

AMC Manager

User's Manual



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Introduction

Thank you for purchasing the AMC Manager utility.

1-1. Introduction

This manual provides information on how to configure and use the AMC Manager.

Disclaimers

- The unauthorized transfer or copying of the content of this manual, in whole or in part, without prior written consent is expressly prohibited by law.
- The content of this manual is subject to change without notice.
- This manual was prepared to accurately match the content of each OS, but the actual information shown on the computer monitor may differ from the content of this manual due to future OS version upgrades, modifications, and other changes.
- Although every effort was made to prepare this manual with the utmost accuracy, Silex Technology will not be held liable for any damages as a result of errors, setting examples, or other content.

Trademarks

- Microsoft and Windows are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Wi-Fi, Wi-Fi Direct, Wi-Fi Protected Setup, Wi-Fi Protected Access (WPA), WPA2 are trademarks or registered trademarks of Wi-Fi Alliance.
- Other company names and product names contained in this manual are trademarks or registered trademarks of their respective companies.

2. What is AMC Manager?

This chapter explains each function of the AMC Manager.

2-1. AMC Manager's Features

The AMC Manager provides unified and remote control of the Silex devices connected both in wired or wireless network, such as status monitoring, configuration change, firmware update, restart, etc. It can save your time of maintenance for devices installed to many locations, as well as find a possible problem for quicker resolution.

AMC Manager's Features

The AMC Manager has following features:

Common user interface for Silex products

For maintenance of the Silex Access Points or station products, many configuration features are installed to the AMC Manager, which can monitor device status, change the configuration and update the firmware version, etc. It can reduce the maintenance cost for the network administrators.

Remote control / monitoring

The status information (wireless LAN status, device status, etc.) can be monitored and the configuration (channel, IP, SSID, etc.) can be changed from a remote place. A network error or device error can be predicted, prevented and resolved from a remote place.

Bulk configuration / firmware update

Even when Silex devices are installed to multiple locations, the configuration can be changed or the firmware can be updated at once. You can save the time of maintenance as well as easily change the security settings such as SSID, etc, regularly.

Survey Assistant plug-in provides a remote wireless survey feature (AMC Manager E model only)

By using the Survey Assistant plug-in together with Silex product, your wireless environment can be visualized as a graph. Because of this, you can check the wireless LAN status and the environmental changes from a remote place in order to keep a stable wireless connection.



Note

- "Survey Assistant plug-in" is a plug-in function which can be used with the Silex network display adapter products such as SX-ND-4350WAN, etc.

AMC Manager's Operating Environment

Name	Details
OS	Microsoft Windows 7 SP1 (32/64bit) Microsoft Windows 8 (32/64bit) Microsoft Windows 8.1 (32/64bit) Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2012 R2 Microsoft Windows 10 (32/64bit) (*1)
Languages	English Japanese
Environment	.NET Framework 4.5 or newer
Supported devices	Silex's network devices * Please visit our homepage for compatible devices.
Number of controllable devices	Up to 10000 devices
Supported transport layer protocol (Port number is occupied)	TCP(#60000) UDP(#60000) UDP(#60001)

(*1) Microsoft Windows 10 will be supported on June 2016.



- The AMC Manager runs as a classic desktop application on Windows 8.
- Windows RT is not supported.

3. Installing AMC Manager

This chapter explain how to install the AMC Manager.

3-1. Before You Begin

License Information

Please be ready for the information below you may have registered when the license was purchased.

- License key
- Company name
- Name
- Email address

Checking Device Compatibility

In order to use the AMC Manager, the Silex product must support the AMC Manager.

Please check the compatibility on our website below.

Also, depending on the product, you may need to change the setting of it.

For details, refer to the user's manual of each product.

URL	
USA	http://www.silexamerica.com/
Europe	http://www.silexeurope.com/
Japan	http://www.silex.jp/

3-2. Installing AMC Manager

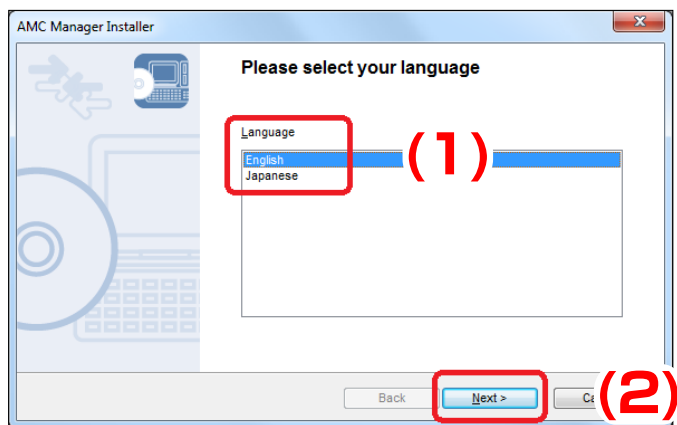
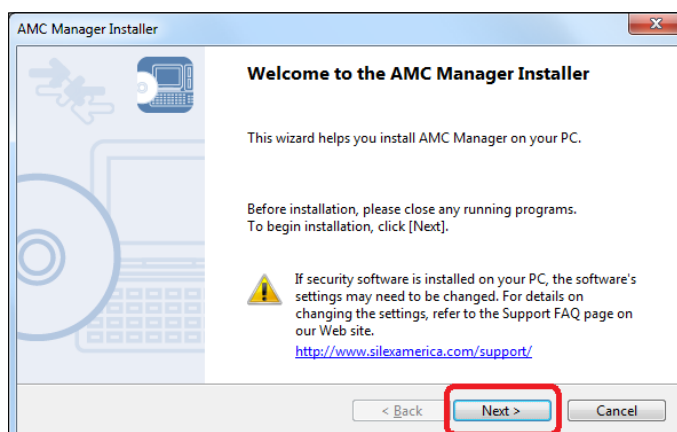
Start the installer to install the AMC Manager.

1. Double-click **Setup.exe** of the AMC Manager on your PC.

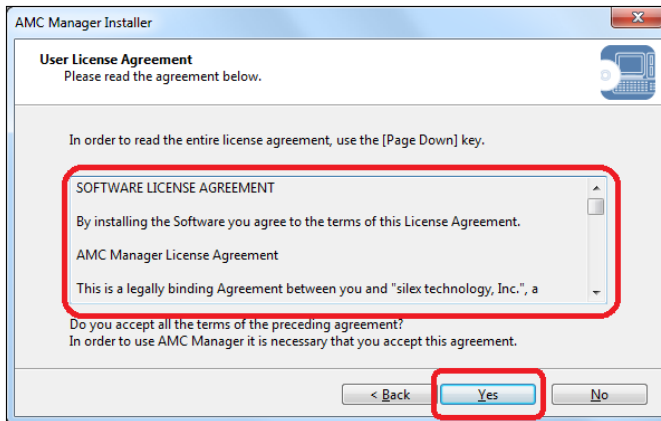


Note

- When the user account control is enabled on your PC, the User Account Control screen is displayed (the screen may differ depending on your OS). If it is displayed, click **Continue** or **Yes**.

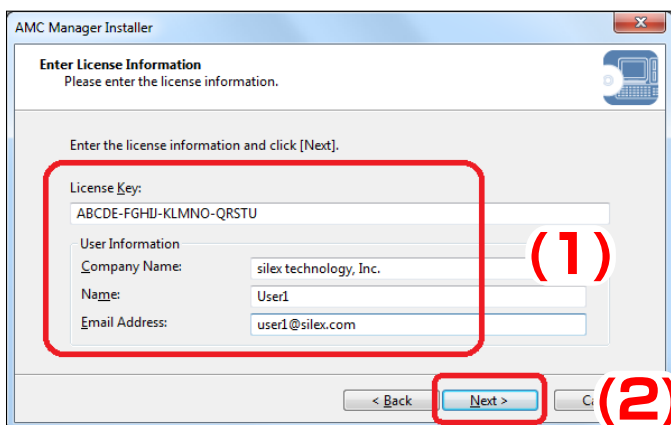
2. Select a language and click **Next.****3. Click **Next**.**

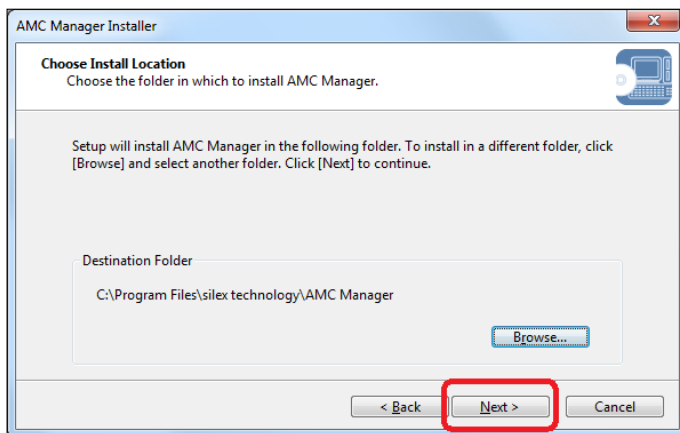
4. Read the software license notes and click **Yes** when you agree with the terms and conditions.



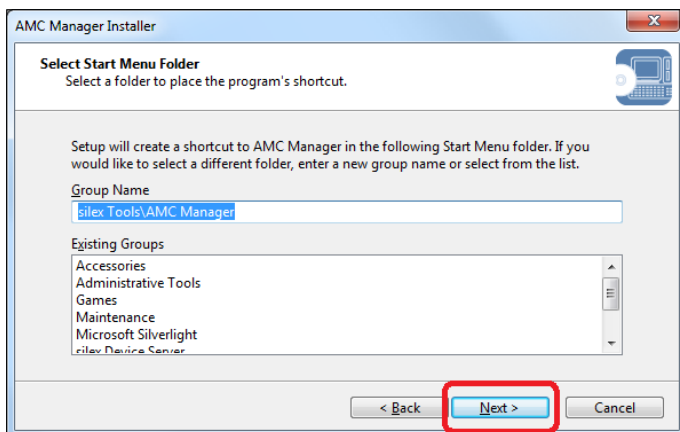
5. Enter the license information and click **Next**.

If the AMC Manager has already been installed to your PC, the screen below is not displayed.



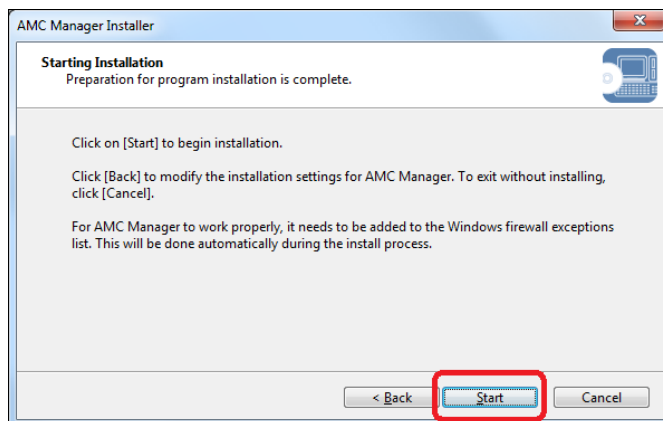
6. Select a folder to install the AMC Manager into and click **Next**.**Note**

- By default, the AMC Manager is installed to **(C:\Program Files) \silex technology\AMC Manager** on your PC.
- By clicking **Browse**, you can change the folder to install the AMC Manager into.

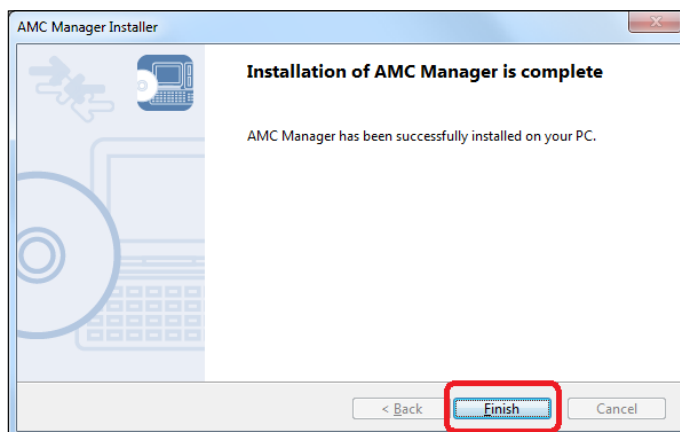
7. Specify a group name to be displayed at the start menu and click **Next**.**Note**

- By default, the group name is set as **silex Tools\AMC Manager**.
- It is possible to change the group name.

8. Click **Start** to start the installation.



9. Click **Finish**. The AMC Manager will start.



4. AMC Manager

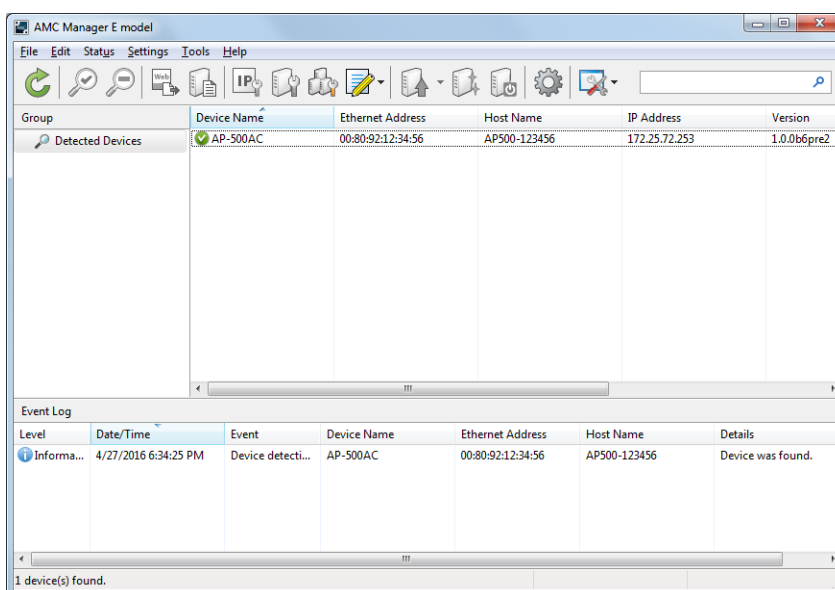
This chapter explains how to use the AMC Manager.

4-1. Starting/Finishing AMC Manager

How to start and finish the AMC Manager is explained.

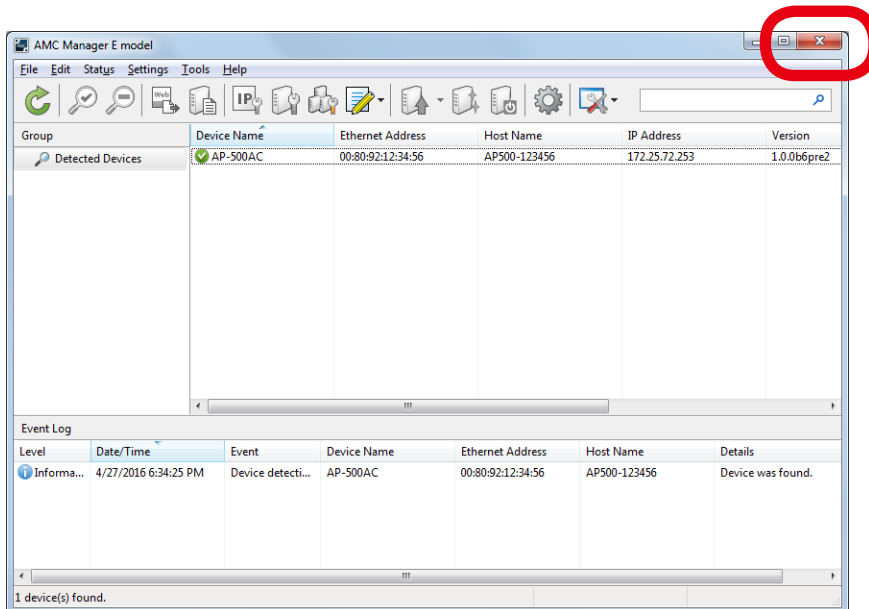
Starting AMC Manager

1. Click **Start - (All) Programs - silex Tools - AMC Manager - AMC Manager**.
The AMC Manager will be started.



Finishing AMC Manager

1. Click the close button from top right of the window.
The AMC Manager will be finished.



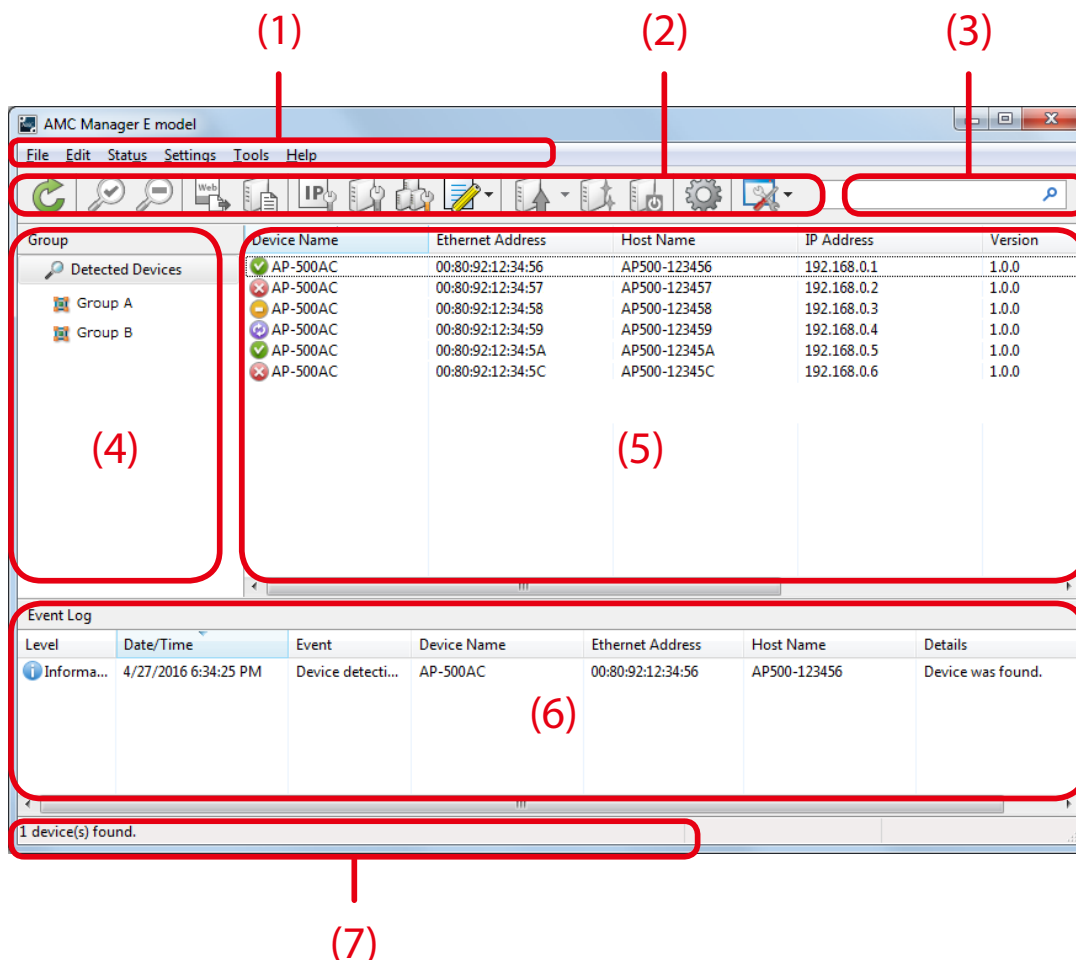
The AMC Manager can also be finished by the method below.

- Click **File - Exit** from the menu bar.

Note

4-2. AMC Manager's Main Window

The following explains the AMC Manager's main window.



(1) Menu bar

Executes each function of the AMC Manager.

(2) Tool bar

Executes each function of the AMC Manager.

(3) Search box

Searches for the entered text and shows the matched devices in the list.

(4) Group list

Shows a list of created groups.

(5) Device list

Shows a list of the Silex devices running on a network and the operating status of each.

(6) Log list

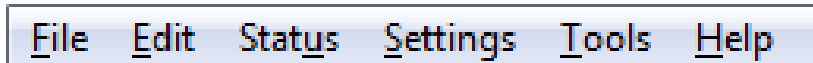
Shows the event logs.

(7) Status bar

Shows the general information of the Silex device selected on the list.

Menu Bar

Executes each function of the AMC Manager such as configuring the search settings, retrieving the device information, etc.



Menu	Name	Details
File	Refresh	Refreshes the device information on the list. The devices will be detected and displayed even if they are in factory defaults.
	Exit	Finishes the AMC Manager.
Edit	Add Group	Creates a new group.
	Edit Group	Opens the edit window for the selected group.
	Delete Group	Deletes the selected group.
	Import Group	Reads group configuration from a file.
	Export Group	Saves group configuration to a file.
Status	Start Monitoring	Starts monitoring for the selected device. The status will be refreshed at the specified interval.
	Stop Monitoring	Stops monitoring for the selected device. The status will not be refreshed unless you refresh it manually.
	Properties	Displays the properties window.
	Get System Log	Retrieves the system log.
Settings	Configure Using Web Browser	Displays the Web configuration interface.
	IP Configuration	Configures the IP address.
	Device Configuration	Configures a single device.
	Bulk Configuration	Configures multiple devices in bulk.
	Create Configuration File	Creates the configuration file to use for bulk configuration.
	Firmware Update	Updates the device firmware.
	Factory Default Configuration	Resets the device to the factory defaults.
	Restart	Restarts the device.
Tools	Option	Changes the optional settings of the AMC Manager.
	Start Survey Assistant	Starts the Survey Assistant. (AMC Manager E model only)
	Start Log Viewer	Starts the Log Viewer.
Help	Silex Homepage	Opens the homepage of Silex Technology, Inc.
	License Information	Shows the license information.
	About AMC Manager	Shows the version information.

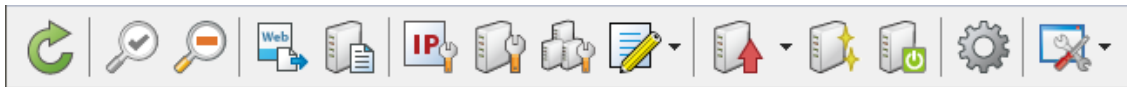


Note

- Even if the device has the default settings and is not configured yet, it will be detected by clicking the **Refresh** button, as the AMC Manager can discover the devices with a different IP address class when the devices are running in the same network as the PC.
- It is impossible to select the function when it is not supported by the device.

Toolbar

Executes each function of the AMC Manager such as configuring the search settings, retrieving the device information, etc.



Icon	Name (Tooltip)	Details
	Refresh	Refreshes the device information on the list. The devices will be detected and displayed even if they are in factory defaults.
	Start monitoring	Starts monitoring for the selected device. The status will be refreshed at the specified interval.
	Stop monitoring	Stops monitoring for the selected device. The status will not be refreshed unless you refresh it manually.
	Configure using Web browser	Displays the Web configuration interface.
	Properties	Displays the properties window.
	Configure the IP address	Configures the IP address.
	Configure the device	Configures a single device.
	Configure multiple devices in bulk	Configures multiple devices in bulk.
	Create the configuration file	Creates the configuration file to use for bulk configuration.
	Firmware update	Updates the device firmware.
	Factory default configuration	Resets the device to the factory defaults.
	Restart	Restarts the device.
	Option	Changes the optional settings of the AMC Manager.
	Start the plug-in tools	Starts the plug-in tools of AMC Manager.

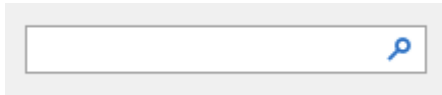


Note

- Even if the device has the default settings and is not configured yet, it will be detected by clicking the **Refresh** button, as the AMC Manager can discover the devices with a different IP address class when the devices are running in the same network as the PC.

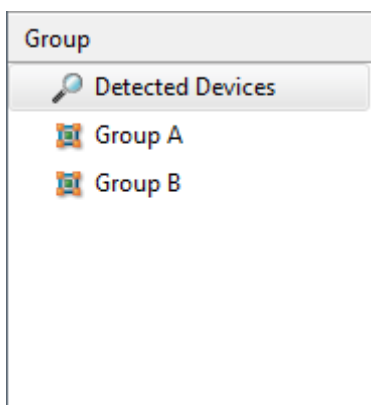
Search box

Searches for a certain text and shows the devices that include that text. The text search is handled on all items of the device list.



Group list

Shows a list of created groups. If a group is selected, the devices registered to that group will be displayed in the device list.




Note








- Right-clicking on a group list will show the context menu. The context menu provides the same function as "Edit" of menu bar, at which groups can be added or edit.

List View (Device List)

Shows a list of the Silex devices running on a network and the operating status of each.

Device Name	Ethernet Address	Host Name	IP Address	Version
 AP-500AC	00:80:92:12:34:56	AP500-123456	172.25.72.253	1.0.0b6pre2

Name	Details
Device Name	Shows the device status icon and device name.
Ethernet Address	Shows the Ethernet Address.
Host name	Shows the host name.
IP Address	Shows the IP Address.
Version	Shows the firmware version.
Status	Shows the status information.
Last Update Time	Shows the time of last status update.

Icon	Status	Details
	Refreshing the status	Retrieving the device status.
	Ready	Device is operating.
	Ready (factory defaults)	Device is operating with the factory default settings.
	No reply	Device is not found on a network.
	No reply (factory defaults)	Device is not found on a network.
	Not a monitoring target	Device is not a target for monitoring.
	Not detected	Device is not detected.

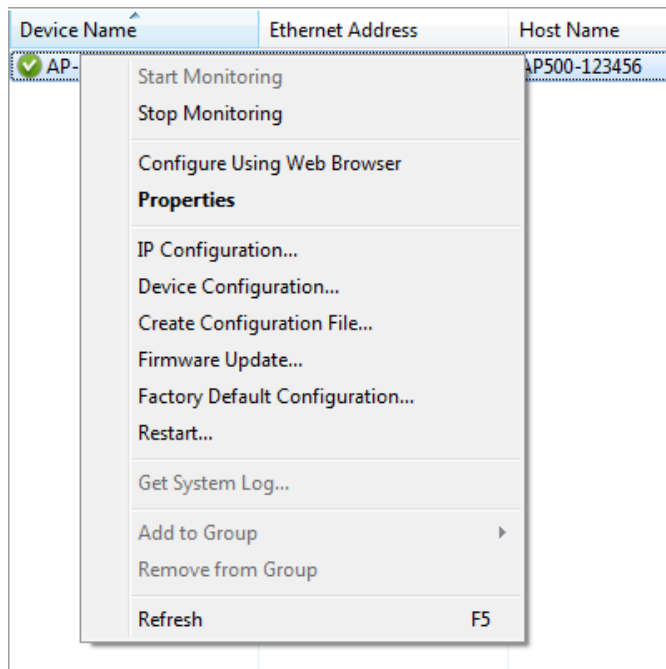


Note

- If you click a column header, the order of devices will be sorted by the column you have clicked.

Context menu

If one device is right-clicked on the device list, the context menu is displayed. The context menu provides each function of the AMC Manager such as device monitoring, configuration, etc. of the selected device.








Name	Details
Start Monitoring	Starts monitoring for the selected device. The status will be refreshed at the specified interval.
Stop Monitoring	Stops monitoring for the selected device. The status will not be refreshed unless you refresh it manually.
Configure Using Web Browser	Displays the Web configuration interface.
Properties	Displays the properties window.
IP Configuration	Configures the IP address.
Device Configuration	Configures a single device.
Create Configuration File	Creates the configuration file to use for bulk configuration.
Firmware Update	Updates the device firmware.
Factory Default Configuration	Resets the device to the factory defaults.
Restart	Restarts the device.
Get System Log	Opens the system log window.
Add to Group	Adds a device to group.
Remove from Group	Removes a device from group.
Refresh	Refreshes the device status.




[Log list]

Log list shows the event information of AMC Manager including executed operations, network monitoring results, etc..

Information of log list is initialized when AMC Manager is started but the past logs would remain on Log Viewer.

Level	Date/Time	Event	✓ Device Name	Ethernet Address	Host Name	Details
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 0...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found

Name	Details
Level	Shows the icons of warning level.
Date/Time	Shows the date/time of event.
Event	Shows the event type.
Device Name	Shows the device name.
Ethernet Address	Shows the Ethernet Address.
Host Name	Shows the host name.
Details	Shows the details of the event.

Icon	Level Type	Details
	Information	Configuration change, device detection, etc.
	Error	Configuration change error, communication error, etc.
	Warning	Monitoring stop, etc.

Group	Event Type	Details
Log of control	IP configuration	IP address is configured.
	Configuration change	Configuration is changed.
	Firmware update	Firmware is updated.
	Initialization	Configuration is initialized.
	Restart	Device is restarted.
	Log retrieval	System log is retrieved.
Log of device monitoring	Device detection / recovery	There is a reply from device.
	Device loss	Reply is lost from device (communication error)
	Monitoring start/stop	Device monitoring is started or stopped.
	Change detection	Configuration is changed or firmware is updated by a method other than AMC Manager.

**Note**

- If you click a column header, the order of logs will be sorted by the column you have clicked.

Status Bar

Shows the numbers of active devices or selected devices.

When only one device is selected on the list, the Ethernet Address and IP Address of that device will be displayed.

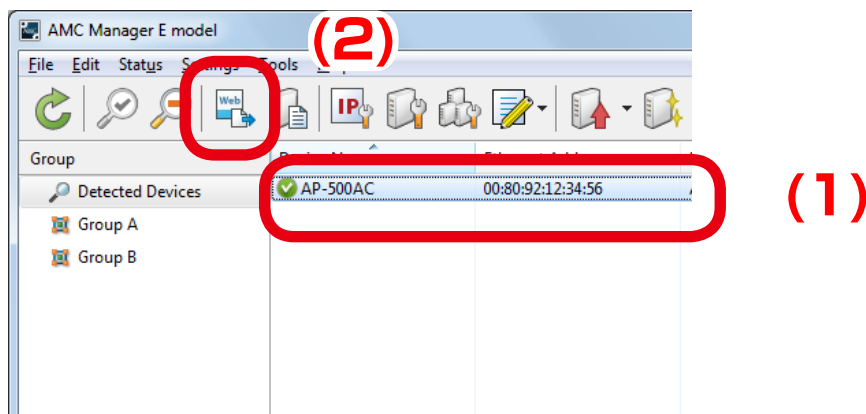
1 item(s) selected.	172.25.72.253	00:80:92:12:34:56
---------------------	---------------	-------------------

4-3. Displaying the Web Configuration Interface

The following explains how to display the Web configuration interface of the Silex device. In the Web configuration interface, you can check the detailed status as well as configure the advanced settings.

Displaying Web Configuration Interface

1. Select a device in the list and click the **Configure using Web browser** icon from the toolbar.



Note

- The Web configuration interface can also be displayed by one of the following methods:
 - Select the device and click **Settings - Configure Using Web Browser** from the menu bar.
 - Right-click on the device and select **Configure Using Web Browser** from the context menu.
- When an IP address class is different between the device and your PC, the Web configuration interface cannot be displayed. See **4-4. Configuring IP Address** for details on how to change the IP address of the device.

**Note**

- When a password is set to the device, the window below is displayed. Enter the password of the device and click **Login**.

- The Web browser will run and the Web configuration interface of the device will be displayed. For details on the Web configuration interface, refer to the user's manual of that device.

Select	SSID	RSSI	CH	Wireless Standard	Wireless Mode
<input type="radio"/>	Wireless-Network-01	6	11g	11g	Infrastructure
<input type="radio"/>	Wireless-Network-02	36	11n	11n	Infrastructure
<input type="radio"/>	Wireless-Network-03	6	11n	11n	Infrastructure

4-4. Configuring IP Address

How to configure an IP address to the Silex device is explained.

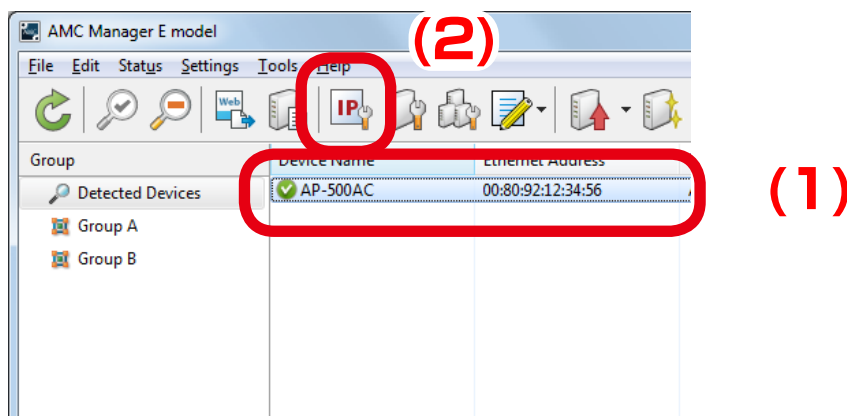
IP address can be configured from the **IP Address Configuration** window.

IP Address Configuration Window

Name	Details	Default Value
Device Name	Displays the device name.	-
Ethernet Address	Displays the Ethernet Address.	-
IP Address	Enter the IP Address to configure.	None
Subnet Mask	Enter the Subnet Mask to configure.	0.0.0.0
Default Gateway	Enter the Default Gateway to configure.	0.0.0.0
Open the device configuration page using Web browser after this configuration	Check this check box when you wish to display the Web configuration interface of the device after finishing the configuration. The URL " http://(IP Address)/ " will be used to display the Web configuration interface.	OFF
[OK] button	Configures the entered IP Address to the device.	-
[Cancel] button	Cancels the configuration and closes the window.	-

Configuring IP Address

1. Select the device to configure the IP Address from the list and click the **Configure the IP address** icon on the toolbar.

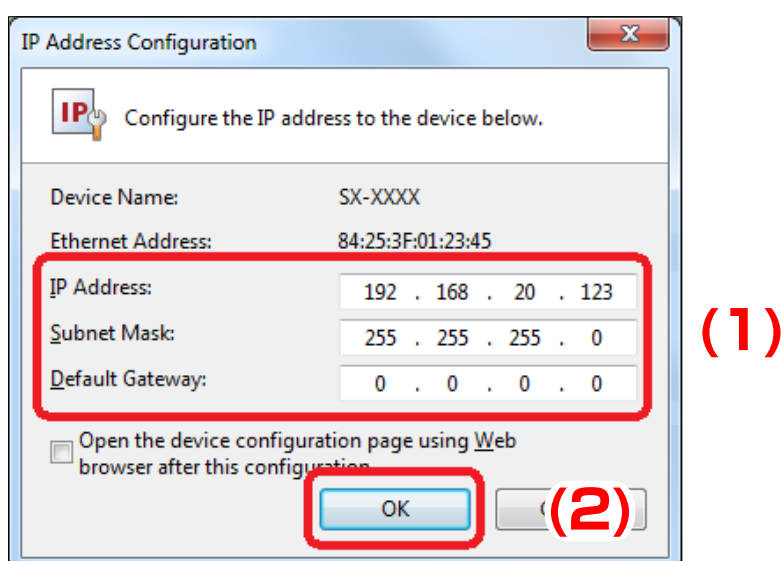


Note

IP Address can also be configured by one of the following methods:

- Select the device and click **Settings - IP Configuration** from the menu bar.
- Right-click on the device and select **IP Configuration** from the context menu.

2. In the **IP Address Configuration** window, enter the IP Address and click **OK**.
If you wish to display the Web configuration interface after you finish the IP Address configuration, check the check box at **Open the device configuration page using Web browser after this configuration** and then click **OK**.





Note

- When a password is set to the device, the window below is displayed.
Enter the password of the device and click **OK**.

(1)

(2)

3. The result of IP Address configuration is displayed.

If you have checked the check box at **Open the device configuration page using Web browser after this configuration**, your Web browser will run to display the Web configuration interface. Click **Close** to close the **IP Address Configuration** window.

Device Name	Ethernet Address	Status
✓ SX-XXXX	84:25:3F:01:23:45	Completed.

(1)

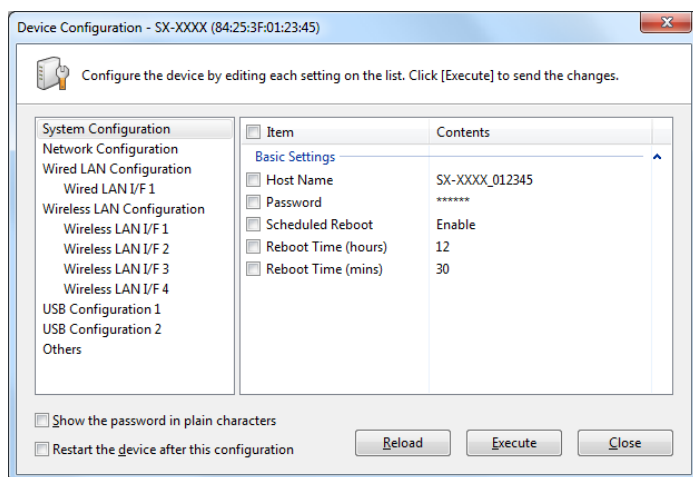
(2)

4-5. Individual Device Configuration

How to configure a single device is explained.

The device can be configured from the **Device Configuration** window.

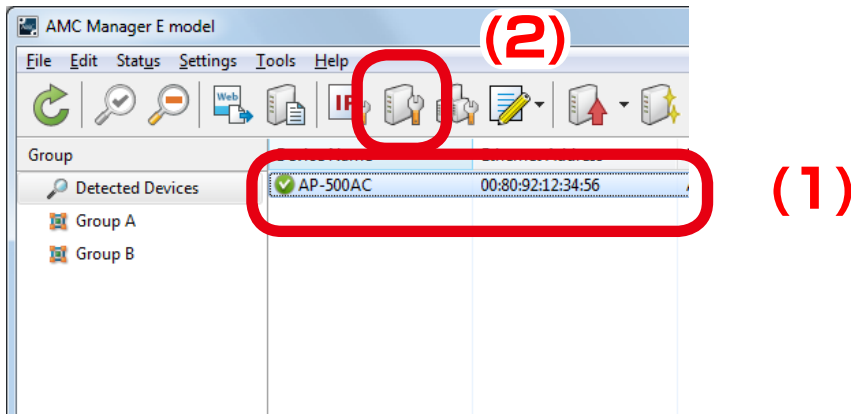
Device Configuration Window



Name	Details
Window title	Shows the device name and the Ethernet Address.
Configuration menu	Menu of settings. If one menu item is clicked, the detailed settings will be displayed on the list.
List of settings	Contents of settings. The settings displayed on this list will vary depending on the device you configure. Each setting will show the current settings of the device. Check the check box of the items you want to configure.
Show the password in plain characters	Check this check box when you do not want to hide the password.
Restart the device after this configuration	Check this check box when you want to restart the device automatically after finishing the configuration.
[Reload] button	Reloads the setting information.
[Execute] button	Executes the configuration.
[Close] button	Closes the window.

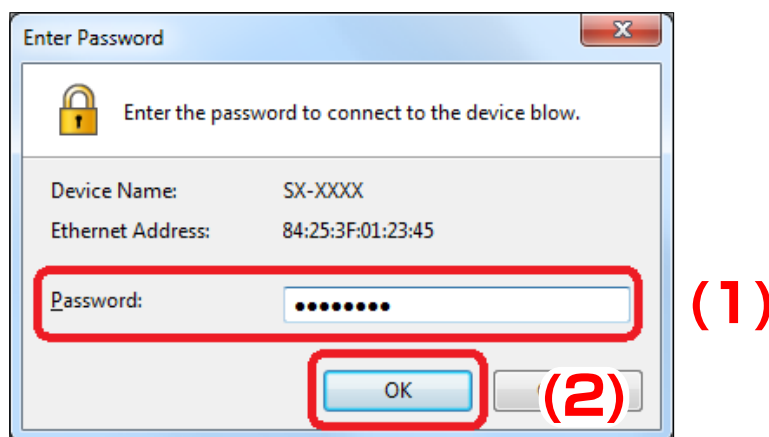
Configuring Device

1. Select a single device from the list and click the **Configure the device** icon from the toolbar.



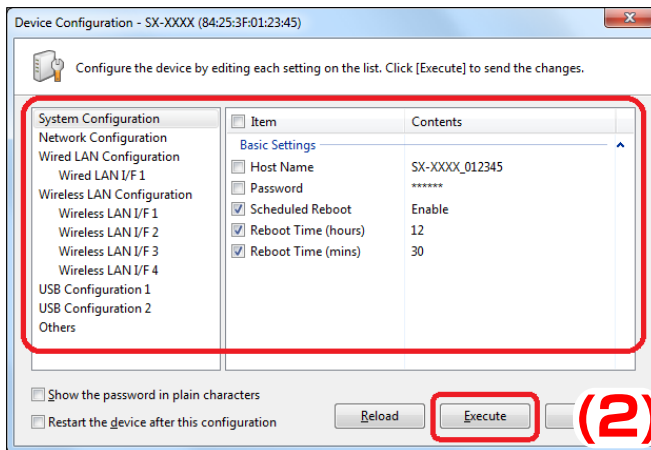
Note

- The device can also be configured by one of the following methods:
 - Select the device and click **Settings - Device Configuration** from the menu bar.
 - Right-click on the device and select **Device Configuration** from the context menu.
- When a password is set to the device, the window below is displayed.
- Enter the password of the device and click **OK**.



- 2.** In the **Device Configuration** window, the current settings are displayed on the setting list. Check the check box of the items you want to configure, edit the settings and click **Execute**.

If you want to restart the device automatically after finishing the configuration, check the check box at **Restart the device after this configuration** and then click **Execute**.



TIP

- The configuration will perform for those you have checked the check boxes. Clear the check box of the items you do not want to change the configuration.
- The changes will take effect after the device is restarted. If you have not selected the automatic restart, please restart the device manually. See **Restarting Device** for how to restart the device.

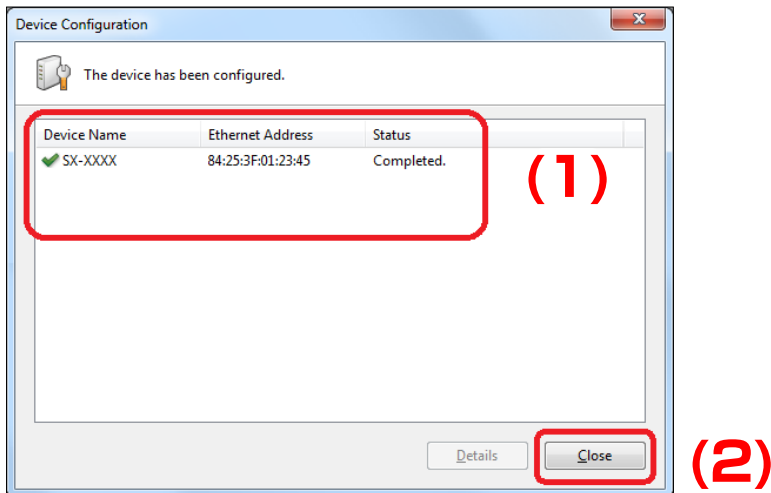


Note

- The configurable settings will differ depending on each device. For details, refer to the operating manual of that device.

3. The result of configuration is displayed.

If you have checked the check box at **Restart the device after this configuration**, the device will restart and the configuration will take effect automatically. Click **Close** to close the **Device Configuration** window.



4-6. Bulk Configuration

The following explains how to configure multiple devices in bulk.

For bulk configuration, the configuration file is used to send the settings to the devices.

Before You Begin

In order to configure multiple devices at once, the configuration file needs to be created first. The configuration file can be created by one of the following 3 methods:

(1) Creating from the selected device

The configuration file is created using the setting information of the device displayed on the list.

(2) Creating from a template

The configuration file is created using a template of each device.

(3) Editing the existing file

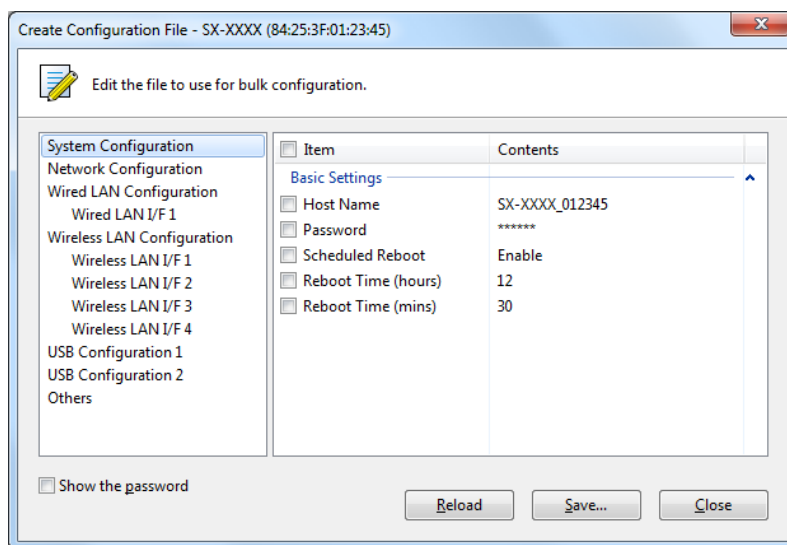
The existing configuration file can be edited.

(1) Creating from the selected device

The configuration file is created using the setting information of the device displayed in the list. The current settings of the configured device can be utilized.

The configuration file is created in the **Create Configuration File** window.

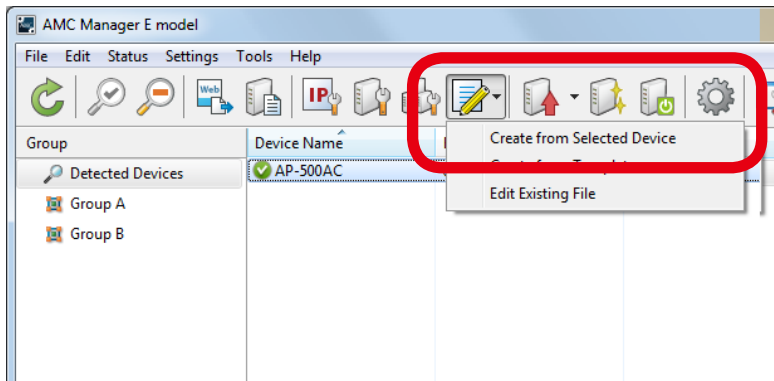
[Create Configuration File Window]



Name	Details
Window title	Shows the device name and the Ethernet Address.
Configuration menu	Menu of settings.
List of settings	Contents of settings. Each setting will show the current settings of the device. The settings displayed in this list will vary depending on the device you configure. Check the check box of the items you want to configure.
Show the password	Check this check box when you do not want to hide the password.
[Reload] button	Reloads the setting information.
[Save] button	Saves the edited settings as a configuration file.
[Close] button	Closes the window.

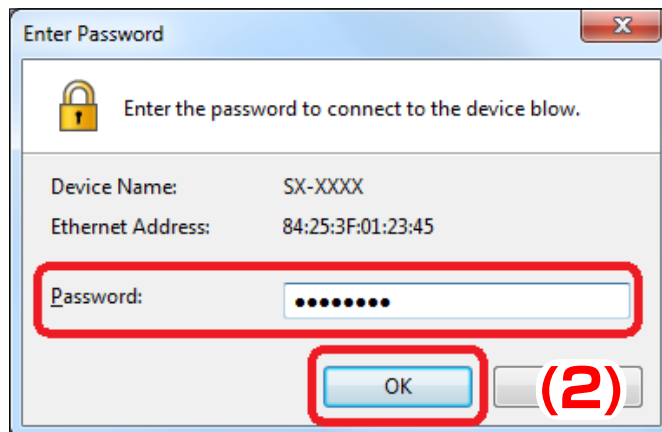
[Creating Configuration File]

1. Select the device you want to use the configuration of and click the **Create the configuration file** icon and click **Create from Selected Device** from the toolbar.

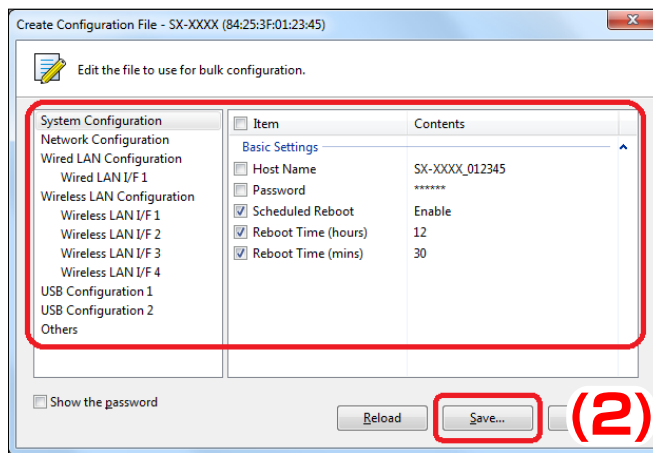


Note

- The configuration file can also be created by one of the following methods:
 - Select the device and click **Settings - Create from Selected Device** from the menu bar.
 - Right-click on the device and select **Create Configuration File** from the context menu.
- When a password is set to the device, the screen below is displayed. Enter the password of the device and click **OK**.



2. In the **Create Configuration File** window, the settings of the current device are displayed on the list. Check the check box of the items you want to use for the configuration file, edit the settings and click **Save**.



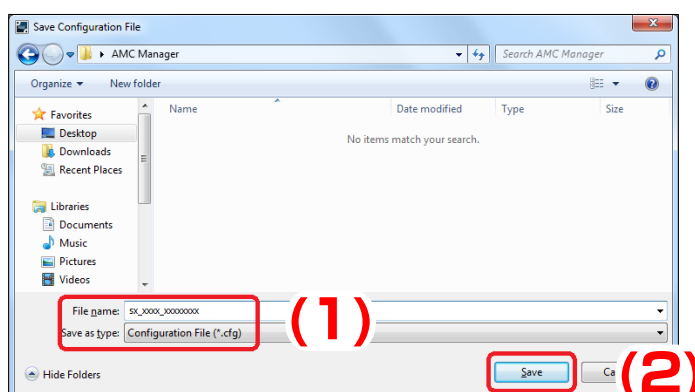
- Only the items you have checked the check box will be updated. Clear the check box of the items you do not want to change the configuration.



Note

- The configurable settings will differ depending on each device. For details, refer to the operating manual of that device.

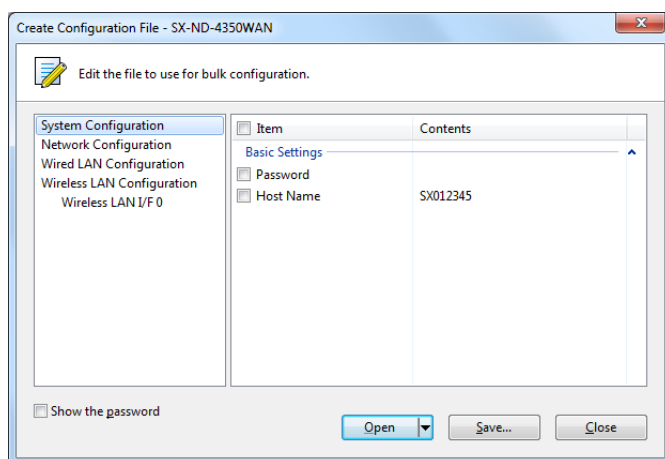
3. In the dialog to save the configuration file, specify the file name and click **Save**.



(2) Creating from a template

The configuration file can be created in the **Create Configuration File** window using a template for each device.

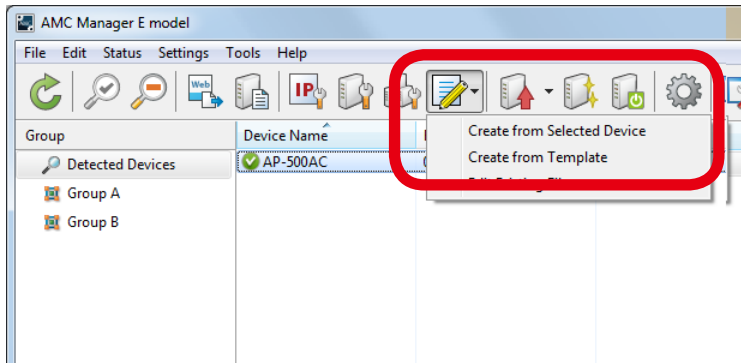
[Create Configuration File Window]



Name	Details
Window title	Shows the device name of the selected template.
Configuration menu	Menu of settings.
List of settings	Contents of settings. The settings displayed in this list will vary depending on the device you have selected. Check the check box of the items you want to configure.
Show the password	Check this check box when you do not want to hide the password.
[Open] button	Opens the existing configuration file.
Open Template	Opens the window to select a template of the configuration file.
[Save] button	Saves the entered settings as a configuration file.
[Close] button	Closes the window.

[Creating Configuration File]

1. Click the **Create the configuration file** icon and click **Create from Template** from the toolbar.

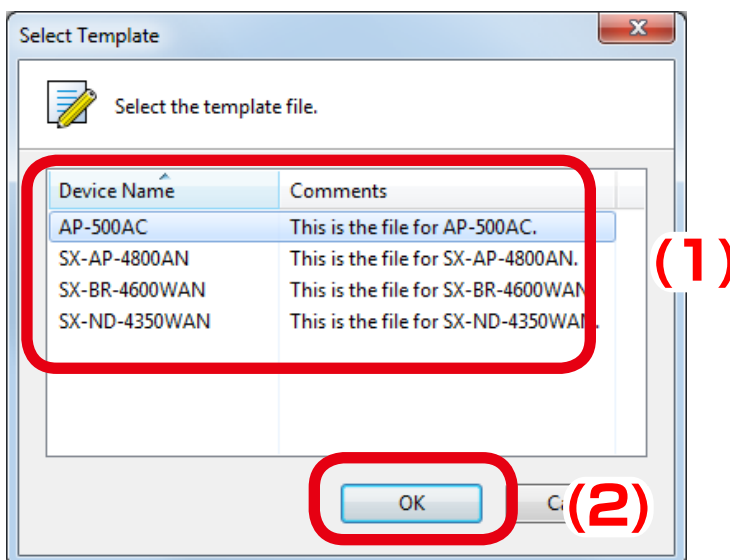


The configuration file can also be created by a method below:

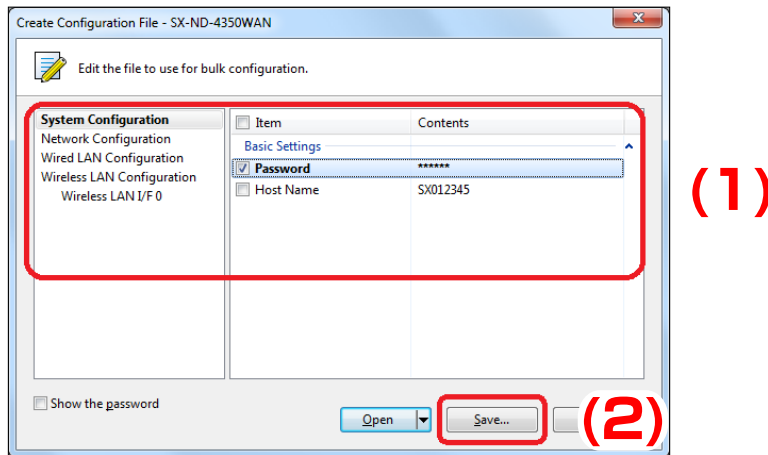
- Click **Settings - Create Configuration File - Create from Template** from the menu bar.

Note

2. In the **Select Template** window, select the device to configure and click **OK**.



3. In the **Create Configuration File** window, check the check box of the items you want to use for the configuration file, edit the settings and click **Save**.



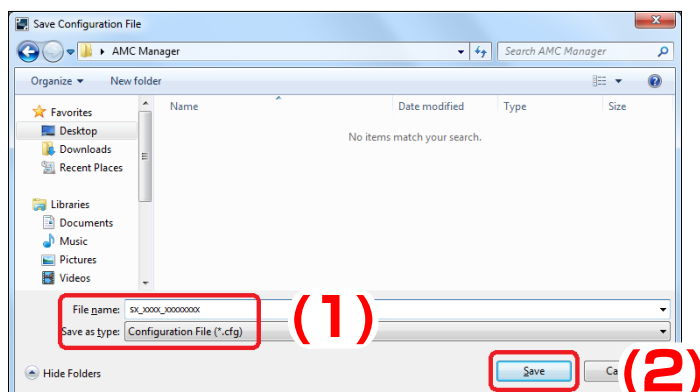
- Only the items you have checked the check box will be updated. Clear the check box of the items you do not want to change the configuration.



Note

- The configurable settings will differ depending on each device. For details, refer to the operating manual of that device.

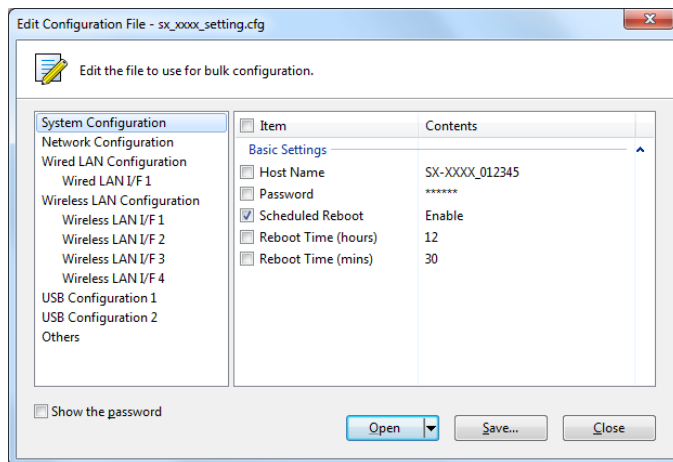
4. In the dialog to save the configuration file, specify the file name and click **Save**.



(3) Editing the existing file

The existing template can be edited in the **Edit Configuration File** window.

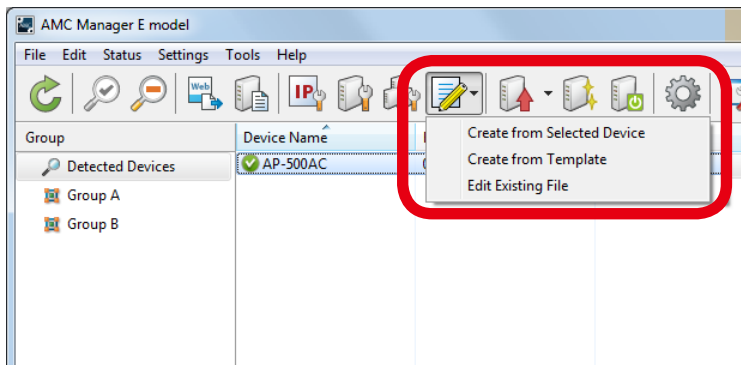
[Edit Configuration File Window]



Name	Details
Window title	Shows the file name of the selected configuration file.
Configuration menu	Menu of settings.
List of settings	Contents of settings. The settings displayed in this list will vary depending on the device you have selected. Check the check box of the items you want to configure.
Show the password	Check this check box when you do not want to hide the password.
[Open] button	Opens the existing configuration file.
Open Template	Opens the window to select a template of the configuration file.
[Save] button	Saves the entered settings as a configuration file.
[Close] button	Closes the window.

[Editing Configuration File]

1. Click the **Create the configuration file** icon and click **Edit Existing File** from the toolbar.

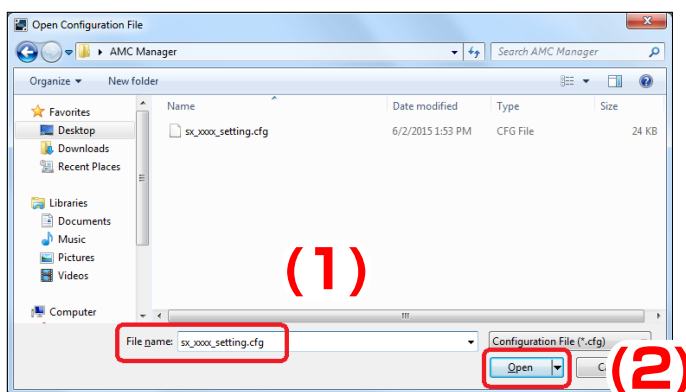


The configuration file can also be created by a method below:

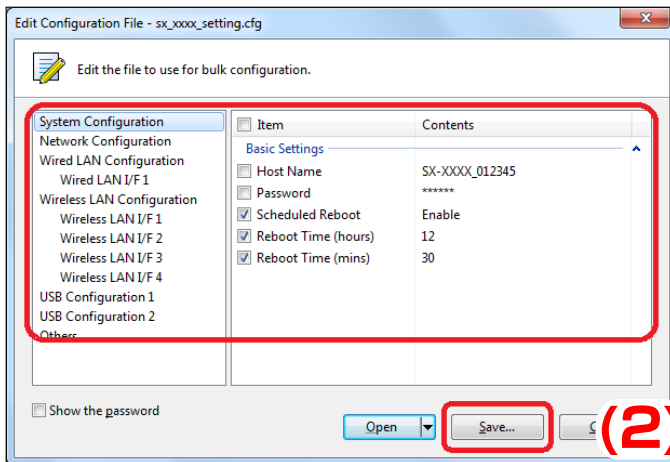
- Click **Settings - Create Configuration File - Edit Existing File** from the menu bar.

Note

2. In the dialog to open the configuration file, select the configuration file to edit and click **Open**.



3. In the **Edit Configuration File** window, check the check box of the items you want to edit, edit the settings and click **Save**.



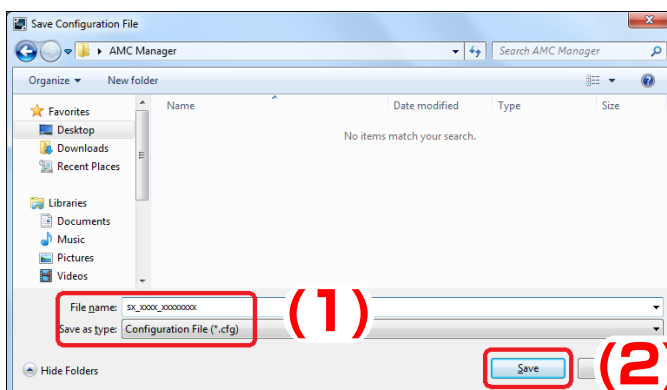
- Only the items you have checked the check box will be updated. Clear the check box of the items you do not want to change the configuration.



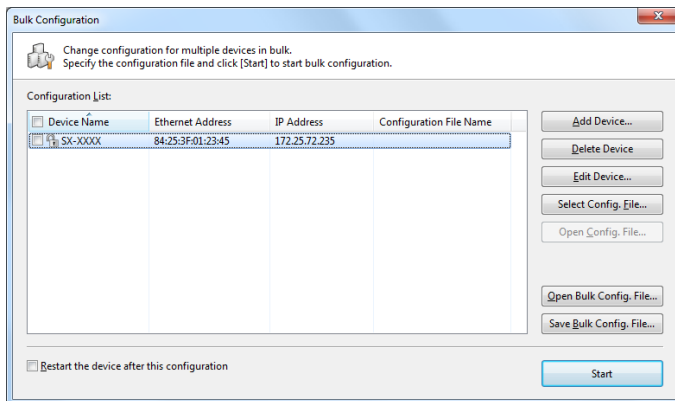
Note

- The configurable settings will differ depending on each device. For details, refer to the operating manual of that device.

4. In the dialog to save the configuration file, specify the file name and click **Save**.



Bulk Configuration Window



Name	Details
Configuration List	Shows the name, Ethernet Address and IP Address of the devices you may want to configure in bulk. Also, the name of configuration file to use for bulk configuration is displayed. Check the check box of the devices you want to configure in bulk.
[Add Device] button	Adds a device to the configuration list. If clicked, the Add Device window is displayed.
[Delete Device] button	Deletes the device from the configuration list.
[Edit Device] button	Select one device in the configuration list and select the configuration file to use. If clicked, the Edit Device window is displayed.
[Select Config. File] button	Select the devices in the configuration list and select the configuration file to use. Two or more devices can be selected.
[Open Config. File] button	Opens the Edit Configuration File window at which you can edit the configuration file selected for the device.
[Open Bulk Config. File] button	Opens the existing bulk configuration file. The devices to configure in bulk and configuration file of each are displayed in the list.
[Save Bulk Config. File] button	Saves the list of devices and configuration files as a bulk configuration file.
Restart the device after this configuration	Check this check box if you want to restart the devices after finishing the bulk configuration.
[Start] button	Starts the bulk configuration. Configuration will be loaded to the devices that you have selected the configuration file and have checked the check box.

Add Device Window

Add Device

Enter information of the device to add.

Ethernet Address: 84 92 3F 01 23 45

IP Address: 192 . 168 . 20 . 123

Device Name: SX-XXXX

Password: *****

Configuration File: C:\sx_xxxx_setting.cfg ...

☐ Show the password

Add Cancel

Name	Details
Ethernet Address	Enter the Ethernet Address of the device to add.
IP Address	Enter the IP Address of the device to add.
Device Name	Enter the name of the device to add.
Password	Enter the password configured to the device.
[Configuration File] button	Select the configuration file to use for the device.
Show the password	Check this check box when you do not want to hide the password.
[Add] button	Adds the device.
[Cancel] button	Cancels the settings and closes the window.

Edit Device Window

Edit Device

Enter information of the device to add.

Ethernet Address: 84 25 3F 01 23 45

IP Address: 192 . 168 . 20 . 123

Device Name: SX-XXXX

Password: *****

Configuration File: C:\sx_xxxx_setting.cfg ...

☐ Show the password

OK Cancel

Name	Details
Ethernet Address	Enter the Ethernet Address of the selected device.
IP Address	Enter the IP Address of the selected device.
Device Name	Enter the name of the selected device.
Password	Enter the password configured to the device.
[Configuration File] button	Select the configuration file to use for the device.
Show the password	Check this check box when you do not want to hide the password.
[OK] button	Sets the selected configuration file to the device.
[Cancel] button	Cancels the edit and closes the window.

Configuring Devices in Bulk

The following is an example of configuring multiple devices at once using the configuration file.



Note

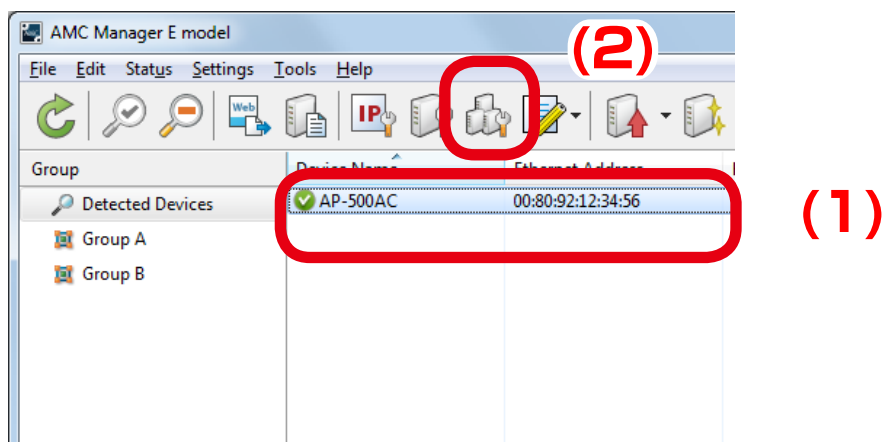
- In the bulk configuration, the settings saved in the configuration file will be sent to the devices.
- When you configure the device-specific values such as IP Address or host name, use the configuration file of each device. The configuration file can also be used to update the common setting that is shared among several devices, such as SSID or Pre-Shared Key of the wireless security.



TIP

- Only the items you have checked the check box will be updated. Make sure that you have created the configuration file in which the check box is checked for those you want to update.

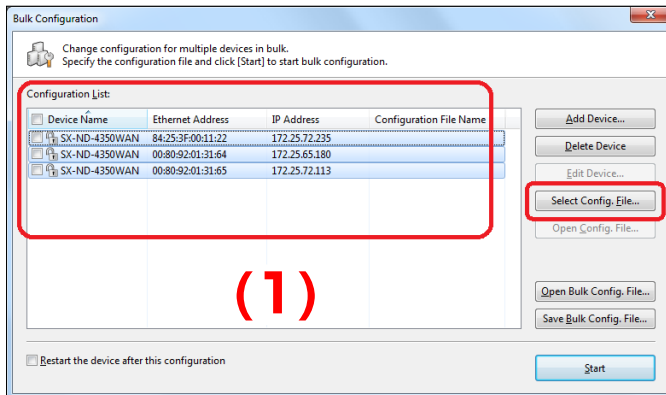
1. Select the devices to configure in bulk from the list of the AMC Manager and click the **Configure multiple devices in bulk** icon from the toolbar.



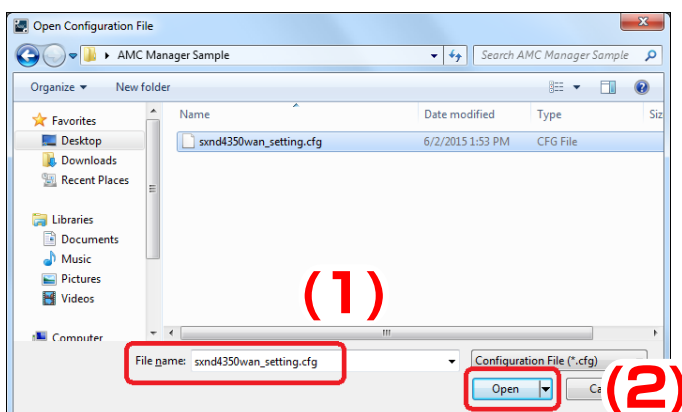
Note

- The bulk configuration window can also be displayed by a method below:
- Select the devices to configure in bulk and click **Settings - Bulk Configuration** from the menu bar.

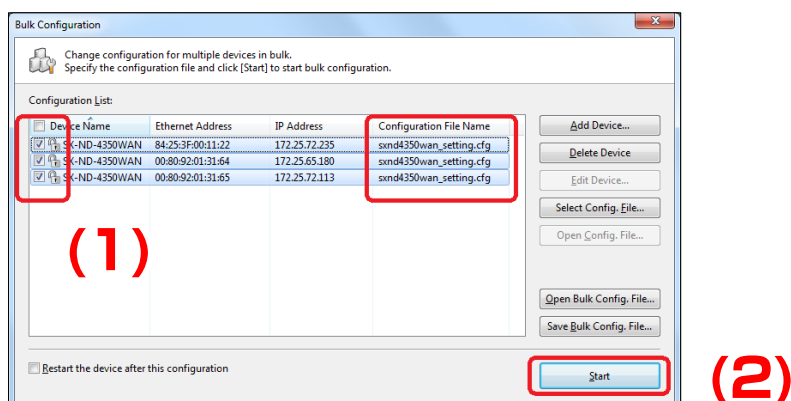
2. In the **Bulk Configuration** window, select the devices to configure in bulk from the **Configuration List** and click the **Select Config. File** button.



3. Select the configuration file that you have created to use for bulk configuration and click **Open**.

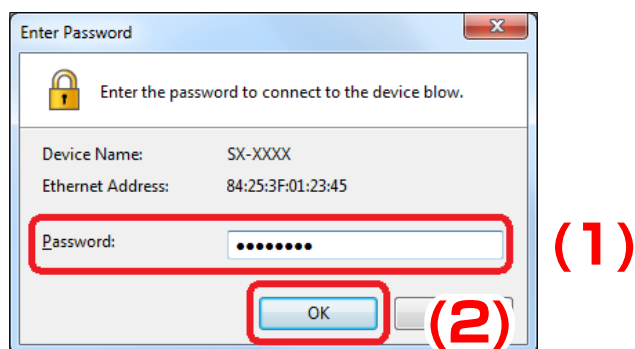


4. In the **Bulk Configuration** window, check the check box of the items you want to configure in bulk and click **Start**.

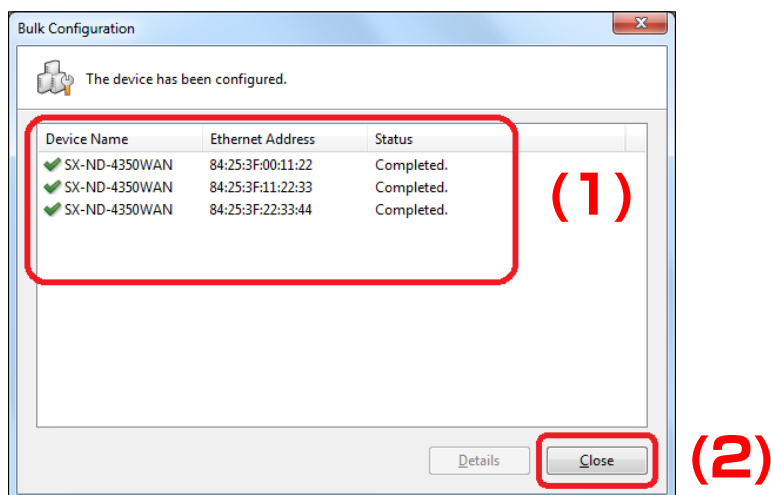


Note

- When a password is set to the device, the screen below is displayed.
Enter the password of the device and click **OK**.



5. The bulk configuration performs and the result is displayed.
Click **Close**.

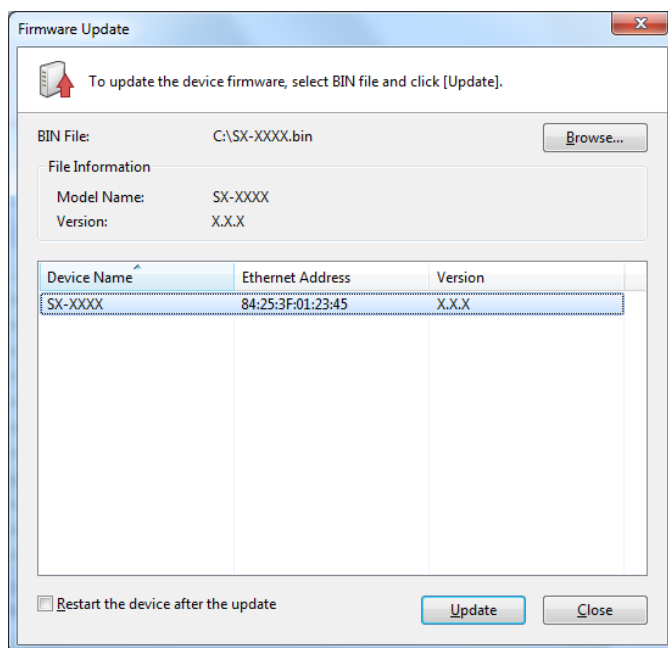


4-7. Firmware Update

How to update the device firmware is explained.

The firmware can be updated from the **Firmware Update** window. The latest firmware file can be downloaded from our website.

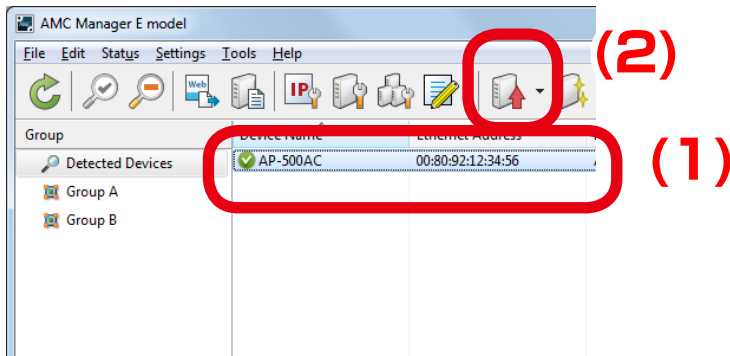
Firmware Update Window



Name	Details
[Browse] button	Select the firmware file (BIN file).
BIN File	Shows the file path to the selected firmware.
Model Name	Shows the device model of the firmware file.
Version	Shows the firmware version.
(List of devices)	Shows the name, Ethernet Address and current firmware version of the devices to update.
Restart the device after the update	Check this check box if you want to restart the device after finishing the firmware update.
[Update] button	Executes the firmware update.
[Close] button	Closes the window.

Updating Firmware

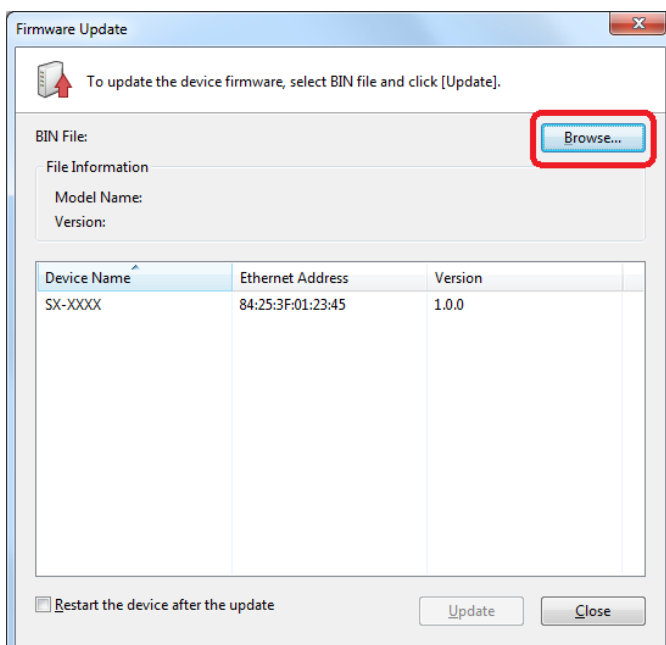
1. Select the device to update the firmware from the list and click the **Firmware update** icon from the toolbar.



Note

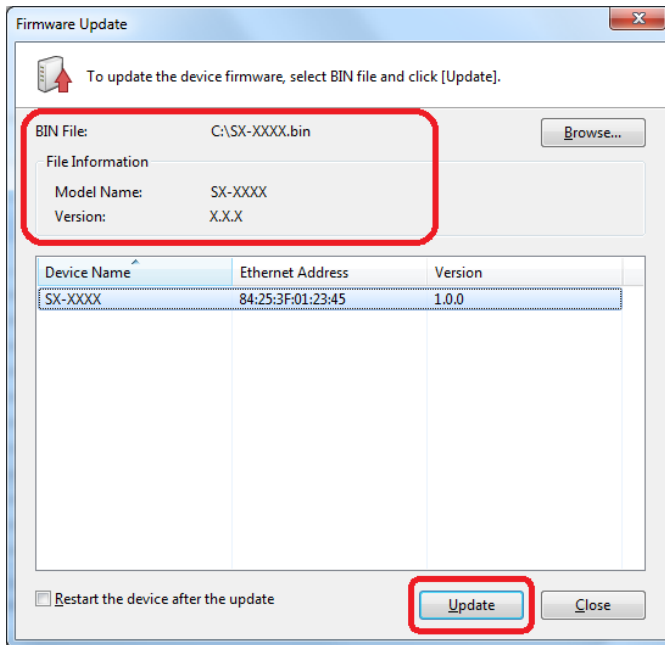
- The firmware update window can also be displayed by the methods below:
- Click **Settings - Firmware Update** from the menu bar.
- Right-click on the device and select **Firmware Update** from the context menu.
- If ▼ on the right of the **Firmware update** icon is clicked, the history of used firmware files is displayed (up to 9 files). If the firmware file is selected from the history, you will not have to select it manually at the **Firmware Update** window.

2. In the **Firmware Update** window, select the firmware file (BIN file) by clicking **Browse**.



3. Check the file information of the selected firmware and click **Update.**

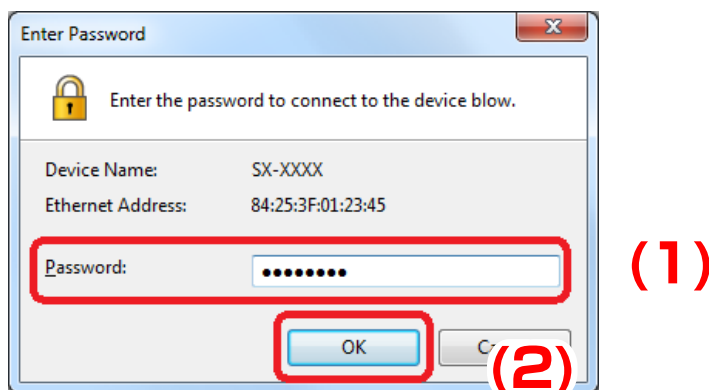
If you want to restart the device automatically after completing the firmware update, check the check box at **Restart the device after the update** and then click **Update**.



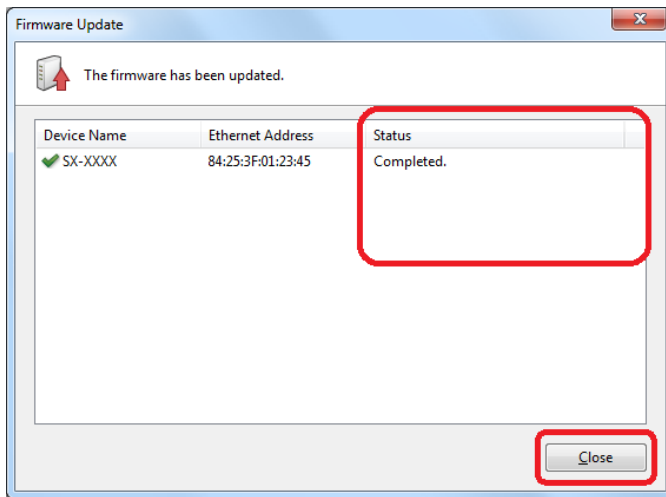
- The new firmware will take effect after the device is restarted. If you have not selected the automatic restart, please restart the device manually. See **Restarting Device** for how to restart the device.

4. Enter the password of the device and click **OK.**

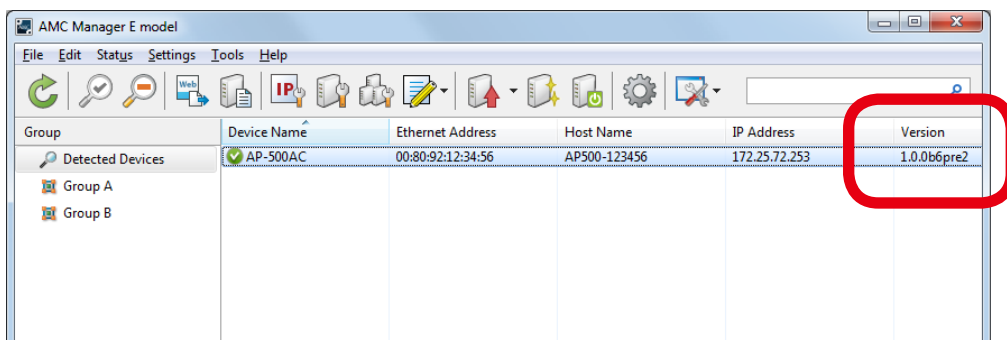
If the password is not configured to the device, the window below is not displayed.



5. The firmware of the selected device has been updated.
Click **Close** to close the **Firmware Update** window.



6. In the main window of the AMC Manager, check that the version information is changed for the device you have updated the firmware.

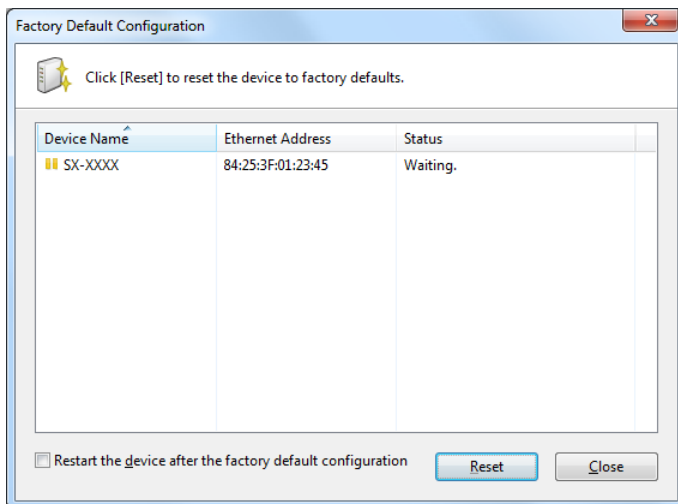


4-8. Factory Default Configuration

How to reset the device to the factory default setting is explained.

The device can be initialized from the **Factory Default Configuration** window.

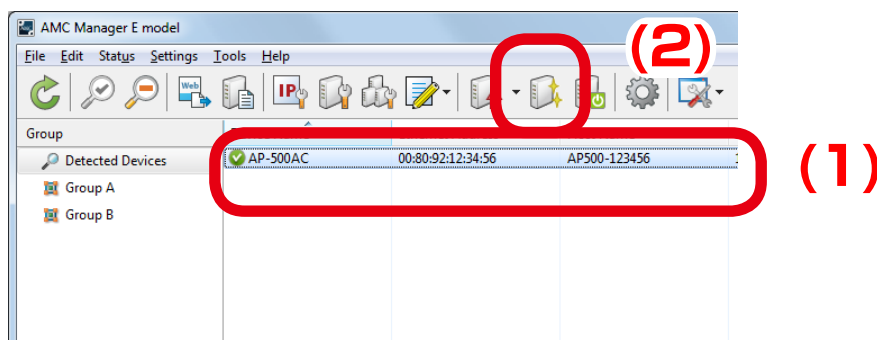
Factory Default Configuration Window



Name	Details
(List of devices)	Shows the name, Ethernet Address, current status of the devices to initialize. The devices can be initialized when they are in the "Waiting" status.
Restart the device after the factory default configuration	Check this check box if you want to restart the device after finishing the factory default configuration.
[Reset] button	Executes the initialization.
[Close] button	Closes the window.

Factory Default Configuration

1. Select the device to initialize from the list and click the **Factory default configuration** icon from the toolbar.

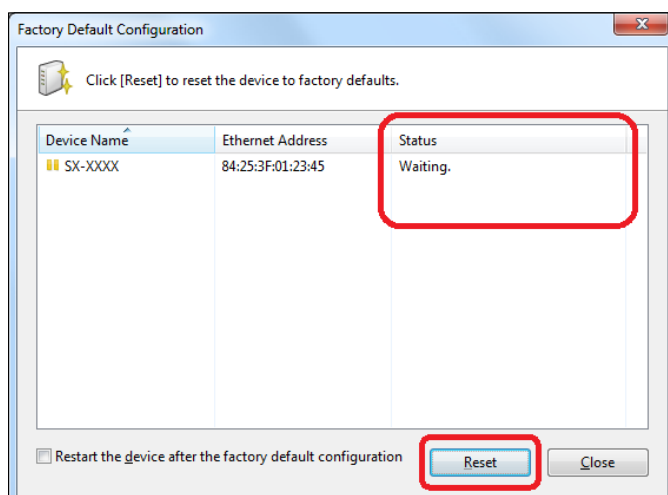


Note

- The firmware can also be initialized by the methods below:
 - Click **Settings - Factory Default Configuration** from the menu bar.
 - Right-click on the device and select **Factory Default Configuration** from the context menu.

2. In the **Factory Default Configuration** window, check that the status message says **Waiting** for the device to initialize and click **Reset**.

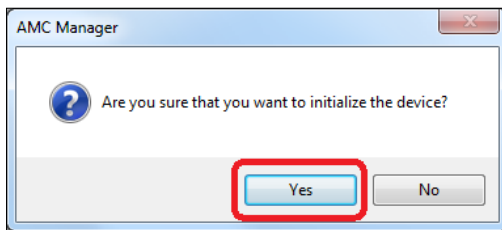
If you want to restart the device automatically after completing the factory default configuration, check the check box at **Restart the device after the factory default configuration** and then click **Reset**.



TIP

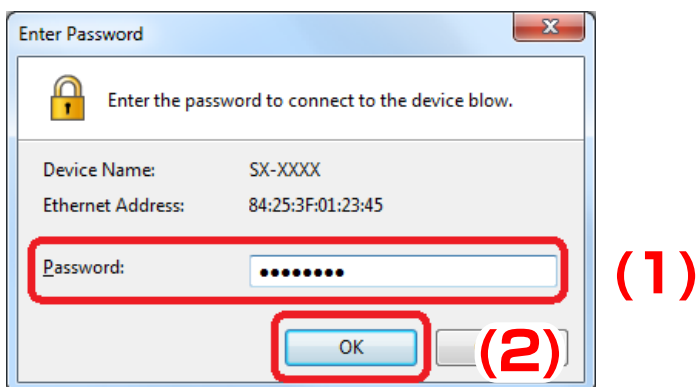
- The initialization will take effect after the device is restarted. If you have not selected the automatic restart, please restart the device manually. See **Restarting Device** for how to restart the device.

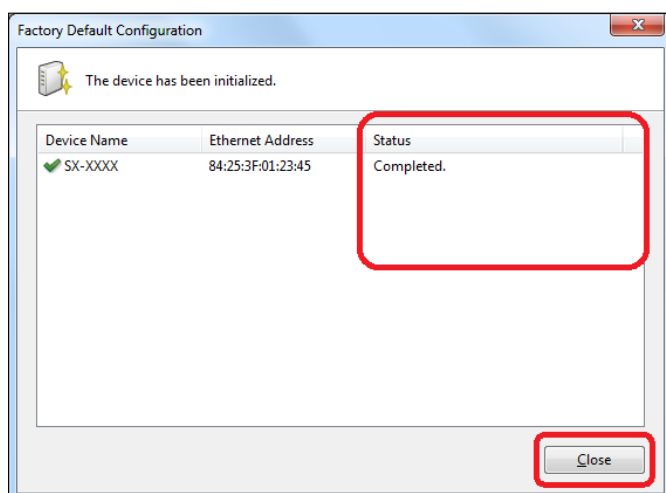
3. Click **Yes** to the confirmation message.



4. Enter the password of the device and click **OK**.

If the password is not configured to the device, the window below is not displayed.



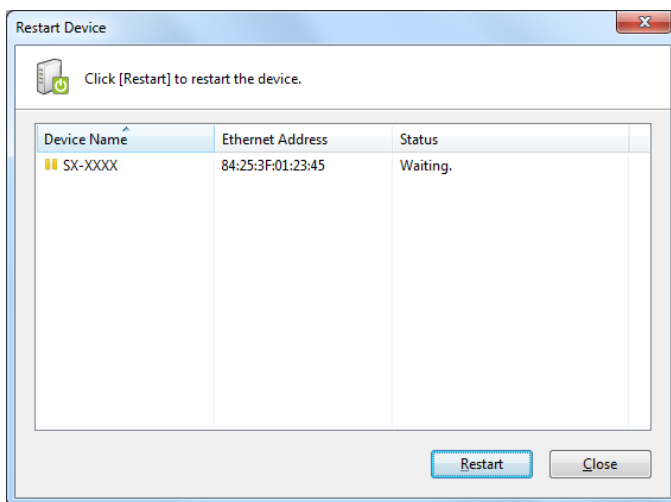
5. Check the result and click the **Close** button.

4-9. Restart

How to restart the device is explained.

The device can be restarted from the **Restart Device** window.

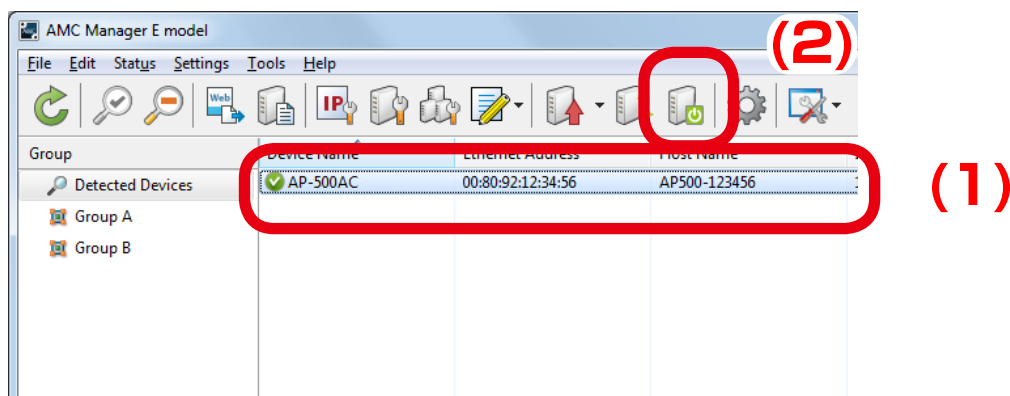
Device Restart Window



Name	Details
(List of devices)	Shows the name, Ethernet Address, current status of the devices to restart. [Status] The devices can be restarted when they are in the "Waiting" status.
[Restart] button	Restarts the device.
[Close] button	Closes the window.

Restarting Device

1. Select the device to restart from the list and click the **Restart** icon from the toolbar.

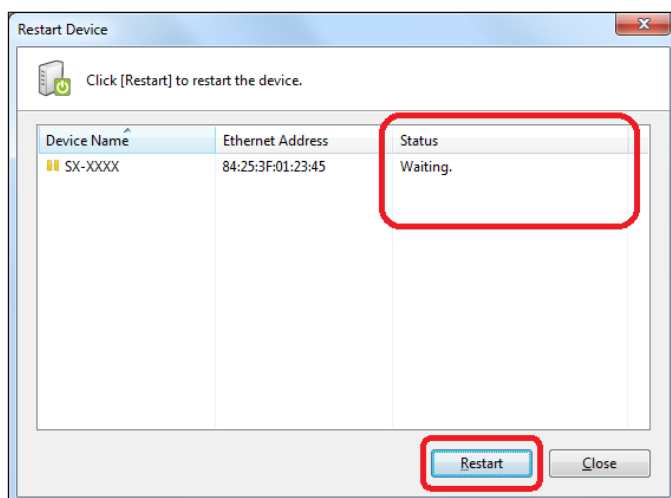


Note

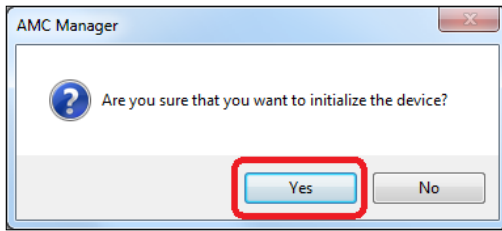
The device can also be restarted by the methods below:

- Click **Settings - Restart** from the menu bar.
- Right-click on the device and select **Restart** from the context menu.

2. In the **Restart Device** window, check that the status message says **Waiting** for the device to restart and click **Restart**.

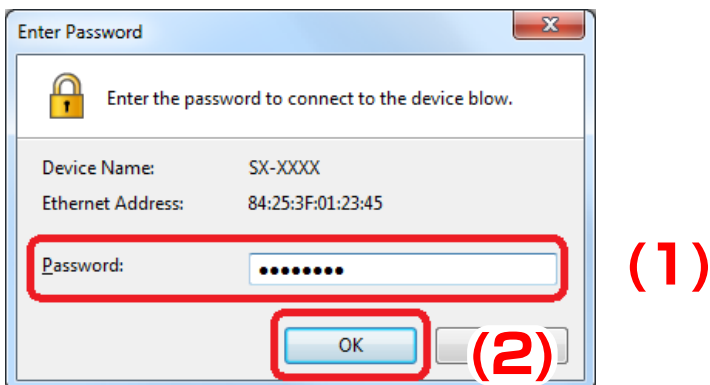


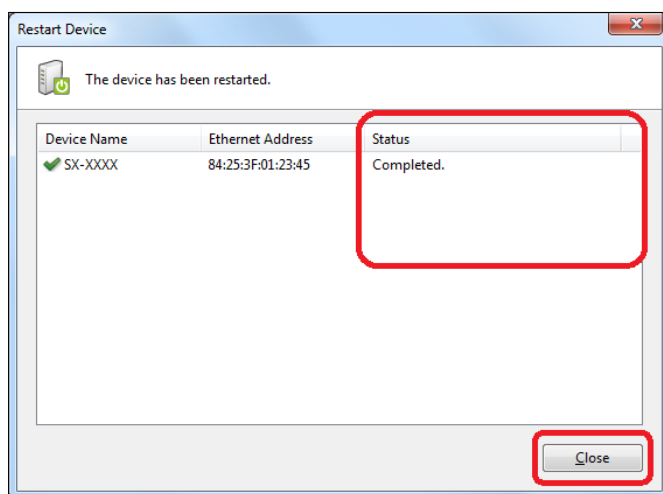
3. Click **Yes** to the confirmation message.



4. Enter the password of the device and click **OK**.

If the password is not configured to the device, the window below is not displayed.



5. Check the result and click the **Close** button.

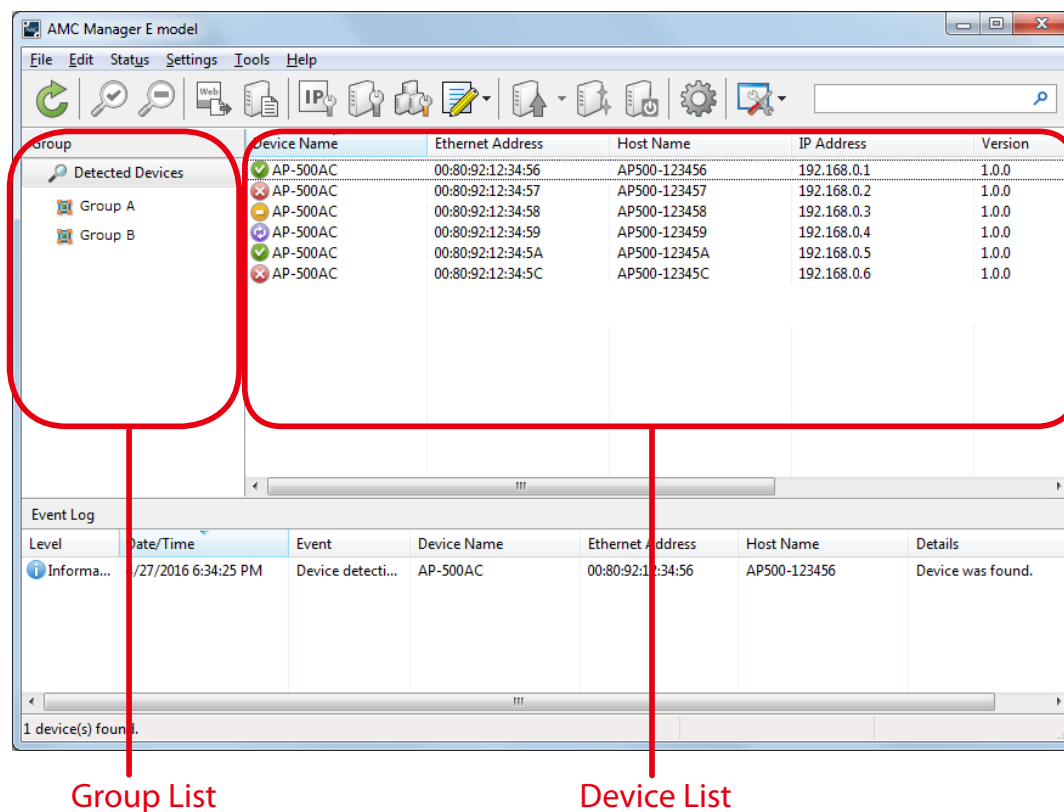
4-10. Device Group Management

Following explains how to make a group of devices.

Groups can be created and devices can be registered to the created groups.

Up to 100 groups can be created. Up to 1,000 devices can be registered per group.

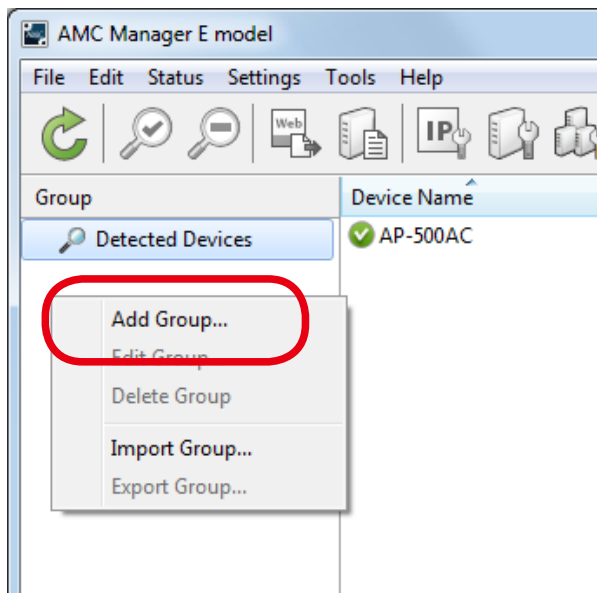
Group List and Device List



Name	Details
Group list	A list of created groups is displayed.
Device list	A list of devices that belong to the selected group is displayed. When Detected Devices is selected in the group list, all devices will be displayed in the device list. If you click a column header, the order of devices will be sorted by the column you have clicked.

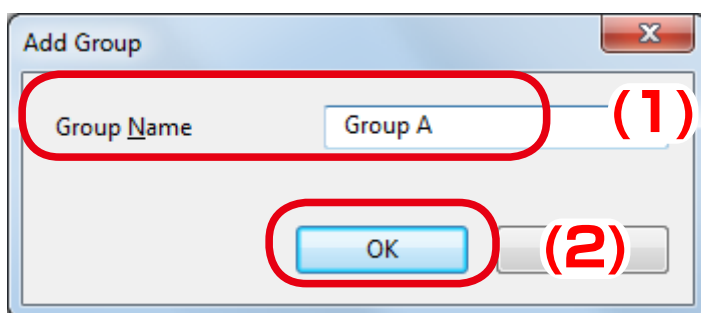
Creating Group

1. Right-click on the group list and select **Add Group** from the context menu.

**Note**

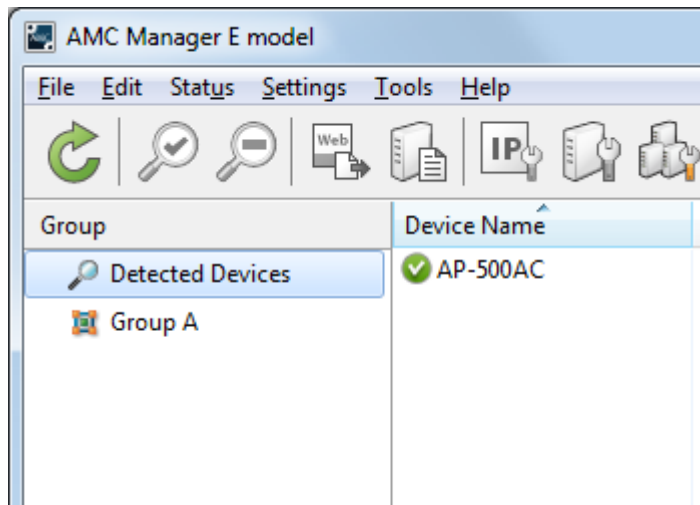
- It is also possible to add a group by following.
- From the menu bar, click **Edit - Add Group**.

2. Enter a group name and click **OK**.

**Note**

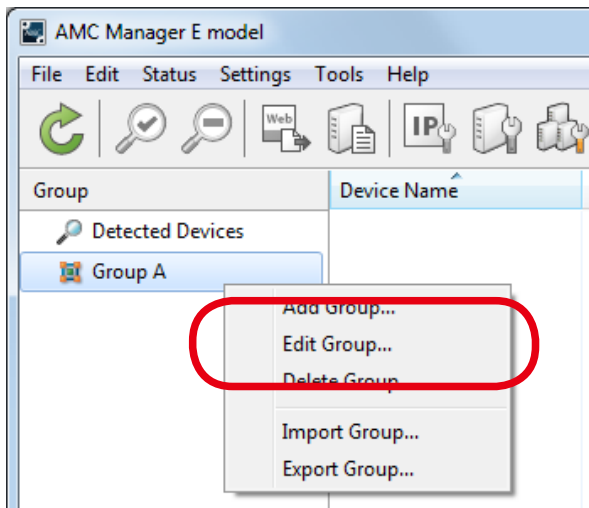
- Up to 32 characters can be used for group name.
- Up to 100 groups can be created.

3. The created group is displayed in the list.



Adding Device to Group

1. Right-click on a group in the group list and select **Edit Group** from the context menu.

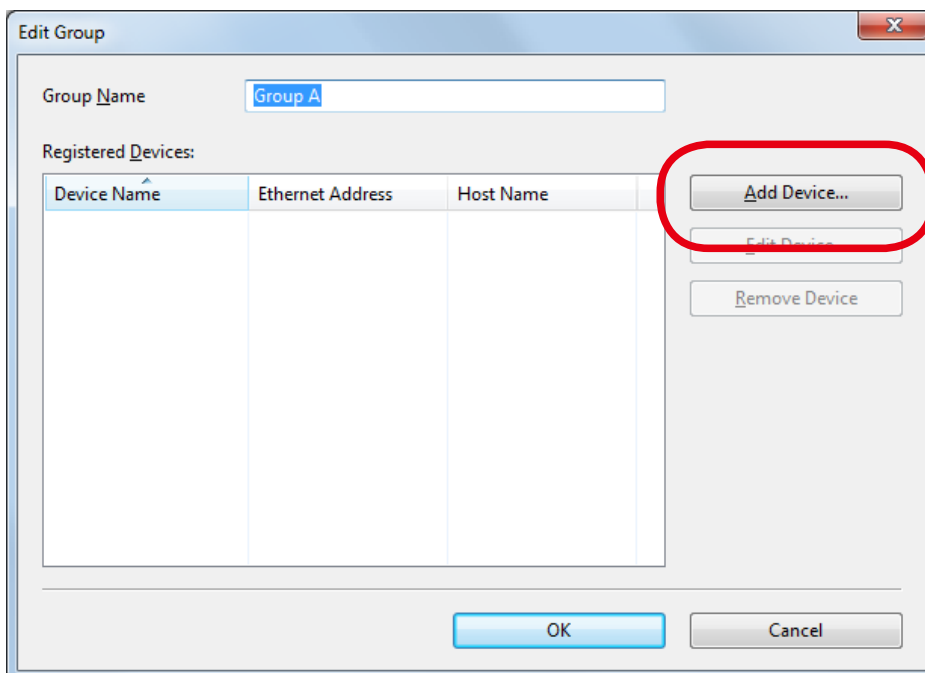


Note

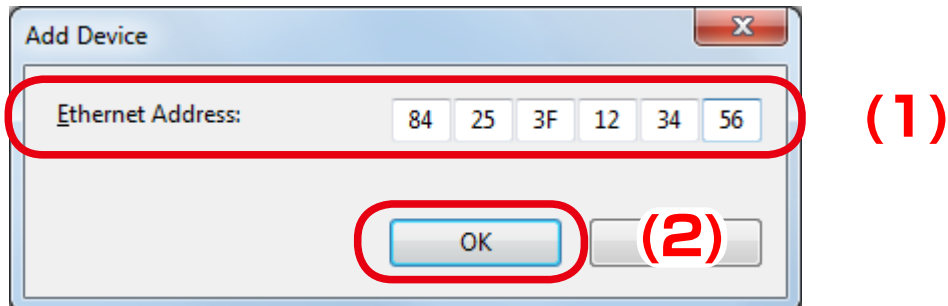
It is also possible to edit a group by following.

- Select a group in the group list and click **Edit - Edit Group** from the menu bar.

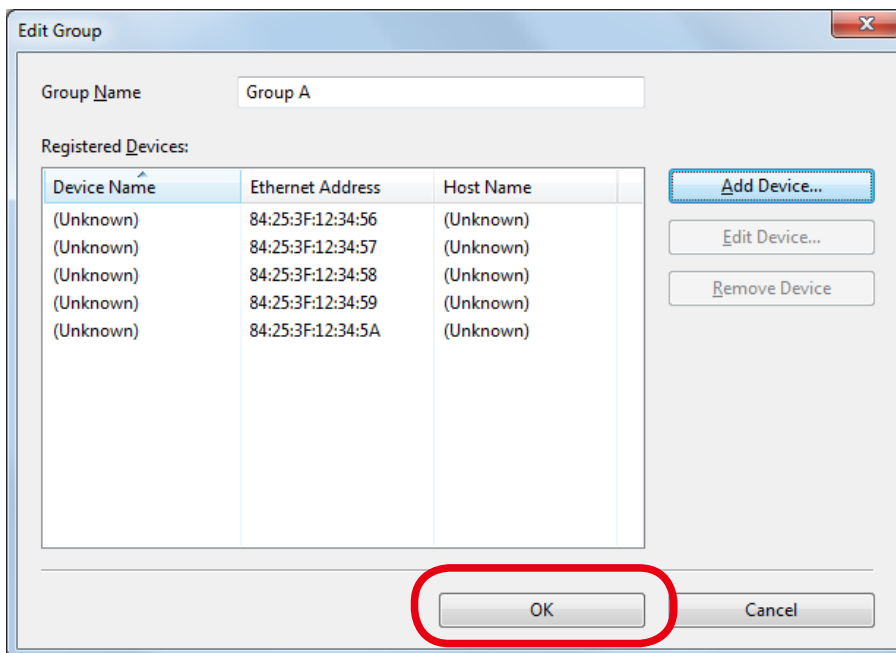
2. Click **Add Device**.



3. Enter the Ethernet Address of the device to register and click **OK**.



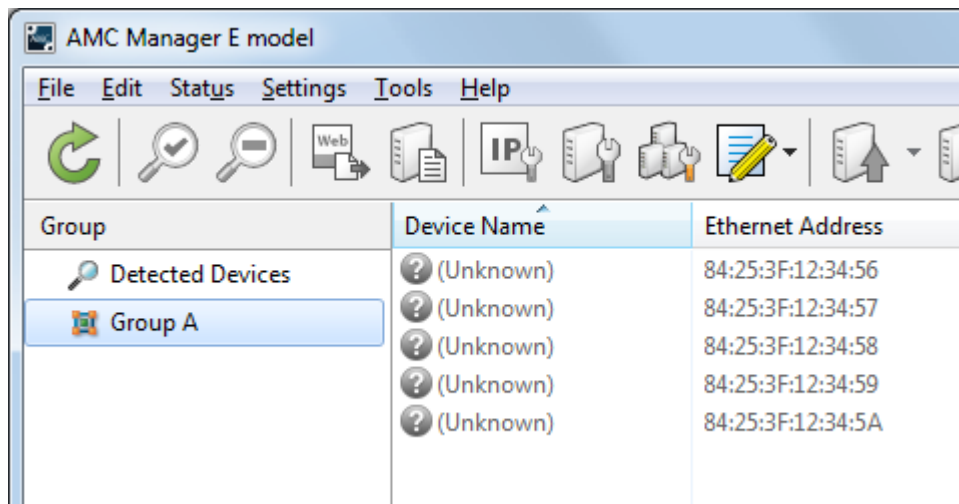
4. The registered device is displayed in the list.
To add another device, go back to **2** and repeat the same process.
Click **OK** when it is finished.



Note

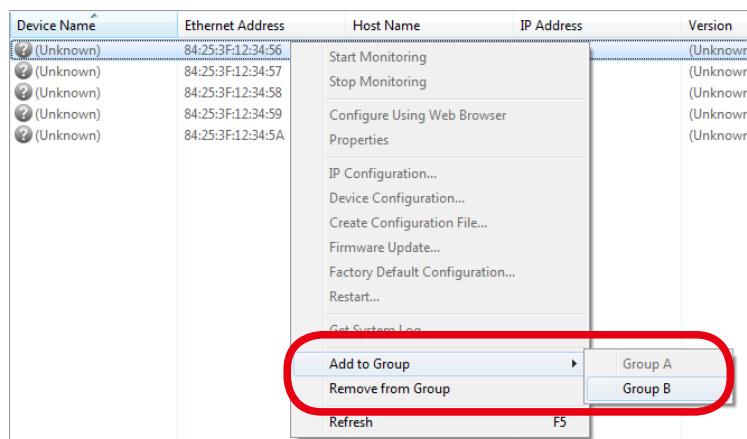
- If the device is not detected by AMC Manager on network, **(Unknown)** will be displayed under **Device Name** and **Host Name** until it is detected.
- Up to 1,000 devices can be registered per group.

5. The device is added to the group.

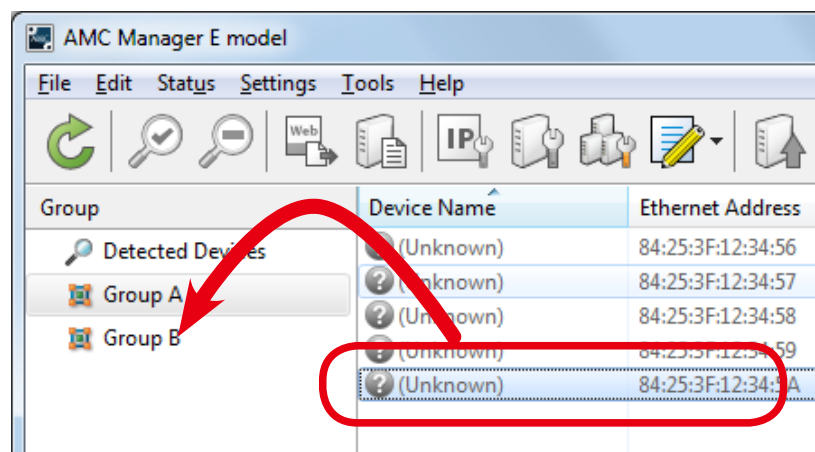
**Note**

It is also possible to add a device to group by following.

- Right-click on the device in the device list, select **Add to Group** from the context menu and select the group.

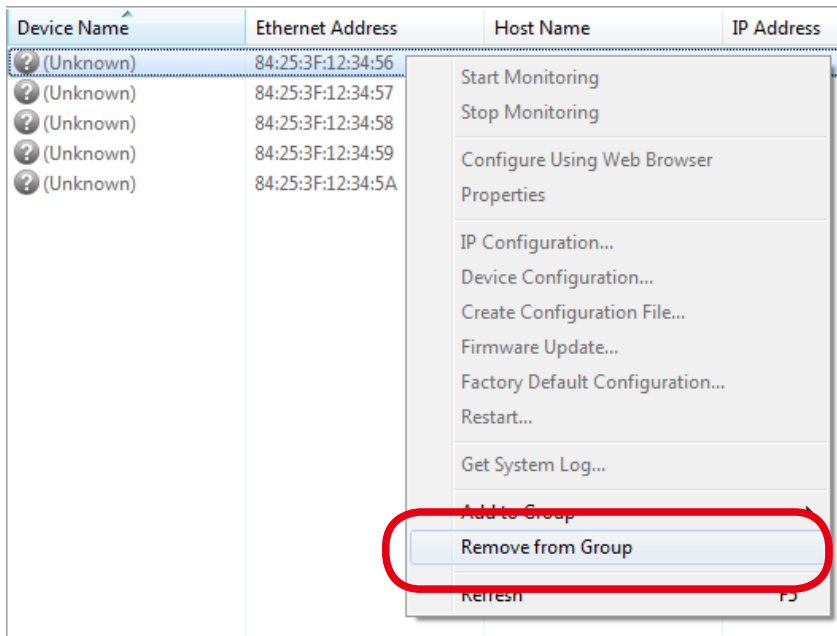


- Select a device in the device list and drag & drop it on the group.



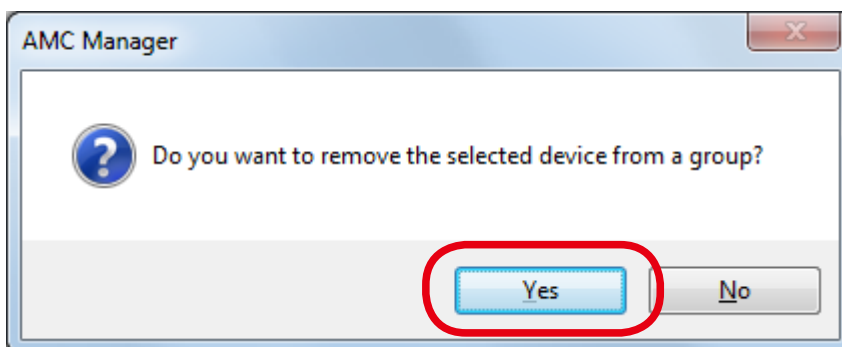
Deleting Device from Group

1. Right-click on a device to remove from the group and select **Remove from Group** from the context menu.

**Note**

- It is also possible to remove a device from group by following.
- Select a device in the device list and press the Delete key.

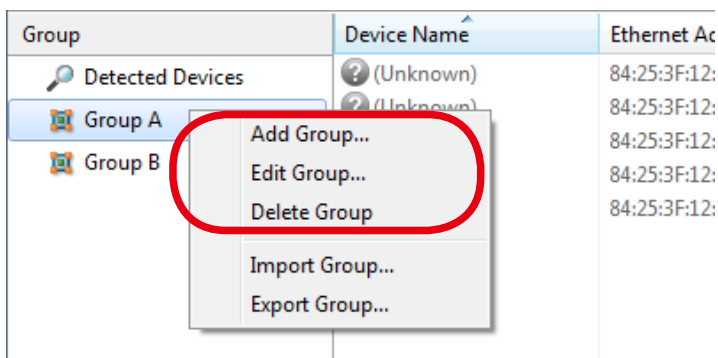
2. Click **Yes**.



Editing Group Information

Following explains how to change the group name and registered devices.

1. Right-click on a group in the group list and select **Edit Group** from the context menu.

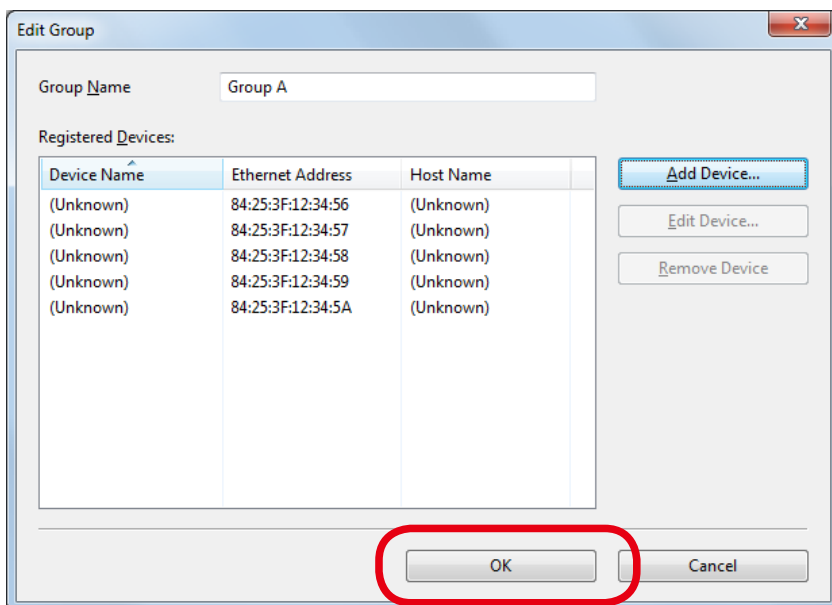


Note

It is also possible to edit a group by following.

- Select a group in the group list and click **Edit - Edit Group** from the menu bar.

2. Enter a group name when it needs to be changed. To delete or change the registered devices, select a device from the list and click **Edit Device** or **Remove Device**. When the edit is finished, click **OK**.



Exporting/Importing Group Information

By exporting the group information, the created group information can be saved as a file. Also, it is possible to register the group and device configuration by importing the file.

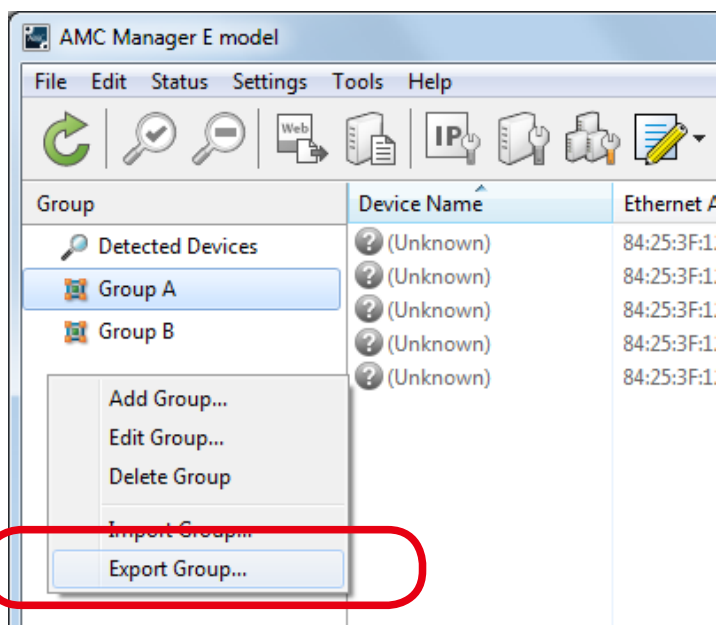


Note

- If **Export Group** is done, all registered groups are saved as a file. It is impossible to export them partially.
- If **Import Group** is done, group information is added from an external file to present ones on AMC Manager.
- The group information may not be correctly imported if the different version of AMC Manager is used when the group information is exported and imported.

Exporting Group Information

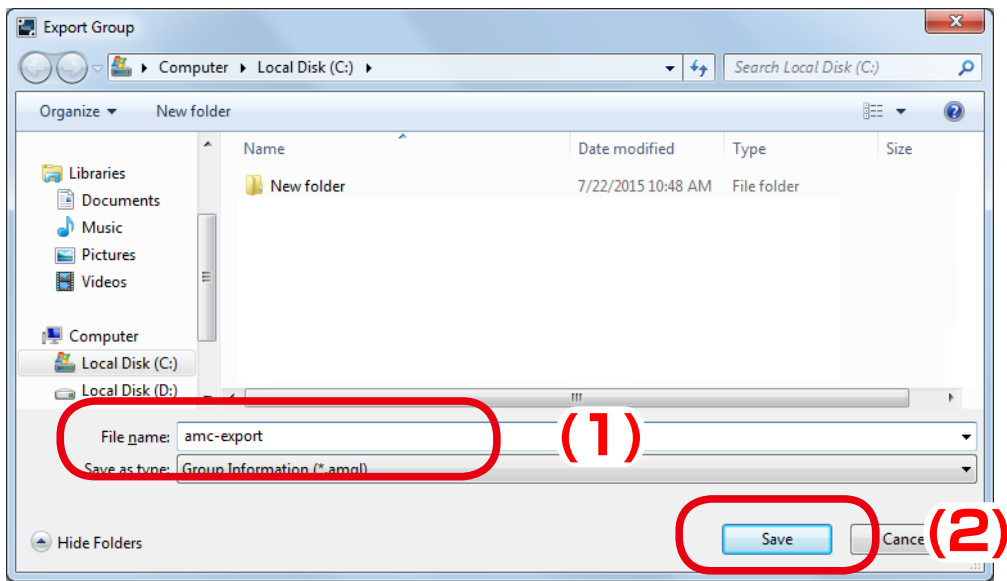
1. Right-click on a group in the group list and select **Export Group** from the context menu.



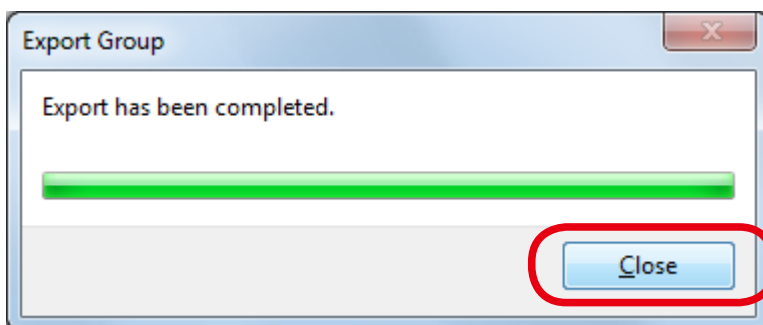
Note

- It is also possible to export a group by following.
- From the menu bar, click **Edit - Export Group**.

2. Specify a file name and click **Save**.

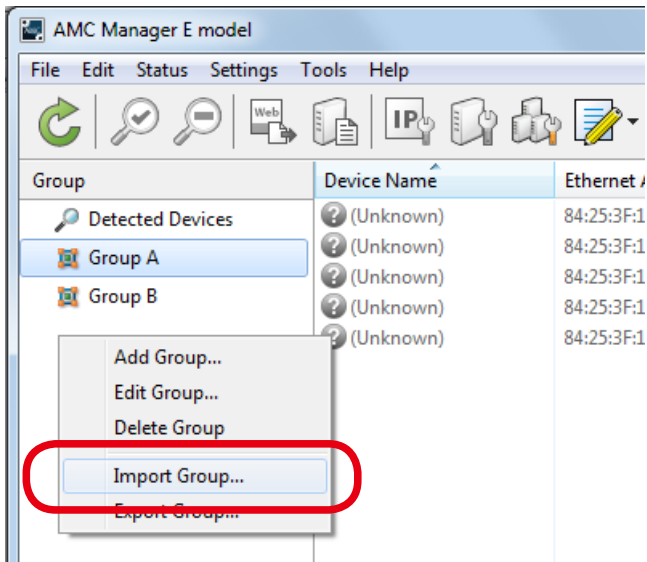


3. Click **Close**.



Importing Group Information

1. Right-click on a group in the group list and select **Import Group** from the context menu.

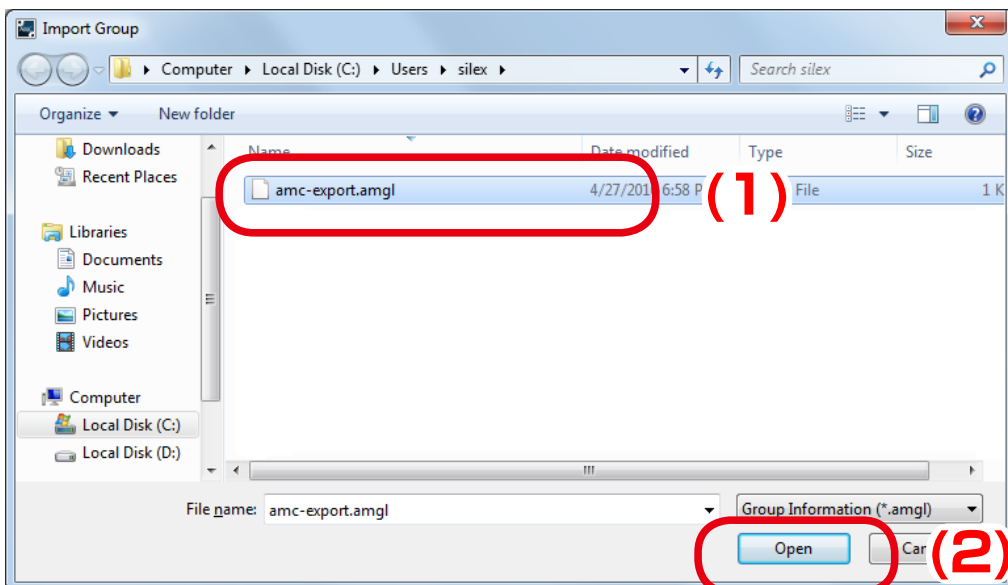


Note

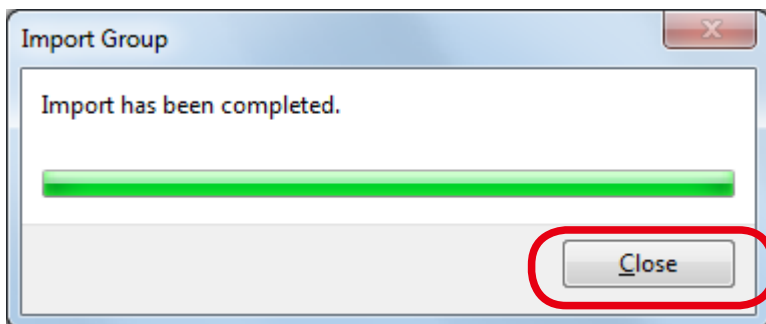
It is also possible to import a group by following.

- From the menu bar, click **Edit - Import Group**.

2. Select a file to import and click **Open**.



3. Click **Close**.



4-11. Accessing Logs on Log Viewer

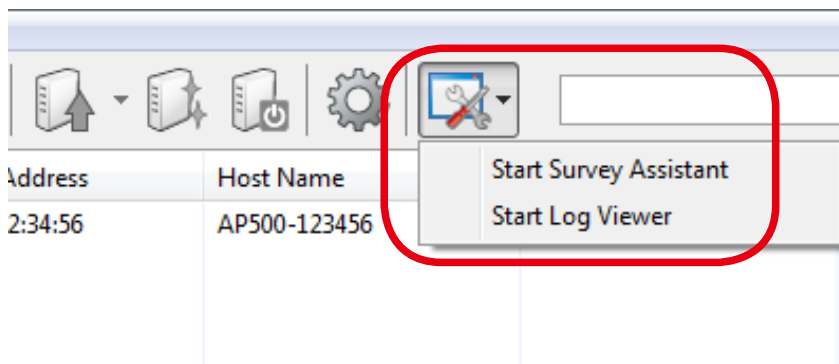
The following explains how to access the event logs saved by AMC Manager using the Log Viewer.

**Note**

- It is possible to specify the retention period of event logs by AMC Manager's option setting.

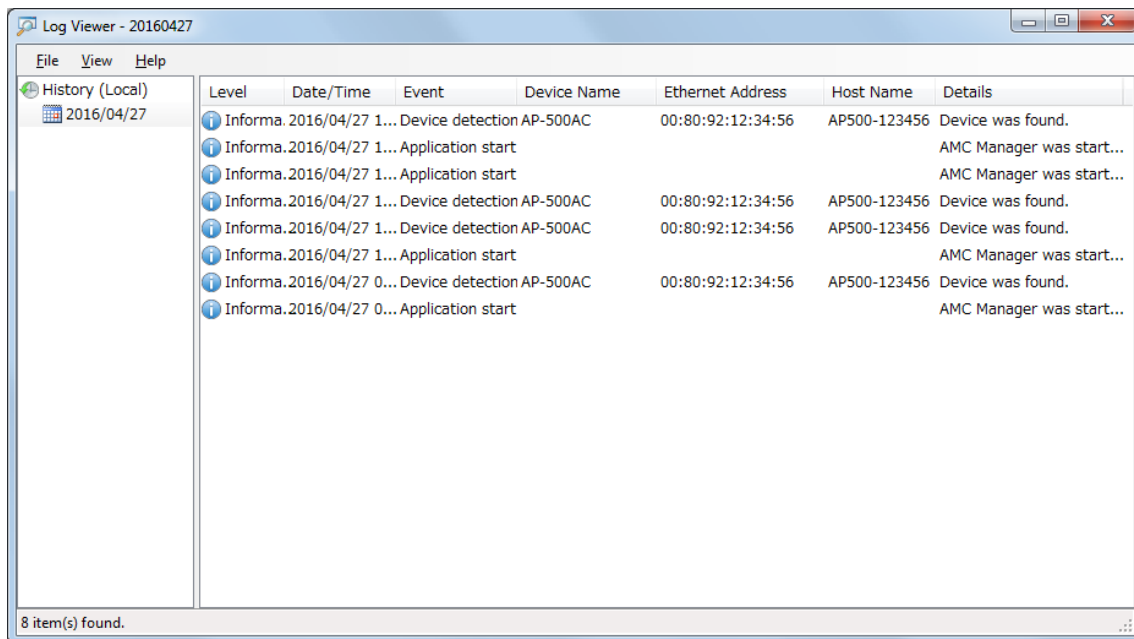
Starting Log Viewer

1. From the tool bar, click **Start Log Viewer**.

**Note**

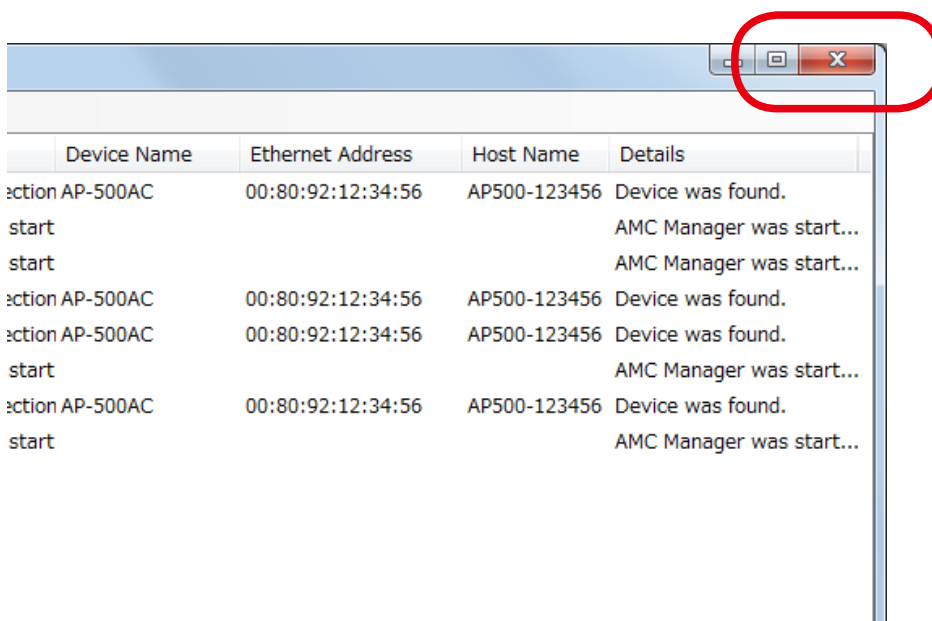
- It is also possible to start Log Viewer by following.
- From the menu bar, click **Tools - Start Log Viewer**.

2. Log Viewer is started.



Finishing Log Viewer

1. Clicking the close button on top right of the window will finish Log Viewer.



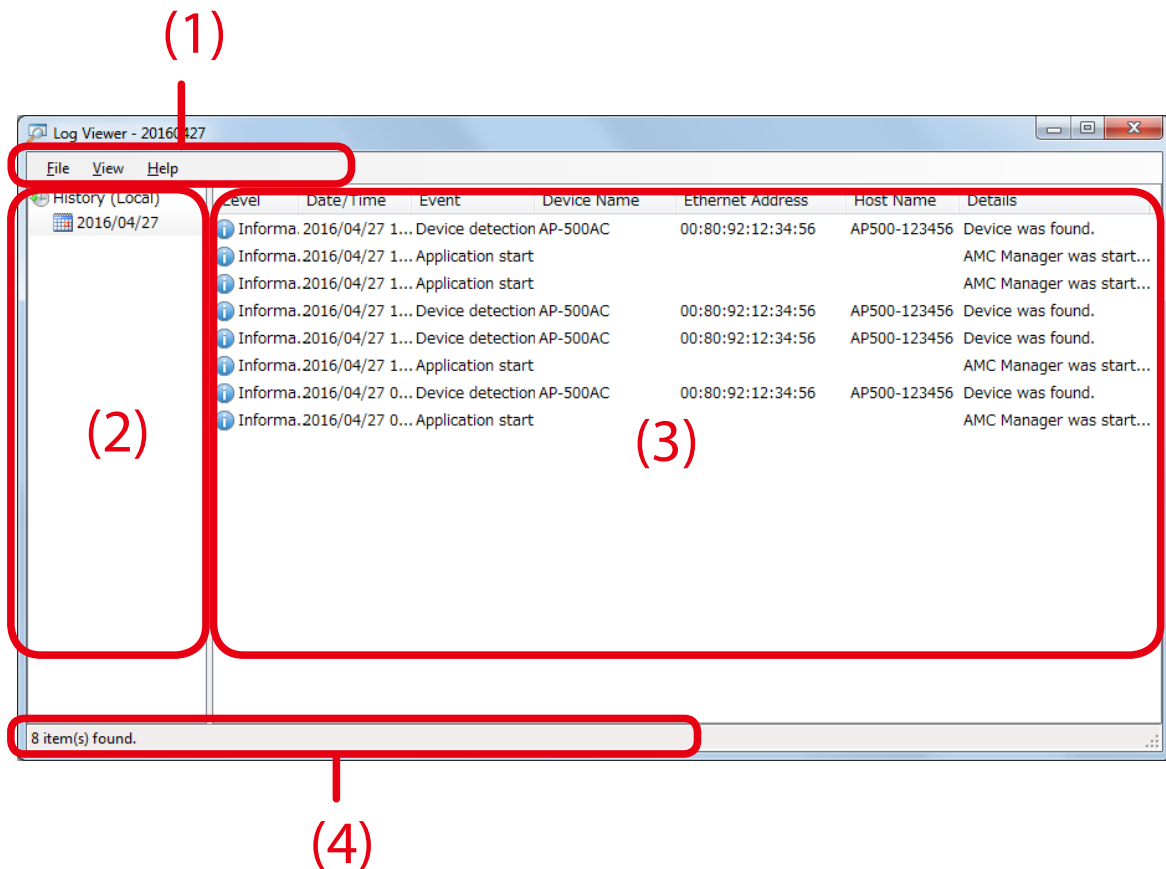
Note

It is also possible to finish Log Viewer by following.

- From the menu bar, click **File - Close**.

Log Viewer's Window

Following explains on the Log Viewer's window.



(1) Menu bar

Provides each function of Log Viewer, such as export, advanced search, etc.

(2) Date/Opened Files

Shows the date of logs and the name of opened Log Viewer files.

(3) Log list

Shows a list of event logs.

If you click a column header, the order of logs will be sorted by the column you have clicked.

(4) Status bar

Shows a number of logs, etc.

[Menu bar]

Menu bar provides each function of Log Viewer, such as export of logs, advanced search, etc.






Menu	Item	Details
File	Open	Reads the Log Viewer format files.
	Export	Saves the log information as Log Viewer format or CSV file.
	History	Shows the opened Log Viewer format files.
	Clear All History	Clears the history of opened files.
	Close	Finishes Log Viewer.
View	Refresh	Refreshes the Log Viewer information.
	Advanced Search	Enables filter for search to show specified log information only.
Help	About Log Viewer	Shows the version information.

**Note**




- The present information on log list will be saved to a file if "**Export**" is done. If a search filter is enabled by **Advanced Search**, the filtered information will be saved to a file.

[Log list]

Log list shows the event logs saved by AMC Manager.

Level	Date/Time	Event	✓ Device Name	Ethernet Address	Host Name	Details
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 1...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found
	Informa. 2016/04/27 0...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-123456	Device was found

Name	Details
Level	Shows the icons of warning level.
Date/Time	Shows the date/time of event.
Event	Shows the event type.
Device Name	Shows the device name.
Ethernet Address	Shows the Ethernet Address.
Host Name	Shows the host name.
Details	Shows the details of the event.

Icon	Level Type	Details
	Information	Configuration change, device detection, etc.
	Error	Configuration change error, communication error, etc.
	Warning	Monitoring stop, etc.

Group	Event Type	Details
Log of control	IP configuration	IP address is configured.
	Configuration change	Configuration is changed.
	Firmware update	Firmware is updated.
	Initialization	Configuration is initialized.
	Restart	Device is restarted.
	Log retrieval	System log is retrieved.
Log of device monitoring	Device detection / recovery	There is a reply from device.
	Device loss	Reply is lost from device (communication error)
	Monitoring start/stop	Device monitoring is started or stopped.
	Change detection	Configuration is changed or firmware is updated by a method other than AMC Manager.

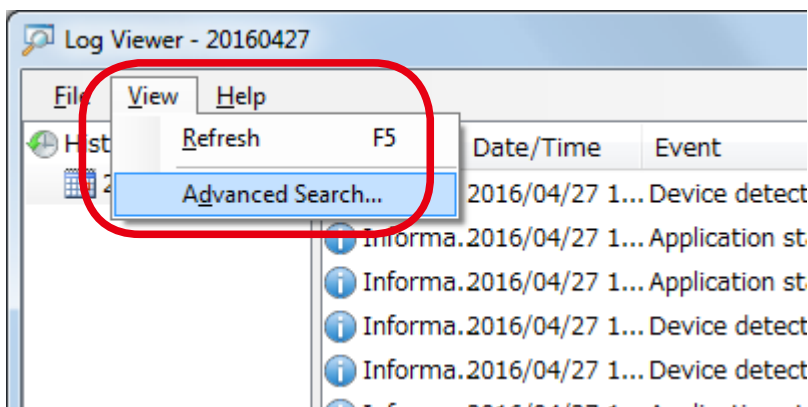
**Note**

- If you click a column header, the order of logs will be sorted by the column you have clicked.

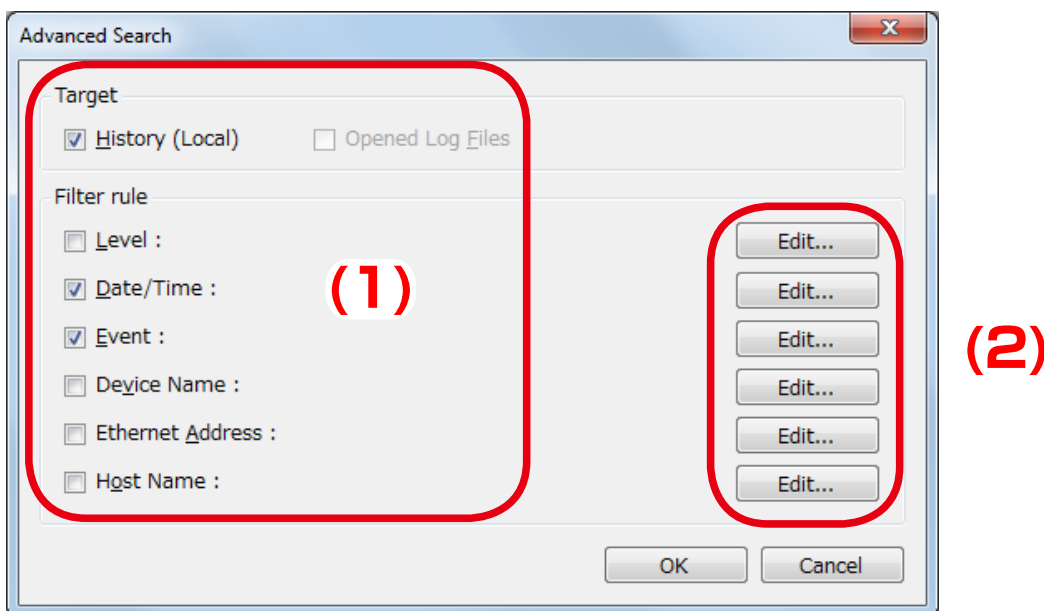
Searching for Logs

It is possible to search for event logs using a filter of advanced search. Only matched logs will be displayed in the log list.

1. From the menu bar, click **View - Advanced Search**.



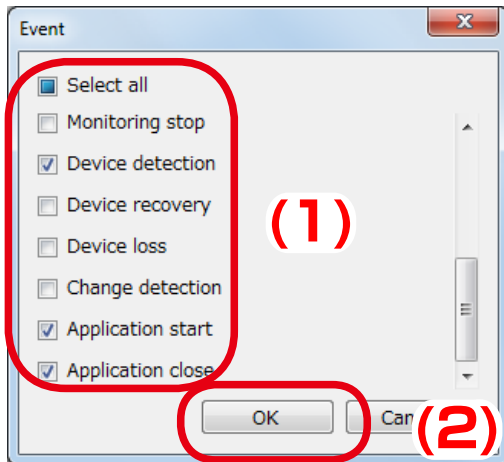
2. Check the search target and filter settings and click **Edit**.



Note

- "Opened Log Files" of the target can be selected only when Log Viewer format file is opened.

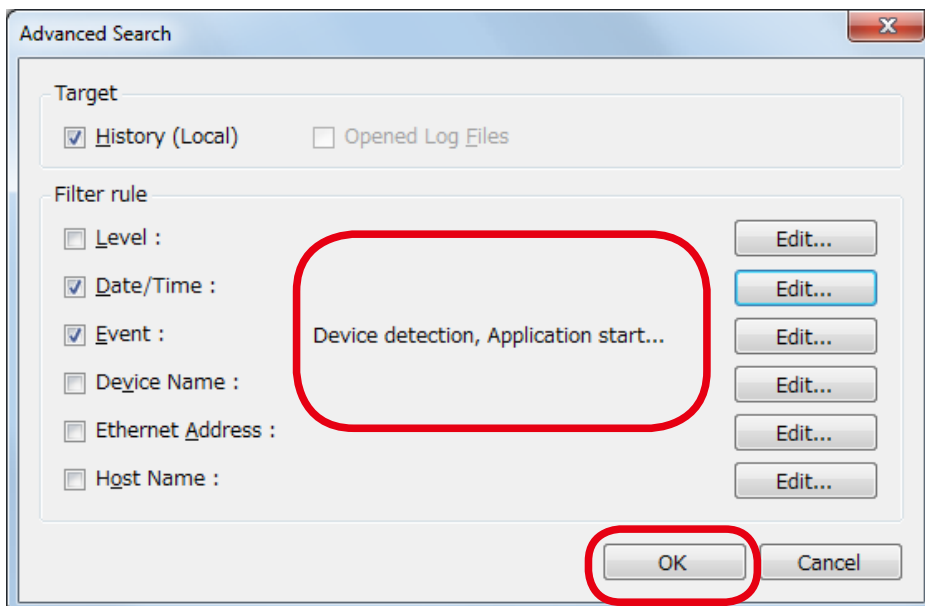
3. Check the filter conditions to use and click **OK**.



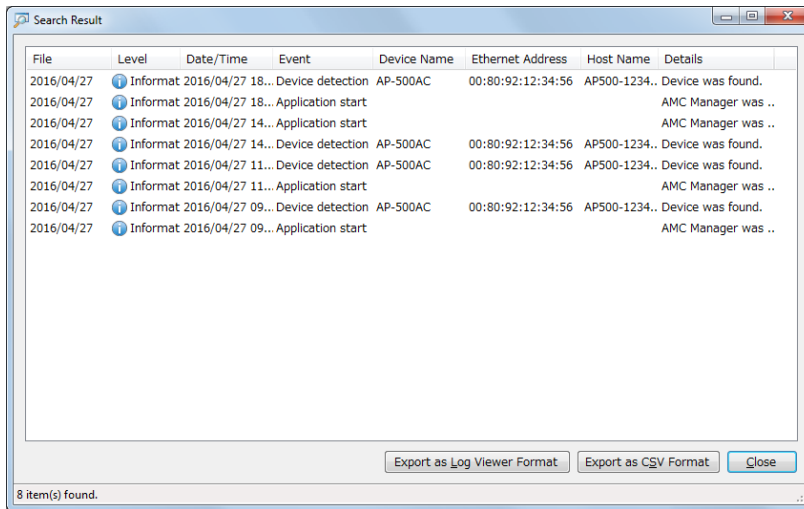
Note

- Enter the date/time, device name, etc. according to the filter conditions.

4. To configure more filter conditions, go back to **2** and repeat the same process. Once the filter setting is configured, it is displayed in the window. When necessary filters are configured, click **OK**.



5. The search result is displayed.



File	Level	Date/Time	Event	Device Name	Ethernet Address	Host Name	Details
2016/04/27	Information	2016/04/27 18...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-1234..	Device was found.
2016/04/27	Information	2016/04/27 18...	Application start				AMC Manager was ..
2016/04/27	Information	2016/04/27 14...	Application start				AMC Manager was ..
2016/04/27	Information	2016/04/27 14...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-1234..	Device was found.
2016/04/27	Information	2016/04/27 11...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-1234..	Device was found.
2016/04/27	Information	2016/04/27 11...	Application start				AMC Manager was ..
2016/04/27	Information	2016/04/27 09...	Device detection	AP-500AC	00:80:92:12:34:56	AP500-1234..	Device was found.
2016/04/27	Information	2016/04/27 09...	Application start				AMC Manager was ..

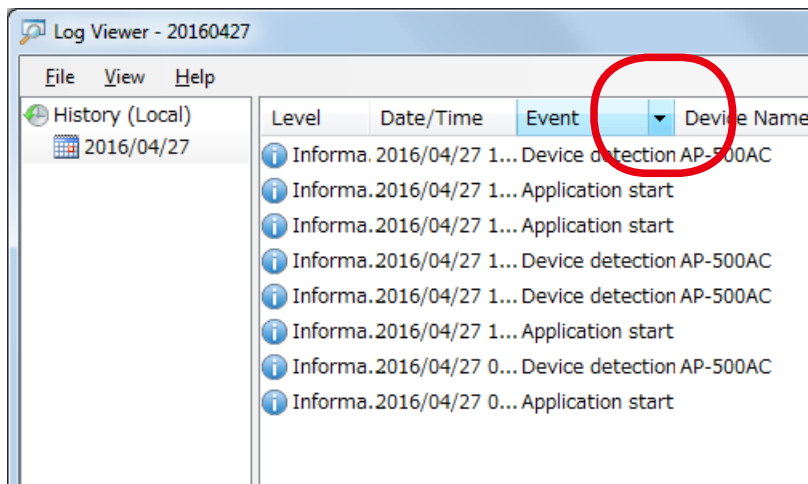
Export as Log Viewer Format Export as CSV Format Close

8 item(s) found.

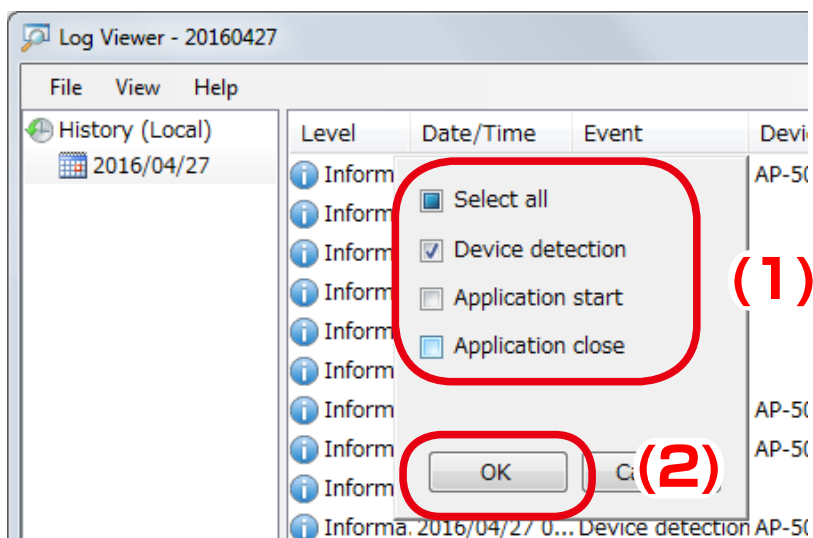
Using Filter of Log List

It is possible to set a filter individually on each item of the log list. Only matched logs will be displayed in the log list.

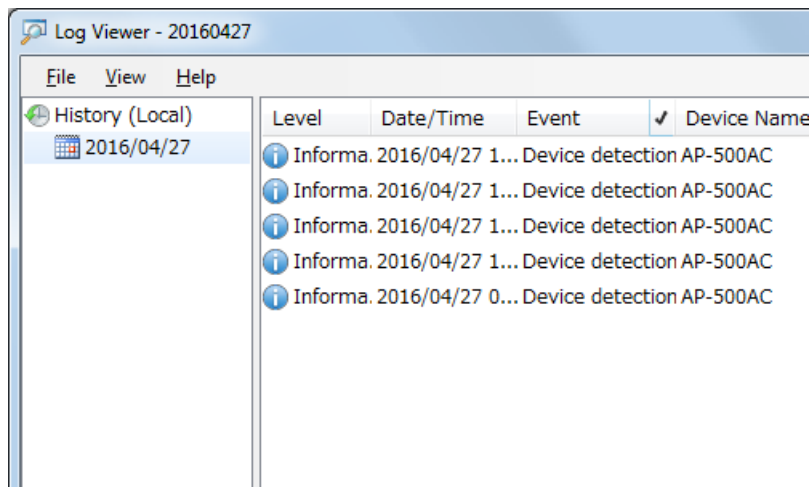
1. If a cursor is moved closer to column header, split button is displayed. Click the split button of the item that you want to enable filter on.



2. Check the items you want to show in the list and click **OK**.



3. Event logs are filtered by the selected conditions.

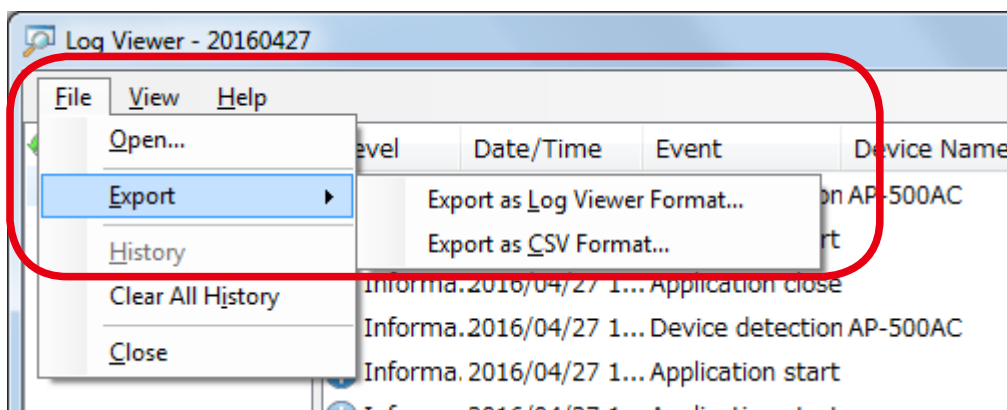
**Note**

- When a filter is used, check mark will be displayed in the column header of that filter.

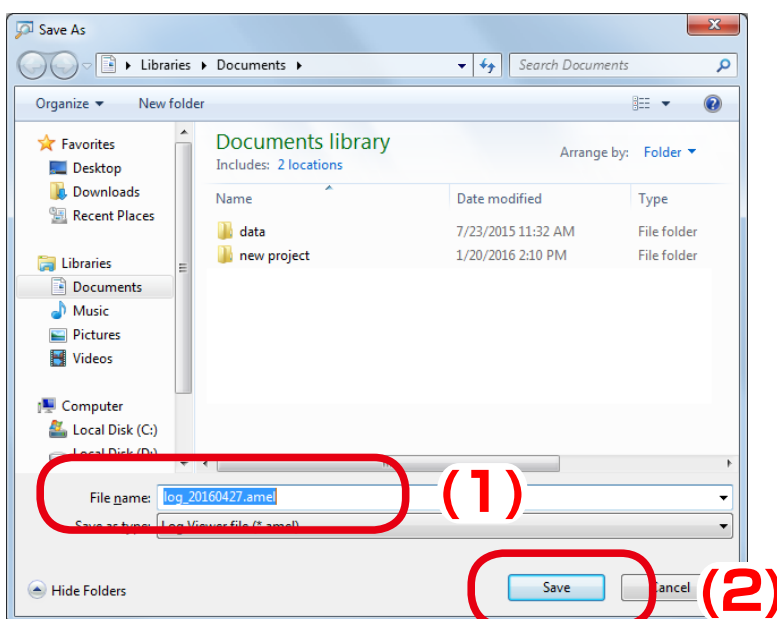
Saving Event Logs to File

It is possible to export event logs and save it as a file. The file can be saved in either Log Viewer format or CSV file. If the file is saved in Log Viewer format file, it can be opened by Log Viewer.

1. From the menu bar, click **File - Export - Export as Log Viewer Format** or **Export as CSV Format**.



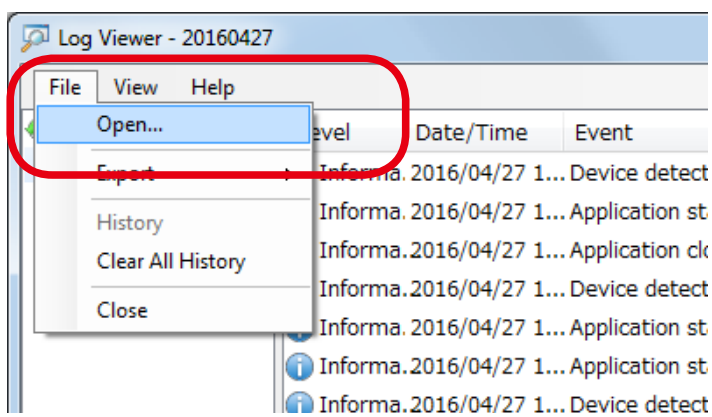
2. Specify a file name and click **Save**.



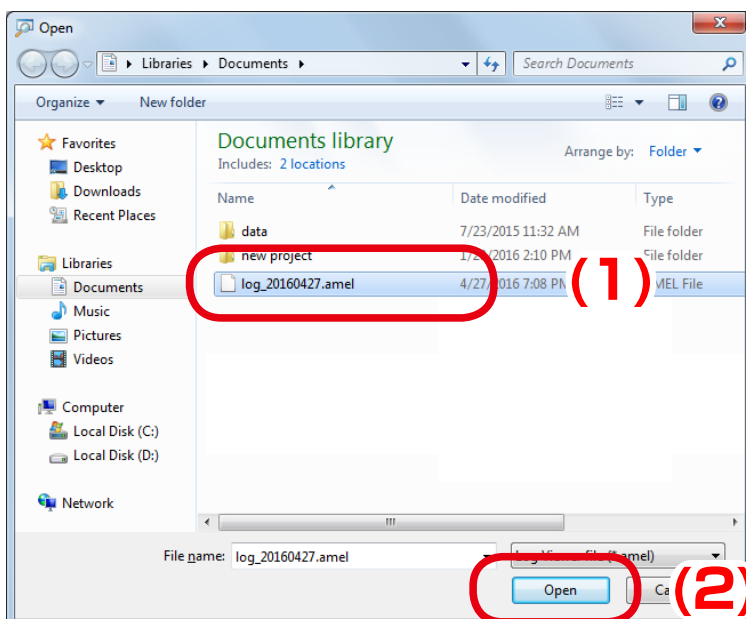
Opening Event Logs

Once the event logs are exported and saved as Log Viewer format file, it can be imported by Log Viewer.

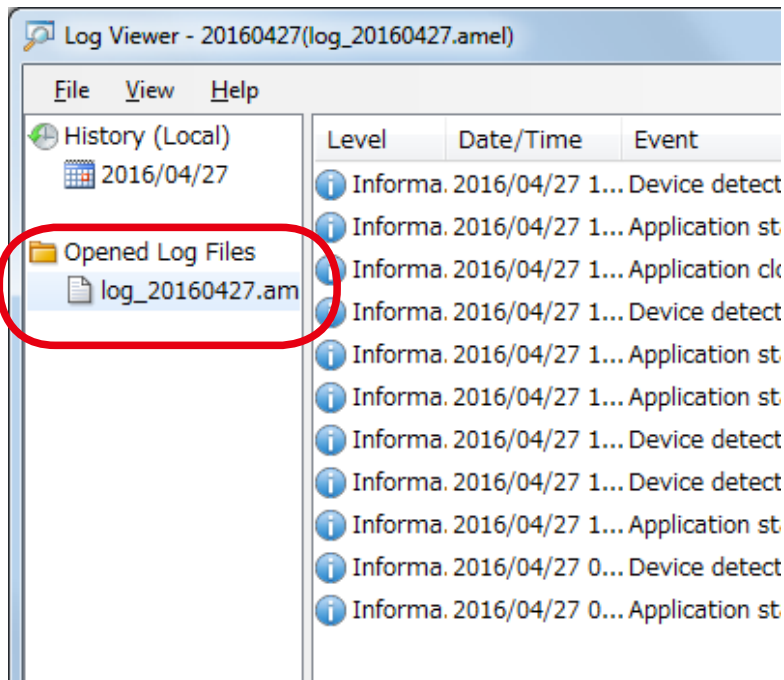
1. From the menu bar, click **File - Open**.



2. Select a Log Viewer format file and click **Open**.

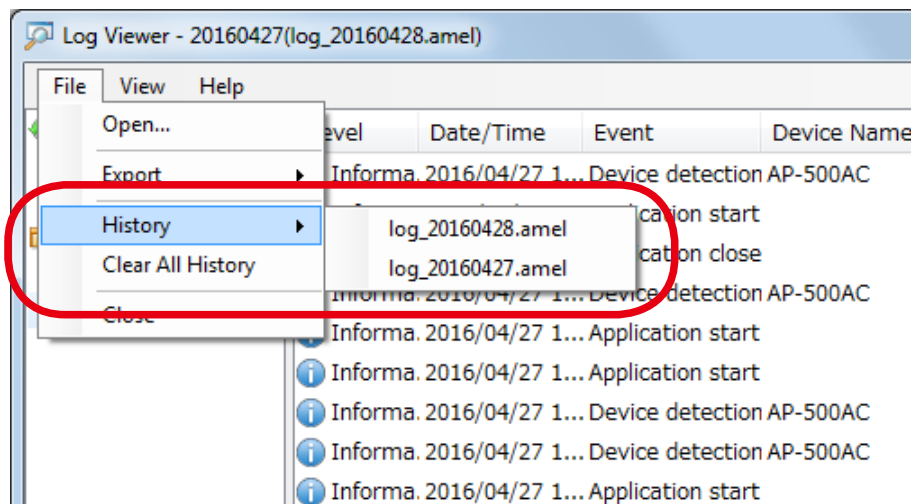


3. The file is opened.



Note

- The history of imported files is displayed at **History** of **File** menu. Up to 5 files are displayed as history. If the file is clicked on the history, the file is opened.



4-12. License Information

The following explains how to update the license information for the AMC Manager. The license information can be displayed and changed in the **License Information** window.

License Information Window

License Information

This is the AMC Manager E model's license information.

License Information

License Key: ABCDE-FGHJ-KLMNO-PQRST

Expiration Date: 7/31/2015

User Information

Company Name: silex technology, Inc.

Name: silex user

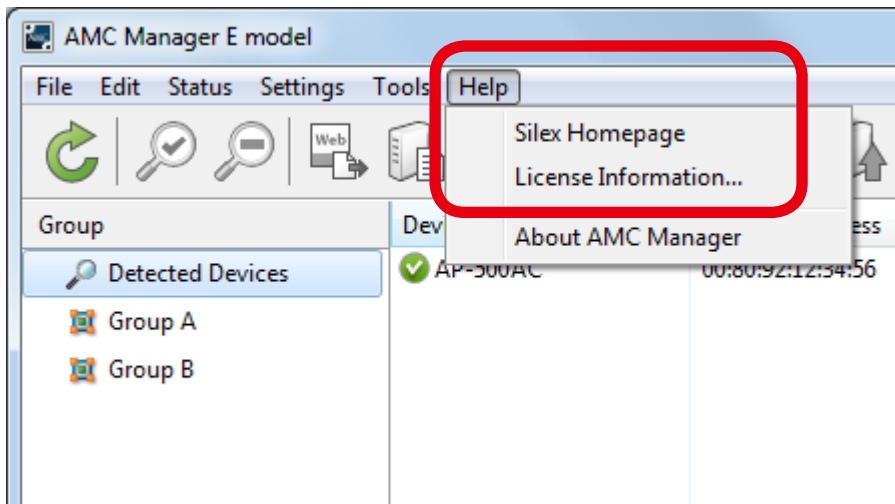
Email Address: *****@silex.com

OK Cancel

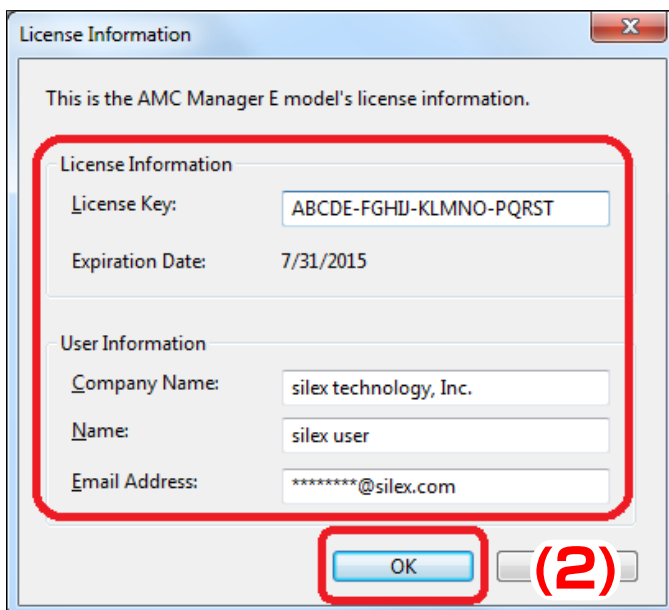
Name	Details										
License Key	Shows the registered license key. (Up to 23 characters can be used.)										
Expiration Date	Shows the expiration date for the license. The followings are displayed.										
	<table> <tr> <th>Information</th><th>Meanings</th></tr> <tr> <td>Indefinite</td><td>There is no expiration for the license.</td></tr> <tr> <td>Date (MM/DD/YYYY)</td><td>Expiration date</td></tr> <tr> <td>This license is expired.</td><td>The registered license is expired. Please get a new license key.</td></tr> <tr> <td>Enter the license key.</td><td>Failed to register the license key. Please enter the correct license key.</td></tr> </table>	Information	Meanings	Indefinite	There is no expiration for the license.	Date (MM/DD/YYYY)	Expiration date	This license is expired.	The registered license is expired. Please get a new license key.	Enter the license key.	Failed to register the license key. Please enter the correct license key.
Information	Meanings										
Indefinite	There is no expiration for the license.										
Date (MM/DD/YYYY)	Expiration date										
This license is expired.	The registered license is expired. Please get a new license key.										
Enter the license key.	Failed to register the license key. Please enter the correct license key.										
Company Name	Shows the company name (up to 64 characters).										
Name	Shows the user name (up to 64 characters).										
Email Address	Shows the email address (up to 254 characters).										
[OK] button	Registers the license information.										
[Cancel] button	Cancels the settings and closes the window.										

Updating License Key

1. Click **Help - License Information** from the menu bar.



2. To change the license information, enter the new information for **License Key**, **Company Name**, **Name** and **Email Address** and click **OK**.



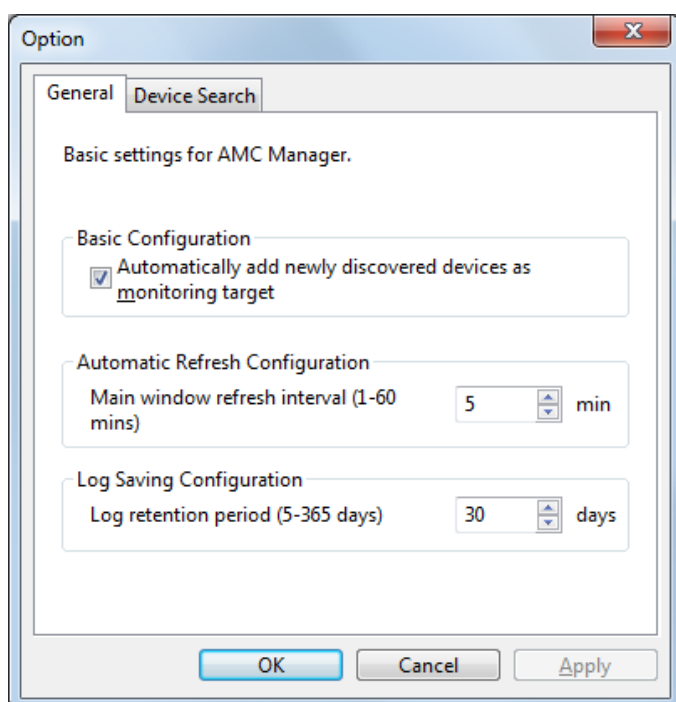
4-13. AMC Manager's Optional Settings

The following explains how to configure the operational settings as well as device search settings for the AMC Manager.

The operational settings can be configured at the **Option** window.

Option Window

General Tab



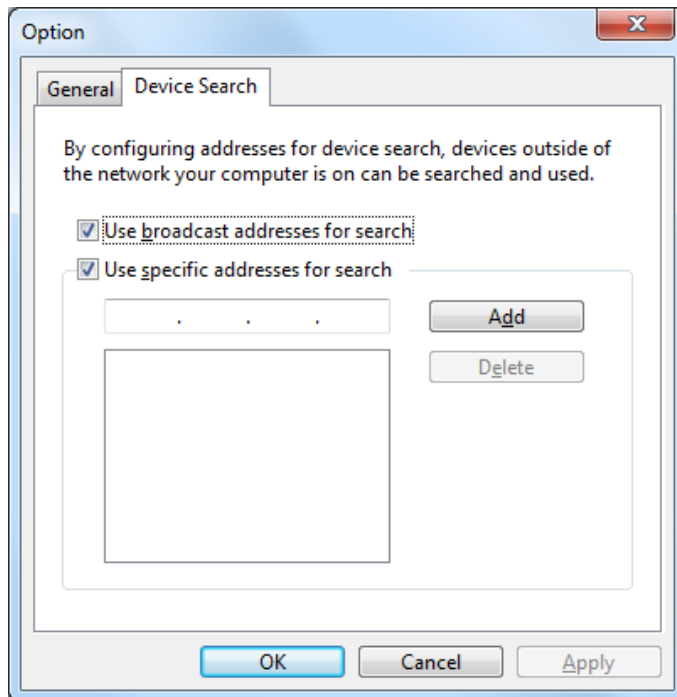
Name	Details	Default Value
Automatically add newly discovered devices as monitoring target	Adds the new devices as monitoring target when the AMC Manager detected it. Once the device is added as the monitoring target, the status of that device is refreshed regularly.	ON
Main window refresh interval	Sets the interval to refresh the operating status for the devices to monitor (1-60 min).	5 min
Log retention period	Sets the number of days to save event logs. The value must be 5 - 365.	30 days
[OK] button	Saves the settings and closes the window.	-
[Cancel] button	Cancels the settings and closes the window.	-
[Apply] button	Saves the settings.	-



Note

- Event logs are saved for a period specified at **Log retention period** and can be accessed using Log Viewer.

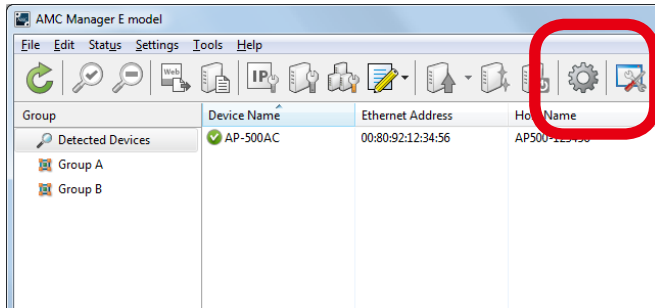
Device Search Tab



Name	Details	Default Value
Use broadcast addresses for search	Check the check box when you use the broadcast address for searching the devices.	ON
Use specific addresses for search	Check the check box when you use the specific address for searching the devices.	ON
(Address field)	Enter the address to register.	None
[Add] button	Adds the address entered to the address field. Up to 64 addresses can be registered to the address list.	-
[Delete] button	Deletes the address from the address list.	-
[OK] button	Saves the settings and closes the option setting window.	-
[Cancel] button	Cancels the settings and closes the window.	-
[Apply] button	Saves the settings.	-

Changing AMC Manager Settings

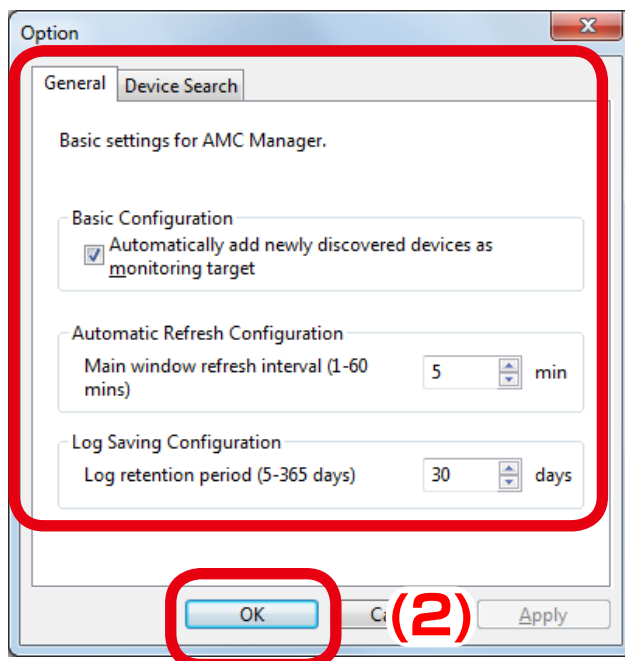
1. Select the **Option** icon from the toolbar.



Note

- The **Option** window can also be displayed by clicking **Tools - Option** from the menu bar.

2. In the **Option** window, configure the settings and click **OK**.



5. Survey Assistant

This chapter explains how to use the Survey Assistant.

5-1. Survey Assistant's Features

The **Survey Assistant** is the plug-in exclusively designed for the AMC Manager E model. It graphically shows the information collected by the Silex product, such as wireless status, radio interference, etc.

Survey Assistant's Features

The **Survey Assistant** has the following features:

Graphic display

Shows a graph of wireless environment scanned by the Silex product which can run with the Survey Assistant plug-in.

Diagnostic feature

Shows the caution or warning on a radio interference.

Graph on a map

Shows a graph of the scanned wireless information on the map which you have specified as a background image. By using the floor map image of where the Silex product is installed, the graph can be displayed on each spot of installation on the map.

5-2. Starting/Finishing Survey Assistant

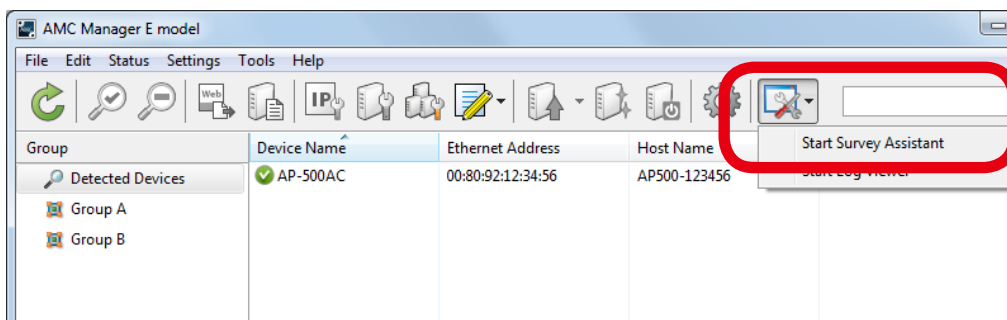
How to start/finish the Survey Assistant is explained.

The Survey Assistant is a plug-in exclusively designed for the AMC Manager E model.

It is impossible to start the Survey Assistant only.

Starting Survey Assistant

1. Select the device to use from the list and click the **Start Survey Assistant** from the toolbar.



Note

The Survey Assistant can also be started by a method below:

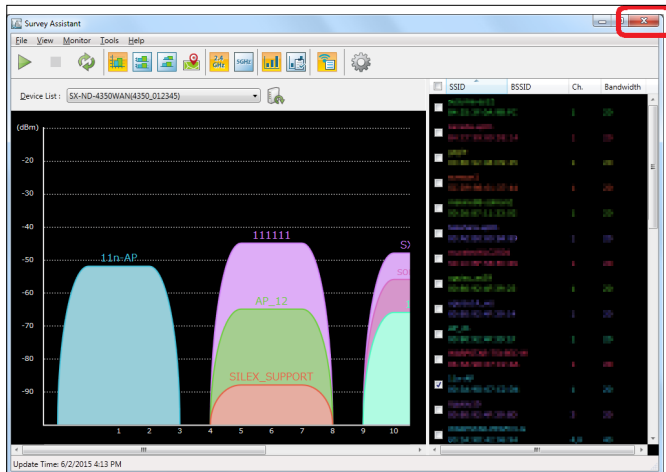
- Click **Tools - Start Survey Assistant** from the menu bar.

The Survey Assistant will use a different view mode depending on how the device is selected on the AMC Manager.

- When one device is selected, **Single View Mode** will be used.
- When multiple devices are selected, **Multi View Mode** will be used.
- When no devices are selected, **Multi View Mode** will be used.

Finishing Survey Assistant

1. Click the close button on top right of the window.

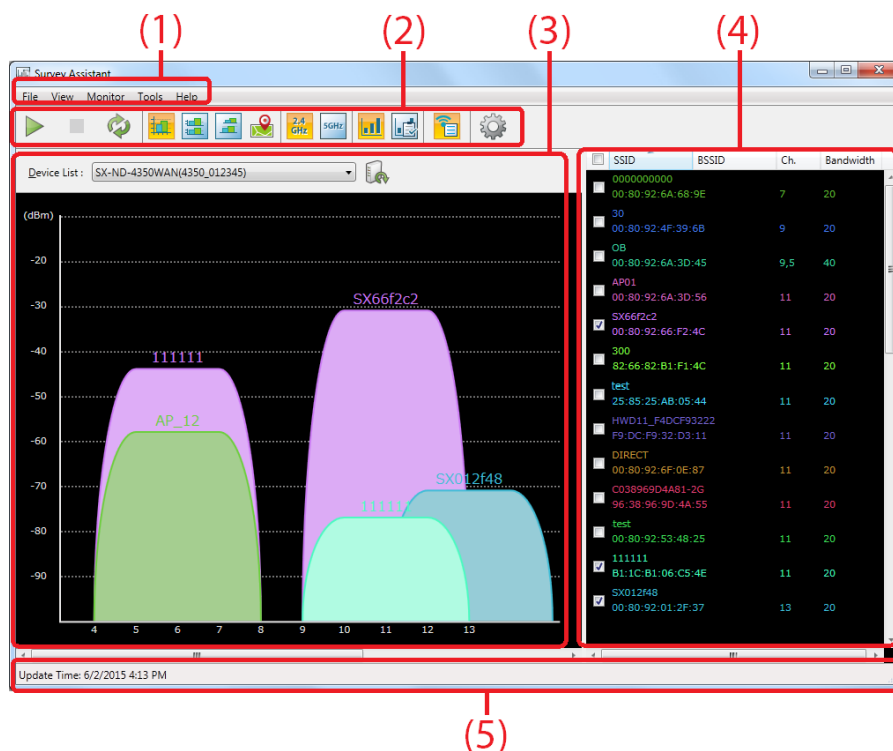


Note

- The Survey Assistant can also be finished by a method below.
- Click **File - Finish** from the menu bar.

5-3. Survey Assistant's Main Window

The Survey Assistant collects the wireless environmental information and shows it as a graph. The following explains on the main window and menu of the Survey Assistant.



(1) Menu bar

Provides each function of the Survey Assistant such as a view mode change, etc.

(2) Toolbar

Provides each function of the Survey Assistant such as a view mode change, etc.

(3) Graph area

Shows the graph of retrieved wireless information according to the view mode.

(4) SSID list

Shows the SSIDs of the retrieved wireless information as a list.

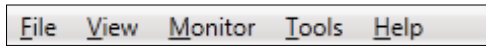
By selecting the SSID from the list, the corresponding graph can be displayed.

(5) Status bar

Shows the operating status.

Menu Bar

This provides each function of the Survey Assistant such as a view mode change, etc.



Menu	Items	Details
File	Refresh	Refreshes the graphs by retrieving the wireless environmental information from all devices.
	Cancel Refresh	Cancels the refresh.
	Finish	Finishes the Survey Assistant.
View	Single View Mode	Shows the graph of one device.
	Multi View Mode	Shows the graphs of multiple devices.
	Historical View Mode	Shows the graph of one device with its past graphs.
	Map Mode	Shows the graph with the specified image on the back such as a floor map image, etc.
	2.4GHz	Shows the graph of 2.4GHz wireless.
	5GHz	Shows the graph of 5GHz wireless.
	Color View	Shows the SSIDs in a different color for each.
	Diagnostic View	Shows the caution or warning for the radio interference according to the specified conditions.
	SSID List	Shows a list of SSIDs.
Monitor	Start Monitoring	Opens the setting window for device monitoring. The wireless environmental information is retrieved according to the monitor setting.
	Stop Monitoring	Stops the device monitoring.
Tools	Option	Opens the option setting window.
Help	Silex Homepage	Opens the Silex's homepage.
	About Survey Assistant	Shows the version information.



Note

- When a monitoring is in process, the refresh button is disabled.

Toolbar

This provides each function of the Survey Assistant such as a view mode change, etc.



Icon	Item(Tooltip)	Details
	Start monitoring	Opens the setting window for device monitoring. The wireless environmental information is retrieved according to the monitor setting.
	Stop monitoring	Stops the device monitoring.
	Refresh graphs of all devices	Refreshes the graphs by retrieving the wireless environmental information from all devices.
	Cancel the refresh	Cancels the refresh.
	Show the graph of a single device	Shows the graph of one device.
	Show the device graph as a list	Shows the graphs of multiple devices.
	Show the history of scan results	Shows the graph of one device with its past graphs.
	Show the graph on the map	Shows the graph with the specified image on the back such as a floor map image, etc.
	2.4GHz band	Shows the graph of 2.4GHz wireless.
	5GHz band	Shows the graph of 5GHz wireless.
	Show the color graph	Shows the SSIDs in a different color for each.
	Find the radio interference	Shows the caution or warning for the radio interference according to the specified conditions.
	SSID list	Shows/Hides a list of SSIDs.
	Option	Opens the option setting window.



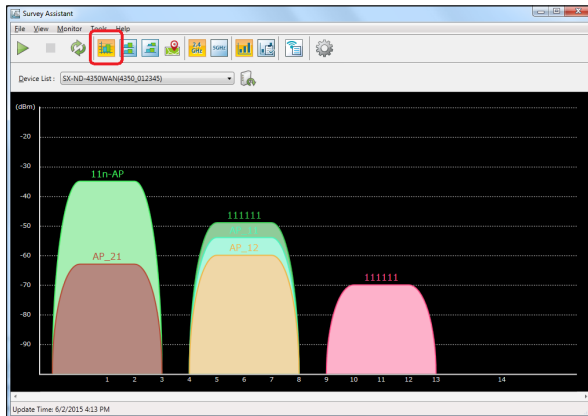
Note

- When a monitoring is in process, the **Refresh graphs of all devices** icon is disabled.

Graph Area

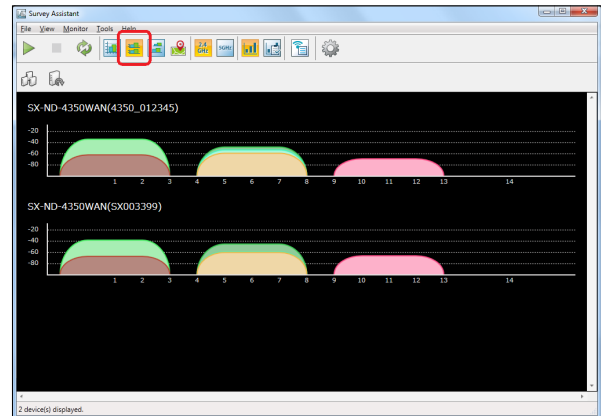
This shows the graph of retrieved wireless environmental information according to the view mode. There are 4 types of view mode; **Single View Mode**, **Multi View Mode**, **Historical View Mode** and **Map Mode**.

Single View Mode



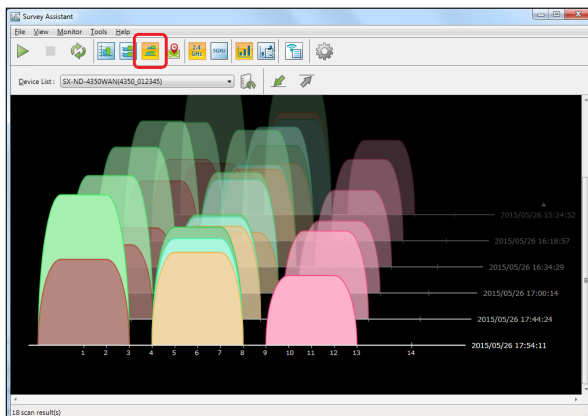
Shows the graph of one device

Multi View Mode



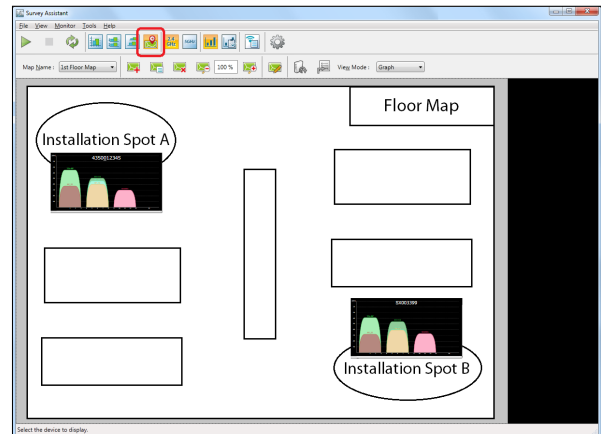
Shows the graphs of multiple devices as a list

Historical View Mode



Shows the history of graphs for one device

Map Mode



Shows the graph on the map which is selected as a background image.

SSID List

This shows the SSIDs of the retrieved wireless information as a list.
The graphs will be displayed for the SSIDs whose check boxes are checked.

<input type="checkbox"/>	SSID	BSSID	Ch.	Bandwidth
<input checked="" type="checkbox"/>	111111	00:00:00:06:C5:4D	6	20
<input type="checkbox"/>	111111	00:00:00:06:C5:4E	11	20
<input checked="" type="checkbox"/>	11n-AP	00:00:00:67:C2:D4	1	20
<input checked="" type="checkbox"/>	AP_11	00:00:00:06:C5:01	6	20
<input type="checkbox"/>	AP_12			



Note

- If the check box is cleared, the graph of that SSID will not be displayed. When too many graphs are displayed on your wireless environment, you can hide unnecessary ones by clearing the check boxes.

Context Menu

If the SSID is right-clicked on the list, the context menu will be displayed. From the context menu, you can show or hide the same channels or same SSIDs as the one you select.

<input type="checkbox"/>	SSID	BSSID	Ch.	Bandwidth
<input checked="" type="checkbox"/>	111111	00:1C:81:06:65:4D	6	20MHz
<input checked="" type="checkbox"/>	111111	00:1C:81:06:65:4E	11	20MHz
<input type="checkbox"/>	11n-AP	00:3A:00:06:00:00	1	20MHz
<input checked="" type="checkbox"/>	aoyam	00:80:00:06:00:00	6	20MHz
<input checked="" type="checkbox"/>	AP_11	00:1C:81:06:65:01	6	20MHz

Name	Details
Show	Shows the graph by checking the check box of the SSID.
Hide	Hides the graph by clearing the check box of the SSID.
Show Same Channels	Shows all SSIDs with the same channel as that of the SSID you select.
Hide Same Channels	Hides all SSIDs with the same channel as that of the SSID you select.
Show Same SSIDs	Shows all SSIDs with the same name as that of the SSID you select.
Hide Same SSIDs	Hides all SSIDs with the same name as that of the SSID you select.

5-4. Device Monitoring

The wireless environmental information can be retrieved regularly from the device by specifying it as a monitoring target. The device to retrieve the information and the interval of retrieving it can be configured at the **Monitor Setting** window. The retrieved information will be displayed as a graph using the **Historical View Mode**.

Monitor Setting Window

Monitor Setting

Configure the device monitoring setting to start monitoring.

Select the monitoring target:

<input type="checkbox"/>	Host Name	Ethernet Address	IP Address	Device Name
<input checked="" type="checkbox"/>	4350_012345	84:25:3F:00:11:22	192.168.20.123	SX-ND-4350WAN
<input checked="" type="checkbox"/>	SX003399	00:80:92:00:33:99	192.168.20.124	SX-ND-4350WAN

Start Time: 6/1/2015 15:19:07

End Time: 6/1/2015 15:19:07

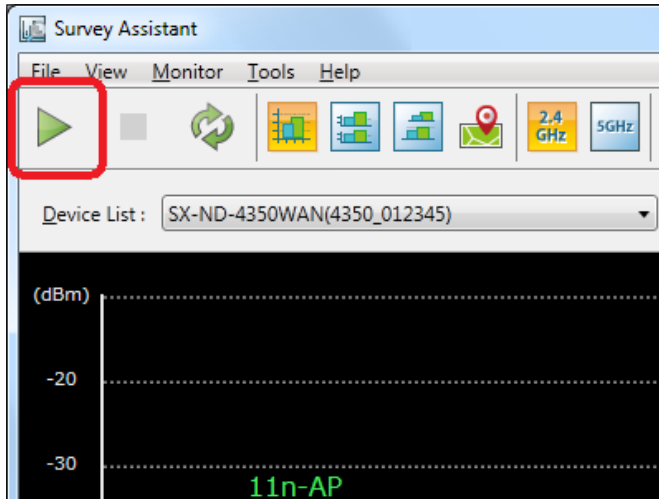
Refresh Interval: 1 Hour 00 Min

Start Close

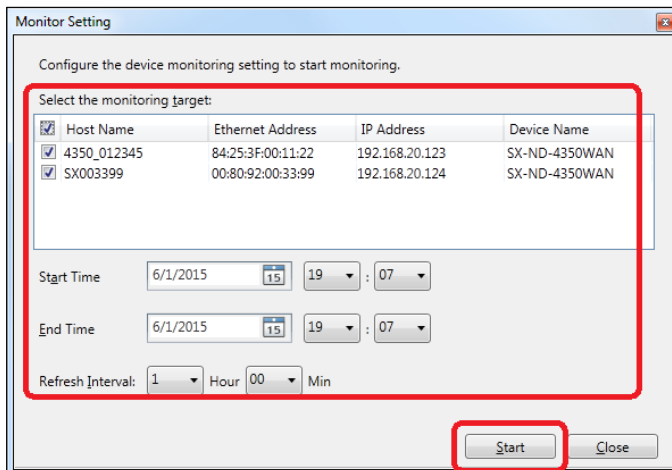
Name	Details
Select the monitoring target	Select the device to monitor. If the check box is checked, the device will be added as a monitoring target.
Start Time	Specify the time to start monitoring. If the time earlier than the current time is specified, the monitoring will start immediately.
End Time	Specify the time to finish monitoring.
Refresh Interval	Specify the interval to retrieve the wireless environmental information.
[Start] button	Starts monitoring with the specified conditions.
[Close] button	Closes the window.

Device Monitoring

1. Click the **Start monitoring** icon from the toolbar.



2. Specify the devices to monitor as well as the start/end time for monitoring and click **Start**.



Note

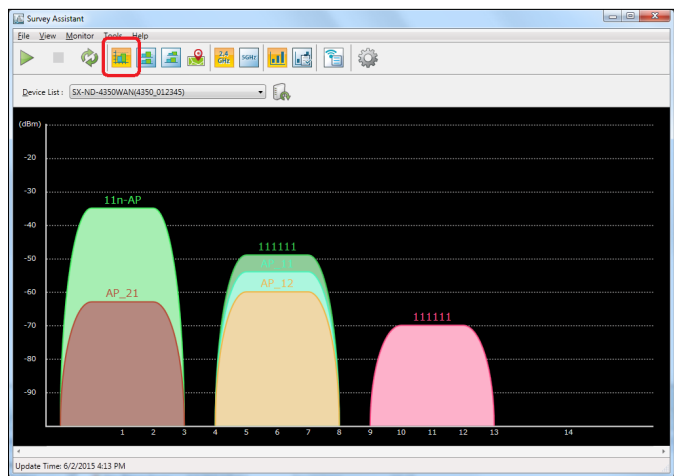
- When a monitoring is in process, the **Refresh graphs of all devices** icon is disabled.


5-5. View Mode

The Survey Assistant can switch the view mode to display the graph of wireless information retrieved from the device.

Single View Mode


Click the **Show the graph of a single device** icon from the toolbar.
The graph will be displayed for the single device you selected. In the graph, the horizontal axis represents the wireless channel while the vertical axis represents the signal strength.



 The Single View Mode can also be enabled by a method below.

- Select the device and click **View - Single View Mode** from the menu bar.

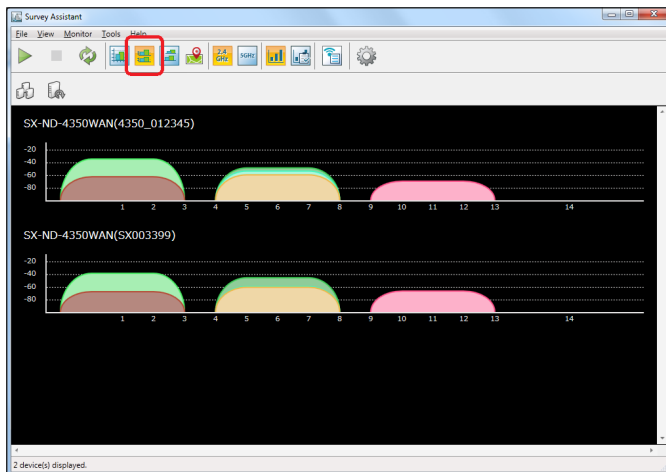
Note

Icon	Name(Tooltip)	Details
-	Device List	Select the device from a pull-down menu.
	Refresh the graph of selected device	Refreshes the graph of the selected device by scanning the wireless environmental information.

Multi View Mode

Click the **Show the device graph as a list** icon from the toolbar.

The graphs will be displayed for the multiple devices you selected. The horizontal axis represents the wireless channel while the vertical axis represents the signal strength.



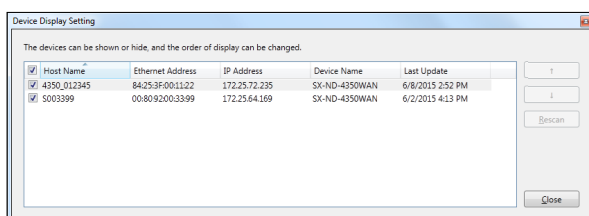
Note

The Multi View Mode can also be enabled by a method below.

- Select the device and click **View - Multi View Mode** from the menu bar.

Icon	Name(Tooltip)	Details
	Device display setting	Opens the Device Display Setting window.
	Refresh the graph of selected device	Refreshes the graph of the selected device by scanning the wireless environmental information.

Device Display Setting Window

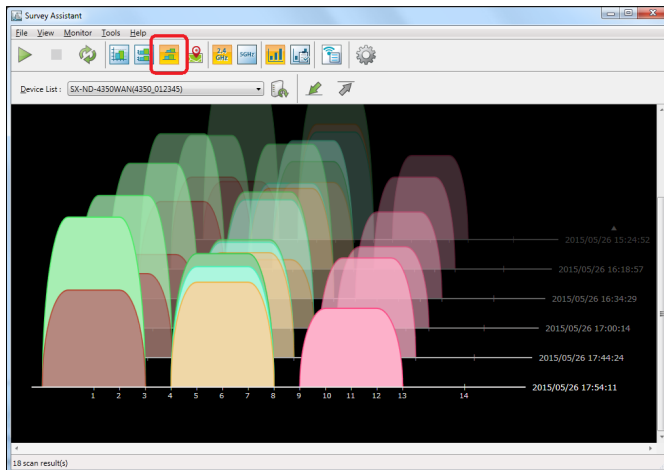


Name	Details
(Device list)	Select the device to display the graph. The graphs will be displayed for the devices you checked the check boxes.
↑ ↓ button	Moves up/down the graph.
[Rescan] button	Rescans the wireless environmental information.
[Close] button	Closes the window.

Historical View Mode




Click the **Show the history of scan results** icon from the toolbar.

The history of graph will be displayed in a chronological order. In the graph, the horizontal axis represents the wireless channel, the vertical axis represents the signal strength and the depth represents the scanned time.



Note

- The Historical View Mode can also be enabled by a method below.
 - Select the device and click **View - Historical View Mode** from the menu bar.
- Up to 100 graphs can be displayed as the history.

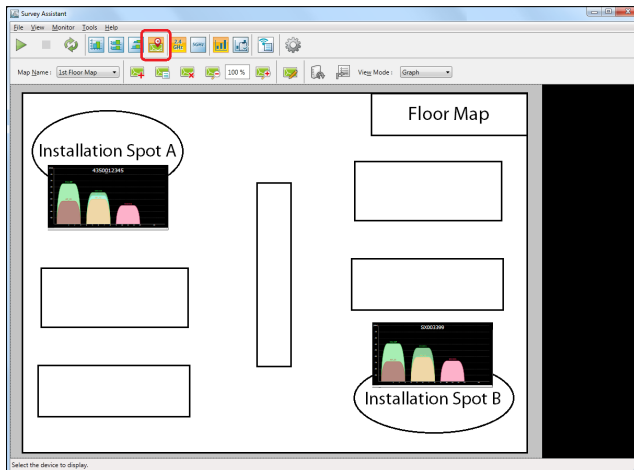
Icon	Name(Tooltip)	Details
-	Device List	Select the device from a pull-down menu.
	Refresh the graph of selected device	Refreshes the graph of the selected device by scanning the wireless environmental information. A newest graph always comes to the front.
	Move the graph to front	Moves the graph to the front.
	Move the graph back	Moves the graph to the back.

Map Mode

Click the **Show the graph on the map** icon from the toolbar.

The graph can be displayed on the image that is specified as the background.

For details on the map setting and the graph allocation, see **5-8. Showing Device Graph on Map**.



The map mode can also be enabled by a method below.

- Select the device and click **View - Map Mode** from the menu bar.

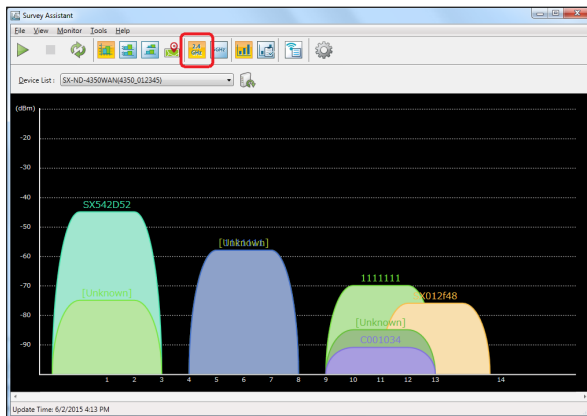
Note

Icon	Name(Tooltip)	Details
-	Map Name	Select the map to use from the pull-down menu.
	Add a new map	The new map can be created.
	Edit the current map	The current map can be edited. It is possible to change the map name and background image.
	Delete the current map	Deletes the current map
	Zoom out the map	Zooms out the current map.
	Zoom in the map	Zooms in the current map.
	Switch to the graph edit mode	Transits to the graph edit mode. The graph can be shown on the map image.
	Refresh the displayed graphs	Refreshes the graph of the current device by scanning the wireless environmental information. This refreshes all graphs on the map.
	Show the selected device on a graph	Shows the selected graph in Single View Mode . When multiple graphs are selected, they will be shown in Multi View Mode .
-	View Mode	Switches the graph to the device information which includes a host name, IP address, SSID, etc.

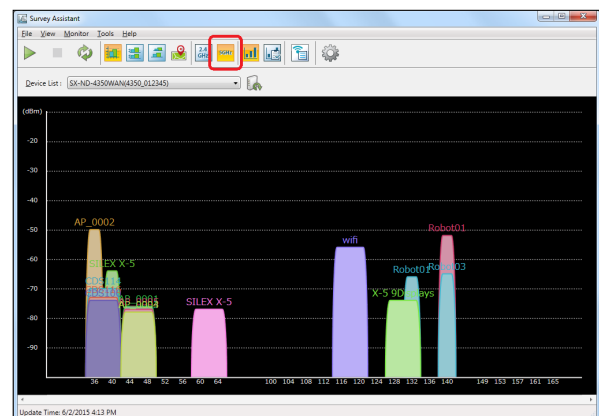
5-6. Changing Bandwidth

The bandwidth can be switched by clicking the **2.4GHz band** / **5GHz band** icons from the toolbar to show the corresponding information on the graph.

2.4GHz band



5GHz band



- The bandwidth can also be switched by the methods below:
- Select the device and click **View - 2.4GHz** from the menu bar.
 - Select the device and click **View - 5GHz** from the menu bar.

Note

5-7. Changing View Mode

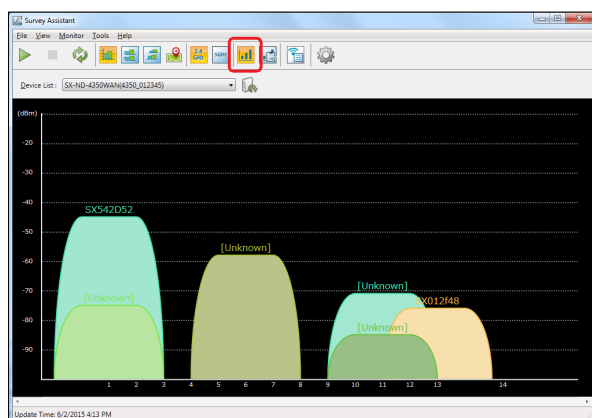
The view of graph can be switched by clicking **Show the color graph of wireless environment** or **Find the wireless interference** from the toolbar.

In the **Color View**, each graph is displayed in a different color.

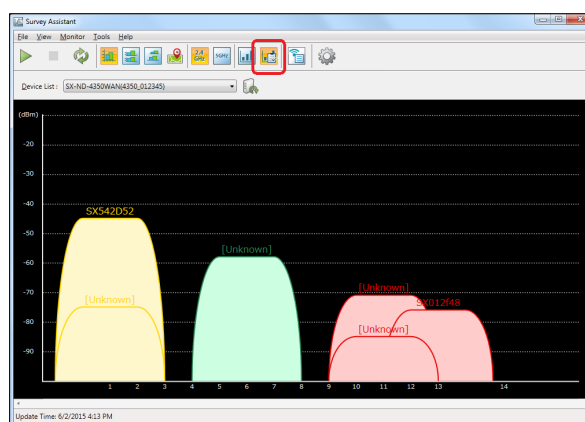
In the **Diagnostic View**, the graph is displayed in yellow (for caution) or red (for warning) according to the specified conditions, or in gray for those not matching the conditions.

The diagnostic settings can be configured in the option window.

Color View



Diagnostic View



Color	Diagnostic result
Green	Normal
Yellow	Caution
Red	Warning
Gray	N/A



Note

- The view mode can also be changed by the methods below:
 - Select the device and click **View - Color View** from the menu bar.
 - Select the device and click **View - Diagnostic View** from the menu bar.
- In the diagnostic view, the color will be applied in the order of Warning(Red) > Caution(Yellow) > Normal(Green). If there is one graph that matches both conditions of Warning(Red) and Caution(Yellow), a higher priority is given to Warning (Red).
- Every time when the graph is changed using the SSID list, the Survey Assistant will recheck them all with the diagnostic conditions.

5-8. Showing Device Graph on Map

How to show the graph on the background image is explained.

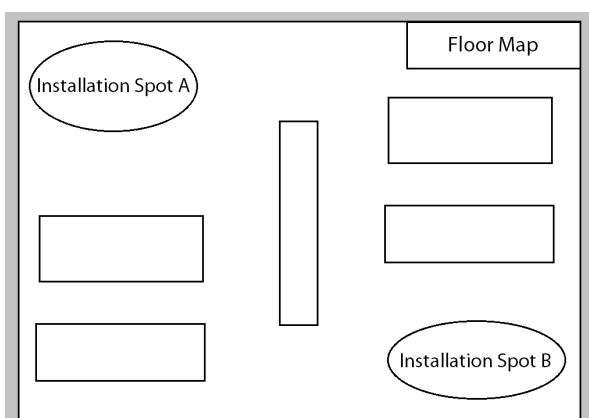
The graph of wireless environmental information can be displayed on the floor map image of where the wireless devices are installed, by adding it as the background image of graph area. Two or more sets of the map and graph can be registered.

Before You Begin

Prepare the image to use as a map.

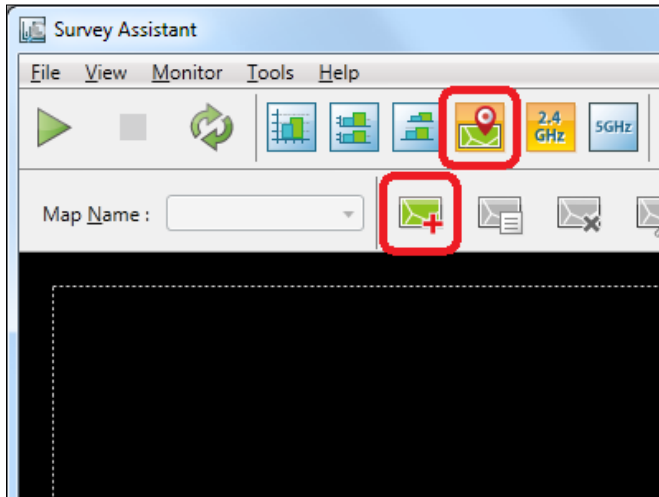
The supported file format is BMP only.

Sample of Image

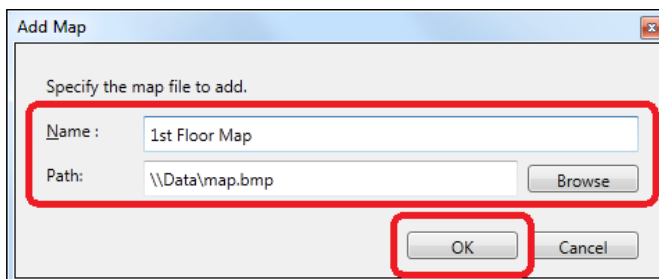


Creating Map

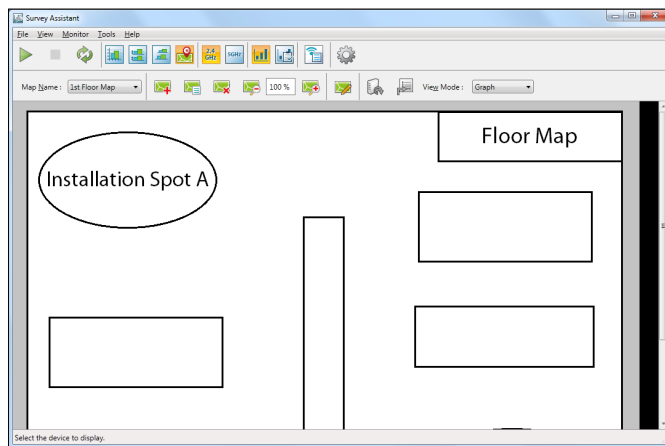
1. Click the **Show the graph on the map** icon and then **Add a new map** icon from the toolbar.



2. In the **Add Map** window, set a name of the map to add, specify where the image is saved and click **OK**.

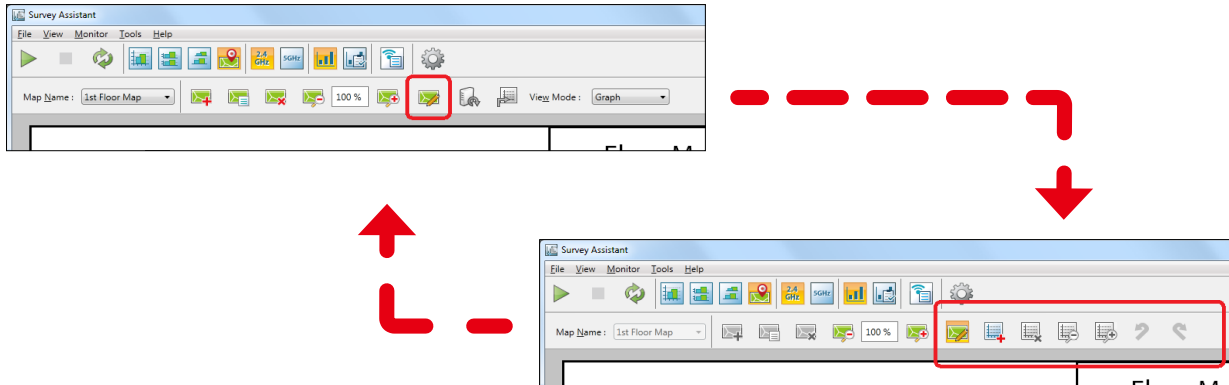


3. The map is created and the image is applied as the background.



Graph Edit Mode

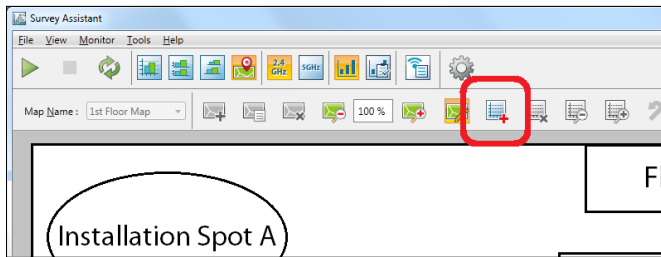
If the **Switch to the graph edit mode** icon is clicked when the Map Mode is used, the graph edit mode is enabled. In the graph edit mode, the graph can be added to the map.



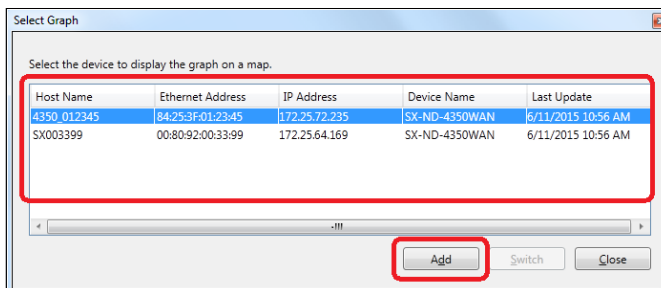
Icon	Name(Tooltip)	Details
-	Map Name	Select the map to use from the pull-down menu. In the pull-down menu, the create maps are displayed.
	Zoom out the map	Zooms out the map.
	Zoom in the map	Zooms in the map.
	Finish the graph edit mode	Finishes the graph edit mode.
	Add the graph to the map	Adds the graph to the map.
	Delete the graph	Deletes the selected graph from the map.
	Zoom out the graph	Zooms out the graph.
	Zoom in the graph	Zooms in the graph.
	Undo	Undoes the last action.
	Redo	Redoes the last action.

Adding Graph to Map

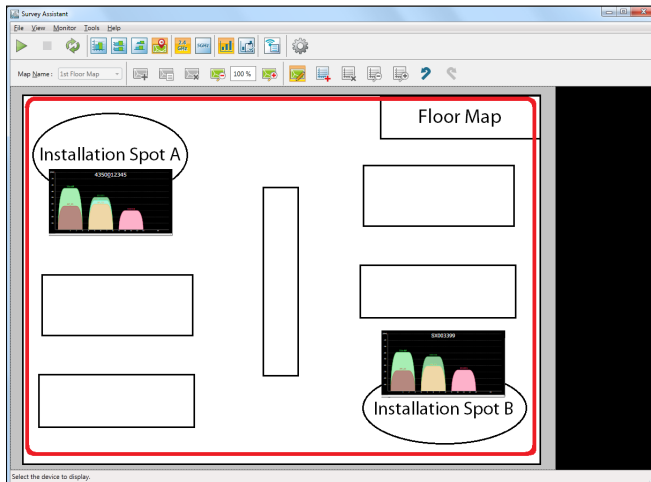
1. When the **Switch to graph edit mode** icon is clicked, the graph edit icons are displayed. Click the **Add the graph to the map** icon then.



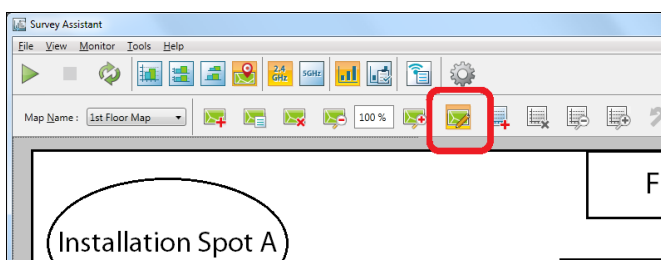
2. Select the device to display the graph on the map from the list and click **Add**.



3. The graph of the selected device is shown on the map.
Move the graph to a desired position on the map by dragging it.
To add more graphs, repeat the same process from 1.



4. Click the **Finish the graph edit mode** icon from the toolbar.

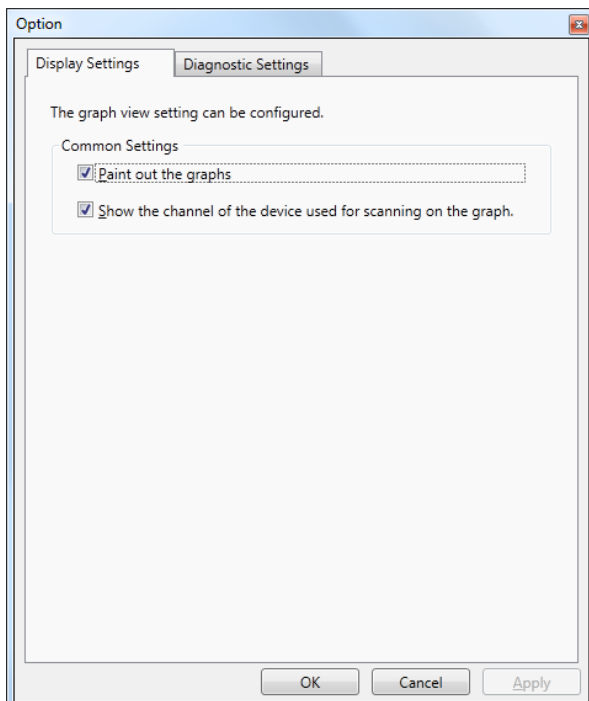


5-9. Survey Assistant's Optional Settings

The following explains how to configure the graph display settings as well as diagnostic mode settings. The operating settings can be configured from the option window.

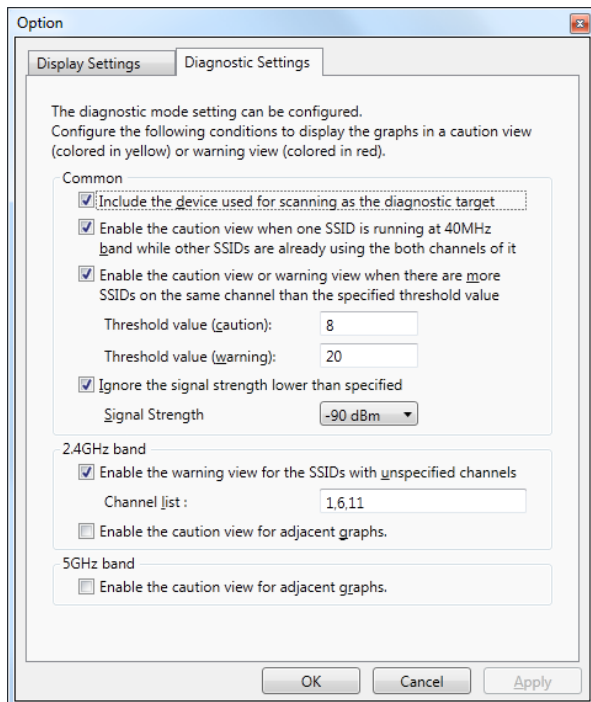
Option Window

Display Settings Tab



Name	Details	Default Value
Paint out the graphs	Paints out the graphs. When the check box is cleared, overlapping graphs can easily be distinguished.	ON
Show the channel of the device used for scanning on the graph	Adds a red line for the channel of the device used for wireless survey. The red line is shown under the channel on the horizontal axis.	ON
[OK] button	Saves the settings and closes the window.	-
[Cancel] button	Cancels the settings and closes the window.	-
[Apply] button	Saves the settings.	-

Diagnostic Settings Tab



Name	Details	Default Value
Include the device used for scanning as the diagnostic target	Includes the device used for wireless survey as the target of radio interference search. The Survey Assistant shows the graphs of wireless environment excluding the device used for the scanning.	ON
Enable the caution view when one SSID is running at 40MHz band while other SSIDs are already using the both channels of it	In 802.11n, two channels can be combined together to use as 40MHz band. If both channels are used by other SSIDs, it will be notified in the caution view (yellow).	ON
Enable the caution view or warning view when there are more SSIDs on the same channel than the specified threshold value	When there are more SSIDs on one channel than the specified threshold value, it will be notified in the caution view (yellow) or warning view (red).	ON
Threshold value (caution)	Specify the number of SSIDs to display in the caution view (yellow).	8
Threshold value (warning)	Specify the number of SSIDs to display in the warning view (red).	20
Ignore the signal strength lower than specified	Shows the SSIDs with a lower signal strength in gray. Such SSIDs will not be included to the radio interference search.	ON
Signal Strength	Specify the threshold value for the signal strength to ignore.	-90dBm
Enable the warning view for the SSIDs with unspecified channels	In 2.4GHz band, if the SSIDs are running at the channel which is not specified by the channel list, they will be notified in the warning view (red).	ON
Channel list	Specify the channel not to show in the warning view in 2.4GHz band. For 2.4GHz band, it is recommended to keep 5 or more channel interval between each channel for the bandwidth not to overlap (e.g. "1, 6, 11").	1,6,11

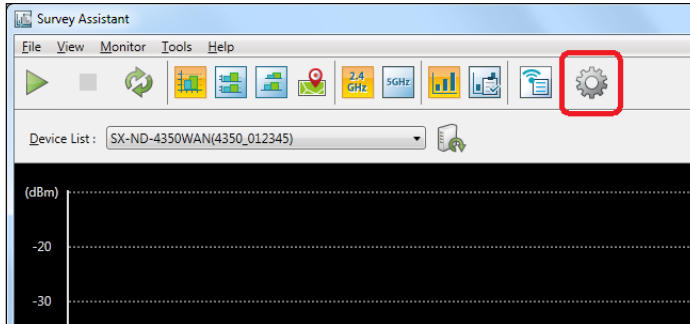
Name	Details	Default Value
Enable the caution view for adjacent graphs	In 2.4GHz, the SSIDs of adjacent graphs will be shown in the caution view (yellow).	OFF
Enable the caution view for adjacent graphs	In 5GHz, the SSIDs of adjacent graphs will be shown in the caution view (yellow).	OFF
[OK] button	Saves the settings and closes the window.	-
[Cancel] button	Cancels the settings and closes the window.	-
[Apply] button	Saves the settings.	-

**Note**

- In 2.4GHz, overlapping graphs will always be notified in the warning view (red) when the channel interval is equivalent to or less than 3 channels.
- As the number of available channels is often not enough in a wireless environment, it is recommended to use the same channel than the channel of the overlapped bandwidth. When the channels of the overlapped bandwidth are used, they may break the wireless packet of each other, while the bandwidth can be shared between the channels because of the carrier sense if the same channel is used.

Changing Survey Assistant Settings

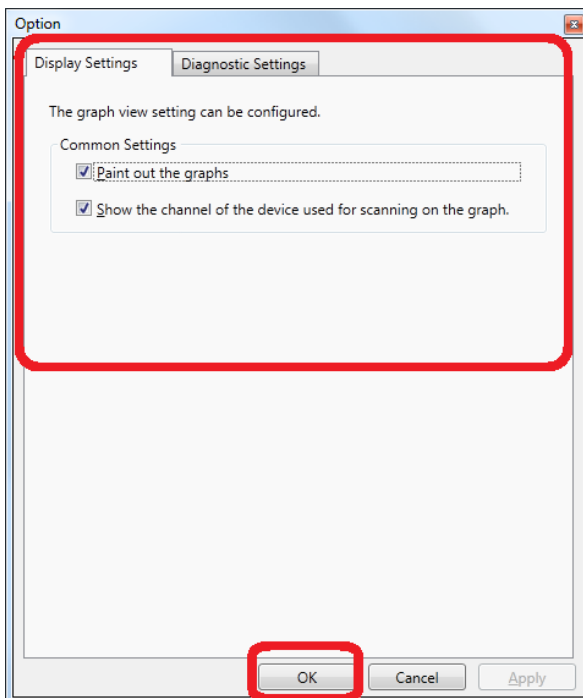
1. Click the **Option** icon from the toolbar.



Note

- The **Option** window can also be displayed by clicking **Tools - Option** from the menu bar.

2. In the **Option** window, edit the settings and click **OK**.



A. Appendix

A-1. Uninstalling AMC Manager

How to uninstall the AMC Manager is explained.

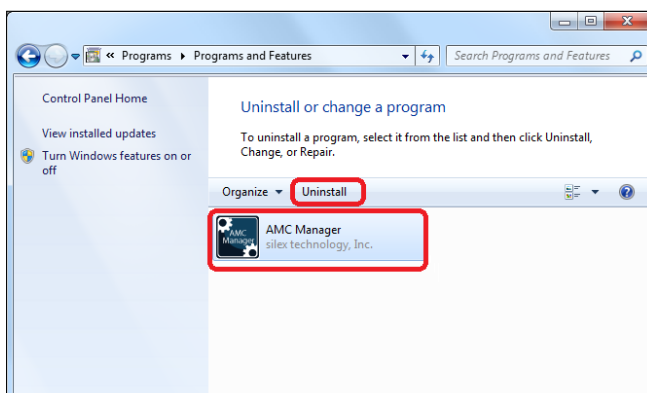
Follow the instructions below to uninstall the AMC Manager.



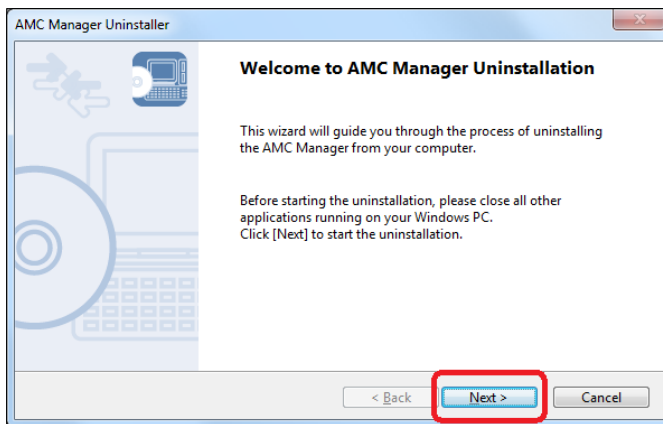
• For uninstallation, you must login to the PC with administrative privileges.

1. Click **Start - **Control Panel** - **Uninstall a program**.**

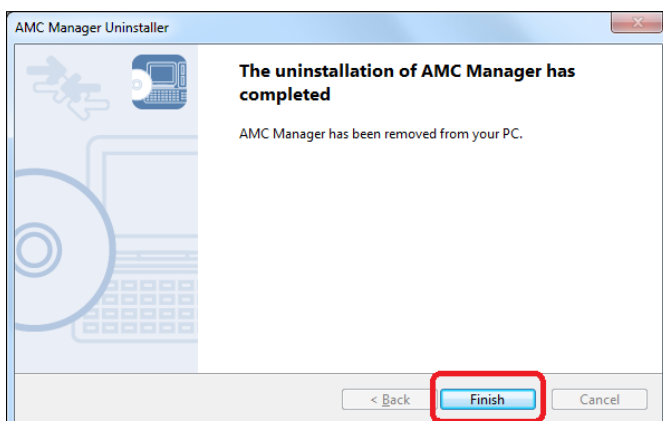
2. Select the **AMC Manager from the list and click **Uninstall**.**



3. Click **Next** to begin the uninstallation.



4. Click **Finish**.



A-2. Latest Firmware Downloads

The latest firmware file can be downloaded from the Silex homepage.

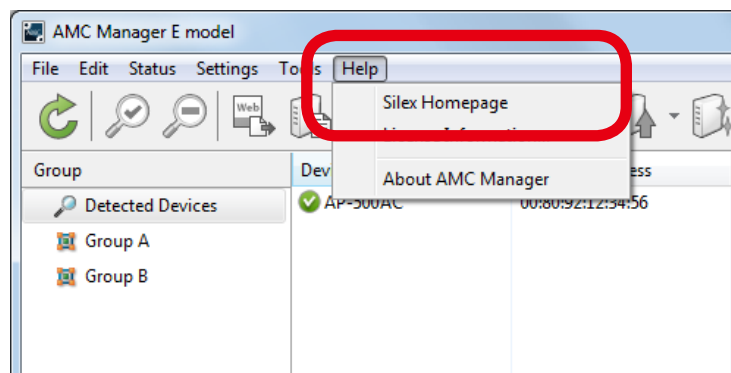
Please access our homepage and go to the support & download section.

URL	
USA	http://www.silexamerica.com/
Europe	http://www.silexeurope.com/
Japan	http://www.silex.jp/

**Note**

Silex homepage can also be accessed by the methods below:

- On the AMC Manager, click **Help - Silex Homepage** from the menu bar.
- On the Survey Assistant, click **Help - Silex Homepage** from the menu bar.



A-3. Customer Support Center

Customer Support is available by e-mail or telephone for any problems that you may encounter. If you cannot find the relevant problem in this manual or on our website, or if the corrective procedure does not resolve the problem, please contact Silex Technology Customer Support.

Contact Information		
USA	+1-801-748-1199	support@silexamerica.com
Europe	+49-(0)2151-65009-0	support@silexeurope.com
Japan	+81-(0)774-98-3981	support@silex.jp

**Note**

- Please also visit our homepage for the latest FAQ and product information.