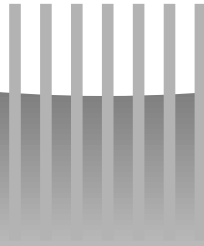




mLAN Interface Card

MY8-mLAN

Owner's manual
Bedienungsanleitung
Mode d'emploi
Manual de instrucciones



English

Deutsch

Français

Español

WARNING

Always follow the basic precautions listed below to avoid the possibility of serious injury or even death from electrical shock, short-circuiting, damages, fire or other hazards. These precautions include, but are not limited to, the following:

- Do not attempt to disassemble or modify the card. Do not apply excessive force to card connectors or other card components. Mishandling of the card may lead to shock, fire hazard, or equipment failure.
- Be sure to disconnect the power cable of the main unit before installing this card (in order to eliminate shock hazard).

CAUTION

Always follow the basic precautions listed below to avoid the possibility of physical injury to you or others, or damage to the instrument or other property. These precautions include, but are not limited to, the following:

- The card is sensitive to static electricity. Before handling the card, you should briefly touch the metal casing of the main unit with your bare hand to discharge any static charge from your body. Failure to do so may damage the card.
- Do not touch the metallic leads (pins) of the circuit board when handling the card. The pins are sharp and may cause hand cuts.

Yamaha cannot be held responsible for data loss or equipment damage caused by inappropriate handling or use.

Introduction

Thank you for purchasing the Yamaha MY8-mLAN. The MY8-mLAN is an interface card that provides mLAN interfacing. mLAN is a digital network designed for music and based on the IEEE 1394 high performance serial bus. mLAN makes it easy to construct sophisticated networks for audio and MIDI signals that can be re-configured without changing the physical cabling (as was necessary with previous systems).

The MY8-mLAN adds two mLAN connectors to the Yamaha AW4416 or AW2816 professional audio workstations, or to the Yamaha 01V digital mixing console etc. (Consult your Yamaha dealer for details of other applicable Yamaha equipment.)

Package Contents

- MY8-mLAN
- mLAN Tools (CD-ROM)
- IEEE 1394 cable (4.5 m)
- Owner's manual (this document)
- mLAN guidebook
- mLAN Tools installation guide

About the included CD-ROM

The included CD-ROM contains software that is useful when used in conjunction with the MY8-mLAN. This software includes "mLAN Patchbay" which lets you make settings on your computer to specify the routing of audio/MIDI signals between mLAN devices connected to the MY8-mLAN. For details refer to the separate "mLAN Tools Installation Guide."

Yamaha cannot be held responsible for damage caused by improper use or modifications to the instrument, or data that is lost or destroyed.

The illustrations shown in this Owner's Manual are for instructional purposes only, and may appear somewhat different from those on your device.

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How to install the MY8-mLAN

1. Set the MY8-mLAN's DIP switch (SW1) according to your application. For details refer to page 7.

(NOTE) It is not possible to change the setting of the DIP switch (SW1) after the MY8-mLAN is installed. You must set the DIP switch before installation. If you want to change the settings, you must turn off the host device, remove the MY8-mLAN, and then change the settings.

2. Install the MY8-mLAN into your device. For details refer to the operation manual for your device.



WARNING

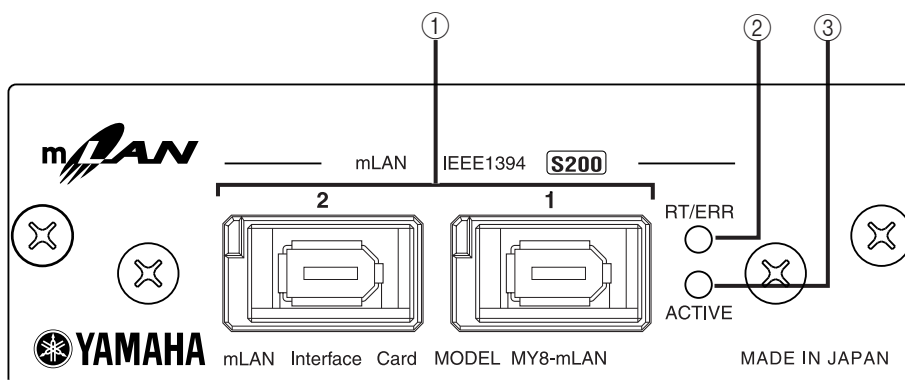
You must turn off the power of your device before you begin installing the MY8-mLAN.

3. Connect the device into which the MY8-mLAN was installed to your other mLAN (IEEE 1394) devices or IEEE 1394-compatible computer. For details refer to page 10.
4. Make mLAN connection settings. For details refer to page 12.

MY8-mLAN Installation Precautions

- Before beginning installation, switch off the power to the main unit and any connected peripherals, and unplug them from the power outlet. Then remove all cables connecting the main unit to other devices. (Leaving the power cord connected while working can result in electric shock. Leaving other cables connected can interfere with the installation procedure.)
- It is recommended that you wear gloves to protect your hands from sharp or pointed projections on the equipment.
- Board components may be damaged by electrostatic discharge. Be sure to drain any electrostatic charge from body and clothes before starting work. Keep hands clear of board components, board circuitry, and metallic leads while carrying out the installation.
- Handle the plug-in boards with care. Dropping or subjecting the card to any kind of shock may cause damage or result in a malfunction.
- Do not touch the exposed metal parts in the circuit board. Touching these parts may result in a faulty contact.
- Take care to avoid dropping screws into the main unit. If a screw does fall in, be sure to remove it before you reassemble and power up the unit. Starting the unit with a loose screw inside may lead to improper operation or to equipment failure. (If you are unable to retrieve a dropped screw, consult your Yamaha dealer for advice.)

Names and Functions



① mLAN (IEEE1394) jacks

These jacks are used to connect mLAN devices or IEEE1394-compatible devices via IEEE1394 standard (6-pin) cables. Each jack has an LED in the upper left corner to indicate the following statuses.

green : The MY8-mLAN or connected device is a “leaf” node.

off : Not connected.

red : When there is a possibility that the sound will be interrupted.

(NOTE) If you disconnect the cable from the jack or turn off the power of the device when the LED is lit red, the sound on the bus (system) will be momentarily interrupted.

② RT/ERR LED

This LED indicates the following statuses.

green : The MY8-mLAN is a “root” node.

orange : An IEEE 1394 bus-related error has occurred.

red : Another type of error has occurred.

off : Normal operating condition other than the above.

(NOTE) Refer to “LED Messages” on page 13 for information on the error indication.

③ ACTIVE LED

This LED indicates the following statuses.

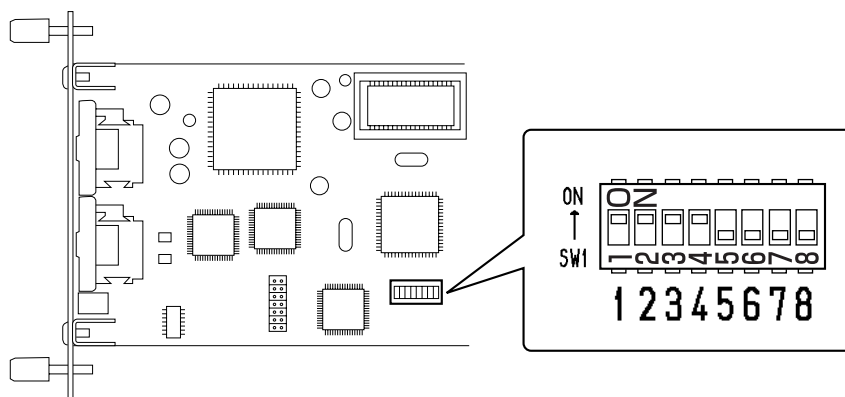
blue : The relay function between mLAN (IEEE 1394) jacks is active.

off : The relay function between mLAN (IEEE 1394) jacks is inactive.

(NOTE) Since the MY8-mLAN will stop functioning as a bus relay when the power of the main unit is turned off, this LED will also correspond to the power on (lit blue) or off (dark) status.

DIP switch (SW1) settings

The MY8-mLAN has a switch that specifies whether audio input/output and MIDI input/output via mLAN will be enabled.



In this switch, moving the white slider toward the number will turn the setting “OFF,” and moving it toward the side marked ON will turn the setting “ON.” The following settings are assigned to each number 1–8.

1 Audio OUTPUT-Plug 1-8 (ON enables, OFF disables)

This specifies whether the audio output plugs will be enabled or disabled.

If this is ON, the eight audio output plugs will be enabled.

If this is OFF, the audio output plugs will be disabled.

2 Audio INPUT-Plug 1-8 (ON enables, OFF disables)

This specifies whether the audio input plugs will be enabled or disabled.

If this is ON, the eight audio input plugs will be enabled.

If this is OFF, the audio input plugs will be disabled.

3 MIDI INPUT-Plug, OUTPUT-Plug (ON enables, OFF disables)

This specifies whether the MIDI input/output plugs will be enabled or disabled.

If this is ON, one MIDI output plug and one MIDI input plug will be enabled.

If this is OFF, the MIDI plugs will be disabled.

4-8 MY8-mLAN number

This specifies the number of the module name.

When you are using multiple MY8-mLAN units together, use these ON/OFF switches to specify a number that will distinguish each unit from the others. This will be reflected in the module name (e.g., “MYmLAN31”) used when you make mLAN connection settings. When you are using multiple MY8-mLAN units, there will be no problems with operation even if each unit is set to the same number. However if you assign a different number to each unit, you will be able to distinguish between units by the different module name that is displayed for each unit when controlling them from software such as “mLAN Patchbay.”

(NOTE) For details about mLAN connections/plugs, see page 11.

4	5	6	7	8	Number	Module name displayed for connection setting
OFF	OFF	OFF	OFF	OFF	—	Do not use this setting
ON	OFF	OFF	OFF	OFF	1	MYmLAN01(factory setting)
OFF	ON	OFF	OFF	OFF	2	MYmLAN02
ON	ON	OFF	OFF	OFF	3	MYmLAN03
OFF	OFF	ON	OFF	OFF	4	MYmLAN04
ON	OFF	ON	OFF	OFF	5	MYmLAN05
OFF	ON	ON	OFF	OFF	6	MYmLAN06
ON	ON	ON	OFF	OFF	7	MYmLAN07
OFF	OFF	OFF	ON	OFF	8	MYmLAN08
ON	OFF	OFF	ON	OFF	9	MYmLAN09
OFF	ON	OFF	ON	OFF	10	MYmLAN10
ON	ON	OFF	ON	OFF	11	MYmLAN11
OFF	OFF	ON	ON	OFF	12	MYmLAN12
ON	OFF	ON	ON	OFF	13	MYmLAN13
OFF	ON	ON	ON	OFF	14	MYmLAN14
ON	ON	ON	ON	OFF	15	MYmLAN15
OFF	OFF	OFF	OFF	ON	16	MYmLAN16
Same as numbers 1–13				ON	17 29	MYmLAN17 MYmLAN29
OFF	ON	ON	ON	ON	30	MYmLAN30
ON	ON	ON	ON	ON	31	MYmLAN31

By setting these settings appropriately for the device in which the MY8-mLAN is installed, you can construct an uncluttered and stable system.

For example on a device such as the Yamaha DA-824 (D/A converter) which provides only the audio INPUT-Plugs described in 2, enabling the audio OUTPUT-Plugs described in 1 will cause an invalid plug to be displayed when you make mLAN connection settings, even though audio is not actually being output to the mLAN bus. On systems that have plug information for numerous devices, this will complicate the situation.

DIP switch settings for typical applications

■ When the MY8-mLAN is installed in the Yamaha AD824

This device performs A/D conversion of analog audio input, and sends it to other devices on the mLAN bus. Thus for the MY8-mLAN installed in this device, only the audio output plugs are valid, and the audio input plugs and MIDI input/output plugs are invalid.

Set the DIP switches as follows.

1-ON, 2-OFF, 3-OFF,

4–8 may be set as desired. (However, be sure not to turn all of them OFF.)

■ When the MY8-mLAN is installed in the Yamaha DA824

This device performs D/A conversion of digital audio from another device on the mLAN bus, and outputs it as analog audio. Thus for the MY8-mLAN installed in this device, only the audio input plugs are valid, and the audio output plugs and MIDI input/output plugs are invalid.

Set the DIP switches as follows.

1-OFF, 2-ON, 3-OFF,

4–8 may be set as desired. (However, be sure not to turn all of them OFF.)

■ Yamaha AW4416 earlier than version 2.0 (not including 2.0)

This version does not support the MY8-mLAN. Please upgrade to version 2.0 or later.

■ When the MY8-mLAN is installed in the Yamaha AW4416 version 2.0 or later

• When installed in slot 1

Slot 1 transmits/receives audio data to/from other devices on the mLAN bus. It does not transmit or receive MIDI data. Thus for the MY-mLAN installed in slot 1, the audio output plugs and audio input plugs are valid, and the MIDI plugs are invalid.

Set the DIP switches as follows.

1-ON, 2-ON, 3-OFF,

4–8 may be set as desired. (However, be sure not to turn all of them OFF.)

• When installed in slot 2

Slot 2 transmits/receives audio and MIDI data to/from other devices on the mLAN bus. Thus for the MY8-mLAN installed in slot 2, the audio output and input plugs as well as the MIDI input/output plugs are valid.

Set the DIP switches as follows.

1-ON, 2-ON, 3-ON,

4–8 may be set as desired. (However, be sure not to turn all of them OFF.)

■ When the MY8-mLAN is installed in the Yamaha AW2816 earlier than version 1.1 (not including 1.1)

This version does not support the MY8-mLAN. Please upgrade to version 1.1 or later.

■ When the MY8-mLAN is installed in the Yamaha AW2816 version 1.1 or later

This device transmits/receives audio and MIDI data to/from other devices on the mLAN bus. Thus for the MY8-mLAN installed in this device, the audio output and input plugs as well as the MIDI input/output plugs are valid.

Set the DIP switches as follows.

1-ON, 2-ON, 3-ON,

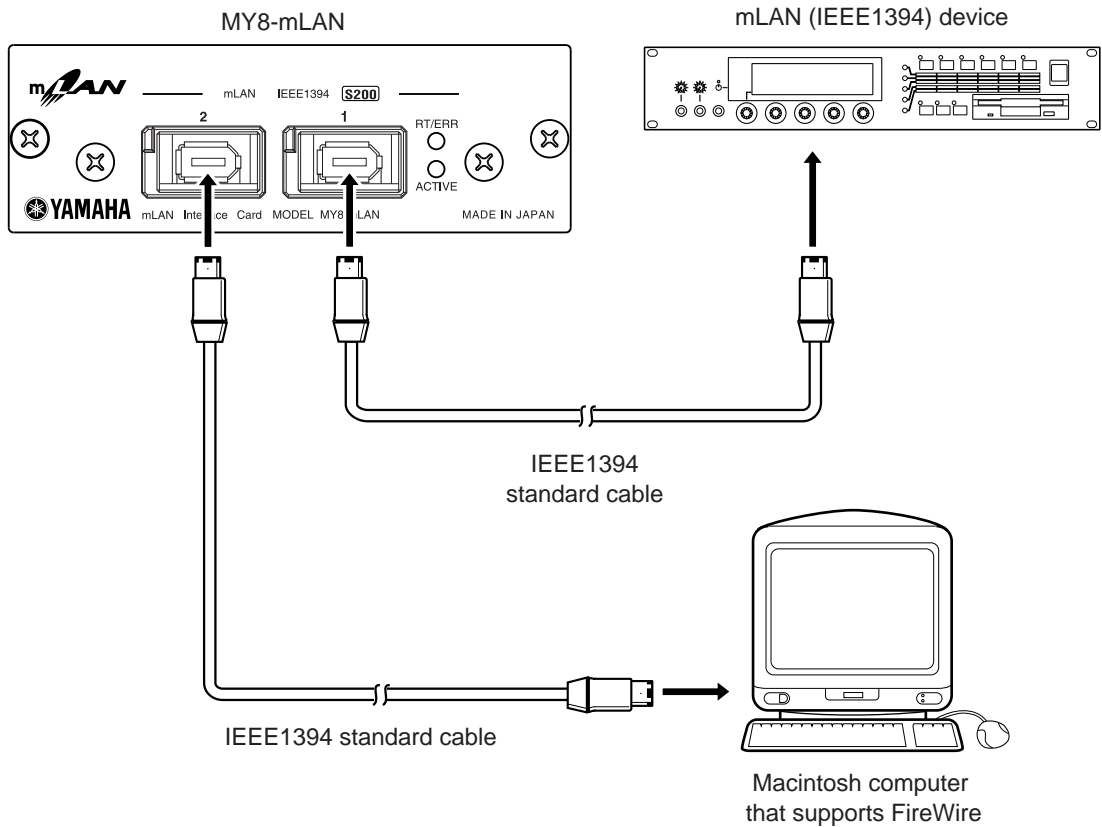
4–8 may be set as desired. (However, be sure not to turn all of them OFF.)

Connections

Here's how to make connections from the MY8-mLAN to other mLAN devices or to your computer.

Connecting an mLAN (IEEE1394) device

Use an IEEE 1394 standard cable (6 pin) to connect the mLAN (IEEE 1394) jack of the MY8-mLAN to the mLAN (IEEE 1394) connector of the other mLAN (IEEE 1394) device. When doing so, it is not necessary to turn off the power of the mLAN (IEEE 1394) device or the host device in which the MY8-mLAN is installed.



CAUTION

Do not insert or remove the MY8-mLAN while the power of the host device is turned on.

About mLAN connections

If you want to use an IEEE 1394 cable to connect mLAN-compatible devices via their IEEE 1394 (FireWire) connectors and exchange audio or MIDI signals, you must make connection settings. There are three ways to make connection settings.

- Use the “mLAN Patchbay” application program to make settings from a Macintosh computer that is equipped with a FireWire port.
- Use the “mLAN Patchbay” application program to make settings from a Windows computer that is equipped with a COM port or other serial port. (However, you will need another mLAN device that has a serial port.)
- Make settings from an mLAN-compatible device (such as the mLAN8P or a synthesizer in which the mLAN option is installed).

The type of system in which the MY8-mLAN is being used will determine which of the above three methods you use to make settings.

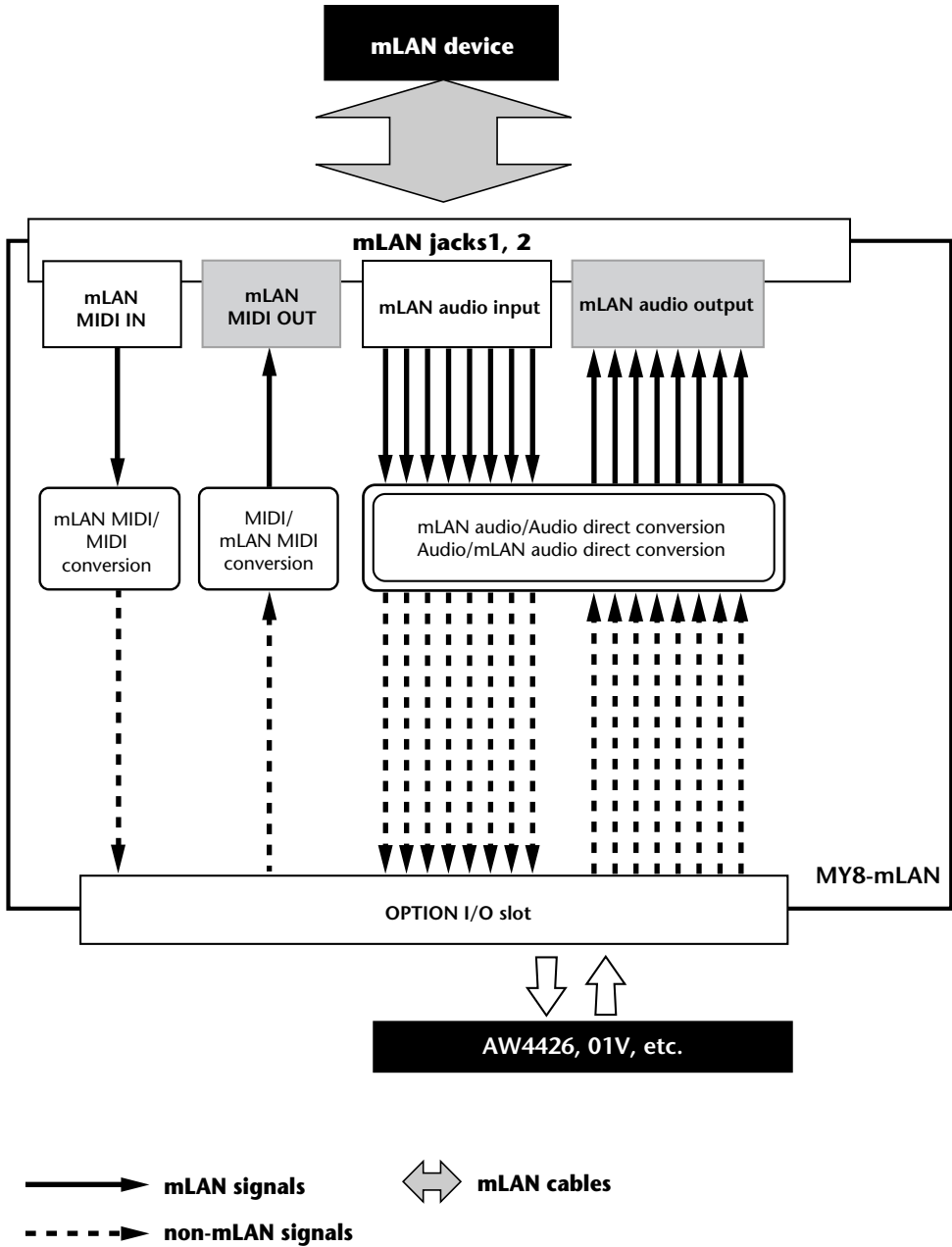
For each MY8-mLAN unit, eight channels of audio and one set of MIDI signals can be input and output. When making mLAN connection settings, these audio and MIDI inputs and outputs are handled as “plugs” — virtual connectors with a name assigned to each.

Each audio or MIDI output from the MY8-mLAN to another mLAN device is called an “OUTPUT-Plug,” and each audio or MIDI input received by the MY8-mLAN from another mLAN device is called an “INPUT-Plug.” Connections are made by connecting these plugs.

NOTE For more information about mLAN connections/plugs, refer to the mLAN Guide Book.

Internal Configuration of the MY8-mLAN

The signal flow within the MY8-mLAN is shown by the following diagram.



LED Messages

LED messages

	Function	Status
mLAN1, 2	Indicates the status of the mLAN (IEEE 1394) jack.	Red Disconnecting the connection will interrupt the sound on the bus (system). Green... The connection is a "leaf" node.
RT/ERR	Indicates "root" node and error.	Red/Orange ... An error has occurred. Green ... The MY8-mLAN is a "root" node.
ACTIVE	Indicates the status of the relay function between mLAN (IEEE 1394) jacks.	Blue ... The relay function is enabled.

Error messages

mLAN*		RT	Cause	Action
2	1			
	red	orange	The topology of the connected devices creates a loop.	Check to see if any part of the connection creates a loop.
red		orange	Cycle Start Packet is not transmitted to the bus. (Audio/MIDI data cannot be transmitted.)	Remove the malfunctioning device.
red	red	orange	A malfunctioning device exists on the bus.	Remove the malfunctioning device.
	green	orange	The number of hops exceeds 16.	Check the number of hops.
green		orange	The power to the bus is insufficient.	Add a power provider to the bus, or remove a power consumer from the bus.
	red	red	MIDI IN transfer rate is not correct.	Check the MIDI transfer rate setting.
red		red	Data transmission exceeds the MIDI transfer rate.	Check to see if the transmitting device is operating properly.
		red	The sound is interrupted for some reason, or the devices are not syncing.	Check the word clock setting.

* If the RT/ERR LED is lit green or is dark, these LEDs indicate the status of the mLAN (IEEE 1394) jacks.

Specifications

mLAN	IEEE1394 High Performance Serial Bus Data Rate S200, Isochronous Resource Manager capable, Bus Manager capable, Connection Manager Conforms to IEC61883-6 Audio and Music Protocol Digital Audio 8in/8out, MIDI 1in/1out
Sampling rate	44.1 kHz, 48 kHz
Jacks	Front: mLAN IEEE1394 (1/2), Rear: OPTION I/O slot connector
Display	mLAN 1/2 LED, ACTIVE LED, RT (Root)/ERR (Error) LED
Power consumption	2.2 W (440 mA/+5 V)

Specifications and descriptions in this owner's manual are for information purposes only. Yamaha Corp. reserves the right to change or modify products or specifications at any time without prior notice. Since specifications, equipment or options may not be the same in every locale, please check with your Yamaha dealer.

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YAMAHA CORPORATION
Pro Audio & Digital Musical Instrument Division
P.O. Box 3, Hamamatsu, 430-8651, Japan

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