MR 816 csx

MR 816 x

ADVANCED INTEGRATION DSP STUDIO

⊙ steinberg

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 : ADVANCED INTEGRATION DSP STUDIO
Model Name : MR816CSX/MR816X

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two 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.

OBSERVERA!
Apparaten kopplas inte ur växelströmskällan (nätet) så länge som den ar ansluten till vägguttaget, även om själva apparaten har stängts av.

ADVARSEL: Netspændingen til dette apparat er IKKE afbrudt, sålæenge netledningen siddr i en stikkontakt, som er t endt — også selvom der or slukket på apparatets afbryder.

VAROITUS: Laitteen toisiopiiriin kytketty käyttökytkin ei irroita koko laitetta verkosta.

(standby)

IMPORTANT NOTICE FOR THE UNITED KINGDOM
Connecting the Plug and Cord

IMPORTANT. The wires in this mains lead are coloured in accordance with the following code:
BLUE   : NEUTRAL
BROWN   : LIVE
As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured makings identifying the terminals in your plug proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Making sure that neither core is connected to the earth terminal of the three pin plug.

• This applies only to users in the United Kingdom.   (2 wires)

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 Steinberg/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 Steinberg/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, Steinberg/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 Steinberg/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 Steinberg/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:
Steinberg/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 Steinberg/Yamaha directly.

NAME PLATE LOCATION:
The name plate is located on the top panel of the product. The name plate lists the product's model number, power requirements, and other information. The serial number is located on the rear panel. Please record the model number, serial number, and date of purchase in the spaces provided below, and keep this manual as a permanent record of your purchase.

Model _____

Serial No. _____

Purchase Date _____

PLEASE KEEP THIS MANUAL

Table of Contents

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-30 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 Steinberg/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. If any liquid such as water seeps into the instrument, turn off the power immediately and unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Steinberg/Yamaha service personnel.
- 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 turn off the power switch, disconnect the adaptor plug from the outlet, and have the instrument inspected by qualified Steinberg/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.
- Before moving the instrument, remove all connected adaptor and other cables.
- When setting up the product, make sure that the AC outlet you are using is easily accessible. If some trouble or malfunction occurs, immediately turn off the power switch and disconnect the plug from the outlet. Even when the power switch is turned off, electricity is still flowing to the product at the minimum level. When you are not using the product for a long time, make sure to unplug the power cord from the wall AC outlet.
- Use only the rack specified for the instrument. When attaching the stand or rack, use the provided screws only. Failure to do so could cause damage to the internal components or result in the instrument falling over.
- Do not place objects in front of the instrument's air vent, since this may prevent adequate ventilation of the internal components, and possibly result in the instrument overheating.

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

- Take care that the key cover does not pinch your fingers, and do not insert a finger or hand in any gaps on the instrument.
- Never insert or drop paper, metallic, or other objects into the gaps on the panel. If this happens, turn off the power immediately and unplug the power cord from the AC outlet. Then have the instrument inspected by qualified Steinberg/Yamaha service personnel.
- Do not place vinyl, plastic or rubber objects on the instrument, since this might discolor the panel.
- 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.

Saving data

Saving and backing up your data

- Storing the settings to internal memory of the MR816 CSX/MR816 X must be performed from the MR Editor on the computer. If you use the MR816 CSX/MR816 X with MR Editor, you can store the settings to internal memory by storing the settings as a Scene or recalling the Scene on the MR Editor. Also, you can save 20 Scenes as an Editor file to the computer. If you use the MR816 CSX/MR816 X with Cubase, you cannot store the settings to internal memory of the MR816 CSX/MR816 X. Save the settings as a project file to the computer. You should also save your Project files or Editor files onto external media as backup to avoid the loss of important data due to equipment malfunction or improper operation.
- If you want to store the settings edited on the MR816 CSX/MR816 X without a computer, launch the MR Editor with the computer and MR connected, then perform the Scene Store operation. This operation will store the settings to the internal memory of the MR816 CSX/MR816 X and the MR Editor as a Scene.

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

Always turn the power off when the instrument is not in use.

Even when the power switch is in the "STANDBY" position, electricity is still flowing to the instrument at the minimum level. When you are not using the instrument for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

Information

- This manual is the exclusive copyrights of Yamaha Corporation.
- The screen displays as illustrated in this manual are for instructional purposes, and may appear somewhat different from the screens which appear on your computer.
- This product incorporates and bundles computer programs and contents in which Steinberg Media Technologies GmbH and Yamaha Corporation own copyrights or with respect to which it has license to use others' copyrights. Such copyrighted materials include, without limitation, all computer software, style files, MIDI files, WAVE data, musical scores and sound recordings. Any unauthorized use of such programs and contents outside of personal use is not permitted under relevant laws. Any violation of copyright has legal consequences. DON'T MAKE, DISTRIBUTE OR USE ILLEGAL COPIES.
- 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.
- Steinberg and Cubase are the registered trademarks of Steinberg Media Technologies GmbH.
- Windows is a registered trademark of Microsoft® Corporation in the United States and other countries.
- Apple, Mac and Macintosh are trademarks of Apple Inc., registered in the U.S. and other countries.
- ADAT is a trademark of Alesis registered in U.S. and other countries. **adat**
- FireWire and the FireWire symbol are trademarks of Apple Inc., registered in the U.S. and other countries. The FireWire logo is a trademark of Apple Inc.
- The company names and product names in this manual are the trademarks or registered trademarks of their respective companies.

FireWire

Introduction

Thank you for purchasing the ADVANCED INTEGRATION DSP STUDIO MR816 CSX/MR816 X. This audio interface device enables you to transfer the digital/analog audio signals between the DAW software such as Cubase on your computer and the audio equipments including the electronic musical instrument, guitar and microphone. Furthermore, this product features the Link functions with the Cubase resulting that you can build the convenient music production studio.

The MR816 CSX/MR816 X provides the two manuals: "Getting Started" manual (this manual) and "Operation Manual" (PDF file included in the accessory disk). The Getting Started manual (this book) covers the introduction for using the MR816 CSX/MR816 X, such as how to install the necessary software and how to connect the audio device and computer to this product. On the other hand, the Operation Manual (PDF file) covers the details about the functions of the MR816 CSX/MR816 X and instructions. Please read the Getting Started manual (this book) at first, then read the Operation Manual (PDF file) so that you can take full advantage of its superlative features and enjoy trouble-free operation for years to come. After reading this manual, please keep it available for future reference.

Main Features

Link with Cubase

Install the included software and you can link the MR816 CSX/MR816 X with Cubase for seamless operation-for example, monitoring the Cubase-mixed sound with no latency, and one-button-press assignment of audio inputs to Cubase tracks. The flagship model of Cubase can also use the convenient Control Room feature with the MR816. For details about the Link function, refer to page 21.

High-quality sound

The MR816 CSX/MR816 X is equipped with eight discrete head amplifiers using the Inverted Darlington Circuitry Design, for superior, highly musical sound with minimal distortion and noise.

Mixer function and useful monitoring

The mixer function (with DSP processor) lets you input up to sixteen channels of audio and mix down to eight channels of stereo. Two of these stereo outputs can be assigned for separate monitoring through headphones connected to the PHONE jacks on the front panel. What's more, the monitor sound can be processed with the REV-X reverb effect, allowing you to have a full and natural monitor sound without latency delays.

Versatile input/output jacks for professional studio use

The MR816 CSX/MR816 X is equipped with eight mono input jacks (MIC/LINE/HI-Z jack and MIC/LINE jack on the front panel and MIC/LINE/INPUT jacks on the rear panel) which accept both XLR-3-31 and TRS phone plug type connectors. In addition, each of these jacks provides a [PAD] button which enables connection of a wide range of instruments and devices-from condenser microphones to synthesizers and other line-level instruments.
The MIC/LINE/HI-Z jack is compatible with HI-Z (high impedance) inputs, allowing you to connect instruments with high output impedance, such as electric guitar or bass. The MIC/LINE/HI-Z jack and MIC/LINE jack are routed to the INSERT I/O jacks on the rear panel, letting you apply a desired effect (different from the internal one) to the sound already input from the external device. Furthermore, the WCL (Word Clock) jack and the digital jacks are also provided for comprehensive compatibility with devices and applications in professional studios.

Sweet Spot Morphing Channel Strip effect (MR816 CSX only)

The MR816 CSX is equipped with eight independent blocks of the Sweet Spot Morphing Channel Strip effect using the new Sweet Spot Morphing Technology developed by Yamaha. These give you a variety of specially programmed compressor/equalizer settings into which are distilled years of extensive professional engineering experience, letting you quickly and easily achieve professional-level results for your sound by simple panel operations. When connecting the MR816 CSX to a computer, this effect can be applied to the audio signal transferred/recorded to the DAW software (such as Cubase) as well as the sound from audio equipment such as keyboards, guitars and microphones. In addition, a dedicated window lets you create more detailed settings for this effect unit.

REV-X effect

The MR816 CSX/MR816 X is equipped with the REV-X Effect, a high-quality digital reverb effect unit which can be applied to all input channels. When connecting the MR816 CSX/MR816 X to a computer, this reverb can be applied to the input signal coming from the DAW software as well as the sound from audio equipment such as keyboards, guitars and microphones. In addition, a dedicated window lets you create more detailed settings for this effect unit.

Daisy-chain connection of up to three devices

Up to three MR816 CSX/MR816 Xs (two devices when the Sample Rate is set to 88.2 kHz or 96 kHz) can be connected in daisy-chain fashion. You can expand the input/output channels simply by connecting the MR816 CSX/MR816 X additionally to the existing device via an IEEE1394 cable.

Package Contents

This package contains the following items. After opening the package, make sure that it includes all of the items listed below.

● **MR816 CSX/MR816 X**

● **AC power adaptor (PA-30 or equivalent)***

● **MR816 CSX/MR816 X Getting Started (this book)**

● **IEEE1394 cable**

● **Cubase AI DVD-ROM**

● **TOOLS for MR CD-ROM**

● **Rubber stoppers x 4****

*　　May not be included depending on your particular area. Please check with your Yamaha dealer.
**　　The rubber stoppers included in this package can be attached to the specified location on the bottom panel of this device to prevent slippage when it is to be used on a slipper surface.

About the Disks included in the Package

Disk Contents

Each of the included disks contains the following software (driver).

TOOLS for MR CD-ROM

● **TOOLS for MR installer**
Executing this installer will install "Yamaha Steinberg FW Driver," "Steinberg MR Editor" and "Steinberg MR Extension" in order.

● **MR816 CSX/MR816 X Operation Manual (PDF)**
For complete and detailed information about the MR816 CSX/MR816 X, refer to this PDF manual.
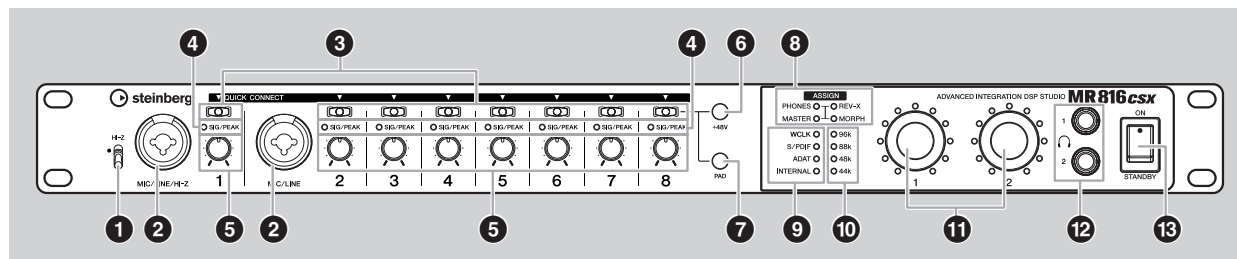
Cubase AI DVD-ROM

● **Cubase AI**

NOTE 🖉

·　To view PDF files, you must install Adobe Reader on your computer. If you do not have Adobe Reader, you can download the application from the Adobe website at the following URL:
　http://www.adobe.com/

Special Notices for the Accessory Disks

· Steinberg and Yamaha make no representations or warranties with regard to any problems while attempting to copy the disks or software and cannot be held responsible for the results of attempts to copy the data.

· These disks are NOT for audio/visual purpose. Do not attempt to play the disks on a CD/DVD player. Doing so may result in irreparable damage to your audio CD/DVD player.

· The software (Yamaha Steinberg FW Driver, Steinberg MR Editor and Steinberg MR Extension) included in the TOOLS for MR CD-ROM and the copyrights thereof are under exclusive ownership by Yamaha.

· The software included in the Cubase AI DVD-ROM and the copyrights thereof are under exclusive ownership by Steinberg Media Technologies GmbH.

· Copying/reproduction of the software in whole or in part by any means is expressly forbidden without the written consent of the manufacturer.

· For latest information of the software included in the accessory disks, refer to the web site below. Future upgrades of application and system software and any changes in specifications and functions will be announced separately on the web site.
  http://service.steinberg.de/goto.nsf/show/supportupdates_mr816_gb

The Controls and Connectors

Front Panel

❶ **[HI-Z] switch**

❷ **MIC/LINE/HI-Z jack 1 (analog input jack 1) and MIC/LINE jack 2 (analog input jack 2)**

❸ **[QUICK CONNECT] buttons (with LED lamps)**

❹ **[SIG/PEAK] lamps**

❺ **Gain knobs 1 – 8**

❻ **[+48V] button (phantom power button; with LED lamps)**

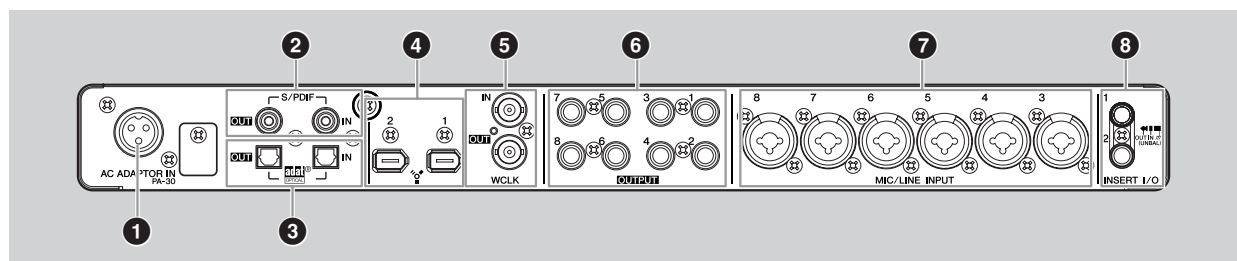❼ **[PAD] button (with LED lamps)**

❽ **[ASSIGN] lamps**

NOTE

· The [MORPH] lamp is available only on the MR816 CSX. The MR816 X is not equipped with the [MORPH] lamp.

❾ **Word Clock Source lamps**

❿ **Sample Rate lamps**

⓫ **Multi Function encoder knobs 1 and 2 (with LED lamps)**

⓬ **Headphone jacks 1 and 2**

⓭ **[STANDBY/ON] switch**

Rear Panel

❶ **AC ADAPTOR IN jack**

❷ **S/PDIF IN/OUT jack**

❸ **OPTICAL IN/OUT jack**

❹ **IEEE1394 jack 1 and 2**

❺ **WCLK IN/OUT jack (wordclock in/out jack)**

❻ **OUTPUT jacks 1 – 8 (analog output jacks 1 – 8)**

❼ **MIC/LINE INPUT jacks 3 – 8 (analog input jacks 3 – 8)**

❽ **INSERT I/O jacks 1 and 2**

Turning the Power On and Off

Power Supply

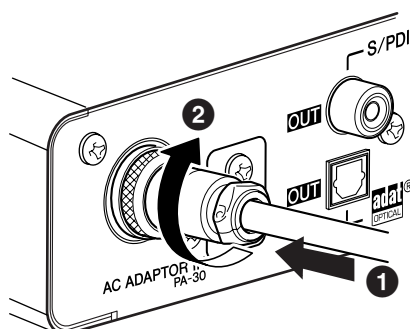**1**   **Make sure that the [STANDBY/ON] switch of the MR816 CSX/MR816 X is in the STANDBY position.**

⚠ WARNING

- Use only the included power adaptor (PA-30) or an equivalent recommended by Yamaha). Use of a different adaptor may result in equipment damage, overheating, or fire. Doing so will also immediately void the product warranty, even if the effective warranty period has not expired.

2   **Connect the power adaptor to the AC ADAPTOR IN jack (❶) on the rear panel of the MR816 CSX/ MR816 X, then turn the fastening ring clockwise (❷) to secure the connection.**

3   **Plug the power adaptor into a standard household power outlet.**

NOTE 🖉

- Be sure to unplug the adaptor from the outlet when you are not using the MR816 CSX/MR816 X, or when lightning storms are expected in your area.
- Make sure that there is adequate distance between the power adaptor and the MR816 CSX/MR816 X. Otherwise, noise may be generated.

Turning the Power On and Off

1   **To turn the power on, press the [STANDBY/ON] switch to the ON position.**

2   **To turn the power off, press the [STANDBY/ON] switch to the STANDBY position.**

⚠ CAUTION

- Note that a small amount of current continues to flow while the switch is in the STANDBY position. If you do not plan to use the MR816 CSX/MR816 X for an extended period of time, please be sure to unplug the adaptor from the wall outlet.

NOTE 🖉

- To prevent sudden loud sounds from being produced from your speakers, power-on your equipment starting at the audio source (instrument, mic, CD player, etc.) and working downstream.
  Example:
  Instruments, microphines, CD players, and other peripheral devices → MR816 CSX/MR816 X → Powered speakers (power amps)

When turning the power off, reverse the above sequence.

⚠ WARNING

- Before you connect external devices to the MR816 CSX/ MR816 X, turn off the power to all devices. Before turning the power on or off to all components, set all volume levels to minimum (0). Otherwise, electrical shock or damage to the components may occur.

Software Installation

To use the MR816 CSX/MR816 X, you must first install the software on the computer. This section explains the software installation. Install Cubase AI before you install TOOLS for MR.

NOTE 🖉

· If you have already installed a version of Cubase (page 21) compatible with the Link function, the instructions for "Installing Cubase AI" are not necessary. Jump to the next section "Installing TOOLS for MR."

Installing Cubase AI

NOTE 🖉

· You are only permitted to use this software pursuant to the terms and conditions of the "Steinberg Software End User License Agreement (EULA)" shown during the installation.
· In order to have continuous use of Cubase AI, including support and other benefits, you will need to register the software and to activate your software license by starting it while the computer is connected to the Internet. Click the "Register Now" button shown when the software is started, then fill in all required fields for registration. If you do not register the software, you will be unable to use it after a limited period of time expires.

1 **Start the computer and log on to the Administrator account.**

2 **Insert the Cubase AI DVD-ROM into the DVD-ROM drive.**

3 **When the "WELCOME TO CUBASE AI" window appears, choose your preferred language by clicking on the corresponding national flag icon.**

NOTE 🖉

· If this window does not appear automatically, open the DVD-ROM then double-click the file "Start Center."

4 **Follow the onscreen instructions to install the software.**

Installing TOOLS for MR

⚠️ *CAUTION*

• Keep in mind that noise may be generated when installing or uninstalling the TOOLS for MR. Before performing either of these operations, make sure to lower the output level of each device.

NOTE 🖉

· You are only permitted to use this software pursuant to the terms and conditions of the "License Agreement" shown during the installation.

TOOLS for MR consists of three software components: Yamaha Steinberg FW Driver, Steinberg MR Editor and Steinberg MR Extension. Yamaha Steinberg FW Driver enables audio signals to be transferred between a computer and the MR816 CSX/MR816 X via IEEE1394 cables. Steinberg MR Editor enables you to perform all settings on the MR816 CSX/MR816 X (including basic parameters and system-related parameters), allowing you to remotely control the MR816 CSX/MR816 X from the computer and save parameter settings for the MR816 CSX/MR816 X as a file. Steinberg MR Extension enables you to use the Link function between the MR816 CSX/MR816 X and versions of Cubase (page 21) that are compatible with this function. The TOOLS for MR Installer installs these three software components.

> **If using a Windows installed Yamaha n Driver, Yamaha AI Driver, or mLAN Driver/mLAN Tools:**
> Uninstall the driver software before installing the TOOLS for MR. If you want to use mLAN devices with the same computer, you don't need to uninstall the mLAN Driver/mLAN Tools.
>
> **NOTE** 🖉
>
> · If you are using mLAN Driver/mLAN Tools V1.6.2, update them to V1.6.3 (or higher) before installing the Yamaha Steinberg FW Driver. This is necessary because the Yamaha Steinberg FW Driver cannot work together with the mLAN Driver/mLAN Tools V1.6.2 installed.
> · When using the Yamaha Steinberg FW Driver, make sure to disable the mLAN Driver. If this is enabled (on), Yamaha Steinberg FW Driver cannot work because the mLAN Driver uses the IEEE1394 interface.
> · When using the mLAN Driver, make sure to turn off any devices compatible with the Yamaha Steinberg FW Driver or disconnect them from the computer before enabling the mLAN driver.
> · Note that you may not need to disable the mLAN driver when the computer is equipped with multiple IEEE1394 interfaces and a device compatible with the Yamaha Steinberg FW Driver is connected to the different IEEE1394 interface from the other used by the mLAN driver.

■ Windows XP:

Preparing to install

1 **Make sure that the power to the MR816 CSX/MR816 X is turned off.**

2 **Using an IEEE1394 cable, connect the MR816 CSX/MR816 X directly to the computer (without using a hub), and disconnect all other IEEE1394 devices from the computer.**

3 **Start the computer and log on to the Administrator account.**

4 **Select [Start] (→ [Settings]) → [Control Panel].**
If the control panel appears as category view, click "Switch to Classic View" in the upper left of the control panel.
All control panels and icons will be displayed.

5 **Go to [System] → [Hardware] → [Driver Signing] → [Driver Signing Options], and select 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.

6 **Check that no "!" or "x" marks appear next to "IEEE1394 Bus host controllers" in ([System] → [Hardware] →) [Device Manager].**
If one of these marks is shown, the IEEE1394/i.LINK connection cannot be used. Refer to the owner's manual of your computer for details.

7 **Close the Device Manager window, System Properties window and Control Panel by clicking the [OK] button or the Close button ([X]) of the windows.**

8 **Exit any open applications and close all open windows.**

9 **Insert the TOOLS for MR CD-ROM into the CD-ROM drive.**

Installation

The installer will install the following three software components to your computer.
· Yamaha Steinberg FW Driver
· Steinberg MR Editor
· Steinberg MR Extension

NOTE

· Use the Cancel button or Close button to quit the installation. Quitting by using the [Ctrl]+[Alt]+[Delete] buttons or by turning off the power while installation is in process can result in problems since the installation is terminated without performing a proper uninstall.

10 **Open the CD-ROM, then double-click the file "setup.exe."**
A "Welcome to the InstallShield Wizard for TOOLS for MR" window appears.

11 **Click [Next].**

12 **Follow the on-screen instructions in the Setup window for Yamaha Steinberg FW Driver, Steinberg MR Editor and Steinberg MR Extension appearing in order.**

NOTE

· If the same version of each software component has already been installed in your computer, the installation window of the corresponding software will not appear.
· If a message "The software you are installing has not passed Windows Logo Testing" appears, click [Continue Anyway]. You do not need to abort the installation. If the message does not appear, proceed to the next step.

13 **When installation is complete, a message indicating so appears. If restarting of the computer is necessary following successful completion of the installation, make sure that the radio button to the left of "Yes, I want to restart my computer now" is selected, then click [Finish] to restart the computer. If restarting the computer is unnecessary, click [Finish] to exit the installation process.**

> **When canceling the installation:**
> If you've cancelled an installation before it is complete, the software may not have been installed properly. To install the software properly, resume the procedure from Step **10**.

Initial settings of driver

After you've installed TOOLS for MR, perform the initial settings of the driver.

NOTE

· A dialog box may appear asking you whether you wish to connect to Windows Update. In this case, select the radio button to the left of "Not at this time," then click [Next].

Bus driver initial settings

14 **The "Found New Hardware Wizard" window appears. Select the radio button next to "Install the software automatically [Recommended]," then click [Next].**

15 **When installation is complete, a message indicating so appears.**
Click [Finish].

NOTE

· If multiple IEEE1394 interfaces have been installed to the computer, the wizard appears several times. Exit the wizard each time.

Initial Settings of MR816 Series Driver

16 **Turn on the power to the MR816 CSX/MR816 X.**
The "Found New Hardware Wizard" window is displayed.

17 **Select the radio button next to "Install the software automatically [Recommended]," then click [Next].**

18 **When installation is complete, a message indicating so appears.**
Click [Finish].

WDM Audio driver initial settings

19 **The "Found New Hardware Wizard" window appears. Select the radio button next to "Install the software automatically [Recommended]," then click [Next].**

20 **When installation is complete, a message indicating so appears.**
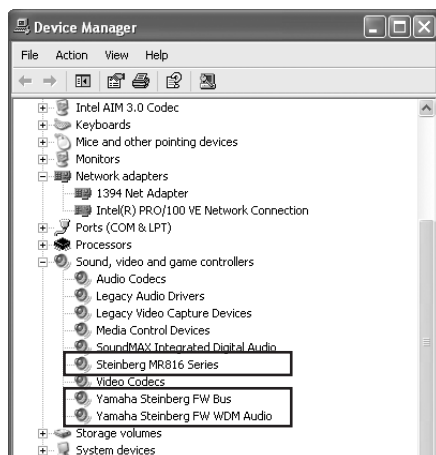Click [Finish].
The Clock Source lamps and the Sample Rate lamps of the MR816 CSX/MR816 X flash sequentially then the flashing stops indicating that the initial settings have been completed.

NOTE

· When a new IEEE1394 interface is installed to the computer or the second or later MR816 CSX/MR816 X is connected to the computer, the "Found New Hardware Wizard" window will appear. In that case, finish the wizard in the same way as described here.

Confirming the installation

1 Select [Control Panel] from the Start menu.

2 Double-click on the System icon to call up the System Properties window.

3 Select the Hardware tab and click [Device Manager].

4 Click on the [+] mark next to "Sound, video and game controllers," and confirm that "Steinberg MR816 Series," "Yamaha Steinberg FW Bus" and "Yamaha Steinberg FW WDM Audio" are listed.

Uninstallation

To uninstall TOOLS for MR, you must remove the following three software components:
· Yamaha Steinberg FW Driver
· Steinberg MR Editor
· Steinberg MR Extension

1 Make sure the POWER switch on the MR816 CSX/MR816 X is set to OFF, exit from any open applications and close all open windows.

2 From the Start menu, select ([Settings] →) [Control Panel] → [Add or Remove Programs] to display the Add or Remove Programs panel.

3 Click "Change or Remove Programs" located in the upper left, then select "Yamaha Steinberg FW Driver," "Steinberg MR Editor" and "Steinberg MR Extension" from the list in the right panel.

4 To uninstall the software, click [Change or Remove] / [Remove].
Follow the instructions to remove the software.

■ Windows Vista/Windows 7:

Preparing to install

1 **Make sure that the power to the MR816 CSX/ MR816 X is turned off.**

2 **Using an IEEE1394 cable, connect the MR816 CSX/MR816 X directly to the computer (without using a hub), and disconnect all other IEEE1394 devices from the computer.**

3 **Start the computer and log on to the Administrator account.**

4 **Select [Start] → [Control Panel].**
If the control panel appears as category view, switch the view as follows:

For Windows Vista
Click [Classic View] in the upper left of the control panel.

For Windows 7
Click [View by : Category] in the upper right of the control panel, and select "Large icons" or "Small icons".

All control panels and icons will be displayed.

5 **Double-click the Device Manager icon.**

NOTE

· If the "User Account Control" window appears, click [Continue]. A dialog box appears.

6 **Check that no "!" or "x" marks appear next to "IEEE1394 Bus host controllers."**
If one of these marks is shown, the IEEE1394/i.LINK connection cannot be used. Refer to the owner's manual of your computer for details.

7 **Click the Close button ([x]) at the top right of the Device Manager window, then click the Close button ([x]) at the top right of the Control Panel window to close it.**

8 **Exit any open applications and close all open windows.**

9 **Insert the TOOLS for MR CD-ROM into the CD-ROM drive of your computer.**

Installation

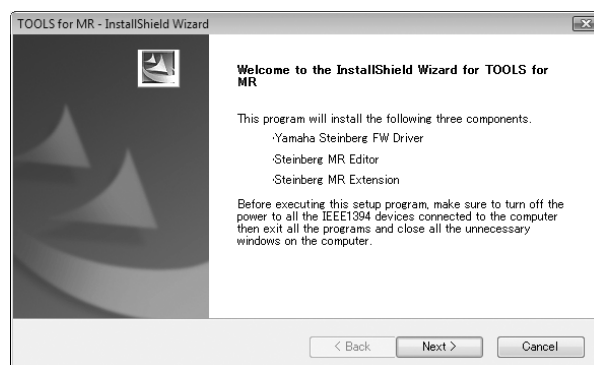The installer will install the following three software components to your computer.
· Yamaha Steinberg FW Driver
· Steinberg MR Editor
· Steinberg MR Extension

NOTE

· Use the Cancel button or Close button to quit the installation. Quitting by using the [Ctrl]+[Alt]+[Delete] buttons or by turning off the power while installation is in process can result in problems since the installation is terminated without performing a proper uninstall.

10 **Open the CD-ROM then double-click the file "setup.exe."**
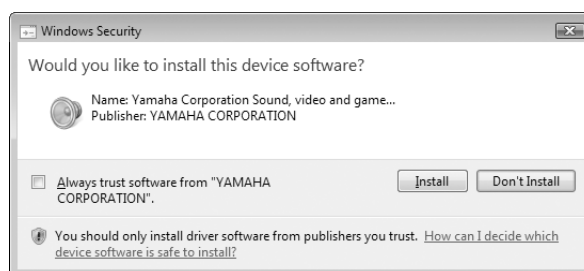A "Welcome to the InstallShield Wizard for TOOLS for MR" window appears.

NOTE

· If the "User Account Control" window appears, click [Continue]. A dialog box appears.

11 **Click [Next].**

12 **Follow the on-screen instructions in the Setup window for Yamaha Steinberg FW Driver, Steinberg MR Editor and Steinberg MR Extension appearing in order.**

NOTE

· If the same version of each software component has already been installed in your computer, the installation window of the corresponding software will not appear.
· If the "Windows Security" window appears, confirm that the publisher is "YAMAHA CORPORATION," then click [Install].

13 **When installation is complete, a message indicating so appears. If restarting of the computer is necessary following successful completion of the installation, make sure that the radio button to the left of "Yes, I want to restart my computer now" is selected, then click [Finish] to restart the computer. If restarting the computer is unnecessary, click [Finish] to exit the installation process.**

When canceling the installation
If you've cancelled an installation before it is complete, the software may not have been installed properly. To install the software properly, resume the procedure from Step **10**.

Initial settings of driver

After you've installed TOOLS for MR, perform the initial settings of the driver.

NOTE

· If the "User Account Control" window appears, click [Continue].

14 **Turn on the power to the MR816 CSX/MR816 X.**
The Clock Source lamps and the Sample Rate lamps of the MR816 CSX/MR816 X flash sequentially then the flashing stops indicating that the initial settings have been completed.

NOTE

· If the Word Clock Source lamps and Sample Rate lamps of the MR816 CSX/MR816 X do not flash in order after waiting a while, restart the computer.
· If the "User Account Control" window appears when you install a new IEEE1394 interface to the computer, click [Continue].
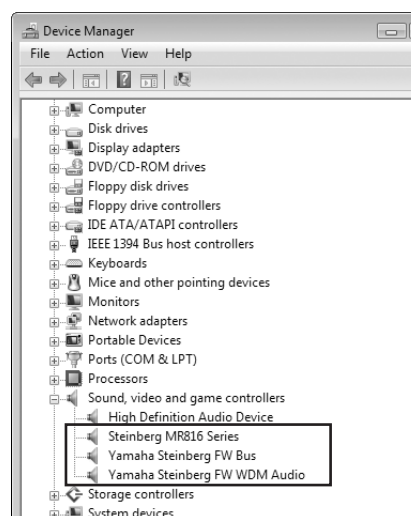
Confirming the installation

1 **Select [Control Panel] from the Start menu.**

2 **Double-click the Device Manager icon.**

NOTE

· If the "User Account Control" window appears, click [Continue]. A dialog box appears.

3 **Click on the [+] mark next to "Sound, Video and game controllers" and confirm that "Steinberg MR816 Series," "Yamaha Steinberg FW Bus" and "Yamaha Steinberg FW WDM Audio" are listed.**

Uninstallation

To uninstall TOOLS for MR, you must remove the following three software components:
· Yamaha Steinberg FW Driver
· Steinberg MR Editor
· Steinberg MR Extension

1 **Make sure that the power to the MR816 CSX/MR816 X is turned off. Exit any open applications and close all open windows.**

2 **From the Start menu, select [Control Panel] → [Programs and Features] to display the Uninstall or change a program panel.**

3 **Select "Yamaha Steinberg FW Driver," "Steinberg MR Editor" and "Steinberg MR Extension" from the list.**

4 **To uninstall the software, click [Uninstall]/[Uninstall/Change].**
If the "User Account Control" window appears, click [Continue]. A dialog box appears. Follow the instructions to remove the software.

■ Mac:

Preparing to install

1 **Make sure that the power to the MR816 CSX/ MR816 X is turned off.**

2 **Using an IEEE1394 (Firewire) cable, connect the MR816 CSX/MR816 X directly to the computer (without using a hub), and disconnect all other IEEE1394 devices from the computer.**

3 **Start the computer and log in to the Administrator account.**

4 **Exit any open applications and close all open windows.**

5 **Insert the TOOLS for MR CD-ROM into the CD-ROM drive of your computer.**

Installation

6 **Open the CD-ROM, then double-click the file "TOOLS for MR.mpkg."**
The "Welcome to the TOOLS for MR Installer" window appears.

NOTE

· A dialog box appears asking if you want to install the software. Click [Continue].

7 **Follow the onscreen instructions to install the software.**

8 **When installation has been completed, click [Restart] to restart the computer.**

9 **Turn on the power to the MR816 CSX/MR816 X.**
The Word Clock Source lamps and Sample Rate lamps of the MR816 CSX/MR816 X flash in order then stop, indicating that the initial settings are completed.

NOTE

· If Word Clock Source lamps and Sample Rate lamps of the MR816 CSX/MR816 X do not flash in order after waiting a while, restart the computer.

When canceling the installation
If you've cancelled an installation before it is complete, the software may not have been installed properly. To install the software properly, resume the procedure from Step **6**.

Confirming the installation

Audio MIDI Setup (Audio Devices)

1 **From the hard disk to which the OS is installed (usually Macintosh HD), click [Applications] → [Utilities], then double-click [Audio MIDI Setup].**

Mac OS X 10.5:
The "Audio MIDI Setup" window appears.

Mac OS X 10.6/Mac OS X 10.7:
The "Audio Devices" window appears.

2 Follow the instructions below to confirm the setting.

MAC OS X 10.5:
Click [Audio Devices], then select "Yamaha Steinberg FW" from the pull-down menu in [Properties For].
The current audio settings are shown in the [Audio input] and [Audio Output] fields.

MAC OS X 10.6/Mac OS X 10.7:
Select "Yamaha Steinberg FW" from the list of Audio Devices.
The current audio settings are shown in the right of the screen.

NOTE

· You can output audio signals of the system sounds and audio player software (e.g., i Tunes, etc.) from the MR816CSX/ MR816X. The procedure is described below.

Mac OS X 10.5:
Select "Yamaha Steinberg FW" for [Default Output] in System Settings.

Mac OS X 10.6/Mac OS X 10.7:
Select "Use this device for sound output" in the Action menu (gearwheel icon) at the left bottom of the Audio Devices window.

Uninstallation

Remove the following files from the boot disk (generally Macintosh HD) to uninstall TOOLS for MR (Yamaha Steinberg FW Driver, Steinberg MR Editor and Steinberg MR Extension.)

NOTE 🖉

· If the folders described below are not displayed in the Finder, select [Go to Folder…] under the [Go] menu of the Finder, input the folder locations, and then click [Go].

Removing Yamaha Steinberg FW Driver

/Applications/Yamaha/FWDriver/
    Yamaha Steinberg FW Control Panel.app
    YamahaFWCM.app

/Library/Application Support/Yamaha/FWDriver/HAL/
    YamahaFWHAL.bundle

/Library/Audio/MIDI Devices/Yamaha/Images/
    FW_10000D.tiff
    FW_10000E.tiff
    FW_110006.tiff
    FW_110007.tiff
    FW_110008.tiff
    FW_110009.tiff
    FW_11000B.tiff
    FW_11000C.tiff
    FW_11000D.tiff

/Library/Audio/MIDI Drivers/
    YamahaFWMIDI.plugin

/Library/LaunchAgents/
    com.yamaha.YamahaFWCM.plist

/Library/PreferencePanes/
    Yamaha Steinberg FW.prefPane

/Library/Preferences/
    com.yamaha.FWDriver.plist

/Library/Receipts/
    YamahaFWAudioDriver.pkg
    YamahaFWCM.pkg
    YamahaFWCP.pkg
    YamahaFWDriverplist.pkg
    YamahaFWEnabler.pkg
    YamahaFWHAL.pkg
    YamahaFWMIDIIcon.pkg
    YamahaFWMIDIPlugIn.pkg

/System/Library/Extensions/
    YamahaFWAudioDriver.kext

/System/Library/Frameworks/
    YamahaFWEnabler.framework

/Users/{Account name}/Library/Preferences/
    com.yamaha.YamahaFWCM.plist

* "{Account name}" indicates the account name when Yamaha Steinberg FW Driver is installed.

Removing Steinberg MR Editor

NOTE 🖉

· Keep in mind that files with the extension ".ttf" may be in use by other Yamaha applications. We recommend that you avoid deleting any of these files unless necessary.

/Applications/
    MREditor.app

/Library/Fonts/
    Yamaha EBM7 Bold.ttf
    Yamaha EBM7 Regular.ttf
    Yamaha EBM8 Expanded.ttf
    Yamaha EBM8 Regular.ttf
    Yamaha EBM10 Bold.ttf
    Yamaha EBM15 Condensed.ttf

/Library/Receipts/
    Steinberg MR Editor.pkg

Removing Steinberg MR Extension

/Library/Application Support/Steinberg/Components/
    mr_extension_u.bundle

/Library/Application Support/Steinberg/Project Templates/
    Steinberg xxx.cpr ("xxx" indicates specific model name, etc.)

/Library/Audio/Plug-Ins/VST3/Yamaha/
    ChannelStrip_m.vst3
    ChannelStrip_s.vst3
    RevHall.vst3
    RevHallMix.vst3
    RevPlate.vst3
    RevPlateMix.vst3
    RevRoom.vst3
    RevRoomMix.vst3

/Library/Audio/Presets/Yamaha Corporation/REV-X Hall/
    Basic.vstpreset
    Bright Hall.vstpreset
    Church.vstpreset
    Clean.vstpreset
    Small Hall.vstpreset

/Library/Audio/Presets/Yamaha Corporation/REV-X Room/
    Basement.vstpreset
    Basic.vstpreset
    Bedroom.vstpreset
    Garage.vstpreset

/Library/Receipts/
    Steinberg MR Extension.pkg
    Templates for Low Grade DAWs.pkg

Connecting to an External Device

Cautions when connecting to external devices

When connecting the MR816 CSX/MR816 X to external audio devices and a computer, follow the instructions below.

⚠ *WARNING*

• Before you connect external devices to the MR816 CSX/MR816 X, turn off the power to all devices after setting all volume levels to minimum (0). Otherwise, electrical shock or damage to the components may occur.
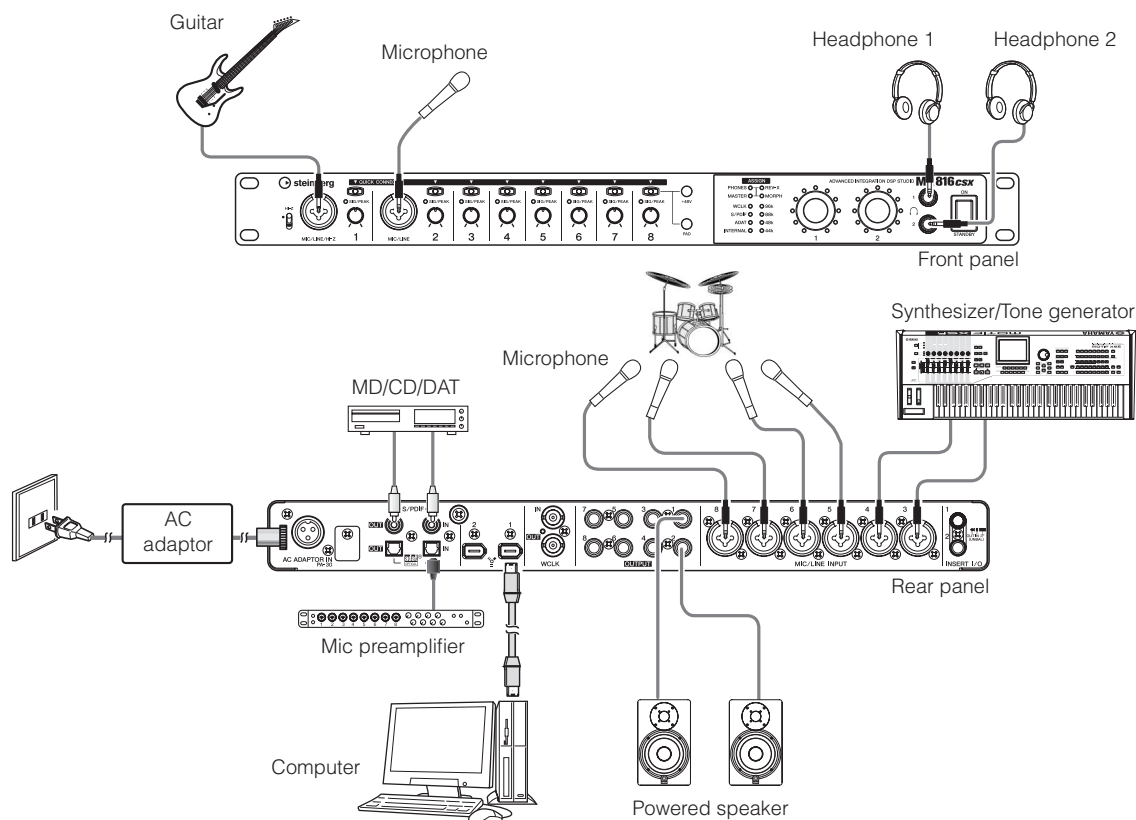
1 Connect the instrument or microphone to MR816 CSX/MR816 X then connect the MR816 CSX/MR816 X to the computer using an IEEE1394 cable.

2 Start the computer.

3 Turn on the power to all the devices in the following order: connected instruments and microphones → MR816 CSX/MR816 X → monitor speakers.
When you turn off the power, first turn down the volume of each audio device, then turn off in the reverse order: monitor speakers → MR816 CSX/MR816 X → instruments and microphones).

Connecting a single MR816 CSX/MR816 X to a computer (DAW)

The MR816 CSX/MR816 X has a comprehensive set of I/O terminals allowing you to connect digital devices such as a master recorder and mic preamp (having digital input/output) as well as analog devices such as microphone, guitar and bass.

⚠ *WARNING*

• Make sure to set all volume levels to minimum (0) before disconnecting the external device.

Guitar
Microphone
Headphone 1   Headphone 2
Front panel
Synthesizer/Tone generator
Microphone
MD/CD/DAT
AC adaptor
Rear panel
Mic preamplifier
Computer
Powered speaker

NOTE ✎

· The MR816 CSX/MR816 X can handle up to 16 channels of audio signal (Analog 8 channels, Digital 8 channels). Regarding the digital input/output channels, you can select which format is used: S/PDIF (coaxial/optical) or ADAT or both according to the connected audio devices. You can set this from the control panel in Cubase or Yamaha Steinberg FW Driver, and the setup screen of MR Editor. Please refer to the Operation Manual for more details.
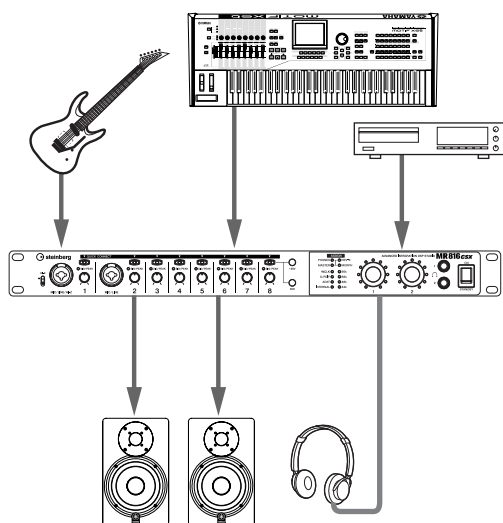
Using the MR816 CSX/MR816 X without a computer

The settings of the internal mixer and system edited on the MR Editor can be stored to the MR816 CSX/MR816 X by storing the settings as a Scene and recalling a Scene on the MR Editor on the computer. This means that the last settings stored or recalled on MR Editor can be used even if the MR816 CSX/MR816 X is disconnected from the computer. Accordingly, you can use the MR816 CSX/MR816 X as a mixer or D/A converter or A/D converter without a computer after the necessary settings on the MR Editor or Cubase are completed.
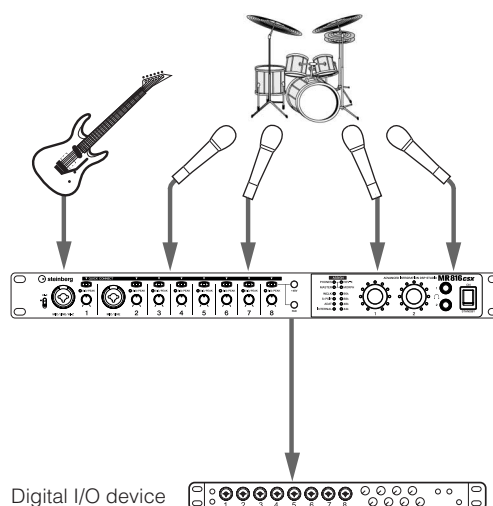
⚠ WARNING

• Make sure to set all volume levels to minimum (0) before disconnecting the external device.

■ Using the MR816 CSX/MR816 X as a mixer

■ Using the MR816 CSX/MR816 X as an AD converter.

Digital I/O device

NOTE

· Up to three MR816 CSX/MR816 Xs (up to two when the Sample Rate is set to 88.2kHZ or 96kHz) can be used simultaneously by connecting them in daisy-chain fashion to a computer via IEEE1394 cables. For details, refer to the Operation Manual (PDF file) included in the accessory CD-ROM.

Volume settings of the MR816 CSX/MR816 X and monitor speakers (powered speakers)
To ensure a clear monitor sound with the least noise, set the master volume level of the MR816 CSX/ MR816 X to high. Lower the volume of the monitor speakers (powered speakers) to the minimum, then raise the master volume level of the MR816 CSX/MR816 X to high. After that, adjust the volume of the monitor speakers as desired.

Try Recording

Once you've successfully installed the device (following the instructions on page 11), you can quickly and easily record your musical performances through simple operations on the DAW software. Here, you'll connect a microphone to the MIC/LINE/HI-Z jack then record your vocal performance to a mono track in Cubase.

Cubase Link function

- By installing the TOOLS for MR, you can use various functions linked between the MR816 CSX/MR816 X and Cubase and Cubase AI etc.. You must have a version of Cubase or Cubase AI later than 5 in order to use the Link function. For information, check the MR816 CSX/MR816 X operation manual and the website below.
  http://service.steinberg.de/goto.nsf/show/supportupdates_mr816_gb
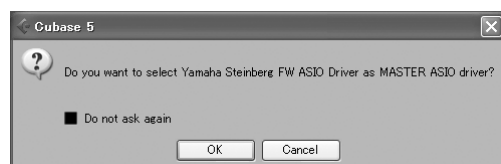
NOTE

- For more information on recording using the MR816 CSX/MR816 X and Cubase as well as details about the buttons and knobs of the MR816 CSX/MR816 X, refer to the Operation Manual (PDF file).
- For details about Cubase, refer to the Operation Manual of Cubase.
- For explanations in this section, examples from Cubase 5 are used. If you are using a version of Cubase other than version 5, see the PDF manual provided with Cubase.

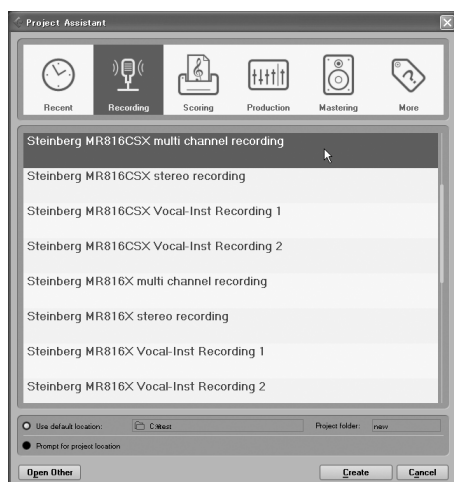**1** **Connect a computer to the MR816 CSX/MR816 X using an IEEE1394 cable, then start the computer.**

2 **Turn on the power of the MR816 CSX/MR816 X.**
Wait until the Word Clock Source lamps and Sample Rate lamps of the MR816 CSX/MR816 X flash in order then stop.

3 **After the lamp flashing is completed, launch Cubase.**
If the following dialog box is displayed while Cubase is starting, click [OK].

4 **When the "Project Assistant" window appears, click [Recording].**
The project templates for the MR816 CSX/MR816 X will be displayed. Selecting one of these project templates will create a project in which the input/output routing of audio tracks has already been set. Here, select "Steinberg MR816CSX multi channel recording" or "Steinberg MR816X multi channel recording."
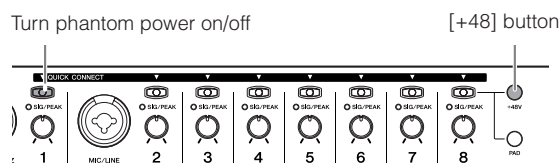

5 **Select the template, then click [Create]/[Continue].**
Selecting "Steinberg MR816CSX multi channel recording" or "Steinberg MR816X multi channel recording" will create audio tracks 1 – 8 on Cubase. To the audio input/output routing for each track, the input channel (input jack) of the MR816 CSX/MR816 X will be assigned then the corresponding [QUICK CONNECT] lamps will light.

6 **Connect the microphone to MIC/LINE/HI-Z jack 1.**
When using a phantom-powered condenser microphone, turn on the phantom power of the MIC/LINE/HI-Z jack 1 via the following instructions.

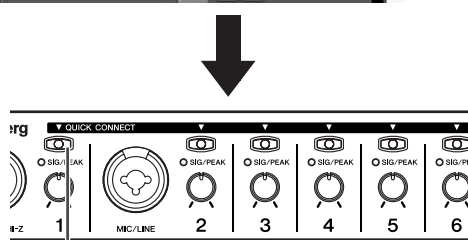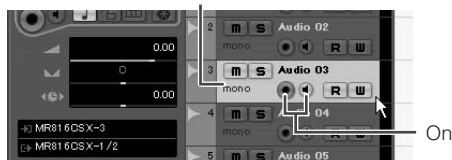Turn phantom power on/off   [+48] button

Press the [QUICK CONNECT] button 1 while holding down the [+48V] button. The lamps of the [+48V] button and [QUICK CONNECT] button 1 will light, indicating that the phantom power of the MIC/LINE/HI-Z jack 1 is turned on.

7 **If you want to change the recording track for the MIC/LINE/HI-Z jack already set via the selected template, select the mono audio track to be record in the project window on Cubase, then click the [QUICK CONNECT] 1 button of the MR816 CSX/MR816 X.**

The lamp of the [QUICK CONNECT] button 1 flashes for a while then the input channel corresponding to the MIC/LINE/HI-Z jack is assigned to the newly selected audio track. Turn on the Record Enable button and Monitoring button of Cubase so that you can monitor the sound being recorded.
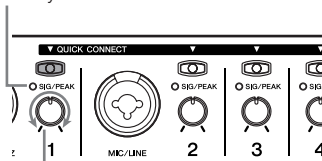
Select the mono audio track.

On

Click the [QUICK CONNECT] button

8 **Turn the gain knob 1 to adjust the input sensitivity of the MIC/LINE/HI-Z 1 jack.**

You can confirm the input signal level by checking the [SIG/PEAK] lamp. Adjust the input signal level by turning the knob so that the [SIG/PEAK] lamp flashes dimly in red. The input signal level for each status of the lamp is as follows: Please note that the following numeric value is a value when the clipping point is assumed to be 0dB.

When the lamp is off:	The input signal level is less than -40 dB.
When the lamp lights in green:	The input signal level is -40dB to -3dB.
When the lamp lights in red:	The input signal level is -3dB or more.

Flashes dimly in red.

Turn the knob to adjust the gain.

9 **While playing the instrument or singing into the microphone, gradually adjust the volume of the master output and headphones.**

10 **Click the Record button in the Transport panel to start recording.**

When you have finished recording, click the Stop button. If necessary, return to the beginning of the project, then press the Play button to listen to the recording.

Likewise, record your musical performance to the different track.

Restoring the Factory-programmed Settings (Factory Set)

You can reset all the settings of the MR816 CSX/MR816 X to the initial factory-programmed one by turning the power on (pressing the [STANDBY/ON] switch to the ON position) while holding the multi function encoder knob and [PAD] button. While the operation is being performed, all the lamps of the MR816 CSX/MR816 X will flash. When the flashing stops, the operation is completed and the MR816 CSX/MR816 X starts normally with the factory settings.

⚠️**CAUTION**

• Never attempt to turn off the power while factory settings are being written to internal memory.
Turning the power off in this state results in loss of all user data and may cause the system to freeze (due to corruption of data in the internal memory). This means that MR816 CSX/MR816 X may not be able to operate properly, even when turning the power on next time.

Troubleshooting

■ No sound is heard, or the sound is too faint.

Settings on the MR816 CSX/MR816 X and connections

· The connection cable from the external device may be broken.

· Make sure that a signal from an external device or the DAW is being sent to the MR816 CSX/MR816 X's input.

· Make sure to set the volume of the connected device to appropriate levels.

· Make sure to set the gain to an appropriate level.

· Make sure to set the [+48V] button (phantom power) to on when using a condenser microphones.

· If you are connecting an electric guitar, make sure that it is connected to an input jack that supports HI-Z, and that the [HI-Z] switch is turned on.

· Make sure that the INSERT I/O jacks are connected properly.

· Make sure to turn off the mute for each channel.

· Make sure to raise each input channel fader to an appropriate level.

· Make sure to set the volume for the headphones and master volume applied to the output jacks.

· Make sure that the speakers or headphones are connected correctly.

· Make sure that the power to your amplifier and other external devices is turned on.

· Make sure that the volume between monitor speakers is well-balanced.

· Make sure the word clock setting is correct for both the MR816 CSX/MR816 X and the external device(s).

Connection with a computer

· Confirm whether or not the lamps of the Word Clock Source and Sample Rate flash in order. Refer to "Word Clock Source lamps and Sample Rate lamps flash in order."

Settings on a computer

· Make sure to set the volume settings within your application to appropriate levels.

· Confirm whether or not the settings in Yamaha Steinberg FW Driver are appropriate. For details, refer to "Audio and MIDI signals fail to transfer between computer and the MR816 CSX/MR816 X."

■ Word Clock Source lamps and Sample Rate lamps flash in order.

Settings on the MR816 CSX/MR816 X and connections

· When the lamps flash, the MR816 CSX/MR816 X may not be recognized by the connected computer. Turn off then on of the power of the corresponding MR816 CSX/MR816 X, or disconnect an IEEE1394 cable from the MR816 CSX/MR816 X then connect again.

· When multiple MR816 CSX/MR816 Xs (or devices compatible with the Yamaha Steinberg FW Driver) are daisy-chain connected, remember that up to three devices can be connected if the Sample Rate is set to 44.1kHz/48kHz and up to two devices can be connected if the Sample Rate is set to 88.2kHz/96kHz. If more devices than this limit are connected, remove unnecessary device(s) from the daisychain connection.

· Confirm whether or not an audio device which is not compatible with the Yamaha Steinberg FW Driver has been connected. If so, remove the corresponding device from the daisy-chain connection.

· (For Windows) Confirm whether or not the Yamaha n Driver, Yamaha AI Driver or mLAN Driver/mLAN Tools is installed to the computer. If so, disable these drivers, turn the power to the corresponding device off then on again or disconnect the corresponding device from the computer then connect again.
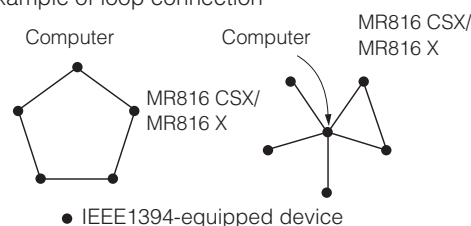
■ The device name cannot be recognized from the DAW software.

■ Audio and MIDI signals fail to transfer between computer and the MR816 CSX/MR816 X.

Connection with a computer

· Confirm the status of the Word Clock Source lamps and Sample Rate lamps. If they flash in order, refer to "Word Clock Source lamps and Sample Rate lamps flash in order."

· Make sure that the IEEE1394 cable is connected properly, and that the power to the MR816 CSX/MR816 X has been turned on. Disconnect the IEEE1394 cable once, then insert it again.

· There may be a loop connection. Check the IEEE1394 cable to make sure that none of the devices are connected in a loop.

Example of loop connection

Computer   Computer   MR816 CSX/
                                MR816 X

MR816 CSX/
MR816 X

● IEEE1394-equipped device

· If any IEEE1394 devices which are not compatible with Yamaha Steinberg FW Driver are connected directly to a computer, disconnect them from the computer and make sure to connect only a device which is compatible with Yamaha Steinberg FW Driver.

· There may be multiple IEEE1394 interfaces installed on the computer and each of the multiple IEEE1394 devices may be connected to different interfaces. When using multiple devices compatible with the Yamaha Steinberg FW Driver and connecting them to the computer peer-to-peer individually (i.e., star-connection), make sure to connect them all to the jacks of a single interface.

Settings on a computer

· Confirm whether or not "TOOS for MR" has been installed correctly.

· (For Windows XP) "Add New Hardware Wizard" may not be completed correctly. If you have canceled it, restart the computer so that "Add New Hardware Wizard" appears.

· Restart the computer.

· (For Mac) If the new IEEE1394 interface (PC card, etc.) is connected to the computer (with the power turned on), restart the computer. The IEEE1394 device compatible with the Yamaha Steinberg FW Driver will be recognized by the computer after restarting.

■ **Cannot use other connected IEEE1394 devices correctly.**

· Disconnect the IEEE1394 device compatible with the Yamaha Steinberg FW Driver from the computer.

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This symbol on the products, packaging, and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.
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Appendix

Specifications

Electrical Characteristics

Sample Rate	Internal	44.1kHz, 48kHz, 88.2kHz, 96kHz
	External	44.1kHz, 48kHz, 88.2kHz, 96kHz (± 0.1% respectively)
Total Harmonic Distortion	GAIN: Minimum	0.004% or less (1 kHz @ +18 dB, into 600 Ω)
Frequency Response (CH IN to LINE OUT)	fs = 48 kHz	20 Hz–20 kHz, +1, -3 dB @ +4 dB, into 600 Ω
	fs = 96 kHz	20 Hz–40 kHz, +1, -3 dB @ +4 dB, into 600 Ω
Dynamic Range (SN ratio at the maximum level)		104 dB, DA converter (LINE OUT)
		97 dB, AD + DA (to LINE OUT)
Hum & Noise (20 Hz–20 kHz) Rs = 150 Ω		-118 dB, Equivalent input noise
		-86 dB, Residual output noise, Output fader: Minimum
	GAIN: Maximum	-86 dB (90 dB SN), LINE OUT
	PAD: OFF	Output channel fader: Nominal, All Input channel faders: Minimum
	GAIN: –60 dB	-53 dB (57 dB SN), LINE OUT
	PAD: OFF	Output channel fader: Nominal, Input channel fader (one channel): Nominal
Maximum Voltage Gain		84 dB, CH1 – 8 to LINE OUT
Crosstalk @ 1 kHz	GAIN: Minimum Adjacent Input	-85 dB, CH1 – 8

Input and Output Specifications

Analog Input	Type	Input Level		
		Nominal Level	Maximum Level	Input Impedance
MIC/LINE/HI-Z jack 1, MIC/LINE jack 2 and MIC/LINE IN jacks 3 – 8 (CH1 – 8)	XLR type balanced, +48 V Phantom powered	–60 dBu to +10 dBu	+24 dBu	3.5 kΩ
INSERT I/O jack 1 and 2 (INSERT IN)	TRS phone type, unbalanced	0 dBu	+14 dBu	10 kΩ

Analog Input	Type	Output Level		
		Nominal Level	Maximum Level	Input Impedance
OUTPUT jacks 1 – 8 (Line Output)	TRS phone type, balanced	+4 dBu	+18 dBu	600 Ω
INSERT I/O jack 1 and 2 (INSERT OUT)	TRS phone type, unbalanced	+4 dBu	+18 dBu	10 kΩ
Headphone jacks 1 and 2 (Monitor 1/2)	TRS phone type, unbalanced	4 mW + 4 mW	25 mW + 25 mW	8 Ω
		12 mW + 12 mW	75 mW + 75 mW	40 Ω

General Specifications

Power Requirements	40W (PA-30)
Dimensions (H x D x W)	44 x 305 x 480 mm
Net Weight	3.2kg
Operating Free-air Temperature Range	+5 – +35
Included Accessories	AC power adaptor (PA-30 or equivalent)
	DVD-ROM (Cubase AI)
	CD-ROM (TOOLS for MR)
	Getting Started manual (printed booklet)
	IEEE1394 cable
	Rubber stoppers x 4

Functions

	Analog Input	
	MIC Preamp	Discrete Class-A MIC preamp (Inverted Darlington Circuitry)
	[+48V] button (Phantom Power switch)	+48 V DC
	[PAD] button	0/26 dB
	Gain knob	44 dB variable (-60 dB to -16 dB)
Input Channels 1 – 8	Phase	Normal/Reversed (controlled via a computer)
	High Pass Filter	OFF/80 Hz (-12 dB/oct.) Controlled via a computer
	[HI-Z] switch	On/off (for channel 1), Input impedance: 500 kΩ
	AD converter	24 bit linear, Enhanced dual-bit delta-sigma conversion
	[SIG/PEAK] lamp	-3dB or mode (red), -40db – -3dB (green) (when the clipping point of the signal is assumed to be 0 dB)
	Analog Output	
Output Channels 1 – 8	Level Control	Multi Function Encoder knob control (for all the channels 1 – 8) Software control (for each of the channels 1 – 8)
	DA converter	24 bit linear, 128 times oversampling Advanced multi-bit delta/sigma conversion
Headphone jacks 1 and 2	Level Control	Multi Function Encoder knob control
	Maximum Output Level	25mW (@ 8Ω)/75mW (@ 40Ω)
IEEE1394 jack	Audio interface	16-ch input/16-ch output

European models
Purchaser/user Information specified in EN55103-1 and EN55103-2.
Inrush current: 2.0 A (MR816 CSX), 2.0 A (MR816 X)
Conforms to environments: E1, E2, E3, E4

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