YAMAHA

Digital Equalizer Control Software





for Macintosh

User Guide Guide de l'utilisateur Bedienungsanleitung

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Introduction

Welcome

Thank you for purchasing and welcome to—the Yamaha QS1-MC Digital Equalizer Control software. QS1 is a member of the Yamaha Sound System Control Software Series. It allows you to control both large and small size sound systems easily. Before installing or using QS1, please read through this *User Guide*.

What is QS1?

QS1-MC Digital Equalizer Control is a Macintosh application that allows you to control Yamaha digital equalizers from Macintosh desktop and laptop computers. The following Yamaha digital equalizers can be used with QS1: DEQ5, DEQ5E, YDG2030, and YDP2006.

QS1 offers parameter control for up to 31 digital equalizers. The computer used to run QS1 can be situated at an ideal listening position. The sound engineer can then make adjustments while monitoring the results. QS1 Projects make it easy to manage equalizer data. Project data can be saved to disk and recalled for future use. Data from one device, or all devices can be saved and loaded.

A Project may contain up to 100 Scenes. A Scene allows you to recall Scene memories on all active equalizers simultaneously. Each Scene can be assigned a suitable icon, and the Scene change can be executed by double-clicking the icon.

QS1's GUI (Graphical User Interface) allows you to make adjustments just like you would using real equalizer controls. For example, sliders and rotary controls can be moved using the mouse, and buttons appear to depress when clicked. Commands can be accessed through familiar pull-down menus, and many commands have keyboard shortcut equivalents.

Graphic equalizer, parametric equalizer, and filter windows corresponding to a number of equalizers can be open simultaneously, allowing you to set up multiple equalizers with ease. The Curve window displays the resultant frequency response of the selected equalizer, providing visual feedback for your EQ adjustments.

Features

- Offstage remote-computer control of Yamaha digital equalizers
- Compatible with Yamaha DEQ5, DEQ5E, YDG2030, and YDP2006 digital equalizers
- On-screen parameter control for up to 31 equalizers
- Equalizer data can be saved to disk and recalled for future use
- · Data from all devices or individual devices can be saved and loaded
- · Projects provide easy data management
- Each Project may contain up to 100 Scenes
- Scenes can be assigned suitable icons for easy identification
- Double-clicking a Scene icon recalls the specified Programs in up to 31 equalizers simultaneously
- Multiple equalizer windows can be open at once
- Familiar GUI style user interface with full mouse control
- On-screen rotary controls can be adjusted using the mouse
- Command access via pull-down menus
- Many commands with equivalent keyboard shortcuts

About this Manual

This *User Guide* assumes that you have a basic knowledge of Macintosh computers and the following concepts: *point*, *click*, *double-click*, *close box*, *size box*, and *drag*. For more information about these terms and others, please refer to your Macintosh documentation.

This User Guide should be used in conjunction with the documentation supplied with the IFU485 and EQ devices.

QS1 Notes

In the File and Edit menus, the following commands appear: Page Setup, Print, and Undo. These commands are not active in QS1. Since they are a part of the basic Macintosh interface, they always appear, used or not.

Package Contents

The following items are included in the package. Make sure that you have them all.

- QS1 Program Disk (3.5 inch 2HD)
- User Registration Card
- This User Guide
- IFU485 Interface Unit
- IFU485 Owner's Manual
- PA-1B AC Adaptor

Registering Your Software

To register yourself as an official QS1 user, please fill out the enclosed User Registration Card. If you don't register, you will not be entitled to any customer support.

Computer System Requirements

- A Macintosh computer (MC68030, MC68040 CPU)
- · Color, gray scale, or monochrome monitor
- Macintosh System 777 or higher
- · At least 2MB of available RAM
- At least 5MB of available hard disk space

Backing Up the Program Disks

Before installing QS1, backup the original QS1 Program Disk, then store it in a safe place. See your Macintosh documentation for details about copying disks.

Chapter 1 - Getting Started

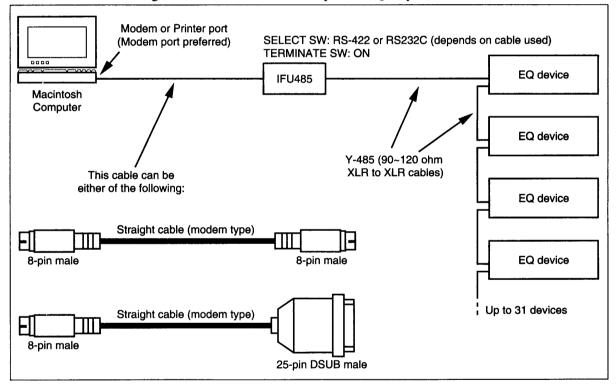
In this chapter we explain how to set up a QS1 system and install and start-up the QS1 software.

What You Need to Run QS1

- A Macintosh computer (see "Computer System Requirements" on page 2)
- Straight 8-pin to 8-pin mini DIN, or 8-pin to 25-pin DSUB cable (modern type, not printer type)
- Yamaha IFU485 Interface Unit
- XLR to XLR cable. Use AES/EBU digital audio cables (90–120 ohm)
- A least one Yamaha digital equalizer: DEQ5, DEQ5E, YDG2030, or YDP2006.

Connecting the System

The following illustration shows how to set up a basic QS1 system.



System Settings

The following basic settings must be made. Please refer to the documentation supplied with the IFU485 and EQ devices for full details.

- Set the IFU485 SELECT switch to either RS-422 or RS-232, depending on the cable being used.
- If the IFU485 is the last device on the network, set the TERMINATE switch to ON.

Device Settings

- DEQ5, DEQ5E, YDG2030, YDP2006: In the Utility RS485 NETWORK menu, set the baud rate (see "Preferences" on page 14). The local address number can be set in the same menu. In the RS485 COMM.I/O menu, set the I/O Comm to ALL.
- DEQ5, YDG2030, YDP2006: Set the Remote Address to an unused address. For example, 7.31. Do not set it to * (asterisk).
- DEQ5: Set the rear panel MEMORY PROTECT switch to OFF.
- DEQ5E: first set up the DEQ5 or QS1, then set the Remote Address in the Utility window.
- Assign local address numbers exclusively to all devices (see "What is an Address?" on page 7)

Macintosh Settings

- On the Monitor control panel, set the number of colors to 256. If 32,000 is selected, some of the QS1 windows may not display correctly.
- If you are using a Macintosh Duo 230, 250, or 270C, and are using the built-in modem and modem software, you should make the following settings: On the PowerBook control panel, set the Modem to External Modem. On the Express Modem control panel, set the Modem to OFF.
- If you have a Macintosh Duo system, we recommend that you use it with the Duo inside the Dock.
- If you are using the built-in modem on a PowerBook 140 or above, before using the QS1, on the PowerBook control panel set the built-in modem to External.

Installing QS1

See "Backing Up the Program Disks" on page 2 before proceeding. Use the backup copy for installation.

- 1. Power on your Macintosh computer.
- 2. Insert the backup copy of the QS1 Program Disk into the disk drive.
- 3. On the Macintosh hard disk, create a new folder and name it QS1.
- 4. Copy the contents of the QS1 disk into the folder.

The installation is now complete. Eject the disk and store it in a safe place.

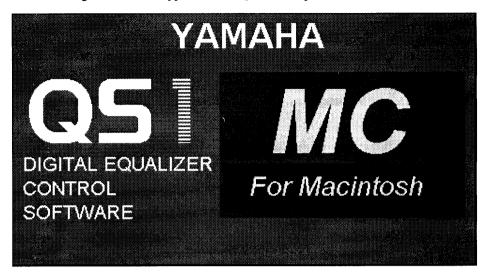
Starting QS1

Before starting QS1, power on all equalizers, then the IFU485.

To start QS1, double-click its icon.

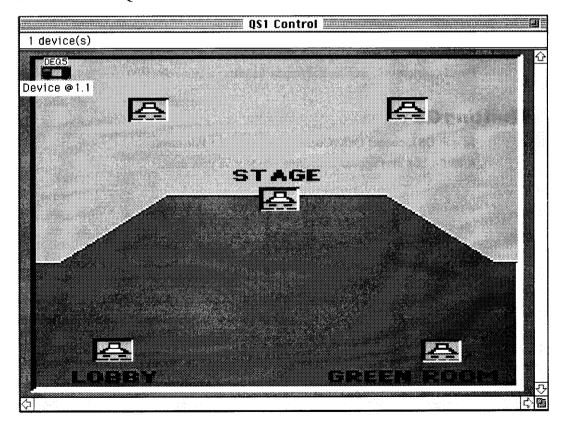


The following title window appears while QS1 starts up.



QS1 can also be started by double-clicking a Control file or Project file, or by dragging and dropping a Control file or Project file on top of the QS1 icon. When Master is set to Host, Projects can be opened much quicker this way.

When QS1 starts up, it checks to see what devices are connected. An icon for each active device is displayed in the Device window. Inactive devices appear with gray icons. The Device window below shows an active DEQ5.



Dummy Device

If no active devices are found, QS1 gives you the option to add a Dummy device. You cannot control a Dummy device, but it does allow you to complete QS1 start up, view the various equalizer windows, and check Scene data stored in existing Projects. A Dummy device can be useful when, for example, you want to check Project data on your home Macintosh before the next day's big event.

Note: When Master Select is set to Device, the option to create a Dummy device does not appear.

What to Do When Devices Are Not Recognized

If QS1 does not detect connected devices:

- Make sure that all devices are powered on
- Check the connecting cables
- Check the IFU485 settings
- Check the equalizers' settings
- Restart QS1.

Note: Do not power off the IFU485 or devices while QS1 is running. Doing so may cause QS1 to crash.

In cases where QS1 works incorrectly due to a cable disconnection or equipment power off, turn your amplifier's volume down to minimum, then power on your equipment in the following order:

- Devices (digital equalizers)
- · Macintosh computer
- IFU485
- Power amplifier

Finally, restart QS1 and set it up ready for use.

Quitting QS1

To quit QS1, choose Quit (Command-Q) from the File menu.

A dialog box may appear prompting you to save your data.

Chapter 2-EQ Devices

In this chapter we explain about devices and the Option menu commands.

What is a Device?

A device is a QS1 compatible digital equalizer. QS1 is compatible with the following Yamaha digital equalizers: DEQ5, DEQ5E, YDG2030, and YDP2006.

Device data is stored in Device files. If you have only one or two devices, Device files can be used to store data. However, in a large system with many devices, it is better to handle data as a Project. In a Project all device data is stored in one Project file.

What is an Address?

Each device on the network must be assigned an exclusive address number. An address consists of two parts: Group ID and Device ID. For example, device@1.5 indicates device 5 of group 1.

Note: Make sure that addresses are assigned exclusively. QS1 does not detect shared addresses. If two or more devices share the same address, operation will be unpredictable. The devices' Remote Addresses should be assigned unused addresses. Broadcast addresses may occasionally cause malfunction.

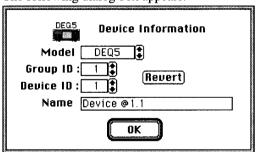
Adding a Device

The New command allows you to add new devices to the Device window. Normally, active devices are automatically added during QS1 start up, or by using the Search command in the Option menu. This command allows you to add Dummy devices for experimentation, or to set up a device or Project off site.

Note: If Master Select in Preferences is set to Device, you cannot add a Dummy device.

1. Choose New from the File menu.

The following dialog box appears.



Device Information: shows an icon of the selected device.

Model: click the up/down arrows to select a Model.

Group ID: click the up/down arrows to set the Group ID number.

Device ID: click the up/down arrows to set the Device ID number.

Group ID and Device ID are automatically set to the next available address.

Revert: click here to revert the Group ID and Device ID to their former values.

Name: enter a name up to 16 characters long. The device name appears under the respective icon in the Device window. The name can also be entered in the Device window.

2. Click OK to add the new device to the Device window.

Saving a Device

1. To save a device, select the device in the Device window.

The name under the selected device's icon becomes highlighted.

2. Choose Save from the File menu.

Device files are saved in the same folder as QS1.

Closing a Device

1. To close a device, select the device in the Device window.

The name under the selected device's icon becomes highlighted.

2. Choose Close from the File menu.

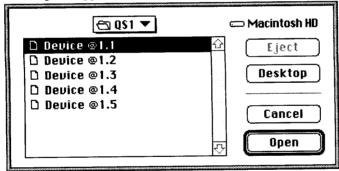
A dialog box may appear prompting you to save your data.

Note: If the Auto Polling box in Preferences is checked, that is, Auto Polling is turned on, a closed device may reappear when QS1 polls the network again. Therefore, when you want to close a device, switch off Auto Polling, or power off the device.

Opening a Device

1. To open a device, choose Open (Command-O) from the File menu.

A dialog box appears.



2. Select the device, then click Open.

Searching for Devices

When the Search command is executed, QS1 searches to see what devices are currently active.

1. To search, choose Search from the Option menu.

An icon for each active device appears in the Device window.

Updating Devices

When the Update command is executed, QS1 checks the settings of all active devices and updates its data. This can be used when the Preferences Master Select option is set to Host, and EQ adjustments are made on an actual device. In this case, QS1 is not automatically updated, and the device data and QS1 data do not match. This command can be used to update the QS1 data.

Normally, when Master Select is set to Host, you should not operate the device controls, because the host data and device data will then be different.

1. To update, choose Update from the Option menu.

Loading Device Data

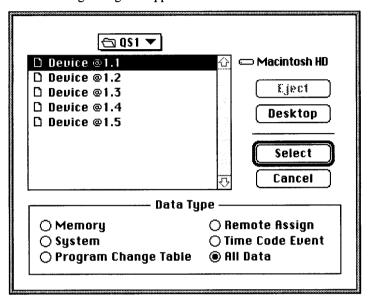
The Load command allows you to load data from an individual Device file.

1. Select the device that you want to load the data to in the Device window.

The name under the selected device's icon becomes highlighted.

2. Choose Load from the File menu.

The following dialog box appears.



3. Select a Device file.

4. Select the Data Type.

The following Data Types can be selected:

Memory: all memories (Programs).

System: system data.

Program Change Table: Program Change table data.

Remote Assign: remote assign data.

Time Code Event: time code event list data.

All Data: all the above data.

5. Click Select.

The specified data is loaded to the selected device. When Master Select is set to Host, data is loaded and transmitted simultaneously.

Note: You cannot exchange device data between different models. For example, you cannot load DEQ5 data to a YDG2030.

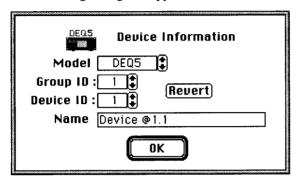
Device Information

The Device Information dialog box displays information about the selected device.

 Select a device in the Device window, and choose Information (Command-I) from the File menu.

Note: The Information dialog box cannot be used when the selected device is being edited. In other words, when an equalizer window is open.

The following dialog box appears.



Device Information: this shows an icon of the selected device.

Model: this indicates the Model.

Group ID: this shows the Group ID number. **Device ID:** this shows the Device ID number.

Revert: click here to revert the Group ID and Device ID to their former values.

Name: the device name appears here. You can enter a name up to 16 characters long. The device name also appears under the respective icon in the Device window. Naming devices makes it easy to identify them. For example, you could use names like Stage Left, Side Fill Right, Drum Mon, etc.

Note: For an active device, you should not change the Model, Group ID, and Device ID parameters. However, it's OK to change them for a Dummy device. The name parameter can be changed for active devices and Dummy devices.

Device Window

The Device and Scene commands in the Window menu are used to select the Device and Scene windows. This is the same as clicking on the respective windows. Only one window can be active at a time, and the name of the active window appears dimmed in menu.

Device Window View

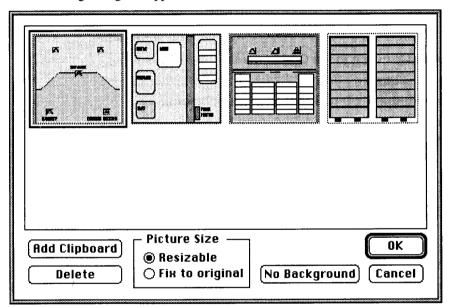
When the Device window is the active window, you can set the view to Icon or List.

1. To set the view, choose either Icon or List from the View menu.

Icon View Background

When the Device window is set to Icon view, you can change the window background.

1. To change the background, choose Background (Command-B) from the View menu. The following dialog box appears.



- 2. Click a background to select it.
- 3. Click the OK button.

Other options in the Background dialog box are:

Add Clipboard: this allows you to add your own pictures to the Background window. You can create your own background pictures using a drawing or painting application that supports the Macintosh PICT file format. In the application, select the picture and copy (Command-C) to the clipboard. Then switch to QS1, and open the Background window. Click on Add Clipboard. The picture appears. Not all applications support the PICT format, so you might have to experiment.

Delete: this allows you to delete backgrounds. Select the background, then click on Delete.

Picture Size: this option determines how the background picture is sized. When Resizable is selected, the background picture will automatically resize to fit the Device window. When Fix to Original is selected, the background picture will remain at its original size regardless of the Device window size.

No Background: this allows you to select no background.

Equalizer Type

The Equalizer Type command allows you to set a device to either Graphic or Parametric mode.

1. To set the mode, select a device icon in the Device window.

Note: The Equalizer Type function is not available for the YDG2030 and YDP2006.

2. Choose Equalizer Type from the Option menu.

A submenu appears. A check symbol appears before the name of the current mode.

3. Choose either Graphic or Parametric from the submenu.

A dialog box appears.

4. Click OK to continue, or Cancel.

Max Gain

The Max Gain command allows you to set a device's gain to 6 dB or 12 dB.

1. To set the Max Gain, select a device icon in the Device window.

Note: The Max Gain function is not available for the DEQ5 and DEQ5E.

2. Choose Max Gain in the Option menu.

A submenu appears.

3. Choose either 6 dB or 12 dB from the submenu.

A dialog box appears.

4. Click OK to continue, or Cancel.

Parameter Linking

The Parameter Linking command allows you to turn Parameter Linking on and off.

Note: The Parameter Linking function is not available for YDP2006 Mono mode.

- 1. Select a device icon in the Device window.
- 2. Choose Parameter Linking in the Option menu.

When Parameter Linking is on, a check symbol appears before the command name in the pull-down menu. Parameter Linking can also be set on the Equalizer and Filter windows.

Bypass

The Bypass command allows you to turn Bypass on and off.

- 1. Select a device icon in the Device window.
- 2. Choose Bypass in the Option menu.

When Bypass is on, a check symbol appears before the command name in the pull-down menu. Bypass can also be set on the Equalizer and Filter windows.

Hum Cancel

The Hum Cancel command allows you to turn the Hum Cancel function on and off.

Note: The Hum Cancel function is not available for the YDG2030 and YDP2006.

- 1. Select a device icon in the Device window.
- 2. Choose Hum Cancel in the Option menu.

When this function is on, a check symbol appears before the command name in the pull-down menu.

Chapter 3-Edit Menu

In this chapter we explain the Edit menu commands: Cut, Copy, Paste, Clear, and Preferences. Edit menu commands can be used only for editing text (program names, etc).

Cut

The Cut command (Command-X) can be used to delete text data. The deleted text data is placed in the clipboard, and can be pasted as required. The text data remains in the clipboard until either the Cut or Copy command is used again.

Copy

The Copy command (Command-C) can be used to copy text data to the clipboard. The text data can then be pasted as required. The text data remains in the clipboard until either the Cut or Copy command is used again.

Paste

The Paste command (Command-V) can be used to paste text data from the clipboard.

Clear

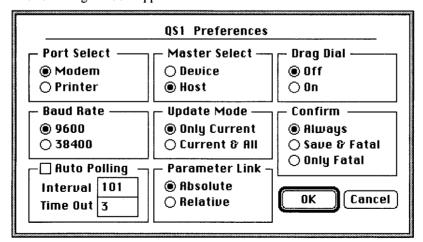
The Clear command can be used to delete text data. It works the same as the Cut command except that text data is not placed in the clipboard.

Preferences

The Preferences window allows you to make various QS1 settings.

1. Choose Preferences from the Edit menu.

The following window appears.



Port Select: this parameter is used to select the Macintosh serial port. Unless it is being used by another application, select the Modem port. If you use the Printer port, some malfunction may occur. Yamaha cannot be held responsible for this.

Baud Rate: this parameter is used to select the baud rate.

Auto Polling: this parameter is used to turn Auto Polling on and off, set the Interval between polling, and set the Time Out. When Auto Polling is on, QS1 checks the status of each device at a rate determined by the Interval parameter. The Time Out parameter determines how long QS1 checks a device that is not responding before moving on to another device.

With a low Interval setting, QS1 searches the network frequently. With a high Interval setting, it searches the network less frequently. If you are editing a lot of data, set this to a high value. This will make editing operations quicker and more responsive. When you've finished editing, set it to a lower value for normal network searching. The minimum Interval setting is 100.

Note: If the Interval setting is too low, with QS1 operations being slow and unresponsive, a device's icon may become black, indicating that the device is inactive, even though it is actually active. Therefore, we recommend that you set the Interval to a relatively high value.

The Time Out parameter determines how long QS1 waits when a previously active device does not respond during a network search. If this is set to a high value when not many devices are connected, system start up and network searches take more time. However, it does allow for correct system status checking. The minimum Time Out setting is 3.

Taking the Interval and Time Out parameter explanations into account, use your discretion to determine the optimum settings for your particular system.

Master Select: this parameter is used to select the control master: Device or Host computer. Normally, the host computer is used as the master controller, since that's what QS1 is all about. However, this parameter can be used when QS1 is introduced into an existing equalizer system, and Scene data, etc., already exists in each equalizer. When the master is changed from Device to Host, QS1 requests and receives the data from all equalizers. The data in QS1 then matches that of the equalizers, and subsequent control can be performed from QS1.

When Master Select is Device: (initial setting) the device data is the main data. Loading Project data will affect the host data only, not the device data. EQ adjustments made on the host will affect the device. When a Program recall is initiated on the host, the host requests the corresponding Program data from the device. EQ adjustments and Program recalls initiated on the device are not echoed to the host. You can use the Update command in the Option menu to update the host data.

When Master Select is Host: the host data is the main data. Loading Project data will affect the host data and the device data. Initiating a Program recall on the host sends only a Program Change message to the device. See also "Master Select" on page 30.

Update: this parameter determines which data is updated when the Update command in the Option menu is used.

Parameter Link: this parameter determines how the left and right channels of an equalizer behave when Parameter Linking is on. When Absolute is on, adjusted left or right channel controls are set the same. When Relative is on, channels are controlled relatively.

Drag Dial: this parameter is used to turn the rotary control drag function on and off. When set to On, rotary equalizer controls on QS1 windows can be dragged. When set to Off, they cannot. You may want to set this to Off sometimes because subtle EQ adjustments are not too easy when dragging rotary controls with the mouse.

Confirm: this parameter determines if and when alert boxes appear. When set to Always, alert boxes appear as normal. When set to Save & Fatal, alert boxes appear only before saving and performing commands that will change data. When set to Only Fatal, alert boxes appear only when fatal errors occur.

Chapter 4-Windows

In this chapter we explain the Window menu commands and EQ control windows.

Device/Scene

The Device and Scene commands in the Window menu are used to select the Device and Scene windows. This is essentially the same as clicking on the respective windows. Only one window can be active at a time, and the name of the active window appears dimmed in the menu.

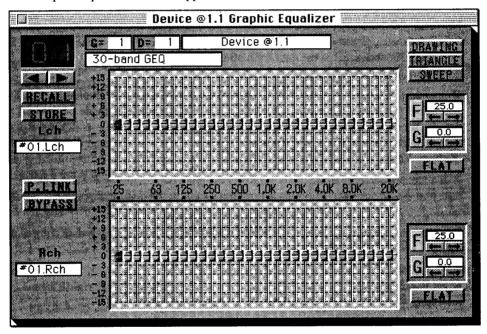
Graphic Equalizer

The Graphic Equalizer window provides access to the graphic EQ functions.

Note: Refer to the device's operating manual for a full explanation of the equalizer functions.

1. To select the Graphic Equalizer window, double-click a device icon in the Device window. Alternatively, highlight a device icon, and choose Equalizer (Command-E) from the Window menu.

The Graphic Equalizer window appears.



Note: If the device is in Parametric Equalizer mode, the Parametric Equalizer window appears.

Several Graphic Equalizer windows can be open simultaneously.

To close a Graphic Equalizer window, click the window's close box.

The device's group number, device number, and name are displayed just below the title bar.

2. To adjust a slider, simply drag it.

The color of the selected slider button changes to indicate that it is the active slider.

The current Program number is displayed in the top left-hand corner, and the Program name is displayed to its right. You can enter a name up to 16 characters long for the Program. This is the same as the Title Edit function in the device's Utility mode.

To select another Program, click the arrows below the Program number. Left arrow to decrease, right arrow to increase. Holding down an arrow button causes the Program number to change continuously. When a different Program number is selected, the number blinks. This means that the selected Program number does not correspond to the last stored or recalled Program. If the last Program number is selected again, or another window is activated, the number stops blinking.

Once you've selected a Program number, click RECALL to recall it, or STORE to store it. If you click STORE, an alert box appears asking for confirmation. Click OK to continue, or Cancel.

Note: You cannot store Programs when the device's Software Protect function is on.

It may take a second to complete a Program recall. When completed, the Program number stops blinking, and the Program and channel names, if previously stored, appear.

Other parameters on the Graphic Equalizer window are:

DRAWING: click to select Drawing mode. In this mode, you can actually draw the EQ curve by dragging the mouse across the slider area. The slider buttons display the path traced by the mouse.

TRIANGLE: click to select Triangle mode. In this mode, you can set the EQ curve by specifying three points. QS1 joins up these points, creating an angled EQ curve. First, set the sliders at the ends of the angle, then drag the slider at the angle point. The sliders in-between these points move to create an angled looking response.

SWEEP: click to select Sweep mode. In this mode, you can quickly sweep through the frequency bands. This is useful for locating troublesome frequency bands, such as those causing feedback. Drag the mouse across the slider area at any level. Sliders move in turn, with each slider returning to its previous position when the next slider is selected.

F: click these arrows to select the frequency bands.

G: click these arrows to set the gain. This has the same effect as dragging the sliders.

FLAT: click to set the equalizer to a flat response.

Lch: enter a name up to eight characters long for the left channel.

Rch: enter a name up to eight characters long for the right channel.

P.LINK: click to turn the Parameter Link function on and off.

BYPASS: click to turn the Bypass function on and off.

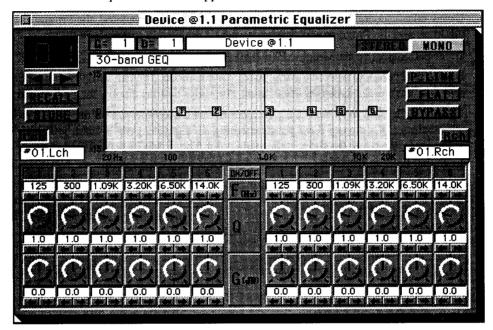
Parametric Equalizer

The Parametric Equalizer window provides access to the parametric EQ functions.

Note: Refer to the device's operating manual for a full explanation of the equalizer functions.

1. To open the Parametric Equalizer window, double-click a device icon in the Device window. Alternatively, select a device icon, and choose Equalizer (Command-E) from the Window menu.

The Parametric Equalizer window appears.



Note: If the device is in Graphic Equalizer mode, the Graphic Equalizer window appears.

Several Parametric Equalizer windows can be open simultaneously.

To close a Parametric Equalizer window, click the window's close box.

The device's group number, device number, and name are displayed just below the title bar.

The current Program number is displayed in the top left-hand corner, and the Program name is displayed to its right. You can enter a name up to 16 characters long for the Program. This is the same as the Title Edit function in the device's Utility mode.

To select another Program, click the arrows below the Program number. Left arrow to decrease, right arrow to increase. Holding down an arrow button causes the Program number to change continuously. When a different Program number is selected, the number blinks. This means that the selected Program number does not correspond to the last stored or recalled Program. If the last Program number is selected again, or another window is activated, the number stops blinking.

Once you've selected a Program number, click RECALL to recall it, or STORE to store it. If you click STORE, an alert box appears asking for confirmation. Click OK to continue, or Cancel.

Note: You cannot store Programs when the device's Software Protect function is on.

It may take a second to complete a Program recall. When completed, the Program number stops blinking, and the Program and channel names, if previously stored, appear.

Other parameters on the Parametric Equalizer window are:

F: click these arrows to set the center frequency.

Center frequency can also be set by dragging the number boxes on the response graph to the left and right.

Q: click these arrows to set the Q.

Q can also be set by dragging the rotary Q controls.

Note: The Drag Dial parameter in Preferences must be set to On in order to drag the rotary Q controls.

G: click these arrows to set the gain.

Gain can also be set by dragging the rotary Gain controls, or dragging the number boxes on the response graph up and down.

Note: The Drag Dial parameter in Preferences must be set to On in order to drag the rotary Gain controls.

FLAT: click to set the equalizer to a flat response.

Lch: click to activate the left channel. **Rch:** click to activate the right channel.

P.LINK: click to turn the Parameter Link function on and off.

Note: When a YDP2006 is set to Mono mode. P.LINK is inactive.

BYPASS: click to turn the Bypass function on and off.

STEREO/MONO: click these buttons to set the device to Stereo or Mono Parametric mode.

Note: The STEREO/MONO parameter works with the YDP2006 only.

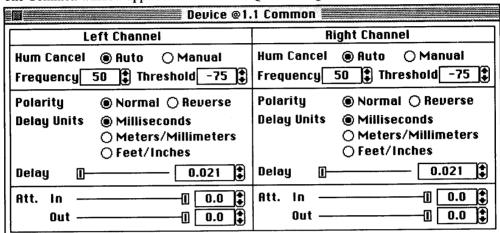
Eq. Com

The Common window provides access to common functions.

Note: Refer to the device's operating manual for a full explanation of the common functions.

1. To open the Common window, select a device icon in the Device window, and choose Eq. Com (Command-M) from the Window menu.

The Common window appears. This is the DEQ5 and DEQ5E Common window,



and this is the YDG2030 and YDP2006 Common window, which does not have the Hum Cancel and Polarity functions.

Left Channel		Right Channel	
Delay On ® Off		Delay	○ On ● Off
Delay Units	Milliseconds	Delay Units	Milliseconds
_	O Meters/Millimeters		○ Meters/Millimeters
	O Feet/Inches		○ Feet/Inches
Delay []-	0.031	Delay 🗓-	0.031
Att. In —	1 0.0 £	Att. In —	0.0 1

Left channel functions appear on the left-hand side. Right channel functions on the right-hand side.

Several Common windows can be open simultaneously.

To close a Common window, click the window's close box.

Common window functions are:

Hum Cancel: this is used to set the Hum Cancel function to Auto or Manual and set the Frequency and Threshold. Click the up/down arrows to set the Frequency and Threshold.

Polarity: these buttons are used to set the output polarity to Normal or Reverse.

Delay Units: these buttons are used to set the delay units. The device will not use a new setting until the delay time is adjusted.

Delay: this is used to set the delay time. Drag the slider, or click the up/down arrows to set it.

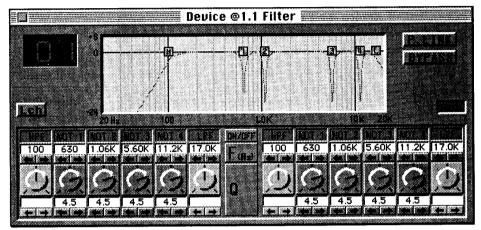
Att.: these are used to set the amount of input and output attenuation. Drag a slider, or click the up/down arrows to set them. A setting of "--" means infinity (∞) .

Filter

The Filter window provides access to the filter controls.

1. To open the Filter window, select a device icon in the Device window, and choose Filter (Command-F) from the Window menu.

The Filter window appears.



Several Filter windows can be open simultaneously.

To close a Filter window, click the window's close box.

Lch: click to activate the left channel. **Rch:** click to activate the right channel.

P.LINK: click to turn the Parameter Link function on and off.

BYPASS: click to turn the Bypass function on and off.

ON/OFF: click the ON/OFF buttons to turn the individual filters on and off.

F (Hz): click the arrows to set the filter frequency.

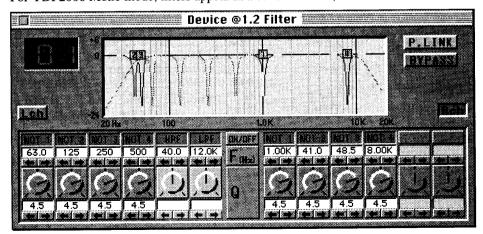
Filter frequency can also be set by dragging the number boxes on the filter response graph.

Q: click the arrows to set the filter Q.

Filter Q can also be set by dragging the rotary Q controls.

Note: The HPF and LPF do not have Q parameters.

For YDP2006 Mono mode, filters appear in a different order, as shown below.

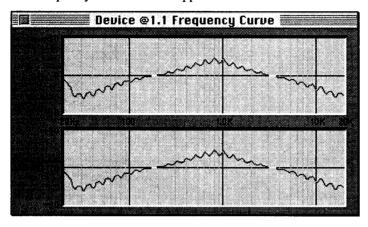


Frequency Curve

The Frequency Curve window displays a device's frequency response.

1. To open the Frequency Curve window, select a device icon in the Device window, and choose Curve (Command-A) from the Window menu.

The Frequency Curve window appears.

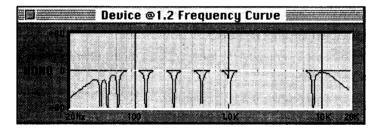


Several Frequency Curve windows can be open simultaneously.

To close a Frequency Curve window, click the window's close box.

Note: The Frequency Curve window does not update itself continuously. When EQ adjustments have been made, you must activate the window again by clicking it. It will be updated, and will then show the current frequency response.

The Frequency Curve window for YDP2006 Mono mode is a little different, as shown below.



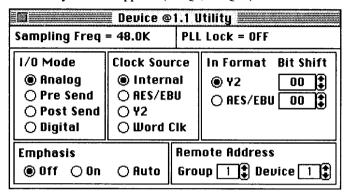
Utility

The Utility window provides access to the utility functions.

Note: Refer to the device's operating manual for a full explanation of the utility functions.

1. To open the Utility window, select a device icon in the Device window, and choose Utility (Command-U) from the Window menu.

The Utility window appears (DEQ5, DEQ5E).



Several Utility windows can be open simultaneously.

To close a Utility window, click the window's close box.

Utility window functions are:

Sampling Freq: this indicates the device's Sampling Frequency.

PLL Lock: this indicates whether PLL Lock is ON or OFF.

VO Mode: these buttons are used to set the I/O mode.

Clock: these buttons are used to set the device's Clock Source.

In Format: these buttons are used to set the device's digital Input Format.

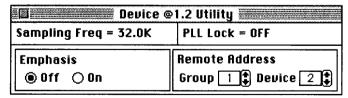
Bit Shift: these are used to set the device's digital Input Bit Shift. Click the up/down arrows to set the Bit Shift.

Note: Bit Shift is not available on the DEQ5E.

Emphasis: these buttons are used to set the Emphasis function to Off, On, or Auto.

Remote Address: these are used to set the device's remote address (group, device).

The Utility window for the YDG2030 and YDP2006 is shown below.



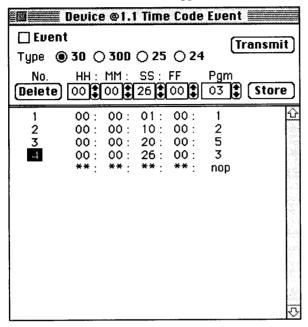
Time Code Event

The Time Code Event window allows you to enter Program recall events.

Note: Refer to the device's operating manual for a full explanation of time code events.

1. To open the Time Code Event window, select a device icon in the Device window, and choose Time Code (Command-T) from the Window menu.

The Time Code Event window appears.



Note: Time code events are available only on the DEQ5.

Several Time Code Event windows can be open simultaneously.

As the Event List window fills up, scroll bars will appear automatically. Use the scroll bars, zoom box, or size box to view the Event List in its entirety.

To close a Time Code Event window, click the window's close box.

2. To turn the Time Code Event function on and off, click the Event check box.

The Time Code Event function is on when the box is checked.

- 3. Set the time code type using the Type buttons: 30, 30D, 25, 24.
- 4. To enter an event, set the time code address using the HH:MM:SS:FF controls, enter a Program number using the pgm control (nop means no Program), then click Store to add the event to the list.
- 5. Repeat step 4 to add more events.
- 6. To send the Event list to the device, click Transmit.

Note: The device will not receive the Event List while in Utility mode.

Chapter 5-Projects

In this chapter we explain about Projects; what they are and how to use them.

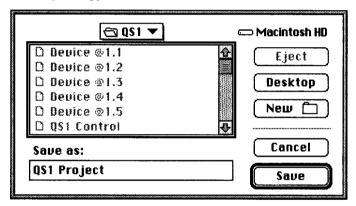
What is a Project?

A Project is an ideal way to manage equalizer data in a multiple equalizer system. A Project contains data for all equalizers. In addition, up to 100 Scenes allow you to recall Programs on a number of equalizers simultaneously. Each Scene can be assigned a suitable icon, and the Scene change can be executed by double-clicking the icon. The positions of device icons in the Device window are also stored within a Project.

Creating a New Project

1. To create a new Project, choose New Project from the Project menu.

A dialog box appears.



- 2. Enter a name for the new Project and select the folder where you want to save it.
- 3. Click the Save button.

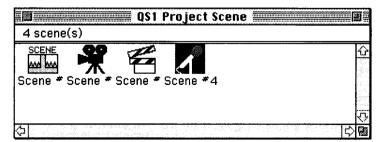
An empty Scene window appears with the Project name displayed in the title bar.

Adding Scenes to a Project

1. To add a Scene to a Project, choose New Scene (Command-K) from the Project menu.

A new Scene icon appears in the Scene window.

The number of Scenes in a Project is displayed below the Scene window's title bar, as shown below.



Naming Scenes

1. To name a Scene, click on the name below the icon.

The name appears highlighted.

- 2. Enter a name up to 16 characters.
- 3. Press Return.

Editing Scenes

1. To edit a Scene, choose Edit Scene (Command-R) from the Project menu.

The following window appears.

		Scene	9 #1	U
Model	Adrs	Device Name	Program Name	Pgm No
DEQ5	(1,1)	Device @1.1	30-band GEQ	1 🛊 🕹
YDP	(1,2)	Device @1.2	6-band PEQ	21
YDG	(1,3)	Device @1.3	6-band PEQ	23 🕻 🛂
1				

This window displays the model name, address, device name, and Program Change number for all active equalizers. Each equalizer can be set to recall a different Program when a Scene is executed.

2. To select a Program, click the up/down arrows.

As each Program Change number is selected, the corresponding Program Name appears.

3. Click the close box when finished.

Executing Scene Changes

A Scene change can be executed in one of three ways:

- 1. Double-click the Scene icon.
- 2. Select the Scene icon and press Command-G.
- 3. Select the Scene icon and choose Transmit Scene from the Project menu.

Note: Do not set the broadcast address to a device's remote address. If you do, scene changes may not work correctly.

Deleting Scenes

1. To delete a Scene, select the Scene icon, then choose Delete Scene (Command-D) from the Project menu.

Saving a Project

1. To save a Project, choose Save Project from the Project menu.

Closing a Project

1. To close a Project, choose Close Project from the Project menu.

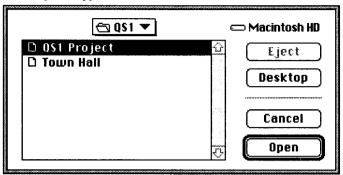
An alert box appears if there is Project data to be saved.

Note: If the Auto Polling box in Preferences is checked, that is, Auto Polling is turned on, devices from a closed Project may reappear when QS1 polls the network again. Therefore, when you want to close a Project and its devices, switch off Auto Polling.

Opening a Project

1. To open an existing Project, choose Open Project from the Project menu.

A dialog box appears.



2. Select the Project, then click Open.

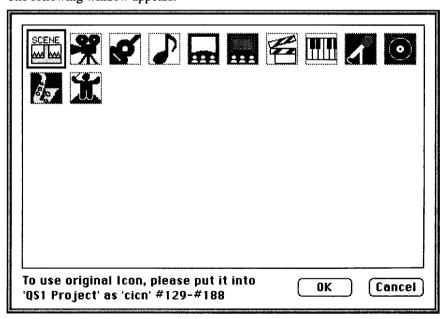
Note: Only one Project can be open at a time.

Selecting Scene Icons

Selecting a different icon for each Scene makes it easy to identify Scenes in the Scene window.

1. To change a Scene icon, select the Scene, then choose Change Icon (Command-J) from the Project menu.

The following window appears.



- 2. Click an icon to select it.
- 3. Click the OK button.

The Scene appears with the new icon.

Custom Scene Icons

See "Custom Scene Icons" on page 33.

Chapter 6-Bulk Data

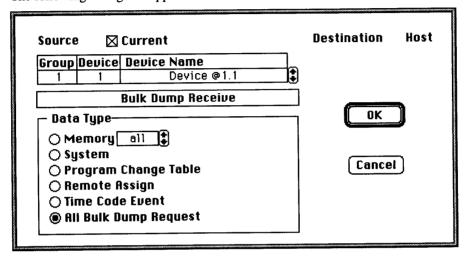
In this chapter we explain how to receive and transmit device bulk data.

Receiving Bulk Data

The Bulk Dump Receive command allows you to request and receive bulk dump data from a device.

1. Choose Receive from the File menu.

The following dialog box appears.



2. Click the up/down arrows next to the Group, Device, Device Name box to select the source device.

When the current device is selected, the Current box is checked.

Clicking the check box selects the current device automatically.

The Destination device is displayed on the right-hand side of the dialog box.

When copying data from a device other than the current device, you must use the Bulk Dump Transmit function to transmit the data once it has been received by the host. Otherwise, the host data and device data will be different.

3. Select the data type.

The following data types are available:

Memory: all or individual memories (Programs). Click the up/down arrows to select all, or a memory from 1 to 40.

System: system data.

Program Change Table: Program Change table data.

Remote Assign: remote assign data.

Time Code Event: time code event list data.

All Bulk Dump Request: all the above data (initial setting).

4. Click OK to receive, or Cancel.

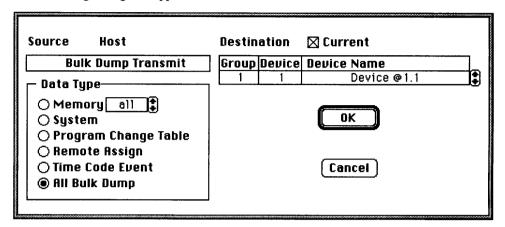
Data receive may take a few seconds.

Transmitting Bulk Data

The Bulk Dump Transmit command allows you to send bulk dump data to a device.

1. Choose Transmit from the File menu.

The following dialog box appears.



2. Click the up/down arrows next to the Group, Device, Device Name box to select the destination device.

When the current device is selected, the Current box is checked.

Clicking the check box selects the current device automatically.

The Source device is displayed on the left-hand side of the dialog box.

3. Select the data type.

The following data types are available:

Memory: all or individual memories (Programs). Click the up/down arrows to select all, or a memory from 1 to 40.

System: system data.

Program Change Table: Program Change table data.

Remote Assign: remote assign data.

Time Code Event: time code event list data.

All Bulk Dump: all the above data (initial setting).

4. Click OK to transmit, or Cancel.

Data transmission may take a few seconds.

Master Select

This section provides more details about Master Select. During normal operation the master device data is not destroyed. Initially, Master Select is set to Device.

When Host is Master

- The host data is the main data.
- When a Project is loaded, the host data and device data are updated.
- When a program number is changed on the host, only a Program Change message is sent.

When Device is Master

- · The device data is the main data.
- When a Project is loaded, only the host data is updated.
- All parameter changes made on the host affect the device data.
- When a program number is changed on the host, a Bulk Dump request message is used to receive
 the corresponding program data from the device.

When Master Select is changed from Device to Host, the host receives bulk data from all active devices.

Basic Operation

1. To control the system from the host computer and update the data of all devices so that it matches that of the host:

If multiple devices are used, power on all devices and set the local address (Group, Device) for each device. Then connect them together using Y-485.

Power on the host computer, and start up QS1. QS1 searches the network for active devices, which are then added to the Device window. Make sure that all devices have been added, and that their local addresses are correct.

Set the Master Select parameter in Preferences to Host.

The data from all active devices is transmitted to the host computer. All parameter adjustments performed on the host will be reflected on the active devices.

When a Project file is opened, the host data and device data is updated.

2. To use the device data as the main data:

If you want fine-tune the current data without changing the data in the devices:

Set the Master Select parameter in Preferences to Device. Device data will not be changed. Changes only will be reflected on the devices.

When a Project file is opened, only the host data is updated, no data is transmitted to the devices.

If a program number on the host is changed, data is received from each device. Data in the host computer always functions as a temporary buffer.

Troubleshooting

If QS1 does not appear to be working as expected, look up the symptoms in the following table and see what to do.

Symptom		What to Do		
	IFU485 BUSY indicator is OFF when QS1 starts.	Power on the system in the following order: devices, computer, IFU485, then start QS1.		
QS1 starts, but no device icons appear and nothing can be controlled.		If you are using an internal modem, set the related software to External, or remove the modem. The modem may have exclusive use of the modem port, in which case, QS1 will not work.		
		Try the QS1 (set in Preferences) and IFU485 at 9600 and 38400 baud rates.		
	IFU485 BUSY	Make sure that the QS1 baud rate (set in Preferences) matches that of the IFU485.		
		Make sure that the IFU485 is connected to the computer with a straight cable (modem type), not a crossed cable (printer type).		
		Check the following IFU485 settings: POWER switch set to ON. TERMINATE switch set to ON. SELECT switch set to RS-232C or RS-422 as required. Internal baud switch (initial setting: 9600).		
	indicator is ON when QS1 starts.	Check the following device settings: Comm, I/O, ALL. Local address, Remote address. Baud rate.		
		Remove all your system extensions, INITS, etc., from the System Folder to achieve a standard system. You may want to try holding down the Shift key while powering on the Macintosh. This technique makes sure that system extensions, INITS, etc., are not loaded upon power on.		
		Finally, consult your Yamaha dealer.		
QS1 operation stops intermittently.		In Preferences, set Auto Polling to a low value (2–3), or uncheck the Auto Polling check box to turn off auto polling. When auto polling is on, QS1 regularly polls the network to check the status of connected devices. This polling may interrupt normal QS1 operation.		
A device icon is inactive.		See Auto Polling on page 15.		
Screen colors seem odd.		In the Monitor control panel, set the number of colors to 256, or less.		
QS1 takes a long time to start and load data.		In Preferences, set Master Select to Device, and click OK. Again in Preferences, this time set Master Select to Host, and click OK. Data from all active devices will be transmitted to the host. Create a new Project, and save it. Now all the data is stored in a Project file, so simply double-clicking it will load all data quickly. Note that it may take up to 10 minutes to receive all the data from 31 devices at a baud rate of 9600.		
Some menu commands are inactive.		When Master Select is set to Device, some commands are not available, and confirmation dialog box messages are different. The commands available at any given time depends on the currently selected device and active window.		
The message, "Can't create" appears		If you are running QS1 from a floppy disk, make sure that the disk's write protect tab is set to unlocked, and that there is enough free space on the disk for the new file.		
and you cannot create	a IIIE.	If you are running QS1 from a hard disk, make sure that there is enough free space on the disk for the new file.		
The system won't work even with Port Select set to Printer.		Normally, Port Select should be set to Modem, since some systems will not work with Port Select set to Printer. If the system works with the Modem port, do not use the Printer port. We recommend that you use the Modem port, and cannot be held responsible for erratic operation when the Printer port is used.		

Glossary

Active device — A working EQ device detected by QS1.

Active window — The window in front of all others on the Macintosh desktop with a visible title bar, close box, zoom box, and size box. It typically belongs to the currently active application.

Auto Polling — A background process whereby QS1 checks the status of connected devices at regular intervals.

Baud Rate — The number of data bits transmitted in one second.

Check box — A small box that typically appears on dialog boxes and windows. It is used to turn options on and off. An option is on when the check box is crossed.

Clipboard — An area of computer memory where data that is copied and cut is temporarily stored. Clipboard data can be pasted between applications.

Close box — A small box in the top left-hand corner of the active window. Clicking it closes the window.

Control file — A QS1 file that is needed for normal operation.

Device — A generic term that refers to the digital equalizer units that can be controlled by QS1. A Device maybe a graphic equalizer, parametric equalizer, etc.

Device address — An exclusive identity number that is assigned to each EQ device on the network. *See also* Device ID and Group ID.

Device file — a QS1 file that is used to store device data.

Device ID — The portion of a Device address that indicates what number a device is in a group.

Dummy device — A dummy device allows you to start up QS1, view the various graphic equalizer windows, and check scene data when there are no active devices connected.

Green Room — A room in a theater or concert hall where performers can relax.

Group ID — The portion of a Device address that indicates which group a device belongs to.

Network — A number of devices connected for communications.

PICT file — A bitmap graphic file format synonymous with the Macintosh. You can create your own backgrounds for the Device window using an application that supports PICT data transfer through the clipboard.

Program — A set of equalizer settings stored in a device.

Project — A convenient way to manage EQ data in a system that contains many equalizers.

Project file — A QS1 file that is used to store Project data.

RS-232C — A serial communication protocol used on PC-AT and compatible computers, typically a 9-pin or 25-pin DSUB type connection.

RS-422 — A balanced serial communication protocol used on Macintosh computers, typically an 8-pin mini DIN type connection.

Scene — A convenient way to manage Program changes. Program Change messages can be transmitted to a number of devices simultaneously. Transmission can be instigated by double-clicking an icon.

Text Field — A rectangular box on a dialog box or window that accepts text input.

Y-485 — A serial communication protocol used by Yamaha digital equalizers.

Zoom box — A small box in the top right-hand corner of the active window. Clicking it enlarges the window so that all items can be seen. Clicking it again resizes the window to its previous size.

Appendix

Keyboard Shortcuts

The following keyboard shortcuts can be used to initiate QS1 commands.

File Menu

Command-N	Create new device
Command-O	Open device
Command-W	Close selected device
Command-S	Save selected device
Command-L	Load device data
Command-I	Get device information
Command-O	Ouit OS1

Project Menu

Command-K	Create new scene
Command-D	Delete selected scene
Command-R	Edit selected scene
Command-J	Change selected scene's icon
Command-G	Transmit selected scene

Window Menu

Command-E	Open Equalizer window
Command-M	Open Common window
Command-F	Open Filter window
Command-A	Open Frequency Curve wi

indow

Command-U Open Utility window

Command-T Open Time Code Event window

View Menu

Command-B Open Background dialog box

Custom Scene Icons

You can create your own scene icons using an application such as ResEdit, which is available from most computer bulletin boards. Editing files with ResEdit is an extremely dangerous proposition; the slightest mistake can render a file useless. You edit QS1 files at your own risk, and Yamaha cannot be held resposible. There are many books about ResEdit for those who want to know more.

Custom icons can be created in the "cicn" resource of a Project file, and should be assigned ID numbers from 129 to 188.

Transferring QS1 Data

To use your QS1 data on another Macintosh computer you need to copy the QS1 application, the relevant Control files, Device files, and Project files. Unless you have saved them somewhere else, these files will normally reside in the same folder as the QS1 application.

Confirmation Messages

Address duplication...(gg, dd) Replace'xx'by'xx'?

Level: Fatal

When: Initialize and open device

The device file address clashes with an existing address.

OK: Replace the existing device data with the contents of the file.

Cancel: Stop reading the file.

Changing master Receive all data?

Level: Normal

When: Preferences

Changing Master to Host.

OK: Receive all data from all devices.

Cancel: Do nothing.

Changing Type Round illegal frame?

Level: Normal

When: Time Code Event

Frame type is changed.

OK: Round to a valid frame value.

Cancel: Do not change frame type.

Closing edited device/project Save 'xxxx' before closing?

Level: Fatal & Save

When: Close Device, Close Project

Edited device or project is closed.

Yes: Store then close.

No: Close without store.

Cancel: Cancel close.

Data are edited Are you sure to recall #mm?

Level: Normal

When: Memory Recall

Try to recall data before saving current data.

OK: Do recall.

Cancel: Cancel recall.

Edit window is opening Delete 'xxxx'?

Level: Normal

When: Delete Scene

Try to delete scene being edited.

OK: Close the edit window and delete the scene.

Cancel: Cancel delete.

Model conflict@(gg, dd) Overload'xxxx'?

Level: Fatal

When: Auto polling

After searching, a different model is found at an existing address.

OK: Replace the existing device with the new device.

Cancel: Ignore the new device.

(Note that this will be confirmed in every search)

Model mismatch Continue receiving/transmitting?

Level: Fatal

When: Bulk Receive/Transmit

Try to receive/transmit bulk data between different models.

OK: Do receive/transmit.

Cancel: Cancel receive/transmit.

New device found@(gg, dd) Receive all data?

Level: Normal

When: Auto polling on Master=Host

After searching due to Host setting, a new device is found.

OK: Receive data from the new device.

Cancel: Data for the new device is set to the initial settings.

No device connected Add dummy one?

Level: Fatal

When: Initialize

No devices are found during start up.

OK: Add dummy device.

Cancel: Do not add dummy device.

Operation will modify memory data Are you sure to xxxxx?

Level: Normal

When: GEQ <-> PEQ changed Max Gain changed

Stereo <-> Mono changed

Cut, Paste, Clear Memory Store

The edit operation (Cut, Paste, Clear, Memory Store, etc.) effect the memory data, not the edit

buffer data.

OK: Execute edit function.

Cancel: Cancel edit function.

Operation will renew all data Are you sure to update?

Level: Normal

When: Update on Master=Host & Update=All

Try to update when Master=Host and Update mode is Current and All.

OK: Receive and replace all the current data.

Cancel: Do not update.

There are some edit windows Close them?

Level: Normal

When: Closing Scene Window

Close Scene window while the Scene Edit window is open.

OK: Close the Scene Edit window and Scene window.

Cancel: Cancel close.

Warning Messages

Add Time Code Event No more room for adding

You've tried to add more than 99 events to the Time Code event list.

Can't delete preset picture

You cannot delete the preset background picture.

Illegal address value Open cancelled

The device file that you tried to open contains an incorrect device address.

The device file is not recognized correctly.

Illegal control file Updating 'xxxx'

The control file contains dubious contents.

The device file is not recognized correctly.

Illegal project file Ignore contents

The project file contains dubious contents.

The project file is not recognized correctly.

Load

Illegal mode

You are trying to load Remote Assign or Time Code Event data to a device other than a DEQ5.

No more room for user PICT Please delete needless one

You are trying to add a PICT file background, but no more can be added.

Open

Can't open 'xxxx'

The device file that was open when you last quit cannot be opened.

Note that when Confirm Level is set to All, this message is not displayed.

Paste clipboard

Can't find PICT in clipboard

You have clicked Add Clipboard, but there is no PICT data in the clipboard.

Receive/Transmit bulk Device (g, d) is not alive

During receive and transmit operations, the device specified does not appear to be active.

Receive/Transmit bulk Illegal model

You have selected Remote Assign or Time Code Event data for a device other than a DEQ5.

Remote Assign/Time Code Event

WARNING

Can't change when Master=Device

When Master is set to Device, you cannot change settings in the Information dialog box.

Warning

Can't open while editing parameters

You cannot open the Information dialog box while a device is being edited.

WARNING

Can't receive device data...@(gg, dd)

The current data or bulk data cannot be received for some reason.

Others

Error messages for internal conflicts and environment errors are also displayed.

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