



INSTRUCTION MANUAL

NXDN SYSTEM MANAGER
RS-MGR1

INTRODUCTION

FEATURES

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INTRODUCTION

Thank you for purchasing this Icom product. The RS-MGR1 NXDN System Manager is designed and built with Icom's IP network technology. We hope you agree with Icom's philosophy of "technology first." Many hours of research and development went into the design of your RS-MGR1.

FEATURES

- Repeaters and system status can be managed from one single PC.
- Proven to work with IDAS multi-site systems.
- Supports SNMP.
- Repeater's status data which received from SNMP/SYSLOG can be managed on a single screen by administrator.
- Status data can be used as a troubleshoot by logging.
- A large background image enables you to place the site icons to see the locations and status of each icons.

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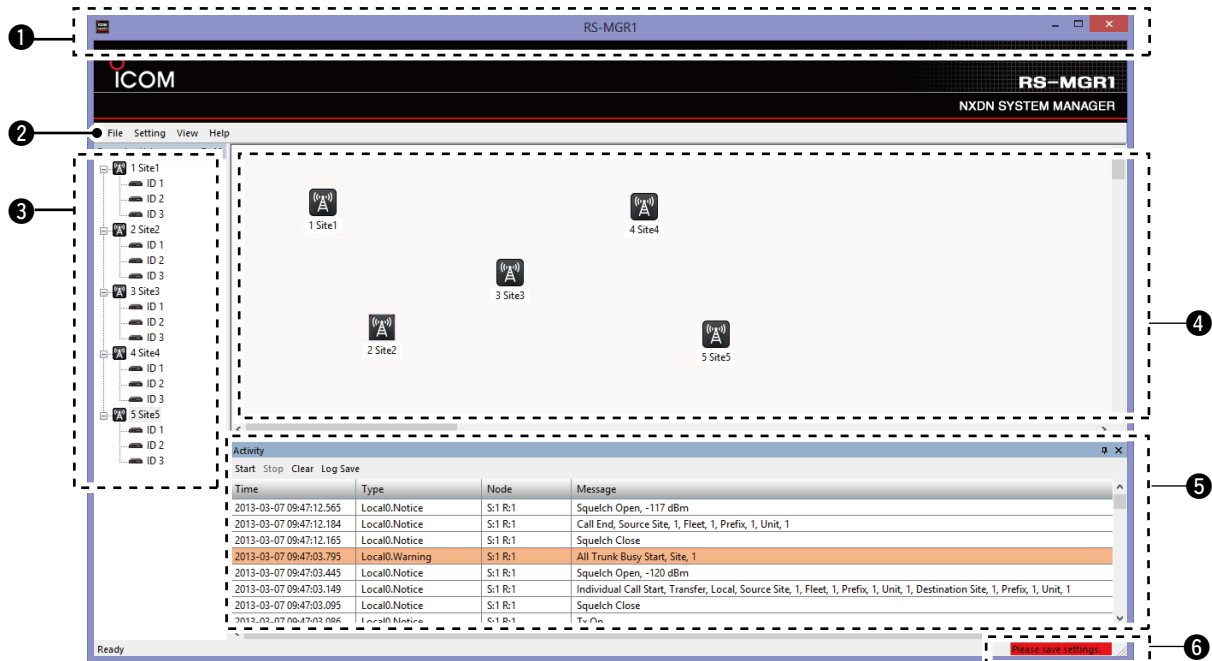
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Section 1 MAIN MENU

Main Menu Description 1-2

Main Menu Description

Below is the main menu display of the RS-MRG1. The display appears when the RS-MGR1 is started.



1 Title Bar

Application icon, application title (RS-MGR1), minimize button, maximize button, and close button.

2 Menu Bar

File

- New: Creates a new file.
- Open: Opens a data file.
- Save: Overwrites the previously saved settings in a data file. (Extension; rsmgr1)
- Save As: Saves the current settings as a different file name or in different location.
- Exit: Closes the application. If there is an unsaved file, confirmation popup appears.

Setting

New

- Site: Enters the Site Settings mode. (p. 2-2)
 - Repeater: Enters the Repeater Settings mode. (p. 2-4)
- System Settings: Enters the System Settings mode. (p. 2-7)

View

- Registration Log: Enters the Registration Log mode. (p. 3-2)
- Communication Log: Enters the Communication Log mode. (p. 3-3)

Traffic Log:

Enters the Traffic Log mode. (p. 3-4)

Search Log:

Enters the Search Log mode. (p. 3-5)

Mesh Ping Status:

Enters the Mesh Ping Status mode. (p. 3-6)

Version List:

Enters the Version List mode. (p. 3-7)

Repeater List Window:

Check to display the Repeater List Window. (Default ON)

Caption Window:

Check to display the Caption Window. (Default ON)

Activity Window:

Check to display the Activity Window. (Default ON)

Status Bar:

Check to display the Status Bar. (Default ON)

Help

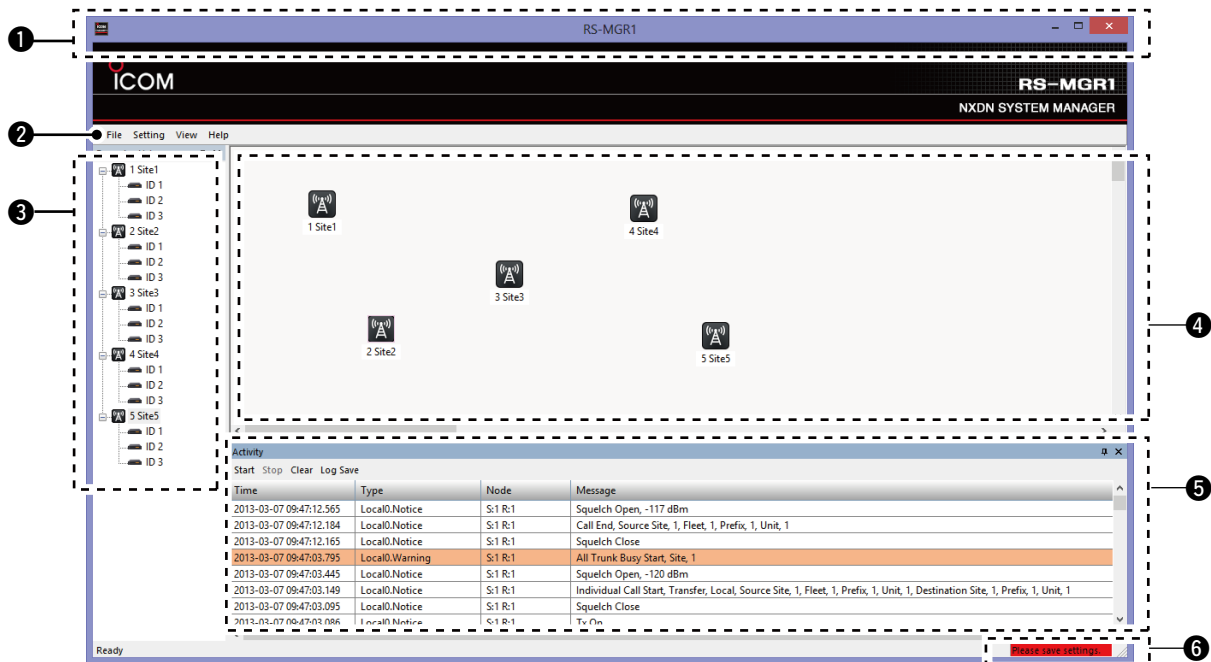
Manual:

Displays this Instruction Manual. (p. 4-3)

About RS-MGR1:

Opens the information window, which shows the version number of the software. (p. 4-3)

Main Menu Description (Continued)



3 Repeater List

Displays the registered site's repeaters in a tree view format. The tree is made in the maximum of 2 layers. A total of 48 sites are selectable, and 30 repeaters can be installed in each site.

Site

Displays the Site code and Site name registered in the *Site Settings* screen. (p. 2-2)

If the icons blink red, it means there is a problem in the site's repeater or network. The icons are linked to the icons on the Map.

Repeater

Displays the Repeater ID registered in the *Repeater Settings* screen. (p. 2-4)

The icon color is linked to the *Repeater View*. (p. 4-2)

Operation

- Right click the Site icon to select between:
 - Site Settings
 - Repeater View
 - Delete (A confirmation pops up when selected.)
 - New Repeater
- Right click the Repeater icon to select between:
 - Repeater Settings
 - Repeater Properties
 - Connect web (Enter the IP address in the PC'S default browser to start the browser)
 - Delete (A confirmation pops up when selected.)
- Click to open the tree view, and click to close.
- Right click in the Repeater List while the cursor is not placed on any program to select between:
 - Expand All to display all the contents in the tree view.
 - Collapse All to close all the contents in the tree view.

4 Map

The Site icon on the Map can be dragged to your desired location. The Site code and Site name are displayed along with the icon. They can be deleted by pushing the delete button on your key board while the icon to be deleted is selected. A confirmation pops up when deleting. If the icons blink red, it means there is a problem in the site's repeater or network. The icons are linked to the site's icons in the Repeater List.

Operation

- Right click the Site icon to select between:
 - Site Settings (*Site Settings* (p. 2-2))
 - Repeater View (*Repeater View* (p. 4-2))
 - Delete (A confirmation pops up when selected.)
 - New Repeater (*Repeater Settings* (p. 2-4))
- Right click on the Map to create a New Site while the cursor is not placed on any site.

5 Activity

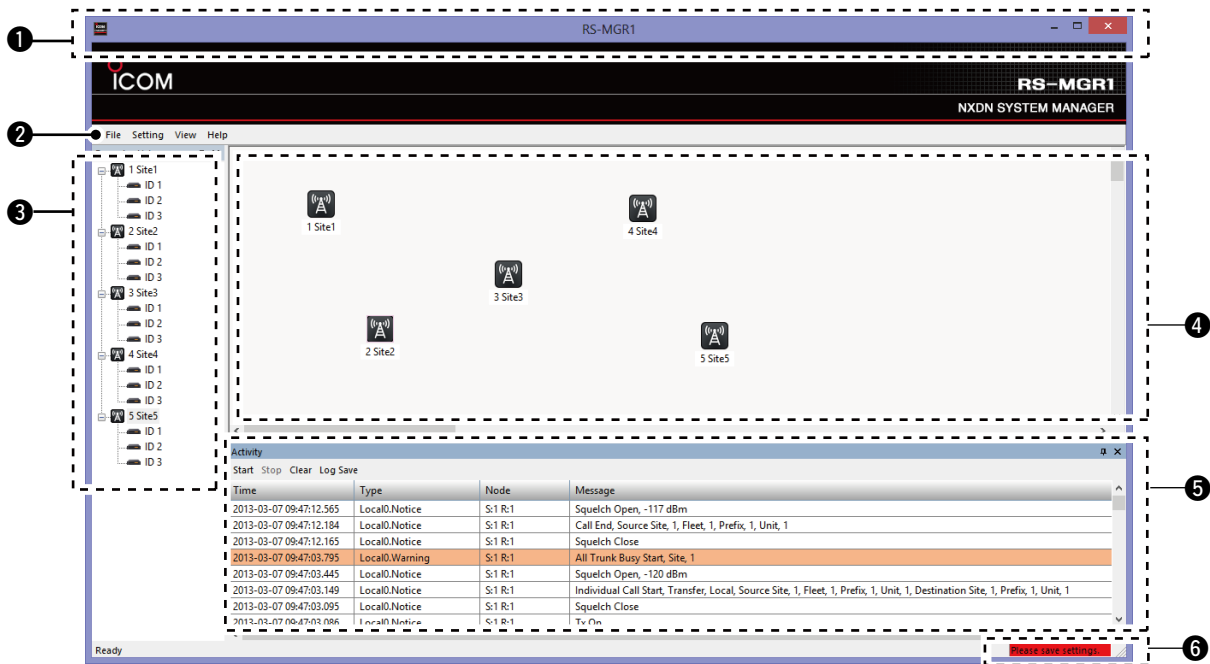
Select between Start, Stop, Clear, and Log Save in the menu bar.

- Start: Starts the log display.
- Stop: Stops the log display.
- Clear: Clears the displayed log.
- Log Save: Name and save the displayed log.

The Activity log displays the Syslog/SNMP in real time. All logs are cleared when the RS-MGR1 is started. The latest log is shown at the top, and a total of 1000 logs can be displayed at a time.

1 MAIN MENU

Main Menu Description (Continued)



5 Activity (Continued)

Type and Time

Type	Type Display	Time Display	Details
Syslog	"Facility"/"Severity"	UC-FR5000 time in "Message."	Facility: Between Local0 to Local7 . Severity: Emergency, Alert, Critical, Error, Warning, Notice, Information, or Debug.
SNMP	Get	PC time	Displays the Polling results. To abbreviate Message, "blank" or "000" is displayed.
	Trap	PC Time	Displays the RX Trap. The RX Port is fixed to 162. To abbreviate Message, "blank" or "000" is displayed.
Ping	Ping	PC Time	Displays the Ping results. To abbreviate Message, "blank" or "000" is displayed.

➔ The Syslog mode is displayed in colors categorized by its Severity.

Emergency, Alert, Critical, Error Red
Warning..... Orange*
Notice, Information, Debug Black

*Ping NG and SNMP Get NG are also displayed in Orange.

Node

For the previously registered IP Addresses, Site code and Register ID are converted into the following format.

S:"Site code"+" "(Space)+R:"Repeater ID"

The IP Address is saved in the log file in the Log Save folder in the format before the conversion. The unregistered repeater's IP Address is displayed in the regular IP Address format.

Message

A total of 512 characters can be displayed.

Syslog: The contents in the Message list.

SNMP. Get: Success or Failure.

SNMP. Trap: Trap contents.

(Example; sysUpTime.0 = 47638 snmpTrapOID.0 = nsNotifyRestart)

Ping: Success RTT=xxxms or Failure.

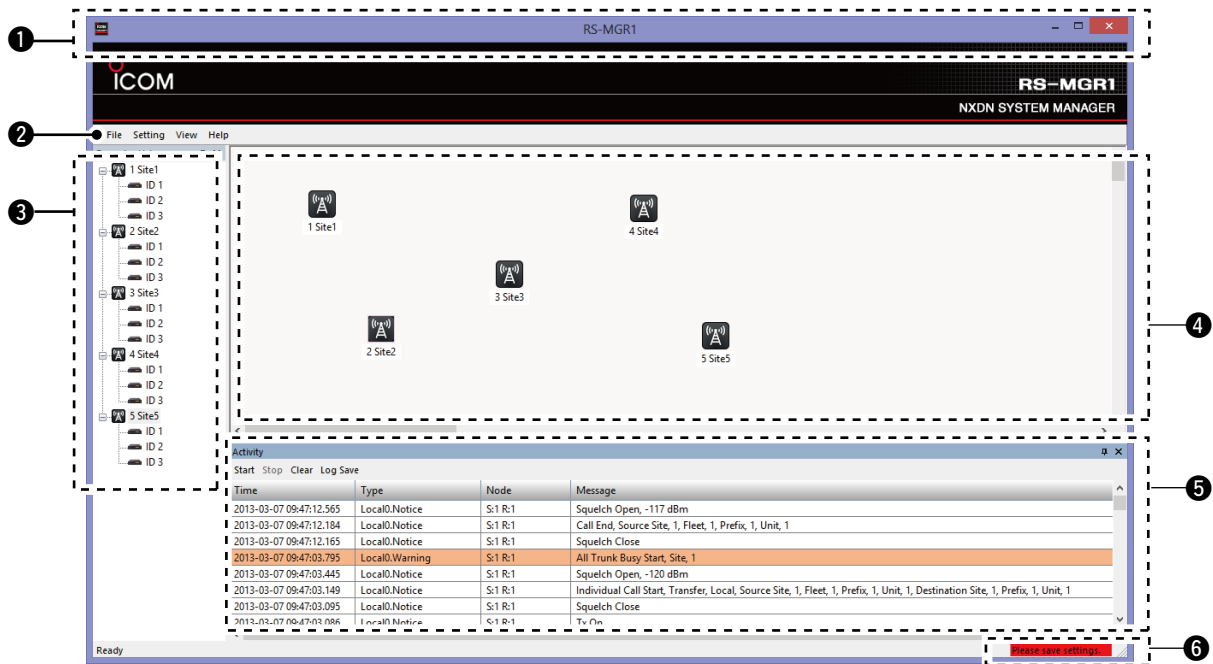
The displayed logs are saved in a file. For the SNMP. Get, the information contents are also saved in the log file. The destination to save the file can be changed in the "Save Folder" of the *System Settings*. (p. 2-7)

We recommend that you create folders by year and month to organize.

NOTE: Though the saving manner may be different, depending on how the software is setup, one file a day is the standard.

1 MAIN MENU

Main Menu Description (Continued)



6 Status Bar

When there has been an adjustment or change in the System Settings, Site Settings, Repeater Settings, and so on, the Status bar will display the message "Please save settings" and blink. Double clicking the blinking message saves the data.

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Site Settings screen

In the Site Settings screen, you can add or set the site information, and the programmed contents can be displayed. All items are blank when you add a new site.

After adding, the site icon appears on the Map and the Repeater List, and it can be freely moved on the Map.

To show the programmed contents, right-click the site icon on the Map or the Repeater List, and then click [Site Settings...].

The image shows a 'Site Settings' dialog box with the following elements:

- 1 Site code:** A small text input field.
- 2 Site name:** A larger text input field.
- 3 Memo:** A large text area for entering a memo.
- 4 [Update]:** A blue button to save the settings.
- 5 [Cancel]:** A grey button to cancel the settings.

1 Site code

Enter a site code of up to 3 digits between 1 and 250 which is programmed into the UC-FR5000.

- 0 to 9 can be entered.

2 Site name

Enter a site name of up to 16 characters.

The entered name is displayed on the Map and the Repeater List.

- Upper case letters, Lower case letters, Numbers or Symbols can be entered.

3 Memo

Enter a memo of up to 255 characters.

- Upper case letters, Lower case letters, Numbers or Symbols can be entered.

4 [Update]

Click to update the setting.

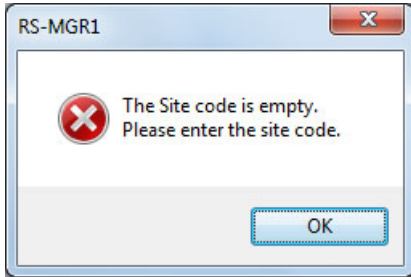
5 [Cancel]

Click to cancel the setting.

Site Settings screen (Continued)

NOTE: If the set site code or site name is empty, invalid, or duplicated, an error message appears when you click [Update]. In this case, you should make a correction according to the instruction in the dialogue box.

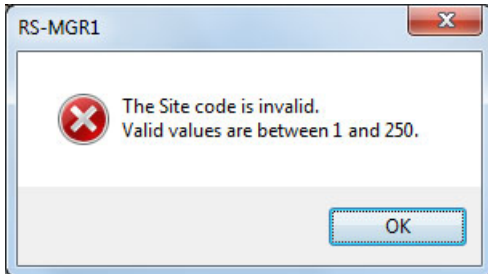
- When the site code is empty.



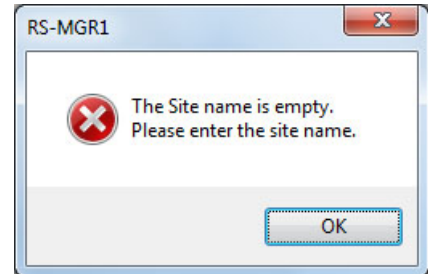
- When the site code is duplicated.



- When the site code is invalid.



- When the site name is empty.

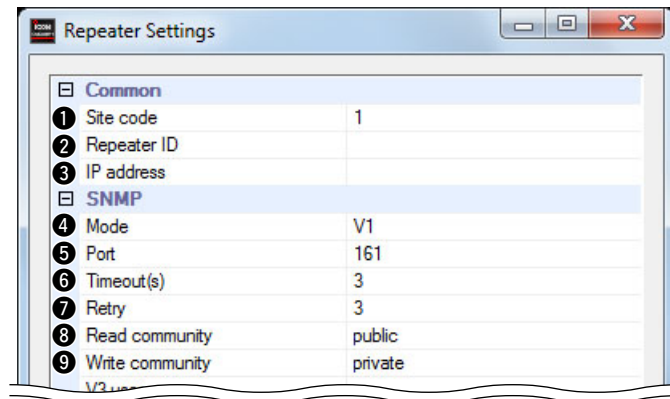


Repeater Settings screen

In the Repeater Settings screen, you can add or set the repeater information, and the programmed contents can be displayed.

After adding, the repeater icon appears under the site icon on the Repeater List.

To show the programmed contents, right-click the repeater icon on the Repeater List, and then click [Repeater Settings...].



◇ Common

① Site code

Enter the site code of up to 3 digits between 1 and 250 which is programmed on the UC-FR5000.

- 0 to 9 can be entered.
- If you enter a site code that does not exist and [Update] is clicked, the error message appears.
- If you add the repeater information on the Repeater View screen, the selected site's code is automatically entered.

② Repeater ID

Enter the repeater ID of up to 2 digits between 1 and 30 which is programmed on the UC-FR5000.

- 0 to 9 can be entered.
- If the programmed ID is duplicated and [Update] is clicked, the error message appears.

③ IP address

Enter the IP address which is programmed into the UC-FR5000.

◇ SNMP (Simple Network Management Protocol)

④ Mode

(Default: V1)

Select the mode to **V1**, **V2C** or **V3** (MD5 authentication) to receive data from the MIB (Management Information Base).

⑤ Port

(Default: 161)

Set the port number to between 1 and 65535 to receive the MIB data.

⑥ Timeout(s)

(Default: 3 seconds)

Set the SNMP command timeout period to between 3 and 10 seconds. If a timeout occurs often, set it to a longer period.

- A longer period may prevent frequent timeout from occurring, but the longer the period is set, the longer the period of time the RS-MGR1 function is passive.

⑦ Retry

(Default: 3)

Set the number of retry times to between 0 and 10 when a command timeout has occurred.

⑧ Read community

(Default: public)

When the Mode is set to "V1" or "V2C," set an ID of up to 32 characters, which is required for the access to the SNMP monitor.

This setting should be same as the UC-FR5000.

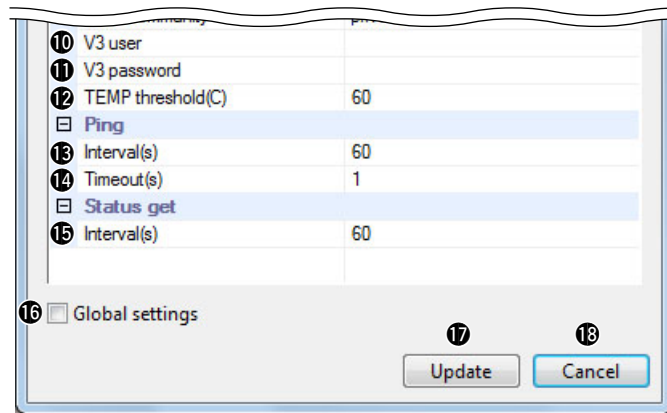
⑨ Write community

(Default: private)

When the Mode is set to "V1" or "V2C," set an ID of up to 32 characters, which is required for the access to the SNMP monitor.

This setting should be same as the UC-FR5000.

Repeater Settings screen (Continued)



10 V3 user (Default: blank)
 When the Mode is set to “V3,” set a user name of up to 16 characters.
 This setting should be same as the UC-FR5000.

11 V3 password (Default: blank)
 When the Mode is set to “V3,” set a password of up to 16 characters (at least 8 characters).
 This setting should be same as the UC-FR5000.
 • 0 to 9 can be entered.

12 TEMP threshold(C) (Default: 60°C)
 Set the temperature threshold level to between 50 and 90°C.
 When the detected repeater temperature is higher than this value, it is regarded as abnormal.

◇ **Ping**
13 Interval(s) (Default: 60 seconds)
 Set the interval to send the PING commands to the specified repeater to between 60 and 3600 seconds.
 When “0” is set, the PING command is not send.

14 Timeout(s) (Default: 1 second)
 Set the PING command Timeout period to between 1 and 10 seconds.
 When no acknowledgement is received within this set period, the PING send command is cancelled.

◇ **Status get**
15 Interval(s) (Default: 60 seconds)
 Set the interval to send polling commands to the repeater specified in the *Repeater properties window* (p. 4-4) to between 0 and 3600 seconds to receive.
 • The repeater information is displayed on the [Repeater] tab of the *Repeater properties window*. (p. 4-4)

16 Global settings
 When this item is checked, the same value of the [SNMP], [Ping], [Status get] items are set to all repeaters.

17 [Update]
 Click to update the setting.

18 [Cancel]
 Click to cancel the setting.

Repeater Settings screen (Continued)

NOTE: If the set repeater ID or IP address is empty, invalid or duplicated, an error message appears when you click [Update]. In this case, you should make a correction according to the instruction in the dialogue box.

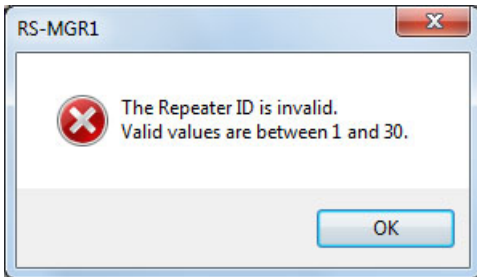
- When the Repeater ID is empty.



- When the IP address is duplicated.



- When the Repeater ID is invalid.



- When the IP address is empty.

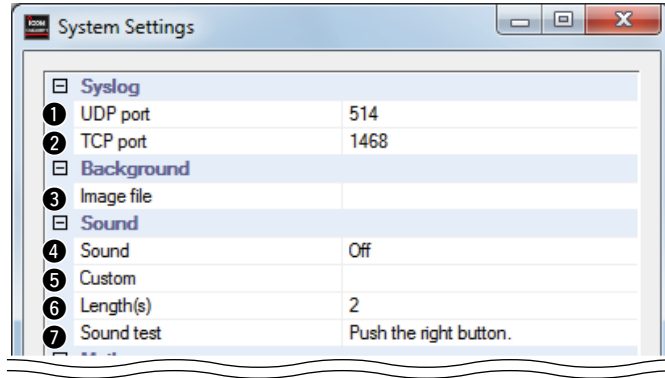


- When the Repeater ID is duplicated.



System Settings screen

In the System Settings screen, you can add or set the system information.



◇ Syslog

① UDP port (Default: 514)
Enter a Syslog receiving UDP port number between 1 and 65535.

② TCP port (Default: 1468)
Enter a Syslog receiving TCP port number between 1 and 65535.

◇ Background

③ Image file (Default: Blank)
The background image enables you to place the site icons to see the locations and state of each icons. Click <Image file> to display the [...] button, and then click it to select an existing image file of a map. When selected, click [Open] to upload.

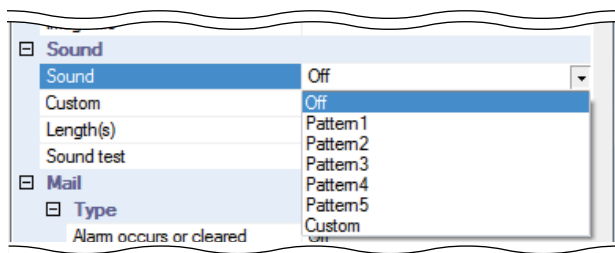


- When the file is uploaded, click [Update] in the System Settings window to update the image.
- The image file's format is either **bmp**, **jpg**, or **png**.

◇ Sound

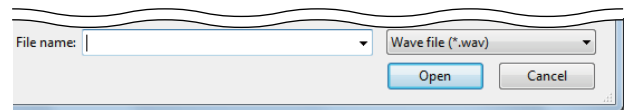
Select whether or not to set the alarm sound when there is a problem with a repeater.

④ Sound (Default: Off)
Select the Sound type between **Off**, **Pattern 1** to **5**, or **Custom**.



⑤ Custom

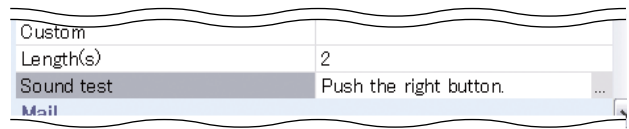
When **Custom** is selected in ④, click <Custom> to display the [...] button, and then click it to select an existing sound file. The sound file's format must be a **Wave file** (*.Wav). When selected, click [Open] to upload the file.



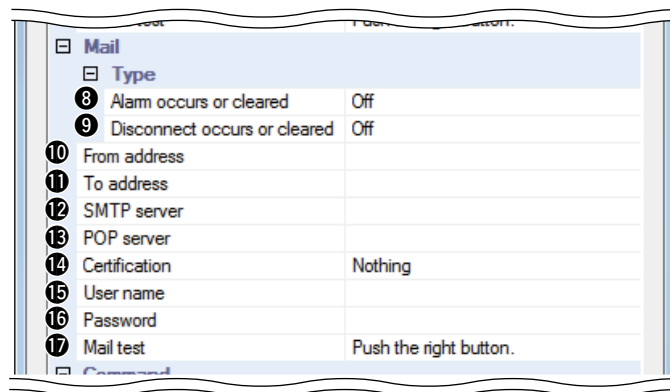
When the file is uploaded, click [Update] in the System Settings window to update.

⑥ Length(s) (Default: 2)
Set the alarm sound time to between 1 and 30 seconds.

⑦ Sound test
Click <Sound test> to display the [...] button, and then click it to test the configured sound settings, as shown below.



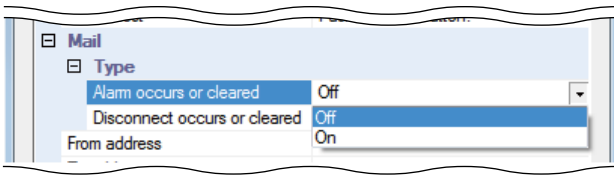
System Settings screen (Continued)



◇ Mail

⑧ Type—Alarm occurs or cleared (Default: Off)

- Select **On** to send an E-mail to the specified address (⑪ To address) when the alarm has been activated, or recovered after an alarm, or select **Off** to turn the function off.



• See *Repeater Properties window* (p. 4-4) for details.

⑨ Type—Disconnect occurs or cleared (Default: Off)

Select **On** to send an E-mail to the specified address (⑪ To address) when the network has been disconnected, or reconnected after a disconnection. Select **Off** to turn off the function.

NOTE for ⑧ and ⑨:

When both functions ⑧ and ⑨ are to send an E-mail, they will be sent together. If there are more than one to be sent, they will be sent in a set every one minute.

⑩ From address (Default: Blank)

Enter the sender's E-mail address of up to 255 characters.

⑪ To address (Default: Blank)

Enter the destination address of up to 255 characters.

⑫ SMTP server (Default: Blank)

Enter the SMTP's IP address or FQDN (Fully-Qualified Domain Name) of up to 255 characters.

⑬ POP3 Server (Default: Blank)

Enter the POP3's IP address or FQDN (Fully-Qualified Domain Name) of up to 255 characters.

⑭ Certification (Default: Nothing)

Select the certification method for the SMTP between the listed selections below.

- Nothing:** No certification.
- POP before SMTP:** Certifies to the selected POP3 server.
- Login:** Certifies by logging in.
- CRAM-MD5:** Certifies by challenge responding using CRAM-MD5.

⑮ User name (Default: Blank)

Enter a user name of up to 64 alphanumeric characters and symbols (!\"#\$%&/'()*-+.,?_<>@`=~^{|}[];:).

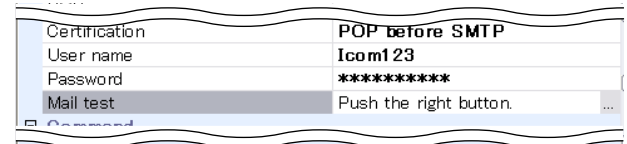
⑯ Password (Default: Blank)

Enter a password of up 64 alphanumeric characters and symbols (!\"#\$%&/'()*-+.,?_<>@`=~^{|}[];:).

⑰ Mail test

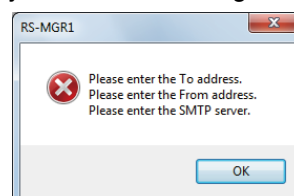
A test mail can be sent with the above configurations by clicking the [...] button* shown below.

* Click <Mail test> to display the [...] button.

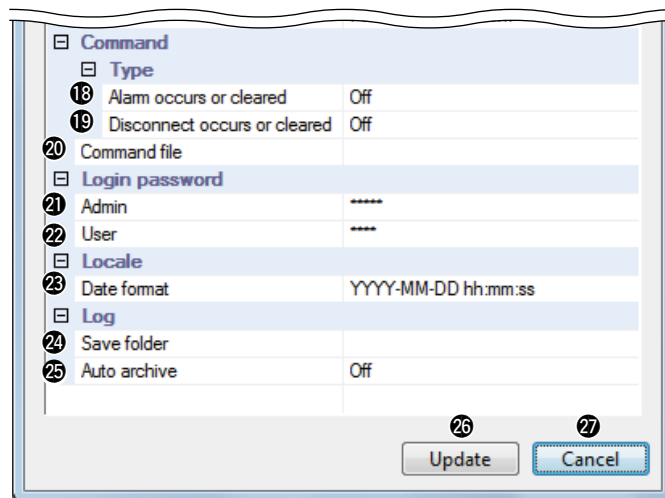


NOTE:

- When the test mail is successfully sent, a "Succeeded in sending the mail" message appears. Click [OK].
- If there is a problem in a Mail configuration, the dialogue box below appears. Configure the settings properly and test send it again.



System Settings screen (Continued)



◆ **Command**

18 **Type—Alarm occurs or cleared** (Default: Off)

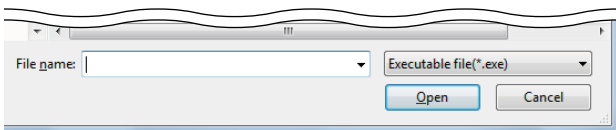
- Select **On** to convert the report into an executable file (20 **Command file**) when an alarm has been activated, or after recovering from an alarm. Select **Off** to turn the function off.

19 **Type—Disconnect occurs or cleared** (Default: Off)

- Select **On** to convert the report into an executable file (20 **Command file**) when the network has been disconnected, or reconnected after a disconnection. Select **Off** to turn off the function.
- See *Repeater Properties window* (p. 4-4) for details.

20 **Command file**

- Click the [...] button to select an **Executable file (*.exe)**.
- When selected, click [Open] to upload the file.



- When the file is uploaded, click [Update] in the System Settings window to update the commands.

◆ **Login password**

21 **Admin** (Default: admin)

Set an administration password.

22 **User** (Default: user)

Set a user password.

◆ **Locale**

23 **Date format** (Default: YYYY-MM-DD hh:mm:ss)

Set the date display format to **YYYY-MM-DD hh:mm:ss** or **MM-DD-YYYY hh:mm:ss**.

◆ **Log**

24 **Save folder**

- Select the configuration saving folder.
- Click <Save folder> to display the [...] button, and select the saving folder, then click [OK].



- Click [Update] in the System Settings window to update the configurations.

25 **Auto archive** (Default: After 6 months)

This function automatically compresses and saves the configuration data periodically into the selected folder in step 24.

- Select the frequency of this function between **After 1 month**, **After 3 months**, **After 6 months**, **After 1 year**, or simply turn this function **Off**.
- The log data is compressed into a Cabinet file (*.cab).
- For example; When **After 3 months** is selected, the expired data will be compressed into a cab file on the first day of every 3 months at 1:00 AM. If the compressed data is of April 2013, the data will be saved as "Rsmgr1_log201304.cab".
- The data in the RS-MGR1 will be automatically deleted after being compressed and saved.

26 **[Update]**

Click to update the setting.

27 **[Cancel]**

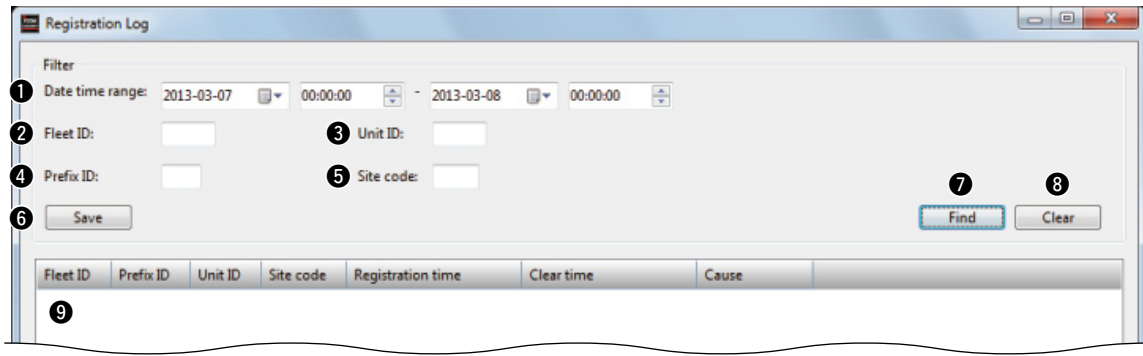
Click to cancel the setting.

Section 3

VIEW SETTING MENU

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Registration Log



1 Date time range

Enter both starting and ending “date and time” to specify the registration log term you want to view.

- Date and time can be manually entered using the keyboard.
- Click [▼] next to the date field to open a calendar and select a date.
- Click the hours, minutes, or seconds and then click [▲] or [▼] next to the time field to set the time.

2 Fleet ID (Default: Blank)

Enter a desired ID between 1 and 5000 to display by the Fleet ID.

3 Unit ID (Default: Blank)

Enter a desired ID between 1 and 2000 to display by the Unit ID.

4 Prefix ID (Default: Blank)

Enter a desired ID between 1 and 30 to display by the Prefix ID.

5 Site Code (Default: Blank)

Enter a desired code between 1 and 250 to display by the Site code.

- If an invalid number is entered, a dialogue pops up.

6 Save

Click to save the displaying logs in a CSV (Comma Separated Values) format.

7 Find

Click to display the filtered results in the Log List below. The searching object is the registration time.

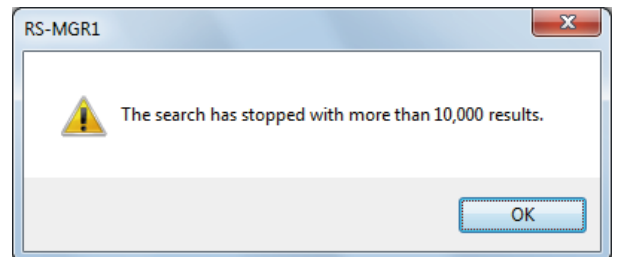
8 Clear

Click to clear all the filter settings.

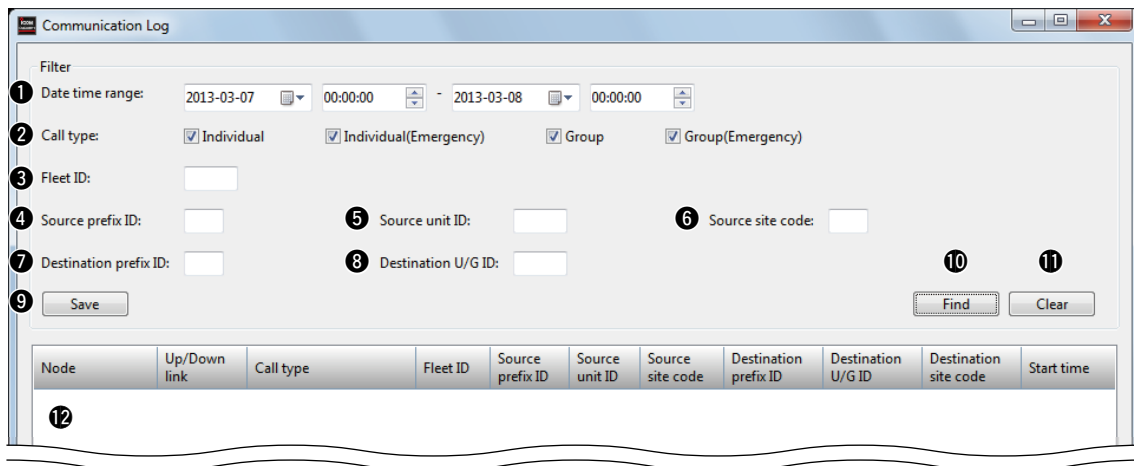
9 Log List (Default: Blank)

Displays the Registration logs, according to the filter settings.

- Click a header to sort by categories.
- Only 10000 can be displayed on the list. If there are more than 10000, a confirmation dialogue pops up, as shown below.



Communication Log



1 Date time range

Enter both starting and ending “date and time” to specify the communication log term you want to view.

- Date and time can be manually entered using the keyboard.
- Click [▼] next to the date field to open a calendar and select a date.
- Click the hours, minutes, or seconds and then click [▲] or [▼] next to the time field to set the time.

2 Call type (Default: All)
Select the call type from **Individual**, **Individual (Emergency)**, **Group**, and **Group (Emergency)**.

3 Fleet ID (Default: Blank)
Enter a desired ID between 1 and 5000 to display by the Fleet ID.

4 Source prefix ID (Default: Blank)
Enter a desired ID between 1 and 30 to display by the Source prefix.

5 Source unit ID (Default: Blank)
Enter a desired ID between 1 and 2000 to display by the Source unit.

6 Source site code (Default: Blank)
Enter a desired code between 1 and 250 to display by the Source site code.

7 Destination prefix ID (Default: Blank)
Enter the Destination prefix ID between 1 and 30.

8 Destination U/G ID (Default: Blank)
Enter a desired ID between 1 and 2000:2047 to display by the Destination U/G.

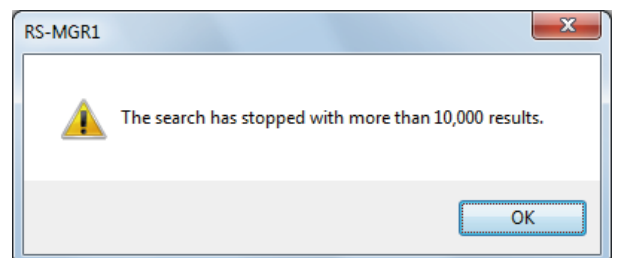
9 Save
Click to save the displaying logs in a CSV (Comma Separated Values) format.

10 Find
Click to display the filtered results in the Log List below. The searching object is the start time.

11 Clear
Click to clear all the filter settings.

12 Log list (Default: Blank)
Displays the Communication logs, according to the filter settings.

- Click a header to sort by categories.
- Only 10000 can be displayed on the list. If there are more than 10000, a confirmation dialogue pops up, as shown below.



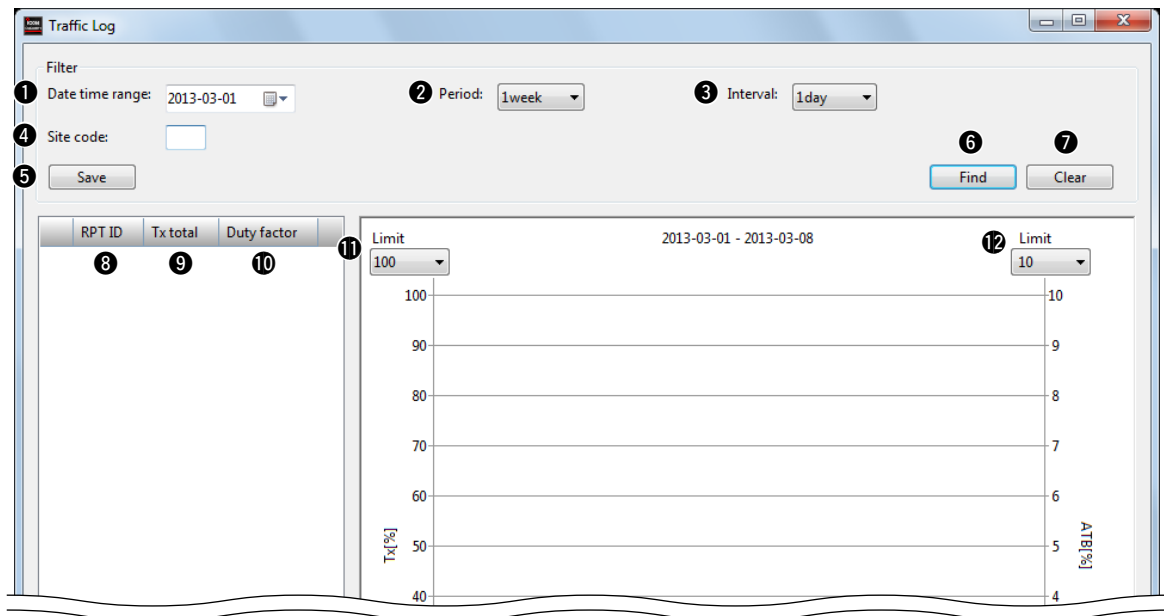
NOTE for Node:

• For previously registered repeater’s IP Addresses, the Site code and Repeater ID are displayed in the converted format as follows.

S:"Site code"+" "(Space)+R:"Repeater ID"

- The previously registered repeater’s IP Addresses are saved in the log file.
- The unregistered repeater’s IP Addresses are displayed in the regular IP Address format.

Traffic Log



◇ Filter

① Date time range

Enter the “date” to specify the Traffic log starting date you want to display.

- Date can be manually entered using the keyboard.
- Click [▼] next to the date field to open a calendar and select a date.

② Period (Default: 1 week)

Click [▼] to select whether to display the period of time **1 week** or **1 day**.

③ Interval (Default: 1 day or 1 hour)

Click [▼] to select the plot interval.

- When the Period in the step ② is set to **1 week**, select between **1 day** (default) (7 plots) and **1 hour** (168 plots).
- When the Period in the step ② is set to **1 day**, select between **60 minutes** (default) (24 plots) and **10 minutes** (144 plots).

④ Site code (Default: Blank)

Enter a desired code between 1 and 250 to display by the Site code.

- If an invalid number is entered, a dialogue pops up.

⑤ Save

Click to save the displaying logs in a CSV (Comma Separated Values) format.

⑥ Find

Click to display the filtered results in the Log List below. The searching object is the start time.

⑦ Clear

Click to clear all the filter settings.

◇ Log list

Each contents are displayed in colors. Only the contents with checks are displayed on the graph, and all contents are set with checks as default.

⑧ RPT ID

The RPT ID is shown in ATB (All Trunk Busy) and RPT ID (1 to 30)

⑨ Tx total

Shows the total Tx time period in seconds.

- Numbers after a decimal point is not displayed.
- Displayed with the round off system.
- If the Period in step ② is set to **1 week**, the maximum is 604800 seconds, and if it's set to **1 day**, 86400 seconds.

⑩ Duty factor

Shows the total Tx time period as a percentage of the time that is set in the Filter.

- Numbers after a decimal point is not displayed.
- Displayed with the round off system.

◇ Graph

⑪ Limit (%) Tx (Default: 100%)

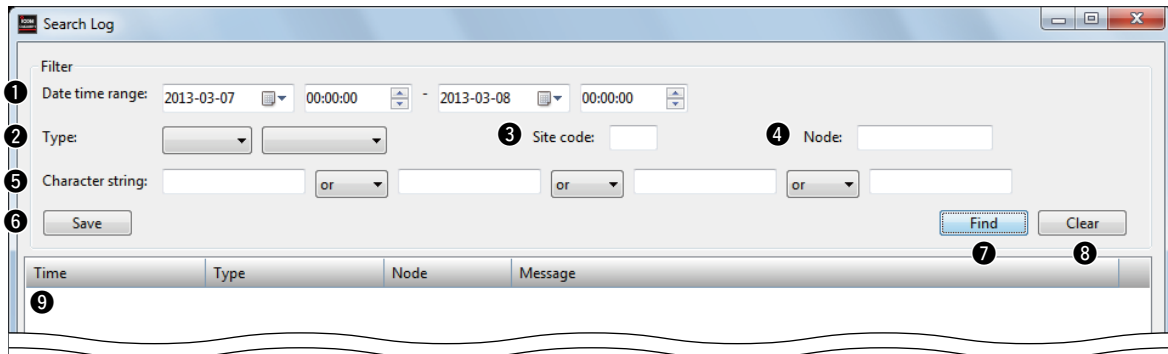
Click [▼] to select the limit for the Tx division.

⑫ Limit (%) ATB (Default: 10%)

Click [▼] to select the limit for the Tx division.

Search Log

The Search Log lists the time, type, node, message received from searches.



1 Date time range

Enter both starting and ending “date and time” to specify the Search log term to display.

- Date can be manually entered using the keyboard.
- Click [▼] next to the date field to open a calendar and select a date.
- Click the hours, minutes, or seconds and then click [▲] or [▼] next to the time field to set the time.

2 Type (Default: Blank)

Field 1: Click [▼] to select a type between **Local 0 to 7, Get, Trap, Ping** and blank.

Field 2: If the Field 1 is set to **Local 1 to 7**, click [▼] to select between **Emergency, Alert, Critical, Error, Warning, Notice, Information, Debug** and blank. If the Field 1 is set to **Get, Trap** or **Ping**, blank is set.

3 Site code (Default: Blank)

Enter a desired code between 1 and 250 to display by the Site code.

- If an invalid number is entered, a dialogue pops up.

4 Node (Default: Blank)

Set the IP address.

5 Character string (Default: or)

Set the searching words of up to 4 sets of 16 characters. Click [▼] to select between **and, or, or not** to engage the searching words. The searching priority order is **not > and > or**.

6 Save

Click to save the displaying logs in a CSV (Comma Separated Values) format.

7 Find

Click to display the filtered results in the Log List below.

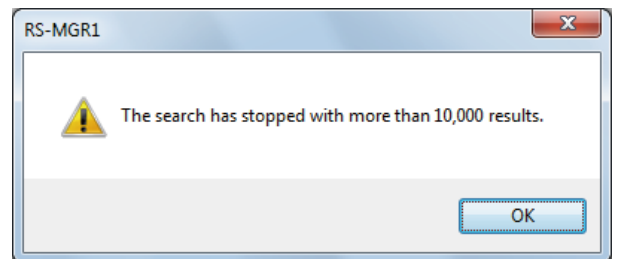
8 Clear

Click to clear all the filter settings.

9 Log list

Displays the Search log research results, according to the filter settings.

- Click a header to sort by categories between **Time, Type, Node, and Message**.
- Only 10000 can be displayed on the list. If there are more than 10000, a confirmation dialogue pops up, as shown below



NOTE for Node:

- For previously registered repeater’s IP Addresses, the Site code and Repeater ID are displayed in the converted format as follows.

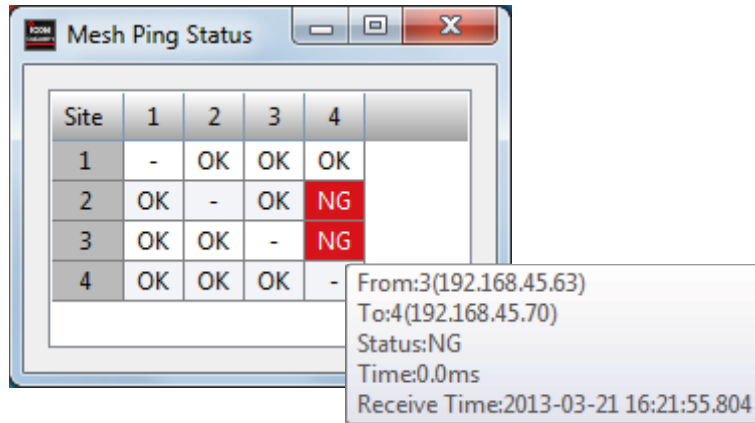
S:"Site code"+" (Space)+R:"Repeater ID"

- The previously registered repeater’s IP Addresses are saved in the log file.
- The unregistered repeater’s IP Addresses are displayed in the regular IP Address format.

Mesh Ping Status window

Displays the result of Ping test between 2 site masters.

- Reload the screen to update the statuses.
- The test result of up to 48 sites are displayed.



① "From" site codes

Displays the sites which send the Ping packets.

② "To" site codes

Displays the sites which is sent the Ping packets to.

③ Ping test results

OK: The Ping test was succeed.

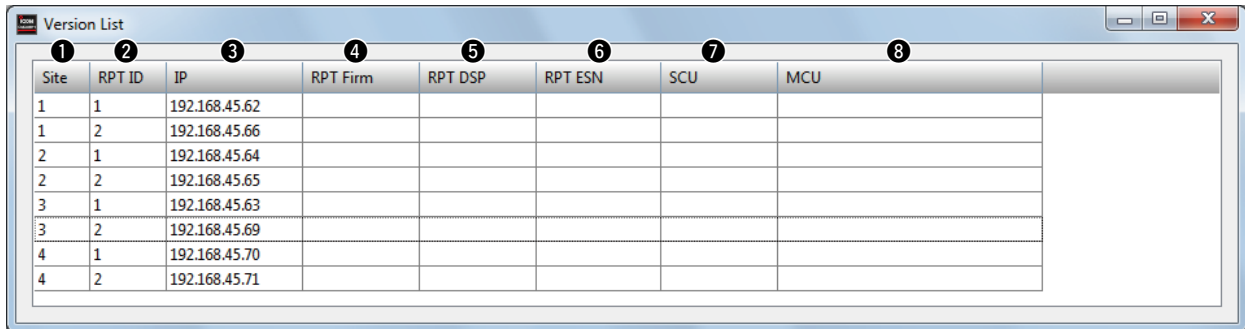
- When the response packets took are returned within 100 milliseconds (default value) or more, the result cell is displayed in yellow.

NG: The Ping test was failed.

- When putting the cursor on a result cell, the test details are displayed.

Version List

The screen shows a list for repeater's firmware version of all registered repeaters.



1 Site	2 RPT ID	3 IP	4 RPT Firm	5 RPT DSP	6 RPT ESN	7 SCU	8 MCU
1	1	192.168.45.62					
1	2	192.168.45.66					
2	1	192.168.45.64					
2	2	192.168.45.65					
3	1	192.168.45.63					
3	2	192.168.45.69					
4	1	192.168.45.70					
4	2	192.168.45.71					

1 Site

Shows the repeater's site code.

2 RPT ID

Shows the repeater's ID number

3 IP

Shows the repeater's IP address.

4 RPT Firm

Shows the repeater's main firmware version.

5 RPT DSP

Shows the DSP firmware version of the repeater.

6 RPT ESN

Shows the repeater's ESN (Electrical Serial Number).

7 SCU

Shows the sub CPU's (UC-FR5000) firmware version.

8 MCU

Shows the main CPU's (UC-FR5000) firmware version.

NOTE: See **2 Menu Bar** on page 1-2 for details on Repeater List Window, Caption Window, Activity Window, and Status Bar.

Section 4 OTHER FUNCTIONS

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◇ System tab	1-5
◇ Interface tab	1-6
◇ Repeater tab.....	1-7
◇ Ping tab	1-7

Repeater View

This screen shows the repeater's condition of each site.

- The Site code and Site name registered in the *Site Settings* screen (p. 2-2) displays on the title bar.

② Status	③ RPT ID	④ Rx dBm	⑤ Tx	⑥ From	⑦ To	⑧ Frequency(Rx)	⑨ Frequency(Tx)	⑩ IP Address
Good	1	●	●			140.310000MHz	145.310000MHz	192.168.45.62
Good	2	●	●			140.320000MHz	145.320000MHz	192.168.45.66

① Setting

Click to create a New Repeater.

- The Repeater Settings screen appears. See *Repeater Settings Screen* (p. 2-4) for setting details.
- The Site code is automatically set.

② Status

Repeater can be displayed differently in colors by its status.

- If there is an error or problem on the repeater, the repeater's field turns **red**, and when the network is off, the repeater field turns **grey**. Good stays white.

③ RPT ID

Shows the Repeater ID set in the *Repeater Settings Screen* (p. 2-4).

④ Rx dBm

Shows the dBm level of received signal strength level next to the RX dBm lamp.

- The Rx dBm lamp lights in either green, orange, or yellow depending on the received signal strength level.

- Green:** More than -102 dBm
- Orange:** Less than -102 dBm
- Yellow:** Less than -118 dBm

- When no signal is received, the lamp lights OFF (gray).

⑤ Tx

Tx lamp lights red when a signal is received (**Syslog Tx On.**)

⑥ From

Shows the Source prefix ID (between 1 and 30) and Source unit ID (between 1 and 2000). They are displayed at the same time and are joined with a hyphen.

⑦ To

Shows the Call Types between the listed below.

- Individual
- Individual (Emergency)
- Group, Group (Emergency)
- Destination prefix ID (1 to 30)-Destination User/Group ID (1 to 2000)

⑧ Frequency (Rx)

Shows the frequency of the received SNMP Polling.

⑨ Frequency (Tx)

Shows the frequency of the transmitted SNMP Polling.

⑩ IP Address

Shows the IP address of the site.

Help

Help contains this RS-MGR1 instruction manual, and the information of the RS-MGR1

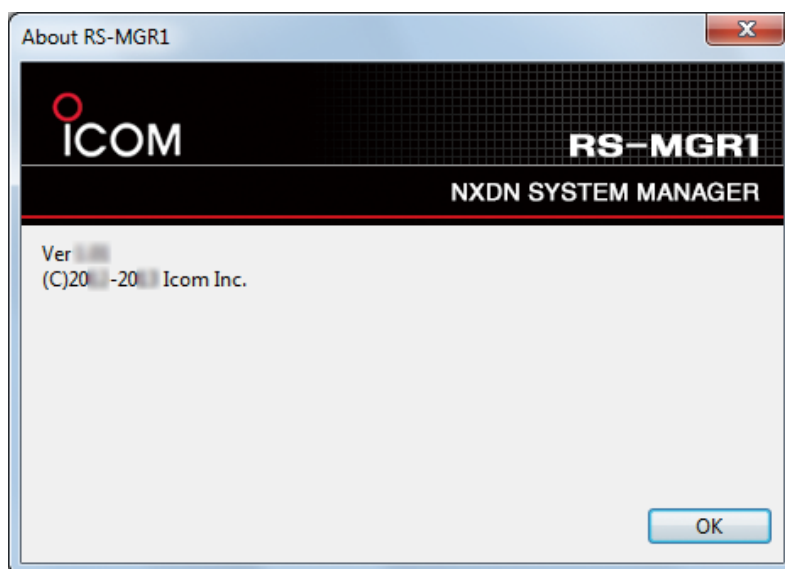
◇ Manual

Click to open this instruction manual for assistance with the functions or settings.

◇ About RS-MGR1

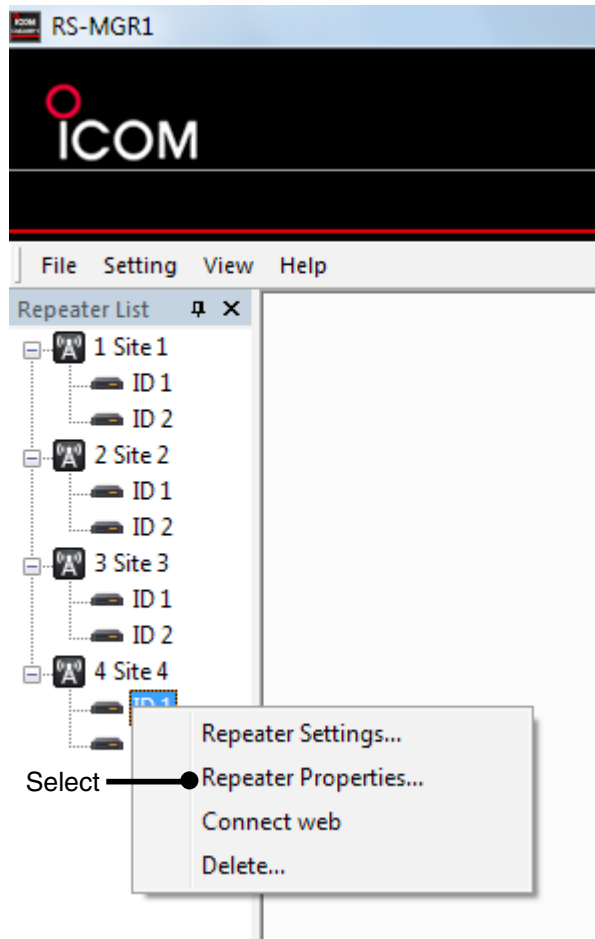
Click to open the information window, which shows the production information, including the revision number of the software.

Click [OK] to close the window.

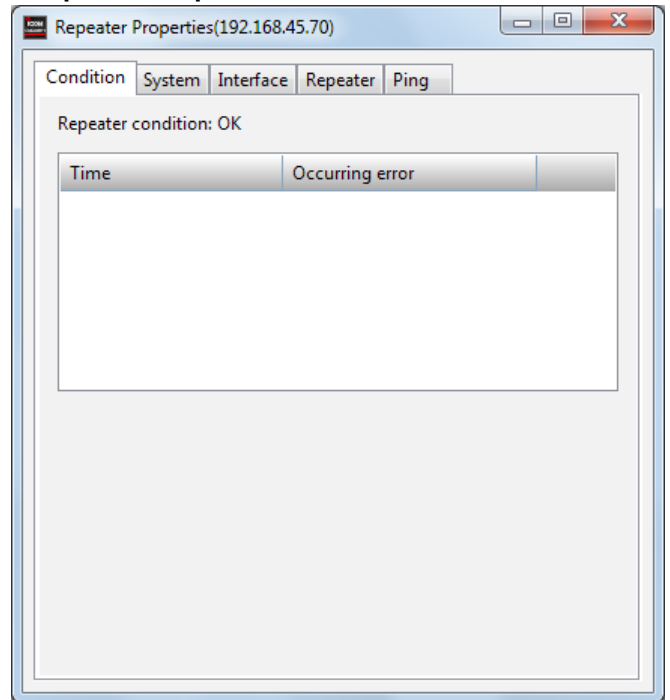


Property window

Right click the Repeater icon on the Repeater List, and then select "Repeater Properties" to open the Repeater Properties window.



• Repeater Properties window



Property window (Continued)

◇ **Condition tab**

Displays the repeater status information.

❶ **Repeater condition**

The repeater status.

- **OK:** The repeater correctly works.
- **NG:** The repeater has a problem.
- **Offline:** The repeater is disconnected from the network.

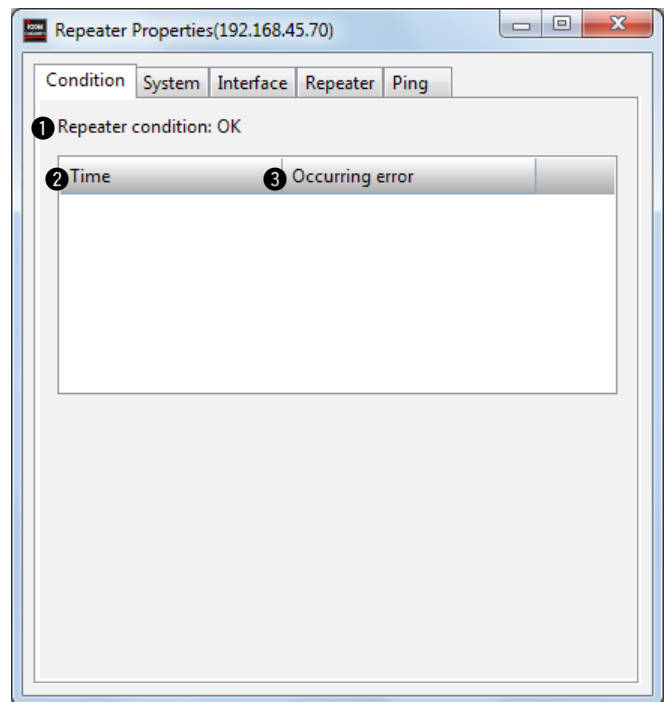
❷ **Time**

The time when the error occurred.

❸ **Occurring error**

The occurred error content.

- **Tx PLL Unlock:** The transmitter PLL is unlocked.
- **Rx PLL Unlock:** The receiver PLL is unlocked.
- **Supply voltage abnormal:** The supplied voltage is out of the specified range.
- **Internal Temp abnormal:** The repeater temperature is out of the usable range.
- **FAN abnormal:** The cooling FAN is malfunctioning.
- **Temp exceeded the threshold:** The repeater temperature exceeded the set threshold level.



◇ **System tab**

Displays the system setting.

❶ **Name**

The name of MIB object.

- These objects provide contact, administrative and location information regarding the managed node.

sysContact: The textual identification of the contact repeater for this managed node, together with information on how to contact this repeater.

sysName: An administratively-assigned name for this managed node.

sysLocation: The physical location of this node.

❷ **Value**

The value for the item.

❸ **New value**

The re-set value.

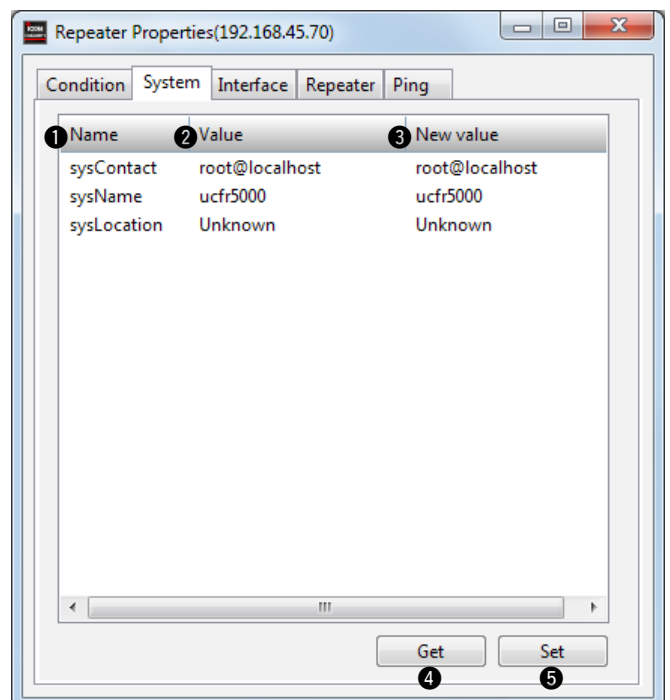
- Enter the new value to change the value for the item.

❹ **[Get]**

Click to load the parameters from the repeater.

❺ **[Set]**

Click to apply the new value.



Property window (Continued)

◆ Interface tab

Displays the interface information.

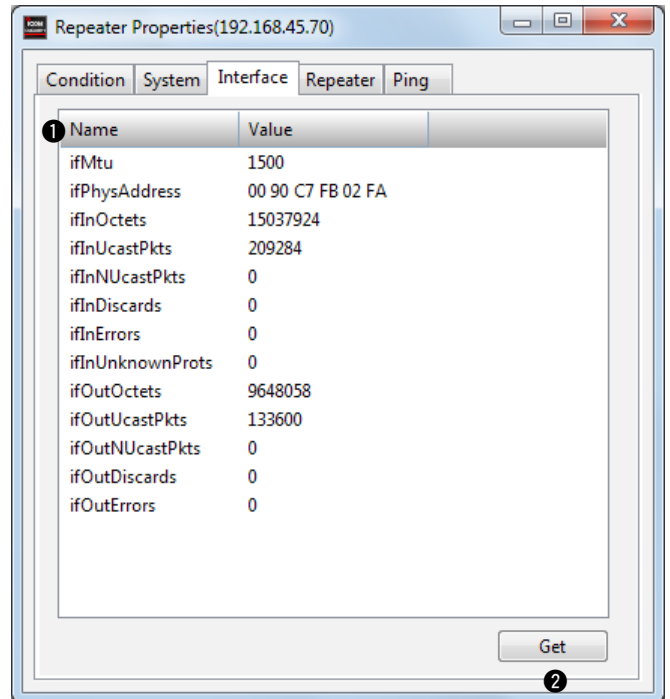
❶ Name/Value

The name of MIB object.

- **ifMtu:** The size of the largest datagram which can be sent/received on the interface, specified in octets.
- **ifPhysAddress:** The interface's address at the protocol layer immediately "below" the network layer in the protocol stack.
- **ifInOctets:** The total number of octets received on the interface, including framing characters.
- **ifInUcastPkts:** The number of subnetwork-unicast packets delivered to a higher-layer protocol.
- **ifInNUcastPkts:** The number of non-unicast packets delivered to a higher-layer protocol.
- **ifInDiscards:** The number of inbound packets which were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol.
- **ifInErrors:** The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.
- **ifInUnknownProts:** The number of packets received via the interface which were discarded because of an unknown or unsupported protocol.
- **ifOutOctets:** The total number of octets transmitted out of the interface, including framing characters.
- **ifOutUcastPkts:** The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent.
- **ifOutNUcastPkts:** The total number of packets that higher-level protocols requested be transmitted to a non-unicast address, including those that were discarded or not sent.
- **ifOutDiscards:** The number of outbound packets which were chosen to be discarded even though no errors had been detected to prevent their being transmitted.
- **ifOutErrors:** The number of outbound packets that could not be transmitted because of errors.

❷ [Get]

Click to load the parameters from the repeater.



Property window (Continued)

◇ Repeater tab

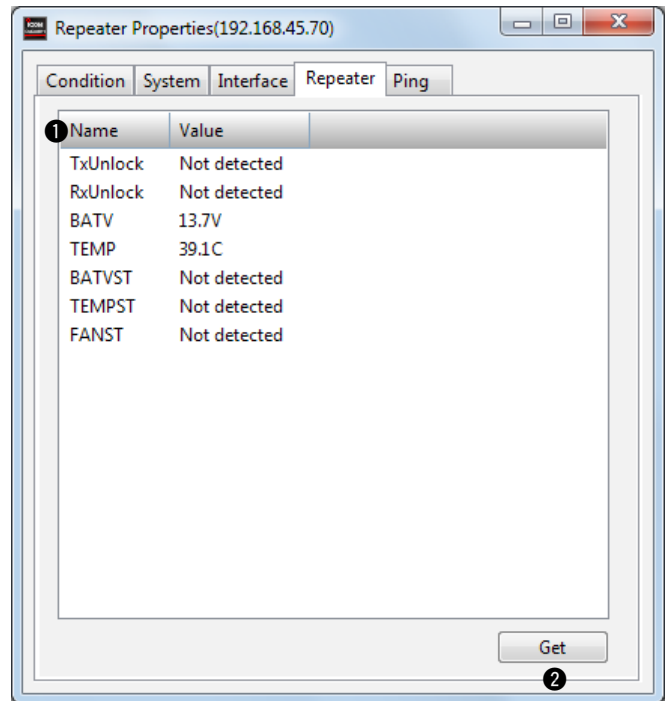
Displays the repeater hardware parameters.

① Name/Value

- **TxUnlock:** Displays "Detected" when the TX PLL is unlocked.
- **RxUnlock:** Displays "Detected" when the RX PLL is unlocked.
- **BATV:** Power supply voltage.
- **TEMP:** Internal temperature.
- **BATVST:** Displays "Detected" when the power supply voltage is out of the specified range.
- **TEMPST:** Displays "Detected" when the internal temperature is out of the usable range.
- **FANST:** Displays "Detected" when the cooling FAN is malfunctioning.

② [Get]

Click to load the parameters from the repeater.



◇ Ping tab

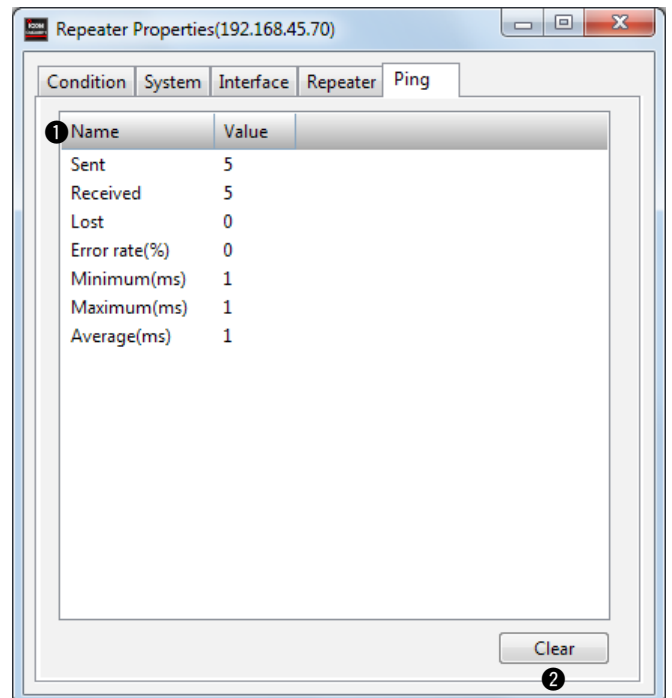
Displays the Ping test statistics.

① Name/Value

- **Sent:** Total number of PING packets sent.
- **Received:** Total number of PING packets received.
- **Lost:** Total number of PING packets lost.
- **Error rate (%):** PING packets loss in percentage. (0–100%)
- **Minimum (ms):** Minimum response time. (0–60000 ms)
- **Maximum (ms):** Maximum response time. (0–60000 ms)
- **Average (ms):** Average response time. (0–60000 ms)

② [Clear]

Click to clear the results.



Windows Vista	5-2
◇ Windows Firewall exception list.....	5-2
Windows 7 and 8 (Except for RT).....	5-3
◇ To add a program to the Windows Firewall exception list	5-3

Windows Vista

Programs listed below must be allowed for the Windows Firewall.

- **GenWatch.exe**
This is the GenWach3 service executable.
C:\Program Files\Genesis\Genwatch3\GenWatch.exe
- **SqlServer.exe**
C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn\sqlservr.exe

The following ports may also need to be allowed.

- **TCP 9130, 9131**
These ports are required to connect to Topaz devices.

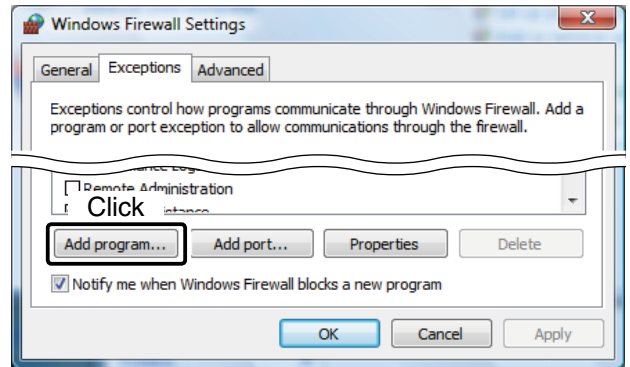
To access the “Windows Firewall settings” within Microsoft® Windows® Vista®:

- ① Control Panel
- ② Windows Firewall
- ③ Allow a program through Windows Firewall

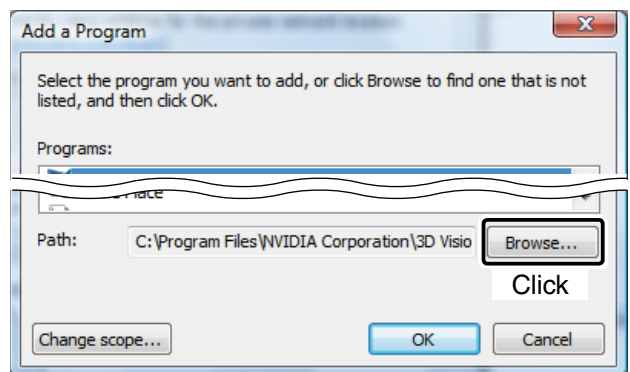
◇ Windows Firewall exception list

Follow the steps below to to add a program to the Windows Firewall exception list.

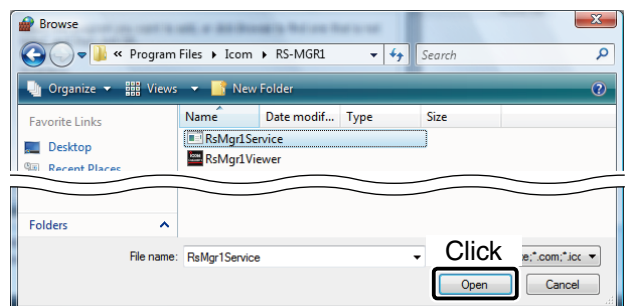
- ① Click [**Add Program...**] in the Exception list in the “Windows Firewall Settings” dialogue to display the Add a Program dialogue.



- ② Click [**Browse...**], and then select the target executable data.



- ③ Click [**Open**] on the Browse window, and then click [**OK**] on the Add a Program window.



Windows 7 and 8 (Except for RT)

Below instructions are based on using Microsoft® Windows® 8

Programs listed below must be allowed for the Windows Firewall.

- **GenWatch.exe**

This is the GenWach3 service executable.
C:\Program Files\Genesis\Genwatch3\GenWatch.exe

- **SqlServer.exe**

C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Binn\sqlservr.exe

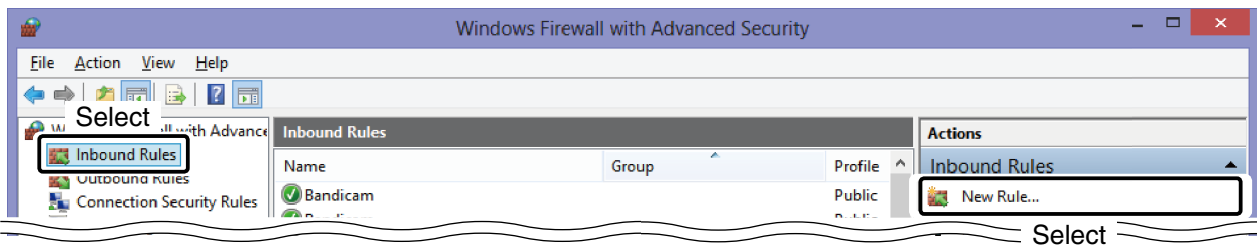
To access the “Windows Firewall with Advanced Security” within Microsoft® Windows® 7 and 8:

- ① Control Panel
- ② Windows Firewall
- ③ Advanced Settings

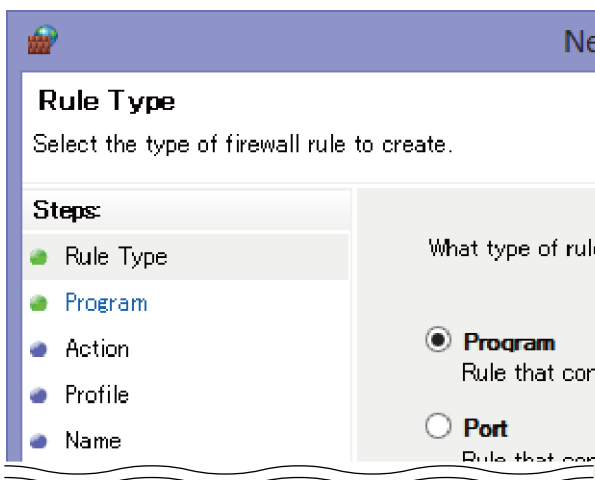
◇ Windows Firewall exception list

Follow the steps below to add a program to the Windows Firewall exception list.

- ① Click [**Inbound Rules...**] in the “Windows Firewall with Advanced Security” window.
- ② Click [**New Rule...**] to launch the New Inbound Rule Wizard.



- ③ Follow the instructions within the New Inbound Rule Wizard.



- Set the Rule Type, Program, Action, Profile, and Name in the the New Inbound Rule Wizard to complete the settings.

- ④ When step ③ is completed, the new program or port exception will appear within the inbound exceptions list.

Count on us!

