YAMAHA

RIVAGE PM Series Firmware Update Guide

Thank you for choosing a Yamaha product. This guide explains how to update the RIVAGE PM Series firmware.

- This guide describes the update procedure for the CS-R10, CS-R10-S, CSD-R7, CS-R5, CS-R3, DSP-R10, DSP-RX, DSP-RX-EX, RPio622 and RPio222.
- Updating the CSD-R7, DSP-R10, DSP-RX, DSP-RX-EX, RPio622 or RPio222 will also update the firmware for the RY cards or HY cards other than the HY-144-D or HY144-D-SRC installed in these devices. Replacing RY cards or HY cards after performing an update may cause a firmware version conflict. If the version conflict occurs, update the firmware on the device with the replacement cards installed.

    NOTE In order to remotely control the I/O device via a Dante network, update the HY144-D, HY144-D-SRC Dante firmware to V3.10.4.1 or later.

- The updating procedure of HY144-D, HY144-D-SRC firmware is not described in this document. For details on updating the HY144-D firmware, refer to the HY144-D, HY144-D-SRC Firmware Update Guide provided at the website below.
    https://www.yamahaproaudio.com/

Precautions
Read this before installing!

- Note that the device may be damaged if you fail to follow these instructions properly, or turn off the device or disconnect the cable while the update is in progress.
- Yamaha Corporation owns exclusive copyrights for the firmware, its update program, and the update guide.
- It is prohibited to duplicate or modify the firmware, software or guides, in part or in their entirety, without permission from the copyright owner.
- The screen shots in this guide are for use with this update procedure only and may be different from the actual screen shots.
- Windows is a registered trademark of Microsoft ® Corporation in the United States and other countries.
- Mac and macOS are trademarks of Apple Inc., registered in the U.S. and other countries.
- The company names and product names in this document are the trademarks or registered trademarks of their respective companies.
- This guide predominantly uses screenshots of Windows.

Index

Updating the CS-R10, CS-R10-S, CSD-R7, CS-R5 and CS-R3 firmware

Preparing for the update

A USB flash drive is required to update the CS-R10, CS-R10-S, CSD-R7, CS-R5 and CS-R3 (hereafter written as "console").

• Prepare a FAT16/FAT32-formatted USB 2.0 or USB 3.0-compatible flash drive.
• Download the firmware from the following URL:
  https://www.yamahaproaudio.com/
• The firmware file must be downloaded, and must be expanded prior to updating.

Updating

NOTE Do not simultaneously update the CSD-R7 and RPio622/RPio222 when they are connected to the same network. To update these devices simultaneously, remove the CSD-R7 from the network before performing the update.

1 **Copy the firmware file to the root directory of the USB flash drive**
   Copy "rivage_csr10.bin" when updating from V1.21 or an earlier version of the firmware.
   Copy "rivage_console.bin" when updating from V1.51 or a later version of the firmware.

   NOTE In order to update the firmware appropriately, do not place both "rivage_csr10.bin" and "rivage_console.bin" in the USB flash drive at the same time.
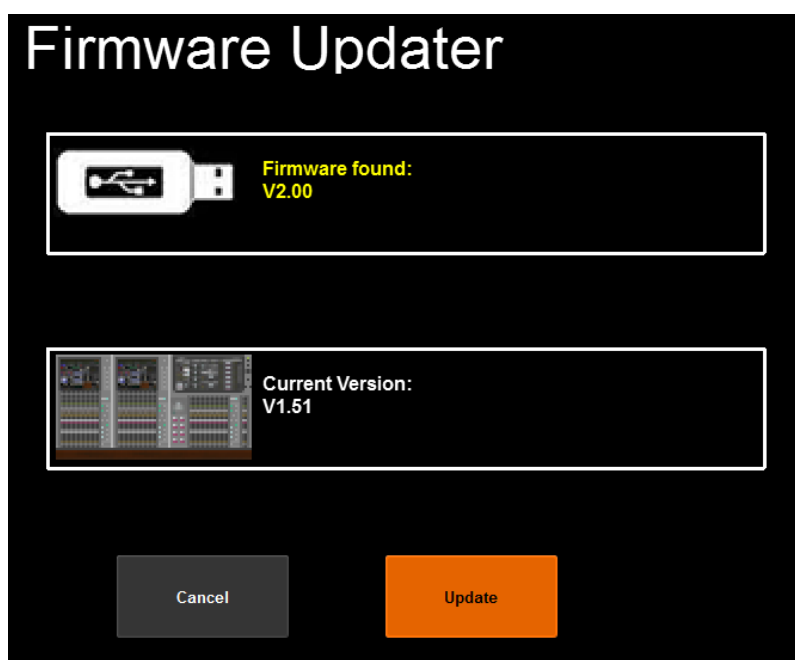
2 **Turn off the power to the console.**

3 **Connect the both the AC- A and AC-B to the AC inlets.**

4 **Connect the USB flash drive (step 1) to the USB connector of the console.**

5 **Turn on the power to the console.**
   The update window appears. The update window displays the version of the firmware updater in the USB flash drive and the current version of the console.

NOTE Some models do not support older firmware versions. In that case, the "Firmware found:" part will be in red. The update cannot be executed.

6 **Press the "Update" button.**

A confirmation message is displayed prompting you to continue the update or not.
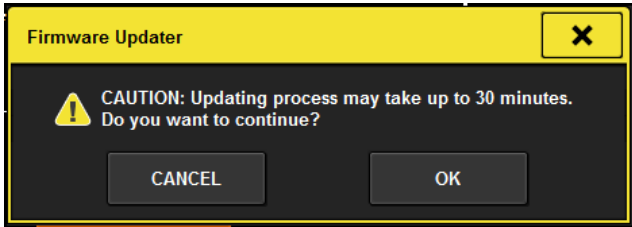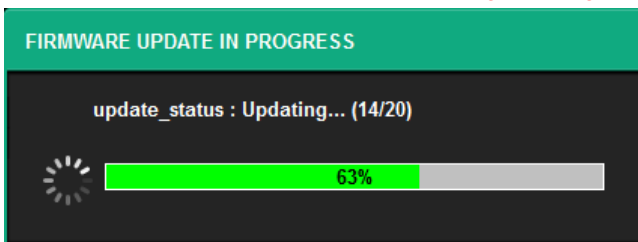

NOTE If both of the power connectors were not connected to the AC inlets at Step 3, the following message appears. Press the "CLOSE" button, connect both power connectors to the AC inlets, and then update the firmware.
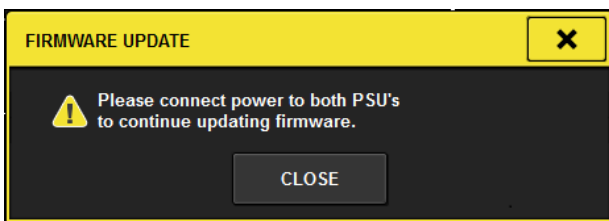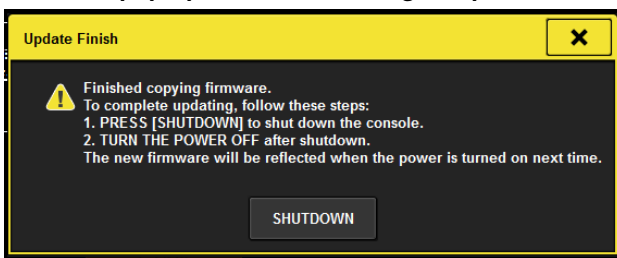

7 **Press the "OK" button.**

After starting the update, the update status is shown via the progress bar.

Do not turn the power off to the console during updating.

8 **When the pop-up window indicating completion of the update appears, press the "SHUTDOWN" button.**

9 **After closing the pop-up window so that only the POWER LED is lit, reboot the console.**

The firmware update is now complete.

Updating the DSP-R10/DSP-RX/DSP-RX-EX and RPio622/RPio222 firmware.

The RIVAGE PM FIRMWARE UPDATER V3.0.0 (referred to hereafter as the RIVAGE PM FIRMWARE UPDATER) is required to update the firmware of devices such as DSP-R10/DSP-RX/ DSP-RX-EX and RPio622/RPio222.
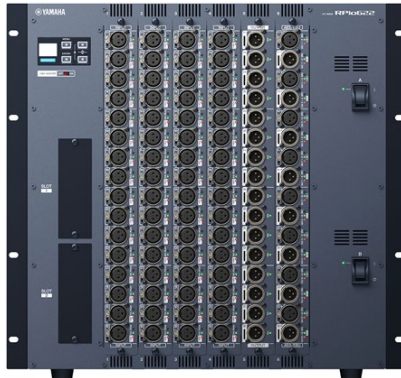
RIVAGE PM FIRMWARE UPDATER

The RIVAGE PM FIRMWARE UPDATER is software for updating the RIVAGE PM Series system firmware on the computer.
The target devices are the following. (August/2020)

DSP-R10

RPio622

DSP-RX/DSP-RX-EX

RPio222

NOTE For the latest information about the target devices, refer to the following website.
https://www.yamahaproaudio.com/

Updating – Operation Overview

1 **Verify that your computer meets the updating requirements of the firmware (page 4).**
2 **Connect your computer to the device (page 5).**
3 **Configure the network settings (page 9).**
4 **Update (page 10).**

System Requirements

OS	Windows 8.1, Windows 10 (Supports both 32-bit and 64-bit versions.) OS X 10.9.5, OS X 10.10.x, OS X 10.11.x, macOS 10.12.x, macOS 10.13.x, macOS 10.14.x, macOS 10.15.x, macOS 11.x
CPU	Intel Core i3 or higher
HDD	100 MB or more

Others	Ethernet (1000BASE-T/100BASE-TX)port

NOTE The System Requirements described above are applied to the RIVAGE PM FIRMWARE UPDATER V 3.0.0. You can check the latest version information of each program and its system requirements at the following website.
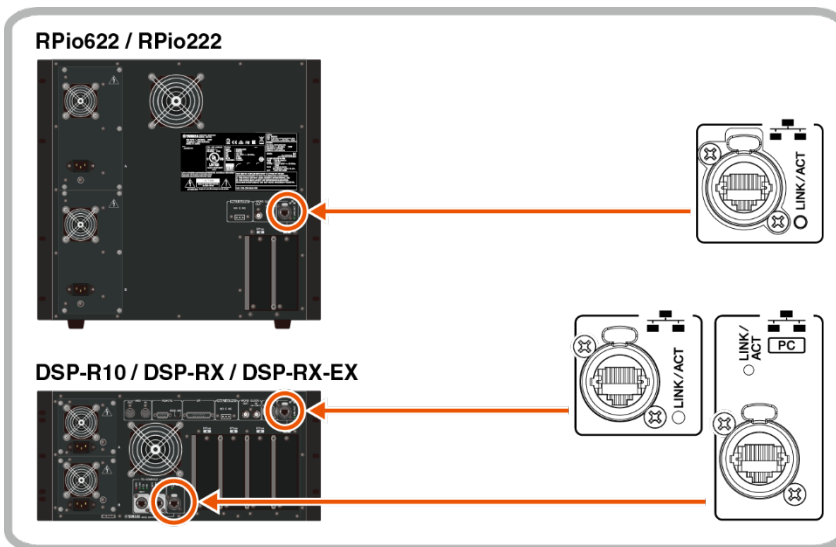https://www.yamahaproaudio.com/

The system requirements may differ slightly depending on the particular computer.
Use of an Ethernet cable (CAT5e or better) is recommended.

Connecting the computer to the device

Updating devices individually

Connect your computer directly to the DSP-R10/DSP-RX/DSP-RX-EX or the RPio622/RPio222 to update.


NOTE When an HY-144-D, HY144-D-SRC card is installed in the HY SLOT1 of the DSP-R10, DSP-RX or DSP-RX-EX, updating from the Main I / O Network or Sub I / O Network is not possible. Connect to an appropriate terminal on the external control computer and update the DSP-R10, DSP-RX or DSP-RX-EX individually from the Console Network.

Updating devices via a network

■ You can update multiple devices together, if devices are connected via a network.

You can connect the computer used for updates to any device on a network.

☐ When your computer is connected to the Main I/O Network, updates will be applied to all DSP-R10/DSP-RX/DSP-RX-EX and RPio622/RPio222 devices connected to the Main I/O Network and all Sub I/O Networks.
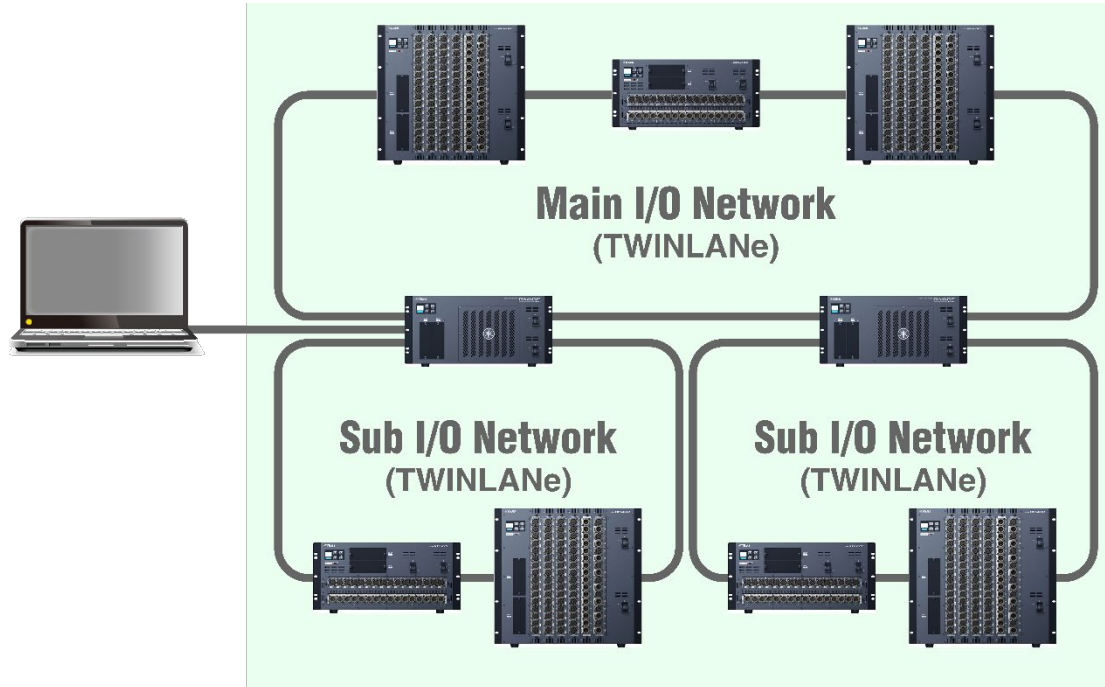
☐ When your computer is connected to an RPio622/RPio222 on a Sub I/O Network, updates will be applied to devices on the same Sub I/O Network and devices on the Main I/O Network (range indicated by the green background in the image below).
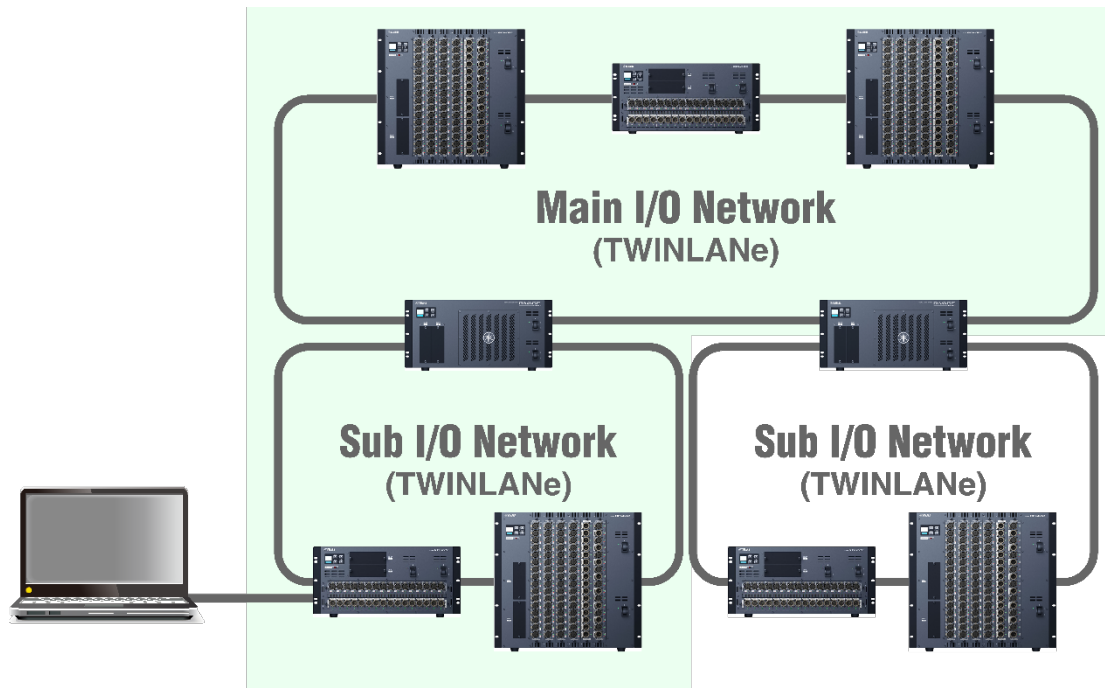
☐ When your computer is connected to the CSD-R7, updates will be applied to all RPio622/RPio222 devices connected to the Main I/O Network.

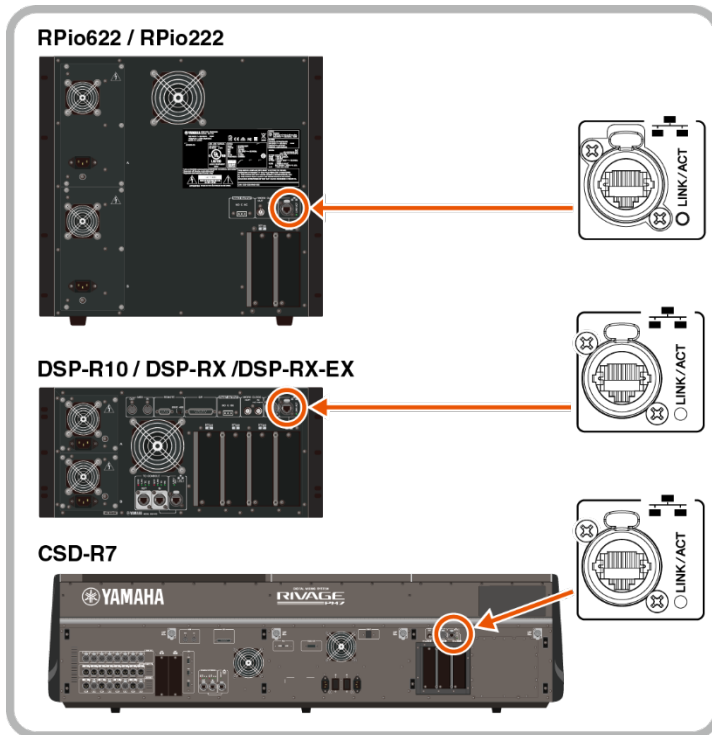**Main I/O Network**
(TWINLANe)
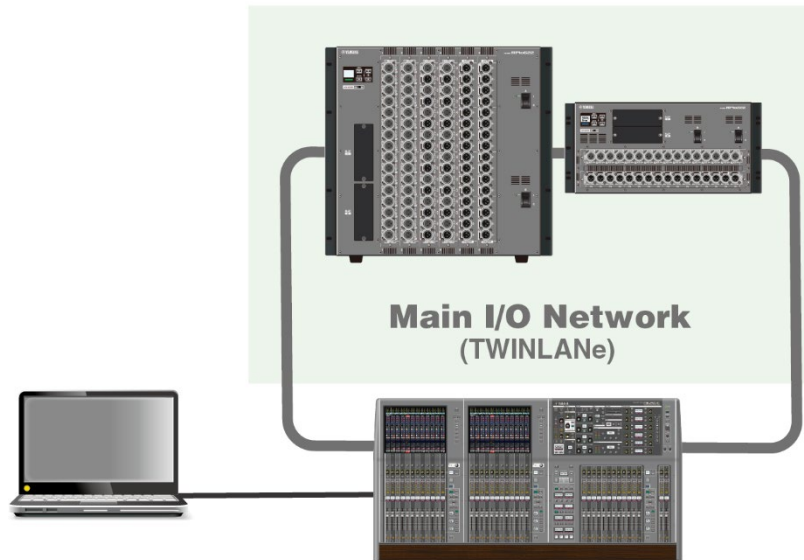
NOTICE Do not connect the network connectors of multiple devices to the same network switch. These connectors are connected to each other via a network in a system. Normal communication may not be possible within the system since a loop is created by connecting to a network switch.

NOTE
・Be sure to assign a unique Unit ID to each device.

・To use a Sub I/O Network (supported by the DSP-R10/DSP-RX/DSP-RX-EX), the firmware version of all devices connected to the Sub I/O Network must be updated to V2.0 or later. If the device in use is using a firmware version earlier than V2.0, either connect it directly to your computer, or connect it to the Main I/O Network and update the firmware to V2.0 or later.

・Do not simultaneously update the CSD-R7 (update using a USB flash device) and the RPio622/RPio222 (update via a network) that are connected to the same network. To update these devices simultaneously, remove the CSD-R7 from the network before performing the update.

・The console cannot be updated via a network. Use a USB flash drive to perform the update.

Connect the Ethernet cable to a NETWORK connector at the top of the HY card slots.

RPio622 / RPio222

DSP-R10 / DSP-RX /DSP-RX-EX

CSD-R7

Network Settings

Make the network settings to connect your computer as follows.

Settings of the computer

 When connecting your computer to the Main I/O Network

IP Address	172.17.0.1
Subnet mask	255.255.0.0

When connecting your computer to a Sub I/O Network

IP Address	172.18.0.1
Subnet mask	255.255.0.0

When connecting your computer to a Console Network

IP Address	192.168.53.1
Subnet mask	255.255.255.0

TCP/IP Settings

Make TCP/IP settings for the computer.

NOTE The "User Account Control" dialog box may appear during the procedure. Click [Continue].

For Windows

1 **Access the Control Panel, then click or double-click [Network and Sharing Center] or [View network status and tasks].**
The "Network and Sharing Center" window is called up.

2 **Click [Manage network connection] or [Change adapter settings] from the "Tasks" list located in the left side of "Network and Shearing Center" window, then double-click [Local Area Connection].**
(Select [Local Area Connection 2] etc., depending on your environment.)
The "Local Area Connection Status" dialog box is called up.
If the "Local Area Connection properties" dialog box appears instead, skip ahead to step 4.

3 **Click [Properties].**
The "Local Area Connection properties" dialog box is called up.

4 **Select [Internet Protocol Version 4(TCP/IPv4)], then click [Properties].**
The "Internet Protocol Version 4(TCP/IPv4) Protocol" dialog box is called up.

5 **Click [Use the following IP address].**

6 **Enter your computer's IP address into [IP address], the Gateway's IP address into [Default gateway], and the Subnet mask into [Subnet mask].**

7 **Click [OK].**

8 **Restart your computer.**

For Mac

1 **Click [System Preferences] → [Network].**

The "Network" dialog box will be displayed.

2 **Click the service that you want to connect to the device.**

If you're using the Ethernet port that's built into the Mac, click [Ethernet].

3 **In "Configure IPv4," choose [Manually], enter your computer's IP address and the Subnet mask.**

4 **Click [Apply] button, then close "Network" dialog box.**

Updating the Firmware

RIVAGE PM FIRMWARE UPDATER

Below is the window of the RIVAGE PM FIRMWARE UPDATER that appear when updating the firmware.
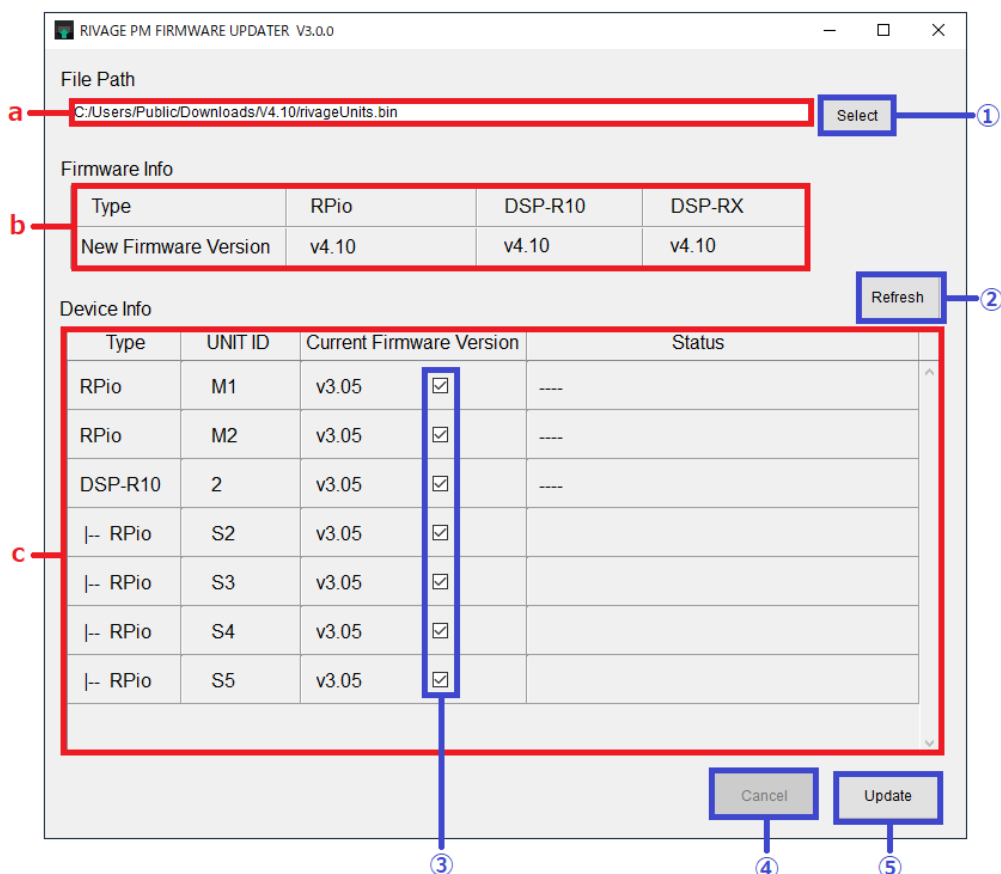
a File Path (File selection area)

Select the firmware to be updated (displayed here).

b Firmware Info (File information area)

Displays information of the selected firmware.

c   Device Info(Device information area)

Displays information about the devices to be updated.

Displays the device type, UNIT ID, the firmware version and the status.

NOTE Make sure to set a unique UNIT ID to each device, since multiple devices having the same UNIT ID will not all be shown.

The status displays the following information during the update.

Message	Meaning
Waiting	Waiting for start of update
Transferring	During firmware transferring
Writing	During writing of the firmware
Cancelled	The update was canceled.
Update finished. Please restart device.	The update was completed. Restart the device.
Update finished. (Do not restart device yet!)	The update has finished; however, do not restart until update of all other devices has finished.
Update failed! Please try again.	The update failed. Attempt the update again.
Device not found.	Please restart device. The device was not detected. Restart the device.
Update failed! Single Power Supply.	The power is turned on only for either A or B. Turn on the power for both A and B.

① [Select] button

Selects the firmware to be updated.

② [Refresh] button

Updates the device information.

③ Checkbox

Selects the device to be updated.

④ [Cancel] button

Stops the update operation of the device that has not been updated yet.

⑤ [Update] button

Starts the update process.

NOTE The Sub I/O Network will not be detected when the devices with an earlier firmware version than V2.0 is connected. Connect the device with a firmware version earlier than V2.0 to the Main I/O Network, then update its firmware to V2.0 or a later version. After the update is complete, reconnect the device to the Sub I/O Network.

Update operation

Described below are the steps necessary to update the RIVAGE PM Series system firmware.

Expand the compressed file you downloaded in advance.

1 **After expanding the downloaded file, double-click "RIVAGE PM FIRMWARE UPDATER.exe" (Windows) or "RIVAGE PM FIRMWARE UPDATER.app" (Mac) in the expanded file location.**
Start RIVAGE PM FIRMWARE UPDATER.

2 **Press the "Select" button and select the firmware "rivageUnits.bin" to be updated**
Devices that can be updated appear in the device information area.
If the firmware of the device is an older version, the checkbox for its device will be automatically checked.
If necessary, manually select the device to be updated by using the checkbox.
NOTE Press the "Refresh" button, if any device for the update is not shown.

3 **Press the "Update" button to start the update.**

4 **When the update is complete, a popup window appears. Press the "OK" button.**
This completes the updating operation.

NOTE When connecting multiple devices via the TWINLANe network to update, update all devices before restarting.

This table shows the version, data correspondence and compatibility for RIVAGE PM FIRMWARE UPDATER

	rivageUnits.bin (V3.05 or earlier)	rivageUnits.bin (V4.0 or later)
UPDATER V2.0.0	○[*1]	×
UPDATER V3.0.0	○[*1]	○

*1 The DSP-RX and DSP-RX-EX are not supported.

NOTE
・When updating, turn on the power for both A and B of the DSP-R10, DSP-RX, DSP-RX-EX, RPio622 or RPio222.
・When updating the firmware version of the DSP-R10, , RPio622 or RPio222 from less than V4.0 to V4 or later, use UPDATER V3.0.0.

Messages

Error, warning, and confirmation messages are displayed on the popup window during updating.

■ Error messages

Message	Meaning	Action
Confirm the network setting of the PC to be one of the followings according to the connection. Then relaunch this software. Connection: IP Address (Subnet Mask) Main I/O Network: 172.17.0.1 (255.255.0.0) Sub I/O Network: 172.18.0.1 (255.255.0.0) Console Network: 192.168.53.1 (255.255.255.0)	Network setting is incorrect.	Check the computer's network setting. (page 9)
Invalid file type! Please select a valid file.	The selected file is incorrect.	Re-select the correct file.
Cannot unpack the file.	You failed to expand the file.	
File path too long. Make sure that the file path is less than 260 characters.	The location of the file is incorrect.	Move the file to the location where the file path is no more than 260 characters.
Failed updating device(s) Check network connection and try again.	You failed to update devices.	Check the computer's network setting (page 9), and update the devices again.

■ Warning messages

Message	Remarks
Please wait until update is completed.	You pushed the "X" button during updating. Wait until the update is completed, since the update cannot be interrupted.

■ Confirmation messages

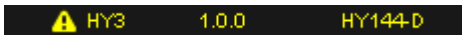| Message	Remarks
Cancel update? This will cancel the update of all waiting devices.	You pushed the "Cancel" button during updating. Push the "Yes" button to exit the update. Once started, the update in progress cannot be cancelled, but continues until the updating operation is complete.
Quit this software? One or more devices have not been updated yet.	You pushed the "X" button when the device has not been updated yet.
Start update ? [ATTENTION] - This firmware update requires that both power supply units are correctly powered and switched on, for all devices to be updated. Otherwise the update will fail.	It is a confirmation message to start the update.

Troubleshooting

Any device to be updated is not displayed.

Symptom	Action
Are you attempting to update the console via a network?	Use a USB flash drive to perform the update. (page 2)
Is the Ethernet cable connected correctly?	Directly connect the computer to the RIVAGE PM Series system using an Ethernet cable. Also, check the appropriate connector used to connect to the computer. When updating via a network, check whether the I/O Network has been connected using the ring topology. (page 5)
Is a device with a firmware version earlier than V2.0 connected to the Sub I/O Network?	The firmware of all devices on the Sub I/O Network must be updated to V2.0 or a later version for devices to be detected. If the device in use is using a firmware version earlier than V2.0, either connect it directly to your computer, or connect it to the Main I/O Network and update the firmware to V2.0 or later.
Are the network settings correct?	Check the network settings (IP address, subnet mask) on your computer. (page 9)
Did you select the firmware for updating?	Select the firmware file. (page 10)
Are multiple devices set to the same UNIT ID?	When multiple devices are set to the same UNIT ID, they will not appear as devices to be updated. Set a different UNIT ID for each device.

The updater fails to update.

Symptom	Action
Has the Ethernet cable been unplugged from the connector?	Check the Ethernet cable connection.
Is the POWER switch on the device turned on?	Check that the device receiving the firmware update is turned on.
Are the network settings correct?	Check the network settings (IP address, subnet mask) on your computer. (Page 9)
Is there any security software running on the computer?	The "firewall" feature of antivirus or security software installed on the computer may be interfering with communication. Pause the security software and update the firmware again.

A firmware incompatibility error is displayed

Symptom	Action
⚠ appears next to the "FIRMWARE VERSION" of the HY144-D on the "MAINTENANCE" window on the console. ⚠ HY3 1.0.0 HY144-D	The version of the HY144-D, HY144-D-SRC firmware is incompatible with the RIVAGE PM Series system. Refer to the HY144-D, HY144-D-SRC Firmware Update Guide to update the HY144-D, HY144-D-SRC firmware to a version compatible with the system. The HY144-D, HY144-D-SRC firmware and the Update Guide can be downloaded from the following URL. http://www.yamaha.com/proaudio/

### A warning message "Console local I/O not responding!" is displayed

Symptom	Action
The warning message "Console local I/O not responding" was displayed by some reason such as turning the power off during the updating.	Execute recovery of the console. (Page 15)

Recovery of the CS-R10, CS-R10-S, CSD-R7, CS-R5 and CS-R3 (Console I/O)

NOTE Only perform the following action when the "Console local I/O not responding!" message appears on the console touchscreen.

Connecting the computer to the CS-R10, CS-R10-S, CSD-R7, CS-R5 or CS-R3

Connect the computer to the NETWORK connector (PC) of the console to be recovered.
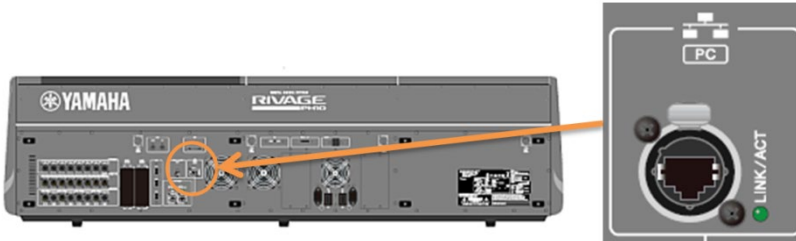
Network Settings on the Computer

Make the following network settings on the computer to be connected.

IP address	192.168.53.1
Subnet mask	255.255.255.0

The procedures of TCP/IP settings on the computer are the same as the DSP engine or the I/O rack. ()

Recovery operation

1 After expanding the downloaded file, double-click "RIVAGE PM CONSOLE IO RECOVERY TOOL.exe" (Windows) or "RIVAGE PM CONSOLE IO RECOVERY TOOL.app" (Mac) in the expanded file location.

2 Press the "Select" button and select the firmware "rivageUnits.bin" to recovery.

3 Press the "Update" button to start the recovery.

4 When the recovery is complete, a popup window appears. Press the "OK" button.