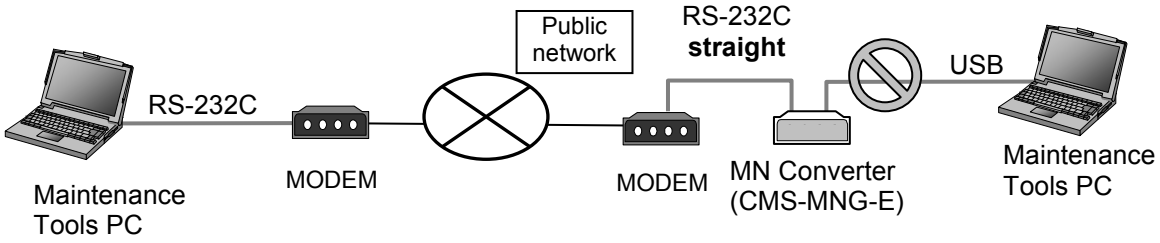
(3) In case for remote connection

Using a modem and remotely connecting PC installed with the Maintenance Tool to MN Converter via public telephone circuit allow conducting various monitoring and setting as same in the case of local connection.



*For the remote connection utilizing MN Converter, an isolator is required to be inserted between the modem and MN Converter.(except CMS-MNG-E)

For detail, please see Installation Manual-annexing of MN Converter (CMS-MNF-B).



NOTE:

- You cannot use the Maintenance Tools via RS-232C remote connection and via USB at the same time. Doing so may result in malfunctions.
  You can use the Maintenance Tools for error notification setting via USB when the Maintenance Tools is not used via RS-232C remote connection.
  (Used when connecting via MN converter CMS-MNG-E.)

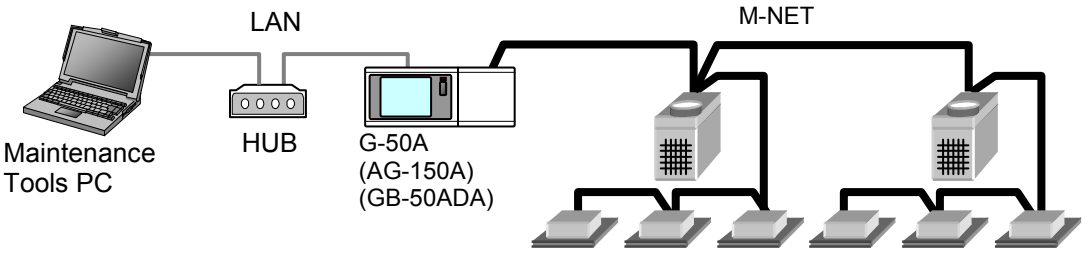
1.1.2 On-Line Monitor(via G50A(AG-150A/GB-50ADA/PAC-YG50ECA))

The **On-Line Monitor** is connected to the unit by the central controller(G-50A,AG-150A) and can monitor areas as system data, unit data and operating data.

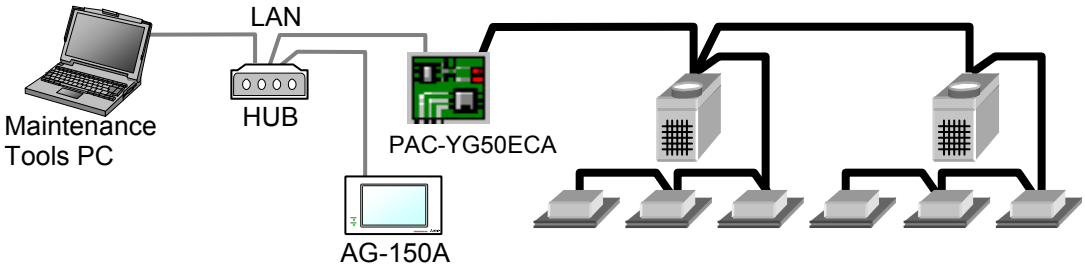
NOTE:
- When connecting AG-150A with Expansion Controller(PAC-YG50ECA), connect maintenance tool not AG-150A but via Expansion Controller.
- AG-150A Ver2.45 or more and Expansion Controller Ver1.45 or more are necessary for the connection via Expansion Controller.

(1) In case for local connection

By directly connecting the PC installed with Maintenance Tools and G50A(AG-150A/GB-50ADA/PAC-YG50ECA) through LAN, various monitoring/setting can be performed from the Maintenance Tools.

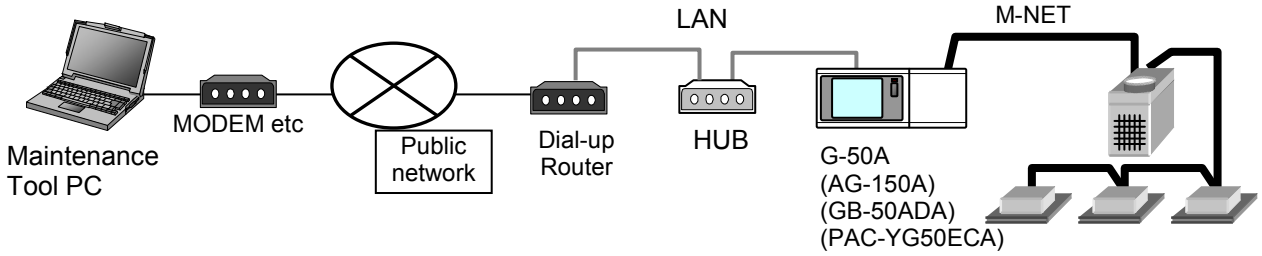


(1)-2 In case for local connection for AG-150A connection with the Expansion Controller (PAC-YG50ECA)



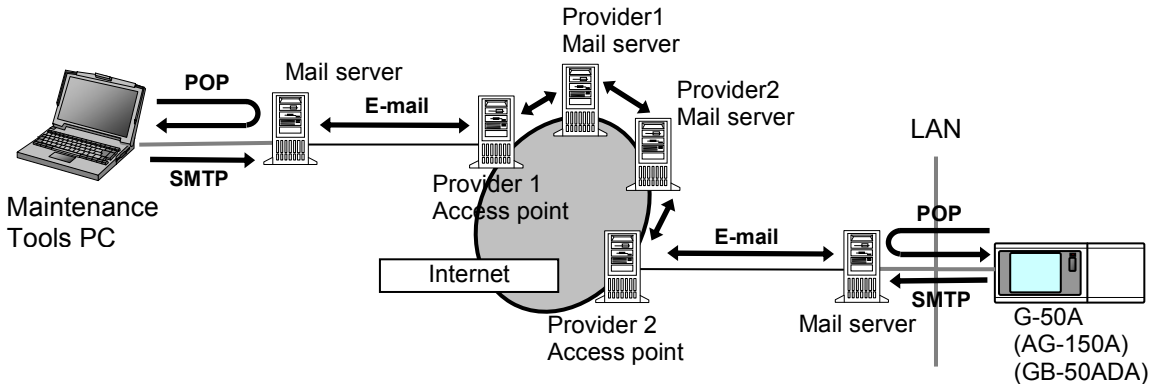
(2)-1 In case for remote connection (Dialup connection mode)

By connecting the PC installed with Maintenance Tools and G50A(AG-150A/GB-50ADA/PAC-YG50ECA) through public network remotely, various monitoring/setting can be performed from the Maintenance Tools.



(2)-2 In case for remote connection (E-mail connection mode)

Under E-mail connection mode, communication can be executed with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) through E-mail transmission via mail server. All communication with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) is converted into E-mail in this case.



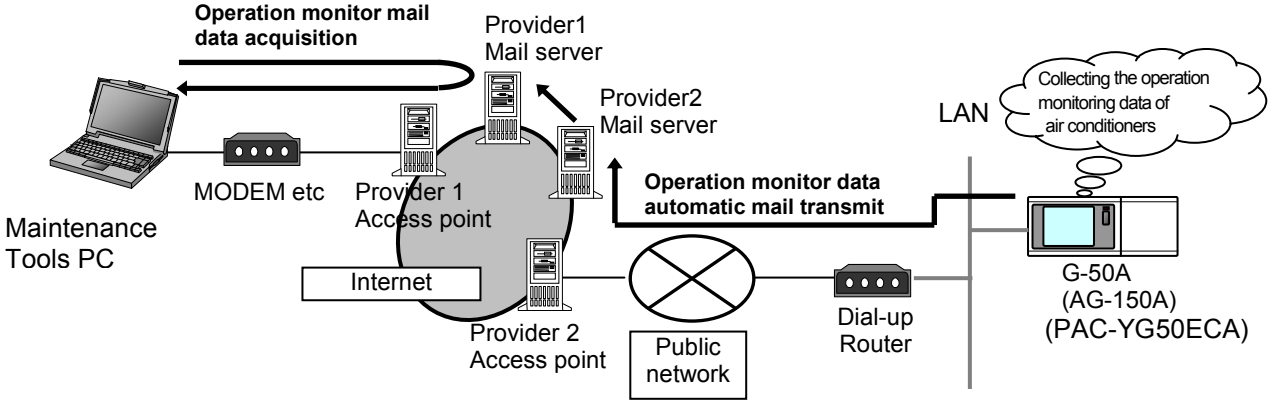
NOTE:

- To use the E-mail connection mode, the version of G-50A should be above 2.60.
- When using E-mail connection mode, the local G-50A is required to be initially set with Maintenance Tool and the mail address by the G-50A initial setting tool.
  (When AG-150A, please set it from initialization WEB.)
  - For each mail address, it is required to obtain and set an exclusive one. To transmit mail via an internet provider, obtain the mail address from the provider. When a mail server is existing on the LAN, obtain the mail address from the LAN administrator.
  - Set the [Pop receive interval] within 3 minutes. However to monitor operating status [Operation Monitor], set it within 1 minute.
  - Setting of initial information to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) can not be executed from Maintenance Tool. Make sure to set it from the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) initial setting tool locally. If dialup connection environment is available, it can be set from a remote position.
    (For detail, please when G-50A, refer to 6-1 Mail Basic Setting in the instruction manual of the G-50A initial setting tool. When AG-150A and PAC-YG50ECA, refer to 5-1 Error mail reports/E-mail comunication in the instruction manual of the AG-150A Web browser for initial settings.)
- When using E-mail connection mode, the local G50A(AG-150A/GB-50ADA/PAC-YG50ECA) is required to be initially set with Maintenance Tool and the mail address by the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) initial setting tool.
- The communication speed under E-mail connection mode largely depends on the transfer rate of each mail server. Under the circumstance, the action of Maintenance Tool may take a lot of time under some internet environments or routing mail servers.
- When connecting maintenance tool via Expansion Controller, set the setting of each E-mail adress with initialization WEB of Expansion Controller. Initialization WEB of Expansion Controller can be used for 30 days at the first time. Since the above-mentioned, it becomes possible to use only 24 hours by switching Dip-SW604-5 of the main body of Expansion Controller from off on.

1.1.3 Off-Line Monitor

The **Off-Line Monitor** can display, print information obtained by the On-Line Monitor.
In the case of connection monitoring utilizing G50A(AG-150A/GB-50ADA/PAC-YG50ECA), the operation monitor data collected by G50A(AG-150A/GB-50ADA/PAC-YG50ECA) will be transmitted to remote mail servers periodically if the [Operation monitor - mail communication mode] of online mode is adapted.
Using this function allows to collect and monitor the operation monitor data without continually connecting the maintenance tool.
*For the setting of the [Operation monitor - mail communication mode], refer to 3.7.1 and 4.3.2 description.

***Image of the [Operation monitor - mail communication mode]**



NOTE:
This differs from the E-mail connection mode of (2)-2 in 1.1.2 On-Line Monitor (via G50A(AG-150A/GB-50ADA/PAC-YG50ECA)).

1.1.4 Wide area access mode

The "**Wide area access mode**" has been located starting from **Ver4.05(D)**.
Under the "Wide area access mode," the access method for remote connection can be registered to the database of each customer enabling easy online connection with the air conditioning system of the customer desired to be accessed.

[Remote access method]

- **LAN** : Accessing by directly connecting Maintenance Tool PC and G50A(AG-150A/GB-50ADA/PAC-YG50ECA) with LAN (WAN).
- **Dialup** : Accessing by dialup connection to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) via public network.
- **E-mail** : Accessing by E-mail communication to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) via mail server.
- **Modem** (MN Converter) : Accessing by connecting Modem to MN Converter via public telephone circuit.

After the online connection performed by any of the above methods, you may use the similar function as that obtainable in the normal online connection.
While under the offline mode, customer information will be provided to the monitored data enabling only to select a specified customer for display.

1.2 Required Operating Environment

This manual refers to Windows® 2000 as Windows 2000, and Windows® XP as Windows XP, and Windows® Vista as Windows Vista, and Windows® 7 as Windows 7.

Caution:
64bit OS that this tool corresponds is only "Windows Vista 64bit Edition" or "Windows 7 64bit Edition".

1.2.1 Hardware Requirements

The computer must be IBM compatible on DOS/V and capable of satisfying the following requirements.

Windows2000/WindowsXP

* Required environment
  - OS ..... Windows2000(service pack4) or Windows XP (service pack2 or higher) (Recommended English version *1)
  - CPU…..... Desktop:Celeron 1GHz
    Notebook:CeleronM 1GHz
  - RAM ..... Minimum 512 MB
  - HDD …..... Available space 40GB (Ultra ATA compatible 5400r.p.m.) *2
  - LCD ..... Display resolution:XGA(1024x768)
  - Serial port ..... 1 RS232C serial port (Used when connecting via MN converter)
  - USB port ..... 1 USB port (Used when connecting via MN converter CMS-MNG-E) *4
  - LAN port..... 1 LAN port (10BASE-T)
  - Optical drive..... 1 CD-ROM drive (Used when installing the Maintenance Tool to a PC)
  - Pointing device..... Mouse or track ball or any other pointing device

* Recommended environment
  - OS ..... Windows2000(service pack4) or Windows XP (service pack2 or higher) (Recommended English version *1)
  - CPU …..... Desktop: Pentium4 2GHz
    Notebook: PentiumM 1.6GHz
  - RAM ..... 1GB or more
  - HDD …..... Available space 120 GB (SATA compatible 7200r.p.m) *2
  - LCD ..... Display resolution:XGA(1024x768) or more
  - Serial port..... 1 RS-232C serial port (Used when connecting via MN converter)
  - USB port ..... 1 USB port (Used when connecting via MN converter CMS-MNG-E) *4
  - LAN port ..... 1 LAN port (10BASE-T or faster) *3
  - Optical drive..... 1 CD-ROM/CD-RW or DVD drive
    (Used when installing the Maintenance Tool to a PC)
  - Pointing device..... Mouse or track ball or any other pointing device

***1 About OS**
Fundamentally, it corresponds to OS of each country. However, separators of time and date differ in each language. This separator may affect a maintenance tool.
It recommends using it by English OS and Regional options setup, changing into English area form. Or it recommends using it, changing date separator into [/] and time separator into [:].

***2 About Hard Disk Space**
The hard disk space recommended above is only the amount required for installing the maintenance application. Additional space will be required if the operating data is also to be stored on the hard disk. Accordingly, there may not be enough memory to store operating data if the maintenance system is installed in a computer with limited hard disk memory.

***3 About LAN port**
An LAN port of G-50A is 10BASE-T.

***4 About USB port**
An USB port of MN Converter (CMS-MNG-E) is USB1.1.

NOTE:
TG-2000A and Maintenance Tool cannot operate with the same personal computer.
Maintenance Tool cannot be installed in the personal computer that has already used MS SQL Server in another software.

Caution:
Maintenance Tool requires a version of Windows 2000 with **SP4** or higher to run, and
Maintenance Tool requires a version of Windows XP with **SP2** or higher to run.

Windows Vista/Windows7

* Required environment
  - OS ..... Windows Vista or Windows 7 (Except Starter Edition)
    (Recommended English version *1)
  - CPU …..... Desktop: Pentium4 2GHz
    Notebook: PentiumM 1.6GHz
  - RAM ..... Minimum 1 GB
  - HDD …..... Available space 40GB (Ultra ATA compatible 5400r.p.m.) *2
  - LCD ..... Display resolution:XGA(1024x768)
  - Serial port ..... 1 RS232C serial port (Used when connecting via MN converter)
  - USB port ..... 1 USB port (Used when connecting via MN converter CMS-MNG-E) *4
  - LAN port..... 1 LAN port (10BASE-T)
  - Optical drive..... 1 CD-ROM drive (Used when installing the Maintenance Tool to a PC)
  - Pointing device..... Mouse or track ball or any other pointing device

* Recommended environment
  - OS ..... Windows Vista or Windows 7 (Except Starter Edition)
    (Recommended English version *1)
  - CPU …..... Desktop: Core™2 Duo 1.86GHz
    Notebook: Core™2 Duo 1.86GHz
  - RAM ..... 2GB or more
  - HDD …..... Available space 120 GB (SATA compatible 7200r.p.m) *2
  - LCD ..... Display resolution:XGA(1024x768) or more
  - Serial port..... 1 RS-232C serial port (Used when connecting via MN converter)
  - USB port ..... 1 USB port (Used when connecting via MN converter CMS-MNG-E) *4
  - LAN port ..... 1 LAN port (10BASE-T or faster) *3
  - Optical drive..... 1 CD-ROM/CD-RW or DVD drive
    (Used when installing the Maintenance Tool to a PC)
  - Pointing device..... Mouse or track ball or any other pointing device

***1 About OS**
Fundamentally, it corresponds to OS of each country. However, separators of time and date differ in each language. This separator may affect a maintenance tool.
It recommends using it by English OS and Regional options setup, changing into English area form. Or it recommends using it, changing date separator into [/] and time separator into [:].

***2 About Hard Disk Space**
The hard disk space recommended above is only the amount required for installing the maintenance application. Additional space will be required if the operating data is also to be stored on the hard disk. Accordingly, there may not be enough memory to store operating data if the maintenance system is installed in a computer with limited hard disk memory.

***3 About LAN port**
An LAN port of G-50A is 10BASE-T.

***4 About USB port**
An USB port of MN Converter (CMS-MNG-E) is USB1.1.

NOTE:
TG-2000A and Maintenance Tool cannot operate with the same personal computer.
Maintenance Tool cannot be installed in the personal computer that has already used MS SQL Server in another software.

Caution:
Maintenance Tool doesn't correspond to "Windows 7 Starter Edition".

1.2.2 Required Materials

The following materials are needed for operating the Maintenance Tools :

(1) In case of routing via MN converter

MN Converter (CMS-MNF,CMS-MNF-B,CMS-MNG-E), Personal Computer, RS-232C **cross** cable, USB cable(CMS-MNG-E) and modem in the case of remote connection, are required. RS-232C is to be **straight** cable in this case.
For detail, please see Installation Manual-annexing of MN Converter (CMS-MNF,CMS-MNF-B,CMS-MNG-E).
(*The power consumption factor of the M-NET circuitry of CMS-MNG-E is "1.5" (equivalent to 1.5 Indoor unit)).

(2) In case of routing via G50A(AG-150A/GB-50ADA/PAC-YG50ECA)

G50A(AG-150A/GB-50ADA/PAC-YG50ECA), personal computer, LAN cable (Straight) and HUB.
A dial-up router is required for remote communication. For the dial-up router to be used, employ that allowing data communication by receiving external telephone transmission.

1.3 Installation

There are two Maintenance Tool setup methods:
Method 1) New setup.(See Section 1.3.1)
Method 2) Upgrading with existing setup.(See Section 1.3.2)

Caution:
Please refer to also 1.3.5 Change of computer name on PC.

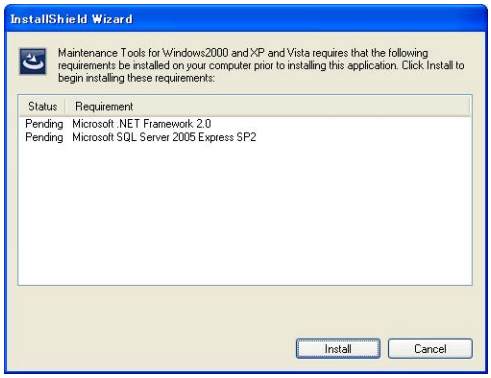
1.3.1 Setting Up the Maintenance Tools (New setup)

Caution:
- Before setting up, be sure to login with the login name authorized as administrator.
- Before setting up, please confirm the following points.
  1. The check 'Compress drive to save disk space' of LocalDisk(C:) Properties must be removed.
  2. “MSDE” must be uninstalled.
  3. “SQL Server 2008” must be not installed.

  When not satisfying it, the error occurs when installing it and the installation is discontinued.

Request:
Before Setting up the MSDE, restart your computer and Ending software for application program and Anti-Virus.

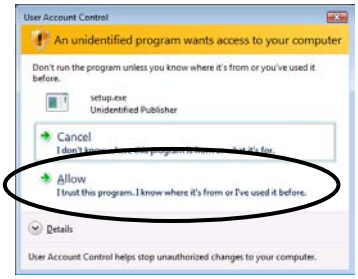
（1）Starting the setup program
Execute **“SETUP.exe”** located in folder(It name is "New") on CD-ROM.（**Not click on any other files.**）
Double clicking on **“SETUP.exe”** with the explorer displays the application install screen as shown right. Click on [**install**] button and start installation.



NOTE:
・The number of applications installed by the OS is different, but just click on **[install]** button**.**
（Right Figure is Screen of Windows XP.）

Caution:
- **It takes 15 minutes from about 10 minutes to install the application.**

NOTE:
・When it install Maintenance Tool in Windows Vista or 7, warning such as the right is given. Click on [Allow].



（2）Installing the Maintenance Tools

When the installation of the application software is finished, the installation screen of the Maintenance Tool is displayed. Confirm the display contents, and if no problem was found on the content, click [**Next**] button.

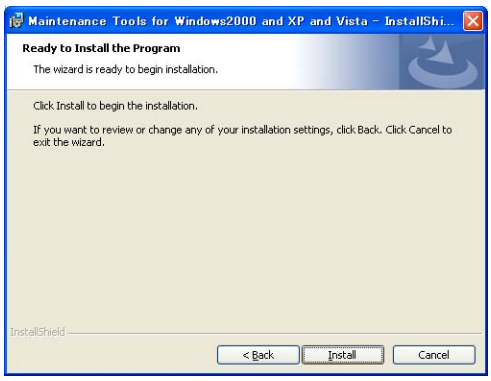
* To stop setting up, click on [**Cancel**] button.



（3）Ready to the installation start

Confirm the starting and select an [**Install**] button.
Click on [Install] button starts installation.

* Clicking on [**Cancel**] button stops installation.

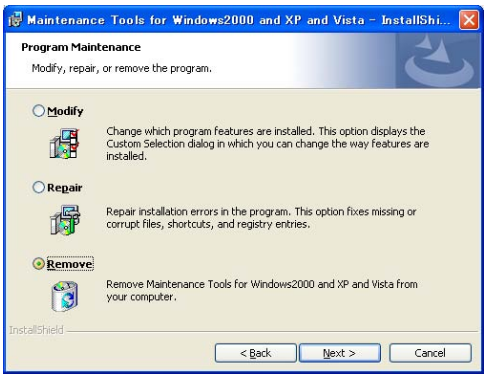


Caution:

・When a screen such as the right figure was displayed without installation start preparations screen being displayed, Select [Remove], and please click a [Next] button.

・Click [Remove] with the next screen, click on [Finish], and be completed.

・Install the Maintenance Tool program.
＊Refer to 1.3.2 Running Maintenance Tool Upgrade.

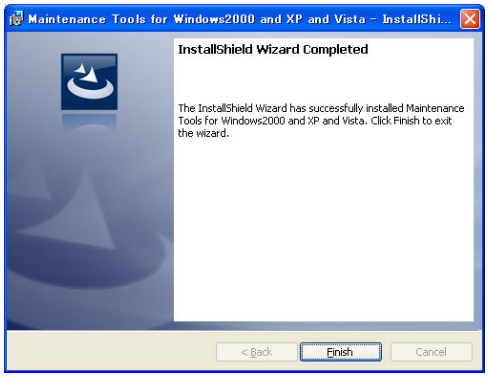


（4）Confirming the completion of Maintenance Tools setup

1) Select [**Finish**] button.
Click on [**Finish**] button on the Installation Complete screen.

After completing installation, restart your computer.

Keep the CD-ROM used with you carefully.



Caution:

After installing Maintenance Tools, <u>be sure to restart your computer</u>.

1.3.2 Running Maintenance Tool Upgrade

The following describes how to upgrade the Maintenance Tool.

The method of the upgrade of the maintenance tool is different according to the version of the maintenance tool.

(1) When the version of the Maintenance Tool is less than Ver 4.30

Step 1) Ending the Maintenance Tool and the MSDE
Step 2) Uninstalling the Maintenance Tool :**Restart your computer after completing the STEP 2.**
Step 3) Uninstalling the MSDE :**Restart your computer after completing the STEP 3.**
Step 4) Upgrade the Maintenance Tool :**Restart your computer after completing the STEP 4.**

Caution:
- **For setting up, be sure to practice 4 steps in order.** Otherwise, Maintenance Tools will not operate normally.
- Before setting up, be sure to login with the login name authorized as administrator.

Step 1) Ending the Maintenance Tool and the MSDE

End the Maintenance Tool program.
***Refer to 1.4.6 Ending the Maintenance Tool**
***Refer to 1.4.7 Ending the MSDE**

Step 2) Uninstalling the Maintenance Tool

Uninstall the Maintenance Tool program.
*** Refer to 1.3.3 Uninstalling the Maintenance Tool**

Caution:
- **After uninstalling Maintenance Tool program, be sure to restart your computer.**

Step 3) Uninstalling the Maintenance Tool and the MSDE

Uninstall the Maintenance Tool program and the MSDE program.
*** Refer to 1.3.4 Uninstalling the MSDE**

Caution:
- **After uninstalling MSDE program, be sure to restart your computer.**

Step 4) Upgrade the Maintenance Tool

Execute **"Setup.EXE"** located in folder(It name is "New") on CD-ROM.
Double clicking on **" Setup.EXE "**.
*The Maintenance Tool program version upgrading procedure is the same as new setup.
Refer to 1.3.1 Setting Up the Maintenance Tools

Caution:
- **After installing Maintenance Tool program, be sure to restart your computer.**
- Before setting up, please confirm the following points.
  1. The check 'Compress drive to save disk space' of LocalDisk(C:) Properties must be removed.
  2. “MSDE” must be uninstalled.
  3. “SQL Server 2008” must be not installed.

  When not satisfying it, the error occurs when installing it and the installation is discontinued.

(2) When the version of the Maintenance Tool is Ver 4.30 or more

Step 1) Ending the Maintenance Tool
Step 2) Upgrade the Maintenance Tool

Step 1) Ending the Maintenance Tool

End the Maintenance Tool program.
***Refer to 1.4.6 Ending the Maintenance Tool**

Step 2) Upgrade the Maintenance Tool

Execute **"Setup.EXE"** located in folder(It name is "upgrade") on CD-ROM.
Double clicking on **" Setup.EXE "**.

When "Setup.EXE" executed, a screen such as the right figure is displayed.
Click on [**Yes**].



*The Maintenance Tool program version upgrading procedure is the same as new setup.
Refer to 1.3.1 Setting Up the Maintenance Tools

Caution:

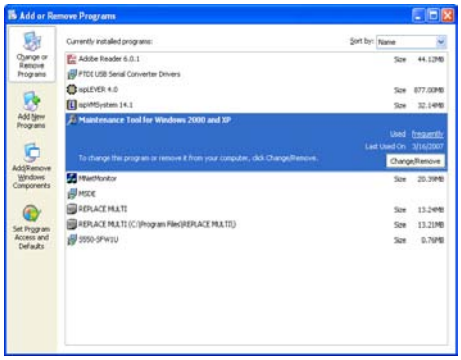
- **After installing Maintenance Tool program, be sure to restart your computer.**
- Before setting up, please confirm the following points.
  1. The Maintenance Tool Ver4.30 or more must be installed.
  2. “MSDE” must be uninstalled.
  3. “SQL Server 2008” must be not installed.

  When not satisfying it, the error occurs when installing it and the installation is discontinued.

1.3.3 Uninstalling the Maintenance Tool

It explains the method of uninstalling the **Maintenance Tool** as follows.

(1) Confirm the ending of **Maintenance Tool**.
Confirm that Maintenance Tool program has been ended.
If not, end the program.
***For the ending method, refer to Chapter 1.4.6.**



(2) Start [Add/Remove Programs].
Click on [Add/Remove Programs] from [Control panel] to start.

(3) Select [Maintenance Tool for windows 2000 and XP] and press [Change & Remove] button.
Select [Maintenance Tool for windows 2000 and XP] from the application, and click on [Remove] button.
The deletion of Maintenance Tools application starts.

NOTE:
- Recommend not to delete the common components.
- There are folders and files that can not be deleted with this uninstalling.
  (Example:C:¥MnttoolEA)

(4) Ending the [Add/Remove Programs].
After ending the deletion of application, end [Add/Remove Programs].
Select [Maintenance Tool for windows 2000 and XP] from the application, and click on [Remove] button.
The deletion of Maintenance Tools application starts.

4) Ending the [Add/Remove Programs].
After ending the deletion of application, end [Add/Remove Programs].

Caution:
- **After uninstalling Maintenance Tool program, be sure to restart your computer.**

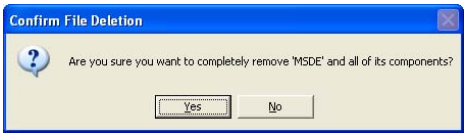
1.3.4 Uninstalling the MSDE

It explains the method of uninstalling the **MSDE** as follows.

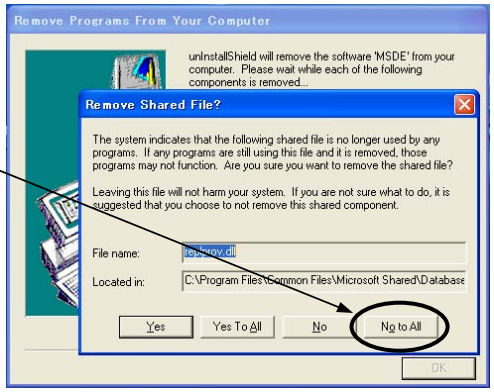
(1) Confirm the ending of **MSDE**.
Confirm that **MSDE** program has been ended. If not, end the program.
***For the ending method, refer to Chapter 1.4.7.**

(2) Start [Add/Remove Programs].
Click on [Uninstall] from [**MSDE**] to [All Programs] to start.
※It can start [Add/Remove Programs] from [Control Panel] to start.

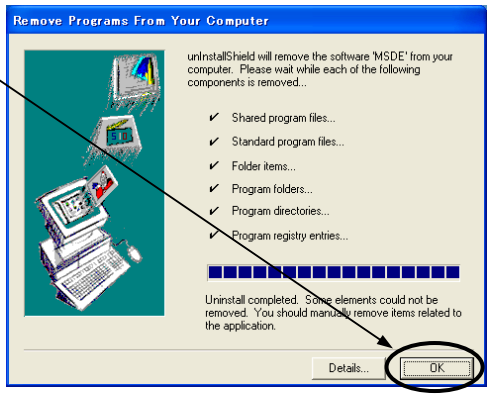
『Confilm File Deletion』 is displayed, and Click on [Yes]
It starts Uninstallation.



(3) During uninstallation, a screen such as the right figure is displayed. Click on [**No to All**].



(4) Confirming the completion of Uninstall.
・Select [**OK**] button.
Click on [**OK**] button on the Remove Programs screen.



NOTE:
- Recommend not to delete the common components.
- There are folders and files that can not be deleted with this uninstalling.
  (Example:C:¥Program files¥MSDE)

Caution:
- **After uninstalling MSDE program, be sure to restart your computer.**

1.3.5 Change of computer name on PC

Do not change the computer name after the Maintenance Tool has been setup.
Maintenance Tool will not run properly if changed, and may require the OS to be installed again.

1.3.6 USB Serial driver installation

To connect the Maintenance Tool to the MN Converter (CMS-MNG-E) via USB and then use the tool, the USB serial driver must be installed on the Maintenance Tool PC.

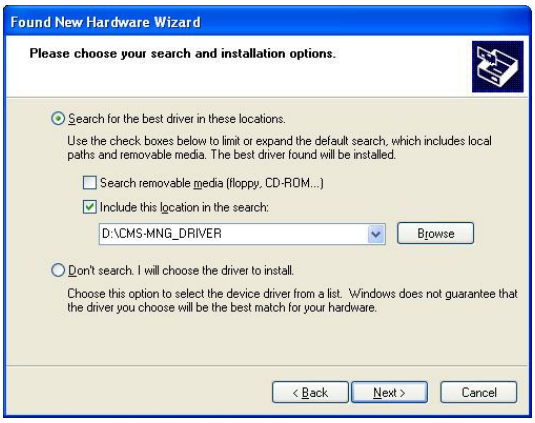
[In the case of Windows 2000 or XP or Vista]

(1) Connect a USB cable to the USB port of the MN Converter (CMS-MNG-E).
A window appears asking you to install the driver.
Select **[Install from a list or specific location (Advanced)]** and then click **[Next]**.



(2) Click **[Browse]** and specify **CMS-MNG_Driver** folder.
※ When it install driver in Windows Vista x64 Edition, specify **CMS-MNG_Driver(x64)** folder.

(3) on the CD-ROM.
Then click **[OK]**, and click **[Next]**.



(4) Though the warning shown on the right appears, this is not a problem. Simply click **[Continue Anyway]**.



NOTE:
- This warning only relates to testing of the Windows logo and does not affect operation.

(5) Installation begins and the window shown on the right appears denoting that “USB Serial Converter(CMS-MNG)" installation has ended. Click **[Finish]**.



(6) Next, the window shown on the right appears. Repeat steps (2) to (4).



(7) The window shown on the right appears and "USB Serial Port(CMS-MNG)" installation ends. Click **[Finish]**.

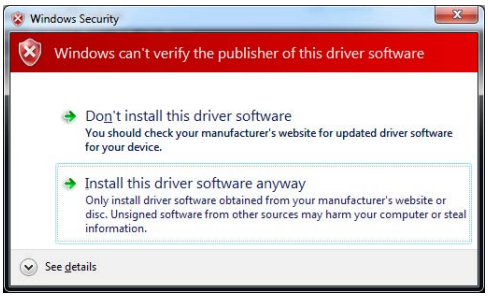


This completes USB serial driver (CMS-MNG) installation.
Check that the driver is running correctly in the Device Manager window.

[In the case of Windows 7]

(1) Open **CMS-MNG_Driver(win7_x86_x64)** folder, and execute "**Win7DriverInst.bat"** in that.

(2) A window appears asking you to install the driver.
Select **[Install this driver software anyway]**.
Repeat this step twice.



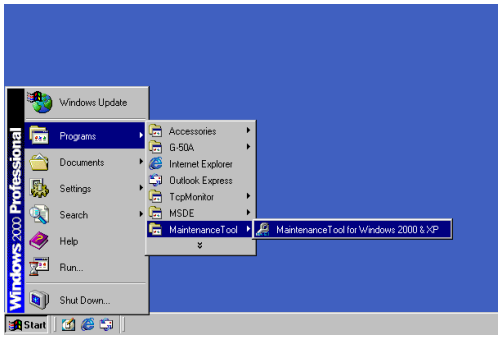
(3) Connect a USB cable to the USB port of the MN Converter (CMS-MNG-E).

This completes USB serial driver (CMS-MNG) installation.
Check that the driver is running correctly in the Device Manager window.

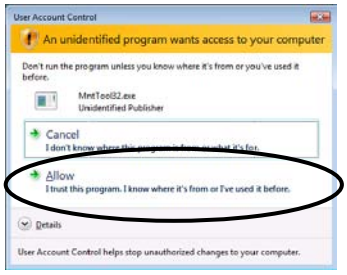
1.4 Starting and Ending the Application

1.4.1 Starting the Maintenance Tool

(1) Connect the computer and G-50A(AG-150A,MN Converter) and air conditioner.
(2) Click on "**Start**", and then click on "**Programs**".
(3) Click on "**Maintenance Tool for Windows2000 & XP & Vista**" in the "**Maintenance Tool**" folder.



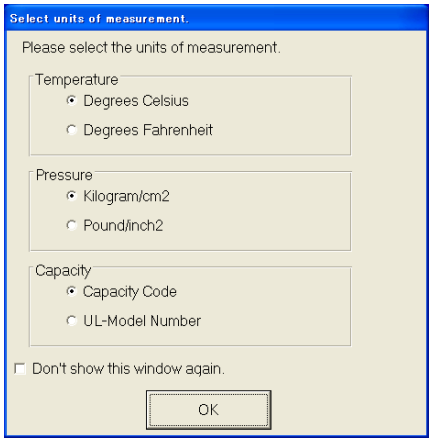
NOTE:
・When it start Maintenance Tool in Windows Vista or 7, warning such as the right is given. Click on [Allow].



(4) The **Title Screen** will soon appear.



(5) The "**Select units of measurement**" screen is displayed.
Select the method of displaying the Temperature, the Pressure and the capacity.



a) Temperature
- If the "**Degrees Celsius**" is checked, the temperature display becomes a celsius.
- If the "**Degrees Fahrenheit**" is checked, the temperature display becomes a fahrenheit.

b) Pressure
- If the "**Kilogram/cm2**" is checked, the pressure display becomes a Kilogram/cm2.
- If the "**Pound/inch2**" is checked, the pressure display becomes a Pound/inch2.

c) Capacity
- If the "**Capacity Code**" is checked.
  ・The capacity item name of the Unit Information Display Columns becomes "**Capacity**", and **indoor unit capacity code** is displayed.
  ・The QJ item name of the operation monitor becomes "**QJ**", and **indoor unit capacity code** is displayed.
- If the "**UL-Model Number**" is checked.
  ・The capacity item name of the Unit Information Display Columns becomes "**UL-Model**", and indoor unit **UL-Model number** is displayed.
  ・The QJ item name of the operation monitor becomes "**Model**", and indoor unit **UL-Model number** is displayed.

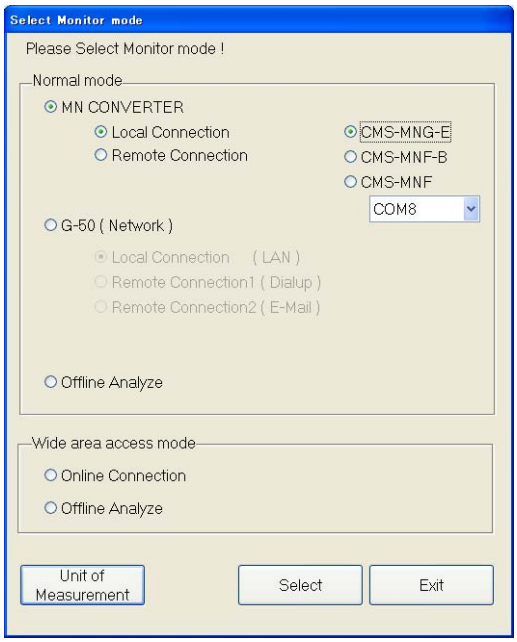
d) If the "**Don't show this window again.**" is checked, this window will not appear again.
(However, it is possible to select it from "**Select Monitor Mode**" screen.)
e) If the [OK] button selected, this screen is closed.

*After upgrade, if a Maintenance Tool is started for the first time, conversion processing of a database may be performed. In this case, "Now, Converting database! " and a progress state are displayed.

*The capacity to store the data obtained by the maintenance tool counts for 2G-bite maximum. When the remaining storage capacity is insufficient at starting,Warning Screen will appear. In this case, move to OFF- Line Screen to delete unnecessary data.



(6) Thereafter, the selection screen of Monitor mode is displayed. Selecting the mode to be adapted.



Normal mode

a) ON LINE MODE

- MN CONVERTER

When on-line monitoring is adapted to air conditioning system by connecting MN Converter [Refer to 1.4.2.1.] Further select Remote connection to conduct remote connection. [Refer to 1.4.2.2.]

- G50A(AG-150A/GB-50ADA/PAC-YG50ECA) (LAN)

When on-line monitoring is adapted to air conditioning system via G50A(AG-150A/GB-50ADA/PAC-YG50ECA) by connecting the Maintenance Tool to LAN. [Refer to 1.4.3.1.] For remote connection, select either "Dialup connection mode" or "E-mail connection mode". [Refer to 1.4.3.2., 1.4.3.3.]

b) OFF LINE MODE

- Offline analysis

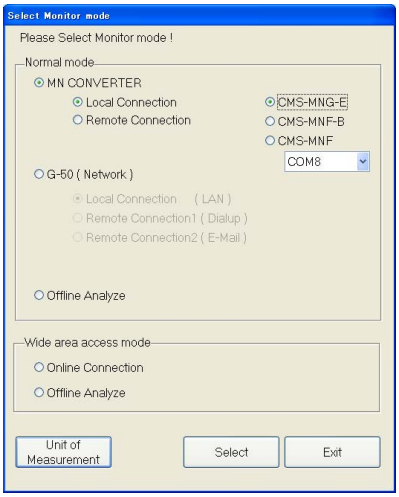
When offline analysis is adapted to the data collected under ON-LINE MODE [Refer to 1.4.4.]

c) When [Unit of Measurement] button is selected, the "**Select units of measurement**" screen is displayed. [Refer to (5)]

1.4.2 Starting the On-Line Monitor(MN Converter connection)

1.4.2.1 In case for local connection

This will be used when online monitoring is adapted to air conditioning system by connecting the maintenance tool and MN Converter locally. The maintenance tool, MN Converter and air conditioning system should be connected beforehand.



(1) Clicking "MN CONVERTER" on the selection screen of Monitor mode selects "Local connection" simultaneously. Select the model name of the connected MN Converter and the COM port No. of the connected RS-232C. Last click Select .

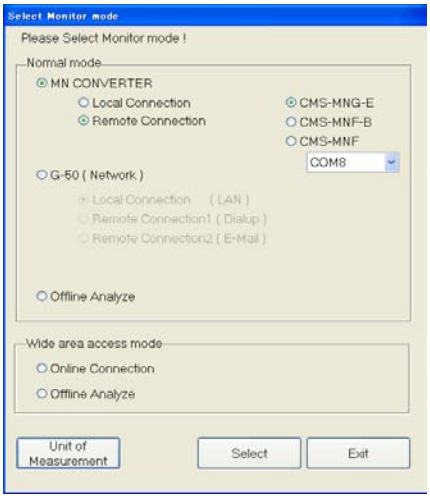
* When MN Converter model is ”CMS-MNG-E “, and it is connected via USB, USB COM port No. is displayed. Select the USB COM port No. of the connected USB.

1.4.2.2 In case for remote connection

This will be used when online monitoring is adapted to air conditioning system by using a modem, and connecting the maintenance tool and MN Converter with public telephone circuit remotely. The setting up of the modem for Windows (modem at the remote site side) and the initial setting up (modem connecting MN Converter at the local side. For detail, refer to (3).) are previously required. The connection of the modem, public telephone circuit and local MN Converter is necessary.

* For a description of the on-site air conditioner system connection method, refer to the MN Converter Operation Manual.

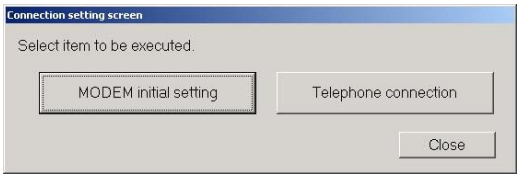
* If communication does not have for 10 minutes in remote connection, "Timeout occurred!" will be displayed, if O.K. is pushed, a telephone circuit will be cut automatically and the Maintenance tool will be ended.



(1) After clicking "MN CONVERTER" on the selection screen of Monitor mode, and click "REMOTE CONNECTION." For MN Converter, "CMS-MNF-B"","CMS-MNG-E” will automatically be selected. Then select COM port No. of RS-232C connected with equipment (like a modem) for connection to public telephone line.Last click Select .

*MN Converter to be locally installed should be "CMS-MNF-B",”CMS-MNG-E”.
Remote connection can not be performed with "CMS-MNF."

(2) Next the screen to set remote connection will appear. In order to conduct the initial setting (AT command setting) of the modem to be used, click MODEM initial setting , and to initiate remote connection, click Telephone connection .



*Insert an isolator between the local MN Converter and modem for insulation. Inserting the isolator reduces the number of lines used by the internal wiring of RS-323C. For this reason, it is required to select MODEM initial setting before the remote connection to change the setting information on the modem to be installed at the local side.
For detail, see Installation Manual-annexing of MN Converter (CMS-MNF).

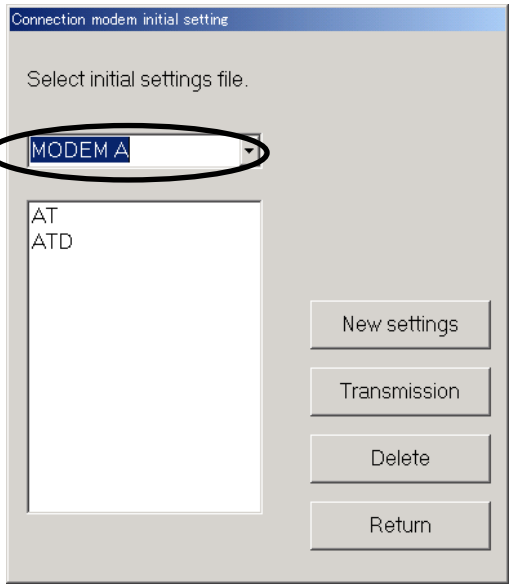
(3) Initial setting of modem

For the modem to be installed at the local side (MN Converter side), initial setting should be applied before connecting remotely. To apply the initial setting of the modem, click [MODEM initial setting] on the remote setting screen.

The **Connection Modem Initial Setting Screen** will appear. A modem that is already initialized does not have to be re-initialized.

The explanation of the operation only is described here. For the detail of the setting content, see Installation Manual-annexing of MN Converter (CMS-MNF).

(a) Explanation of screen



-Select a registered modem setup file at the **Select Initial Settings File Box**. The contents of the selected file will be listed below the selection box.

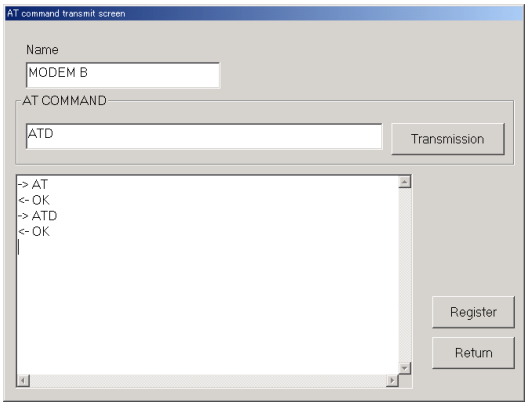
-Click on [Transmission] and the modem will be set up according to the contents selected at the selection box.
(AT commands are sent to the modem.)
Check if transfer with the modem is normal at the **Transfer with Modem Status Screen**.

- Click on [New settings] to initialize another modem. Send the initialize command and register the transfer contents for the modem at the **AT Command Transmit Screen**. [Refer to (b)]

- Click on [Delete] to delete the selected modem settings from the registered settings. When the number of registrations limit is exceeded, delete the unwanted contents. [Refer to (b)]

- Click on [Return] to return to the **Connection Setting Screen**.

(b) Perform new modem setup.



- Enter the command (you want to set) you want to send to the modem at the AT command input text. Then click on [Transmission] to send the entered AT command to the modem. The response from the modem will appear below the entered AT command. Check the contents.

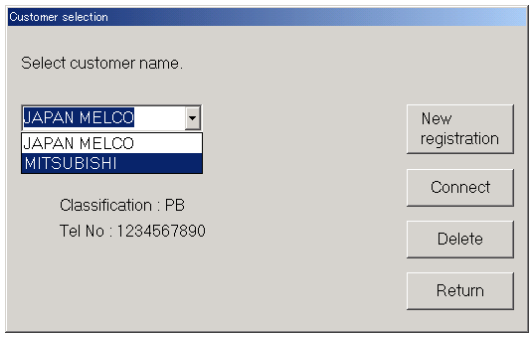
- After transmission to the modem is complete, click on [Register]. The contents sent to the modem will be registered as an initialize file. (Registered in the setup file list of the **Connection Modem Initial Setting Screen**.) At this time, do not forget to enter the registration name. Up to ten items can be registered. If ten items are already registered, new items cannot be registered. Delete unwanted items using the **Connection Modem Initial Setting Screen**.

- Click on [Return] to return to the **Connection Modem Initial Setting Screen**.

(4) Initiating the remote connection

To initiate the remote connection, click [Telephone connection] on the remote setting screen.

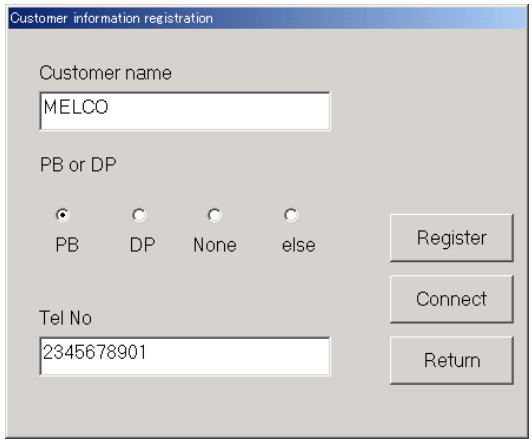
The **Customer Selection Screen** will appear. This screen connects to the on-site remote modem.



(a) When the addressee has already been registered, select the customer name to be connected in "Select customer name box" and then click [Connect] to initiate connection.

In the case of initial connection or to change to a new addressee, click [New registration] .
Then the Customer Information Registration Screen will appear.

(b) Enter Customer name of the field addressee, enter the type of the telephone circuit to be used and the telephone number of the addressee, and click [Register] . The set content will be registered.



* The contents transmitted to the modem vary in the chosen Line type.
Pay attention to the following.
When PB is chosen, "ATDT" is added before the telephone number.
For example, when a telephone number is 0123456789,
"ATDT0123456789" is transmitted to the modem.
It becomes the following when "DP", "NONE" are chosen in the same way.

DP --- ATDP0123456789
NONE --- ATD0123456789

When a circuit connection is impossible in the case of above three which as well, "ELSE" is used.
When "ELSE" is chosen, nothing is added to before the telephone number.
Input a command for the circuit connection from the beginning.
For example, "ATD0,0123456789" is transmitted to the modem when "ATD0,0123456789" is inputted in the telephone number column.
When the one except for the "ELSE" is chosen, only a number can be inputted in the telephone number column.

The information for up to 100 customers can be registered. When the information for 100 customers has been registered, new customer information cannot be registered. Delete the unwanted customer information using the customer selection screen.

(c) Check the contents, then click on [Connect] .
The **Connection Status Indication Screen** will appear.
Connect the line. When you want to disconnect the line, click on [Stop] .
The line will be disconnected.



1.4.3 Starting the On-Line Monitor(G50A(AG-150A/GB-50ADA/PAC-YG50ECA) connection)

* To use the maintenance tool via G50A(AG-150A/GB-50ADA/PAC-YG50ECA) (Network), license registration for the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be used is necessary.
Purchasing the license No. for each G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be used, conduct the license registration through the Web browser (http://[IP address of the G50A(AG-150A/GB-50ADA/PAC-YG50ECA)]/ administrator.html). After selecting "Maintenance tool" of the optional function on the Web Browser Screen displayed, enter the purchased license No..
For the detail of the license registration, see Chapter 4 [Registering a License for Optional Functions] of Central Controller Model: G50A(AG-150A/GB-50ADA/PAC-YG50ECA)Web Browser Operation Manual (For manager).

* To use the maintenance tool via G50A(**AG-150A/GB-50ADA/PAC-YG50ECA**) (Only for LAN mode and Dialup connection mode), please check a setup of Internet Connection Firewall of PC. If the FIREWALL function is used, communication will be normally impossible with G50A(**AG-150A/GB-50ADA/PAC-YG50ECA**), and normal data will not be displayed.
For detail, please refer to **[6. How to change setting of Firewall].**
In the case of permanently installing an anti-virus software and always started under this environment, the fire wall function of this software may be activated sometimes. In such case, The normal communication with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) will be hindered not displaying data normally. When operating Maintenance Tool, finish the anti-virus software once or remove the fire wall function.

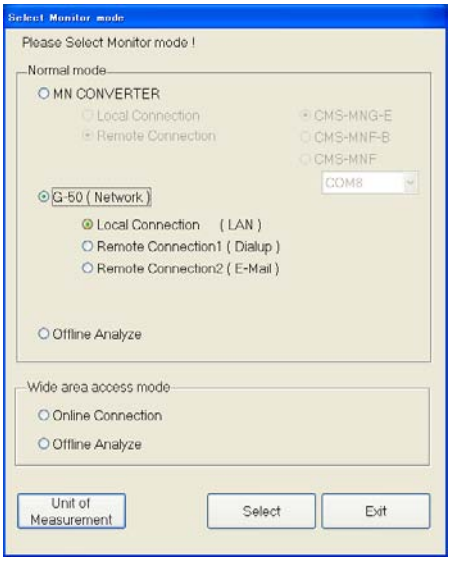
1.4.3.1 In case for local connection

In the case when on line monitoring is applied to air conditioning system via G50A(AG-150A/GB-50ADA/PAC-YG50ECA) by connecting the Maintenance Tool to LAN locally.

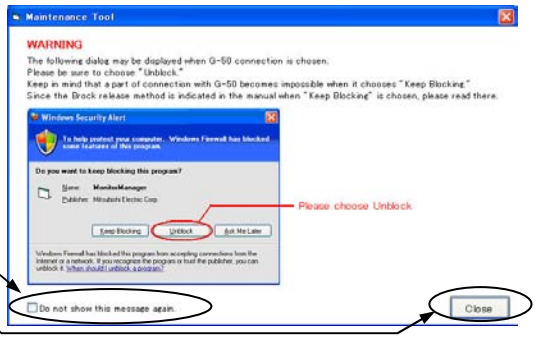
NOTE:
・Though the warning shown on the right appears, this is not a problem. Simply click **[Unblock]** or **[Allow access]**.



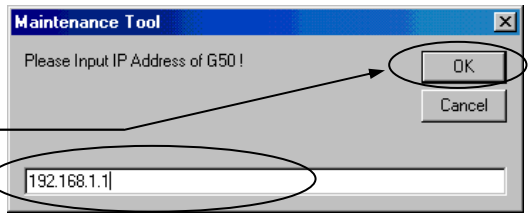
(1) Clicking "G-50A(Network)" on the selection screen of Monitor mode selects "Local connection" simultaneously. Last click " Select ".



(2) A message will appear prompting you to unblock **[MonitorManager]**.
If **[MonitorManager]** is already unblocked, check the checkbox next To **[Do not show this message again]** to not show this message.
Click **[Close]** to close the popup window.



(3) Next IP address input screen is displayed. Here,input IP address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) connected to the air conditioning system of which operating information is desired to monitor, and click on OK .



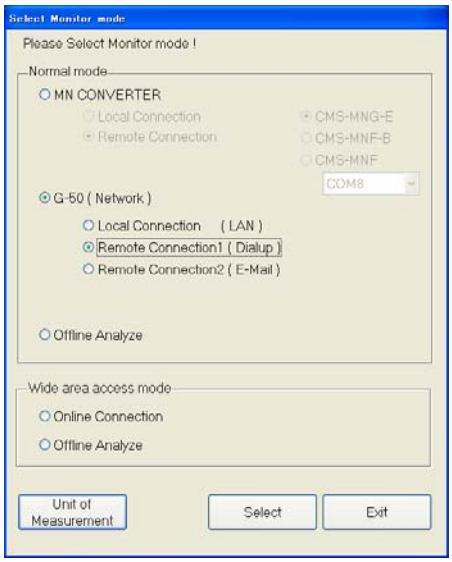
NOTE:
- It is required to set to the IP address in the same system with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be connected to Maintenance Tool PC from [Control Panel].

1.4.3.2 In case for remote connection (Dialup)

In the case when on line monitoring is applied to local air conditioning system (with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) installed) from the maintenance tool in the remote place via public telephone circuit.

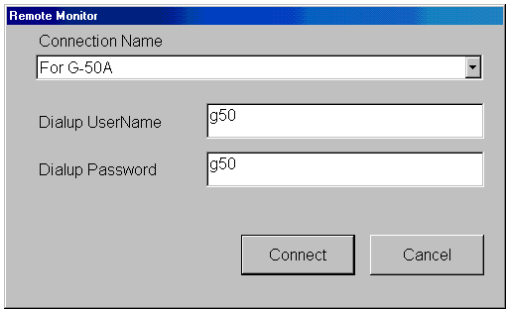
* When utilizing Remote connection (Dialup),please prepare MODEM and DIAL-UP ROUTER (of a type allowing data communication by receiving external telephone transmission) for the connection with the public circuit in addition to the components used by Local connection (LAN).
  For the system composition, please refer to the system diagram of (2)-1 in 1.1.2.
  To use Remote connection (Dialup), it is previously required to register MODEM onto Windows and set the information on the receiver (the dial-up router at G50A(AG-150A/GB-50ADA/PAC-YG50ECA) in the field) of the telephone transmission onto the dial-up connection screen.
* If communication does not have for 10 minutes in remote connection, "Timeout occurred!" will be displayed, if O.K. is pushed, a telephone circuit will be cut automatically and the Maintenance tool will be ended.

(1) After clicking "G-50A(Network)" on the selection screen of Monitor mode, and click "REMOTECONNECTION(Dialup)." Last click " Select ".



(2) Next **Remote Monitor screen** is displayed.
Here select the connection name of the dial-up router at G50A(AG-150A/GB-50ADA/PAC-YG50ECA) in the field desired to be remotely connected.
It is being set previously on the dial-up connection screen.
Then input Dial-up user name and Dial-up password to connect with the dial-up router,and click on Connect .

After connecting to the telephone circuit, on-line monitoring can be performed as same as the case when connected with LAN.



1.4.3.3 In case for remote connection (E-mail)

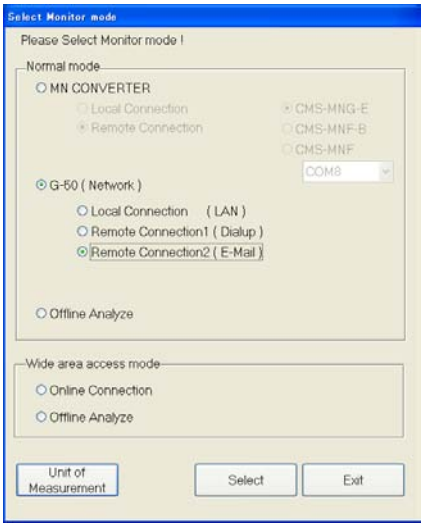
In the case when on line monitoring is applied to local air conditioning system (with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) installed) from the maintenance tool in the remote place via mail server.

All communication to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) is converted in E-mail in this case.

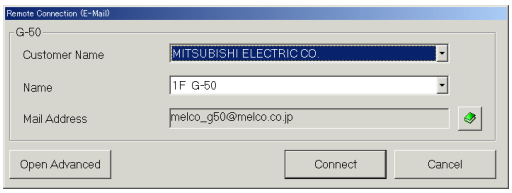
NOTE:

- To use the E-mail connection mode, the version of G-50A should be above 2.60.
- When using E-mail connection mode, the local G-50A is required to be initially set with Maintenance Tool and the mail address by the G-50A initial setting tool. (When AG-150A, please set it from initialization WEB.)
  - For each mail address, it is required to obtain and set an exclusive one. To transmit mail via an internet provider, obtain the mail address from the provider. When a mail server is existing on the LAN, obtain the mail address from the LAN administrator.
  - Set the [Pop receive interval] within 3 minutes. However to monitor operating status [Operation Monitor], set it within 1 minute.
  - Setting of initial information to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) can not be executed from Maintenance Tool.
    Make sure to set it from the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) initial setting tool locally. If dialup connection environment is available, it can be set from a remote position.
    (For detail, please when G-50A, refer to 6-1 Mail Basic Setting in the instruction manual of the G-50A initial setting tool. When AG-150A, refer to 5-1 Error mail reports/E-mail comunication in the instruction manual of the AG-150A Web browser for initial settings.)
- When using E-mail connection mode, the local G50A(AG-150A/GB-50ADA/PAC-YG50ECA) is required to be initially set with
  Maintenance Tool and the mail address by the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) initial setting tool.
- The communication speed under E-mail connection mode largely depends on the transfer rate of each mail server. Under the circumstance, the action of Maintenance Tool may take a lot of time under some internet environments or routing mail servers.
- For the system composition, please refer to the system diagram of (2)-2 in 1.1.2.

(1) After clicking "G-50A(Network)" on the selection screen of Monitor mode, and click "REMOTE CONNECTION(E-mail)". Last click " Select ".



(2) The mail connection setting screen is displayed. Here, set the mail information on G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be connected, and that on the Maintenance Tool.



NOTE:

For each mail address, it is required to obtain and set an exclusive one. To transmit mail via an internet provider, obtain the mail address from the provider. When a mail server is existing on the LAN, obtain the mail address from the LAN administrator.

(a)Setting of the mail information on G50A(AG-150A/GB-50ADA/PAC-YG50ECA)

1) To assign the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) connected in the past
After assigning “Customer name” from the pull down menu, select G50A(AG-150A/GB-50ADA/PAC-YG50ECA) name.

2) To connect to new G50A(AG-150A/GB-50ADA/PAC-YG50ECA)
Click  to open the address book, and register and select the mail address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA).
*The 10 Customer names in the past are displayed on the pull down menu. To assign earlier G50A(AG-150A/GB-50ADA/PAC-YG50ECA), open the address book to select.

(b) Address book

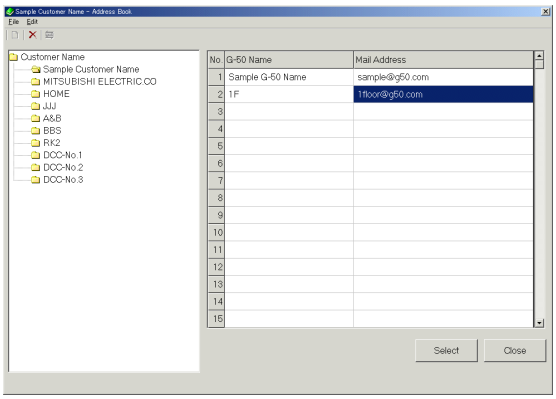
The mail address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) for each project can be registered.
As shown in the sample examples, register the name and mail address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) after preparing the [Customer name] folder.

[Entering order]

1) Preparing the Customer folder

Pressing  displays the input screen of customer name, and then enter the name.
The setting can also be made from the file menu or the sub-menu displayed by right-clicking.

Further deletion processing can be made with  or Del-key, and rename processing with  button.



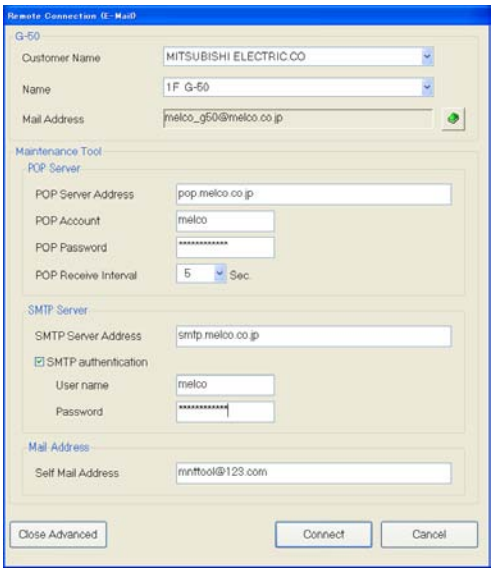
2) Name and address setting of G50A(AG-150A/GB-50ADA/PAC-YG50ECA)
Double-clicking at a position desired to enter provides the input mode.
Set the name and address accordingly.
*Be sure to set the name of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) also.
The deleting processing can be executed with the  Del-key, or Edit menu. It can also be performed by the Delete setting of the sub menu displayed by right-clicking.

[Selection order]

-Selection of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be connected with
Click the customer name folder desired to connect to open the address book of the project.
After fitting the cursor to the name of address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA), click [SELECT] button.

(c)Advanced setting screen

Clicking **[Open Advanced]** opens Advanced screen where the mail information about Maintenance Tool may be set. When the mail information about Maintenance Tool has not been set, Advanced screen is displayed always under opened state.



- Setting of mail information on Maintenance Tool

1) POP server (Receiving)

- POP server address
  Set the IP address of the receiving mail server (POP3) of Maintenance Tool or domain name.
- POP account
  Set the POP account (user ID) for mail receiving.
- POP password
  Set the user password for mail receiving.
- POP receive interval
  Select the mail receiving interval.
  The default value represents 5sec.
  It can be selected within a range of 5 ~180sec.
  Extend the interval when the server is crowded.

2) SMTP server (Transmitting)

- SMTP server address
  Set the IP address of transmitting mail server of Maintenance Tool.
- SMTP authentication
  If it is not checked, SMTP authentication is not used when sending e-mails.
  If it is checked, SMTP authentication is used when sending e-mails. The following settings are needed for this setting. Ask the IT management staff for questions regarding
  a) User name ：Set the SMTP user name.
  b) Password ：Set the user password.

3) Mail address

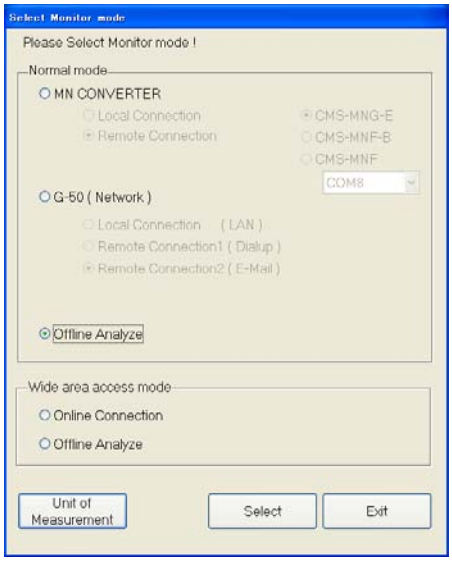
- Set the mail address of Maintenance Tool.
  Clicking [Close Advanced] closes Advanced screen.

(3) After setting the mail information about the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) connected and that about Maintenance Tool, click **[CONNECT]**.

1.4.4 Starting the Off-Line Monitor

When offline analysis is adapted to the data collected under ONLINE MODE.

(1) Clicking "Offline Analyze" on the selection screen of Monitor mode.
Last click " Select ".



1.4.5 Using the Wide area access mode

Under the "Wide area access mode," the access method for remote connection can be registered to the database of each customer enabling easy online connection with the air conditioning system of the customer desired to be accessed.

[Remote access method]

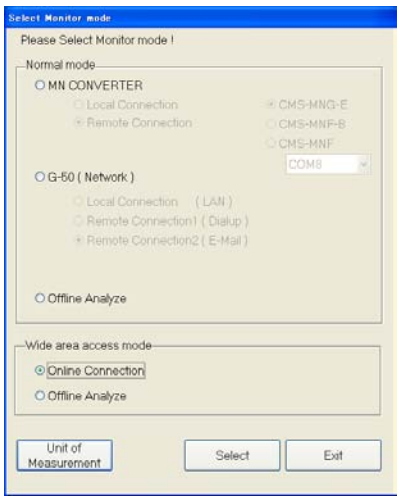
- **LAN** : Accessing by directly connecting Maintenance Tool PC and G50A(AG-150A/GB-50ADA/PAC-YG50ECA) with LAN (WAN).
- **Dialup** : Accessing by dialup connection to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) via public network.
- **E-mail** : Accessing by E-mail communication to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) via mail server.
- **Modem** (MN Converter) : Accessing by connecting Modem to MN Converter via public telephone circuit.

After the online connection performed by any of the above methods, you may use the similar function as that obtainable in the normal online connection.
While under the offline mode, customer information will be provided to the monitored data enabling only to select a specified customer for display.

NOTE:
Even when connecting under the wide area access mode, cautions will be applied as same as under the normal connection mode. You are kindly requested to observe the cautions described in the connection method under normal mode as well. (1.4.1 - 1.4.3)

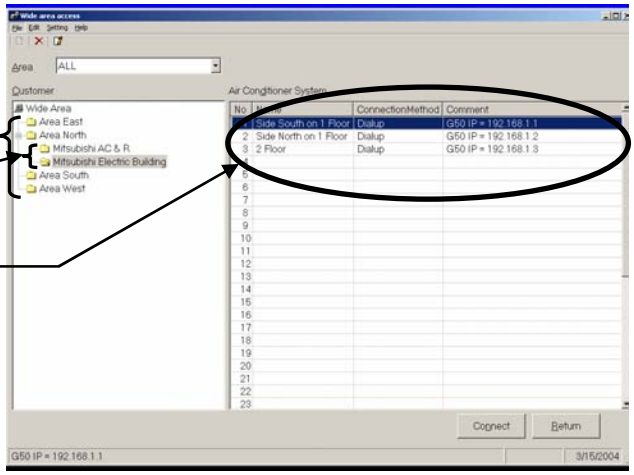
1.4.5.1 Online Connection

(1) Clicking “Online Connection (Wide area access mode)” on the section screen of Monitor mode.
Last click " Select ".



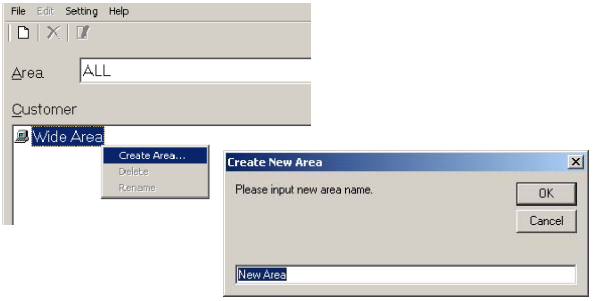
(2) The customer registration screen will be displayed.
Register customer information in the order of
[1] -> [2] -> [3] hierarchically.

[1] Area name
└→ [2] Customer name
└→ [3] Air conditioning system name & connection method



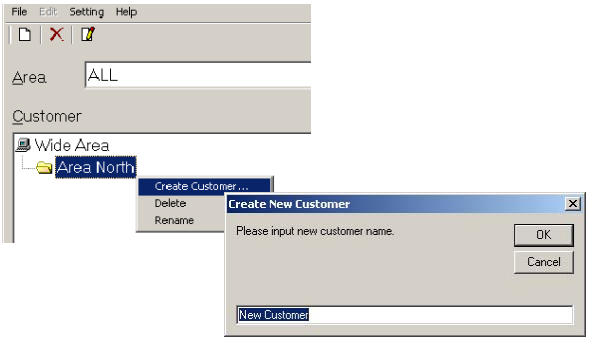
(a) Creating the [Area name] folder

1) When [Wide Area] is being focussed, the sub-menu will be displayed by right-clicking.
2) Select [Create Area …].
3) As the screen to enter the AREA name appears, set a proper Area name and press [OK] to create the Area folder.



(b) Creating the [Customer name] folder

1) Right-clicking the [Area name folder] to be registered displays the sub-menu.
2) Select [Create Custormer …].
3) As the screen to enter the Customer name appears, set a proper customer name.

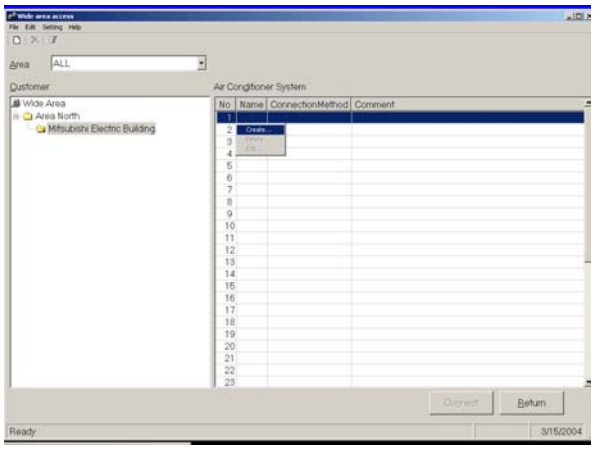


* In addition to the above mouse operation, the creation of [AREA name] and [Customer name] can be set from the **menu bar (File)** or **tool bar (Figure).**
By applying the same operation procedure(right-clicking, menu bar, tool bar), each folder can be deleted. Also the name of each folder can be changed.

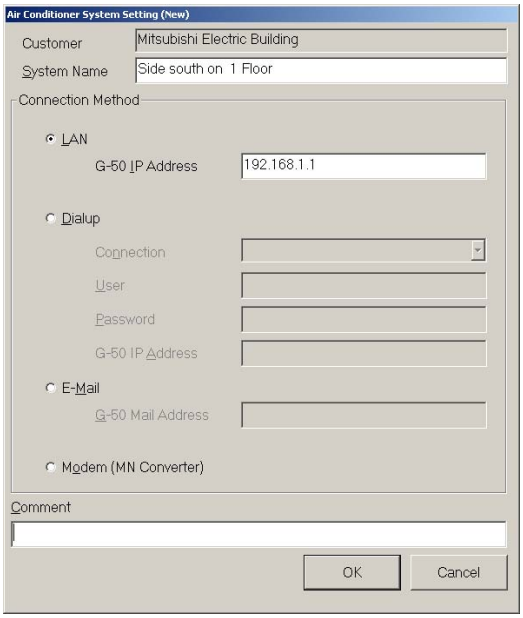
Caution:
If a folder is deleted, all information (customer name, air conditioning system name, etc.) will be deleted similarly.

(c) Setting the [Air conditioning system name]

1) Under the state when the [Customer name folder] desired to be set on the air conditioning system is focussed, the sub-menu will be displayed by right-clicking the air conditioning system list at the right screen.
2) Selecting [Create ...] displays [Setting screen of air conditioning system].

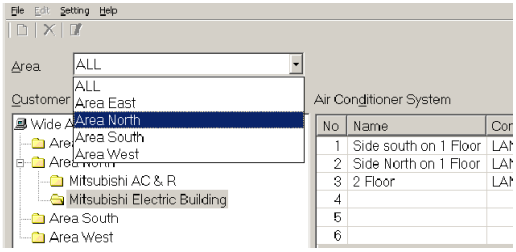


[Setting screen of air conditioning system]



1) Set the system name.
2) Select the method to connect with the system.
   - To connect by using **LAN (WAN)**, enter the IP address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be connected. (Same as 1.4.3.1)
   - To connect by using **Dial-up**, select the [Connection name] of dialup router of the local G50A(AG-150A/GB-50ADA/PAC-YG50ECA) being previously set on the dialup connection screen of Windows. And enter [User name] and [Password] for the connection with the dialup router, and lastly enter the IP address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA). (Same as1.4.3.2)
   - To connect under **E-mail mode**, enter the E-mail address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) to be connected.(Refer to1.4.3.3.)
   - To connect remotely with **MN Converter and Modem**, select [Modem(MN Converter)].
3) Enter special notes if any on the comment column.
   After entering and selecting the above, press [OK].

Set various information as required by repeating the items **(a)~(c) above**.
Using the area selecting section allows you to extract the only area desired to display.

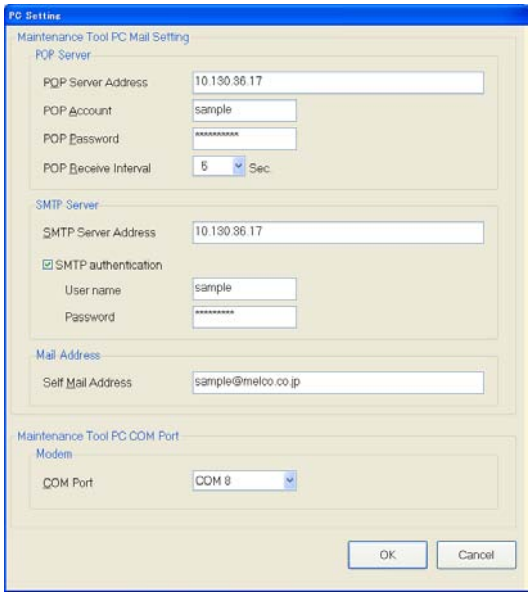


(d) Other setting

You may select the mail address of maintenance tool PC itself and the Com port to be used.

* To use the E-mail mode, mail setting is essentially required.

[Mail setting of maintenance tool PC]

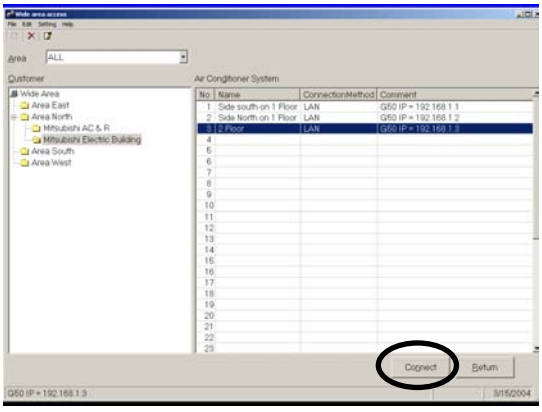


1) POP server (Receiving)
   - POP server address
     Set the IP address of the receiving mail server(POP3) of Maintenance Tool or domain name.
   - POP account
     Set the POP account (user ID) for mail receiving.
   - POP password
     Set the user password for mail receiving.
   - POP receive interval
     Select the mail receiving interval.
     The default value represents 5sec.
     It can be selected within a range of 5 ~180sec.
     Extend the interval when the server is crowded.
2) SMTP server (Transmitting)
   - SMTP server address
     Set the IP address of transmitting mail server of Maintenance Tool.
   - SMTP authentication
     If it is not checked, SMTP authentication is not used when sending e-mails.
     If it is checked, SMTP authentication is used when sending e-mails. The following settings are needed for this setting. Ask the IT management staff for questions regarding.
     a) User name : Set the SMTP user name.
     b) Password : Set the user password.
3) Mail address
   - Set the mail address of Maintenance Tool.
     Clicking [Close Advanced] closes Advanced screen.

[Setting of Com port]

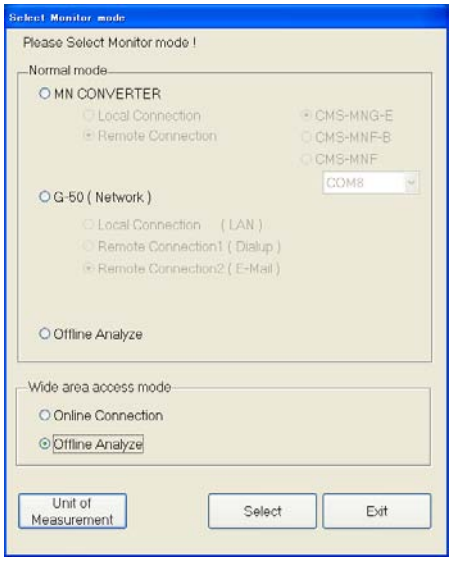
To connect Mode, select the Com port to be used.

(3) Focussing on the air conditioning system desired to be connected and pressing [Connect] will start the procedure for connection. After completing the normal connection, the screen moves to the online main screen allowing normal online operation.
However when the connection method uses [Modem(MN Converter)], the screen of the Modem remote connection will appear. In this case, select the Modem to be connected and proceed the connection procedure.(Refer to 1.4.2.2.)



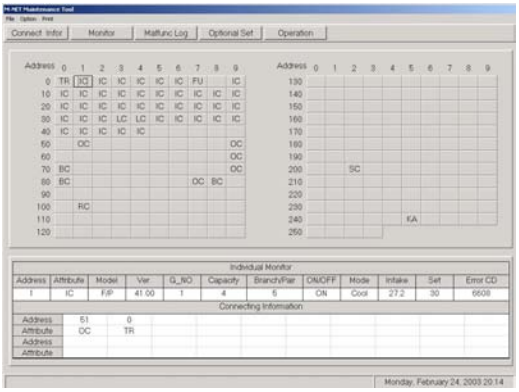
1.4.5.2 Offline Analyze

(1) Clicking “Offline Analyze (Wide area access mode)” on the section screen of Monitor mode.
Last click " Select ".



1.4.6 Ending the Maintenance Tool

1.4.6.1 Ending the On-Line Monitor

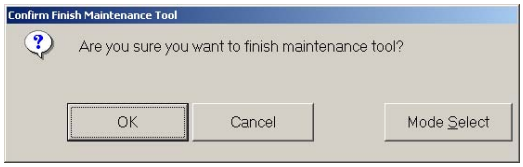


(1) Open the **Main Screen**.

(2) Click on [**File**] on the menu bar.

(3) Click on [**Return**] in the sub-menu.

(4) The message "**Are you sure you want to finish maintenance tool?**" will appear.
Click on [OK].

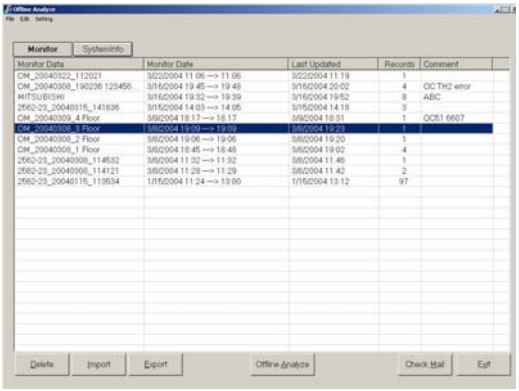


The On-Line Monitor will end and the Windows screen will appear.

*At ending of Maintenance Tools, the telephone circuit will automatically be disconnected.

* Clicking [Mode Select] returns to the [selection screen of Monitor mode].

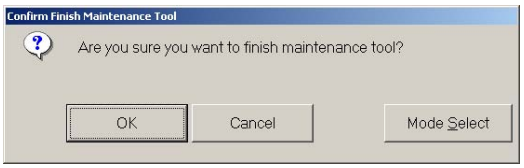
1.4.6.2 Ending the Off-Line Monitor



(1) Open the **Off-line Analyze Screen**.

(2) Click on [Exit].

(3) The message "**Are you sure you want to finish maintenance tool?**" will appear.
Click on [OK].



* When finishing Offline Screen immediately after deleting data, a message of "Finishing Maintenance Tool !!" may sometime be displayed. The internal data is now under arrangement. Offline Screen will automatically be finished after completing this process. Please wait a while.

* Clicking [Mode Select] returns to the [selection screen of Monitor mode].

1.4.7 Ending the MSDE

(1) Click on［**Service Manager**］from［**MSDE**］to［**All Programs**］to start, and start it.

(2) When it start『SQL Server Service Manager』,
a screen such as the right is displayed.
Click on ■ **, and stop Server**.

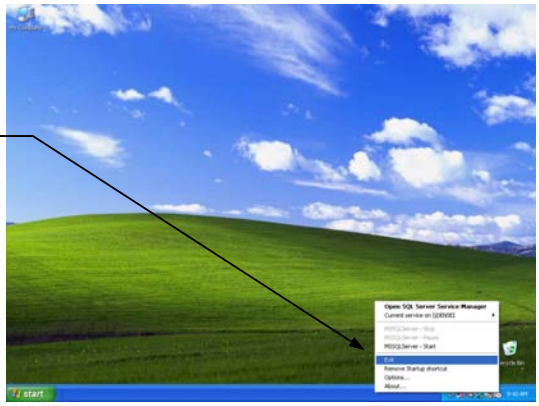


When it click on ■ , the confirmation screen is displayed.
Click on [Yes], and『SQL Server Service Manager』is stop.

(3) When it stop, a screen such as the right is displayed.



(4) Close Window of『**SQL Server Service Manager**』
and **click the right**  **of the task bar right-side end, and Click on[Exit]**.

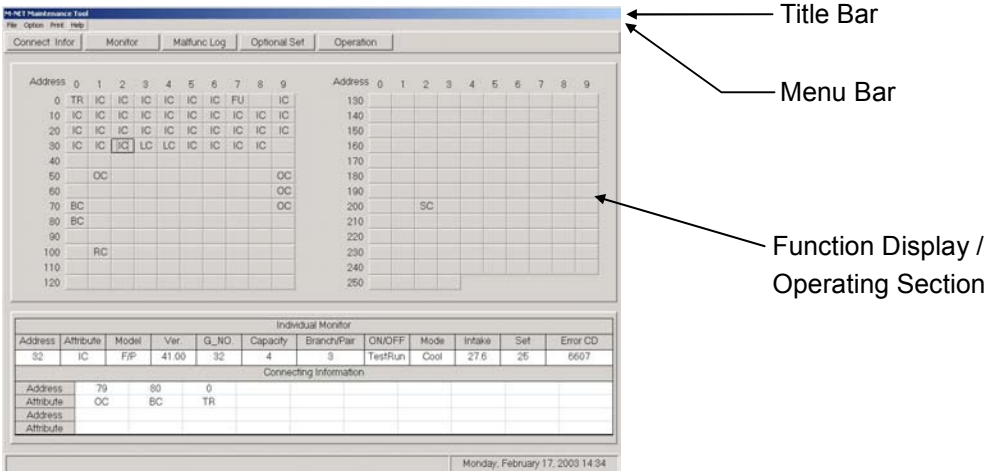


『SQL Server Service Manager』is finished.

2 Terms for Each Section

2.1 Design of Screen

The design of the screen is shown below.



- Title Bar

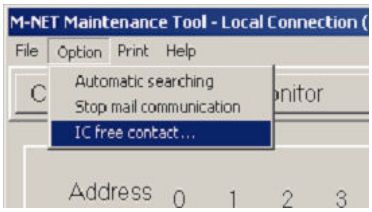
Displays the title of the screen.

- Menu Bar

Displays the functions that can be performed using the current screen.

Click on an item and a sub-menu or message screen will appear, as shown in the illustration.

If a sub-menu appears, further function selections can be made.



(Example of what the screen looks like when option is clicked.)

- Function Display / Operating Section

Displays the contents of the screen and the operation to be performed.

2.2 Operating Method

The following operations are performed by mouse.

(1) Click

Align the mouse pointer with the desired button and press the left button on the mouse. This is known as a click.

In general, all Maintenance Tool operations are performed with click operations.

(2) Drag

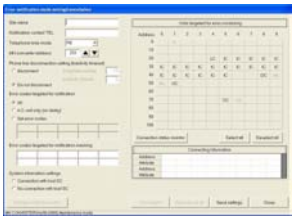
A drag is when the mouse pointer is moved while the left button is held down.

If you desired to check the bottom screen when two or more screens are being displayed on top of each other, align the mouse pointer with the title bar of the top screen and drag it. The bottom screen can now be seen.

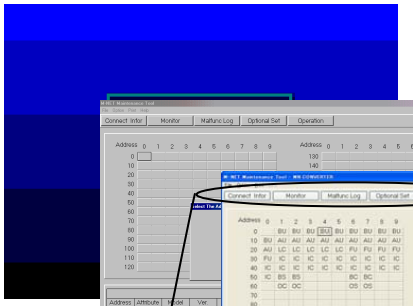
3 On-Line Monitor Operating Method

3.1 On-Line Monitor Screen Transfer

Remote error notification

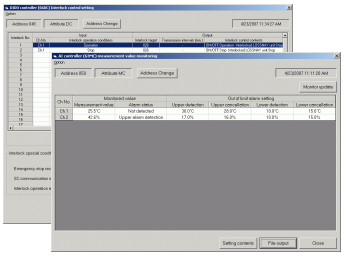


Title Screen

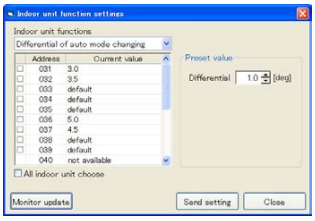


Main Screen

Setting and Monitoring DIDO/AI/PI controllers

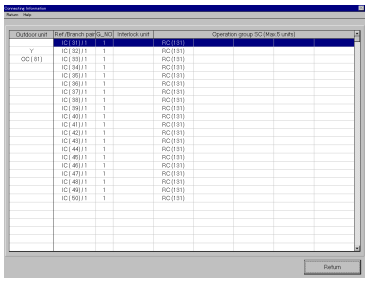


Setting the Values for Indoor Unit Functions

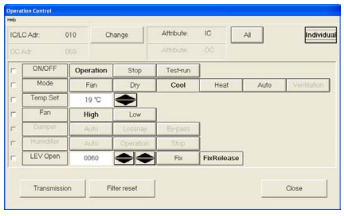


Connect Infor | Malfunc Log | Operation | Monitor | Optional Set

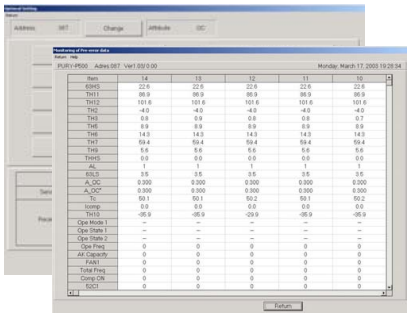
Connecting Information



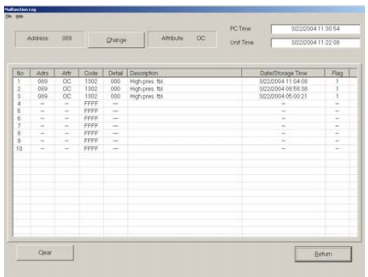
Operation Control



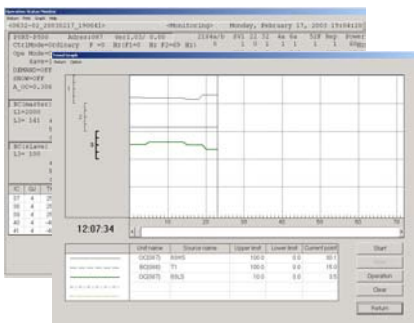
Optional Setting



Malfunction Log



Operation Monitor



3.2 Function Chart

Connecting Information ---------- [Refer to 3.6]

This allows monitoring of the indoor units connected to the outdoor unit and of the interlock units and the operation group SC connected to indoor units.
Or this allows monitoring of a network information of the Expansion Controller (PAC-YG50ECA-J) and that upper controller's connection informations.

Operation Monitor ---------- [Refer to 3.7]

This allows monitoring of the operating condition of the unit and operating data. The operation data obtained will be shown in the form of a graph.
Utilizing the mail communication mode in addition, the operation monitoring data collected by G50A(AG-150A/GB-50ADA/PAC-YG50ECA) can periodically be transmitted to remote mail servers, and it can be referred as the off-line data later.
*The Mail communication mode can not be used with MN Converter connected.

Malfunction Log ---------- [Refer to 3.8]

This allows monitoring of the ten most recent errors of the unit.

Optional Setting ---------- [Refer to 3.9]

This allows monitoring of self-diagnosis function, operation control and pre-error data monitoring.
This also allows to monitor the response to any M-NET command transmitted to the unit. Time setting.

Operation Control ---------- [Refer to 3.10]

This allows the same operation as with the remote controller.

OC Date / Time Setting ---------- [Refer to 3.11]

A setup of the present time can be performed to all outdoor units at the same time.

Free contact of indoor unit ---------- [Refer to 3.12]

When utilizing the [Indoor unit free contact mode] which uses the external input/output of Free Plan indoor unit (Building-Multi) together with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) and TG 2000A, the contact action of the indoor unit can be tested with this function.

Remote error notification ---------- [Refer to 3.13]

When an error occurs in the air conditioning unit, the remote error notification function allows previously registered destinations to be automatically notified of the error via telephone lines. (This function can only be used with the MN Converter CMS-MNG-E.)

Setting and Monitoring DIDO/AI/PI Controllers ---------- [Refer to 3.14]

Settings and monitoring DIDO Controller (PAC-YG66DCA), AI Controller (PAC-YG63MCA), and PI Controller (PAC-YG60MCA) can be made. (PI Controllers can be used only for monitoring.)
DIDO Controllers and AI Controllers have an interlock control function.
DIDO Controllers can also change the operation status of M-NET devices (such as indoor units, DIDO Controllers) by sending operation commands. DIDO Controllers can output contacts on DIDO Controllers themselves depending on the change in input contact status.
AI Controllers can change the operation status of M-NET devices (such as indoor units, DIDO Controllers) by sending operation commands depending on the change in measurement values.
“Interlock operation conditions” for the “interlock control function” can be set on Maintenance Tools.

Setting the Values for Indoor Unit Functions ---------- [Refer to 3.15]

The preset settings for each function of the connected indoor units can be displayed, set, or changed.

Compressor operating time monitor ---------- [Refer to 3.16]

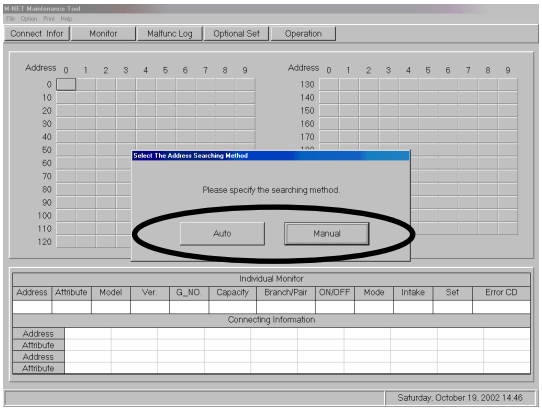
The compressor operating time of the outdoor unit can be monitored.

3.3 Address Search Method

3.3.1 Address Search Method Selection

(1) Start the M-NET Maintenance Tools and the **Select The Address Searching Method Screen** will appear after the **Title Screen**.

(2) Click on either Auto or Manual to select the address search method.



* **Automatic Search**

The Maintenance Tools automatically searches for and displays information about units connected to the M-Net transmission line.

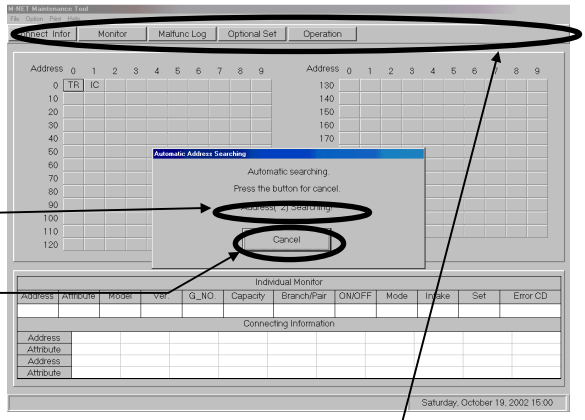
* **Manual Search**

The user optionally searches for the units connect to the M-Net transmission line.

3.3.2 Automatic Searching

(1) Click on Auto and the **Automatic Address Searching Screen** will appear.

- The time required to complete the automatic search will depend on the PC.
- The address currently being searched for is displayed as [**Address**]. Up to 250 addresses can be searched for.
- Click on Cancel to end automatic search. The **Main Screen** will appear.

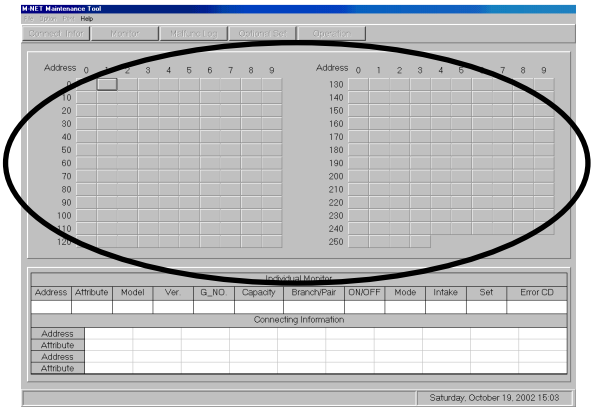


(2) When automatic search has ended, the **Main Screen** will appear.
Returning to the **Main Screen** enables the [**Function Buttons**].

3.3.3 Manual Searching

(1) Click on Manual and the **Main Screen** will appear.

(2) Click on the [**Button**] of the address desired and searching will begin.

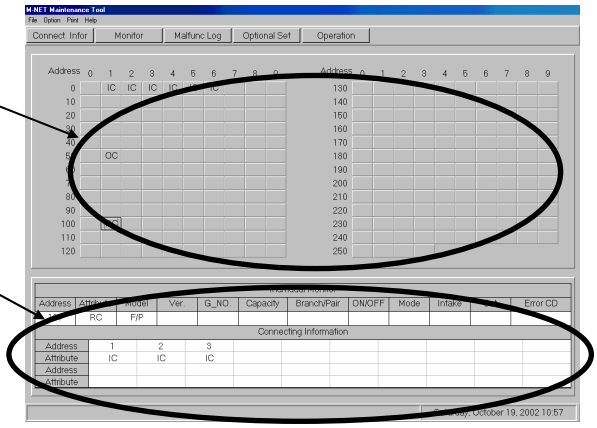


NOTE:
When a system is changed, please search an address after re-starting a Maintenance tool and G50A(AG-150A/GB-50ADA/PAC-YG50ECA).

3.4 Main Screen

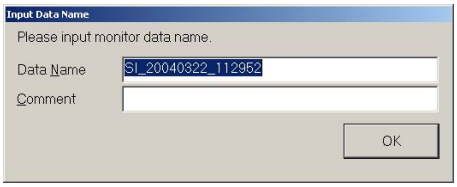
The operations in **3.3 Address Search Method** have made information about the units known.
The [**Unit Attributes**] are displayed on top of the address buttons.
The **Function Buttons** are now enabled at this time.

(1) Click on an address [**Button**] displaying attributes and information about that unit will be displayed in the [**Unit Information Display Columns**].



(2) The menu bar will display [**File**], [**Option**] ,[**Print**] and [**Help**].

- Click on [**File**] and "**Save System Information**" and "**Return**" sub-menu can be selected.
  Click on "**Save System Information**" and the message "**Are you sure you want to save the System Information?**" will appear.
  Clicking OK displays the screen to save data. Change the data name as required and save it.
  You may enter your comment also.
  Click on Cancel to return to the **Main Screen**.
  [Refer to **5.1 System Information Data.**]



  Click on "**Return**" to end the operation of the On-line monitor.
  [Refer to **1.4.5.1 Ending the On-Line Monitor**]

- Click on [**Option**] and "**Automatic searching**" and the "**Stop mail communication**" sub-menus can be selected. * At the connection of MN Converter, "**Stop mail communication**" is not displayed.
  Click on "**Automatic searching** " and the message "**Start the automatic searching. Is it OK?**" will appear.
  Click on OK to perform automatic searching or click on Cancel to return to the **Main Screen**.

  For more information about automatic searching, refer to [**3.3 Address Search Method 3.3.2 Automatic Searching**].

  Click on "**Stop mail communication**" ,and the **Stop mail communication Screen** will appear.
  Clicking on Yes stops the mail transfer processing of operation monotor data to remote mail servers.
  After a while, the setting completion message appears. Clicking on OK returns to the main screen.
  Clicking on No returns to the main screen directly.



- Clicking on [**Print**] prints out the display currently shown on the screen.

- Click on [**Help**] and "**Explanation of Terminology**" and "**Operation Method**" sub-menus can be selected.
  [Refer to **3.6.1 Connecting Information of outdoor units 3.6.1.2 (2) "Menu Bar"**]

NOTE:
"Stop mail communication" is a function to stop the operation monitor mail transmission of G-50A (AG-150A) under [mail communication mode] set in Chapter 3.7. It has no relation with (2)-2 E-mail connection mode of 1.1.2 On-line Monitor (via G50A(AG-150A/GB-50ADA/PAC-YG50ECA)).

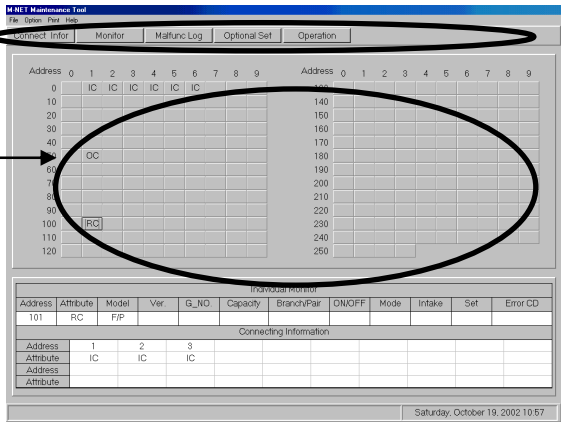
3.5 Function Selection Operations

(1) First, click on the desired [**Function Selection Button**].

(2) Next, click on the **Unit to Operate**.

(3) The screen will move to the various operation screens.

(4) If the wrong function selection button is clicked, click on that button once again and the other function selection buttons will be enabled.



3.6 Connecting Information [Connect Infor]

*** Items Performed Here**

- Indoor units connected to outdoor units, interlock units and the operation group SC (such as system controller and remote controller) connected to indoor units can be monitored here.
  (Refer to **3.6.1 Connecting Information of the outdoor unit**)
- Network information of the Expansion Controller (PAC-YG50ECA-J) and that upper controller's connection informations can be monitored here.
  (Refer to **3.6.2 Connecting Information of the Expansion Controller**)

3.6.1 Connecting Information of the outdoor unit [OC]

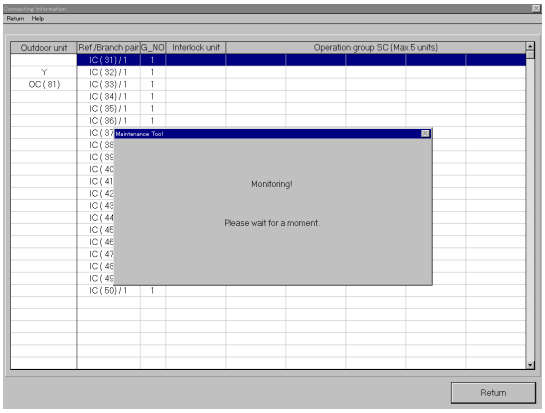
·Indoor units connected to outdoor units, interlock units and the operation group SC (such as system controller and remote controller) connected to indoor units can be monitored here.
·Select and double-click the interlock units and operation group SC (remote controller only), the **Connecting Information Screen** will display as a pop-up menu.
The screen displays addresses and attributes of the units connected to the select unit.

3.6.1.1 Screen Transfer Operation

(1) Click on [Connect Infor] on the **Main Screen**.

(2) Click on the [OC] for the outdoor unit to be monitored.
- Only outdoor units and the Expansion Controller (PAC-YG50ECA-J) can be selected.

(3) Momentarily, the message "**Monitoring! Please wait for a moment.**" will appear.

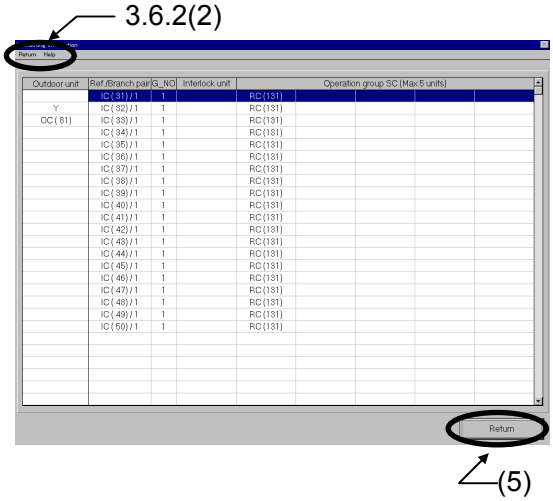


NOTE:
Even with the direct expansion type, when units other than the outdoor unit and other than the Expansion Controller(PAC-YG50ECA-J) are selected by (2), the screen returns to the **Main Screen** (where it waits for function selection input).

(4) Momentarily, the **Connecting Information Screen** will appear.

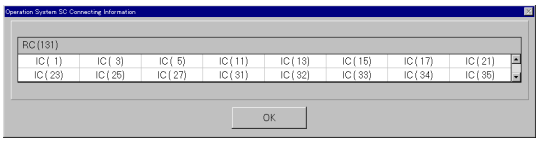
(5) Click on [Return] to end the **Connecting Information Screen**.

(6) The message "**Finish the Connecting Information**" will appear.
Click on [OK] to end or click on [Cancel] to continue.
Click on [OK] and the Main Screen appears.



3.6.1.2 Screen Functions and Operation

(1) Double-click on the interlock unit and operation group SC (such as system controller and remote controller), the **Operation System SC Connecting Information Screen** (in case operation group SC) will appear as a pop-up menu.
The screen displays addresses and attributes of each connected unit.



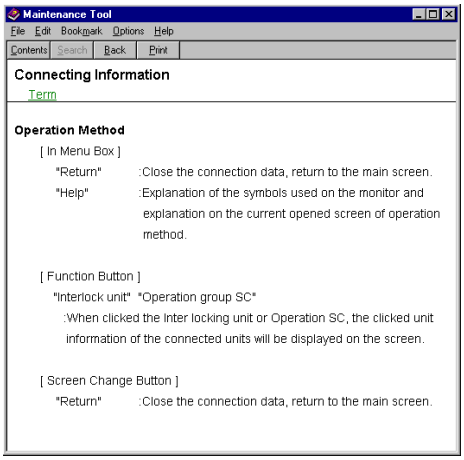
NOTE:
The **BC controller(BC),Subsidiary outdoor unit(OS)** are indicated in the outdoor unit column.

(2) "**Menu Bar**"
[**Return**] and [**Help**] appear in the menu bar.

Click on [**Return**] to end the **Connecting Information Screen** and return to the **Main Screen**.

Click on [**Help**] and the **Help Screen** appear.

- Click on "**Contents**" and the index for the **Help Screen** appear.
- Click on "**Back**" and the unit returns to its previous operating state.
- Click on "**Print**" and the currently displayed screen is printed. (Caution: Do not print while on-line. There is a chance that it could interfere with operation.)
- Click on "**Term**" and **Explanation of Terminology Screen** appear.
  Abbreviations, codes and other terms are explained on the explanation of terminology screen.



3.6.2 Connecting Information of the Expansion Controller [TR]

・Network information of the Expansion Controller (PAC-YG50ECA-J) and that upper controller's connection informations can be monitored here.

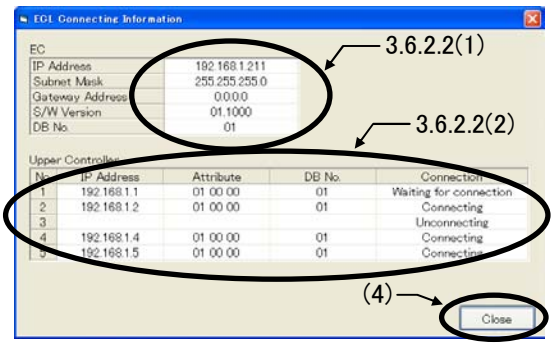
3.6.2.1 Screen Transfer Operation

(1) Click on [Connect Infor] on the **Main Screen**.

(2) Click on the [TR] for the Expansion Controller to be monitored.
- Only outdoor units and the Expansion Controller (PAC-YG50ECA-J) can be selected.

NOTE:
Even with the direct expansion type, when units other than the outdoor unit and other than the Expansion Controller(PAC-YG50ECA-J) are selected by (2), the screen returns to the **Main Screen** (where it waits for function selection input).

(3) Momentarily, the **ECL Connecting Information Screen** will appear.
The monitor result to the Expansion Controller is displayed.
Refer to [**3.6.2.2 Content of the Display Item**] for the content of the display item.



(4) Click on [Close] to end the **ECL Connecting Information Screen**.

3.6.2.2 Content of the Display Item

(1) Content of the **"EC"** Item
Selected Expansion Controller's Network informations is displayed.
・IP Address : The Expansion Controller's Internet protocol address.
・Subnet Mask : Subnet mask value to the Expansion Controller's Internet Protocol address.
・Gateway Address : Gateway address on network where Expansion Controller is connected.
・S/W Version : The Expansion controller's software version number.
・DB No. : The Expansion controller's DB No..

(2) Content of the **"Upper Controller"** Item
Connection informations of selected Expansion Controller's upper controller is displayed.
(The setting value of the Expansion Controller is displayed, excluding Connection Column.)
・IP Address : The upper controller's Internet protocol address.
・Attribute : The upper controller's attribute data.
・DB No. : The upper controller's database number.
・Connection : Connected state at upper controller and the Expansion Controller.
Connectting : The Expansion Controller and the upper controller is connecting now.
Waiting for connection : The Expansion Controller and the upper controller is not connecting now.
Unconnectting : The Expansion Controller doesn't have the upper controller's registration.

* When the Connection Column is a "Unconnectting", that are displayed by the blank, excluding it.

3.7 Operation Monitor [Monitor]

* **Items Performed Here**

- Monitors the operating condition and operating data of the current units every minute. This information can be displayed and saved.

* When an excessively large number of the objective unit for monitoring exists, the monitoring interval may exceed 1 minute (70s, 80s, ---).

* The capacity to store the data obtained by the Maintenance Tool counts for 2G-bite maximum.When the remaining storage capacity is getting insufficient during Operation Monitoring, Warning Screen will appear. **In this case, suspend the Operation Monitoring, move to Offline screen and delete unnecessary data to keep a proper capacity.**

3.7.1 Screen Transfer Operation

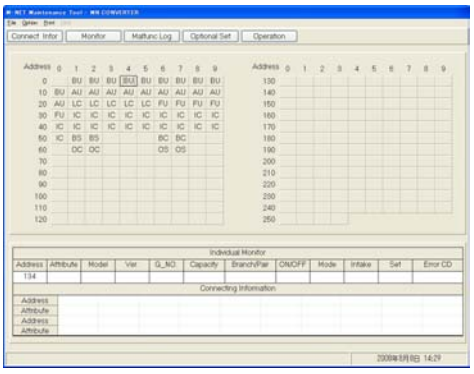
(1) Click on [Monitor] on the **Main Screen**.

(2) Click on the unit to be monitored.
If only outdoor unit is [OC] selected here, the operating data for the units connected to the outdoor unit will be automatically monitored.
The maximum number which can carry out a monitor changes with selected models.
An **error message** will appear if the limited number of units is exceeded.

<u>The standard of the number which can carry out a monitor.</u>

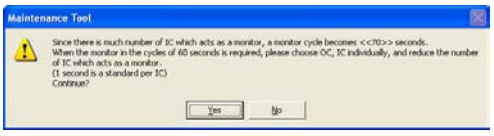
* When only **Outdoor Unit** is selected.
- **One (1) Outdoor Unit + 50 Indoor Units.**
- **One (1) Outdoor Unit + Three (3) OC Sub Controller (BC,BS,OS…) + 50 Indoor Units.**

* When only **Indoor Units** are selected, **50 Units.**



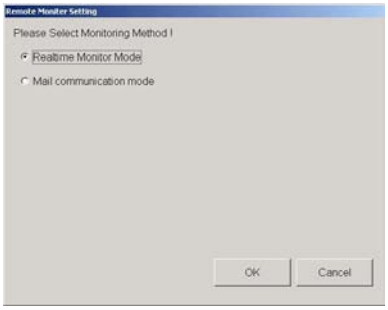
(3) After the units to be monitored have been selected, click on [Defined] .

(4) The message "**Monitoring! Please wait for a moment.**" will appear.
After a while, the screen to select monitor method appears.



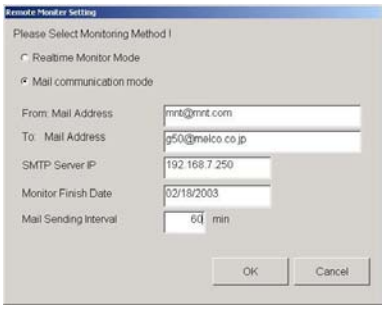
When it is judged that monitoring with one minute cycle may not be performed because of many units to be monitored, a message of **[The monitoring cycle will be [* *] seconds due to too many IC units for monitoring. ---]** will be displayed automatically. To continue the monitoring, click [Yes], while to suspend it once to reduce the quantity of units for monitoring, click [NO]. Reduction of one IC can minimize the cycle time by about one second.

* In "MN converter connection", it shifts to (7).



(5) When desiring to observe the operation data immediately, select [**Realtime Monitor Mode**] and then click on [OK] .
Select [**Mail communication Mode**] to observe the operation data by the off-line monitor later, after mail-transmitting the operation data beforehand by using the mail transmission function.

When [**Mail communication Mode**] is selected, the setting items of mail communication will be displayed.



- From: Mail Address
  Set the mail address of the G50A(AG-150A/GB-50ADA/PAC-YG50ECA) in the [From: Mail Address] field. When sending mail via an ISP, set the mail address allocated by the ISP. When the mail server resides on the LAN, obtain the mail address from the LAN administrator.
  * When sending mail via an ISP, a user contract with the ISP is required.

- To: Mail Address
  Set the mail addresses of the recipients to which mail is sent.
  * The mail address of recipient (To:) acquires and sets up the address only for Maintenance Tools.

- SMTP Server IP
  Set the mail server IP address in the Mail Server Information [SMTP Server IP] field. When sending mail via an ISP, set the ISP address of the ISP mail server. When the mail server resides on the LAN, obtain the IP address from the LAN administrator.
  * If the only information available on the ISP mail server is a domain name, use a PC to connect to the Internet, open a DOS prompt and type “ping *domain name*”. Set the IP address that is displayed as the ping response.

- Monitor Finish Data
  Set the date of monitor data transmit period.

- Mail Sending Interval
  Set the transmit interval of monitor data (**max 240 min**).

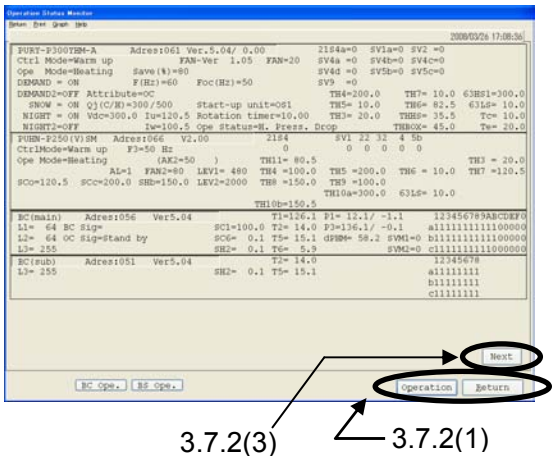
Then click on 

.

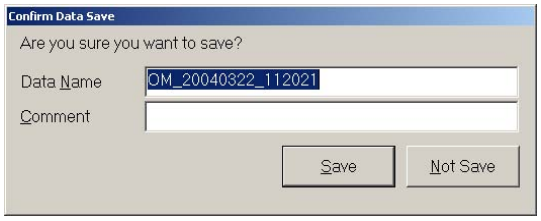
After a while, it returns to the main screen, but the mail transmission to remote receivers will be performed by G50A(AG-150A/GB-50ADA/PAC-YG50ECA) automatically.
* At the connection of MN Converter **“**the screen to select monitor method**”** is not displayed. Real-time Monitor Mode is always commenced not allowing to use [**Mail communication Mode**].

(6) In the case of real time monitoring, the message “**Monitoring. Please wait for a moment.**” will appear again.

(7) Momentarily, the **Operation Status Monitor Screen** will appear.



(8) Click on Return to end the **Operating Status Monitor Screen**.
The message "**Finish the operation status monitor**" will appear.
Click on Yes to end or click on No to not end.
Clicking Yes displays the screen to save data.
Change the data name as required and save it. You may enter your comment also.
Clicking Not Save does not allow the data to be saved.
Returning to the main screen.



3.7.2 Screen Functions and Operations

- The operating condition and operating data are displayed every minute.
- The [**Current Time**] is displayed. The [**Monitor ID**] is displayed when saving data.
  [Refer to **5.2 Operation Status Monitor Data**]

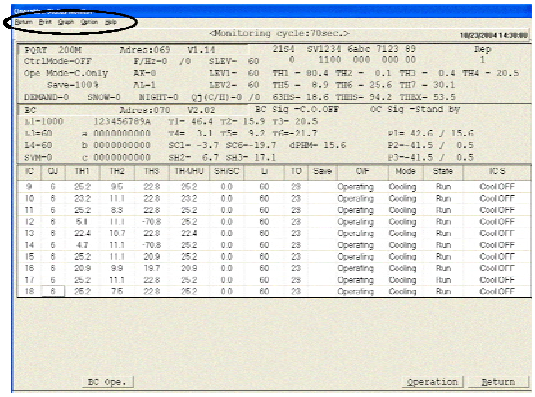
(1) "**Operation Buttons**"

Operation operation in the same manner as a remote controller.
[Refer to **3. 10 Operation Control**]

Click on Return to end the operation status monitor and return to the **Main Screen**.
[Refer to **3.7.1(8)**]

(2) "**Menu Bar**"

[**Return**], [**Print**], [**Graph**], [**Option**] and [**Help**] are displayed on the menu bar.



- Click on [**Return**] to end the Operation Status Monitor and return to the **Main Screen**.

- Click on [**Print**] and then select "**Print screen**" from the **sub-menu**.
  The hard copy of the screen will be printed from the connected printer.

- Clicking [Graph] displays a message of "Make the graph to data ?".
  To graphing, click Yes , while to return to the operation monitor screen without graphing,
  Click No .

- Click on [**Option**] and then select "**Show unit infomation**" from the **sub-menu**.
  "**Unit information**" will be displayed. [Refer to **3.7.4 Unit information**]

- Click on [**Help**] and an explanation about "**Terminology**" and "**Operation Method**" will be displayed.
  [Refer to **3.6.1 Connecting Information of outdoor units 3.6.1.2 (2) "Menu Bar"**]

(3) "**Next / Prev Buttons**"

When it is not possible to display it on one screen, the button is displayed.

- Clicking Next displays the second screen.

- Clicking Prev return to the first screen.

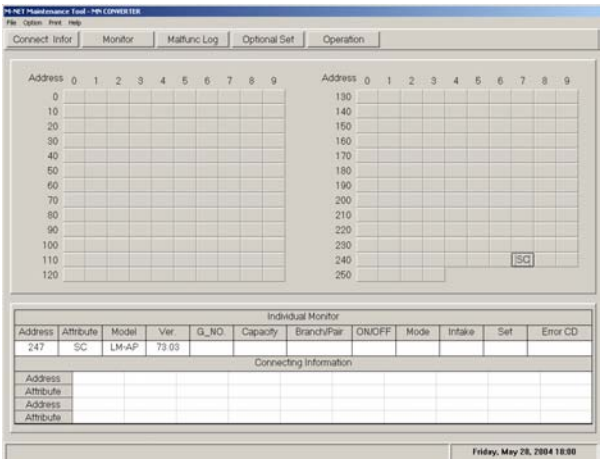
* About LM ADAPTER

Operation Monitor Monitor

Item Performed Here

Operation status of LM ADAPTER, current values of network variable and configration property,setting status of switch or the like.

[**Refer to 3.7 Operation Monitor**]

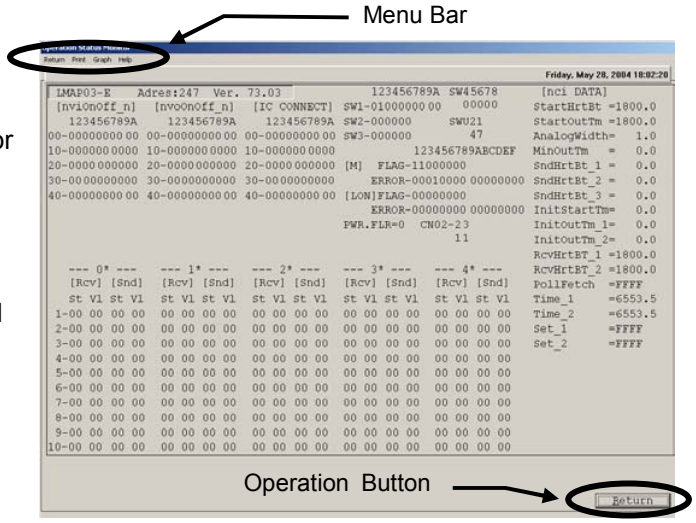


1. Screen Transfer Operation

To move to the screen monitoring LM ADAPTER operation, select LM ADAPTER SC from the main screen.
(LM ADAPTER is expressed by SC)
When LM ADAPTER is selected,you may not monitor other units.
Same operation procedure as that of other units is applicable to other main screens.

2. Screen Functions and Operations

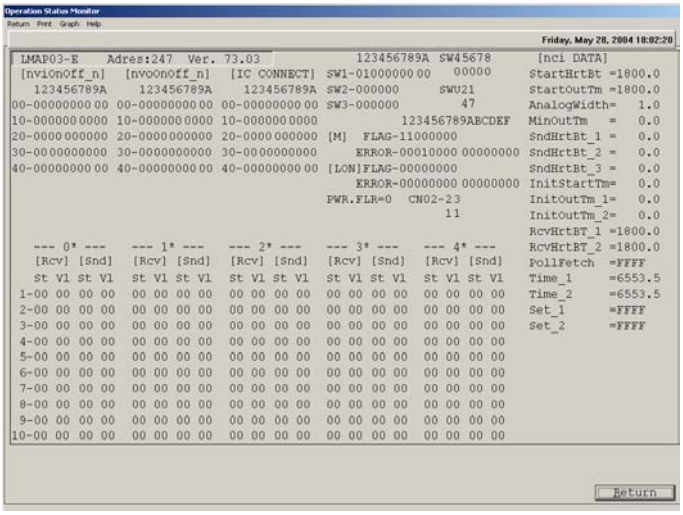
- The operating condition and operating data are displayed every minute.
- [Current time] will be displayed.During a time when saving data,[Monitor ID] will also be displayed.
  [**Refer to 5.2 Operation Status Monitor Data**.]



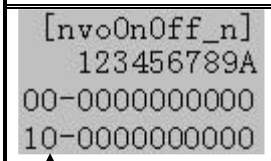
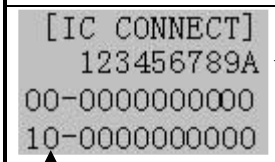
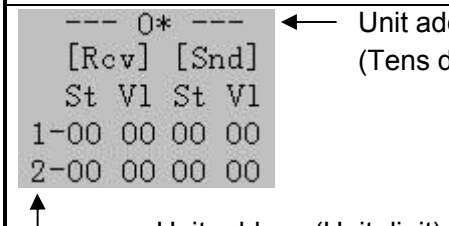
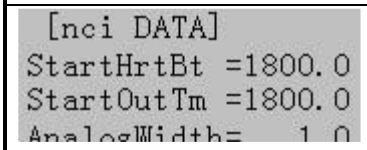
(1) [**Operation Button**]
[**Operation control**] will not be displayed.
Click on [**Return**] to end the operation status monitor and return to the Main Screen.
[**Refer to 3.7.1(8)**]

(2) [**Menu Bar**]
[**Return**] , [**Print**] , [**Graph**] and [**Help**] are displayed on the menu bar.
Neither [**Graph**] nor [**Ref.**] may be used.
Other menus are same as that of other units.

3. Introduction to the screen



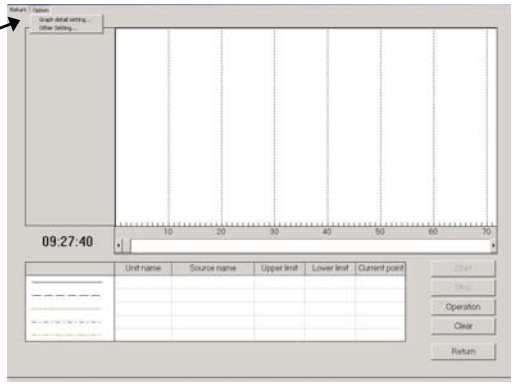
Display	Contents
123456789A SW1-0100000000 SW2-000000 SW3-000000	<Function set switch> Set status of function selector switch 0:OFF setting 1:ON setting
SW45678 00000	<Extension switch> Set status of extension function selector switch 0:OFF setting 1:ON setting
SWU21 49	<M-NET address switch> Set status of M-NET address switch on LM ADAPTER SWU1:The units digit SWU2:The tens digit
123456789ABCDEF [M] FLAG-11000000 ERROR-0011000000000000 [LON]FLAG-00000000 ERROR-0000000000000000	<Control flag> Internal processing status of LM ADAPTER FLAG:Control flag status ERROR:Error flag status [M]:M-NET communication processing flag [LON]:LonWorks communication processing flag 0:Reset 1:Set
CN02-23 11	<General input> General input status of LM ADAPTER 0:Normal 1:Detecting
PWR.FLR=0	<Power failure flag> Indicating power failure detecting status of LM ADAPTER 0:Powering 1:Interrupting
[nviOnOff_n] 123456789A ← Unit address (Unit digit) 00-0000000000 10-0000000000 Unit address(Tens digit)	<Binding status : nvoOnOff_n> Binding information on operation command input 0:No binding 1:Binding

<table>
<tr><th>Display</th><th>Contents</th></tr>
<tr><td>
</td><td><Binding status : nvoOnOff_n>
Binding information on operation status output
0:No binding
1:Binding</td></tr>
<tr><td>
</td><td><IC connection status>
Connection status of air conditioner(indoor unit)
0:Not connected
1:Connected</td></tr>
<tr><td>
</td><td><nv Transmitting/receiving data>
Latest value of network variables
[Rcv] Received value of operation command input
[Snd] Output value of operation status
St : state field data
V1 : value field data
Display example
<table><tr><th></th><th colspan="2">[Rcv]</th><th colspan="2">[Snd]</th></tr><tr><th></th><th>St</th><th>Vl</th><th>St</th><th>Vl</th></tr><tr><td>stopping</td><td>00</td><td>00</td><td>00</td><td>00</td></tr><tr><td>Operating</td><td>01</td><td>C8</td><td>01</td><td>C8</td></tr></table></td></tr>
<tr><td>
</td><td><nci set value>
Set value of configuration property</td></tr>
</table>

3.7.3 Trend graph

Clicking [Yes] at 3.7.2 (2) [GRAPH] displays Trend Graph Screen.

(1) Procedure for graphing

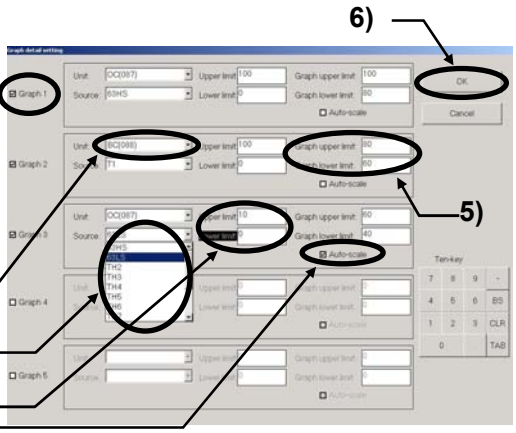


(a)Click [Option] on the menu bar.

(b)The sub-menu of "Graph detail setting" and "Other setting" will be displayed. Click "Graph detail setting" to set each item of the graph.

NOTE:
Without setting of each item on "Graph detail setting," no graph can be displayed.
(The graph detail setting is explained in (c) and other setting is in (d).)

(c) Graph Detail Setting Screen will be displayed.

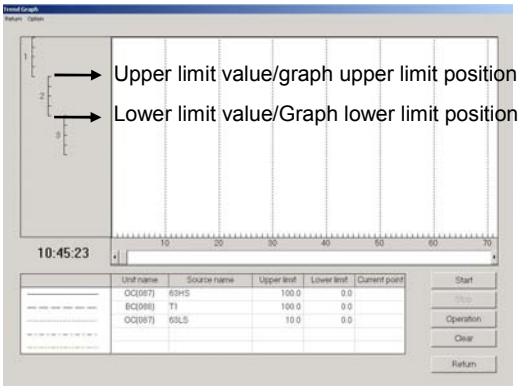


1) Click your desired number (from Graph 1 ~ 5) for graphing.

NOTE:
The number of the graph selected represents the ordinate.

2) Select [Unit] desired to be graphed.
3) Select [Source] (Data item) desired to be graphed.
4) Set [Upper limit, Lower limit] of data. You may also set to [Auto-scale].

- When the data exceeds the high limit value or low limit value being set under [Auto-scale] setting, the above value is replaced by the exceeded value in the setting. When the high limit value and low limit value are set before entering, 10 will be set to the high limit value and 0 will be to the low limit value automatically.



5) [Graph upper limit, Graph lower limit] (Ordinate display position/range) may be acceptable as it is. Setting is required when the display position/range is desired to change.
(To display over the entire screen, enter 100 to the graph high limit position, while 0 to the low limit position.)

NOTE:
The input of the upper limit value/lower limit value and graph upper limit position/lower limit position can bentered by the ten keys for numerical input besides the entering by the key board.

6) Click [OK] after completing all setting to return to Trend Graph Screen.

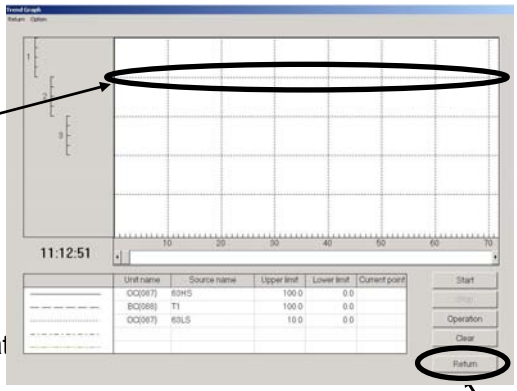
(d) Conducting the "Other setting"



With "Other setting," the optional function to facilitate graph observation can be set.
Click [Option] on the menu bar. Click "Other setting."
Other Setting Screen will be displayed.

1) Moving [Scroll bar] by dragging or clickir changes the value of the horizontal grid line from 0 to 4. The horizontal grid line will be displayed on the graph in a number of the value above.
*The sampling time can not be set by on-line.

2) Clicking OK returns to Trend Graph Screen displaying the horizontal grid line in the number being set to the graph.

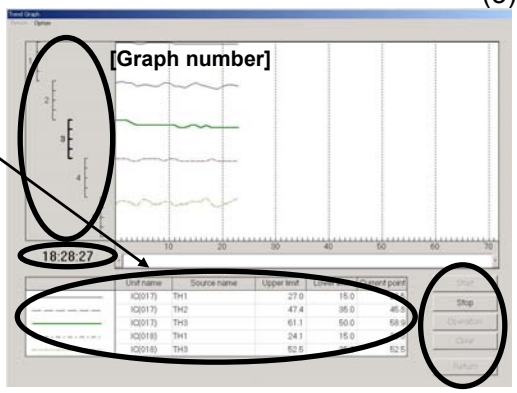


(e) Starting the graph

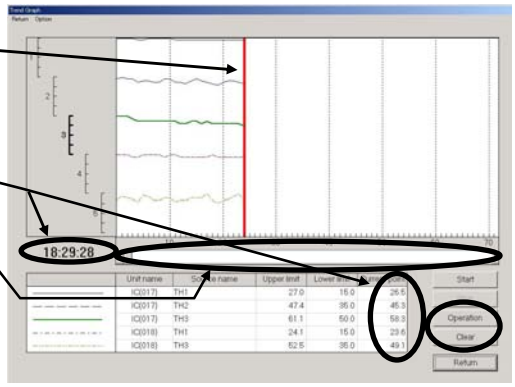
Clicking Start initiates monitoring to graph the data for each one minute. The sampling time to allow graphing by online system is limited to 500 minutes maximum.
If 500 minutes are exceeded, the data of old time is eliminat by the excess time.

(3)

(2) Screen function and operation



- The current monitor data is displayed on [Lower column].
- Clicking [Graph number] makes the graph line bold.
- [Current time] is displayed.
- Clicking Stop suspends the monitoring.



At suspension, [Scaler] will be displayed on the graph.
Dragging the scaler displays the data on the scaler at the current value column and [Time] at the under part of the graph number.

- Moving [Scroll bar] by dragging or clicking moves the display range of the graph.
Operation can be operated as same as the local remote controller.
[Refer to 3.10 Operation control.]
* Here, BC operation cannot be carried out.

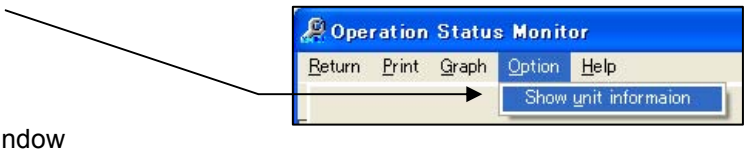
- Clicking Clear clears the graph being displayed. The set values of the graph setting items and other setting items will remain unchanged.

(3) Ending the graph

To finish Trend Graph Screen and return to Operation Status Monitor Screen, click [Return] on the menu bar or click Return . A message of [Finish the trend graph and return to the monitor?] will be displayed. For returning, click OK , while not returning, click Cancel . Clicking OK returns to Operation Status Monitor Screen.

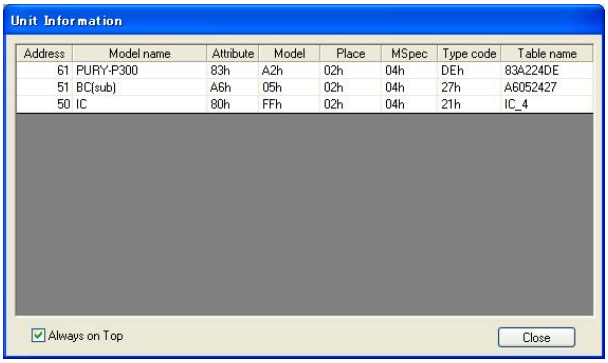
3.7.4 Unit information

(1) Clicking [**Option**] of the menu bar on the Main Screen and then clicking [**Show unit information**] of the sub-menu.



(2) **[Unit information]** Screen opens.

When Always on Top is checked, the window on the this screen comes always to be displayed on the foremost side.



(3) Close is clicked or when operation monitor is ended will close this screen.

3.8 Malfunction Log

Malfunc Log

*** Items Performed Here**

- The malfunction log of the most recent 10 cases (except operation group SC)

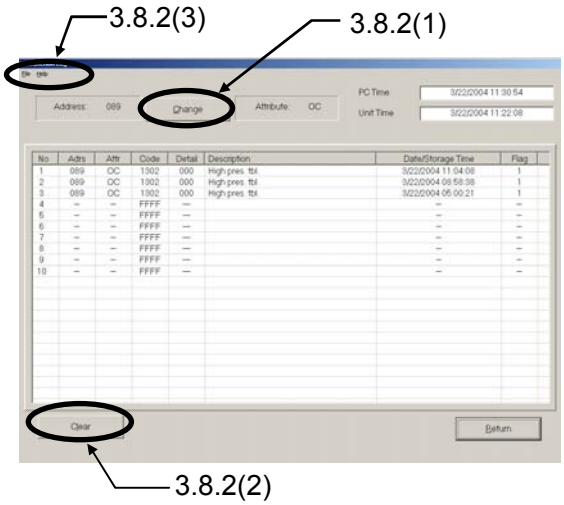
3.8.1 Screen Transfer Operation

(1) Click on Malfunc Log from the function selection buttons on the **Main Screen**.

(2) Click on the units to be monitored (except operation group SC).

(3) The message "**Monitoring. Please wait for a moment.**" will appear.

(4) Momentarily, the **Malfunction Log Screen** will appear. If the number of incidents in the malfunction log is less than ten, **[--]** will appear in the attribute column and **[FFFF]** will appear in the code column.



* Error detailed No.
Error detailed No. may be displayed on the right of an error code by the model which carries out a monitor. Refer to the service handbook for the implications of detailed No.

* When the monitor of the unit with a simple clock function is carried out, the time which malfunction generated, or the time when it was integrated to unusual generating is displayed.

- When the unit has received a setup of time: The time which malfunction generated is displayed.
- When the unit has not received the setup of time: The addition time from a power supply injection when malfunction occur is displayed.

NOTE:
While the power supply of a unit turns off, time does not count the simple clock function of a unit. Therefore, the display of the time which malfunction generated, and addition time will be a mere rough standard.

* About a flag display

- When a flag is "1" : The state which the power supply does not turn off after receiving a setup of time.
- When a flag is "0" : A setup of time is not received. Or the state which the power failure generated after receiving a setup of time.

* About PC Time/Unit Time

- PC Time : The present time set as the Maintenance Tool PC.
- Unit Time : The present time which carried out the monitor from the unit with a simple clock function.

NOTE:
When the system controller which transmits a setup of time to a unit periodically is not connected, a year and moon data are not updated. In this case, the date column of unit time maybe counted up till the 9999th.

(5) Click on Return to end the **Malfuncion Log Screen**.
The message "**Close the malfunction log display?** " will be displayed.
Click on Yes to end or click on No to not end.
Yes is clicked, the **Main Screen** is returned.

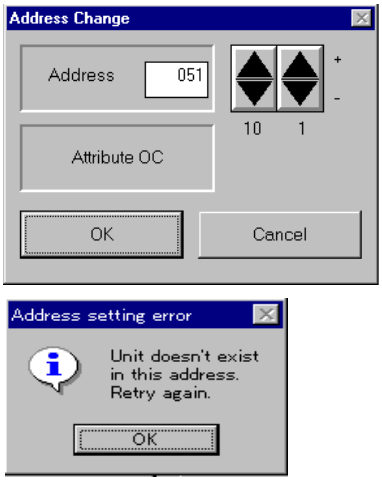
NOTE:
When G-50A is connected to the system, the malfunction log of OC is eliminated.
Please check the malfunction log in G-50A to check the malfunction log of OC.

3.8.2 Screen Functions and Operations

(1) Click on Change and the **Address Change Screen** appear.
Click on ▲▼ to change the address.
The unit attributes are displayed at this time.
(If there is no unit at the address given, the attributes are not given.)

Once the address has been set, click on OK .
The units are changed.

If there is no unit at the address given, the message "**Unit doesn't exist in this address. Retry again.**" will appear.
Click on OK to return to the **Address Change Screen**.



(2) Click on Clear and the message "**Clear the malfunction log. Is it OK?**" will appear.
Click on OK to clear or click on Cancel to not clear.

(3) "**Menu Bar**"
The menu bar displays [**File**] and [**Help**].
- By clicking [**File**] and then selecting "**Save as …**" from the sub-menu, the Malfunction Log data will be output and saved in the CSV format. This data can not be viewed on the offline screen.

- Click on [**File**] and then select "**Return**" from the sub-menu to end the **Malfunction Log Screen** and return to the **Main Screen**.

- Click on **[Help]** and an explanation about "**Terminology**" and "**Operation Method**" will be appear.
[Refer to **3.6.1 Connecting Information of outdoor units 3.6.1.2 (2) "Menu Bar"**]

* The error history being memorized by G-50A can also be monitor-displayed.
(Display can not be performed when connecting with MN Converter.)
The system controllers other than G-50A can not provide the monitoring of error history.

3.9 Optional Setting [Optional Set]

*** Items Performed Here**

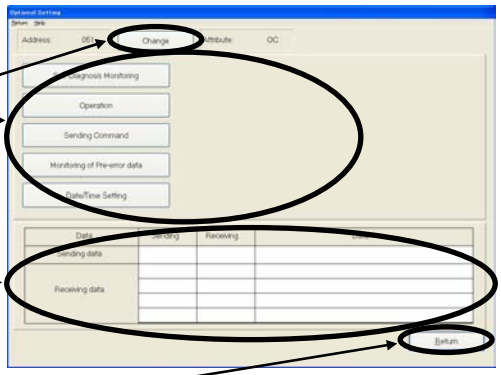
- **Self-Diagnosis Monitoring** : The self-diagnosis function (LED for service monitor) to be performed with Dip-SW on the circuit board of the outdoor unit can be monitored.
- **Operation Control** : Controlling of unit operation can be performed in the same manner as a remote controller.
- **Sending Command** : Allows to monitor the response for any M-NET command transmitted to the unit.
- **Monitoring of Pre-error Data** : The operation status of the unit (OC/OS) until generating an error can be monitored in a unit of minute.
- **Date / Time Setting** : A setup of the present time can be performed to outdoor unit. (It is used for the time when abnormalities occurred.)

(1) Click on [Optional Set] from the function selection buttons on the **Main Screen**.

(2) Click on the units to be monitored or operated.

(3) The **Optional Setting Screen** will be appear.
Click on **[Item]** to be monitored or operated.

- Click on [Change] and the **Address Change Screen** appears.
  [Refer to **3.8 Malfunction Log 3.8.2 (1)**]
- The sending/receiving data are displayed on the [**Lower Column**].



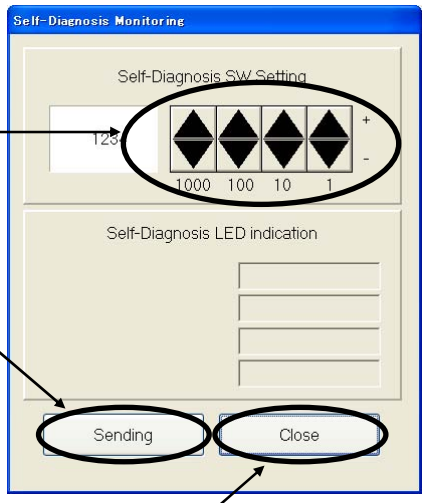
(4) Click on [Return] to end the **Optional Setting Screen** and return to the **Main Screen**.

3.9.1 Self-Diagnosis Monitoring

(1) Click on [Self-Diagnosis Monitoring] and the **Self-Diagnosis Monitoring Screen** will appear.

(2) Set the self-diagnosis SW value with [▲▼].
For the set value, use the **No. on the List of LED monitor display of the Service Handbook** for each unit.
* The displaying digit number is different on the model.
(There is a model that doesn't display the digit of 1000.)

(3) After setting the set value, click on [Sending].
The self-diagnosis LED display will be shown with flag or numerial value.
If the unit other than the outdoor unit or the set value being not corresponded is sended, the characters "**Not corresponded**" and "**Attribute and Version**" are displayed.



(4) Click on [Close] to end the **Self-Diagnosis Monitoring Screen** and return to the **Optional Setting Screen**.

3.9.2 Operation Control

[Refer to **3.10 Operation Control**]

3.9.3 Sending Command

(1) Click on [Sending Command] and the **Sending Command Screen** will appear.



(2) Input M-NET command desired to transmit by clicking on the button.
Direct input from the keyboard is also possible.

(3) After inputting command, click on [Sending] . Response command is displayed on [**Answer**] column.

(4) Click on [Close] to end the **Sending Command Screen** and return to the **Optional Setting Screen**.

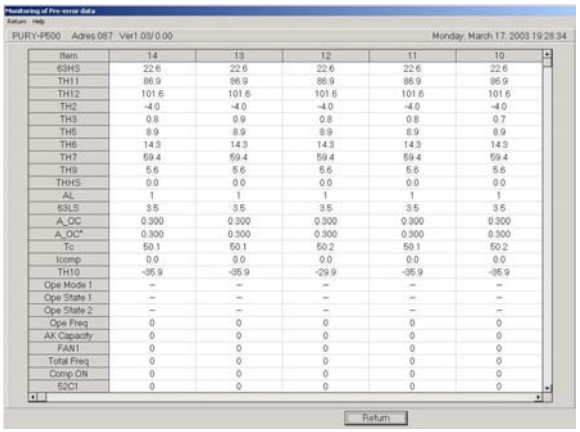
NOTE:
Use this function after obtaining the knowledge of **M-NET** command.

3.9.4 Monitoring of Pre-error Data

(1) Click on [Monitoring of Pre-error data] and the **Pre-error Data Screen** will appear.

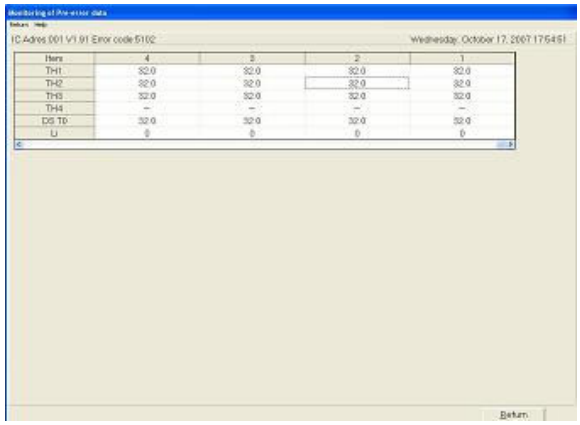
- When it chooses except the outdoor unit or constant speed unit (OS), the message of "**This model doesn't have the function of Monitoring of Pre-error.**" is displayed not allowing operation.

(2) As the screen opens, the monitoring of the data of the selected unit before error occurred will automatically be started.


Outdoor Unit

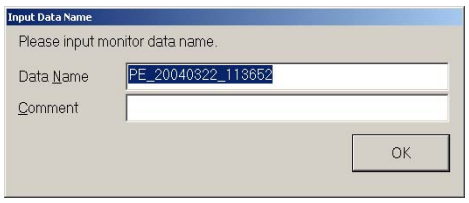
(3) After ending the monitoring, the data of the selected unit before error occurred is displayed in a unit of minute on **Pre-error Data Screen.**
Each figure on the upper column indicates a number of minute before generating an error respectively.
The change of the display content is performed with Up/down, left/right scroll bar.

The number of displayed items and that of the stored data (per minute) differ depending on the selected item.


Indoor Unit

(4) "**Menu Bar**"
The menu bar displays [**Return**] and [**Help**].

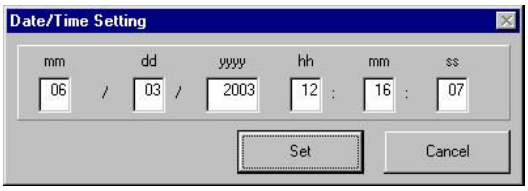
- Click on [**Return**] to end the **Pre-error Data Screen** and return to the **Optional Setting Screen**.
As the screen to save data will appear, change the data name as required and save it. You may enter your comment also.
After saving, return to the Optional Setting Screen.



- Click on [**Help**] and an explanation about "**Terminology**" and "**Operation Method**" will be displayed.
[Refer to **3.6 Connecting Information 3.6.2 (2)**]

3.9.5 Date / Time Setting

(1) Click on Date/Time Setting . The **Date / Time Setting Screen** opens and the present time of PC is displayed.



* When the unit which does not correspond to a setup of time is chosen, the message of "This function is not available" is displayed, and it cannot set up.

(2) A click of Set sets the time currently displayed to a unit.

* The time to set up can also be changed on a screen. Cursor is united with a change point and a numerical value is inputted.

(3) Click on Cancel to end the **Date / Time Setting Screen** and return to the **Main Screen**.

3.10 Operation Control [Operation]

*** Items Performed Here**

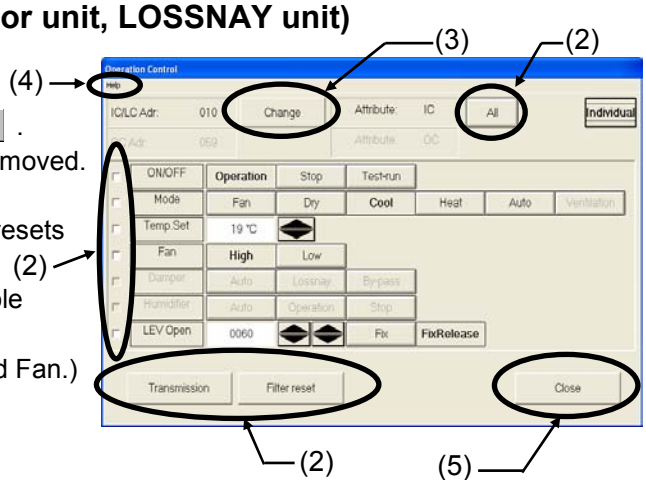
- ON / OFF of the unit, the operation mode and setting the temperature can be performed in the same manner as a remote controller.

3.10.1 Screen Transfer Operation

(1) Click on [Operation] from the function selection buttons on the **Main Screen**.
(2) Click on the unit to be controled.
(3) The **Operation Control Screen** will be appear. This display shows the current conditions.

3.10.2 Screen Functions and Operation (Indoor unit, LOSSNAY unit)

(1) Set each desired [**Item**].



(2) After setting the operation item, click on [Transmission] .
* The item will not be transmitted if a "check" is removed. Please remove a check if needed.
* Click on [Filter reset] and the command which resets a filter sign will transmit.
***** If " [All] " is chosen, operation can do the whole system in a package.
(Only four items of ON/OFF,Mode,Temp.Set,and Fan.)
However, [Operation(ON)] cannot be operated.

(3) Click on [Change] and the **Address Change Screen** will appear.
[Refer to **3.8 Malfunction Log 3.8.2 (1)**]

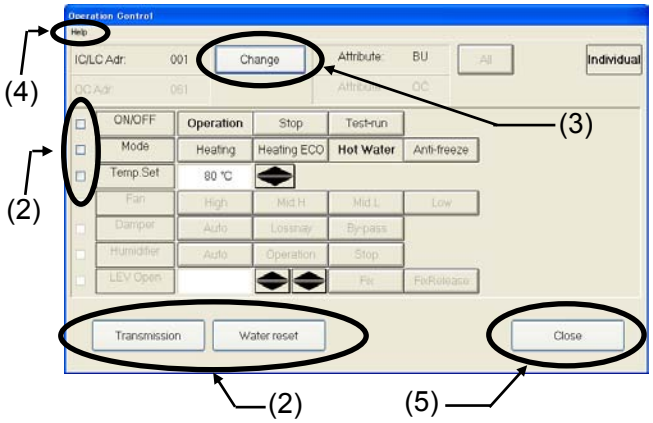
(4) "**Menu Bar**"
[**Help**] appears in the menu bar.
Click on [**Help**] and an explanation of the "**Operation Method**" will appear.
[Refer to **3.6 Connecting Information 3.6.2 (2)**]

(5) Click on [Close] to end the **Operation Control Screen**.The **Main Screen** will return.

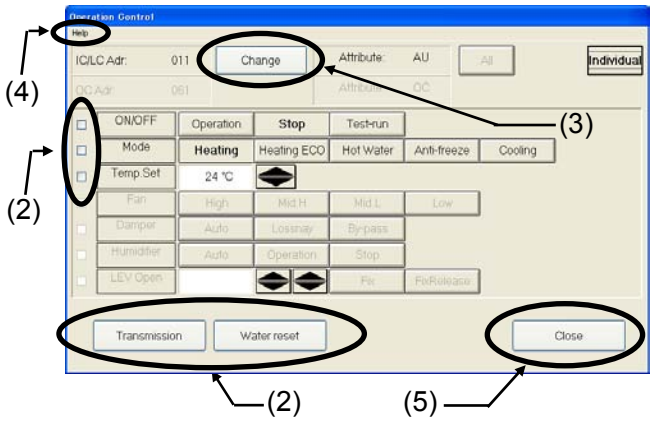
NOTE:
When LEV OPENING is changed, to prevent failure to release the LEV opening after test run, close the operation control screen. This release the LEV opening on this screen automatically.
However when moving to the operation control screen from the operation monitor screen, the LEV opening will be retained even by closing this screen.
At a timing when finishing the operation monitor screen, the LEV opening can be released.

3.10.3 Screen Functions and Operation (Booster Unit, Water HEX Unit)

Screen when Booster Unit is selected.



Screen when Water HEX Unit is selected.



(1) Set each desired [**Item**].

(2) After setting the operation item, click on Transmission .
* The item will not be transmitted if a "check" is removed. Please remove a check if needed.
* Click on Water reset and the command which resets a water exchange signal will transmit.

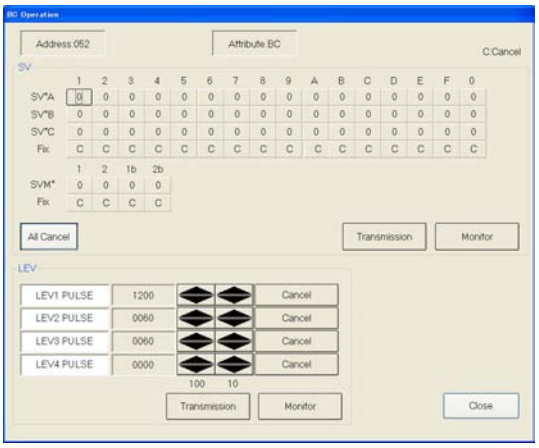
(3) Click on Change and the **Address Change Screen** will appear.
[Refer to **3.8 Malfunction Log 3.8.2 (1)**]

(4) "**Menu Bar**"
[**Help**] appears in the menu bar.
Click on [**Help**] and an explanation of the "**Operation Method**" will appear.
[Refer to **3.6 Connecting Information 3.6.2 (2)**]

(5) Click on Close to end the **Operation Control Screen**.The **Main Screen** will return.

3.10.4 Screen Functions and Operation(BC Controller)

(1) Click on the button corresponding to the valve number you want to change.
"0" represents "close" and "1" represents "open".
To change the valve setting, perform
"Fix Release" --> "Fix"



(2) After setting, click on Transmission .

(3) Click on Monitor to check the current conditions.

(4) Change the LEV opening with ◆ . Set to the LEV opening.
Click on Transmission to send the setup contents.

(5) After adjustment by solenoid valve and LEV opening change is complete, click on Close .
The **Main Screen** will return. At this time, the contents set at this screen become invalid.

NOTE:
To prevent failure to release the status set after test run, close the operation control screen of BC/BS controller.
This releases all the content set on this screen automatically.
However when moving to the operation control screen of BC/BS controller from the operation monitor screen,
the set content will be retained even by closing this screen.
At a timing when finishing the operation monitor screen, the set content can be released.

3.11 OC Date / Time Setting

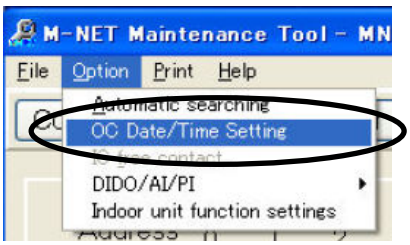
*** Items Performed Here**

- A setup of the present time can be performed to all outdoor units at the same time.

3.11.1 Starting of this function

(1) Screen moving operation and its method

a) Clicking [Option] of the menu bar on the main screen and then clicking [OC Date/Time Setting] of the sub-menu. The searching about outdoor unit connected will begin.



NOTE:
When there is no operation object, Warning Message is displayed and processing is interrupted.

b) The **[OC Date/Time Setting] Screen** opens and the present time of PC is displayed



3.11.2 OC Date / Time Setting

(1) The present time of PC is displayed on the **[OC Date/Time Setting] Screen** in the beginning.



(2) The time to set up can also be changed on a screen. Cursor is united with a change point and a numerical value is inputted.

(3) A click of 

sets the time currently displayed to a unit.

NOTE:
If it failed, Error Message and th error-generated address are displayed.



(4) When the transmission is completed, Completion Message is displayed.



(5) Click on 

to end the **[OC Date/Time Setting] Screen** and return to the **Main Screen**.

3.12 Free contact of indoor unit

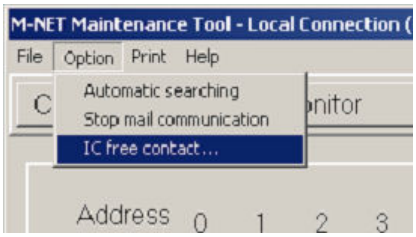
*** Items Performed Here**

- When utilizing the [Indoor unit free contact mode] which uses the external input/output of Free Plan indoor unit (Building-Multi) together with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) and TG 2000A, the contact action of the indoor unit can be tested with this function.

3.12.1 Starting of this function

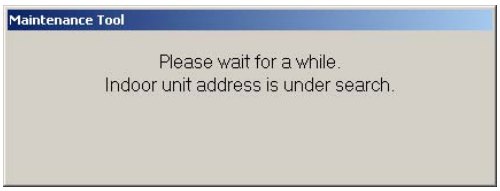
(1) Screen moving operation and its method

a) Clicking [Option] of the menu bar on the main screen and then clicking **[IC free contact …]** of the sub-menu will display the screen for the free contact of indoor unit.



NOTE:
[IC free contact …] can be chosen only when G-50A is Ver.2.60 or more.

In the case when connected via G50A(AG-150A/GB-50ADA/PAC-YG50ECA), the screen shown right will appear once.
Now the necessary information is under collecting from G50A(AG-150A/GB-50ADA/PAC-YG50ECA).



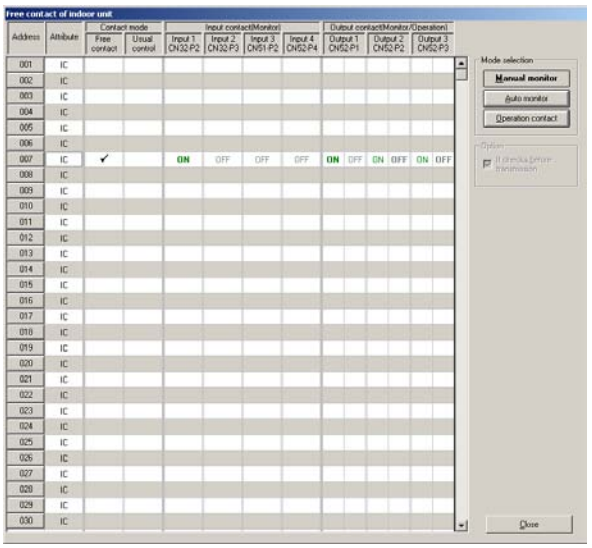
3.12.2 Monitoring of contact status

(1) Manual monitoring

To manually check the contact status of indoor units at each address, select the [Manual monitor] mode.

a) Click the **[Manual monitor]** button on the mode selection section.

b) Click the **[Address button]** of the unit desired to be monitored. The contact status will be monitored from the unit for display.



[Attribute]
The unit attribute will be displayed.

[Indoor unit contact mode]
The contact mode being set will be monitored, and a check mark will be affixed on the applied mode.

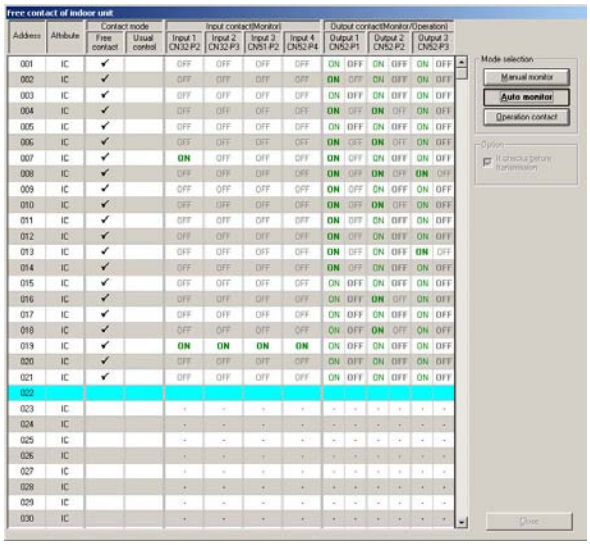
[Input contact (monitor)]
The ON/OFF status of each input contact will be monitored for display.

[Output contact (monitor/operation)]
The ON/OFF status of each output contact will be monitored for display.
In the case of output contacts, the status shown with **bold letter** represents the present status.

*In the case of non-objective attribute, and when the contact mode is under normal control, the above monitor display will be [-].

(2) Automatic monitoring

To automatically monitor the contact status of indoor units of No.1 ~ 50 repeatedly, select the [Auto monitor] mode.



a) Click the **[Auto monitor]** button on the mode selection section.
The contact status of indoor units of No.1 ~ 50 will automatically be monitored, and this operation will be repeated.

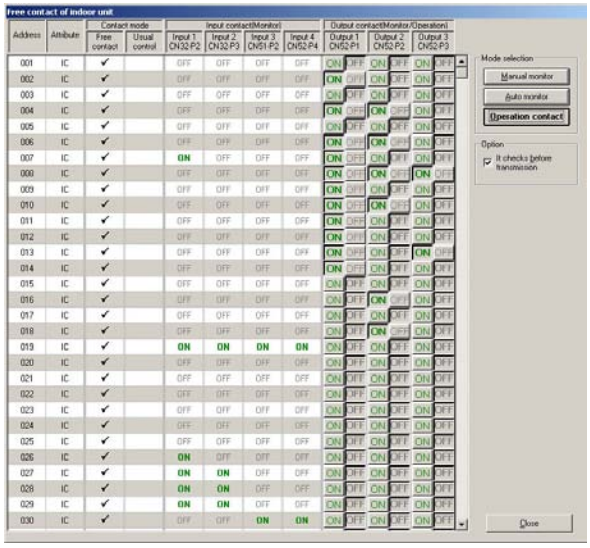
The display for [Attribute], [Indoor unit contact mode], [Input contact (monitor)] and [Output contact (monitor/operation)] are identical to that in the manual monitoring.

* In the case to terminate the auto mode, selecting other mode will stop the monitoring.

3.12.3 Operation of output contact

(1) Contact operation

To operate for the ON/OFF selection of the output contact of indoor units, select the [Operation contact] mode.



a) Click the **[Operation contact]** button on the mode selection section.
b) Click the **[Output contact (ON/OFF)]** button of the unit for which the ON/OFF of the output contact is desired to be selected for change.

***<u>The state where the button is being depressed (with bold letter)</u>** displays the present output status.

[Option] function

Affixing a check mark to **[It checks before transmission]** displays the warning screen as shown right before transmitting actual transmission command at the operation of output contact.
To continue the transmission, click **[Yes]**.



When a check mark is not affixed, the transmission command will be transmitted at the clicking of the **[Output contact (ON/OFF)]** button simultaneously.

3.12.4 Termination of this function

(1) Clicking the [Close] button will close this screen and return to the main screen display.

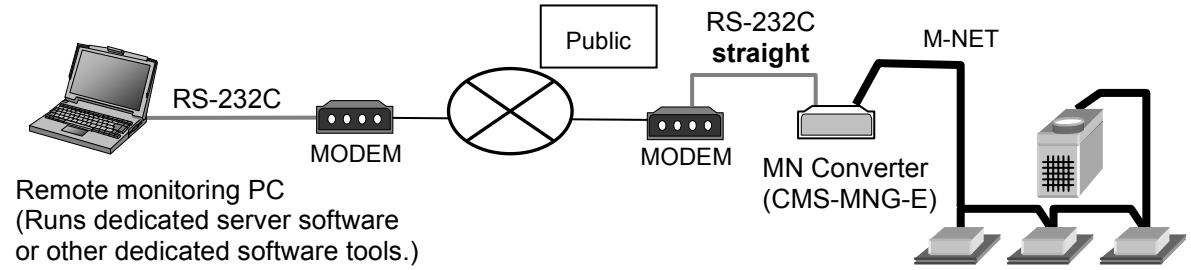
3.13 Remote error notification

The “**Remote error notification**" has been located starting from **Ver4.20**.

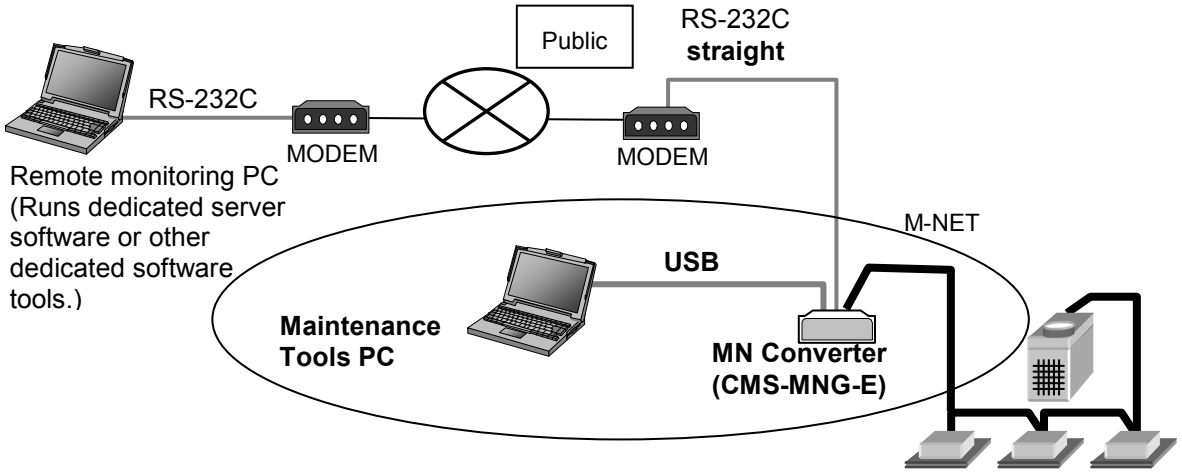
* **Items Performed Here**

- The MN Converter (CMS-MNG-E) has a built-in remote error notification function.
  When an error occurs in an air conditioning unit, the remote error notification function allows previously registered destinations to be automatically notified of the error via telephone lines.
  To use the remote error notification function in the MN Converter (CMS-MNG-E), you must first specify the remote error notification settings from the Maintenance Tool.
  The MN Converter (CMS-MNG-E) has the following 2 modes:
  (1) Maintenance mode
  In this mode, the MN Converter can only be used as a normal converter.
  (2) Remote error notification mode
  This mode allows both the normal MN Converter functions and the remote error notification function to be used.
  Use the Maintenance Tool to switch between these 2 modes.

To use the remote error notification function, connect the MN Converter (CMS-MNG-E) to a modem via the RS-232C port and then connect the modem to the telephone outlet, as shown in the figure below.
For details, refer to the Installation Manual of MN Converter (CMS-MNG-E).
The dedicated server software or other dedicated software tools run on the remote monitoring PC.



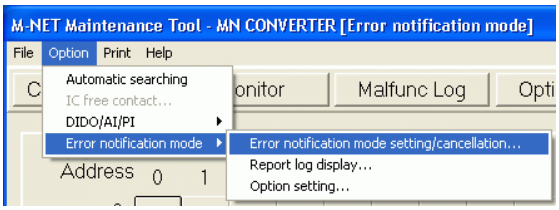
To specify the remote error notification function settings using the Maintenance Tool, connect the MN Converter (CMS-MNG-E) to the Maintenance Tools PC via USB, as shown in the figure below.



NOTE:
• When setting remote error notification, connect to the MN Converter via USB.

3.13.1 Starting of this function

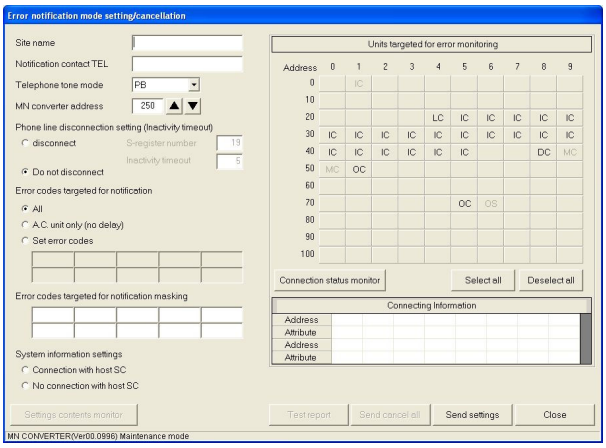
(1) Click **[Option]** in the menu bar and select **[Error notification mode] -> [Error notification mode setting/cancellation...]** in the sub-menu.



The function starts searching for units to be notified of errors and displays a message to that effect.



(2) When the search is completed, the **Error notification mode setting/cancellation screen** appears.



3.13.2 Design of Screen

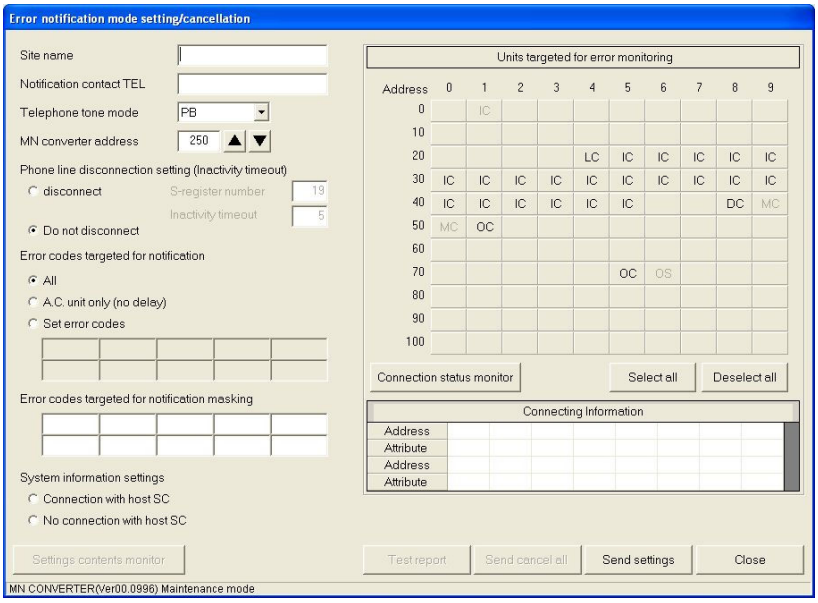
There are two kinds of following screens to the Error notification mode setting/cancellation screen.

(1) Maintenance mode -- When the MN Converter is in maintenance mode

(2) Remote error notification mode -- When the MN Converter is in remote error notification mode

[Maintenance mode screen]

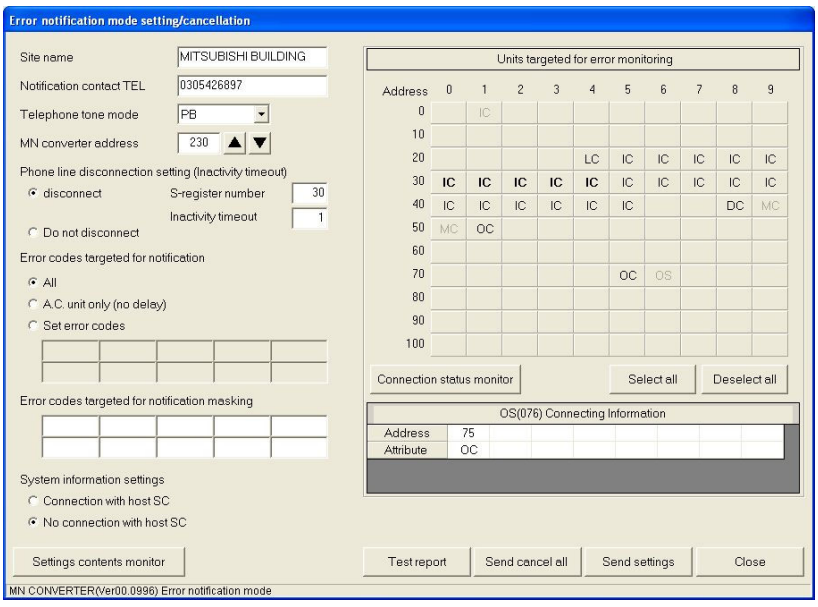
All the settings are blank and the **[Settings contents monitor]**, **[Test report]** and **[Send cancel all]** buttons are disabled.



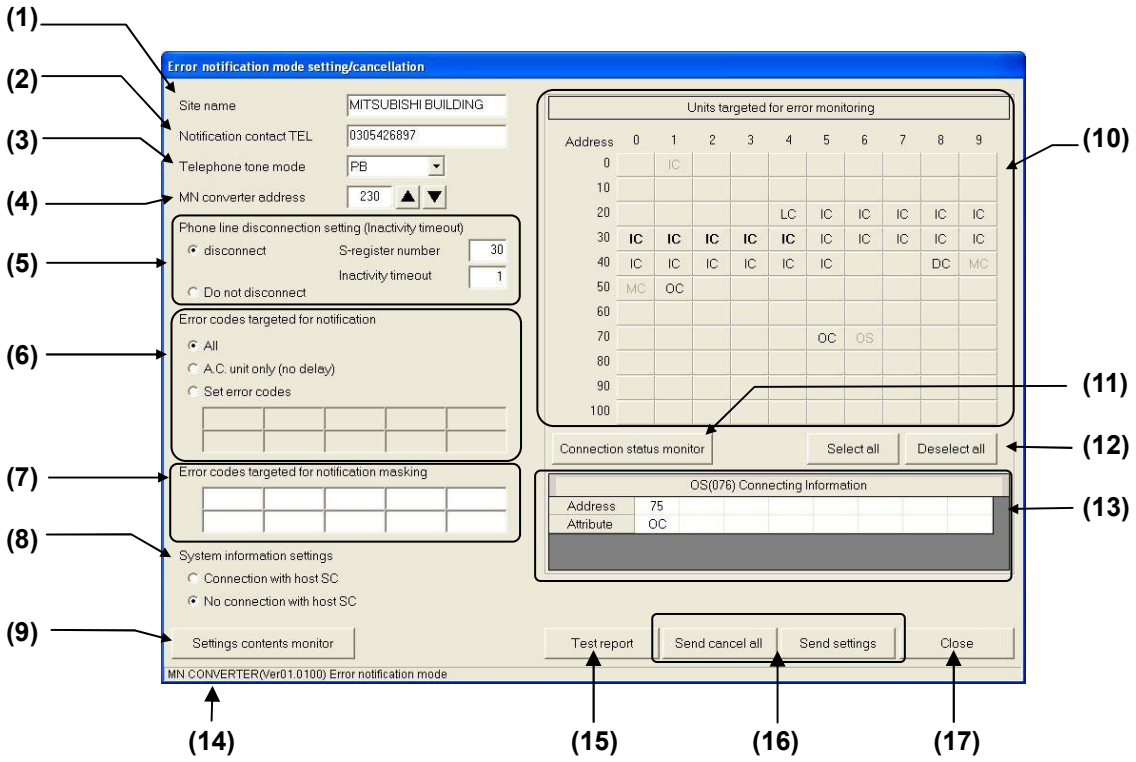
[Remote error notification mode screen]

Monitors and displays the settings from the MN Converter.

If the connection status monitor has not been implemented, ” ***** “ appears in the "**Units targeted for error monitoring**" fields.



The design of the screen is shown below.



- **(1) Site name**
  Name of the system being monitored
- **(2) Notification contact TEL**
  Telephone number of the notification contact
- **(3) Telephone tone mode**
  Telephone line dial type
- **(4) MN Converter address**
  M-NET address of the MN converter
- **(5) Phone line disconnection setting(Inactivity timeout)**
  Specifies how soon an inactive telephone line is disconnected.
- **(6) Error codes targeted for notification**
  Specifies which errors are notified.
- **(7) Error codes targeted for notification masking**
  Specifies the error codes that are not notified (masked) when an error occurs.
- **(8) System information settings**
  Specifies whether or not an upstream system controller is connected.
- **(9) Settings contents monitor**
  Monitors the MN Converter settings.
- **(10) Units targeted for error monitoring**
  Selects the units to be notified when an error occurs.
- **(11) Connection status monitor**
  Monitors the connection information for the remote error notification unit.
- **(12) Select all / Deselect all**
  Selects or deselects all the units for error notification.
- **(13)Connecting information**
  Displays the connection information for the selected unit.
- **(14)MN Converter version/mode**
  Displays the version of the connected MN Converter and its current mode.
- **(15)Test report**
  Actually calls the notification contacts and sends a test message to test notification operations.
- **(16)Send cancel all/Send settings**
  Sends either the settings or a cancel all settings instruction to the MN Converter.
- **(17)Close**
  Closes the screen.

3.13.3 Selecting remote error notification mode

Specify the settings below to enable the remote error notification function on the MN Converter.

(1) Enter the site name.
Enter the name of the air conditioning system to be monitored.

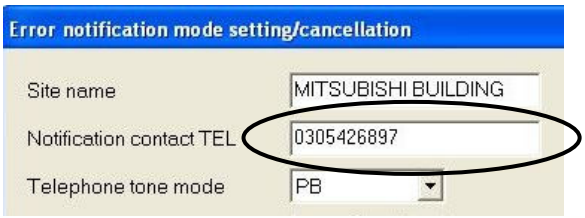


E.g.) MITSUBISHI BUILDING

The remote monitoring PC is notified of this site name.
To enable the remote monitoring PC to monitor multiple air conditioning systems at the same time, you should assign a unique site name to each system.

Site names can consist of up to 20 uppercase letters (A to Z), numbers (0 to 9) and some symbols, but may not contain the following symbols : " + " or " ; "

(2) Enter the notification contact telephone number.
Take care to enter the contact telephone number correctly.



E.g.) For 012-345-6789

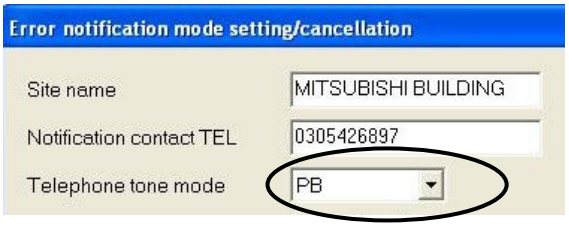
Enter the number as 0123456789.
The number cannot include hyphens (-).

Numbers can consist of up to 20 digits (0 to 9). However, when the Inactivity Timeout function is used, numbers may be no longer than 14 digits.

Caution:
Take care to enter the telephone number correctly. If the number contains an error, notification may be sent to an unrelated number and cause problems.
Note that Mitsubishi Electric accepts no liability whatsoever for any problems resulting from incorrect telephone number input.

NOTE:
When select the telephone tone type to "ELSE", you can enter AT command in this field.

(3) Select the tone type for the telephone.
Select one of the following telephone tone types:

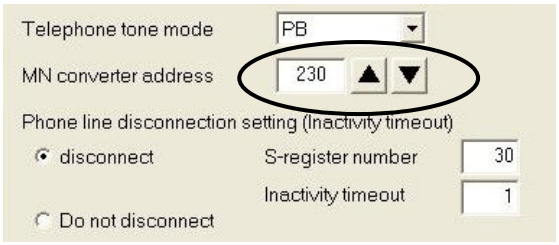


PB -- Tone (push-button line)
Sends ATDT plus the telephone number to the modem.
DP -- Pulse (dial line)
Sends ATDP plus the telephone number to the modem.
None -- Sends ATD plus the telephone number to the modem.
Else -- Nothing is added to before the telephone number.

Check your telephone line to determined which tone type is used.

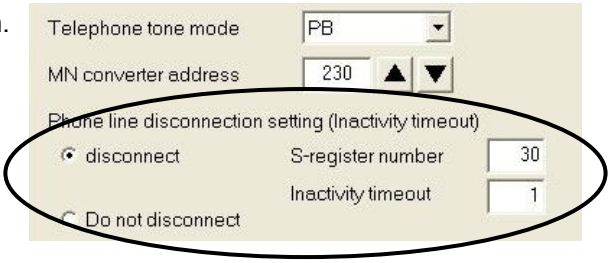
(4) Enter the MN Converter address.
Enter the M-NET address for the MN Converter.
You can enter any number between 201 and 250.
Ensure that you do not enter the same address as another unit.

The default is 250.



(5) Specify the setting for the Inactivity Timeout function.
The Inactivity Timeout function is a modem function that automatically disconnects telephone lines when there has been no communication on a connected line for a set period during error notification.

If power to the MN Converter is turned off due to a power failure or any other cause while a telephone line is connected for error notification, the telephone line remains connected unless this function is enabled.
This function can be used to release connected lines in this situation.



The S-register setting used with the Inactivity Timeout function differs depending on the modem model.
Read the modem's instruction manual carefully to ensure that you use the correct setting.

-**disconnect** Use the Inactivity Timeout function.

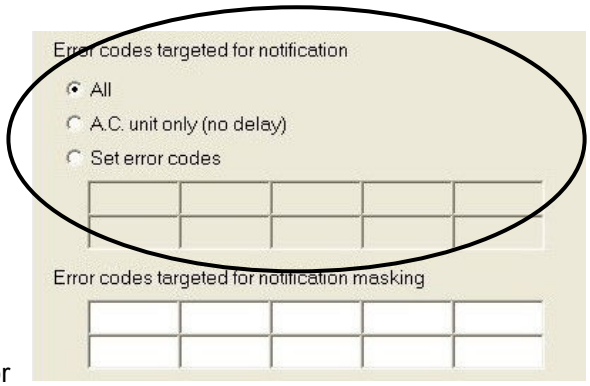
S-register number Modem S-register number that sets Inactivity Timeout.
Inactivity timeout Time for which inactivity is monitored

-**Do not disconnect** Do not use the Inactivity Timeout function (default).

Caution:
If you do not use the Inactivity Timeout function, bear in mind that **telephone lines may remain connected.**
If you do not use the Inactivity Timeout function, or if the modem settings are not specified correctly, Mitsubishi Electric accepts no liability whatsoever for any faults or damage arising from the continued connection of telephone lines.
Before use, always check that the Inactivity Timeout function is working correctly.

NOTE:
*The Inactivity Timeout function setting differs according to the modem model.
(The S-register number and the units and setting range for inactivity timeout differ.)
Read the modem's instruction manual carefully (AT commands) to ensure that you use the correct settings.
*If the Maintenance Tool is used to remotely connect to the MN Converter via a telephone line while the Inactivity Timeout function is being used, the Inactivity Timeout function may disconnect the telephone line when the Maintenance Tool is not being used.
If you use the Maintenance Tool to remotely connect to the MN Converter via a telephone line, consider carefully whether to use the Inactivity Timeout function and the length of timeout delay when specifying the settings.
*When changed this setting, the setting of “Notification contact TEL” is cleared.

(6) Specify the error codes targeted for notification.



You can use this setting to specify which of the errors that occur in air conditioning units will be reported.
You can choose from the following 3 options:

[All]
Reports all error codes.

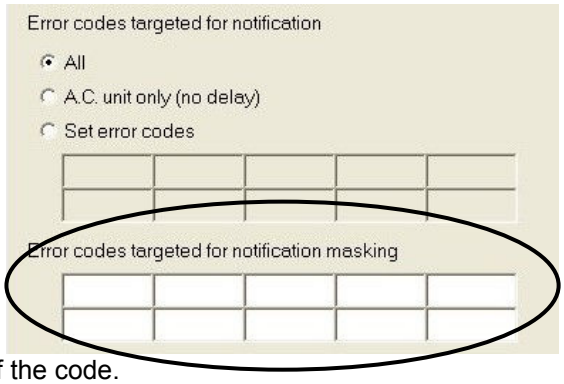
[A.C. unit only (no delay)]
Error delay codes are not reported.

[Set error codes]
Only the specified error codes are reported.

If you selected "**Set error codes**", enter the target error codes.
You can specify up to 10 error codes.
You can also specify wildcards. However, if you specify a wildcard in an error code, all the subsequent digits are also taken as wildcards.
Note that you cannot enter a wildcard at the beginning of the code.

E.g.) 2* -- All error codes from 2000 to 2999
2*50 -- Illegal specification.
**01 -- Illegal specification.

(7) Specify the error codes that will be masked from error notification.

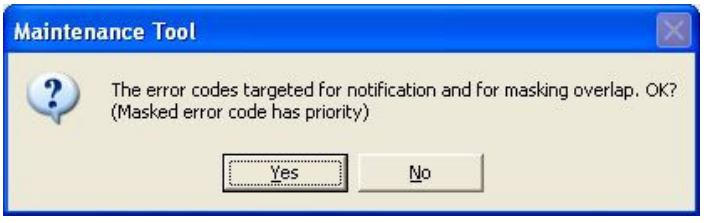


You can use this to specify error codes that will not be reported (that will be masked) when errors occur in an air conditioning unit.

You can specify up to 10 error codes.
You can also specify wildcards. However, if you specify a wildcard in an error code, all the subsequent digits are also taken as wildcards.
Note that you cannot enter a wildcard at the beginning of the code.

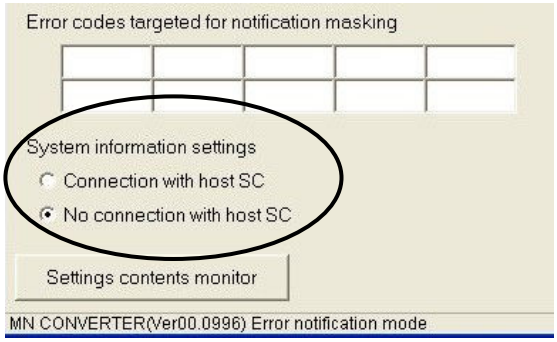
E.g.) 2* -- All error codes from 2000 to 2999
2*50 -- Illegal specification.
**01 -- Illegal specification.

NOTE:
If the error codes targeted for notification and the masked error codes include the same error codes, the message shown below appears.
If there is an overlap, the masking specification has priority.
If necessary, specify the settings again correctly.



(8) Select the system information settings.

This option selects whether a host system controller is connected in the M-NET system to which the MN Converter is connected.
The host system controller is the G-50A, G(B)-50A, or AG-150A, etc.



When an error occurs in an air conditioning unit, in order for the unit where the error occurred to notify the MN Converter of the error, the MN Converter address information must first be registered in the unit targeted for notification.
This system information setting (Connection/No connection with host SC) specifies the source from which the address information is registered.

[Connection with host SC]

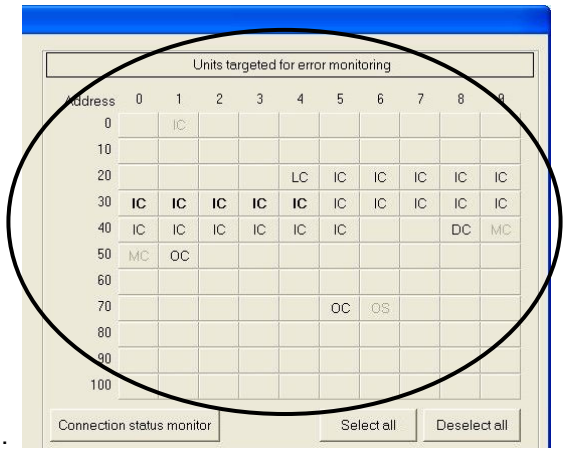
The MN Converter address information is registered/deleted in the notification target unit from the host SC. (Refer to the host SC instruction manual for details.)

[No connection with host SC]

The MN Converter registers/deletes its own address information in the notification target unit. (To register or delete address information, click **[Send settings]** in this screen.)

(9) Specify the units to be monitored for errors.

Use this to select the units for which notification is provided when an error occurs.
If a unit is not selected here, no notification is given when an error occurs on that unit.
When you click a unit, the name is bolded to indicate that it has been selected (will be monitored for errors).
Clicking the unit name again returns it to normal text and deselects the unit (excluded from monitoring).
Click the units to be monitored for errors so that they are selected (displayed in bold). To select all the units for monitoring, click **[Select all]**.
To deselect all the units for monitoring, click **[Deselect all]**.



The meanings of the different types of display are as follows:

Pale gray	MC	-----	There is no error notification function on this model. This model cannot be selected. Models that cannot be monitored are as follows: Models other than IC, DC or OC.
Bold	**IC**	-----	Selected as a unit targeted for error monitoring. Currently set as a unit to be monitored for errors by the MN Converter or selected ready to be set as such.
Normal text	IC	-----	Available for selection as a unit to be monitored for errors. Not currently set in the MN Converter as a unit to be monitored for errors.

In addition to the above, units may be displayed in blue. The meaning of this is as follows:

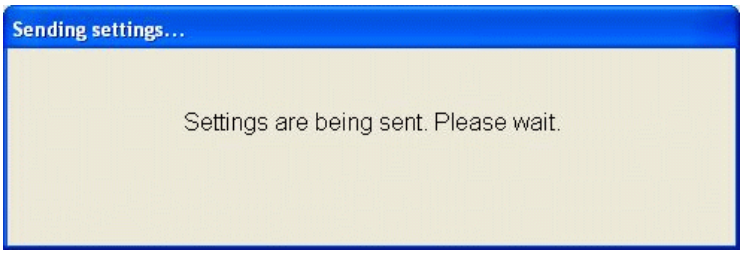
Blue	IC	-----	Not currently set in the MN Converter as a unit to be monitored for errors, but the MN Converter's connection data is registered in the unit.

(10) Send the settings.
Click **[Send settings]**.

When the **Settings will be sent. OK?** message appears, click **[Yes]**.



Setting begins.



When setting is completed, the **Settings have been sent** message appears.
Click **[OK]**.
The MN Converter switches to remote error notification mode.



Caution:
After specifying the error notification settings, always run the error notification test to check that notification is correctly provided to the correct addresses.
[See section 3.13.4].

NOTE:
If you selected "Connection with host SC", you must register the address of the MN Converter on the host SC.

NOTE:
MN Converter is registered with a unit targeted for error monitoring as attribute SC. When five SC is already register with a unit targeted for error monitoring, the following messages are displayed and you cannot register MN Converter with a unit. Please confirm connection relations.



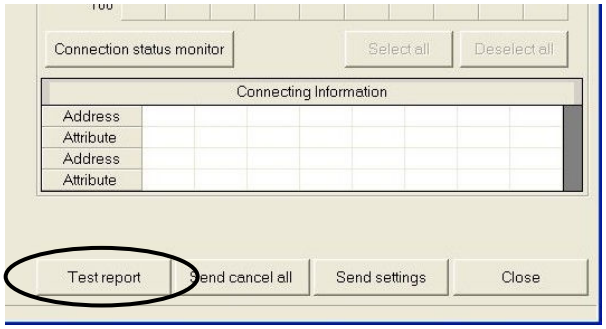
3.13.4 Error notification testing

After setting the MN Converter to remote error notification mode, run the error notification test to check that notification is implemented correctly.

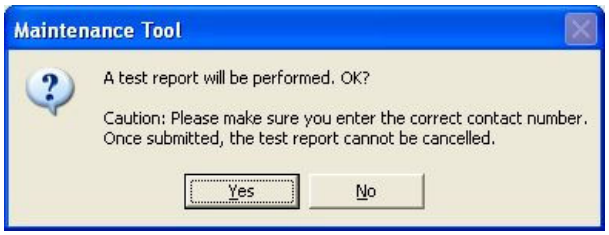
Caution:
After specifying the error notification settings, always run the error notification test to check that notification is correctly provided to the correct addresses during the error notification test, always check that errors are posted correctly on the remote monitoring PC.

NOTE:
Before running the error notification test, check whether the software running on the remote monitoring PC is the dedicated server software or another software tool. Then refer to "3.13.8 Option settings" to ensure that you specify the correct server or tool settings.

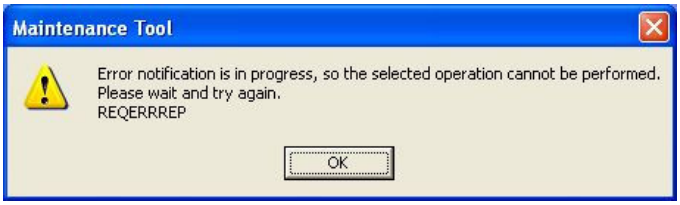
(1) In the **Error notification mode setting/cancellation screen**, click **[Test report]**.



(2) The test notification begins.
A confirmation window is displayed.
Check the contact number and then click **[Yes]**.

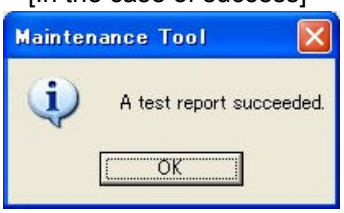


NOTE:
When error notification is in progress, the following messages are displayed, and the test report cannot be performed. Please wait and try again.
In addition, when a modem is not connected, the following messages are displayed.
Please try again after connecting a modem definitely.

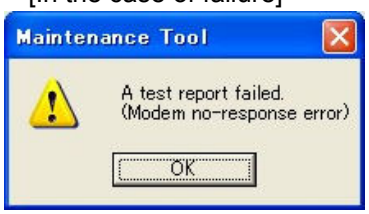


(3) After a few moments, the results are displayed.
Check the message and then click **[OK]**.

[In the case of success]



[In the case of failure]



(* The actual message differs depending on the error.)

The error messages are shown below.
If an error occurs, check the connections, etc.

Error message When Test report

Error message	Meaning/Cause	Repair
A test report failed (Modem no-response error)	Modem connection error The MN Converter cannot communicate with the modem. Probable causes are: * The cable between the MN Converter and the modem is not connected properly. * The modem is not turned on.	 * Check the connections on the cable between the MN Converter and the modem. * Turn the modem on.
A test report failed (Phone connection error)	Phone line connection error. A call was made via the modem, but no connection with the contact could be established. Probable causes are: * The cable between the modem and the telephone line is not connected properly. * The other party's telephone is not responding. * The contact phone number is wrong. * The telephone line itself is damaged.	 * Check the connections on the cable between the modem and the telephone line. * Check that the other party's modem is set to auto receive. * Check the contact phone number. * Check with the connecting telephone exchange.
A test report failed (Server no-response error) * Only when "Server" is selected in "Option settings".	Contact server no-response error. Communication was established with the other party's modem, but there is no response (REP) from the contact server. * The contact server is not connected or the dedicated server software is not running.	 * Check the operation status of the contact server.
A test report failed (No-response timeout)	No response from the MN Converter. The software cannot communicate with the MN Converter. * The MN Converter cable is disconnected or broken. * Power to the MN Converter has failed.	 * Check the connection to the MN Converter. * Check that the MN Converter is powered up.

(4) Also check that notification is provided correctly on the remote monitoring PC.
For information on the message format used for test notification, see section “3.13.9 Error notification data format".

(5) Click **[Close]** to exit the setting/cancellation screen.

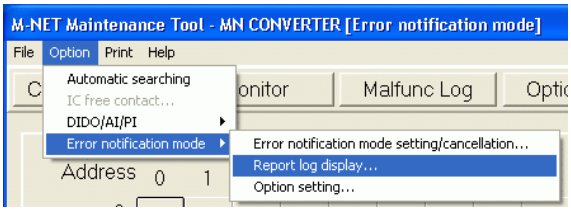
3.13.5 Report log

A log of past error notifications is saved in the MN Converter.
You can use the Maintenance Tool to view and check the Report log stored on the MN Converter.
The log shows the reported error codes, the address of the unit on which the error occurred and the report result (OK/NG).

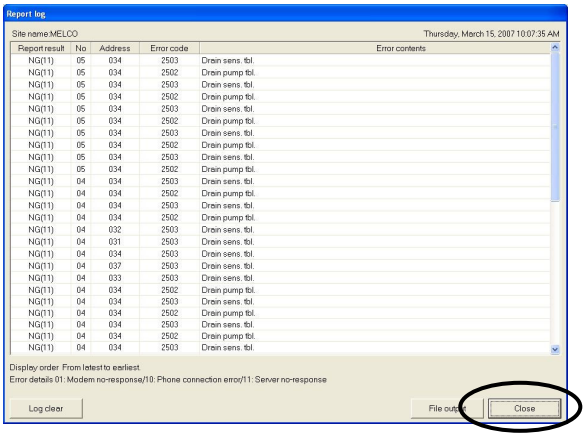
NOTE:
A maximum of 50 notification log entries are stored on the MN Converter.
Once the limit of 50 entries is exceeded, the oldest entries in the log are deleted sequentially.

3.13.5.1 Viewing the Report log

(1) Click **[Option]** in the main menu bar and then select **[Error notification mode]** -> **[Report log display]** in the sub-menu.

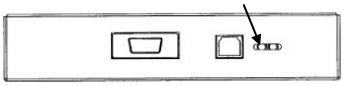


The **Report log screen** appears.
Report log entries are displayed in chronological order with the most recent entry at the top.



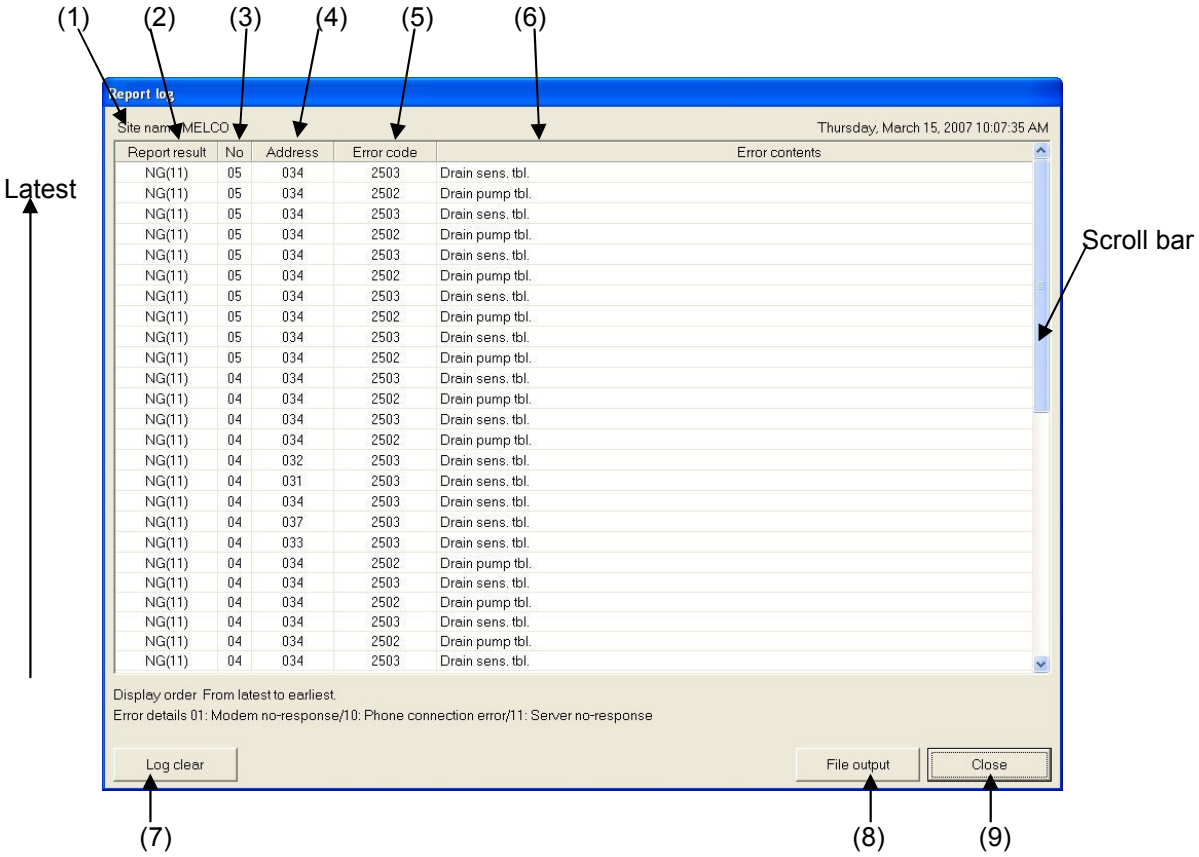
(2) Click **[Close]** to exit the Report log screen.

NOTE:
If the notification log stored on the MN Converter includes entries where the report result is "NG", the STATUS LED (yellow) on the front of the MN Converter repeatedly lights for 2 seconds and turns off for 0.5 seconds to show that notification failed.



To reset the flashing LED, display the Report log using the Maintenance Tool.
(See section 3.12.10 for more information on the STATUS LED display.)
If a failed notification is logged, check the error code (P.70 (5)) for the log entry and ensure that future notification is carried out correctly.

The design of the screen is shown below.



- (1) Site name

Name of the system being monitored [see section 3.13.3 (1)]

- (2) Report result

Results notified

OK --- Notification succeeded

NG(**) ----Notification failed

** : Error code (see below)

01:Modem no-response -- There was no response from the modem.

10:Phone connection error-- A telephone line connection could not be established.

11:Server no-response -- There was no response from the server software. (Only applies when "Server" is selected in "Option setting" (see section 3.13.8).)

- (3) No.

Notification number

A number assigned sequentially for each notification. [See section 3.13.9 for details.]

- (4) Address

M-NET address of the unit in which the error occurred.

- (5) Error code

Code for the error that occurred.

- (6) Error contents

Details of the error.

- (7) Log clear

Clears the Report log.

- (8) File output

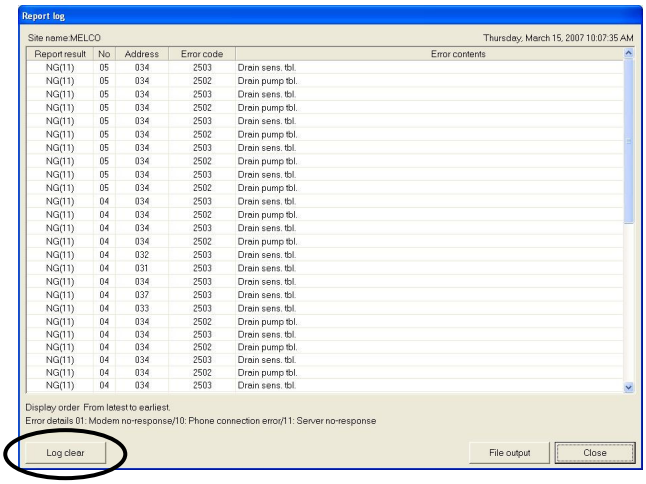
Saves the Report log as a CSV-format file. [See section 3.13.5.3.]

- (9) Close

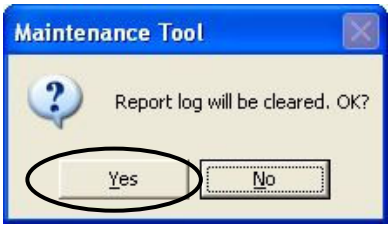
Closes the **Report log screen**.

3.13.5.2 Clearing the Report log

(1) Click the **[Log clear]** button in the **Report log screen**.



(2) Click **[Yes]**.



(3) The Report log is cleared. Click **[OK]**.

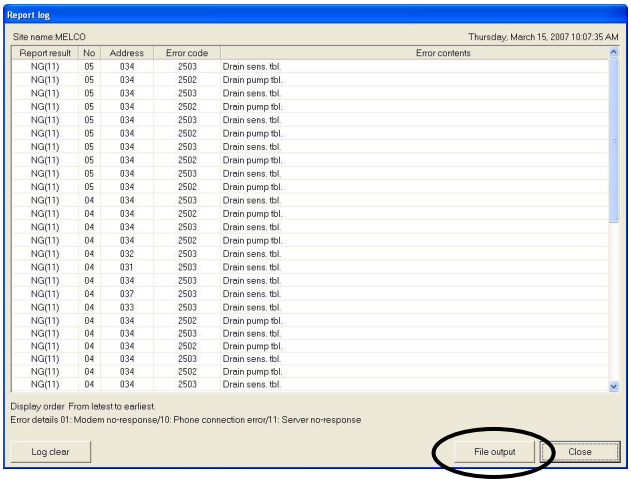


NOTE:
When you clear the Report log, the notification number is reset and restarts from 1 in the next report.

3.13.5.3 Saving the Report log in CSV format

You can save the Report log as a CSV-format file on the Maintenance Tool PC.

(1) Click the **[File output]** button in the **Report log screen**.



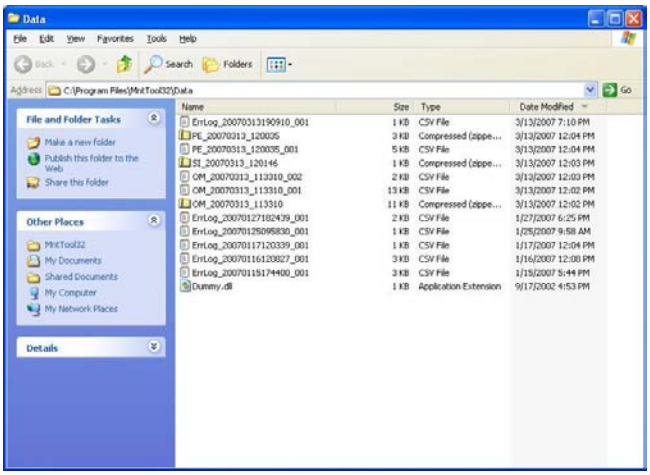
(2) Select CSV format and click **[OK]**.

Use , -- Uses a comma (,) as the delimiter in the CSV file.

Use ; -- Uses a semicolon (;) as the delimiter in the CSV file.



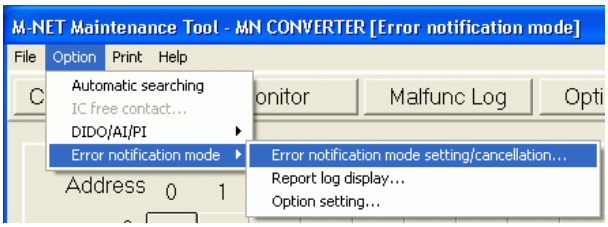
(3) The log is saved in CSV format and a folder display window opens. The folder name is **C:¥MntToolEA¥Data.**
[See section 5.5.]



3.13.6 Changing the error notification settings

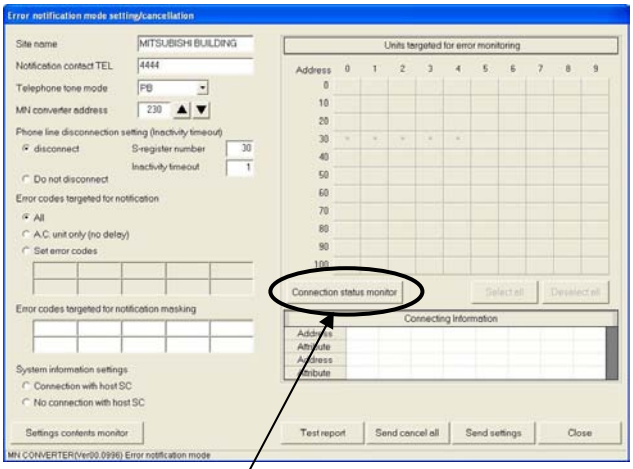
NOTE:
If you change the units targeted for error monitoring or change the MN Converter address, the MN Converter will be reset by the change. This will erase the previous error data stored on the MN Converter.
When the data is erased, notification also stops and no error report log is kept.
To retain the error data, set the **Minimum reporting period** in the Option settings to 0 minutes before sending the settings to forcibly report the error data currently stored on the MN Converter.
You can check whether there is currently error data stored on the MN Converter by the STATUS LED, which will blink at 0.5-second intervals if there is data stored.
For details, see section 3.13.10 "MN Converter LED display" (pattern 4).

(1) Click **[Option]** in the menu bar and select **[Error notification mode]** -> **[Error notification mode setting/cancellation]** in the sub-menu.



(2) The information set in the MN Converter is loaded and the **Error notification mode setting/cancellation screen** appears.

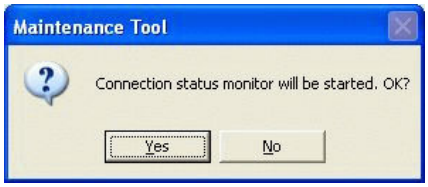
Units set on the MN Converter as targets for error monitoring are marked with an asterisk (*).



(3) Change the desired items in the **Error notification mode setting/cancellation screen**.

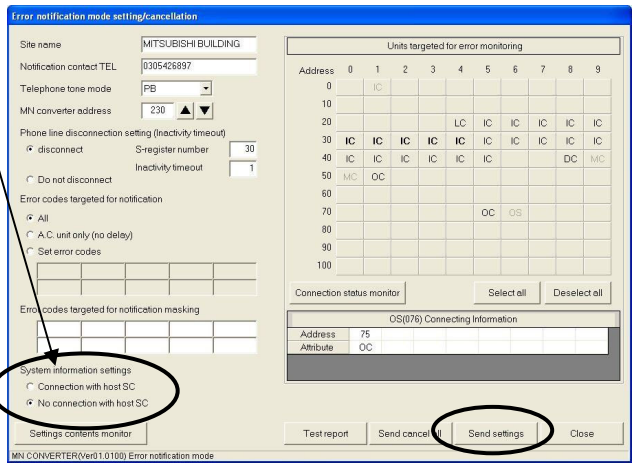
To change the units targeted for error monitoring, you have to run the Connection status monitor.
Click **[Connection status monitor]** to collect the connection information.

A confirmation window is displayed.
Click **[Yes]**.
Connection status monitor begins.





(4) Select System information settings.



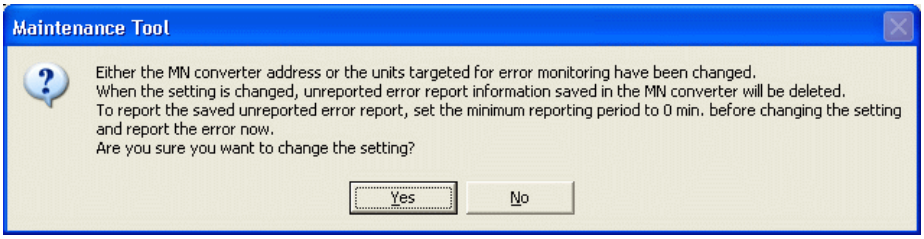
(5) Click **[Send settings]**.

A confirmation window is displayed.
Click **[Yes]**.

Setting begins.



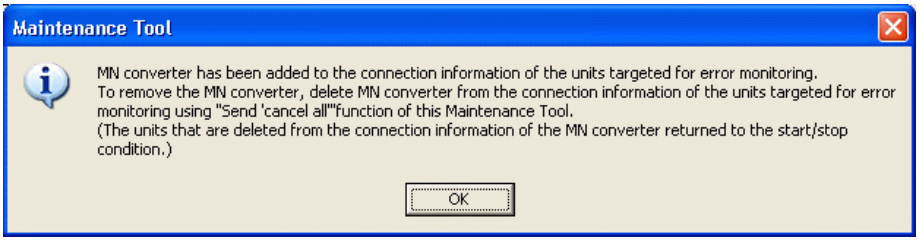
(6) If you change the units targeted for error monitoring or change the MN Converter address, the message shown below appears.
The MN Converter is reset by the change. This erases the previous error data stored on the MN Converter. Reporting also stops and no error report log is kept.
Set the “Minimum reporting period” in the Option settings to 0 minutes before sending the settings to forcibly report the error data currently stored on the MN Converter,
and click **[Yes]**.
Setting begins.



(7) The **Settings have been sent** message appears and setting is completed. Click **[OK]**.



(8) If you add the units targeted for error monitoring, the message shown below appears.
Click **[OK]**.



(9) Click **[Close]** to close the **Error notification mode setting/cancellation screen**.

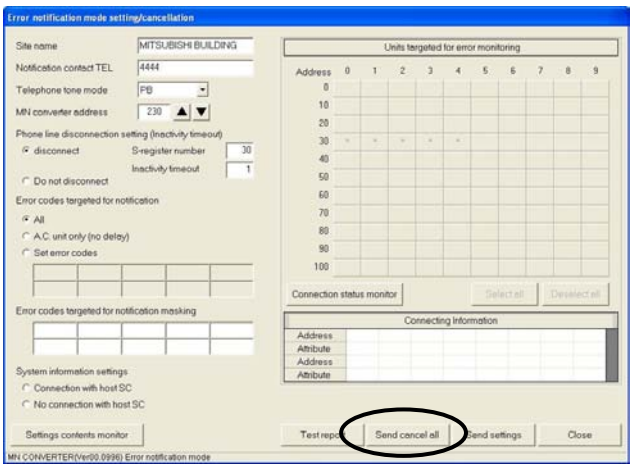
Caution:
If you have changed the telephone number, you must run the error notification test.
[See section **3.13.4.**]

NOTE:
*If you change the units to be monitored for errors when "**Connection with host SC**" is selected, **you must add or delete the MN Converter address in the corresponding unit connection data on the host SC.**
*To remove the MN Converter, delete MN Converter from the connection information of the units targeted for error monitoring using “Send cancel all” function of this Maintenance Tool.
*The units that are deleted from the connection information of MN Converter returned to the start/stop condition.

3.13.7 Canceling error notification mode

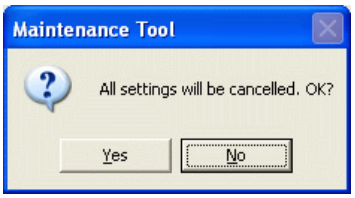
This procedure cancels error notification mode and returns the MN Converter to maintenance mode.

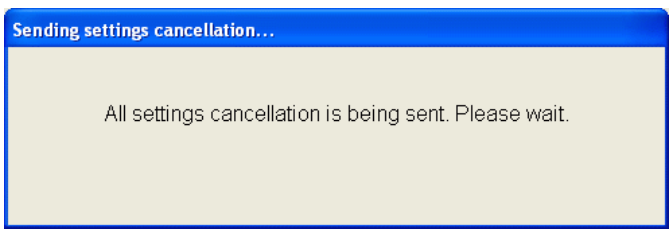
(1) In the **Error notification mode setting/cancellation screen**, click **[Send cancel all]**.



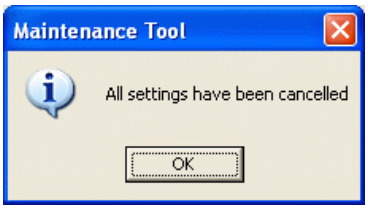
(2) A confirmation window is displayed.
Click **[Yes]**.

Cancellation begins.





(3) When setting is completed, the **All settings have been cancelled** message appears.
Click **[OK]**.



The MN Converter switches to maintenance mode, and the message below appears.Click **[OK]**.



NOTE:
After cancellation, check the start/stop condition of the unit for confirmation

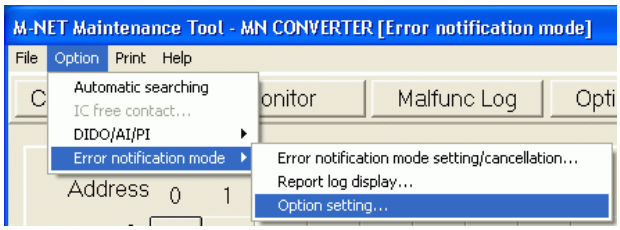
(4) Click **[Close]** to close the **Error notification mode setting/cancellation screen**.

NOTE:
If you selected "Connection with host SC", you must delete the address of the MN Converter from the connection data for the corresponding unit on the host SC.

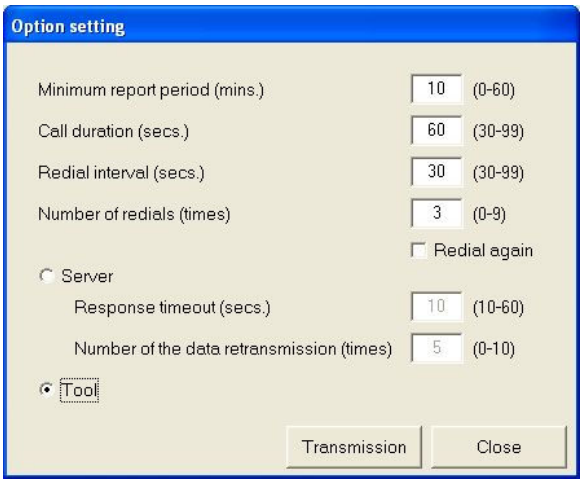
3.13.8 Option settings

Use the procedure below to specify the settings for remote error notification mode.

(1) Click **[Option]** in the menu bar and select **[Error notification mode]** -> **[Option setting]** in the sub-menu.



(2) The **Option setting screen** appears.



(3) Change the settings as desired and click **[Transmission]**.

(4) The new settings are applied on the MN Converter and the window shown below appears.

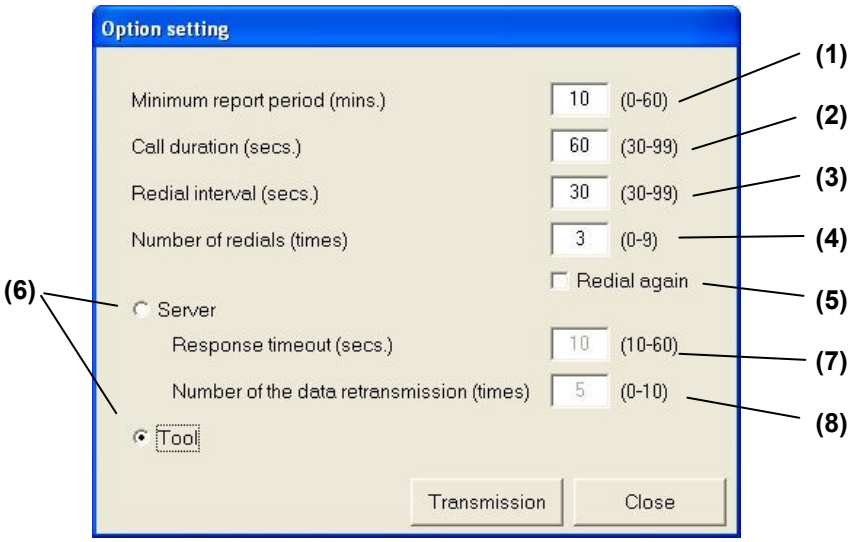


NOTE:

If the MN Converter is reporting an error, the message shown below appears and the settings cannot be applied. Wait a few moments until error notification ends and then resend the settings.

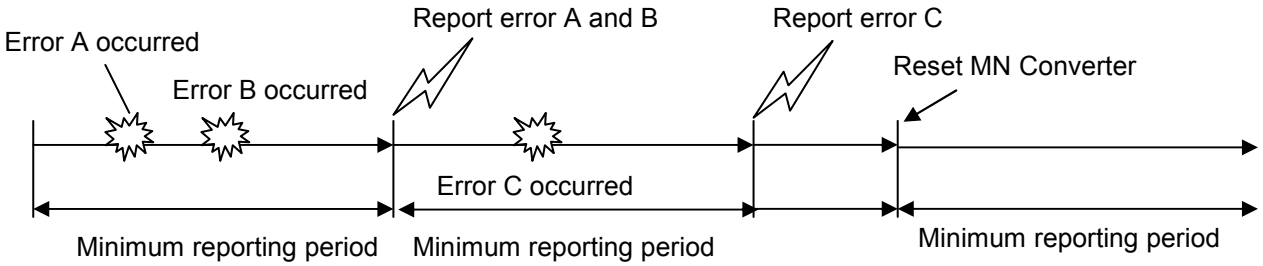


The various settings are explained below.



- (1) Minimum reporting period (mins.) (Default = 10 min.)

Set a period between 0 and 60 minutes in 1-minute increments as the error reporting interval.
Errors that occur during this period are all reported together when the end of the specified period is reached.
After the errors are reported, the next notification occurs at the end of the next reporting period.
If no errors occur during this period, none are reported.
Counting of the reporting period begins when the setting is specified.
If the MN Converter is reset due to an event such as a change to the error notification setting, the counting for the minimum reporting period is also reset and errors are reported as soon as the countdown restarts.



NOTE:
The maximum number of errors that the MN Converter can store during the minimum reporting period is 50.
Once the limit of 50 errors is exceeded, the oldest entries in the log are deleted.
When more than 50 errors occur, only the number of excess errors is reported.

- (2) Call duration (secs.) (Default = 60 sec.)

Set a period between 30 and 99 seconds in 1-second increments as the time for which the MN Converter continues dialing a contact telephone number once it has started the notification process.
If the contact telephone does not answer before this period expires, dialing is cancelled and notification fails. This function prevents long periods of continuous dialing.

NOTE:
Some modem models have a similar function. If this is the case and the modem's continuous dialing period is shorter than the Maintenance Tool setting, dialing stops after the period set on the modem.
Refer to your modem's instruction manual for details.

- (3) Redial interval (secs.) (Default = 30 sec.)

If the MN Converter dials a notification contact but the contact telephone does not answer, the converter redials the number for the number of times specified in "**(4) Number of redials**" below.
In this setting, specify a period between 30 and 99 seconds in 1-second increments as the interval between redials.

- (4) Number of redials (times) (Default = 3 times)

Set a number between 0 and 10 as the number of redials when the MN Converter dials a notification contact but the contact telephone does not answer.
If you set this number to 0, the converter does not redial the number.

- (5) Redial again (Default = Not selected)

If you tick this option, when the MN Converter redials a number for the number of times specified in **"(4) Number of redials"** and there is still no reply, the converter again attempts to report the same notification data after the period specified in **"(1) Minimum reporting period"** has passed.
It repeats this process until notification succeeds.
If this option is not ticked and redialing fails to establish contact, the result is stored in the error report log as a failure and that notification process ends. If this option is ticked, the result is not logged as a failure and notification is retried.

- (6) Server/Tool (Default = Server)

Choose whether the software running on the remote monitoring PC connected to the notification contact is the dedicated server software or another software tool.

Server ---------- The MN Converter waits until it receives a "REP" character string from the remote monitoring PC in response to a notification.
If "REP" is received, the notification result is stored in the MN Converter's Report log as a success.
If no response is received after a set time, the notification result is stored in the MN Converter's Report log as a failure.

Tool ---------- Without waiting for a response from the remote monitoring PC, the MN Converter stores the notification result in its Report log as a success when the notification from the MN Converter is completed.

When a notification test is run, this setting is also used to identify the notification contact and determine whether notification was a success or a failure.

- (7) Response timeout (secs.) (Default = 10 sec.)

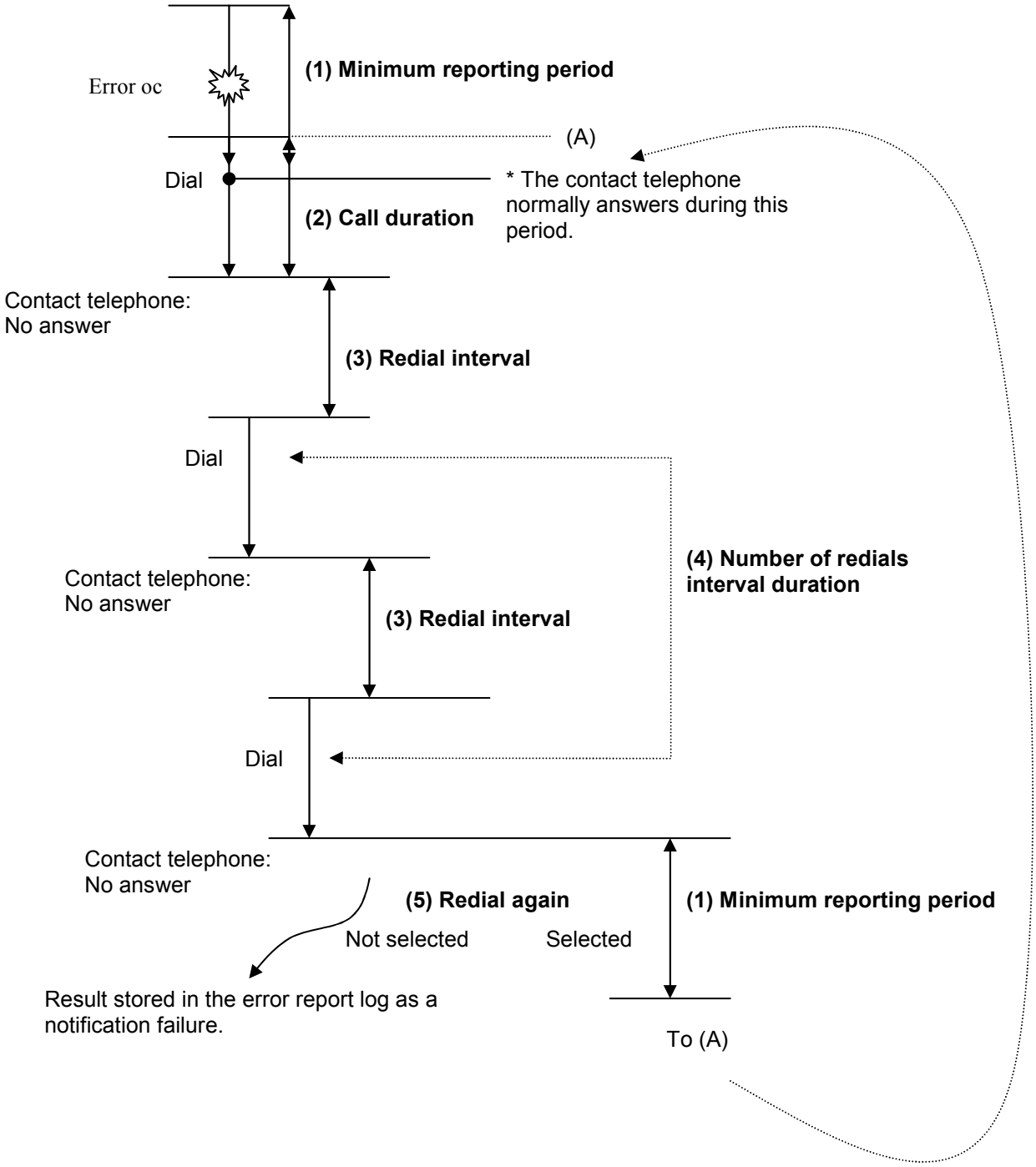
When "**Server**" is selected in "**(6) Server/Tool**" above, use this setting to specify a period between 10 and 60 seconds in 1-second increments as the time for which the MN Converter waits for a "REP" response from the server.
When "**Tool**" is selected, this setting is disabled.

- (8) Number of the data retransmission (times) (Default = 5 times)

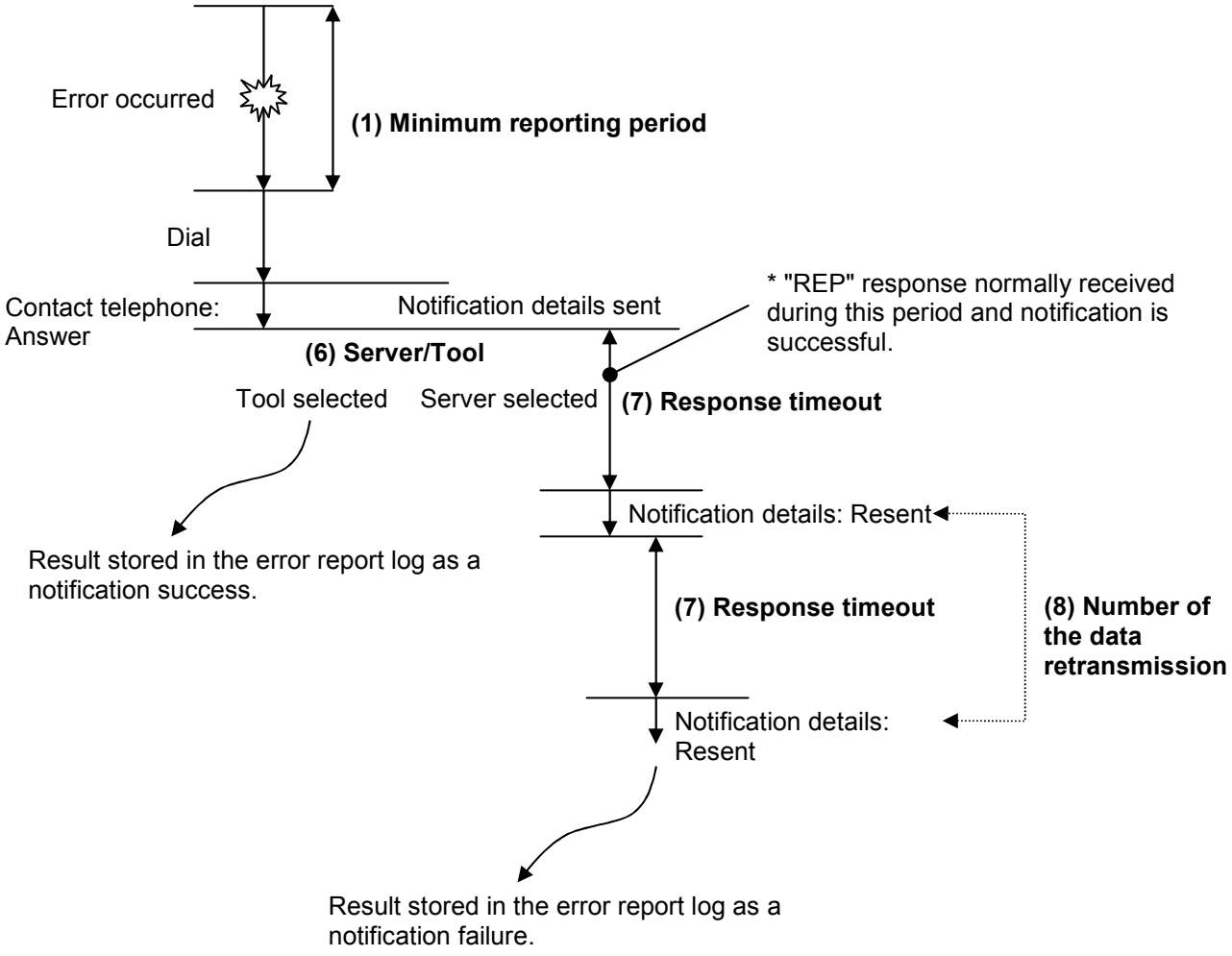
When "**Server**" is selected in "**(6) Server/Tool**" above and no "REP" response is received from the server in the time set in "**(7) Response timeout**" above, use this setting to specify a number between 0 and 10 as the number of times the MN Converter retries server notification.
If you set this number to 0, the MN Converter does not retry notification.
When "**Tool**" is selected, this setting is disabled.

The figure below summarizes these settings.

[If the notification contact telephone does not answer]



[If the notification contact telephone answers]



3.13.9 Error notification data format

The notification data sent from the MN Converter to the remote monitoring PC via the telephone lines is in the format shown below. The remote monitoring PC receives and processes this data in the dedicated server software or another dedicated software tool. Prior to notification, up to 50 items of error data are stored on the MN Converter. No more than 50 items of error data can be reported each time (each dialing).
If there are more than 50 errors, only the number of excess errors is reported.
The 50 items are divided into blocks of up to 20 items for transmission.

[Data format]

```
NO10                          -- Notification number
MITSUBISHI ELEC BUILDING      -- Site name
0312502
0346607                       -- Error data (up to 20 items)
0352503
*
*
*
(20 or more items)
NO11                          -- Notification number
MITSUBISHI ELEC BUILDING      -- Site name
0362502
0346608                       -- Error data (up to 20 items)
0352504
*
*
*
(40 or more items)
NO12                          -- Notification number
MITSUBISHI ELEC BUILDING      -- Site name
0362502
0346608                       -- Error data (up to 10 items)
0352504
*
*
*
OVER12                        -- Number of items in excess of 50 (if there are more than 50 items)
```

- Notification number

NO + notification number
The number increments by 1 for each item up to 50 items. When 50 is reached, numbering restarts at 1. If there are more than 20 items of error data, the notification is divided and the notification number increments by 1 for each item. The notification number displayed by the Maintenance Tool matches the error report log number on the MN Converter. When the log is cleared in the Maintenance Tool error report log screen, the numbering restarts from 1. The notification number for a test notification is 0.

- Site name

Site name
The site name specified in the **Error notification mode setting/cancellation screen**.

- Error data

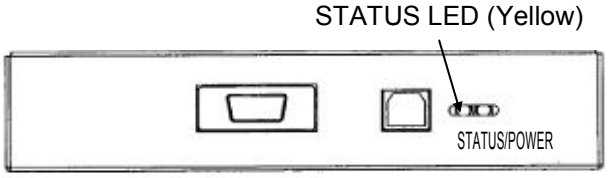
Address of unit on which the error occurred (3 digits) + error code (4 digits)
For a test notification, the unit where the error occurred is "MN Converter's address" and the error code (1 only) is "0000".

- Number of errors in excess of 50

OVER + the number of errors in excess of 50

3.13.10 MN Converter LED display

The MN Converter (CMS-MNG-E) has a STATUS LED (yellow) that displays the converter status.



MN Converter (CMS-MNG-E)

The STATUS LED blinking patterns are shown below.

[Maintenance mode]

Lit: Ready for operation. (normal)
Unlit: Not ready for operation. (error)

[Remote error notification mode]

Lit: Ready for operation. (normal)
Unlit: Not ready for operation. (error)
Blink: When the remote error notification activates, the LED light blinks according to the following blink patterns:

■ ··Lit (Unit: second)

Pattern	Explanation	Priority*	Blinking pattern	Operation status
1	Slow blink	High ↑	0.5 2.0 0.5 2.0 0.5 2.0	Modem error
2	Long blink	Low	0.2-0.1-0.2-0.5 0.5 0.5	Remote error notification failed
3	Double blink			Redialing
4	Blinking			Air-conditioner error

(*When all of the operation statuses occur at a time, the status with the highest priority is displayed.)

Pattern

1----------Modem error

Unable to communicate with the modem. The MN Converter is not connected to the modem or the modem is not turned on. Check the connection to the modem and that the modem is turned on.

2----------Remote error notification failed

A failed notification result is saved in the Report log stored on the MN Converter. [See section **3.13.5.**]

If the LED is displaying this pattern, check the Report log in the Maintenance Tools and eliminate the cause of the failure.

When the Report log is displayed, the software recognizes that the log has been "checked by a person" and resets the display pattern.

When it reaches the limit of 50 items stored in the Report log, and the oldest entries that exceed the 50 limits are deleted. The display is reset when there are no failure results in the Report log.

3----------Redialing

The LED blinks in this pattern while the MN Converter is redialing after there is no answer from a notification contact telephone.

4----------Air-conditioner error

The LED blinks in this pattern when an error requiring notification has occurred in one of the units being monitored for errors and the MN Converter is storing the error data. If an error occurs in a unit that is not being monitored for errors, or if the error code is masked or does not require notification, the LED does not blink. This display is reset when error notification is carried out.

3.14 Setting the Values for Indoor unit Functions

*** Features**

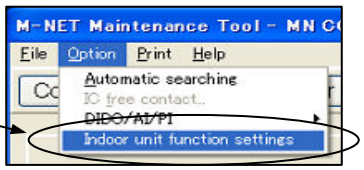
- The preset values for each function of the connected indoor units can be displayed.
- The preset values for each function of the connected indoor units can be set or changed.

NOTE:
The function mentioned here is not available to the models that do not support this function.

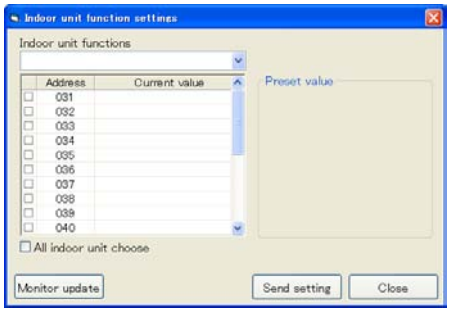
3.14.1 Start-up

(1) Start-up sequence

a) Click **[Option (Ө)]** of the menubar in the **[On-Line Main]** Screen, and click **[Indoor unit function settings]** of the submenu.



b) The **[Indoor unit function settings]** screen is displayed.

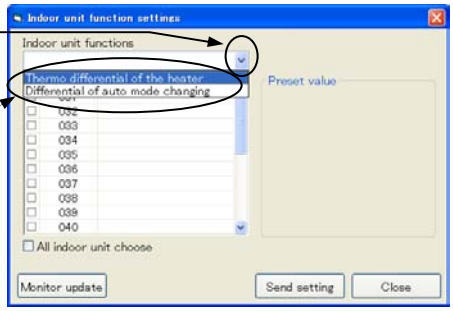


3.14.2 Monitoring the preset value

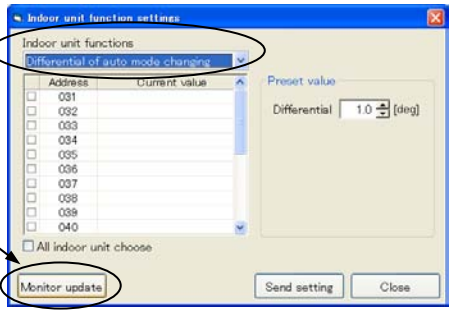
(1) Select the function whose preset value is to be monitored from the list of **[Indoor unit functions]**.

a) Click **[▼]** next to **[Indoor unit functions]**.

b) Select the desired function from the list of functions that appears.



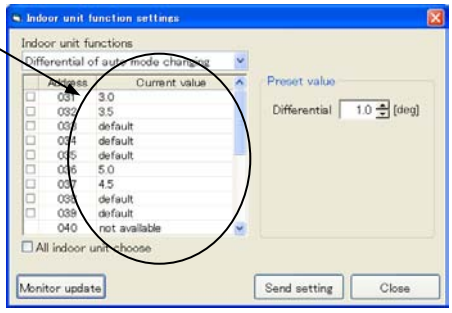
c) The selected function will appear under **[Indoor unit functions]**.



(2) Click the **[Monitor update]** button.
The current data for the selected function will be collected from all indoor units, and the results will appear in the **[Current value]** field.

・Values that may appear in the **[Cuurent value]** field (Example of displayed value.)

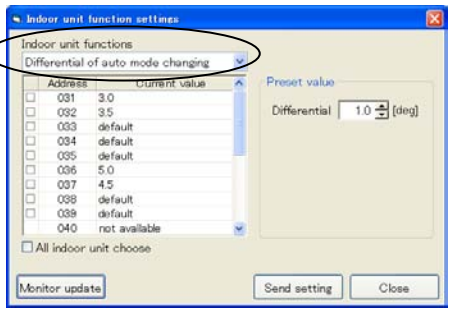
Displayed value	Description
1.0～5.0	Current preset value
Default	Default value
Not available	The selected function is not supported.



3.14.3 Setting/Changing the values

(1) Select the function whose preset value is to be set/changed from the list of **[Indoor unit functions]**.
(Refer to **[3.14.2 (1)]**)

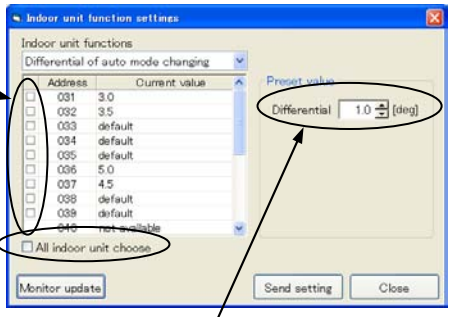
a) Click **[▼]** next to **[Indoor unit functions]**.
b) Select the desired function from the list of functions.
c) The selected function will appear under **[Indoor unit functions]**.



(2) **Click the check box next to the indoor units** whoose preset values are to be set/changed (multiple selection allowed).
When the check box next to **[All indoor unit choose]** is clicked, all indoor units are selected.

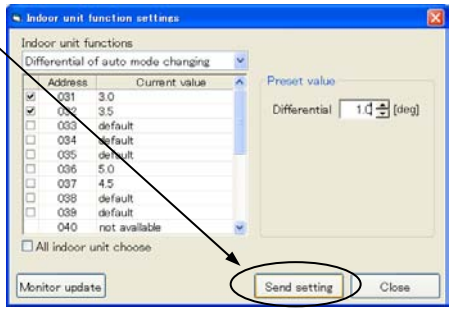
(3) Enter the values in the **[Differential]** field.

a) Click **[▲][▼]** next to the preset value to increase or decrease the value.
・Clicking **[▲]** increases the value in 0.1 increments.
・Clicking **[▼]** decreases the value in 0.1 increments.
・The range of values available depends on the function.



(4) Click the **[Send setting]** button.

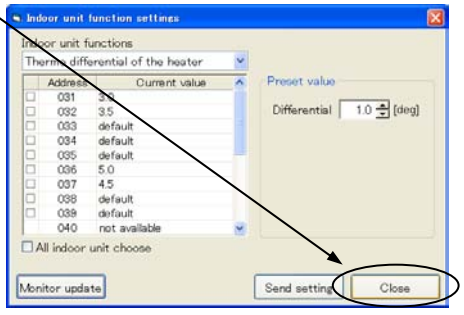
a) The changes made to the selected functions for the selected indoor unit(s) are reflected.
b) The current data for the selected function will be collected from all indoor units, and the results will appear in the **[Cuurent value]** field.
(Refer to **[3.14.2 (2)]**)



3.14.4 Exiting the function

(1) Exiting sequence

a) Click the **[Close]** button to close the **[Indoor unit function settings]** screen to go back to the **[On-Line Main]** screen.



3.15 Compressor operating time monitor

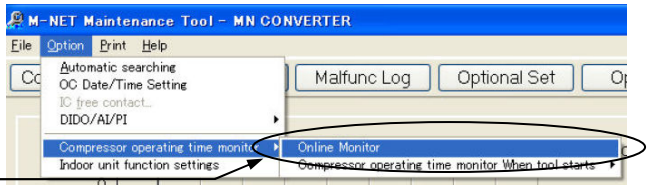
*** Features**

- The compressor operating time of the outdoor unit can be monitored.

3.15.1 Start-up

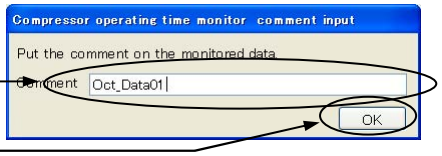
(1) Start-up sequence

a) Click **[Option]** of the menubar on the **[On-Line Main]** screen, and click **[Compressor operating time monitor]→[Online Monitor]** of the submenu.

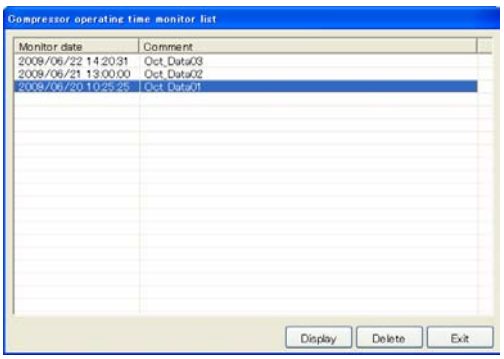


b) The **[Compresor operating time monitor comment input]** screen is displayed.
Input the comment on the monitored data.

c) When **[OK]** button clicked, it start the monitoring.



d) When the monitor is completed, the monitor result is saved, and the list of the data monitored to **[Compressor operating time monitor list]** screen is displayed.

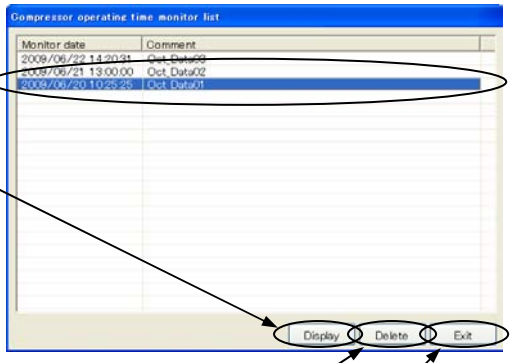


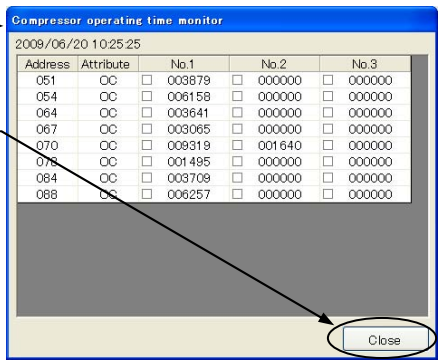
3.15.2 Compressor operating time monitor

(1) When the line of data that wants to confirm the monitor result is clicked from **[Compressor operating time monitor list]** screen, and **[Display]** button is clicked, the monitor result is displayed on **[Compressor operating time monitor]** screen.

When the line of data clicked from the list screen, and **[Delete]** button is clicked, the selected data is deleted.

When **[Exit]** button is clicked, it returns to **[On-Line Main]** screen.





(2) To close **[Compressor operating time monitor]** screen, **[Close]** button is clicked.
It returns to **[Compressor operating time monitor list]** screen.

NOTE:
When the units with only one or two compressor, the compressor operating time monitor that doesn't exist is displayed as "000000".

3.15.3 Automatic compressor operating time monitor when tool start

(1) Click **[Option]** of the menubar on the **[On-Line Main]** screen, and click **[Compressor operating time monitor]→[Compressor operating time monitor When tool starts]** of the submenu. And then click **[Active]**.



When the Maintenance Tool (at On-Line mode) starts, the compressor operating time is monitored and saved automatically.

[Compressor operating time monitor when tool starts] will be kept active once it becomes active.

The data automatically saved when the tool starts can be referred to by **[3.15.2 Compressor operating time monitor]** and **[4.6.1 Compressor operating time monitor(Off-Line Analyzing)]**.

To Make it inactive, click **[Inactive]** of the submenu.

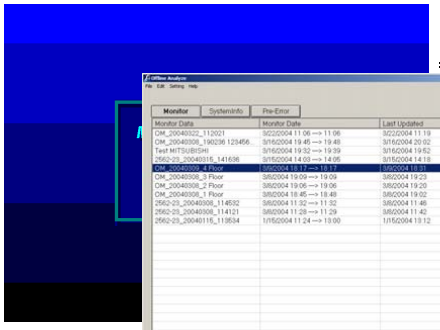
NOTE:
The comment doesn't attach to the data automatically monitored when the tool starts.

NOTE:
When the compressor operating time monitor when the tool starts is inactive, the uptime of the Maintenance Tool is shortened.

4 Off-Line Monitor Operating Method

4.1 Off-Line Monitor Screen Transfer

Title Screen



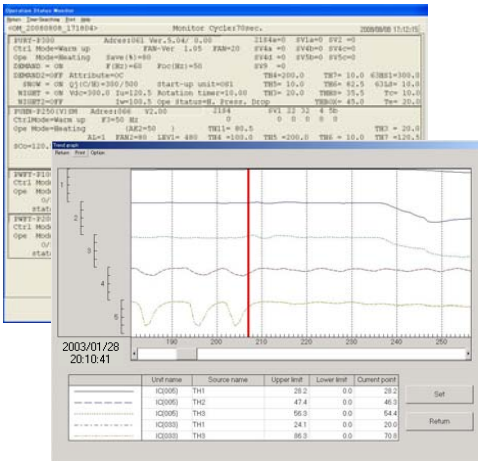
Operation Monitor

(Operation monitor Data list screen)

Offline Analyze

Graph

(Operation status monitor screen)



(Trend graph screen)

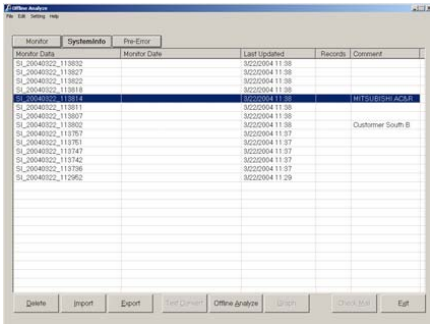
SystemInfo

Monitor

Pre-Error

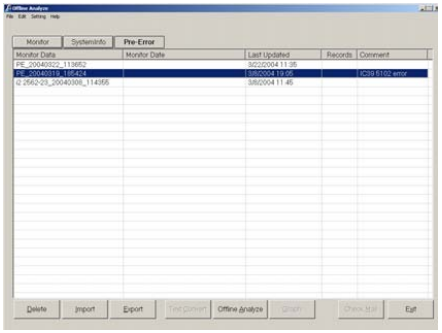
Monitor

System Information



(System info. Data list screen)

Monitoring of Pre-error Data

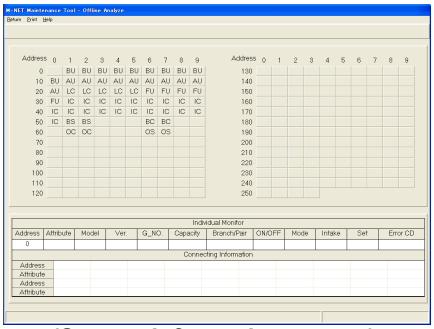


(Pre-error Data list screen)

Pre-Error

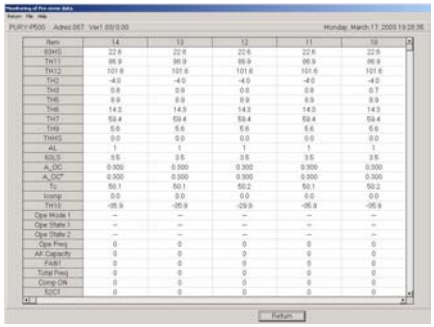
SystemInfo

Offline Analyze



(System information screen)

Offline Analyze



(Pre-error data screen)

4.2 Function Chart

4.2.1 Operation Monitor

Off-Line Analizing ---------- [Refer to 4.3.1]
Monitors and prints about unit data saved in On-Line "**3.7 Operation Monitor**".

Graph ---------- [Refer to 4.3.2]
The operation data obtained can be graphed for display.

Check Mail ---------- [Refer to 4.3.3]
Extracts the operation monitoring data being mail-transferred by the remote monitor mode from the mail server.

4.2.2 System Information Monitor

Off-Line Analyzing ---------- [Refer to 4.4.1]
Monitors and prints about unit data saved in On-Line "**3.4 Main Screen**".

4.2.3 Monitoring of Pre-error Data

Off-Line Analizing ---------- [Refer to 4.5.1]
Monitors and prints about unit data saved in On-Line "**3.9.4 Monitoring of Pre-error data**".

4.2.4 Compressor operating time monitor

Off-Line Analizing ---------- [Refer to 4.6.1]
Monitors and prints about unit data saved in On-Line "**3.16 Compressor operating time monitor**".

4.2.5 Function common for each screen (Filing operation)

Delete Data ---------- [Refer to 4.7.1]
The offline data selected can be deleted.

Export ---------- [Refer to 4.7.2]
Allows to output the off-line data selected on the screen as a separate file from the database.

Import ---------- [Refer to 4.7.3]
Allows to take the off-line data being output as a file by Export into the database.

Text Convert ---------- [Refer to 4.7.4]
Allows to output the off-line data being displayed on the screen as a file in Text format from the database. The system information data can not be converted. The Pre-error data can be converted in text on Offline Analysis Screen.

- **Changing the name of monitor data**
  You may change the monitor data name on the screen of the data list.
- **Right-clicking menu**
  Clicking the right button of the mouse on the [Monitor data] desired to be operated displays the pop-up menu. Using the pop-up menu facilitates your operation.
- **Malfunction Log Data**
  The folder where the CSV file (Malfunction Log etc.) is stored can be displayed.
- The offline mode includes 2 types, the [**normal mode**] and [**wide area access mode**]. Although the functions of both modes are almost same, however, under the [**wide area access mode**], the following functions are provided additionally.

  1) Display of monitored name objective for data collection
  The [AREA name], [Customer] and [Air conditioning system name] are shown for each data obtained.

  2) Display of extracted data
  By selecting [AREA name] and [Customer name], the relevant data only can be displayed.

NOTE: Both the data obtained by online under normal mode and that under wide area access mode can be displayed commonly under both offline modes.

4.3 Operation Monitor

*** Items Performed Here**

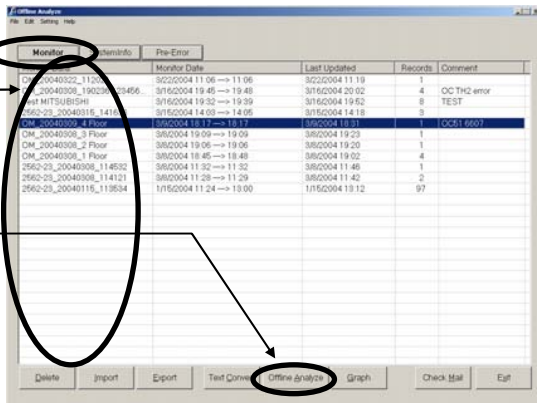
- Monitors and prints about the System Information and the Operating Data of units saved using the on-line monitor.

4.3.1 Off-Line Analyzing

(1) Click on [Monitor] to display the data list screen of Operation Monitor.

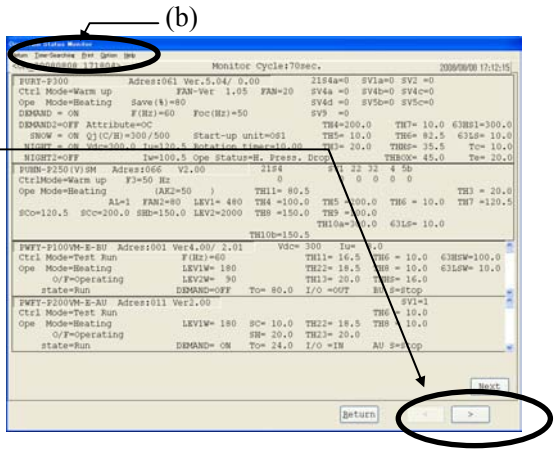
(2) Click on [**Monitor Data**] desired to be monitored.

(3) Click on [Offline Analyze].



NOTE:
This covers the operation with the menu of the right-clicking of the mouse.
(Refer to 4.6.6 Right-clicking menu.).

(4) **Operation Status Monitor Screen**

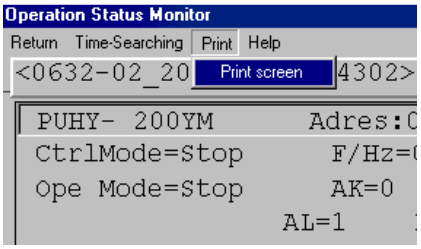


(a) Click on the [〈] [〉] buttons to display data from one minute before or one minute after.

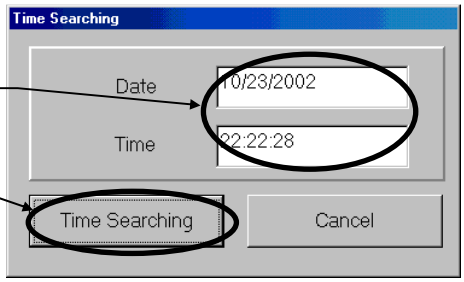
(b) "**Menu Bar**"
The menu bar displays [**Return**], [**Print**], [**Time-Searching**], [**Option**], [**Help**].

- Click on [**Return**] to end the **Operation Status Monitor Screen**.
  [Refer to (c)]

- Click on [**Print**] and then select "**Print screen**" from the **sub-menu**.
  The hard copy of the screen will be printed from the connected printer.



- Click on [**Time-Searching**] and the **Time Searching Screen** will appear.
  Enter the [**Date**] and [**Time**].
  (When entering the time, refer to the monitor data time.)



  Once the time has been entered, click on [Time Searching].
  The entered data will appear.
  If no time data has been entered, data for the nearest time will appear.

NOTE:
Set the data/time to be entered to the time presented within the monitor data.
Setting to the time outside of the monitor time may cause to disable the search function.

- Click on [**Option**] and then select "**Show unit infomation**" from the **sub-menu**.
  "**Unit information**" will be displayed. [Refer to **3.7.4 Unit information**]

- Click on [**Help**] and "**Explanation of Terminology**" and "**Operation Method**" sub-menus can be selected.
  [Refer to **3.6.1 Connecting Information of outdoor units 3.6.1.2 (2) "Menu Bar"**]

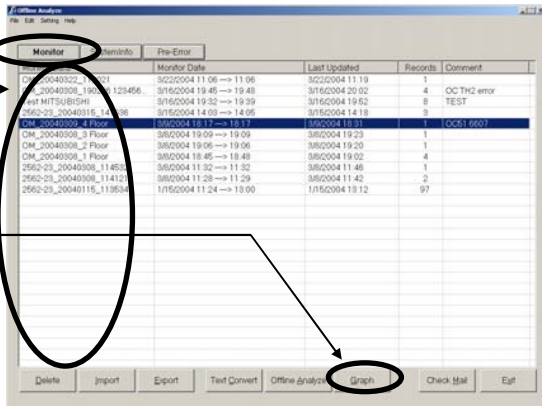
(c) Click on [**Return**] on the menu bar to end the **Operation Status Monitor Screen**.
The screen returns to the data list screen of Operation Monitor.

4.3.2 Graph

(1) Click on [Monitor] to display the data list screen of Operation Monitor.

(2) Click on [**Monitor Data**] desired to be monitored.

(3) Click on [Graph].

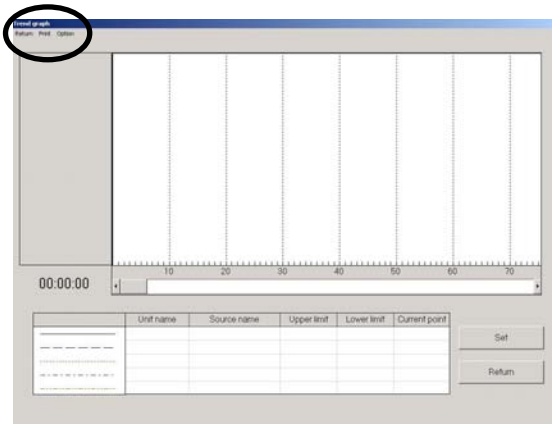


(4) Trend Graph Screen

*For the Procedure for graphing, please refer to [3.7.3 (1) Procedure for graphing].

(a) The menu bar
[Return], [Print] and [Option] are displayed on the menu bar.
1) [Return] is to be clicked when finishing Trend Graph. [Refer to (c).]

2) Clicking [Print] allows selecting the sub-menu of "Hard Copy."
Clicking "Hard Copy" displays a message of [Print the data?]. Clicking [Yes] prints out the screen presently displayed as it is.



3) Clicking [Option] allows selecting the sub-menu of "Graph detail setting ---", "Time search ---" and "Sampling setting ---."

- Clicking "Graph detail setting ---" displays Graph Detail Setting Screen.
  For the setting method, please refer to [3.7 Operation Monitor 3.7.3 (1) Procedure for graphing].

  Clicking [OK] after completing the setting on Graph Detail Setting Screen displays a message of [Please wait for a moment.] and then displays a message of [x-records data read !!].
  Click [OK] to display Trend Graph Screen.

  *The sampling time to allow graphing by offline system is limited to 1515 minutes (records) maximum. If 1515 minutes (records) are exceeded, the data after it is not displayed on graph.

- Clicking "Time search ---" displays Time Search Screen.
  For the operation method, please refer to [4.3.1 (4)(b) MENU BAR [Time searching]].

  * When the sampling interval is not set up in 1 minute, it does not search, even if it performs a time search function.

- Clicking "Sampling setting ---" displays Sampling Setting Screen.
  Set the sampling time (interval) by moving [Scroll bar] or input through the keyboard.
  For the sampling interval, set the time interval of the abscissas axis with 1 ~10 minutes.
  For the horizontal grid line, refer to [3.7.3 (1) Procedure for graphing].

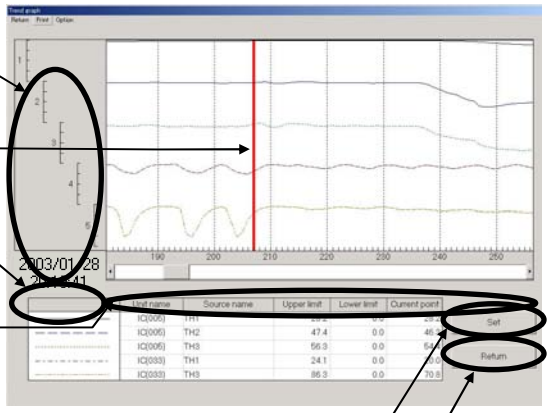


(b) Screen function and operation

1) Clicking [Graph number] makes the graph line bold.

2) Moving [Scaler] by dragging displays [Data] on the scaler at the current value column, and [Date/Time] at the lower part of the graph number.

3) Moving [Scroll bar] by dragging or clicking ◂ ▸ moves the range of the graph being displayed.



NOTE:
When a scroll bar or ◂ ▸ is clicked, a scroll button may sometimes move continuously.
In this case, it clicks again and please let me move to the position which wants to see graph.

4) Clicking [Set] displays Graph Detail Setting Screen.
For the setting method, refer to [3.7.3 (1) Procedure for graphing].

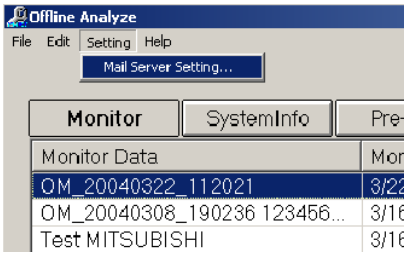
5) [Return] is to be clicked when finishing Trend Graph.

(c) To finish Trend Graph, click [Return] of [MENU BAR] or [Return]. Then a message of [Finish the trend graph?] will be displayed.
Click [Yes] to finish while click [No] not to finish.
Clicking [Yes] returns to Operation Monitor Data list screen.

4.3.3 Check mail

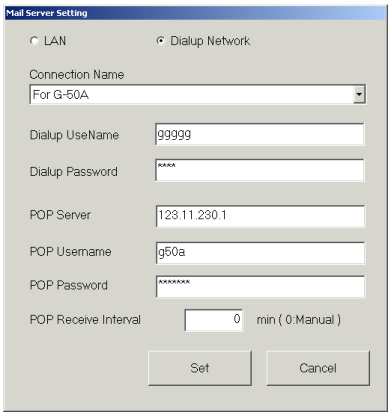
***Mail Server Setting**

In order to provide mail checking to the operation data mail-messaged from G50A(AG-150A/GB-50ADA/PAC-YG50ECA) by utilizing Mail communication mode under online mode, the setting is required relating to the connection of the objective mail server.



(a) Clicking on the sub-menu "**Mail server setting**" of "**Setting**" on the menu bar displays **Mail server setting screen**.

(b) For lan connection, click on "**LAN**," set the items relating to mail servers, and click on [Set] .



Items to be set

- Pop server :Ip address of mail servers for receiving
- User name :User name for mail receiving
- Password :Password for mail receiving

(c) For diaplup connection, click on "**Dialup Network**," set the items relating to dialup and mail servers,and click on [Set] .

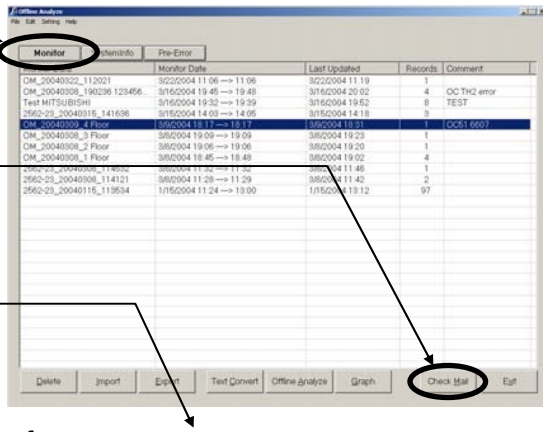
Items to be set

- Connection name:dialup connection name (requires to set the information on the provider to be connected by [dialup connection] from [control panel])
- Dialup user name :user name for dialup connection
- Dialup password :password for dialup connection
- POP Server :IP address of mail servers for receiving
- User Name :User name for mail receiving
- Password :Password for mail receiving

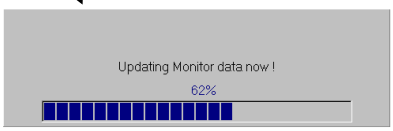
* When there are many amounts of data, this several hours case is in update of monitor data. We recommend you to set up so that interval time may be inputted into "POP Receive Interval" of "Mail Server Setting" and a mail check may be carried out periodically. (A mail check is automatically performed at the set-up interval.)

(1) Click on [Monitor] to display the data list screen of Operation Monitor.

(2) Click on [Check Mail] .
Initiates the checking of the operation monitor data mail for the mail server, and storing of the acquired data. During the data transfering and storing, the progress rate will be displayed.



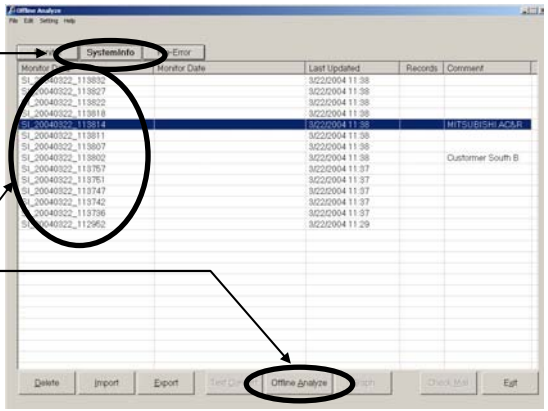
(3) After completing of data tranffer and storing, the numbers of received mail will be displayed.
(The numbers of the received mail counted here have no relation with the numbers displayed on the monitor data.)
Clicking on [OK] returns to the data list screen of Operation Monitor.



*The capacity to store the data obtained by the Maintenance Tool counts for 2G-bite maximum. When the remaining storage capacity is getting insufficient during data reception by mail, Warning Screen will appear. In this case, suspend the mail checking, and delete unnecessary data on Offline Screen to keep a proper capacity.

4.4 System Information

4.4.1 Off-Line Analyzing



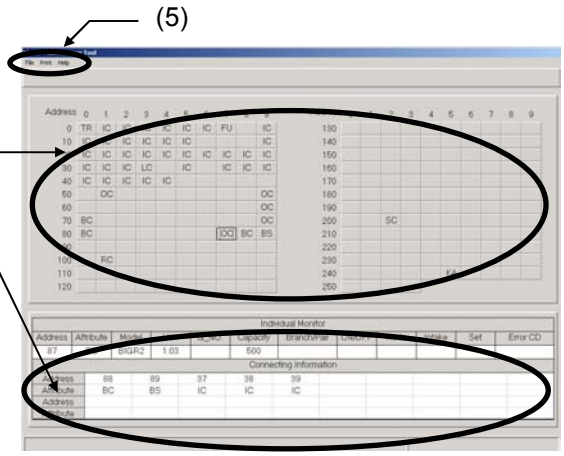
(1) Click on SystemInfo to display the data list screen of System Information.

(2) Click on [**Monitor Data**] desired to monitor.

(3) Click on Offline Analyze .

- The System Information Screen of Off-Line displays all connection information memorized by the connected G50A(AG-150A/GB-50ADA/PAC-YG50ECA).

NOTE:
This covers the operation with the menu of the right-clicking of the mouse.
(Refer to 4.6.6 Right-clicking menu.)



(5)

(4) Click on the address [**Button**] of the attributes to be displayed and the [**Unit Information Display Column**] is shown in the same way as when on-line. The [**Function Selection Buttons**] cannot be used.

(5) "**Menu Bar**"
[**Return**], [**Print**] and [**Help**] are displayed on the menu bar.

- Click on [**Return**] to end the system information. [Refer to (6)]

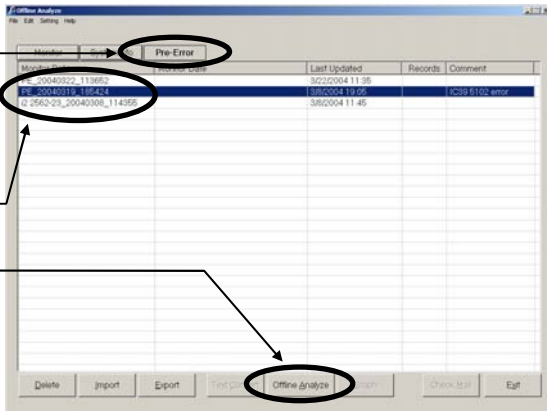
- Click on [**Print**] and then select "**Hard Copy**" from the sub-menu.
The hard copy of the screen will be printed out from the connected printer.

- Click on [**Help**] and an explanation "**Terminology**" and "**Operation Method**" will be displayed.
[Refer to **3.6.1 Connecting Information of outdoor units 3.6.1.2 (2) "Menu Bar"**]

(6) Click on [**Return**] on the menu bar to end system information.

4.5 Monitoring of Pre-error Data

4.5.1 Off-Line Analyzing



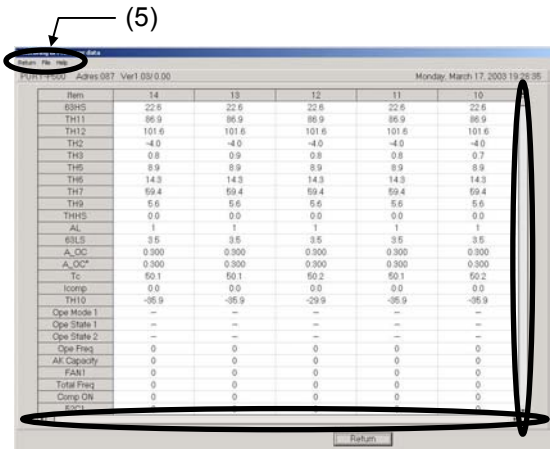
(1) Click on [Pre-Error] to display the data list screen of Pre-error.

(2) Click on [**Monitor Data**] desired to monitor.

(3) Click on [Offline Analyze] .

NOTE:
This covers the operation with the menu of the right-clicking of the mouse.
(Refer to 4.6.6 Right-clicking menu.)

(4) On the Pre-error Data screen, the operation status data immediately before generating error will be displayed in a unit of minute.
Each figure on the upper column indicates a number of minute before generating an error respectively.
The change of the display content is performed with Up/down, left/right scroll bar.
The number of displayed items and that of the stored data (per minute) differ depending on the selected item.



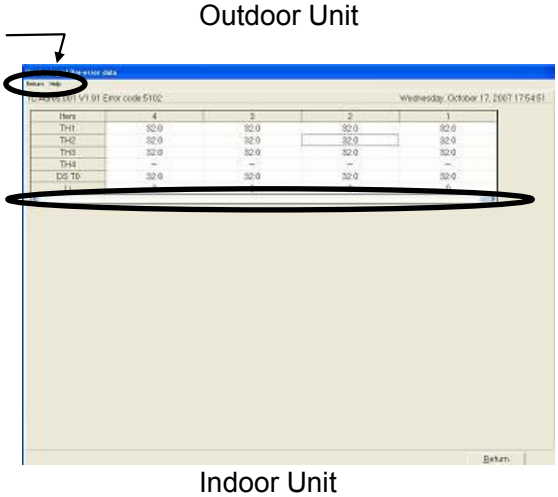
Outdoor Unit

(5) "**Menu Bar**"
[**Return**], **[Text convert] of [file]** and [**Help**] are displayed on the menu bar.

- Click on [**Return**] to end the Monitor before error occurred screen.[Refer to (6)]

- Clicking **[Text convert] of [file]** prepares a text file of the Before error occurred data being displayed.

- Click on [**Help**] and an explanation "**Terminology**" and "**Operation Method**" will be displayed.
[Refer to **3.6 Connecting Information 3.6.2 (2)"Menu Bar"**]



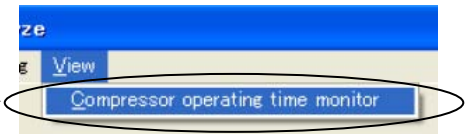
Indoor Unit

(6) Click on [**Return**] on the menu bar to end the data list screen of **Pre-error Data**.

4.6 Compressor operating time monitor

4.6.1 Off-Line Analyzing

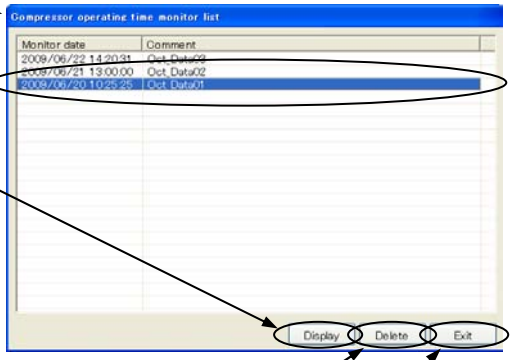
(1) Click **[View]** of the menubar on the **[Off-Line Main]** screen, and click **[Compressor operating time monitor]** of the submenu.
[Compressor operating time monitor list] screen is displayed.



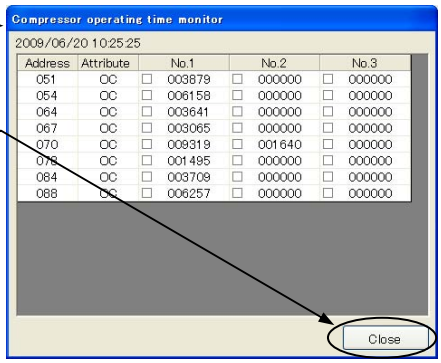
(2) When the line of data that wants to confirm the monitor result is clicked from **[Compressor operating time monitor list]** screen, and **[Display]** button is clicked, the monitor result is displayed on **[Compressor operating time monitor]** screen.

When the line of data clicked from the list screen, and **[Delete]** button is clicked, the selected data is deleted.

When **[Exit]** button is clicked, it returns to **[Off-Line Main]** screen.



(3) To close **[Compressor operating time monitor]** screen, **[Close]** button is clicked.
It returns to **[Compressor operating time monitor list]** screen.



NOTE:
When the units with only one or two compressor, the compressor operating time monitor that doesn't exist is displayed as "000000".

4.7 Function common for each screen (Filing operation)

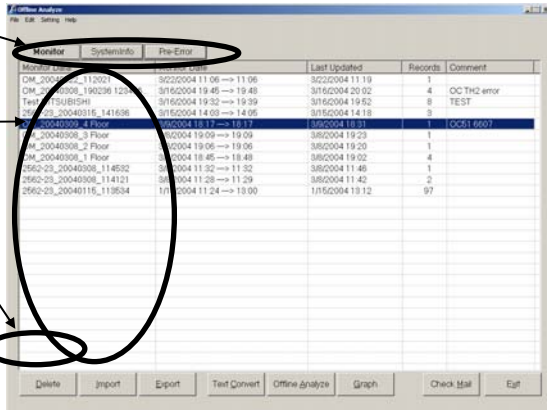
* Clicking the button of "Monitor Data", "Monitor Date", "Last Updated" and "Others" at the upper column allows to sort the displayed data.
* The right-clicking operation of the mouse covers the operation of each file also. For detail, refer to the item 4.7.6 Right-click menu.

4.7.1 Delete Data

(1) Clicking either Monitor , SystemInfo or Pre-Error to display Data list screen containing the file desired to edit.

(2) Click on [**Monitor Data**] desired to delete.

(3) Click on Delete.
Then the screen to confirm the selected monitor data will appear.
Clicking on Yes deletes the data.
Clicking on No returns to Data list screen.



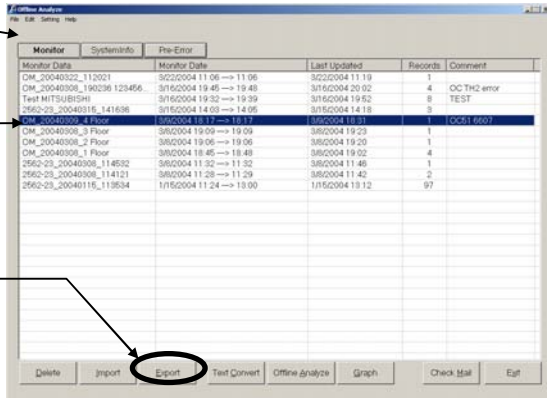
NOTE:
Selecting monitor data collectively enables to execute batch deletion.
This operation may be performed in the similar way of the file selection of Windows explorer (shift,ctrl).

4.7.2 Export

(1) Clicking either Monitor , SystemInfo or Pre-Error to display Data list screen containing the file desired to edit.

(2) Click on [**Monitor Data**] desired to output.

(3) Click on Export.



Export files exceeding 15 MB are divided.

Output methods are shown below.

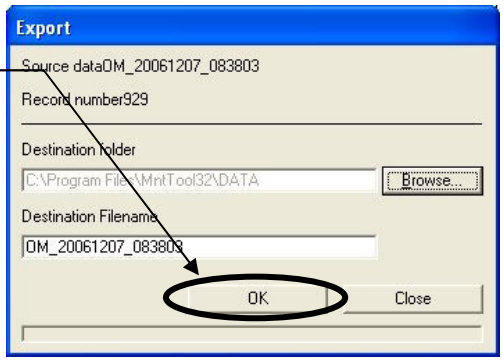
(a) **Not divided (file is smaller than 15 MB)**

1. [**Export**] screen appears.

2. Enter the name of the destination folder and export file, and click OK.

3. The [**File**] is exported and saved, and the destination folder is displayed in Explorer.

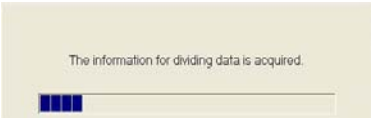
*During processing operation, the progress ratio will be displayed.



NOTE:
The exported file is a compressed archive with the file extension ZIP.

(b) **Divided (file exceeds 15 MB)**

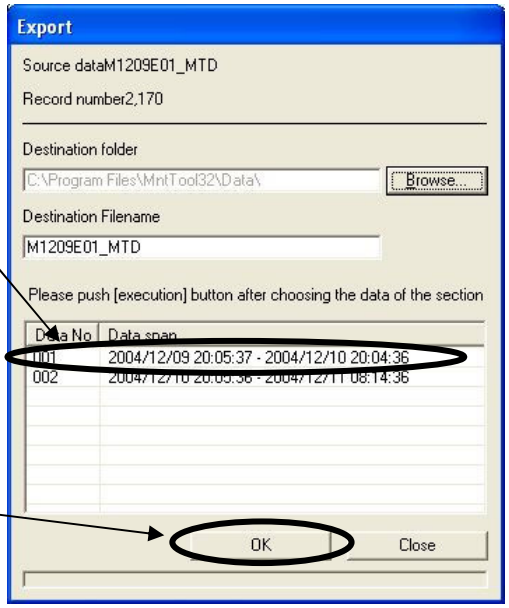
1. [**The information for dividing data is acquired**] screen appears.



2. After the information for dividing data is acquired, [**Export**] screen appears.

3. Enter the name of the destination folder and export file.

4. Click and select the data span to export.



NOTE:
Multiple data spans can be selected.
Use the operations used in Windows Explorer (Shift, Ctrl).

4) Click OK

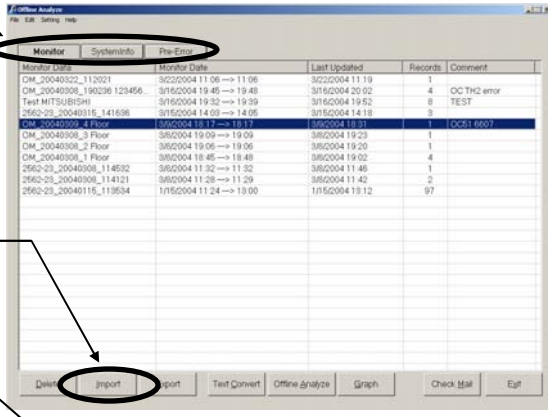
The selected data span [**Files**] are exported and saved, and the destination folder is displayed in Explorer.

*During processing operation, the progress ratio will be displayed.

NOTE:
The exported file is a compressed archive with the file extension ZIP.

4.7.3 Import

(1) Clicking either Monitor , SystemInfo or Pre-Error to display Data list screen containing the file desired to edit.

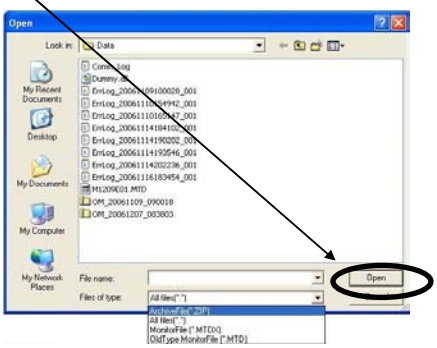


(2) Click on Import .

The screen to read a file will be displayed.

Set the reading folder, input the file name and click on Open .

*During processing operation, the progress ratio will be displayed.



NOTE:
Files with the following file extensions can be imported.
- Compressed data *.zip
- Monitor file *.MTDX
- Old file format Monitor file *.MTD
- Old file format Pre-error data file *.EDD

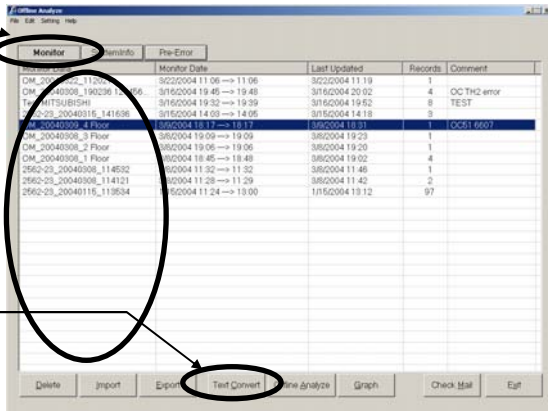
NOTE:
The operation monitor data (*.MTD) obtained by Win3.1/95/98 versions (Ver.3.**) can also be imported.
(The reverse operation is not allowed.)

4.7.4 Text Convert

(1) Clicking [Monitor] to display Data list screen containing the file desired to edit.
(Text conversion can also be adapted to the Pre-error data. For the converting method, refer to 4.5.1(5).)

(2) Click on [**Monitor Data**] desired to convert into text format.

(3) Click on [Text Convert] .
The screen to confirm the selected monitor data.
Clicking on [Yes] provides text conversion processing and then a file name will be displayed.
[Refer to **5.4 Text Convert Data**]



In the case of Operation Monitor, clicking [Yes] displays Data Transfer Screen prompting you to select the object and method of the conversion.

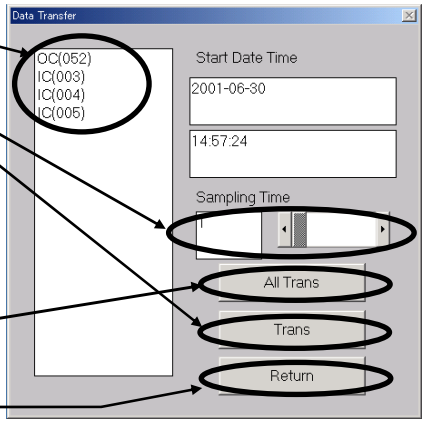
(a) Click on [**units**].
Set the [**Sampling Time**] between 1-min and 10-min.

(b) Click on [Trans] .
"Converting! Please wait for a moment." will be appeared, then a file name will be displayed.

[Refer to **5.4 Text Convert Data**]

(c) Click on [All Trans] to transfer the data of all units.

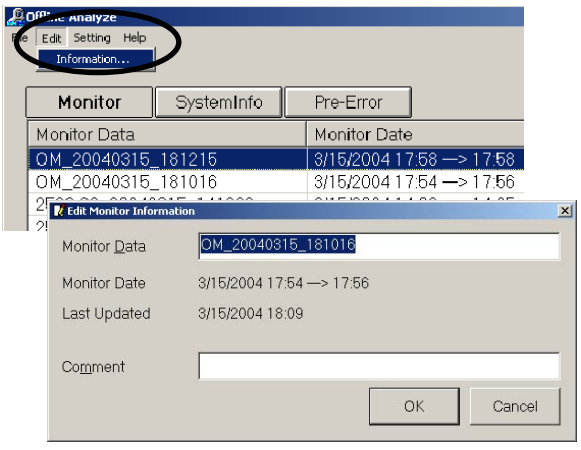
(d) Click on [Return] to end the **Data Transfer Screen**.



* During processing operation, the progress ratio will be displayed.

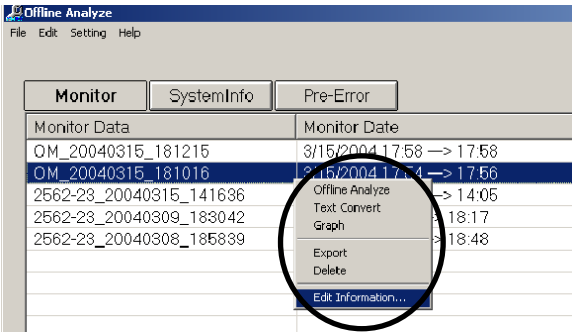
4.7.5 Monitor Data information convert

- Changing the name of monitor data
Clicking the Edit of the menu bar while focussing the monitor data name on the Monitor Data of which name is desired to be changed on the Screen listing each data will display the editing screen.
On this screen, the name of Monitor Data or other relevant information can be edited.



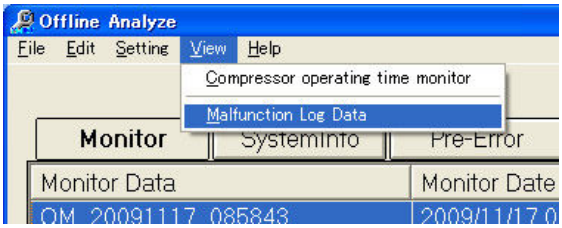
4.7.6 Right-clicking menu

- Right-clicking menu
  Clicking the right button of the mouse on [Monitor data] displays the pop-up menu as shown on the right screen. The items that can be set are same as that of the function button on the screen listing each data.
  (Some function is unable to operate partially.)
  Use them in accordance with your applications.



4.7.7 Malfunction Log Data

Click **[View]** of the menubar on the **[Off-Line Main]** screen, and click **[Malfunction Log Data]** of the submenu.
The folder of data file is displayed by the Explorer.

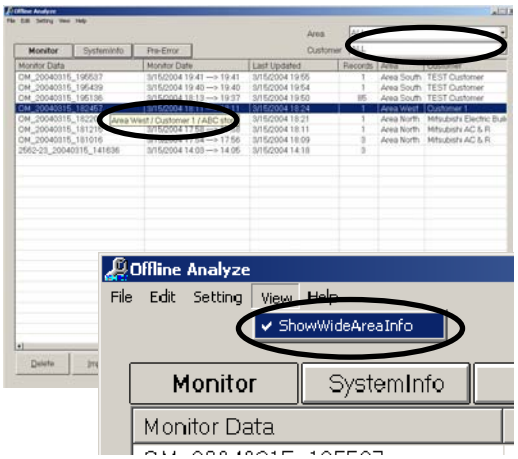


4.8 Offline Analyze on Wide area access mode

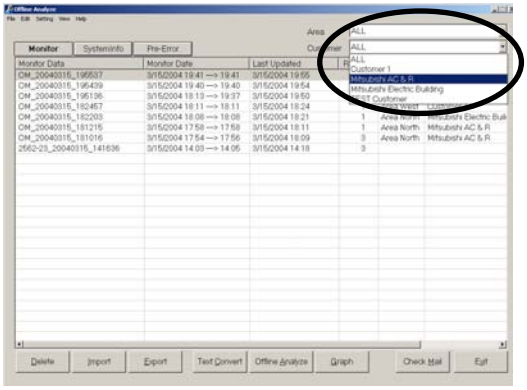
The function of the offline mode is mostly equals that of the normal mode, however, the following function is provided additionally.

1) Display of monitored name objective for data collection.
   - The [AREA name], [Customer name] and [Air conditioning system name] are shown for each data obtained.
   - Setting the cursor to the data provides the pop-up display of the [AREA name], [Customer name] and [Air conditioning system name] of the data.

   In order not to show the POP-UP display, click the View of the menu bar and remove the check mark of the [Show Wide Area Info.] on the sub-menu.



2) Display of extracted data.
   - By selecting [AREA name] and [Customer name], the relevant data only can be displayed.



As the other function and operation are same as that under the normal mode, please refer to Chapters 4.3 - 4.7.

NOTE:
Both the data obtained by online under normal mode and that under wide area access mode can be displayed commonly under both offline modes.

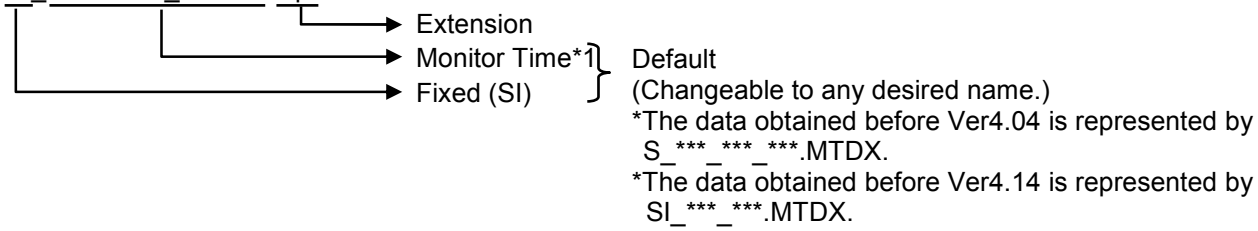
5 File Names

5.1 System Information Data

When the system information data saved in the database in "**3.4 Main Screen (2)**" is exported in "**4.7.2 Export**", exported data is saved in
C:¥MntToolEA¥Data. (Default setting. Can be changed.)
The exported file is a compressed archive with the file extension ZIP.

- The following is an explanation of the file name

SI_20040315_181026.zip



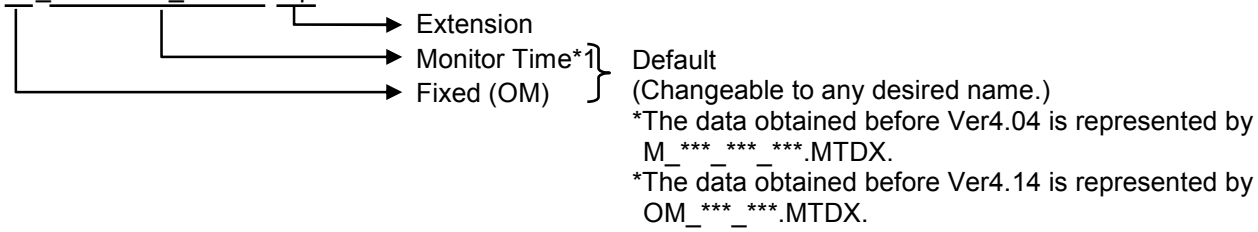
*1 **Monitor Time**
Monitor starting time : YYYYMMDD_HHMMSS format

5.2 Operating Status Monitor Data

When the operation status monitor data saved in the database automatically in "**3.7 Operation Monitor**" is exported in "**4.7.2 Export**", exported data is saved in
C:¥MntToolEA¥Data. (Default setting. Can be changed.)
The exported file is a compressed archive with the file extension ZIP.

- The following is an explanation of the file name(**Operating Status Monitor Data** has been automatically stored at the on-line monitoring.)

OM_20040315_181026.zip

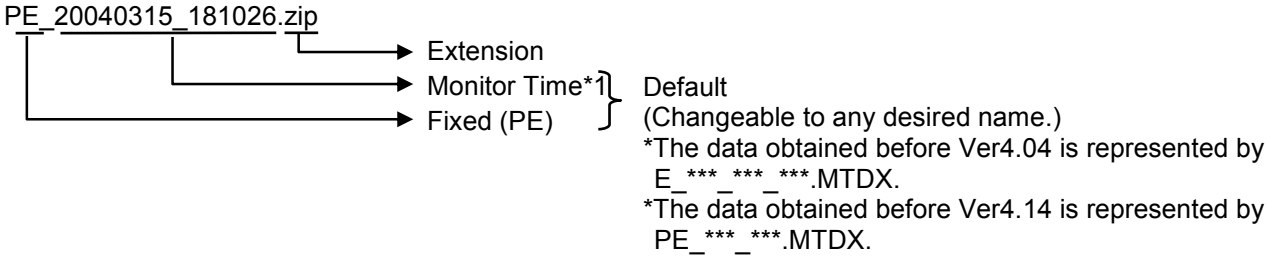


*1 **Monitor Time**
Monitor starting time : YYYYMMDD_HHMMSS format

5.3 Pre-error Data

When the pre-error data saved in the database in "**3.9.4 Monitoring of Pre-error Data**" is exported in "**4.7.2 Export**", exported data is saved in **C:¥MntToolEA¥Data.** (Default setting. Can be changed.)
The exported file is a compressed archive with the file extension ZIP.

- The following is an explanation of the file name(**Pre-error Data** has been automatically stored at the on-line monitoring.)

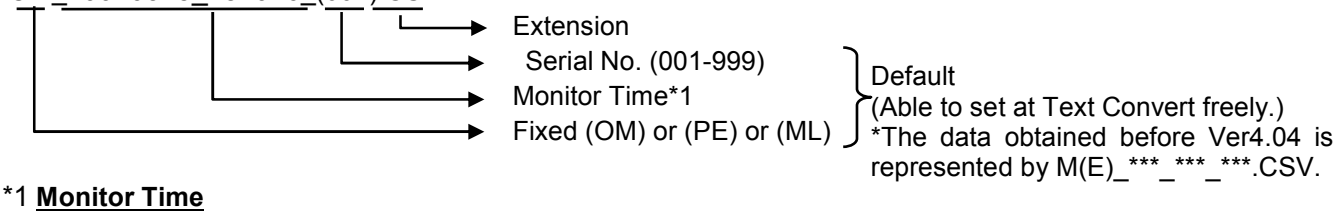


*1 **Monitor Time**
Monitor starting time : YYYYMMDD_HHMMSS format

5.4 Text Convert Data

The data saved in Section "**4.7.4 Text Convert** " is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name

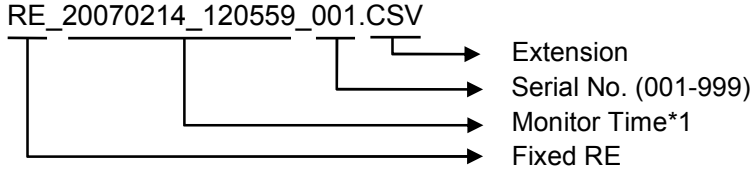


*1 **Monitor Time**
Monitor starting time : YYYYMMDD_HHMMSS format
* For the data obtained before Ver4.04 via MN Converter, "MN"-"PC host name" will be displayed at the former part of the data.

5.5 Remote error notification report log Data

The data saved in Section "**3.13.5.3 Saving the Report log in CSV format**" is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name



*1 **Monitor Time**
Monitor time : YYYYMMDD_HHMMSS format

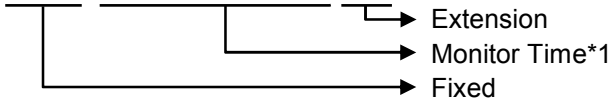
5.6 DIDO Controller Monitor Data

The data saved in Section "**3.14.1 Setting and Monitoring DIDO Controllers (66DC)**" is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name

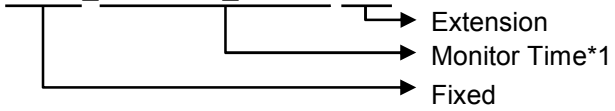
(1) Monitoring input/output status on DIDO Controllers (66DC) (Section "3.14.1.2")

DCCV_20070214_120559.CSV



(2) Monitoring Dip switch setting of DIDO Controllers (Section "3.14.1.4")

DCDS_20070214_120559.CSV



*1 **Monitor Time**

Monitor time: YYYYMMDD_HHMMSS format

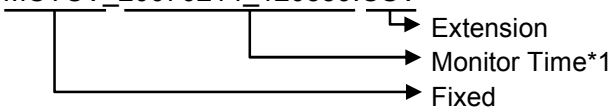
5.7 AI Controller Monitor Data

The data saved in Section "**3.14.2 Setting and Monitoring AI Controllers (63MC)**" is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name

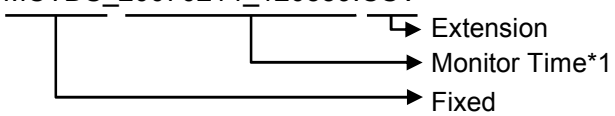
(1) Monitoring measurement value on AI Controllers (63MC) (Section "3.14.2.1")

MCTCV_20070214_120559.CSV



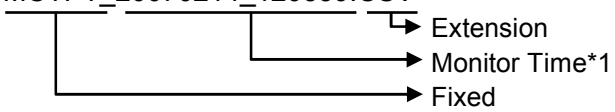
(2) Monitoring Dip switch setting of AI Controllers (Section "3.14.2.3")

MCTDS_20070214_120559.CSV



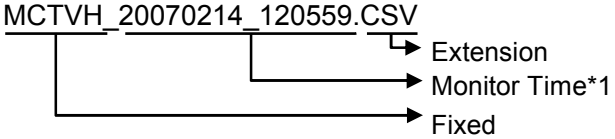
(3) Monitoring of the correction value for Pt100 detection (Section "3.14.2.4")

MCTPT_20070214_120559.CSV

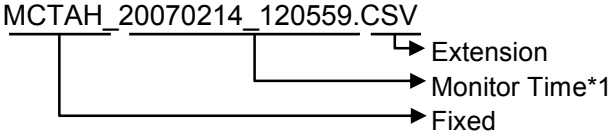


(4) Measured value history (Section "3.14.2.5")

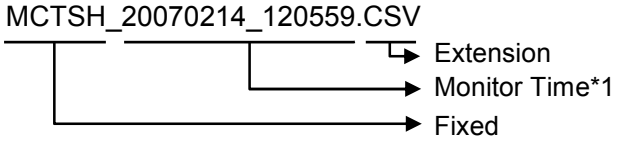
MCTVH_20070214_120559.CSV



(5) Out-of-limit alarm history (Section “3.14.2.6”)



(6) Measurement category setting history (Section “3.14.2.7”)



*1 **Monitor Time**

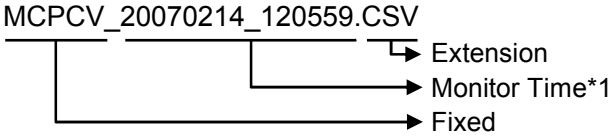
Monitor time: YYYYMMDD_HHMMSS format

5.8 PI Controller Monitor Data

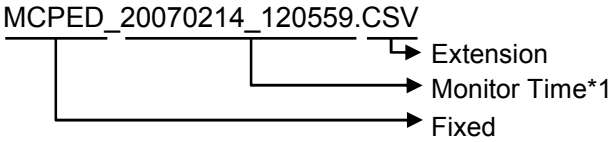
The data saved in Section "**3.14. Monitoring PI Controllers (60MC)**” is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name

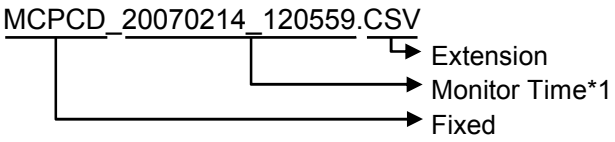
(1) PI Controller (60MC) measurement value Monitor (current value) (Section “3.14.3.1”)



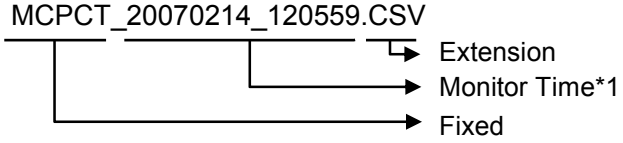
(2) PI Controller (60MC) measurement value Monitor (cumulative value) (Section “3.14.3.2”)



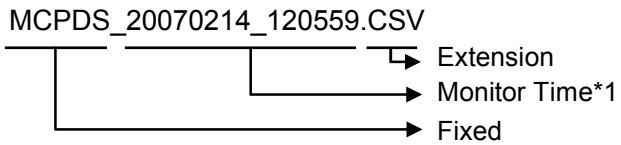
(3) PI Controller (60MC) measurement value Monitor (settlement date) (Section “3.14.3.3”)



(4) Charge time zone setting monitor (Section “3.14.3.5”)

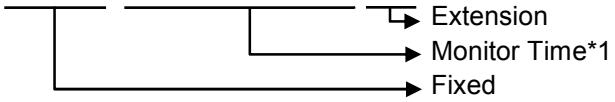


(5) Monitoring Dip switch setting of PI Controllers (Section “3.14.3.6”)



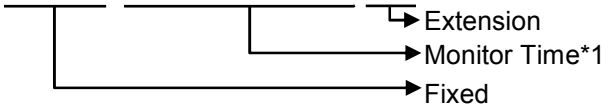
(6) Power failure/restoration history (Section “3.14.3.7”)

MCPPH_20070214_120559.CSV



(7) Pulse unit (weight) change history (Section “3.14.3.8”)

MCPWH_20070214_120559.CSV



*1 **Monitor Time**

Monitor time: YYYYMMDD_HHMMSS format

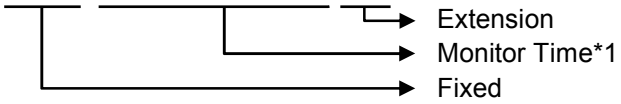
5.9 DIDO/AI Controller interlock control Data

The data saved in Section "**3.14.4 Interlock control settings on DIDO Controllers (66DC)**" and "**3.14.5 Interlock control settings on AI Controllers (63MC)**" is stored in **C:¥MntToolEA¥Data**

- The following is an explanation of the file name

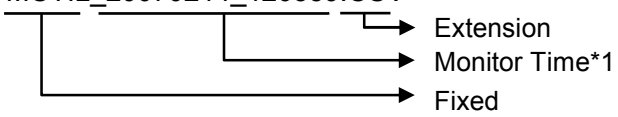
(1) Saving the interlock control settings on DIDO Controllers (66DC) in CSV format (Section “3.14.4.4”)

DCIL_20070214_120559.CSV



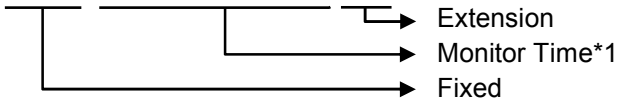
(2) Saving the interlock control settings on AI Controllers (63MC) in CSV format (Section “3.14.5.4”)

MCTIL_20070214_120559.CSV



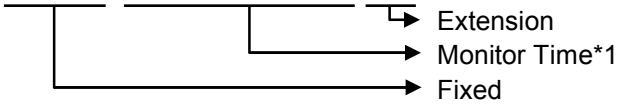
(3) DIDO controler interlock operation history (Section “3.14.4.5”)

DCIH_20070214_120559.CSV



(4) AI Controller interlock operation history(Section “3.14.5.5”)

MCTIH_20070214_120559.CSV



*1 **Monitor Time**

Monitor time: YYYYMMDD_HHMMSS format

6 How to change setting of Firewall

How to Change Setting of Firewall for Windows XP and Vista and 7

1. Introduction

When connecting Maintenance Tool through G50A(AG-150A/GB-50ADA/PAC-YG50ECA), normal communication may not be performed if Firewall, the security function of Windows XP, has wholly been validated. **(* In E-Mail mode and MN converter connection, it is not related)**

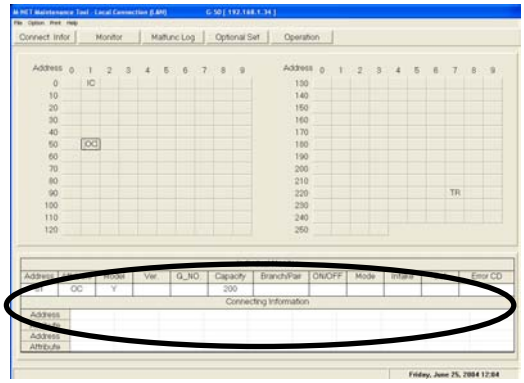
Therefore, the setting of Firewall should partially be changed following the procedure indicated in Chapter **3 How to change the setting of Firewall**.

2. Applicable case

(1) Should the following symptoms occur at the Address Searching of OC (051~100), it may be possible that the communication from G50A(AG-150A/GB-50ADA/PAC-YG50ECA) can not be received normally as the communication port to use has been blocked by Firewall.

- Requiring a lot of time for searching.
- Not displaying the connecting relation (as shown in the right figure).

In such case, terminate Maintenance Tool once, and change the setting of Firewall.



3. How to change the setting of Firewall

The method to change the setting differs depending on the Service Pack loaded as explained below.

- 3-1 [For WINDOWS XP Service Pack 2 or higher]
- 3-2 [For WINDOWS Vista Service Pack 1 or higher]
- 3-3 [For WINDOWS 7]

3-1 [In the case of Windows XP Service Pack 2 or higher]

With Windows XP Service Pack 2 or higher, the [Windows Security Alert] screen will be displayed at the initial starting (G50A(AG-150A/GB-50ADA/PAC-YG50ECA)-Network) of Maintenance Tool.



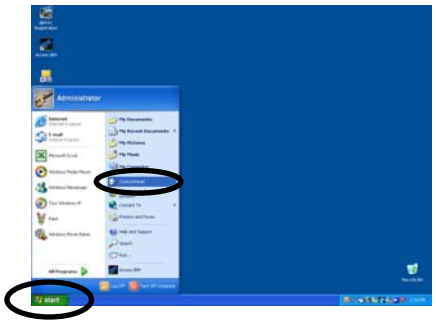
Selecting the [Unblock] button on this screen **completes all settings of Firewall**.

NOTE:

For Windows XP Service Pack 2 or higher, it may be set whether the receiving port of the network is to be blocked or not per application. Selecting [Unblock] realizes normal communication by opening minimum receiving ports required during the operation of the relevant application program. After the termination of the application, the receiving ports not used will automatically be blocked for further security.

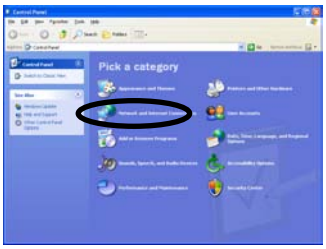
On the [Windows Security Alert] screen, if [Keep Blocking] or [Ask Me Later] has been selected, the settings of Firewall should be changed manually.
The method of change is given below.

(1) Select [Control Panel] from the Start menu.

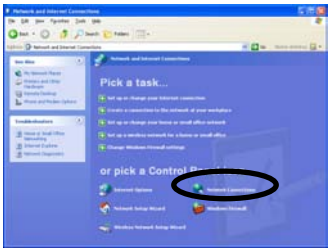


(2) The [Control Panel] screen will be displayed.

(3) Click [Network and Internet Connections].



(4) Click [Network Connections].



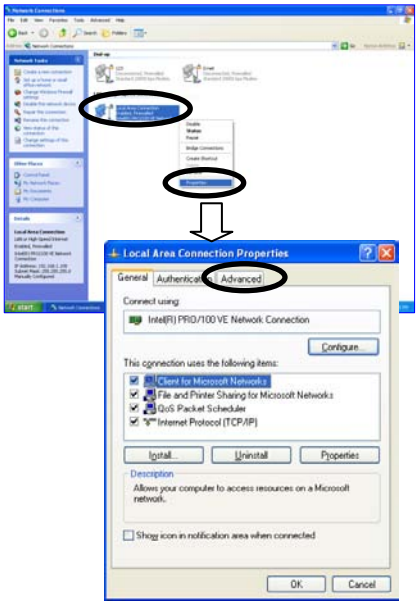
(5) The [Network Connections] screen will be displayed.

(6) Right-click on the characters of [Local Area Connection] to display the sub menu.

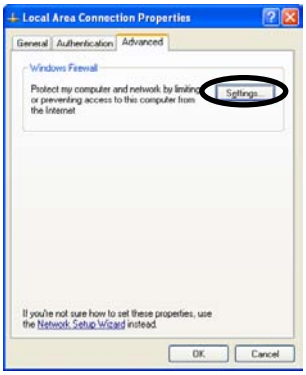
(7) Select [Properties] from the sub menu, and then click it.

(8) The [Local Area Connection Properties] screen will be displayed.

(9) Select the [Advanced] tab.



(10) Click the [Settings - - -] button.



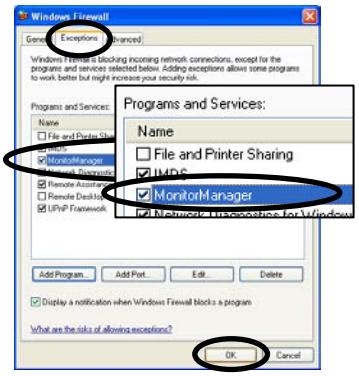
(11) The [Windows Firewall] screen will be displayed.

Confirm that Firewall is being set to [On [recommended]].
Do not affix a check mark to [Don't allow exceptions].



(12) Click the [Exceptions] tab.

(13) Click the checking column of **[MonitorManager(.exe)]** to affix a check mark.

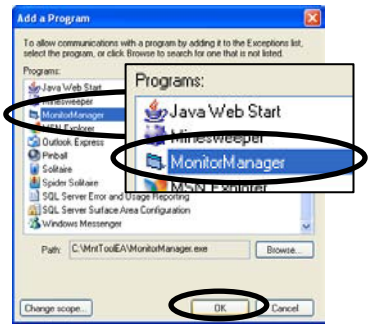


∗ When **[MonitorManager(.exe)]** is not displayed on the program list, click the [Add Program - - -] to add **[MonitorManager(.exe)]**.

(a) Clicking the [Add program - - -] button displays the screen to add a program.

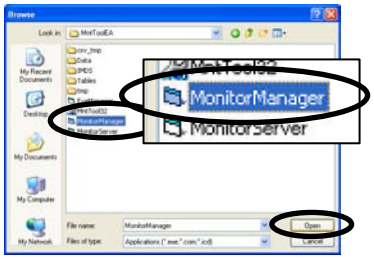
(b) Clicking the [Browse - - -] button on the [Add a Program] screen displays the [Browse] screen.

(c) After selecting the Programs **[C:¥MntToolEA¥MonitorManager(.exe)]** (Default folder) of Maintenance Tool from the [Browse] screen, click the [Open] button.



(d) Select **[MonitorManager(.exe)]** from Programs: on the [Add a Program] screen, and click the [OK] button.

(e) Here, **[MonitorManager(.exe)]** has been registered to the Programs and Services: on the [Exceptions] tab screen of Windows firewall. [Refer to “(13)”.]



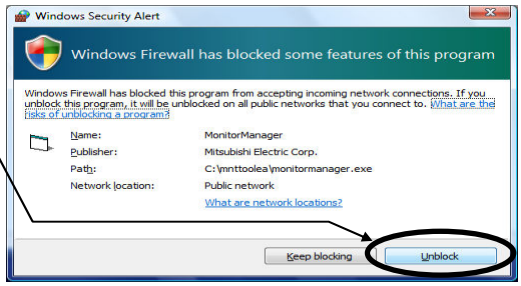
(f) Click the checking column of **[MonitorManager(.exe)]** to affix a check mark.

(14) Click the [OK] button to close the [Windows Firewall] screen.

Now the manual setting of Firewall has completed. The same status as that when [Unblock] of [Windows Security Alert] was selected will be presented.
Close all screens and start Maintenance Tool.

3-2 [In the case of Windows Vista Service Pack 1 or higher]

On Windows Vista Service Pack 1 or higher, the **[Windows Security Alert]** screen will appear when the Maintenance Tool is started up (Connected to G50A(AG-150A/GB-50ADA/PAC-YG50ECA)-Network) for the first time.
Click **[Unblock]** to change the **Firewall settings to allow the Maintenance Tool to run**.

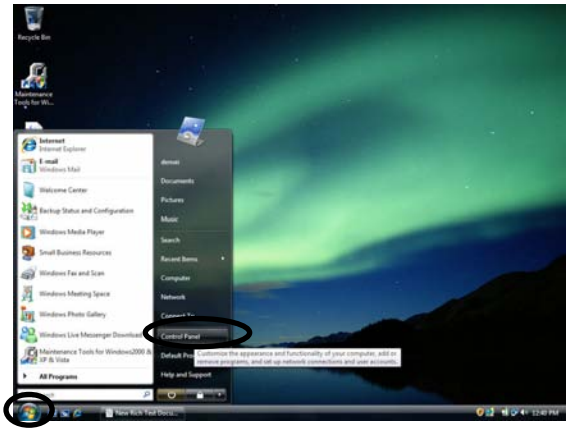


NOTE:
On Windows Vista Service Pack 1 or higher, the Firewall settings can be changed for each application individually to accept or deny incoming network connections. If [Unblock] is clicked, Firewall automatically opens up minimum ports required for given application to run and communicate normally. Firewall automatically blocks the ports that are no longer used once the application is closed.

If you clicked [Keep blocking] on the [Windows Security Alert] screen, you would need to manually change the Firewall settings.

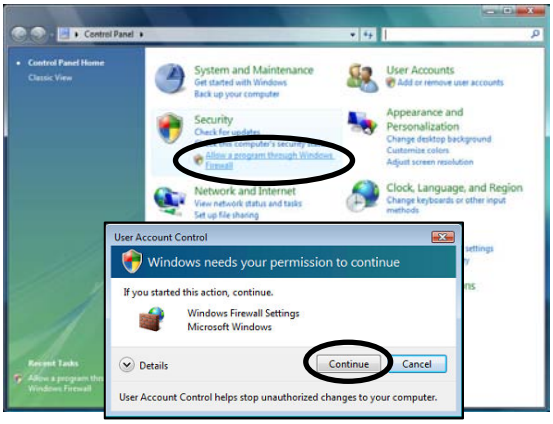
See bellow for how to chage the settings.

(1) Select [Control Panel] from the Start menu (button).

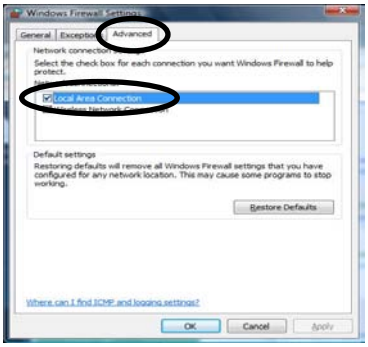


(2) The [Control Panel] window will appear.
Click [Allow a program through Windows Firewall] in the Security sub menu.

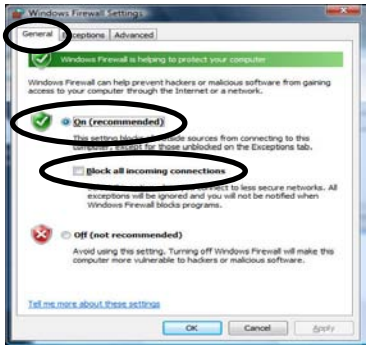
When [User Account Control] window appears, Click [Continue] on the window.



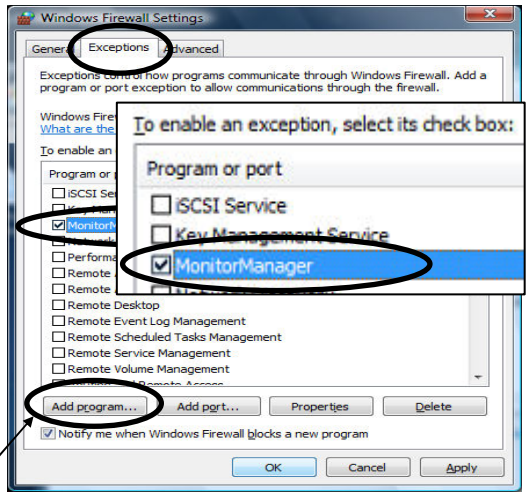
(3) Because [Windows Firewall Settings] window appers, click on the [Advanced] tab.
Check it unless the check box next to [Local Area Connection] is checked.



(4) Click on the [General] tab.
Check that Firewall is turned on. If it is not turned on, click the radio button next to [On(recommended)] for turn it on.
Moreover, leave the check box next to [Block all incoming connections] unchecked. Uncheck the check box if it is checked.



(5) Click on the [Exceptions] tab to display the [To enable an exception, select its check box] list.
Check it unless the check box next to **[MonitorManager(.exe)]** in the list is checked.



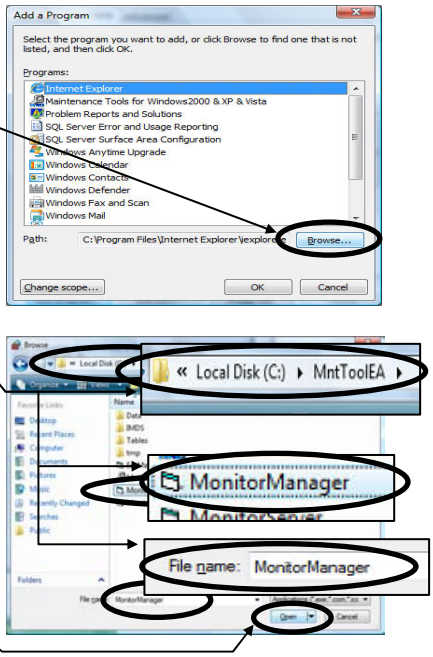
※If **[MonitorManager(.exe)]** does not appear in the [To enable an exception, select its check box] list, **[MonitorManager(.exe)]** is added by an additional function of the program.

a) Click the [Add Program] button to display the [Add Program] window.

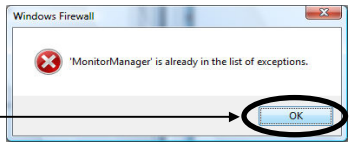
b) Click the [Browse] button on the [Add Program] window to display the [Browse] window.

c) Select the **[C:¥MntToolEA¥MonitorManager(.exe)]**(default) of the Maintenance Tool program from the [Browse] window, and click the [Open] button.

d) Select **[MonitorManager(.exe)]** from the list of [Programs] on the [Add a Program] window, and click the [OK] button.

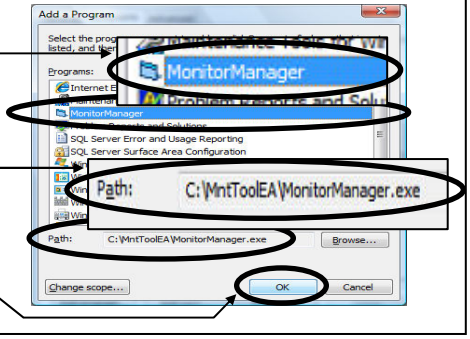


∗ If the message **['MonitorManager(.exe)' is already in the list of exceptions.]** of the figure below appeared, the program has been already registered to exceptions list.



Click the [OK] button to close the message window.

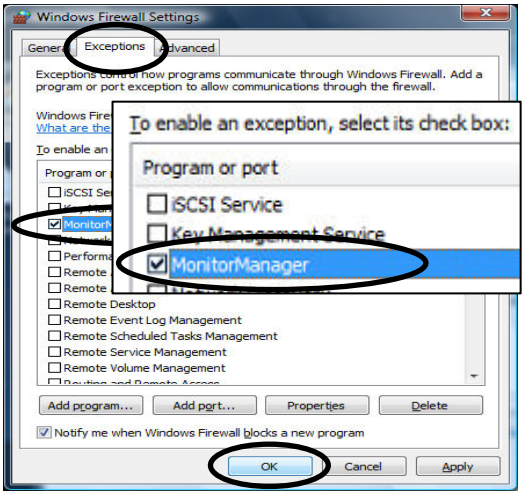
e) **[MonitorManager(.exe)]** is added to the [To enable an exception, select its check box] list that appears when the [Exception] tab on the [Windows Firewall Settings] window is clicked. [Refer to “(5)”.]



f) Check the check box next to **[MonitorManager(.exe)]** in the list.

(6) Click the [OK] button to close the [Windows Firewall Settings] window.

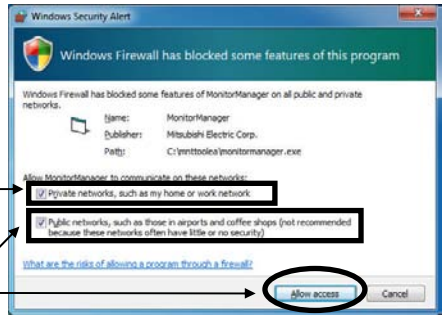
(7) Close the [Control Panel] window.



As a result, the manual setting of the Firewall is completed. Firewall settings are the same as when it clicked [Unblock] button on the [Windows Security Alert] window.
Close all the windows and start up the Maintenance Tool.

3-3 [In the case of Windows 7]

On Windows 7, the **[Windows Security Alert]** screen will appear when the Maintenance Tool is started up (Connected to G50A(AG-150A/GB-50ADA/PAC-YG50ECA)-Network) for the first time.



Check both if the **[Private networks,...] check box** or the **[Public networks,...] check box** is not checked.

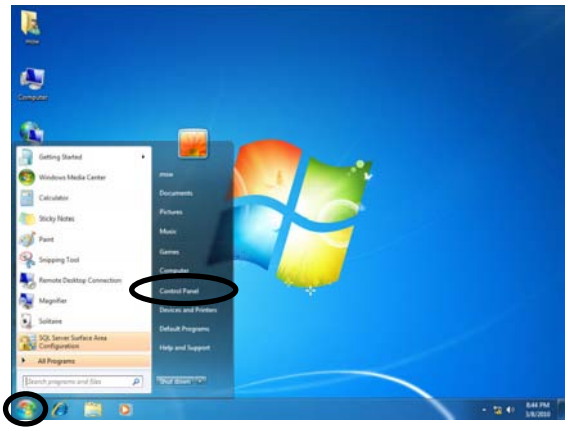
After that,click **[Allow access]** to change the **Firewall settings to allow the Maintenance Tool to run**.

NOTE:
On Windows 7, the Firewall settings can be changed for each application individually to accept or deny incoming network connections. If [allow access] is clicked, Firewall automatically opens up minimum ports required for given application to run and communicate normally. Firewall automatically blocks the ports that are no longer used once the application is closed.

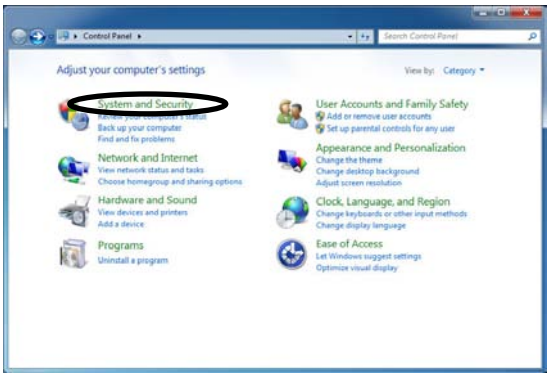
If you clicked [Cancel] on the [Windows Security Alert] screen, you would need to manually change the Firewall settings.

See bellow for how to chage the settings.

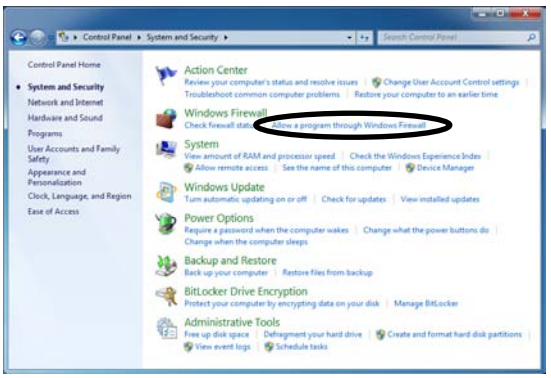
(1) Select [Control Panel] from the Start menu (button).



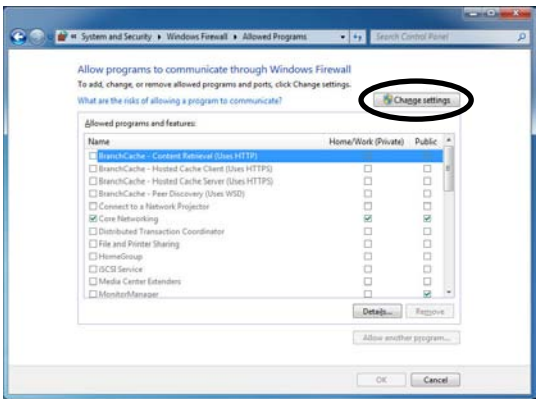
(2) The [Control Panel] window will appear.
Click [System and Security].



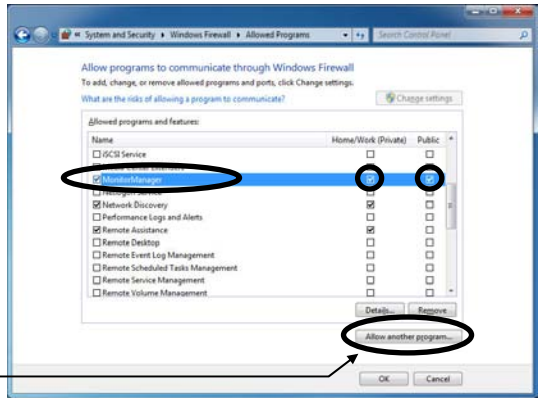
(3) The [System and Security] window will appear.
Click [Allow a program through Windows Firewall] in the Windows Firewall sub menu.



(4) The [Allowed Programs] window will appear.
Click [Change Settings].



(5) Check the [Allowed programs and features] check list unless the check box next to **[MonitorManager(.exe)]** in the list is checked.
Check both if the **[Home/Work(Private)] check box** or the **[Public] check box** is not checked.



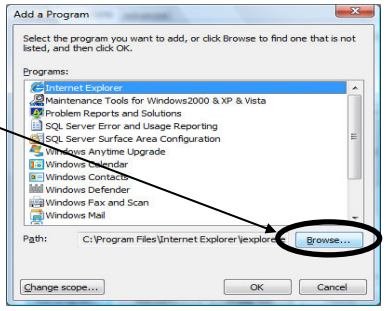
※If **[MonitorManager(.exe)]** does not appear in the [To enable an exception, select its check box] list, **[MonitorManager(.exe)]** is added by an additional function of the program.

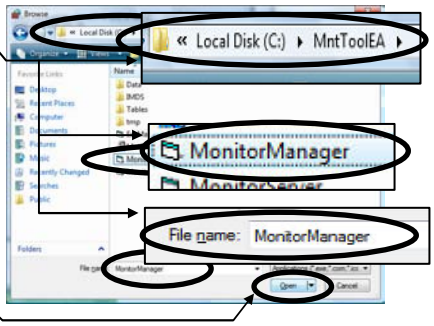
a) Click the [Allow another program] button to display the [Add Program] window.

b) Click the [Browse] button on the [Add Program] window to display the [Browse] window.

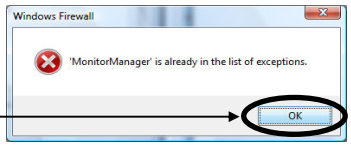
c) Select the **[C:¥MntToolEA¥MonitorManager(.exe)]**(default) of the Maintenance Tool program from the [Browse] window, and click the [Open] button.

d) Select **[MonitorManager(.exe)]** from the list of [Programs] on the [Add a Program] window, and click the [OK] button.



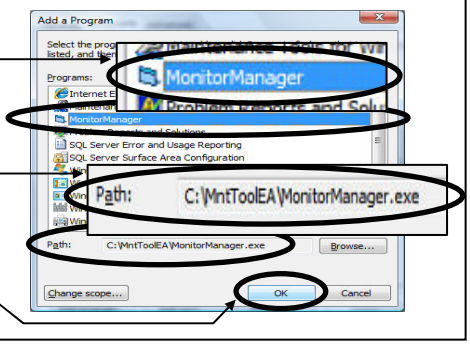


∗ If the message **['MonitorManager(.exe)' is already in the list of exceptions.]** of the figure below appeared, the program has been already registered to exceptions list.



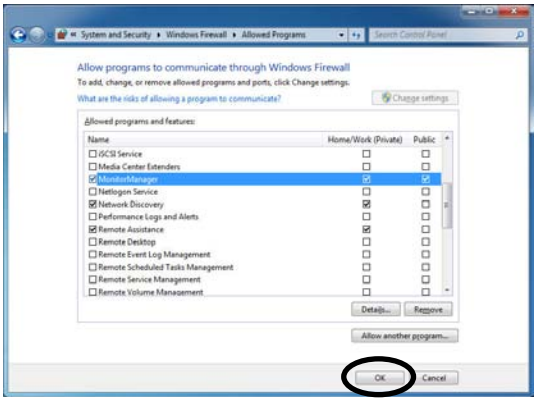
Click the [OK] button to close the message window.

e) **[MonitorManager(.exe)]** is added to the [Allowed programs and features] list that appears when the [Allowed Programs] window is appeared.
[Refer to "(5)"]



f) Check the check box next to **[MonitorManager(.exe)]** in the list.

(6) Click the [OK] button to close the [Allowed Program] window.



(7) Close the [System and Security] window.

As a result, the manual setting of the Firewall is completed. Firewall settings are the same as when it clicked [Allow access] button on the [Windows Security Alert] window.
Close all the windows and start up the Maintenance Tool.

7 Troubleshooting

Trouble When Installing or Starting

Trouble	Cause	Repair
Cannot install.	Install CD-ROM not properly positioned.	Properly position Install CD-ROM.
	A local disk (It's C-Drive) is setting a compression option.	Release compression option of a local disk, and install the Maintenance Tool again.
	“MSDE” is not uninstalled.	Uninstall "MSDE", and install the Maintenance Tool again.
	"SQL Server 2008" is installed.	Uninstall "SQL Server 2008", and install the Maintenance Tool again.
	Does not conform to the network domain security policy.	Change the configuration settings from the domain membership to workgroup, and install the Maintenance Tool again.
Cannot start application.	Insufficient memory.	End other applications.
	OS is not an English version.	Regional options setup, changing into English area form. Or after changing date separator into [/], time separator into [:], and a decimal point mark is changed into [.], it tries. (Refer to 1.2.1 *1)
	A local disk (It's C-Drive) is setting a compression option.	Release compression option of a local disk, and install the Maintenance Tool again.
The message of ”Can’t Connect to G-50A” is displayed at on-line starting.	The IP address of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) or PC is incorrect.	Input the correct address.
	LAN cable is not connected.	Connect securely LAN cable between G50A(AG-150A/GB-50ADA/PAC-YG50ECA)/HUB/PC.
The message of ”Maintenance Tool can’t connect to old version G-50A! Use G-50A upper version2.40!” is displayed at the on-line starting.	The S/W version of G-50A is older than Ver2.40.	The Maintenance Tools can not be connected to the older version of G-50A than Ver2.40. Use the new version G-50A. (**Recommended Ver2.50** or more) To use the E-mail connection mode, the version of G-50A should be above 2.60.
The message “M-Net interface board not connected” appears.	-RS-232C cable and MN converter are not connected. -A straight type RS-232C cable is being used.	A cross type RS-232C cable is being used. Make sure MN converter and PC are properly connected. (Refer to Operator's Manual for the MN converter.)
	MN converter is not turned on.	Connect the MN converter and the air conditioning unit to the M-Net transmission line. (Refer to the Operator's Manual for the MN Converter)
A message of " Monitor data size is very large!! Please, delete old monitor data!!" is displayed at starting.	The memory capacity to store data is insufficient.	Move to Offline Screen, and delete unnecessary data.
A message of " Maintenance Tool can’t connect to this G-50A! Because, this G-50A is not licensed!!" is displayed at starting under the online mode.	The license registration has not been done for G50A(AG-150A/GB-50ADA/PAC-YG50ECA).	Purchase the license No., and register the license for G50A(AG-150A/GB-50ADA/PAC-YG50ECA).
A message of " The term of validity of the installed version went out.!!" is displayed at starting. Maintenance Tool does not start.	The term of validity of the installed version went out.	It upgrades. Please upgrade periodically

Trouble with Main Screen

Trouble	Cause	Repair
Cannot select function selection buttons.	Collecting data about individual units using manual search. (Unit is communicating.)	Can be used when communication with all the units selected by manual search have completed communication.
A[**]appears in the unit address button for an existing unit.	-No response from that unit. -Attributes cannot be known due to communication error.	Wait a moment and then click on the address button for the same unit again.
A[**]appears in the unit address button for a unit that does not exist.	Interference caused an non-existing unit to appear.	Wait a moment and then click on the address button for the same unit again. The[**] display will disappear.
A[??]appears in the address button.	There is a unit that is not compatible with the Maintenance Tools.	Refer to the explanation on terminology in help. If there is no explanation, the unit is not a compatible type.
Address searching takes 3 minutes or more per set. (G50A(AG-150A/GB-50ADA/PAC-YG50ECA) connection)	The port required for communication is being protected by the Firewall checking function of Windows or anti-virus software.	In this case, the communication transmitted from G50A(AG-150A/GB-50ADA/PAC-YG50ECA) may not partially be received. Please remove the check mark on the Firewall function of the necessary port. (For detail, please refer to “6. How to change setting of Firewall”.) (If the version of G-50A is more than 2.50, only [IC] can be searched, even if it uses FIREWALL. However, [OC] reference cannot be performed. Moreover, since other functions cannot operate normally, please be sure to remove a check.)
	When a Maintenance Tool is not ended normally, G50A(AG-150A/GB-50ADA/PAC-YG50ECA) will be in a data resending state, and LAN communication will increase.	In this case, please perform "Stop mail communication" of 3.4 (2), and start a Maintenance Tool again after waiting about 15 minutes.
	The version of G-50A is old.	A recommendation version is 2.50 or more.

Connecting information Trouble

Trouble	Cause	Repair
Cannot switch to connection information screen.	A unit other than an outdoor unit (OC) has been selected.	Refer to 3.6.1
The connection data display does not appear when the operating system SC is clicked.	An operating SC other than remote control has been clicked.	Click on remote control. Monitoring of connection data cannot be done from operating SC other than remote control.

Operation Monitor Trouble

Trouble	Cause	Repair
The monitor display screen on the operation monitor has red characters.	Because of the increased re-transmission process work due to abundant communication noise, data may not be monitored fully within the rated cycle.	Please take a countermeasure against the communication noise source in this case.
All of the characters on the monitor display for some units are red.	There is no answer from the unit.(Cannot communicate with the unit.)	Error with unit. Refer to the service handbook for that unit.
The message of ” G-50A can't Connect to SMTP Server ! or G-50A Date Setting is wrong !! Continue ?” is displayed at remote monitor setting.	The dial-up router is not connected. Or connected but incorrectly.	By referring to Instruction Manual of Dial-up router, connect or set correctly.
	The default gateway of G50A(AG-150A/GB-50ADA/PAC-YG50ECA) is not set.	Set correctly by using the G-50A initial setting tool. (When AG-150A, please set it from initialization WEB.) (Refer to Instruction Manual of G-50A (AG-150A).)
	The incorrect display of the receiver address is pointed out by SMTP.	Set the correct mailing address.
	The Monitor Finish Date is older than the current date/time of G50A(AG-150A /GB-50ADA/PAC-YG50ECA).	Set the monitor finish date correctly. (However when connecting to G50A(AG-150A/GB-50ADA/PAC-YG50ECA) in a region with a time differential, set it by considering the time in that place.)
A message of " Monitor data size is very large!! Please, delete old monitor data!!" is displayed during collecting data.	The memory capacity to store data is insufficient.	Move to Offline Screen, and delete unnecessary data.
Data becomes a red display and the "-" display.	Since data cannot receive normally. - There is too much number of a monitor. - Data transforms itself by a noise.	- Reduce the number of a monitor. - Cope with noise generating origin. * Also when returning from a graph screen to an operation screen, it may become a red display and the "-" display, but it is normal.

Malfunction Log Trouble

Trouble	Cause	Repair
Cannot clear malfunction log	The unit is not compatible with malfunction log clear.	The malfunction log cannot be cleared.
There is an error code, but the contents of the error are not displayed	This is a newly added error code and is not compatible with the Maintenance Tools.	Refer to the service handbook for that unit.

Operation Monitor Mail Communication Mode Trouble

Trouble	Cause	Repair
Operation monitor mail cannot receive normally.	A mail address and SMTP server information were made a mistake in and set up by mail communication setup.	Please set up the right information again after performing "Stop mail communication" of 3.4 (2).
	The mail address a contract of is not made with a provider was set as [FROM: Mail Address]. (When using dialup)	Please set the regular mail address a contract of is made with the provider to [FROM: Mail Address].
	The mail address of recipient (To:) is not an address only for Maintenance Tools. (The mail address used usually is set up. In this case, once other mail software receives mail, operation data mail will be deleted from a mail server.)	The mail address of recipient (To:) acquires and sets up the address only for Maintenance Tools.
The analysis screen of the operation monitor data (which carried out mail acquisition by OFFLINE) is not displayed.	The system configuration information acquired from G50A(AG-150A/GB-50ADA/PAC-YG50ECA) immediately after a mail communication setup was not acquired normally.	Please delete the corresponding data. Text conversion can be carried out and data can be outputted.
	Mail communication mode was set up from the Maintenance Tool of a remote place, and the mail address of recipient (To:) was set as another addressing to a Maintenance Tool of a remote place. (System configuration information mail is transmitted from G50A(AG-150A/GB-50ADA/PAC-YG50ECA) immediately after a mail communication setup. However, the Maintenance Tool by the side of a setup is using dial-up service, and mail transmission cannot be performed. Consequently, since the Maintenance Tool with which mail is transmitted cannot acquire system configuration information mail, even if it receives after that operation monitor data mail, it does not indicate by normal.	When mail communication mode is set up from the Maintenance Tool of a remote place, mail acquisition of operation data can be performed only with the Maintenance Tool which set up. Please make a set the mail address of a Maintenance Tool which set mail communication mode to the mail address of recipient (To:).

Specific troubles induced by E-mail connection mode

Trouble	Cause	Repair
The message of ” Not connectable to mail server.” or “Not connectable to G-50A.” Is displayed.	The initial information is not being set to G50A(AG-150A/GB-50ADA/PAC-YG50ECA). (The mail address of Maintenance Tool is not being registered previously.) The mail address normally obtained is not being set. The version of G-50A is not exceeding 2.60. The setting of the mail server address is not correct. The setting of environments like for LAN cable connection is not correct.	Execute the initial setting of Maintenance Tool or G-50A mail address on the local G-50A by using the G-50A initial setting tool. (When AG-150A, please set it from initialization WEB.) Verify the set contents of the mail server/mail address. Obtain and use the mail address individually for each Maintenance Tool PC. Set the connection environment correctly.
The message of “Network possibly disconnected finishing Maintenance Tool.” is displayed.	Displays when the normal communication with G50A(AG-150A/GB-50ADA/PAC-YG50ECA) was not performed.	Maintenance Tool is finished forcibly. Restart Maintenance Tool after a while.
The message of “? operation status mails at mail server. After receiving mail under offline mode, start E-mail mode again. Returning to mode selection screen?” is displayed.	Displays when the operation monitor mail is remained at the mail server. The action of Maintenance Tool will be delayed caused by a time required by the search processing of remaining mail.	After removing the operation monitor mail under Off-line mode, execute E-mail connection mode.
The operation monitor screen is not displayed normally.	The POP receiving interval of Maintenance Tool is being set to over 2 minutes. [Operation control screen] is being opened for over 20 minutes on the operation monitor screen	Set the POP receiving interval within 1 minute. Do not open [Operation control screen] for over 20 minutes on the operation monitor screen.

Free contact of indoor unit Trouble

Trouble	Cause	Repair
A menu cannot be chosen and cannot be started.	The version of G-50A is old.	A recommendation version is 2.60 or more.

Remote error notification Trouble

Trouble	Cause	Repair
A menu cannot be chosen and cannot be started.	The MN Converter model is not CMS-MNG-E.	Use the CMS-MNG-E MN Converter model.
When Maintenance Tool is connected to the MN Converter (CMS-MNG-E) via RS-232C, a message of " Cannot communicate with MN converter." is displayed at starting. Maintenance Tool does not start.	The MN converter (CMS-MNG-E) mode is the error notification mode.	Connect to the MN Converter (CMS-MNG-E) via USB.

Setting and Monitoring DIDO/AI/PI Controllers Trouble

Trouble	Cause	Repair
The pulse unit (weight) cannot be set on the PI Controller.	The PI Controller can be used only for monitoring.	Make the settings for the PI Controller on G(B)-50A Web Browser or TG-2000A.
An error occurs when the limit alarm value is set on the **AI controller (63MC) setting screen** on the AI Controller.	The values exceeding the upper/lower limit of the measurement range are set.	Set the values between the upper and lower limit of the measurement range.
[DIDO/AI interlock setting] in the sub menu is inactive.	The interlock setting is not set to enabled on the **Interlock control option screen.**	**[Option]** in the menu bar and select **[DIDO/AI/PI]** ,and select **[Interlock control option]** in the sub menu. Read the agreement on the **Interlock control option screen**, and agree.
An error occurs when the password is entered to accept the agreement on the **Interlock control option screen**.	The entered password is incorrect.	Ask the administrator for the password used on the **Interlock control option screen**.
An error occurs when the upper/lower thresholds for the interlock operation condition are set on the **AI controller (63MC) interlock control setting screen**.	The values exceeding the upper/lower limit of the measurement range are set.	Set the upper/lower thresholds for the interlock operation condition between the upper and the lower limit values of the measurement range.
An error occurs when the interlock control setting is made on the **DIDO controller (66DC) /AI controller (63MC) interlock control setting screen**.	The interlock target unit that has the set address does not exist.	Set the correct unit address of the interlock target.
The interlock control is not performed when the interlock control setting is made.	The set address of the interlock target unit is incorrect., or the address of the different unit is set.	Set the correct unit address of the interlock target.
	An emergency stop is made when the interlock control is set to “Prohibited” when an emergency stop is made with G(B)-50A (AG-150A).	After the emergency stop is reset, check that the interlock control is performed properly.
	A communication error occurs when the interlock control is set to “Prohibited” when a communication error is occurring with G(B)-50A (AG-150A).	After the communication error is reset, check that the interlock control is performed properly.
Two or more interlock control operations with the AI Controller are being performed simultaneously.	The set input condition and the set range overlap with those that have been set for other interlock No.	Check that the set input condition and the set range do not overlap with those that have been set for other interlock No. There is an exception when two or more interlock control operations are simultaneously performed.
	Differentials are set for some interlock operation No., whereas not for some, or the set differentials are different.	To make the differential valid, make the differentials of all the channels the same.
The attribute (each address) searched by auto or manual search cannot be set.	The wrong sub menu is selected in **[Option]** in the menu bar.	Select the correct setting the sub menu, and set the attribute (each address).
	After the attribute is displayed, the unit to be connected is changed without changing the address.	Click **[File]** and select [**Return**] to shutdown and restart the Maintenance Tools. Try the auto/manual search again.
The message **“**** monitoring failed.”** appears.	The power of the unit is turned off, or the M-NET transmission line or the MN converter is not connected properly.	Turn on the power of the unit, and reconnect the M-NET transmission line or the MN converter.
The **upper/lower detection/cancellation values** are not updated when **[Monitor update]** is clicked on the **AI controller (63MC) measurement value monitoring screen**.	When the setting change is made on G(B)-50A (AG-150A) Web Browser, the **upper/lower detection/cancellation values** are not updated. Only the **measurement value** and the **alarm status** are updated.	Click **[Close]** to end the **AI controller (63MC) measurement value monitoring screen**, and open the screen again.

Off-Line Monitor Trouble

Trouble	Cause	Repair
The message of ”Timeout Can’t connect to Mailserver.” Is displayed.	The setting of IP address of POP server is incorrect.	Set the correct IP address with Mail Server Setting.
	The setting of the IP address of PC is incorrect.	Set the IP address of PC correctly.
The message of “Invalid Parameter!” is displayed.	The POP server is not set yet.	Set POP server.
The message of “Can’t Connect to mail sever!” is displayed.	The LAN cable is not connected correctly.	Connect LAN cable securely.
	The IP address setting of POP server is not correct.	Set the correct IP address with Mail Server Setting.
The message of “POP Authention Error” is displayed.	The setting of the user and password of POP server is not correct.	Set correctly with Mail Server Setting.
A message of " Monitor data size is very large!! Please, delete old monitor data!!" is displayed during collecting the mail of operation data.	The memory capacity to store data is insufficient.	Move to Offline Screen, and delete unnecessary data.
A message of " Now finalizing Maintenance Tool !!" is displayed at finishing Offline, and the screen does not finish.	The internal data is under arrangement at finishing the Maintenance Tool.	Offline Screen will automatically be finished after completing this process. Please wait a while.
Data cannot be imported.	It was going to import the data acquired by “Maintenance Tools (Ver.3.**)”.	Among the data obtained by Ver3.**, the operation monitor data (*.MTD) can only be imported. Regarding to other data, the data obtained by Ver.4.** has no compatibility with that obtained by Ver.3.**.
A message of " The file name is incorrect. --- " is displayed. Data cannot be imported.	It contains characters unable to be fetched in (such as [“or”] and the like).	Please delete such special characters in the file name.
Printing is not normally carried out for graph etc.	-	Please set a setup of a printer as Grayscale Printing.
In processing for the time searching or text convert of the operation status monitor, "Date or Time is wrong" is displayed without executing the processing.	The information inherent in a district (language) will be added on the column of Date and Time depending on the PC (OS) of the district. However, such information inherent in the district can not be read by the Maintenance Tool.	- Change the setting of the OS to that in English for use. - Execute processing after deleting the information (characters) inherent in the district to be added on the column of Date and Time.
"This archive file was broken." appears when importing.	The ZIP archive selected for importing may be broken.	If using Windows XP, double-click the applicable file and check that the file is recognized as a ZIP archive. Archives acquired from media or through email is sometimes broken. In such a case, reacquire the archive.
"As for the data with path, the import is not done." appears when importing.	Multiple files are included in the ZIP archive selected for import.	Extract files from the ZIP archive to a folder and then select the files to import when importing.
"Since two or more files are compressed, it cannot import." appears when importing.	Archives created in a format that includes a path cannot be imported.	Extract files from the ZIP archive to a folder and import them.

8 Trademark and license

* MS, Microsoft, Microsoft logo, and Windows are registered trademarks and trade names of Microsoft Corporation.
  Each company may use as registered trademarks and trade names the product names used in this manual.

* Distributed 7-Zip library according to GNU LGPL is used for data export and import in the Maintenance Tool.
  The 7-Zip source code is available at http://www.7-Zip.org.