INSTRUCTION MANUAL

•INSTALLATION •SETTING •OPERATING

BACnet[®] Gateway for VRF System

UTY-ABGXZ1

Ver. 3.0



FUJITSU GENERAL LIMITED

PART NO. 9708568010-13

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Contents

1.	Usag	e Precautions	6
	1-1	Precautions When Using the BACnet [®] Gateway ······	6
2.	How [·]	To Use This Manual	8
	2-1	Manual Composition ·····	8

Introduction

3.	Overv	view10
	3-1	Features 10
4.	Mater	rials To Be Prepared Beforehand······ 11
5.	Softw	vare License ······

Installation

6.	Instal	lation ·	14
	6-1	Installa	ation Flow 15
	6-2	Hardw	are Installation (Transmission Adaptor) 16
		6-2-1	Transmission Adaptor Installation
		6-2-2	Wiring and Turning on the Units Power ·····18
	6-3	Softwa	re Installation
	6-4	Softwa	are Uninstallation ····································
		6-4-1	BACnet® Gateway Uninstallation
		6-4-2	WIBU-KEY Driver Uninstallation 32
		6-4-3	Microsoft® SQL Server® Uninstallation

Settings

7.	Basic	Settings ······36
	7-1	When Starting for the First Time
	7-2	"Selection of Unit Data Acquisition Method"
	7-3	"Login Setting"
	7-4	"Initial Setting" ····· 39
	7-5	"Adaptor Setting"
	7-6	"Unit Registration"
	7-7	"Description Property Setting" 46
	7-8	"Change Password" 47
	7-9	"Display Language Setting"
	7-10	"License Manager"
	7-11	"Monitoring Unit Setting"

8.	Elect	ricity Charge Apportionment (ECA) Setting	52
	8-1	Basic Setting Flow	52
	8-2	Overview	53
	8-3	"Model Name and ECA Parameter Setting"	56

Operation

9.	Opera	ation	58
	9-1	Starting	g and Ending the BACnet [®] Gateway······58
	9-2	Main S	60 Screen
	9-3	"Data I	mport/Export" ······ 62
		9-3-1	"Unit List (EDE) Export"
		9-3-2	"All Data Import"
		9-3-3	"All Data Export"
	9-4	"View"	
	9-5	"Contro	ol"67
		9-5-1	"Operation Setting"67
		9-5-2	"Device Communication Disable" 68
		9-5-3	"Device Communication Disable_Initiation" 69
		9-5-4	"Device Communication Enable" 70
		9-5-5	"Out of Service"71
	9-6	"Error"	
		9-6-1	Displays "Error Information" 72
		9-6-2	Displays "Error History" 73
	9-7	"Help"	
		9-7-1	Displays "Manual" 73
		9-7-2	Displays "Interface Specification Document" 74
		9-7-3	Displays Application "Version Information" ~~~~~ 74

Appendix

10. Prod	uct Specifications ·····	76
10-1	Operating Conditions	76
11. Error	Code Table ·····	77
12. FAQ·		78
12-1	General	78
12-2	Trouble Shooting BACnet [®] Installation	81

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1. Usage Precautions

1-1 Precautions When Using the BACnet[®] Gateway

- 1. Please read and agree to the LICENSE AGREEMENT FOR "BACnet[®] Gateway" at the beginning of this manual before using the BACnet[®] Gateway.
- 2. Please confirm that the PC for the BACnet[®] Gateway meets the operating condition of the "Product Specifications" described in the Appendix of this manual.
- **3.** Please read and fully understand this manual before using the BACnet[®] Gateway.
- **4.** Be careful not to shutdown or turn off the power supply of the PC or unplug its transmission adaptor. Do not terminate the BACnet[®] Gateway program unless necessary. Otherwise, normal operation of the BACnet[®] Gateway may not be performed.
- 5. To ensure continuous normal operation of this software,set the PC so that it would not go into an energy saving mode such as standby mode, sleep mode or execute hibernation. If the PC goes into a standby, sleep mode or execute hibernation, this software may not function properly. The method for releasing the energy saving or hibernation of the PC depends on the Windows versions. For windows[®] 7, right click the desktop to select "Personalize" and click "Screen Saver" icon to select "Change power settings". Check "Power saver" in the "Preferred plans" and select "Change plan settings" to set "Never".
- 6. This product and accessories are not reissued. Keep and handle them with great care after installing.
- 7. BACnet[®] Gateway programs perform schedules, operation recording and electricity apportionment data control based on date and time set in the personal computer. Adjust date and time periodically and by a small amount. Changing date and time may affect the functions listed above. When the date/time of the PC running BACnet[®] Gateway is adjusted to roll back in time, the data collected for the electricity charge apportionment for that period will be deleted and be newly collected. When the date/time is adjusted to roll forward in time, there will be no data for that period. Such cases will result in incorrect calculation results for the electricity charge apportionment so the user should be careful when adjusting date/time for the PC.
- 8. When program execution environment of Windows[®] is corrupted or abnormal, or if other software is installed or running on the same PC, operation of BACnet[®] Gateway may be interfered and may not install or run properly. It is usually extremely difficult to detect such conditions, if it occurs. It is recommended that BACnet[®] Gateway be installed on a new PC, dedicated for the use of BACnet[®] Gateway.
- **9.** BACnet[®] Gateway product is provided with software, drivers, components listed below. If the same kind of software, drivers, components with different version is installed on the same PC, BACnet[®] Gateway may not install or run properly.
 - (1) Microsoft[®] SQL Server[®] Express
 - (2) OpenLDV (U10 USB Network Interface driver)
 - (3) WIBU-KEY driver
- **10.** This product may be updated without prior notice. If by chance you encounter any trouble with this product , check with your service personnel for updates.

11. When Anti-Virus software is running, an error may occur in this software. Set the Anti-Virus software to exclude this software from being monitored. Please refer to your Anti-Virus software manual on how to do this.

2. How To Use This Manual

2-1 Manual Composition

This manual is composed of 5 sections.

- Introduction
- Installation
- Settings
- Operation
- Appendix

Before installing the software, read the Introduction first and check the Overview of the BACnet[®] Gateway and the notes and cautions.

When installing the BACnet[®] Gateway to the PC, read the Installation and Settings sections. Complete installation to the PC in accordance with the procedure described.

When performing operations related to various functions of the BACnet[®] Gateway after installation, refer to the relevant parts of the operation section.

The Appendix is made up of product specifications, error code table, and FAQ. Read them as required.

Interface Specification document is also available and should be referred to along with this manual.

Introduction

- 3. Overview
- 4. Materials To Be Prepared Beforehand
- 5. Software License

3. Overview

3-1 Features



The maximum number of connecting systems

	VRF System	4 systems
--	------------	-----------

For the numbers of the Units that can connect with 1 VRF System, Indoor and Outdoor Units are up to 400 units and up to 100 units respectively.

* VRF System Address:

The numbers from 0 to 3, which are assigned to each VRF System in the BACnet® Gateway.

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VRF system

Operator Workstation

4. Materials To Be Prepared Beforehand

Materials necessary at installation

- U10 USB Network Interface (adaptor with connection to VRF network work finished)
- Administrator ID and password for Windows login (arbitrarily decided by the user. 2 byte characters cannot be used.)
- BACnet[®] Gateway setup media (For details, see the next page.)
- IP Address (Fixed IP address is recommended.)

When number of USB ports for WIBU-KEY and U10 USB Network Interface are insufficient;

• USB hub

Setup media configuration (Reference)

	-ReadMeFirst.txt Read before installing the	e software application.
	■setup.exe Install the BACnet [®] Gatev Execute the setup.exe to	
	Manual ————	BACnet [®] Gateway Manual.pdf (PDF file for this manual) +Interface Specification.pdf
	Tools	OpenLDV Driver for U10 USB Network Interface When the Driver for U10 USB Network Interface is installed, execute it. WibuKey Driver for WIBU-KEY This software is necessary to use WIBU-KEY It is usually installed automatically when BACnet® Gateway is installed to the PC. When the driver for WIBU-KEY is installed manually, execute it.
	LicenseAgreement —	–LicenseAgreement.pdf
L	ISSetupPrerequisites	

5. Software License

What is software license?

- The software license means the use acceptance of this product in the agreed-upon License Agreement.
- One software license is provided as "License" stored in WHITE-USB-KEY for each purchased product.
- The license varies depending on the product.



 "License" stored in WHITE-USB-KEY can be used by inserting WHITE-USB-KEY in PC as it is or moved into PC by using "License Manager for VRF System". Refer to "License Manager" manual for details.
 * License Manager for VRF System" is installed together at the time of BACnet Gateway installation.



When used by inserting "License" stored WHITE-USB-Key into PC as it is. (Status at the time of purchase)



When used by moving "License" from WHITE-USB-KEY into PC

Installation

6. Installation

6. Installation

This section describes the procedure when installing the BACnet[®] Gateway software to the PC which connects directly to the VRF network. The PC communicates directly with the indoor and outdoor units.

The PC and VRF network are connected by a Transmission Adaptor (U10 USB Network Interface).

This section also describes how to uninstall the software when BACnet[®] Gateway software becomes unnecessary and also, how to reinstall the installed software due to software upgrading or other reasons.

6-1 Installation Flow

Installation/Setting Flow



6-2 Hardware Installation (Transmission Adaptor)



6-2-1 Transmission Adaptor Installation

The BACnet[®] Gateway can connect up to 4 VRF Systems. Since 1 Transmission Adaptor connects to 1 system, up to 4 Transmission Adaptors are connected.

Following chart shows the detail of the U10 USB Network Interface Adaptor. These adaptors are not included in the BACnet[®] Gateway product and must be procured in advance.

Name & Shapes	Q'ty	Remark
Transmission Adaptor (U10 USB Network Interface -TP/FT-10 Channel)	Procure the necessary number in accordance with the number of connection systems.	Model : 75010R (Echelon [®] Corporation)

It is necessity that set Transmission adaptor respectively because of the S/V series and V-II or later (V-II/ J-II/VR-II/J-IIS/V-III/J-III) series can not be connected to the same communication line.

Installing U10 USB Network Interface Adaptor

To use this product, turn on the power of the PC and install necessary drivers/software for this product (BE-FORE connecting it to any USB port), following the ***QUICK START*** enclosed with this product.

When using multiple U10 USB Network Interface adaptors, confirm in advance, which U10 USB Network Interface adaptor connects to which VRF Network (Attach labels to the U10 USB Network Interface adaptors If possible). These information will become necessary during the setup procedure of BACnet[®] Gateway (You will be required to specify which U10 USB Network Interface adaptor corresponds to which VRF network).



Keeping a record of a table such as shown below is recommended.

LON No.	Adaptor No.	VRF System No.
LON1	Adaptor 1	VRF 0
LON2	Adaptor 2	VRF 1
LON3	Adaptor 3	VRF 2
LON4	Adaptor 4	VRF 3

Note. "LONx" is used to identify U10 USB Network Interface adaptor. LON numbers are given in the order they are inserted to a PC for the first time and basically, never changes, even if you change USB slot afterwards.

2 Connect the U10 USB Network Interface adaptor to the personal computer USB port.

When there are multiple U10 USB Network Interface adaptors, connect each U10 USB Network Interface adaptor in the order of its LON number.

6-2-2 Wiring and Turning on the Units Power

Once the wiring has been installed, the power can be turned on. Follow the procedure below for turning on the power.

- (1) Connect VRF network cables to the corresponding U10 USB Network Interface adaptors.
- (2) Turn on the power for all connected indoor units.
- (3) Turn on the power for all connected outdoor units.

Note

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).

(4) Turn on the power for BACnet[®] Gateway PC, if it is not yet turned on.

6-3 Software Installation

- The following software is installed here.
 - Microsoft[®] .NET Framework
 - Microsoft[®] SQL Server[®] Express
 - BACnet[®] Gateway
 - WIBU-KEY driver
 - License Manager

Before starting the installation of this product, check each of the followings.

- Install Adobe[®] Reader[®] (Ver. 9.0 or later) prior to the installation. (Adobe[®] Reader[®] does not come with this product).
- Remove all program as described in "6-4 Software Uninstallation", if you have the same or previous version of BACnet[®] Gateway.
- Do NOT insert WIBU-KEY (Software protection key) enclosed with this product to the PC until product installation is completed.
- You are required to login to the computer as Administrator (or equivalent) to the PC to install this product. (Enter the ID with single-byte characters.)
- Stop all running programs before you start the installation.
- If Anti-Virus software product is installed, temporarily disable the software during the installation of this product.

(1) Execute setup.exe in the root folder on the BACnet[®] Gateway setup media.

- Microsoft[®] .NET Framework
 .NET Framework is installed automatically if it is not already installed.
- Microsoft[®] SQL Server[®] Express
 Microsoft[®] SQL Server[®] Express is installed automatically if it is not already installed.
- Select the language. Select the desired language.
- (3) Click the "OK" button.



(4) Install .NET Framework using the chosen method (for Windows 8.1 (or later)).

This screen will not be displayed for Windows other than Windows 8.1 (or later). Even for Windows 8.1 (or later), it will not be displayed if .NET Framework has already been installed.

 Install Online (when the PC is connected to internet) Select "Install from Internet" and click "Install" button.
 .NET Framework 3.5 will be downloaded from Microsoft site and will be installed.

Install Offline (when the PC is not connected to internet)
 When the PC is not connected to the internet, Windows 8.1 (or later) installation media is required to install .NET Framework 3.5. Please have the media ready before continuing the following steps.

If you have Windows 8.1 (or later) installation DVD, select "Install using Windows 8.1 (or later) DVD installation media". If you have other types of Windows 8.1 (or later) installation media, check that the "sxs" folder that holds the .NET Framework components exists within that media, and select "Specify the folder with .NET Framework installation files".

- Install using Windows 8.1 (or later) DVD installation media Insert Windows 8.1 (or later) installation DVD to the DVD drive.
 Select that drive and click "Install" button.
 When the installation of .NET Framework 3.5 completes, a message "Set the System Tool DVD installation media" is displayed. Insert the BACnet[®] Gateway media again.
- Specify the folder with .NET Framework installation files Specify the "sxs" folder and click "Install" button. (The "sxs" folder is where the .NET Framework components are stored). <u>Ex. D:\windows8\sources\sxs</u>

.NET Framew	vork 3.5 Installation
NET Framework 3.5 installation metho	vd.
Online	
Install from Internet	
This is the preferred installation met	thod.
Offline	
Install using Windows DVD installat	tion media
If you have the Windows DVD inst to the drive.	allation media, select this and set the DVD disk
Windows DVD drive	D:\
Specify the folder with .NET Frame	work installation files
If you do not have the Windows D ¹ folder.	VD installation media, select this and specify \sxs
C:\	Browse
	Install Cancel

Note

Installation of .NET Framework 3.5 requires few minutes to complete. Do not operate the screen until the installation is completed.



(5) Click the "Install" button.

BACnet Gateway for VRF System (UTY-ABGXZ1) - InstallShield Wizard Image: BACnet Gateway for VRF System (UTY-ABGXZ1) requires the following items to be installed on your computer. Click Install to begin installing these requirements. Status Requirement Pending Microsoft .NET Framework 3.5 SP1 (Windows Feature) Pending Microsoft Visual C++ 2015 Redistributable Package (x86) Pending SQL Server 2014 SP2 Express New_BACnet		
Status Requirement Pending Microsoft .NET Framework 3.5 SP1 (Windows Feature) Pending Microsoft .NET Framework 4.6.1 Full Pending Microsoft Visual C++ 2015 Redistributable Package (x86) Pending SQL Server 2014 SP2 Express New_BACnet	ACnet Ga	ateway for VRF System (UTY-ABGXZ1) - InstallShield Wizard
Pending Microsoft .NET Framework 3.5 SP1 (Windows Feature) Pending Microsoft .NET Framework 4.6.1 Full Pending Microsoft Visual C++ 2015 Redistributable Package (x86) Pending SQL Server 2014 SP2 Express New_BACnet		
Pending Microsoft .NET Framework 4.6.1 Full Pending Microsoft Visual C++ 2015 Redistributable Package (x86) Pending SQL Server 2014 SP2 Express New_BACnet	Status	Requirement
Pending Microsoft Visual C++ 2015 Redistributable Package (x86) Pending SQL Server 2014 SP2 Express New_BACnet	Pending	Microsoft .NET Framework 3.5 SP1 (Windows Feature)
Pending SQL Server 2014 SP2 Express New_BACnet	Pending	Microsoft .NET Framework 4.6.1 Full
	-	
Cancel Cancel		
		Cancel

Installation

(6) When "Install" is selected, installation begins. (a) When "ReadMeFirst.txt" is selected, ReadMe is displayed.

Note

Be sure to read it for important information.

(b) When "Manual" is selected, the manual is displayed.



• BACnet[®] Gateway

(7) Install BACnet[®] Gateway. Click the "Next" button.



(8) If the BACnet[®] Gateway end user "License Agreement" is displayed, confirm the contents. If you can agree to the terms of the "License Agreement", check "I accept the terms in the license agreement" and click the "Next" button.



(9) Specify the installation "Destination Folder" and click the "Next" button.

(To change the installation "Destination Folder", click the "Change" button and select the folder to be installed.)

闄 BACnet	Gateway for VRF System (UTY-ABGXZ1) - InstallShield Wizard	×
	ion Folder xt to install to this folder, or click Change to install to a different folder.	と
Þ	Install BACnet Gateway for VRF System (UTY-ABGXZ1) to: C:\Program Files\BACnet Gateway for VRF System\	<u>C</u> hange
InstallShield -		
	< Back Next >	Cancel

(10) If the installation setting contents are correct, click the "Install" button.



Installation starts.

The necessary drivers are also installed at the same time.

WIBU-KEY Setup

1 A description of WIBU-KEY Setup is displayed. Confirm the contents. Click the "Next" button.

🛃 WIBU-KEY Setup	
	Welcome to the WIBU-KEY Software Setup program. This program will install WIBU-KEY Software on your computer.
	It is strongly recommended that you exit all Windows programs (and the control panel) before running this Setup program.
	Click »Cancel« to quit Setup and then close any programs you have running. Click »Next« to continue with the Setup program.
- mouseu	сиск энехк то солилие эки пле зекир родган.
:	
	Version 5.20a
	Next > Cancel

2 Select the language.

Check the desired language.

(3) Click the "Next" button.



When the screen to specify the installation "Destination Folder" is displayed, specify the installation "Destination Folder" and click the "Next" button.

🚚 WIBU-KEY Setup	
The second second	Setup will install the WIBU-KEY Tools in the following folder.
	To install to this folder, click »Next«.
	To install to a different folder, click »Browse« and select another folder.
(C)	You can choose not to install the WIBU-KEY tools by clicking »Cancel« to exit Setup.
i augu	
	Destination Folder
	C:\Program Files\W/IBUKEY Browse
	< Back Cancel

(5) Click the "Yes" button.



(6) The WIBU-KEY components selection screen is displayed. Uncheck all the checkboxes and click the "Next" button.

🛃 WIBU-KEY Setup	
210 mall	Select the WIBU-KEY components you like to install:
Carlos Port	32 bit WkNet/WkLAN Network Server Install as NT service with autostart
	Install as NT service with autostart WkNet Network Server for Novell Netware
and the second second	WkLAN/WkNet Network Monitor (32 bit)
U	WkNet Network Monitor (16 bit) Additional W/BU-KEY Tools
i ma	
:	Once you have selected the components you wish to install, press the »Next« button to complete the installation.
	< <u>B</u> ack Next> Cancel
	L

(7) If the WIBU-KEY driver installation contents are displayed, confirm the contents and click the "Next" button.

(8) Installation starts.

When "Next" button is enabled, click the "Next" button.



Installation

(9) WIBU-KEY Setup is complete.

Uncheck the checkbox and click the "Finish" button.



WIBU-KEY Setup was successful. Click the "OK" button.

	Setup	
	(į)	WIBU-KEY driver successfully installed.
<u>(1)</u>		OK

License Manager Installation

A description of License Manager Setup is displayed. Confirm the contents. Click the "Next" button.

B License Manager for VRF Sys	tem - InstallShield Wizard × Welcome to the InstallShield Wizard for License Manager for VRF System
	The InstallShield(R) Wizard will install License Manager for VRF System on your computer. To continue, click Next.
	WARNING: This program is protected by copyright law and international treaties.
	< Back Next > Cancel

(2) Check the installation destination.

If it is not necessary to change the destination, click the "Next" button and go to the next step.



3 Decide the installation.

Click the "Install" button to start the installation.





InstallShield Wizard Completed The InstallShield Wizard has successfully installed License Manager for VRF System. Click Finish to exit the wizard. You can choose the way you'd like to use the applications and options. • Use them on any PC, while inserting a single WHITE-USB-KEY. • Use them on a fixed PC, without inserting WHITE-USB-KEY. If you choose the latter way or you have more than one WHITE-USB-KEYs to use concurrently, then you have to move licenses by using License Manager tool.	😸 License Manager for VRF Sys	stem - InstallShield Wizard X
Manager for VRF System. Click Finish to exit the wizard. You can choose the way you'd like to use the applications and options. - Use them on any PC, while inserting a single WHITE-USB-KEY. - Use them on a fixed PC, without inserting WHITE-USB-KEY. If you choose the latter way or you have more than one WHITE-USB-KEY to use concurrently, then you have to move licenses by using License Manager tool.		InstallShield Wizard Completed
options. - Use them on any PC, while inserting a single WHITE-USB-KEY. - Use them on a fixed PC, without inserting WHITE-USB-KEY. If you choose the latter way or you have more than one WHITE-USB-KEY's to use concurrently, then you have to move licenses by using License Manager tool.		
- Use them on a fixed PC, without inserting WHITE-USB-KEY. If you choose the latter way or you have more than one WHITE-USB-KEYs to use concurrently, then you have to move licenses by using License Manager tool.		
If you choose the latter way or you have more than one WHITE-USB-KEYs to use concurrently, then you have to move licenses by using License Manager tool.		- Use them on any PC, while inserting a single WHITE-USB-KEY.
WHITE-USB-KEYs to use concurrently, then you have to move licenses by using License Manager tool.		- Use them on a fixed PC, without inserting WHITE-USB-KEY.
< <u>B</u> ack Finish Cancel		WHITE-USB-KEYs to use concurrently, then you have to move
< <u>B</u> ack Finish Cancel		
< Back Finish Cancel		
		< Back Einish Cancel

(5) A message appears saying whether or not you want to start the BACnet[®] Gateway automatically.



When the "Yes" button is clicked, the BACnet[®] Gateway is registered at the following location and automatically starts when the PC is booted.

For 7/8.1/10:The BACnet® Gateway is registered at the task scheduler.
When deleting, start the task scheduler and delete.
Control Panel - Administrative Tools - Task Scheduler



(6) If this screen is displayed, installation of the BACnet[®] Gateway for VRF System to the PC is complete. Click the "Finish" button

Installation

After the end of installation, reboot the PC. Click the "Yes" button.

	谢 BACne	t Gateway for VRF System (U	TY-ABGXZ1) Installe	\times
	1	You must restart your system changes made to BACnet Gate (UTY-ABGXZ1) to take effect. or No if you plan to restart lat	eway for VRF System Click Yes to restart now	
7)-		Yes	No	

(8) When U10 USB Network Interface adaptor and WIBU-KEY are available, insert the WIBU-KEY into USB port of PC after PC reboot. When the WHITE-USB-KEY is available and the License is in WHITE-USB-KEY, insert the WHITE-USB-KEY into USB port of PC. When the License is in PC, remove WHITE-USB-KEY from USB port for storage.

6-4 Software Uninstallation

When uninstalling the software from PC, follow the procedures shown below.



Note

• Refer to the License Manager Manual for the uninstallation of the License Manager for VRF System.

Note

4

- When you need to keep the data for later use, export the data before uninstalling the BACnet[®] Gateway.
 - Write all the data by exporting. \rightarrow 9-3 "Data Import/Export"
- Select the menu items in order of "start"→"Control Panel"→"Program and Features".
- Select the "BACnet[®] Gateway for VRF System (UTY-ABGXZ1)".
- (3) Click the "Uninstall" button.



(4) When the "Yes" button is clicked, uninstallation begins.

	ateway for VRF System (UTY-ABGX	Are you sure you want to uninstall BACnet G
In the future, do not show me this dialog box	Yes No	

(5) When the screen displaying the uninstallation process closes, uninstallation is complete.

Close the "Program and Features" screen by clicking the [x] at the top right-hand corner of the screen.
 * A folder named the BACnet[®] Gateway remains in the folder designated the BACnet[®] Gateway installation folder at installation even though uninstallation is performed.

There is no problem even if this folder remains as is, but it doesn't matter if the folder is deleted.

6-4-2 WIBU-KEY Driver Uninstallation

Execute only when you know for certain that the WIBU-KEY driver is not used by programs other than the BACnet[®] Gateway.

If unknown, do not uninstall the WIBU-KEY driver

Remove WIBU-KEY from the PC before uninstalling it.

- (1) Select the menu items in order of "start" \rightarrow "Control Panel" \rightarrow "Program and Features".
- (2) Select "WIBU-KEY Setup (WIBU-KEY Remove)".
- (3) Click the "Uninstall/Change" button.



(4) Click the "Next" button.



(5) Check "Ignore, Setup will replace file at system startup (reboot required)."



Installation

(6) Click the "OK" button.

(7) When this screen is displayed, uninstallation of the WIBU-KEY driver is complete. Click the "Finish" button.

Its storagly recommended that you close all programs that use the MURLEY driver and the control panel before starting the uninstalland to control panel before starting to control panel bef	🚽 WIBU-KEY Setup (Unin:	itall)
Finish Cancel		V/IBU-KEY driver and the control panel before starting the uninstall process. Click sNext∈ to remove the WIBU-KEY software from your computer. Uninstalling files done. Not all files/folders could be removed. Uninstalling rooms done. Uninstalling registry entries done.
		Finish Cancel

(8) Close the "Program and Features" screen by clicking the [x] at the top right-hand corner of the screen.

6-4-3 Microsoft[®] SQL Server[®] Uninstallation

Execute only when you know for certain that Microsoft[®] SQL Server[®] 2014 is not used by programs other than the BACnet[®] Gateway.

If unknown, do not uninstall the program.

- (1) Select the menu items in order of "start"→"All Programs"→"Microsoft SQL Server 2014"→ "Configuration Tools"→"SQL Server Configuration Manager".
- (2) Select "SQL Server Services".
- (3) Right-click "SQL Server (SQLEXPRESS)".
- Select "Stop".

(

(5) When [x] is clicked, "SQL Server Configuration Manager" is completed.



- (6) Select the menu items in order of "start" \rightarrow "Control Panel" \rightarrow "Program and Features".
- (7) Select "Microsoft SQL Server 2014".
- (8) Click the "Uninstall/Change" button.

Control Panel Home View installed updates STurn Windows features on or	Uninstall or change a program To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.		
off	Organize Uninstall/Change		
	Name	Publisher	Installed On
	Andreike Radie 9.5.0 Johnson Fernander 9.5.0 Echelen OpenLDV 4.0 Morosoft .NLT Framework 4 Client Profile Morosoft .NLT Framework 4 Extended Morosoft .NLS Server 2008 R2 Native Client Morosoft .SL Server 2008 K2 Native Morosoft .SL Server 2008 R2 Native Client Morosoft .SL Server 2008 R2 Native Morosoft .SL Server 2008 R2 Native	Adobe Systems Incorporated FUITSU GRNRAL LIMITED Exhelen Corporation Microsoft Corporation	2/20/2012 3/15/2012 11/24/2011 2/20/2012 2/20/2012 3/15/2012 3/15/2012 3/15/2012 3/15/2012 3/15/2012 3/15/2012 11/22/2011
	WibuKey Setup (WibuKey Remove)	WIBU-SYSTEMS AG	3/15/2012
	·		

- (9) After this, follow the instructions on the screen. For details, refer to the Microsoft website.
- (10) When uninstall is ended, uninstall "Microsoft SQL Server Native Client" in the same manner

Settings

- 7. Basic Settings
- 8. Electricity Charge Apportionment (ECA) Setting

7. Basic Settings

In this section, the basic settings necessary before use in the PC are explained. The settings that are also necessary when equipment configuration changes are also explained here.

When starting the system for the first time after installation, make the settings in accordance with the flow described below. At the 2nd and subsequent starting, make the necessary settings in accordance with subsequent paragraphs, as required.

7-1 When Starting for the First Time

When starting the BACnet[®] Gateway for the first time, perform the settings in accordance with this flow. • Setting for First Time Use


• Items Which Can Be Arbitrarily Set

7-7 "Description Property Setting"

7-8 "Change Password"

7-9 "Display Language Setting"

7-10 "License Manager"

7-11 "Monitoring Unit Setting"

"Selection of Unit Data Acquisition Method" 7-2

This setting is performed only at first start settings.

- (1) To perform 7-5 "Adaptor Setting" processing, select (a). To import backed up data, select (b).
- (2) Click the "OK" button.



"Login Setting" 7-3

This setting is performed first start settings.

(1) Login ID

Enter the administrator's login ID. (Within 20 characters of alphabet and numeric)

(2) Password

Enter the administrator's Password. (Within 20 characters of alphabet, numeric, and symbol) Password can be changed. See 7-8 Change Password.

(3) Password Confirmation Enter the administrator's Password again for confirmation

(4) Omit Login screen at startup

When checked, the password input screen is omitted when the application is started from the next time. At the end of an application, at DB importing, etc. the password input screen is displayed the same as up to now.

This setting can be changed by 7-4 Initial Setting screen and 7-8 Change Password screen.

	√ ^µ Login Setting	Х	
	Enter login ID and password. The password may be left blank now, and be set afterward.		
	Login ID		
	Administrator Password		
	Password Confirmation		
	Omit Login screen at startup. OK Cancel		-(4
ত	UK		

(5) Click the "OK" button.

7-4 "Initial Setting"

Makes any settings and changes necessary before operation.

(1) When you want to reset Initial Setting, open the "Initial Setting" screen. Select the menu items in order of "Setting"→"Initial setting" from the Menu bar.

📠 BACnet Gatewa	ay for VRF System	n		
<u>F</u> ile <u>V</u> iew C <u>o</u>	ntrol <u>E</u> rror	<u>S</u> etting <u>H</u> elp		\bigcirc
🛃 🐌 🗊 🖪	All	Initial Setting	-	-(1)
R.C.Group Name	System Type	Change Password	I N	$\mathbf{\cdot}$
· · ·		Display Language Setting	E	
Inner_LON1_00-00	Heat Recovery	License Manager		
Inner_LON1_00-01	Heat Recovery	License Manager	A	
Inner_LON1_00-02	Heat Recovery	Adaptor Setting	A	
	Heat Recovery			
Inner_LON1_01-00	Heat Recovery	Unit Registration	A	
Inner_LON1_01-01	Heat Recovery	Model Name and ECA Parameter Setting	A	
Inner_LON1_01-02	Heat Recovery	Monitoring Units Setting	A	
	Heat Recovery	Monitoring onits setting	A	
Inner_LON2_00-00	Heat Pump	Description Property Setting		
Inner_LON2_00-01	Heat Pump	Huaptorz 00-01-00		

Input or check each item of the screen shown below. Always set "IP Address" and "Subnet Mask". Change other items as required.

Initial Setting الط		>
IP Address	192.168.1.4	
Subnet Mask	255.255.255.0	
Device Instance No.		4
Device Object Name	BACnet_Gateway_for	_VRF_System
Max_APDU_Length_Accepted	1024	~
APDU_Timeout		3000 m sec
Number_of_APDU_Retries	3	✓ m sec
APDU_Segment_Timeout		2000
Set the same value to Time_Dela	y_Normal, when writing to the	e Time_Delay.
I-Am Service Broadcast Sending(at 60-second intervals)	
UnconfirmedCOVNotification Ser	vice Broadcast Sending	
ProcessID		0
Synch. VRF System Time to Time	Synchronization/UTCTimeSy	nchronization.
Register as Foreign Device with &	BBMD	
BBMD at IP Address		
BBMD at UDP Port		0xBAC0(47808) Default
Temperature Units	Celsius (°C)	◯ Fahrenheit (°F)
Capacity Units	BTU	○kW
Omit Login screen at startup.		
		OK Cancel
	L	

When "Omit Login screen at startup" is checked, the password screen is omitted at application starting from the next time.

At the end of an application, at DB importing, etc. the password input screen is displayed the same as up to now.

(3) Click the "OK" button

Items	Contents
"IP Address"	Enter the IP address used in BACnet [®] communications. (IPv4 only)
"Subnet Mask"	Enter the subnet mask corresponding to the IP address used in BACnet [®] communications.
"Device Instance No."	Enter the Instance No. of the local Device.
"Device Object Name"	Enter the object name of the local Device. (Up to 50 ASCII charac- ters)
"Max_APDU_Length_Accepted"	Select the acceptable APDU length.
"APDU_Timeout (m sec)"	Enter the APDU timeout time in milliseconds.
"Number_of_APDU_Retries"	Select the number of retries when time out occurs.
"APDU_Segment_Timeout (m sec)"	Enter the internal time at which APDU segment is resent, in milli- seconds.
"Set the same value to Tlime_Delay_Normal when writing to the Time_Delay"	When writing into "Time-Delay-Normal" cannot be performed, place a check mark in this option. The value is stored when writing into "Time_Delay_Normal" even if a check mark is in place.
"I-Am Service Broadcast Sending (at 60-second intervals)"	Check when you want to send I-Am Service periodically. (60-second intervals)
"Unconfirmed COV Notification Service Broadcast Sending"	COV notification is sent by broadcast even when SubscribeCOV service is not subscribed. Refer to the interface specifications for the target object. * Depending on the number of units and their status, large number of packets are sent.
"Process ID"	Process ID used when sending COV notification.
"Synch. VRF System Time to Time Synchro- nization/UTCT Time Synchronization."	Check if you want to send "system time setting" to VRF units when TimeSynchronization/UTCTimeSynchronization Service is received.
"Register as Foreign Device with BBMD"	Check when you register as an external device to BBMD.
"BBMD at IP Address"	BBMD IP address.
"BBMD at UDP Socket"	BBMD UDP port No.
"Temperature Units" *1	"Celsius" or "Fahrenheit" can be selected. Select the units to be used at temperature display.
"Capacity Units"	"BTU" or "kW" can be selected. The selected unit will be used for displaying the capacity values in the main screen.
"Omit Login screen at startup"	When "Omit Login screen at startup" is checked, the password screen is omitted at application starting from the next time. At the end of an application, at DB importing, etc. the password input screen is displayed the same as up to now.

Also, the following property values of the following objects will be converted automatically.

*1	Property Identifier	For CELSIUS	For FAHRENHEIT
	Present_Value	CELSIUS Temperature	FAHRENHEIT Temperature
Al_Object	Units	DEGREES-CELSIUS	DEGREES-FAHRENHEIT
	High_Limit	Default:30.0	Default:88.0
	Low_Limit	Default:10.0	Default:48.0
	Present_Value	CELSIUS Temperature	FAHRENHEIT Temperature
	Units	DEGREES-CELSIUS	DEGREES-FAHRENHEIT
A.O. Object	Priority_Array	CELSIUS Temperature	FAHRENHEIT Temperature
AO_Object	Relinquish_Default	Default:26.0	Default:80.0
	High_Limit	Default:30.0	Default:88.0
	Low_Limit	Default:10.0	Default:48.0

Notes on the temperature unit setting screen

Temperature unit can only be selected from this screen. It is not possible to change the temperature unit from BMS.

The temperature unit should not be changed during operation. If changed, the user must notify the BMS of the change.

7-5 "Adaptor Setting"

Sets the Device Name and confirms the Device State of the Transmission adaptor (U10 USB Network Interface) that connects the "BACnet[®] Gateway".

- (1) When you want to reset "Adaptor Setting", open the "Adaptor Setting" screen.
 - Select the menu items in order of "Setting" \rightarrow "Adaptor setting" from the Menu bar.

📠 BACnet Gatewa	ay for VRF System	m		
<u>F</u> ile <u>V</u> iew C <u>o</u>	ntrol <u>E</u> rror	Setting	<u>H</u> elp	
灵 🧶 🎒 🛛 🔜	All	Ini	itial Setting	
R.C.Group Name System Type		Ch	nange Password	t t
			splay Language Setting	
Inner_LON1_00-00	Heat Recovery			
Inner_LON1_00-01	Heat Recovery	Lic	License Manager	
Inner LON1 00-02	00-02 Heat Recovery Heat Recovery	Ad	daptor Setting	
IIIIIe1_LONT_00-02				
Inner_LON1_01-00	Heat Recovery	Un	nit Registration	
Inner_LON1_01-01	Heat Recovery	M	odel Name and ECA Parameter S	Setting
Inner LON1 01-02	Heat Recovery	M	onitoring Units Setting	-
Inner_LONT_01-02	Heat Recovery		onitoning onits setting	
Inner_LON2_00-00	Heat Pump	De	escription Property Setting	
Inner_LON2_00-01	Heat Pump	Huapto	12 00-01-00	

The Adaptor Name can be set for easy identification by the user. Click the Adaptor Name you want to set and enter the text. (Default name: "AdaptorX")

Up to 20 characters (alphabet, numeric, and symbol) can be set. The Adaptor Name cannot be duplicated. Only the connected adaptor can be set.

(3) Usable device setting and confirmation are possible.

	Name	A usable de	evices list (LONx) or "Not Used" can be pulled down and selected.
		Displays the	e device status.
		"Ready"	The specified adaptor can be used.
	"Status"	"Busy"	The specified adaptor is being used by another system.
R.,		"Error"	The specified adaptor cannot be used.
ice		(Blank)	Not displayed when an adaptor is not connected.
"Device"	"Check"	fied device which Trans	Wink" button is clicked, the SVC lamp of the speci- lights (for approx. 2 second) and you can confirm smission line the adaptor is connected to. (Only evice Status is Ready)

)—4	Adaptor Name	Device Name		Status	Check	+3
	Adaptor1	LON1	\sim	Ready	Wink	
	Adaptor2	LON2	\sim	Ready	Wink	
	Adaptor3	Not Used	~		Wink	
	Adaptor4	Not Used	~		Wink	

(4) "OK": Saves the settings and ends setting work. "Cancel": Ends setting work without saving the settings.

Note

Adaptor Name is a name which can be arbitrarily set so that the user can easily identify connection of the Transmission adaptor (U10 USB Network Interface). (Default name: "AdaptorX") "Device Name" is a name automatically allocated to the network when a "Transmission adaptor" (U10 USB Network Interface) is connected. (User may select the LONx number)

7-6 "Unit Registration"

Scans by the network and detects and registers usable R.C. groups and outdoor units. The units registered by scanning are managed by BACnet[®] Gateway.

(1) When you want to reset "Unit Registration", open the "Unit Registration" screen. Select the menu items in order of "Setting"→"Unit Registration" from the Menu bar.

📠 BACnet Gatewa	y for VRF Syste	m		
<u>F</u> ile <u>V</u> iew C <u>o</u>	ontrol <u>E</u> rror	Setting	Help	
灵 🔮 🎒 🔜	All	Ini	tial Setting	
R.C.Group Name	System Type	Ch	ange Password	I N E
	System Type	Dis	play Language Setting	E
Inner_LON1_00-00	Heat Recovery		M	
Inner_LON1_00-01	Heat Recovery	LIC	ense Manager	A
Inner LON1 00-02	Heat Recovery	Ad	aptor Setting	A
	Heat Recovery			
Inner_LON1_01-00	Heat Recovery	Un	it Registration	A
Inner_LON1_01-01	Heat Recovery	Mo	odel Name and ECA Parameter Setting	A
Inner LON1 01-02	Heat Recovery	M	- onitoring Units Setting	A
Innel_LONT_01-02	Heat Recovery		Shittoning onliss Setting	A
Inner_LON2_00-00	Heat Pump	De	scription Property Setting	
Inner_LON2_00-01	Heat Pump	Muapto		

(2) Set the scan Targets.

Scan targets

"Adaptor Name"	Selects the name of the adaptor which is to perform scanning. (Name set at par. 7-5 "Adaptor Setting") Unit Registration is necessary for each adaptor. When an adapter is set at a blank line, a blank line is added below it. The same adapter can be set on multiple lines and different refrigerant system can also be specified.						
"Secure Reg."	Specifies by checkbox whether or not secure registration is to be performed when scanning Checked: Secure registration (Recommended) Not checked: No secure registration When scanning is performed by secure registration, operation of the units is stopped. When you do not want to stop operation, uncheck the checkbox. See par. 11-1 No.4.						
"Ref. No."	"Start"	When partially scanning, specify the start number of the refrigerant system by pull- down menu or key input. See par.11-1 No.8.					
Rel. NO.	"End"	When partially scanning, specify the end number of the refrigerant system by pull- down menu or key input.					
	"Name"	Displays the name of the device used by the relevant network.					
	"Status"	Displays the status of the device used by the relevant network. Normal: "Ready" Abnormal: "Error" Not connected: "Blank"					
"Device"	"Check"	When the (a) "Wink" button is clicked, the SVC lamp of the Transmission adaptor used by the relevant network lights (for approx. 2 second) and connection of the selected adaptor can be identified. (Effective only when the status of the Transmission adaptor is normal.)					

Description of screen

Adaptor Name		Casu	ire Reg.	Ref. N	0.			Progress			Device		
			-	Start	-	End					Name	Status	Check
Adaptor1	~		Enable	00	× -	99	~	_			LON1	Ready	Wink
Adaptor2	~	_	Enable	00	× -	99	~	_			LON2	Ready	Wink
	~				× -		~	<u> </u>					Wink
													Start
Init Newly Detected													
		_											
Adaptor Name		4	Address No.		R.C.Grou	ıp Name			Unit Type	Model N	ame	RB Group No.	RB Model Name
Unit Not Detected													
Adaptor Name			Address No.			up Name			Unit Type	Model N		RB Group No.	RB Model Name

- (3) Click the "Start" button.
- (4) Click the "OK" button. (The following screen is displayed only when "Secure Reg" is checked.)

	Unit Re	gistration
	⚠	Secure registration will be performed. All VRF units will stop during secure registration. OK?
		OK Cancel
4		

Starts scanning. (Disabled when there is no scanning target.)

The time required by scanning differs with the size of the system. Use the indicator displayed at (b) during scanning as a guideline.

While scanning is being performed, the "Stop" button (c) is displayed. To stop scanning, click this button.

Note

All systems connected to 1 Transmission adaptor (U10 USB Network Interface) are stopped during scanning for secure reg.

VRF network list display during scanning

	Secure Reg.		Ref. No.			-	Device	Device		
Adaptor Name	Secu	ire Reg.	Start	-	End	Progress	Name	Status	Check	
Adaptor2	✓	Enable	00	-	01	52%	0 1010			-(h
									Wink	(

When scan ends, "Done" is displayed at the progressive bar display.

Note

If the following message is displayed after scanning is completed, the necessary information cannot be acquired.

"Information was not acquired for some units. Perform unit registration again."

In this case, always perform scan again to acquire all the necessary information.

If advanced to next as is, normal operation will become impossible.

Especially, if there is a unit for which information could not be acquired when electricity charge apportionment is performed, the refrigerant system including that unit will not be handled by the electricity charge apportionment function.

When these information missing units are included in "Unit Newly Detected", since they are displayed in red characters, treat them as the index of refrigerant system specification when rescanning.



"Unit newly detected" list:

After the end of scanning, displays the units newly detected.

At initial scanning, all the units are displayed. After the 2nd scanning, only the units newly detected are displayed.

Model names for S/V series will not be displayed.

"Unit not detected" list:

When scanning was performed for the 2nd and subsequent times, displays the units which are already registered but were not detected this time.

Note

• As a result of performing scan, a unit of the same address may be displayed in the "Unit Newly Detected" list and "Unit not detected" list.

This occurs when a registered unit was changed to a different model and set to the same address as the previous unit, etc.

Since the registration information of the previous unit is erased when registration is completed, continue at that setting.

- When intentionally removing a unit from registration, etc, because the unit is removed from the electric power charge apportionment objective or other reason, confirm it here. (Perform scanning after turning off the power of the unit removed from registration.)
- Depending on the R.C. connected to the indoor unit, "R.C. address" part of the "Address No." column may show different value from that being set to the indoor unit.
 The same applies to the "Address No." and "Address" column of other screens.
 The numbers in the "Address No." corresponds to "Refrigerant system address" "Unit address" "R.C. address".
- The message "Units have been detected that do not support energy saving function" will appear after scan.

Firmware update of the outdoor unit will be required to perform outdoor unit capacity save function.

5 "OK" button: Saves the detected unit configuration detected by scanning."Cancel" button: Ends scanning without saving the scanned result.

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Settings

7-7 "Description Property Setting"

Values of description properties of all objects within the selected unit can be modified at once.

(1) Select the menu items in order of "Setting" \rightarrow "Description Property Setting" from the Menu bar.

<u>File View Co</u>	ontrol <u>Error</u>	Setting Help		
灵 🐌 🗗 🛛	All	Initial Setting		
R.C.Group Name	System Type	Change Password	I N	
n.c. Group Name	System Type	Display Language Setting	E	
nner_LON1_00-00	Heat Recovery			
nner_LON1_00-01	Heat Recovery	License Manager	A	
nner_LON1_00-02	Heat Recovery	Adaptor Setting	A	
nner_LONT_00-02	Heat Recovery	1 2		
nner_LON1_01-00	Heat Recovery	Unit Registration	A	
nner_LON1_01-01	Heat Recovery	Model Name and ECA Parameter Setting	A	
	Heat Recovery		A	
nner_LON1_01-02	Heat Recovery	Monitoring Units Setting	A	
nner LON2 00-00	Heat Pump	Description Property Setting		
nner LON2 00-01	Heat Pump	Hugelor Toy Toy		

(2) Up to 50 characters can be entered.

P Description Prop	perty Setting	×
Unit Address	VRF-0 00 04	
Description	IndoorUnit_0-00-04	
Note. Default descri	ption will be registered when no description is specified.	
	O	K Cancel
	I	

(3) Click the "OK" button.

"Change Password" 7-8

Change the password.

(1) Select the menu items in order of "Setting" \rightarrow "Change Password " from the Menu bar.

🏙 BACnet Gatewa	ay for VRF System	n	
<u>F</u> ile <u>V</u> iew C <u>o</u>	ontrol <u>E</u> rror	Setting Help	
灵 🐌 🍮 🖪	All	Initial Setting	
R.C.Group Name	System Type	Change Password Display Language Setting	(1)
Inner_LON1_00-00	Heat Recovery	License Manager	
Inner_LON1_00-01	Heat Recovery	License Manager	A
Inner_LON1_00-02	Heat Recovery Heat Recovery	Adaptor Setting	A
Inner_LON1_01-00	Heat Recovery	Unit Registration	A
Inner_LON1_01-01	Heat Recovery	Model Name and ECA Parameter Setting	A
Inner_LON1_01-02	Heat Recovery Heat Recovery		AA
Inner_LON2_00-00	Heat Pump	Description Property Setting	
Inner_LON2_00-01	Heat Pump	Huaptorz 00-01-00	

(2) Enter the current password.

(3) Enter the new password.

(Within 20 characters of alphabet, numeric, and symbol)

(4) Enter the new password again for confirmation.

Change Password	×
Old Password	
New Password	
Password Confirmation	
Omit Login screen at startup.	
OK Cancel	J

When "Omit Login screen at startup" is checked, the password screen is omitted at application starting from the next time.

At the end of an application, at DB importing, etc. the password input screen is displayed the same as up to now.

(5) "OK" button: Saves the new password. "Cancel" button: Ends without saving the revised contents.

7-9 "Display Language Setting"

Language setting for words and error words displayed on screen can be changed.

English, Chinese, French, German, Russian, Spanish and Polish can be selected from Install Folder.

If you want to display language other than above, translate it by using template file.

Storage destination: Install Folder\LanguageResource\

There are two kinds of words used by this application.

The words written on the "TextResource" sheet of the excel file are used on the screens and messages. Refer to the "FormImage" sheet for the examples of used location.

The words on another "ErrorResource" sheet are for error words output from VRF devices and this application.

Write the translated words in "LocalLanguage" row of either sheet.

- (1) Select the menu items in order of "Setting" \rightarrow "Display Language Setting" from the Menu bar.
- (2) Press the "Open" button and select the excel file in which the translated words are registered.

Display 🖏	/ Language Setting	×	
Select th	e Excel file with the definition of the desired language for screen display.		
Note:	By pressing the "Change" button, BACnet Gateway will exit.		
	Data collection for the electricity charge apportionment function will stop, if it is performed.		
	Open	•	-2
	Change		
			-3

(3) Transposition starts when "Change" button is clicked. When the transposition is complete, BACnet[®] Gateway ends automatically. Start it manually.

7-10 "License Manager"

Select the menu items in order of "Setting" \rightarrow "License Manager" from the Menu bar. Refer to the "License Manager" manual for details.

7-11 "Monitoring Unit Setting"

Register from this screen if you want to receive the error messages sent from the control device *¹ connected to VRF network.

Monitoring can be performed by BI/MI Object on the BACnet communication.

- (1) Select the menu items in order of "Setting" \rightarrow "Monitoring Unit Setting" from the Menu bar.
- Click the "New Registration" button when registering the unit to be monitored newly. When changing registered unit, click the "Change" button displayed at the right of corresponding unit. When deleting registered unit, click the "Delete" button displayed at the right of corresponding unit.

				N	ew Registration
daptor Name	VRF Address	Instance Number	Object Name		
daptor1	200-01	0001	System Controoler	Change	Delete
daptor1	200-90	0090	Service Tool	Change	Delete

- (3) New Registration;
 - (a) Select the adaptor to which equipment to be monitored is connected.
 The control unit to be monitored is the equipment *¹ corresponding to V-II and later series.
 - (b) Enter the lower order of VRF address. (high order is 200 only)
 - (c) Enter "Object Instance Number" in order to read in from BACnet Device. Make the number unique in UTY-ABGXZ1.
 - (d) Enter "Object Name" similarly.

Honitoring Units Setting	×
VRF side information of the monitoring units.	
Adaptor	Adaptor1 ~
Select the adopter used for monitoring	
Refers to the "J" used for the Object_	Identifier of the BACnet side.
VRF Address	200 . 1
Object information used in the BACnet side.	
Object Instance Number	1
Refers to the "KKLL" used for the Obj	ect_Identifier of the BACnet side.
Object Name	System Controoler
Used as part of the Object_Name.	
	OK Cancel
*Master data will be updated after press	ing the "OK" in the Unit list screen.

Specify the following Object_Identifier when the registered unit is monitored at the BACnet side. Error Status: BI, IIJKKLL → II=05, J=VRF System Address, KKLL=Entered Value Error Code: MI, IIJKKLL → II=05, J=VRF System Address, KKLL=Entered Value

Equipment Name	Equipment Side	Setting Address	VRF Address Used by This Function
System Controller UTY-APGX/UTY-APGXZ1	200.1		200.1
System Controller Lite UTY-ALGX/UTY-ALGXZ1	200.1		200.1
Touch Panel Controller UTY-DTG* Z1	Touch Panel Controller Address 00	i	200.3
	01		200.4
	14 15		200.17 200.18
Group Remote Controller	Remote Controller Address	Group Remote Controller Address	
UTY-CGG*	00	00	200.3
	00	01	200.19
	00	02	200.35
	00	03	200.51
	01	00	200.4
	01	01	200.20
	01	02	200.36
	01	03	200.52
	14	00	200.17
	14	01	200.33
	14	02	200.49
	14	03	200.65
	15	00	200.18
	15	01	200.34
	15	02	200.50
	15	03	200.66
Network Convertor for	ID Number		
LONWORKS	00		200.3
UTY-VLGX	01		200.4
	14		200.17
	15 (Default)		200.18
Service Tool UTY-ASGX/UTY-ASGXZ1	200.90		200.90
Web Monitoring Tool			
UTY-AMGX/UTY-AMGXZ1	200.91		200.91

*1. List of peripherals to be monitored and VRF Addresses

8. Electricity Charge Apportionment (ECA) Setting

Performs basic settings related to electricity charge apportionment necessary before operation. You may also update the settings due to facility and tenant changes.

At initial starting after installation, perform setting in accordance with the following flow. For settings and changes after operation starts, perform the necessary settings in accordance with the contents of par. 8-2 and subsequent paragraphs.

8-1 Basic Setting Flow

Perform initial setting in accordance with this flow.



8-2 Overview

1. Purpose of electricity charge apportionment

The electricity charge apportionment function apportions air conditioner electricity charges to tenants. Generally, indoor units are divided among and used by each tenant, and calculation of the electricity charge for each tenant is easy. But since outdoor units are shared by multiple tenants, calculation of the electricity charge for each tenant is not easy.

The electricity charge apportionment function allows distribution of the electricity charges of outdoor units, which are a large part of the air conditioner power consumption, according to the air conditioner usage of each tenant.

2. Features of electricity charge apportionment of BACnet[®] Gateway

- (1) Power meter is not used and electricity apportionment calculation is performed from the electricity charges billed from the electric power company.
- (2) Apportionment calculation is performed according to indoor unit usage.
- (3) In addition to electricity charge calculation of outdoor units only, electricity charge calculation including indoor units is also possible.
- (4) In case of heat recovery system(VR-II series), power consumption of RB units may be also be included in the calculation.

3. Precautions for Using Electricity Charge Apportionment Function

- The electricity charge apportionment function requires correct setting and use in accordance with the descriptions in this manual and Interface Specification Manual.
 If correct operation based on correct setting is not performed, a reasonable result may not be obtained.
- (2) The electricity charge apportionment function does not calculate official electricity charges like those established by the laws and regulations of each country.
- (3) Gaining an understanding of the descriptions, etc. in this manual and using the electricity charge apportionment function accordingly should be performed by the responsibility of the user.
- (4) The electricity charges used in electricity charge apportionment calculation should only be that of the power consumed by the air conditioner.
- (5) For the electricity charge apportionment function to function properly, BACnet[®] Gateway must operate continuously. If BACnet[®] Gateway is shut down or stopped by a power failure, etc. while the data needed by calculation is being acquired, correct electricity charge apportionment calculation may be not be possible.
- (6) Electricity charge apportionment is performed for units identified by scanning. When the unit configuration is changed, perform scanning to re-identify the target units.
- (7) Constantly maintain the units which are the target of electricity charge apportionment calculation in the normal operating state.

If it is turned off for a long time, etc., data acquisition and correct calculation may not be possible.

- (8) The electricity charge for units or refrigerant systems which are the target of electricity charge apportionment calculation are calculated even when it is turned off. To remove them from electricity charge apportionment calculation, turn off the power of the unit or refrigerant system which is to be removed and re-scan to remove the unit from the calculation target.
- (9) Electricity charge apportionment calculation identifies units by address. When the address of a unit was changed by automatic addressing function, etc., perform scanning to re-identify the correct address.
- (10) Even when an indoor unit operation time is zero, the rate (proportion) of the electricity charge apportionment is not zero because of the power consumed in the outdoor unit in standby.
- (11) The apportionment calculation for the electricity charge cannot be performed for air conditioners other than VRF, such as single split type, that are connected to the VRF System via convertors.

- (12) The S/V series and V-II or later series adopt different refrigerant system control and the electricity charge apportionment function adopts different method reflecting the difference. So the same operation condition for units may not yield the same result for S/V and V-II or later series.
- (13) The electricity charge apportionment function of VRF system can only be performed from 1 controller or 1 gateway simultaneously.
- (14) About fan for the DX-Kit.

When fan is controlled by DX-Kit, fans are presumed to have 1 fan level (ON or OFF) in terms of electricity charge apportionment calculation.

Power consumed by the external fan must be entered by the user from the "Model Name and ECA Parameter Setting" screen in order to perform ECA.

Calculation is performed using the entered value as power consumed when the fan is ON. When fan is controlled by external equipment, calculation is also performed using the ON/OFF status, but the status is estimated from the thermo-control status, acknowledged by DX-Kit.



4. Error that affects normal operation of electricity charge apportionment function

Errors and their main causes related to electricity charge apportionment, detected by the BACnet[®] Gateway are described.

(1) Generation conditions

Generated when a unit is detected, that does not respond with the information necessary for electricity charge apportionment (non-communicating unit), while the electricity charge apportionment data collection is performed.

Check the communication status of indoor and outdoor units, if the following error is present.

Error Code	Error Contents
F21	System tool communication adaptor connection error
F22	System tool communication error (no data)
16	Peripheral unit communication error
17	Electricity charge apportionment error

* This error is raised if there is no communication with outdoor unit for more than 70 minutes and with indoor unit for more than 30 minutes.

- (2) Processing of errors by BACnet[®] Gateway
 - Electricity charge apportionment error with the unit address are displayed for the non-communicating unit.

The generation time and recovery time are recorded in the error history as with the other errors.

- In the electricity charge apportionment calculation, non-communicating unit is handled the same as an indoor unit whose operation is stopped by a remote controller.
- In the electricity charge apportionment calculation, non-communicating unit is handled as follows:
 - Non-communicating indoor unit: Handled the same as an indoor unit whose operation is stopped by a remote controller
 - Non-communicating outdoor unit: When the non-communicating unit is a master unit, since the minimum data necessary for electricity charge apportionment is not collected, apportionment calculation of the relevant refrigerant system is not performed. (Electricity charge becomes "0".) When a slave unit is the non-communicating unit, calculation is performed as if the slave unit does not exist.
- (3) Recovery conditions

When the data necessary for electricity charge apportionment can be acquired from the relevant unit, the electricity charge apportionment error is reset.

- (4) Main error generation causes
 - Electricity charge apportionment errors are mainly generated when the power breaker of a unit is switched off.

(Because apportionment data is not sent when the power breaker is switched off.)

When the power breaker of only part of the units in a refrigerant system is switched off, outdoor unit trouble may occur.

Therefore, if there is a unit whose power breaker is switched off, quickly recover the power by switching on the breaker.

• This error may also occur when the communication is disrupted due to disconnection of VRF communication line. Check that the communication line is not disconnected.

8-3 "Model Name and ECA Parameter Setting"

Model Name is automatically acquired at scanning.

When the data was collected normally, Model Name is Displayed at "Acquired Name" and "ECA Name" of the main screen.

When the data could not be collected normally, Model name is displayed in red. In this case, set Model Name individually, using this screen.

When parameter value is required for the electricity charge apportionment, "Required" is shown in the "ECA Param" column of the main screen.

When shown, open this screen and enter the value.

When "Acquired" is shown, there will be no field to enter in this screen.

* Model name and parameter setting is not required for S/V series.

(1) Select the menu items in order of "Setting" \rightarrow "Model Name and ECA Parameter Setting" from the Menu bar.

🛍 BACnet Gatew	ay for VRF Syster	n	
<u>F</u> ile <u>V</u> iew C	ontrol <u>E</u> rror	Setting Help	
灵 🐌 🗊 🛙 🗖	AII	Initial Setting	
R.C.Group Name	System Type	Change Password	I N E
		Display Language Setting	E
Inner_LON1_00-00	Heat Recovery	License Manager	
Inner_LON1_00-01	Heat Recovery	License Manager	A
Inner LON1 00-02	Heat Recovery	Adaptor Setting	A
IIIIIei_conti_00-02	Heat Recovery	· · ·	
Inner_LON1_01-00	Heat Recovery	Unit Registration	A
Inner_LON1_01-01	Heat Recovery	Model Name and ECA Parameter Setting	
Inner LON1 01-02	Heat Recovery	Monitoring Units Setting	A
Inner_LONT_01-02	Heat Recovery	Monitoring onits setting	A
Inner_LON2_00-00	Heat Pump	Description Property Setting	
Inner_LON2_00-01	Heat Pump	Auguorz 00-01-00	

2) Select "Model Name".

For the outdoor unit or indoor unit without any RB unit connected.



For the indoor unit with RB unit connected

Note

Some units have more than 2 sets of ECA parameter.

For such units, model name is suffixed with index number in brackets to distinguish a particular set of ECA parameter.

For detail of the index number, refer to the description in the "ReadMe.txt" file within the installation DVD.

(3) When ECA parameter field is displayed Enter the value in the corresponding field. External Fan Rated Power Consumption: Enter the rated power consumption of the external fan used with DX-Kit.

(4) Click the "OK" button.

Operation

9. Operation

9. Operation

9-1 Starting and Ending the BACnet[®] Gateway

■ Starting the BACnet[®] Gateway

Make sure that USB Adaptor Connections (Refer to 6-2 Hardware Installation.) are completed and the Ethernet cable for the BACnet[®] Gateway is connected to LAN port of the PC before starting up the application.

(1) Select "BACnet[®] Gateway for VRF System" from the Windows start menu.



- (2) Enter the Login ID.
- (3) Enter the Password.

đa	BACnet Gateway for VRF System	
Enter logi	n ID and password.	
Login	•	-2
Passw	Pord	-3
	OK Cancel	-4

- (4) Click the "OK" button.
- (5) When "BACnet[®] Gateway for VRF System" boots up, the main screen is displayed. (Refer to 9-2 Main Screen.)

■ Ending the BACnet[®] Gateway

(1) Select the menu items in order of "File" \rightarrow "Exit" from the Menu bar

	<u>în</u>						BACnet Ga	teway for	VRF System	
	File	View Co	ontrol Error	Setting	Help					
		Import/Expo	rt		•		- h	ndoor Unit	•	
	П	Unit Parame	ter Definition File	e Import			Indo	or Unit Mode	I Name	RB
						Address	Acqu	uired Name	ECA Name	Act
	0	Exit				02-01-00	AUU	B24TLAV	AUUB24TLAV	
U		LON2 02-02	Heat Pump	Adaptor2		02-02-00	ARG	J022GLAH	ARQJ022GLAH	
	inner	_LUN2_02-02	Heat Pump	Adaptor2		02-03-00	ASY	A07LACH	ASYA07LACH	
	1	1.0112.02.04	Heat Pump	Adaptor2		02-04-00	ASY	A07LACH	ASYA07LACH	
	Inner	_LON2_02-04	Heat Pump	Adaptor2		02-05-00	ARG	J071GLCH	ARQJ071GLCH	_
	Inner	LON2_03-00	Cooling Only	Adaptor2		03-00-00	UTY	-VGGX	UTY-VGGX	—
	Inner	LON2 04-00	Heat Recovery	Adaptor2		04-00-00-2	20400 AUG	A063GLBH	AUQA063GLBH	UT

(2) Enter the Login ID.

3 Enter the Password.

à	BACnet Gateway for VRF System ×	
Enter log	jin ID and password.	
Login	ID	
Pass	word	
	•	-3
	ок Салест	—Ă
		9

(4) Click the "OK" button.



(5) Click the "OK" button.

9-2 Main Screen

	<u> </u>				ت				
🛍 BACne Gate	way for VRF Syste	n							- 0
File View	Control Error	Setting Help							
	All			 Indoor Unit 					
bar h				Indoor Unit Mode	al Name	RB Model Name			
RC.Group Name	System Type	Adaptor Name	Address	Acquired Name	ECA Name	Acquired Name	ECA Name	ECA Param	Description
Inner_LON1_00-0	0 Heat Recovery	Adaptor1	00-00-00	ARXB07LALH	ARXB07LALH	/loguirou Humo	Lovingino	Acquired	IndoorUnit 0-00
Inner LON1 00-0		Adaptor1	00-01-00	ARXB09LALH	ARXB09LALH			Acquired	IndoorUnit 0-00
	Heat Passwork	Adaptor1	00-02-00	ARXB18LALH	ARXB18LALH			Acquired	IndoorUnit 0-00
inher_LON1_00-0	2 Heat Recovery	Adaptor1	00-03-01	ARXB36LATH	ARXB36LATH			Acquired	IndoorUnit 0-00
Inner LON1 01-0		Adaptor1	01-00-00	ARXB07LALH	ARXB07LALH			Acquired	IndoorUnit 0-01
Inner LON1 01-0		Adaptor1	01-01-00	ARXB09LALH	ARXB09LALH			Acquired	IndoorUnit 0-01
	Heat Recovery	Adaptor1	01-02-00	ARXB18LALH	ARXB18LALH			Acquired	IndoorUnit 0-01
Inner_LON1_01-0	Heat Recovery	Adaptor1	01-03-01	ARXB36LATH	ARXB36LATH			Acquired	IndoorUnit 0-01
Inner_LON2_00-0	0 Heat Pump	Adaptor2	00-00-00						IndoorUnit_1-00
Inner_LON2_00-0	1 Heat Pump	Adaptor2	00-01-00						IndoorUnit_1-00
1 010 00 0	Heat Pump	Adaptor2	00-02-00						IndoorUnit_1-00
Inner_LON2_00-0	Heat Pump	Adaptor2	00-03-01						IndoorUnit_1-00
	Heat Pump	Adaptor2	00-04-00						IndoorUnit_1-00
Inner_LON2_00-0	4 Heat Pump	Adaptor2	00-05-02						IndoorUnit_1-00
	Heat Pump	Adaptor2	00-06-03						IndoorUnit_1-00
Inner_LON2_00-0	7 Heat Pump	Adaptor2	00-07-00						IndoorUnit_1-00
Inner_LON2_01-0	0 Heat Recovery	Adaptor2	01-00-00						IndoorUnit_1-01
Inner_LON2_01-0	1 Heat Recovery	Adaptor2	01-01-00						IndoorUnit_1-01
Inner_LON2_01-0	2 Heat Recovery	Adaptor2	01-02-00						IndoorUnit_1-01
LON2 01-0	3 Heat Recovery	Adaptor2	01-03-00						IndoorUnit 1-01

This software has the following functions

		Menu bar (Command nan	ne)	Contents	Tool bar
			"Unit List(EDE) Export"	Exports "Unit List(EDE)" data to a CSV format file.	-
		"Import / Export"	"All Data Import"	Imports the data backed up by "All Data Export".	-
			"All Data Export"	Backs up the internal data.	-
1	1 "File"	"Unit Parameter Definition File Import"	-	Import unit parameter definition file of indoor, outdoor and RB unit referenced by BACnet Gateway. Explanation on import method will come with the unit parameter definition file. * Contact your service personnel for getting the unit parameter definition file.	-
		"Exit"	-	The BACnet [®] Gateway ends.	-
			"All (All adaptors)"	Displays the Status information of all the indoor units or outdoor units connected to this system.	E
		"VRF System"	"Adaptor*"	Displays the Status information of the indoor unit or outdoor unit of the selected adaptor. * A maximum of 4 adaptors can be connected. Menus for only the number of connected adaptors are displayed	E
2	"View"		"Indoor Unit"	Displays the Status information of the Indoor Unit connected to the adaptor selected by [VRF System] menu.	F
		"Unit"	"Outdoor Unit"	Displays the Status information of the Outdoor Unit connected to the adaptor selected by [VRF System] menu.	F
			"Monitoring Unit"	Displays the Status information of the Monitor- ing Unit connected to the adaptor selected by [VRF System] menu.	F

		Menu bar (Command nan	ne)	Contents	Tool bar
		"Operation Setting"	-	The following setting screen of indoor unit is displayed. ①Operation "on/off" ②"Operation mode" switching ③"Set temperature" switching ④"Fan speed" switching (Outdoor Unit cannot be set.)	D
3	"Control"	"Device Communication Disable" (*1)	-	Device communications is disabled. * When this setting is performed, communica- tion with the VRF System is not stopped.	A
		"Device Communication Disable_Initiation" (*1)	-	The initiation of communications is disabled. *When this setting is performed, communica- tion with the VRF System is not stopped.	В
		"Device Communication Enable" (*1)	-	Communications is enabled.	C
		"Out of Service"	"False"	Set Out_Of_Service properties of all BACnet [®] objects to "False".	-
4	"Error"	"Error Notification"	-	Displays the current error information.	-
4		"Error History"	-	Displays the error information history.	-
		"Initial Setting"	-		-
		"Change Password"	-		-
	'Error"	"Adaptor Setting"	-		-
		"Unit Registration"	-		-
5	"Setting"	"Model Name and ECA Parameter Setting"	-	Set when installing equipment.	-
5	Setting	"Description Property Setting"	-	Refer to par. 7. Basic Settings.	-
		"Display Language Set- ting"	-		-
		"License Manager"	-		-
		"Monitoring Unit Setting"	-		-
		"Manual"	-	Instruction manual (this manual) is displayed.	-
6	"Help"	"Interface Specification Document"	-	Interface Specification Document is displayed.	-
		"Version Information"	-	Version information is displayed.	-

*1. About Device Communication Control Service

The 3 functions "Device Communication Disable", "Device Communication Disable_Initiation" and "Device Communication Enable" can be set for a Device itself. (Time Duration, Password cannot be set) This setting can be set from a BACnet[®] Device (B-OWS, etc.) This value can be overwritten from B-OWS.



9-3 "Data Import/Export"

9-3-1 "Unit List (EDE) Export"

1. Description of function

Export "Unit List(EDE)" data to a CSV format file.

About "EDE"

The contents of "EDE " sheet and "State-Texts" sheet of The Engineering Data Exchanger (EDE) template created by BACnet[®] Interest Group Europe is output in CSV format. In addition, the "set-table" field of the "EDE" sheet is not used.

2. Operating procedure

(1) Select the menu items in order of "File" \rightarrow "Import/Export" \rightarrow "Unit List (EDE) Export" from the Menu bar.

				-(1)			
<u>du</u>			BACne	t Gateway	for	VRF System	
File View Co	ontrol Error	Setting Hel	,				
Import/Expo	nt	•	Unit List (EDE)	Export	nit	-	
Unit Parameter Definition File Import			All Data Impor	All Data Import			RB
Exit			All Data Export		ne V	ECA Name AUUB24TLAV	Acq
	Heat Pump	Adaptor2	02-02-00	ARQJ022GL	AH	ARQJ022GLAH	
Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH		ASYA07LACH	
Long 1 0ND 02 04	Heat Pump	Adaptor2	02-04-00	ASYA07LAC	н	ASYA07LACH	
Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GL	СН	ARQJ071GLCH	
Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX		UTY-VGGX	
Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GL	BH	AUQA063GLBH	UTF
	100 A 100		01.01.00	1.000100100		100100107111	1

Specify the Export destination folder and click "OK". The folder to be saved shall be created in advance.

🚱 Desktop	~	
🗉 My Documents		
🗉 📃 My Computer		
🗉 😼 My Network Places	=	
🥑 Recycle Bin	_	
🚞 BACnet work		
🚞 com0com-2.1.0.0-i386-chk		
🛅 DISK1		
🗉 🚞 Installer File_100122		
🛅 Newly EXE 100205	-	
C Newlary Accord	<u> </u>	
Make New Folder	Cancel	
Make New Polder	Cancer	

(3) When "OK" is clicked, the export is complete.

BACnet	Gateway for VRF System	
(į)	Unit list export complete.	
	ОК	

1. Description of function

Import the data backed up by "All Data Export".

2. Operating procedure

(1) Select the menu items in order of "File" \rightarrow "Import/Export" \rightarrow "All Data Import" from the Menu bar.

	du				BACne	t Gateway	for	VRF System	
	File View Co	ontrol Error	Setting H	lelp					
\bigcirc	Import/Expo	rt	•	•	Unit List (EDE)	xport	nit	-	
(1)	Unit Parame	ter Dennition File	emport	0	All Data Import		lode	I Name	RB
\mathbf{U}			· ·	-	All Data Export		ne	ECA Name	Acc
-	Exit			1.0	02.01.00			AUUB24TLAV	
	Inner LON2 02-02	Heat Pump	Adaptor2		02-02-00	ARQJ022GL	.AH	ARQJ022GLAH	
	Inner_LUN2_02-02	Heat Pump	Adaptor2		02-03-00 ASYA07LAC		н	ASYA07LACH	
	1 10112 02.04	Heat Pump	Adaptor2		02-04-00 ASYA07LAC		н	ASYA07LACH	
	Inner_LON2_02-04	Heat Pump	Adaptor2		02-05-00	ARQJ071GL	CH	ARQJ071GLCH	_
	Inner_LON2_03-00	Cooling Only	Adaptor2		03-00-00	UTY-VGGX		UTY-VGGX	
	Inner_LON2_04-00	Heat Recovery	Adaptor2		04-00-00-20400	AUQA063GL	BH	AUQA063GLBH	UTI
	Inner I ON2 04-01	Heat Recovery	Adaptor?		04-01-00	VBUR53VG	тлн	AROH224GTAH	—

(2) Enter the Login ID.

(3) Enter the Password.

<u>du</u>	BACnet Gateway for VRF System	×	
Enter login ID a	and password.		
Login ID Password	OK 🗣 Can		-2 -3 -4

(4) Click the "OK" button.

(5) Specify the file to be imported and click "Open".

	000				
Look #	x 🖸 BACnet wo) 🏚 🔛 🖽-		
My Recent Documents	VRF2BACnel	_11-02-2010.lbak			
Desktop					
My Documents					
My Computer					
	File name:	VBF28ACnet_11-02-2010	Y	Open	<u>–(</u>

(6) When "OK" is clicked, the import starts.



- (7) When "OK" is clicked, the import is complete.
- 8 After the main screen is closed, restart BACnet[®] Gateway.

9-3-3 "All Data Export"

1. Description of function

Back up the "All Data" (internal data).

All Data : Connected U10 USB Network Interface adaptor data, scanned unit data, and data set by B-OWS.

2. Operating procedure

(1) Select the menu items in order of "File" \rightarrow "Import/Export" \rightarrow "All Data Export" from the Menu bar.

	<u>du</u>					BACne	t Gateway	for	VRF System	
	File View C	ontrol Error	Setting	Help						
	Import/Export								nit 👻	
A	Unit Parameter Definition File Import								odel Name	
						All Data Export			ECA Name	Ac
	Exit				4			V	AUUB24TLAV	
	Inner LON2 02-02	Heat Pump	Adaptor2	_	0	2-02-00	ARQJ022GL	AH	ARQJ022GLAH	
	Inner_LON2_02-02	Heat Pump	Adaptor2		0	2-03-00	ASYA07LAC	н	ASYA07LACH	
	1 LOND 02.04	Heat Pump	Adaptor2		0	2-04-00	ASYA07LAC	н	ASYA07LACH	
	Inner_LON2_02-04	Heat Pump	Adaptor2		0	2-05-00	ARQJ071GL	CH	ARQJ071GLCH	
	Inner_LON2_03-00	Cooling Only	Adaptor2		0	3-00-00	UTY-VGGX		UTY-VGGX	

Specify the export destination folder and click "OK". The folder to be saved shall be created in advance.

Image: Sector product and the sector product	
Ø Recycle Bin BACnet work com0com-2.1.0.0-I386-chk Disk1 Disk1 Disk1 Machaeler File_100122 Disk1 Newly EXE 100205	
➢ BACnet work ➢ com0com-2.1.0.0-i386-chk ➢ DISK1 ➢ ``Installer File_100122 ➢ Newly EXE 100205	
DISK1 DISK1 DISK1 Diskaller File_100122 Newly EXE 100205	
Tostaller File_100122 Newly EXE 100205	
Dewly EXE 100205	

(3) When "OK" is clicked, the export is complete.



9-4 "View"

1. Description of function

The Indoor unit and Outdoor unit Status information can be viewed.

2. Operating procedure

(1) Select the VRF System ("All" or "Adaptor") that you wish to display.

* Menus for only the number of connected adaptors are displayed Select the menu items in order of "View"→"VRF System"→"All" or "Adaptor*" from the Menu bar

	<u>l</u>			BACne	t Gateway for	VRF System	
	File View Co	ntrol Error	Setting Help				
$\overline{\mathbf{A}}$	VRF S	ystem 🔸 🔽	All	•	lndoor Unit	-	
(1) -	R.C.Grdop result		Adaptor1	ddress	Indoor Unit Mode	Name	RB
	R.C.Orcop rumo	0,0101111,000	Adaptor2	odress	Acquired Name	ECA Name	Ac
<u> </u>	Inner_LON2_02-01	Heat Pump	riduptone	_2-01-00	AUUB24TLAV	AUUB24TLAV	
	Inner LON2 02-02	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	
	Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	
	Inner LON2 02-04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	
	Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	
	Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX	
	Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	UT
	1012.01.01		A 1 4 A	04.04.00	ADDUDDACTAU	ADOUDDACTAU	-

2 Select the displayed unit (indoor unit or outdoor unit).

Select the menu items in order of "View"→"Unit"→"Indoor Unit", "Outdoor Unit" or "Monitoring Unit" from the Menu bar

	<u>lu</u>			BACn	et Gateway for	VRF System	
			Setting Help				
\sim		ystem			 Indoor Unit 	-	
(0)	Unit	•	Indoor Unit		Indoor Unit Mode	l Name	RE
			Outdoor Unit	55	Acquired Name	ECA Name	Ac
	Inner_LON2_02-01	Heat Pump	risspierz	00	AUUB24TLAV	AUUB24TLAV	
	Inner LON2 02-02	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	
	inner_LUN2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	
	1 LOND 02.04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	
	Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	
	Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX	
	Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	UT
	1 LOND 04.01	Hant Deservery	A	04 01 00		АПОЦІОЗАСТАЦІ	_

Example) When set to "All" and "Indoor unit"

<u>du</u>			BACn	et Gateway for	VRF System			-	×
<u>F</u> ile <u>V</u> iew Co	ntrol <u>E</u> rror	Setting <u>H</u> elp							
灵 🐌 🎒 🔣	All			• Indoor Unit	-				
	Indoor Unit Model Name RB Model Name			ECA Param	D				
R.C.Group Name	System Type	Adaptor Name	Address	Acquired Name	ECA Name	Acquired Name	ECA Name	ECA Param Descrip	Descript "
Inner_LON2_02-01	Heat Pump	Adaptor2	02-01-00	AUUB24TLAV	AUUB24TLAV			Acquired	IndoorUr
L	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH			Acquired	IndoorUr
Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH			Acquired	IndoorUr
1 1010 00.04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH			Acquired	IndoorUr
Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH			Acquired	IndoorUr
Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX			Acquired	IndoorUr
Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	UTP-RQ01CH	UTP-RQ01CH	Acquired	IndoorUr
Inner_LON2_04-01	Heat Recovery	Adaptor2	04-01-00	ARQH224GTAH	ARQH224GTAH			Acquired	IndoorUr
Inner_LON2_04-02	Heat Recovery	Adaptor2	04-02-00	UTY-VDGX	UTY-VDGX			Required	IndoorUr
Inner_LON2_04-03	Heat Recovery	Adaptor2	04-03-00	UTY-VDGX (1)	UTY-VDGX (1)			Set	IndoorUr
Inner_LON2_04-04	Heat Recovery	Adaptor2	04-04-00	UTY-VDGX (3)	UTY-VDGX (2)			Set	IndoorUr

3. Items displayed in the Status List.

I.U.=Indoor unit O.U.=Outdoor unit

Items	Remarks	I.U.	O.U.	M.U.
"R.C.Group Name"	Remote controller group name	0	-	-
"Unit Group Name"	Outdoor group name	-	0	-
"Object Name"	Object Name	-	-	0

	Items	Remarks	I.U.	0.U.	M.U.
"System Type"		Displays the type of refrigerant system (cooling only , heat pump or heat recovery)	0	0	-
Instance Numb	per"	Instance Number	-		0
'Adaptor Name'	-	Connected U10 USB Network Interface adaptor name.	0	0	0
		Displays the address for each unit. "Refrigerant system address"-"Unit address"-"R.C. address" or "Refrigerant system address"-"Unit address"-"R.C. address"-"RBG No"			
"Address"		For V-II or later series following notations apply for the address suffix to show how the units are controlled in AUTO mode; /M Master indoor unit /S Slave controlled by master indoor unit /O Externally controlled Those without suffixes are units that not any of the aboves.	0	0	0
"Indoor Unit Mo	del Name"	Unit model name	0	-	-
	"Acquired Name"	Model name. acquired from unit	0	-	-
	"ECA Name"	Model names used with electricity charge apportionment	0	-	-
"RB Model Nam	ne"	RB model name	-	0	-
	"Acquired Name"	Model name. acquired from unit Only when RB unit is connected.	-	0	-
	"ECA Name"	Model names used with electricity charge apportionment	-	0	-
"Outdoor Unit N	lodel Name"	Unit model name	0	- 1	-
	"Acquired Name"	Model name. acquired from unit	0	-	-
	"ECA Name"	Model names used with electricity charge apportionment	0	- 1	-
"ECA Param"		Availability of parameter used in ECA calculation. "Acquired": Is already aquired. "Required": Needs to be entered by the user. "Set": Is already entered.	0	0	-
"Description"		Explanation for Indoor/Outdoor units	0	0	0
"Capacity"		Capacity of Indoor units	0		-
"TYPE"		Indoor unit type *Universal shows Floor or Ceiling.	0	-	-
"Operation State	us"	Operation Status	0	-	-
	"OP"	Operation status.	0	-	-
	"MODE"	Displays the operation mode. (Displayed even when stopped.)	0	-	-
	"Set Temp."	Displays the set temperature.	0	-	-
	"Fan Speed"	Fan speed displays the air flow setting.	0	-	-
"Reliability"		Shows any of the values other than "No_Fault_Detected",of the reliability properties of the objects contained in the unit.	0	0	0
"Out of service"		Shows "True" if any one of the values of the Out_Of_Service properties of the objects contained in the unit is "True".	0	0	0
"Error"		State separate from original instruction and operation	0	0	0
	"Code"	Error code of current error	0	0	0
	"Contents"	Error code details	0	0	0
	"Time of Occur- rence"	Time error occurred	0	0	0
	"Total Count of Occurrences"	Number of errors which occurred from start up to the present	0	0	0
"Emergency Sto	op"	Displayed when emergency stop signal sent/received	0	0	-
"Priority Operati	ion Mode"	Cooling/heating priority operation (Heat pump of S/V Series only)	-	0	-

Note

Some units have more than 2 sets of ECA parameter. For such units, model name is suffixed with index number in brackets to distinguish a particular set of ECA parameter.

9-5-1 "Operation Setting"

1. Description of function

Indoor unit "On/Off", "Operation Mode", "temperature setting", and "Fan speed" can be set.

2. Operating procedure

(1) Select indoor unit.

Select the menu items in order of "View"→"Unit"→"Indoor Unit" from the Menu bar

<u>du</u>			BAC	Cnet Gateway for	VRF System	
File View Co	ntrol Error	Setting Help				
🛃 🐰 VRF Sj	/stem			🕶 🕴 Indoor Unit	-	
R.C.Gross Unit		Indoor Unit		Indoor Unit Model	Name	RE
R.C.Groop rune	0)010111 1)pc	Outdoor Unit	:55	Acquired Name	ECA Name	Ac
Inner_LON2_02-01	Heat Pump	- approve		AUUB24TLAV	AUUB24TLAV	
Inner LON2 02-02	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	
Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	\square
Lange 1 (0NI2) 02:04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	
Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	

(2) Click the unit (line) that you wish to select.

<u>du</u>			BACn	et Gateway for	VRF System	
Eile View C	ontrol <u>E</u> rror	<u>S</u> etting <u>H</u> elp		✓ Indoor Unit	•	
R.C.Group Name	System Type	Adaptor Name	Address	Indoor Unit Mode Acquired Name	Name ECA Name	R
Inner_LON2_02-01	Heat Pump	Adaptor2	02-01-00	AUUB24TLAV	AUUB24TLAV	Г
1 0 10 00 00 00	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	
Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	
Inc. 1010 02.04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	
Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	Г
Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX	Γ
Inner_LON2_04-00_	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	U
IIIIer_LON2_04-0	Heat Recovery	Adaptor2	04-01-00	ARQH224GTAH	ARQH224GTAH	Τ
Inner_LON2_04-02	Heat Recovery	Adaptor2	04-02-00	UTY-VDGX	UTY-VDGX	Γ

(3) Select the menu items in order of "Control" \rightarrow "Operation Setting" from the Menu bar or

Click the **D** button.

	<u>du</u>		BACr	et Gateway for	VRF System	
	File View Co	ntrol Error Setting Help				
(3) -		Operation Setting		🝷 🕴 Indoor Unit	-	
S	R.C.Group Name	Device Communication Disable		Indoor Unit Mode	Name	RB
		Device Communication Disable Initiation		Acquired Name	ECA Name	Acc
	Inner_LON2_02-	-		AUUB24TLAV	AUUB24TLAV	
	Inner LON2 02-	Device Communication Enable		ARQJ022GLAH	ARQJ022GLAH	
		Out of Service	•	ASYA07LACH	ASYA07LACH	
	Inner LON2 02-04	non cub hasher or ci co		ASYA07LACH	ASYA07LACH	

D

<u>du</u>			BACr	net Gateway for	VRF System	
<u>F</u> ile <u>V</u> iew (g	ontrol <u>E</u> rror	<u>S</u> etting <u>H</u> elp				
灵 🔮 🗗 🛙 🗟	All			• Indoor Unit	-	
	с. т	Adaptor Name	Address	Indoor Unit Mode	l Name	R
R.C.Group Name	System Type	Adaptor Name	Address	Acquired Name	ECA Name	A
Inner_LON2_02-01	Heat Pump	Adaptor2	02-01-00	AUUB24TLAV	AUUB24TLAV	Γ
	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	Γ
Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	Г
I	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	Г
Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	Γ
Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX	T
Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	L
Inner I ON2 04-01	Heat Recovery	Adaptor2	04-01-00	AROH224GTAH	AROH224GTAH	1



When the set button is pressed, "On/Off", "Operation Mode", "Set Temp. ", and "Fan Speed" can be set.

* Function which cannot be set is not pressed.

🔣 Operation Set	ting		×	
On/Off	On	Off	On	
Operation Mode	Cool	Auto Cool Dry	Fan Heat	
Set Temp. (°C)	20.0	v	^	-4
Fan Speed	High	High	~	
		Reset	Send	-(5)
			Close	
		"Reset" button: V	Vhen this button is	;

pressed, returns to the setting state when this screen was displayed.

Function List

"On / Off"	Switches operation of the selected Indoor Unit On/Off.
"Operation Mode"	Switches Operation Mode.
"Set Temp"	Changes the set temperature.
"Fan Speed"	Switches Fan speed.

(5) Click the "Send" button.

Indoor unit setting is switched.

9-5-2 "Device Communication Disable"

1. Description of function

Device communications is disabled.

* When this setting is performed, communication with the VRF System is not stopped.



2. Operating procedure

① Select the menu items in order of "Control"→"Device Communication Disable" from the Menu bar or

Click the **A** button.

	<u>C</u> a			I	3ACne	et Gateway for	VRF System	
	<u>F</u> ile <u>V</u> iew	Control Error	<u>S</u> etting <u>H</u> el	р				
	🛃 🖏 🔁 🛛	Operation Set	tting			- Indoor Unit	-	
(1)_		Device Comm	nunication Disa	ble		Indoor Unit Mode		RB
\cup	Inner_LON2_02-	Device Comm	nunication Disa	ble_Initiation		Acquired Name AUUB24TLAV	ECA Name AUUB24TLAV	Ac
		 Device Comm 	nunication Enal	ble	- 1	ARQJ022GLAH	ARQJ022GLAH	-
	Inner_LON2_02-	Out of Service	a		- L [ASYA07LACH	ASYA07LACH	
	1		ricoptore	02 01 00	-	ASYA07LACH	ASYA07LACH	
	Inner_LON2_02-0	4 Heat Pump	Adaptor2	02-05-00		ARQJ071GLCH	ARQJ071GLCH	
I	1 LOND 02.0	a	A.L	00.00.00		UTVUCCY	UTVUCCY	-

(2) Click the "OK" button on the window of "Disable device communications" shown below.



9-5-3 "Device Communication Disable_Initiation"

1. Description of function

The initiation of communications shall be disabled.

* When this setting is performed, communication with the VRF System is not stopped.

2. Operating procedure

Select the menu items in order of "Control"→"Device Communication Disable_Initiation" from the Menu bar

or

Click the **B** button.

	<u>dia</u>			BAC	net Gateway for	VRF System	
	File View C	ontrol Error	Setting Help		_		
	灵 🖏 🗗 🛛	Operation Set	ting		🝷 🕴 Indoor Unit	-	
\bigcirc	R.C.Group Name	Device Comn	nunication Disabl	Indoor Unit Mode		RE	
(1)	Inner LON2 02-	Device Comm	nunication Disabl	e_Initiation	Acquired Name AUUB24TLAV	ECA Name AUUB24TLAV	Ac
\mathbf{U}	· ·	Device Comn	nunication Enable	ARQJ022GLAH	ARQJ022GLAH		
	Inner_LON2_02-	Out of Service	-	•	ASYA07LACH	ASYA07LACH	
	Inner_LON2_02-04	moarr amp	risspione		ASYA07LACH	ASYA07LACH	
	Inner_conv2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	
I I	1 010 00 00	0.1.01	A	00.00.00	Lime Linear	0.000	

(2) Click the "OK" button on the window of "Disable initiation of communications" shown below.



1. Description of function

Communications is enabled.

2. Operating procedure

(1) Select the menu items in order of "Control"→"Device Communication Enable" from the Menu bar

Click the C button.

or

C							
	<u>du</u>			BACr	net Gateway for	VRF System	
	File View C	Control Error	Setting Help				
	🗟 🔮 🎒 🛛	Operation Set	ting		🝷 🕴 Indoor Unit	-	
	R.C.Group Name	Device Comm	nunication Disabl	e	Indoor Unit Mode		RE
\bigcirc	Inner LON2 02-	Device Comm	nunication Disabl	e_Initiation	Acquired Name AUUB24TLAV	ECA Name AUUB24TLAV	Ac
(1)_		Device Comm	nunication Enable	•	ARQJ022GLAH	ARQJ022GLAH	-
U	Inner_LON2_02-	Out of Service	•	•	ASYA07LACH	ASYA07LACH	
_	Inner LON2 02-04	rieser omp	/ maptore		ASYA07LACH	ASYA07LACH	
	miner_c01v2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	
	1 OND 02 00	Caalian Oalu	A J	03 00 00	UTV VCCV	UTVUCCV	

(2) Click the "OK" button on the window of "Enable device communications" shown below.

	BACnet	Gateway for VRF System 🛛 🔀
	(į)	Enable device communications.
(2)-		- OK Cancel

1. Description of function

Set Out_Of_Service properties of all BACnet® objects to "False".

2. Operating procedure

(1) Select the menu items in order of "Control" \rightarrow "Out of Service" \rightarrow "False" from the Menu bar

			BACr						<u>da</u>
				Help	Setting	ntrol Error	Со	View	File
-	nit	Indoor Unit			tting	Operation Set			🜏 🐰
ne	odel Name	Indoor Unit Mod		n Disabl	nunicatior	Device Comn		oup Name	
Name	ne ECA N	Acquired Name	Device Communication Disable_Initiation					oup warne	R.C.GR
IB24TLAV	/ AUUB	AUUB24TLAV						ON2_02-	Inner_L
J022GLAH	AH ARQJ	ARQJ022GLAH		 Device Communication Enable 					
A07LACH	ASYA	False			٥	Out of Service		Inner_LON2_02-	
A07LACH	ASYA	Faise		-	risapton	riest on print		010 00	
J071GLCH	H ARQJ	ARQJ071GLCH	-05-00	2	Adaptor	Heat Pump	04	.UN2_02-	inner_L
-VGGX	UTY-1	UTY-VGGX	-00-00	2	Adaptor	Cooling Only	00	ON2_03-	Inner_L
2	H ARQ		-05-00	2	Adaptor	Heat Pump		ON2_02-	

(2) Click the "OK" button on the window of "All objects will be put in service." shown below.



9-6 "Error"

"Error information" and "Error History" can be viewed.

9-6-1 Displays "Error Information"

① Select the menu items in order of "Error"→"Error Notification" from the Menu bar or

Automatically opens at error generation.

	du			BACn	et Gateway for	VRF System	
$\overline{\mathbf{A}}$	File View Co	ontrol Error	Setting Help				
(1)		All Err	or Notification		• Indoor Unit	-	
\mathbf{U}	D.C.C. North		or History		Indoor Unit Mode	I Name	RB
	R.C.Group Name	Syster	nuopior numo	Jress	Acquired Name ECA Na		Act
	Inner_LON2_02-01	Heat Pump	Adaptor2	02-01-00	AUUB24TLAV	AUUB24TLAV	
	Inner LON2 02-02	Heat Pump	Adaptor2	02-02-00	ARQJ022GLAH	ARQJ022GLAH	
	Inner_LON2_02-02	Heat Pump	Adaptor2	02-03-00	ASYA07LACH	ASYA07LACH	
	Inner LON2 02-04	Heat Pump	Adaptor2	02-04-00	ASYA07LACH	ASYA07LACH	
	Inner_LON2_02-04	Heat Pump	Adaptor2	02-05-00	ARQJ071GLCH	ARQJ071GLCH	
	Inner_LON2_03-00	Cooling Only	Adaptor2	03-00-00	UTY-VGGX	UTY-VGGX	
	Inner_LON2_04-00	Heat Recovery	Adaptor2	04-00-00-20400	AUQA063GLBH	AUQA063GLBH	UT
	1. 1.0100.01.04			0.000	LABOURS (OTAL)	A DOLLAR COTALL	T

(2) "Error Notification" screen is displayed.

Date Unit Group Model Name Adaptor Name Address Error Code Contents 1/4/2017 10:23:05 PM Inner_LON1_00-00 ARXB07LALH Adaptor1 00-00-00 21 Initial setting error	Error
	Error

"Error Notification" screen

Items displayed in the ERROR List of Indoor/Outdoor Unit.

Items	Remarks
"Date"	Date error occurred
"Unit Group"	Indoor Unit : R.C. Group Name Outdoor Unit : Unit Group Name Monitoring Unit : Unit Name Other : "-"
"Model Name"	Unit model name* *The letter ":" as the last letter of the Model Name signifies that the Model Name for the corresponding unit was written after shipment. The letter ":" is not part of the Model Name.
"Adaptor Name"	Connected U10 USB Network Interface adaptor name.
"Address"	Displays the address for each unit. Display contents: "Refrigerant system address "-"Unit address"-"R.C address".
"Error Code"	Error code
"Contents"	Contents

9-6-2 Displays "Error History"

Select the menu items in order of "Error"→"Error History" from the Menu bar or

Click the "History" button of the "Error Notification" screen.

(2) "Error History" screen is displayed.

🛣 Error His	tory						- 🗆 X
All	~	All	~	Date of E	mor Occurrence:	1/ 4/20	017 v - 1/4/2017 v Display
Time of Occu	rr Time of Restora	Unit Group	Model Name	Adaptor Name	Address	Error Code	Contents
1/4/2017 10:2	7:	Outer_LON1_0	AJH108LALH	Adaptor1	00-00	63	Inverter PCB error
1/4/2017 10:2	6: 1/4/2017 10:27:	Outer_LON1_0	AJH108LALH	Adaptor1	00-00	22	Indoor unit capacity abnormal
1/4/2017 10:2	3: 1/4/2017 10:24:	Inner_LON1_00	ARXB07LALH	Adaptor1	00-00-00	21	Initial setting error

9-7 "Help"

"Instruction manual", "Interface Specification Document", and Version information of BACnet[®] Gateway is displayed.

9-7-1 Displays "Manual"

BACnet Gateway for VRF System da File View Control Error Setting Help Manual Interface Specification Document RB R.C.Group Name System Type Adaptor A Name Ac Version Information Inner LON2 02-01 Heat Pump Adaptor: **UB24TLAV** Heat Pump 02-02-00 ARQJ022GLAH ASYA07LACH Adaptor ARQJ022GLAH nner_LON2_02-02 Adaptor2 02-03-00 ASYA07LACH Heat Pump Adaptor2 Adaptor2 Heat Pump 02-04-00 ASYA07LACH ASYA07LACH LON2_02-04 02-05-00 03-00-00 ARQJ071GLCH ARQJ071GLCH UTY-VGGX UTY-VGGX Heat Pump Inner_LON2_03-00 Cooling Only Adaptor2 er_LON2_04-00 Heat Recovery 04-00-00-20400 AUQA063GLBH AUQA063GLBH UT Adaptor2

(1) Select the menu items in order of "Help" \rightarrow "Manual" from the Menu bar

(2) "Instruction manual" (this manual) is displayed.

9-7-2 Displays "Interface Specification Document"

- (1) Select the menu items in order of "Help"→"Interface Specification Document" from the Menu bar
- (2) "Interface Specification Document" is displayed.

9-7-3 Displays Application "Version Information"

- (1) Select the menu items in order of "Help" \rightarrow "Version Information" from the Menu bar
- (2) "Version Information" is displayed.

Appendix

- 10. Product Specifications
- 11. Error Code Table
- 12. FAQ

10. Product Specifications

10-1 Operating Conditions

PERSONAL COMPUTER SPECIFICATIONS

Operating system	 Microsoft[®] Windows[®] 7 Home Premium (32-bit or 64-bit) SP1, Windows[®] 7 Professional (32-bit or 64-bit) SP1 Microsoft[®] Windows[®] 8.1 (32-bit or 64-bit), Windows[®] 8.1 Pro (32-bit or 64-bit) Microsoft[®] Windows[®] 10 Home (32-bit or 64-bit), Windows[®] 10 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel [®] Core [™] i3 2 GHz or higher
Memory	 2 GB or more (for Windows[®] 7 [32-bit]) 4 GB or more (for Windows[®] 7 [64-bit], Windows[®] 8.1, and Windows[®] 10)
HDD	40 GB or more of free space
Display	1024 × 768 or higher resolution
Interface	 Ethernet port (for getting access to the Internet using LAN) USB ports (Maximum of 5 ports) 1 USB port is required for WHITE-USB-KEY/ WibuKey connection Maximum of 4 USB ports are required for Echelon[®] U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations.
Software	Adobe [®] Reader [®] 9.0 or later
Optical drive	DVD-ROM drive

11. Error Code Table

The BACnet[®] Gateway error codes are shown below. When an error occurred at the BACnet[®] Gateway, check the codes below and contact your service personnel.

Refer to the Interface Specification document for the Indoor unit and Outdoor unit error codes.

Error code	Error contents
F11	System tool database access error
F12	System tool database connection error
F13	System tool restart error
F14	System tool program runtime error
F15	System tool special operation error
F16	System tool low database space error
F21	System tool communication adaptor connection error
F22	System tool communication error (no data)
F23	System tool external input power meter error
F31	System tool inter-process communication error
F32	System tool license authentication error
F33	System tool server/client communication error
F41	System tool hard disk drive capacity error
F42	System tool system requirements error
F43	System tool time error

12. FAQ

12-1 General

Appendix

Ne	Question
No.	Answer
	The PC power was dropped during unit scanning. What happens to the data scanned up to the point? Is data integrity maintained?
1.	The scanned data is saved when scanning is completed and the "OK" button is pressed. When the power was dropped before this, the data scanned up to that point is lost. Restart scanning from the beginning. \rightarrow 7-6 "Unit Registration".
	When scanning, U10 USB Network Interface is not displayed as a selection choice. What should I do?
2.	U10 USB Network Interface driver is not installed. Install the OpenLDV supplied with the U10. Power is not supplied. If an USB hub is used or many USB units are connected, the power supply may be insufficient. Connect the USB units directly to the PC, or reduce the number of USB units connected.
2	Can the U10 USB Network Interface used with the BACnet [®] Gateway also be used with service tools and other software?
3.	The adaptor can also be used with service tools. However, 1 adaptor cannot be used simultaneously by the BACnet [®] Gateway and service tools.
	What is the difference between Secure Reg enable and disable at "Unit Registration"?
4.	Secure Reg. is a mode which stops operation of all the units and confirms scanning for "Unit Registration". Secure Reg. disable is a mode which performs scanning in parallel without stopping operation of the units. Since scanning is an important function for recognition of the units to be managed by the BACnet [®] Gateway, it is recommended that, as a rule, it be performed by enabling Secure Reg. If unavoidable, disable Secure Reg only when scanning must be performed without stopping operation of the units. In any case, whether or not units were recognized correctly must be confirmed after scanning. However, when scanning was performed with Secure Reg disabled, re-scanning may be necessary due to "Unit Registration" failures.
	Scanning was performed, but all the units were not recognized. What should I do?
5.	When work is performed normally and scanning is performed after confirmation and units are not recog- nized, first check that the power of the unrecognized units is turned on. Other causes may be: •Unit trouble •Installation work problem Contact your service personnel.
6.	Scanning was performed, and all the units were recognized, but R.C. group information is not correct. What should I do?
0.	They may be an abnormality in the wiring which defines the R.C. group or incorrect setting of the address in the indoor unit R.C. group. Refer to the service manual and perform setting correctly.
7.	Scanning was performed and all the units were recognized, but the unit information is not correct. What should I do?
	It is possible that communication with the unit is incomplete. Enter a secure reg. check mark and re-scan. \rightarrow 7-6 "Unit Registration".
	Scanning takes a very long time. What can I do?
8.	When the existing refrigerant system numbers are known in advance, the scanning time may be short- ened by specifying the refrigerant range to be scanned at the scan execution screen. For example, when rescanning, etc. when recognition by scanning isn't very good, the scanning time can be shortened by specifying the range of only the refrigerant systems at which recognition was poor. In addition, scanning by "secure reg." is faster than scanning "without secure reg.". \rightarrow 7-6 "Unit Registration".

No.	Question
	Answer
9.	I want to replace the PC with a new PC. Can the data be transferred?
	The BACnet [®] Gateway has data "Export" and "Import" functions. For details, see the "Import/Export" page.
10.	Unit expansion, replacement, and removal were performed. How can I reflect these changes at the BACnet [®] Gateway?
	Perform scanning again. \rightarrow 7-6 "Unit Registration".
11.	VRF System expansion, replacement, and removal were performed.
	After setting the U10 USB Network Interface adaptor correctly, recognize the units by scanning. \rightarrow 7-4 "Initial Setting", 7-5 "Adaptor Setting", 7-6 "Unit Registration"
12.	The state displayed on the screen does not change even though operation setting is performed.
	When operation setting was performed at multiple units or at a group containing multiple units, it may take some time for the state of that unit to change to the set contents.
13.	Can a transmission adaptor (UTR-YTMA) be used with the BACnet® Gateway?
	Transmission adaptor (UTR-YTMA) cannot be used with the BACnet [®] Gateway.
14.	Can a WIBU-KEY used by a UTY-ABGX be used by UTY-ABGXZ1?
	Yes.
15.	Can a WIBU-KEY used by a UTR-YLBA be used by UTY-ABGX/UTY-ABGXZ1?
	No. it cannot be used.
16.	Can a XLON [®] used by a UTR-YLBA be used by the UTY-ABGX/UTY-ABGXZ1?
	No. it cannot be used.
17.	When an error, etc. occurs at SQL Server 2014 installation while this application is installed
	For the identification of reason and the countermeasures, check the contents of log file in the following
	folder. C:\Program Files\Microsoft SQL Server\120\Setup Bootstrap\Log
18.	Why is an electricity charge generated even though none of the indoor units is being used?
	Since power is consumed by the outdoor unit even when all the indoor units are not in use, an electricity
	charge is generated. To prevent generation of an electricity charge, turn off the power of that indoor unit and perform scan to remove the indoor unit from the electricity charge apportionment function objectives.
19.	Why isn't the operation time and electricity charge proportional?
	If the room temperature has reached the set temperature even if the operation is turned ON by a remote controller, the indoor unit will not operate and the power consumption will be that much lower. In addition, if the difference between the room temperature and the set temperature is large, more power is consumed than when the difference is small. Therefore, the operation time and electricity charge may not necessarily be proportional.
20.	Why is the electricity charge of operated indoor units so much smaller than that of indoor units that are not operated at all?
	Electricity charge includes the power consumed by the outdoor unit in addition to that of the indoor unit. The outdoor unit consumes power constantly so that operation at any time is possible even though indoor units are not operating. This is called the "standby power". Since the standby power differs between the models of outdoor units, if the number of indoor units per outdoor unit is assumed to be the same, the indoor units which use an outdoor unit will consume more power than indoor units which use with high standby power. This question is an example of when the difference of this standby power was larger than the power con- sumed by operation. This is a normal result. Generally, this kind of difference is made small by selecting the model of outdoor unit based on appropriate facility design.

No.	Question
	Answer
21.	Why has the electricity charge suddenly increased even though the use is the same as in the past?
	One of the reason could be that some tenants have moved out. The electricity charge is apportioned between blocks. When the number of blocks decreases or increases by moving in and out of tenants, the electricity charge increases and decreases. As an example, if the basic charge is set so that it is equally apportioned between the blocks, then the electricity charges decreases if tenants move in and increases if tenants move out. The building owners and managers should perform appropriate settings in accordance with his/her policy as to how things should be in such cases.
22.	Characters displayed on the screen are strange. What should I do?
	Region is not set. Select "Clock, Language and region" category from the control panel and change from "Region".
23.	When restarting the application, an error message "Failed to initialize UDP socket" appeared. What should I do?
	Open the "Initial Setting" screen and check that the IP address/Subnet Mask set to the PC is equal to those set in the "Initial Setting" screen. If these are the same, then check that the LAN cable is connected from the PC to the hub correctly at both ends.

12-2 Trouble Shooting BACnet[®] Installation

Trouble Shooting Procedures

If you can not perform monitorings and controls of VRF system form B-OWS, the first step for the trouble shooting is to localize the trouble.



Answer each questions in the diagram to see what sort of troubles are suspected.

Q1.Can the VRF system be monitored and controlled by B-OWS?

If no, any of the troubles below is suspected;

S1)VRF system is faulty or is not setup properly.

S2)Communication between BACnet® Gateway and VRF system is not normal.

S3)BACnet[®] Gateway is faulty or is not setup properly.

S4)Communication between the B-OWS and BACnet® Gateway is not normal.

S5)B-OWS is faulty or is not setup properly.

Q2.Can the VRF system be monitored and controlled by BACnet[®] Gateway?

If no, any of the troubles below is suspected;

S1)VRF system is faulty or is not setup properly.

S2)Communication between BACnet[®] Gateway and VRF system is not normal.

S3)BACnet® Gateway is faulty or is not setup properly.

Q3.Can the VRF system be monitored and controlled by Service Tool?

If no, the trouble below is suspected;

S1)VRF system is faulty or is not setup properly.

For each of the troubles suspected, perform the following checks to identify the problem.

S1.VRF system is faulty or is not setup properly.

If the VRF system itself is not working properly, consult the the Service Manuals for VRF system.

S2.Communication between BACnet® Gateway and VRF system is not normal.

If the communication within the VRF system is not working properly, consult the Service Manuals for VRF system.

S3.BACnet[®] Gateway is faulty or is not setup properly.

Refer to the Instruction Manual (this manual) of BACnet[®] Gateway. See also A1.Initial setting for PC.

- S4.Communication between the B-OWS and BACnet[®] Gateway is not normal. See A2.Networking Troubles.
- S5.B-OWS is faulty or is not setup properly.

Refer to the manual that comes with the B-OWS.

Be sure that settings are correct for connecting with the BACnet[®] Gateway.

A1:Initial Setting for PC

(1) Network Setting for the PC

Perform appropriate setting for the transparent connection of UDP/IP unicast and multicast communication.

- IP Address / Netmask Setting
- UDP port 0xBAC0(47808) made available and enabled
 When checking whether the UDP port is already in use, execute a "netstat -a" command from the Windows Command Prompt. At that time, end BACnet[®] Gateway before executing the command. If the UDP port should be in use, stop using the relevant application.

A2:Networking Troubles

- (1) Checking Unicast Communication
 Ping to/from BACnet[®] Gateway B-OWS using Windows Command Prompt.
 Ex. "Ping 192.168.16.2"
 If you get the response, unicast is reachable.
- (2) Checking Broadcast Communication Trace route to/from BACnet[®] Gateway – B-OWS using Windows Command Prompt. Ex. "Tracert 192.168.16.2"

Trouble Shooting the Interworking Troubles

BACnet[®] is an open network protocol interpreted and implemented by different vendors. In some occasions, you may encounter interworking troubles.

If the trouble could not be located in the procedures above, interworking troubles may be suspected.

Analyzing interworking troubles involve capturing BACnet[®] communication packets and analyzing the protocol using tools (ex.Wireshark) and expertise on BACnet[®].

Followings are some hints on the checks you need to perform in order to trouble shoot interworking problems.

1. Has B-OWS recognized BACnet[®] Gateway?

If the B-OWS does not recognize BACnet[®] Gateway, then the initial setting may be wrong or networking problem is suspected.

- Has B-OWS established connection to the BACnet[®] Gateway?
 If the B-OWS cannot establish connection with BACnet[®] Gateway (eg.B-OWS has issued error after series of communication), then packets must be captured to see where and what has gone wrong.
- 3. Has B-OWS registered units in VRF System correctly? If the B-OWS cannot register units in VRF System correctly, then registration must be checked first using BACnet[®] Gateway user interface. If there are no problems on the BACnet[®] Gateway, then packets must be captured to see where and what has gone wrong.
- 4. What Service is Malfunctioning?

If any service cannot be performed on the B-OWS, then packets must be captured to see where and what has gone wrong.