User's Manual

AQ1300/AQ1301 ETHERNET
Control Window

Thank you for purchasing the AQ1300/AQ1301 1G/10G ETHERNET Multi Field Tester.
This user's manual explains the features, operating procedures, and handling precautions of the AQ1300/AQ1301 Remote Control Software. To ensure correct use, please read this manual thoroughly before beginning operation. Keep this manual in a safe place for quick reference in the event that a question arises.
This manual is one of five AQ1300/AQ1301 manuals. Please read all manuals.

Manual Title	Manual No.	Description
AQ1300/AQ1301 ETHERNET Multi Field Tester Operation Guide	IM AQ1300-02EN	This guide focuses on the handling precautions, basic operations, and specifications of the AQ1300/AQ1301.
AQ1300/AQ1301 ETHERNET Multi Field Tester User's Manual (included in CD)	IM AQ1300-01EN	This manual explains all the AQ1300/AQ1301 features and how to use them.
AQ1300/AQ1301 ETHERNET Multi Field Tester Communication Interface User's Manual (included in CD)	IM AQ1300-17EN	The manual explains the AQ1300/AQ1301 communication interface features and instructions on how to use them.
AQ1300 MFT 10GbE Setup Software User's Manual (included in CD)	IM AQ1300-61EN	This manual explains how to use a PC to create AQ1300/AQ1301 setup files, display result files, and generate CSV files.
AQ1300/AQ1301 ETHERNET Remote Control Software User's Manual (included in CD)	IM AQ1300-63EN	This manual. It explains how to use a PC to control the AQ1300/AQ1301 and execute various tests.

The "-EN" in the manual number is the language code.

Contact information of Yokogawa offices worldwide is provided on the following sheet.

Document No.	Description
PIM 113-01Z2	List of worldwide contacts

Notes

- This manual (IM AQ1300-63EN 2nd Edition) applies to AQ1300/AQ1301b ETHERNET Remote Control Software version R1.09.01.001 and later.
  If you are using an older version, you will not be able to use all the features described in this manual.
  Check the software version of your product with the version information. For information on how to view the version information, see section 5.3.
- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the software's performance and functionality. The figures given in this manual may differ from those that actually appear on your screen.
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Revisions

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Conventions Used in This Manual

Notes

The notes and cautions in this manual are categorized using the following symbols.

> *Note*   Calls attention to information that is important for the proper operation of the instrument.

Symbols and Conventions Used in Procedural Explanations

The contents of the procedural explanations are indicated using the following symbols.

> **Procedure**   Carry out the procedure according to the step numbers. All procedures are written under the assumption that you are starting operation at the beginning of the procedure, so you may not need to carry out all the steps in a procedure when you are changing the settings.

> **Explanation**   This section describes the setup items and the limitations regarding the procedures.

Character Notations

Bold formatting indicates menus, buttons, etc. that the procedure requires you to click or interface terms.

Notes about Using This Software

Storing the CD

Keep the original CD for this software in a safe place. To use this software, install it on a PC hard disk, and run it from the PC.

Notes on Using the Software

The software may stop functioning when the PC is in standby mode. Disable standby mode when you use this software.

About This Manual

This manual covers the following topics related to the Remote Control Software.
Chapter 1 explains test configuration, system requirements, software features and screens, and how to start and close the software.
Chapter 2 explains how to connect the software to the AQ1300/AQ1301.
Chapter 3 explains how to use the settings required to perform tests.
Chapter 4 explains how to execute each test and how to save data.

This manual does not explain the details of settings and test items. For details on these items, see the user's manual, IM AQ1300-01EN.

Contents

1.1 Overview

1

What the Remote Control Software Can Do

You can use this software to change the settings and control the starting and stopping of tests on up to two AQ1300/AQ1301s and display on the PC the statistical results of various test data.
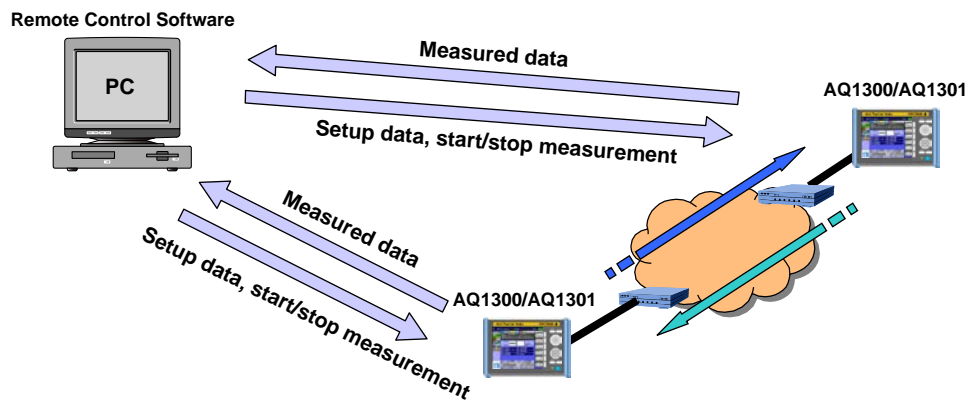
You can control a pair of AQ1300/AQ1301s from a single PC.

Test Items

You can set the parameters related to the following test items and execute tests.

- Traffic test
- Loopback test
- QoS test
- PING test
- BERT

You can also save settings and statistical data to files.

Remote Control Software

For details on test items and settings, see the user's manual, IM AQ1300-01EN.

System Requirements

PC

CPU: 1 GHz or higher

Memory: 256 MB or more

HDD: 500 MB free space or more

CD drive (required when installing the software)

Display:

XGA (1024×768 pixels) or higher

Operating System

Windows XP, Windows Vista, Windows 7, Windows 8

Communication Ports

- **Ethernet**

  An Ethernet port that supports 10BASE-T or 100BASE-TX

- **USB**

  A USB port that supports USB Revision 1.1 or higher

1.2 Specifications

Environment		
	OS	Windows XP, Windows 7 (Windows Vista), Windows 8
	Hardware	Display: XGA (1024×768 pixels) or higher
		Communication port: Ethernet or USB 1.1
	Communication protocol	TCP Port No: 10001
	Maximum number of units that can be controlled simultaneously	2

Measurement function		
	Test type	Traffic/Bert/QoS/Ping/Loopback
	Control items	Test type selection
		Measurement start/stop
		Transmission start/stop
		Error insertion: CRC error, symbol error, sequence error, payload error
		Tx rate adjustment
		LF/RF transmission
		Other device search: In the same segment, up to 64 devices
	Setup items	Common settings
		Test interface: XFP, SFP(1G), SFP(FE), RJ-45
		Test layer: L2, L3-IPv4, L3-IPv6
		Jumbo frame on/off, UDP on/off
		Link settings
		Negotiation, advertisement, speed, duplex, flow control, MDI, automatic RF response, linkdown transmission continuation, Tx clock source
		Address settings
		Source
		Source MAC, source IPv4/IPv6, VLAN
		VLAN stacks
		VLAN1/2 TPID, CFI, CoS, ID
		Destination
		Destination MAC, destination IPv4/IPv6
		Emulation settings
		ARP reply, PING reply, NDP reply, PING v6 reply
		Traffic test settings
		Tx rate settings
		Unit (Utilization[%]/bit/fps)
		Burst setting
		Tx frame format setting: Auto or manual using Frame Builder
		Tx mode: Continuous transmission, transmission time specification, frames specifications
		Tx frame length adjustment
		Field adjustment
		Fill pattern: Random, all zeros, all ones, alternating zeros and ones
		Rx settings
		Oversize threshold
		Rx frame filter

		BERT test settings		
			Tx rate settings	
				Unit (Utilization[%]/bit/fps)
				Burst setting
			Tx mode: Continuous transmission, transmission time specification, frames specifications	
			Tx frame length adjustment	
			Rx settings	
				Timeout period for sync loss
				Oversize threshold
				Rx frame filter
		QoS test settings		
			QoS identification: Tx frame ID, field specification, offset specification	
			Ch(n)	
				Channel enable/disable, QoS value, frame length, Tx rate: Utilization [%]
			Tx frame format setting: Auto or manual using Frame Builder	
			Fill pattern: Random, all zeros, all ones, alternating zeros and ones	
			Tx mode: Continuous transmission, transmission time specification, frames specifications	
			Rx QoS	
				Allocation method specification
				Allocation patterns × 2 fields
			Rx settings	
				Oversize threshold
				Rx frame filter
		Loopback test settings		
			Loopback test target	
		PING test settings		
			Tx interval	
			Tx mode	
			Tx frame length	
	Statistical items	Statistical item display settings: Select the displayed items and their positions		
		Statistical items		
			Common: Acquisition time and measurement duration	
			Link: Laser off count, linkdown count	
			Tx, Rx, delay, sequence, payload, Tx channels (n), Rx channels (n), BERT, PING	
	Options	Advanced settings		
			Synchronize measurement and transmission controls	
			Remove test tag from test frame	
		Measurement settings		
			Operation at measurement start	
				Request ARP/NDP
				Not start the measurement when Link is down.
			Measurement STOP condition	
				Stop measurement when linkdown is detected, L2 error is detected, or L3 error is detected
			Operation after measurement stops	
				Save measurement results and statistics log (in the AQ1300/AQ1301) to files
			Synchronization control setting	
				Try synchronizing with the other device
			Other settings	
				Subtract the delay time specific to the other device from the measurement results
	File			
		Setup file: Uses a dedicated setup file		
			Export setup files for manual mode and auto mode	
		Result file: Save in CSV format (*.csv)		

1.3   Screen Explanation

The software screen contains a menu bar, control menu, setting menu, and a list of statistics.

Control menu
Test item setting, test start, send start, statistical log setting, special control setting, AQ1300/AQ1301 message display, other device information display, AQ1300/AQ1301 status display

Menu bar
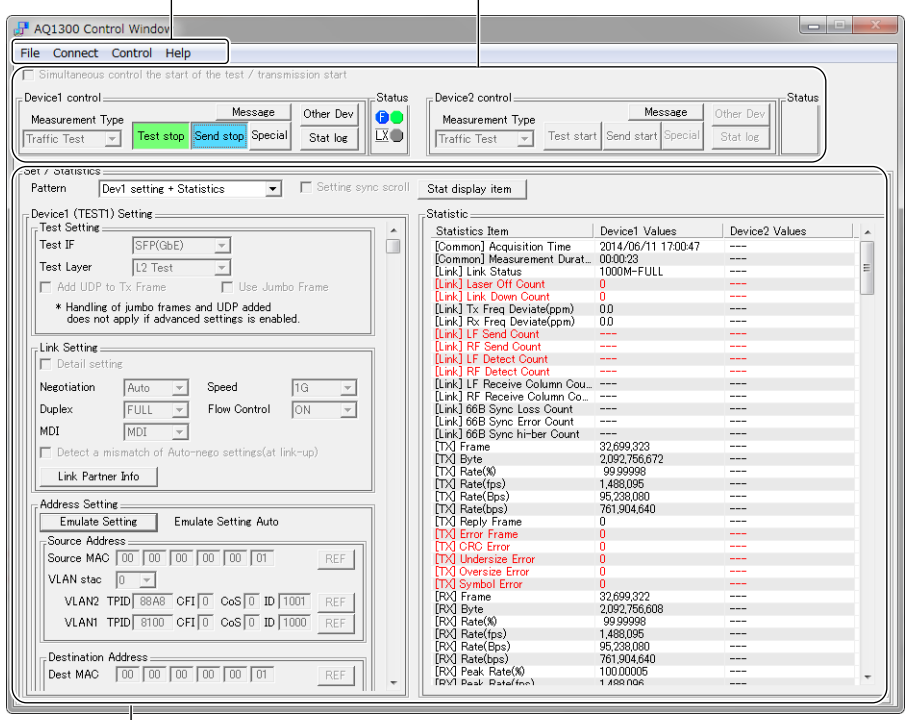
Setting menu and a list of statistics
If you are connected to two AQ1300/AQ1301s, you can display the setting menu of the second unit in place of the list of statistics.
The setting menu displays the auto test settings. To specify the settings in detail, press the appropriate setting buttons to display the corresponding setting windows.

1.4 Starting and Closing the Software

This section explains how to start and close the Control Software.

Starting the Software

1. Click Start, **All Programs**, **yokogawa**, **AQ1300CtrlWnd**, and then click **AQ1300CtrlWnd.exe**.

The Control Software starts.

Closing the Software

1. On the **File** menu, click **Exit Application**.

2.1   Connecting over a Network

This section explains how to connect the AQ1300/AQ1301 to a PC over an Ethernet network.

Configuring the AQ1300/AQ1301

1. Connect the AQ1300/AQ1301 to the network.

2. In the AQ1300/AQ1301 network settings, set the network parameters.

For the procedure, see "Configuring Network Settings" in the AQ1300/AQ1301 User's Manual.

3. Restart the AQ1300/AQ1301.

4. Press **MENU** on the panel to display the top menu.

Configuring the Remote Control Software

1. Click Start, **All Programs**, **yokogawa**, **AQ1300CtrlWnd**, and then click **AQ1300CtrlWnd.exe**.

The Control Software starts.

2. On the **Connect** menu, click **Connect**.

The connection dialog box appears.

Select whether to connect as Device1 or Device2.

Select the check box to reset the device settings to their default values when connecting.

Connects to the AQ1300/AQ1301 at the specified IP address

Select ETHERNET.

Select the device to connect to from a list of host names registered in the past.

Set according to the target AQ1300/AQ1301 settings.

Acquires the host name from the device at the IP address

Deletes the host name from the Host List

Updates the host list
Adds the host name to the Host List

3. Of the two AQ1300/AQ1301s that can be connected, select which device, Device1 or Device2, to connect as.

4. Select **ETHERNET**.

5. If the AQ1300/AQ1301 that you want to connect to does not appear in the host list, set the **IP Address**, **Username**, and **Password** of the appropriate AQ1300/AQ1301.

To connect to the AQ1300/AQ1301 immediately, proceed to step 8.

If the AQ1300/AQ1301 that you want to connect to appears in the host list, select from the **Host List**.

Proceed to step 8.

6. To register the host name to the Host List, click **Get From Host**. The host name assigned to the AQ1300/AQ1301 at the specified IP address will appear in the Host Name box.

7. Click **Add**. The host name is added to the Host List.

8. Check that the AQ1300/AQ1301 is showing the top menu, and click **Connect**.

A connection will be established with the specified AQ1300/AQ1301.

Note

- If you try to connect to an AQ1300/AQ1301 when it is not showing the top menu, an error will occur.
- If an error occurs (the message button blinks in red), click the message button to display a list of messages. The error will be cleared.
- When the PC and AQ1300/AQ1301 connect successfully, the AQ1300/AQ1301 enters remote mode.

2.2   Connecting Using the USB

This section explains how to connect the AQ1300/AQ1301 to a PC using a USB.

Configuring the AQ1300/AQ1301

1.   In the AQ1300/AQ1301 system settings, set the USB function to communications.

For the procedure, see "Configuring the Language, Beep, and USB Function" in the AQ1300/AQ1301 User's Manual.

2.   Press **MENU** on the panel to display the top menu.

3.   Connect the AQ1300/AQ1301 to the PC using a USB cable.

Configuring the Remote Control Software

1.   Click Start, **All Programs**, **yokogawa**, **AQ1300CtrlWnd**, and then click **AQ1300CtrlWnd.exe**.

The Control Software starts.

2.   On the **Connect** menu, click **Connect**.

Select whether to connect as Device1 or Device2.

Connects to the AQ1300/AQ1301
selected in the Host List

Select the check box to reset the device settings
to their default values when connecting.

Select USB TMC.

Updates the host list

The connected AQ1300/AQ1301
host names
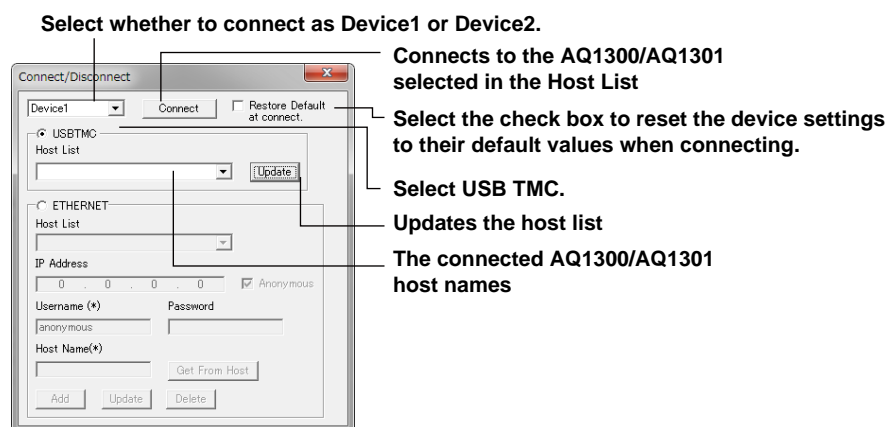
3.   Of the two measuring instruments that can be connected, select which device, Device1 or Device2, to connect as.

4.   Select **USB TMC**.

5.   Click **Update**.

The connected AQ1300/AQ1301 host names appear. The host name is set in the AQ1300/AQ1301 network settings.

6.   Check that the AQ1300/AQ1301 is showing the top menu, and click **Connect**.

A connection will be established with the specified AQ1300/AQ1301.

Note

- If you try to connect to an AQ1300/AQ1301 when it is not showing the top menu, an error will occur.
- If an error occurs (the message button blinks in red), click the message button to display a list of messages. The error will be cleared.
- When the PC and AQ1300/AQ1301 connect successfully, the AQ1300/AQ1301 enters remote mode.

3.1   Configuring a Traffic Test

This section explains how to configure a traffic test.
For details on the settings, see the AQ1300/AQ1301 User's Manual (IM AQ1300-01EN).

When Using an Existing Setup File

1. On the **File** menu, click **Open Setup File**.

2. Select the setup file that you want to open, and click **Open**.

    The software settings are changed to those in the setup file.

Configuring the Settings on the Software

1. Set **Measurement Type** to **Traffic Test**.

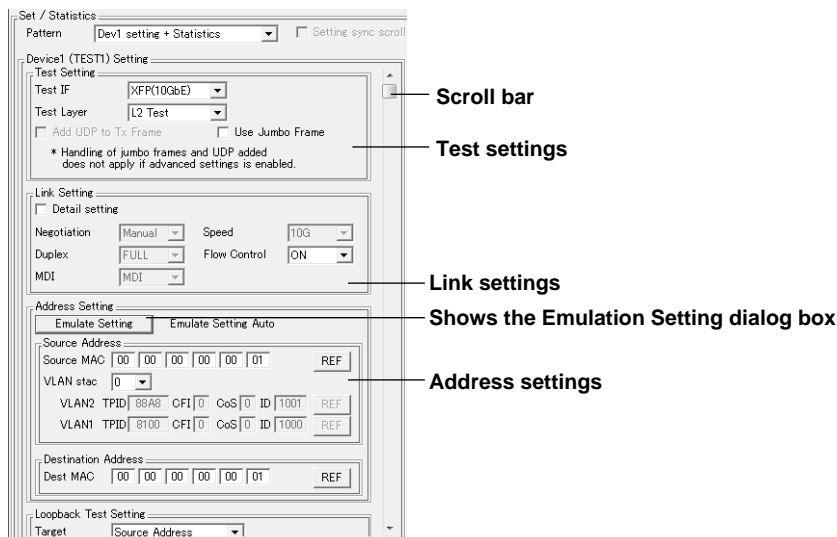   The setting menu changes to show traffic test setup items.
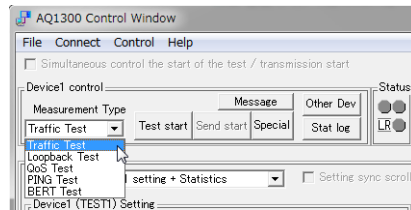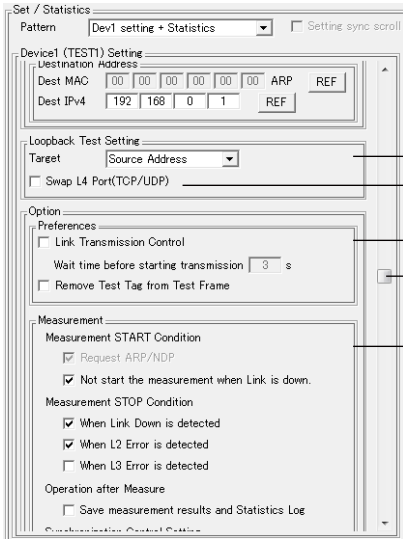

2. Specify the settings.

    To specify the settings manually, click the setting buttons. The corresponding setting dialog boxes will appear.

    Test Setting, Link Setting, Address Setting, and Option are shared among all measurement types.
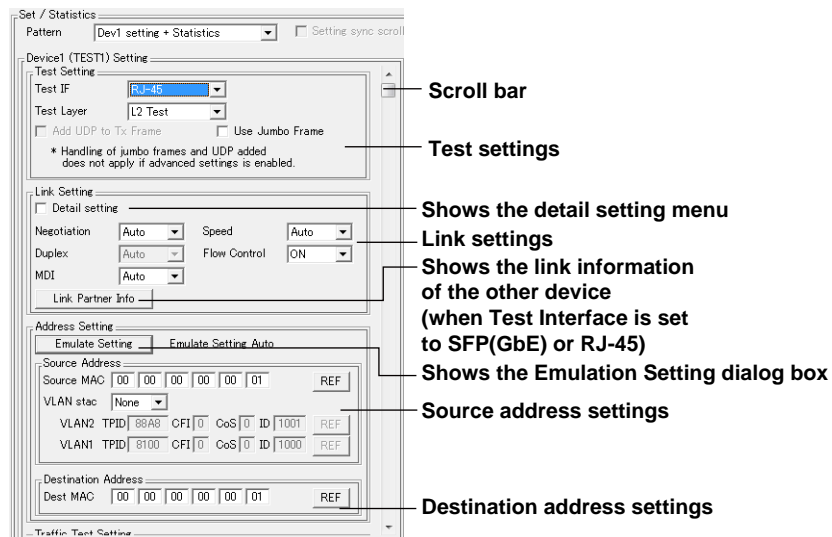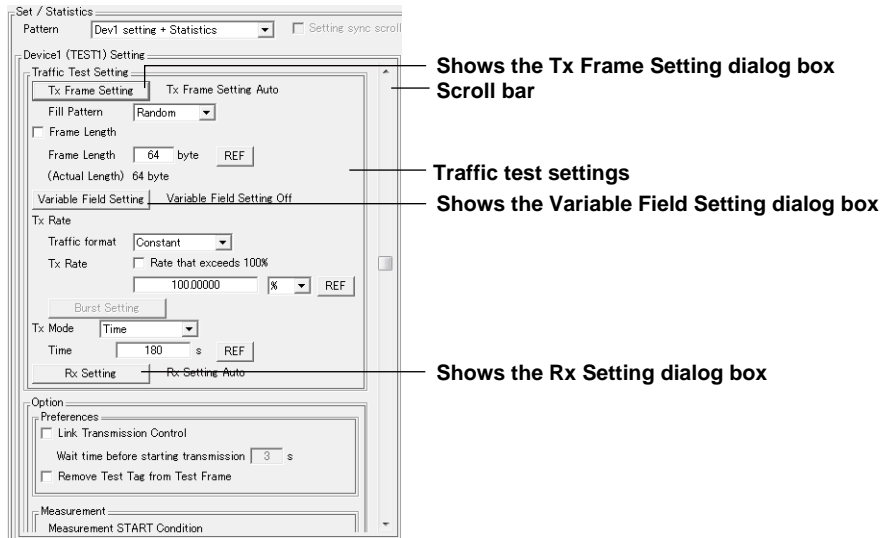
Shows the Tx Frame Setting dialog box

Scroll bar

Traffic test settings

Shows the Variable Field Setting dialog box

Shows the Rx Setting dialog box
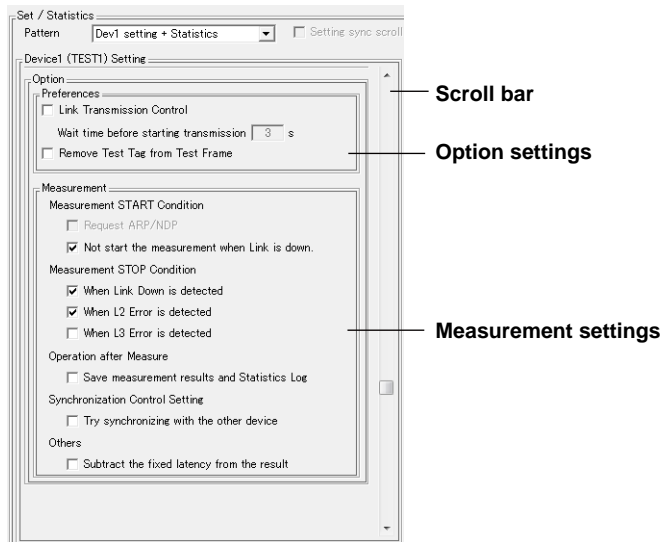
Scroll bar

Option settings

Measurement settings

Specifying Registered Values

Click **REF**. Value registered previously are listed, and you can select from this list. You can add and delete values from this list.
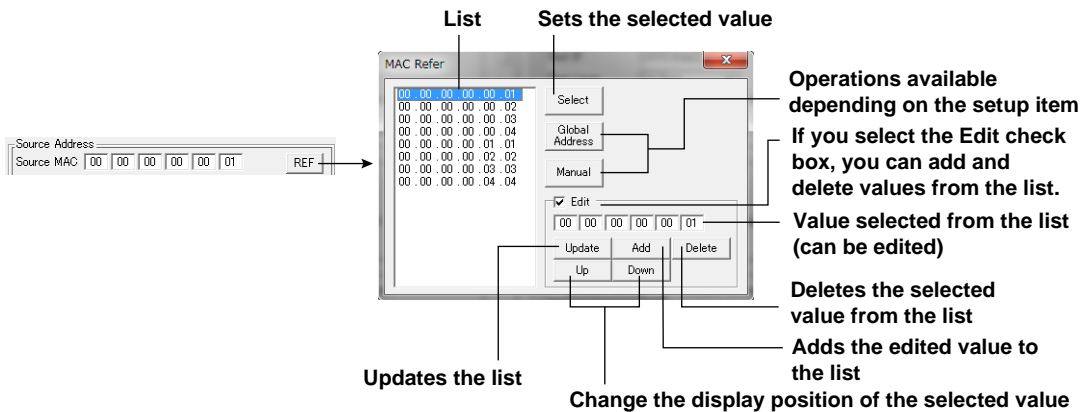
List

Sets the selected value

Operations available depending on the setup item

If you select the Edit check box, you can add and delete values from the list.

Value selected from the list (can be edited)

Deletes the selected value from the list

Adds the edited value to the list

Updates the list

Change the display position of the selected value

Detailed Link Settings

Select the **Detail setting** check box. The detailed setting menu appears.

Select the Detail setting check box.

Acquires information from the other device

Applies the acquired information to the link settings
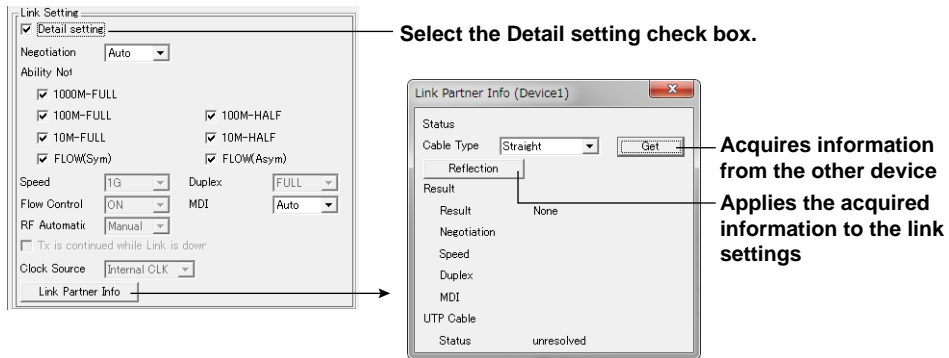
Emulation Settings

Click **Emulate Setting.** A dialog box for manually setting the emulation appears.

This setting is valid when Test Layer is set to L3-IPv4 Test or L3-IPv6 Test.

Select the check box to edit setup items.
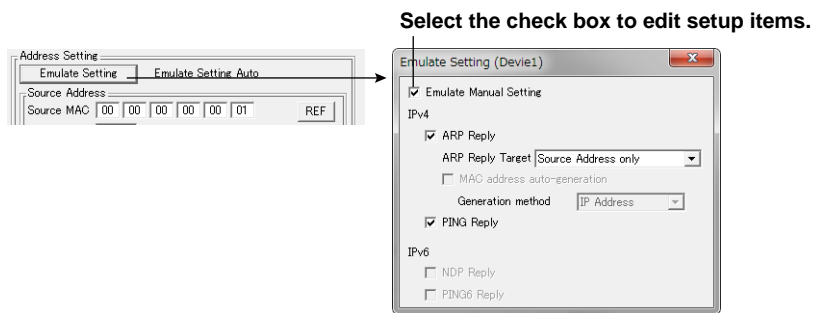
Setting the Destination Address

You can set the destination address from a list containing other devices can be found by searching.

On the control menu, click **Other Dev**.

Click **Search**. From the list that appears, select the device to set as the destination.

Click **Select**. The destination address is set to the MAC address of the selected device.

Sets the destination address to the MAC address of the selected device

Set the items to list.

3

Setup Procedure
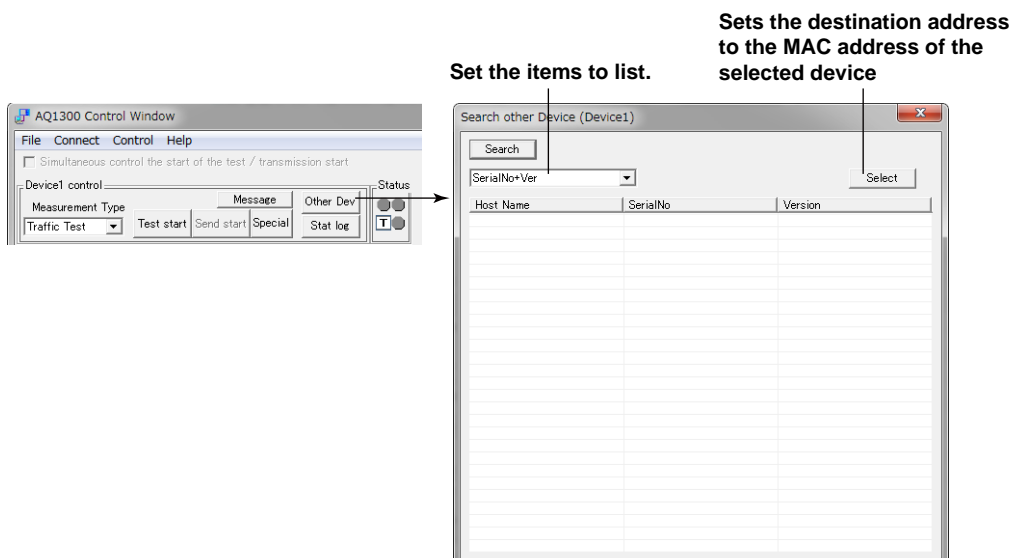
Tx Frame Setting

Click **Tx Frame Setting**. A dialog box for manually setting the Tx frame appears.

The way to use Frame Builder is the same as with the AQ1300/AQ1301 Setup Software. See "Using Frame Builder."
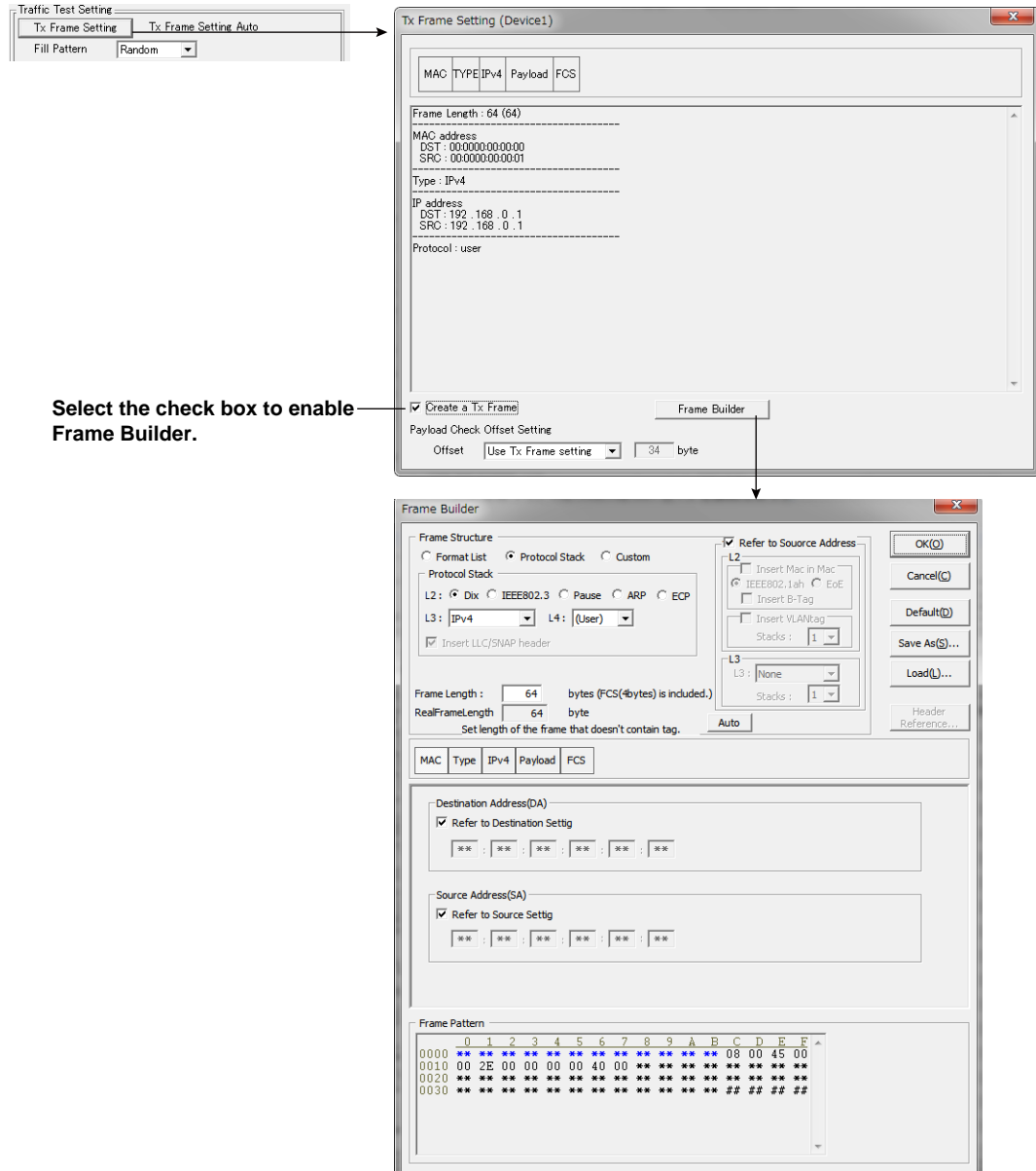
Select the check box to enable Frame Builder.

Variable Field Setting

Click **Variable Field Setting**. A dialog box for manually setting the Tx frame appears.
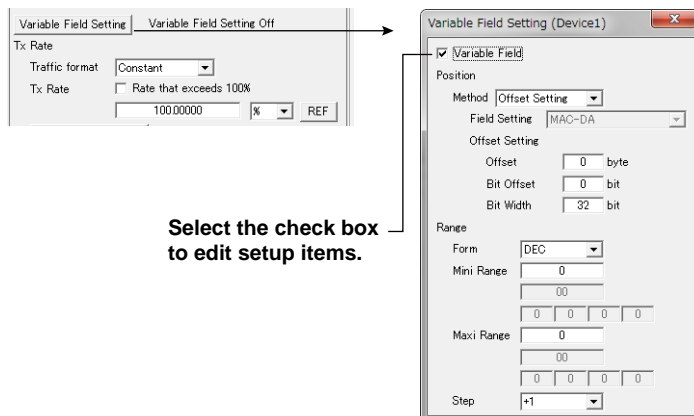
Select the check box to edit setup items.

Burst Setting

Click **Burst Setting**. A dialog box for manually setting the burst count and interval appears.

This setting is valid when the traffic format is set to Burst.
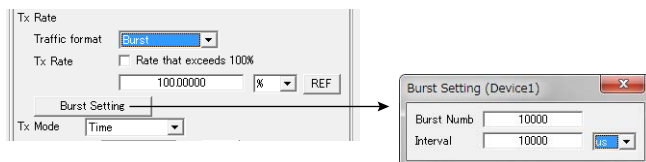
Rx Setting

Click **Rx Setting**. A dialog box for manually setting the reception appears.

Select the check box to edit setup items.

3

Setup Procedure
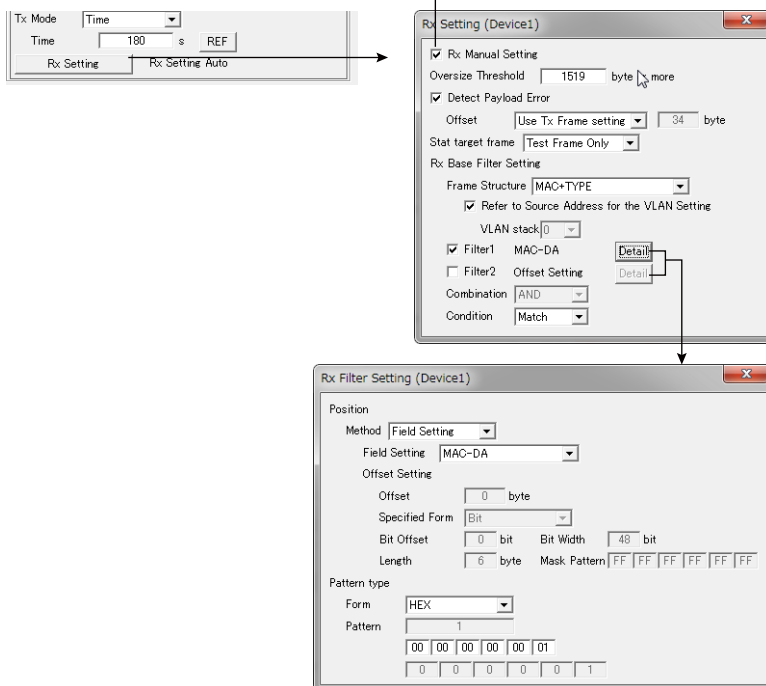
3.2 Configuring a Loopback Test

This section explains how to configure a loopback test.

For details on the settings, see the AQ1300/AQ1301 User's Manual (IM AQ1300-01EN).

When Using an Existing Setup File

1. On the **File** menu, click **Open Setup File**.
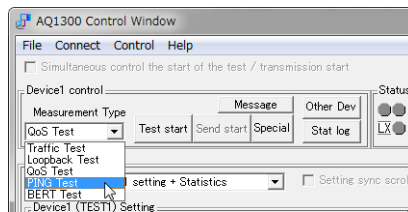
2. Select the setup file that you want to open, and click **Open**.

The software settings are changed to those in the setup file.

Configuring the Settings on the Software

1. Set **Measurement Type** to **Loopback Test**.

The setting menu changes to show loopback test setup items.
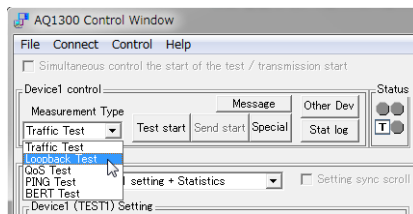
2. Specify the settings.

To specify the settings manually, click the setting buttons. The corresponding setting dialog boxes will appear.

Test Setting, Link Setting, Address Setting, and Option are shared among all measurement types. For the operating procedure, see section 3.1, "Configuring a Traffic Test."

Set / Statistics

Pattern   Dev1 setting + Statistics   Setting sync scroll

Device1 (TEST1) Setting

Destination Address

Dest MAC   00 · 00 · 00 · 00 · 00 · 00 ARP   REF

Dest IPv4   192 · 168 · 0 · 1   REF

Loopback Test Setting

Target   Source Address

□ Swap L4 Port(TCP/UDP)

Option

Preferences

□ Link Transmission Control

Wait time before starting transmission 3 s

□ Remove Test Tag from Test Frame

Measurement

Measurement START Condition

☑ Request ARP/NDP

☑ Not start the measurement when Link is down.

Measurement STOP Condition

☑ When Link Down is detected

☑ When L2 Error is detected

□ When L3 Error is detected

Operation after Measure

□ Save measurement results and Statistics Log

Loopback test settings

Valid when Test Layer is set to L3-IPv4 Test or L3-IPv6 Test

Option settings

Scroll bar

Measurement settings

3.3 Configuring a QoS Test

This section explains how to configure a QoS test.

For details on the settings, see the AQ1300/AQ1301 User's Manual (IM AQ1300-01EN).

When Using an Existing Setup File

1. On the **File** menu, click **Open Setup File**.

2. Select the setup file that you want to open, and click **Open**.

The software settings are changed to those in the setup file.

Configuring the Settings on the Software
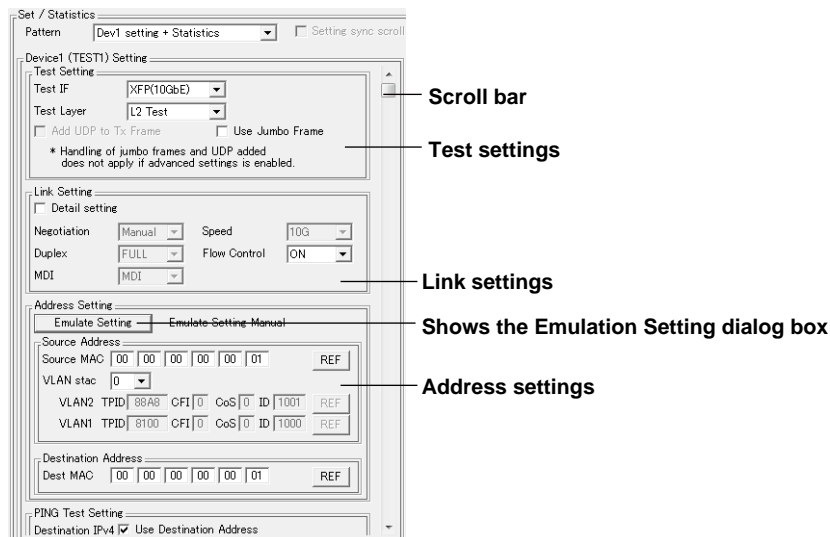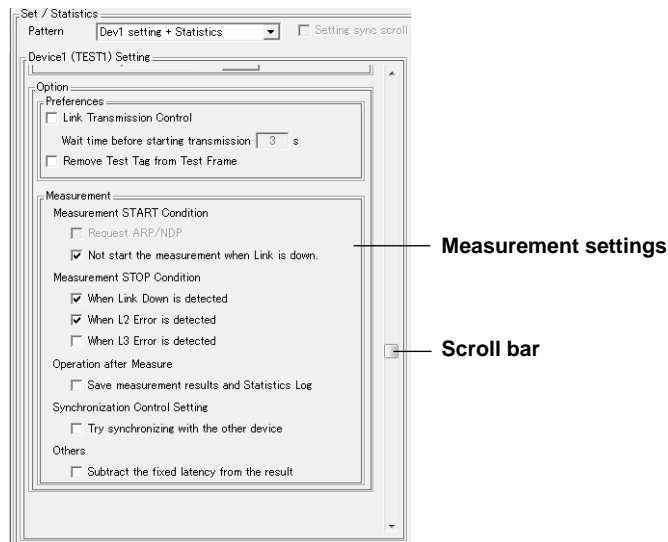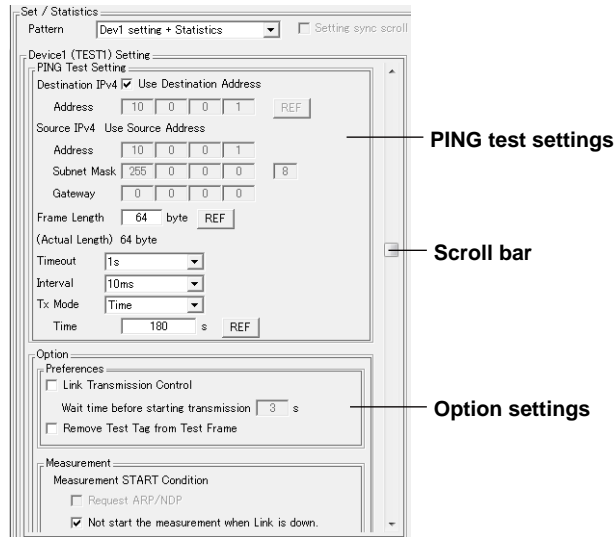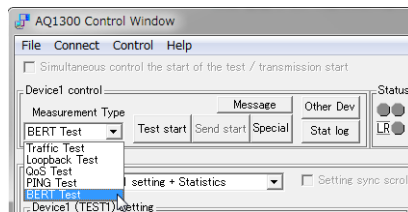
*1.* Set **Measurement Type** to **QoS Test**.

The setting menu changes to show QoS test setup items.
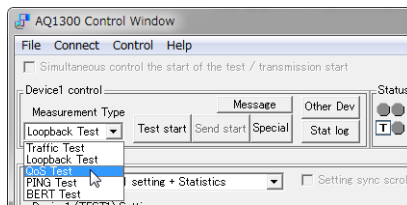
2. Specify the settings.

To specify the settings manually, click the setting buttons. The corresponding setting dialog boxes will appear.

Test Setting, Link Setting, Address Setting, and Option are shared among all measurement types. For the operating procedure, see section 3.1, "Configuring a Traffic Test."
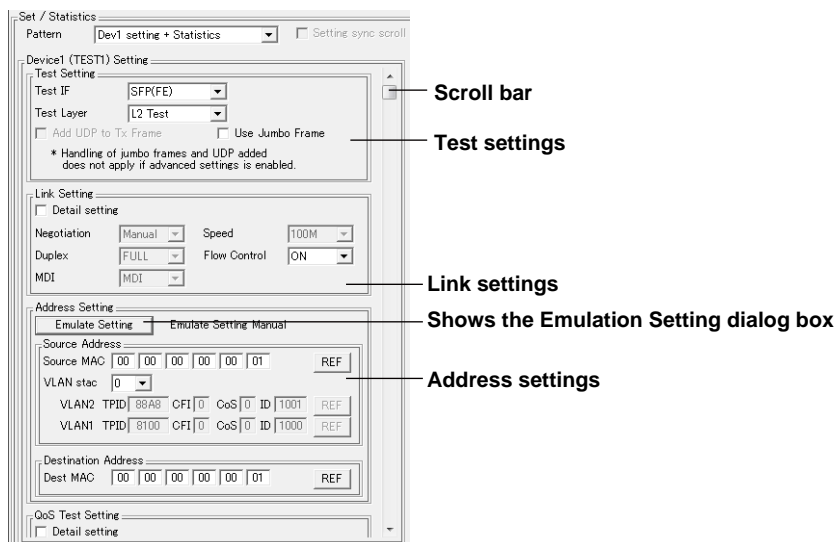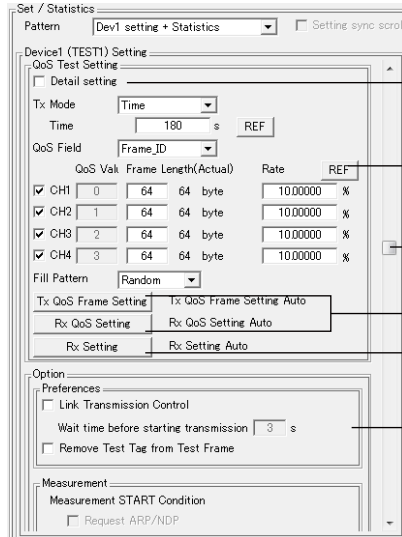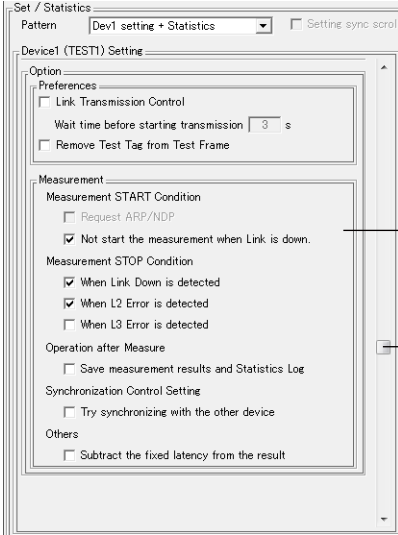
Shows the detail setting dialog box

QoS test settings

Scroll bar

Displays the settings if the Detail setting check box is not selected

Shows the Rx Setting dialog box

Option settings

Measurement settings

Scroll bar

3

Setup Procedure
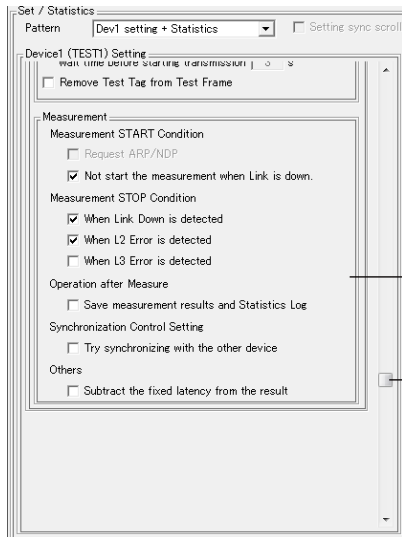
QoS Test Detailed Setting Dialog Box

Select the Detail setting check box.

Shows the detail setting dialog box if the Detail setting check box is not selected

Shows the Rx Setting dialog box
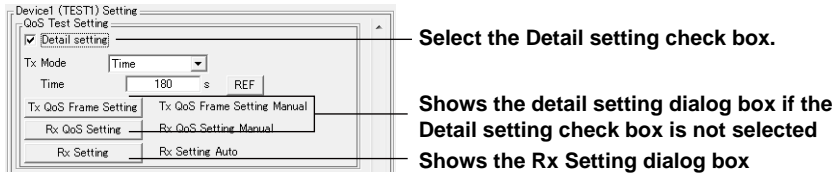
Tx QoS Frame Detailed Settings

Select the Detail setting check box.
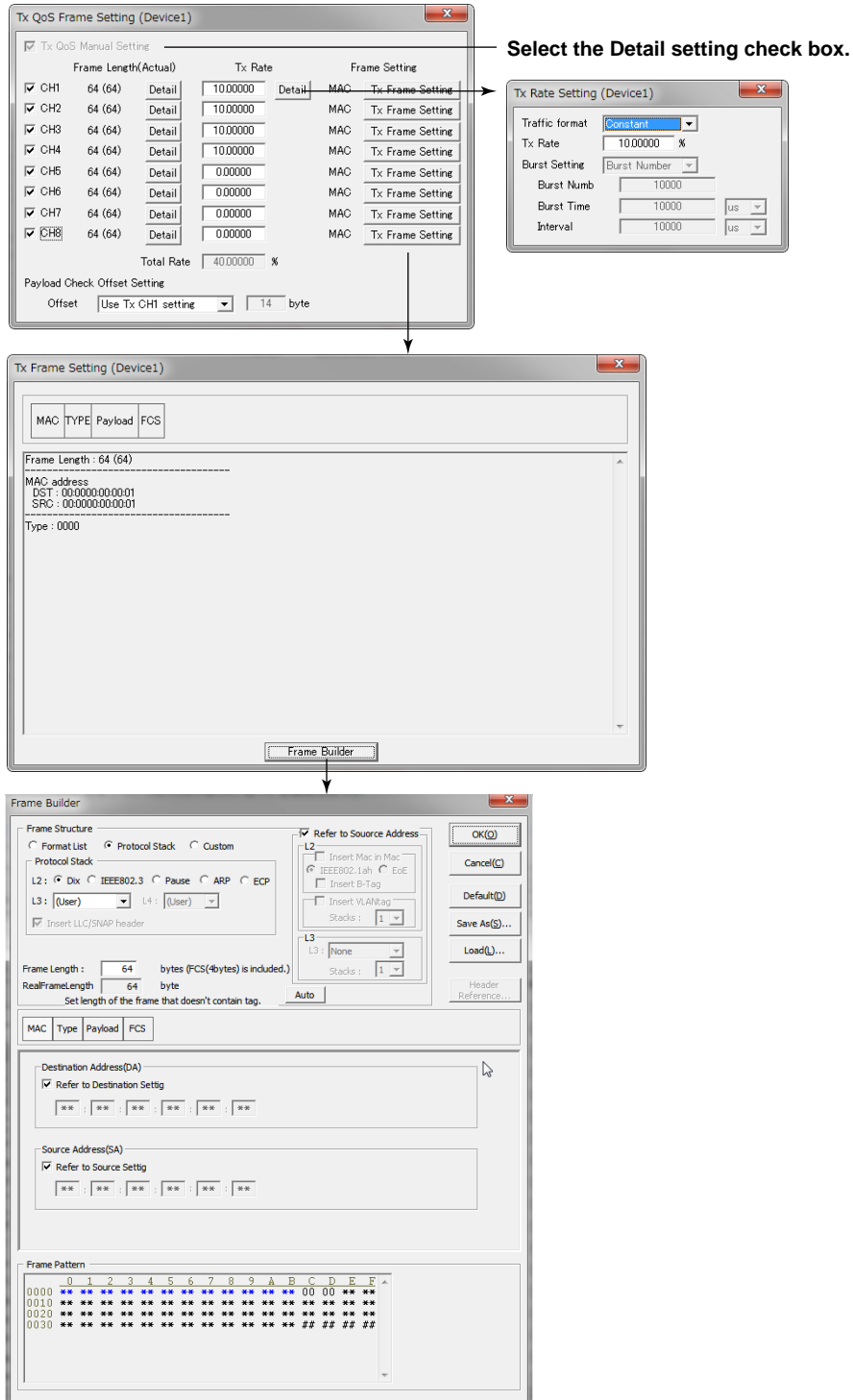
Rx QoS Detailed Settings
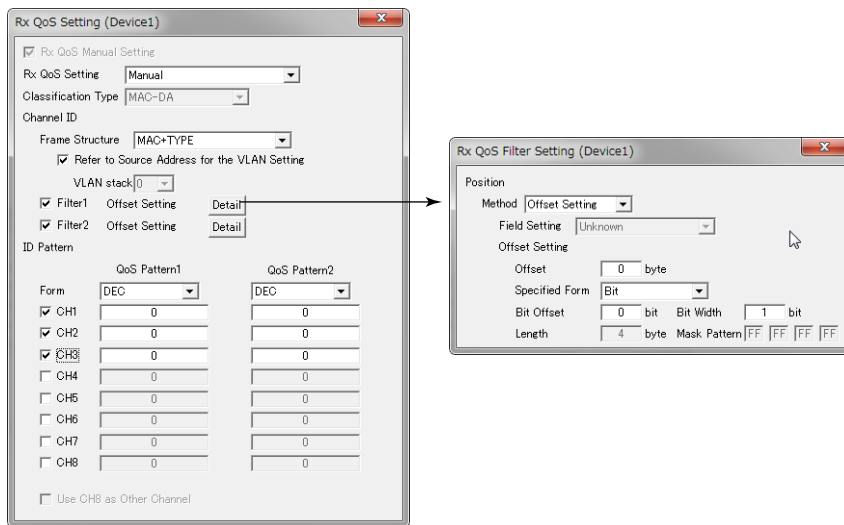
Rx Detailed Settings
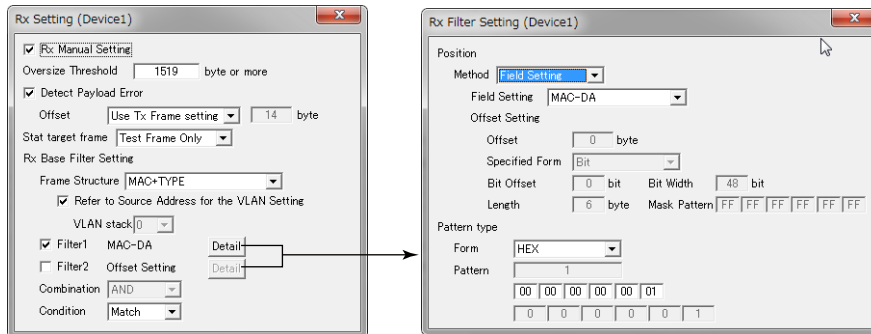
3.4 Configuring a PING Test

This section explains how to configure a PING test.
For details on the settings, see the AQ1300/AQ1301 User's Manual (IM AQ1300-01EN).

When Using an Existing Setup File

1. On the **File** menu, click **Open Setup File**.

2. Select the setup file that you want to open, and click **Open**.

The software settings are changed to those in the setup file.

Configuring the Settings on the Software

1. Set **Measurement Type** to **PING Test**.

The setting menu changes to show PING test setup items.

2. Specify the settings.

To specify the settings manually, click the setting buttons. The corresponding setting dialog boxes will appear.

Test Setting, Link Setting, Address Setting, and Option are shared among all measurement types. For the operating procedure, see section 3.1, "Configuring a Traffic Test."

PING test settings

Scroll bar

Option settings

Measurement settings

Scroll bar

3

Setup Procedure

3.5 Configuring a BERT Test

This section explains how to configure a BERT test.
For details on the settings, see the AQ1300/AQ1301 User's Manual (IM AQ1300-01EN).

When Using an Existing Setup File

1. On the **File** menu, click **Open Setup File**.

2. Select the setup file that you want to open, and click **Open**.

The software settings are changed to those in the setup file.

Configuring the Settings on the Software

1. Set **Measurement Type** to **BERT Test**.

The setting menu changes to show BERT test setup items.

2. Specify the settings.

To specify the settings manually, click the setting buttons. The corresponding setting dialog boxes will appear.

Test Setting, Link Setting, Address Setting, and Option are shared among all measurement types. For the operating procedure, see section 3.1, "Configuring a Traffic Test."
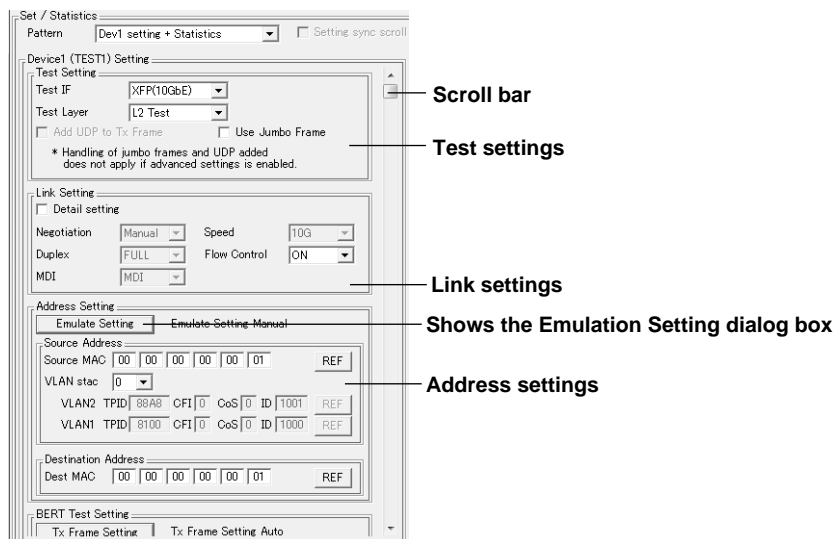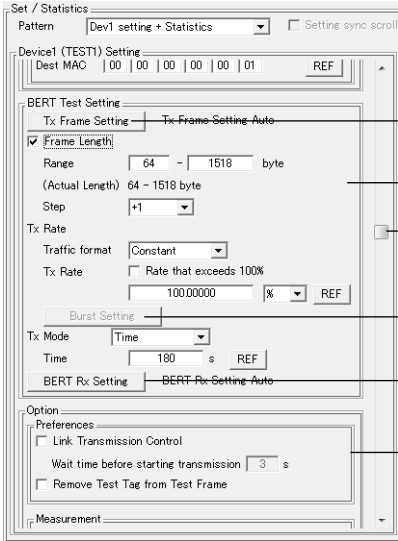
Shows the Tx Frame Setting dialog box

BERT test settings

Scroll bar

Shows the Burst Setting dialog box

Shows the BERT Rx Setting dialog box

Option settings

Measurement settings

Scroll bar

3

Setup Procedure

Tx Frame Setting

Select the check box to enable Frame Builder.
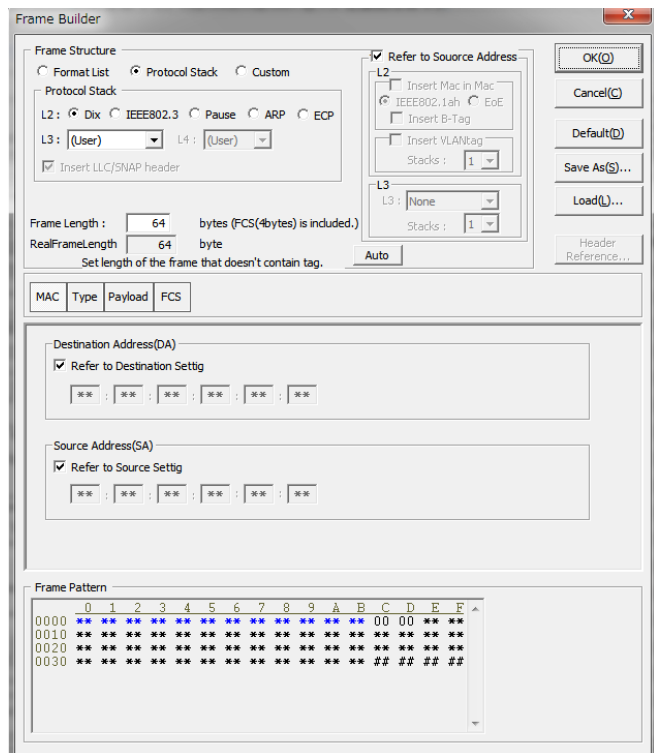
Burst Setting

Click **Burst Setting**. A dialog box for manually setting the burst count and interval appears.

This setting is valid when the traffic format is set to Burst.

Rx Setting

Click **BERT Rx Setting**. A dialog box for manually setting the BERT reception appears.

Select the check box to edit setup items.
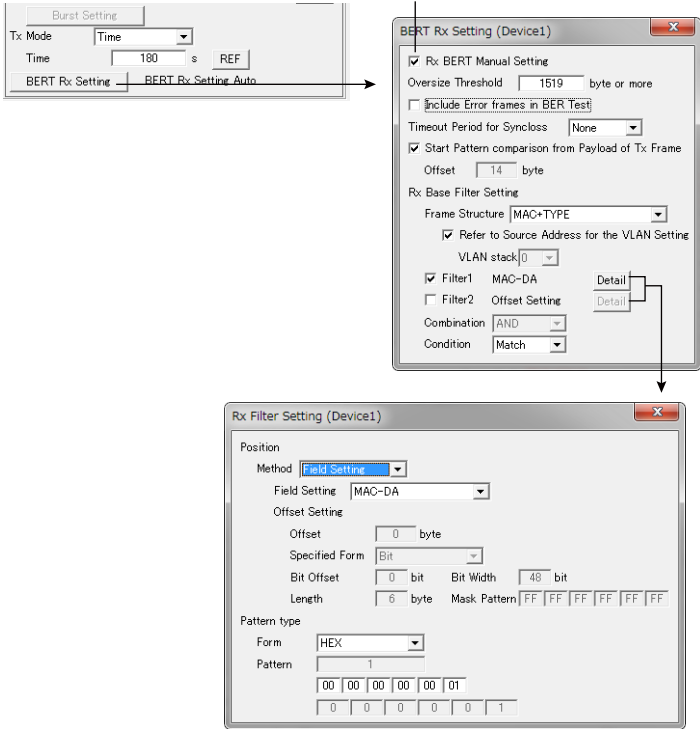
3.6 Saving Setup Data

This section explains how to save the settings that you have specified up to this point to a file. There are two types of files that you can save to: a file that can be loaded by this software and a file that can be loaded by the AQ1300/AQ1301 and setup software.

Saving to a File That Can Be Loaded by This Software

1. On the **File** menu, click **Save Setup File as**.
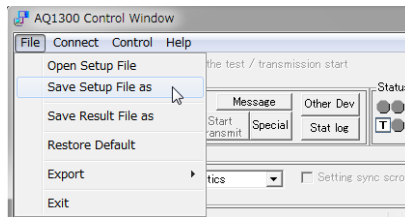
2. Set the save destination and file name, and then click **Save**.

   The file name extension is .cwsd.

Saving to a File That Can Be Loaded by the AQ1300/AQ1301 and Setup Software

1. On the **File** menu, point to **Export**, and then click **Auto Setup File** or **Manual Setup File**.
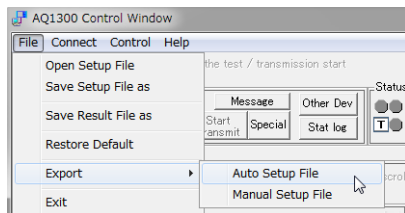
2. Set the save destination and file name, and then click **Save**.

   The file name extension is .sd.

   This file can be loaded into the AQ1300/AQ1301 or setup software as a setup file for auto tests and manual tests.

3.7 Copying Settings

This section explains how to copy the settings of one AQ1300/AQ1301 to the other AQ1300/AQ1301 when two AQ1300/AQ1301s are connected.

*1.* On the **Control** menu, click **Copy the settings**.
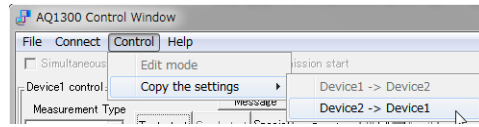
2. Click either **Device1 -> Device2** or **Device2 -> Device1**.

The settings are copied to the specified measuring instrument.

3.8 Creating Setup Data without Connecting to an AQ1300/AQ1301

This section explains how to create setup data without connecting to an AQ1300/AQ1301 and saving the data to a file.

1. On the **Control** menu, click **Edit mode**.
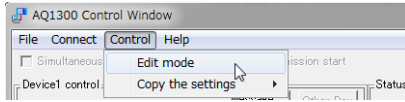
2. A dialog box asking whether you want to initialize the Device1 and Device2 settings appears one at a time.

   For each device, click **Yes** to initialize or **No** otherwise.

   An Edit mode off button appears below the menu bar on the left.
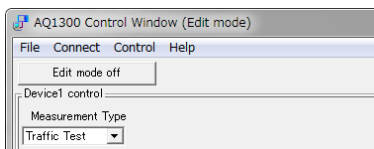
3. Set the items according to the procedures explained in this chapter (see sections 3.1 to 3.5).

4. Save the setup data according to the procedure in section 3.6.

5. To clear Edit mode, click **Edit mode** on the Control menu, or click **Edit mode off**.

6. A dialog box asking whether you want to save the settings appears.

   To save click **Yes**; otherwise click **No**. To not clear Edit mode, click **Cancel**.

3.9 Initializing Settings

This section explains how to initialize the settings.

1. On the File menu, click **Restore Default**.
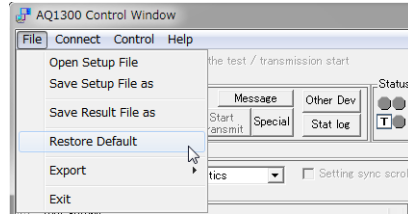
2. A dialog box asking whether you want to initialize the Device1 and Device2 settings appears one at a time.

For each device, click **Yes** to initialize or **No** otherwise.

3.10 Configuring the Window

This section explains how to show different display combinations (patterns) of setting menu and list of statistics.

1. Set Pattern to **Dev1 setting + Statistics**, **Dev2 setting + Statistics**, or **Dev1 setting + Dev2 setting**.
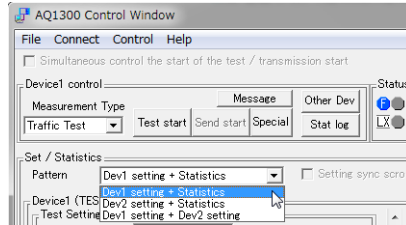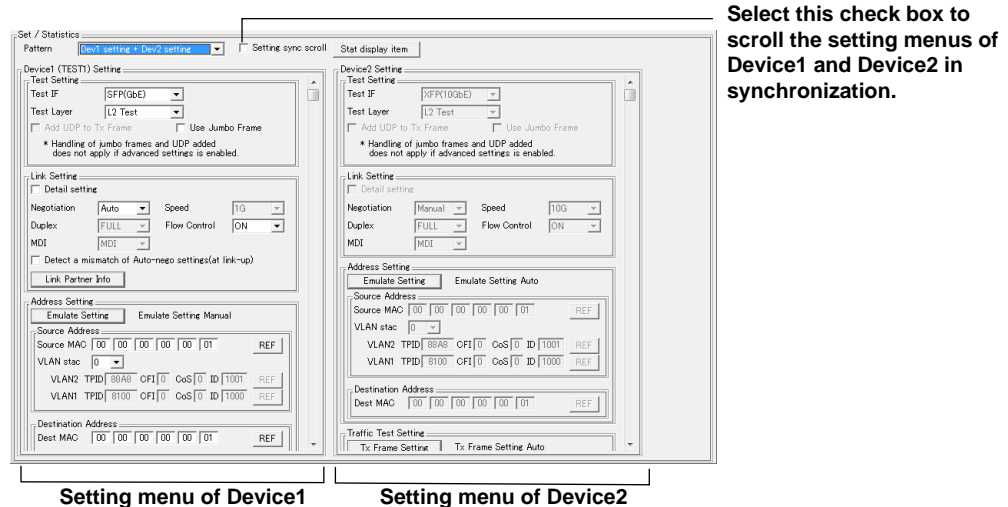

Device1 Settings + Statistics or Device2 Settings + Statistics

Device1 statistics

Device2 statistics
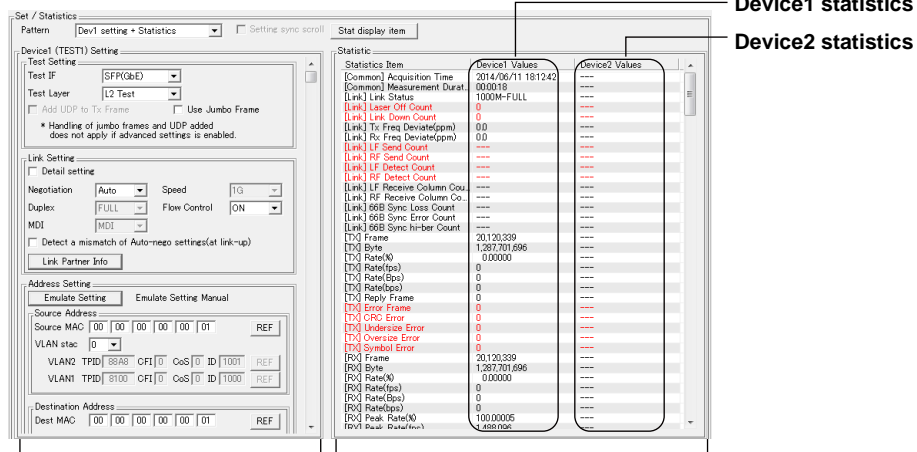
Setting menu of Device1 or Device2   A list of statistics

Dev1 Settings + Dev2 Settings

Select this check box to scroll the setting menus of Device1 and Device2 in synchronization.
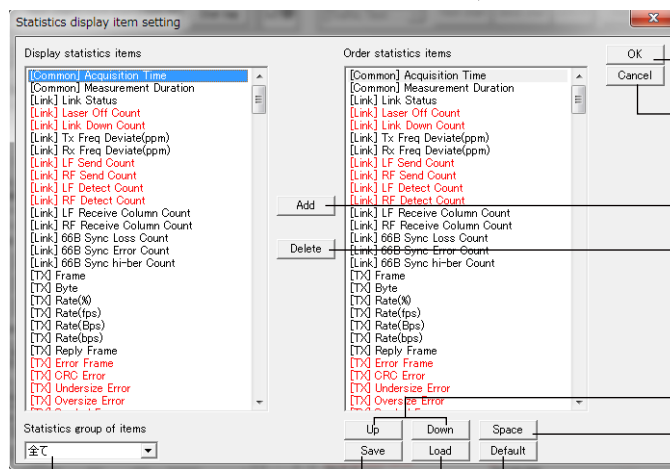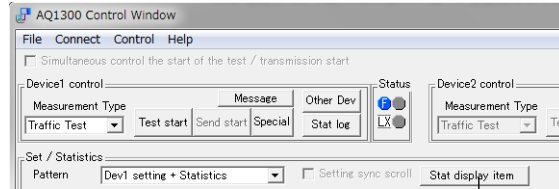
Setting menu of Device1   Setting menu of Device2

3.11   Setting the Statistics to Be Displayed

This section explains how to set the items to be displayed in the list of statistics.

1. Click **Stat display item**.

Applies the settings and closes the dialog box

Discards the settings and closes the dialog box

Adds statistic items to the display

Deletes statistic items from the display

Change the display position

Inserts a line of space

Select the category to display in the "Display statistics items" column.

Resets to default

Load a file.

Save to a file.

To load a list that has saved previously, click **Load**.

Adding Items

2. From the items listed in the "Display statistics items" column, select the items that you want to add.

3. Click **Add**. The selected items are added to the end of the "Order statistics items" column.

Deleting Items

2. From the items listed in the "Order statistics items" column, select the items that you want to delete.

3. Click **Delete**. The selected items are deleted from the "Order statistics items" column.

Changing the Display Positions

2. From the items listed in the "Order statistics items" column, select the item that you want to change the display position of.

3. Click **Up** or **Down** to change its display position.

Inserting a Space

2. Select the item you want to insert a space.

3. Click **Space**. A space is added above the selected item.

Saving the Display List Data

4. Click **Save**.

5. Set the save destination and file name, and then click **OK**.

The file name extension is .ris.

Applying the Settings

6. Click **OK**. The settings are applied, and the dialog box closes.

To cancel the settings, click **Cancel**.

Note

When you save test results to a file, the data of the display items specified here is saved.
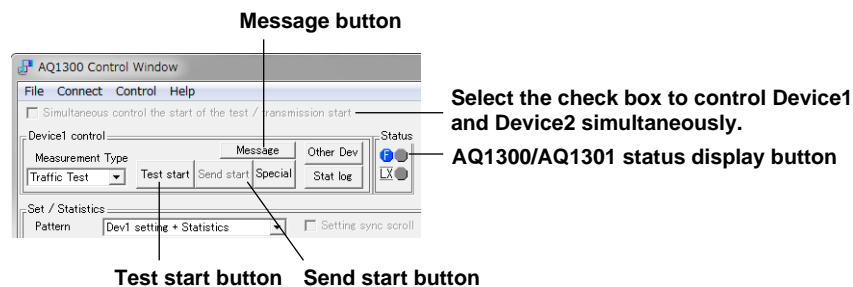
4.1   Executing a Test

This section explains how to execute the test that you have configured.

Executing a Test

1. Click **Test start**.

The Test start button changes to a Test stop button, and the test is executed.

If the option setting has been specified so that the start of the test is synchronized to the start of transmission, transmission also starts. If this is the case, you do not have to perform step 2.

Message button

Select the check box to control Device1 and Device2 simultaneously.

AQ1300/AQ1301 status display button

Test start button   Send start button

Note

If the settings are inconsistent, an error occurs, and the Message button blinks in red. At the same time, the Send start button is disabled.
If you click the Message button to display a list of messages, the error is cleared.

Transmitting

2. Click **Send start**.

The Send start button changes to a Send stop button, and the signal appropriate for the test is transmitted.

Stopping the Test

1. Click **Send stop**.

The Send stop button changes to a Send start button, and the signal transmission stops.

2. Click **Test stop**.

The Test stop button changes to a Test start button, and the test stops.

If you do not stop the transmission and click Test stop, the transmission will also stop automatically.

4.2 Inserting Errors, Controlling L1, and Changing the Tx Rate

This section explains how to insert errors, send LF and RF for L1 control, and change the Tx rate.

1. While the test is running and transmission is in progress, click **Special**.

2. Insert errors, send LF or RF, and change the Tx rate as you like.
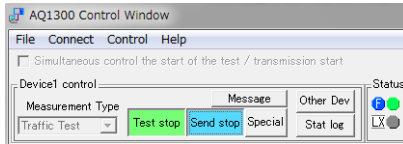
Error insertion
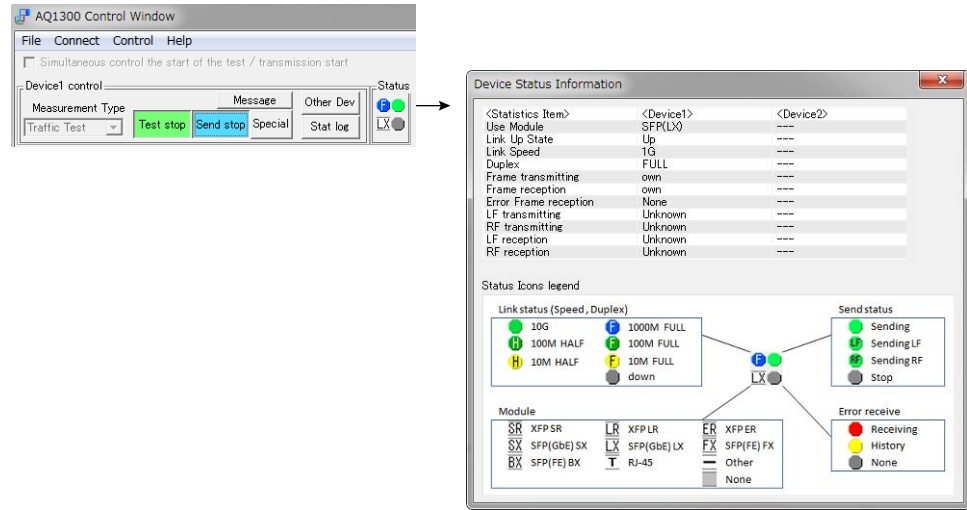**Available when the measurement type is Traffic, QoS, or BERT**
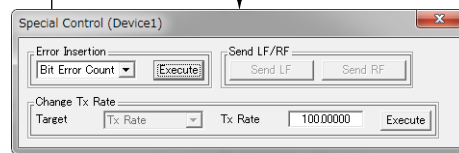
LF/RF transmission
Available when the test interface is XFP(10GbE)

Tx rate change
Available when the measurement type is Traffic, QoS, or BERT
The target channel can be specified for QoS.

4.3 Displaying the AQ1300/AQ1301 Status
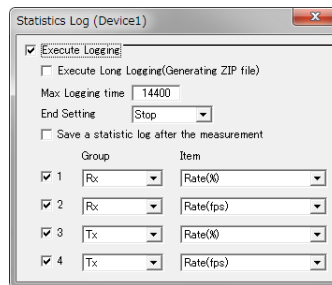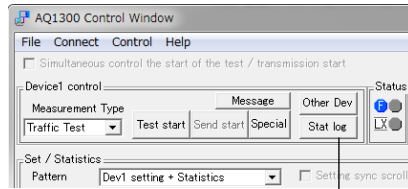
1. Click **Status**.

You can view the link status, send status, module types, and error status.

4.4 Capturing a Statistical Log

This section explains how to capture a statistical log.

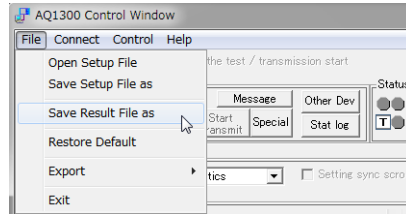1. While the test is stopped, click **Stat log**.

Select the check box, and set the items.

2. Select the **Execute Logging** check box, and set the various setup items.

3. When you start a test, a statistical log of the specified items will be recorded.

4.5   Saving Test Data

This section explains how to save the test results to files.

1. On the **File** menu, click **Save Result File as**.

2. Set the save destination and file name, and then click **Save**.

    The data is saved in CSV format (.csv).

    The data of the items that have been selected to be displayed in the statistical item display settings is saved.