YAMAHA

MOBILE AUDIO INTERFACE

GO44

Owner's Manual

SPECIAL MESSAGE SECTION

This product utilizes batteries or an external power supply (adapter). DO NOT connect this product to any power supply or adapter other than one described in the manual, on the name plate, or specifically recommended by Yamaha.

WARNING: Do not place this product in a position where anyone could walk on, trip over ,or roll anything over power or connecting cords of any kind. The use of an extension cord is not recommended! If you must use an extension cord, the minimum wire size for a 25' cord (or less) is 18 AWG. NOTE: The smaller the AWG number ,the larger the current handling capacity. For longer extension cords, consult a local electrician.

This product should be used only with the components supplied or; a cart, rack, or stand that is recommended by Yamaha. If a cart, etc., is used, please observe all safety markings and instructions that accompany the accessory product.

SPECIFICATIONS SUBJECT TO CHANGE:
The information contained in this manual is believed to be correct at the time of printing. However, Yamaha reserves the right to change or modify any of the specifications without notice or obligation to update existing units.

This product, either alone or in combination with an amplifier and headphones or speaker/s, may be capable of producing sound levels that could cause permanent hearing loss. DO NOT operate for long periods of time at a high volume level or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should consult an audiologist.
IMPORTANT: The louder the sound, the shorter the time period before damage occurs.

Some Yamaha products may have benches and / or accessory mounting fixtures that are either supplied with the product or as optional accessories. Some of these items are designed to be dealer assembled or installed. Please make sure that benches are stable and any optional fixtures (where applicable) are well secured BEFORE using.
Benches supplied by Yamaha are designed for seating only. No other uses are recommended.

NOTICE:
Service charges incurred due to a lack of knowledge relating to how a function or effect works (when the unit is operating as designed) are not covered by the manufacturer's warranty, and are therefore the owners responsibility. Please study this manual carefully and consult your dealer before requesting service.

ENVIRONMENTAL ISSUES:
Yamaha strives to produce products that are both user safe and environmentally friendly. We sincerely believe that our products and the production methods used to produce them, meet these goals. In keeping with both the letter and the spirit of the law, we want you to be aware of the following:

Battery Notice:
This product MAY contain a small non-rechargeable battery which (if applicable) is soldered in place. The average life span of this type of battery is approximately five years. When replacement becomes necessary, contact a qualified service representative to perform the replacement.

This product may also use "household" type batteries. Some of these may be rechargeable. Make sure that the battery being charged is a rechargeable type and that the charger is intended for the battery being charged.

When installing batteries, do not mix batteries with new, or with batteries of a different type. Batteries MUST be installed correctly. Mismatches or incorrect installation may result in overheating and battery case rupture.

Warning:
Do not attempt to disassemble, or incinerate any battery. Keep all batteries away from children. Dispose of used batteries promptly and as regulated by the laws in your area. Note: Check with any retailer of household type batteries in your area for battery disposal information.

Disposal Notice:
Should this product become damaged beyond repair, or for some reason its useful life is considered to be at an end, please observe all local, state, and federal regulations that relate to the disposal of products that contain lead, batteries, plastics, etc. If your dealer is unable to assist you, please contact Yamaha directly.

NAME PLATE LOCATION:
The name plate is located on the bottom of the product. The model number, serial number, power requirements, etc., are located on this plate. You should record the model number, serial number, and the date of purchase in the spaces provided below and retain this manual as a permanent record of your purchase.

Model

Serial No.

Purchase Date

PLEASE KEEP THIS MANUAL

FCC INFORMATION (U.S.A.)

1. **IMPORTANT NOTICE: DO NOT MODIFY THIS UNIT!**
This product, when installed as indicated in the instructions contained in this manual, meets FCC requirements. Modifications not expressly approved by Yamaha may void your authority, granted by the FCC, to use the product.

2. **IMPORTANT:** When connecting this product to accessories and/or another product use only high quality shielded cables. Cable/s supplied with this product MUST be used. Follow all installation instructions. Failure to follow instructions could void your FCC authorization to use this product in the USA.

3. **NOTE:** This product has been tested and found to comply with the requirements listed in FCC Regulations, Part 15 for Class "B" digital devices. Compliance with these requirements provides a reasonable level of assurance that your use of this product in a residential environment will not result in harmful interference with other electronic devices. This equipment generates/uses radio frequencies and, if not installed and used according to the instructions found in the users manual, may cause interference harmful to the operation of other electronic devices. Compliance with FCC regulations does not guarantee that interference will not occur in all installations. If this product is found to be the source of interference, which can be determined by turning the unit "OFF" and "ON", please try to eliminate the problem by using one of the following measures:

Relocate either this product or the device that is being affected by the interference.

Utilize power outlets that are on different branch (circuit breaker or fuse) circuits or install AC line filter/s.

In the case of radio or TV interference, relocate/reorient the antenna. If the antenna lead-in is 300 ohm ribbon lead, change the lead-in to co-axial type cable.

If these corrective measures do not produce satisfactory results, please contact the local retailer authorized to distribute this type of product. If you can not locate the appropriate retailer, please contact Yamaha Corporation of America, Electronic Service Division, 6600 Orangethorpe Ave, Buena Park, CA90620

The above statements apply ONLY to those products distributed by Yamaha Corporation of America or its subsidiaries.

* This applies only to products distributed by YAMAHA CORPORATION OF AMERICA. (class B)

COMPLIANCE INFORMATION STATEMENT
(DECLARATION OF CONFORMITY PROCEDURE)

Responsible Party : Yamaha Corporation of America
Address : 6600 Orangethorpe Ave., Buena Park, Calif. 90620
Telephone : 714-522-9011
Type of Equipment : MOBILE AUDIO INTERFACE
Model Name : GO44

This device complies with Part 15 of the FCC Rules.
Operation is subject to the following conditions:
1) this device may not cause harmful interference, and
2) this device must accept any interference received including interference that may cause undesired operation.
See user manual instructions if interference to radio reception is suspected.

* This applies only to products distributed by (FCC DoC)
YAMAHA CORPORATION OF AMERICA.

PRECAUTIONS

PLEASE READ CAREFULLY BEFORE PROCEEDING

Please keep this manual in a safe place for future reference.

⚠ 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:

Power supply/AC power adaptor

- Only use the voltage specified as correct for the instrument. The required voltage is printed on the name plate of the instrument.
- Use the specified adaptor (PA-3C or an equivalent recommended by Yamaha) only. Using the wrong adaptor can result in damage to the instrument or overheating.
- Check the electric plug periodically and remove any dirt or dust which may have accumulated on it.
- Do not place the AC adaptor cord near heat sources such as heaters or radiators, and do not excessively bend or otherwise damage the cord, place heavy objects on it, or place it in a position where anyone could walk on, trip over, or roll anything over it.

Do not open

- Do not open the instrument or attempt to disassemble the internal parts or modify them in any way. The instrument contains no user-serviceable parts. If it should appear to be malfunctioning, discontinue use immediately and have it inspected by qualified Yamaha service personnel.

Water warning

- Do not expose the instrument to rain, use it near water or in damp or wet conditions, or place containers on it containing liquids which might spill into any openings.
- Never insert or remove an electric plug with wet hands.

Fire warning

- Do not put burning items, such as candles, on the unit. A burning item may fall over and cause a fire.

If you notice any abnormality

- If the AC adaptor cord or plug becomes frayed or damaged, or if there is a sudden loss of sound during use of the instrument, or if any unusual smells or smoke should appear to be caused by it, immediately disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Yamaha service personnel.

⚠ 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:

Power supply/AC power adaptor

- When removing the electric plug from the instrument or an outlet, always hold the plug itself and not the cord.
- Unplug the AC power adaptor when not using the instrument, or during electrical storms.
- Do not connect the instrument to an electrical outlet using a multiple-connector. Doing so can result in lower sound quality, or possibly cause overheating in the outlet.

Location

- Do not expose the instrument to excessive dust or vibrations, or extreme cold or heat (such as in direct sunlight, near a heater, or in a car during the day) to prevent the possibility of panel disfiguration or damage to the internal components.
- Do not use the instrument in the vicinity of a TV, radio, stereo equipment, mobile phone, or other electric devices. Otherwise, the instrument, TV, or radio may generate noise.
- Do not place the instrument in an unstable position where it might accidentally fall over.

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- Before moving the instrument, remove all connected adaptor and other cables.
- When setting up the instrument, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately disconnect the plug from the outlet.

Connections

- Before connecting the instrument to other electronic components, turn off the power for all components. Before turning the power on or off for all components, set all volume levels to minimum. Also, be sure to set the volumes of all components at their minimum levels and gradually raise the volume controls while playing the instrument to set the desired listening level.

Maintenance

- When cleaning the instrument, use a soft, dry cloth. Do not use paint thinners, solvents, cleaning fluids, or chemical-impregnated wiping cloths.

Handling caution

- Never insert or drop paper, metallic, or other objects into the gaps on the panel. If this happens, immediately unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Yamaha service personnel.
- Do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel or keyboard.
- Do not rest your weight on, or place heavy objects on the instrument, and do not use excessive force on the buttons, switches or connectors.
- Do not use the instrument/device or headphones for a long period of time at a high or uncomfortable volume level, since this can cause permanent hearing loss. If you experience any hearing loss or ringing in the ears, consult a physician.

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

SPECIAL NOTICES

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- The supplied Cubase LE, HALion SE, and Groove Agent SE are the exclusive copyrights of Steinberg Media Technologies GmbH.
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- Yamaha makes no representations or warranties with regard to the use of the software and documentation and cannot be held responsible for the results of the use of this manual and the software.
- The supplied disk is a CD-ROM. Do not attempt to play the disk on an audio CD player. Doing so may result in irreparable damage to your audio CD player.
- Copying of the commercially available musical data including but not limited to MIDI data and/or audio data is strictly prohibited except for your personal use.
- The screen displays as illustrated in this owner's manual are for instructional purposes, and may appear somewhat different from the screens which appear on your computer.
- Future upgrades of application and system software and any changes in specifications and functions will be announced separately.

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- Steinberg, Cubase, HALion, and Groove Agent are the registered trademarks of Steinberg Media Technologies GmbH.
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- 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.

Welcome to the GO44

Thank you for choosing the Yamaha GO44 Mobile Audio Interface.

The GO44 is a portable IEEE1394 (FireWire®) audio/MIDI interface featuring multi-channel operation and professional-quality audio. Connect the GO44 to a computer equipped with an IEEE1394 (FireWire) port and enjoy the powerful, versatile features of digital audio recording and editing.

In order to take full advantage of the many features and capabilities provided by the GO44, we urge you to read this owner's manual thoroughly before using your GO44 system, and keep the manual in a safe, accessible location for future reference.

Table of contents

Package Contents

The GO44 package contains the following items. Check the contents for missing items.
- GO44 main unit
- AC Power Adaptor (PA-3C)*
- I/O cable
- GO44 Owner's Manual
- 2 CD-ROMs
  (Windows/Macintosh hybrid CD)

- IEEE1394 (FireWire) cable
  (6–pin/6–pin)
- IEEE1394 (FireWire) adaptor
  (4–pin/6–pin)

FireWire

* May not be included depending on your particular area. Please check with your Yamaha dealer.

About the Included Software

The included CD-ROMs contain the following software (driver).

"TOOLS for GO44/GO46" CD-ROM
- Driver/Control Panel installer (Windows)
- Control Panel installer (Macintosh)
- GO44 Owner's Manual (PDF)
- VST Instruments (VSTi)
   HALion SE (Windows/Macintosh)
   Groove Agent SE (Windows/Macintosh)

"Cubase LE" CD-ROM
- Cubase LE (Windows/Macintosh)

(NOTE)
- The serial number necessary for installing Cubase LE (Windows) is printed on a sheet included with the CD-ROM.
- Please install Cubase LE while connected to the internet and enter all required items during installation.
- For Macintosh computers double-click the "Cubase LE.pkg" icon.

- To install VSTi, double-click the following file on the "TOOLS for GO44/GO46" CD-ROM.
  Windows: VSTi Set\Setup VSTi Set.exe
  Macintosh: VSTi Set\Setup VSTi Set.pkg

Power Supply

The GO44 does not have a power switch. The power is automatically turned on when the AC power adaptor is connected. The GO44 can also be powered via the 6–pin/6–pin IEEE1394 (FireWire) port, making an AC power adaptor unnecessary. However, not all IEEE1394 (FireWire) controllers deliver a constant operating voltage — therefore, we recommend using the included AC power adaptor. The AC power adaptor is also useful whenever you would like to conserve the battery power of your laptop. The AC power adaptor is required if your computer only features a 4–pin IEEE1394 (FireWire) port.

Software Installation — Windows users

NOTE Please perform the following steps in the given order. Do not connect the GO44 module to the computer until instructed to do so.

Compatible operating systems

The GO44 can be used only under Windows XP (Home/Professional editions) SP (Service Pack) 1 and SP2. Other Windows versions are not supported. To check your Windows version, right click the [My Computer] icon and select [Properties] from the context menu. You can also access this menu item by clicking: [Start] → [Control Panel] → [System]. The Service Pack can be obtained free of charge from the Microsoft web site (www.microsoft.com).

NOTE
- Refer to the system requirements printed on the package, or in the PDF manual page 24. You can also check the latest system requirements on the Internet.
  http://www.yamahasynth.com/
- If the [System] icon is not shown in the Control Panel, click "Switch to Classic View" in the upper left of the window to display all control panels and icons.

Preparing to Install

Select [Start] → [Control Panel] and go to [System] → [Hardware] → [Driver Signing] → [Driver Signing Options] and check the radio button to the left of "Ignore — Install the software anyway and don't ask for my approval" and click [OK].
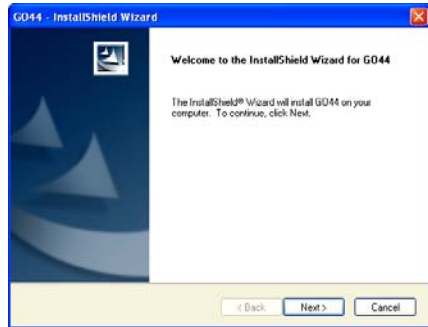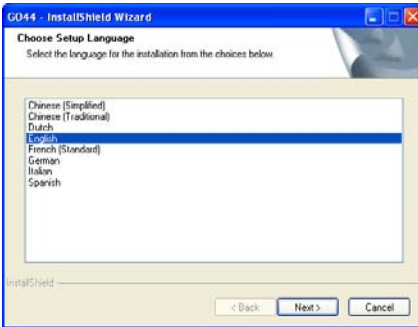

NOTE After completing the installation, make sure to restore the original setting if necessary.
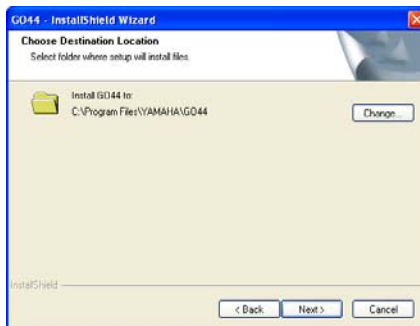
Installing the driver and the Control Panel
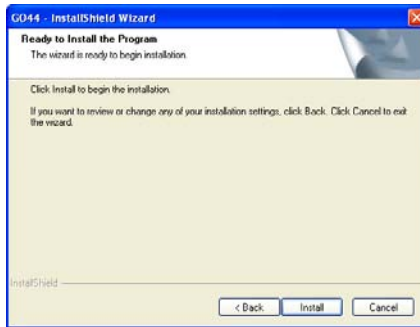
1. Insert the included "TOOLS for GO44/GO46" CD-ROM in the CD-ROM drive of your computer.

2. Double-click on the CD-ROM drive icon in the My Computer menu. Open [GO44Driver_] → [GO44 Setup.exe] to start the InstallShield Wizard.

3. Select a language for the setup wizard and click [Next] to continue with the installation. The welcome message of the InstallShield Wizard appears. Click [Next].

4. If you want to specify a different location, click [Change]. Then click [Next].

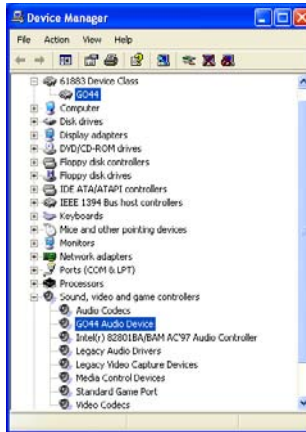**5.**   Click [Install] to start the installation.

6.   As soon as the message shown below appears, connect the GO44 to your computer's IEEE1394 (FireWire) port using the included cable, and click [OK]. Windows XP will automatically recognize the device as new hardware and will open the driver installation dialog.

7.   Check the radio button to the left of "Yes, I want to restart my computer now." and click [Finish] to restart the computer and complete the installation.

8. Once the driver installation is complete, the GO44 should appear as the following entry in the Device Manager. The Device Manager can be found on the Control Panel under [System] → [Hardware]. Then click the [Device Manager] button.

Assigning the GO44 as the default system audio device (Windows)

If you would like to use the GO44 not only for specific audio applications, but as your default Windows audio device, go to the Control Panel, select [Sounds and Audio Devices] → [Audio] and specify the GO44 audio driver as the default device for the desired functions. Since the GO44 is a professional audio interface, the levels can only be adjusted using the included GO44 Control Panel. The Windows mixer is disabled to prevent it from adversely affecting the signal quality.

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Software Installation — Macintosh users

Compatible operating systems

The GO44 can only be used under Mac OS 10.3.4 (OS X) or higher.

NOTE Refer to the system requirements printed on the package, or in the PDF manual page 24. You can also check the latest system requirements on the Internet.
http://www.yamahasynth.com/

Installing the Control Panel

The GO44 uses the operating system's CoreAudio and CoreMIDI drivers. Therefore, it is not necessary to install a device-specific driver. Simply plug the device into your IEEE1394 (FireWire) port using the included cable and the GO44 can be used immediately. However, to take full advantage of the advanced routing, sample rate switching, and other control features, please install the included Control Panel.

1. Insert the included "TOOLS for GO44/GO46" CD-ROM in the CD-ROM drive of your computer.

2. Double-click on the CD-ROM drive icon and open [GO44Driver_] → [GO44 Setup.pkg] to start the InstallShield Wizard.

3. The welcome message of the InstallShield Wizard appears. Click [Continue].

4. Select the hard disk drive where the Mac OS is installed as the destination for the installation. Click [Continue].

5. Click [Install] to start the installation.

6. Click [Restart] to complete the installation.

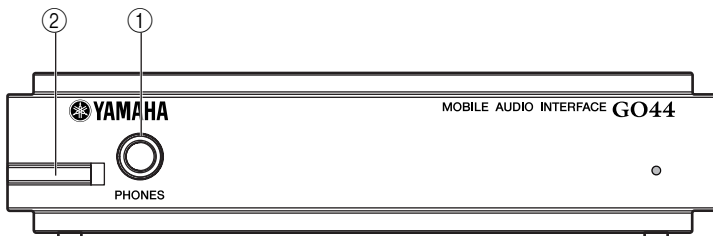NOTE For information about the Control Panel, see page 19 of the PDF manual.

Assigning the GO44 as the default system audio device (Mac OS X)

If you would like to use the GO44 not only for specific audio applications, but as your default Mac OS X audio device, select the GO44 audio driver in the [Sound] control panel as the default device for audio output.
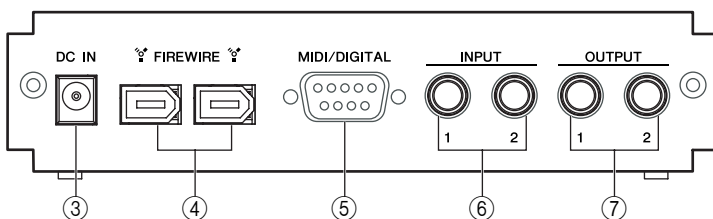
Connectors and controls

Front Panel

① **PHONES jack**
Output for a 1/4" stereo headphone jack. This signal output applies not only to that of the OUTPUT 1/2 jacks (see Rear Panel), but also allows monitoring of other audio channels using the GO44 Control Panel. (See page 19.)

② **VOLUME control**
Adjusts the output level of the PHONES jack. Turn this control to the right to increase the level, and left to decrease it.

Rear Panel

③ **DC IN jack**
Connects the AC power adaptor to this jack.

④ **IEEE1394 (FireWire) port**
Connects the GO44 system to your computer using the included IEEE1394 (FireWire) cable.

⑤ **MIDI / DIGITAL jack**
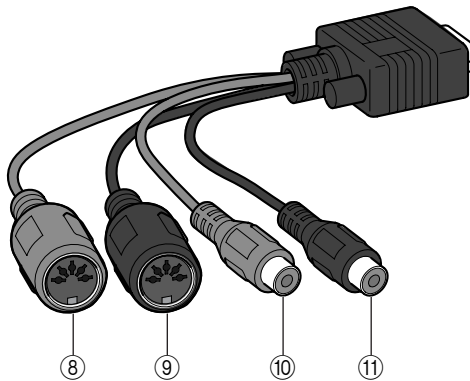For connection of the included I/O cable (page 14), allowing input/output of digital audio and MIDI data.

ⓆⓆ **INPUT 1/2 jacks**
The GO44 System features two high-quality analog mono inputs. The connections have been designed for balanced/unbalanced phone 1/4" jacks. The input levels for these jacks can be selected from three different gain settings, HIGH, MID, and LOW. Refer to page 19 for details on how to make these settings.

⑦ **OUTPUT 1/2 jacks**
The connections have been designed for balanced/unbalanced phone 1/4" jacks for main output. You can connect mixers, powered speakers, or amplifiers. The analog outputs operate with instrument-compatible levels of 2.0 Vrms.

I/O cable

⑧ **MIDI IN jack**
Connects MIDI devices such as MIDI keyboards and DAW controllers. For connecting MIDI devices, connect the MIDI OUT terminal of the MIDI device to this jack using a MIDI cable.

⑨ **MIDI OUT jack**
Connects to MIDI devices such as synthesizers and tone generators. For connecting MIDI devices, connect the MIDI IN terminal of the MIDI device to this jack using a MIDI cable. This can also be used as a MIDI Thru terminal, for MIDI sequence software that allows routing of incoming MIDI data through the OUT jack, using a Thru (or MIDI Echo) function.

⑩ **DIGITAL IN jack**
This coaxial type digital audio jack is for the digital input of audio signals. The interface can receive sample rates of up to 24-bit/96 kHz. The input signal can be adjusted in the Digital Mixer of the GO44 Control Panel. (See page 19.)

When recording from a digital source, make sure that the sampling rates of both devices (e.g. DAT recorder and laptop) are synchronized. The S/PDIF protocol contains a signal called wordclock for this purpose. If the Master Clock switch is set to "EXTERNAL" in the GO44 Control panel, the GO44 will automatically synchronize to it and the "DIGITAL IN" channel will be available in the mixer.

ASIO applications such as Cubase often have an option to switch the hardware from an internal to an external (sometimes also called S/PDIF) clock source. This changeover currently has no effect on the GO44.

(NOTE) Make sure to use RCA pin cables specially made for digital audio applications.

⑪ **DIGITAL OUT jack**

This digital audio jack is for the digital output of audio signals. The interface can transmit sample rates of up to 24-bit/96 kHz. For playback, set the routing in the Control Panel to the digital output. AC3 and DTS can also be played back via the digital output. Select "NON AUDIO" for the digital output in the Control Panel under "ROUTING". (See page 20.) The non-audio signals are not sent to the analog outputs.
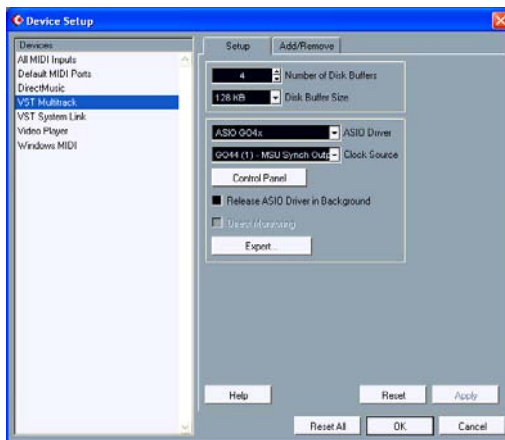
Drivers

Windows drivers

The GO44 audio interface features two kinds of audio drivers that support a variety of applications. The audio drivers support all bit rates between 8 and 24 bits with all common sample rates between 32 and 192 kHz. (Supports digital I/O up to 96 kHz)

MME driver

The Windows MME driver is a multi-channel driver that supports all channels of the GO44. The specific routing options for these drivers can be found in the GO44 Control Panel. In most Windows programs, you will encounter MME drivers with the designation "GO44(GO44 (1)) In 1" for input channel and "GO44(GO44 (1)) MC Out" for output channel.
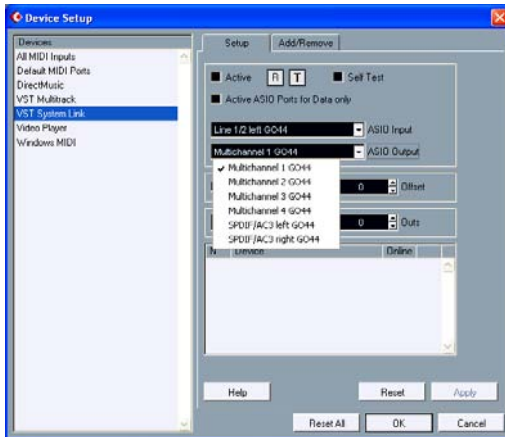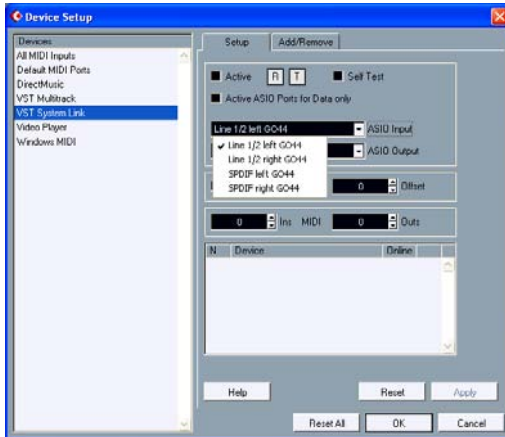
ASIO driver

ASIO (Audio Streaming Input Output) is an audio transfer protocol developed by Steinberg. The advantage of the ASIO driver is the extremely low audio recording and playback delay times, also known as latency. Values of around 5 ms on fast, cleanly configured systems — at sample rates exceeding 96 kHz — are quite realistic. The format also supports sound cards with multiple inputs and outputs — so-called multi-I/O cards, as well as direct monitoring and multi-client mode (ASIO 2.0 or later). In the programs that make use of Steinberg's ASIO interface, the ASIO driver for the GO44 is listed as "ASIO GO4x."

Cubase LE

For Cubase, the inputs are called "Line 1/2 left GO44", "SPDIF left GO44", etc. Also, the outputs (generally called "busses" or "channels") available in the individual programs are generally called "Multichannel 1 GO44", "SPDIF/AC3 left GO44", etc.

Cubase LE

MIDI driver

This driver is for using the GO44 MIDI IN and MIDI OUT ports. The driver is designated as "GO44(GO44 (1)) Midi In 1" (MIDI input) and "GO44(GO44 (1)) Midi Out 1" (MIDI output).
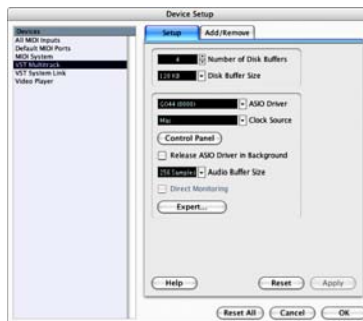
NOTE MIDI files, which can be played back using Windows' media players, are also to be transferred to externally connected devices such as synthesizers and tone generators. Open the "Sounds and Audio Devices Properties" window from the Windows Control Panel, go to "Audio" and set the "MIDI music playback" device to the driver mentioned above.

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Mac OS X drivers

In Mac OS X, the GO44 system is supported completely by Apple CoreAudio and CoreMIDI. Device-specific drivers are not required. If you would like to use the GO44 for the default system sound output, select the GO44 audio driver in [System Preferences] → [Sound] → [Output].

The CoreAudio/MIDI driver can also be selected in DAW applications such as Cubase. Buffer sizes generally can also be configured there to accelerate access to the audio system.

Cubase LE

GO44 Control Panel

The GO44 Control Panel is quite intuitive and should not present beginners with major problems. Here, depending on the requirements of each situation, you can have total control of the audio interface, reduce levels, route inputs to any output or set the Master Clock values.

NOTE   The functions and the positions of the control elements are generally identical between the two platforms, Windows and Mac OS. The following example illustrations have been taken from the Windows version of the Control Panel.

MAIN display

In the MAIN display, you can control the digital mixer of the GO44, set sample rates, route any input to any output, etc.

NOTE   If you are working with common DAW applications, you should also use the DAW for level control. The advantage for doing this is that the settings are usually saved together with your project (song, arrangement etc.)

ANALOG IN / DIGITAL IN

Here you can control the levels of analog input channels in the ANALOG IN column and digital input channels in the DIGITAL IN column. Use the faders to control the levels of corresponding channels. The [MUTE] buttons can be used to mute the individual channels.

In the ANALOG IN column, you can set the gain levels of the INPUT 1/2 jacks. Click the pull-down menu at the top of the ANALOG IN column and select from among the settings "LOW", "MID", and "HIGH" for the input channels. Select "HIGH" to connect low-level equipment such as microphones, and "LOW" to connect high, line-level equipment such as keyboards.

A separate fader is available for each mono channel. The individual channels can be joined using the switchable stereo link function. To turn on/off the stereo link function, click the [PAIR] button. While the stereo link function is active, faders and mute operations are linked.

DIGITAL IN is grayed out until a signal is applied to the digital input and the MASTER CLOCK (page 20) is set to [EXTERNAL].

DAW IN 1/2, 3/4, 5/6

Here you can adjust the levels of the output signals sent from DAW applications.

As with the ANALOG IN / DIGITAL IN, a separate fader is available for each mono channel. The individual channels can be joined using the switchable stereo link function (the [PAIR] button). While the stereo link function is active, faders and mute operations are linked.

To send the mixed signal, [DIGITAL MIXER] must be assigned in the ROUTING section. If [DIGITAL MIXER] is not assigned for any outputs, the operation of the digital mixer is ignored.

MASTER

The overall playback level of the digital mixer can be set with the Master control. In Windows, faders and mute operations can be linked using the stereo link function.

MASTER CLOCK

This controls the sample rate used by the GO44. When digital inputs are not used, click the [INTERNAL] button and choose from all commonly used sample rates from 32 to 192 kHz from the pull-down menu.
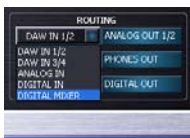
When external devices such as DAT recorders are connected, click the [EXTERNAL] button. The external sample rate is displayed in the box next to the [EXTERNAL] button. If no signal is available or the connection has been interrupted, the message "--------" will be returned.

NOTE

• When a sample rate of 192kHz is selected, only the ANALOG IN (for audio inputs) and DAW IN 1/2 (for audio outputs) columns are available.

• When a sample rate of 192kHz is selected, avoid using MIDI inputs and outputs since this may cause some noise and glitches in the sound.

ROUTING

Selects the output signal sent from the OUTPUT 1/2, PHONES, and DIGITAL OUT jacks. All input signals (DAW IN 1/2, DAW IN 3/4, DAW IN 5/6, ANALOG IN, DIGITAL IN, and DIGITAL MIXER) can be routed to the three output pairs*. Click the three buttons on the left-hand side to open a pull-down menu from which you can select the desired pair. If you intend to use the digital mixer, [DIGITAL MIXER] must also be selected on the input side, otherwise the signal will be sent straight to the output, bypassing the faders.

* For the DIGITAL OUT jack, you can select "NON AUDIO" (as shown above). In this case, AC3 and DTS data will be transmitted only via the digital output.

SETTINGS

Calls up the ASIO control panel (for ASIO driver settings), the SCENES panel for saving the GO44 Control Panel settings, and the ABOUT display for system related information.

The ASIO control panel (Windows only)

Selects a latency value (delay in playing the audio signals) when using the ASIO driver. To open the ASIO panel, click the [ASIO] button in the SETTINGS column of the MAIN display.

If the value is too low (and the sample rate too high), this will negatively affect the performance of your overall system, introducing noise and dropouts. A more powerful computer will support a lower latency setting. With a fast system, you should achieve values of less than 5ms at 96kHz. If problems occur, increase the latency as needed.

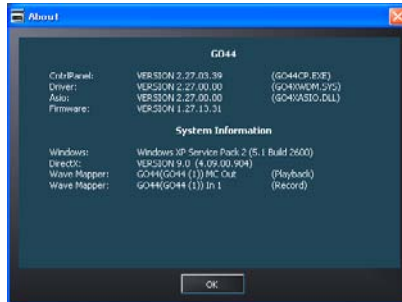Further options are generally available on the relevant panels of ASIO applications such as Cubase, etc.

The SCENES panel

Saves/calls up scenes. A scene is a file in which the Control Panel settings are saved (except settings in the MASTER CLOCK column; page 20). Save the scene and call up the file, and the settings can be reloaded whenever necessary. To open the SCENES panel in Windows, click the [SCENES] button in the SETTINGS column of the MAIN display; on the Macintosh, select [File] → [SCENES] from the GO44 menu.

To save a scene, input a name for the scene in the box located to the left of the [SAVE] button and click the [SAVE] button. To load or delete a saved scene, select the desired scene name from the box and click the [LOAD] or [DELETE] button.

ABOUT

The ABOUT display of the GO44 Control Panel gives you all of the relevant facts on your Control Panel, audio drivers, firmware version, and operating system. To open the ABOUT display in Windows, click the [ABOUT] button in the SETTINGS column of the MAIN display.

> **NOTE** On the Macintosh, if you place the mouse pointer over the YAMAHA logo of the MAIN display, information about your Control Panel, etc. is shown in the bottom of the display.

Specifications

■ **General Specifications**

Bit Depth	8/16/24
Sampling Frequency (kHz)	32/44.1/48/88.2/96/192
Frequency Response	20Hz — 20kHz
Dynamic Range	109dB (Input (Mid) @ 44.1kHz)
Power Consumption	6W

■ **Input/Output Specifications**

Analog Input	Connector	Nominal Input Level	Resolution
INPUT 1/2	TRS Phone (Balanced)	-3dBu (Low)	24bit ADC, up to 192kHz
		+4dBu (Mid)	
		+8dBu (High)	

Analog Output	Connector	Nominal Output Level	Max. Output Level	Resolution
OUTPUT 1/2	TRS Phone (Balanced)	+4dBu	+8dBu	24bit DAC up to 192kHz
PHONES	TRS Phone (Stereo)	—	+16dBu	24bit DAC up to 192kHz

Digital Input/ Output	Connector	Format	Resolution	Other details
DIGITAL IN	RCA Pin (Coaxial)	IEC60958 Consumer use	24bit, up to 96kHz	—
DIGITAL OUT	RCA Pin (Coaxial)	IEC60958 Consumer use	24bit, up to 96kHz	AC3 and DTS Pass Through
IEEE1394 (FireWire)	IEEE1394 6Pin	IEEE1394	—	6INPUT/4OUTPUT Channel (To PC)
MIDI IN/OUT	5pin DIN	MIDI	—	—

System Requirements

GO44

Windows

OS	Windows XP Professional/Home Edition (SP1 or SP2)
CPU	Pentium III 800MHz or higher (Pentium 4 2GHz or higher recommended)
Available Memory	256MB or more (512MB or more recommended)
IEEE1394 (FireWire) terminal*	

* The computer must have an IEEE 1394 (FireWire) terminal. If there is no terminal, install an IEEE 1394 interface card (PCI or PCMCIA).

Macintosh

OS	Mac OS X 10.3.4 or later
CPU	G4 800MHz or higher (G5 1.8GHz or higher recommended)
Available Memory	256MB or more (512MB or more recommended)

CUBASE LE

Windows

OS	Windows 2000/Windows XP Professional/Home Edition
CPU	Pentium III 500MHz or higher (Pentium III 1GHz or higher recommended)
Available Memory	256MB or more (512MB or more recommended)
Hard Disk	1GB or more

Macintosh

OS	Mac OS X 10.3.3 or later
CPU	G4 450MHz or higher
Available Memory	256MB or more (512MB or more recommended)
Hard Disk	1GB or more

HALion SE/Groove Agent SE

Windows

OS	Windows XP Professional/Home Edition
CPU	Pentium III 800MHz or higher (Pentium 4 2.8GHz or higher recommended)
Available Memory	384MB or more (512MB or more recommended)
Hard Disk	512MB or more

Macintosh

OS	Mac OS X 10.3 or later
CPU	G4 867MHz or higher (G5 Dual 1.8GHz or higher recommended)
Available Memory	384MB or more (512MB or more recommended)
Hard Disk	512MB or more

Troubleshooting

■ **The GO44 won't turn on.**
· Is the supplied power adaptor properly plugged into both the GO44 and an appropriate AC wall outlet?
· If you are using a 4–pin/6–pin IEEE1394 (FireWire) adaptor to connect the GO44 to the computer with a 4–pin type IEEE1394 (FireWire) port, use the included AC power adaptor. (See page 7.)

■ **The system doesn't work properly.**
· Are you using an IEEE1394 (FireWire) Repeater?
  IEEE1394 (FireWire) Repeater hubs can interfere with proper operation, so try connecting the GO44 directly to an IEEE1394 (FireWire) port on the computer. If the computer has multiple IEEE1394 (FireWire) ports, try a different port.
· If you are using other IEEE1394 (FireWire) devices at the same time, try removing the other device(s) and connecting only the Yamaha IEEE1394 (FireWire) device.
· Does your computer satisfy the system requirements? (See page 24.)
· (For Windows) Install the driver again.

■ **(For Windows) Cannot install the driver.**
· Does your computer satisfy the system requirements? (See page 24.)
· Install the driver again.

■ **(For Windows) The "Found New Hardware Wizard" window is displayed.**
· Is the driver installed? (See page 8.)
· Cancel the Wizard and install the driver again.

■ **No sound or very low volume level**
· Are speakers or headphones connected correctly?
· Is your amp and other external devices turned on?
· Is the signal from the external device being input?
· Are all the level settings (of any tone generators, audio devices, application software, computer operating system, etc.) appropriate?
· Are the output channels muted in the OS (computer) or the GO44 Control Panel?
· The connection cable from the external device may be broken.
· Is the wordclock setting correct for both the GO44 and the external device(s)? (See page 20.)
· Is the output jack for the audio data assigned in the DAW software (Cubase LE, etc.)?
  For details, refer to the respective owner's manual.
· Try disconnecting the IEEE1394 (FireWire) cable and after a while connect it again.

■ **Distorted sound**
· Does your computer satisfy the system requirements? (See page 24.)
· Is the gain level set correctly in the GO44 Control Panel? (See page 19.)
· The connection cable from the external device may be broken.
· Is the wordclock setting correct for both the GO44 and the external device(s)? (See page 20.)
· Make sure audio data was recorded at an appropriate level.

Troubleshooting

■ **Noise is audible.**
· (For Windows) Is the latency setting of the ASIO Driver appropriate? (See page 21.)
· (For Windows) When using Cubase LE with a computer which the Hyper Threading is on, set as follows on Cubase LE.
   Select [Devices] → [Device Setup] → [VST Multitrack] → [Expert] and check the box to the left of "Multi Processing" and click [OK].
· (For Windows) Setting Hyper Threading to off in the BIOS settings may solve the problem.
· Is the wordclock setting correct for both the GO44 and the external device(s)? (See page 20.)
· If the speed of your computer's hard disk is slow, problems may occur during recording and playback.
· If you connect/disconnect the LAN, USB or the cables to the mini jacks terminals you are using while recording/playback, some noise may be caused and/or data may be cut off. Make sure that you do not insert or unplug any connections while recording/playback.
· Is the sample rate (wordclock) appropriate? A high sample rate can be the cause of the noise depending on the computer capacity and speed. (See page 20.)
· Use of MIDI inputs and outputs when the sample rate is set to 192kHz may cause some noise and glitches in the sound. Do not use MIDI inputs and outputs when the sample rate is set to 192 kHz.
· Try disconnecting the IEEE1394 (FireWire) cable and after a while connect it again.

■ **Cannot resume or suspend the computer correctly.**
· To protect the data you are working on, the computer prevents resuming or suspending the computer while the DAW applications/ sequencer software is active. Close the application to resume or suspend your computer.

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Tel: 55-5804-0600

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Sao Paulo-SP. Brasil
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Sucursal de Argentina
Viamonte 1145 Piso2-B 1053,
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Tel: 1-4371-7021

PANAMA AND OTHER LATIN AMERICAN COUNTRIES/ CARIBBEAN COUNTRIES
Yamaha Music Latin America, S.A.
Torre Banco General, Piso 7, Urbanización Marbella,
Calle 47 y Aquilino de la Guardia,
Ciudad de Panamá, Panamá
Tel: +507-269-5311

EUROPE

THE UNITED KINGDOM
Yamaha-Kemble Music (U.K.) Ltd.
Sherbourne Drive, Tilbrook, Milton Keynes,
MK7 8BL, England
Tel: 01908-366700

IRELAND
Danfay Ltd.
61D, Sallynoggin Road, Dun Laoghaire, Co. Dublin
Tel: 01-2859177

GERMANY
Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: 04101-3030

SWITZERLAND/LIECHTENSTEIN
Yamaha Music Central Europe GmbH,
Branch Switzerland
Seefeldstrasse 94, 8008 Zürich, Switzerland
Tel: 01-383 3990

AUSTRIA
Yamaha Music Central Europe GmbH,
Branch Austria
Schleiergasse 20, A-1100 Wien, Austria
Tel: 01-60203900

CZECH REPUBLIC/SLOVAKIA/ HUNGARY/SLOVENIA
Yamaha Music Central Europe GmbH,
Branch Austria, CEE Department
Schleiergasse 20, A-1100 Wien, Austria
Tel: 01-602039025

POLAND
Yamaha Music Central Europe GmbH
Sp.z. o.o. Oddzial w Polsce
ul. 17 Stycznia 56, PL-02-146 Warszawa, Poland
Tel: 022-868-07-57

THE NETHERLANDS/ BELGIUM/LUXEMBOURG
Yamaha Music Central Europe GmbH,
Branch Benelux
Clarissenhof 5-b, 4133 AB Vianen, The Netherlands
Tel: 0347-358 040

FRANCE
Yamaha Musique France
BP 70-77312 Marne-la-Vallée Cedex 2, France
Tel: 01-64-61-4000

ITALY
Yamaha Musica Italia S.P.A.
Combo Division
Viale Italia 88, 20020 Lainate (Milano), Italy
Tel: 02-935-771

SPAIN/PORTUGAL
Yamaha-Hazen Música, S.A.
Ctra. de la Coruna km. 17, 200, 28230
Las Rozas (Madrid), Spain
Tel: 91-639-8888

GREECE
Philippos Nakas S.A. The Music House
147 Skiathou Street, 112-55 Athens, Greece
Tel: 01-228 2160

SWEDEN
Yamaha Scandinavia AB
J. A. Wettergrens Gata 1
Box 30053
S-400 43 Göteborg, Sweden
Tel: 031 89 34 00

DENMARK
YS Copenhagen Liaison Office
Generatorvej 6A
DK-2730 Herlev, Denmark
Tel: 44 92 49 00

FINLAND
F-Musiikki Oy
Kluuvikatu 6, P.O. Box 260,
SF-00101 Helsinki, Finland
Tel: 09 618511

NORWAY
Norsk filial av Yamaha Scandinavia AB
Grini Næringspark 1
N-1345 Østerås, Norway
Tel: 67 16 77 70

ICELAND
Skifan HF
Skeifan 17 P.O. Box 8120
IS-128 Reykjavik, Iceland
Tel: 525 5000

OTHER EUROPEAN COUNTRIES
Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: +49-4101-3030

AFRICA

Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2312

MIDDLE EAST

TURKEY/CYPRUS
Yamaha Music Central Europe GmbH
Siemensstraße 22-34, 25462 Rellingen, Germany
Tel: 04101-3030

OTHER COUNTRIES
Yamaha Music Gulf FZE
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P.O.Box 17328, Dubai, U.A.E.
Tel: +971-4-881-5868

ASIA

THE PEOPLE'S REPUBLIC OF CHINA
Yamaha Music & Electronics (China) Co.,Ltd.
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Jingan, Shanghai, China
Tel: 021-6247-2211

HONG KONG
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PT. Nusantik
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Gatot Subroto Kav. 4, Jakarta 12930, Indonesia
Tel: 21-520-2577

KOREA
Yamaha Music Korea Ltd.
Tong-Yang Securities Bldg. 16F 23-8 Yoido-dong, Youngdungpo-ku, Seoul, Korea
Tel: 02-3770-0660

MALAYSIA
Yamaha Music Malaysia, Sdn., Bhd.
Lot 8, Jalan Perbandaran, 47301 Kelana Jaya,
Petaling Jaya, Selangor, Malaysia
Tel: 3-78030900

PHILIPPINES
Yupangco Music Corporation
339 Gil J. Puyat Avenue, P.O. Box 885 MCPO,
Makati, Metro Manila, Philippines
Tel: 819-7551

SINGAPORE
Yamaha Music Asia Pte., Ltd.
#03-11 A-Z Building
140 Paya Lebor Road, Singapore 409015
Tel: 747-4374

TAIWAN
Yamaha KHS Music Co., Ltd.
3F, #6, Sec.2, Nan Jing E. Rd. Taipei.
Taiwan 104, R.O.C.
Tel: 02-2511-8688

THAILAND
Siam Music Yamaha Co., Ltd.
891/1 Siam Motors Building, 15-16 floor
Rama 1 road, Wangmai, Pathumwan
Bangkok 10330, Thailand
Tel: 02-215-2626

OTHER ASIAN COUNTRIES
Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2317

OCEANIA

AUSTRALIA
Yamaha Music Australia Pty. Ltd.
Level 1, 99 Queensbridge Street, Southbank,
Victoria 3006, Australia
Tel: 3-9693-5111

NEW ZEALAND
Music Houses of N.Z. Ltd.
146/148 Captain Springs Road, Te Papapa,
Auckland, New Zealand
Tel: 9-634-0099

COUNTRIES AND TRUST TERRITORIES IN PACIFIC OCEAN
Yamaha Corporation,
Asia-Pacific Music Marketing Group
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2312

HEAD OFFICE **Yamaha Corporation, Pro Audio & Digital Musical Instrument Division**
Nakazawa-cho 10-1, Hamamatsu, Japan 430-8650
Tel: +81-53-460-2445

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YAMAHA