

OPERATING MANUAL

SERVICE TOOL for VRF System

UTY-ASGXZ1

Ver. 2.0



CAUTION

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PART NO. 9708313030

FUJITSU GENERAL LIMITED

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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.

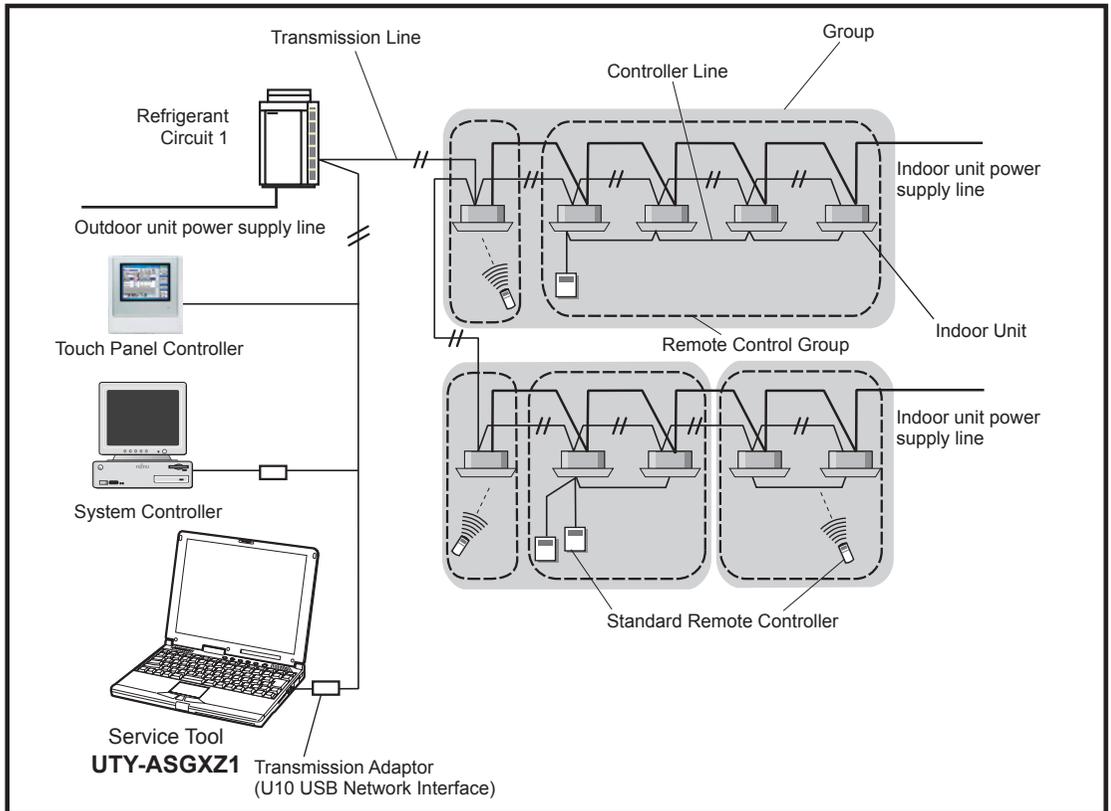
 WARNING
1. When using U10 USB Network Interface, follow the instructions given in the manual that comes with the product.

 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.

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 WIBU-KEY and WHITE-USB-KEY (Software protection key and installation key) will not be reissued. Be careful not to lose them.
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) Microsoft® SQL Server® 2014 Express
11. Before use, set the resolution so that the resolution of PC monitor screen at remote operation side is higher than that of local side. Otherwise, the browser outer frame area in the screen is not displayed because monitor screen is displayed using browser at remote operation side.

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.

■ Software construction

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

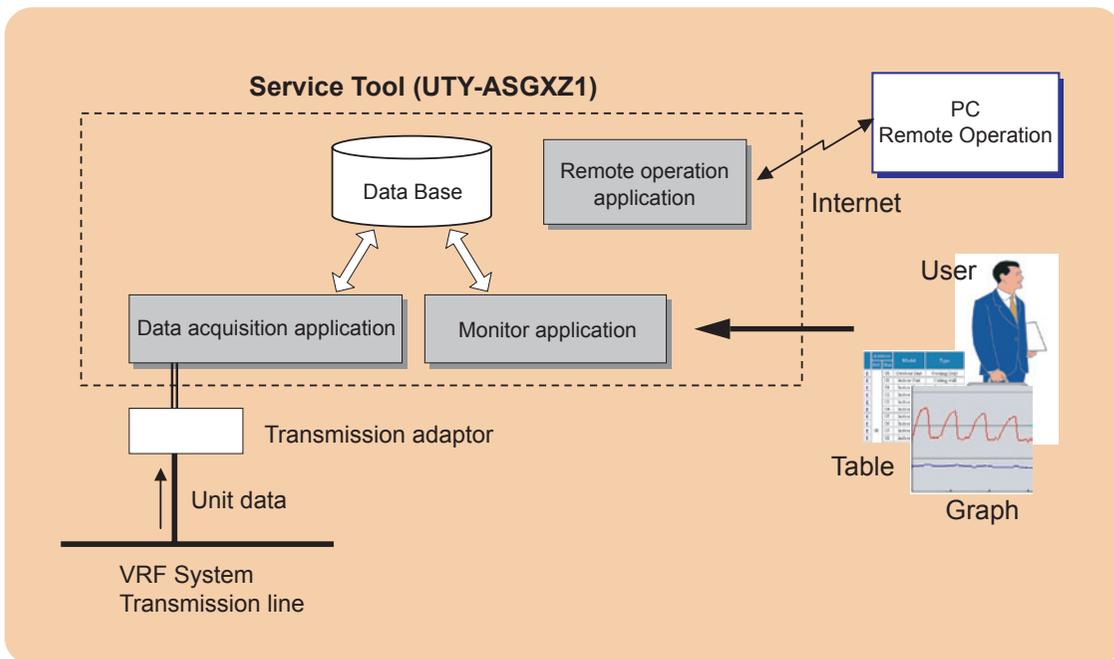
The **Data acquisition application** is a program which is made resident when the Service Tool starts, and exchanges data with the VRF System transmission line. The received Unit data is saved to a Data base.



The **Monitor application** converts the unit data acquired by “Data acquisition application” to the table or graph and displays them to the PC screen. It also converts operations input from the User and passes them to the Data acquisition application through the Database.

The **Remote operation application** is the application to perform the remote operation. The

Remote operation application operates only when the remote operation mode is valid.



3. Data acquisition application starting flow

3-1 Screen transition

* Since the operation is performed on the desktop mode for Windows 10, switch the screen as necessary.

User Registration



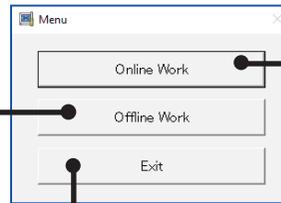
Login



Opening



Menu

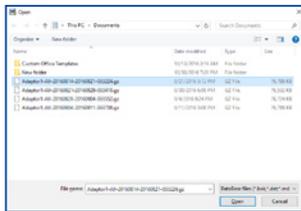


Online work

Offline work

Online Site Data Selection

Import File Selection



Exit

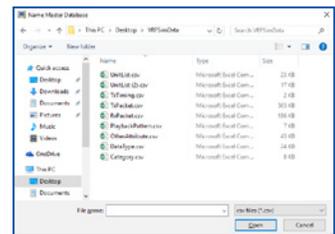
No

Program Exit

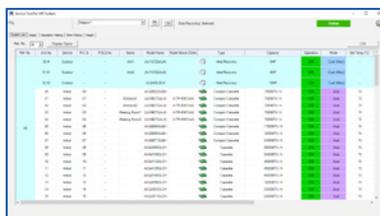


System end

Name Master Database



System List



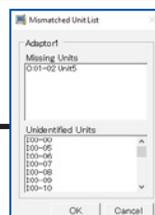
Scanning Setting



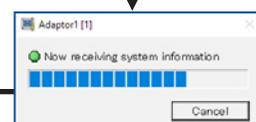
No scanning

Scanning

Mismatched Unit List



OK

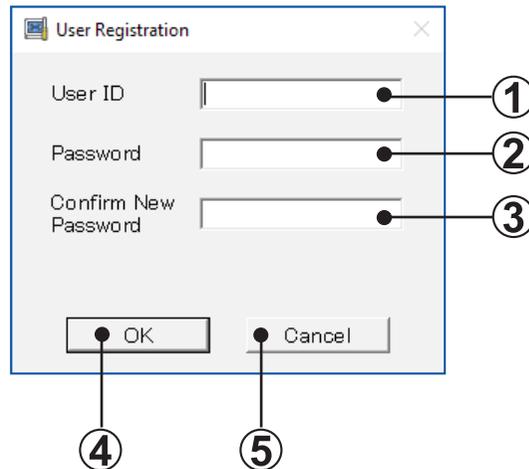


3-2 Data acquisition application starting (online) flow

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 “par. 4-6 User 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
Save the inputted data.

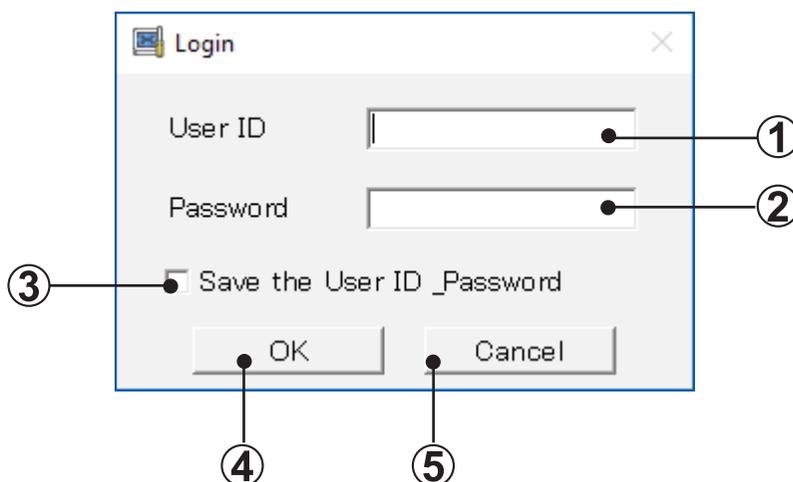
The opening screen is displayed, and operation advances to site data selection processing.
- ⑤ Cancel button
User registration stops and the Service Tool ends.



- 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.

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.

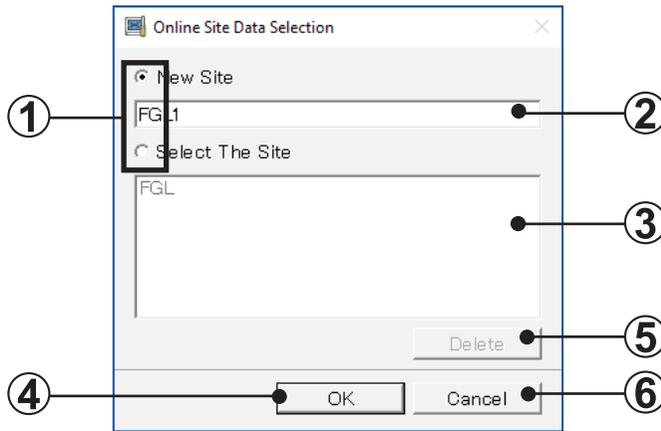
When the Save the User ID & password check box is not checked, the next time the Service Tool is started, the user ID and password are not displayed and must be manually inputted.
- ④ **OK button**
The opening screen is displayed, and then operation advances to site data selection processing.
- ⑤ **Cancel button**
The Service Tool ends.



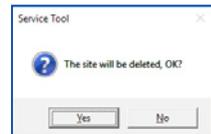
Note *1 When the user ID and password input fields are not inputted, an error message is displayed.

3-2-3 Online 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 alphanumeric characters 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
Displays the Name Master Database file selection screen.
- ⑤** Delete button
Can be used only when the objective site name was selected at step ③.
All the data of the selected site is deleted.
Before deletion processing, a confirmation screen is displayed.
- ⑥** Cancel button
The program returns to the menu screen.

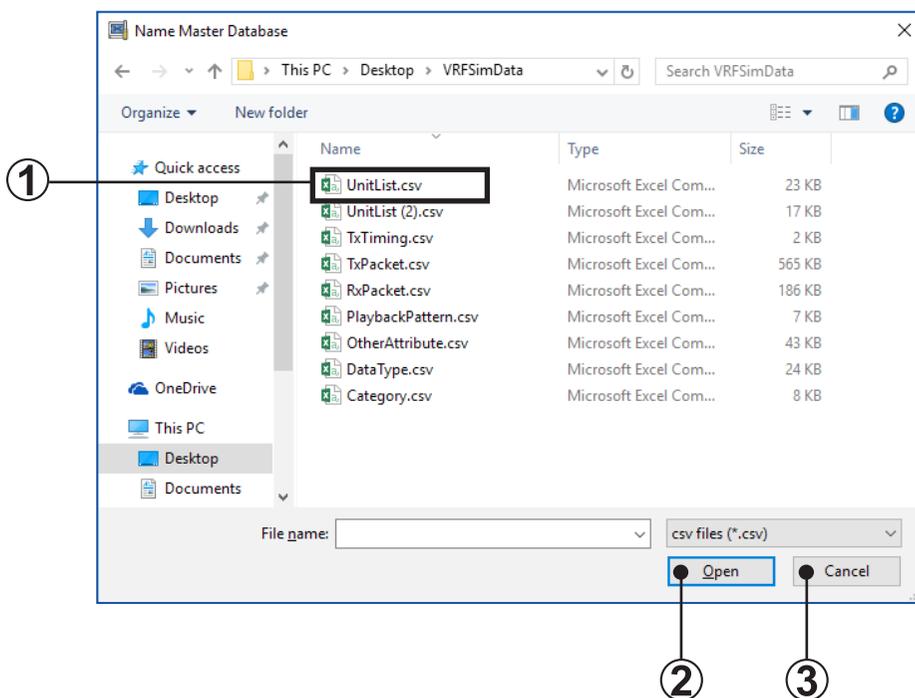


- Note**
- Up to 50 sites can be registered.
When the number of sites already registered exceeds 7, a scroll bar is displayed.
 - *1 When the new site name input field is not inputted, an error message is displayed. Only alpha-numeric characters and spaces may be used for the site name.
 - *2 When a site is not selected, an error message is displayed.

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
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 this button. (The scanning setting screen is displayed.) In this case, the mismatched unit list screen is not displayed after scanning. (*2)

Note



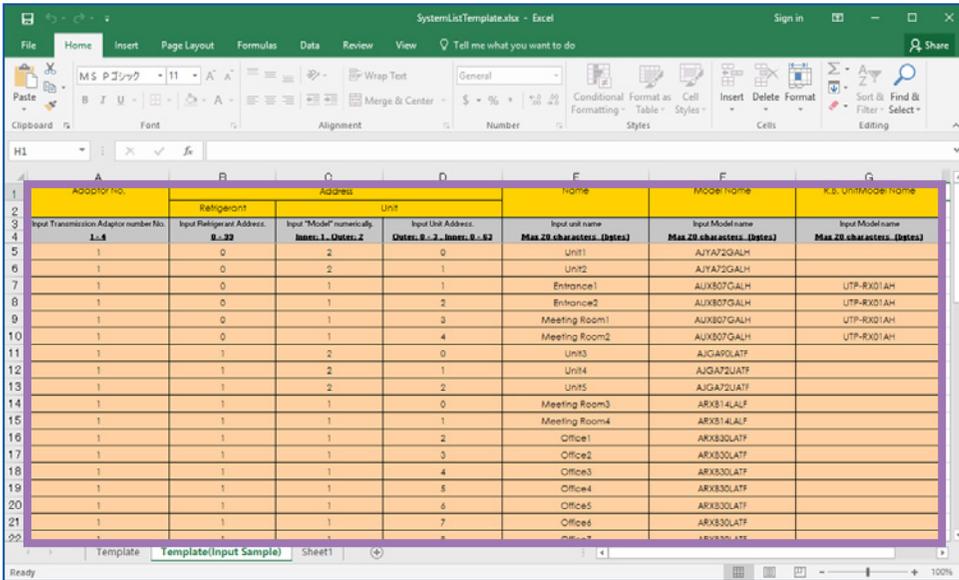
*1 Files other than CSV files cannot be selected and displayed.

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

■ 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.

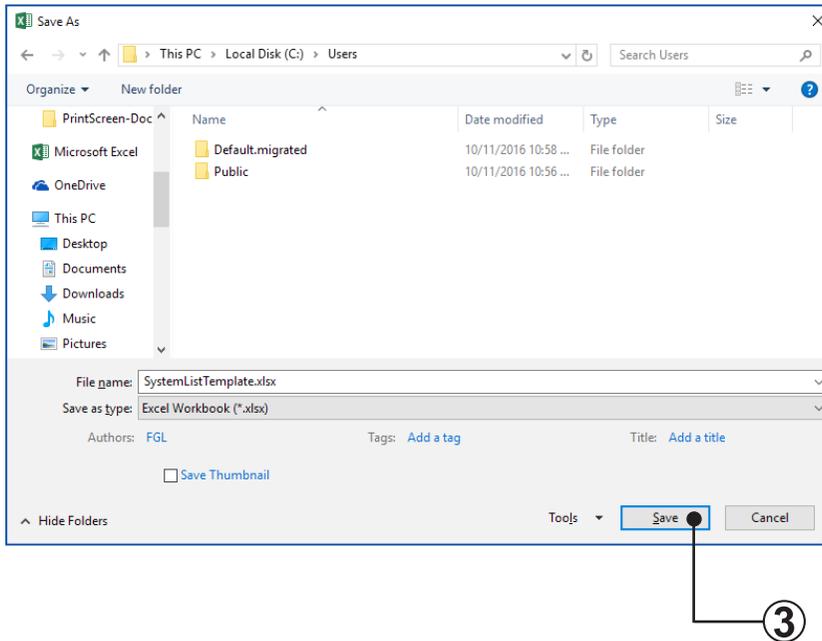
- ① Since the template [SystemListTemplate.xls] is C:\Program Files\AIRSTAGE-Service Tool\SystemListTemplate\, open that file with Excel.
(*1) (*2)
- ② Since the following screen is displayed, set a value at each item.



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.	

- 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)

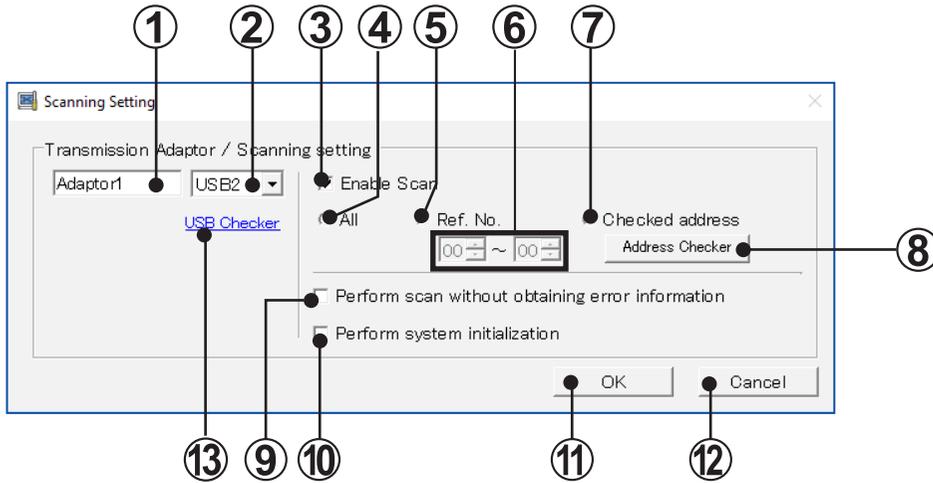


- Note**
- *1 This template is created by spreadsheet program Excel. Excel must be purchased separately.
 - *2 [SystemListTemplate.xls] is in the folder specified when installing the Service Tool. When an address other than the default installation address was specified, check that folder.
When OS is 64 bit, the folder is C:\Program Files(x86)\AIRSTAGE-Service Tool\SystemListTemplate\.
 - *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.

3-2-5 Scanning Setting

■ Scanning Setting screen

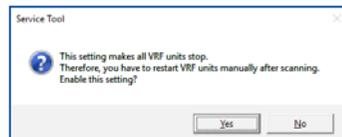
The air conditioner indoor units and outdoor units are connected by a transmission bus line and each have unique address information. Scanning collects this information.



- 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 alphanumeric characters 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. Refer to “par.3-2-7 Address Checker”.
- ⑨ Perform scan without obtaining error information
When it is not necessary to acquire the error information by scan, check the checkbox.

- ⑩ 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 [Yes] button is clicked, all the units in the VRF System may be stopped.

When the [No] button was clicked, the check mark is removed.

- ⑪ OK button
 - When “Enable Scan” checked

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 confirming whether the existing indoor/outdoor units data (operation data, etc.) may be deleted, after selecting the start of scan.

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

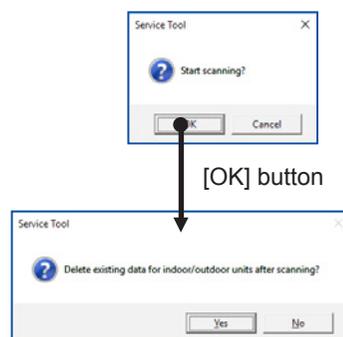
- * When "No" is selected, please confirm that the number of units is the same as the data currently held.

If "No" is selected and the number of units differs before and after scanning, the following reasons are possible.

- A communication error has occurred.
- Data collection delay is occurring.
- When “Enable Scan” not checked

The system list screen is displayed without scanning. But when CSV formatted Name Master File (“par. 3-2-4 Name Master Database file selection screen”) has been already read, the corresponding Name of the unit will be updated.

- ⑫ Cancel button
Displays the online site selection screen.

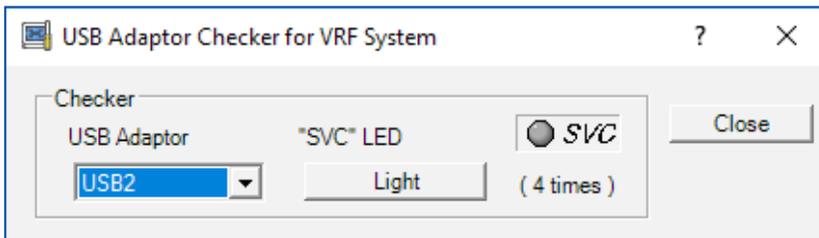


13 USB Checker

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.



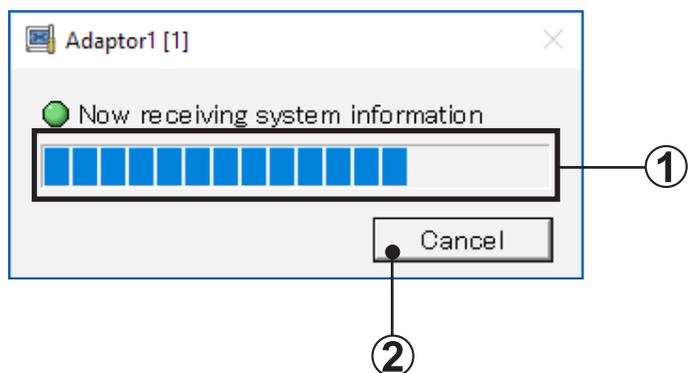
- *2 • When Perform System Initialization checked

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.

■ Scanning progress screen

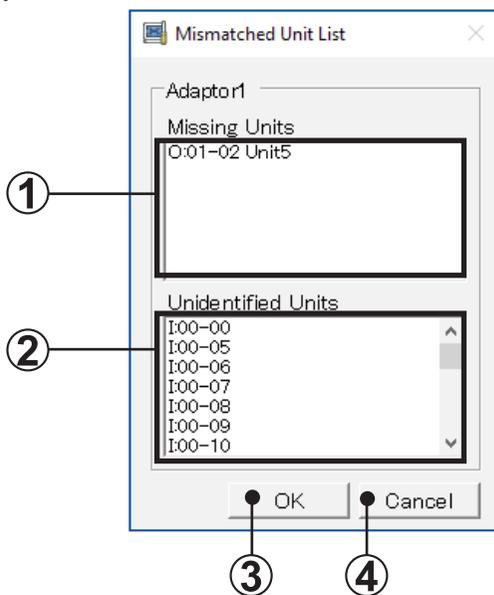
Scanning is started and the scanning progress is displayed.



- ① Scanning progress display field
Displays the progress of scanning.
- ② Cancel button
Scanning stops and the program returns to the scanning setting screen.

3-2-6 Mismatched Unit List

When a Name Master Database file is specified at "par. 3-2-4 Name Master Database file selection screen", 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
The scanning acquisition data is stored and the system list screen (Refer to "par. 5-3 System List") is displayed. The application icon is also displayed at the task tray.

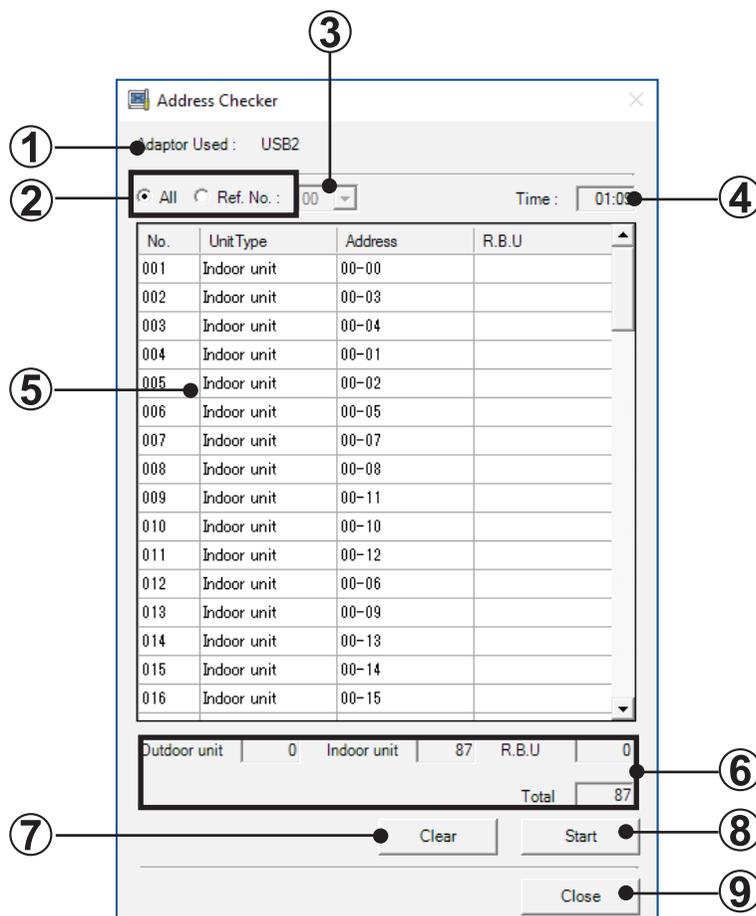
If there is a unit mismatch, return to the scanning setting screen by clicking the [Cancel] button and repeat collation with the scanning acquired data until there are no mismatches. After confirming that there are not mismatches, click the [OK] button. If the [OK] button was clicked when there is a mismatch, the unit data acquired by scanning is displayed on the system list screen unchanged.
- ④** Cancel button
The program returns to the scan setting screen.

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.

⑤ Unit list
Displays the address acquired by starting address check (refrigerant No. – unit No) (*1).

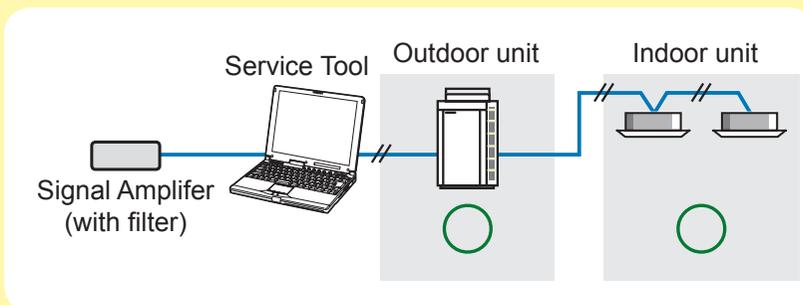
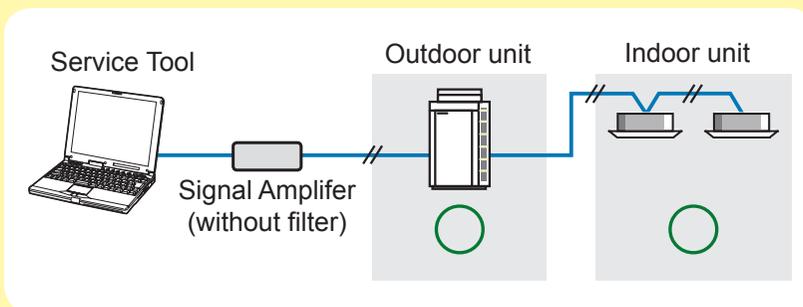
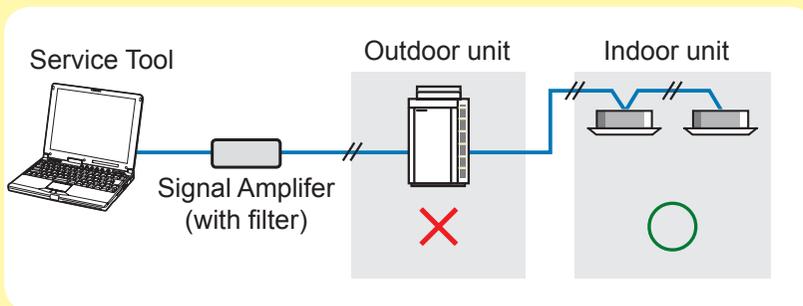
The row displays the acquired order No., unit type, and address starting from the left.

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)



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.

3-3 Data acquisition application starting (offline) flow

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

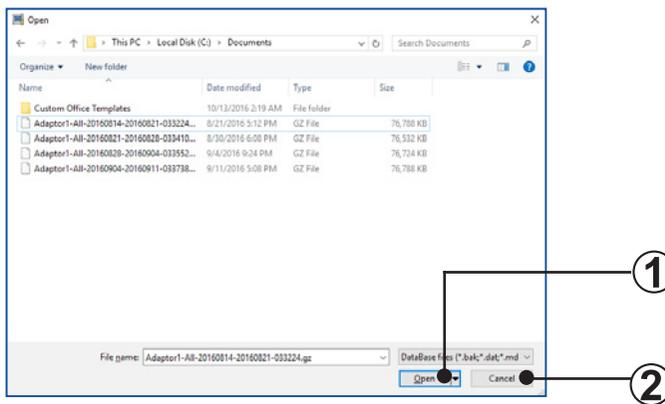
3-3-1 Import file selection

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. 1.0 or later (UTY-ASGX)
- Service Tool Ver. 2.0 or later (UTY-ASGXZ1)
- Web Monitoring Tool Ver. 1.0 or later (UTY-AMGX)
- Web Monitoring Tool Ver. 2.0 or later (UTY-AMGXZ1)

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



1 Open button
The data of the selected Import file is fetched and the menu screen (Refer to "par. 5-2 Main menu") is displayed.

2 Cancel button
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.

- par. 4-9 Exit
- par. 5-11 Data Backup

Note The data saved by the following models cannot be displayed.

- Service Tool (UTR-YSTB / UTR-YSTC)
- Web Monitoring Tool (UTR-YMSA)

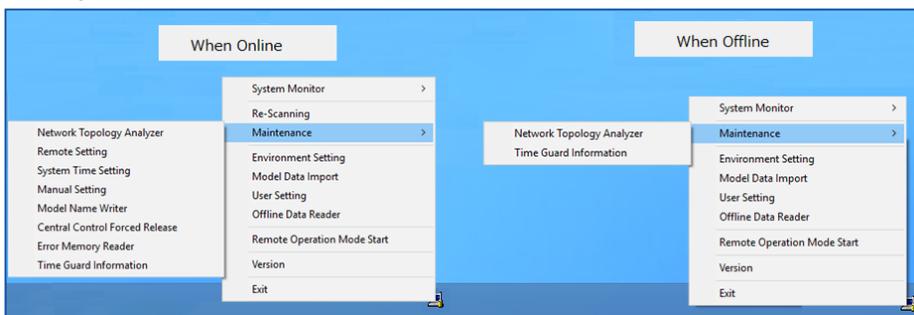
4. Data acquisition application right click menu

4-1 Outline

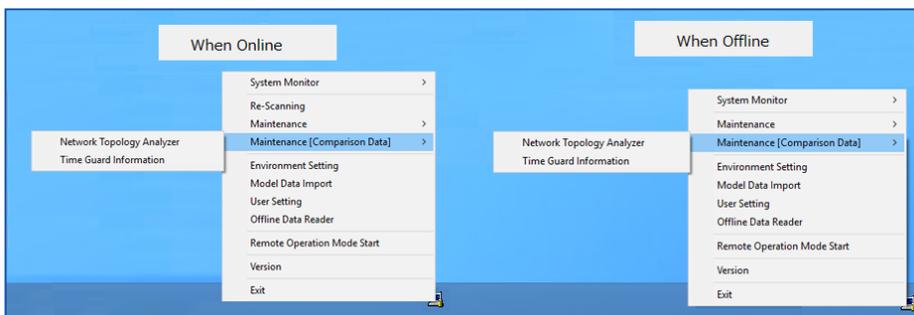
4-1-1 Menu

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

When normally used



When Offline Data Reader is used

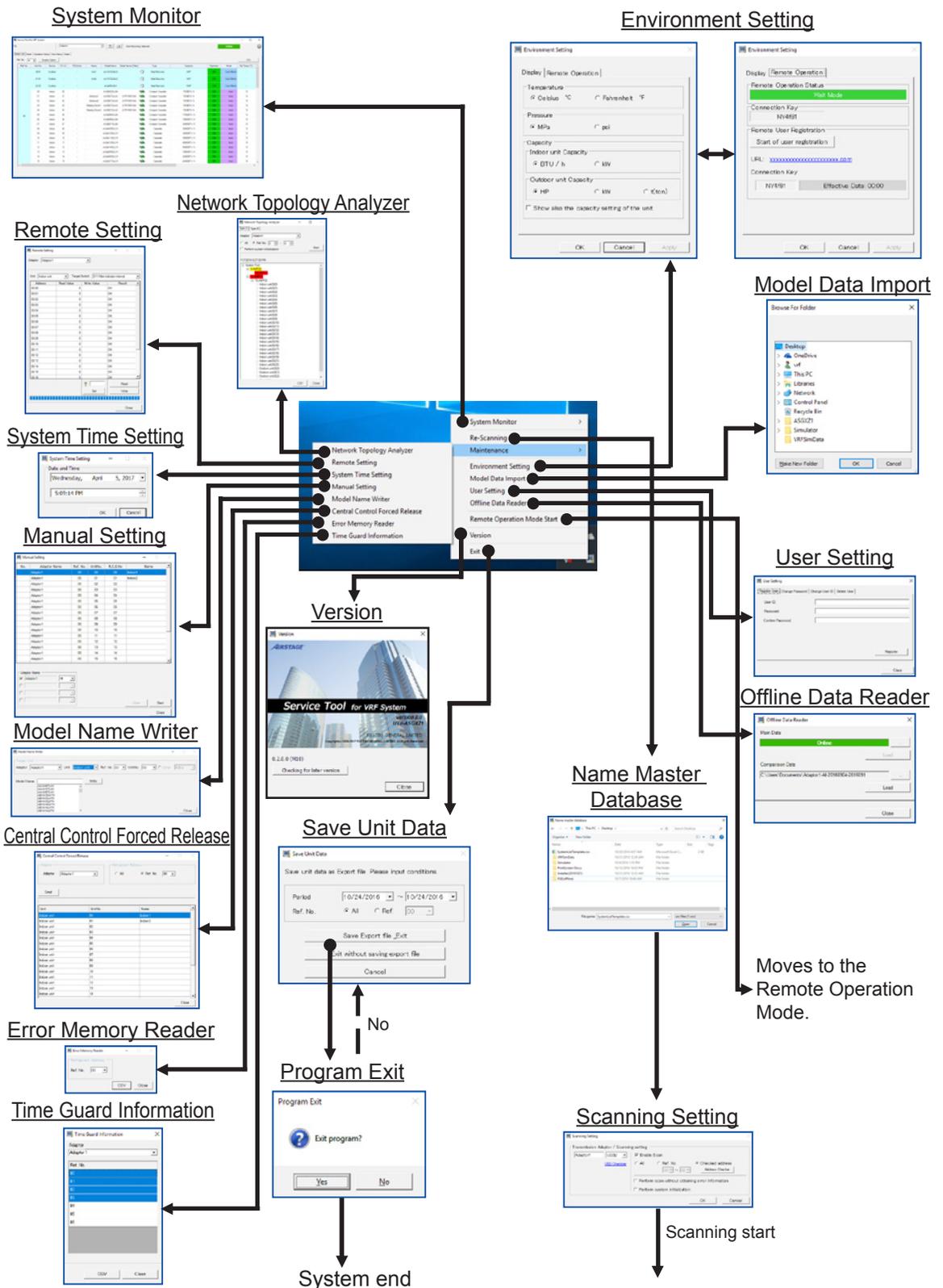


System Monitor	System Monitor screen is displayed.	—
Re-Scanning	Scanning Setting screen is displayed. However, before it is displayed, name master database selection screen is displayed first. Not displayed when offline.	par.3-2-5

Maintenance	Maintenance sub-menu is displayed.	par. 4-3
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/J-III/J-IIIIL/VR-II/V-III series)	par. 4-3-1
Remote Setting	Function (Field) Setting for indoor unit is realized remotely. (V-II/J-II/J-IIS/J-III/J-IIIIL/VR-II/V-III series) Not displayed when offline.	par. 4-3-2
System Time Setting	An arbitrary time is set for all the remote controllers within the system. (V-II/J-II/J-IIS/J-III/J-IIIIL/VR-II/V-III series) Not displayed when offline.	par. 4-3-3
Manual Setting	Manual Setting screen is displayed. Not displayed when offline.	par. 4-3-4
Model Name Writer	An arbitrary model name can be written to the target unit. (V-II/J-II/J-IIS/J-III/J-IIIIL/VR-II/V-III series) Not displayed when offline.	par. 4-3-5
Central Control Forced Release	The operation setting restriction function of the indoor units set from the controller can be forcibly released. (V-II/J-II/J-IIS/J-III/J-IIIIL/VR-II/V-III series) Not displayed when offline.	par. 4-3-6
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/J-III/J-IIIIL/VR-II/V-III series) Not displayed when offline.	par. 4-3-7
Time Guard Information	The reference data is output in a CSV file to judge the maintenance time for indoor unit and outdoor unit.	par. 4-3-8
Maintenance [Comparison Data]	Maintenance [Comparison Data] sub-menu is displayed.	—
Network Topology Analyzer	A list (Comparison data) of units connected to the VRF system network is displayed in network segments in tree form. (V-II/J-II/J-IIS/J-III/J-IIIIL/VR-II/V-III series)	par. 4-3-1
Time Guard Information	The reference data is output in a CSV file to judge the maintenance time for indoor unit and outdoor unit.	par. 4-3-8
Environment Setting	Environment Setting screen is displayed.	par. 4-4
Display	The unit representation setting screen for temperature, pressure, and capacity is displayed.	par. 4-4-1
Remote Operation	This screen is displayed only when the remote operation function starts. The setting for remote operation function can be set and the operating status can be checked.	par. 4-4-2
Model Data Import	The newly released model data of VRF indoor unit and outdoor unit is imported.	par. 4-5
User Setting	User setting (registration, change, and deletion) screen is displayed.	par. 4-6
Offline Data Reader	The data saved previously can be displayed and compared online or offline.	par. 4-7
Version	The version information of this application can be checked. If the version is not latest, it can be updated.	par. 4-8
Exit	Exit from the application.	par. 4-9

4-1-2 Screen transition (online)

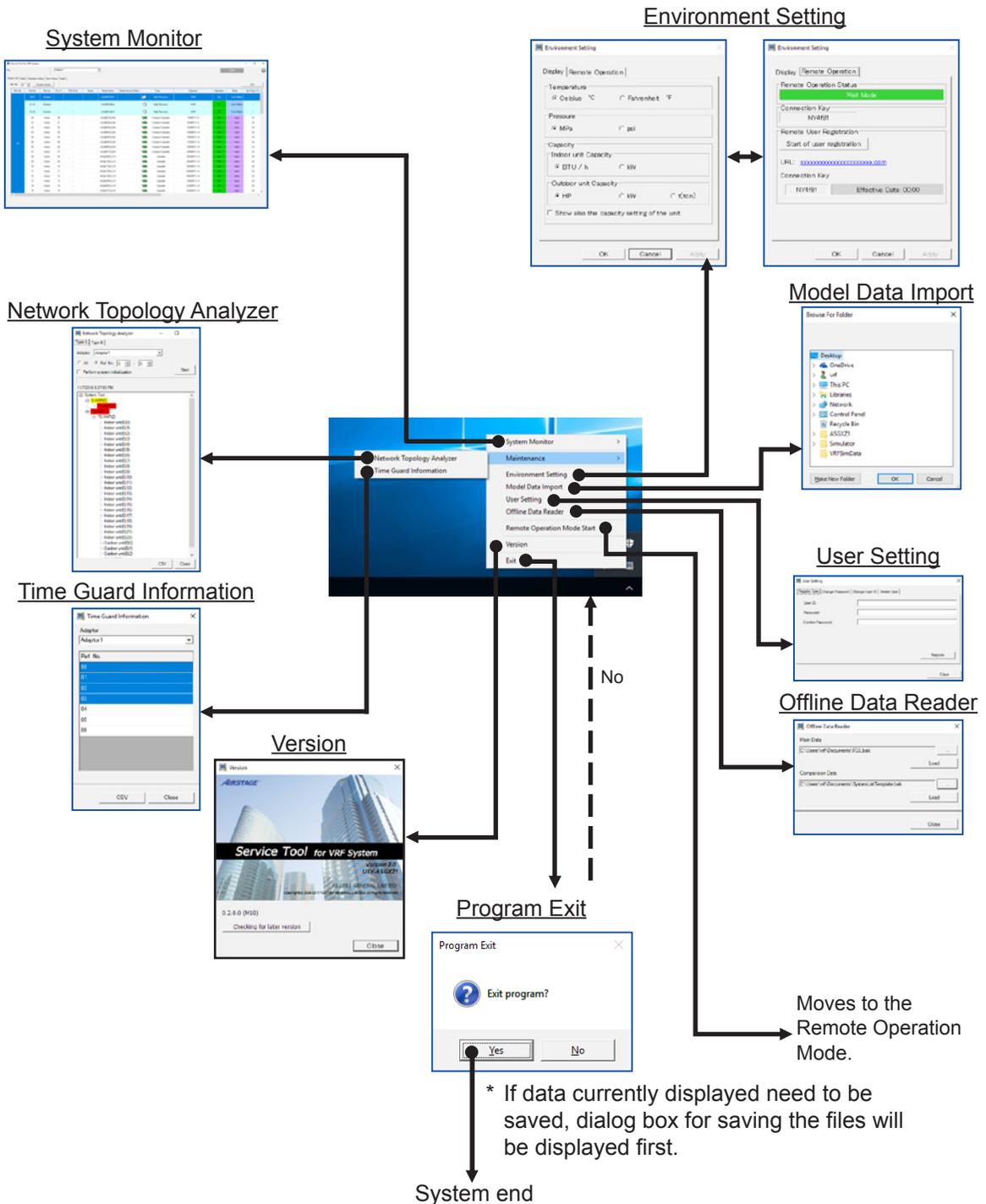
The following shows transition of the screens which are started from the right click online menu.



4. Data acquisition application right click menu

4-1-3 Screen transition (offline)

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



4. Data acquisition application right click menu

4-2 Re-Scanning

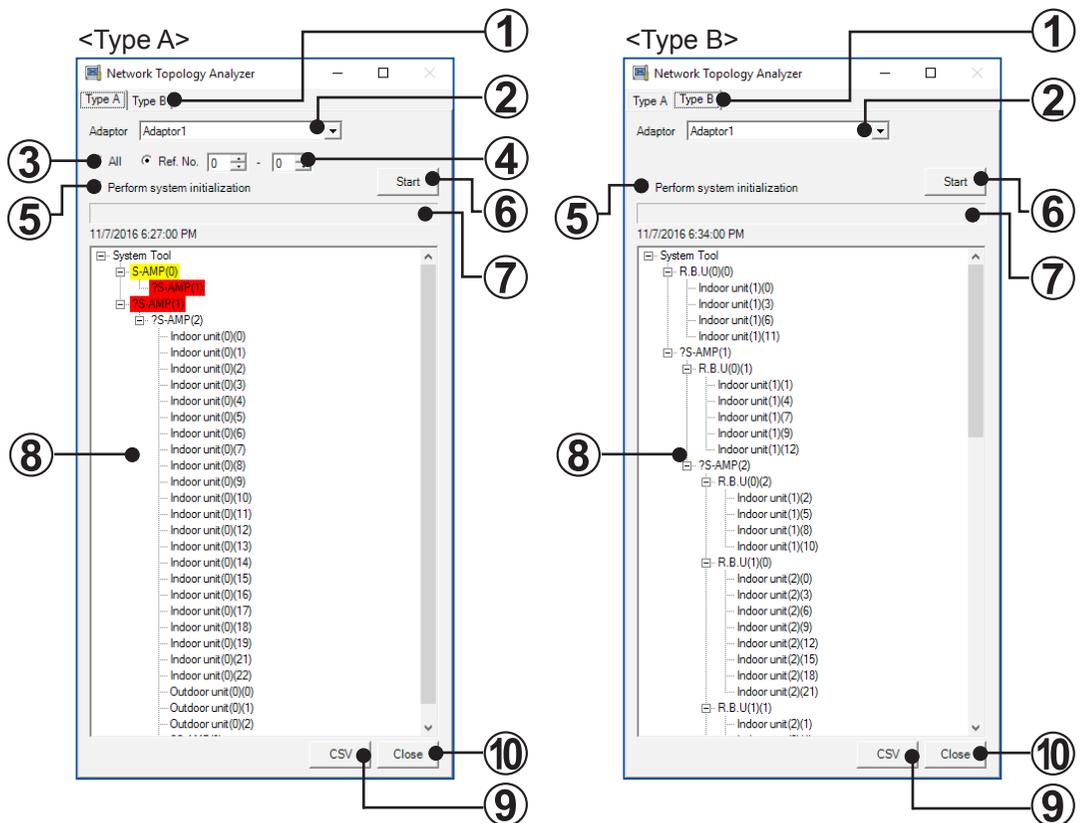
Perform the operations described in “par. 3-2-4 Name Master Database file selection screen” and “par. 3-2-5 Scanning Setting”.

4-3 Maintenance

4-3-1 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/J-III/J-IIIL/VR-II/V-III series)

This information is also output to a CSV file.



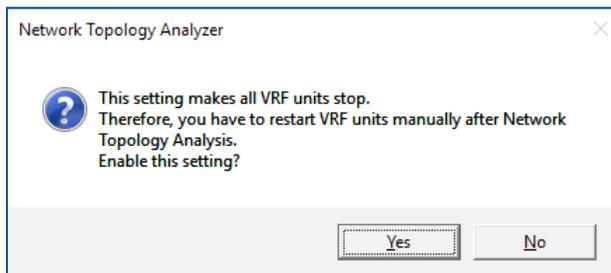
Note When this function is used for VR-II series, do not connect this tool between R.B. unit and indoor unit to obtain the accurate data.

- 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, J-III, J-IIIIL, 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 system 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.

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

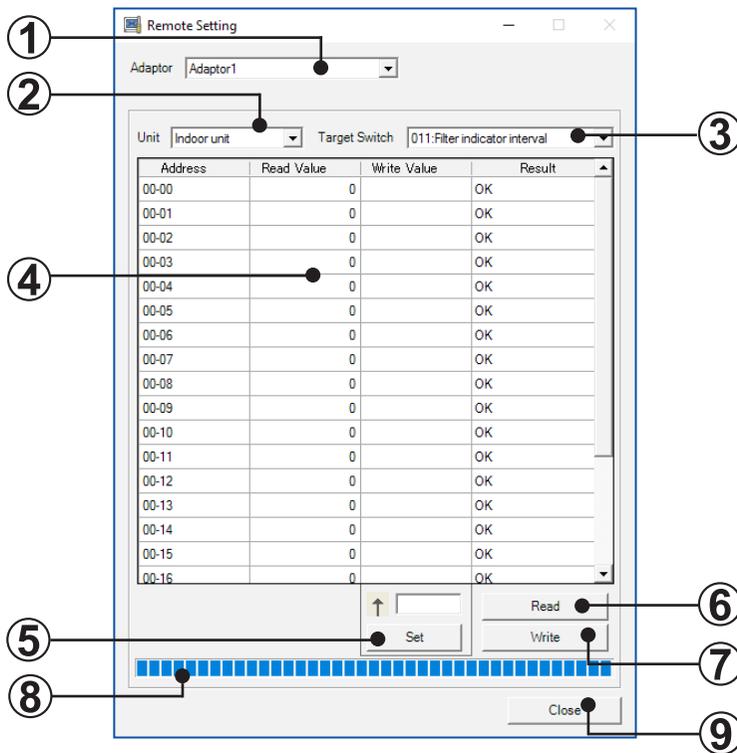
Closes this screen.

4-3-2 Remote Setting

Function (Field) setting can be performed for indoor units by remote controller. (V-II/J-II/J-IIS/J-III/J-III/VR-II/V-III series)

(Some settings cannot be supported.)

The processed result can also be output to a CSV file.



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.

- 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, click 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 clicking 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 clicking the button again.

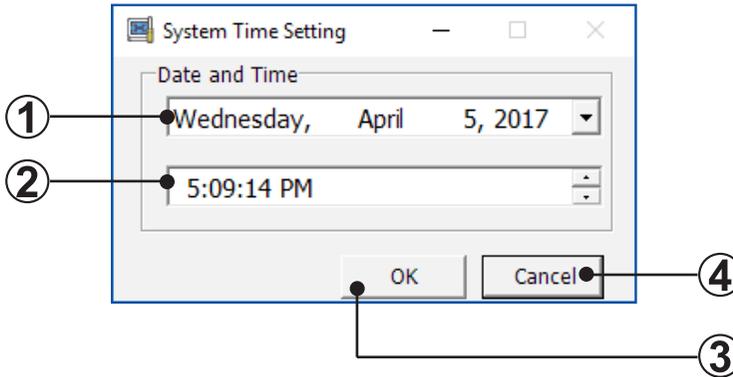
- ⑧ Progress bar
Displays the state of progress of ⑥ or ⑦ execution.

- 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.

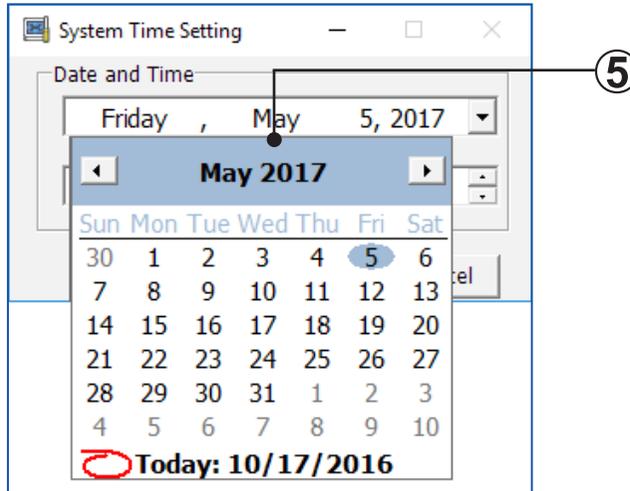
4-3-3 System Time Setting

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

System Time Setting screen



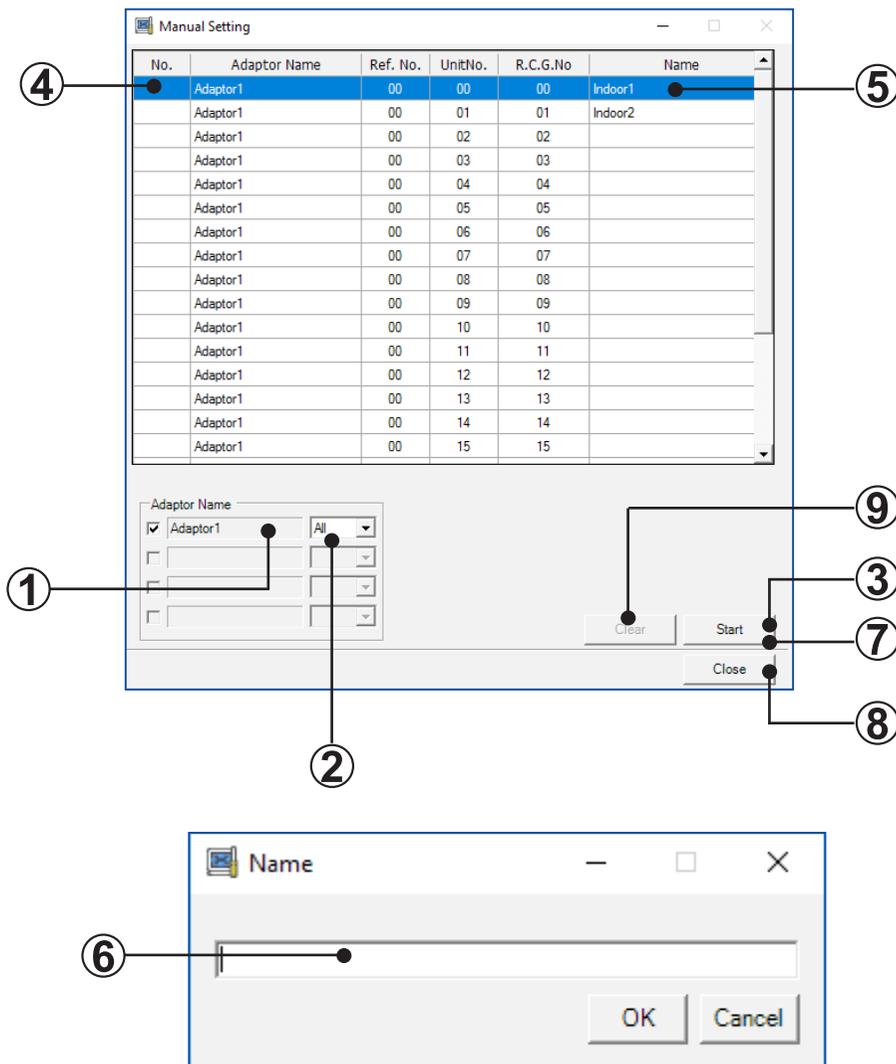
Date and Time Setting screen



- 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.

4-3-4 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.

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.)

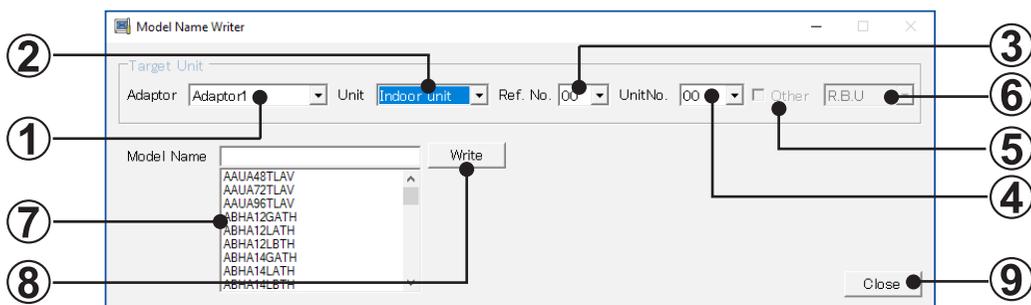
- ⑧** End registration
Click “Close” to end manual setting registration.

- 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.

4-3-5 Model Name Writer

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



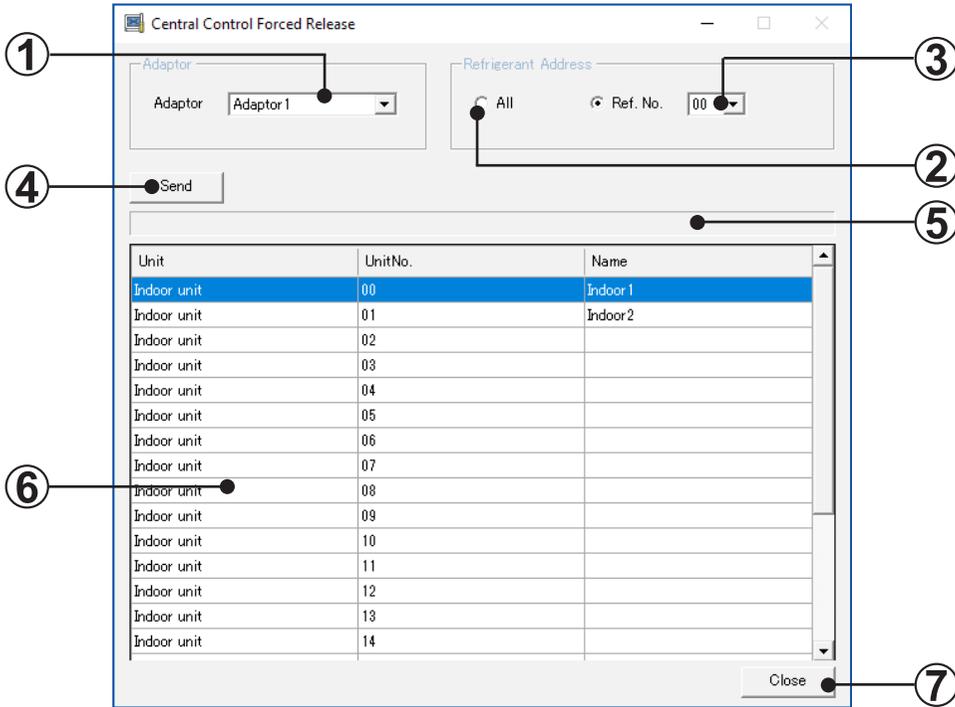
- ① Adaptor selection
Selects the transmission adaptor which connects the target unit.
- ② Unit selection
Selects the type of unit (indoor unit/outdoor unit).
- ③ Refrigerant circuit address selection
Selects the target refrigerant circuit address.
- ④ Unit address selection
Selects the target unit address.
- 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 be 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)

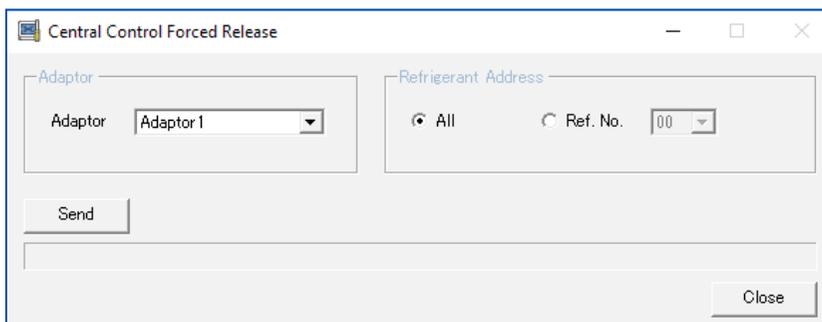
4-3-6 Central Control Forced Release

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/J-III/J-IIIL/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.



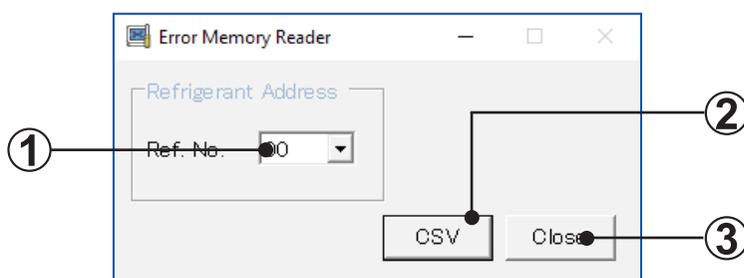
- ③ Refrigerant Address selection
An arbitrary target refrigerant address can be selected.
At this time, the indoor units belonging to the selected refrigerant are displayed at ⑥.

- 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.

4-3-7 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/J-III/J-IIIIL/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.)



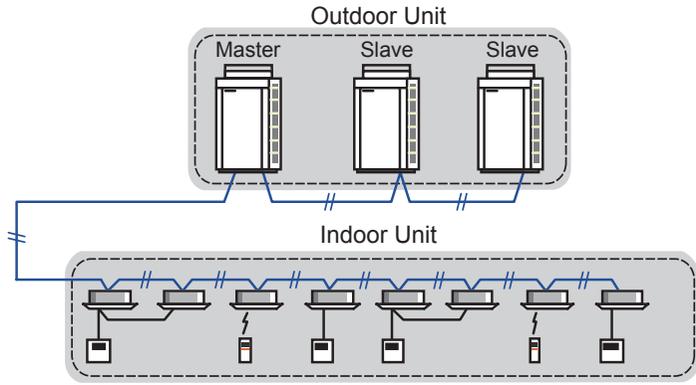
- ① Refrigerant circuit address selection
Selects an arbitrary refrigerant circuit.
- ② CSV button
Acquires the operation data from the outdoor unit of the selected refrigerant circuit address and saves it to a CSV file.

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



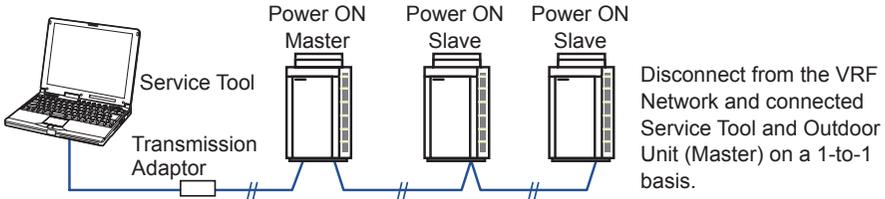
- ③ Close button
Closes this screen.

- When an error occurs at transmission line, unit data can be acquired directly from outdoor unit.

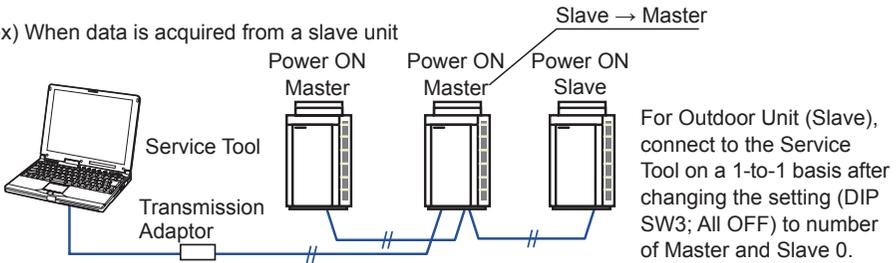


Stop operation of the Indoor Unit of the target refrigerant circuit.

ex) When data is acquired from a master unit

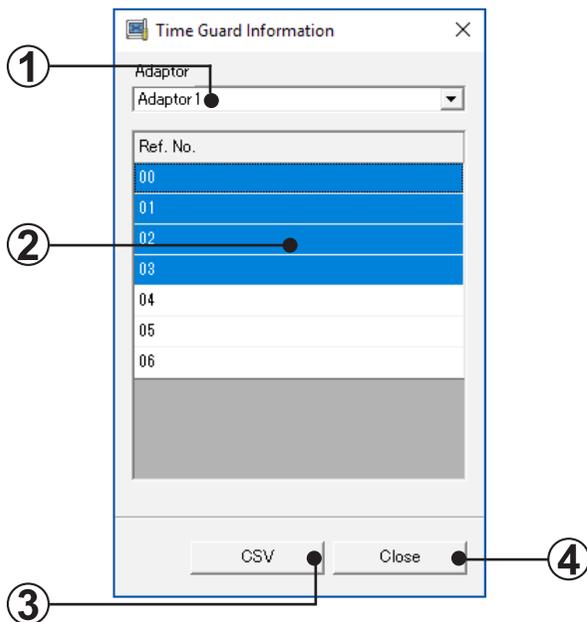


ex) When data is acquired from a slave unit



4-3-8 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/J-III/J-IIIL/VR-II/V-III series)



- 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 **①** and **②**.
- ④** Cancel button
Cancels the selecting status and closes this screen.

4-4 Environment Setting

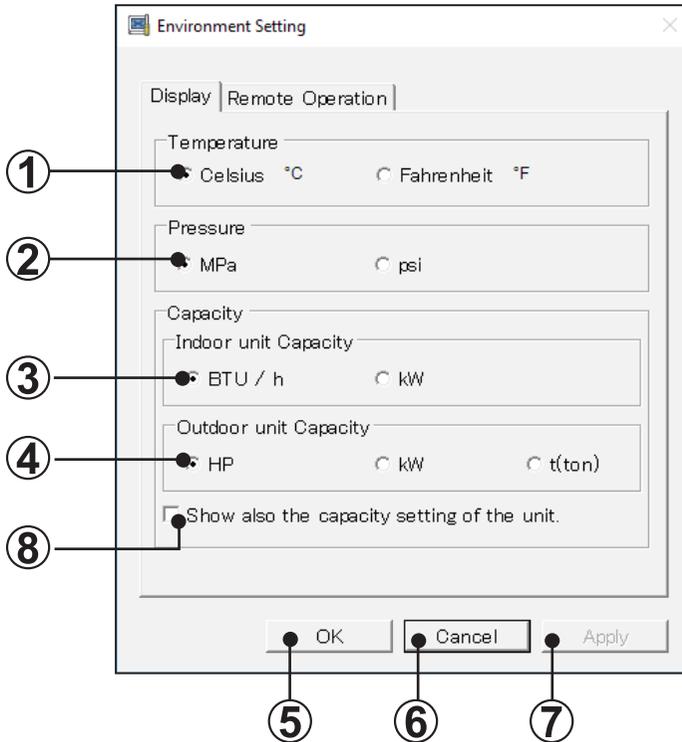
Various settings related to the operating environment are performed.

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

Remote Operation tab: Sets the Remote Operation function.

4-4-1 Display

Sets the display method of the Temperature/Pressure/Capacity to be displayed by the Monitor 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 “t (ton)”.
However, when the unit different from outdoor unit destination is specified, “ - ” is displayed and the value may not be displayed.

- ⑤ OK button
The set contents are saved and the screen is closed.
- ⑥ Cancel button
Environment setting stops and the screen closes.
- ⑦ Apply button
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**

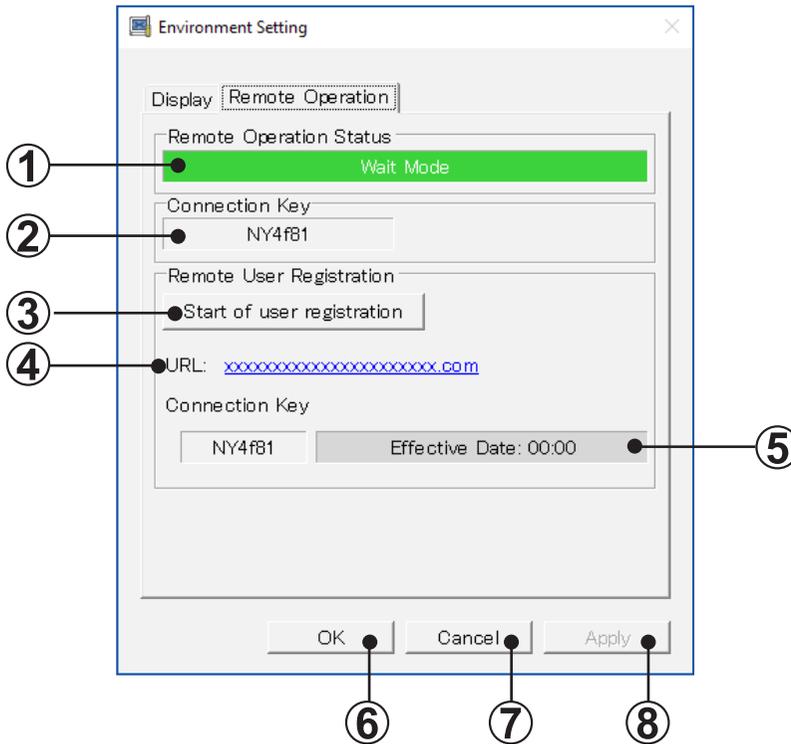
- This set value is used for switching the capacity of air conditioning control. Since the set value may not correspond to the capacity specified by each model, use it only as a guide. (Slight deviation due to destination differences and setting mistakes at PCB replacement, etc.)
- “kW” of outdoor unit 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 Monitor application newly started from the Menu screen. In order for the changes to take effect, re-display the Monitor application from the Menu Screen (Refer to “par. 5-2 Main menu”).

4-4-2 Remote Operation

Remote Operation tab can be operated only when remote operation function is being executed. The remote operation function can be set and the operating status can be checked. (For the execution method of Remote Operation function, refer to “par. 6 Remote Operation”.)



- 1** Remote Operation Status
The operation mode of current Remote Operation function is displayed.

Wait Mode:

The remote operation function is being executed, however user does not connect to the remote operation site.

Remote Operating Mode:

The remote operation function is being executed and user connects to the remote operation site.

- 2** Connection Key
The “Connection key” necessary for starting the remote operation at remote operation site is displayed. The “Connection key” is made up of the six-digit one-byte alphabets and numbers.
- 3** Start of user registration button
“Connection key” is enabled.

- ④ **Linked URL for user registration site**
Linked URL used for registering user ID and password to log in the remote operation site is displayed.

- ⑤ **User registration deadline**
The deadline to create login account to remote operation site is displayed by count-down.

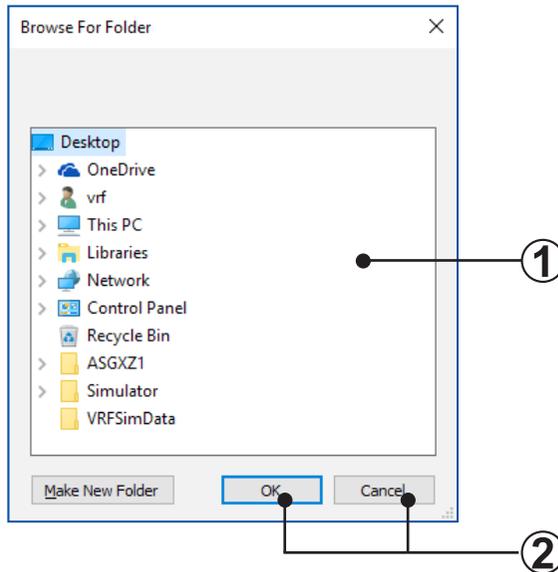
- ⑥ **OK button**
Closes this screen after the setting is saved.

- ⑦ **Cancel button**
Closes this screen after the setting is deleted.

- ⑧ **Apply button**
Saves the setting. This screen is not closed.

4-5 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.

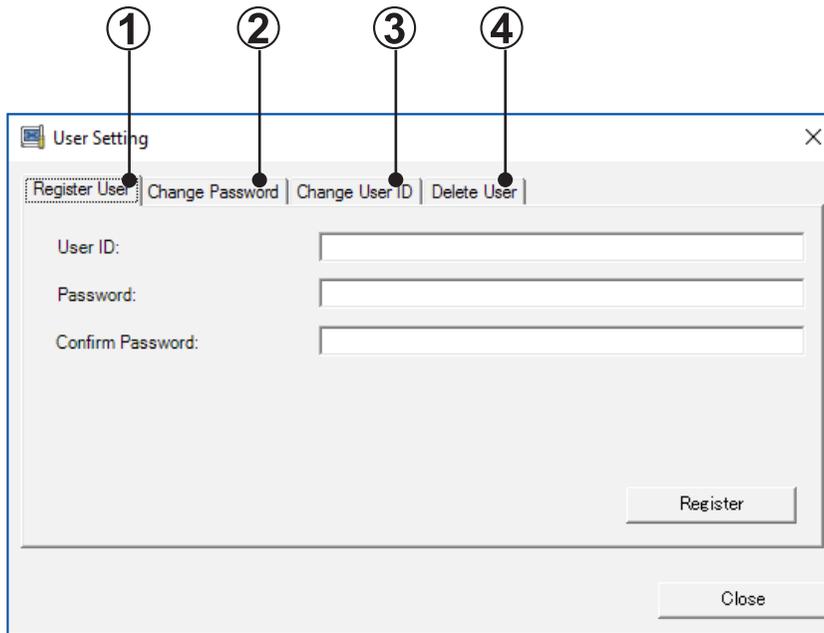
Each version is checked by the following method:

This tool...Task tray icon right click menu → Version selection

Model data...Refer to ReadmeFirst.

4-6 User Setting

Performs Register User, Change Password, Change User ID and Delete User. When User Setting is selected from right-click menu, User Setting screen is displayed.



- ① Register User tab
Displays the Register User screen.
- ② Change Password tab
Displays the Change Password screen.
- ③ Change User ID tab
Displays the Change User ID screen.
- ④ Delete User tab
Displays the Delete User screen.

4-6-1 Register User

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

The screenshot shows a 'User Setting' dialog box with a title bar containing a close button (X). Below the title bar are four tabs: 'Register User' (selected), 'Change Password', 'Change User ID', and 'Delete User'. The main area contains three input fields: 'User ID:', 'Password:', and 'Confirm Password:'. Each field has a corresponding callout number (1, 2, and 3) pointing to its right edge. At the bottom right of the dialog are two buttons: 'Register' (callout 4) and 'Close' (callout 5).

- 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 Register button
Registers the inputted contents. (*3)
- ⑤ Close button
Closes this screen.

- 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.

4-6-2 Change Password

The password of a registered user can be changed.

The screenshot shows a 'User Setting' dialog box with a title bar and a close button (X). The dialog contains a menu bar with 'Register User', 'Change Password', 'Change User ID', and 'Delete User'. Below the menu bar are four input fields: 'User ID' with a dropdown arrow, 'Password', 'New Password', and 'Confirm New Password'. At the bottom right are 'Update' and 'Close' buttons. Numbered callouts 1 through 6 point to the dropdown arrow, the Password field, the New Password field, the Confirm New Password field, the Update button, and the Close button, respectively.

- 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 Update button
Performs change processing according to the inputted contents. (*3)
- ⑥ Close button
Closes this screen.

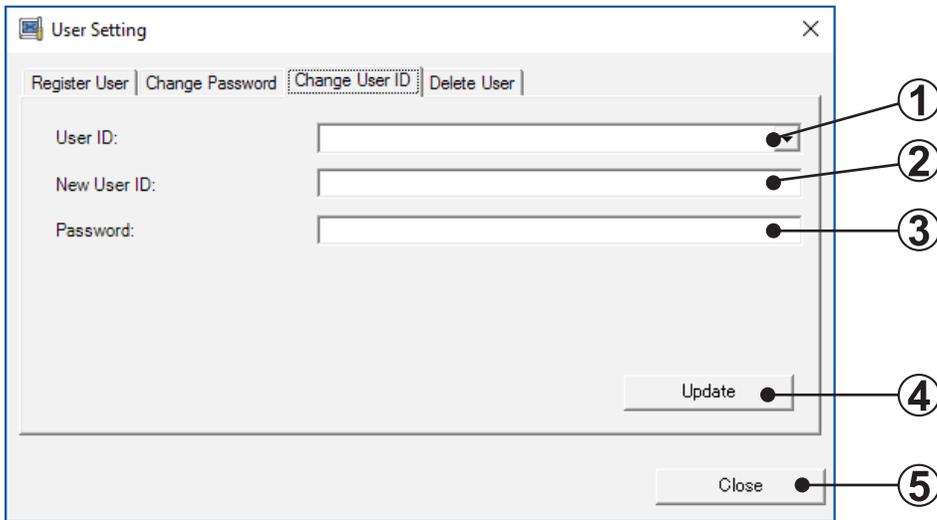
Note



- *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.

4-6-3 Change User ID

The User ID of a registered user can be changed.



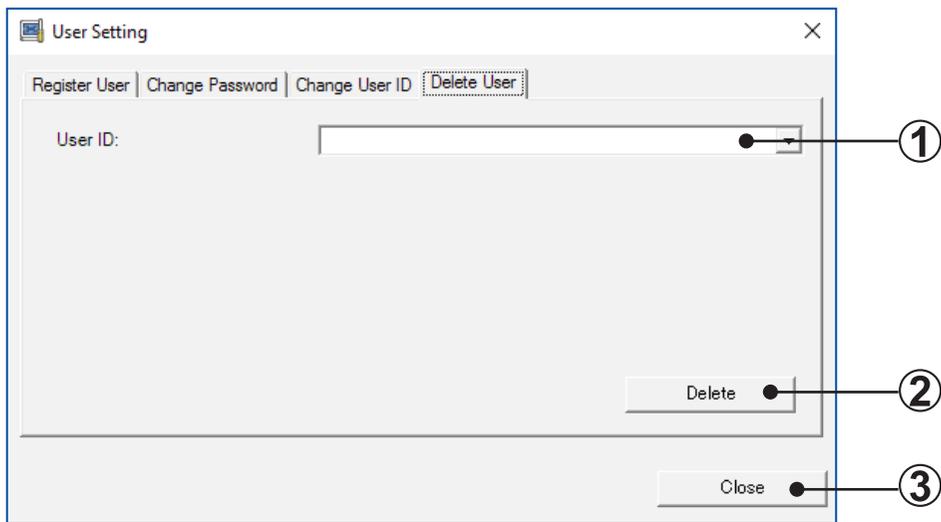
- 1** User ID selection field
Select the user to be changed.
The currently registered users can be displayed and selected with [▼].
- 2** New User ID input field
Input the new user ID to be newly registered. (Up to 20 alphanumeric characters) (*1)
- 3** Password input field
Input the password of the user to be changed. (Up to 20 alphanumeric characters) (*1)
- 4** Update button
Registers the inputted contents. (*2)
- 5** Close button
Closes this screen.

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

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

4-6-4 Delete User

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** Delete button
Deletes the selected user. (*1)
Confirmation screen is displayed to confirm whether the deletion is performed. When deleting, click the [OK] button. When not deleting, click the [Cancel] button.
- ③** Close button
Closes this screen.

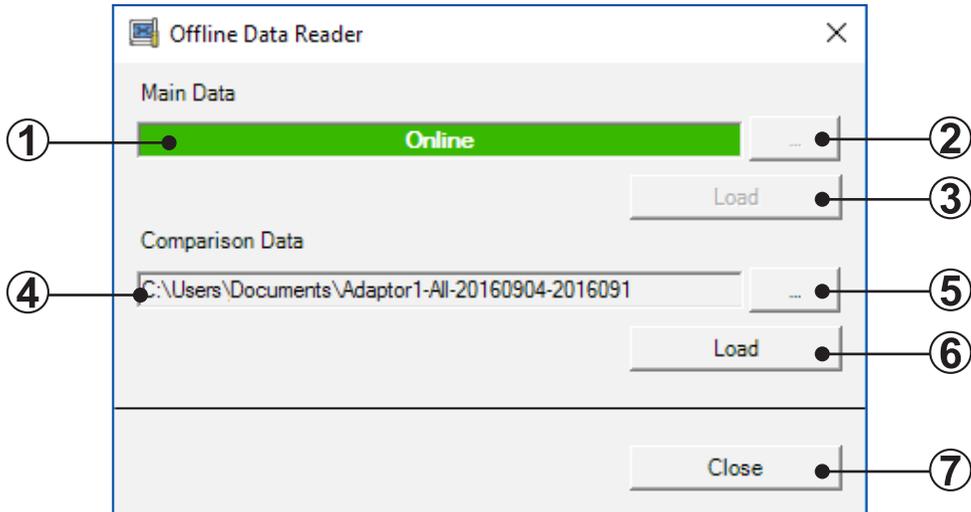
Note *1 When the [Delete] button is clicked, if the selected User ID is used, it cannot be deleted.

4-7 Offline Data Reader

You can monitor the various unit data by loading the backup file saved in the past.

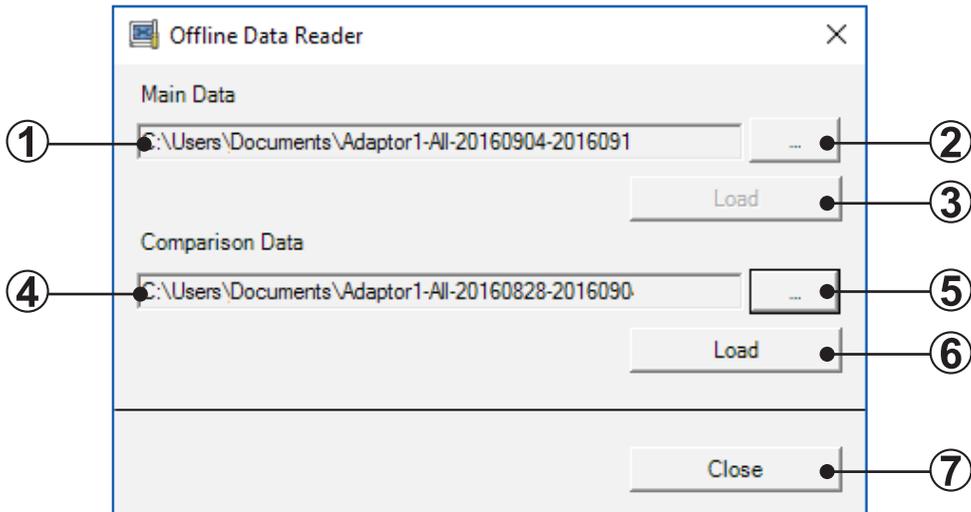
A: Offline Data Reader in online state

Current unit data and backup file saved in the past can be monitored or compared.



B: Offline Data Reader in offline state

Two types of backup files saved in the past can be monitored or compared.



① Main Data file path name display

“Online” is displayed in online state.

The file path name of Main data backup file is displayed in offline state.

The file path name selected at Service Tool startup is displayed in offline state.

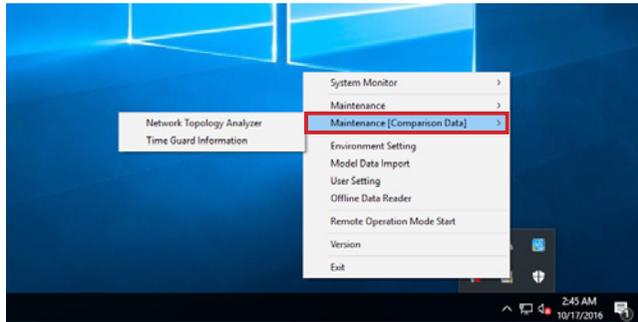
- ② Main Data file selection button
Select the Main Data backup file.
The file cannot be selected in online state.
- ③ Main Data Load button
Load the selected backup file.
Progress screen is displayed during loading, and when it is complete, confirmation screen is displayed.
When it is complete normally, click the [OK] button.
The [Load] button is not enabled in online state.
- ④ Comparison Data file path name display
The file path name of Comparison data backup file is displayed.
- ⑤ Comparison Data file selection button
Select the Comparison Data backup file.
- ⑥ Comparison Data Load button
Load the selected backup file.
Progress screen is displayed during loading, and when it is complete, confirmation screen is displayed.
When it is complete normally, click the [OK] button.
- ⑦ Close button
Closes this screen and displays the Monitor screen (for Comparison data).



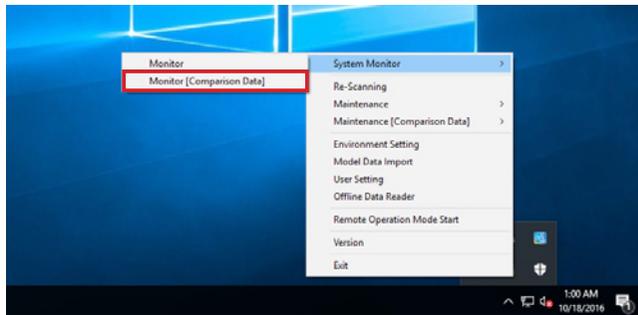
Note When backup data file saved with old version of Service Tool is selected, dialog screen for saving current data format will be displayed.
This is for maintaining the compatibility of data with Service Tool that will be released continuously in future. When this dialog is displayed, the saving by current data format is recommended.

- When Offline Data Reader is executed, two monitor screens can be compared at the same time. In addition, for Maintenance [Comparison data] menu, Network Topology Analyzer and Time Guard Information functions of comparison data can be used.

Functions in which comparison data can be used by "Right-click menu"



When monitor screen [Comparison data] is displayed



Service Tool for VRF System [Comparison Data]

FGL Adaptor1 Offline

System List | Detail | Operation History | Error History | Graph

Ref. No. All Display Option CSV

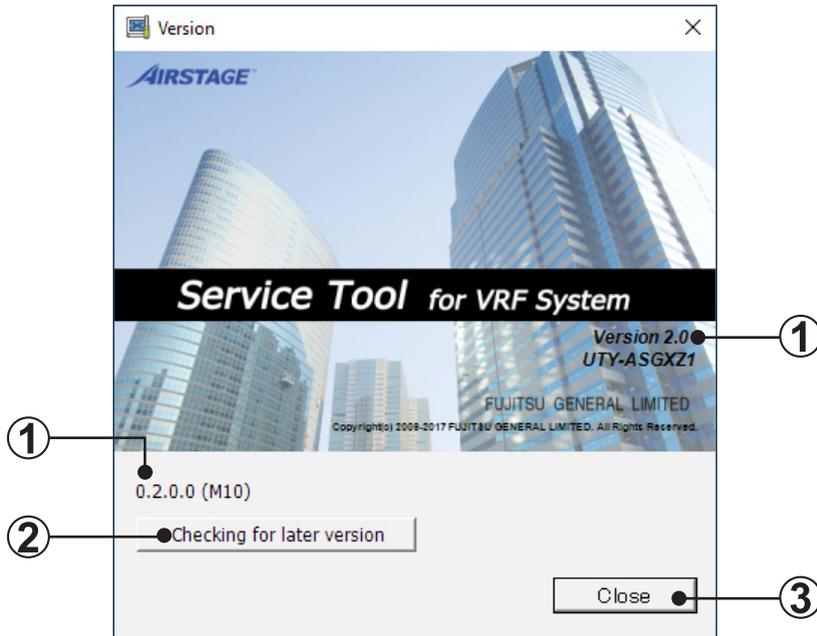
Ref. No.	Unit No.	Device	R.C.G	R.B.G No	Name	Model Name	Model Name (Other)	Type	Capacity	Operation	Mode	Set Temp (°C)
01	00M	Outdoor	-	-		AQU46RLEBV		Heat Pump	10HP	OFF	Idling	-
	01-S1	Outdoor	-	-		AQU46RLEBV		Heat Pump	10HP	OFF	Idling	-
	01	Indoor	-	-		AUXD18G4LH		Cassette	18000BTU / h	OFF	Stop	-
	02	Indoor	02	-		AUXD18G4LH		Cassette	18000BTU / h	OFF	Stop	-
	03	Indoor	-	-		AUXD18G4LH		Cassette	18000BTU / h	OFF	Stop	-
	04	Indoor	-	-		AUXD18G4LH		Cassette	18000BTU / h	OFF	Stop	-
	05	Indoor	05	-		AUXD18G4LH		Cassette	18000BTU / h	OFF	Stop	-
	06	Indoor	-	-		AUXD24G4LH		Cassette	24000BTU / h	OFF	Stop	-
	07	Indoor	06	-		AUXD24G4LH		Cassette	24000BTU / h	OFF	Stop	-
	08	Indoor	-	-		AUXD24G4LH		Cassette	24000BTU / h	OFF	Stop	-
09	Indoor	09	-		AUXD24G4LH		Cassette	24000BTU / h	OFF	Stop	-	
00M	Outdoor	-	-		AQU46RLEBV		Heat Pump	10HP	OFF	Idling	-	
01-S1	Outdoor	-	-		AQU46RLEBV		Heat Pump	10HP	OFF	Idling	-	



- Minimum screen resolution of monitor screen is 1024 × 768.

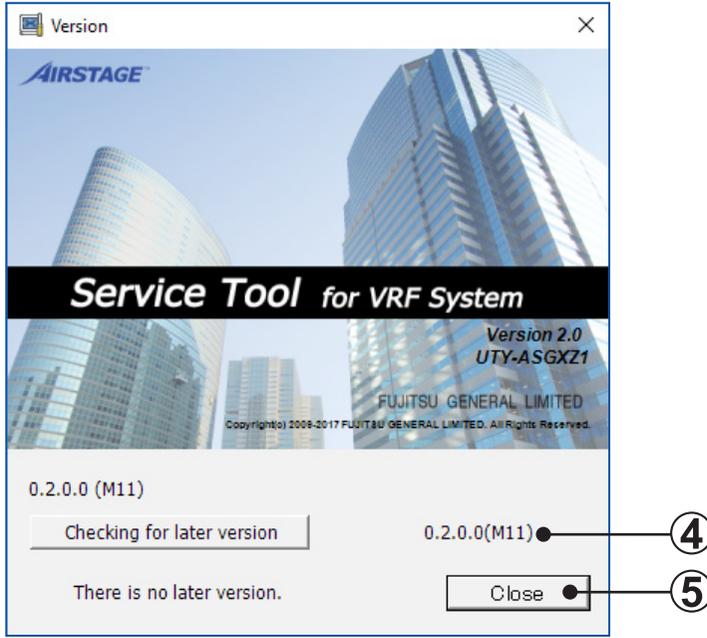
4-8 Version

Software version information can be checked and software can be updated to the latest version.



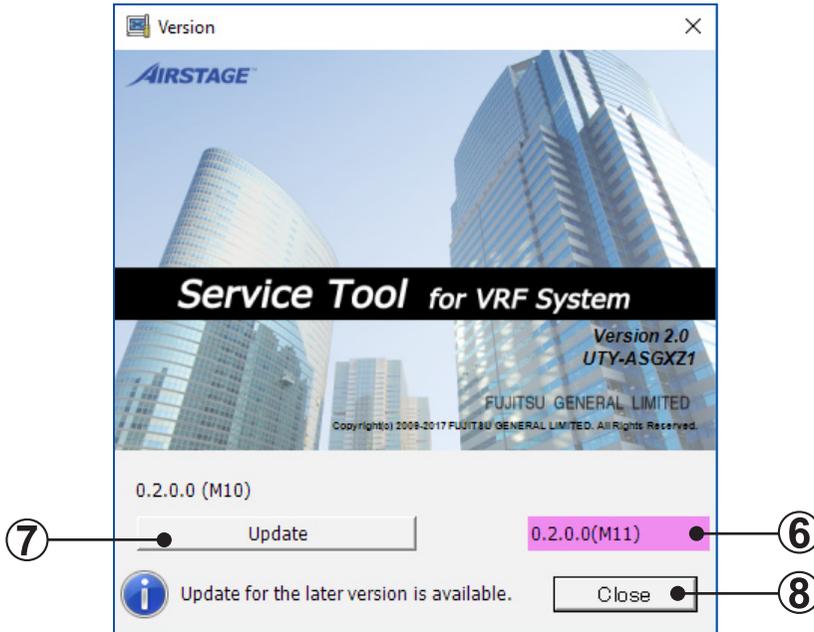
- ① Current software version
Current software version information is displayed.
- ② Checking for later version button
Acquires the software version information from the server and confirms whether the currently used software version is the latest or not.
- ③ Close button
Closes this screen.

When the version information is the latest



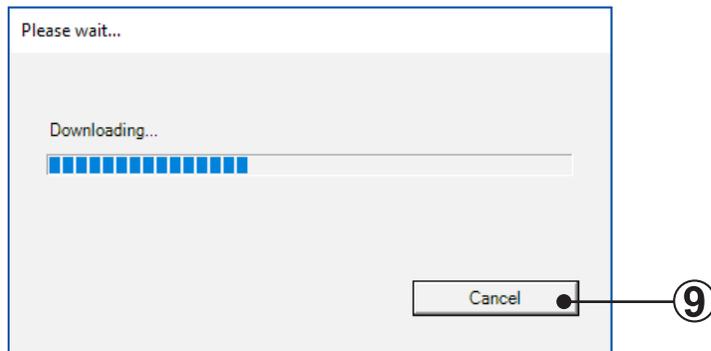
- ④ Version information acquired result (for the latest)
When the version information is the latest, the message “There is no later version.” is displayed. Then, the version information is also displayed.
- ⑤ Close button
Closes this screen.

When the version information is not the latest



- ⑥ Version information acquired result (for not the latest)
When the version information is not the latest, the message “Update for the later version is available” is displayed. Then, the usable latest version information is displayed. The background color of latest version information is pink.
- ⑦ Update button
Update starts and update progress is displayed on the update progress screen.
- ⑧ Close button
Closes this screen.

Update progress screen



- ⑨ Cancel button
Stops the update progress and returns to the previous screen.

- After the Update progress screen is displayed, follow the on-screen instructions to operate.
- When the installation execution screen is displayed, perform the installation after shutting down the Service Tool.

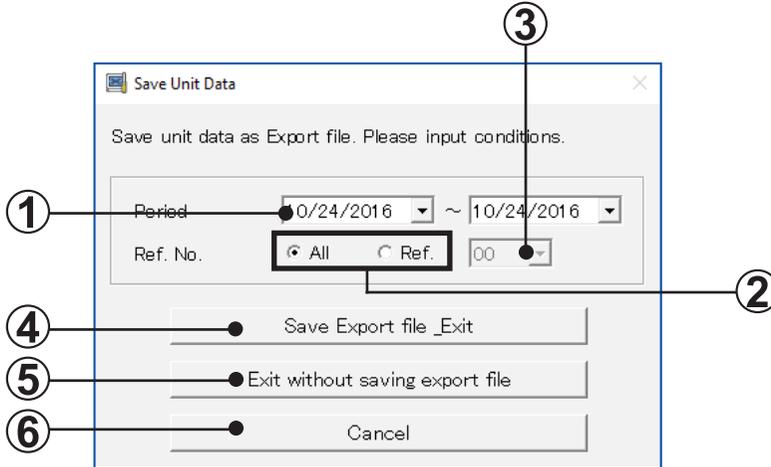


- When the communication with the server fails, the message “Cannot access the server” is displayed. Check the internet environment and perform the communication with the server again.

4-9 Exit

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”.)

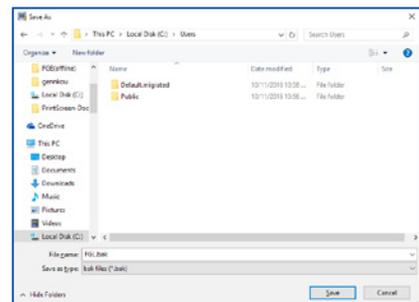


- ① Date setting field
Specify the date range of the data you want to save.
- ② Ref. No. setting field
When you want to save the data of all the refrigerant circuit address, select “All”.
When you want to save the data of a specific refrigerant circuit address, select “Ref”.
- ③ Ref. No. setting field
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 Export 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.



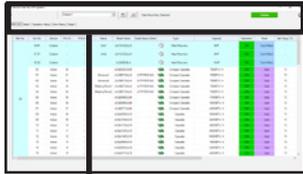
- ⑤ **Exit without saving export file button**
When the [Exit without saving export file] button is clicked, the program exits the Service Tool without creating an Export file. When exiting the Service Tool, all the unit data other than the system list is deleted. Therefore, when data must be referenced later, save the data by selecting "Save Export file & Exit".

- ⑥ **Cancel button**
When the [Cancel] button is clicked, operation returns to the previous screen without exiting the Service Tool.

5. Monitor Application

5-1 Screen transition

Main Screen (System List)



Operation Setting



Data Backup



Setting

- Data Recording Setting
- Room Temperature Display Selection
- VRF Sensor Mark List
- Troubleshooting

Expanded view

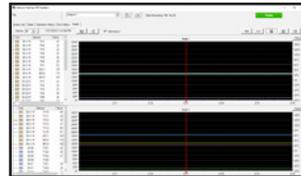
Main menu



Detail Diagram



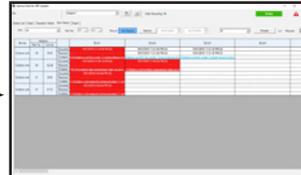
Graph



Detail Status List



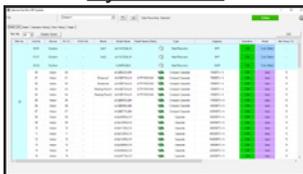
Error History



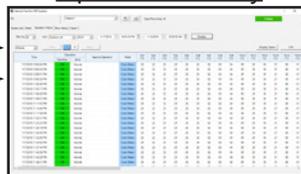
Detail Check List



System List



Operation History



•Operation Setting

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

Screen	Function	Par.
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.	par. 5-3
Detail Diagram screen	Performs normal operation check and cause specification when an error was occurred from the detailed status display of the units.	par. 5-4
Detail Status List screen	Detail data for all the units in the specified refrigerant circuit will be displayed at a certain point of time.	par. 5-5
Detail Check List screen	Calculates each check item by the value of sensor inside the outdoor unit or indoor unit and judges whether the results are normal or not.	par. 5-6
Operation History screen	Displays the indoor units or outdoor units operating history information for each unit.	par. 5-7
Error History screen	Displays the error information for each unit.	par. 5-8
Graph screen	Displays the sensor information by more detailed graph.	par. 5-9
Operation Setting screen	Operation of each refrigerant circuit, indoor unit, or R.C. group can be controlled.	par. 5-12
Data Backup screen	Any unit data currently displayed can be saved.	par. 5-11
Setting	Data Recording Setting and Room Temperature Display Selection can be operated and VRF Sensor Mark List and Troubleshooting can be checked.	par. 5-13

5-2 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.



Site Name	Displays the site name registered and selected by “Online Site Data Selection”.
Adaptor	Displays the name of the transmission adaptor being used.
Online/Offline	Displays Online work status or Offline work status.
System List	Shifts to the System List screen.
Detail	Shifts to the Detail screen.
Operation History	Shifts to the Operation History screen.
Error History	Shifts to the Error History screen.
Graph	Shifts to the Graph screen.
Operation Setting	Displays the Operation Setting screen.
Data Backup	Displays the Data Backup screen.
Setting	Displays the Setting menu. When you select the item you want to operate or check, Data Recording Setting and Room Temperature Display Selection can be operated and VRF Sensor Mark List and Troubleshooting can be checked.
 (Emergency Stop)	When Emergency Stop is operated, this icon is displayed.
 (Error)	When an error occurs, this icon is displayed. When the icon is clicked, the screen shifts to the Error History screen.
Data Recording	Displays the intended operating data of indoor units / outdoor units (sensor data, etc.) to be acquired. All : indoor units / outdoor units of all refrigerant circuits Ref. No : only indoor units / outdoor units of specified one refrigerant circuit Selected : only indoor units / outdoor units specified by Data Recording Setting

5-3 System List

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 "par. 5-4 Detail Diagram") and then check the detailed status.

5-3-1 Name and function of each area

Control area

Ref. No.	Unit No.	Device	R.C.G.	R.B.G.No.	Name	Model Name	Model Name (Other)	Type	Capacity	Operation	Mode	Set Temp.(°C)
00M	Outdoor	-	-	-	-	-	-	Heat Recovery	10HP	On	Cool (Main)	-
01S1	Outdoor	-	-	-	AUG40SLBH	-	-	Heat Recovery	14HP	On	Cool (Main)	-
02S2	Outdoor	-	-	-	AUG40SLBH	-	-	Heat Recovery	14HP	On	Cool (Main)	-
00	Indoor	00	-	-	AUGB02SLBH	-	-	Compact Cassette	7000BTU/h	On	Auto	26
01	Indoor	01	-	-	AUGB02SLBH	-	-	Compact Cassette	9000BTU/h	On	Auto	26
02	Indoor	02	-	-	AUGB03SLBH	-	-	Compact Cassette	12000BTU/h	On	Auto	26
03	Indoor	03	-	-	AUGB40SLBH	-	-	Compact Cassette	14000BTU/h	On	Auto	26
04	Indoor	04	-	-	AUGB40SLBH	-	-	Compact Cassette	14000BTU/h	On	Auto	26
05	Indoor	05	-	-	AUGB05SLBH	-	-	Compact Cassette	17000BTU/h	On	Auto	26
06	Indoor	06	-	-	AUGB05SLBH	-	-	Compact Cassette	18000BTU/h	On	Auto	26
07	Indoor	07	-	-	AUGB71SLBH	-	-	Compact Cassette	24000BTU/h	On	Auto	26
08	Indoor	08	-	-	AUGA09SLCH	-	-	Cassette	30000BTU/h	On	Auto	26
09	Indoor	09	-	-	AUGA09SLCH	-	-	Cassette	34000BTU/h	On	Auto	26
10	Indoor	10	-	-	AUGA12SLCH	-	-	Cassette	36000BTU/h	On	Auto	26
11	Indoor	11	-	-	AUGA19SLCH	-	-	Cassette	45000BTU/h	On	Auto	26
12	Indoor	12	-	-	AUGA19SLCH	-	-	Cassette	50000BTU/h	On	Auto	26
13	Indoor	13	-	-	AUGA08SLCH	-	-	Cassette	18000BTU/h	On	Auto	26
14	Indoor	14	-	-	AUGA08SLCH	-	-	Cassette	22000BTU/h	On	Auto	26
15	Indoor	15	-	-	AUGA71SLCH	-	-	Cassette	24000BTU/h	On	Auto	26

List display area

Control area

Ref. No.	Specifies the refrigerant circuit address (narrow down display)
Display Option	Selects display / hidden for the item (row) displayed at list area.
CSV	Saves the specified data to a CSV file.

List display area

Ref. No.	Displays the refrigerant circuit address
Unit No.	Displays the Unit No. and master / slave operation for outdoor unit. Shifted to unit detail screen of the selected Unit No. by click operation.
Device	Displays the unit model (Indoor/Outdoor).
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 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 "par. 4-4-1 Display".
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)
Error	When a unit is currently generating an error, displays [Error]. The Troubleshooting screen (refer to "par. 5-13-4 Troubleshooting") is displayed by clicking.
Special Operation	Displays special operation with icon. Refer to "List of icon for special operation" below.
FAN	Displays the fan status. (*2)
Air Flow Direction V.T.	Displays vertical louver position.
Air Flow Direction H.Z.	Displays horizontal louver position.
R.C. Prohibition	Displays the R.C. Prohibition setting. * Display whether the "All prohibition" is enabled or disabled.

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

■ List of icon for special operation

Outdoor unit

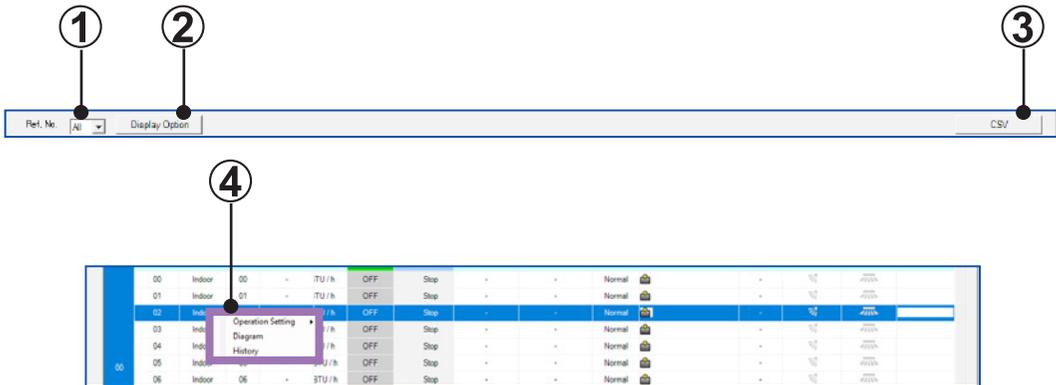
ICON	EXPLANATION
	Oil recovery operation
	Maintenance mode
	Emergency stop
	Forced off operation
	Defrost operation
	Low noise mode operation
	Capacity save operation

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

5-3-2 System List display

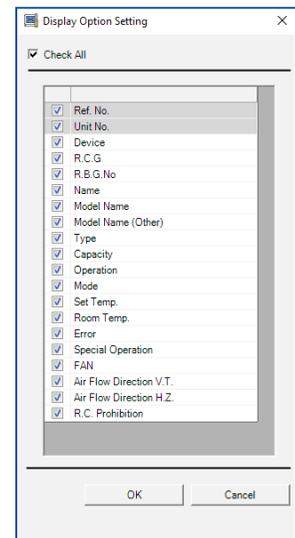
Only the necessary units can be displayed by specifying the refrigerant circuit range. This is convenient when you want to display only the objective unit in the state in which a large number of units are connected to the system.



- 1** Refrigerant circuit selection field
Specifies the refrigerant circuit address.
When "All" is selected, all refrigerant circuits are displayed.
In addition, when Ref. No. is selected by clicking [▼] button, only the selected refrigerant circuit is displayed in a list.

- 2** Display Option button
Selects display / hidden for the item (column) displayed at list area.

Checked ...display, Unchecked ...hidden



- 3** CSV button
Saves the specified data to a CSV file.

- 4** Menu display by right click
When the line of unit on System List screen is right-clicked, the following menu is displayed. Click the menu you want to operate.

- Operation Setting (only when indoor unit is selected)
 - On: Turns the operation status On. Off: Turns the operation status Off.
 - Detail: Displays the Operation Setting screen.
- Diagram
 - Shifts to Detail Diagram screen.
- History
 - Shifts to Operation History screen.

5-4 Detail Diagram

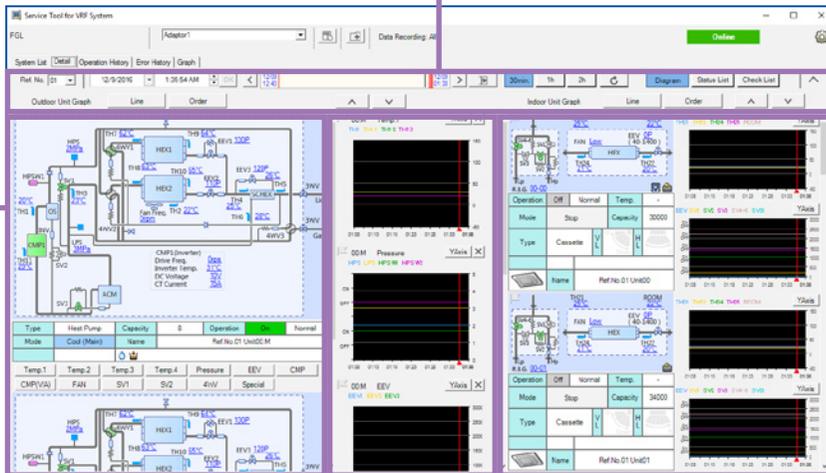
This screen displays the schematic, sensor values, and electrical components operating status of the selected system. At this screen, normal operation checks, and cause specification when an error occurs are performed.

Schematic or Graph screen of all units connected for refrigerant circuit can be checked by scrolling the screen.

Outdoor unit schematic area

Control area

Indoor unit schematic and graph area



Outdoor unit graph area

5-4-1 Name and function of each area

■ Control area

Sets display contents specification and automatic refresh on/off.



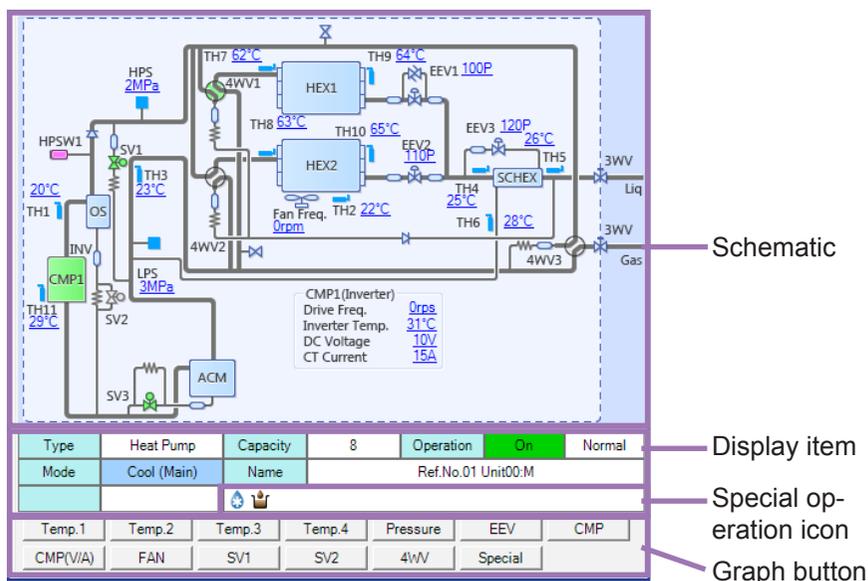
Ref. No.	Displays the refrigerant circuit address
Date, Time	Sets the date and time of the data you want to display.
OK	Confirms the date and time set above and updates the screen to the latest status.
24-hour gauge	Selects the date and time of the data you want to display by moving the probe or gauge of 24-hour gauge.
 , 	Displays the data that was acquired one before or after the currently displayed data.
Graph X Axis	Specifies the X-axis scale of the Graph.(30 min. / 1 hour / 2 hour)
	 (Blue): Updates the screen to the latest data automatically.  (Gray): Does not update the screen automatically.
Diagram	Switch to the Detail Diagram screen.
Status List	Switch to the Detail Status List screen. (Refer to "par. 5-5 Detail Status List")
Check List	Switch to the Detail Check List screen. (Refer to "par. 5-6 Detail Check List")
Line	Selects the sensor which displays the data in the graph screen. The sensor type which can be displayed differs depending on the indoor unit area or the outdoor unit area. (for outdoor unit graph area , for indoor unit schematic and graph area)
Order	Deletes the displayed graph or change the order. (for outdoor unit graph area) Changes the order of the displayed schematic and graph. (for indoor unit schematic and graph area)
 , 	Moves only graph screen and schematic in which flag mark is highlighted () instantaneously. (Only Graph screen is moved at the outdoor unit graph area. Schematic screen and Graph screen are moved at the same time at the indoor unit schematic and graph area.)

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



Outdoor unit schematic area

Displays the schematic of all outdoor units connected to refrigerant circuit selected at the Control area. 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 the schematic for outdoor 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 [t(ton)] , [kW]. Displays {capacity value} when it is set at “par. 4-4-1 Display”.
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 to "List of icon for special operation" of "par. 5-3 System List".

- Note** *1 The display format differs depending on the data acquisition application setting. (Refer to “par. 4-4 Environment Setting”.)
- *2 Only when preset. (Refer to "par. 3-2-4 Name Master Database file selection screen")

Graph button

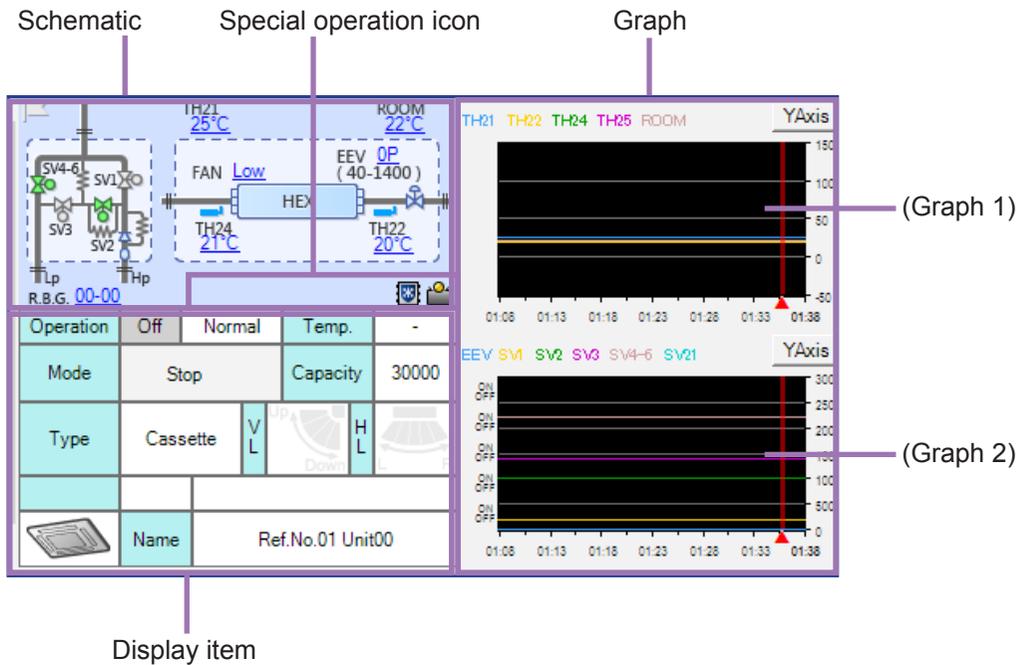
The Graph corresponding to the clicked button is displayed.

For the operation method of Graph, refer to “Outdoor unit graph area” below.

Temp.1	Displays the 4 temperature graphes at the graph area. For the kinds of temperature displayed in each graph, refer to "Schematic/ Graph display item" .
Temp.2	
Temp.3	
Temp.4	
Pressure	Displays a pressure graph at the graph area.
EEV	Displays an electrical expansion valve opening pulse 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.
CMP(V/A)	Displays the inverter voltage value and current value of compressor.
FAN	Displays the operation status of fan at the graph area.
SV1	Displays the operation status of solenoid valve at the graph area.
SV2	
4WV	Displays the operation status of 4-way valve at the graph area.
Special	Displays the special operation status at the graph area.

■ Indoor unit schematic and graph area

Displays the schematic and graph of all indoor units connected to refrigerant circuit selected at the Control area. For the meaning of each item in the schematic, refer to the later "Schematic/graph display item".



Schematic

Schematic	Displays the schematic for indoor unit. 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 to "List of icon for special operation" of "par. 5-3 System List".

Display items

Operation	Displays the operating status (ON/OFF) and unit status (Normal/Error).
Mode	Displays the operating mode.
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 "par. 4-4-1 Display".
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 "par. 3-2-4 Name Master Database file selection screen")
-  *2 The display format depends on the setting at the data acquisition application. (Refer to "par. 4-4 Environment Setting")

Graph

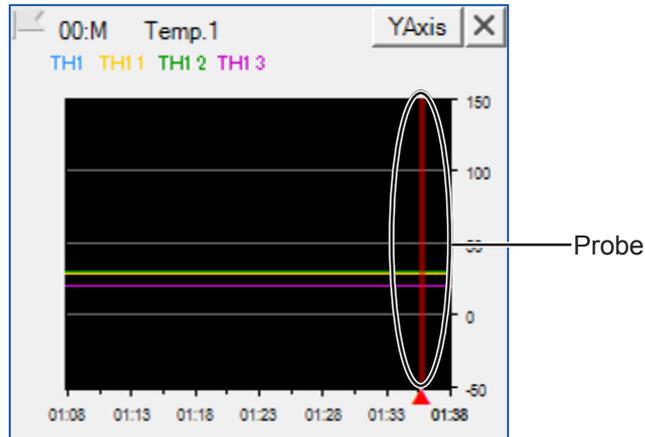
Graph screen of all indoor units connected for the selected refrigerant circuit can be checked by scrolling the screen. Schematic and graph are scrolled at the same time.

2 types of graphs are displayed for one indoor unit. Graph screen cannot be added or deleted.

For the operation method of Graph, refer to "Indoor unit graph area" in the subsequent paragraph.

■ Outdoor unit graph area / Indoor unit graph area

Checks the specified sensor value at the graph screen as time passes.



Name	The graph item/unit name (if set) are displayed at the top left-hand corner of the graph area.
YAxis	Sets the upper limit and lower limit of Y axis arbitrarily within the limit range of each sensor value.
[X] button	Closes the graph. (Outdoor unit graph only)
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.

Note 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.



■ 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 / J-III/J-IIIIL/VR-II/V-III) and unit type (cooling only / heat pump / heat recovery).

For the sensor information, refer to the “par. 5-13-3 VRF Sensor Mark List”.

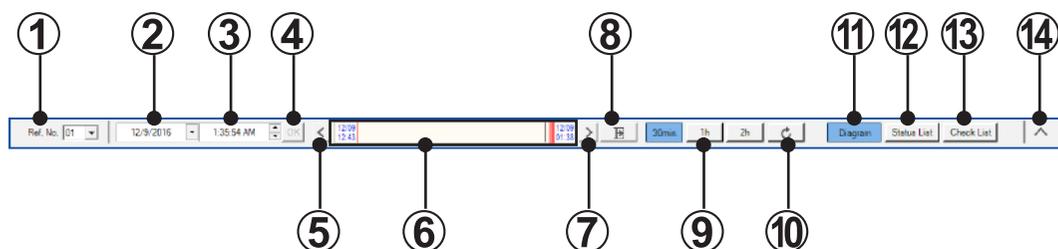
• Outdoor unit

	VRF1, 1-A	1-B	V-II, J-II, J-IIS, J-III, J-IIIIL	VR-II, V-III
Temp.1	THD1, THD2, THD3	TH1, TH2, TH3	TH1, TH2, TH10, TH11	TH1, TH11, TH12, TH13
Temp.2	THS, THO	TH4, TH9, TH10, TH12	TH3, TH5, TH6, TH7	TH7, TH8, TH9, TH10, TH14, TH15
Temp.3	THHI1, THHI2, THHI3, THHO1 THHO2, THHO3	TH5, TH6, TH7 TH8, TH11, H13	TH4, TH8, TH9	TH2, TH3, TH4, TH5, TH6
Temp.4			HPTemp. , LPTemp. Inverter Temp. HPTemp. = HPLTemp. LPTemp. = LPLTemp.	
Pressure	HPS, LPS, HPSW1, HPSW2			
EEV	EEV1, EEV2, EEV3			
CMP	CMP1, CMP2, CMP3, Freq.			
CMP (V/A)	DC Voltage, CT Current, Constant Current			
FAN	FAN Freq.			
SOL V1	SV1, SV2 ,SV3, SV4, SV5, SV6			
SOL V2	SV7, SV8, SV9			
4WV	4WV1, 4WV2, 4WV3			
Special	Oil recovery operation, Defrost operation		Oil recovery operation, Defrost operation, Low noise, Capacity save operation, Out- door unit stopped	

• Indoor unit

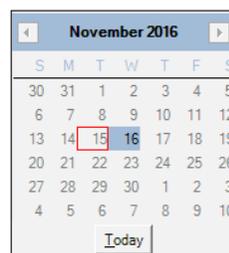
	VRF1, 1-A	1-B	V-II, J-II, J-IIS, J-III, J-IIIIL, VR-II, V-III
Graph1	THHO, THHM, THHI, THIA, THOA	TH21, TH22, TH23	Room Temp., TH21, TH22, TH24, TH25, FAN
Graph2	EEV, SVs, SVd, SVb1, SVb2	EEV	EEV, SV1, SV2, SV3, SV4-6

5-4-2 Detail Diagram specification



① Refrigerant circuit selection field
Specifies the refrigerant circuit address.

② Date setting field
Sets the date of data you want to display at the Schematic screen.
To select the date, select the date from the calendar which appears by clicking [▼] button.



When the background of Date setting field is pink, the user is editing the date and the data displayed at each display is not confirmed. When the date is confirmed, the field background becomes white. (*1)

③ Time setting field
Sets the time of data you want to display at the Schematic screen.
When the background of Date setting field is pink, the user is editing the time and the data displayed at each display is not confirmed. When the time is confirmed, the field background becomes white. (*1)

④ OK button
Confirms the date and time set at ② and ③ and updates the screen.

⑤ < button
Displays the data that was acquired one before the currently displayed data.

⑥ 24-hour gauge
Selects the date and time you want to display at the Schematic screen or Graph screen by using 24-hour gauge.

There are 2 setting methods.

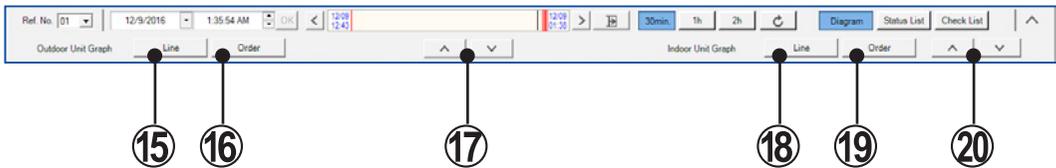
- Date and time setting by probe movement
The date and time are set by moving the probe using the drag and drop of mouse.
- Date and time setting by gauge scroll
The date and time are set by scrolling the gauge using the drag and drop of mouse.

⑦ > button
Displays the data that was acquired one after the currently displayed data.

- ⑧ Probe right edge movement button
Moves the probe position at graph to the right edge of the graph.
- ⑨ Graph X Axis selection field
Specifies the X-axis scale (30min/1hour/2hour)of the graph.
- ⑩ Auto Refresh button
Updates the screen to the latest data.
 (Blue): Updates the screen to the latest data automatically.
 (Gray): Does not update the screen automatically.
- ⑪ Diagram button
Displays the Detail Diagram screen.
- ⑫ Status List button
Displays the Detail Status List screen.
- ⑬ Check List button
Displays the Detail Check List screen.
- ⑭ Optional setting button
Displays the Optional setting screen.

■ **Optional setting screen**

When the Optional setting button (⑭) is clicked, optional setting screen is displayed.

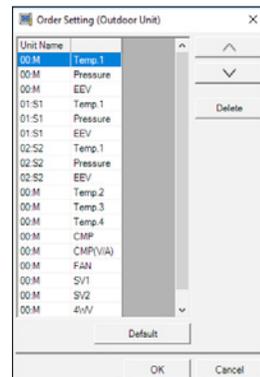


- ⑮ Line button (for outdoor unit)
Selects the sensor to be displayed at the Graph screen of outdoor unit. When all sensors are selected, check the “All” checkbox. When individual sensors are set, check the individual sensor checkboxes. When the selection is complete, click the [OK] button.



- 16** Order button (for outdoor unit)
Deletes the Graph screen displayed at the Outdoor unit graph area or changes the order of display.

- Delete: Selects the item you want to delete and clicks the [Delete] button.
- Change of display order: Selects the item you want to change and changes the display order using [^] and [v] button. When the order is decided, click the [OK] button.
- Default: Returns the displayed item to the initial status. (Setting status when the Service Tool is installed to the PC)



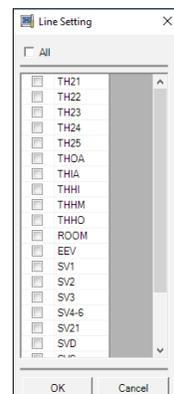
- 17** **20** Display switching button (Up/Down, **17**: for outdoor unit, **20**: for indoor unit)

There are flag marks at top left of outdoor unit graph and at top left of indoor unit schematic. When the flag mark is clicked, it is highlighted (selecting status). When this scroll button is clicked, only highlighted graph screen and schematic screen are shifted instantaneously.



- 18** Line button (for indoor unit)
Selects the sensor to be displayed at the Graph screen of indoor unit.

When all sensors are selected, check the "All" checkbox. When individual sensors are set, check the individual sensor checkboxes. When the selection is complete, click the [OK] button.

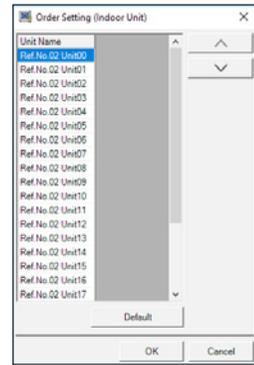


19

Order button (for indoor unit)

Changes the displayed order of indoor unit schematic and graph screen. (One schematic and two graphs are in a set for the indoor unit.)

- Change of display order: Selects the item you want to change and changes the display order using [^] and [v] button. When the order is decided, click the [OK] button.
- Default: Returns the displayed item to the initial status. (Setting status when the Service Tool is installed to the PC)



Note *1 If a time earlier than the time of the oldest data acquired by the Service Tool is specified, the oldest one of the times of data already acquired by Service Tool is selected.
Similarly, if a time later than the time of the latest data acquired by the Service Tool is specified, the latest one of the times of data already acquired by Service Tool is selected.

5-5 Detail Status List

The Detail Status List screen can be displayed by clicking [Status List] button at the Control area.

In this screen, detail data for all the units in the specified refrigerant circuit will be displayed at a certain point of time.

Outdoor unit status list area

Control area

Indoor unit status list area

Service Tool for VRF System

System List | Detail | Operation History | Error History | Graph

Ref No.: [00] | 11/17/2016 | 9:55:17 PM | Data Recording: No.00

Outdoor unit | Display Option

Unit No.	Name	Type	Capacity (HP)	Operation		Special Operation	Mode	TH1 (°C)	TH2 (°C)	TH3 (°C)	TH4 (°C)	TH5 (°C)	TH6 (°C)	TH7 (°C)	TH8 (°C)	
				Status	Error											
02-M	Unit1	Heat Recovery	8	ON	Normal		Cool (Main)	20	22	23	25	26	28	62	63	64
01-S1	Unit2	Heat Recovery	8	ON	Normal		Cool (Main)	20	22	23	25	26	28	62	63	64
02-S2	Ref No.00 Unit02-S2	Heat Recovery	16	ON	Normal		Cool (Main)	20	21	22	23	24	25	26	27	28

Indoor unit | Display Option

Unit No.	R.B.G. No.	Name	Type	Capacity (BTU/h)	Operation		Special Operation	Mode	Set Temp (°C)	Room Temp (°C)	TH1 (°C)	TH2 (°C)	TH3 (°C)	TH4 (°C)
					Status	Error								
00	-	Ref No.00 Unit00	Compact Cassette	7000	ON	Normal		Auto	13	22	25	20	21	
01	-	Entrance1	Compact Cassette	7000	ON	Normal		Auto	13	22	25	20	21	
02	-	Entrance2	Compact Cassette	7000	ON	Normal		Auto	13	22	25	20	21	
03	-	Meeting Room1	Compact Cassette	7000	ON	Normal		Auto	13	22	25	20	21	
04	-	Meeting Room2	Compact Cassette	7000	ON	Normal		Auto	13	22	25	20	21	
05	-	Ref No.00 Unit05	Compact Cassette	17000	ON	Normal		Auto	13	22	25	20	21	
06	-	Ref No.00 Unit06	Compact Cassette	18000	ON	Normal		Auto	13	22	25	20	21	
07	-	Ref No.00 Unit07	Compact Cassette	24000	ON	Normal		Auto	13	22	25	20	21	
08	-	Ref No.00 Unit08	Cassette	30000	ON	Normal		Auto	13	22	25	20	21	
09	-	Ref No.00 Unit09	Cassette	34000	ON	Normal		Auto	13	22	25	20	21	
10	-	Ref No.00 Unit10	Cassette	36000	ON	Normal		Auto	13	22	25	20	21	
11	-	Ref No.00 Unit11	Cassette	45000	ON	Normal		Auto	13	22	25	20	21	
12	-	Ref No.00 Unit12	Cassette	54000	ON	Normal		Auto	13	22	25	20	21	
13	-	Ref No.00 Unit13	Cassette	18000	ON	Normal		Auto	13	22	25	20	21	
14	-	Ref No.00 Unit14	Cassette	22000	ON	Normal		Auto	13	22	25	20	21	

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
Date, Time	Sets the date and time of the data you want to display.
OK	Confirms the date and time set above and updates the screen to the latest status.
24-hour gauge	Selects the date and time of the data you want to display by moving the probe or gauge of 24-hour gauge.
< , >	Displays the data that was acquired one before or after the currently displayed data.
	 (Blue): Updates the screen to the latest data automatically.
	 (Gray): Does not update the screen automatically.
Diagram	Switch to the Detail Diagram screen. (Refer to “par. 5-4 Detail Diagram”)
Status List	Switch to the Detail Status List screen.
Check List	Switch to the Detail Check List screen. (Refer to “par. 5-6 Detail Check List”)
Display Option	Set whether Display item (column) should be displayed or hidden.

■ Outdoor unit status list area

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

Unit No.	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 [t(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).
Error	Displays the error status (Normal/Error).
Special operation	Displays special operation.(*1)
Mode	Displays the operating mode.

* For each sensor information, refer to the "par. 5-13-3 VRF Sensor Mark List".

*1 For the meaning of the displayed icons, refer to "List of icon for special operation" of "par. 5-3 System List".

■ Indoor unit status list area

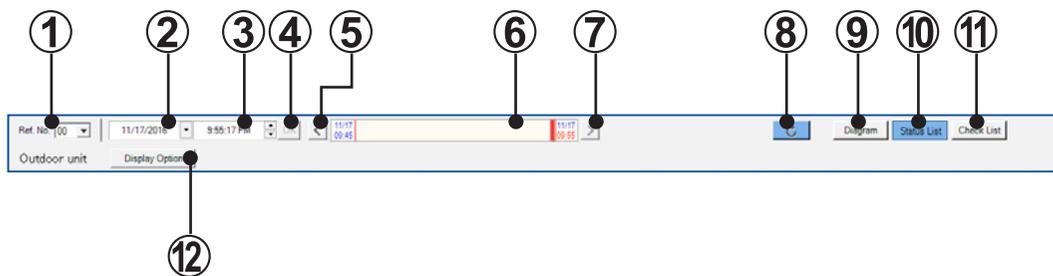
Displays the following operation status of each indoor unit according to the condition given in the Control area.

Unit No.	Displays the unit No.
R.B.G.No.	Displays the RB unit group address.
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).
Error	Displays the error status (Normal/Error).
Special operation	Displays special operation.(*1)
Mode	Displays the operating mode.
Set Temp.	Displays the setting temperature. Units display is [°C] or [°F].

* For each sensor information, refer to the "par. 5-13-3 VRF Sensor Mark List".

*1 For the meaning of the displayed icons, refer to "List of icon for special operation" of "par. 5-3 System List".

5-5-2 Detail Status List specification

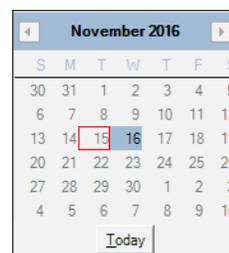


1 Refrigerant circuit selection field
Specifies the refrigerant circuit address.

2 Date setting field
Sets the date of data you want to display at the Detail Status List screen.

To select the date, select the date from the calendar which appears by clicking [▼] button.

When the background of Date setting field is pink, the user is editing the date and the data displayed at each display is not confirmed. When the date is confirmed, the field background becomes white. (*1)



3 Time setting field
Sets the time of data you want to display at the Detail Status List screen.

When the background of Time setting field is pink, the user is editing the time and the data displayed at each display is not confirmed. When the time is confirmed, the field background becomes white. (*1)

4 OK button
Confirms the date and time set at **2** and **3** and updates the screen.

5 < button
Displays the data that was acquired one before the currently displayed data.

6 24-hour gauge
Selects the date and time you want to display at the Schematic screen or Graph screen by using 24-hour gauge.

There are 2 setting methods.

- Date and time setting by probe movement

The date and time are set by moving the probe using the drag and drop of mouse.

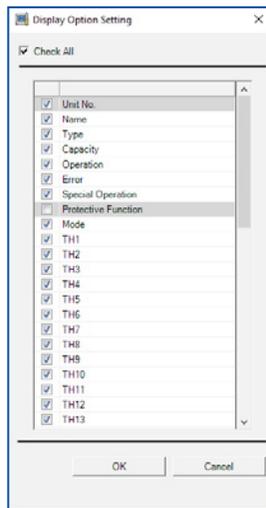
- Date and time setting by gauge scroll

The date and time are set by scrolling the gauge using the drag and drop of mouse.

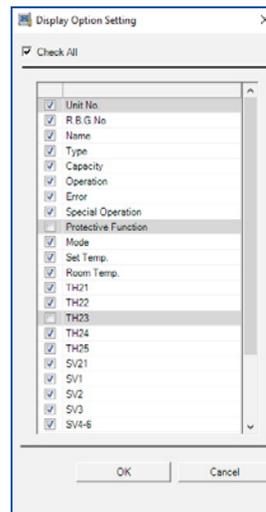
7 > button
Displays the data that was acquired one after the currently displayed data.

- ⑧ Auto Refresh button
Updates the screen to the latest data.
 (Blue): Updates the screen to the latest data automatically.
 (Gray): Does not update the screen automatically.
- ⑨ Diagram button
Displays the Detail Diagram screen.
- ⑩ Status List button
Displays the Detail Status List screen.
- ⑪ Check List button
Displays the Detail Check List screen.
- ⑫ Display Option button
Selects display / hidden for the item (row) displayed at list area.
Checked ...display, Unchecked ...hidden
The Display Option button of the Indoor unit is also the same.

Display Option for outdoor unit



Display Option for indoor unit



Note *1 If a time earlier than the time of the oldest data acquired by the Service Tool is specified, the oldest one of the times of data already acquired by Service Tool is selected.
Similarly, if a time later than the time of the latest data acquired by the Service Tool is specified, the latest one of the times of data already acquired by Service Tool is selected.

5-6 Detail Check List

The Detail Check List screen can be displayed by clicking [Check List] button at the Control area.

Each check item is calculated by the sensor value inside the outdoor unit or indoor unit and the results are judged whether they are normal or not.

Outdoor unit check list area

Control area

Indoor unit check list area

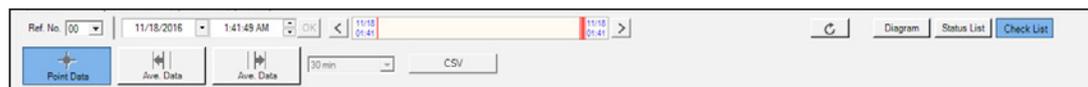
Outdoor unit		Outdoor Temp	Discharge Temp		Suction Temp	SP Saturation Temp	ΔT(Super Heat)		ΔT(Sub Cool)		SCHEX Meter Temp	ICHECK Cut-off Temp	Comp Temp	High Pressure	SP Saturation Temp	ΔT(Super Heat Exchange)		Low Pressure	
		°C	°C		°C	°C	deg		deg		°C	°C	°C	MPa	°C	deg		MPa	
		-	10°C => [value]		0-20°C	-	0-30deg (heating)		5-35deg (Cooling)		(Cooling)	(Cooling)	-	2.5-3.3MPa	-	10deg => [value]		0.7-1.2MPa (Cooling)	
Model Name	THQ	TH1	-	TH3	HPTemp	TH3-LPTemp	TH3-LPTemp	HPTemp-TH5	TH4	TH5	TH11	-	HPS	LPTemp	TH5-LPTemp	-	LPS	LPS	LPS
00 M	A17A27GALH	22	20	-	23	34.2	11.6	12.6	8.2	25	26	29	-	2	50.4	-14.2	-	3	3
01 S1	A17A27GALH	22	20	-	23	34.2	11.6	12.6	8.2	25	26	29	-	2	50.4	-14.2	-	3	3
02 S2	A19A50L8H	21	20	-	22	34.2	24.4	22.4	10.2	23	26	30	-	2	50.4	-14.2	-	3	3

Indoor unit		Suction Air Temp	Orical Temp	ΔTair (Cooling)		ΔTair (Heating)		HEX Temp		ΔT(Super Heat)		ΔT(Sub Cool)	
		°C	°C	°C		°C		°C		deg		deg	
		-	-	1°C => [value]		15°C => [value]		-	-	0-3deg		4-7deg	
Model Name	TH21	TH25	TH21-TH25	TH25-TH21	TH22	TH24	TH24-TH22	HPTemp-TH22	TH22	TH24	TH24-TH22	HPTemp-TH22	TH22
00	AUG8020GLBH	25	-	-	-	20	21	-	1	14.2	-	-	-
01	AUG807GALH	25	-	-	-	20	21	-	1	14.2	-	-	-
02	AUG807GALH	25	-	-	-	20	21	-	1	14.2	-	-	-
03	AUG807GALH	25	-	-	-	20	21	-	1	14.2	-	-	-
04	AUG807GALH	25	-	-	-	20	21	-	1	14.2	-	-	-
05	AUG8050GLBH	25	-	-	-	20	21	-	1	14.2	-	-	-
06	AUG8050GLBH	25	-	-	-	20	21	-	1	14.2	-	-	-
07	AUG8071GLBH	25	-	-	-	20	21	-	1	14.2	-	-	-
08	AUG4090GLCH	25	-	-	-	20	21	-	1	14.2	-	-	-

5-6-1 Name and function of each area

■ Control area

Sets display contents specification and automatic refresh on/off.



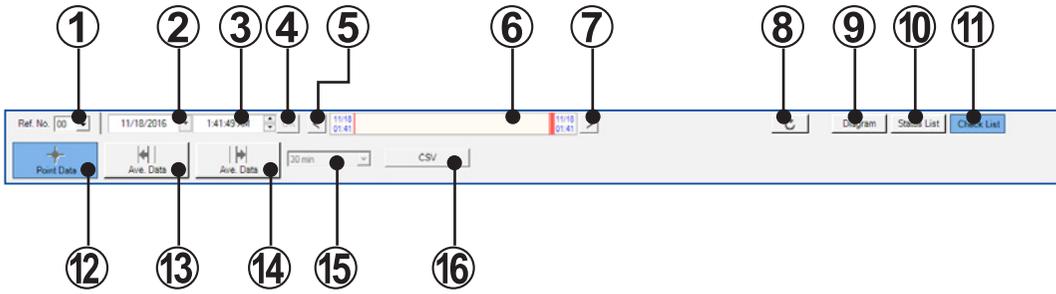
Ref. No.	Displays the refrigerant circuit address
Date, Time	Sets the date and time of the data you want to display.
OK	Confirms the date and time set above and updates the screen to the latest status.
24-hour gauge	Selects the date and time of the data you want to display by moving the probe or gauge of 24-hour gauge.
<, >	Displays the data that was acquired one before or after the currently displayed data.
	<ul style="list-style-type: none"> (Blue): Updates the screen to the latest data automatically. (Gray): Does not update the screen automatically.
Diagram	Switch to the Detail Diagram screen. (Refer to "par. 5-4 Detail Diagram")
Status List	Switch to the Detail Status List screen. (Refer to "par. 5-5 Detail Status List")
Check List	Switch to the Detail Check List screen.
Point Data	Judges each check item by using the sensor instantaneous value acquired at the specified time.
Ave. Data (previous)	Calculates the average of sensor value acquired for a certain period of time before the specified time and judges each check item by using the average value.
Ave. Data (following)	Calculates the average of sensor value acquired for a certain period of time after the specified time and judges each check item by using the average value.
Period	Selects the period to calculate the average value of sensor value.
CSV	Saves the specified data to a CSV file.

■ Outdoor unit check list area / Indoor unit check list area

The sensor value calculated in the condition set at Control area is displayed for each outdoor / indoor unit. The judgment results are also displayed. If the calculated sensor value is deviated from the normal value, the background of the data cell becomes red.

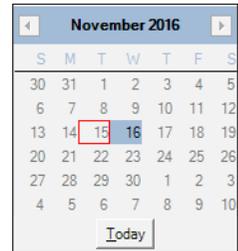
For each sensor information, refer to the "par. 5-13-3 VRF Sensor Mark List".

5-6-2 Detail Check List specification



1 Refrigerant circuit selection field
Specifies the refrigerant circuit address.

2 Date setting field
Sets the date of data you want to display at the Detail Check List screen.
To select the date, select the date from the calendar which appears by clicking [▼] button.
When the background of Date setting field is pink, the user is editing the date and the data displayed at each display is not confirmed. When the date is confirmed, the field background becomes white. (*1)



3 Time setting field
Sets the time of data you want to display at the Detail Check List screen.
When the background of Time setting field is pink, the user is editing the time and the data displayed at each display is not confirmed. When the time is confirmed, the field background becomes white. (*1)

4 OK button
Confirms the date and time set at **2** and **3** and updates the screen.

5 < button
Displays the data that was acquired one before the currently displayed data.

6 24-hour gauge
Selects the date and time you want to display at the Detail Check List screen by using 24-hour gauge.

There are 2 setting methods.

- Date and time setting by probe movement
The date and time are set by moving the probe using the drag and drop of mouse.

- Date and time setting by gauge scroll
The date and time are set by scrolling the gauge using the drag and drop of mouse.

7 > button
Displays the data that was acquired one after the currently displayed data.

- 8** Auto Refresh button
Updates the screen to the latest status.
 (Blue): Updates the screen to the latest data automatically.
 (Gray): Does not update the screen automatically.
- 9** Diagram button
Displays the Detail Diagram screen.
- 10** Status List button
Displays the Detail Status List screen.
- 11** Check List button
Displays the Detail Check List screen.
- 12** Point Data button
Judges each check item by using the sensor instantaneous value acquired at the specified time.
- 13** Ave. Data (previous) button
Calculates the average of sensor value acquired between the specified time and the time before the period selected at **15** and judges each check item by using the average value.
When  button is blue, this button cannot be selected.
- 14** Ave. Data (following) button
Calculates the average of sensor value acquired between the specified time and the time after the period selected at **15** and judges each check item by using the average value.
When  button is blue, this button cannot be selected.
- 15** Data collection period setting field
Selects the period (10 min / 30 min / 1 hour) for calculating the average value of sensor value.
- 16** CSV button
Saves the specified data to a CSV file.

Note *1 If a time earlier than the time of the oldest data acquired by the Service Tool is specified, the oldest one of the times of data already acquired by Service Tool is selected.
Similarly, if a time later than the time of the latest data acquired by the Service Tool is specified, the latest one of the times of data already acquired by Service Tool is selected.

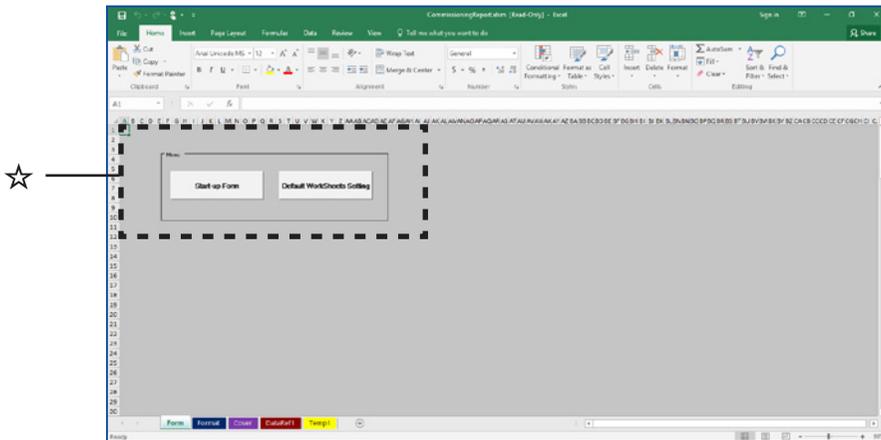
5-6-3 Commissioning Report creation

Commissioning Report is a tool which outputs the commissioning diagnosis in the form of report.

A Commissioning Report can be easily created by reading the CSV file created by the Detail Check List.

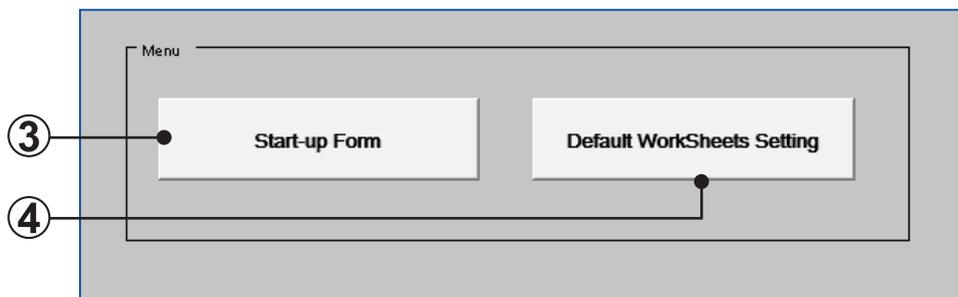
There is a template to easily create a Commissioning Report. (*1)

- ① Since there is a template named “CommissioningReport.xls” at C:\Program Files(x86)\AIRSTAGE-Service Tool\CommissioningReport\ open that file with Excel. (*1)
- ② Display the started Excel “Form” sheet.
A screen like that shown below is displayed.

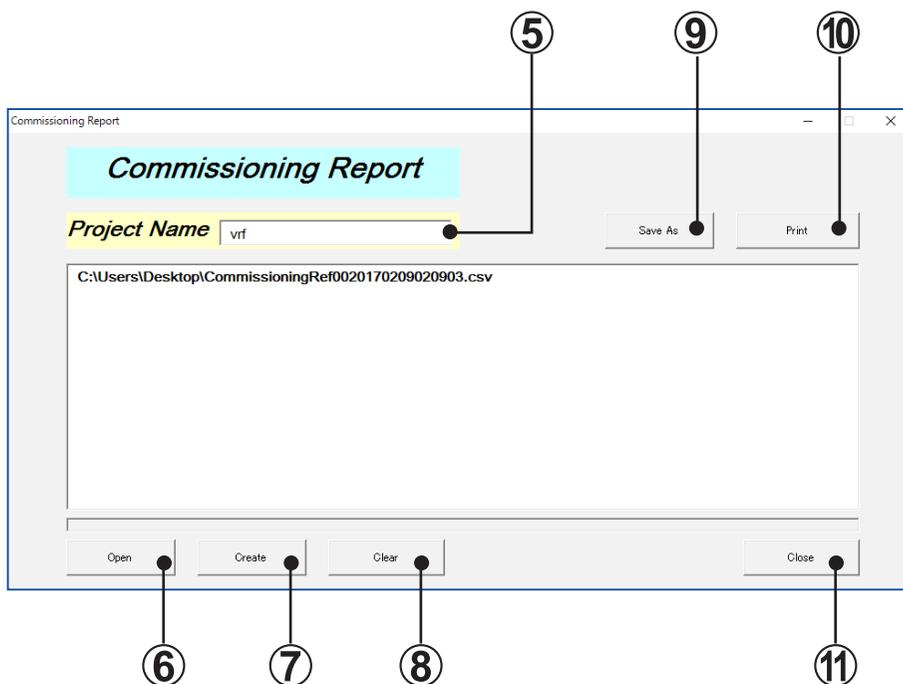


Overview of each sheet

Form	Displays the form for creating Commissioning Report or changes this excel file back to the default.
Format	Commissioning Report Format
Cover	Commissioning Report cover
DataRefN(N=1,2,...)	Displays the created Commissioning Report. (This sheet will be displayed after Commissioning Report was created at ⑦.)
TempN(N=1,2,...)	Displays the CSV file data selected at ⑥. (This sheet will be displayed after Commissioning Report was created at ⑦.)



- ③ Start-up Form button
Displays the following screen to create the Commissioning Report.
- ④ Default WorkSheets Setting button
Changes this excel sheet back to the default. This button is enabled after Commissioning Report was created at ⑦.



- ⑤ Project Name field
Enter the Project Name of Commissioning Report.
- ⑥ Open button
Select the CSV file to create Commissioning Report. (Multiple files can be selected. Select the CSV file saved in the Detail Check List.)
- ⑦ Create button
Creates the Commissioning Report of CSV file selected at ⑥.

- ⑧ Clear button
Deletes all CSV files selected at ⑥ from the screen.
- ⑨ Save As button
Save the Commissioning Report (DataRef sheet) created at ⑦ and cover (Cover sheet) in separate excel files.
- ⑩ Print button
Prints the Commissioning Report (DataRef sheet) created at ⑦ and cover (Cover sheet).
- ⑪ Close button
Closes this screen.

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 created 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 32 bit, the folder is C:\Program Files\AIRSTAGE-Service Tool\CommissioningReport\.

5-7 Operation History

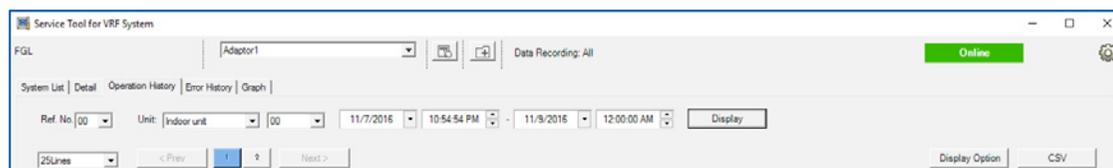
The indoor units or outdoor unit operation history is displayed for each unit.

The displayed operation history can be saved to a CSV file.

History display can display up to 500 items for the specified period.

5-7-1 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.
Start date and time	Displays the start date and time of the history data to be displayed.
End date and time	Displays the end date and time of the history data to be displayed.
Display	Displays the data of the unit of the specified conditions.
Number of lines	Displays the displayed number of lines of the history data in a screen
Page No. <Prev , Next>	Switches the page by clicking the page button ([1],[2],[3]...). Only every 10 pages switching is available by clicking [Prev] or [Next] button.
Display Option	Sets whether Display item (column) should be displayed or hidden.
CSV	Displays the CSV save window.

Outdoor unit

Service Tool for VRF-System

FGL Adaptor1 Data Recording: All

System List | Detail | Operation History | Error History | Graph

Ref. No. [00] Unit: [Outdoor unit] [00M] 11/7/2016 10:54:54 PM 11/5/2016 12:00:00 AM Display

25 Lines < Prev 1 2 Next >

Time	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)	TH12 (°C)	TH13 (°C)	TH14 (°C)	TH15 (°C)
	Operation	Error																	
11/7/2016 10:54:54 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 10:55:53 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 10:56:51 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 10:58:38 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:00:25 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:03:17 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:06:09 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:09:01 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:11:53 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:14:46 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:17:38 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:20:31 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:23:23 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:26:15 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:29:08 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:32:00 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:34:52 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:37:44 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:40:36 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:43:28 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:46:21 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61
11/7/2016 11:49:13 PM	Normal			Cool (Main)	20	22	23	25	26	28	62	63	64	65	29	30	21	60	61

Display item

- Display item

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 to "List of icon for special operation" of "par. 5-3 System List".
Mode	Displays the operating mode

* For each sensor information, refer to the "par. 5-13-3 VRF Sensor Mark List".

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



■ Indoor unit

The screenshot shows the 'Service Tool for VRF System' interface. At the top, there are tabs for 'System List', 'Detail', 'Operation History', 'Error History', and 'Graph'. Below these are filters for 'Ref No.' (00), 'Unit' (Indoor unit), and a date range from 11/7/2016 to 11/9/2016. A 'Display' button is highlighted with a callout arrow labeled 'Display item'. The main area contains a table with the following columns: Time, Operation, Special Operation, Mode, Set Temp, TH1, TH2, TH3, TH4, TH5, SV21, SV1, SV2, SV3, SV4-6, EEV (P), Analog (%), FAN, and Fan Fr. (rpm). The table displays a series of data points over time, with 'Operation' and 'Special Operation' columns showing status changes like 'OFF', 'Normal', and 'Auto'.

- Display item

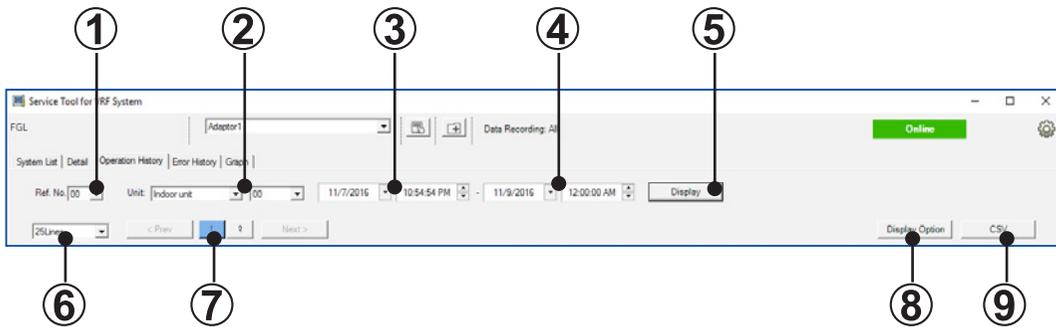
Time	Displays the data acquisition time. (*1) For summer time, (S) is displayed.
Operation	Displays the operating status/unit status.
Special operation	Displays special operation.
Mode	Displays the operating mode.
Set Temp	Displays the setting temperature.

* For each sensor information, refer to the “par. 5-13-3 VRF Sensor Mark List”.

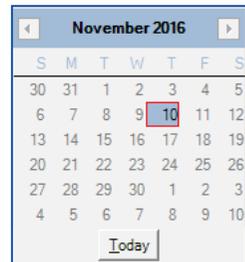
Note *1 Time is displayed according to the time format at the regional setting in the Control panel of Windows.

- List of icon for special operation
For each icon information, refer to the “List of icon for special operation” of “par. 5-3 System List”.

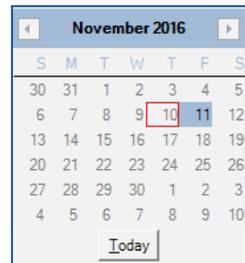
5-7-2 Operation History specification



- ① Refrigerant circuit selection field
Specifies the refrigerant circuit address.
- ② Unit selection field
Switches outdoor unit/indoor unit and selects the Unit No.
- ③ Start date and time selection field
Specifies the start date and time of the history data to be displayed.
To select the date, select the appropriate date from the calendar which appears by clicking [▼] button.



- ④ End date and time selection field
Specifies the end date and time of the history data to be displayed.
To select the date, select the appropriate date from the calendar which appears by clicking [▼] button.

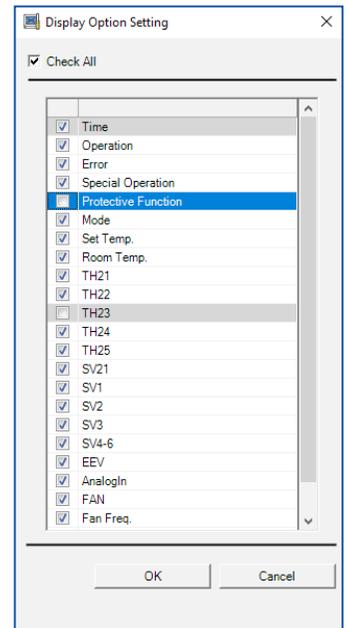


- ⑤ Display button
Displays the history data by specified condition.
- ⑥ Displayed number of lines selection field
Selects the number of lines of the history data to be displayed in a page.

7 Page selection field
Selects the page number to be displayed.

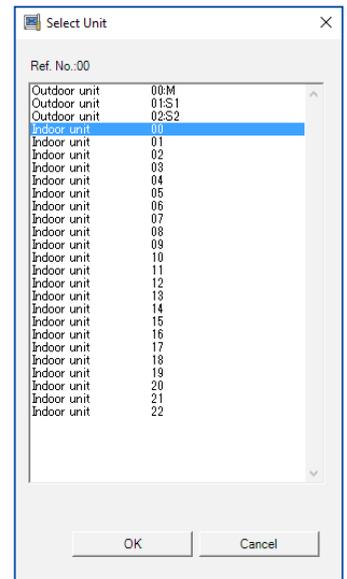
8 Display Option button
Selects display / hidden for the item (row) displayed at list area.

Checked ...display, Unchecked ...hidden



9 CSV button
Saves the displayed operation history to a CSV file.
Setting screen is displayed by clicking the [CSV] button.
Select the units to be saved and then click the [OK] button. (Multiple units can be selected at the same time.)

Max. 500 items of displayed the history data can be saved for one unit.



5-8 Error History

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. The error information can be saved in CSV format.

5-8-1 Name and function of each area

The screenshot shows the 'Error History' tab in the Service Tool for VRF System. The control area at the top allows filtering by Unit (All), Ref No. (00-99), Period (12/21/2016), and Status (All). Below the control area is a table with columns for Device, Ref No., Unit No., and four error columns (Error1 to Error4). The table contains several rows of error records, with some rows highlighted in red to indicate active or recent errors.

• Control area

Device Section	Specifies the unit model.
Ref. No.	Specifies the refrigerant circuit address (narrow down display)
Period	Specifies the date range to be displayed.
State	Specifies the conditions for error display.
Display	Refreshes the display screen according to the specified conditions.
Request	Displays the setting area for selecting the unit from which you want to acquire the error information.
Optional menu	The following 3 menus can be used. <ul style="list-style-type: none"> • Unit Memory • Clear Error Logs • CSV

• List display area

Device	Displays the unit model.
Address	Displays the address information (Refrigerant circuit address/Unit No.) of each unit.
Error1 ~ 50	Displays the error acquisition time and error contents. Displays currently generated errors in red.

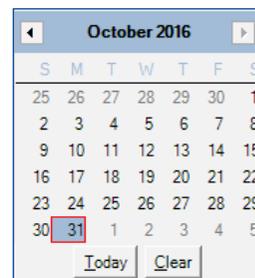
5-8-2 Error History display method



- ① **Unit selection field**
Select the unit type in which you want to display the Error history.
- ② **Refrigerant circuit selection field**
Sets the range of refrigerant circuit address to display the error history.
- ③ **Date period selection field**
Sets the date period to display the error history

When date period is not set: Click the [Not Specify] button.

When date period is set : Click the [Specify] button and set the display “start date and time” and “end date and time”. Select the appropriate date from the calendar which appears by clicking [▼] button.

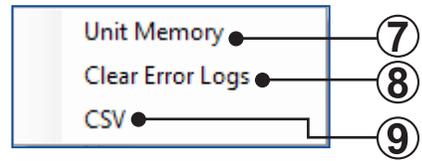


- ④ **Status selection field**
Selects “All” or “Error Only”.
All: Currently occurring error information and past error information (Recovered)
Error Only: Currently occurring error information
- ⑤ **Display button**
Refreshes the display data according to the selected conditions. (*1)

■ Optional setting menu

- ⑥** Optional setting button
Displays the optional setting menu of “Unit Memory”, “Clear Error Logs” and “CSV”.

Optional setting menu



- ⑦** Unit Memory menu
Displays the Unit Memory screen.
When “Peripheral Device” is selected at **①** “Unit selection field”, this menu cannot be selected.

For the details of operations, refer to "par. 5-8-3 Unit Memory".

- ⑧** Clear Error Logs menu
Clears the recovered error information. The cleared error cannot be restored.

- ⑨** CSV menu
Saves the currently specified data to a CSV file.

■ Request setting area (online only)

- ⑩** Request button
Displays the setting area for selecting the unit from which you want to acquire the error information.

- ⑪** Unit selection field
Selects the unit from which you want to acquire the error information. The selectable items at **⑪** differs depending on the selected items at **①**.

Selected items at ①	Selectable items at ⑪			
	Indoor unit	Outdoor unit	Central remote controller	Network converter
All	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In/Out door unit	<input type="radio"/>	<input type="radio"/>	—	—
Peripheral Device	—	—	<input type="radio"/>	<input type="radio"/>

- ⑫** Refrigerant circuit selection field
Selects the refrigerant circuit address to display the error history. The selectable items at **⑫** differs depending on the selected items at **⑪**.

Selected items at ⑪	Selectable items at ⑫
Indoor unit	The refrigerant circuit address number acquired by scanning can be selected.
Outdoor unit	
Central remote controller	200 (Fixed value)
Network converter	240 (Fixed value)

- 13** Unit No. selection field
 Selects the Unit No. of indoor unit and outdoor unit. The selectable items at 13 differs depending on the selected items at 11.

Selected items at 11	Selectable items at 13
Indoor unit	The Unit No. of indoor unit in the refrigerant circuit address selected at 11 can be selected.
Outdoor unit	The Unit No. of outdoor unit in the refrigerant circuit address selected at 11 can be selected.
Central remote controller	1 to 100 (*2)
Network converter	

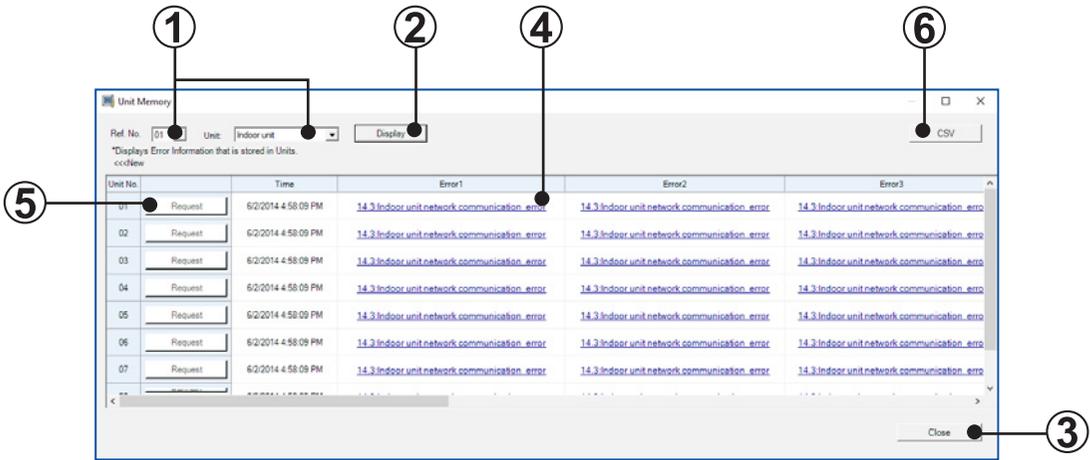
- 14** Request button
 Acquires the current error state of an arbitrarily specified indoor unit or outdoor unit. However, when an error is not occurred, nothing is displayed after execution.

Note *1 Displays only the units with an error history list.
 Troubleshooting screen can be displayed by clicking the error contents of the display. However, excluding “TransmissionAdaptor” errors.

*2 Address number differs depending on these Peripheral Device settings. Check the information of target building.

5-8-3 Unit Memory

By clicking the “Unit Memory” menu, the most recent error information recorded in the indoor / outdoor unit will be displayed.



- 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/J-III/J-IIIL/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/ J-III/J-IIIL/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.
Acquires the error history for any unit.
- ⑥ Saves the currently displayed error history data to a CSV file.

Note

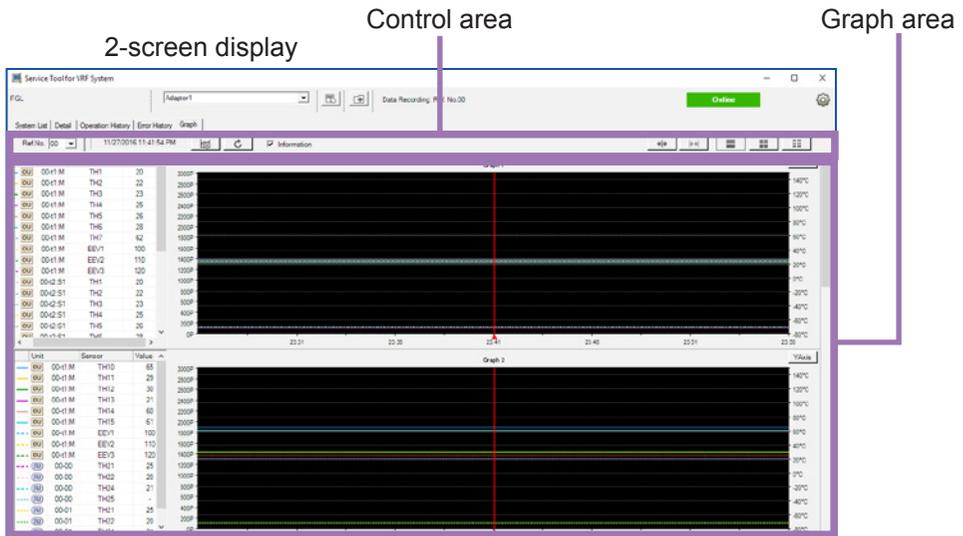
- Error history function displays the error information occurred after the Service Tool is connected to the VRF system. The information occurred before connection cannot be displayed.

Therefore, by using Unit Memory function, you can check the error information occurred before the Service Tool is connected, which cannot be checked by Error History.

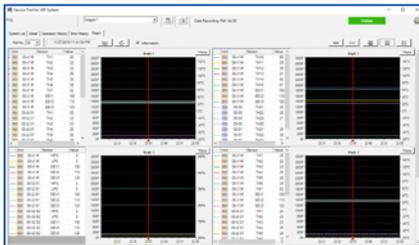
- There are cases where the information in Unit Memory screen and that of Error History screen do not match. This is because of the differences in the displayed information between the 2 screens.
- Errors in Unit Memory screen do not have information on dates.

5-9 Graph

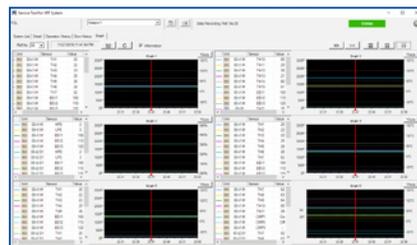
The sensors which user wants to check can be selected freely and their graphs combined as you like can be displayed. In this screen, more detailed and easy-to-see graph can be displayed. Max. 6-screen can be displayed at a graph at the same time.



4-screen display

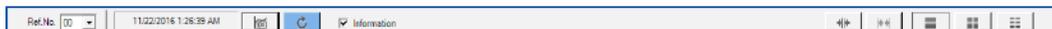


6-screen display



5-9-1 Name and function of each area

■ Control area



Ref. No.	Displays the refrigerant circuit address.
Date, Time	Displays the date and time indicated by the probe at a graph.
	Selects the sensor to be displayed at a graph.
	 (Blue): Updates the screen to the latest data automatically.  (Gray): Does not update the screen automatically.
Information	Selects display / hidden for the sensor list at the side of graph.
	Decreases the time range displayed at a graph. (24hour/12hour/6hour/3hour/1hour/30min)
	Increases the time range displayed at a graph. (30min/1hour/3hour/6hour/12hour/24hour)
	Displays the 2-screen graphs at the same time.
	Displays the 4-screen graphs at the same time.
	Displays the 6-screen graphs at the same time.

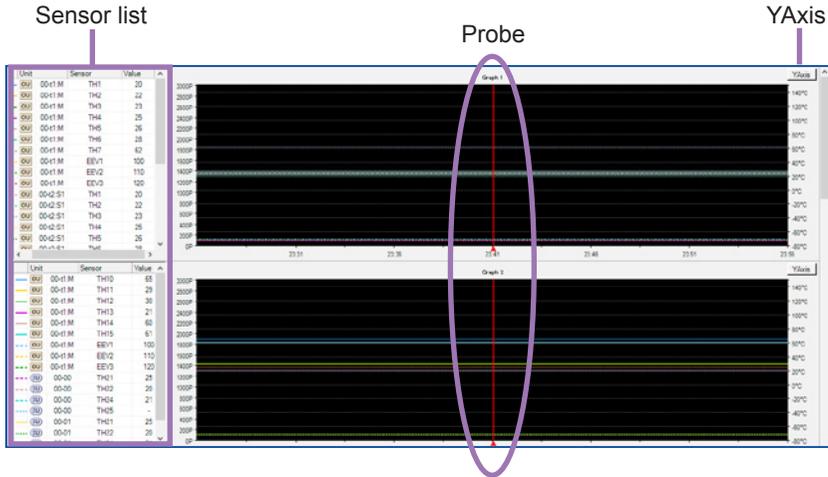
■ Graph area

Up to 30 sensors selected by user can be displayed at a graph.

Up to 6 screens can be displayed at a graph at the same time.

The sensors of outdoor unit and indoor unit can be displayed at the same graph.

Up to 2 types of sensor units can be displayed at one graph.

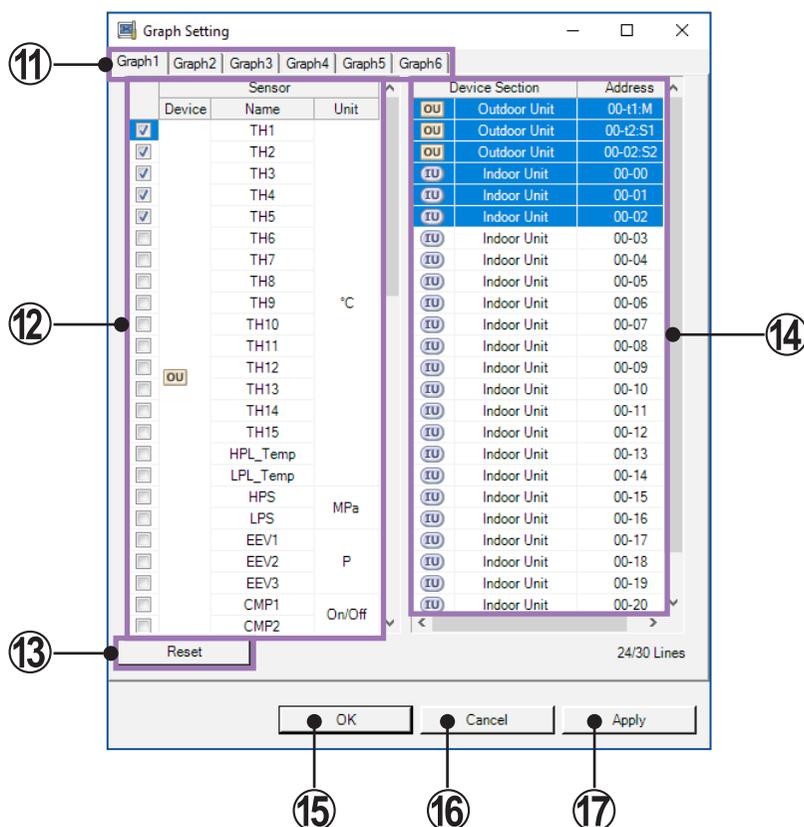


Sensor list	Displays the sensor list and the values displayed at a graph by selecting it. When the checkbox of Information is checked, Sensor list is displayed. If unchecked, Sensor list is not displayed.
YAxis	Sets the upper limit and lower limit of Y axis arbitrarily within the limit range of each sensor value.
Probe	The probe is moved to the left and right by dragging it with the mouse. The sensor value acquired at the probe position time is displayed at the value field of Sensor list.

5-9-2 Graph specification



- ① Refrigerant circuit selection field
Specifies the refrigerant circuit address.
- ② Date and time display field
Displays the date and time indicated by probe at a graph.
- ③ Graph Setting button
Selects the Sensor and Device (Device Section and Address) to be displayed at a graph. For each sensor information, refer to the “par. 5-13-3 VRF Sensor Mark List”.



- ⑪ Graph selection tab
Selects the graph No. in which you want to display the sensor.
- ⑫ Sensor selection field
Checks the checkbox of the sensors you want to display at a graph. [OU] display in the Device field indicates the outdoor unit sensor information. [IU] display indicates the indoor unit sensor information.
Up to 2 types of sensor units can be displayed at one graph.

13 Reset button
Cancels all the sensors selected at **12**.

14 Device Section and Address selection field
Selects the Device you want to display at a graph. When the line of Device you want to display at a graph is clicked, the background becomes blue and it is selected status. Multiple Devices can be selected at the same time by pressing Ctrl key.

15 OK button
Closes this screen after the setting is saved.

16 Cancel button
Closes this screen after the setting is deleted.

17 Apply button
Saves the setting. This screen is not closed.

4 Auto Refresh button
Updates the screen to the latest data.
 (Blue): Updates the screen to the latest data automatically.
 (Gray): Does not update the screen automatically.

5 Information check box
Displays the Sensor list by checking the checkbox of information. When the checkbox is unchecked, the Sensor list is not displayed.

6  button
Decreases the time range to be displayed at X axis of graph each time this button is clicked.
24hour→12hour→6hour→3hour→1hour→30 min.

7  button
Increases the time range to be displayed at X axis of graph each time this button is clicked.
30 min.→1hour→3hour→6hour→12hour→24hour

8  button
Displays 2-screen graphs on the one screen.
Other 4 screens can be displayed by scrolling.

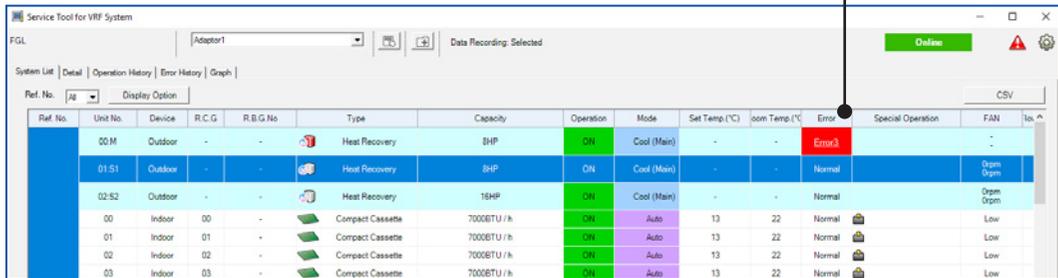
9  button
Displays 4-screen graphs on the one screen.
Other 2 screens can be displayed by scrolling.

10  button
Displays 6-screen graphs on the one screen.

5-10 Error List

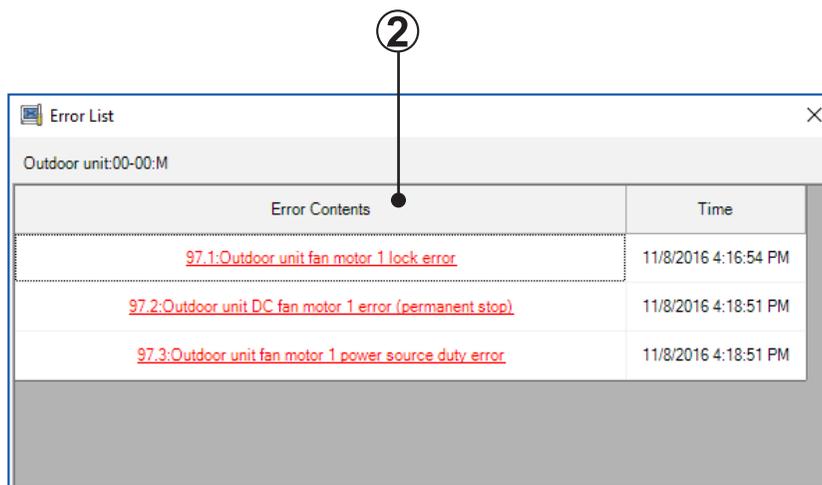
If an error occurs, error detailed information can be displayed from System List screen, Detail Diagram screen, Detail Status List screen, and Operation History screen.

(Example) System List screen



Ref. No.	Unit No.	Device	R.C.G.	R.B.G.No	Type	Capacity	Operation	Mode	Set Temp (°C)	Room Temp (°C)	Error	Special Operation	FAN	Top
	00-M	Outdoor	-	-	Heat Recovery	8HP	ON	Cool (Main)	-	-	Error			
	01-51	Outdoor	-	-	Heat Recovery	8HP	ON	Cool (Main)	-	-	Normal		Open/Close	
	02-52	Outdoor	-	-	Heat Recovery	16HP	ON	Cool (Main)	-	-	Normal		Open/Close	
	00	Indoor	00	-	Compact Cassette	7000BTU/h	ON	Auto	13	22	Normal		Low	
	01	Indoor	01	-	Compact Cassette	7000BTU/h	ON	Auto	13	22	Normal		Low	
	02	Indoor	02	-	Compact Cassette	7000BTU/h	ON	Auto	13	22	Normal		Low	
	03	Indoor	03	-	Compact Cassette	7000BTU/h	ON	Auto	13	22	Normal		Low	

- ① If an error occurs, error link is displayed at System List screen, Detail Diagram screen, Detail Status List screen, and Operation History screen. When the error link is clicked, the Error List screen is displayed.



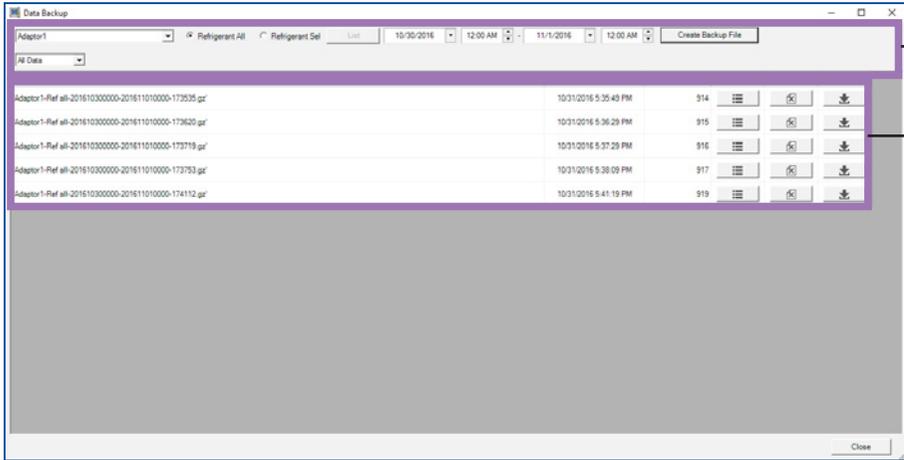
Error Contents	Time
97.1:Outdoor unit fan motor 1 lock error	11/8/2016 4:16:54 PM
97.2:Outdoor unit DC fan motor 1 error (permanent stop)	11/8/2016 4:18:51 PM
97.3:Outdoor unit fan motor 1 power source duty error	11/8/2016 4:18:51 PM

- ② When the error name displayed at Error Contents is clicked, the Troubleshooting screen is displayed.

5-11 Data Backup

Any unit data currently displayed can be saved. The saved data may be displayed as offline data for Service Tool Ver. 2.0.

When the  button is clicked from Monitor screen, the following Data Backup screen is displayed.



Control area

List display area

File Name	Date	ID	Icons
Adaptor1-Ref ah-201610300000-201611010000-172535.gpr	10/31/2016 5:35:49 PM	914	List, Refresh, Download
Adaptor1-Ref ah-201610300000-201611010000-173620.gpr	10/31/2016 5:36:29 PM	915	List, Refresh, Download
Adaptor1-Ref ah-201610300000-201611010000-173719.gpr	10/31/2016 5:37:25 PM	916	List, Refresh, Download
Adaptor1-Ref ah-201610300000-201611010000-173753.gpr	10/31/2016 5:38:09 PM	917	List, Refresh, Download
Adaptor1-Ref ah-201610300000-201611010000-174112.gpr	10/31/2016 5:41:19 PM	919	List, Refresh, Download

5-11-1 Name and function of each area

■ Control area

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

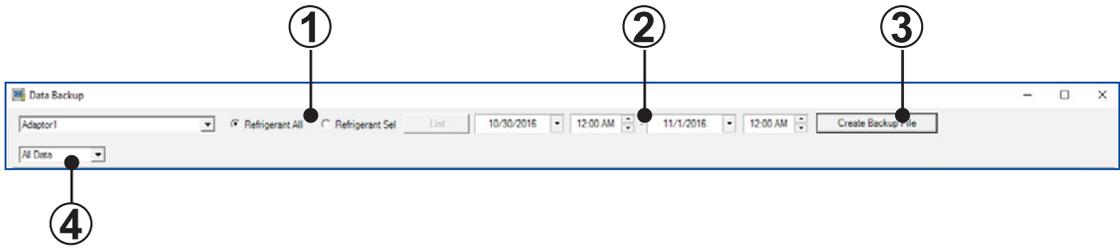
Adaptor	Displays the transmission adaptor name.
Refrigerant All & Refrigerant Sel. [List]	Specify the refrigerant circuit address of the backup file.
Period	Specify the period of the backup file.
Create Backup File	Create the backup file.
Backup file display switching	Switches and displays the files displayed at the list display area for each of the following types. All Data / Manual Data / Auto Data

■ List display area

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

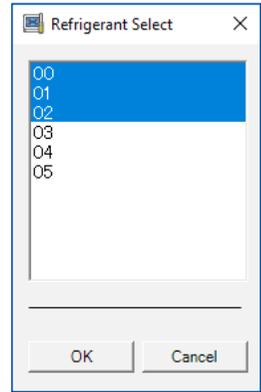
FileName	Display the file names created in the Control area. Also any backup file may be downloaded.
MakeDate	Display date of creation of the backup file.
Size [KB]	Display the size (in KB) of the backup file created. When creation is in progress, display the status of progress.
Detail	Displays the detailed data of the created backup file.
Delete	Delete the backup file.
Download	Saves the created backup file to the local folder.

5-11-2 Procedures for creating backup files



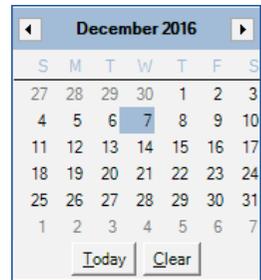
1 Refrigerant All & Refrigerant Sel. selection field
Specify the range of refrigerant circuit address of the backup files to be created by one of the following methods. If Refrigerant Sel. is specified, Refrigerant Select screen will appear by clicking the [List] button. Specify the desired refrigerant circuit address here.

- Refrigerant All All refrigerant circuit addresses are specified.
- Refrigerant Sel. Refrigerant circuit address selected in the refrigerant circuit address selection screen will be specified.
The background of selected items is blue. (Multiple units can be selected at the same time.)



When the selection of refrigerant circuit address is complete, click [OK] button.

2 Period selection field
Specify the period (date and time) of the backup file to be created.
Select the appropriate date from the calendar which appears by clicking [▼] button.



3 Create Backup File button
Sub screen is displayed and then click the [OK] button. Start creating the backup files using the condition specified by **1**, **2**.

4 Backup file display switching field
Switches and displays the backup files for each of the following types.

- All Data Displays all the backup files. (Manual Data and Auto Data)
- Manual Data Displays only the backup files created at **3**
- Auto Data Displays only backup 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.

5-11-3 Data file download/deletion

①	②	③	④	⑤	⑥
FileName	MakeDate	Size[KB]	Detail	Delete	Download
'Adaptor1-Ref all-201610300000-201611010000-173835.gz'	10/31/2016 5:36:49 PM	914	[Detail Icon]	[Delete Icon]	[Download Icon]
'Adaptor1-Ref all-201610300000-201611010000-173620.gz'	10/31/2016 5:36:29 PM	915	[Detail Icon]	[Delete Icon]	[Download Icon]

- ① **File Name display**
Display the file names created in the Control area. Also any backup files may be downloaded

FileName format is as follows;

[Transmission adaptor name - Refrigerant All or Refrigerant Sel *- Period - administrator No.]

* Refrigerant All ... Ref all / Refrigerant Sel ... Ref multi

- ② **Make Date display**
Display date of creation of the backup file.
- ③ **Size [KB] display**
Displays the size (Unit: KB) of the created backup file.
Progress bar is displayed during creating.
If the backup file is not created after creation is complete, the field is blank.
- ④ **Detail button**
Displays the detail screen of the created backup file.

Backup file detail screen

Detail [Close]

FileName : Adaptor1-Ref all-201610300000-201611010000-173620.gz

MakeDate : 10/31/2016 5:36:29 PM

Site name : FGL

Adaptor Name : Adaptor1

Ref. No. : All

Period : 10/30/2016 12:00:00 AM - 11/1/2016 12:00:00 AM

[Delete] [Download] [Close]

When [Delete] button is clicked, the backup file is deleted.

When [Download] button is clicked, the created backup file is saved to the local folder.

When [Close] button is clicked, this detail screen is closed.

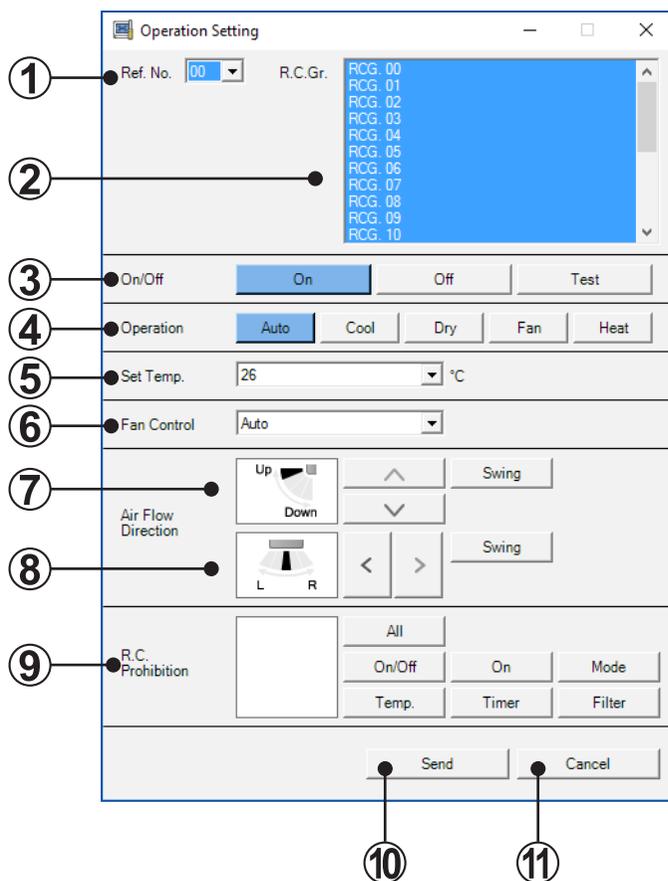
- ⑤ Delete button
Deletes the created backup file.
- ⑥ Download button
Saves the created backup file to the local folder.

5-12 Operation Setting

When the  button is clicked from Monitor screen, the following Operation Setting screen is displayed.

In addition, when the line of indoor units in which you want to set the operation is right-clicked on the System List screen, and “Operation Setting” → “Detail” in the displayed screen is left-clicked, Operation Setting screen is displayed in the same way.

The selected R.C.Gr. (indoor unit) can be operated.



- 1** Ref. No. selection field
Selects the refrigerant circuit address. (The refrigerant circuit address to be registered can be selected.)
- 2** R.C.Gr. selection field
Selects the unit you want to operate in each R.C.Gr. The background of selected R.C.Gr. is blue.
Multiple units can be selected by pressing the Ctrl key while selecting.

- ③ On/Off selection field
Selects the On/Off mode.
The mode can be selected from [On] button, [Off] button, or [Test] button.
- ④ Operation selection field
Selects the operation mode.
The mode can be selected from [Auto] button, [Cool] button, [Dry] button, [Fan] button, or [Heat] button.
- ⑤ Set Temp. selection field
Sets the desired temperature. (*1)
The set temperature is selected from pull-down menu.
- ⑥ Fan Control selection field
Controls the fan speed.
The set fan speed is selected from pull-down menu.
- ⑦ Air Flow Direction (Up-Down) selection field
Adjusts the vertical airflow direction.
When [Swing] button is clicked, automatic up-down swing mode is set.
- ⑧ Air Flow Direction (L-R) selection field
Adjusts the horizontal airflow direction.
When [Swing] button is clicked, automatic left-right swing mode is set.
- ⑨ R.C. Prohibition selection field (*2)
Prohibits the operations of wireless remote controller and wired remote controller.
When [All] button, [On/Off] button, [On] button, [Mode] button, [Temp.] button, [Timer] button, or [Filter] button is clicked, icon is displayed in the frame at the left. When the icon is displayed in the frame, the operation of the function is prohibited.
- ⑩ Send button
Transfer the operating data set at ③ to ⑨ to the R.C. Gr. selected at ① and ②.
- ⑪ Cancel button
Closes the screen.

Note *1 Displayed in Centigrade or Fahrenheit depending on the data acquisition application setting.



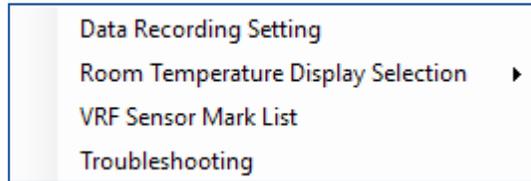
The settable range depends on the series.

Mode	Series	Centigrade	Fahrenheit
Auto / Cool / Dry	All	18~30°C	64~88°F
Heat	S	16~30°C	60~88°F
	Except S series	10~30°C	48~88°F

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

5-13 Setting

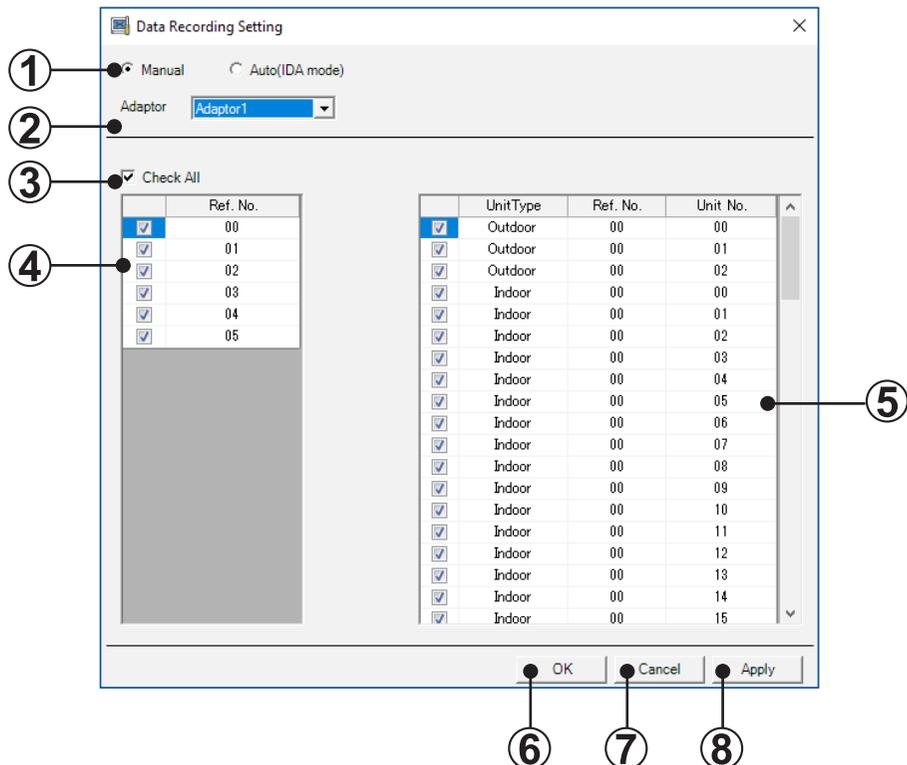
When the  button on the Monitor screen is clicked, the menu of four functions below is displayed. Click the menu you want to set.



Data Recording Setting	Select the unit in which the individual information is required.
Room Temperature Display Selection	Sets the display method of the room temperature to be displayed by the Monitor application.
VRF Sensor Mark List	Displays the list of abbreviations.
Troubleshooting	Displays the error contents and corrective action. Display is performed from also Error History screen.

5-13-1 Data Recording Setting

Select the unit in which the individual information is required.



① Individual information requirement method selection field
 Selects the individual information requirement method (Auto/Manual)

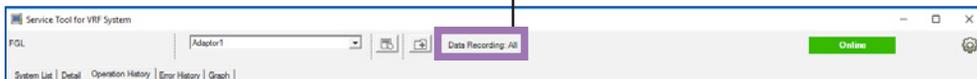
Manual: Manually selects the unit in which the individual information is required.

Auto (IDA mode): Automatically selects the unit in which the individual information is required. The selection of the unit in which the individual information is required differs depending on the monitor screen display state.
 (Refer to the table below.)

When Auto is selected, ② to ⑤ are not displayed.

Requirement method	Monitor screen display state	State	Target in which the individual information is required
Manual	----- (Target in which the individual information is required does not depend on the display state)	All	Units in all refrigerant circuits connected to the adaptor selecting on this setting screen (when all checkboxes of Ref. No. and Unit No. are checked by this setting)
		Selected	Some refrigerant circuits and units connected to the adaptor selecting on this setting screen
Auto (IDA mode)	Not displayed	Not displayed	All units
	System List screen	All	Units in all refrigerant circuits connected to the adaptor selecting on the displayed monitor screen
	Operation History screen		
	Error History screen		
	Detail Diagram screen	Ref. No. value	Units in the adaptor selecting on the displayed monitor screen or in the refrigerant circuit
	Detail Status List screen		
	Detail Check List screen		
	Graph screen		

State



② Adaptor selection field
 Selects the transmission adaptor which connects the target unit.

③ Check All setting field
 When this checkbox is checked, all Unit Types at ④ and ⑤ are selected. (When the checkbox is unchecked at the list of ⑤, the selection can be cancelled individually.)

- ④ Refrigerant circuit address selection field
Select the refrigerant circuit address.
When the checkbox is checked, all the selected Unit Type connected to refrigerant circuit address are selected at the list of ⑤. (When the checkbox is unchecked at the list of ⑤, the selection can be cancelled individually.)
- ⑤ Unit Type selection field
Selects or cancels the Unit Type in which the individual information is required for each unit.
- ⑥ OK button
Saves the set contents and closes the screen.
- ⑦ Cancel button
Deletes the set contents and closes the screen.
- ⑧ Apply button
Saves the set contents. (The screen is not closed.)

5-13-2 Room Temperature Display Selection

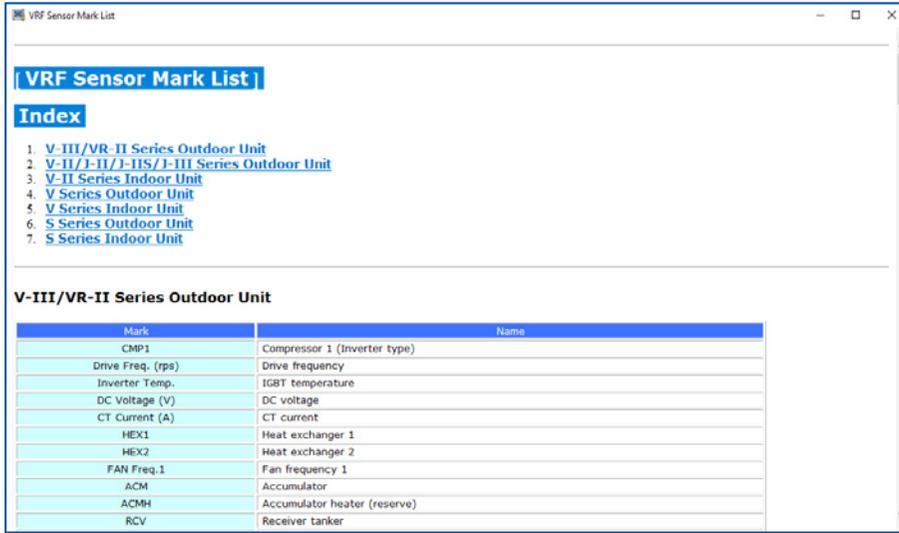
Sets the display method of the room temperature to be displayed by the Monitor application.



- ① When you want to display the room temperature detected by sensor unchanged, select “actual”.
- ② When you want to display the room temperature corrected (used in control) by the unit, select “adjusted”.

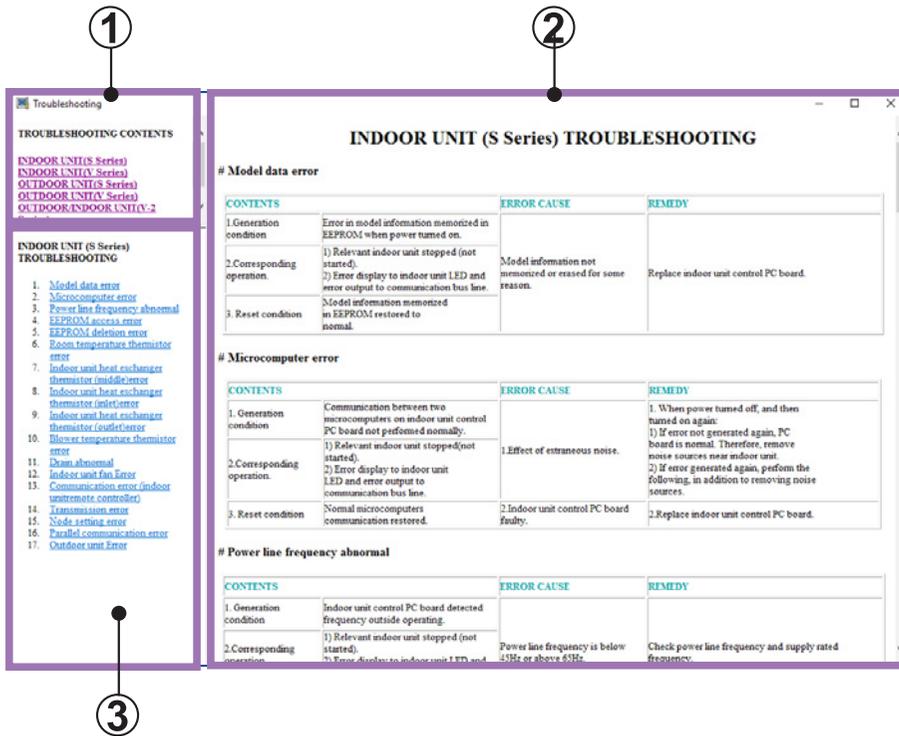
5-13-3 VRF Sensor Mark List

Displays the list of abbreviations.



5-13-4 Troubleshooting

Displays the error contents and corrective action. Display is performed from the Monitor screen and Error History screen.



5. Monitor Application

- 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 V-II/J-II/J-IIS/J-III/J-IIIL/VR-II/V-III 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/J-III/J-IIIL/VR-II/V-III series.

Note



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

5-14 WIBU KEY error

When the WIBU KEY is pulled out during operation, when expiration date of WIBU KEY(with expiration date) is passed during operation, or when the system is started by the expired WIBU KEY, WIBU KEY error screen is displayed.



- ① When the WIBU KEY is pulled out during operation
Insert the WIBU KEY again. When authentication process is complete, the error screen disappears and the normal monitor screen is displayed.
- ② When expiration date of WIBU KEY(with expiration date) is passed during operation
Insert a WIBU KEY that is within the expiry date. When authentication process is complete, the error screen disappears and the normal monitor screen is displayed.
- ③ When the system is started by the expired WIBU KEY
Insert a WIBU KEY that is within the expiry date. When authentication process is complete, the error screen disappears and the normal monitor screen is displayed.

Note

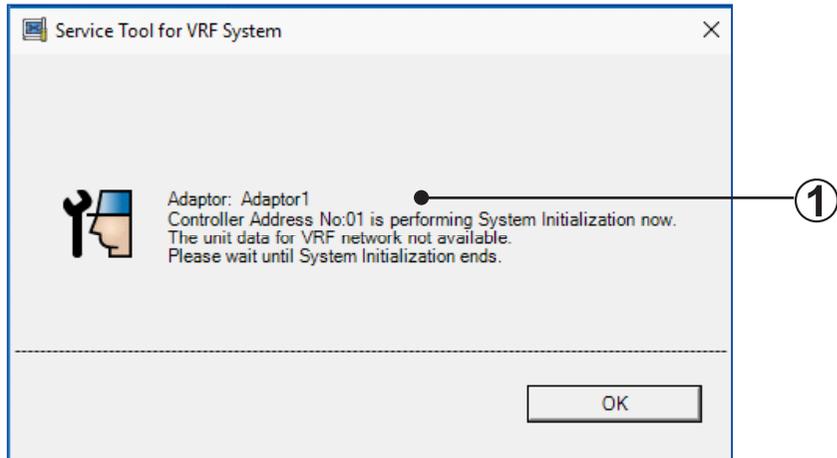


- When an error is occurred while each function operates, the process ends normally. After the error is cancelled, this data can be checked.
- Even when an error is generated, the right-click menu can be operated.
- When an error is generated while sub screen is displayed, only [Cancel] or [Close] button is valid.
- When the progress screen is displayed, the screen is closed after the process is complete.

5-15 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.



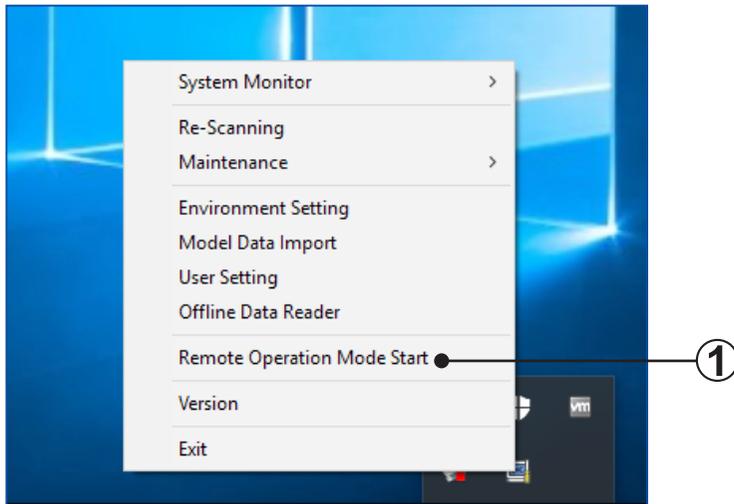
6. Remote Operation

Service Tool can be controlled by the operation of external PC (remote side PC). When Service Tool is operated by remote side PC, the login by the previously registered account is necessary. In addition, when using for the first time, account registration is also necessary in advance. This operation is possible only when Remote Operation usage is enabled by Service Tool user.

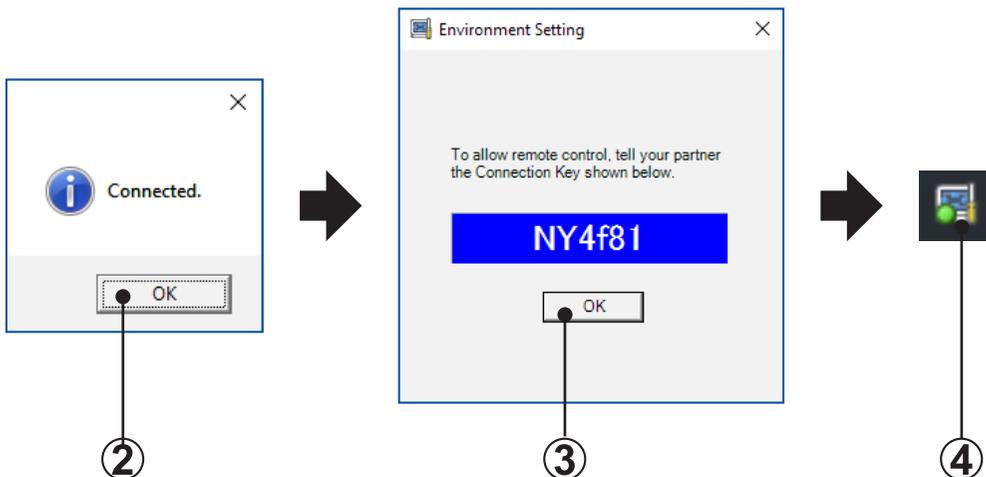
Note When this operation is performed, check the PC can be connected to internet in advance.

6-1 Enabling the Remote Operation (Service Tool operation)

When Remote Operation is performed, it is necessary to enable the Remote Operation function from Service Tool in advance.



① Click the “Remote Operation Mode Start” from the right click menu.



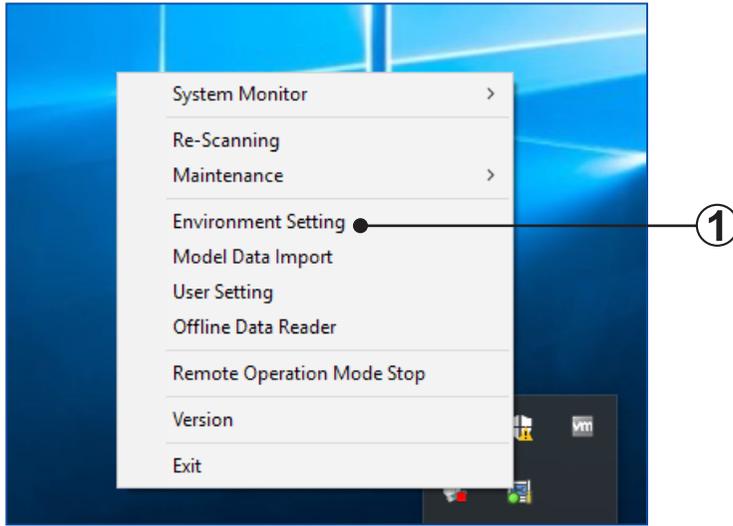
5. Monitor Application

- ② Wait until the message screen appears.
When message screen is displayed, click the [OK] button.
- ③ Wait until the message screen appears.
When message screen is displayed, click the [OK] button.
- ④ The icon in the task tray is displayed.

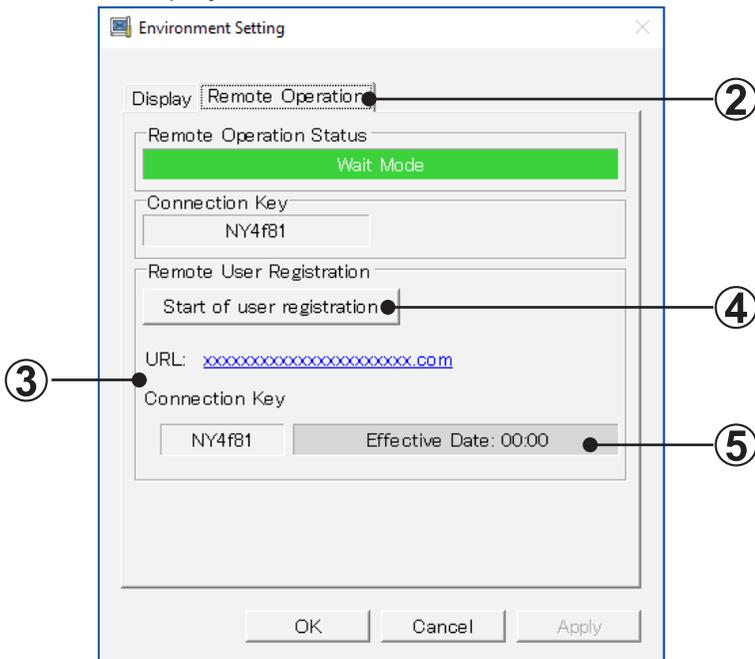
6-2 Account registration (first time only)

Account is used to provide the authorization of Remote Operation.

6-2-1 Connection Key issuance (Service Tool operation)



- 1 When "Environment Setting" is clicked from right click menu, Environment Setting screen is displayed.

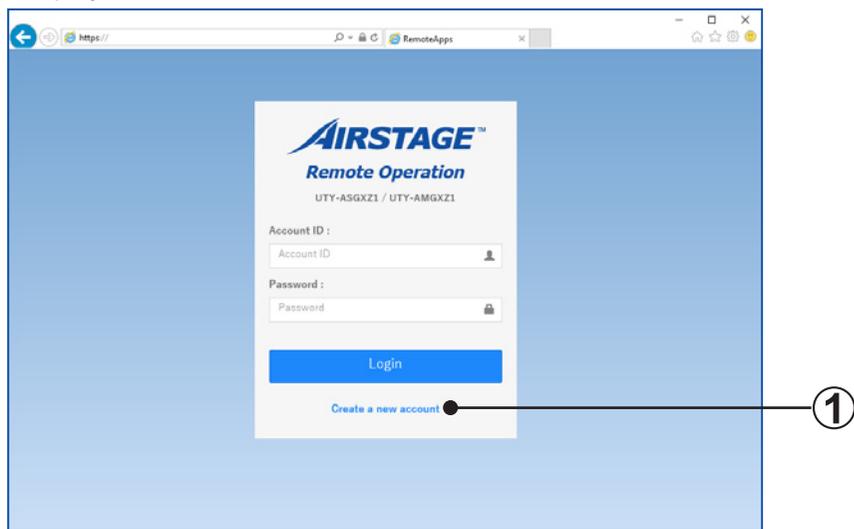


- 2 Click the "Remote Operation" tab.

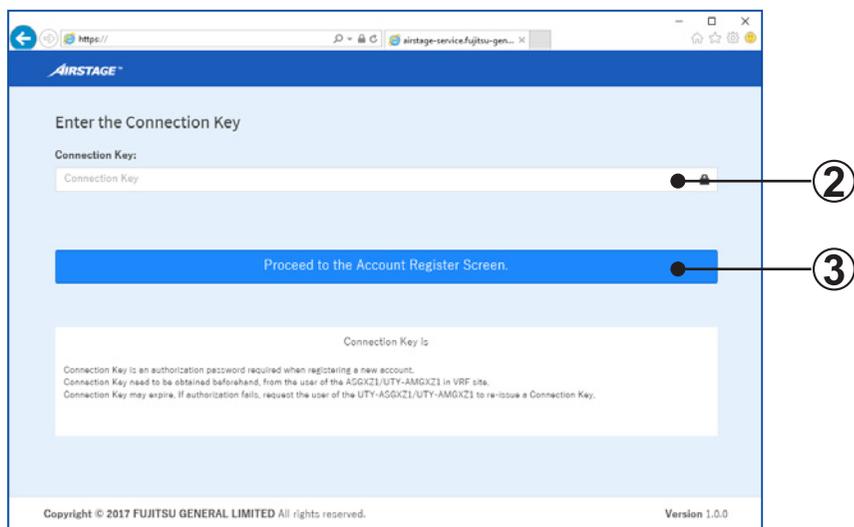
- ③ URL and Connection Key which are necessary for account registration are displayed. Take a note of these not to forget them. In addition, if an actual operator is different, it is necessary to inform the operator about the information of these two URL and Connection Key.
- ④ When [Start of user registration] button is clicked, effective date of account registration is set.
- ⑤ Countdown for effective date of account registration starts. Register the new account within 15 minutes.

6-2-2 Account registration (PC operation at remote side)

Start the Web browser and enter the specified URL (par. 6-2-1③).
Login screen is displayed.



- ① Click the “Create a new account”.



② Enter the connection key (par. 6-2-1③).

③ Click the “Proceed to the Account Register Screen.” button.

The screenshot shows a web browser window with the URL <https://airstage-service.fujitsu-gen...>. The page title is "AIRSTAGE" and the main heading is "Register account". There are three input fields: "Account ID", "Password", and "Confirm Password". A blue "Register account" button is at the bottom. Numbered callouts 4, 5, 6, and 7 point to the Account ID field, the Password field, the Confirm Password field, and the Register account button, respectively. The footer contains "Copyright © 2017 FUJITSU GENERAL LIMITED All rights reserved." and "Version 1.0.0".

④ Enter the Account ID.

⑤ Enter the Password.

⑥ Enter the same Password as ⑤.

⑦ Click the “Register account” button.

The screenshot shows a web browser window with the URL <https://RemoteApps>. The page title is "AIRSTAGE Remote Operation" with the text "UTY-ASGXZ1 / UTY-AMGXZ1" below it. A blue "SUCCESS SAVE" message is displayed at the top. Below it are input fields for "Account ID" and "Password", and a blue "Login" button. A link "Create a new account" is at the bottom. A numbered callout 8 points to the "SUCCESS SAVE" message. The background is a light blue gradient.

⑧ When the registration is complete, the “SUCCESS SAVE” is displayed.

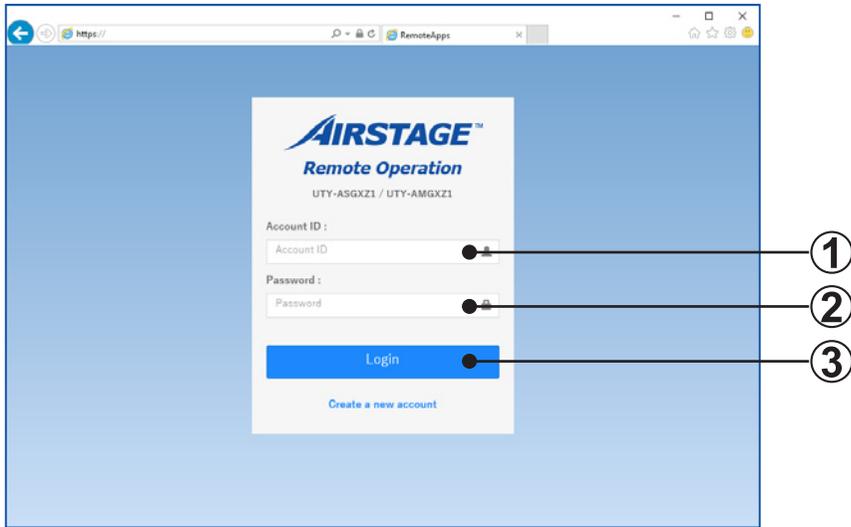
Note



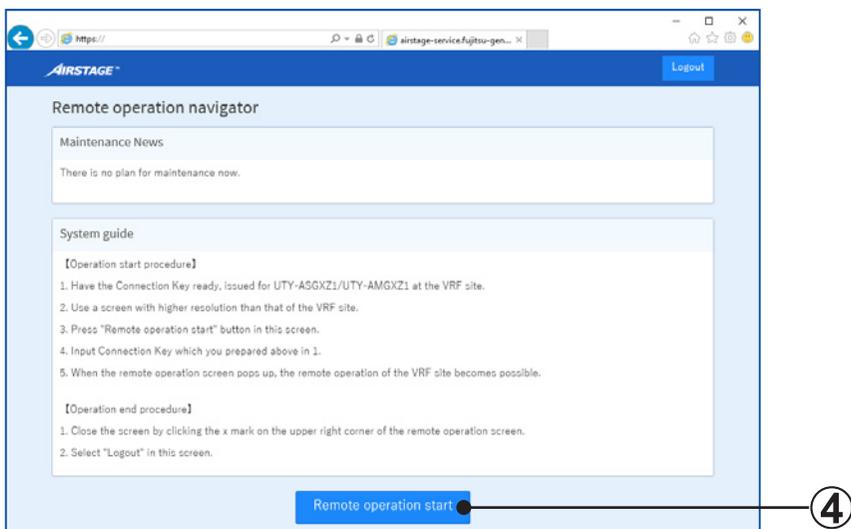
- Once the account is registered, it cannot be deleted or changed.
- Due to the authorization of Remote Operation, pay careful attention to the prevention of account information leakage.

6-3 Login and Remote Operation start (PC operation at remote side)

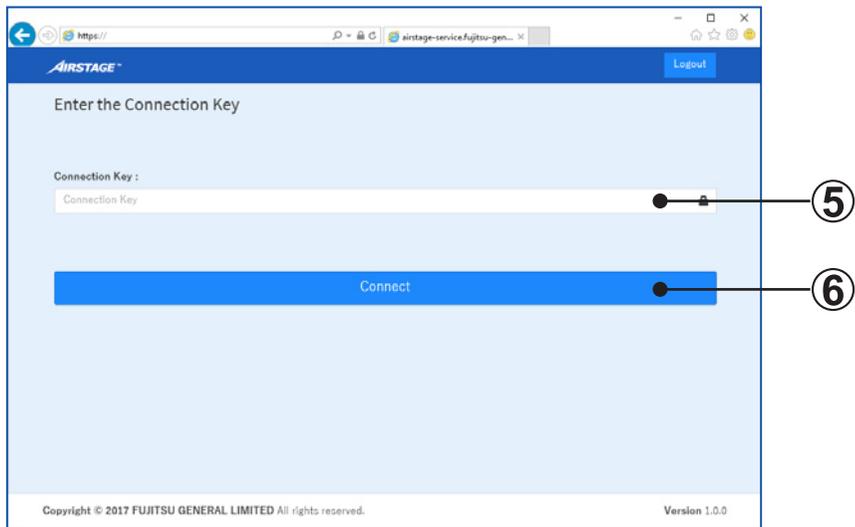
Display the URL specified by Remote side PC (par. 6-2-1③) and log in.



- ① Enter the Account ID.
- ② Enter the Password.
- ③ Click the “Login” button.



- ④ Click the “Remote operation start” button.

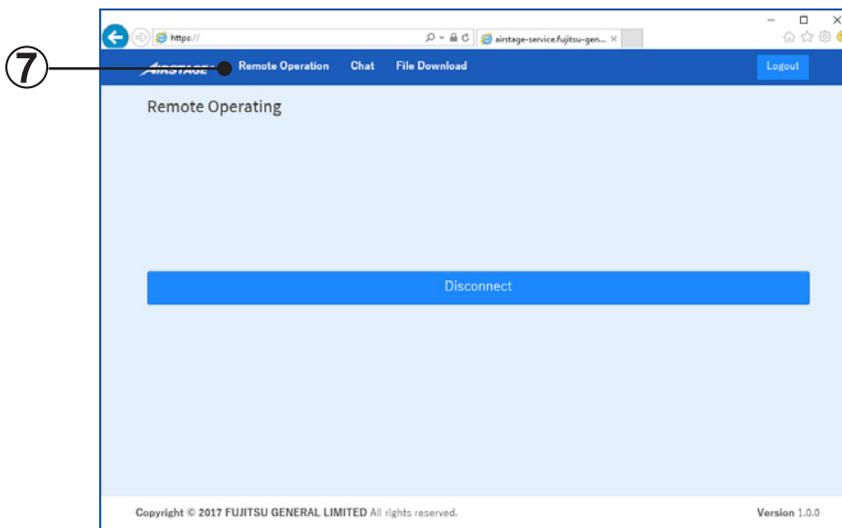


- ⑤ Enter the Connection key of the Service Tool to be operated by Remote Operation.



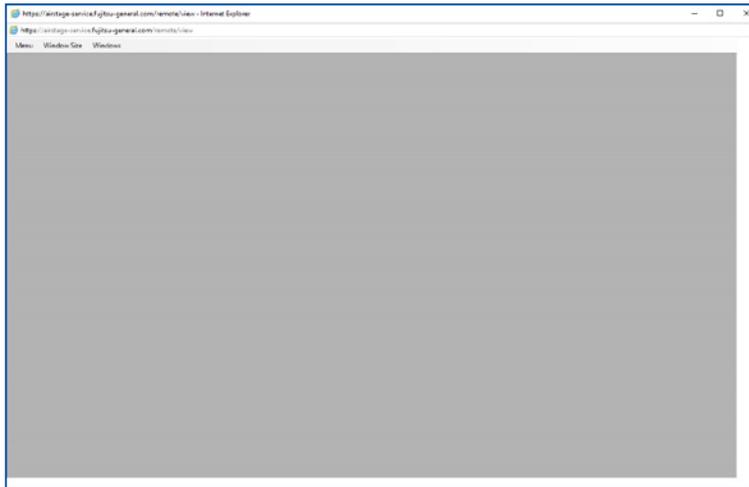
Note Each time the Remote Operation of Service Tool is enabled (par. 6-1), the connection key is changed. Therefore, it is necessary to acquire the key in advance. Acquire the key from Service Tool user. (The key acquired previously cannot be used.) In addition, this key affects the security of Remote Operation, pay careful attention to the prevention of information leakage.

- ⑥ Click the “Connect” button.



- ⑦ Click the "Remote Operation" button.

When it becomes the connecting status, Remote Operating screen is displayed on the Web browser.



Note



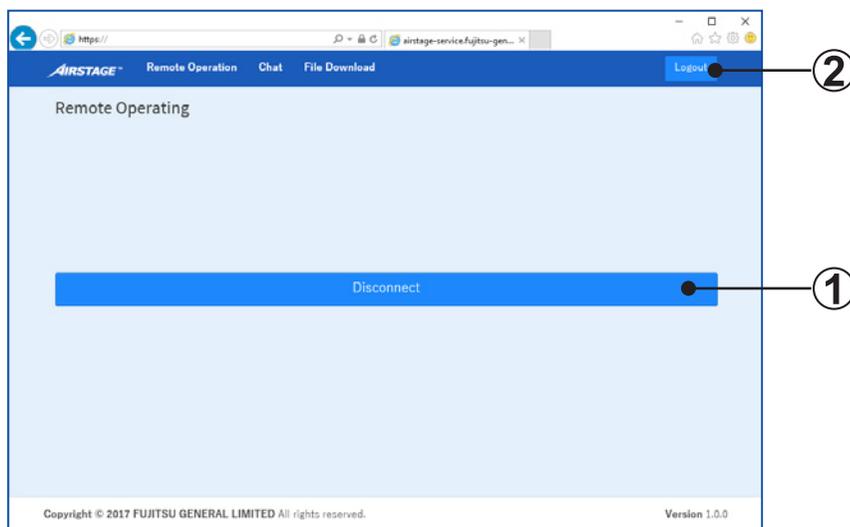
The way of handling is described when the following message appears while the Remote Operating screen is displayed.

- “The connecting site is currently busy. Try Later.”
When the function other than “System monitor” is displayed from the right click menu of Service Tool, Remote Operation cannot be started. To start the operation, close the function displayed currently by Service Tool once and connect again.
- “CONNECTION LIMITED OVER”
Remote Operation is performed by other person and operation limit is exceeded. After the operating work is complete, connect again.
- When the following message is displayed on the Web browser.
For IE11
Internet Explorer blocked a pop-up from xxxxxxxxxxxxxxxx.com

For Edge
Microsoft Edge blocked a pop-up from xxxxxxxxxxxxxxxx.com

Popup block is effective. Select the button to be displayed and display the Remote Operation screen.
- “The connecting PC screen is locked. The screen must be unlocked in order to connect.”
This message is displayed when the screen saver appears or the screen is locked on the PC at VRF site.
For performing remote operation, you need to ask the operator to release these statuses at the PC on VRF site if necessary.

6-4 Remote Operation end and Logout (PC operation at remote side)



① When “Disconnect” button is clicked, Remote Operating screen is closed.

② When “Logout” button is clicked, it switches to the Login screen.



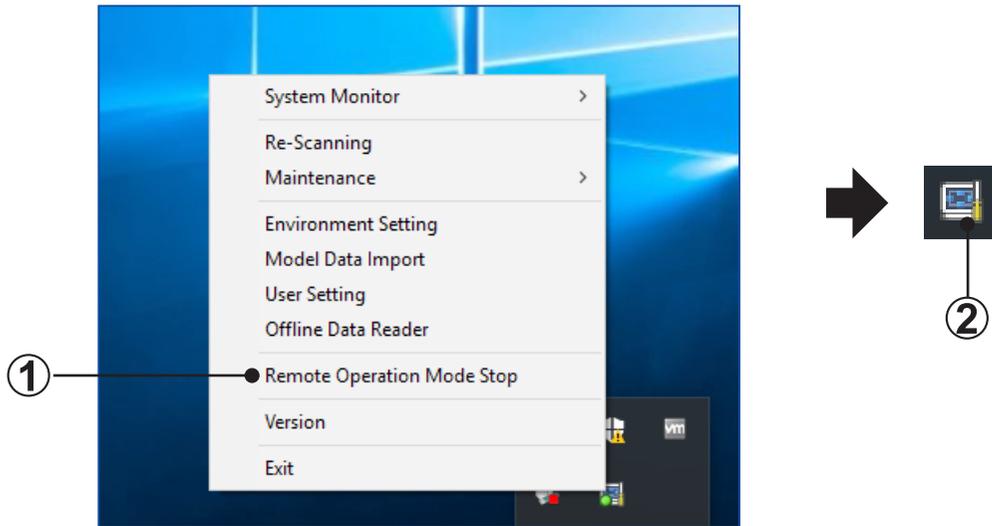
- After login or Remote Operation start, if the operation is not performed for the following period, you will be logged out or the Remote Operation will end automatically.

Logout time No operation for 24 hours

Remote Operation end time No operation for 1 hour

6-5 Disabling the Remote Operation (Service Tool operation)

The Remote Operation function at the Service Tool cannot be used by disabling the Remote Operation.



① Click "Remote Operation Mode Stop" from right click menu.

② The icon at task tray is displayed.

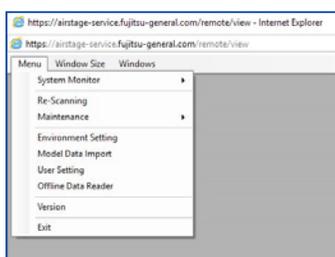
6-6 Remote Operation

The following functions can be used on the Remote Operating screen.

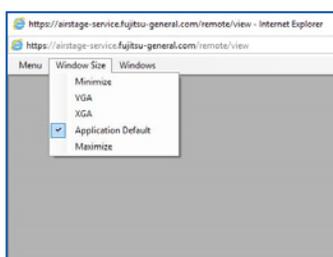
① Remote Operation

Menu	Functions of Service Tool can be used. For the usage of each function, refer to the description of Chapter 4 and 5.
Window Size	Displayed screen size is set.
Windows	Multiple displayed functions (screens) can be arbitrarily switched to the display at the forefront.

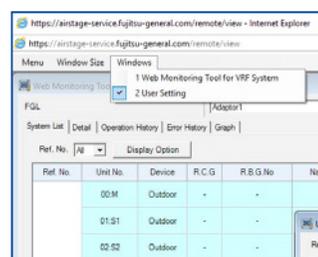
When Menu is selected



When Window Size is selected

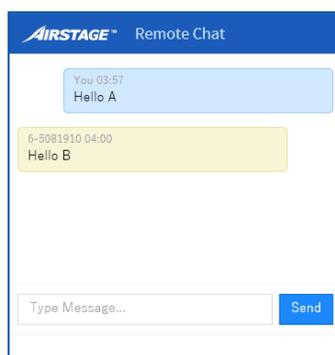


When Windows is selected



② Chat

Character input and talking in real time between Service Tool side and Remote side operators can be performed.

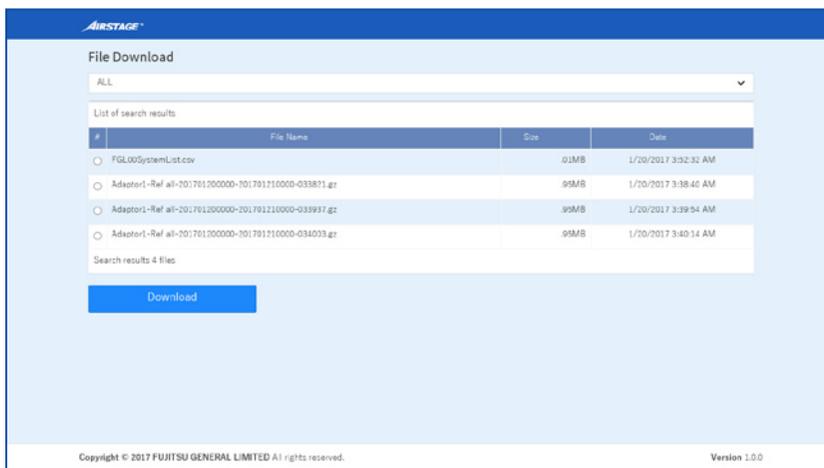


The chat contents can be transmitted only if chat screen is opened mutually at VRF site and Remote site.

In addition, when the chat screen is closed, the history of chat will be deleted.

3 File Download

Various files output from Service Tool during Remote Operation can be downloaded.



7. 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 occurred.

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 Data is not displayed on the monitor screen (System List screen or Detail Diagram screen, etc.)

Cause

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

Countermeasure

Change the setting by Data Recording Setting. For details, refer to "par. 5-13-1 Data Recording Setting".

T-3 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-4 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-5 Refrigerant circuit diagram is not displayed for outdoor/indoor unit in the Detail Diagram screen.
(Message “Cannot display refrigerant circuit diagram” is displayed).

Cause

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

Countermeasure

- ① Perform scan again (Refer to “par. 3-2-5 Scanning Setting”).
After scanning, check that the model name is displayed in the System List screen.
- 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 to “par. 3-2-4 Name Master Database file selection screen”) 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-6 Troubleshooting for VRF is not displayed on ‘Adobe Acrobat Reader’.

Countermeasure

- ① Start the ‘Adobe Acrobat Reader’.
- ② Select [Edit] menu → [Preferences...] → [Security(Enhanced)]
- ③ Remove the check mark of the ‘Enable Protected Mode at startup’.

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 the browsers other than IE11 and Microsoft Edge be used at remote operation side when remote operation function is used?

Answer

Other browsers cannot be used because they are not supported.