

Air-conditioner Network System

Centralized Controller AG-150A AG-150A-A GB-50ADA-A GB-50ADA-J

Instruction Book (Web browser for optional functions)

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Before using the controller, please read this Instruction Book carefully to ensure proper operation. Retain this manual for future reference.

1 Introduction

Special features of Mitsubishi Electric Corporation's "Centralized Controller AG-150A," "Centralized Controller AG-150A-A," "Centralized Controller GB-50ADA-A," and "Centralized Controller GB-50ADA-J" are that a PC connected to a LAN can be used to monitor the operation condition of air conditioners, perform air conditioner operations, and make initial settings. The document explains the procedures for making optional settings for the Centralized Controller using the web browser.

Hereinafter, Centralized controller AG-150A, AG-150A-A, GB-50ADA-A, and GB-50ADA-J, unless otherwise specified, will be called "AG-150A".

- Note: License of "Web Monitor" or "Basic License Pack" is necessary to use the web browser (to operate or monitor the air conditioners). Some licenses are necessary depending on the functions to be used. Register the license key on the LCD screen or on the registration screen.
- Note: A one-day license key can be registered on the LCD screen that allows the user to use the "Web Monitor" only on the day of the registration (not applicable to GB-50ADA-A and GB-50ADA-J). Use this license key to use the initial setting browser, or in any other situations when a temporary license key "Web Monitor" is necessary.
- Note: The use of the function of the outdoor units that measures the electric power will require the "Energy Management License Pack."

Note: Use a security device such as a VPN router when connecting the AG-150A to the Internet to prevent unauthorized access. Note: "Booster unit" and "Water HEX unit" are referred to as "Air To Water (PWFY)".

Note: GB-50ADA-A and GB-50ADA-J cannot be connected to the Expansion Controller (PAC-YG50ECA). Settings or displays of the Expansion Controller cannot be made on the GB-50ADA-A and GB-50ADA-J.

1-1 Terms Used in This Manual

- "Click" refers to the action of positioning the mouse cursor on the object (such as button or folder) and pressing down and releasing the left mouse button once.
- Unless otherwise specified, the example screen images used in this manual are Windows XP[®] and Internet Explorer 6.0 screen images.

Note: Windows is a registered trademark or trademark of Microsoft Corporation USA in the United States and other countries.

1-2 Computer Requirements

To monitor and operate air conditioners by web browser, computer must include the following requirements.

Table 1-1 Computer Requirements

Item	Requirement
CPU	Pentium 300MHz or faster
Memory	64M Bytes or more (128M Bytes or more recommended)
Screen resolution	1024 x 768 or higher recommended
Compatible browser	 Microsoft® Internet Explorer 6.0 Microsoft® Internet Explorer 7.0 Microsoft® Internet Explorer 8.0 Note: You must have a Java execution environment. (Sun Microsystems® Java Plug-in Ver.1.6.0_02 or later). Note: You can check the Sun Microsystems® Java Plug-in version in "Java" in a control panel. Note: Install Sun Microsystems® Java Plug-in that is appropriate for your operating system. When using 64-bit Internet Explorer, install 64-bit Java Plug-in. Note: When using Sun Microsystems® Java Plug-in Ver. 1.6.0_10 or later, set the Java execution environment according to the instructions in section 2-3 "Setting the Java Execution Environment."
On-board LAN port or LAN card	One connector (100BASE-TX)
Other	Pointing device such as a mouse

Note: Microsoft is a registered trademark or trademark of Microsoft Corporation USA in the United States and other countries.

Sun Microsystems and Java are trademarks or registered trademarks of Sun Microsystems Inc. in the United States and/or other countries.

1-3 Notes on using AG-150A with the integrated centralized control software (TG-2000A)

If the system is connected to the integrated centralized control software (referred to as TG-2000A hereafter), make all settings and changes from the TG-2000A so that the data in TG-2000A and AG-150A will match.

2 Setting the Operating Environment

PC settings and web browser settings that are required for using a web browser to monitor air conditioner units and perform operations are explained in the following pages.

2-1 Setting the PC IP Address

Set an IP address on the PC that enables AG-150A to connect via a web browser. For instance, if the AG-150A IP address is [192.168.1.1], the PC IP address will need to belong to the same system [192.168.1.101].

If the AG-150A is connected to an existing LAN, ask the LAN administrator to decide what PC IP address to use.

- Note: When using a AG-150A dedicated LAN, it is recommended that the AG-150A main unit be given an IP address within the range [192.168.1.1] [192.168.1.40] and the PCs that will be connected to the AG-150A be given an IP address within the range [192.168.1.101] [192.168.1.150]
- (1) Click on [Control Panel] under [Start] to open the Control Panel.
- (2) In the Control Panel window, double click [Network and Dial-up Connections] and the Network and Dial-up Connections window will open. Double click on [Local Area Setting] and the [Local Area Connection Status] dialog will open. Click [Properties].

(3) In the [Local Area Connection Properties] dialog, click [Internet Protocol] to select it and click the [Properties] button.







(4) In the [Internet Protocol (TCP/IP) Properties] dialog, click [Use the following IP address] and enter the IP address (for example, "192.168.1.101") that you want to set in the IP address field.
You normally set [255.255.255.0] as the subnet mask.

Note: Ask your LAN administrator to provide the IP addresses and subnet mask.

(5) Click the [OK] button to close this dialog, and then close the other open dialogs to complete the network setting.

nternet Protocol (TCP/IP) Proper	ties	? 🔀
General		
You can get IP settings assigned autom this capability. Otherwise, you need to a the appropriate IP settings.	atically if your network suppor isk your network administrator	s ior
🔘 🛛 btain an IP address automatically	,	
Use the following IP address: —		
IP address:	192.168.1.101	
S <u>u</u> bnet mask:	255 . 255 . 255 . 0	
Default gateway:		
O Dbtain DNS server address autom	atically	
• Use the following DNS server add	resses:	
Preferred DNS server:		
Alternate DNS server:	· · ·	
	Advance	d
	OK Ca	ancel

2-2 Setting the Web Browser

Use a security device such as a VPN router when connecting the AG-150A to the Internet to prevent unauthorized access.

If no security devices are installed, the operation settings may be changed by an unauthorized person without the knowledge of the user.

Necessary web browser settings must be performed to enable the web browser to connect to the AG-150A. Note: The settings and screen images used as examples in this manual are based on Internet Explorer 6.0.

2-2-1 No Internet Connection

Follow the instructions below to make the web browser environment settings when using the PC with no Internet connection for monitoring and operating the air conditioners.

(1) Click the web browser menu item [Tools] and then click [Internet Options...] to select.

File Edit View Favorites	Tools Help	
G Back 🔹 🐑 🔹 💌	Mail and News Synchronize	📌 Favorites 🜒 Media 🥝
Address 🕘 http://192.168.1.1/	Show Related Links	
The page car	Internet Options	

- (2) In the [Internet Options] tabbed dialog, click the [Connections] tab to display.
- (3) Select [Never dial a connection] in the Dial-up settings section and click the [OK] button to close the dialog.

Internet Options	? 🔀
General Security Privacy Content Connections	Programs Advanced
To set up an Internet connection, click Setup.	Setup
Dial-up and Virtual Private Network settings	
Dialup Connection (Default)	Add
	<u>R</u> emove
Choose Settings if you need to configure a proxy server for a connection.	Settings
Never dial a connection	
Dial whenever a network connection is not pres	ent
Always dial my default connection	
Current Dialup Connection	S <u>e</u> t Default
CLocal Area Network (LAN) settings	
LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.	LAN Settings
OK Ca	ncel Apply

2-2-2 Connecting to the Internet Using a Dial-up

If the PC you use for monitoring air conditioners and performing operations is going to connect to the Internet via a dial-up connection, use the procedure given below to set the web browser environment settings.

By performing these settings, a message will appear asking whether or not to use a dial-up connection when an Internet connection is necessary. When connecting to the Internet, follow the directions below.

- (1) Click the web browser menu item [Tools] and then click [Internet Options...] to select.
- (2) In the [Internet Options] tabbed dialog, click the [Connections] tab to display.
- (3) Select [Dial whenever a network connection is not present] in the Dial-up settings section and click the [OK] button to close the dialog.

ATTP 404 Not Found - Microsoft Internet Explorer						
File Edit View Favorites		Help				
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inder of a map of the fourth of the	Sho	w Related Links				
The page car	Inte	rnet Options				

Internet Options	? 🛛
General Security Privacy Content Connections	Programs Advanced
To set up an Internet connection, click Setup.	Setup
Dial-up and Virtual Private Network settings	
Dialup Connection (Default)	A <u>d</u> d
	<u>R</u> emove
Choose Settings if you need to configure a proxy server for a connection.	Settings
Never dial a connection	
 Dial whenever a network connection is not pres 	ent
 Always dial my default connection 	
Current Dialup Connection	S <u>e</u> t Default
CLocal Area Network (LAN) settings	
LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.	LAN Settings
ОК Са	ncel Apply

2-2-3 Connecting to the Internet using a proxy server (Using an existing LAN)

If the PC you use for monitoring air conditioners and performing operations is going to access the Internet via proxy server by connecting to an existing LAN such as a LAN within your company, use the procedure given below to set the web browser environment settings.

By performing these settings, your PC will connect to a proxy server only when connecting to the Internet.

- (1) Click the web browser menu item [Tools] and then click [Internet Options...] to select.
- (2) In the [Internet Options] tabbed dialog, click the [Connections] tab to display.
- (3) Select [Never dial a connection] in the Dial-up setting section.
- (4) Click the [LAN Setting . . .] button in the Local Area Network (LAN) settings section to display the Local Area Network (LAN) Settings dialog.
- (5) In the Local Area Network (LAN) Settings dialog, check [Bypass proxy server for local addresses] and click the [Advanced...] button.

- (6) Enter the IP address for the AG-150A (e.g. 192.168.1.1) in the Exceptions field of the Proxy Setting dialog and click the [OK] button to close the dialog and then close the other open dialogs to complete the setting.
 - Note: If connecting to more than one AG-150A, you can specify multiple IP addresses like [192.168.1.1; 192.168.1.2], however, it is also possible to use the asterisk (*) and specify [192.168.1*].

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ternet Options	?
General Security Privacy Content Connectio	ns Programs Advanced
To set up an Internet connection, click Setup.	Setup
Dial-up and Virtual Private Network settings	
Dialup Connection (Default)	A <u>d</u> d
	<u>R</u> emove
Choose Settings if you need to configure a pro- server for a connection.	(Y <u>S</u> ettings
Never dial a connection	
O Dial whenever a network connection is not p	resent
 Always dial my default connection 	
Current Dialup Connection	S <u>e</u> t Default
CLocal Area Network (LAN) settings	
LAN Settings do not apply to dial-up connection Choose Settings above for dial-up settings.	s. LAN Settings
	Cancel Applu
	Danoor Dppy

Local Area Network (LAN) Settings 🛛 🛛 🛛 🔀
Automatic configuration Automatic configuration may override manual sattings. To ensure the use of manual sattings, disable automatic configuration.
Use automatic configuration script
Address
Proxy server
Use a pro_Xy server for your LAN (These settings will not apply to dial-up or VPN connections).
Address: 192.168.1.254 Port: 8080 Advanced
Bypass proxy server for local addresses
OK Cancel



2-3 Setting the Java Execution Environment

When using Java Plug-in version 1.6.0_10 or later, make the following environment settings (not required for version 1.6.0_09 or earlier).

Note: The setting samples and screenshots used in this manual are those of Java Plug-in version 1.6.0_11.

2-3-1 Disabling the next-generation Java Plug-in

- (1) Open Java Control Panel by double-clicking Java in the Control Panel.
- (2) In the [Advanced] tab under the [Java Control Panel] screen, click the plus next to [Java Plug-in] to expand the list, and uncheck the checkbox next to [Enable the next-generation Java Plug-in (requires browser restart.)].

*The checkbox cannot be unchecked depending on your PC environment. In this case, update the version of Java Plug-in to 1.6.0_30 or later.



3 Performing Operations

Text below explains how to connect to the AG-150A and how to make various settings for the AG-150A.

Note: If the AG-150A is restarted due to a power interruption etc., wait until the screen on the AG-150A main unit displays the normal operation screen (it takes several minutes before the normal operation screen is displayed) before using a web browser to access the AG-150A. If access is attempted while the AG-150A is still starting up, the most recent data might not be displayed or communication errors could occur.

Note: Default IP address of AG-150A is "192.168.1.1". (Factory setting)

3-1 Opening the Option Setting screen 3-1-1 Opening the Option Setting screen

(1) Enter the web page address in the address field of the web browser as follows:

http:// [IP address of the AG-150A]/g-50

/administrator.html

Press the [Enter] key on the keyboard. A screen appears for login. Note: For example, type "http://192.168.1.1/g-50/administrator.html" if the

AG-150A IP address is [192.168.1.1].

*If the login screen does not appear then take the steps below to delete the temporary files as it may help with the problem.

<Internet Explorer>

- 1. Open Internet Explorer and click on Tools.
- 2. Click on Internet Options.
- 3. On the General Tab, in the middle of the screen, click on Delete Files.
- <Java>
- 1. Click Start > Control Panel.
- 2. Double-click the Java icon in the control panel to launch the Java Control Panel.
- 3. On the General Tab, click on Settings under Temporary Internet Files.
- 4. Click on Delete Files.
- (2) Enter the user name and the password in the login screen, and click the [Login] button. A screen will appear in which various setting are made. Procedures for making proper settings on each screen will be explained in the following pages.

The user name and password is same as the maintenance user of the Web for initial setting.

Note: The Web page is displayed in the same language as the computer uses and it is also possible to display the Web page in other languages by entering the following Web page addresses.

Chinese	:http://[The IP address of the AG-150A]/g-50/zh/administrator.html
English	:http://[The IP address of the AG-150A]/g-50/en/administrator.html
French	:http://[The IP address of the AG-150A]/g-50/fr/administrator.html
German	:http://[The IP address of the AG-150A]/g-50/de/administrator.html
Italian	:http://[The IP address of the AG-150A]/g-50/it/administrator.html
Japanese	:http://[The IP address of the AG-150A]/g-50/ja/administrator.html
Portuguese	:http://[The IP address of the AG-150A]/g-50/pt/administrator.html
Russian	:http://[The IP address of the AG-150A]/g-50/ru/administrator.html
Spanish	:http://[The IP address of the AG-150A]/g-50/es/administrator.html

Note: When the license of "Web Monitor" is not registered, the following message will appear when the [Login] button is clicked.

Login

License is not registered. Register the web license "Web Monitor"

(3) Enter the web page address in the address field of the web browser as follows and press the [Enter] key on the keyboard. A screen appears for optional (measurement) settings.

http://[IP address of the AG-150A]/g-50/option.html

Note: For example, type "http://192.168.1.1/g-50/option.html" if the AG-150A IP address is [192.168.1.1].

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	Retresh			Save Settings	

		Ander
Login Page		Begistration of Optional Functions
	Type your user name and password. User name Password	
	Lögn	

3-1-2 Encrypting the communication data and opening the Option Settings screen

AG-150A can encrypt communication data using HTTPS (SSL).

When connecting the AG-150A to the LAN that can be accessed by the general public, it is recommended that the following settings be made so that the units are monitored and controlled on the encrypted Web page.

Note: Depending on the operating system or the version of Java, HTTPS encrypted messages may not be handled correctly. If this happens, use a HTTP connection to monitor and control the units as noted in the section above.

(1) Go to [Tools]->[Internet Options]->[Advanced], and make the following settings.

Item	Checkbox setting
Use SSL 2.0	Uncheck the box.
Use SSL 3.0	Check the box.
Use TLS 1.0	Uncheck the box.
Do not save encrypted pages to disk	Check the box.

Note: Some of the settings may have different names depending on the Web browser version.

- Internet Options ? General Security Privacy Content Connections Programs Settings: 🔒 Security Allow active content from CDs to run on My Computer Allow active content to run in files on My Computer Allow software to run or install even if the signature is invalid Check for publisher's certificate revocation Check for server certificate revocation (requires restart) Check for signatures on downloaded programs Do not save encrypted pages to disk Empty Temporary Internet Files folder when browser is closed Enable Integrated Windows Authentication (requires restart) Enable Profile Assistant ~ 🔲 Use SSL 2.0 🗹 Use SSL 3.0 Use TLS 1.0 Warn about invalid site certificates Warn if changing between secure and not secure mode > < Restore Defaults OK Cancel
- (2) Click on [Java] in the Control Panel, and make the settings for the items under [Security] in the [Advanced] tab.

Item	Checkbox setting
Use SSL 2.0 compatible Client Hello format	Uncheck the box.
Use SSL 3.0	Check the box.
Use TLS 1.0	Uncheck the box.

Note: Some of the settings may have different names depending on the Java version.

(3) Prefix the Web address with [https], enter the address, and hit the [Enter] (Return) key on the keyboard.

https://[IP Address of the AG-150A]/g-50 /administrator.html

Note: For example, type "https://192.168.1.1/g-50/administrator.html" if the AG-150A IP address is [192.168.1.1].

If the security alert is disabled as described in the note in the following and the subsequent sections, encrypted date

communication will begin, and the Login screen will appear. If the security alert has not been disabled, take the following procedures.

🏄 Java	Contro	l Pane	el				
General	Update	Java	Security	Advanced			
E-Misc	ugging a console sult Java f tcut Crea P File/MIMI Auto-Dow rrity Ø Allow (Ø Use ce Ø Use pe Ø Warn i Show : Ø Allow (Ø Warn i Check Enable Use 55 Ø Use 52 Use 52 Use 52 Use 52	ior brow tion E Association user to user to site cer sandbo user to publish e online \$2.0 c 51.30	vsers iation grant perr grant perr es and key certificate certificate fricate fro x warning accept JN er certificate ompatible	missions to s missions to o rs in browse automatica does not mai does not mai does not mai does not mai does not mai does not mai baner P security not validation ClientHello f	igned conte ontent fron t keystore ly if only or ch hostnan en if it is va equests tation ormat	ent n an untrusted ne matches sern ne	authority ver request
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- (4) If the security alert has not been disabled, after entering the web address and hitting the Enter (Return) key, a security alert message will alert asking if you want to proceed. This is because the AG-150A uses the self-authentication system. Click [Yes] and proceed.
 - Note: To disable the security alert that appears every time the browser is opened, take the following two steps:
 - 1) Register the security certificate and
 - 2) Change the Web browser's option settings

To register the security certificate, click the [View Certificate] button on the security alert window to display the certificate, click on the [Install Certificate] button, and add the certificate to the Trusted Root Certification Authorities store. Just follow the prompts of the Import Wizard.

Go to [Tools]->[Internet Options]->[Advanced], and make the following settings for the Web browser.

Item	Checkbox setting
Warn about invalid site certificates	Uncheck the box.

unicate	Import wizard
ertifica	e Store
Certif	cate stores are system areas where certificates are kept.
Windo	ws can automatically select a certificate store, or you can specify a location for
0	Aytomatically select the certificate store based on the type of certificate
۲	Place all certificates in the following store
	Certificate store:
	Trusted Root Certification Authorities Browse
	< <u>Back</u> <u>N</u> ext > Cancel

- (5) A Java security alert message will appear after you click [Yes] in step (4) above, click [Yes] again to proceed.
 - Note: To disable the security alert message that appears every time the browser is opened, check the check box next to [Always trust content from this publisher], and click [Yes]. The browser may need to be restarted to reflect the change.
 - Note: If the window shown on the right does not appear and connection fails, the certificate needs to be added to the Java certificate list. Click the [View Certificate] button on the screen in step (4) to display the certificate, click on the [Copy to File] on the [Details] page, and save the

Warning - Security	X
The web site's certificate cannot be verified. Do want to continue?	you 🅠
Name: 1921681.1 Publisher: Mitsubishi Electric Corporation Diways trust content from this publisher.	Yes No
The certificate cannot be verified by a trusted source.	More Information

certificate in any desired location in the DER format. Open [Java] in the Control Panel, click on the [Certificates] button on the [Security] page to bring up the certificate registration screen. On the screen, select [Secure Site], click on the [Import] button, change the File of type to [All Files], and select the saved certificate. Now the certificate has been added to the Java certificate list.

(6) If a connection is successfully made, the login window will appear. All communication with the AG-150A will be encrypted.

Enter the user name and the password in the login screen, and click the [Login] button. A screen will appear in which various setting are made. Procedures for making proper settings on each screen will be explained in the following pages.

The user name and password is same as the maintenance user of the Web for initial setting.

File Edit View Favorites Tools Help			
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	Type your user name and password.		
	User name		
	Password		
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(7) Enter the web page address in the address field of the web browser as follows and press the [Enter] key on the keyboard. A screen appears for optional (measurement) settings.

https://[IP address of the AG-150A]/g-50/option.html

Note: For example, type "https://192.168.1.1/g-50/option.html" if the AG-150A IP address is [192.168.1.1].



3-2 Enabling the function that measures the electric power by the outdoor unit

On the Measurement Settings screen that appears when the above-mentioned address is entered, the settings for the measurement of the electric power by the outdoor units as well as the settings for the temperature, humidity, power measurement for the AI controller (PAC-YG63MCA) and PI controller (PAC-YG60MCA).

After the settings are made, click [Save Settings] to send setting data to AG-150A.

- Note: If PAC-YG50ECA Expansion Controllers are connected, Expansion Controller system selection buttons will appear. Select the desired Expansion Controller (EC1, EC2, or EC3), and make the settings for each system. Make the settings with the Expansion Controllers properly connected.
- Note: License of "Web Monitor" or "Basic License Pack" is necessary to use the web browser (to operate or monitor the air conditioners). Some licenses are necessary depending on the functions to be used. Register the license key on the LCD screen or on the registration screen.
- Note: A one-day license key can be registered on the LCD screen that allows the user to use the "Web Monitor" only on the day of the registration (not applicable to GB-50ADA-A and GB-50ADA-J). Use this license key to use the initial setting browser, or in any other situations when a temporary license key "Web Monitor" is necessary.
- Note: The use of the function of the outdoor units that measures the electric power will require the "Energy Management License Pack."
- Note: All connected outdoor units will appear on the screen. The setting for the electric power measurement function of the outdoor units that do not have that function will be fixed to [Not Available] and cannot be changed to [Available].
- Note: When connecting AG-150A controllers by connecting an Expansion Controller to the system, measurement settings should be made only on one of the AG-150A controllers.

A Measurement settings on Expansion Controllers (PAC-YG50ECA), when connected, must be made with the Expansion Controller properly connected to ensure proper settings.

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	Address 🚳 http://192.168.1.1/g-50/en/option.html	V 🔁 Go Links	»
Address Unit address will be displayed			
nere.	Measurement /		+Name of outdoor unit
Expansion Controller	Address Name / Function A	vailability	Set the name of outdoor unit.
system selection buttons Click to select the system to be set.	EII 51 Name : 2F Tenant Floor		Outdoor unit measurement function
Selection of separator—	EC3		Switch between [Available] and
character			[Not Available] for the electric power measurement function.
Select the separator character for CSV file.	Image: Construction () (12.92) (13.92) (12.92) (13.92) (12.92) (13.92) (13.92) (13.92)	Type of E-Mail Out-of-limit alarm Mail Subject	Scroll bar Switch the address.
Selection of decimal point—	2.04 223 Comma ()	E-Mail Address 1	
character	Every 1 minute (For 2 days) Every 2 minutes (For 4 days)	▶ <u>E-Mail Settings</u>	Savo Sottings
Select the decimal point	Every 5 minutes (For 10 days)		Cond cotting data to AC 450A
character.	Refresh	Save Settings	Send setting data to AG-150A.
		Copylight(C) 2004-2000 MITSUBISHI ELECTRIC CORPORATION All Rights Reserve	
	8	Succel Intranet	
Refresh-			
Read setting data from AG-150A.			

3-2-1 Entering the outdoor unit names

Click on the scroll bar to scroll down to the outdoor unit to be selected as the electric power measurement target, and enter its name.

Name :	2F Tenant Floor

3-2-2 Switch between [Available] and [Not Available]

If [Available] is selected for the "Outdoor unit measurement function," outdoor units will begin measuring the electric power.

Outdoor unit measurement function :	Available	Not Available
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3-2-3 Setting the trend data format

The data format to be used when the trend graph data of the measured value is downloaded can be set.

- (1) Select the separator character between [Comma (,)] and [Semicolon (;)].
- (2) Select the decimal point character between [Dot (.)] and [Comma (,)].



- Note: Regardless of the settings on the screen above, the data collection intervals and data storage duration for the function of the outdoor units that measure the electric power will be fixed for each data type.
 - Electric Energy (kWh) is the cumulative amount for each successive 30-minute period, Electric Power (kW) shows the maximum value in each successive 5-minute period, and Efficiency shows the average efficiency values that are taken at 5-minute intervals. These data are retained for up to 62 days.

3-3 Checking the electric power measured by the outdoor units

The amount of electric power measured by the outdoor units can be checked on the [Measurement List] screen that can be accessed via a Web browser for system maintenance engineers.

3-3-1 Logging in on the Web browser for system maintenance engineers

Enter the web page address in the address field of the web browser as follows and press the [Enter] key on the keyboard. A screen appears for login.

http://[IP address of the AG-150A]/administrator.html

Note: For example, type "http://192.168.1.1/administrator.html" if the AG-150A IP address is [192.168.1.1]. Note: To encrypt data, change [http] to [https].

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3-3-2 Using a measurement list

Click [Monitor/Operation] in the menu, and click [Measurement List] in the sub menu to display a list of the measurement condition.

On this screen, the amount of electric power measured by the outdoor units can be checked.

- Note: Only the measurement results of those units whose "Outdoor unit measurement function" setting was set to [Available] can be obtained.
- Note: If an AI controller (PAC-YG63MCA) or a PI controller (PAC-YG60MCA) is connected, temperature, humidity, and the reading of the watt-hour meter will also appear.



Item	Description	
Trend graph	Switches to the screen where the measurement value can be checked by graph.	
Update to most recent condition	Click [Update] to ensure the displayed items reflect the most recent operation condition. When [Auto] is selected, information is updated automatically every minute to reflect the latest information.	
Measurement value	 Displays the current readings of the Electric Energy (kWh), Electric Power (kW), and Efficiency. Note: Electric Energy (kWh) is the cumulative values since measurement began. Note: The value for Efficiency will read "0" when the compressor on the outdoor unit is not operating. Note: The measurement data are collected from outdoor units at 1-minute intervals. So the displayed data are refreshed at 1-minute intervals. 	

3-3-3 Using a graph

Click [Trend Graph] on the measurement condition list screen, and select the measured item to be displayed. The measured value can be checked by graph. The graph can also be downloaded as a CSV file.

Update to most recent condition

Click to update the screen so that the most recent operation condition is shown.

Selection of measured

item Select the measured item to be displayed.

> Measurement value-The measured value is displayed as a graph.

Download Click to download the graph

in the CSV format.



Overview display

Click to display the measurement value as a list.

Measurement date

Select the date when the value to be displayed is measured.

Item		Description	
Overview		Switches to the screen where the measurement value can be checked as a list.	
Update to most recent condition		Click [Update] to ensure the displayed items reflect the most recent operation condition.	
Selection of measured item		Click the [Selection of measured item], and select the measured item to be displayed from the list.	
Measurement date		Select the date when the value to be displayed is measured.	
		Note: Up to 62 days of the measurement data collected by the outdoor units can be stored and displayed.	
Outdoor unit	Electric Energy (kWh)	Electric energy (kWh) is shown as a bar graph in 30-minute increments.	
	Electric Power (kW)	Electric power (kW) is shown as a line graph in 5-minute increments.	
		Note: The largest value of the values measured at 1-minute intervals in each 5 minutes will be displayed.	
	Efficiency	Efficiency is shown as a line graph in 5-minute increments.	
		Note: The average value of the values measured at 1-minute intervals in each 5 minutes will be displayed.	
		Note: The value for Efficiency will read "0" when the compressor on the outdoor unit remains stopped for 5 minutes.	

Click [Download] to download the gr The data format of the downloaded data	aph in the CSV format. is as follows	
The data format of the downloaded data		
Item	Aded data is as follows.	
First line File type 124: Outd	oor unit data	
Second line Date yyyy/mm/	dd	
Note: T	he date format set on Initial Setting Web.will be applied. ature: "Address" + M-NET address	
Third line Trend target Note: I	f an expansion controller is connected, the third line will appear in the "Address"+[Expansion controller No.]- [M-NET address] format.	
Fourth line Measured item " Time,Ele	ectric energy (kWh),Electric power (kW),Efficiency"	
Fifth line or Data hh:MM, E later Note: E	ectric energy, Electric power, Efficiency lectric energy (kWh) is shown in 5-minute increments.	
Example of csv data 124 15/03/2008 Address 53 Time,Electric energy 00:00,15.24,32.23,2.3 00:05,14.20,29.57,2.4 00:10,12.25,26.00,2.5 : 23:55,11.60,25.27,2.3 Note: When the data cannot be down properly, uncheck the "Use Passi (for firewall and DSL modem comp " checkbox. (Refer to the image right.)	(kWh),Electric power (kW),Efficiency	
	Restore Defaults OK Cancel	

[Modification list]

Category Item		Contents	Page/Section	
Modification	Note about Java	A note regarding Java Plug-in execution		
	execution environment	environment was added.	P6 Section 2-3-1	
Modification	"Web Monitor" license :	An explanation of new error message, which		
	unregistered error	appears when the license of "Web Monitor" is	P7 Section 3-1	
	message	not registered, was added.		

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

- Low Voltage Directive 2006/95/EC
- Electromagnetic Compatibility Directive 2004/108/EC

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

MITSUBISHI ELECTRIC CORPORATION

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