OPERATING MANUAL

SERVICE TOOL for VRF System

UTY-ASGX

Ver. 1.13

CAUTION

Please read the LICENSE AGREEMENT in the manual first.

PART NO. 9708313016-13

FUJITSU GENERAL LIMITED

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for
“SERVICE TOOL for VRF SYSTEM”

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1. Safety precautions

1-1 Safety precautions

- Before using Service Tool, read this “Safety precautions” thoroughly to ensure the correct operation.
- This section describes the important safety information to operate Service Tool.
- The meanings of “WARNING” and “CAUTION” are explained as follows.

⚠ **WARNING**	This mark indicates the procedures, which might result in the death of or serious injury to the user or service personnel if improperly performed.
⚠ **CAUTION**	This mark indicates the procedures, which might result in personal harm to the user or damage to property if improperly performed.

This manual is for service personnel authorized to use the Service Tool. Always keep this manual in an easily accessible place for use by authorized service personnel.

⚠ **WARNING**
1. When using U10 USB Network Interface, follow the instructions given in the manual that comes with the product.

⚠ **CAUTION**
Service Tool can control the air-conditioner system on a personal computer. Be careful not to turn off the power supply of the personal computer, or not to finish the application compulsorily during operation. Otherwise, Service Tool might malfunction. For personal computer used as Service Tool, refer to the setting manual.

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1-2 Precautions when using the Service Tool

1. Please read and fully understand the Operating Manual. Fujitsu General Limited is not responsible for improper use.
2. Fujitsu General Limited is not responsible if the settings in this software or data used for the controlling are deleted. We request that the customer take responsibility for the administration of the settings and control data.
3. If the personal computer operating this software stops, immediately restart the computer and restart this software. Also, if the unit equipment stops due to a power supply interruption, restart this software immediately as there is the potential for malfunctioning.
4. The master DVD for this software and the WIBU-key (Software protection key) will not be reissued. Store the master DVD in a safe place after installing.
5. For information about operating your personal computer, refer to the operating manual for the PC and the store that sold it.
6. Never start this software simultaneously with other software as this may cause malfunctioning.
7. When Service Tool program is running, do not set/adjust the time and date of the PC to prevent data becoming inconsistent.
8. When program executional environment of Windows is corrupted or abnormal, or other softwares that interfere with the operation of Service Tool is installed or running, Service Tool may not install or run properly. It is usually extremely difficult to detect such conditions, if it occurs.
9. Service Tool product is provided with softwares, drivers, components listed below.
10. If the same kind of softwares, drivers, components with different version is installed on the same PC, Service Tool may not install or run properly.
    1) Microsoft® .NET Framework
    2) Internet Information Services (IIS)
    3) Microsoft® SQL Server® 2008 R2 Express
11. When using the service tool, do not use other than Internet Explorer display magnification 100%.
    If other than 100% is used, normal display may be impossible.
12. When indoor / outdoor operational data is not monitored using the Service Tool, exit all Internet Explorers. (Minimizing the Internet Explorer Window will not be enough, either click the “x” button on the upper right corner of the Window, or select “Exit” from the “File” menu).

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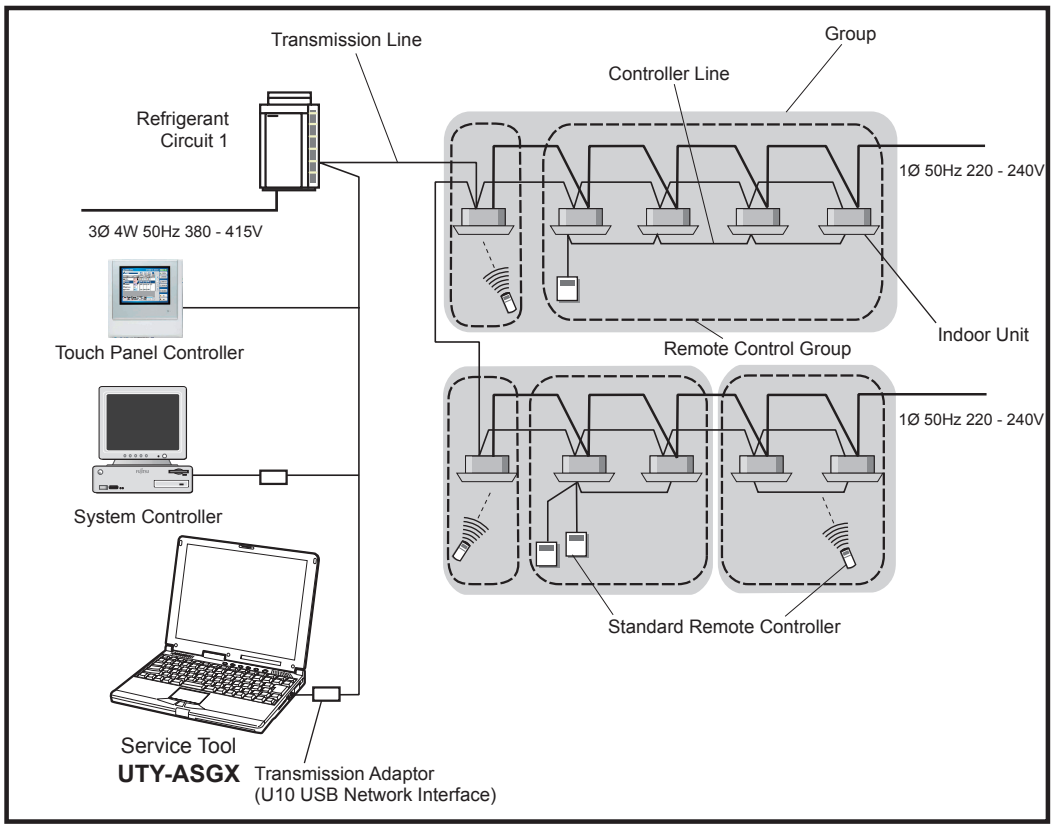
2. Outline



This operating manual explains the operating procedures for the software of Service Tools for the VRF control system.
The use of the service tool allows detailed data about the operating condition of each refrigerant circuit that has been installed in the building's system to be displayed in an easy-to-understand format.
Moreover, it also allows the latest data about pressure and temperature of indoor and outdoor units to be monitored. If there are fluctuations in the conditions, they can be displayed clearly in graph form on a PC screen.
When an error occurs in the transmission line or in an indoor or outdoor unit in the system, details about the error can be displayed on the error history screen for easy assessment of the conditions for fast troubleshooting and resolution.

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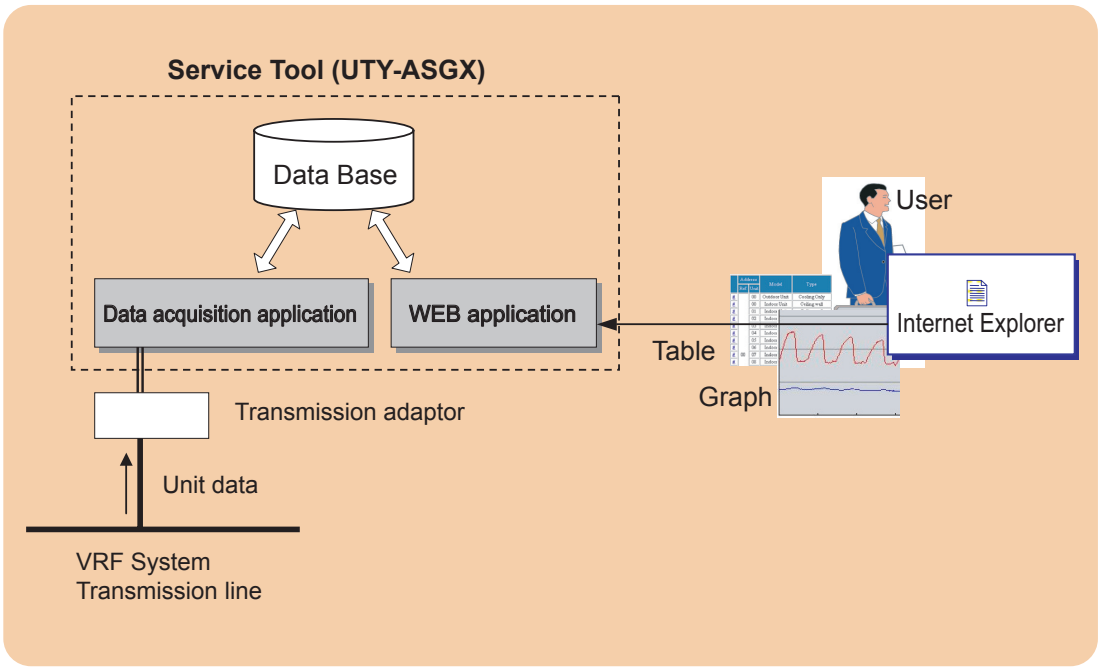
■ Software construction

The Service Tool software consists of the Data acquisition application and WEB application .

The Data acquisition application is a program which is made resident when the Service Tool starts, and exchanges data with the VRF System transmission line. The received Unit data is saved to a Data base.

The WEB application is a program which converts the acquired Unit data to Table and Graph, and displays them to a browser (Internet Explorer). It also converts operations input from the User and passes them to the Data acquisition application through the Database.



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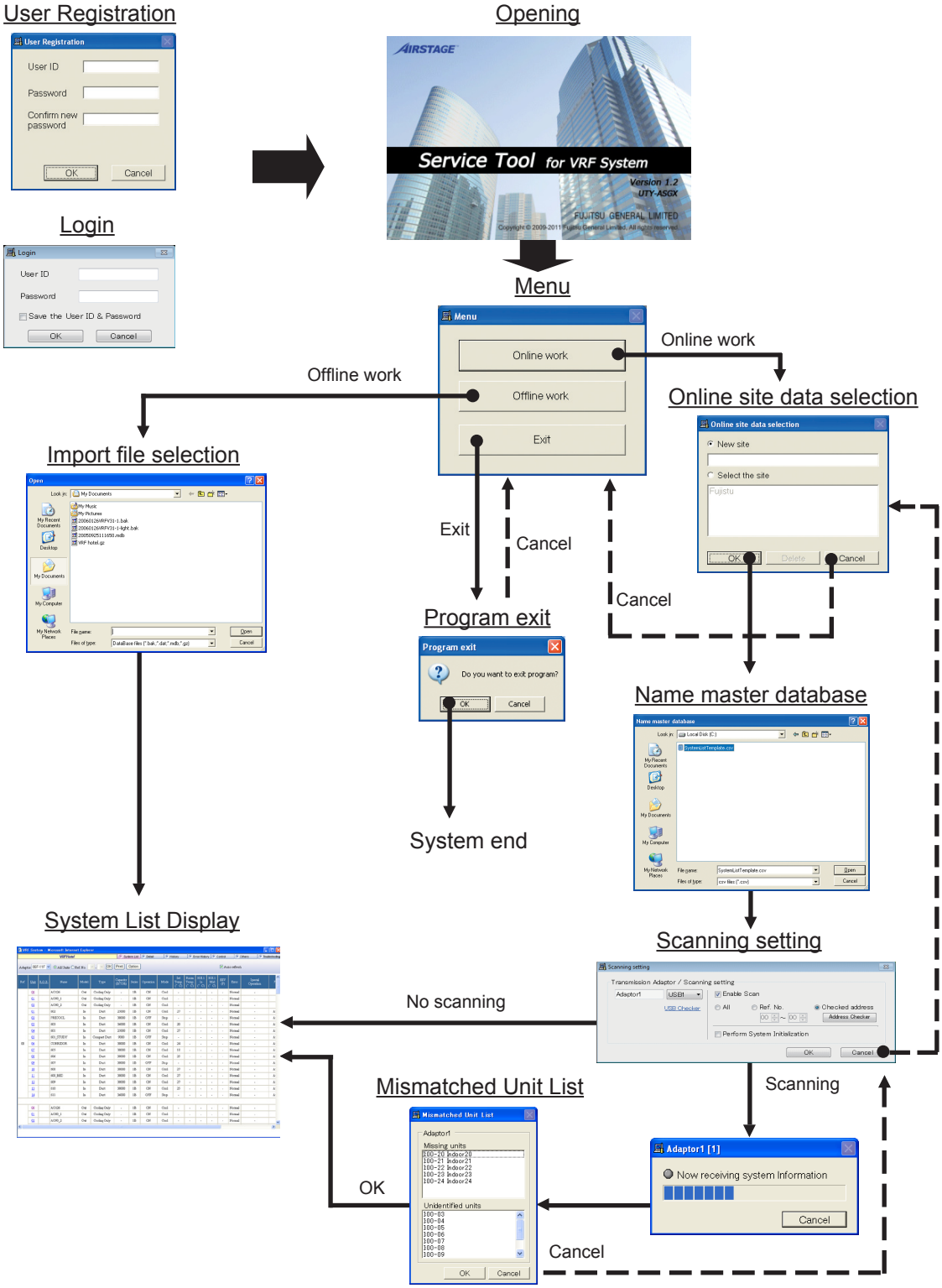
3. Data acquisition application starting flow

3-1 Screen transition

* Since the operation is performed on the desktop mode for Windows 8, switch the screen as necessary.



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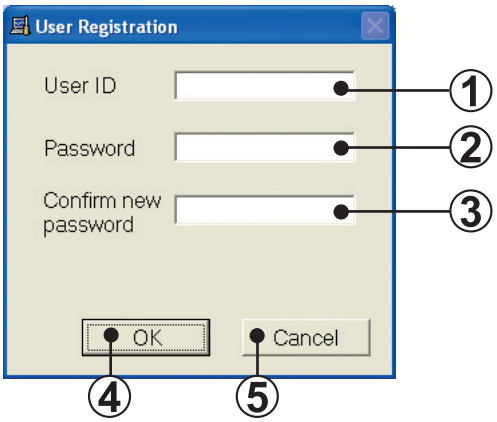
3-2 Data acquisition application starting (online) flow

This section describes procedures for online work when “Online work” is selected from the Menu.

3-2-1 User registration (at initial starting)

To start the Data acquisition application, the user must be verified by user ID and password. If the user is not registered, user registration processing is started. User registration, change, and deletion can also be performed at 5-12 Others screen (Setting).



① User ID input field
Input the user ID. (Up to 20 alphanumeric characters) (*1)

② Password input field
Input the password. (Up to 20 alphanumeric characters) (*1)

③ Password confirmation input field
Input the password again for confirmation. (Up to 20 alphanumeric characters) (*2)

④ OK button
When the OK button is clicked, the inputted data is saved.

The opening screen is displayed, and operation advances to site data selection processing.

⑤ Cancel button
When the Cancel button is clicked, user registration stops and the Service Tool ends.

Note

*1 When the user ID and password input fields are not inputted, an error message is displayed.

*2 When the password and password confirmation input contents are different, an error message is displayed.

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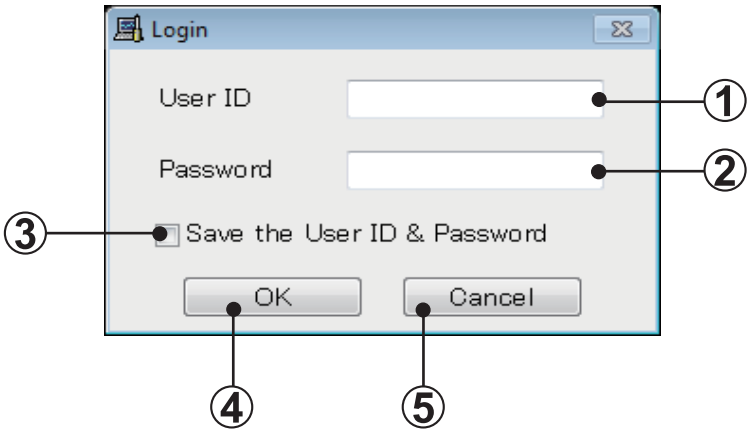
3-2-2 Login

At other than initial starting (when a user is registered), a login screen is displayed.



① User ID input field
Input the ID of the user to be logged in. (Up to 20 alphanumeric characters) (*1)

② Password input field
Input the password of the user to be logged in. (Up to 20 alphanumeric characters) (*1)

③ Save the User ID & password check box
When the Save the User ID & password check box was checked, the same user ID and password are automatically displayed the next time the Service Tool is started.

When the Save the User ID & password check box is not checked, the next time the Service Tool is started, the user ID and password are not displayed and must be manually inputted.

④ OK button
When the [OK] button is clicked, the opening screen is displayed, and then operation advances to site data selection processing.

⑤ Cancel button
When the [Cancel] button is clicked, the Service Tool ends.

Note *1 When the user ID and password input fields are not inputted, an error message is displayed.

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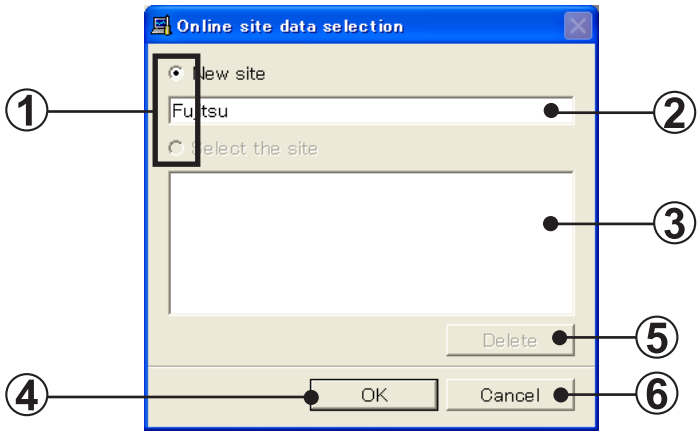
3-2-3 Site data selection

New site can be registered and existing site can be selected / deleted on this screen. 1 Service Tool can manage multiple sites by registering the sites. When using the Service Tool the next time, rapid service without scanning can be performed by reading already registered site data.



① Site data selection item

To register a new site, select “New site”. To select an already registered site data, select “Select the site”.

② New site name input field

When “New site” was selected at step ①, input the site name to be registered. (Up to 20 alphanumerics and spaces) (*1)

③ Site data selection display field

Displays the site names already registered.

When “Select the site” was selected at step ①, select the objective site name. (*2)

④ OK button

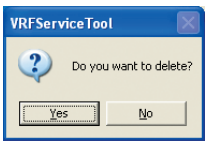
When the [OK] button is clicked, the name master database file selection screen is displayed.

⑤ Delete button

Can be used only when the objective site name was selected at step ③.

When the [Delete] button is clicked, all the data of the selected site is deleted.

Before deletion processing, a confirmation screen is displayed.



⑥ Cancel button

When the [Cancel] button is clicked, the program returns to the menu screen.

Note

- Up to 50 sites can be registered.
  When the number of sites already registered exceeds 7, a scroll bar is displayed.

*1 When the new site name input field is not inputted, an error message is displayed. Only alpha-numeric characters and spaces may be used for the site name.

*2 When a site is not selected, an error message is displayed.

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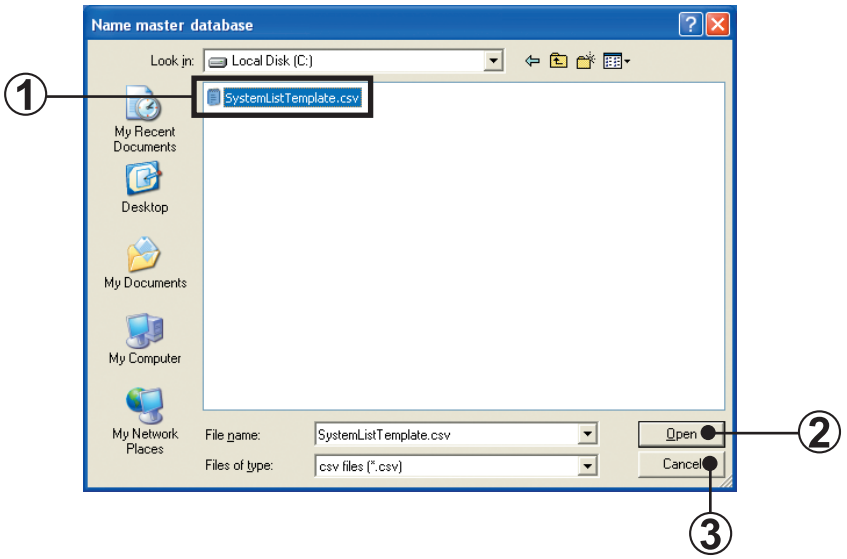
3-2-4 Name master database file selection screen

When scanning is performed by specifying a name master database file (.CSV), the specified file and the unit data actually scanned are collated, and the mismatched unit list of par. 3-2-6 can be performed.
Create the name master database file in advance and specify it from this screen.



① CSV file selection

Select a name master database file (.CSV) containing the unit data. (*1)

② Open button

When the Open button is clicked, the scanning setting screen is displayed, and after the end of scanning, the differences between the name master database file and actual scanning result can be confirmed.

③ Cancel button

When scanning is performed without selecting a name master database file (.CSV), click the Cancel button. (The scanning setting screen is displayed.) In this case, the mismatched unit list screen is not displayed after scanning. (*2)

Note

*1 Files other than CSV files cannot be selected and displayed.

*2 When selecting “Cancel”, an error is not displayed even if there are units which cannot receive the address information normally.

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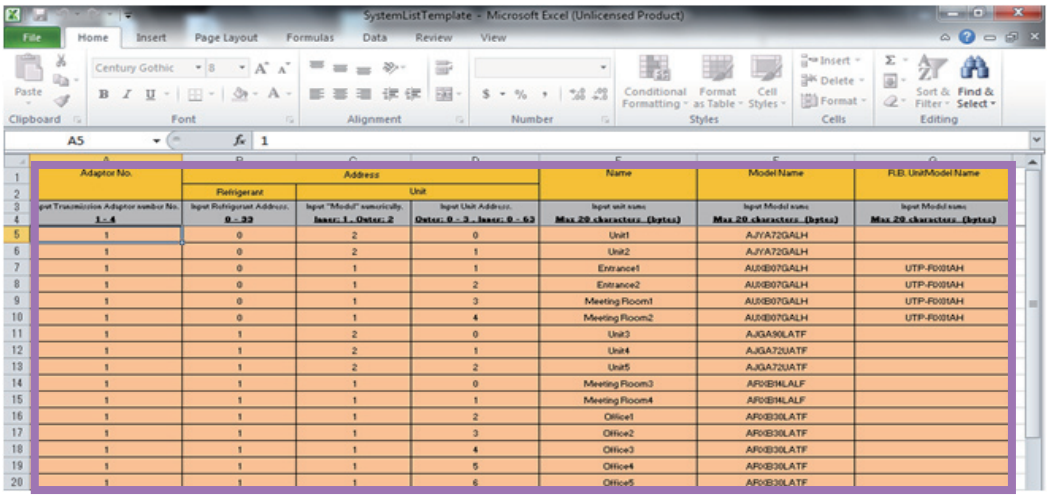
■Name master database file (.CSV) preparation

The address, name, and other information which becomes the comparison source during scanning are saved beforehand in CSV format.

① Since the template [SystemListTemplate.xls] is C:\Program Files\VRF System\ServiceTool\, open that file with Excel. (*1) (*2)

② Since the following screen is displayed, set a value at each item.



Input contents

Adaptor No.		Enter the Adaptor No. (Range: 1 ~ 4)
Refrigerant		Enter the refrigerant circuit address (Range: 0 ~ 99)
Unit	Input “Model” numerically	Enter the unit model. (Inner: 1, Outer: 2)
	Input Unit Address	Enter the unit No. (When “1” is inputted in “Model” field, input within the 0 ~ 3 range. When “2” is inputted in “Model” field, input within the 0 ~ 63 range.)
Name		Enter a name which allows easy classification of units. When a name is entered in this field, it is displayed on the Service Tool. Entry is not always necessary. When nothing is entered, the name is displayed as a blank. Only alpha-numeric characters and spaces may be used for the unit name.
Model Name		Enter a correct model name for each unit, using alphanumeric characters, “-” and “#”. If the model name is unknown, keep the cell blank.
R.B. Unit Model Name		Enter the model name of the R.B. unit connected to each indoor unit using alphanumeric characters, “-” and “#”. If the model name is unknown, keep the cell blank.

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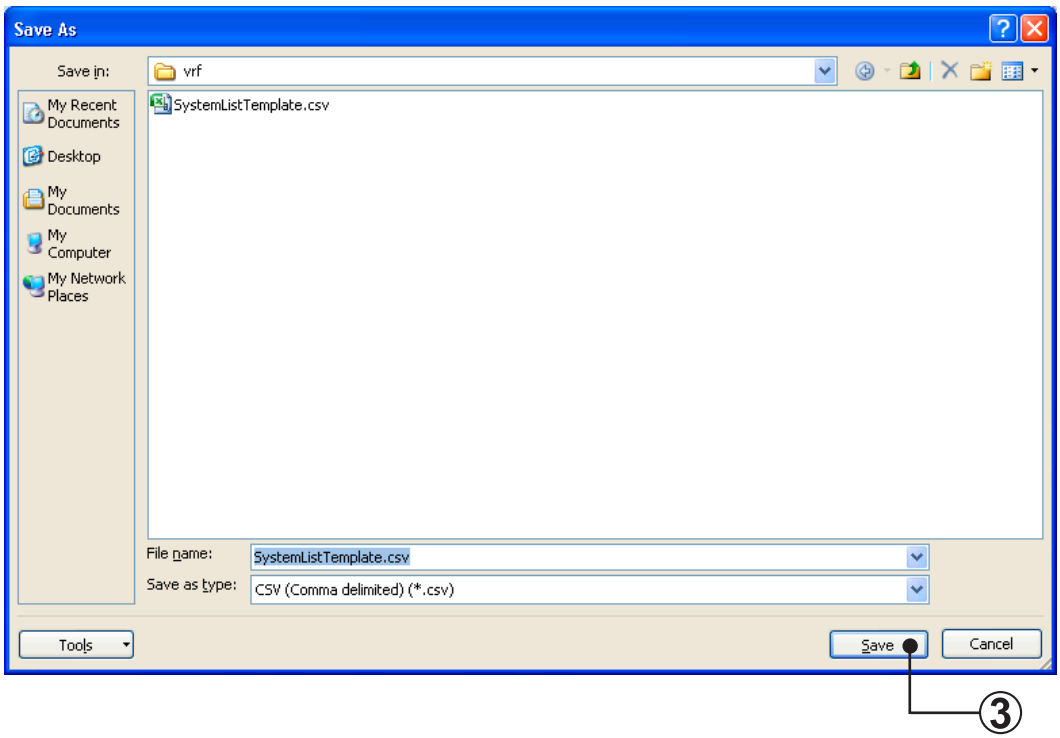
③ Select “Microsoft® Excel workbook (*.CSV) at Save as type.
Confirm that the file name extension is [.CSV] and then click the Save button. (*3)



Note

*1 This template is created by spreadsheet program Excel.
Excel must be purchased separately.

*2 [SystemListTemplate.xls] is in the folder specified when installing the Service Tool. When an address other than the default installation address was specified, check that folder.
When OS is 64 bit, the folder is C:\Program Files(x86)\VRF System\ServiceTool\.

3 Since a CSV file is not created in formats other than “Microsoft® Excel workbook (.CSV)” at Save as type, it cannot be used at the name master database file selection screen.

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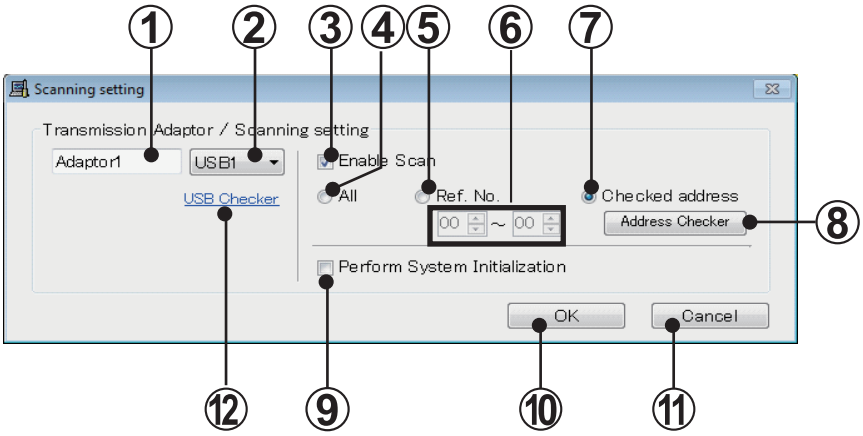
3-2-5 Scanning

■Scanning setting screen

The air conditioner indoor units and outdoor units are connected by a transmission bus line and each have unique address information. Scanning collects this information.



① Transmission adaptor entry field

The name of the transmission adaptor displayed on the screen can be entered. The default is “Adaptor1”. When unnecessary, it can remain as is. Only alpha-numeric characters and spaces may be used for the transmission adaptor name (up to 10 alphanumerics and spaces).

② USB port selection field

Select the USB port which connects the transmission adaptor.

③ Scan execution setting check

Check to execute scanning.

Do not check when using existing site data which is currently being read. (*1)

④ Ref. No. range (ALL) check

Check to scan all the refrigerant circuits.

At this time, the range of refrigerant circuit addresses to be scanned is automatically set to 00 ~ 99.

⑤ Ref. No. check

Check to execute the setting of ⑥.

⑥ Ref. No. range input field

When Ref. No. is checked at step ⑤, input the refrigerant circuit addresses to be scanned within the 00 ~ 99 range.

Input the start refrigerant circuit address ~ end refrigerant circuit address range.

⑦ Checked address

When this radio button is selected, only addresses confirmed by the address checker are scanned.

⑧ Address Checker

Opens the address checker screen. See par.3-2-7 Address Checker.

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⑨ Perform System Initialization check

Can be used only when ③ is checked.

Check when you want to acquire more detailed information by scanning. (*2)

When checked, a confirmation screen is displayed. When the [OK] button is clicked, all the units in the VRF System may be temporarily stopped.

When the [Cancel] button was clicked, the check mark is removed.

⑩ OK button

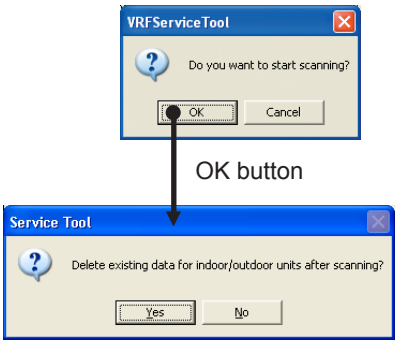
• When “Enable Scan” checked

When the [OK] button is clicked, scanning starts and scanning progress is displayed on the scanning progress screen.

Before scanning starts, whether or not scanning is to be performed is displayed on a confirmation screen.

When re-scanning, dialog box will appear after selecting the start of scan, confirming whether the existing indoor/outdoor units data (operation data, etc.) may be deleted.

Yes … delete the data after scanning, No … Keep the data,



* When performing scanning selecting “No” and number of units before and after scanning mismatches, following symptom may be encountered. Therefore, when selecting “No”, be sure to have the correct number of units before and after scanning in mind.

- Transmission error may occur for the units that ceased to exist after scanning.
- Delay may occur for collecting data for each unit.

• When “Enable Scan” not checked

When the [OK] button is clicked, the system list screen is displayed without scanning. But when CSV formatted Name master file (3-2-4) has been already read, the corresponding Name of the unit will be updated.

⑪ Cancel button

When the [Cancel] button is clicked, the online site selection screen is displayed.

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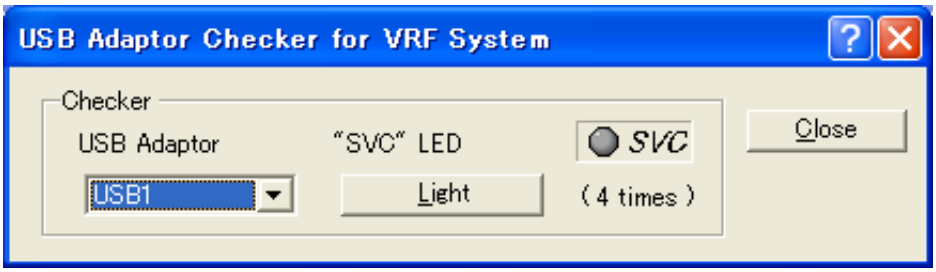
⑫ USB Checker

This will be used to detect the actual USB port where transmission adaptor is inserted. Note that this will not be displayed if the driver for the U10 USB Network Interface is not installed. This will not be displayed for re-scanning.

<Detection Mechanism>

- Insert the transmission adaptor (U10 Network Interface) into the USB port. (This requires that software installation is already completed).
- When clicking the [USB Checker] in the scanning setting screen, following screen will be displayed.
- In this screen, click the U10 USB Network Interface pull-down list box and select any USB port, then push the [Light] button.
- If the selected USB port is the actual porting connecting the U10 USB Network Interface, [SVC] in this screen and LED (SVC) of the transmission adaptor will flicker 4 times. (If the port differs, there will be no flicker).
- When the USB port No. is confirmed, close the screen and set the USB No. port in the above procedure ② (USB port selection field) the USB port number where U10 USB Network Interface was detected.



Note

*1 When not checked, since scanning is not performed, the scanning objective refrigerant circuit address cannot be set.

*2
- When Perform System Initialization checked

  Normally, perform bus priority mode scanning. Full scanning which can receive detail data is performed. However, since each unit performs scan dedicated special operation, the units of the entire VRF System temporarily stop. To start scanning, check if the VRF System can be completely stopped, then execute scanning. Since the units remain stopped even when scanning is finished, a restart command must be sent from the control unit.

- When Perform System Initialization not checked (S/V series)

  Use when scanning at sites at which the VRF System cannot be stopped. In this mode, scanning can be performed without affecting the operating status of the VRF System. However, since R.C group data cannot be received, it is not full scanning. Operation is not controlled in R.C. group units.

- When Single-Split Adaptor (UTR-YRDA) is connected within the VRF system, be sure to check the “Perform System Initialization” when performing scanning in order to recognized the equipment and display correct information.

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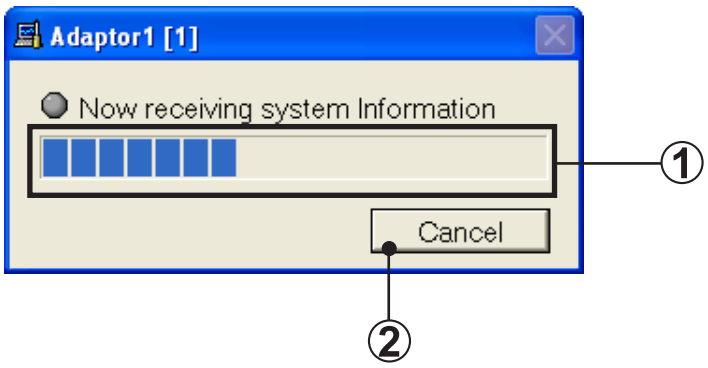
■Scanning progress screen

Scanning is started and the scanning progress is displayed.



① Scanning progress display field

Displays the progress of scanning.

② Cancel button

When the Cancel button is clicked, scanning stops and the program returns to the scanning setting screen.

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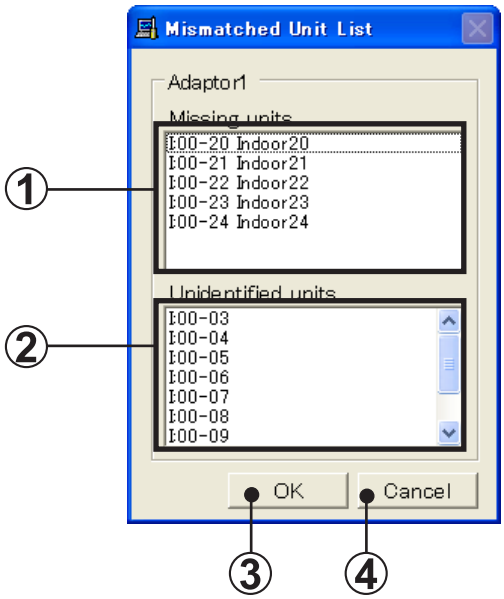
3-2-6 Mismatched unit list

When a name master database file is specified at par. 3-2-4, the unit data of the database file and the unit data actually scanned are collated. If there is a mismatch, that unit address is displayed. Therefore, correct the address setting on the board of the displayed unit and then re-scan. Repeat this work until a mismatched unit is not displayed.



① Missing units address display field

This field displays the unit addresses and unit names whose unit data is defined by name master database, but the relevant data could not be acquired during scanning.

② Unidentified units address field

This field displays the unit address and unit model (indoor unit, outdoor unit) whose address was received during scanning, but whose unit data is not defined by name master database file.

③ OK button

When the OK button is clicked, the scanning acquisition data is stored and the system list screen (see par. 5-4) is displayed. The application icon is also displayed at the task tray.

If there is a unit mismatch, return to the scanning setting screen by clicking the Cancel button and repeat collation with the scanning acquired data until there are no mismatches. After confirming that there are not mismatches, click the OK button. If the OK button was clicked when there is a mismatch, the unit data acquired by scanning is displayed on the system list screen unchanged.

④ Cancel button

When the Cancel button is clicked, the program returns to the scan setting screen.

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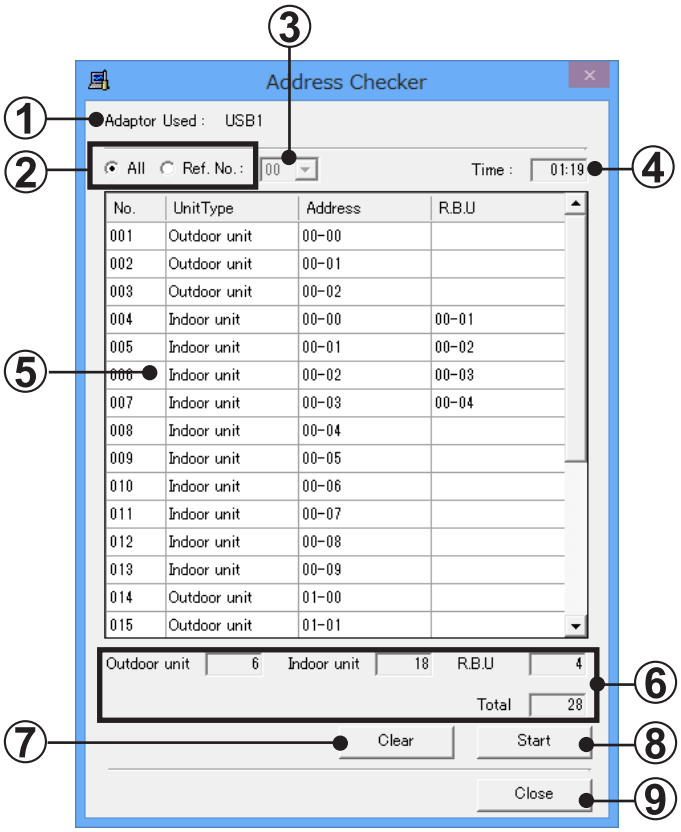
3-2-7 Address Checker

When using this function, the address set at the outdoor unit, indoor unit, or RB unit can be checked easily. The scanning time is shortened by acquiring the address in advance.
A list of the indoor unit and outdoor unit addresses recognized when this function was used is displayed.
Other function does not operate while this function is used.
In addition, when registering at this tool the indoor and outdoor units recognized by this function, a scan must be executed separately.



① Adaptor Used
Displays the No. of the adaptors currently being used.

② Ref. No. setting field
Selects whether the entire address list of ⑤ is displayed or only a specific refrigerant system is displayed.

③ Ref. No. setting field
Selects the refrigerant system to be displayed. Can be selected only when Ref. No. is selected at ②.

④ Time field
Displays the time that has elapsed after the address check is started by clicking ⑧.

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⑤ Unit list

Displays the address acquired by starting address check (refrigerant No. – unit No) (*1).

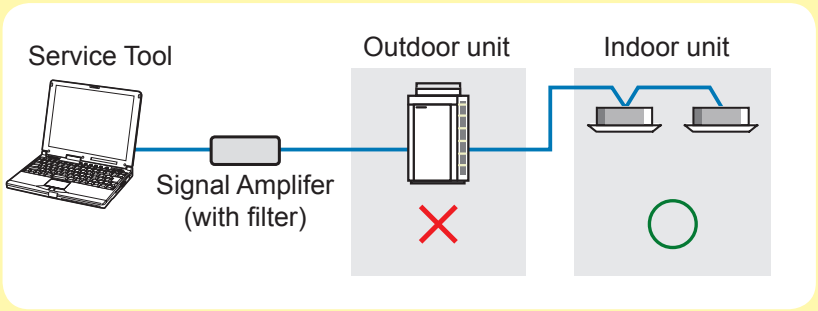
The row displays the acquired order No., unit type, and address starting from the left.

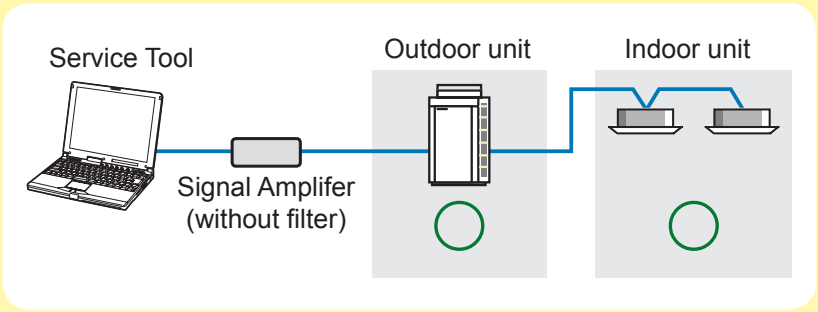
By pressing header, sorting in ascending order and descending order by pressed header is performed. (Default is display in acquired order.)

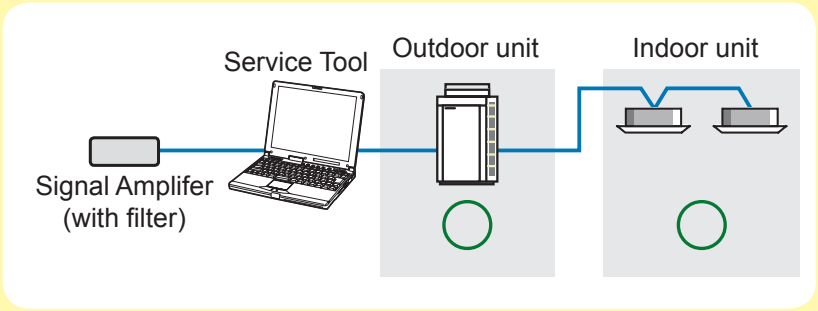
Note *1 •When negative numbers are displayed at the address (Example: -1--1)
Negative numbers may be displayed when the set value of the address is not recognized normally.
Recheck the address setting (rotary switch, etc.)

•When there is an outdoor unit that is not displayed
When there is a signal amplifier that uses the filter mode between service tool and outdoor unit, outdoor unit is not displayed because the outdoor unit data cannot be acquired.

Example)







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Note

- Units that cannot be acquired by address checker are not scanned.
- When the same address is displayed at outdoor units or indoor units, it indicates that the address is duplicated. (Except RB unit and S/V series outdoor unit/indoor unit) However, address duplication is not always acquired, depending on network data collision, and other effects.
- When the RB unit is in the following states, the addresses are not displayed.
  - When not connected to indoor unit
  - When connected indoor unit power is off

⑥ Total unit list

Displays the number of outdoor units and indoor units and RB units and the total number of units (outdoor units + indoor units + RB units) displayed at ⑤.
Multi type RB units are counted by duplicating the number of units connected to piping individually. (Maximum 4 units) Therefore, the number of displayed RB units may be larger than the actual number of units.

⑦ Clear button

Clears the list of ⑤. When performing an address check, this button is disabled.
When the list is cleared, the scanning by [Checked address] cannot be performed.

⑧ Start button

Address check Start/End button. When not performing an address check, this serves as the Start button, and when performing an address check, this serves as the End button.

⑨ Close button

Closes this window. When performing an address check, this button is disabled.

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3-3 Data acquisition application starting (offline) flow

This section describes procedures for offline work when “Offline work” is selected from the Menu.

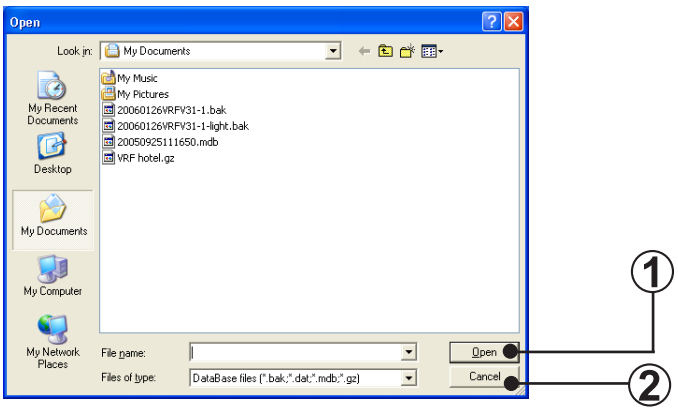
3-3-1 Import file selection

By selecting the data files that has been saved in the past, you may monitor the various unit data on the screen off-line.

The data that may be displayed are those saved using;

- Service Tool Ver. 1.1 (UTR-YSTB) *1
- Service Tool Ver. 3.0 or later *2 (UTR-YSTC)
- Service Tool Ver. 1.0 or later (UTY-ASGX)
- Web Monitoring Tool Ver. 3.0 or later *2 (UTR-YMSA)
- Web Monitoring Tool Ver. 1.0 or later (UTY-AMGX)

For how to save the data, refer following chapter. For how to save data for other product type, refer corresponding manual.



① Open button

When the Open button is clicked, the data of the selected Import file is fetched and the menu screen (see par. 5-2) is displayed.

② Cancel button

When the Cancel button is clicked, the program returns to the menu screen.

Refer to the following chapter for a description of the data storage method.

To store data with other product types, refer to the relevant manual.

- 4-6 Exiting
- 5-13 Others screen (Download)

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Note

*1 In order to cope with the incompatibility of data between Service Tool Ver. 1.1 (UTR-YSTB), following restriction will apply when displaying that version of data offline.

- VRF Series data from Single-Split Adaptor (UTR-YRDA) will be displayed as S Series.
- Data from VRF V Series (operation data and series) will not be displayed correctly.

*2 When the file created by Download screen is imported (compression file-extension:gz), the decompression file of the selection file is created.

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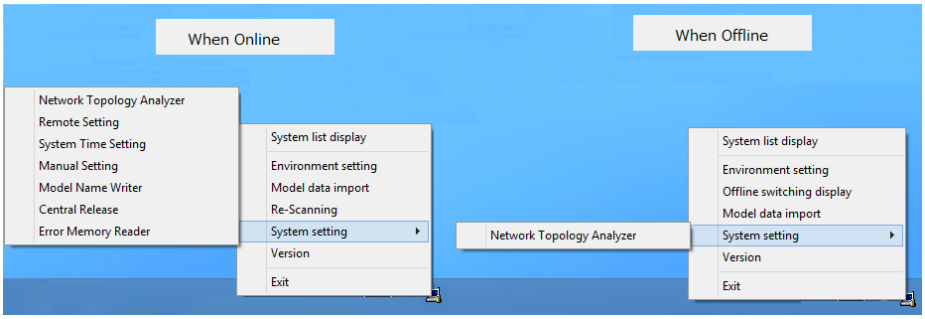
4. Data acquisition application right click menu

4-1 Outline

4-1-1 Menu

A menu is displayed and various operations can be performed by right-clicking the application icon on the task tray.



System list display	System list screen is displayed.
Environment setting	Environment setting screen is displayed.
Model data import	The newly released model data of VRF indoor unit and outdoor unit is imported.
Re-Scanning	Scanning setting screen is displayed. However, before it is displayed, name master database selection screen is displayed first. Not displayed when offline.
System Setting	System setting sub-menu is displayed.
Network Topology Analyzer	A list of units connected to the VRF system network is displayed in network segments in tree form. (V-II/J-II/J-IIS/VR-II/V-III series)
Remote Setting	Function (Field) Setting for indoor unit is realized remotely. (V-II/J-II/J-IIS/VR-II/V-III series) Not displayed when offline.
System Time Setting	An arbitrary time is set for all the remote controllers within the system. (V-II/J-II/J-IIS/VR-II/V-III series) Not displayed when offline.
Manual Setting	Manual setting screen is displayed. Not displayed when offline.
Model Name Writer	An arbitrary model name can be written to the target unit. (V-II/J-II/J-IIS/VR-II/V-III series) Not displayed when offline.
Central Release	The operation setting restriction function of the indoor units set from the controller can be forcibly released. (V-II/J-II/J-IIS/VR-II/V-III series) Not displayed when offline.
Error Memory Reader	When an error occurs at an outdoor unit, the operation data records before/after the error are acquired over a network and saved to a CSV file. (V-II/J-II/J-IIS/VR-II/V-III series) Not displayed when offline.
Offline switching display	Offline data may be read again. Not displayed when online.
Version	Version information screen is displayed.
Exit	Exit from the application.

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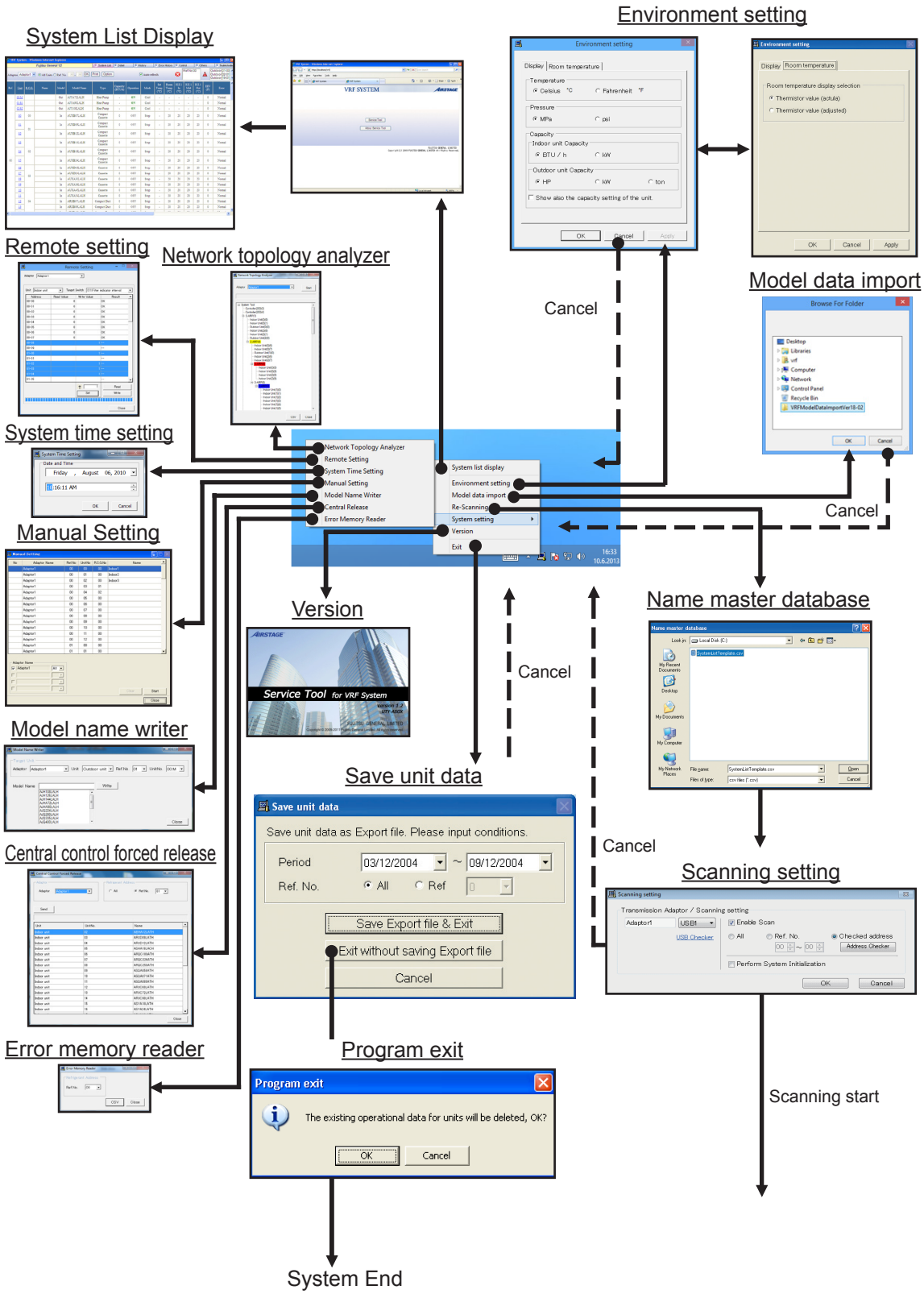
4-1-2 Screen transition (online)

The following shows transition of the screens which are started from the right click online menu.



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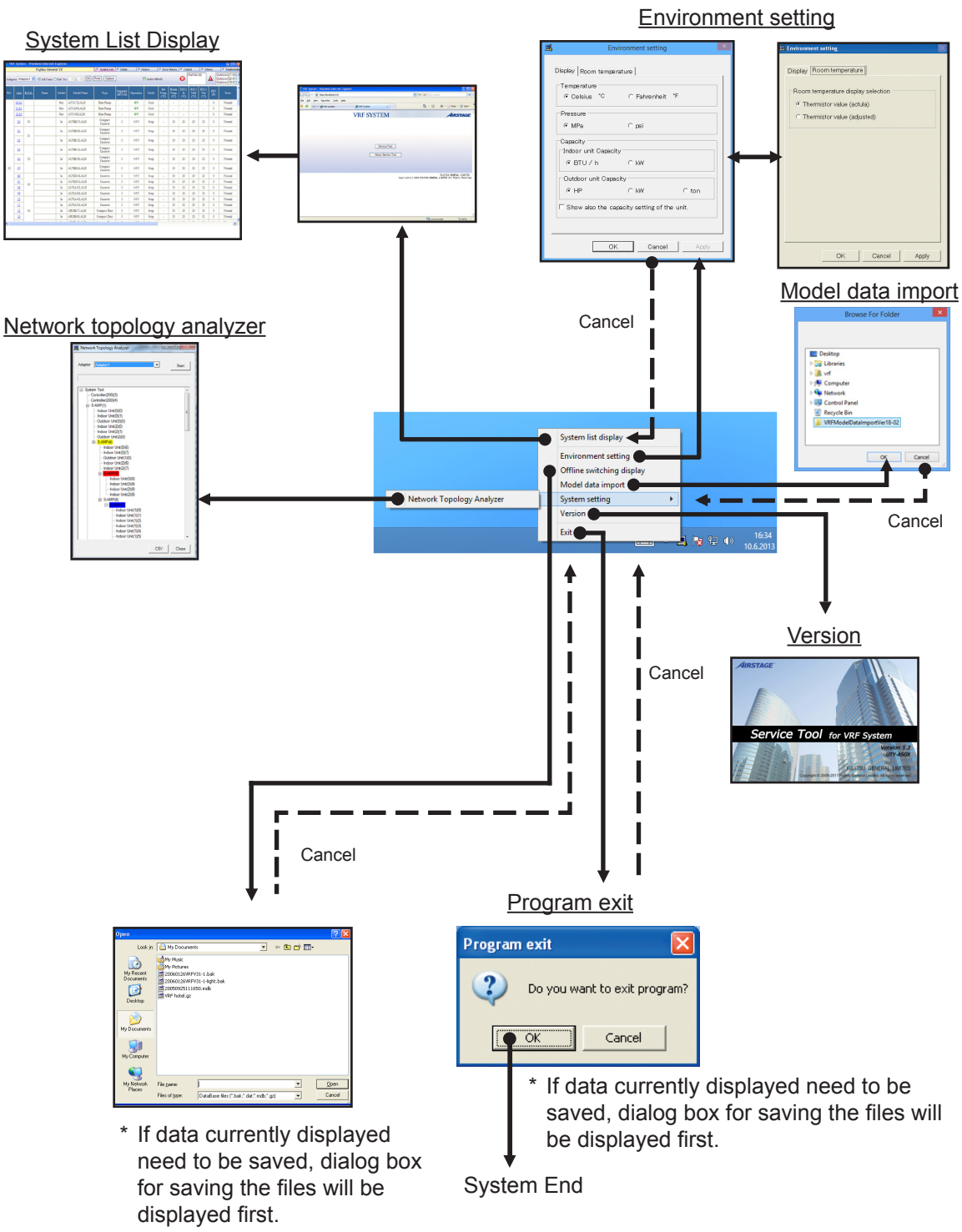
4-1-3 Screen transition (offline)

The following shows transition of the screens which are started from the right click offline menu.



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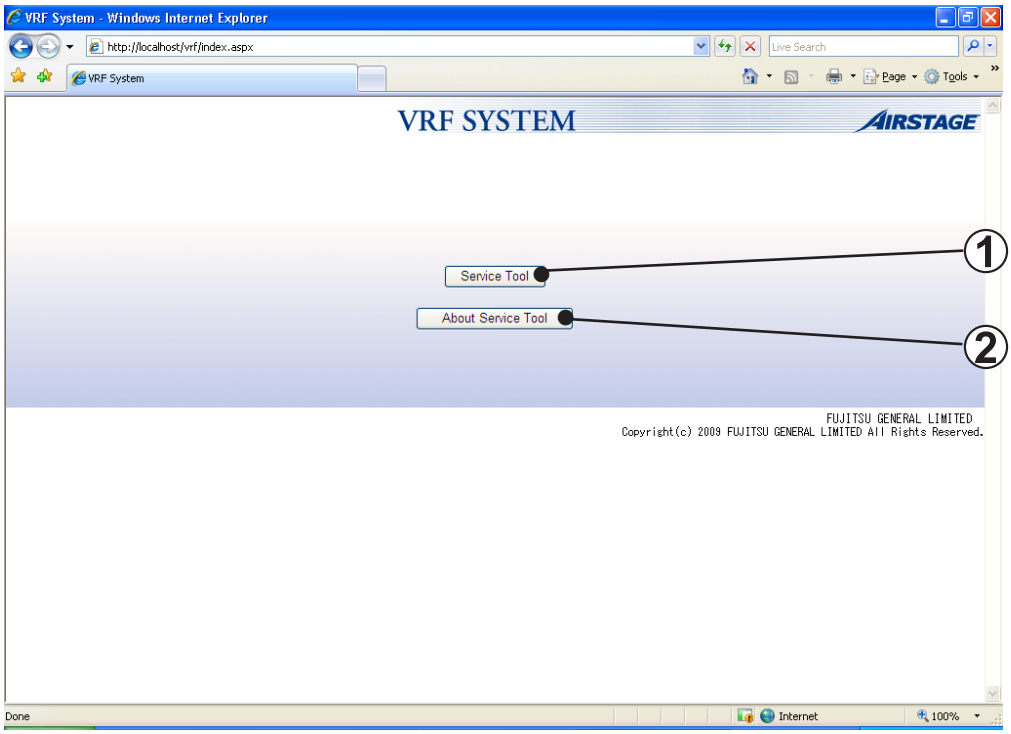
4-2 Web browser starting (menu screen)

This is the initial screen. It displays Service Tool starting and version information.



① Displays the system list screen.

② Displays the version information.

Note

* For details, refer to “5-2 Menu”.

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4-3 Environment setting

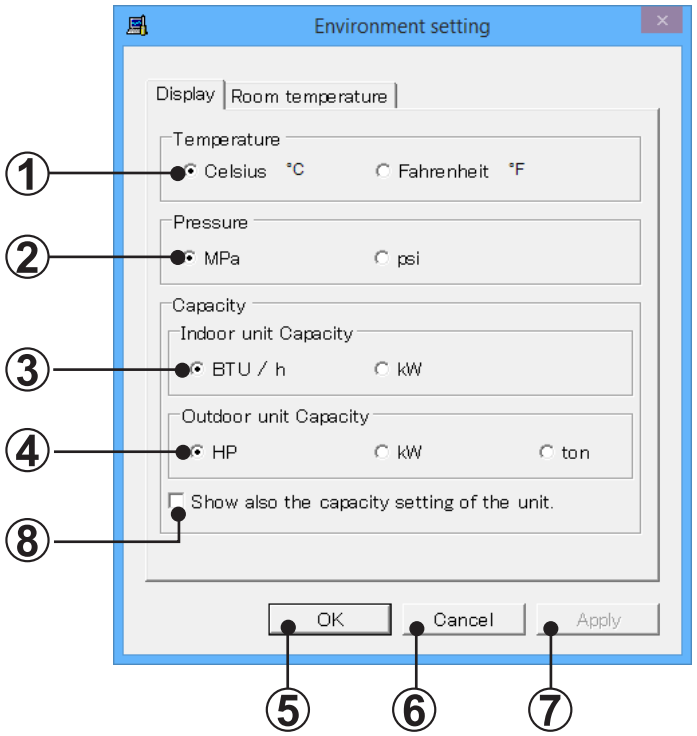
Various settings related to the operating environment are performed.

Display tab: Sets the Time/Temperature/Pressure/Capacity display method.

Room temperature tab: Sets the room temperature display method.

4-3-1 Display setting

Sets the display method of the Time/Temperature/Pressure/Capacity to be displayed by the Web application.



① Temperature selection item

Sets the temperature display units.

When you want to display the temperature in centigrade, select “Centigrade °C”.

When you want to display the temperature in fahrenheit, select “Fahrenheit °F”.

② Pressure selection item

Select the pressure display units from “MPa” or “psi”.

③ Indoor unit capacity selection item

Select the units of capacity of the displayed indoor unit from “BTU/h” or “kW”.

④ Outdoor unit capacity selection item

Select the units of capacity of the displayed outdoor unit from “HP” , “kW” or “ton” . However, when the unit different from outdoor unit destination is specified, “ - ” is displayed and the value may not be displayed.

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⑤ OK button

When the OK button is clicked, the set contents are saved and the screen is closed.

⑥ Cancel button

When the Cancel button is clicked, environment setting stops and the screen closes.

⑦ Apply button

When the Apply button is clicked, the set contents are saved.

⑧ Show also the capacity setting of the unit.

Simultaneously shows the capacity value set by PCB of each indoor unit and outdoor unit at the capacity display field on each screen. When displayed, it is displayed by {capacity value} to distinguish it from the capacity specified by each model.
However, when the unit different from outdoor unit destination is specified, " - " is displayed and the value may not be displayed.

Note

- This set value is used for switching the capacity of air conditioning control. Since the set value may not correspond to the capacity specified by each model, use it only as a guide. (Slight deviation due to destination differences and setting mistakes at PCB replacement, etc.)
- "kW" of outdoor unit is not displayed because this function is not supported.
- S and V series indoor unit and outdoor unit are not displayed.

Note

After changing the display settings, the changes will take effect only from the Web application newly started from the Menu screen.
In order for the changes to take effect, re-display the Web application from the Menu Screen (Refer to "5-2 Menu").

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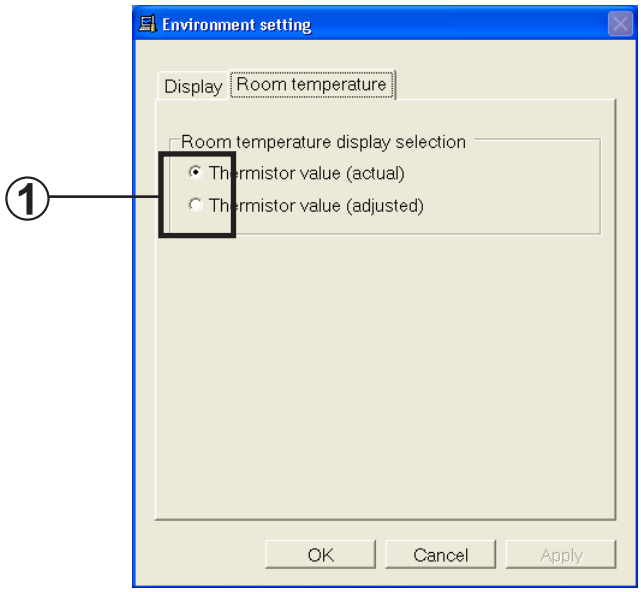
4-3-2 Room temperature display setting

Sets the display method of the room temperature to be displayed by the Web application.



① Room temperature selection item

When you want to display the room temperature detected by sensor unchanged, select “actual”. When you want to display the room temperature corrected (used in control) by the unit, select “adjusted”.

Note

After changing the display settings, the changes will take effect only from the Web application newly started from the Menu screen.
In order for the changes to take effect, re-display the Web application from the Menu Screen (Refer to “5-2 Menu”).
For S series, only thermistor value (actual) is displayed.

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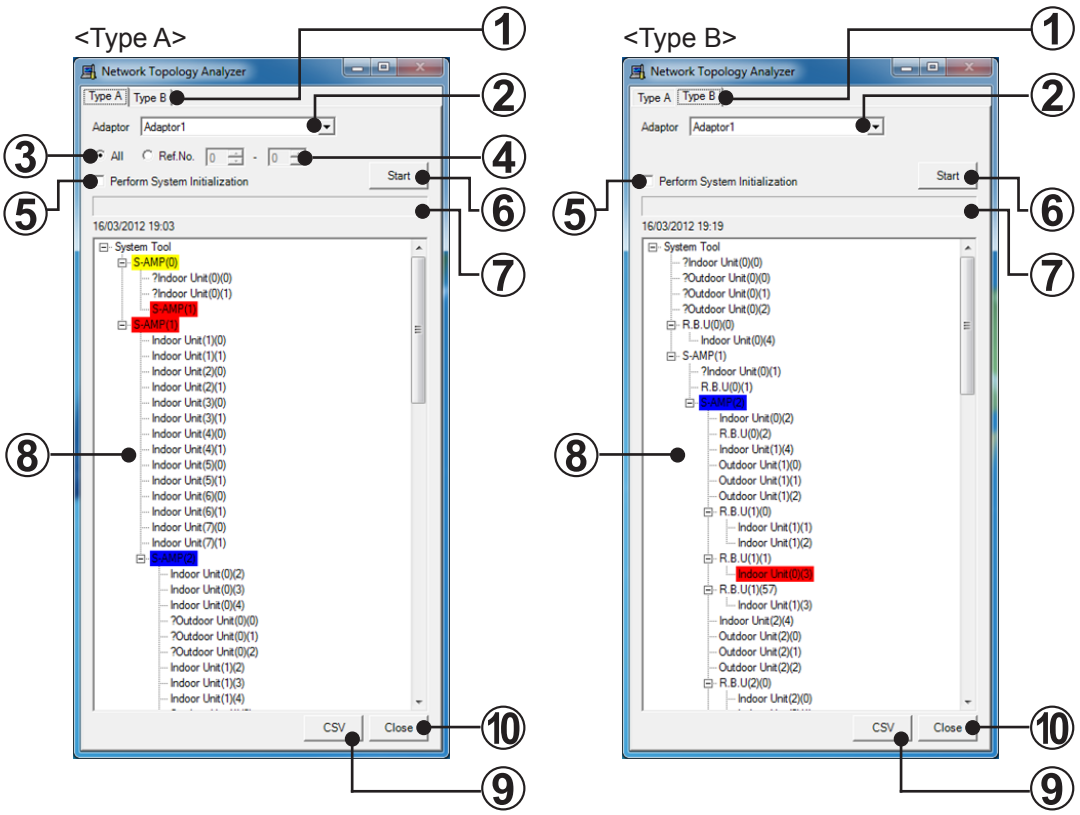
4-4 Re-scanning

Perform the operations described in par. 3-2-4 and 3-2-5.

4-5 System Setting

4-5-1 Network Topology Analyzer

A list of units connected to the VRF system network is displayed in tree form in network segments. (V-II/J-II/J-IIS/VR-II/V-III series)
This information is also output to a CSV file.



Note

When this function is used for VR-II series, do not connect this tool between R.B. unit and indoor unit to obtain the accurate data.

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① Analyzer type selection tab

Select the type of network topology analyzer from either “Type A” or “Type B”.
“Type A” is used for V-II and J-II series, and “Type B” for VR-II, J-IIS, V-III or later series.

Note If the analyzer type is incorrect, the correct results will not be displayed.

② Adaptor selection

Selects the transmission adaptor which acquires the connection data.

③ Refrigerant system selection

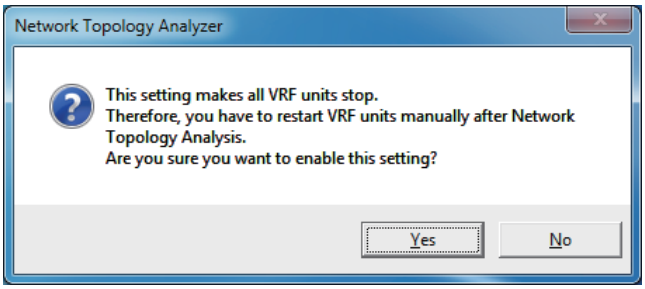
Selects the intended refrigerant address. The type is selected from all refrigerant systems or arbitrary refrigerant system range.

④ Refrigerant system range input

Enters the intended refrigerant of this function over the 00 to 99 range when “Ref. No.” is selected at step ③ .

⑤ “Perform System Initialization” check

When checked, the verification screen is displayed. When the Yes button is clicked, all the units in the VRF system stop.
When the No button is checked, check mark is removed.



⑥ Start button

Starts this processing.

Note It takes up to 1 hour from start to the end of this process.
However, this process time may be shorten depending on the setting of ④ or ⑤.

⑦ Progress bar

Displays the progress of this processing.

Note When Type B is used, the progress bar display shows the 1000 units of the maximum number of responding units as 100%. Consequently, check the progress state by considering that the last display position depends on the number of responding units.

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⑧ Network Topology display

Displays in tree form the data acquired when this tool (System Tool) started.
In addition, the date and time when displayed are displayed at the top of the tree.
Notation contents
S-AMP(X)···Signal Amplifier (address)
Blue background: When the number of units connected in 1 segment exceeded 64.
Red background: When the address of signal amplifier is redundant.
When matched up to the connection point, S-AMP(x) count (number duplicated) is displayed.
Yellow background: When data cannot be acquired from signal amplifier, but they exist in the data acquired from another unit (indoor unit, etc.).(*1)
White background : Normal state other than the above.

Indoor Unit(X)(Y)···Indoor unit (refrigerant address)(unit address)
Outdoor Unit(X)(Y)···Outdoor unit (refrigerant address)(unit address)
Controller(X)(Y)···Peripheral unit (system address)(unit address)
R.B.U(X)(Y)···R.B.unit(refrigerant address)(unit address)
When the same address exists in indoor unit, outdoor unit, and controller respectively, red background is displayed.
In addition, "?" is added before the unit name for the unit corresponding to both "Type A" and "Type B". In this case, confirm by relevant type of each series described in ① .

Note *1 In the case of Type B, the signal amplifier of yellow background color and the units connected to it are not displayed at the correct segment position.

⑨ CSV button

The information displayed at ⑧ can be saved to CSV file.
[CSV configuration]

- Communication data (reference data) of each unit acquired by this processing

Note Since the address of each unit is the address used in communication, it is different from the screen display address.

- Tree display displayed on the screen

Note

- The signal amplifier background color is replaced by the following symbols.
  White : None / Blue: * / Red: ** / Yellow: ***
- The indoor unit, outdoor unit and controller background color are replaced by the following symbols.
  White: None / Red: **

⑩ Close button

Closes this screen.

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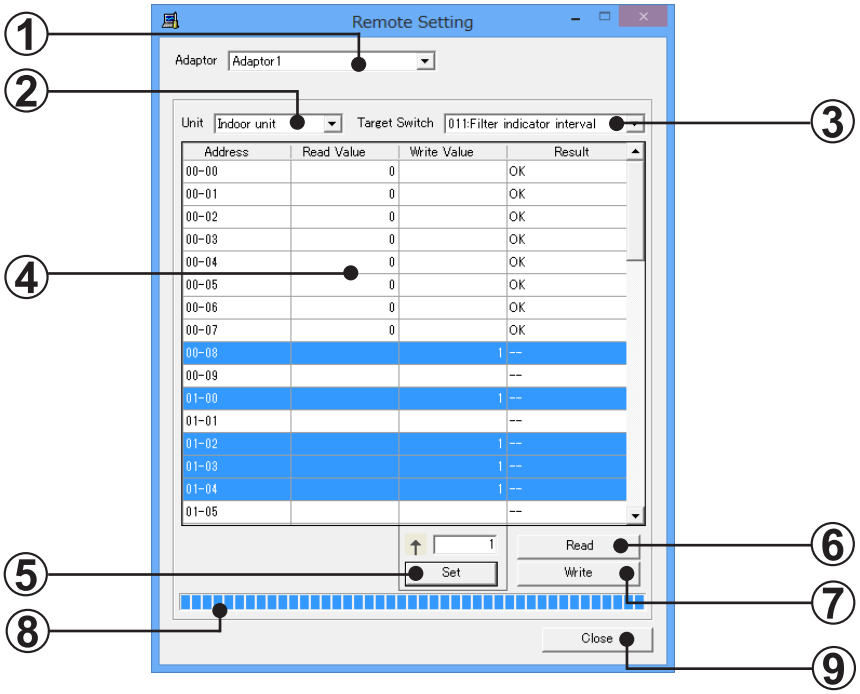
4-5-2 Remote Setting

Function (Field) setting can be performed for indoor units by remote control. (V-II/J-II/J-IIS/VR-II/V-III series)
(Some settings cannot be supported.)
The processed result can also be output to a CSV file.

Remote Setting Screen



① Adaptor selection

Selects the transmission adaptor which connect the system containing units which perform processing.

② Unit type

Selects the unit type of the unit which is to perform processing.

③ Target switch

Displays the item of the local Function(Field) setting item. (No. + name)

④ Unit list

Displays a list of addresses (refrigerant No. - unit No.) of the target unit selected at ① and ②.
In addition, multiple units can be handled simultaneously by arbitrary selection (background blue color) for target unit selection.

This list displays the following information, in addition to address.

- Read value
  Displays the value of the item selected by combo box of ③ acquired from the target unit.

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- Write value
  Displays the set value specified at ⑤.
- Result
  Displays the result (OK/NG) of execution of ⑥ or ⑦.
  When outside the target, '--' is displayed.

⑤ Write value input

The value input here is set at the write value field of the unit selected at ④.
This input value becomes the setting change value of the item selected at ③.

> **Note** For the set value of each Function, refer to the "DESIGN & TECHNICAL MANUAL" or the "INSTALLATION MANUAL" packed with the indoor unit.
> When clearing the write value, press the "Set" button with the field blank after selecting the target unit.

⑥ Read button

Acquires the value of the item selected at ③ from the unit selected at ④ and displays it at the read value field of ④.
After execution, subsequent processing can be cancelled by pressing the button again.

⑦ Write button

Executes setting of the value input at the write value field of ④ for the unit selected at ④.
Thereafter, the setting contents result is displayed at the read value field of ④ for check use.
After execution, subsequent processing can be cancelled by pressing the button again.

⑧ Progress bar

Displays the state of progress of ⑥ or ⑦ execution.

⑨ Close button

Closes this screen (remote setting screen). However, when read/write processing to unit was performed, confirmation dialog box opens to confirm whether to save the data to a CSV file.

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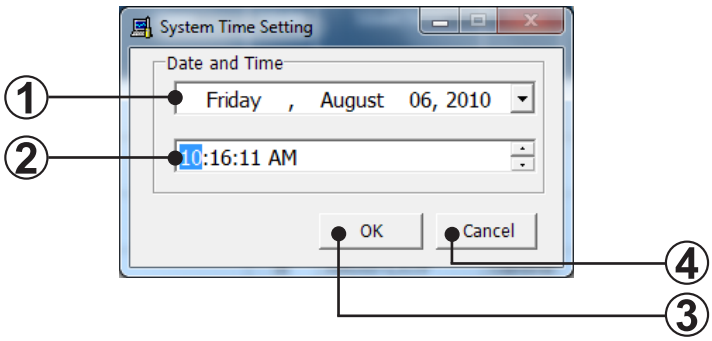
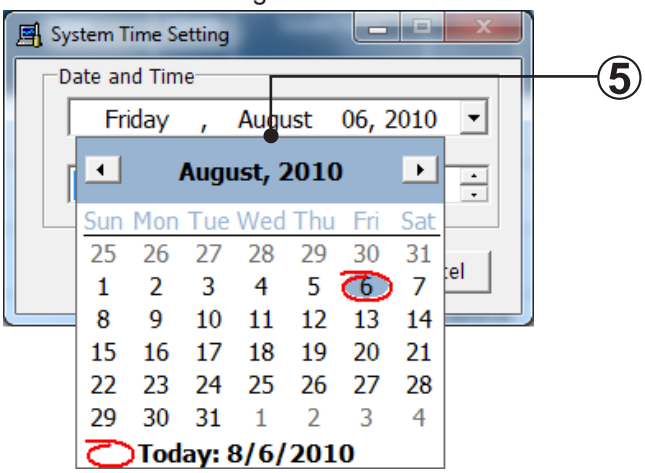
4-5-3 System Time Setting

An arbitrary time can be set for VRF System remote controller. (V-II/J-II/J-IIS/VR-II/V-III series)

System Time Setting Screen



Date and Time Setting Screen



① Date
Specifies the date to be set. When this specification field is selected, calendar ⑤ is displayed.
The initial display is the current date.

② Time
Specifies the time to be set. The initial display is the current time.

③ OK button
Executes date/time setting using the contents specified at ① ②.

④ Cancel button
Closes this screen.

⑤ Calendar
Arbitrarily selects from a calendar the date to be set.

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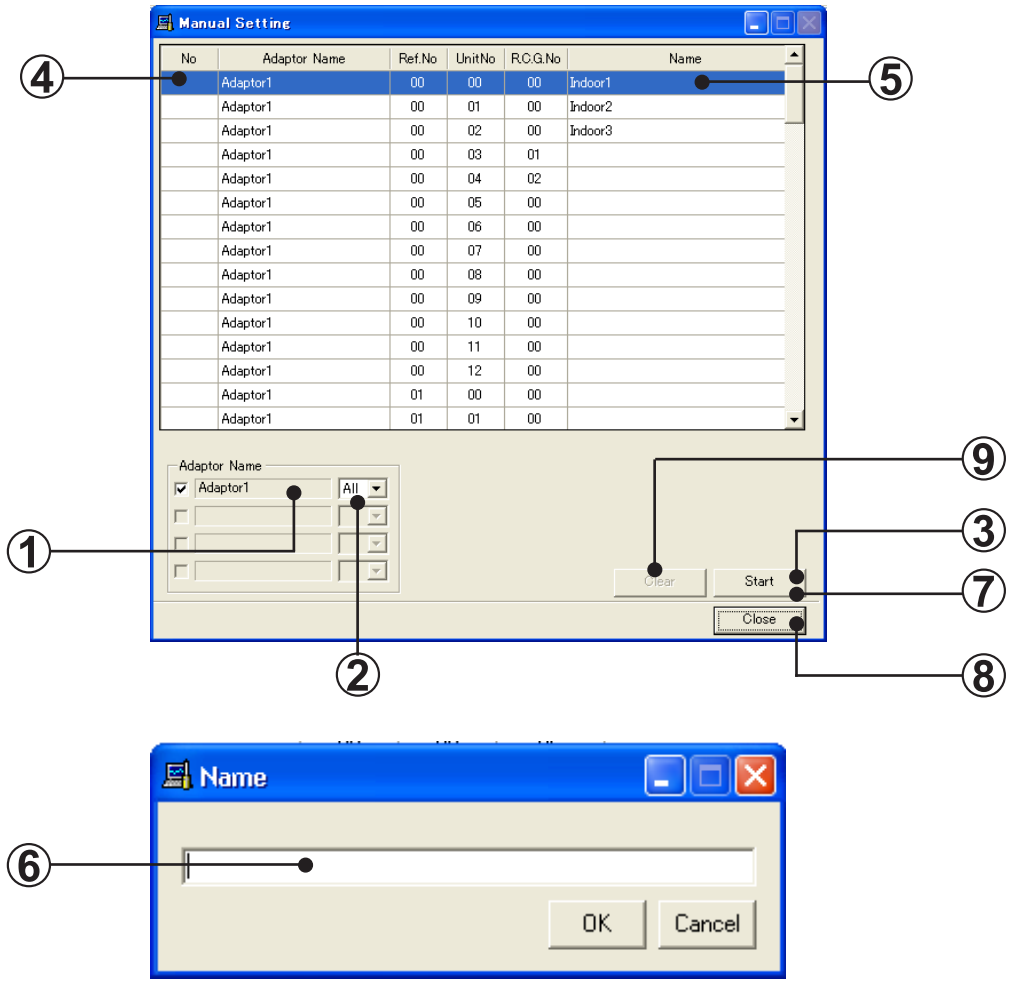
4-5-4 Manual setting

Manual unit name registration by manual setting can be performed. Manual setting enables you to register the names for each scanned unit, by operating each unit ON, one by one.



① Adaptor selection
Select the network to which manual setting operation is to be performed, by checking the transmission adaptor.

② Select “All” or the desired refrigerant circuit address to perform manual setting operation.

③ Start registration
Click to start. When manual setting operation starts, this button changes to “Stop”.

④ Unit operation
Go to the unit location and start the unit operation with a remote controller. The units started will be listed in the order they are started on this list and will be numbered in that order.

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Note For the indoor units already allocated a No., No. cannot be updated even by executing this operation. When No. must be reallocated, execute it after clearing the No.(⑨)

⑤ Selecting units
When units are recognized and numbered, double click on the unit. The name registration dialog box will appear.

⑥ Naming units
Enter the name for the unit and click “OK”.

⑦ Stop registration
Click “Stop” when finished with the registration.

Note When the operation ③ was executed, always end registration by this operation. If this operation was not performed, the indoor unit will not operate properly thereafter. (Indoor unit fan will not operate.)

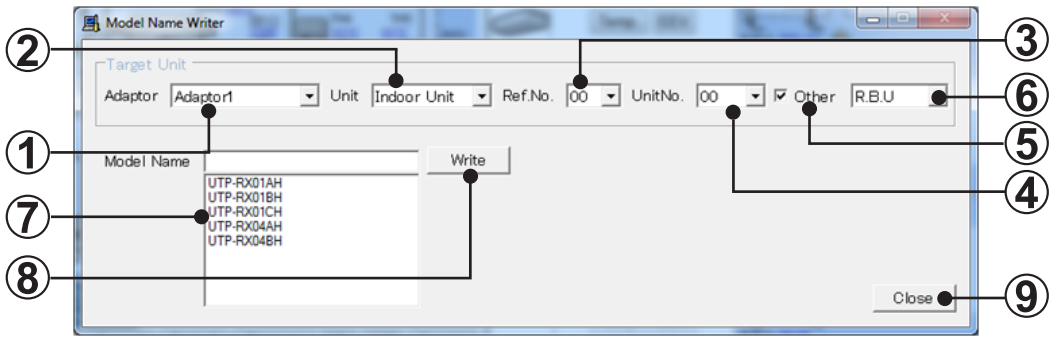
⑧ End registration
Click “Close” to end manual setting registration.

⑨ Clear button
Clear the No. (④) of an arbitrarily selected indoor unit. When indoor unit was cleared by this operation, the indoor unit can be operated at ④ .

Note Instead of registering names for each start operation, you may operate all the units and name all the units at once after stopping registration.

4-5-5 Model Name Writer

An arbitrary model name can be written to the target unit. (V-II/J-II/J-IIS/VR-II/V-III series)



① Adaptor selection
Selects the transmission adaptor which connects the target unit.

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② Unit selection
Selects the type of unit (indoor unit/outdoor unit).

③ Refrigerant circuit address selection
Selects the target refrigerant circuit address.

④ Unit address selection
Selects the target unit address.

⑤ Model name write target selection
The target unit for writing the model name can be selected.
Unchecked: Units specified at ②, ③, ④
Checked: Attached units specified at ②, ③, ④

⑥ Attached unit selection
Selects the attached unit whose model name is to written.

⑦ Model name selection
Selects the write model name.
Advanced search is also possible by directly inputting the model name.

⑧ Write button
Executes writing of the specified model name to the target unit.

⑨ Close button
Closes this screen.

Note The outdoor unit of revision code version A or later corresponds to this function. (V-II Series)

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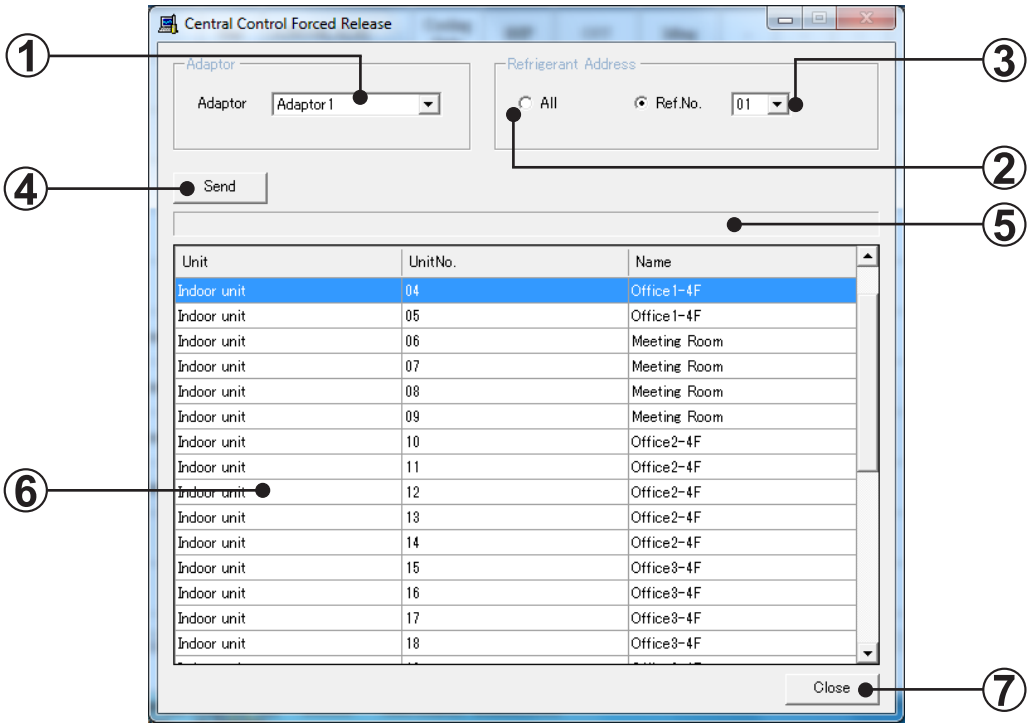
4-5-6 Central Release

The operation setting restriction function (remote controller inhibit, temperature upper/lower limit setting) set from the controller can be forcibly released. (V-II/J-II/J-IIS/VR-II/V-III series) When the controller cannot be used for various reasons, the condition can be released and the controller can be used by this function.



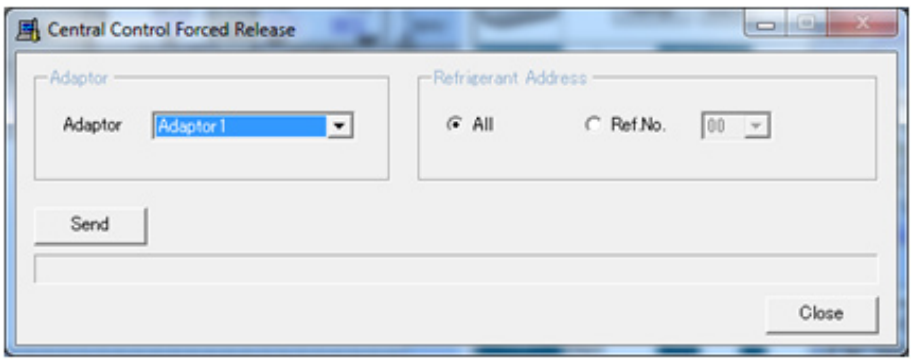
① Adaptor selection

Selects the transmission adaptor which connects the target unit.

② Refrigerant Address selection

Selects the target refrigerant address. Makes the selection from 2 types of all refrigerant and refrigerant 1 as the type of selection.

When “All” is selected, nothing is displayed at ⑥ as shown below.



③ Refrigerant Address selection

An arbitrary target refrigerant address can be selected.

At this time, the indoor units belonging to the selected refrigerant are displayed at ⑥.

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④ Send button
Execute Central Control Forced Release for the target indoor unit.

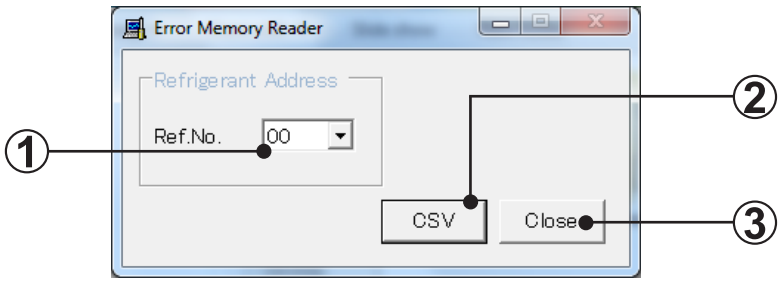
⑤ Progress bar
Display the progress of Send.

⑥ Unit list
Displays the indoor units belonging to the refrigerant circuit selected at ③.
Also selects the target indoor unit of this processing.

⑦ Close button
Closes this screen.

4-5-7 Error Memory Reader

Acquires the operation data and saves it to a CSV file when an error occurred at an outdoor unit. (V-II/J-II/J-IIS/VR-II/V-III series)
When acquiring this data, it is necessary to disconnect the outdoor unit from the VRF system network and connect this tool and that outdoor unit on a 1-to-1 basis. (The data of only 1 outdoor unit can be acquired at 1 time.)



① Refrigerant circuit address selection
Selects an arbitrary refrigerant circuit.

② CSV button
Acquires the operation data from the outdoor unit of the selected refrigerant circuit address and saves it to a CSV file.

Note This data is technical analysis data. Only specified technical staff can handle it.

③ Close button
Closes this screen.

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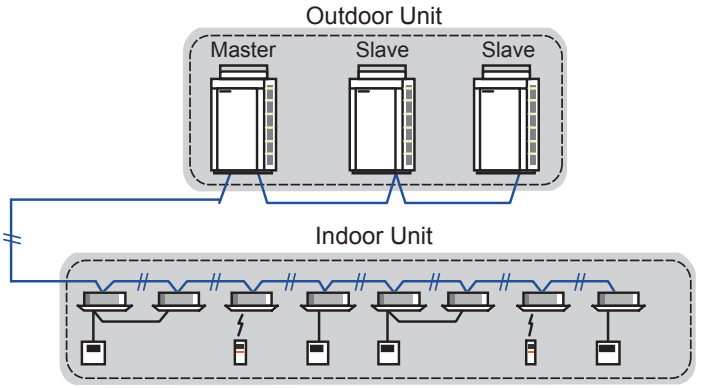
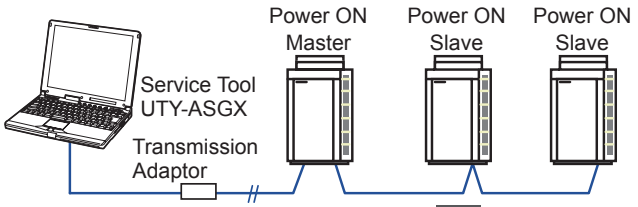
Service tool connection method



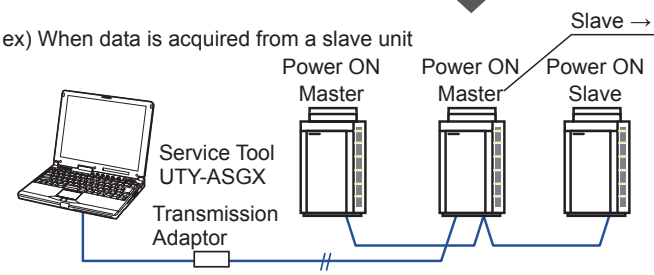
Stop operation of the Indoor Unit of the target refrigerant circuit.

ex) When data is acquired from a master unit



Disconnect from the VRF Network and connected Service Tool and Outdoor Unit (Master) on a 1-to-1 basis.

ex) When data is acquired from a slave unit



For Outdoor Unit (Slave), connect to the Service Tool on a 1-to-1 basis after changing the setting (DIP SW3; All OFF) to number of Master and Slave 0.

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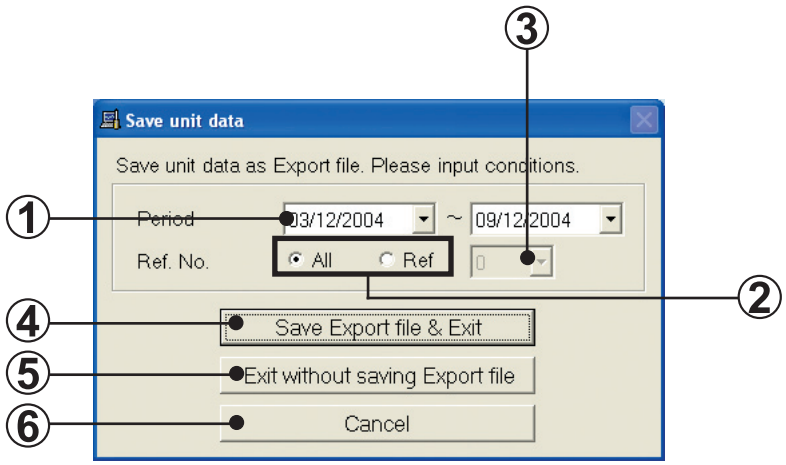
4-6 Exiting

Exits the Service Tool. When exited, the unit data acquired up to that point can be saved as an Export file, as required. Care is required because all the data which is not saved when exiting is deleted.
The saved Export file can be referenced later in the offline mode. (See par. 3-3-1 Import file selection.)



① Date setting field

Specify the date range of the data you want to save.

② Ref. No. setting field

When you want to save the data of all the refrigerant circuit address, select “All”.

When you want to save the data of a specific refrigerant circuit address, select “Ref”.

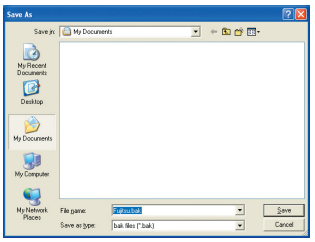
③ Ref. No. setting field

This field can be used only when “Ref” was selected.

Select the refrigerant circuit address to be saved.

④ Save Export file & Exit button

Creates an Expert file and exits the Service Tool.



When the Save Export file & Exit button is clicked, the save file dialog screen is displayed. Set the Export file save location and save name.

When the Save button of the save file dialog screen is clicked, Export file creation under the conditions set on the screen starts. After the end of creation, the program exits from the Service Tool.

⑤ Exit without saving Export file button

When the Exit without saving Export file button is clicked, the program exits the Service Tool without creating an Export file. When exiting the Service Tool, all the unit data other than the system list is deleted. Therefore, when data must be referenced later, save the data by selecting “Save Export file & Exit”.

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⑥ Cancel button

When the Cancel button is clicked, operation returns to the previous screen without exiting the Service Tool.

4-7 Offline switching display

Other offline data can be displayed without restarting the Service Tool.
When currently displayed data is of the version listed below, file save dialog box for the currently displayed data will be displayed prior to “Import file selection” dialog box where offline data may be selected.
Here, give an arbitrary file name and save. By saving the files, the data may be read and displayed faster the next time you read in (the speed may depend on the file volume). If you select “Cancel”, the screen closes without saving the data.

<Version whose data will be save>

- Service Tool Ver. 1.1 (UTR-YSTB)
- Service Tool Ver. 3.0 or 3.1, 3.2 (UTR-YSTC)
- Service Tool Ver. 1.0 or later (UTY-ASGX)
- Web Monitoring Tool Ver. 3.0 or 3.1, 3.2 (UTR-YMSA)
- Web Monitoring Tool Ver. 1.0 or later (UTY-AMGX)

When file save dialog box closes (the dialog may not be displayed depending on the version), “Import file selection” dialog screen is displayed. Here, by selecting any file, the unit data will be displayed offline.

* Time required to display the data may depend on the data volume.

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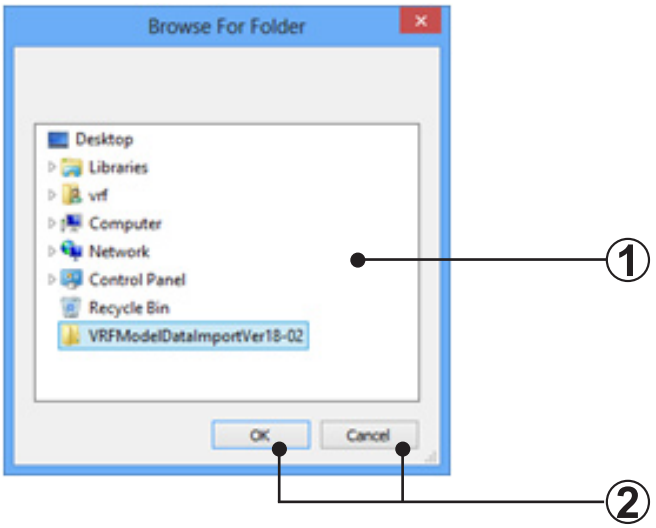
4-8 Model data import

The newly released model data of VRF indoor unit and outdoor unit can be imported.
This function makes it possible to display the new circuit diagrams of indoor unit and outdoor unit and troubleshooting by only importing the dedicated data prepared in advance.



① Folder designation
Select the folder containing the model data file acquired beforehand.

② OK/Cancel button
OK···Imports the model data in the designated file.
Cancel···Cancels the model data import.

Note

- Do not change the file configurations such as the model data file deletion, the file name change, etc.
- This tool and the model data consist of the following 2 versions:
  Version···Version that identifies the tool to be imported (application version)
  Data Version···Version that identifies the kind of model data
  When using this function, the conditions of each version must be satisfied.

<Target conditions>

This tool	Condition	Model data
Version	=	Version
Data Version	≦	Data Version

* If these conditions are not satisfied, the version of the tool itself must be upgraded or the newest version of the model data must be acquired.

Each version is checked by the following method:
This tool···Task tray icon right click menu → Version selection
Model data···Refer to ReadmeFirst.

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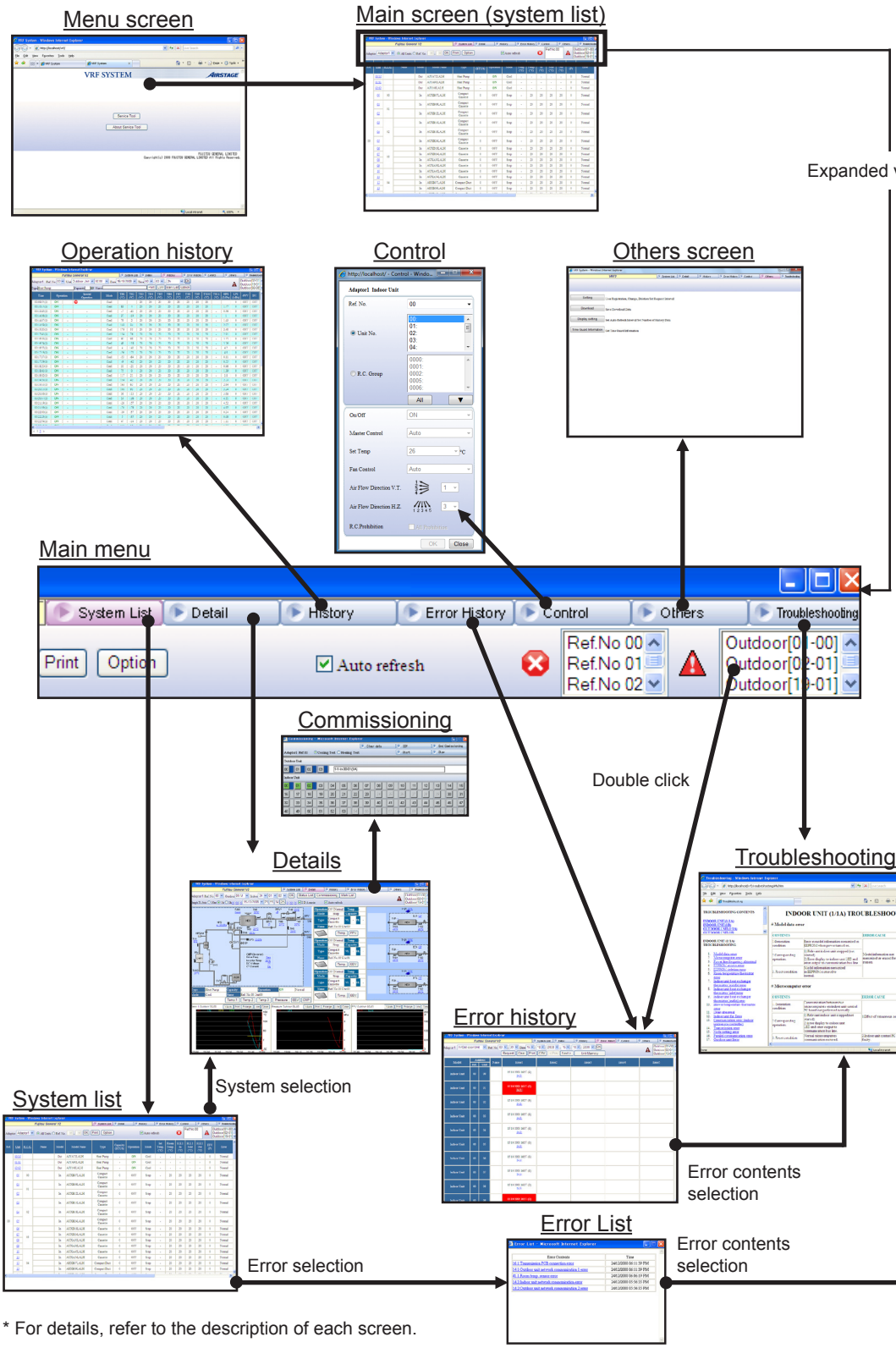
5. WEB application

5-1 Screen transition



* For details, refer to the description of each screen.

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Screen	Function	Page
Menu screen	Initial screen. Starts the Service Tool and displays the version information	51
System list screen	Lists the status of each unit and the overall operating status can be grasped. This screen is displayed when shifting from the menu screen.	53
Details screen	Performs normal operation check and cause specification when an error was generated from the detailed status display of the units.	59
Commissioning tool	Test run instructions and commissioning data storage can be performed.	76
Operation history screen	Displays the indoor units or outdoor unit operating history information for each unit.	84
Error history screen	Displays the error information for each unit.	94
Control screen	Operation of each refrigerant circuit, indoor unit, or R.C. group can be controlled.	102
Others screen	• Performs new user registration, user password change, registered user deletion, and demand interval setup. • Save/Download data • Setting Auto-refresh interval and maximum No. of lines per page. • Time Guard Information is acquired from a unit and the CSV file output.	104
Troubleshooting screen	Displays the error contents and corrective action for S, V series units. Refer “Trouble Shooting” section of Service Manual for V-II/J-II/J-IIS/VR-II/V-III series.	116

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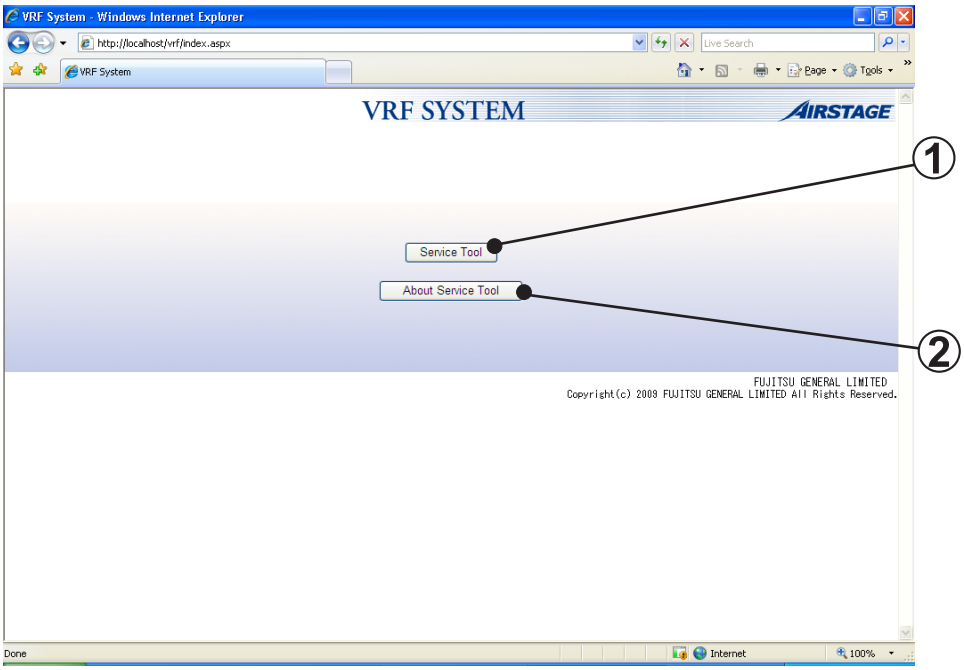
5-2 Menu

This is the initial screen. It starts the Service Tool and displays the version information.



① Service Tool button
Starts the Service Tool, and displays the Main screen (system list).

② About Service Tool button
Displays the version information.

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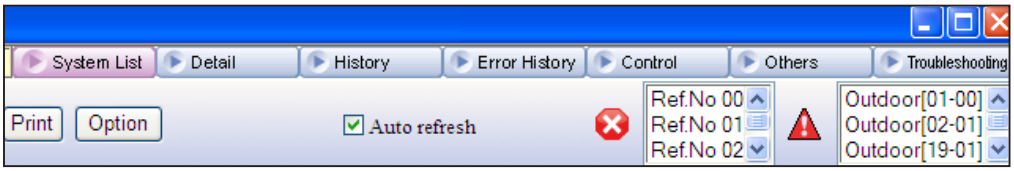
5-3 Main menu

Menu which is displayed at the top of the screen. Each time the button is clicked, the display shifts to the screen of the next function.



System List	Shifts to the system list screen.
Detail	Shifts to the detail screen.
History	Shifts to the operation history screen.
Error History	Shifts to the error history screen.
Control	Displays the control screen.
Others	Shifts to the others screen.
Troubleshooting	Displays the troubleshooting screen.
(Emergency Stop)	Displays refrigerant circuit where emergency stop is activated.
(ERROR)	Up to 20 addresses of units currently generating an error can be displayed, beginning from the newest unit. Shift to the error history screen by double clicking the unit.

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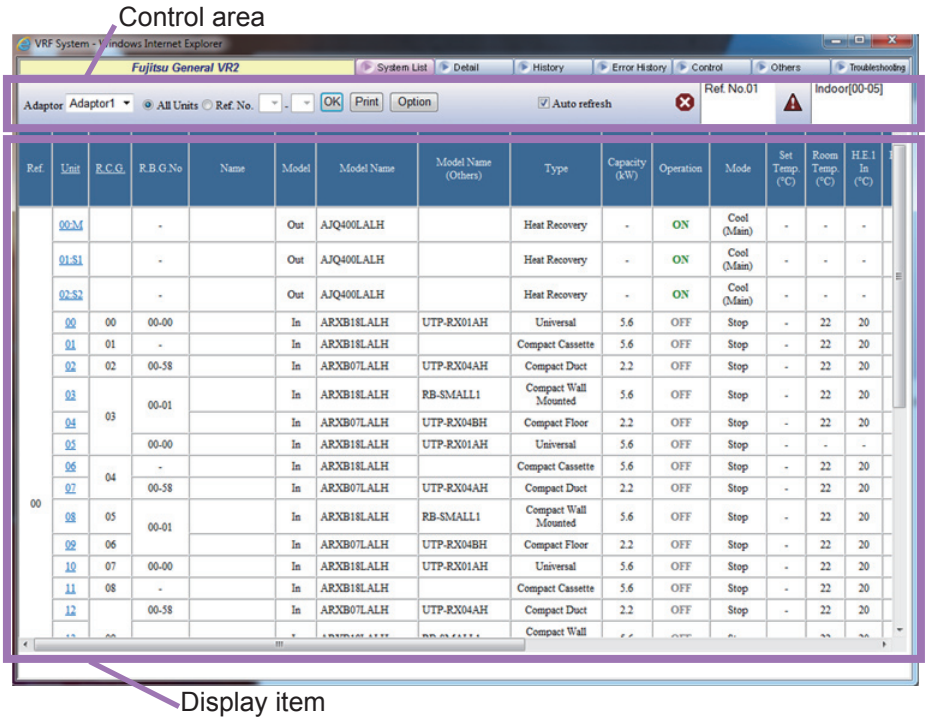
5-4 System list screen

This screen grasps the overall operating status from a list of the status of each unit. When an error unit is detected at this screen, shift to the system detail screen (Refer to "5-5 Detail screen (Diagram)") and then check the detailed status. This screen can also be printed.

5-4-1 Name and function of each area



Control area

Adaptor	Displays the name of the transmission adaptor being used.
All Units	Displays all the units.
Ref. No.	Specifies the refrigerant circuit address (narrow down display)
OK	Specified condition. Refreshes the display screen.
Print	Prints the currently displayed list.
Option	Set whether the column should be displayed or hidden.
Auto refresh	Specifies automatic refreshing of the display data. Checked: Automatically refresh the screen at a 30 seconds interval. Unchecked: Do not automatically refresh the screen.

Display items

Ref.	Displays the refrigerant circuit address
Unit	Displays the unit No. and master / slave operation for outdoor unit. Shifted to unit detail screen of the selected unit No. by click operation.

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R.C.G.	Displays the R.C. Group No.
R.B.G.No.	Displays the R.B. unit group No.
Name	Displays the unit name.
Model	Displays the unit model (Indoor/Outdoor).
Model Name	Displays the model name of the unit. If the model name is with “[ ]” brackets, the name was written after shipment. If the model name is with “( )” brackets, the name was read from the Name master database file.
Model Name (Other)	Displays the model name of the attached unit of the unit.
Type	Displays the unit type.
Capacity	Displays the indoor unit and outdoor unit capacity. However, S and V series outdoor units are not displayed. Indoor unit capacity is displayed in [BTU/h] or [kW] units. Outdoor unit capacity is displayed in [HP] or [ton] , [kW] units. Displays {capacity value} when it is set at step ⑧ of 4-3-1 Display setting.
Operation	Displays the operating status.
Mode	Displays the operating mode.  icon,if displayed, signifies that mode mismatch has occurred due to illegal operation. When “(Auto)” is displayed, operation is linked to the “Auto” mode of the master indoor unit of the refrigerant circuit.
Set Temp.	Displays the setting temperature. (*1)
Room Temp.	Displays the room temperature. (*1)
H.E.1. In	Displays the heat exchanger inlet temperature. (*1)
H.E.1. Mid	Displays the heat exchanger middle temperature. (*1)
H.E.1. Out	Displays the heat exchanger outlet temperature. (*1)
EEV	Displays expansion valve. Units display is [Pulse].
Error	When a unit is currently generating an error, displays [Error]. The troubleshooting screen (refer to "5-15 Others screen (Time Guard Information)") is displayed by clicking.
Special Operation	Displays special operation with icon. Refer “List of icon for special operation” below.
Fan	Displays the fan status. (*2)
V.T. Louver	Displays vertical louver position.
H.Z. Louver	Displays horizontal louver position.
R.C. Prohibition	Displays the R.C. Prohibition setting. * Display whether the “All prohibition” is enabled or disabled.
Time	Displays the newest receiving time of a transmission packet received by the Service Tool. (12-hour display or 24-hour display) (*3) • For summer time, (S) is displayed. Whether or not network communication is performed normally is made the judgment standard.

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Note

*1 Units display is [°C] or [°F]. The display format depends on the setting at the data acquisition application. (Refer to "4-3 Environment setting")

*2 Sometimes, it may take time for the FAN status display to be updated in the System List screen. The delay time is proportional to the number of existing indoor units and may take approximately 2 minutes for 100 indoor units (the time does not have anything to do with the number of indoor units being controlled). In any case, the actual control operation to the indoor units are performed immediately after control operation from the Control screen, only the display delays.

*3 The display format depends on the setting at the data acquisition application.

■ List of icon for special operation

Outdoor unit

ICON	EXPLANATION
	Oil recovery operation
	Maintenance mode
	Emergency stop
	Forced off operation
	Defrost operation
	Night mode operation
	Capacity save operation

Indoor unit

ICON	EXPLANATION
	Freeze prevention operation
	Anti-freeze operation
	Anti-freeze setting
	Maintenance mode
	Master indoor unit
	Operation mode controlled by external unit
	Operation mode controlled by master indoor unit
	Emergency stop
	Energy save operation / Economy operation
	All operations invalid

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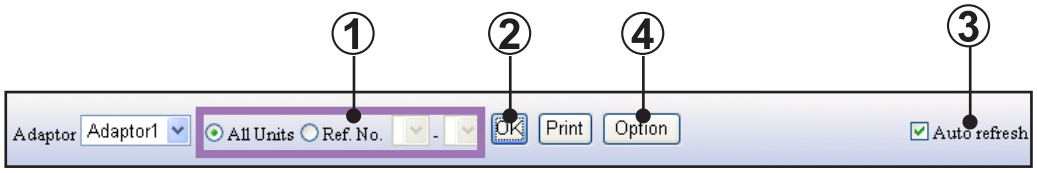
5-4-2 System list display

Only the necessary units can be displayed by specifying the refrigerant circuit range. This is convenient when you want to display only the objective unit in the state in which a large number of units are connected to the system.



① Select the range of the displayed refrigerant circuit. (*1)

② When the OK button is clicked, the display data is refreshed.

③ The system list is automatically refreshed every 30 seconds by checking Auto refresh.

④ Set whether Display item (column) should be displayed or hidden.
Items to be set in the option screen is as follows. When display items are set, they will be displayed on the right side.

Checked …display, Unchecked …hidden

Note *1 When “All Units” is selected, the entire refrigerant circuit is displayed.
When “Ref No.” is selected, a list of only the refrigerant circuit of the specified range is displayed. Specify the range of the refrigerant circuit you want to display.
Select the refrigerant circuit from . The refrigerant circuit currently registered are displayed.

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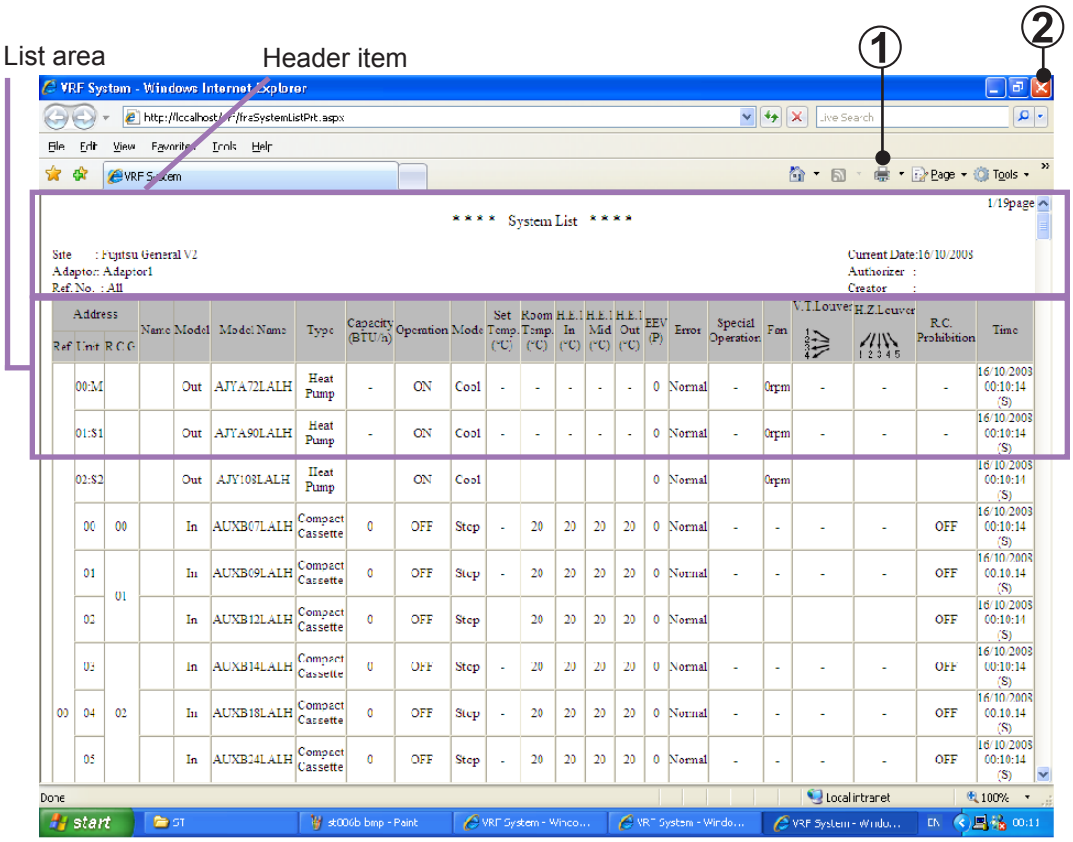
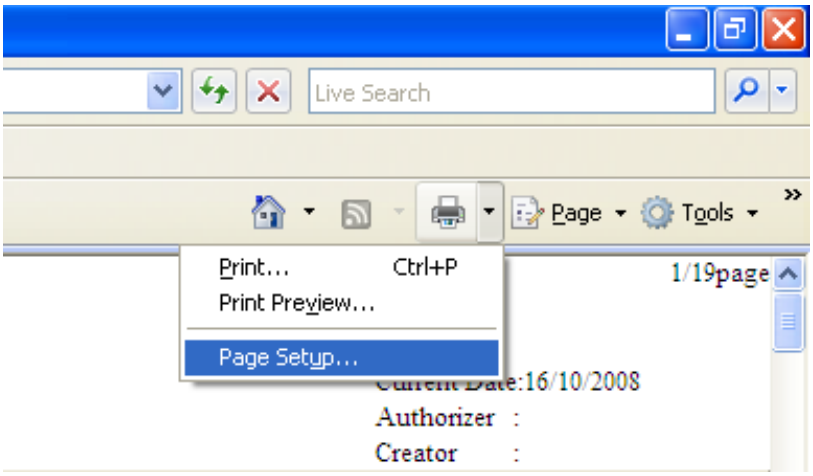
5-4-3 System list printing

A print window of the currently displayed system list is displayed by clicking the Print button of the system list screen.



① Printer setup and printing

Click on the print tool icon on the right upper corner of the screen and select “Page Setup...”.



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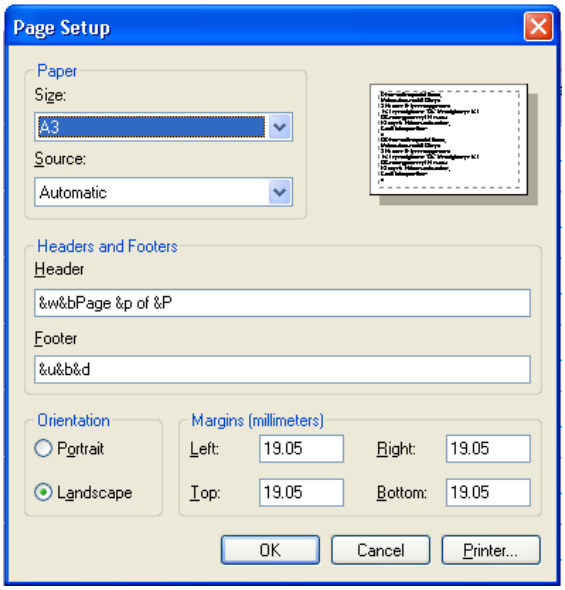
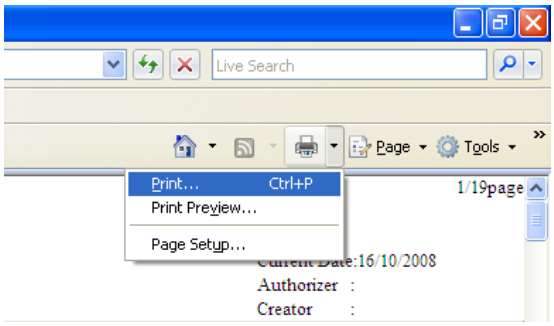
In the Page Setup screen, select the size of the paper as “A3” and the Orientation as “Landscape” and click “OK”. If other option is selected, the print may not come up as good.



Click on the print tool icon on the right upper corner of the screen again and select “Print...” to start printing.



② Close button

When the ☒ button is clicked. the print window closes.

Printing contents

Header item

Site	Displays the site name.
Adaptor	Displays the transmission adaptor name.
Ref No.	Displays the specified refrigerant circuit range.
Current Date	Displays the current date.

List area

List	Displays the system list displayed on the screen.

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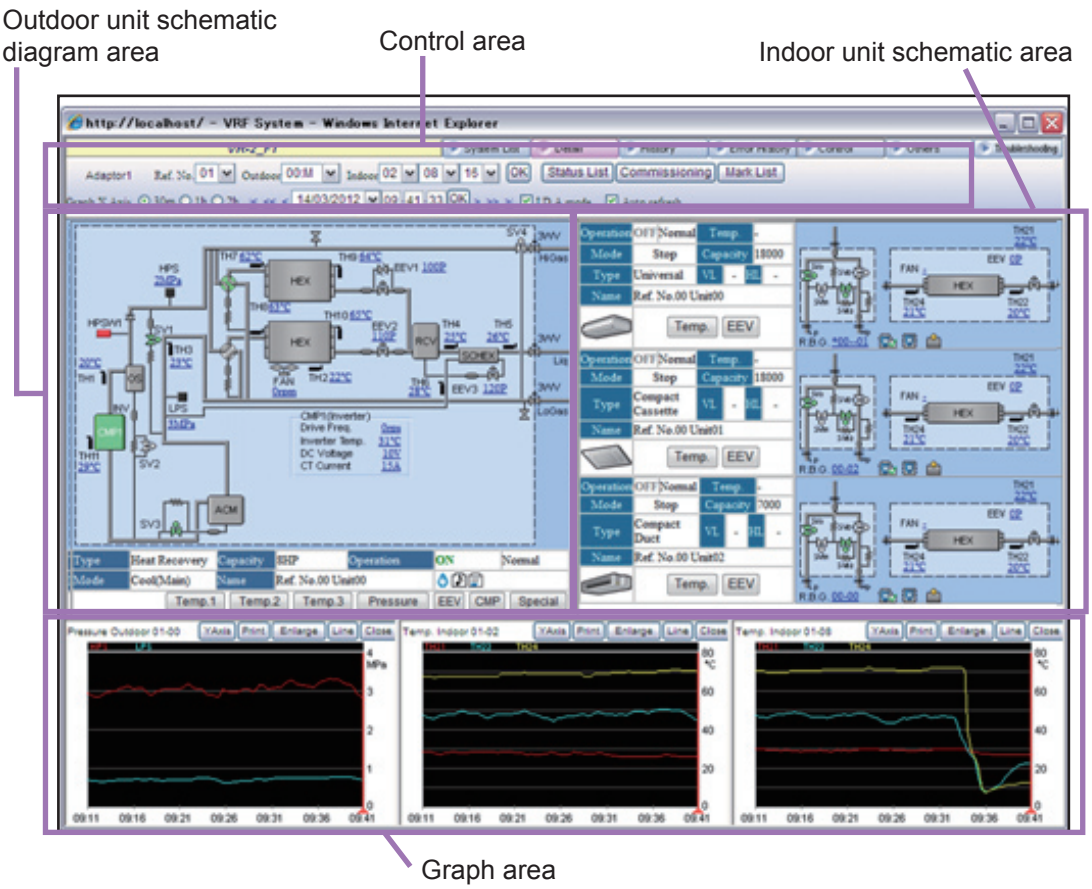
5-5 Detail screen (Diagram)

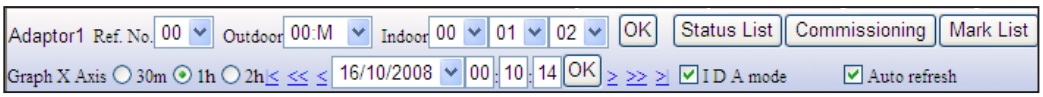
This screen displays the schematic, sensor values, and electrical components operating status of the selected system. At this screen, normal operation checks and cause specification when an error occurs are performed.
The schematic of 1 outdoor unit and 3 indoor units and 3 items graph can be simultaneously displayed.



5-5-1 Name and function of each area

■ Control area

Sets display contents specification and automatic refresh on/off.



Ref. No.	Displays the refrigerant circuit address
Outdoor	Specifies the outdoor unit No. displayed on the schematic.
Indoor	Specifies the indoor unit No. displayed on the schematic. (Up to 3 units can be specified.)
OK	The schematic of the specified unit is reflected on the screen by clicking this OK button after the refrigerant circuit address and unit No. were specified. (*1)

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Commissioning	Starts the commissioning tool. (Refer to "5-7 Commissioning tool")
Status List	Switch to the “Status List screen”. (Refer to "5-6 Detail screen (Status List)")
Mark List	Displays the list of abbreviations.
Graph X Axis	Specifies the X-axis scale of the graph.
<, << , |<	Moves the display time. (Refer to "5-5-2 Schematic specification method")
Date	Specifies the date of the display data.
Time	Displays the acquisition time of the display data. (12-hour display or 24-hour display) (*2) For summer time, (S) is displayed. By inputting time, data for the nearest time will be displayed.
IDA mode	Sets to the Intensive Data Acquisition mode which demands data from the Service Tool to each unit. (*3) The demand interval is set at 5-12-4 Demand interval setup. Checked: Acquires only the refrigeration cycle of the refrigerant system currently displayed. Unchecked: Acquires the refrigeration cycle of all the refrigerant systems.
Auto refresh	Specifies automatic refreshing of the displayed data. Checked: Refresh screen automatically when refrigerant circuit status change. Unchecked: Do not automatically refresh the screen.

Note

*1 When unchecked (no automatic refresh) at “Auto refresh”, each time the OK button is clicked, the screen can be manually refreshed to the newest status.

*2 Time is displayed according to the time format at the regional setting in the Control panel of Windows.

*3 A data demand is sent from the Service Tool at a fixed interval and the data returned by each unit in response to this demand is displayed on the screen.
When checked, since demands are limited to the displayed refrigerant circuits, detailed data collection is possible.
Conversely, a demand is not sent for refrigerant circuits other than the displayed systems. Select this when you want to monitor a specific refrigerant circuit.
When unchecked, demands are sent to the entire system. However, instead of the demand range becoming wide, the data density becomes thin. Set when the system is operating normally and you want to monitor the entire system.

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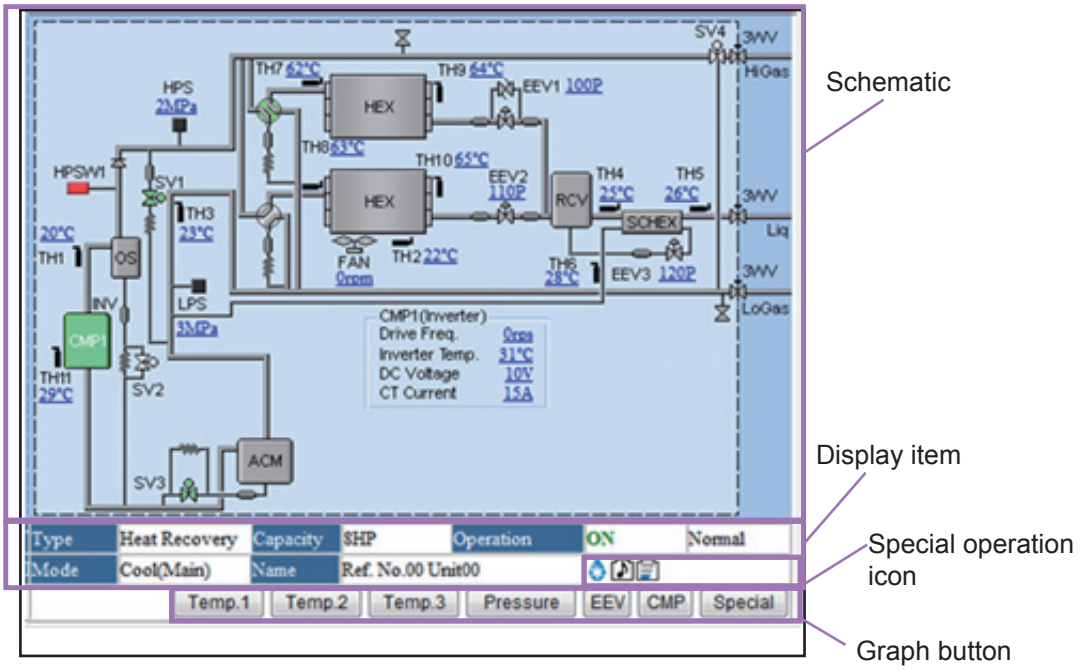
■Outdoor unit schematic area

This area displays the outdoor unit schematic. For the meaning of each symbol, refer to the “Design & Technical Manual”. For the meaning of each item in the schematic, refer to the later schematic /graph display item.



Schematic

Schematic	Displays a schematic of the specified unit. • The schematic depends on the unit.
Compressor 	Displays the compressor status. On: Green Off: Gray
4-way valve/solenoid valve 	Displays the 4-way valve/solenoid valve status. On: Green Off: Gray *The outdoor unit of S series (VRF1/1A) does not change of status. (gray display)

Display items

Type	Displays the unit type.
Capacity	Displays the capacity of outdoor unit. (*1) Units display is [HP] or [ton] , [kW]. Displays {capacity value} when it is set at step ⑧ of 4-3-1 Display setting.
Operation	Displays the operating status (ON/OFF) and unit status (Normal/Error).
Mode	Displays the operating mode.
Name	Displays the unit name. (*2)
Special operation icon	Displays the special operation status using icon. Refer “List of icon for special operation” in P75.

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Note *1 The display format differs depending on the data acquisition application setting. (Refer to “4-3 Environment setting”.)

*2 Only when preset. (Refer to "3-2-4 Name master database file selection screen")

Graph button

The graph corresponding to the clicked button is displayed. Up to 3 graphs can be displayed at the graph area. When you want to display a new graph, but 3 graphs are already displayed, close one of the graphs beforehand.

Temp.1	Displays the 3 temperature graphes at the graph area. For the kinds of temperature displayed in each graph, refer to ■Schematic/ graph display item (P66).
Temp.2	
Temp.3	
Pressure	Displays a pressure graph at the graph area.
EEV	Displays an electrical expansion valve opening rate graph at the graph area.
CMP	Displays the operating status of the compressor at the graph area. For an inverter compressor, the operation frequency is also displayed.
Special	Displays the special operation status at the graph area.

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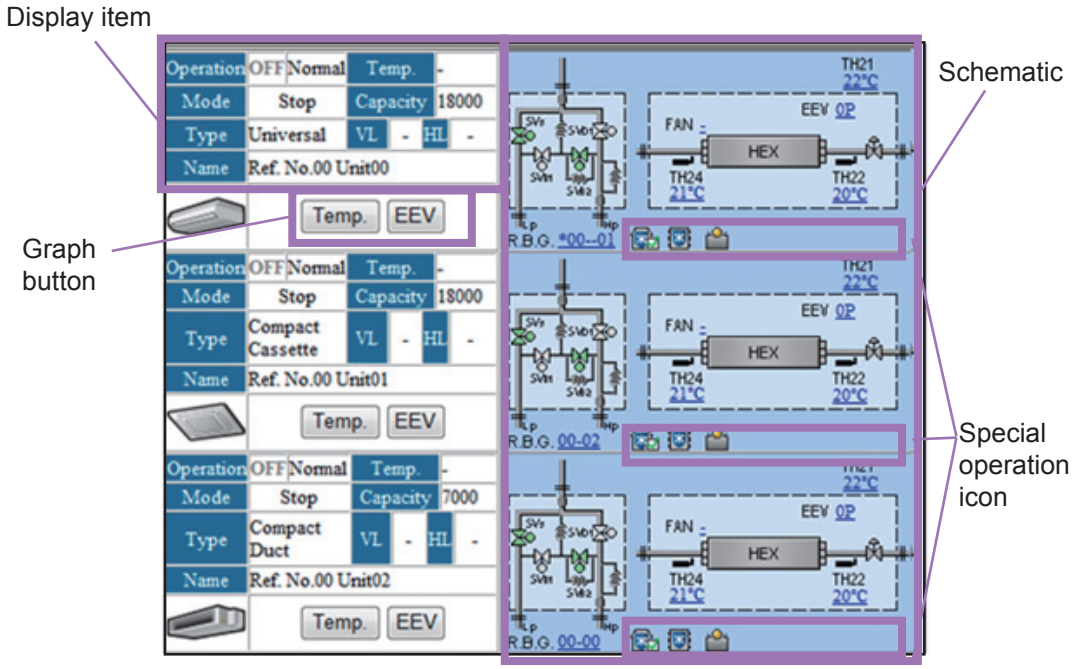
■Indoor unit schematic area

Displays the schematic of up to 3 indoor units selected by control area. For the meaning of each item in the schematic, refer to the later schematic/graph display item.



Display items

Operation	Displays the operating status (ON/OFF) and unit status (Normal/Error).
Mode	Displays the operating mode. (Refer to "5-4-1 Name and function of each area")
Type	Displays the unit type.
Name	Displays the unit name. (*1)
Temp.	Displays the setting temperature. Units display is [°C] or [°F]. (*2)
Capacity	Displays the capacity. Units display is [BTU/h] or [kW]. (*2) Displays {capacity value} when it is set at step ⑧ of 4-3-1 Display setting.
VL	Displays the vertical louver position.
HL	Displays the horizontal louver position.
Indoor Unit Icon 	Displays the status of the indoor units. The display color depends on the status. On: Green Off: Gray Test: Orange On (Error): Red Off (Error): Red Test (Error): Red

Note

*1 Only when preset. (Refer to "3-2-4 Name master database file selection screen")

*2 The display format depends on the setting at the data acquisition application. (Refer to "4-3 Environment setting")

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Graph button

The graph corresponding to the clicked button is displayed. Up to 3 graphs can be displayed at the graph area. When you want to display a new graph, but 3 graphs are already displayed, close one of the graphs beforehand.

Temp	Displays a temperature graph at the graph area.
EEV	Displays an electrical expansion valve pulse value at the graph area.

Schematic

Schematic	Displays the schematic of the specified units. Up to 3 units can be displayed. The R.B. unit status will only be displayed beside the refrigerant circuit when the system type is heat recovery.
Special operation icon	Displays the special operation status using icon. Refer “List of icon for special operation in P75.”

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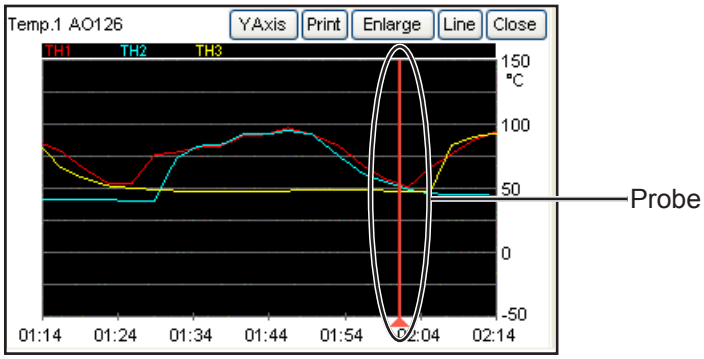
■ Graph area

Graphs are displayed by clicking each button of the control item from the indoor unit/outdoor unit schematic area.



Name	The graph item/unit name (if set) are displayed at the top left-hand corner of the graph area.
YAxis	Upper and lower limit of Y axis of the graph may arbitrary be set (*1). Allowable range for each graph types is as follows. • Temp: -75~185 °C/-103~365 °F • Pressure: 0~5 Mpa/-145~730 psi • EEV: 0~2000 Pulse • CMP: 0~300 rps(Hz)
Print	Displays the print confirmation window. (*2)
Enlarge	Enlarges and displays a graph. (*2)
Line	Displays the graph line selection screen. (*2)
Close	Closes the graph.
Probe	The probe is moved to the left and right by dragging it with the mouse. The unit status received at the past time at the probe position is reflected on the schematic. When a past unit status is referenced, the “Auto refresh” check mark is automatically removed. (*3)

Note

*1 For details, refer to the next clause (Graph area details).

*2 When displaying the files created by previous version of this product (Ver. 1.1:mdb files) in offline mode, indoor and outdoor unit data corresponding to the time position of the probe may not synchronize. This is because in previous version, the data collecting method of the Service Tool was different from the present version.

*3 After upper and lower limit is set, scale for the Y axis will evenly be apportioned. Therefore, the scale may slightly be different from the actual value.

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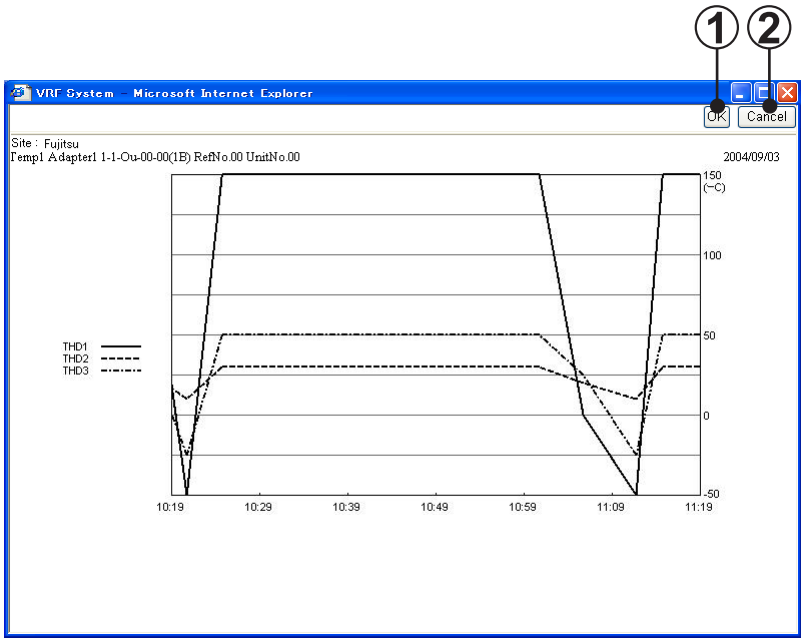
■Graph area details

- Graphs can be printed by clicking the Print button.

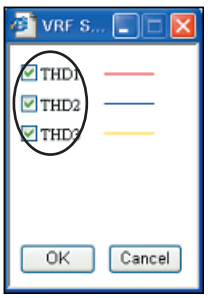
① OK button
Start printing by clicking the OK button.

Since a print confirmation screen is displayed, follow the instructions displayed on the screen. Set the printing form in the horizontal direction.

② Cancel button
Close the print window without printing by clicking the Cancel button.



- The graph is vertically enlarged 2 times and displayed by clicking the Enlarge button.
- The graph line selection screen is displayed by clicking the Line button.
  Graph display/hide can be set by checking/unchecking.
  For the meaning of each item displayed on the graph line selection screen, refer to the later schematic/graph display item.



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■ Schematic/graph display item

Shows the item names and contents displayed on the schematic and graph screens. The items in the graph button field can be graphically displayed with the graph button of the relevant name. However, there are also items which may not be displayed, depending on the unit series (S / V / V-II / J-II /J-IIS / VR-II/V-III) and unit type (cooling only / heat pump / heat recovery).

- Outdoor unit

S	V	V-II	J-II	J-IIS	VR-II	V-III	Кнопка График	Описание
CMP1							CMP	Compressor 1
CMP2			—				CMP	Compressor 2
CMP3		—					CMP	Compressor 3
HEX							—	Heat exchanger
Fan			Fan1/ Fan2	FAN			—	Outdoor fan
ACM							—	Accumulator
RCV		—			RCV		—	Receiver tank
OS				—	OS		—	Oil separator
—	SCHEX			—	SCHEX		—	Sub cool heat exchanger
HPS							Pressure	High pressure sensor
MPS	—						Pressure	Middle pressure sensor
LPS							Pressure	Low pressure sensor
4WV1	4WV					4WV1	—	4-way valve 1
4WV2	—				4WV	4WV2	—	4-way valve 2
4WV3	—					4WV3	—	4-way valve 3
4WV4	—						—	4-way valve 4
EEV1							EEV	Electrical expansion valve 1
EEV2				—	EEV2		EEV	Electrical expansion valve 2
EEV3	—				EEV3		EEV	Electrical expansion valve 3
—	SV1		—		SV1		—	Solenoid valve 1
—	SV2						—	Solenoid valve 2

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S	V	V-II	J-II	J-IIS	VR-II	V-III	Кнопка График	Описание
—	SV3		—		SV3		—	Solenoid valve 3
—	SV4	—			SV4		—	Solenoid valve 4
—	SV5		—				—	Solenoid valve 5
—	SV6		—				—	Solenoid valve 6
—	SV7	—					—	Solenoid valve 7
—	SV8	—					—	Solenoid valve 8
THD1	TH1						Temp.1	Discharge temperature 1
THD2	TH2		—				Temp.1	Discharge temperature 2
THD3	TH3	—					Temp.1	Discharge temperature 3
THHI1	—	TH5			—		Temp.3/2	Heat exchanger inlet temperature 1 (S/V) Heat exchanger temperature (V-II/J-II/J-IIS/ VR-II/V-III)
THHI2	—						Temp.3	Heat exchanger inlet temperature 2
THHI3	—						Temp.3	Heat exchanger inlet temperature 3
THHO1	TH4	—					Temp.3/2	Heat exchanger outlet temperature 1
THHO2	—						Temp.3	Heat exchanger outlet temperature 2
THHO3	—						Temp.3	Heat exchanger outlet temperature 3
—	TH5	—					Temp.3	Receiver low level temperature
—	TH6	—					Temp.3	Receiver middle level temperature

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S	V	V-II	J-II	J-IIS	VR-II	V-III	Кнопка График	Описание
—	TH7	—					Temp.3	Receiver high level temperature
—	TH8			—			Temp.3	SCHEX inlet temperature
—	TH9	TH6	—		TH4		Temp. 2/3	Liquid temperature 1
—	TH10	TH7		—	TH5		Temp. 2/3	Liquid temperature 2
THS	TH11	TH4			TH3		Temp. 2/3	Suction temperature
THO	TH12	TH3			TH2		Temp. 2/3	Outdoor temperature
—	TH13	TH9		—	TH6		Temp.3	SCHEX outlet temperature
—	—	TH10			TH11		Temp.1	Displays shell temperature (Invertor Comp.)
—	—	TH11	—				Temp.1	Displays shell temperature (Constant rate Comp.)
—					TH7		Temp. 2	Heat exchanger 1 gas thermistor
—					TH8		Temp. 2	Heat exchanger 2 gas thermistor
—					TH9		Temp. 2	Heat exchanger 1 liquid thermistor
—					TH10		Temp. 2	Heat exchanger 2 liquid thermistor
3WV			—	3WV			—	3-way valve
BV	—						—	Ball valve
SP			—				—	Service port
HP	—	HPSW1		—	HPSW1		—	High-pressure switch1
—	—	HPSW2	—				—	High-pressure switch2
LP	—						—	Low-pressure switch
—	Drive Freq. (Hz)	Drive Freq.(rps)					CMP	Displays drive frequency

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S	V	V-II	J-II	J-IIS	VR-II	V-III	Кнопка График	Описание
—	Inverter Temp.(°C/°F)						—	Displays IGBT temperature.
—	DC Voltage(V)						—	Displays DC voltage
—	CT Current(A)						—	Displays CT current

- Indoor unit

S	V	V-II/J-II/J-IIS/ V-III	VR-II	Graph button	Description
EEV1	EEV		EEV	EEV	Electrical Expansion valve
MAX	—			—	Displays maximum EEV value.
THOA	—	TH25		Temp	Outlet temperature
THIA	TH21	Room Temp.		Temp	Room temperature
THHI	TH22		TH22	Temp	Heat exchanger inlet temperature
THHM	TH23	—		Temp	Heat exchanger middle temperature
THHO	—	TH24		Temp	Heat exchanger outlet temperature
—		TH21		Temp	Inlet temperature
—		SV21		—	Bypass solenoid valve
SVD	—		SV1	—	Discharge solenoid valve (For R.B. unit)
SVS	—		SV4~6	—	Suction solenoid valve (For R.B. unit)
SVB	—		SV3	—	Bypass 1 solenoid valve (For R.B. unit)
—			SV2	—	Bypass 2 solenoid valve (For R.B. unit)

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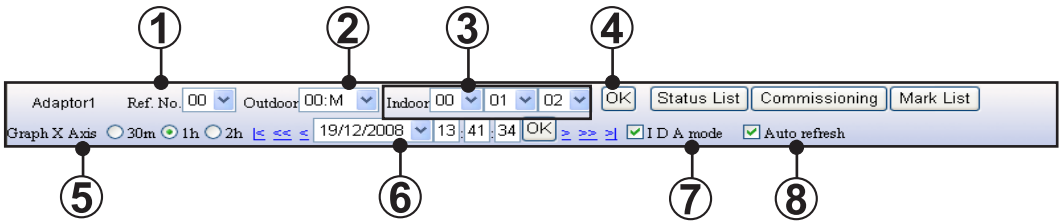
5-5-2 Schematic specification method

The refrigerant circuit, outdoor unit, and indoor unit are specified at the control area and the schematic is displayed. The graph X-axis/display date are also changed and the screen is refreshed.



① Specifies the refrigerant circuit.

② Selects the outdoor unit.

③ Selects the indoor units. (Up to 3 indoor units can be selected.)

④ When the OK button is clicked, the schematic display is refreshed. (*1)

⑤ Changes the X-axis time. Select from Graph X Axis 30m 1h 2h . (*2)

⑥ Displays the data of the specified date/time. (*3)
Select the date from 14/10/2004 .
Change the time by the following method.

≤ & ≥	Shift the time 1 graduation.
≪ & ≫	Shift the time 1 axis.
|≤ & ≥|	Shift up to the first or last data acquisition time of the specified date.
02 : 58 : 24	By inputting time, data for the nearest time will be displayed.

⑦ Demands are sent to the currently displayed refrigerant circuit in a concentrated manner by checking ☐ I D A mode . When you want to monitor units at a shorter interval, check mark the box.

⑧ Automatically refresh the screen at a 30 seconds interval by checking ☐ Auto refresh .

Note

*1 The latest date/time are displayed.Only when preset.

*2 The X-scale of the graph is changed by selection. (Default 1h)

*3 The dates at which there is data are displayed in a list and can be selected. When the date/time was changed and the schematic was displayed, the check mark is removed from “Auto refresh”.

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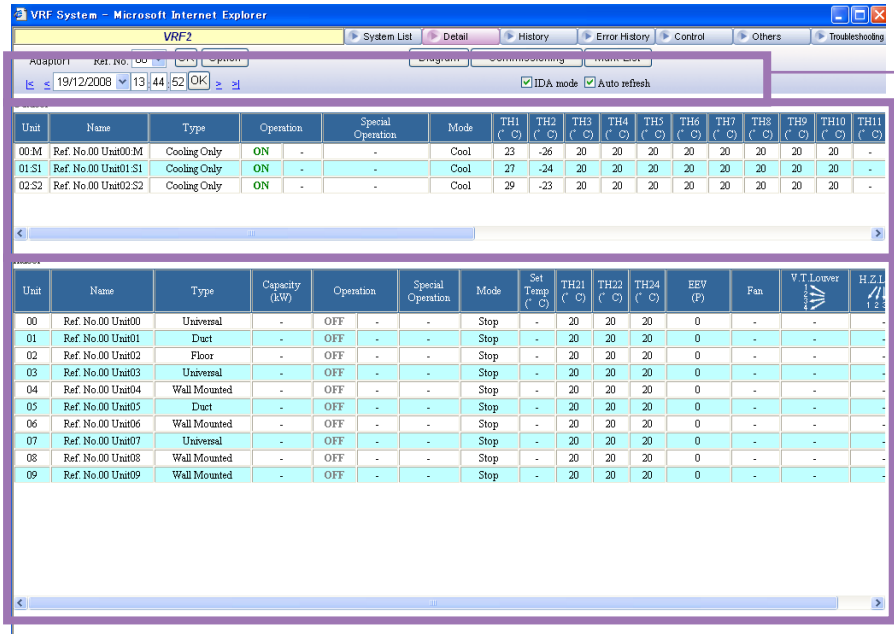
5-6 Detail screen (Status List)

The Status List is started with the Status List button of the detail screen control area.
Status list screen will be switched from the diagram screen by clicking the “Status list” button in the detail screen area.
In this screen, detail data for all the units in the specified refrigerant circuit will be displayed at a certain point of time.



Unit	Name	Type	Operation		Special Operation	Mode	TH1 (°C)	TH2 (°C)	TH3 (°C)	TH4 (°C)	TH5 (°C)	TH6 (°C)	TH7 (°C)	TH8 (°C)	TH9 (°C)	TH10 (°C)	TH11 (°C)
00:M	Ref. No.00 Unit00:M	Cooling Only	ON	-	-	Cool	23	-26	20	20	20	20	20	20	20	20	-
01:S1	Ref. No.00 Unit01:S1	Cooling Only	ON	-	-	Cool	27	-24	20	20	20	20	20	20	20	20	-
02:S2	Ref. No.00 Unit02:S2	Cooling Only	ON	-	-	Cool	29	-23	20	20	20	20	20	20	20	20	-

Unit	Name	Type	Capacity (kW)	Operation		Special Operation	Mode	Set Temp (°C)	TH21 (°C)	TH22 (°C)	TH24 (°C)	EEV (P)	Fan	V.T.Louver	H.Z.L
00	Ref. No.00 Unit00	Universal	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
01	Ref. No.00 Unit01	Duct	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
02	Ref. No.00 Unit02	Floor	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
03	Ref. No.00 Unit03	Universal	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
04	Ref. No.00 Unit04	Wall Mounted	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
05	Ref. No.00 Unit05	Duct	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
06	Ref. No.00 Unit06	Wall Mounted	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
07	Ref. No.00 Unit07	Universal	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
08	Ref. No.00 Unit08	Wall Mounted	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-
09	Ref. No.00 Unit09	Wall Mounted	-	OFF	-	-	Stop	-	20	20	20	0	-	-	-

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5-6-1 Name and function of each area

■ Control area

Sets display contents specification.

Ref.No.	Displays the refrigerant circuit address Also, any refrigerant circuit address may be specified and be switched to.
OK	Fix the Ref. No. and the date / time of the data to be displayed.
≤ & ≥	Shift up to the first or last data acquisition time of the specified date.
< & >	Shift the time 1 graduation.
Date/Time	Date/time for the data currently displayed will be shown. By specifying specific date and time, any data may be displayed.
Option	Set whether Display item (column) should be displayed or hidden. Items to be set in the option screen is as follows. When display items are set, they will be displayed on the right side. Checked … display, Unchecked … hidden
IDA mode	Sets to the Intensive Data acquisition mode which demands data from the Service Tool to each unit. Checked: Demand output only for the displayed refrigerant circuit. Unchecked: Demand output for the entire system.
Auto refresh	Specifies automatic refreshing of the displayed data. Checked: Automatically refresh the screen at a 30 seconds interval. Unchecked: Do not automatically refresh the screen.
Diagram	This will switch to the Diagram screen. (Refer to "5-5 Detail screen (Diagram)")
Commissioning	Starts the commissioning tool. (Refer to "5-7 Commissioning tool")
Mark List	Displays the list of abbreviations.

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■Outdoor unit status area

Display the following operation status of each outdoor unit according to the condition given in the Control area.

Unit	Displays the unit No.
Name	Displays the unit name.
Type	Displays the unit type.
Capacity	Displays the capacity of outdoor unit. Units display is [HP] or [ton] , [kW]. When the capacity value set by each unit is displayed, it is displayed by {capacity value}.
Operation	Displays the operating status (ON/OFF) and unit status (Normal/Error).
Special operation	Displays special operation.(*1)
Mode	Displays the operating mode.

* For other information, refer to the "5-8-1 Name and function of each area", display item (Outdoor unit).

*1 For the meaning of the displayed icons, refer, icon list below

■Indoor unit status area

Display the following operation status of each indoor unit according to the condition given in the Control area.

Unit	Displays the unit No.
Name	Displays the unit name.
Type	Displays the unit type.
Capacity	Displays the capacity. Units display is [BTU/h] or [kW]. When the capacity value set by each unit is displayed, it is displayed by {capacity value}.
Operation	Displays the operating status (ON/OFF) and unit status (Normal/Error).
Special operation	Displays special operation.(*1)
Mode	Displays the operating mode. (Refer to "5-4-1 Name and function of each area")
Set Temp.	Displays the setting temperature. Units display is [°C] or [°F].
Fan	Displays the fan status.
V.T. Louver	Displays vertical louver position.
H.Z. Louver	Displays horizontal louver position.

* For other information, refer to the "5-8-1 Name and function of each area", display item (Indoor unit).

*1 For the meaning of the displayed icons, refer, icon list below

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■ List of icon for special operation

Outdoor unit

ICON	EXPLANATION
	Oil recovery operation
	Maintenance mode
	Emergency stop
	Forced off operation
	Defrost operation
	Night mode operation
	Capacity save operation

Indoor unit

ICON	EXPLANATION
	Freeze prevention operation
	Anti-freeze operation
	Anti-freeze setting
	Maintenance mode
	Master indoor unit
	Operation mode controlled by external unit
	Operation mode controlled by master indoor unit
	Emergency stop
	Energy save operation / Economy operation
	All operations invalid

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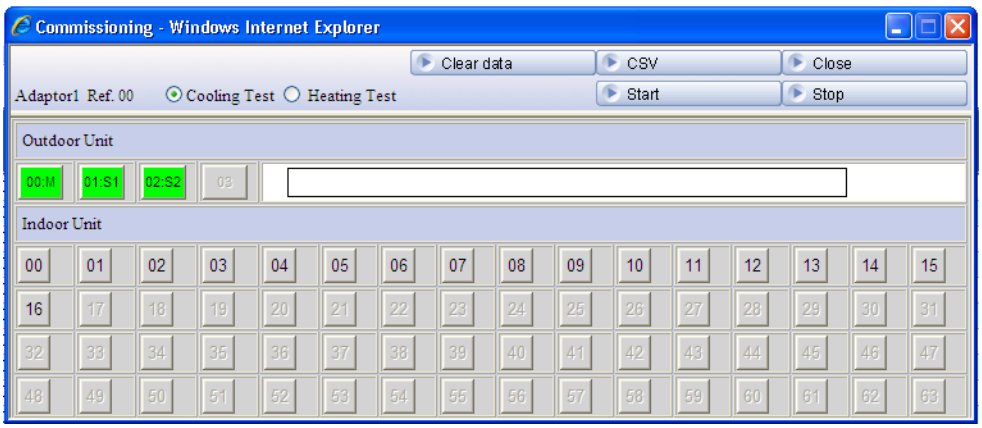
5-7 Commissioning tool

The commissioning tool is started with the Commissioning button of the detail screen control area.
Test run commands can be executed with the commissioning tool. During test running, the outdoor unit/indoor unit sensor data can be saved (commissioning log data). After the end of test running, this data can be exported in CSV file format.
The exported CSV file can be used in commissioning report generation by reading the CSV file by Excel or other spreadsheet application.
The commissioning screen is automatically refreshed and the latest status is displayed every 30 seconds.

5-7-1 Name and function of each area

■ Control area (initial display)



Ref No.	Displays the refrigerant circuit address.
Test Pattern Select	Selects “Cooling Test” / “Heating Test” . When selection is switched, unit button selections are all reset.
Clear data	Clears all the commissioning log data of the displayed refrigerant circuit.
CSV	Creates the commissioning log data to an arbitrary file as a CSV file.
Close	Closes the commissioning tool screen. Test running is not stopped at exiting.
Stop	Executes a stop command for all the indoor units of the relevant refrigerant circuit.
Start	Executes the test run command for the selected unit. After the Start button was clicked, unit button selection cannot be changed. If there is even 1 indoor unit currently being operated by control, etc. from another unit, test run commands cannot be executed. Use the Stop button and stop all the units in advance.

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Unit Name Display Area	When a unit name is registered, and the mouse cursor is aligned with the unit button, that unit name is displayed. (Only when set)
Unit Button (outdoor unit)	Represents the current status by character color and back ground color. (*1) When 1 outdoor unit button is selected, other outdoor unit buttons can be simultaneously selected.
Unit Button (indoor unit)	Represents the current status by character color and back ground color. (*1) Multiple indoor unit buttons can be simultaneously selected.
Commissioning Log Data Yes/No Display Area	Displays whether or not there is commissioning log data for each unit. (*2)

Note

*1 Unit button display status (indoor unit/outdoor unit)

Display		Status
	Character color (black)	Unselected state
	Character color (Red: Bold & italic)	Selected state
	Button color (green)	(Indoor unit) Running (Outdoor unit) Unit running or thermostat on
	Button color (gray)	(Indoor unit) Stopped (Outdoor unit) Unit stopped or thermostat off

*2 Commissioning log data yes/no display status

Display		Status
	Background color (blue)	Commissioning log data of the unit of the currently selected test pattern.
	Background color (gray)	No commissioning log data of unit of the currently selected test pattern

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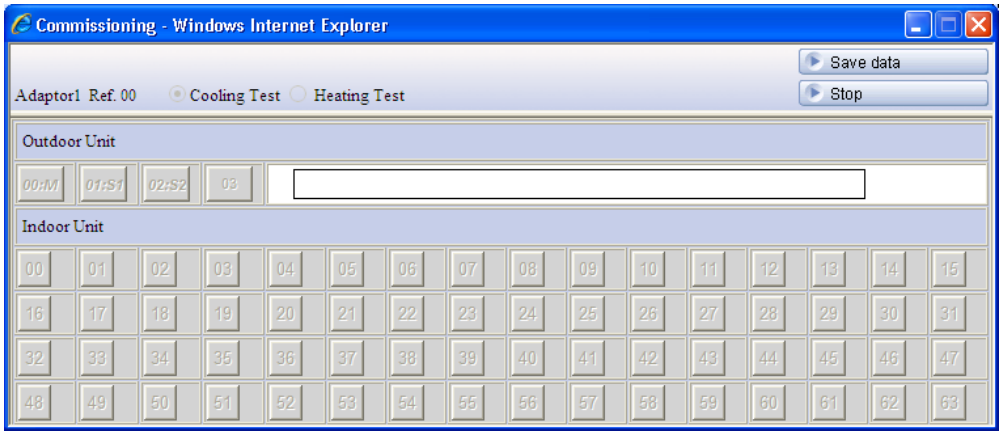
■Control area (after run command)



Save data	Saves the sensor data of the test running unit to the commissioning log data. The commissioning log data is saved for each Test Pattern.
Stop	Stops test running of the relevant refrigerant circuit and returns to the initial display.
Unit Button	After run command, enters the unselectable state. For units which performed a test run, the button color is displayed in green.

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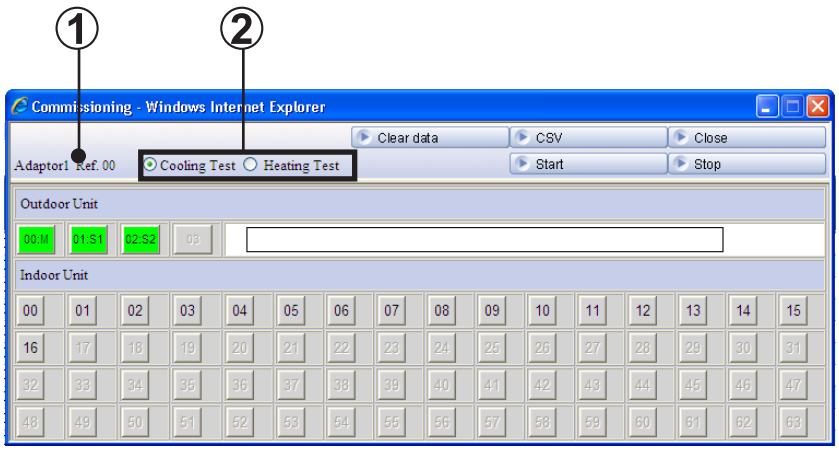
5-7-2 Operating procedure

Selects the test items and the units to be tested from all the units stopped status.

① Check the refrigerant circuit address to which the units which are to be test run at “Ref.” on the screen.
Since the refrigerant circuit address specified at the detail screen is displayed here, when making changes, after re-specifying by 5-5 Detail screen and clicking the OK button, start the commissioning tool.

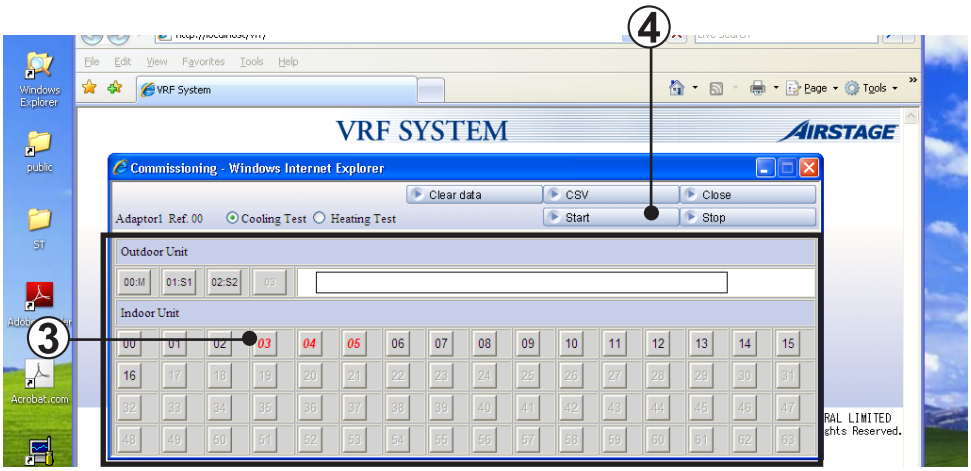
② Select the test pattern according to the item to be test run.
For test run by cooling, select “Cooling Test” and for test run by heating, select “Heating Test”.



③ Select the unit which is to start test run. Select the unit by clicking the button of the relevant unit No.
The selected unit is displayed by a red italic numeric.

For outdoor units, when any button is selected, all the indoor units also enter the selected state. For indoor units, when any button is selected, all the units that belong to the same R.C. group as the selected unit No. also enter the selected state.

④ When the Start button is clicked in the units selected state, test run is started.



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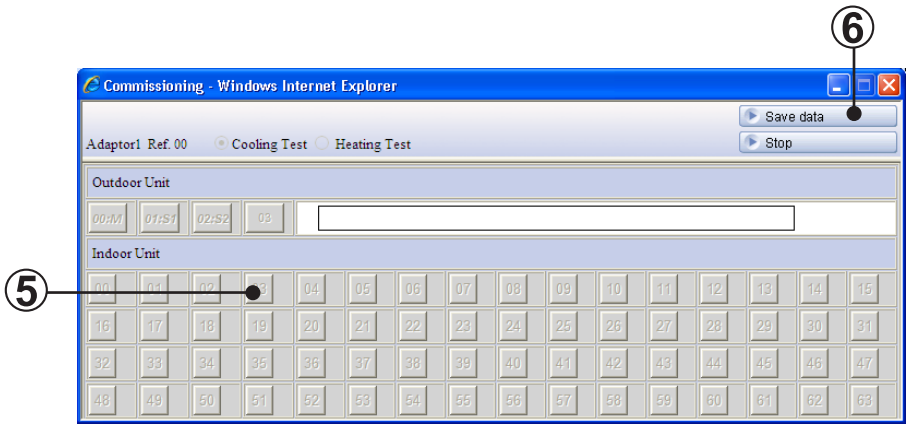
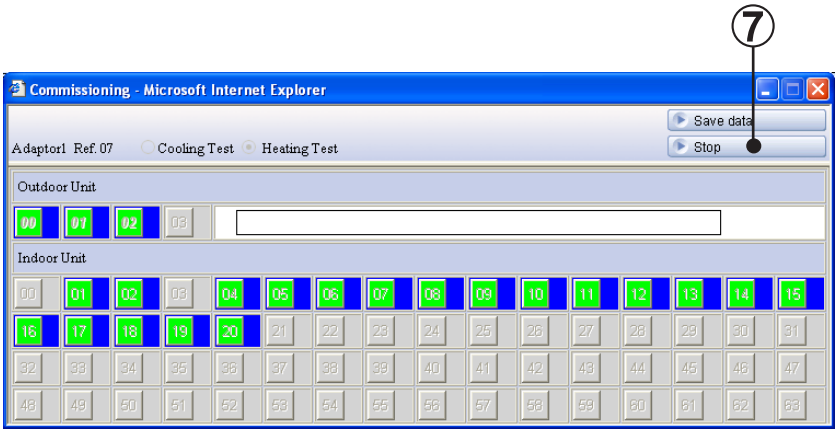
⑤ The button of units that have entered the test run state is displayed in green.
When an indoor unit was selected and started, the selected indoor units enter the test run state. When an outdoor unit was selected and started, all the indoor units enter the test run state.

After test run starts, new test run objective units cannot be added. Perform test run stop of ⑦ , clear the commissioning log data of ⑨ , as required, and repeat operation from the initial state.



⑥ The commissioning log data of the selected units (italic bold characters) is saved by clicking the Save data button. On the screen, the background color of the unit No. that generated the commissioning log data changes to blue.



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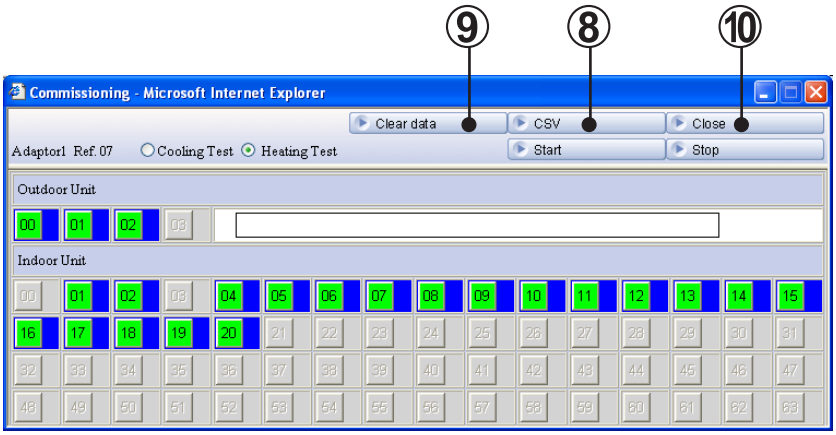
⑦ Test run can be stopped by clicking the Stop button.
The display returns to the initial screen, but the commissioning log data cannot be cleared. (The background color of the unit Nos. at which there is commissioning log data remains blue.)



⑧ A CSV file for generating a commissioning report can be saved to an arbitrary folder by clicking the CSV button in the state of the unit which generated the commissioning log data. (For the commissioning report generation method, refer to "5-7-3 Commissioning report generation".)

Note The separation character among items at CSV file creation can be changed arbitrarily. For details, refer to “5-14 Others screen (Display setting)”.

⑨ The commissioning log data can be cleared by clicking the Clear data button. When the commissioning log data is cleared, the background color returns to gray.

⑩ End the commissioning tool by clicking the Close button.
However, units which are test running are not stopped.

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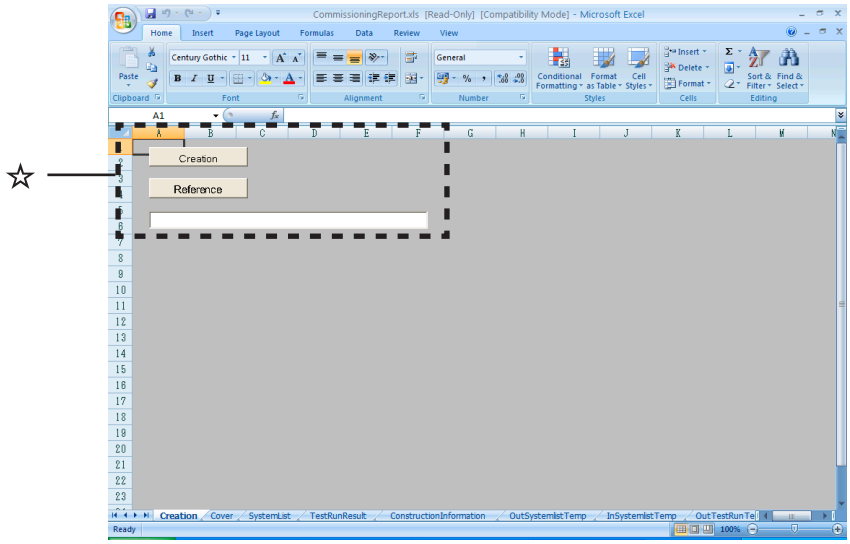
5-7-3 Commissioning report generation

There is a template to easily generate a commissioning report. (*1)
A commissioning report can be easily generated by reading the CSV file generated by the commissioning tool to this template.

① Since there is a template named “CommissioningReport.xls” at C:\Program Files\VRF System\Service Tool, open that file with Excel. (*1)

② Display the started Excel “Creation” sheet.
A screen like that shown below is displayed. (*2)



Overview of each sheet

Creation	This screen is used to specify the read CSV file and execute commissioning report generation.
Cover	Commissioning report cover (*3)
SystemList	System list
TestRunResult	Test run result
ConstructionInformation	Construction information (*3)
OutSystemListTemp	System list template (outdoor unit)
InSystemListTemp	System list template (indoor unit)
OutTestRunTemp	Test run result template (outdoor unit)
InTestRunTemp	Test run result template (indoor unit)
DataSheet	Temporarily saves the CSV data. This sheet is used in report generation processing.

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☆ Enlarge

③ Specify the read CSV file by full path.
A file reference dialog box is displayed by clicking the Reference button.

When a file other than a CSV file created by commissioning tool was specified when the path is incorrect, a commissioning report is not generated.

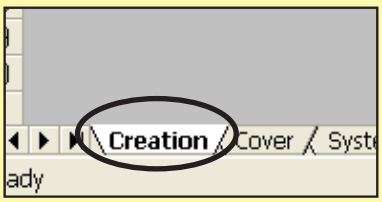
Specify the correct file.

④ Create “SystemList” and “TestRunResult” which read the CSV file specified at ③ by clicking the Creation button.

Note

*1 This template is created by Excel spreadsheet program.
Excel must be purchased separately.
When opening the file, you may be asked if you want to enable macro, depending on the security level set within Excel. In such cases, select “Enable Macros”.
[SystemListTemplate.xls] is in the folder specified when installing the Service Tool. When an address other than the default installation address was specified, check that folder.
When OS is 64 bit, the folder is C:\Program Files(x86)\VRF System\ServiceTool\.

*2 When you want to change the displayed sheet, click the sheet heading at the bottom of the screen. (See the following figure.)



*3 Since generation is not automatic, the necessary items are inputted manually.

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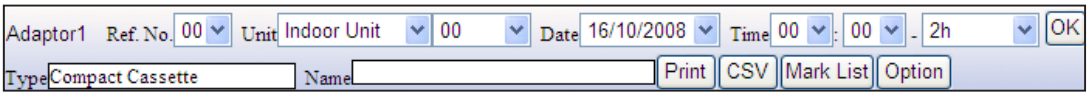
5-8 Operation history screen

The indoor units or outdoor unit operation history is displayed for each unit.
The displayed operation history can be printed and saved to a CSV file.
History display can display up to 500 items for the specified period.

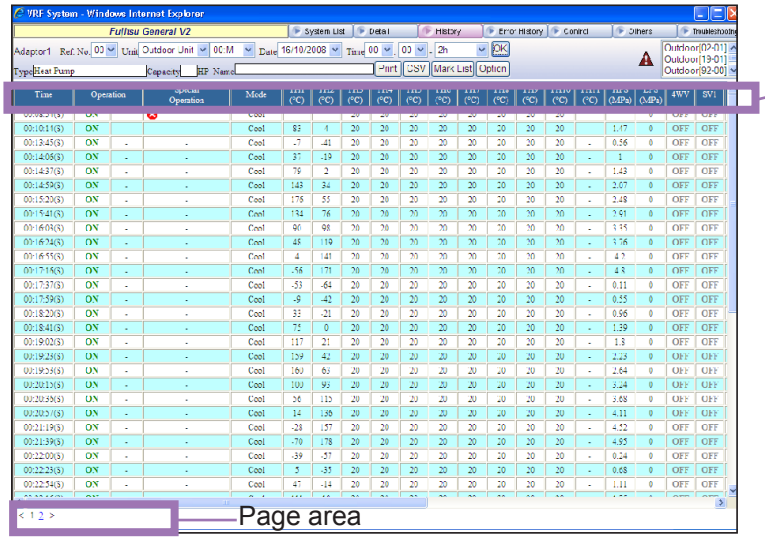
5-8-1 Name and function of each area

■Control area (common)



Ref. No.	Specifies the refrigerant circuit address
Unit	Switches outdoor unit/indoor unit and selects the unit No.
Date	Specifies the date of the history data to be displayed.
Time	Specify the time range of the history data to be displayed.
OK	Displays the data of the unit of the specified conditions.
Type	Displays the unit type.
Capacity	Displays the capacity of outdoor unit.
Name	Displays the unit name.
Print	Displays a print window.
CSV	Displays the CSV save window.
Mark List	Displays the list of abbreviations.
Option	Set whether Display item (column) should be displayed or hidden.

■Outdoor unit



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- Display item

S	V	V-II	J-II	J-IIS	VR-II	V-III	Description
Time							Displays the data acquisition time. (*1) For summer time, (S) is displayed.
Operation							Displays the operating status/ unit status
—		Special operation					Displays special operation in icon. Refer “Icon list for special operation”.
Mode							Displays the operating mode
THD1	TH1						Displays discharge temperature 1. (*2)
THD2	TH2		—				Displays discharge temperature 2. (*2)
THD3	TH3	—					Displays discharge temperature 3. (*2)
THHI1	—	TH5			—		Displays heat exchanger inlet temperature 1. (S/V) Displays heat exchange temperature (V-II/J-II/J-IIS/VR-II/ V-III). (*2)
THHI2	—						Displays heat exchanger inlet temperature 2. (*2)
THHI3	—						Displays heat exchanger inlet temperature 3. (*2)
THHO1	TH4	—					Displays heat exchanger outlet temperature 1. (*2)
THHO2	—						Displays heat exchanger outlet temperature 2. (*2)
THHO3	—						Displays heat exchanger outlet temperature 3. (*2)
—	TH5	—					Displays receiver low level temperature. (*2)
—	TH6	—					Displays receiver middle level temperature. (*2)
—	TH7	—					Displays receiver high level temperature. (*2)
—	TH8		—				Displays the SCHEX inlet temperature. (*2)
—	TH9	TH6	—		TH4		Displays liquid temperature 1. (*2)
—	TH10	TH7	—		TH5		Displays liquid temperature 2. (*2)
THS	TH11	TH4			TH3		Displays the suction temperature. (*2)
THO	TH12	TH3			TH2		Displays the outdoor temperature. (*2)
—	TH13	TH9	—		TH6		Displays the SCHEX outlet temperature. (*2)
—		TH10			TH11		Displays shell temperature (Invertor comp.)
—		TH11	—				Displays shell temperature (Constant rate comp.)

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S	V	V-II	J-II	J-IIS	VR-II	V-III	Description
—					TH7		Heat exchange 1 gas temperature
—					TH8		Heat exchange 2 gas temperature
—					TH9		Heat exchange 1 liquids temperature
—					TH10		Heat exchange 2 liquids temperature
HPS							Displays high pressure. (*3)
LPS							Displays low pressure. (*3)
MPS	—						Displays middle pressure. (*3)
—	4WV				4WV1/ 4WV2	4WV1/ 4WV2/ 4WV3	Displays 4-way valve status.
—	SV1		—		SV1		Displays solenoid valve 1 status.
—	SV2						Displays solenoid valve 2 status.
—	SV3		—		SV3		Displays solenoid valve 3 status.
—	SV4	—			SV4		Displays solenoid valve 4 status.
—	SV5		—				Displays solenoid valve 5 status.
—	SV6		—				Displays solenoid valve 6 status.
—	SV7	—					Displays solenoid valve 7 status.
—	SV8	—					Displays solenoid valve 8 status.
—							Displays solenoid valve 9 status.
CMP1							Displays compressor 1 status.
CMP2			—				Displays compressor 2 status.
CMP3		—					Displays compressor 3 status.
—		HPSW1					Displays high pressure switch 1
—		HPSW2	—				Displays high pressure switch 2
Fan		Fan1	Fan1/ Fan2	Fan1			Displays the fan status.(rpm)
—		FAN-STATE1	FAN-STATE 1/2	FANSTATE1			Displays the fan status.(On/ Off)
EEV1							Displays electrical expansion valve 1 status.
EEV2				—	EEV2		Displays electrical expansion valve 2 status.
EEV3	—				EEV3		Displays electrical expansion valve 3 status.
—	Inverter CMP (Hz)	Inverter CMP (rps)					Displays drive frequency of inverter comp.

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S	V	V-II	J-II	J-IIS	VR-II	V-III	Description
—	Inverter CMP (°C/°F)						Displays IGBT temperature of inverter comp.
—	Inverter CMP (V)						Displays DC voltage of inverter comp.
—	Inverter CMP (A)						Displays CT current of inverter comp.
—		CT current	—				Displays CT current of constant rate comp.
—							Displays accumulator heater(ACMH) status.
—		CCH1/ CCH2	CCH1		CCH1/CCH2		Displays crankcase heater status.
—		BH					Displays base heater status

- Page area
  Page will be displayed, if number of items to be displayed exceeds 1 page.
  (Refer to "5-14 Others screen (Display setting)")

≤ & ≥	Page may be shifted back and forth every 10 page.
< & >	Signifies that there are no more page.
Page No.	Displays data corresponding to the page.

Note

*1 Time is displayed according to the time format at the regional setting in the Control panel of Windows.

*2 Units display is [°C] or [°F]. The display format depends on the setting at the data acquisition application.

*3 Units display is [Mpa] or [psi]. The display format depends on the setting at the data acquisition application.

* For setting at the data acquisition application, refer to "4-3 Environment setting".

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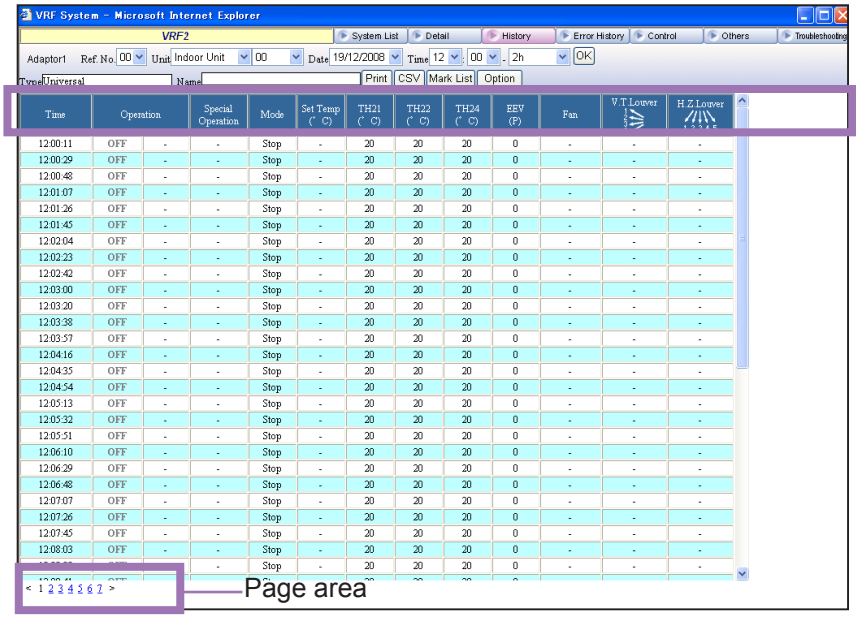
■Indoor unit



- Display item

S	V	V-II/J-II/J-IIS/V-III	VR-II	Description
Time				Displays the data acquisition time. (*1) For summer time, (S) is displayed.
Operation				Displays the operating status/unit status.
—		Special operation		Displays special operation.
Mode				Displays the operating mode. (Refer to "5-4-1 Name and function of each area")
Set Temp				Displays the setting temperature. (*2)
THIA	TH21	Room Temp.		Displays the room temperature. (*2)
THHI	TH22			Displays heat exchanger inlet temperature. (*2)
THHM	TH23	—		Displays the heat exchanger middle temperature. (*2)
THHO	—	TH24		Displays the heat exchanger outlet temperature. (*2)
THOA	—	TH25		Displays the outlet temperature. (*2)
—		TH21		Displays inlet temperature.(*2)
EEV				Displays electrical expansion valve status.
MAX EEV	—			Displays maximum EEV value.
—		SV21		Displays bypass solenoid valve status.
SVD	—		SV1	Displays discharge solenoid valve status. (For R.B. unit)
SVS	—		SV4~6	Displays suction solenoid valve status. (For R.B. unit)
SVB	—		SV3	Displays bypass 1 solenoid valve status. (For R.B. unit)
			SV2	Displays bypass 2 solenoid valve status. (For R.B. unit)
—	Fan			Displays fan volume.
—		V.T. Louver		Displays vertical fan position.
—		H.Z. Louver		Displays horizontal fan position.

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Page area

Page will be displayed, if number of items to be displayed exceeds 1 page.
(Refer to "5-14Others screen (Display setting)")

≤ & ≥	Page may be shifted back and forth every 10 page.
< & >	Signifies that there are no more page.
Page No.	Displays data corresponding to the page.

Note

*1 Time is displayed according to the time format at the regional setting in the Control panel of Windows.

*2 Units display is [°C] or [°F]. The display format depends on the setting at the data acquisition application.

* For setting at the data acquisition application, refer to "4-3 Environment setting".

List of icon for special operation

Outdoor unit

ICON	EXPLANATION
	Oil recovery operation
	Maintenance mode
	Emergency stop
	Outdoor unit stopped
	Defrost operation
	Night mode operation
	Capacity save operation

Indoor unit

ICON	EXPLANATION
	Freeze prevention operation
	Anti-freeze operation
	Anti-freeze setting
	Maintenance mode
	Master indoor unit
	Operation mode controlled by external unit
	Operation mode controlled by master indoor unit
	Emergency stop
	Energy save operation / Economy operation
	All operations invalid

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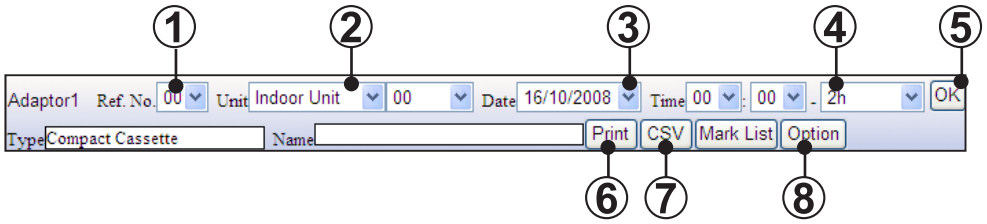
5-8-2 Operation history specification



① Refrigerant circuit selection field
Specifies the refrigerant circuit address.

② Unit selection field
Switches the unit to be displayed. (Select from “Indoor Unit” / “Outdoor Unit”.)

③ Date specification field
Specifies the date of the history data to be displayed.

④ Display time range specification field
Specifies the range of the history time to be displayed.

* By specifying “1 day”, the range will be 24 hours from the starting time. If range other than “1 day” is specified, only data for that day (till midnight) will be displayed.

⑤ OK button
Displays the history by specified condition.

⑥ Print button
Prints the displayed data.

⑦ CSV button
Displays the CSV save widow.

⑧ Set whether Display item (column) should be displayed or hidden.
Items to be set in the option screen is as follows. When display items are set, they will be displayed on the right side.

Checked … display, Unchecked … hidden

Note

- For Windows®XP SP2 and later versions,
  in order to save CSV files, set Internet Explorer as follows;
  from [Tool] menu, select [Pop-up Blocker], [Turn Off Pop-up Blocker]
- The separation character among items at CSV file creation can be changed arbitrarily. For details, refer to “5-14 Others screen (Display setting)”.

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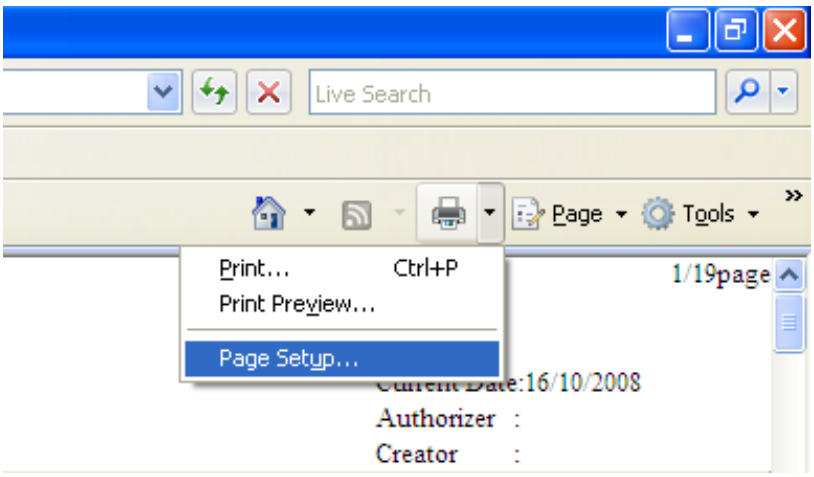
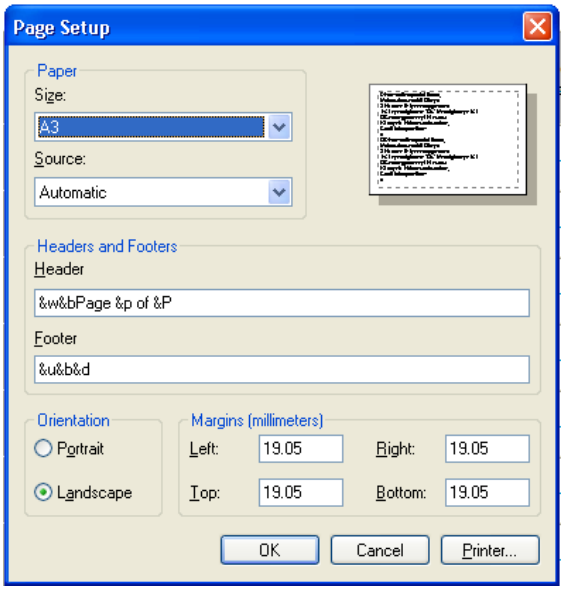
5-8-3 Operation history printing

The operation history currently being displayed can be printed by clicking the Print button.

① Printer setup and printing
Click on the print tool icon on the right upper corner of the screen and select “Page Setup...”.



In the Page Setup screen, select the size of the paper as “A3” and the Orientation as “Landscape” and click “OK”. If other option is selected, the print may not come up as good.



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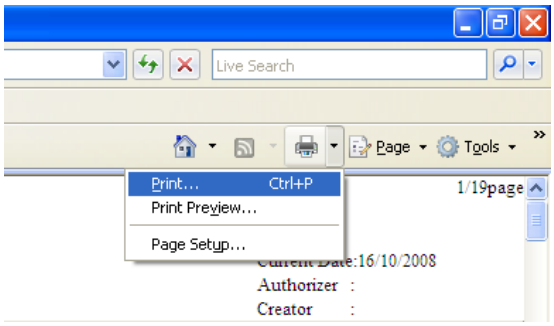
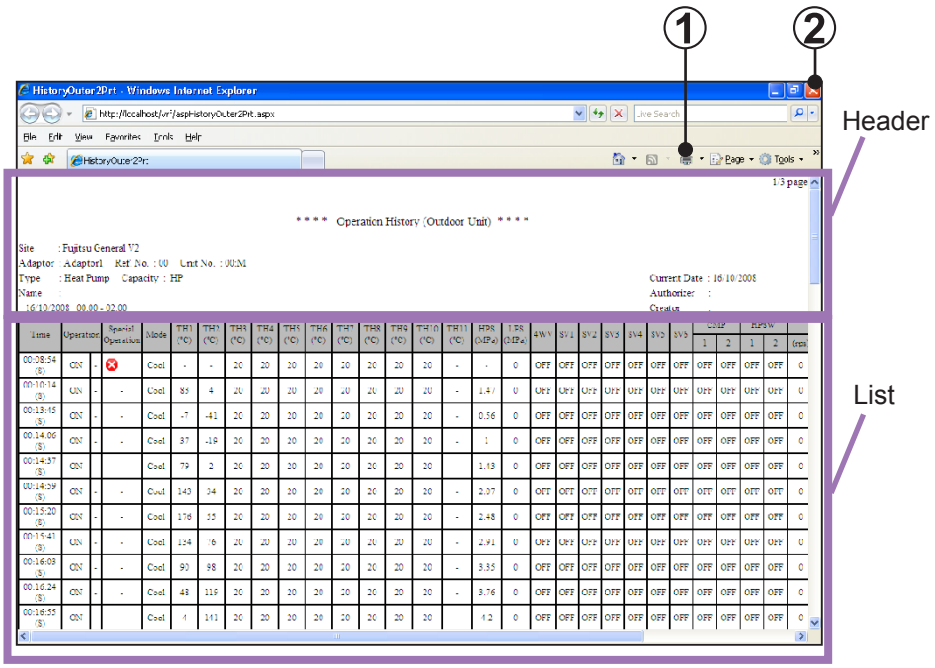
Click on the print tool icon on the right upper corner of the screen again and select “Print...” to start printing.



② Close button

When the ☒ button is clicked. the print window closes.



Printing contents

Header

Site	Displays the site name.
Adaptor	Displays the transmission adaptor name, refrigerant circuit address, and indoor unit No.
Type	Displays the unit type.
Date	Displays the date and time of the display list.
Max EEV	Displays the maximum of the electrical expansion valve of the relevant unit. (*1)
Current Date	Displays the current date.

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Ref. No	Displays the refrigerant circuit address.
Unit No	Displays the unit No.
Capacity	Displays the capacity. (Only for outdoor units)

List

List	Displays the operation history currently being displayed.

Note

*1 Only indoor unit of S series is displayed.

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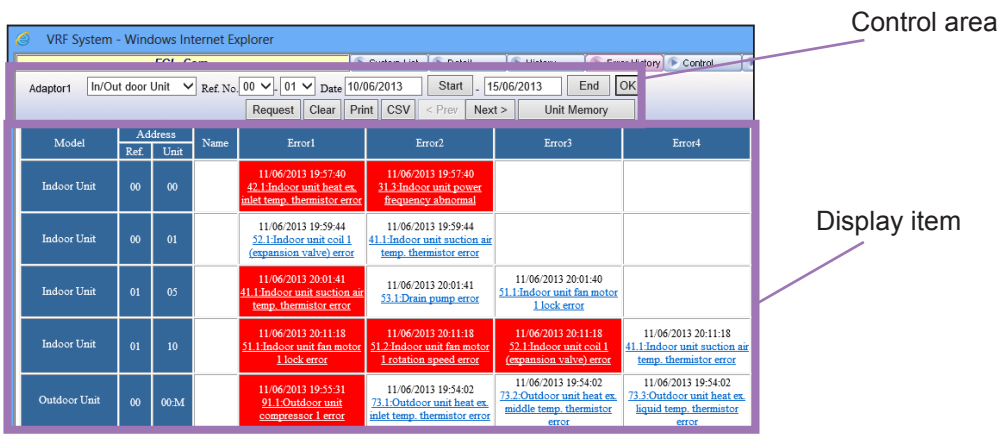
5-9 Error history screen

Displays the error information for each unit. The error information can sequentially display up to 50 items beginning from the newest error for each unit. This screen can also be printed and the error information can be saved in CSV format.

5-9-1 Name and function of each area



Control area

Device Section	Specifies the unit model. Select from “In/Outdoor Unit”, “Peripheral Device”.
Ref.No.	Specifies the refrigerant circuit address (narrow down display)
Date	Specifies the date range to be displayed.
OK	Refreshes the display screen according to the specified conditions.
Request	Request for the latest error information of the specified unit. (V-II/J-II/J-IIS/VR-II/V-III series)
Clear	Clears all the error history data of the selected refrigerant circuit except for the existing errors.
Print	Prints the list currently displayed.
CSV	Saves the currently specified data to a CSV file. (*1)
PREV	Displays errors generated before the time displayed on the screen.
NEXT	Displays errors generated after the time displayed on the screen.
Unit Memory	Displays error names recorded in the indoor / outdoor units.

Display item

Model	Displays the unit model.
Address	Displays the address information (refrigerant circuit address/unit No.) of each unit.
Name	Displays the unit name. (*2)
Error1 ~ 50	Displays the error acquisition time and error contents. Displays currently generated errors in red.

Note

*1 The separation character among items at CSV file creation can be changed arbitrarily. For details, refer to “5-14 Others screen (Display setting)”.

*2 Only when preset. (Refer to "3-2-4 Name master database file selection screen")

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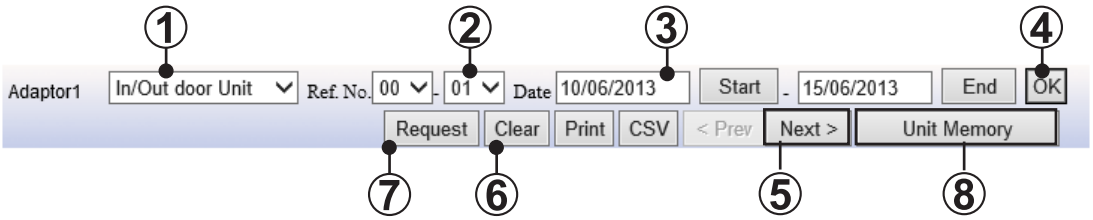
5-9-2 Error history display method



① Display unit model selection field

Selects the unit model.

For indoor unit/outdoor unit, select “In/Outdoor Unit” and for centralized remote controller/transmission adaptor, select “Peripheral Device”.

② Refrigerant circuit selection field

Specifies the range of the refrigerant circuit address to be displayed. (*1)

③ Date selection field

Selects the range of dates to be displayed. (*2)

Specifies the corresponding date from the calendar displayed by pressing the Start or End button to select the date.

④ OK button

Refreshes the display data according to the selected conditions by clicking the [OK] button. (*3)

⑤ Display item change button

The [Next>] button displays the next error. (Errors are displayed in groups of 5, such as when Error1~Error5 were displayed, Error6~Error10 are displayed.)

The [<Prev] button returns to the previous error.

⑥ Clear button

Clears the error history data of the selected refrigerant circuit by clicking the [Clear] button.

⑦ Request button

Acquires the current error state of an arbitrarily specified indoor unit or outdoor unit. However, when an error is not generated, nothing is displayed after execution.

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⑧ Unit Memory button

When the Unit Memory button is clicked, the Unit Memory screen is displayed.

Note

*1 If the end refrigerant circuit address is smaller than the start refrigerant circuit address, an error message is displayed.

*2 If the end date is earlier date than the start date, an error message is displayed.

*3 Displays only the units with an error history list.
Troubleshooting screen (Refer to "5-15 Others screen (Time Guard Information)") can be displayed by clicking the error contents of the display. However, excluding “TransmissionAdaptor” errors.

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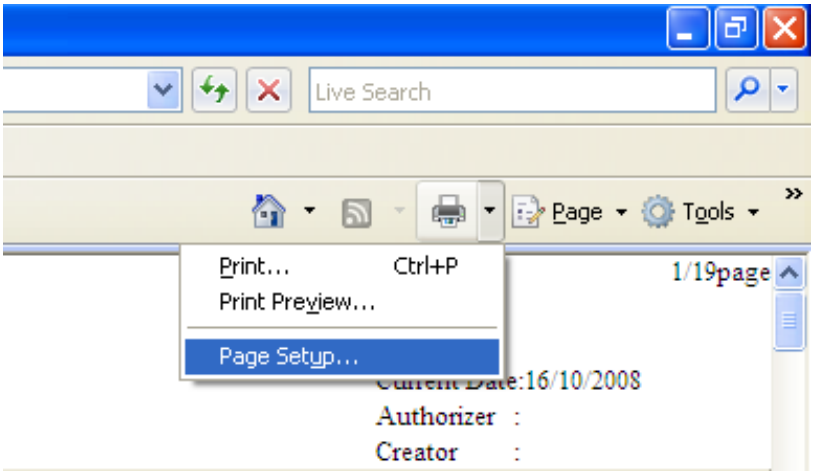
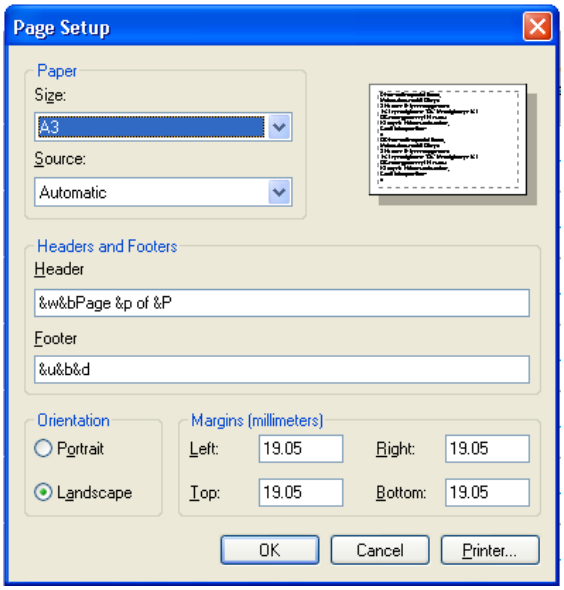
5-9-3 Error history printing

The currently displayed error history can be printed by clicking the Print button on the error history screen.

① Printer setup and printing
Click on the print tool icon on the right upper corner of the screen and select “Page Setup...”.



In the Page Setup screen, select the size of the paper as “A3” and the Orientation as “Landscape” and click “OK”. If other option is selected, the print may not come up as good.



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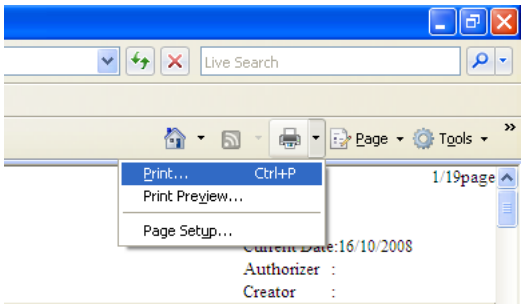
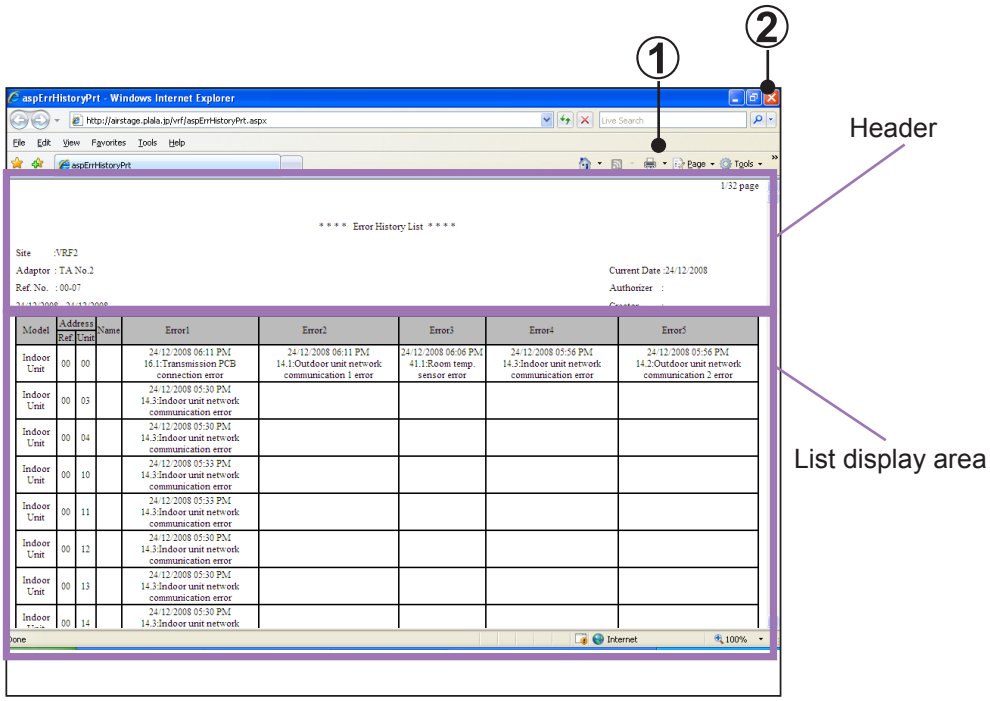
Click on the print tool icon on the right upper corner of the screen again and select “Print...” to start printing.



② Close button

When the ☒ button is clicked. the print window closes.



Printing contents

Header

Site	Displays the site name.
Adaptor	Displays the transmission adaptor name.
Ref No.	Displays the specified refrigerant circuit range.
Date	Displays the date range of the specified data.)
Current Date	Displays the current date.

List display area

List	Displays the error history list displayed on the screen.

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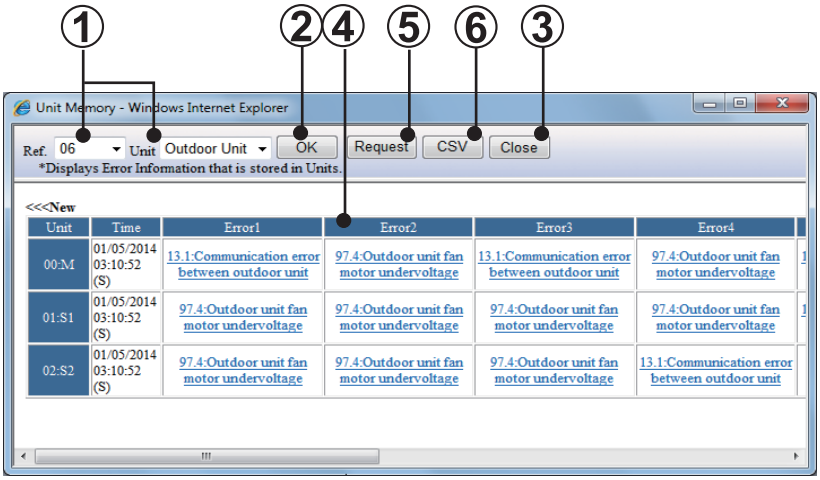
5-9-4 Unit Memory

By clicking the Unit Memory button, the most recent error information recorded in the indoor / outdoor unit will be displayed. Using this screen, you can display the maximum of 20 error information of any specified indoor / outdoor unit.



① Specify refrigerant circuit address and unit type whose error records are to be displayed. You may only specify unit for the refrigerant circuit of V(Outdoor unit) and V-II(Indoor unit) and V-II/J-II/J-IIS/VR-II/V-III (Outdoor unit) series.

② Error information for the refrigerant circuit address specified in ① are displayed below.

③ Close this screen.

④ Display error information as described below.

Unit	Displays unit address.
Time	Displays the date & time when the error information was acquired from the unit.
Error n n=20 for V series n=10 for V-II/J-II/J-IIS/ VR-II/V-III series	Error n displays error names acquired from the unit. When blank, no error exists. Errors will be sorted by time, [Error1] being the most recent error.

⑤ Request error history.
Error history may be acquired for any unit.

⑥ Saves the currently displayed error history data to a CSV file.

Note

- The separation character among items at CSV file creation can be changed arbitrarily. For details, refer to “5-14 Others screen (Display setting)”.

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Note

- This is a supplementary screen to the Error History Screen. Use This screen to check errors not confirmed in the Error History Screen.
- There are cases where the information in this screen and that of Error History Screen do not match. This is because of the differences in the information between the 2 screens.
  a) Error History Screen displays errors real-time and the data may be deleted at will.
  b) This screen displays errors recorded in the indoor / outdoor unit.
- Errors in this screen do not have information on dates.

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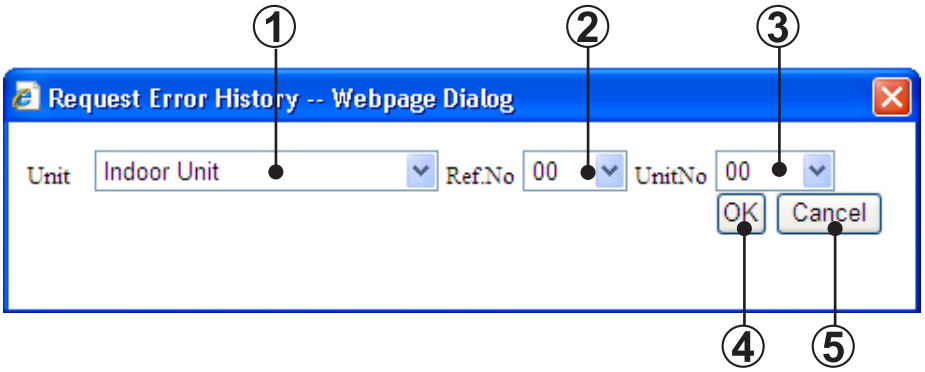
5-9-5 Request Error History

By clicking the Request button, the most recent error information will be acquired for the specified units. The acquired information can be displayed as previously explained in “Error history display method” section. You may only use this function for V-II/J-II/J-IIS/VR-II/V-III series.



① Specify unit type whose error information is to be requested.

② Specify refrigerant circuit address whose error information to be requested.

③ Specify unit No. whose error information is to be requested.

④ Perform request.

⑤ Cancel request

Note Requesting error of particular unit using this screen may become necessary when immediately after connecting Service Tool to a system and you need the latest error information.

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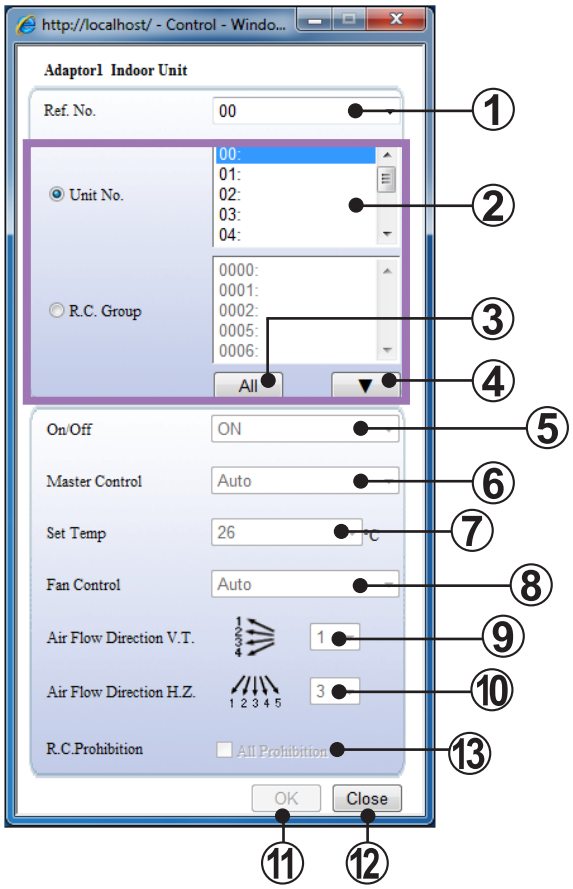
5-10 Control screen

Operation of each refrigerant circuit address, indoor unit No. or each R.C. Group can be controlled.



① Ref No. selection field

Selects the refrigerant circuit address (The refrigerant circuit address to be registered can be selected.)

② Control objective selection field

When specifying in unit units, select “Unit” and when specifying in R.C. Group units, select “R.C. Group”. (Unit No and R.C. Group cannot be selected simultaneously.)

Multiple units can be selected by pressing “ctrl” key while selecting.

③ All

Selects all the displayed units (displayed at ②).

④ ▼ (▲) button

The indoor units to be controlled are confirmed by pressing the ▼ button.
Returned to selection of the indoor unit to be controlled by pressing the ▲ button.

⑤ On/Off selection field

Selects the operating status. (Select from On/OFF/On (Test).)

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⑥ Master Control selection field
Selects the operating mode. (Select from Cool/Heat.)

⑦ Set Temp selection field
Selects the temperature. (*1)

⑧ Fan Control selection field
Selects the air flow. (Select from Auto/S-Low/Med/High.)

⑨ V. T. Louver
Select the vertical louver position.

⑩ H. Z. Louver
Select the horizontal louver position.

⑪ OK button
Controls operation according to the specified contents.

⑫ Close button
Closes the screen without taking any action.

⑬ R.C. Prohibition
Specify that all operation using remote controller will be prohibited. *2
Checked … Operation prohibited, Unchecked … Not prohibited.

Note

*1 Displayed in Centigrade or Fahrenheit depending on the data acquisition application setting.
The settable range depends on the series.

Mode	Series	Centigrade	Fahrenheit
Cool	All	18~30°C	64~88°F
Heat	S	16~30°C	60~88°F
	V / V-II / J-II / J-IIS / VR-II / V-III	10~30°C	48~88°F

*2 When setting the R.C. Prohibition, be sure to release the prohibition afterward.

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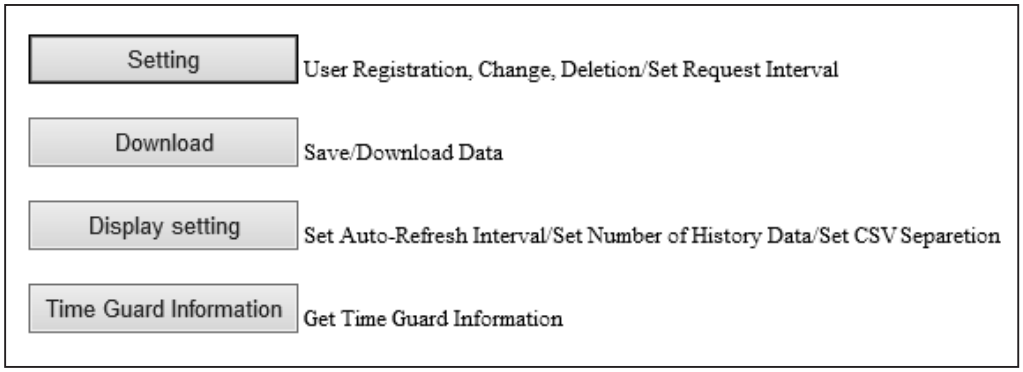
5-11 Others screen

Various setting may be performed and any existing data may be downloaded.

When the Others button is clicked from the main menu, the following Others menu is displayed at the bottom of the main menu.



Setting	Performs new user registration, user password change, registered user deletion, and demand interval setup. (Refer to "5-12 Others screen (Setting)")
Download	Any unit data currently displayed can be saved. (Refer to "5-13 Others screen (Download)")
Display setting	Sets Auto-refresh interval, maximum No. of lines per page, and separation character at CSV file creation (Refer to "5-14 Others screen (Display setting)")
Time guard information	Time guard information is acquired from a unit and the CSV file output. (Refer to "5-15 Others screen (Time guard information)")

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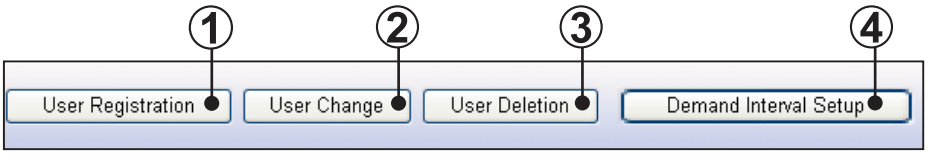
5-12 Others screen (Setting)

Performs user registration, user password change, registered user deletion, and demand interval setup. When the Setting button is clicked from the Others screen, the following setting menu is displayed at the bottom of the main menu.



① User registration button
Shifts to the user registration screen.

② User change button
Shifts to the user change screen.

③ User deletion button
Shifts to the user deletion screen.

④ Demand interval setup button
Shifts to the demand interval setup screen.

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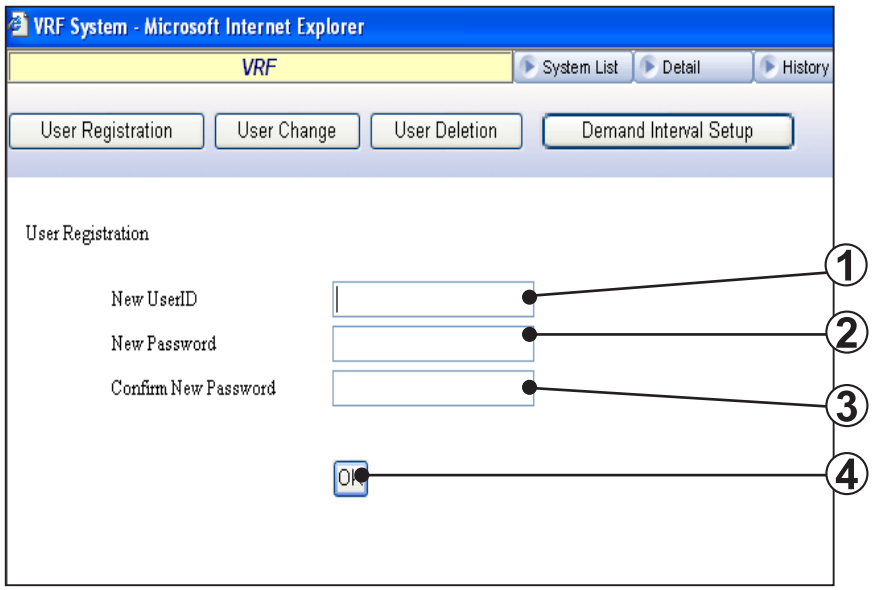
5-12-1 User registration

Registers new user ID and password. A data acquisition application start user can be added.



① User ID input field
Input the user ID. (Up to 20 alphanumeric characters) (*1)

② Password input field
Input the password. (Up to 20 alphanumeric characters) (*1)

③ Password confirmation input field
For confirmation, input the password again. (Up to 20 alphanumeric characters) (*2)

④ OK button
Registers the inputted contents. (*3)

Note

*1 If the user ID and password input fields are not inputted, an error message is displayed.

*2 If there is a difference in the password and password confirmation input contents, an error message is displayed.

*3 If the same user ID is already registered, an error message is displayed.

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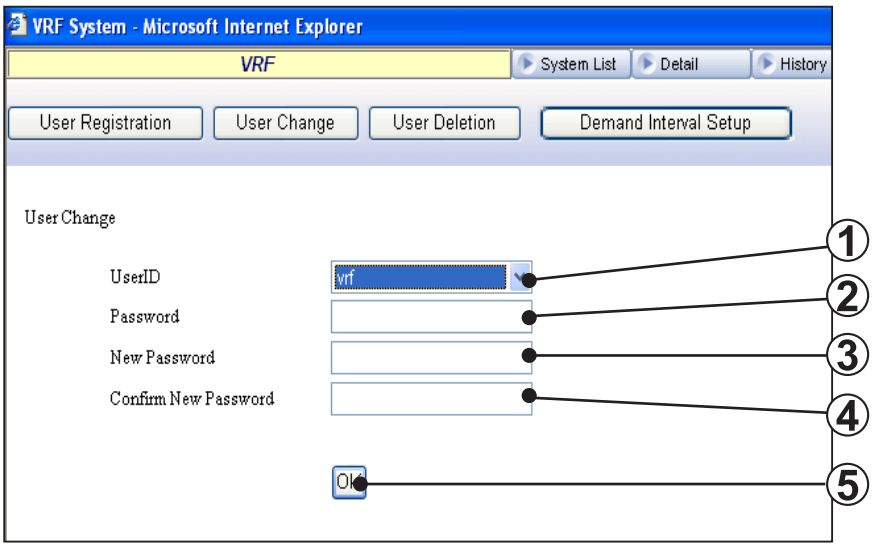
5-12-2 User change

The password of a registered user can be changed.



① User ID selection field
Select the user to be changed.
The currently registered users can be displayed and selected with .

② Password input field
Input the password of the user to be changed. (Up to 20 alphanumeric characters) (*1)

③ New password input field
Input the password to be newly registered. (Up to 20 alphanumeric characters) (*1)

④ New password confirmation input field
For confirmation, input the password again. Input the same password as the new password. (*2)

⑤ OK button
Performs change processing according to the inputted contents. (*3)

Note

*1 When the password and new password input fields are not inputted, an error message is displayed.

*2 When the contents input at the new password and new password confirmation input fields do not match, an error message is displayed.

*3 When the password of the selected user ID is incorrect, an error message is displayed.

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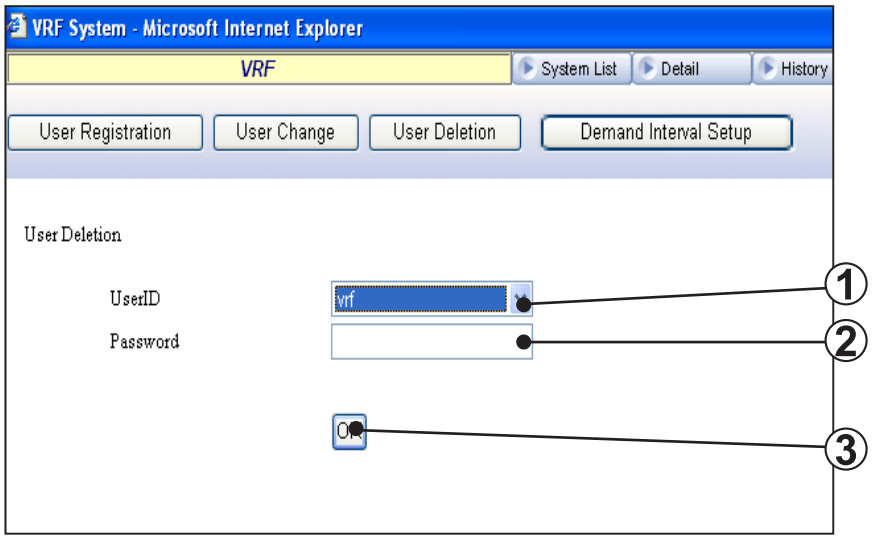
5-12-3 User deletion

Deletes registered users.



① User ID selection field
Select the user to be deleted.
The currently registered users can be displayed and selected with .

② Password input field
Input the password of the user to be deleted. (Up to 20 alphanumeric characters) (*1)

③ OK button
Deletes the selected user. (*2)

Note
*1 When the password input field is not inputted, an error message is displayed.
*2 When the selected user ID and password do not match, an error message is displayed.

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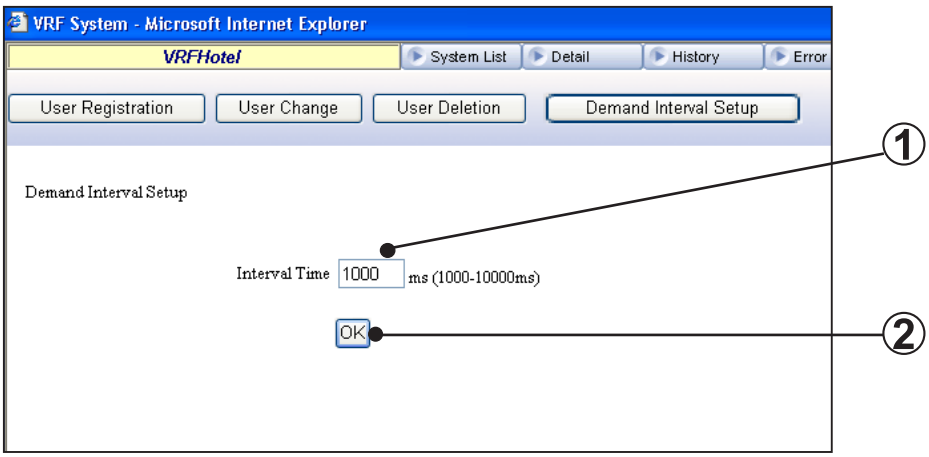
5-12-4 Demand interval setup

Specifies the interval at which the temperature, pressure information, and electrical components operating status is specified for each unit in the VRF System. The refresh interval of the data displayed at the system list, operation history, and unit detail screens is changed by changing this setting. When the demand interval is set to a small value, the data refresh interval becomes shorter, but the data may not be received correctly by an error. At this time, set this interval to a large value.



① Interval time input field
Set the demand interval time. (*1)

② OK button
Refreshes the demand interval time according to the inputted time.

Note *1 The currently set time is displayed by default. Only the numerics 1000 to 10000 (ms) can be inputted. When input is incorrect or there is no inputted, an error message is displayed.

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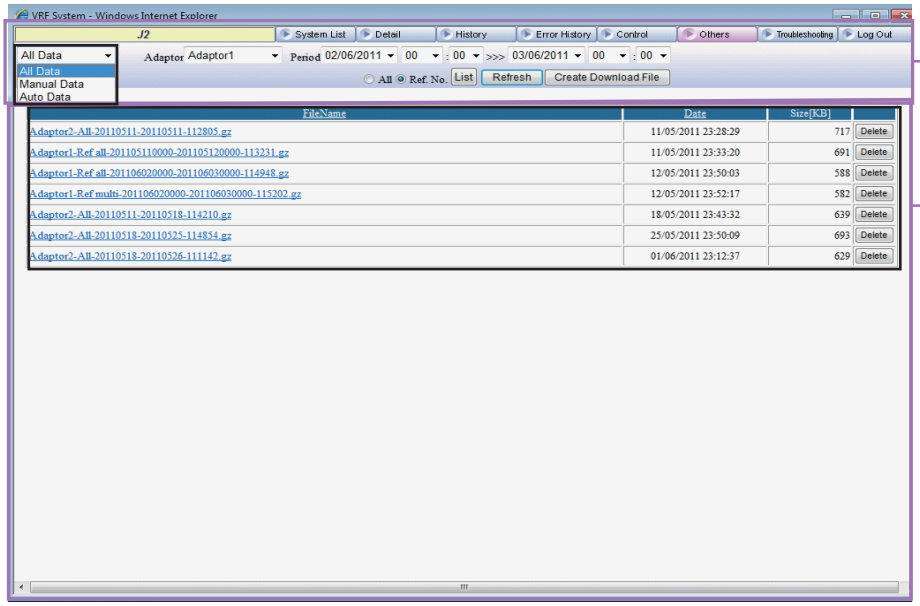
5-13 Others screen (Download)

Any unit data currently displayed can be saved. The saved data may be displayed as offline data for Service Tool Ver. 1.7.
When the Download button is clicked from the Others screen, the following setting menu is displayed at the bottom of the main menu.



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5-13-1 Name and function of each area

■ Control area

Specify the conditions and creation of data file to be downloaded.

Download file display switching	Switches and displays the files displayed at the list display area for each of the following types. All files/files created arbitrarily/automatic backup files
Adaptor	Displays the transmission adaptor name.
All & Ref.No. List	Specify the refrigerant circuit address of the data file.
Period	Specify the period of the data file.
Refresh	Update the contents of “List display area”.
Create Download File	Create data files.

■ List display area

Display the list of created data files. Also, any data files may be specified for download and/or deletion.

FileName	Display the file names created in the Control area. Also any data file may be downloaded.
Date	Display date of creation of the data files.
Size	Display the size (in KB) of the data files created. When creation is in progress, display the status of progress.
Delete	Delete any data file.

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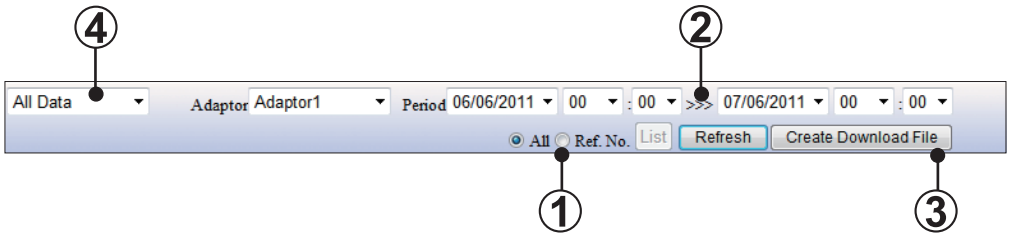
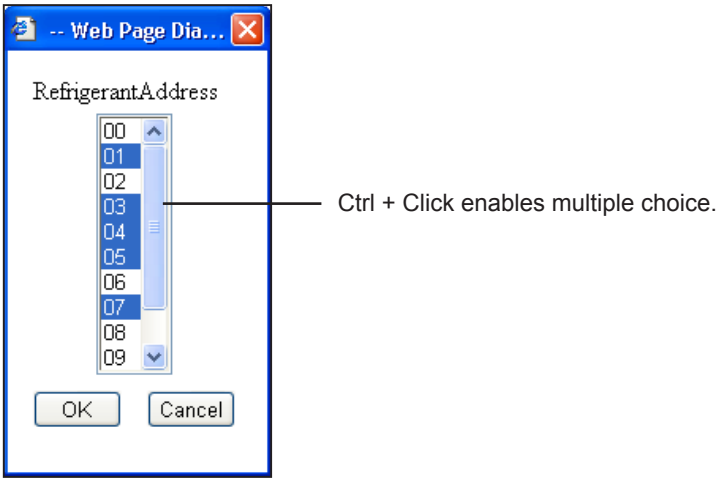
5-13-2 Procedures for Creating Download Files



① All & Ref. No.

Specify the range of refrigerant circuit of the data files to be created by one of the following methods. If Ref. No. is specified, refrigerant circuit address selection screen will be show up by clicking the List button. Specify the desired refrigerant circuit address here.

- All ..... All refrigerant circuit addresses are specified.
- Ref. No ..... Refrigerant circuit address selected in the refrigerant circuit address selection screen will be specified.



Refrigerant Address selection screen

② Period

Specify the period (Start >>> End) of the data file to be created by date and time.

③ Create Download File

Start creating data files using the condition specified by ①, ②. Creation progress may be checked with the FileName in the “List display area”.

- FileName format is as follows;
  [Transmission adaptor name - Ref all or Ref multi *- Period - time]
  * Ref all … All / Ref multi … Ref.No.
- There 3 progress status.
  - Completed … Only File name (File name will be underlined)

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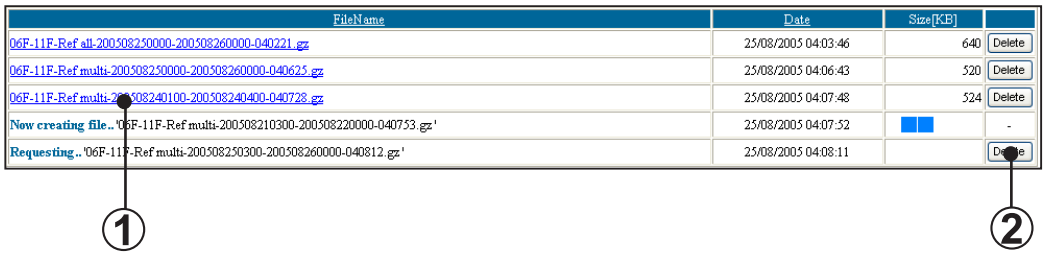
- Creating … Now creating file … File name
- Waiting … Requesting … File name

④ Download file display switching

Switches and displays the download files for each of the following types.

- All Data … Displays all the Download files.
- Manual Data … Displays only the Download files created at ③
- Auto Data … Displays only the backup use Download files (Data for 1 week) that are created automatically every Sunday (3 o'clock). This file holds the backup files for up to 1 month before. Backup files before this are automatically deleted.

5-13-3 Data file download/deletion



① Download

Click on the (underlined) file name that you want to download.

② Delete button

Click on the "Delete" button on the same line as the file name that you want to delete.

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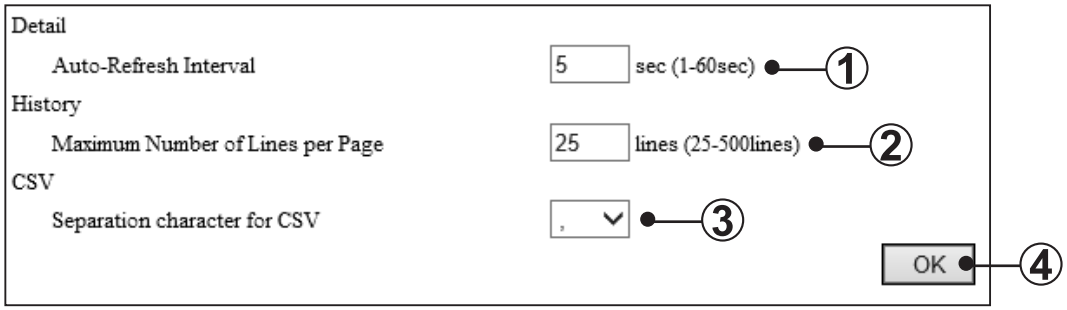
5-14 Others screen (Display setting)

Make display setting for the “Detail” screen and “Operation history” screen.
When the Display setting button is clicked from the Others screen, the following setting menu is displayed at the bottom of the main menu.



① Auto-Refresh Interval (*1)
Set “Detail” screen update interval. This defines not the screen update interval but interval for checking the existence of updated data. The check will be performed in this interval and if the data is updated, the screen display will be updated.

② Maximum number of Lines per Page (*1)
Defines the maximum number of data that can be displayed in a page of Operation history screen.

③ Separation character for CSV
Specifies the separation character among items at CSV file creation.

④ OK button
Register the data set in ①, ②, ③.

Note *1 Depending on the performance spec. of personal computer used, operation of this software may become slow. In such case, re-adjust the value set and check the operation.

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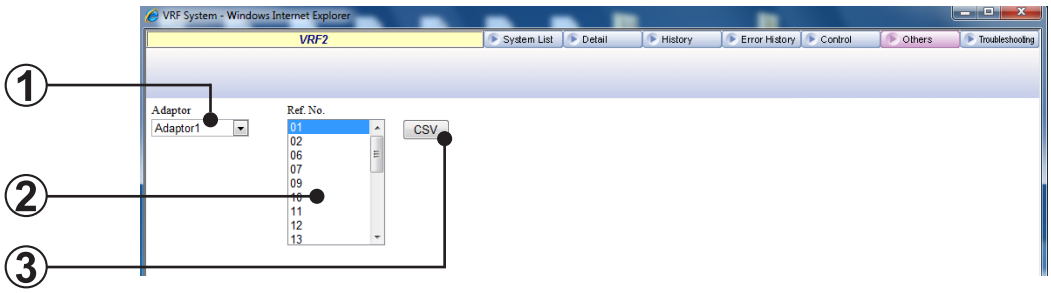
5-15 Others screen (Time Guard Information)

5-15-1 Time Guard Information

Reference data for judging the maintenance period of indoor and outdoor units (compressor, FAN, etc. integrated time) is output to a CSV file. (V-II/J-II/J-IIS/VR-II/V-III series)

Web Menu Area Screen



① Adaptor name selection
Selects the transmission adaptor which connects the target unit.

② Refrigerant circuit address selection
Specified the units which acquires this data in refrigerant circuit units.

③ CSV button
Outputs the Time Guard data of the indoor units and outdoor units belonging to the refrigerant circuit address selected at ②.

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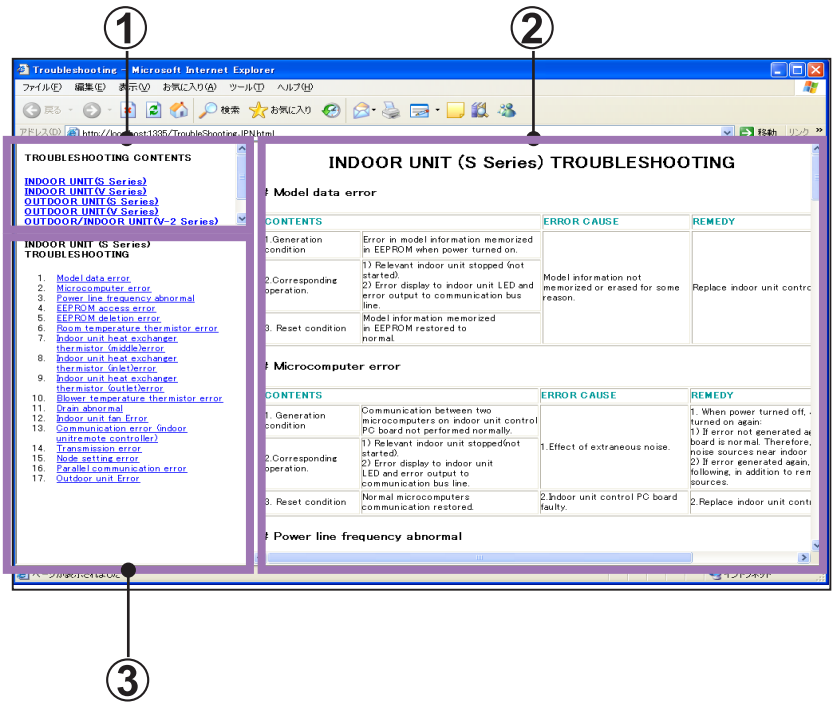
5-16 Troubleshooting screen

Displays the error contents and corrective action. Display is performed from the main menu and error history screen.

5-16-1 Name and functions of each area



① Contents area by type
When contents are clicked, the contents of the error contents are displayed.

② Troubleshooting contents display area
Displays the error details.

For VII/JII series, this area will be displayed full screen.

③ Contents area for each error contents
When contents are clicked, those contents are displayed.

This area will not be displayed for V-II/J-II/J-IIS/VR-II/V-III series.

Note

When V-II/J-II/J-IIS/VR-II/V-III series is selected, trouble shooting section from service manual will be displayed. This will give you a precise and detailed instruction on trouble shooting.

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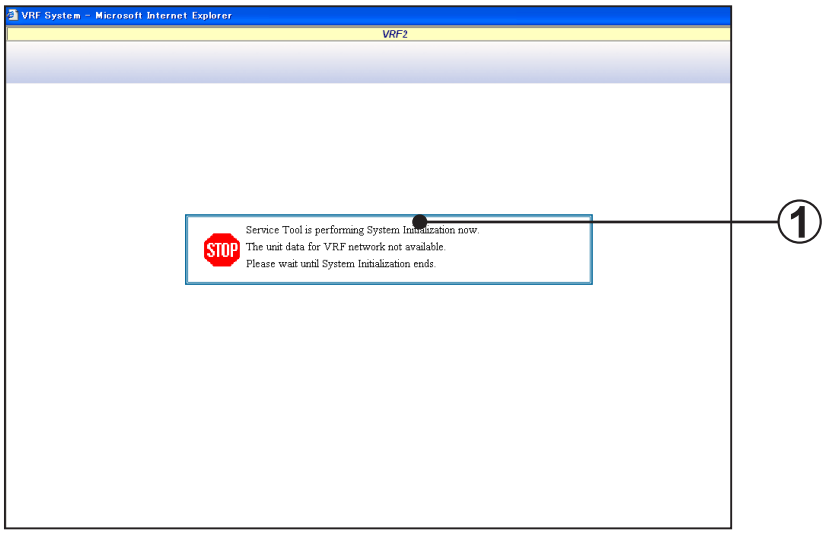
5-17 When a message is displayed on web screen

When the Service Tool (WEB application) cannot be used, the following screen is displayed.

5-17-1 Scanning other units

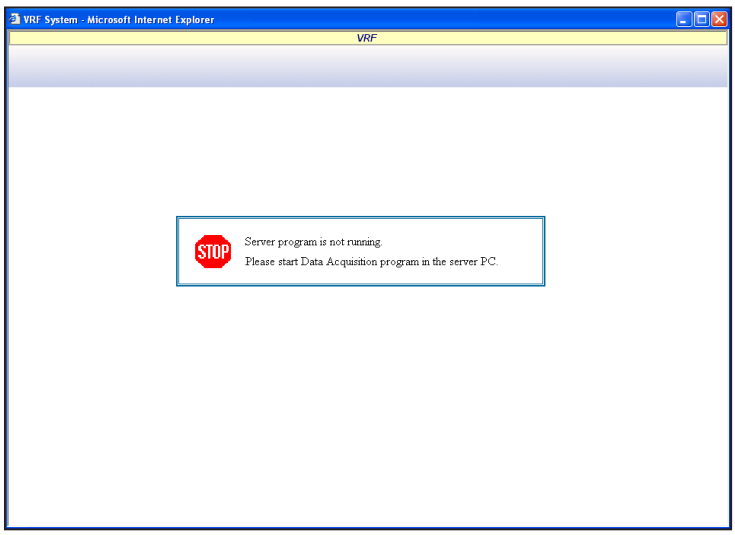
Displays when bus priority processing was generated at another unit (Touch Panel Controller, other System Controller). In this case, all operations which perform communication become impossible. When scanning ends, the display automatically returns to the processing screen and operation becomes possible.

① Message
The unit name being scanned is displayed.



5-17-2 Data acquisition application shutdown

Displays when the data acquisition application is shut down. All operations are impossible. Start the data acquisition application.



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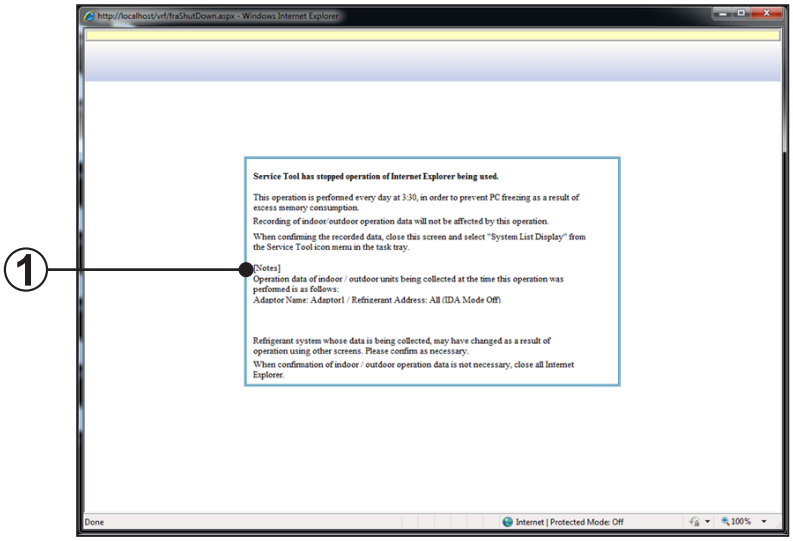
5-17-3 Stopping of Internet Explorer

Internet Explorer operation stops at each fixed time (3:30).
When Internet Explorer operation was stopped, the display switches to the following screen.
This is normal operation to prevent stopping of the PC by Internet Explorer memory consumption.

* Only when Internet Explorer was displayed up to the fixed time by this tool
* In this operation, the display is reset, but collection of indoor unit/outdoor unit operation data is continued.



① [Notes]
Collection target range of indoor unit/outdoor unit operation data immediately before Internet Explorer operation stops is displayed in communication adapter units.

[Target range]
The target range is one of the following.

- Refrigerant Address All (IDA Mode Off)...All refrigerant addresses are the collection target (when operation stopped while other than Detail Screen was being displayed)
- Refrigerant Address XX (IDA Mode On)..One specific refrigerant address is the collection target (when operation was stopped while IDA Mode of Detail Screen is ON)

*When you want to change the target range, switch to the relevant communication adapter after System List is displayed again.

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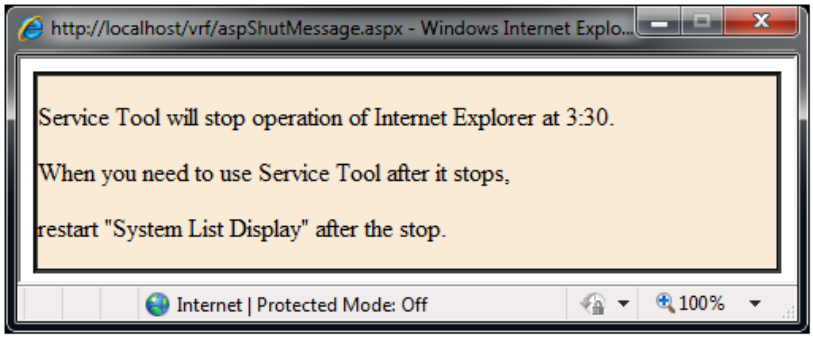
■ **Message screen**

The following message which reports that this operation is executed is displayed 10 minutes before Internet Explorer operation is stopped.

However, when Internet Explorer ended after this message was displayed, the screen above is not displayed.



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6. Troubleshooting

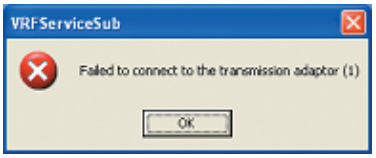
When a problem occurred during operation, refer to this section. This section describes assumed problems and how to solve them.

T-1 A transmission adaptor connection error was generated.

Cause

① Driver is not installed.

② Power is not supplied to the transmission adaptor.



Countermeasure

① To use this product, install necessary drivers/software for this product following the ***QUICK START*** enclosed with this product.

② Make sure that USB equipment (USB hub, etc.) that this product is connected to, is not overloaded (power supplied thru the interface does not exceeds the maximum limit).

T-2 Forms cannot be printed.

Cause

① Printer power is not ON.

② Printer cable between PC and printer is not properly connected.

③ Printer driver is not correctly installed.

Countermeasure

① Check if the printer power is ON.

② Check if the printer cable is connected.

③ Print forms by performing printing processing by Windows® setting. Refer to Windows® printing troubleshooting, and check whether or not the Windows® printer setting is correct.

T-3 “Master Abnormality.” message was displayed by the browser.

Cause

There is an abnormality in the master data.

Countermeasure

The database backed up last time is automatically restored. This software cannot be used until completion of restore processing. Since restore processing takes

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several minutes, wait a while before performing operation. The data backed up the previous time and subsequently is lost. After recovery, check the data.

T-4 “Can not control this transmission adaptor.” message was displayed by the browser.

Cause

The system entered a state in which it cannot control operation because the name master data was not received.

Countermeasure

Wait until the Service Tool automatically acquires each name master data, and then scan by detailed information scanning setting. For details, refer to “3-2-5 Scanning”.

T-5 “No data existing.” message was displayed by the browser.

Cause

Data cannot be displayed because the unit data which is the display objective was not received.

Countermeasure

Wait until the Service Tool automatically acquires each unit data, and then set Intensive Data Acquisition (IDA) Mode at the system detail screen. For details, refer to “5-6-1 Name and function of each area”.

T-6 “Server access error occurred.” message was displayed by the browser.

Cause

① Error was generated when accessing the database.

② The database may have been stopped by some cause.

③ The database may have been destroyed.

④ PC memory is used up.

Countermeasure

① Close the browser and redo from login.

② Restart the PC and then restart the Service Tool.

③ The database backed up last time is automatically restored. This software cannot be used until completion of restore processing. Since restore processing takes several minutes, wait a while before performing operation. The data backed up the previous time and subsequently is lost. After recovery, check the data.

④ Close all applications and stop unnecessary services of the PC in order to free memory. Add extra memory if possible (refer “3-2 Recommended specs” of Setting Manual).

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T-7 During scanning, PC power was dropped by a power failure or erroneous operation and operation became unstable.

Countermeasure

At a power failure, incomplete data remains and operation may be performed with this incomplete data at the next starting. Repeat scanning. When the power was interrupted during another operation, the operation may return to normal by the same operation after resetting.

T-8 Air conditioner is not controlled in R.C. group units.

Cause

R.C group data cannot be acquired.

Countermeasure

Repeat scanning by detailed information scanning setting.

T-9 Pop-up window does not show up in the Service Tool screens. (Control screen, Commissioning tool, etc.)

Cause

Pop-up Blocker is enabled in the Internet Explorer.

Countermeasure

① Open Internet Explorer ⟶ [Tools] ⟶ [Pop-up Blocker] and check [Turn Off Pop-up Blocker]

② If any of the search tool bar from various search engines (Yahoo, Google etc.) is installed, disable the Pop-up Blocker.
(For detail, refer the help of each toolbar.)

T-10 Refrigerant circuit diagram is not displayed for outdoor/indoor unit in the Detail screen (diagram).
(Message “Cannot display refrigerant circuit diagram” is displayed).

Cause

Model name was not acquired from indoor/outdoor unit (V-II/J-II/J-IIS/VR-II/V-III series).

Countermeasure

① Perform scan again (Refer section 3-2-5 Scanning).
After scanning, check that the model name is displayed in the System List screen.

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② If the name is not displayed in the System List screen, enter the correct model name for the unit in the Name master database file (Refer section 3-2-4) and select “re-scanning” from the right-circle menu in the task tray.
When requested for the Name master database file, specify the file, but the following scan may be cancelled.

T-11 The following message is displayed during use.
“Internet Explorer has stopped working. A problem caused the program to stop working correctly. Windows will close the program and notify you if a solution is available.”

Cause

Add-on function used by Internet Explorer 8 is enabled.

Countermeasure

When using this tool, disable the Add-on functions used by Internet Explorer 8 by the following procedure:

[Internet Explorer] → [Tools] → [Manage Add-ons] → [Toolbars and Extensions] → Select the displayed Add-on function → Right click → Select [disable]

Q-1 Can the Service Tool be restarted by installing it on the same PC as the System Controller or other Software tool and using the same transmission adaptor?

Answer

The Service Tool can be installed on the same PC, but simultaneous operation is outside the warranty. Also, each application cannot simultaneously share 1 transmission adaptor.

Q-2 Can a browser other than Internet Explorer be used?

Answer

Other browsers cannot be used because they are incompatible.

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