OMRON

Programmable Terminal NA-series

Practices Guide
NJ/NX Troubleshooter
For the Elementary Level

NA5-15W□□□□
NA5-12W□□□□
NA5-9W□□□□
NA5-7W□□□□

Practices

Guide

sysmac
always in control

■ Introduction

This guide provides reference information on editing pages of the NA. It does not provide safety information.

Be sure to obtain the NA-series Programmable Terminal User's Manuals, read and understand the safety points and other information required for use, and test sufficiently before actually using the equipment.

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Contents

Related Manuals

The following manuals are related to this manual.

| Cat.No.	Model	Manual Name
SBCA-362	SYSMAC-SE2□□□	Sysmac Studio Version 1 Operation Manual
SBSA-545	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Hardware User's Manual
SBSA-546	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Software User's Manual
SBSA-547	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Device Connection User's Manual
SBSA-548	NA5-15W□□□□ NA5-12W□□□□ NA5-9W□□□□ NA5-7W□□□□	NA-series Programmable Terminal Startup Guide

1 Outline

The troubleshooter function displays on the NA unit the controller errors of the CPU or other units, with the use of the NJ/NX-series CPU unit's function to monitor errors.
The troubleshooter screens are installed in the NA unit system. Thus, there is no need at all for the users to create the conventional alarm screens using the graphic tool (i.e. to perform the settings on Sysmac Studio) for NA. Moreover, the contents that are to be displayed as "User Events" are to be registered in advance in "Event Settings" in Sysmac Studio, which eliminates the need for setting alarms in the NA tool.

<NJ/NX Troubleshooter for NA>
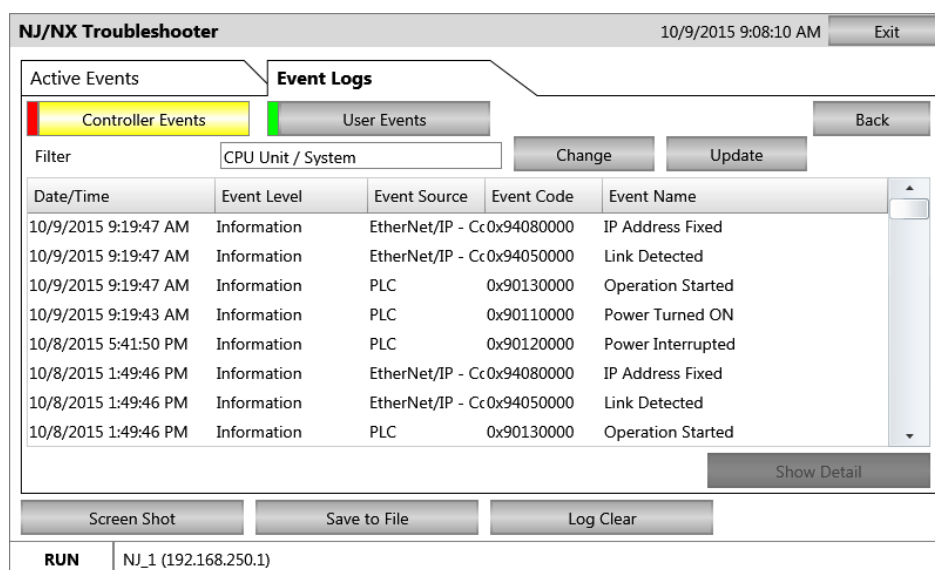
Sysmac Studio also has the same troubleshoot function as that of the NA unit. Selecting [Tools]-[Troubleshooting…]-[Controller Event Log] displays the screen shown below.

<Sysmac Studio Troubleshooter>
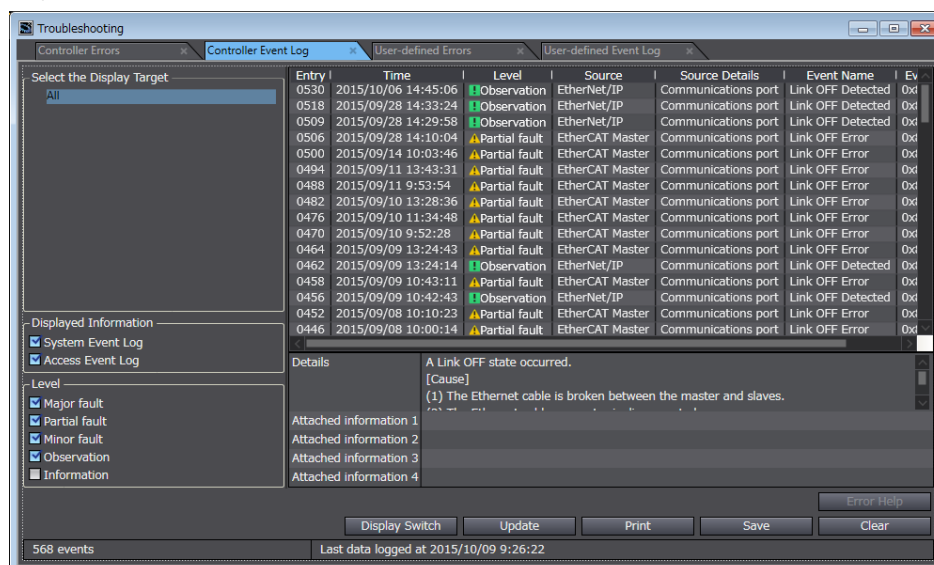
2 NJ/NX-series Troubleshooter Functions

The troubleshooter function allows you to confirm the "user-defined errors" and "errors occurred in the controller or anywhere in the internal devices", the contents of the event logs, and the countermeasures against the errors. This function is only available when connected to the NJ/NX-series controllers.

2-1 Controller Events and User Events

On the Troubleshooter screen, you can confirm the active events and event logs for the "Controller Events" as well as "User Events".

1. **User Events/User Event Logs**

   These are the errors and event logs that can be defined by the users with Sysmac Studio. The users can also specify detailed information such as countermeasures against troubles.

   The errors caused by "instruction to cause a user error (SetAlarm)" or "instruction to generate user information (Setinfo)" are displayed on the NA unit.

   Register the errors (events) to display in Sysmac Studio. (See next page.)

   In and after NARuntime Ver.1.03, only for the user events, the detailed display can be switched to a previously prepared screen (the function equivalent to NS).

2. **Controller Events/Controller Event Logs**

   These are the fixed errors and event logs included in the NJ/NX-series controllers. The users therefore cannot edit them.

   The errors that occurred in the CPU units, NX-series slave terminals, EtherCAT slaves, CJ units, or other devices are to be reported from the controller to the NA.

2-2 Active Events and Event Logs

When you start up the NJ/NX Troubleshooter, the following screen appears. You can switch the display between "Active Events" and "Event Logs" by the tabs enclosed in the ⌐ ─ ─ ─ ⌐ red dashed-line rectangle as shown below.

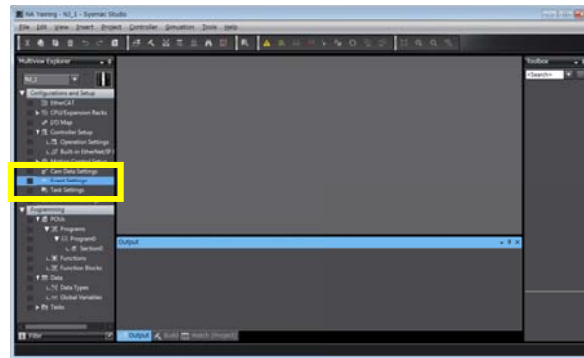| NJ/NX Troubleshooter		10/8/2015 10:31:41 AM	Exit
Active Events	Event Logs		
Controllers	Controller Event Status	User Event Status	
NJ_1	Normal	Error	
	Show Controller Events		Show User Events
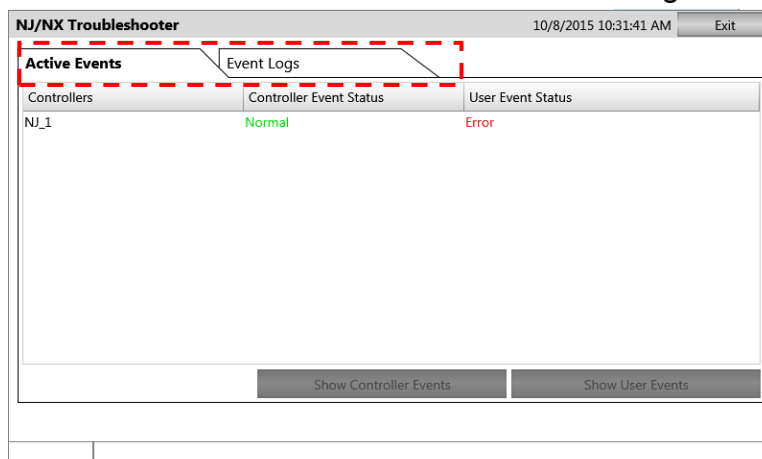
"Error" appears if there is an error. If there is no error, "Normal" appears.
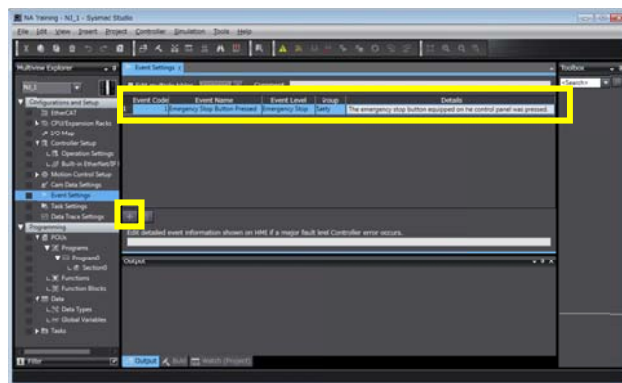
2-3   Registering User Events

Register the contents of the errors that are displayed on the User Events screen in the Sysmac Studio for the NJ/NX controller.

1. Select and double-click [Configurations and Setup]-[Event Settings]. Otherwise, right-click on it and select [Edit]. The "Event Settings" tab page opens.	
2. Click the ➕ icon at the left bottom of the tab page. Register the following data in the cells for "Event Code/Event Name/Event Level/Group/Details". ·Event Code: 1 ·Event Name: Emergency Stop Button Pressed ·Event Level: Emergency Stop ·Group: Safety ·Details: The emergency stop button equipped on the control panel was pressed.	
3. If you create an Excel file like the one shown on the right, you can directly copy and paste the contents to register them in "Event Settings". Note: Do not copy the header of each column (i.e. Event Code, Event Name, etc.). Reference: Excel "event.xlsx"	
4. Copy the contents of the Excel file and paste them in "Event Settings".	
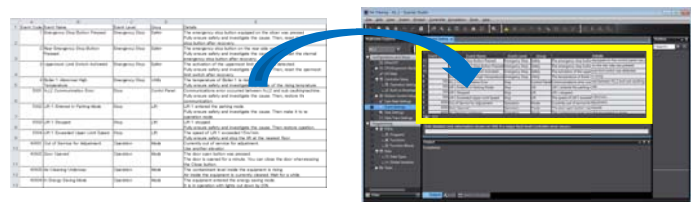
**5.** The contents of the Excel file are now pasted in "Event Settings".

6. Activate "the instruction to cause a user error (SetAlarm)" or "the instruction to generate user information (SetInfo)" to cause a user event.

Reference project:
NA_Trouble.smc2
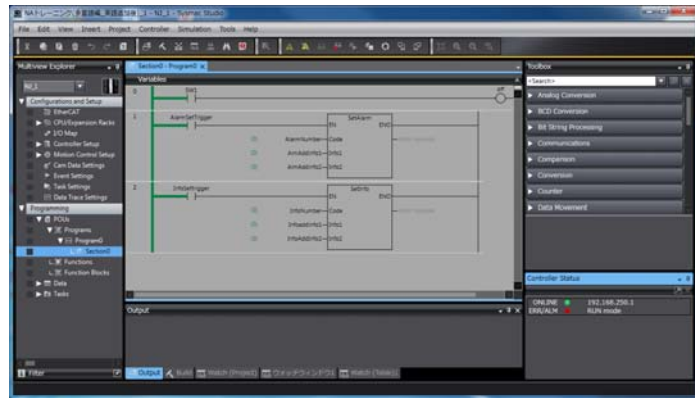
7. Enter the "Event Code" number that is set in "Event Settings" in "AlarmNumber" or "InfoNumber", and set "AlarmSetTrigger" or "InfoSetTrigger" to True. The corresponding error appears on the NA.
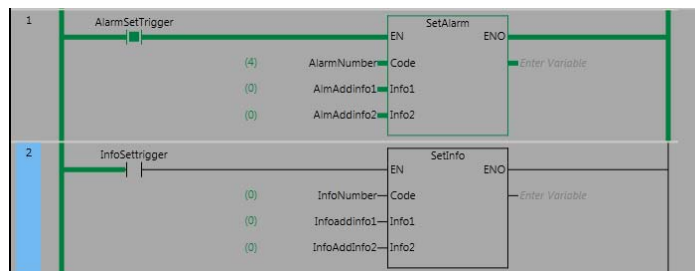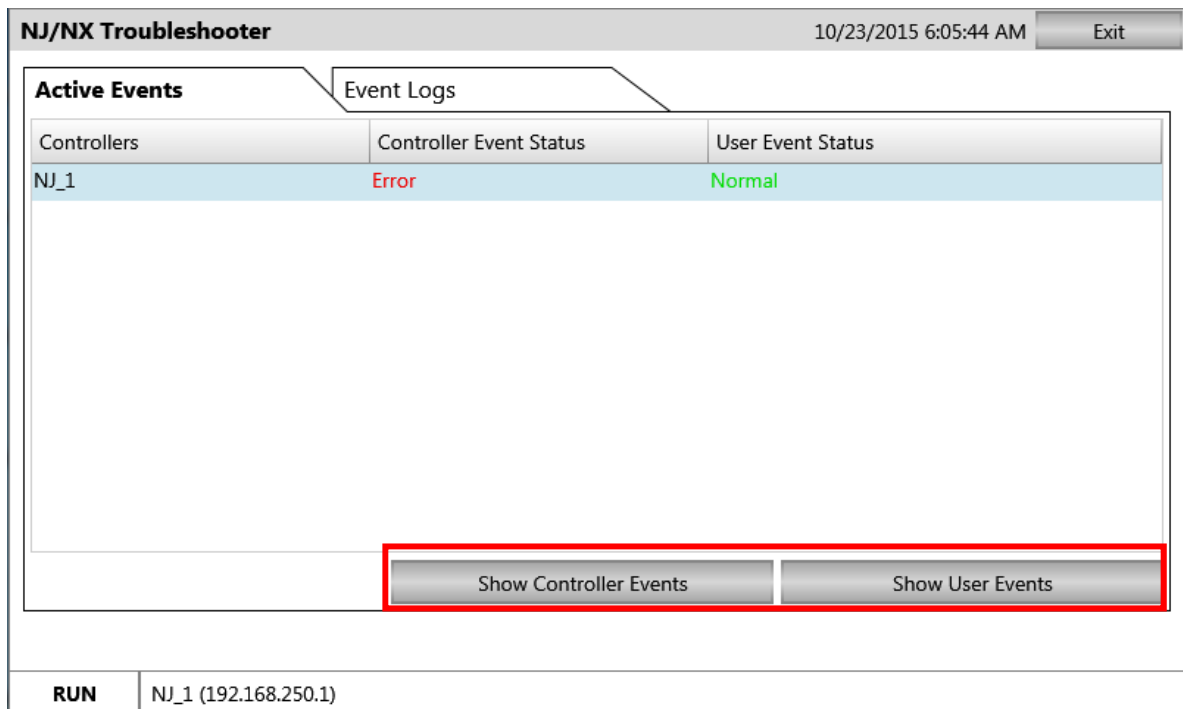
3 Description on Event Screens

3-1 Active Events

Displays the currently raised "Controller Events" and "User Events".

"Error" appears when an error has occurred.
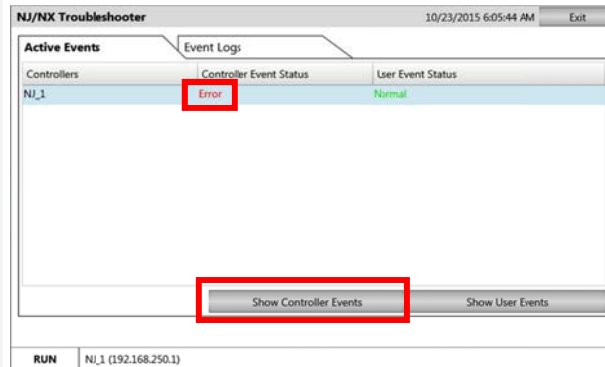"Normal" is displayed in the normal status.

To confirm the contents of the currently raised errors, select the controller (to highlight it light blue) and press either "Show Controller Events" or "Show User Events".
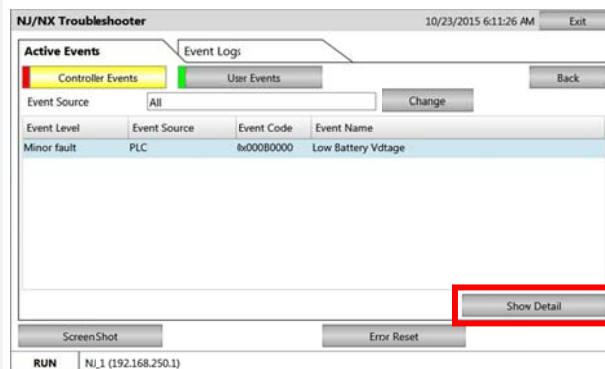
Active Events – Controller Events

When "Error" appears in the Controller Event Status column on the "Active Events" tab, it means that an error has occurred in the controller. Check for the currently occurring errors following the procedure below.
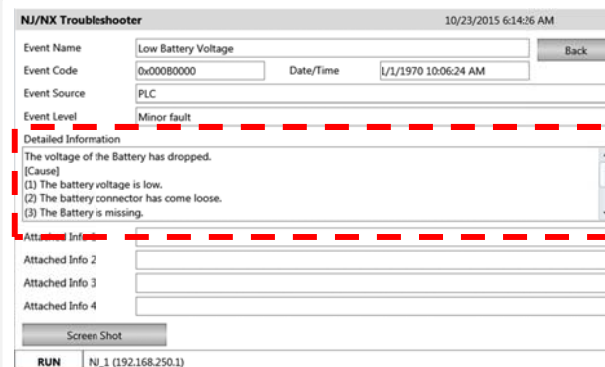
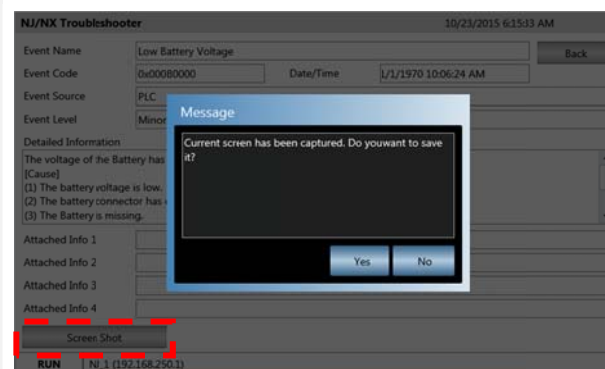|		
1.	When "Error" is displayed in the Controller Event Status column on the "Active Events" tab, press the "Show Controller Events" button at the bottom of the screen.	
2.	The screen is switched to "Controller Events". A list of the currently occurring controller events is displayed. Select an event from the list and press "Show Detail" at the right bottom of the screen.	
3.	The details of the event that is selected in Step 2 appear. You can recover from the problem by referring to what is displayed in "Detailed Information".	
4.	In Steps 2 and 3, if you press the "Screen Shot" button, the currently displayed screen can be captured and saved in an SD Memory Card. You can attach the saved image to defect reports. When no SD Memory Card is inserted in NA, if you press "Yes" in the dialog box shown on the right, the following message appears. "Failed to capture screenshot – Could not find the storage media 'SDCard'."	

Active Events – User Events

When "Error" appears in the User Event Status column on the "Active Events" tab, it means that at least one of the errors created in Step 5 in Section 2-3 has occurred. Check for the currently occurring errors following the procedure below.

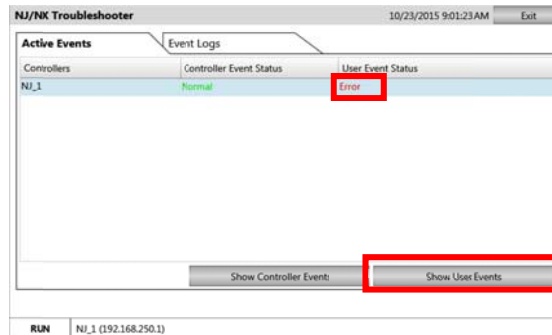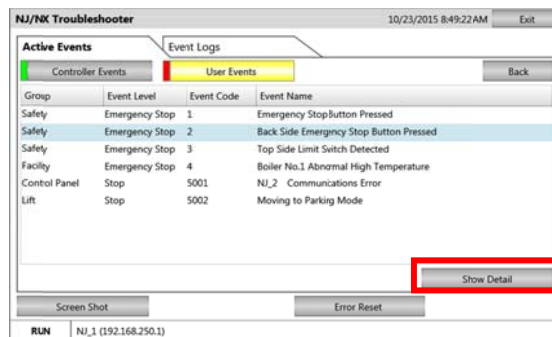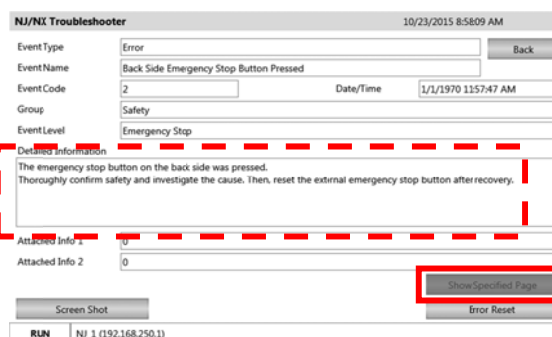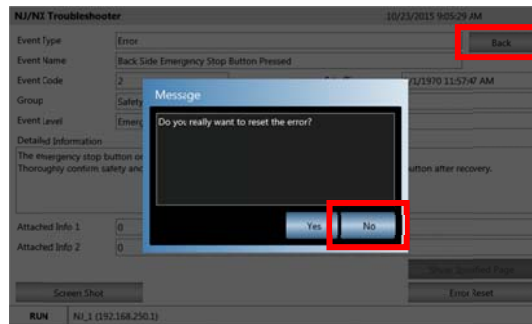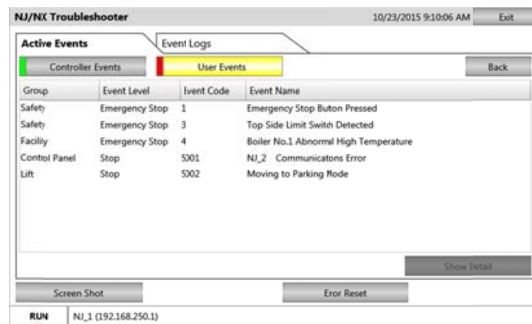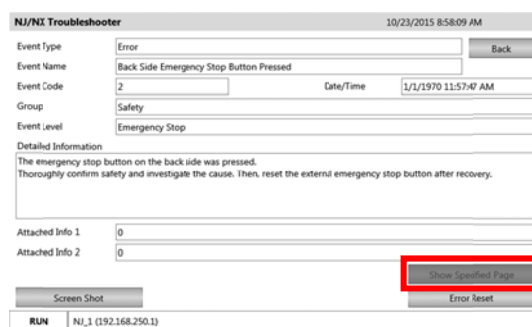|		
1.	When "Error" is displayed in the User Event Status column on the "Active Events" tab, press the "Show User Events" button at the bottom of the screen.	
2.	The screen is switched to "User Events". A list of the currently occurring user events is displayed. Select an event from the list and press "Show Detail" at the right bottom of the screen.	
3.	The details of the event that is selected in Step 2 appear. You can recover from the problem by referring to what is displayed in "Detailed Information". Pressing the "Show Specified Page" button allows you to jump to the page that is created with Sysmac Studio and related to the trouble. For more details, refer to Steps 7 to 9 on Page 14.	
4.	In cases of User Events, you can clear the currently occurring event by pressing the "Error Reset" button on the Troubleshooter screen. When you press the "Error Reset" button, the "Do you want to really reset the error?" message appears. Press "Yes".	
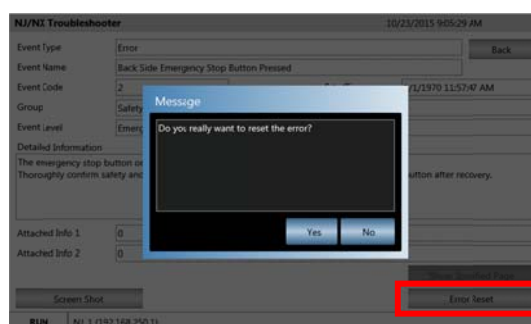
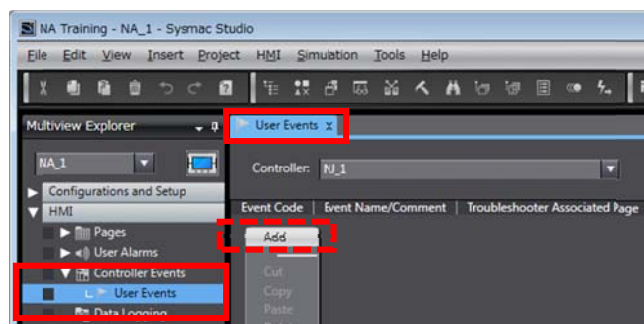|	
5.	The "The error was reset successfully." Message appears. Press "OK" and then "Back" at the top right of the screen.
6.	On the "Active Events" screen, you will find that the event you just cleared has been deleted.
7.	As described in Step 3, if you press the " Show Specified Page " button in the Details screen of the user event, the page created with Sysmac Studio can be displayed. You can specify the page from [HMI]-[Controller Events]-[User Events] on Sysmac Studio, as described in Step 8 below.
8.	Specify the page related to the Troubleshooter as below. Select [HMI]-[Controller Events]-[User Events], and right-click on the edit pane of "User Events" and select [Add].
9.	Add in [Event Code] the code of the event for which to display the related page, and enter in [Troubleshooter Associated Page] the name of the page to display. The [Event Code] represents the code that is assigned in [Event Settings] in Step 5 on Page 10.
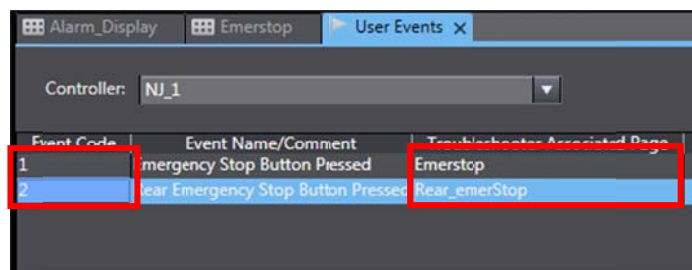
With the settings shown on the right, when you press [Show Specified Page] on the User Events Details screen of Troubleshooter, the [Emerstop] page appears. |

In [Event Name/Comment], the ones set in [Event Name] in Step 5 on Page 10 are automatically displayed.

3-2 Event Logs

Displays the "Controller Events" and "User Events" that have been raised so far.

"Yes" appears when the event log is not cleared.
"No" appears when it is cleared.

NJ/NX Troubleshooter		10/23/2015 9:27:28 AM	Exit
Active Events	**Event Logs**		
Controllers	Controller Event Status	User Event Status	
NJ_1	No	Yes	
	Show Controller Events		Show User Events
RUN	NJ_1 (192.168.250.1)		

To confirm the contents of the errors that have been raised so far, select the controller (to highlight it light blue) and press either "Show Controller Events" or "Show User Events".
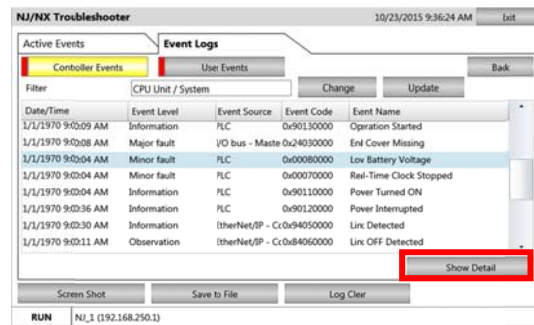
Event Logs – Controller Events

When "Yes" appears in the Controller Event Status column on the "Event Logs" tab, it means that there is a log of the errors that have occurred so far in the controller. Check for the log following the procedure below.
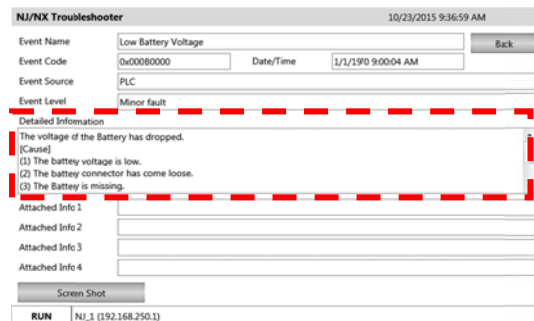
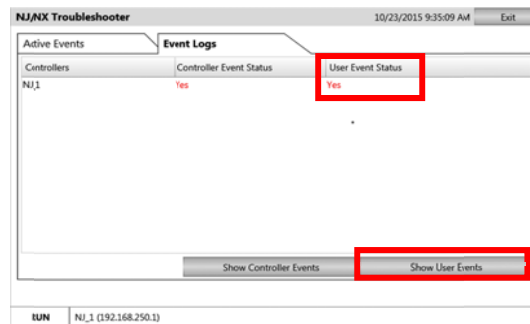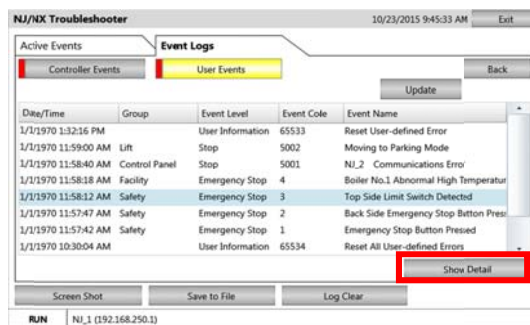|		
1.	When "Yes" is displayed in the Controller Event Status column on the "Event Logs" tab, press the "Show Controller Events" button at the bottom of the screen.	
2.	The screen is switched to "Controller Events". A list of the controller events that have occurred so far is displayed. Select an event from the list and press "Show Detail" at the right bottom of the screen.	
3.	The details of the event that is selected in Step 2 appear. You can recover from the problem by referring to what is displayed in "Detailed Information".	

Event Logs – User Events

When "Yes" appears in the User Event Status column on the "Event **L**ogs" tab, it means that there is a log of the errors created in Step 5 in Section 2-3 (on Page 10). Check for the log following the procedure below.
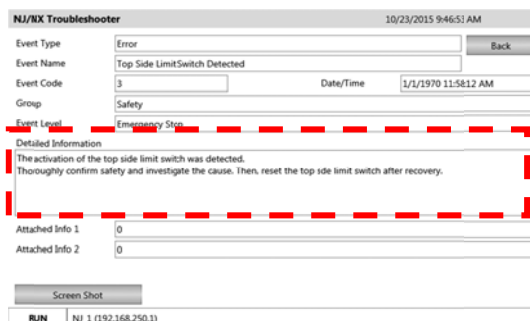
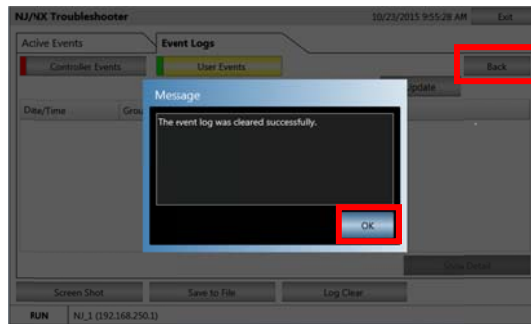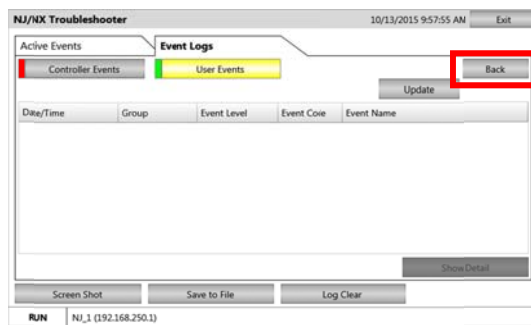|	
1. When "Yes" is displayed in the User Event Status column on the "Event Logs" tab, press the "Show User Events" button at the bottom of the screen.	
2. The screen is switched to "User Events". A list of the user events that have occurred so far is displayed. Select an event from the list and press "Show Detail" at the right bottom of the screen.	
3. The details of the event that is selected in Step 2 appear. You can recover from the problem by referring to what is displayed in "Detailed Information".	
4. You can clear the event log by pressing the "Log Clear" button in the screen that shows the list of the user events described in Step 2. Pressing the button displays the "Do you really want to clear the event log?" message. Press "Yes".	
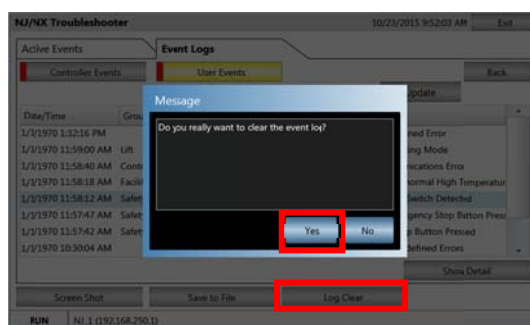
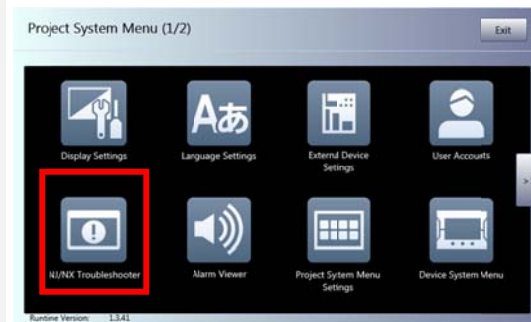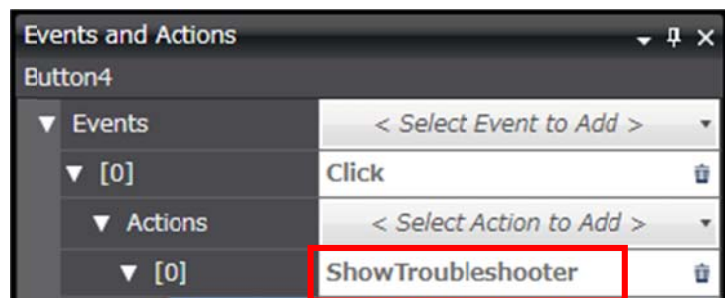|	
5. The "The event log was cleared successfully." message appears. Press "OK" and then "Back" at the top right of the screen.	
6. The "User Events" screen appears. You will find that the user event has been cleared. Press the "Back" button to show the "Event Logs" screen.	
7. The "Yes" sign that appeared in the User Event Status column as described in Step 1 is now changed to "No".	
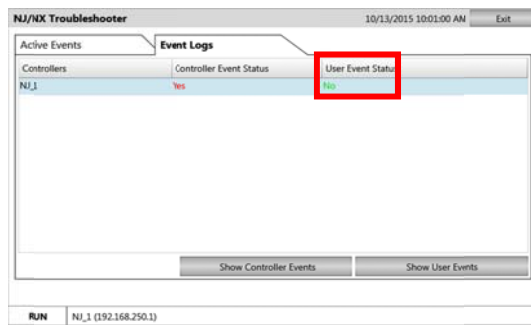
4 Procedure to Start Up the NJ/NX Troubleshooter

There are three methods to start up the NJ/NX Troubleshooter as described below.
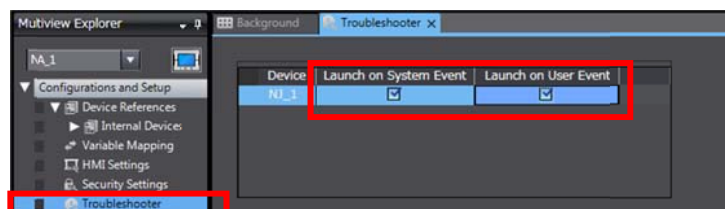
1.	Select "NJ/NX Troubleshooter" from "Project System Menu".	
2.	Press the Button for which to have set "ShowTroubleshooter" as the action under [Events and Actions].	
3.	The troubleshooter can also be started if you have selected either "Launch on System Event" or "Launch on User Event" and when a corresponding event occurs.	

Revision History

Revision code	Date	Revised content
01	October 2015	Original production

Note: Do not use this document to operate the Unit.

OMRON Corporation   **Industrial Automation Company**
  Tokyo, JAPAN

         Contact: www.ia.omron.com

Regional Headquarters

OMRON EUROPE B.V.
Wegalaan 67-69, 2132 JD Hoofddorp
The Netherlands
Tel: (31)2356-81-300/Fax: (31)2356-81-388

OMRON ASIA PACIFIC PTE. LTD.
No. 438A Alexandra Road # 05-05/08 (Lobby 2),
Alexandra Technopark,
Singapore 119967
Tel: (65) 6835-3011/Fax: (65) 6835-2711

OMRON ELECTRONICS LLC
2895 Greenspoint Parkway, Suite 200
Hoffman Estates, IL 60169 U.S.A
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

OMRON (CHINA) CO., LTD.
Room 2211, Bank of China Tower,
200 Yin Cheng Zhong Road,
PuDong New Area, Shanghai, 200120, China
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

Authorized Distributor:

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