# TASCAM

SERIES 102i
SERIES 208i
AUDIO INTERFACE

REFERENCE MANUAL

Hi·Res
AUDIO
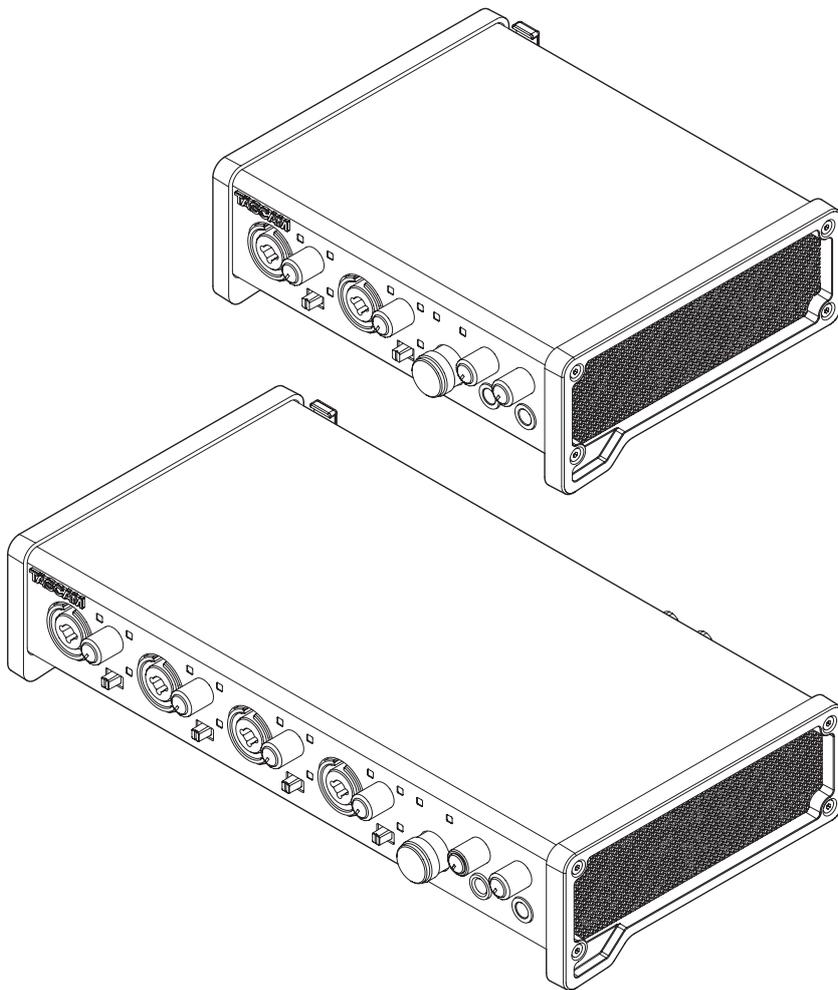
Before connecting this unit to a computer, you must download and install dedicated software on the computer.

Contents

Features

- Ultra-HDDA (High Definition Discrete Architecture) mic preamps with -129 dBu EIN
- Ultra-HDDA mic preamps (2 in SERIES 102i and 4 in SERIES 208i)
- Multiple XLR mic inputs (balanced) and standard jack inputs (balanced/unbalanced)
- Support for high-resolution recording formats up to 24-bit/192 kHz
- Supports Windows and Mac
- USB port (USB-B type, USB 2.0 standard)
- Connect with iOS devices including iPad
- +48V phantom power can be provided to each input channel independently
- Supports direct guitar/bass input
- Direct monitoring function allows zero-latency monitoring
- Input level specifications boast a 57 dB range and support dynamic mic input
- Tough metal casing can endure even hard use
- Angled design provides excellent usability on a desktop
- Two standard headphone output jacks
- Separate volume controls for monitoring and headphone outputs
- MIDI input and output enable connection with keyboards and other MIDI devices
- Low latency monitoring through the DSP mixer
- DSP mixer with 4-band EQ and compression on each input channel
- Routing function that allows inputs and outputs to be assigned freely
- Ten scene memories (can be renamed) for saving DSP mixer settings
- TRS analog output jacks (2 on SERIES 102i and 8 on SERIES 208i)
- TOSLINK multichannel optical digital input connectors (support S/MUX2 and S/MUX4)
- BNC WORD CLOCK input and output connectors with terminal ON/OFF switch (SERIES 208i only)
- Supports USB Audio Class 2.0
- Operation confirmed with major DAW software, including Cubase, SONAR, Pro Tools, Live, Studio One and GarageBand
- AC adapter (PS-P1220E) included with 3 alternate plugs
- DAW software and plug-in effects included

Note about computer operation

If you are unsure about anything related to the basic operation of a computer when it is mentioned in an explanation in this manual, please refer to the computer operation manual.

To use this unit with a computer, dedicated software must be installed on the computer.

For details about software installation, see "Installing the dedicated software" on page 7.

Conventions used in this manual

In this manual, we use the following conventions:
- Switches, connectors and other physical parts of this unit are written using a bold font like this: **PHONES** knob.
- Information shown on a computer display is written like this: "*OK*".
- As necessary, additional information is provided under TIP, NOTE and CAUTION headings.

TIP

These are tips about how to use the unit.

NOTE

These provide additional explanations and describe special cases.

ATTENTION

Failure to follow these instructions could result in damage to equipment or lost data, for example.

⚠ CAUTION

Failure to follow these instructions could result in injury.

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2 - Names and Functions of Parts

Front panel

SERIES 102i

SERIES 208i
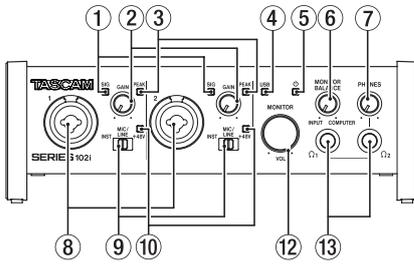
1 **SIG indicators**

These light green when signals (of at least -32 dBFS) are input.

2 **GAIN knobs**

Use to adjust the input levels of the input jacks.

3 **PEAK indicators**

These light red when signals are about to distort (-1 dBFS or higher).

Adjust these so that the **PEAK** indicators do not light red.

4 **USB indicator**

This indicator shows the status of the unit by lighting, blinking and turning off.

Status	Meaning
Lit	Good USB connection
Blinking	Bad USB connection (disconnected or error occurred)
Unlit	Operating in standalone mode

5 ⏻ **indicator**

This indicator lights when the **STANDBY** (17) switch is set to ON.

This indicator blinks if the clock source or OPTICAL input is irregular (when the clock source is set to OPTICAL).

6 **MONITOR BALANCE knob**

Use this to adjust the balance between the signals from this unit's input jacks and the output signals from the computer.

The volume of signals input through this unit's input jacks increase the more the **MONITOR BALANCE** knob is set to the left (**INPUT**) and signals output from the computer increase the more this is set to the right (**COMPUTER**).

This knob does not affect the recording level of input signals.

Input monitoring without lag is possible by monitoring the signals from the input jacks (direct monitoring).

7 **PHONES knob**

Use to adjust the output levels of the **PHONES** Ω1 and Ω2 jacks.

⚠ **CAUTION**

Before connecting headphones, minimize the volume with the **PHONES** knob. Failure to do so could result in a sudden loud noise that could harm hearing, for example.
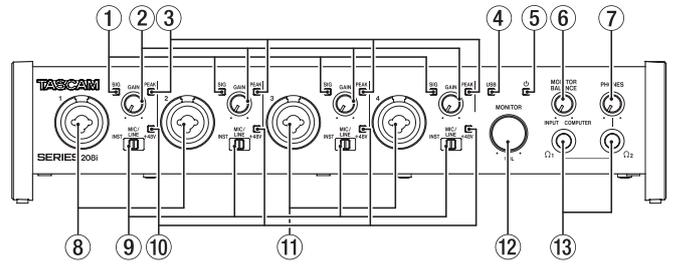
8 **1-2 input jacks**

These analog inputs are XLR/TRS combo jacks.

These support high impedance input, including direct guitar input.

Use the input switches (9) to select balanced line (MIC/LINE) or unbalanced (INST) input for the TRS jacks.

When directly connecting a guitar, bass or other instrument, set the input switch (9) to **INST**.

9 **Input switches**

Set according to the input source of each input jack.

INST:Select when connecting a guitar, bass or other high-impedance instrument. This makes it an unbalanced input for high impedance.

MIC/LINE:Select when connecting a balanced-output mic or line-level-output device.

+48V: This provides +48V phantom power to the **1-2** XLR Jacks and **3-4** XLR jacks.

10 **+48V indicators**

These indicators light when their input switches (9) are set to **+48V**.

11 **3-4 input connectors (SERIES 208i only)**

These analog inputs are XLR/TRS combo jacks.

These support high impedance input, including direct guitar input.

Use the input switches (9) to select balanced line (MIC/LINE) or unbalanced (INST) input for the TRS jacks.

When directly connecting a guitar, bass or other instrument, set the input switch (9) to **INST**.

12 **MONITOR knob**

Use to adjust the output level of the **LINE OUT (BALANCED) 1-2** (20) jacks on the back of the unit.

13 **PHONES** Ω1/Ω2 **jacks**

Use this standard stereo jack to connect stereo headphones.

These output the same signals as the **LINE OUT (BALANCED) 1-2** jacks (20) on the back of the unit.

Use an adapter to connect headphones with a mini plug.

NOTE

The same signals are output at the same level (volume) from both **PHONES** Ω1 and **PHONES** Ω2 jacks.

Rear panel

SERIES 102i
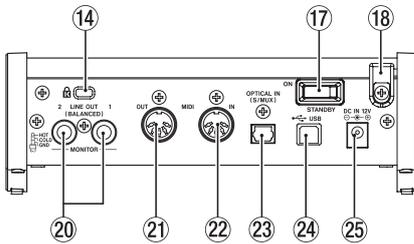
SERIES 208i

⑭ **Kensington Security Slot**

⑮ **WORD IN/OUT connectors (SERIES 208i only)**

These BNC connectors are for the input and output of word clock signals.

Word clock signals of 44.1, 48, 88.2, 96, 176.4 and 192 kHz can be input and output.

ATTENTION

If a digital system has multiple word clock masters, serious problems, including damage to equipment, could occur.

⑯ **75Ω ON/OFF switch (SERIES 208i only)**

When this switch is set to **ON**, the **WORD IN** connector terminates to 75 Ω.

⑰ **STANDBY switch**

Press to turn the unit on and to put it into standby.

⑱ **Cord holder**

Hook the cord of the included PS-P1220E AC adapter here to prevent accidental disconnection.

⑲ **LINE OUT (BALANCED) 3-8 jacks (SERIES 208i only)**

These standard TRS jacks are analog line outputs.

The nominal output level is +4 dBu.

(Tip: HOT, Ring: COLD, Sleeve: GND)

⑳ **LINE OUT (BALANCED) 1-2 jacks**

These standard TRS jacks are analog line outputs.

The nominal output level is +4 dBu.

(Tip: HOT, Ring: COLD, Sleeve: GND)

㉑ **MIDI OUT connector**

This 5-pin DIN is a standard MIDI output connector.

This outputs MIDI signals.

㉒ **MIDI IN connector**

This 5-pin DIN is a standard MIDI input connector.

Use this to input MIDI signals.
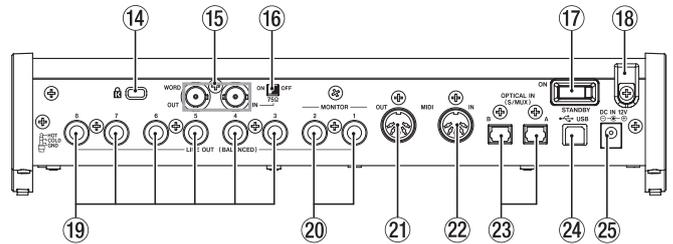
㉓ **OPTICAL IN (S/MUX) connector(s)**

These input multichannel digital audio in optical format.

44.1, 48, 88.2, 96, 176.4 and 192 kHz sampling frequencies are supported.

88.2/96 kHz is supported by S/MUX2, and 176.4/192 kHz is supported by S/MUX4.

㉔ **USB port**

Use the included USB cable to connect the unit to a computer.

(Supports USB 2.0.)

ATTENTION

• When connected to a USB 3.0 port, it will function in High Speed mode equivalent to USB 2.0 (480 Mbps maximum).

• After waking a computer from suspend (sleep) mode, if the unit does not operate properly, turn it off and turn it on again or disconnect and reconnect the USB cable.

㉕ **DC IN 12V connector**

Connect the included AC adapter (PS-P1220E) here.

3 - Installation

System requirements

Check the TEAC Global Site (**http://teac-global.com/**) for the latest information about supported operating systems.

Windows

Supported operating systems

Windows 10 32-bit
Windows 10 64-bit
Windows 8.1 32-bit
Windows 8.1 64-bit
Windows 7 32-bit SP1 or later
Windows 7 64-bit SP1 or later
(Windows 8, Windows Vista and Windows XP are not supported)

Computer hardware requirements

Windows computer with a USB port that supports at least USB 2.0 or USB 3.0

CPU/processor speed

2 GHz or faster dual core processor (x86)

Memory

2 GB or more

ATTENTION

Operation of this unit was confirmed using standard computers that meet the above requirements. This does not guarantee operation with all computers that meet the above requirements. Even computers that meet the same system requirements might have processing capabilities that differ according to their settings and other operating conditions.

NOTE

Since noise could occur depending on the computer system used, we recommend selecting "*High performance*" for "*Plugged in*" on the *Power Options* Control Panel page.

macOS

Supported operating systems

macOS Mojave (10.14 or later)
macOS High Sierra (10.13 or later)
macOS Sierra (10.12 or later)

Computer hardware requirements

Mac with a USB port that supports at least USB 2.0 or USB 3.0

CPU/processor speed

2 GHz or faster dual core processor

Memory

2 GB or more

Apple iOS devices

Supported operating systems

Apple device running iOS 10 or later

Supported audio drivers

Windows

USB Audio Class 2.0, ASIO 2.2, WDM (MME), MIDI

Mac

Core Audio, Core MIDI

Apple iOS devices

Core Audio for iPhone

Installing the dedicated software

To use this unit, a dedicated software must be installed on a computer.

The dedicated software might be updated at any time. Download the latest software for the operating system you are using from the TEAC Global Site (**http://teac-global.com/**).

- On a Windows computer, this will install the Windows driver and Settings Panel application.
- Installing the dedicated software on a Mac will install only the Mac Settings Panel application. The standard OS driver will be used.
- With an iOS device, the standard OS driver will be used, so there is no need to install any.

ATTENTION

Before starting to install software, quit other applications.

Installing the Windows dedicated software

Follow the procedures below to install the Windows dedicated software.

ATTENTION

- Complete installation of the Windows dedicated software on the computer before connecting the unit to it with the USB cable.
- If you connected the unit to the computer using the USB cable before installing the Windows dedicated software and the "*Found New Hardware Wizard*" launched, close the Wizard and disconnect the USB cable.

Windows dedicated software installation procedures

1. Download the latest Windows dedicated software for the operating system you are using from the TEAC Global Site (**http://teac-global.com/**) and save it on the computer to be used with the unit.

2. Uncompress the saved software (zip file) on the computer desktop or another location.

3. Double-click the "*TASCAM_SERIES_102i_208i_Installer_x.xx.exe*" (*x.xx* is the version number) file in the folder that appears after uncompression to automatically launch the installation software.

ATTENTION

If you open a zip file without decompressing it and doubleclick the "TASCAM_SERIES_102i_208i_Installer_x.xx.exe" file in the folder that opens, installation will not start. Right-click the zip file and select *"Extract All"*, for example, to decompress it and then try again.

4. Depending on the computer set up, a "*Security Warning*" or "*User Account Control*" screens might appear. If this occurs, click the "*Yes*" button.
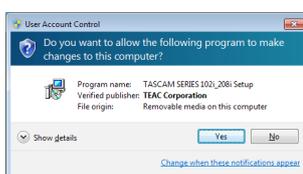
5. Read the contents of the License Agreement, and select "I accept the agreement" if you agree to the terms. Then, click the "*Next*" button.
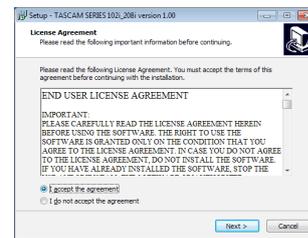
6. Next, click the "*Install*" button.
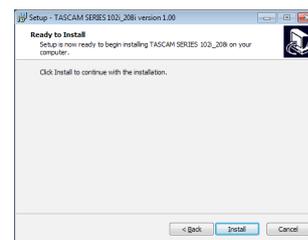
7. When the Windows security screen appears, click the "*Install*" button to start installation.

8. The following screen appears when installation has completed.
   Click the "*Finish*" button.

   The installer will quit and the Windows Settings Panel will launch.

NOTE

The first time you connect the unit by USB to the computer after installing the software, installation of the device driver will be executed. Some time might be necessary before the unit is recognized because Windows Update will be automatically searched at this time. If the unit is still not recognized after a while, open the software installation screen from the notification area at the bottom right of the computer display, and click "*Skip obtaining driver software from Windows Update*" to stop the search.

Installing the Mac dedicated software

NOTE

- Install the Mac dedicated software on the computer before connecting the unit to it with the USB cable.
- Depending on the Gatekeeper setting, a warning message might appear during installation. Please see "Working with Gatekeeper" on page 8 for information about Gatekeeper.

Mac dedicated software installation procedures

1. Download the latest Mac dedicated software for the operating system you are using from the TEAC Global Site (**http://teac-global.com/**) and save it on the computer to be used with the unit.

2. Double-click "**TASCAM_SERIES_102i_208i_Installer_x.xx.dmg**", which is the saved disk image file for the Mac dedicated software, and double-click "**SERIES_102i_208i_Installer.pkg**" inside the folder that opens.

SERIES_102i_208i_Installer.p
kg
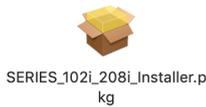
NOTE

Depending on the computer's settings, the downloaded zip file might not have been uncompressed automatically. In this case, uncompress the zip file first and then double-click the disk image file.

3. When the installer starts, click the "**Continue**" button.
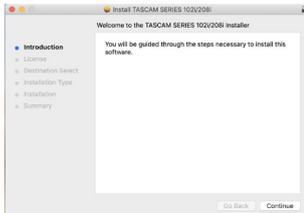
4. Next, select the desired language and click the "**Continue**" button.
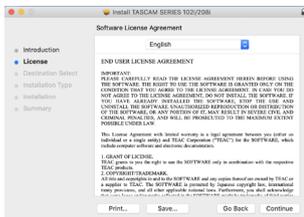
5. Click the "**Read License**" button and check the contents of the Software License Agreement. If you agree to the contents of the license, click "**Agree**". Then, click the "**Next**" button.

6. Next, click the "**Install**" button to start installation.

7. The following screen appears when installation has completed. Click the "**Close**" button.
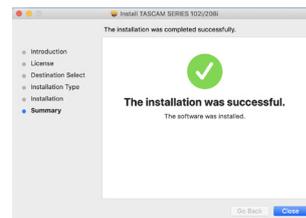
Working with Gatekeeper

When using macOS, depending on the Gatekeeper security function setting, a warning message might appear during installation.

The solution depends on the warning message shown.

See the following explanations for details.

When the Gatekeeper setting is "Allow applications downloaded from: the Mac App Store"

The following security warning might be shown: *""SERIES_102i_208i_Installer.pkg" can't be opened because it was not downloaded from the Mac App Store."* In this case, click the "OK" button to close the message.

In this case, click the **OK** button to close the message. Then, control-click (or right-click) the file and click "**Open**".

When the **""SERIES_102i_208i_Installer.pkg" can't be opened because it was not downloaded from the Mac App Store. Are you sure you want to open it?"** security warning message appears, click the "**Open**" button.
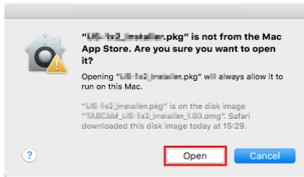
This warning message might also appear when the Gatekeeper setting is something other than "**Allow applications downloaded from: the Mac App Store.**"

The file still might not open and "**SERIES_102i_208i_Installer. pkg**" can't be opened because it was not downloaded from the Mac App Store." might appear again.
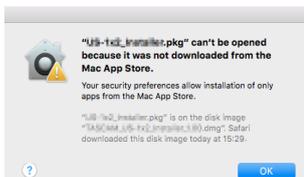
In this case, copy the file from the folder where it is to the desktop or another folder, and then open it. Alternatively, change the Gatekeeper settings to "**Allow applications downloaded from: the Mac App Store and identified developers**" and try opening it again.

When the Gatekeeper setting is not "**Allow applications downloaded from: the Mac App Store**"

""TASCAM_SERIES_102i_208i_Installer_x.xx.dmg." is an application downloaded from the Internet. Are you sure you want to open it?" might appear as a security warning message. In this case, click the "**Open**" button.

Changing the Gatekeeper setting

The Gatekeeper setting can be changed using the "**Allow applications downloaded from:**" item on the "**General**" page of the "**Security & Privacy**" pane of the System Preferences. To change this, you must click the lock icon (🔒) at the bottom left and enter a password to unlock the settings.

This setting will lock again when you click the 🔴 button or type command-Q to close the System Preferences or when you click "**Show All**" to close the open pane.

ATTENTION

Changing the Gatekeeper settings could result in security risks.
If you changed the Gatekeeper setting to decrease security (use one of the lower settings), set it back to the original setting after updating the driver and/or firmware.

Uninstalling the dedicated software

NOTE

Normally, there is no need to uninstall the dedicated software. Follow these procedures if a problem occurs or you no longer intend to use the unit with the computer.

Uninstalling the Windows dedicated software

1. Open the "**Uninstall or change a program**" screen using the procedures for the operating system being used (Windows 10/Windows 8.1/Windows 7).

2. Select "**TASCAM SERIES 102i_208i version x.xx**" from the list, and double-click it.

3. Then, follow the instructions that appear on the screen.

Uninstalling the Mac dedicated software

Delete "**SERIES 102i_208i**" from the Application folder to complete uninstallation.

4 - Preparation

Connecting the power

Use the included AC adapter (PS-P1220E) to connect a power supply to the unit as shown below.

Power outlet

PS-P1220E (included)

DC plug
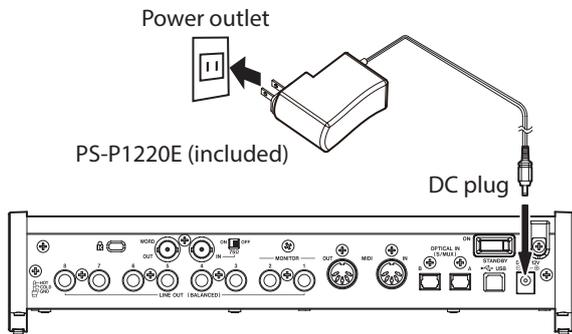
In order to prevent the cord from becoming disconnected during use, wrap it around the cord holder when connecting it.
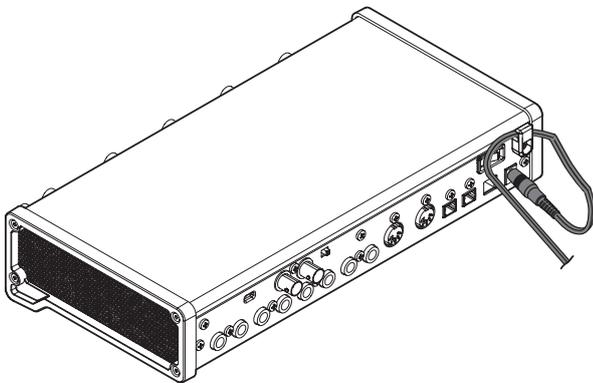
ATTENTION

Always use the AC adapter (PS-P1220E) that was shipped with the unit. Using a different AC adapter could cause malfunction, overheating, fire or other problems.

NOTE

The AC adapter for the unit includes 4 types of outlet plugs. Attach the type of plug that matches the power outlet that you are using. (see "Changing the outlet plug" on page 10)

Changing the outlet plug

NOTE

When purchased new, the included PS-P1220E AC adapter for the unit has an outlet plug (Ⓐ) already attached. There should be no need to change the plug.

1. Move the knob (①) on the PS-P1220E AC adapter in the direction of the arrow and remove the plug (Ⓐ).
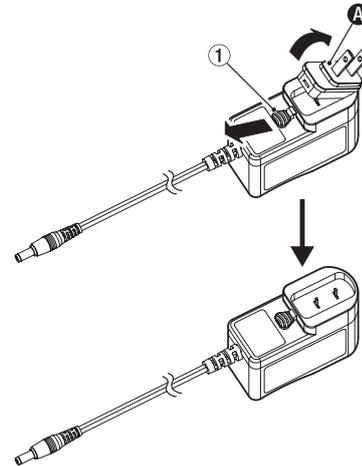
2. Select the plug that matches the AC outlet from the 3 other types included (Ⓑ, Ⓒ or Ⓓ).

3. Move the knob (①) in the direction of the arrow again, and attach the plug to the AC adapter.
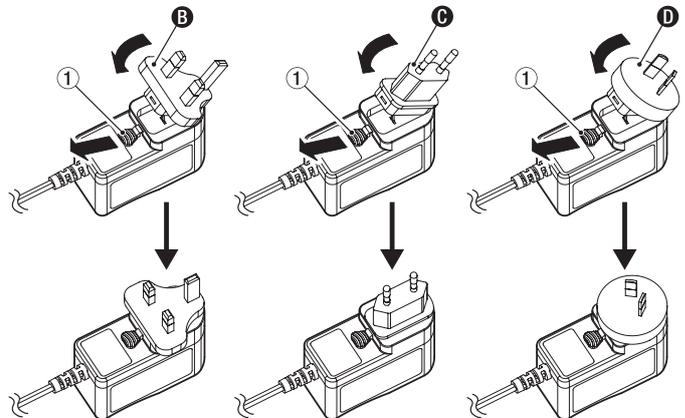
This completes changing the outlet plug.

After changing the outlet plug, confirm that it is not loose or crooked and that everything is normal before plugging it into an outlet.

ATTENTION

Do not use the adapter if there is anything abnormal about the plug after changing it. Use when the plug is abnormal could cause fire or electric shock. Contact the retailer where you purchased the unit or a TEAC service center (on the back cover) to request repair.

Connecting other equipment

This is an example of SERIES 208i connections.

Precautions before making connections

- Carefully read the operation manuals of the devices to be connected and then connect them correctly.

- Before making connections, turn this unit and all equipment to be connected off (standby).

- If possible, install all connected devices so that they are powered from the same AC power supply line. When using a power strip or similar device, be sure to use one that has a thick cable with high current capacity in order to minimize voltage fluctuations in the AC power supply.

Guitar

Bass

Headphones

Mic
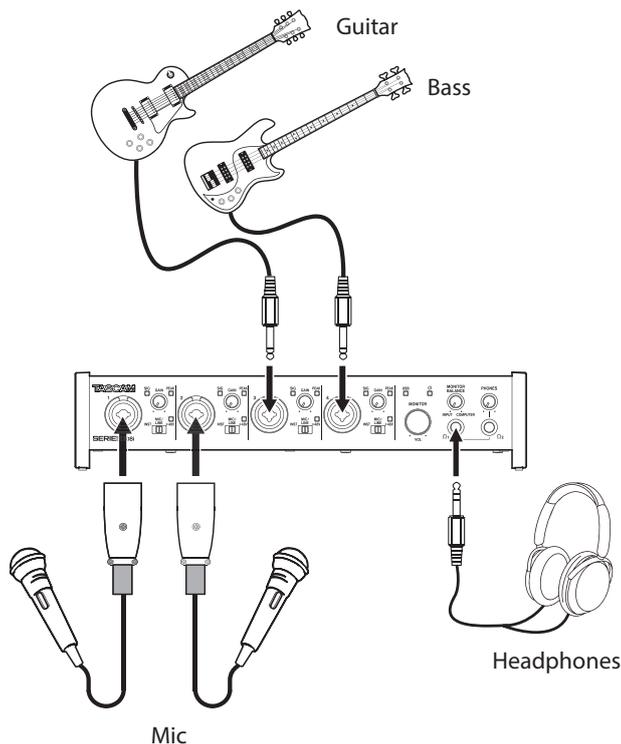
Mic preamp with S/MUX
(When using the word clock output of a TASCAM SERIES 8p Dyna as the clock master for this unit)

Powered speakers   Drum machine   Computer
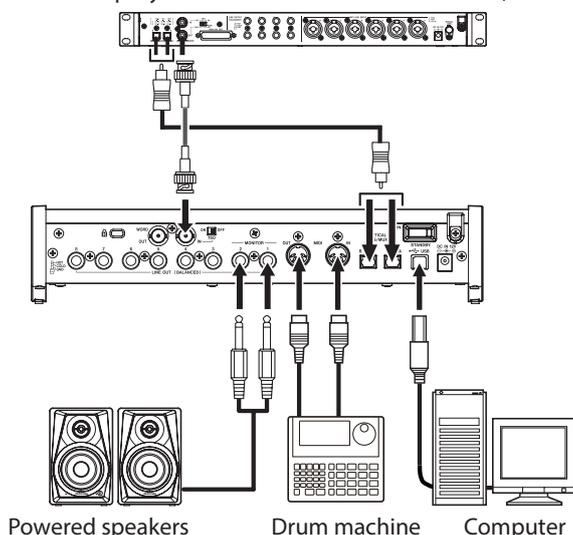
Examples of connections to a SERIES 208i

Connecting with a computer

Use the included USB cable to connect the unit to a computer USB port compatible with 2.0, 3.0 or higher USB specifications. When the USB connection is working, the **USB** indicator on the front of the unit lights.

> **ATTENTION**
>
> If you connect this unit to a computer via a USB hub, for example, audio signal dropouts, clicking noises and other interference could occur due to the influence of other USB devices connected to that hub. For this reason, we strongly recommend connecting this unit to a separate USB port. Connecting USB keyboards and mice, however, to the same bus should not be a problem.

Connecting with iOS devices

You will need a Lightning to USB Camera Adapter and the USB cable included with this unit to connect an iOS device.

> **NOTE**
>
> - When connected, this unit will not provide power to the iOS device.
> - iOS does not support 176.4/192 kHz sampling frequencies.

Audio connections

Analog audio signals input into this device from mics, guitars, keyboards and other audio equipment can be converted into digital signals and transmitted to the computer via USB. In addition, by connecting speakers (through an amplifier if not powered) or headphones to this unit, you can monitor audio signals that are input to this unit and output from the computer.

> **ATTENTION**
>
> Before connecting audio equipment, set the **GAIN**, **MONITOR** and **PHONES** knobs to their lowest values. Failure to do so could cause sudden loud noises from monitoring equipment, and this could damage the equipment or harm hearing.

Connecting microphones

Dynamic mics

Connect these to the **1-2** (or **3-4** on SERIES 208i) input jacks on the front of the unit.

Condenser mics

When using a condenser mic that requires phantom power, connect it to a **1-2** (or **3-4** on SERIES 208i) input jack, and then set the input switch to **+48V**.

When the input switch is set to **+48V**, the **+48V** indicator on the front of the unit lights.

> ⚠ **CAUTION**
>
> Set the **MONITOR** and **PHONES** knobs to their minimum values before changing the input switch setting. Failure to do so could cause sudden loud noises from monitoring equipment, and this could damage equipment or harm hearing.

> **ATTENTION**
>
> - Input switches can be set for each channel separately. Do not set the switch to **+48V** when connecting a mic that does not require phantom power.
> - Do not connect or disconnect mics when the switch is set to **+48V**. Doing so could cause a loud noise and might damage this unit and connected equipment.
> - Set the switch to **+48V** only when using a condenser

microphone that requires phantom power. Setting the switch to **+48V** when a dynamic mic or other device that does not require it is connected could damage this unit and connected equipment.

- Supplying phantom power to some ribbon mics could break them. If you are unsure, do not supply phantom power to a ribbon mic.

Connecting guitars

When connecting a guitar or bass guitar directly to this unit, use a **1-2** (or **3-4** on SERIES 208i) jack on the front of the unit and set its input switch to **INST**.

Connecting electronic devices and other audio equipment

When connecting an electronic instrument or other audio equipment directly to this unit, use a **1-2** (or **3-4** on SERIES 208i) jack on the front of the unit and set its input switch to **MIC/LINE**.

Connecting analog record players

The output of an analog record player cannot be connected directly to this unit. To connect an analog record player to this unit, a phono amp and equalizer (or an audio amplifier that has phono input jacks) must be connected between them.

Connecting monitor speakers

Connect monitor speakers (powered speakers or an amplifier and speaker system) to the **LINE OUT (MONITOR) 1-2** jacks on the back of the unit.
Use the **MONITOR** knob on the front of the unit to adjust the speaker volume.

Connecting headphones

Connect headphones to the **PHONES** Ω_1 and **PHONES** Ω_2 jacks (standard stereo) on the front of the unit.

⚠ **CAUTION**

Before connecting headphones, minimize the volume with the **PHONES** knob. Failure to do so could result in a sudden loud noise that could harm hearing, for example.

NOTE

The same signals are output at the same level (volume) from both **PHONES** Ω_1 and **PHONES** Ω_2 jacks.

MIDI connections

Connect sound modules, keyboards, synthesizers, drum machines and other MIDI devices to the unit in the following manner.

- If you want to monitor sound from a MIDI device, connect its audio outputs to the **1-2** (or **3-4** on SERIES 208i) jacks on the front of the unit or use an external mixer.
- You can also use the MIDI IN and MIDI OUT connectors on the back of the unit to send and receive MIDI timecode (MTC). By doing this, you can use an application that supports MTC to synchronize a multitrack recorder (MTR) and MIDI devices.

Opening the Settings Panel

You can use the Settings Panel to make settings for the various functions of this unit.

Open the Settings Panel in the following manner.

NOTE

The Settings Panel cannot be used with an iPad or other iOS device.

Windows

● From the **Start** menu select "**SERIES 102i_208i**" under "**TASCAM**".

Mac

● On the **Launchpad**, click **SERIES 102i_208i**.

● Using the **Finder**, open the **Applications** folder and double-click **SERIES 102i_208i** to open the Settings Panel.

● In the **Audio Devices** window of the **Audio MIDI Setup** application, right-click (control-click) "**SERIES 102i**" or "**SERIES 208i**". Alternatively, click the ⚙⌄ button and click "**Configure device…**" from the menu that appears to open the Settings Panel.

Settings Panel overview

The Settings Panel has three pages.

Click a tab at the top of the Settings Panel to open that page.

● **MIXER**: Make built-in mixer and effect settings.

● **INFORMATION**: This shows the current status of the driver and information about connections. You can also make various settings.

● **ROUTING**: Make output settings (and Monitor Control settings for the SERIES 208i).

ATTENTION

When you open the Settings Panel, the state will be the same as the last time closed. However, the setting values on each page (**MIXER**, **INFORMATION** and **ROUTING**) will be the same as when last closed, but will not have been saved in a scene memory. To save settings in a scene memory, use the **Scene Memory** menu in the menu bar. (see "Using the SceneMemory menu" on page 24)

Moreover, to use settings in standalone mode, they must be saved to the unit. To save settings to the unit, To save settings to the unit, select "**Save into the unit**" under **SceneMemory** in the menu bar. (see "Saving Settings Panel settings to the unit" on page 26)

MIXER page
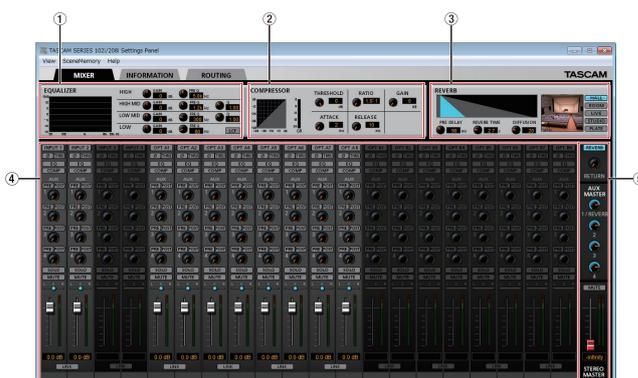
SERIES 102i Settings Panel **MIXER** page in Windows
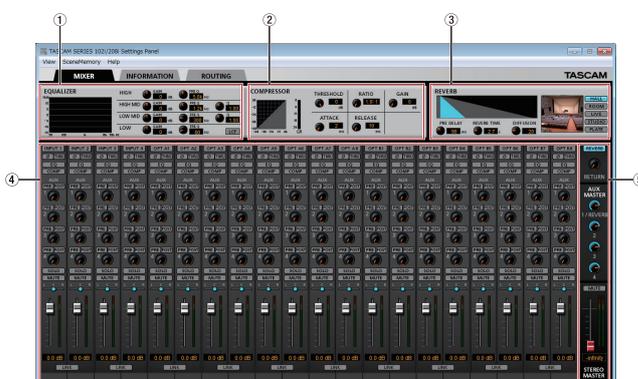
SERIES 208i Settings Panel **MIXER** page in Windows

① **EQUALIZER**

This unit has a 4-band equalizer (with HIGH, HIGH MID, LOW MID and LOW bands).

Use the equalizer to increase or decrease the levels of specific frequency ranges. This can be used, for example, to enhance the sound of individual instruments, to adjust the balance of a wide frequency range and to cut specific unwanted frequencies. (see "This can be selected when set to BROADCAST, but it will always function as MONO." on page 14)

Activate the Select button of a channel to make equalizer settings for it.

Equalizer settings are shown here for the channel activated using its Select button.

② **COMPRESSOR area**

When the input volume exceeds the THRESHOLD level, the input volume is compressed, reducing output volume variation.

For example, by reducing the levels of sounds that are high level, lower level sounds become relatively louder, creating a more even volume level throughout and a more sustained sound. (see "COMPRESSOR display area overview" on page 15)

Activate the Select button of a channel to make compressor settings for it.

Compressor settings are shown here for the channel activated using its Select button.

NOTE

- If the input is a stereo signal (stereo-linked channel or master), compression will start and be applied to both channels when either the left or right input channel exceeds the threshold level.
- When the compressor is off, the compressor curve will appear but the meters will not be active.

③ **REVERB area**

This effect adds reverberations to the original sound. Multiple sounds are delayed at various times with damping over time that is as natural as possible to produce reverberations like those of a hall, live-music club or studio, for example. (see "REVERB display area overview" on page 15)

④ **Channel Mixer**

Check and make settings for each channel. (see "Channel Mixer details" on page 16)

NOTE

All channels are available when a SERIES 208i is connected.

When a SERIES 102i is connected, the *INPUT 3*, *INPUT 4* and *OPT B1 – B8* channels cannot be used and will appear dimmed.

⑤ **Output adjustment section**

Make *REVERB*, *AUX MASTER* and *STEREO MASTER* settings here. (see "Output adjustment section" on page 18)

This can be selected when set to BROADCAST, but it will always function as MONO.

Use this to increase or decrease the levels of specific frequency ranges.

This can be used, for example, to enhance the sound of individual instruments, to adjust the balance of a wide frequency range and to cut specific unwanted frequencies.
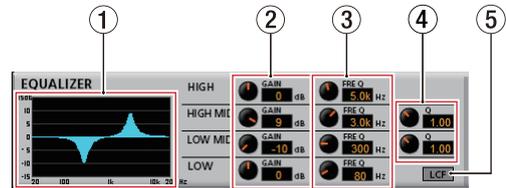
The equalizer has a high-shelf HIGH band, a low-shelf LOW band and peaking (bell-shaped) HIGH MID and LOW MID bands.

① **EQ graph**

This shows the frequency response with the current equalizer settings.

The graph is shown even when the equalizer is off.

② **GAIN (HIGH/HIGH MID/LOW MID/LOW) knobs**

Set the amount the levels are increased or decreased for the HIGH, HIGH MID, LOW MID and LOW bands.

Range: ±12 dB (default: 0 dB)

③ **FREQ (HIGH/HIGH MID/LOW MID/LOW) knobs**

Set the cutoff frequencies of the HIGH, HIGH MID, LOW MID and LOW bands.

Ranges

HIGH: 1.7 kHz - 18.0 kHz (default: 5 kHz)
HIGH MID: 32 Hz - 18.0 kHz (default: 1.2 kHz)
LOW MID: 32 Hz - 18.0 kHz (default: 300 Hz)
LOW: 32 Hz - 1.6 kHz (default: 80 Hz)

④ **Q (HIGH MID/LOW MID) knobs**

Set the acutenesses of the peaks of the HIGH MID and LOW MID bands.

The higher the value the more acute it becomes, making it affect a narrower frequency band. The lower the value, the less acute it becomes, making it affect a broader frequency band.

Ranges

HIGH MID: 0.25 - 16.00 (default: 1.00)
LOW MID: 0.25 - 16.00 (default: 1.00)

⑤ **LCF button**

Click the *LCF* button to enable a low cut filter that cuts noise and other sounds at low frequencies. The *LCF* button lights when enabled. (Default: off)

COMPRESSOR display area overview

When the input volume exceeds the THRESHOLD level, the input volume is compressed, reducing output volume variation.

For example, by reducing the levels of loud sounds, lower level sounds become relatively louder, creating a more even volume level throughout and a more sustained sound.
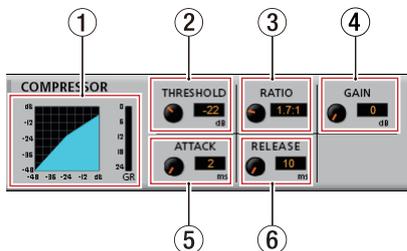
① **Compressor status display**

Three meters show the level of the signal input to the compressor (*INPUT*), the level of the signal output from the compressor (*OUTPUT*) and the gain reduction caused by the compressor (*GR*).

② **THRESHOLD knob**

Sets the threshold level that will cause the compressor to start.

Range: -32 dB - 0 dB (default: 0 dB)

③ **RATIO knob**

Sets the compression ratio for the input volume.

Turning it right raises the compression ratio, increasing the amount of compression.

Range: 1.0:1 - inf:1 (default: 1.0:1)

④ **GAIN knobs**

Sets the gain of the output signal.

When the volume is compressed, the output level becomes lower than the input level. Use the *GAIN* knob to increase the output level so that it is close to the input level.

Range: 0 dB - 20 dB (default: 0 dB)

⑤ **ATTACK knob**

Sets the amount of time until the compression reaches the compression *RATIO* setting after the input volume exceeds the threshold.

Range: 2 ms - 200 ms (default: 2 ms)

⑥ **RELEASE knob**

Sets the amount of time until the compression stops and the sound returns to its uncompressed level after the input sound goes below the threshold level.

Range: 10 ms - 1000 ms (default: 10 ms)

NOTE

• If the input is a stereo signal (stereo-linked channel or master), compression will start and be applied to both channels when either the left or right input channel exceeds the threshold level.

• When the compressor is off, the compressor curve will appear but the meters will not be active.

REVERB display area overview

This effect adds reverberations to the original sound. Multiple sounds are delayed at various times with damping over time that is as natural as possible to produce reverberations like those of a hall, live-music club or studio, for example.
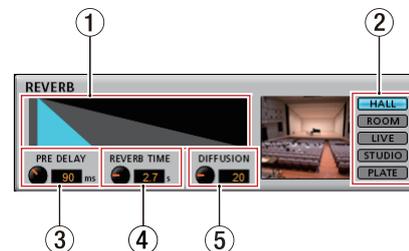
① **Reverb status display**

This shows the setting status of the *PRE DELAY* and *REVERB TIME* knobs.

② **Reverb type switch**

Use to select the type of reverb.

Depending on the type, the density and level of the reverb sound changes.

Options: *HALL* (default), *ROOM*, *LIVE*, *STUDIO*, *PLATE*

③ **PRE DELAY knob**

Set the amount of delay until the first reverberations.

The larger the value, the larger the reverberations make the room sound.

Range: 0 ms - 250 ms (default: 90 ms)

④ **REVERB TIME knob**

Set the amount of time that the reverberations continue.

The larger the value, the longer they continue.

Range: 0.1 s - 10 s (default: 2.7 s)

⑤ **DIFFUSION knob**

Sets the breadth of the reverberations.

Range: 0 - 100 (default: 20)

NOTE

In the menu bar, open the *View* menu and click *Initialize Reverb* to reset the settings shown in the *REVERB* section to their default values. (see "Resetting the reverb settings" on page 23)

5 - Using the Settings Panel

Channel Mixer details
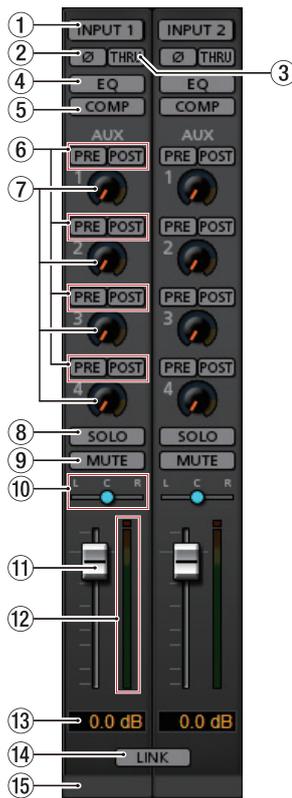
Settings Panel MIXER page channels 1–2

① **Select button**

The equalizer and compressor settings for the selected channel are shown in the *EQUALIZER* and *COMPRESSOR* sections.

> Off (default): Select button unlit
>
> ON: Select button lit

To select a different channel, click that channel's button. The previously selected channel button will become unlit, and the newly selected channel button will light.

② ***φ* button**

Use these to change the phases of the signals on each channel.

If the phase becomes reversed due to the wiring of a mic or other cause, turn the *φ* button on (lit) to reverse the phase of the channel. (Default: off)

③ **THRU button**

Click a *THRU* button to light it and send the input signal for that channel directly to the computer without passing through the input signal mixer.

Since the signal does not pass through the mixer, phase, equalizer and compressor settings will have no effect.

④ **EQ button**

Use these to turn the equalizer on/off for each channel.

Click the *EQ* button to activate the equalizer. The *EQ* button will light and the equalizer settings shown in the *EQUALIZER* section will be applied.

⑤ **COMP button**

Use these to turn the compressor on/off for each channel.

Click the *COMP* button to activate the compressor. The *COMP* button will light and the compressor settings shown in the *COMPRESSOR* section will be applied.

⑥ **PRE/POST buttons**

Set whether the signal sent to the AUX bus is pre-fader or post-fader.

The selected button lights.

Status	Meaning
PRE button unlit *POST button unlit* *(default)*	The signal is not sent to the AUX bus.
PRE button lit	The signal is sent to the AUX bus before adjustment by the channel fader. The AUX level will not be affected by the channel fader.
POST button lit	The signal is sent to the AUX bus after adjustment by the channel fader. The AUX level will be affected by the channel fader.

⑦ **AUX 1-4 knobs and indicators**

Use to adjust the levels of the signals sent to the AUX bus (AUX levels).

> **Range:** -inf. to 6 dB (default: -inf.)

Drag an *AUX* knob up or down to adjust that *AUX* level. While dragging, the value being adjusted is shown below and to the right of the *AUX* knob.

The indicator lights blue at levels of 0 dB or less and yellow at levels from 0 dB to 6 dB.

⑧ **SOLO button**

When *SOLO* buttons are turned on, other channels will automatically be muted (in place solo monitoring).

The *MUTE* buttons of muted channels will light. (Default: off)

Multiple channels can be soloed at the same time.

NOTE

- When all the *SOLO* buttons are off, clicking the *SOLO* button of one channel will solo it, automatically muting the other channels and lighting their *MUTE* buttons.
- If every *SOLO* button is turned off, channels that had been automatically muted will become unmuted. Channels that had been individually muted before any channel was soloed will remain muted.
- The *STEREO MASTER* channel *MUTE* button will not turn on automatically because of soloing.

⑨ **MUTE button**

Click a *MUTE* button to mute that channel. The button lights when the channel is muted. (Default: off)

NOTE

In addition to turning the *MUTE* button on and off, channels will be automatically muted and unmuted when *SOLO* buttons are used.

⑩ **Pan slider**

Use to adjust the stereo positions of the signals input to each channel.

Drag the pan slider left or right to adjust the stereo position. While dragging, the adjusted position is shown above the channel level meter (⑫).

The value is *L20* when set all the way to the left, *R20* when set all the way to the right and *C* when centered.

    Setting range: *L20* - *L1*, *C* (default), *R1* - *R20*

The pan slider appears blue when centered (*C*) and yellow at all other positions.

NOTE

- When the pan slider is centered (*C*), signals reduced by 3 dB are sent to both the stereo left and right buses.

- Double-click the pan slider to return it to the center (*C*) position.

- When the pan slider is at the left end (*L20*), the signal is sent only to the left bus of the stereo bus. It is not sent to the right bus.

- When the pan slider is at the right end (*R20*), the signal is sent only to the right bus of the stereo bus. It is not sent to the left bus.

⑪ **Channel fader**

Use these to adjust the levels of the signals sent from each channel to the stereo bus.

    Range: -infinity to 6.0 dB (default: 0.0 dB)

Drag a channel fader up or down to adjust the channel level. The gain value of the channel fader is shown in the fader level display area (⑬).

NOTE

Shift-click the fader to set it to 0 dB.

⑫ **Channel level meter**

These meter show the signal levels of each channel.

The channel level meter appear green at levels of -12 dB or less, yellow at levels from -12 dB to -6 dB and red at levels above -6 dB.

Each level meter has an overload indicator at its top.

NOTE

The channel meter show the level before being adjusted by the fader. Level meter are not affected by fader adjustment or even their channel being muted.

⑬ **Fader level display area**

These show the level of the channel fader above them as decibel value.

⑭ **LINK button**

Click a *LINK* button to unite odd and even channel as a single stereo channel. When linked, this button lights for those channel. (Default: off)

When a pair is stereo linked, the buttons and knobs of the channels are combined. The channel level meters are also shown is a stereo pair.

See "LINK button overview" on page 19 for details.

⑮ **Channel note**

You can input up to six alphanumeric characters.

Character input

- Click one of these areas. The cursor will blink when ready for input. When the unit is ready, use a computer keyboard to input characters. When done inputting, press the computer Enter key to confirm.

- When done inputting characters, you must press the computer Enter key to confirm. If you do not press the Enter key before switching from the *MIXER* page to a different page, the input characters will continue to be shown but will not be saved.

5 - Using the Settings Panel

Output adjustment section
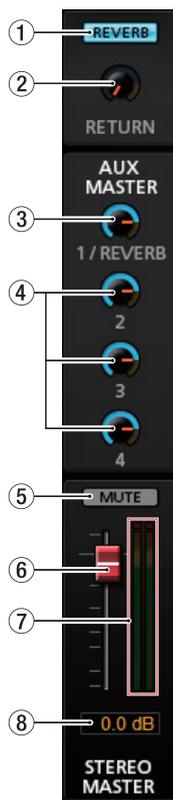
① REVERB button

Click the *REVERB* button to apply reverb.
(Default: on)
When the reverb is on, the *REVERB* button lights.

NOTE

The reverb cannot be turned on if the sampling frequency is 176.4/192 kHz.

② RETURN knob and indicator

Use to adjust the return level, which is the signal from the reverb effect returned to the stereo bus.

> **Range:** -inf. to 6 dB (default: -inf.)

Drag the *RETURN* knob up or down to adjust the return level.
While dragging, the value being adjusted is shown below and to the right of the *RETURN* knob.
The indicator lights blue at levels of 0 dB or less and yellow at levels from 0 dB to 6 dB.

③ AUX MASTER 1/REVERB knob and indicator

Use this to adjust the send master level of the signal sent to the AUX 1 bus and reverb effect.

> **Range:** -inf. to 6 dB (default: 0 dB)

Drag the *1/REVERB* knob up or down to adjust the send level.
While dragging, the value being adjusted is shown below and to the right of the *1/REVERB* knob.
The indicator lights blue at levels of 0 dB or less and yellow at levels from 0 dB to 6 dB.

④ AUX MASTER 2-4 knobs and indicators

Use these to adjust the send master levels of the signals sent to the AUX 2-4 buses.

> **Range:** -inf. to 6 dB (default: 0 dB)

Drag the *2-4* knobs up or down to adjust the send levels.
While dragging, the value being adjusted is shown below and to the right of the *2-4* knob.
The indicator lights blue at levels of 0 dB or less and yellow at levels from 0 dB to 6 dB.

⑤ MUTE button

This mutes the *STEREO MASTER* output. (Default: off)

⑥ STEREO MASTER fader

Use this to adjust the level of the output signal.

> **Range:** -infinity to 6.0 dB (default: 0.0 dB)

Drag the *STEREO MASTER* fader up or down to adjust the master level.
The value being adjusted is shown in the *STEREO MASTER* fader level display area (⑧).

⑦ STEREO MASTER level meters

The master levels are shown by this stereo level meter.
The *STEREO MASTER* level meters appear green at levels of -12 dB or less, yellow at levels from -12 dB to -6 dB and red at levels above -6 dB.
Each level meter has an overload indicator at its top.

NOTE

The *STEREO MASTER* level meter shows the levels after being adjusted by the fader (post fader). The level meters are affected by fader adjustments and channels being muted.

⑧ STEREO MASTER fader level display area

This shows the level of the *STEREO MASTER* fader as a decibel value.

LINK button overview

When a *LINK* button on the *MIXER* page is turned on/off, the settings differ according to whether the stereo link is on or off.
The details of the settings are as follows.

When a LINK button is turned on

Button/knob	Setting status
Select buttons	On if a Select button was on (lit) for either channel. Off if the Select buttons were off (unlit) for both channels.
φ (phase) buttons	Settings are not combined. Both channels retain their previous settings.
THRU buttons	The setting of the odd channel is used for both.
EQ buttons	The setting of the odd channel is used for both.
COMP buttons	The setting of the odd channel is used for both.
PRE/*POST* buttons	The setting of the odd channel is used for both.
AUX knobs *(1–4)*	The setting of the odd channel is used for both.
SOLO buttons	The setting of the odd channel is used for both.
MUTE buttons	The setting of the odd channel is used for both.
Pan sliders	Settings are not combined. Odd and even channels can each be set independently.
Channel faders	The setting of the odd channel is used for both.
Channel level meters	The channel level meters are shown as a stereo pair.
Fader level display areas	The setting of the odd channel is shown.

When a LINK button is turned off

| Button/knob	Setting status
Select buttons	When on (lit), the odd channel will be turned on and the even channel will be turned off. When off (unlit), both channels will be turned off.
φ (phase) buttons	Settings do not change. Both channels retain their previous settings.
THRU buttons	Both channels use the settings they shared when stereo-linked.
EQ buttons	Both channels use the settings they shared when stereo-linked.
COMP buttons	Both channels use the settings they shared when stereo-linked.
PRE/*POST* buttons	Both channels use the settings they shared when stereo-linked.
AUX knobs (1-4)	Both channels use the settings they shared when stereo-linked.
SOLO buttons	Both channels use the settings they shared when stereo-linked.
MUTE buttons	Both channels use the settings they shared when stereo-linked.
Pan sliders	Both channels use the settings they shared when stereo-linked.
Channel faders	Both channels use the settings they shared when stereo-linked.
Channel level meters	The channel level meters switch to showing mono signals.
Fader level display areas	Both channels use the settings they shared when stereo-linked.

NOTE

When a *LINK* button is on (lit), the select button names change to a name used when the stereo link is active.

Examples

When the *INPUT 1* and *INPUT 2* buttons are linked, the name of the button changes to *INPUT 1-2*.

5 - Using the Settings Panel

INFORMATION page
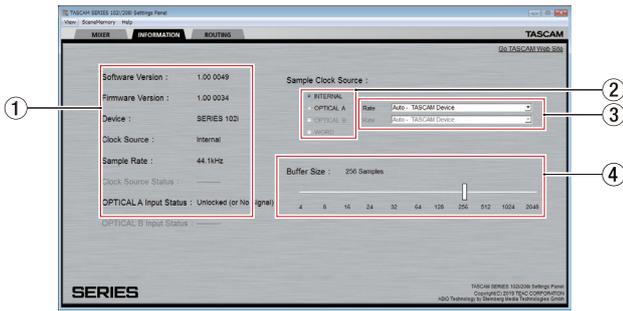
① Status display area

This shows the current status of the unit.

Item displayed	Meaning
Software Version	This is the software version.
Firmware version	This is the firmware version used by the connected unit.
Device	This is the name of the connected unit. (**No Device** is shown when no device is connected.)
Clock Source	This shows the name of the currently selected clock source.
Sample Rate	This shows the current sampling frequency.
Clock Source Status	This shows the sampling clock status. **Good**: There are no problems. **Unlocked (or No Signal)**: There is no valid signal or it is disconnected. **Phase Error**: This unit and the device that is optically connected are not synchronized. **Sample Rate Mismatch**: This unit and the device that is optically connected have different sample rates.
OPTICAL A Input Status	This shows the OPTICAL input status. **Good**: There are no problems. **Unlocked (or No Signal)**: There is no valid signal or it is disconnected.
OPTICAL B Input Status (SERIES 208i only)	**Phase Error**: This unit and the device that is optically connected are not synchronized. **Sample Rate Mismatch**: This unit and the device that is optically connected have different sample rates.

* Note about the sample rate of this unit
  * Win: Set the same sample rate for both the Playback and Recording tabs of the Sound Properties in Control Panel screen.
  * Mac: Set the sample rate in the Audio Devices window of Audio MIDI Setup.

NOTE

- When the unit and the computer are not connected, "**No Device**" is shown for the "**Firmware Version**" and "**Device**" items.
- When the ② **Sample Clock Source** item is set to "**Internal**", the **Clock Source Status** item will appear dimmed as "**----------**".

② Sample Clock Source

Use this to set the sampling clock source.

Option	Meaning
INTERNAL	The unit's built-in clock is always used.
OPTICAL A	The clock signal input through the **OPTICAL IN (S/MUX)** connector is used.
OPTICAL B (SERIES 208i only)	If the connected device is a TASCAM device and ③ **Rate** setting is "**Auto - TASCAM Device**", the input clock signal will be automatically identified and set.
WORD (SERIES 208i only)	The clock signal input through the **WORD IN** connector is used.

NOTE

- When set to **OPTICAL A**, **OPTICAL B** or **WORD**, if no signal is input through the corresponding connector or synchronization becomes impossible, the status will appear in the **Clock Source Status** item and this unit's **STANDBY** indicator will blink.
- When connecting multiple digital devices to the SERIES 208i, synchronize them to a system word clock and input word clock supplied by the master clock device to the SERIES 208i.
- After changing the clock source, proper continuation of playback/recording might not be possible, so you should restart the playback/recording software that you are using.

③ Rate items

Use these to set the connected OPTICAL (S/MUX) sample rates.

If the connected device is also a TASCAM product, select "**Auto - TASCAM Device**" to set this automatically.

> **Options:** *Auto - TASCAM Device, Manual - 44.1kHz/48kHz, Manual - 88.2kHz/96kHz, Manual - 176.4kHz/192kHz*

④ Buffer Size (Windows only)

The Windows driver for the unit stores the audio signals transferred to and from the computer temporarily in a buffer. This buffer size can be adjusted.

Smaller buffer sizes result in less audio signal delay (latency), but require high-speed processing by the computer.

If the processing cannot keep up, for example, due to other system operations, clicking and popping noises might occur and the audio signal might even drop out.

Increasing the buffer size will stabilize operation and suppress negative effects on audio signals, but the delay in audio signals sent to the computer will increase.

You can use the slider on the panel to adjust the buffer size, according to the use conditions.

Use the slider to select fixed values that increase from left to right.

> **Options**: *4 Samples, 8 Samples, 16 Samples, 24 Samples, 32 Samples, 64 Samples, 128 Samples, 256 Samples, 512 Samples, 1024 Samples, 2048 Samples*

ROUTING page
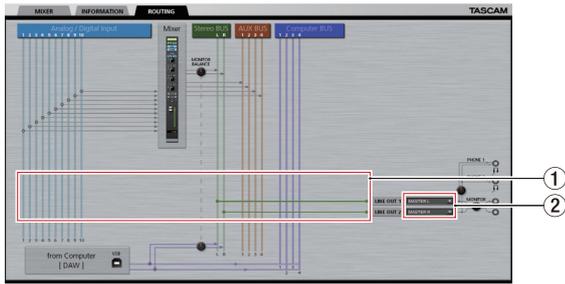
SERIES 102i Settings Panel *ROUTING* screen
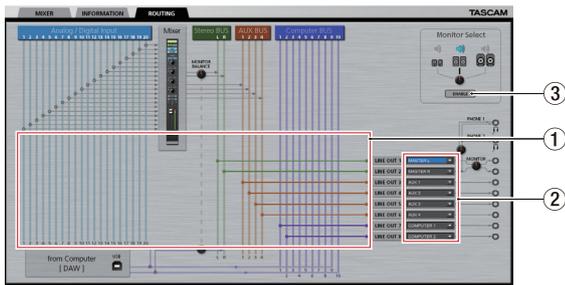
SERIES 208i Settings Panel *ROUTING* screen

① **Status display area**

This shows the connections between the signals selected in the output signal selection area (②) and the output connectors.

② **Output signal selection area**

Click the output signal selection area to open a pull-down menu and select the signal you want to output.

SERIES 102i options

Option	Meaning
INPUT 1	Output signals as *Analog/Digital Input 1-2*.
INPUT 2	
OPTICAL 1	Output signals as *Analog/Digital Input 3-10*.
OPTICAL 2	
OPTICAL 3	
OPTICAL 4	
OPTICAL 5	
OPTICAL 6	
OPTICAL 7	
OPTICAL 8	
MASTER L	Output signals from the *Stereo BUS L/R*.
MASTER R	
AUX 1	Output signals from *AUX BUS 1-4*.
AUX 2	
AUX 3	
AUX 4	
COMPUTER 1	Output signals from *Computer BUS 1-4*.
COMPUTER 2	
COMPUTER 3	
COMPUTER 4	

SERIES 208i options

Option	Meaning
INPUT 1	Output signals as *Analog/Digital Input 1-4*.
INPUT 2	
INPUT 3	
INPUT 4	
OPTICAL A1	Output signals as *Analog/Digital Input 5-12*.
OPTICAL A2	
OPTICAL A3	
OPTICAL A4	
OPTICAL A5	
OPTICAL A6	
OPTICAL A7	
OPTICAL A8	
OPTICAL B1	Output signals as *Analog/Digital Input 13-20*.
OPTICAL B2	
OPTICAL B3	
OPTICAL B4	
OPTICAL B5	
OPTICAL B6	
OPTICAL B7	
OPTICAL B8	
MASTER L	Output signals from the *Stereo BUS L/R*.
MASTER R	
AUX 1	Output signals from *AUX BUS 1-4*.
AUX 2	
AUX 3	
AUX 4	
COMPUTER 1	Output signals from *Computer BUS 1-10*.
COMPUTER 2	
COMPUTER 3	
COMPUTER 4	
COMPUTER 5	
COMPUTER 6	
COMPUTER 7	
COMPUTER 8	
COMPUTER 9	
COMPUTER 10	

③ **Monitor Select ENABLE button (SERIES 208i only)**

This opens the *Monitor Control* screen for selecting monitoring output.

NOTE

The illustration above the *ENABLE* button shows an image of operation. The *Monitor Select* knob does not function.

5 - Using the Settings Panel

Monitor Control screen (SERIES 208i only)

On this screen, you can assign the Master and AUX bus outputs to eight analog outputs, and make settings for each output channel, including monitor speaker selection and level adjustment for Small, Medium and Large types.

The set output channels and output levels, however, are only effective while the *Monitor Control* screen is open. Returning to the previous screen will disable these settings.

Closing the *Monitor Control* screen will switch the output settings to those on the *ROUTING* screen.
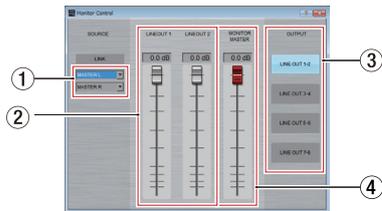
① Input source selection

Click the input source selection area to open a pull-down menu with options and select the input source.

② Monitor output channels

Drag each output channel fader up or down to adjust the monitor output signal levels.

The adjusted values are shown above the faders.

The output channel names selected in the monitor output selection area (③) are shown.

Range: -inf. to 0.0 dB (default: 0.0 dB)

③ Monitor output selection

Use these to select the output channels.

The names of the selected output channels are shown at the top of the monitor output channel area (②).

④ MONITOR MASTER channel

Drag the *MONITOR MASTER* channel fader up or down to adjust the monitor output signal level.

The adjusted values are shown above the faders.

Range: -inf. to 0.0 dB (default: 0.0 dB)

Using the Settings Panel View menu

Use the *View* menu in the menu bar to reset the Settings Panel and reverb settings to their original values, as well as to minimize the Settings Panel.
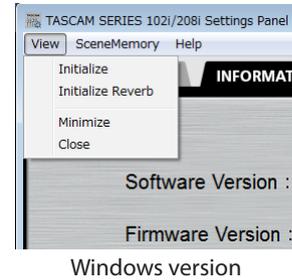
Windows version
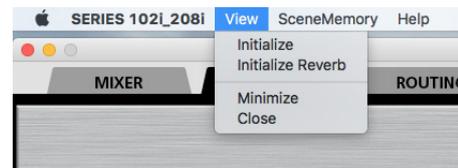
Mac version

Initialize

Select this to reset all settings in the Settings Panel.

See "Initializing the Settings Panel" on page 23 for details.

Initialize Reverb

Select this to reset the settings in the *REVERB* section on the *MIXER* page.

See "Resetting the reverb settings" on page 23 for details.

Minimize

This minimizes the Settings Panel software to the Windows Taskbar or Mac Dock.

Close

Close the Settings Panel and quit/exit the software.

Initializing the Settings Panel

Select this to reset all settings in the Settings Panel.

ATTENTION

Depending on the input signal level, sudden loud sounds could be output unexpectedly. We recommend initializing settings when no sound signals are being input from instruments or playback devices.

NOTE

The items on the *INFORMATION* page will not be initialized.

1. In the menu bar, open the *View* menu, and click *Initialize*.
The following confirmation message will appear.

Windows version

2. Click the "*OK*" button in the message window to reset the Settings Panel settings to their default values.
The items reset are as follows.

Following items on MIXER page
- *EQUALIZER* area settings: all initialized
- *COMPRESSOR* area settings: all initialized
- *REVERB* area settings: all initialized
- *φ* (phase) buttons (all channels): off
- *THRU* buttons (all channels): off
- *EQ* buttons (all channels): off
- *COMP* buttons (all channels): off
- *PRE*/*POST* buttons: off
- *AUX 1-4* knobs (all channels): -inf.
- *SOLO* buttons (all channels): off
- *MUTE* buttons (all channels): off
- *Pan* sliders (all channels): center (*C*)
- Channel faders (all channels): 0.0 dB
- *LINK* buttons (all channel pairs): off
- *REVERB* buttons: on
- *REVER RETURN* knob: -inf.
- *AUX MASTER 1/REVERB* knob: 0 dB
- *AUX MASTER 2-4* knobs: 0 dB
- *STEREO MASTER* fader: -infinity

Following items on ROUTING page
- *LINE OUT 1*: *MASTER L*
- *LINE OUT 2*: *MASTER R*
- *LINE OUT 3*: *AUX 1* (SERIES 208i only)
- *LINE OUT 4*: *AUX 2* (SERIES 208i only)
- *LINE OUT 5*: *AUX 3* (SERIES 208i only)
- *LINE OUT 6*: *AUX 4* (SERIES 208i only)
- *LINE OUT 7*: *COMPUTER 1* (SERIES 208i only)
- *LINE OUT 8*: *COMPUTER 2* (SERIES 208i only)

## Resetting the reverb settings

Select this to reset the settings in the *REVERB* section on the *MIXER* page.

ATTENTION

After resetting, you cannot restore the previous settings.

1. In the menu bar, open the *View* menu, and click *Initialize Reverb*.
The following confirmation message will appear.
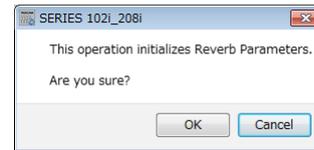
Windows version

2. Click the "*OK*" button in the message window to reset the reverb settings to their default values.
The items reset and their default values are as follows.

Reverb type	Reverb knobs		
	PRE DELAY	*REVERB TIME*	*DIFFUSION*
HALL	90 ms	2.7 s	20
ROOM	25 ms	1.4 s	60
LIVE	6 ms	2.6 s	50
STUDIO	60 ms	0.4 s	70
PLATE	42 ms	2.7 s	50

The reverb type will also be set to HALL (default value).

NOTE

Click the "*Cancel*" button to return to the previous screen without initializing.

Using the SceneMemory menu

Use the "*SceneMemory*" menu to save the current Settings Panel settings in a scene memory or to initialize those settings.

SceneMemory1-10 items

Use to save the current Settings Panel settings as a scene memory. Ten scene memories have been prepared in advance.

Initialize Memory item

Use to reset all scene memories to their default values.
See "Resetting all scene memories" on page 26 for details.

Save into the unit item

You can transfer the current Settings Panel settings to the unit.
By transferring the settings saved in the Settings Panel to the unit, you can use them to operate the unit in standalone mode when it is not connected to a computer by USB.
See "Saving Settings Panel settings to the unit" on page 26 for details.

NOTE

The *Buffer Size* item on the *INFORMATION* page is not saved.

Using the SceneMemory menu

Use to save the current Settings Panel settings as a scene memory.

ATTENTION

Only one set of Settings Panel settings can be saved in each scene memory. For this reason, saving settings will erase the previously saved settings.

1. Open the "*SceneMemory*" menu from the menu bar, and click the name of the scene memory where you want the settings to be saved to open a submenu.

2. Click "*Save*" in the submenu to save the current Settings Panel settings to the selected scene memory.
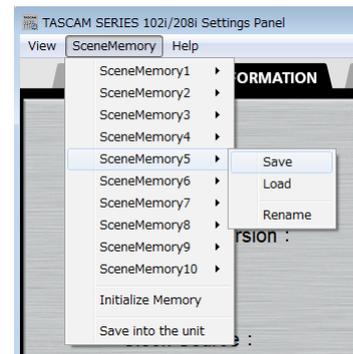
Windows version
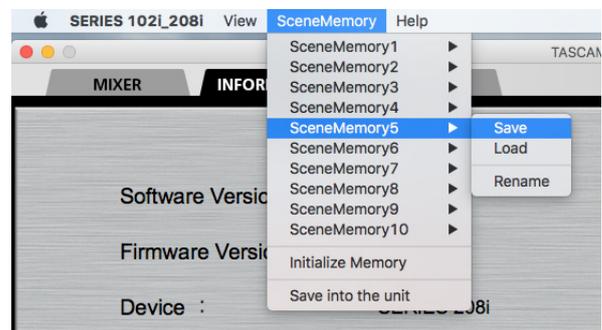
Mac version

NOTE

The select button settings on the *MIXER* page are not saved.

Loading Settings Panel settings

You can change the current Settings Panel settings by loading settings stored in a scene memory.

ATTENTION

Depending on the settings of the saved scene memory, sudden loud sounds could be output. We recommend loading settings when no sound signals are being input from instruments or playback devices.

1. Open the "*SceneMemory*" menu from the menu bar, and click the name of the scene memory to be loaded to open a submenu.

2. Click "*Load*" in the submenu to change the Settings Panel settings to the settings in the selected scene memory.
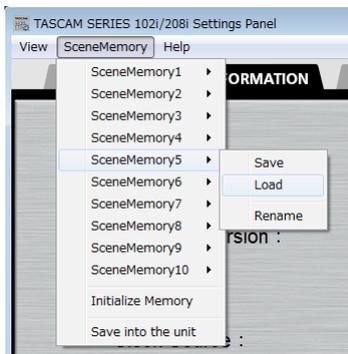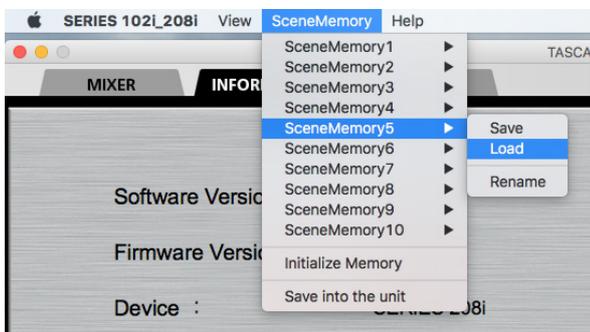

Windows version

Mac version

ATTENTION

A scene memory that has never been saved contains no Settings Panel settings. If you try to load such a scene, the following message will appear.
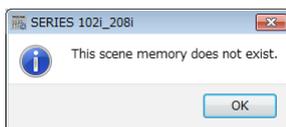

Windows version

Changing scene memory names

You can change the names of scene memories.

1. Open the "*SceneMemory*" menu from the menu bar, and click the scene memory name that you want to change to open a submenu.

2. Select "*Rename*" in the submenu.
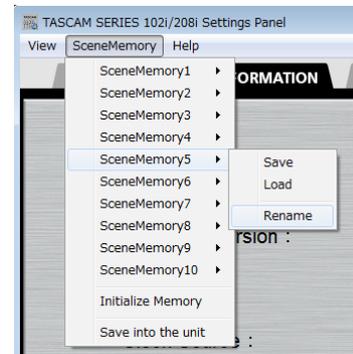
Windows version
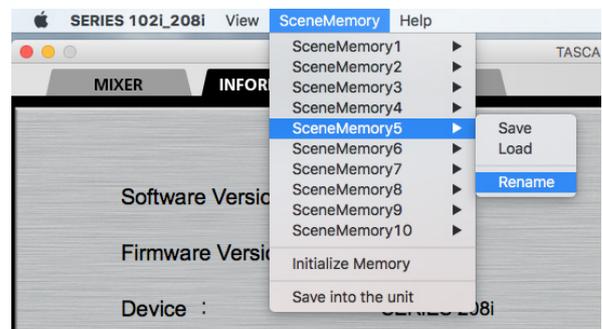
Mac version

3. A window where you can change the scene memory name will open.
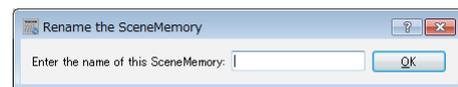
Windows version

4. Input a new name for the scene memory, and click the "*OK*" button to confirm the change.

Resetting all scene memories

You can reset the 10 scene memories to the default values.

ATTENTION

After resetting, you cannot restore the previous settings.

1. In the menu bar, open the "*SceneMemory*" menu, and click "*Initialize Memory*".
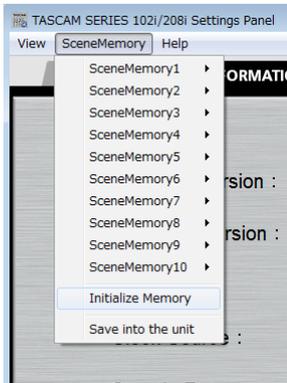

Windows version
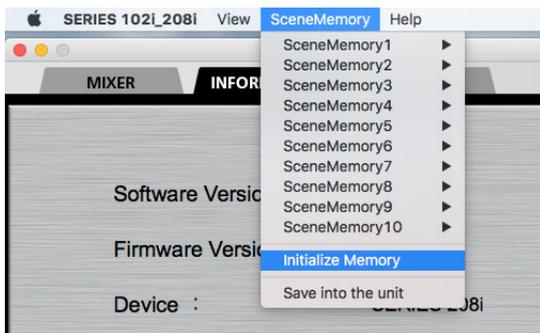
Mac version

2. The following confirmation message, which explains that all scene memories will be reset, will appear.
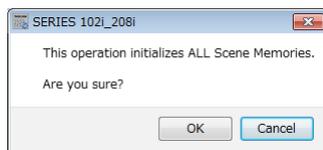
Windows version

3. *Click the* OK button to reset all the scene memories.

NOTE

Click the "*Cancel*" button to return to the previous screen without resetting the 10 scene memories.

Saving Settings Panel settings to the unit

You can transfer the current Settings Panel settings to the unit.

1. In the menu bar, open the "*SceneMemory*" menu, and click "*Save into the unit*".
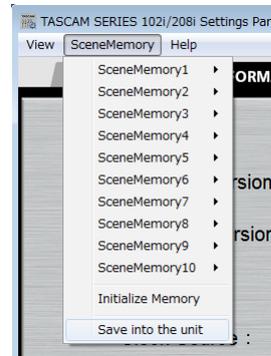
Windows version
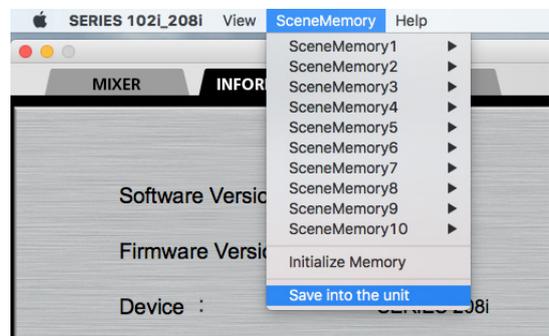
Mac version

2. The following confirmation message, which explains that all the current Settings Panel settings will be saved to the unit, will appear.
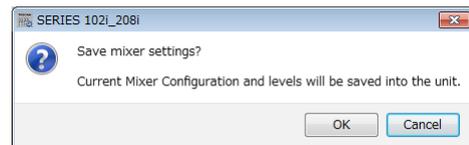
Windows version

3. Click the "*OK*" button on the screen to save all the current Settings Panel settings to the unit memory.

NOTE

The *Buffer Size* item on the *INFORMATION* page is not saved.

Notification function

If the computer you are using is connected to the Internet, notifications might appear when the Settings Panel is launched.


> **NOTE**
>
> Put a check in the "Do not show the same message again" checkbox to prevent the same message from being shown the next time it is launched.

Automatic software and firmware update function

If the computer you are using is connected to the Internet, when a new version of the software or the firmware is released, a notification about automatic updating will appear when the software is launched.
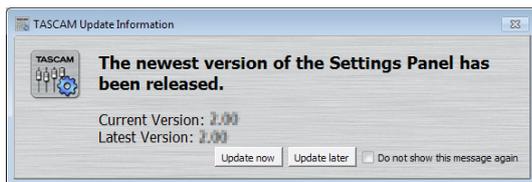
Software update notification
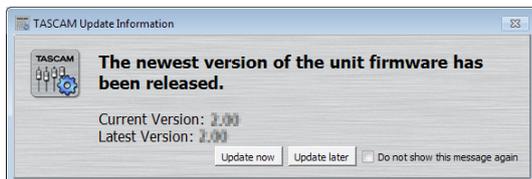
Firmware update notification

Click the "Update now" button to use the latest version of the software or firmware.

The file will be downloaded automatically in the update software will launch.

Click the "Update later" button to close the update window if you do not want to update or want to update later.

> **NOTE**
>
> • Put a check (✔) in the "Do not show the same message again" checkbox to prevent the same window from being shown the next time the software is launched.
>
> • After closing the update window, you can reopen it by selecting "*Update*" from the "*Help*" menu.

6 - Application Guide

In this chapter, we explain how to set some audio applications for use with this unit.

DAW software

Bundled DAW software

Download quickstart guides for the bundled DAW software from the TEAC Global Site (**http://teac-global.com/**), and refer to them for instructions about downloading, installing and making settings in these applications.

Other DAW software

When using any other DAW software, consult its operation manual.

Windows Media Player

1. Open the "*Sound*" screen using the procedures for the operating system being used (Windows 10/Windows 8.1/Windows 7).

2. On the *Playback* page, right-click "*Speakers SERIES 102i*" or "*Speakers SERIES 208i*", and click "*Set as Default Device*" in the pop-up menu that appears.

   When you do this, the green check mark appears next to the selected device.
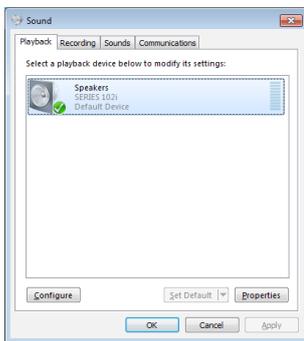
Windows 7 screen

> **NOTE**
>
> To use the unit as a recording device, set the default device according to the ASIO device being used on the *Recording* tab in the same manner as on the *Playback* tab.

3. After completing the setting, click the *OK* button.

4. Launch Windows Media Player, select an audio file and start playback.

> **NOTE**
>
> • If you change the setting while Windows Media Player is running, the software will not recognize that the device has been changed. In this case, restart Windows Media Player.
>
> • If you still cannot hear sound after correctly making the settings and completing the procedures above, turn the **STANDBY** switch off and restart the computer.
>
> • If you make this setting, sound will be output through this unit, but no sound will be output by the computer's speakers or headphones jacks.

macOS and iTunes

1. Open the "*Utilities*" folder in the "*Applications*" folder, and double-click "*Audio MIDI Setup*". Then open the "*Audio Devices*" window.

2. Click "*SERIES 102i*" or "*SERIES 208i*" to select it. Then, while right-clicking or control-clicking it, click "*Use this device for sound output*" in the pop-up menu that appears.

   The speaker mark moves next to "*SERIES 102i*" or "*SERIES 208i*".

> **NOTE**
>
> To use this device as the recording device, set "*SERIES 102i*" or "*SERIES 208i*" to "*Use this device for sound input*".

3. Launch iTunes, select an audio file and start playback.

> **NOTE**
>
> Do not change the sampling frequency when YouTube, iTunes or another application is playing back.

iOS

When using this unit with an iOS device, no special settings are necessary. You can use the unit immediately after connecting it to the device by USB.

> **NOTE**
>
> Connecting headphones or other equipment to the headphone jack of the iOS device will interrupt USB communication with the unit.

Overview

- This unit will operate in standalone mode if it is turned on when it is not connected to a computer by USB.
- You can use this unit as a mic preamp and to monitor input signals. This function is convenient when you want to practice an instrument without recording, for example.

Settings in standalone mode

When operating in standalone mode, input signals pass-through the built-in digital mixer and output selector, which are set at fixed values, and are output from the output jacks. In addition, when operating in standalone mode, the **USB** indicator will be unlit.

Various settings

When the power is turned on again, the various settings, including for the internal digital mixer and routings, will be those loaded when "*Save into the unit*" was executed while connected to a computer.

8 - MIDI Implementation Chart

MIDI Implementation Chart

Function		Transmit	Recognize	Remarks
Basic channels	When power on	×	×	Thru
	Settable	×	×	
Mode	When power on	×	×	Thru
	Messages	×	×	
	Altered	....		
Note number	Range	×	×	Thru
Velocity	Note on	×	×	Thru
	Note off	×	×	
Aftertouch	Polyphonic	×	×	Thru
	Channel	×	×	
Pitch bend		×	×	Thru
Control change		×	×	Thru
Program change		×	×	Thru
	Setting range	....		
System exclusive		×	×	Thru
System common	Position	×	×	Thru
	Song select	×	×	
	Tune	×	×	
System real-time	Clock	×	×	Thru
	Command	×	×	
Other	Local on/off	×	×	Thru
	All notes off	×	×	
	Active sense	×	×	
	Reset	×	×	
Notes				

Mode 1: OMNI ON, POLY　Mode 2: OMNI ON, MONO　○ : YES
Mode 3: OMNI OFF, POLY　Mode 4: OMNI OFF, MONO　✕ : NO

Please read this chapter if you are unable to use the unit properly even after setting it following the procedures in this manual.

If you are still unable to resolve your problems please contact TASCAM customer support with the following information about the operating environment and details about the trouble.

Operating environment

- Computer manufacturer :
- Model:
- CPU:
- Memory (RAM) :
- Operating system:
- Applications used:
- Antivirus software:
- Wireless LAN use:

See the end of this document for contact information.

The dedicated software cannot be installed.

1. Check the operating system

The operating system being used might not be compatible with the software that you are trying to install.

Check the compatible operating system of the software you are trying to install again.

2. Stop software running in the background

Antivirus software and other software that runs in the background can prevent installation. Quit software that runs in the background and try installation again.

The unit is connected, but the computer does not recognize it.

1. Install the dedicated software

- If you have not done so, install the dedicated software. "Installing the dedicated software" on page 7 Please refer to this manual.

2. Change the USB port

- This unit cannot be used with USB 1.1. Use a port that supports at least USB 2.0 or USB 3.0.
- Do not use a USB hub with this unit. Always connect the unit directly to a USB port on the computer.
- If the above methods do not resolve the problem, connect the unit to a different USB port on the computer.

There is no sound even when playing back on the computer.

Confirm that the **MONITOR BALANCE** knob on the unit is not turned all the way to the left (toward **INPUT**).

If that is the case, turn the **MONITOR BALANCE** knob to the right of center.

In addition, check the status of the unit's connection with the computer.

Moreover, if you make the following settings, sound will be output through this unit, but no sound will be output by the computer's speakers or headphone jack.

Windows

See the "6 - Application Guide" on page 28 of this manual, and set the default playback device as necessary for the OS.

Mac

1. Quit all applications and open "*System Preferences…*" from the Apple menu.
2. Open "*Sound*" .
3. On the "*Output*" tab, select "*SERIES 102i*" or "*SERIES 208i*".

After completing the setting, restart the computer and check the sound of playback. Depending on the application that you are using, you might need to make additional device settings.

In particular, DAW applications operate using audio engines with settings that are different from the OS settings, so confirm the DAW settings first after installing the driver and Settings Panel software for this unit.

Please see the manuals for the applications that you are using for detailed setting procedures.

The input sound has too much latency when monitoring.

Use the direct monitoring function.

See "⑥ MONITOR BALANCE knob" in "Front panel" on page 4 for details.

The input sound can be heard doubled.

Confirm that the input is not set as an output (monitoring on, for example) in the DAW or other recording software.

An input signal from an input jack could sound doubled because along with direct monitoring it is also being monitored as an output signal from the computer.

Sound breaks up or there is noise.

The processing load on the computer causes sound to break up and noise to occur.

Here are some methods to reduce the load on the computer.

1. A wireless LAN and software running in the background, including antivirus software, regularly put processing loads on the computer, which can cause sound to break up and other noise. Stop wireless LAN transmission, antivirus software and other software running in the background when using this unit.

2. Set the buffer size (latency) in the audio application that you are using or in this unit's Settings Panel to a larger value. (Windows only)

NOTE

Consult the maker of the audio application that you are using for methods to reduce its load on your computer.

3. Change the settings of your computer so that they are optimal for audio processing.

Using Windows

- **Performance Options**
① Open "*System*" using the appropriate method for the OS you are using (Windows 10/Windows 8.1/Windows 7).
  - In Windows 10, open the "*Control Panel*". Then, click the "*System*" icon.
  - In Windows 8.1, right-click the ordinary Start screen (Metro user interface screen) and then click "*All apps*". Then, right-click "*Computer*" and select "*Properties*".
  - In Windows 7, right-click "*Computer*" from the Windows Start button, and select "*Properties*".
② Click "*Advanced system settings*".
③ Click "*Settings*" in the "*Performance*" section of the "*Advanced*" tab of the "*System Properties*" window.
④ In the "Visual Effects" tab of the "*Performance Options*" window, select "*Adjust for best performance*".

- **Power Options**
① Open the   *Control Panel* using the appropriate method for the OS you are using (Windows 10/Windows 8.1/Windows 7).
② Click "*Hardware and Sound*".
③ Click "*Power Options*".
④ Click on "*Create a power plan*" and select "*High Performance*".

NOTE

If an item is not shown, select the "*Show Additional Plans*" downward triangular button. Alternatively, click "Create a power plan".

Using Mac
① Open "*System Preferences…*" from the Apple menu, and select "*Energy Saver*".
② Set "*Computer sleep*" to "*Never*".
③ Set "*Display sleep*" to "*Never*".

NOTE

Depending on the macOS version and Mac computer model, this setting might not be available.

4. **Change the USB port**
   Since the unit might not properly function with some USB ports, try connecting it to a different USB port.

NOTE

- Try again after disconnecting other USB devices. (Keyboards and mice can be left connected.)
- Do not use a USB hub. Always connect the unit directly to a USB port on the computer (built-in)

I see that the SERIES 102i or SERIES 208i recommends that I change the Windows Power Management settings. How do I do this?

Windows allows the processor to throttle to half speed when the computer is idle. However, this can affect the performance of DAW recording software. TASCAM recommends that this function be disabled, especially when using a multi-channel interface such as the SERIES 208i. To Change the Power Management settings in Windows:

1. Open the *Control Panel* using the appropriate method for the OS you are using (Windows 10/Windows 8.1/Windows 7).

2. Click "*Hardware and Sound*".

3. Click "*Power Options*".

4. Select "*High Performance*" from the "*Power Options*".

NOTE

If an item is not shown, select the "Show Additional Plans" downward triangular button. Alternatively, click "Create a power plan".

Using the tab key on a Mac does not move the operation selection.

This function is enabled with a Mac setting.
① Open "System Preferences…" from the Apple menu, and select "Keyboard".
② Select the "Shortcuts" tab, and set "Full Keyboard Access: In windows and dialogs, press Tab to move keyboard focus between:" to "All controls".

Support for Bundled DAW software

TASCAM does not provide end-user support for the bundled DAW software.

Please check the Help menu of the installed software to find where this support is available.

General

Sampling frequencies

44.1, 48, 88.2, 96, 176.4, 192 kHz

Quantization bit depth

24-bit

Inputs and outputs

Analog inputs

Mic inputs (balanced)

SERIES 102i: 1-2
SERIES 208i: 1-2, 3-4
(when the input switch is set to **MIC/LINE**)

> Connector : XLR-3-31 equivalent (1: GND, 2: HOT, 3: COLD)
> Input impedance: 1.5 kΩ
> Rated input level:
> > -64 dBu (0.0005 Vrms, **GAIN** knob at maximum)
> > -6 dBu (0.388 Vrms, **GAIN** knob at minimum)
> Maximum input level: +10 dBu (2.45 Vrms)
> Gain range: 58 dB

Instrument inputs (unbalanced)

SERIES 102i: 1-2
SERIES 208i: 1-2, 3-4
(when the input switch is set to **INST**)

> Connectors: 6.3mm (1/4") standard TS jacks
> > (Tip: HOT, Sleeve: GND)
> Input impedance: 1 MΩ or more
> Rated input level:
> > -64 dBV (0.0006 Vrms, **GAIN** knob at maximum)
> > -6 dBV (0.501 Vrms, **GAIN** knob at minimum)
> Maximum input level: +10 dBV (3.162 Vrms)
> Gain range: 58 dB

Line inputs (balanced)

SERIES 102i: 1-2
SERIES 208i: 1-2, 3-4
(when the input switch is set to **MIC/LINE**)

> Connectors: 6.3mm (1/4") standard TRS jacks
> > (Tip: HOT, Ring: COLD, Sleeve: GND)
> Input impedance: 10 kΩ
> Rated input level:
> > -54 dBu (0.0015 Vrms, **GAIN** knob at maximum)
> > +4 dBu (1.228 Vrms, **GAIN** knob at minimum)
> Maximum input level: +24 dBu (12.282 Vrms)
> Gain range: 58 dB

Analog outputs

Monitor outputs (balanced, LINE OUT 1-2)

> Connectors: 6.3mm (1/4") standard TRS jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
> Output impedance: 230 Ω
> Nominal output level: +4 dBu (1.228 Vrms)
> Maximum output level: +20 dBu (7.75 Vrms)

Line outputs (balanced, LINE OUT 3-8, on SERIES 208i only)

> Connectors: 6.3mm (1/4") standard TRS jacks (Tip: HOT, Ring: COLD, Sleeve: GND)
> Output impedance: 230 Ω
> Nominal output level: +4 dBu (1.228 Vrms)
> Maximum output level: +20 dBu (7.75 Vrms)

Headphone outputs (PHONES Ω1/Ω2)

> Connectors: 6.3mm (1/4") standard stereo jacks
> Maximum output:
> > SERIES 102i: 18 mW + 18 mW
> > SERIES 208i: 45 mW + 45 mW
> > (THD+N 0.1% or less, into 32 Ω load)

Digital audio input ratings

OPTICAL (S/MUX) IN (SERIES 208i includes A and B)

> Connectors: OPTICAL (JEITA RC-5720C)
> Signal format: Multi-channel optical format
> > (Supports S/MUX when 88.2 k, 96 k, 176.4 k or 192 kHz.)

Control input/output

USB

> Connector: 4-pin USB B-type
> Transfer rate: USB 2.0 High Speed (480 Mbps)

MIDI IN connector

> Connector: 5-pin DIN
> Format: standard MIDI

MIDI OUT connector

> Connector: 5-pin DIN
> Format: standard MIDI

WORD IN connector (SERIES 208i only)

> Connector: BNC
> Input voltage: 2.0 Vpp – 5.0 Vpp
> Input impedance: 75 Ω ±10%
> Permitted frequency deviation during external synchronization: ±100 ppm
> Terminal on/off switch

WORD OUT connector (SERIES 208i only)

> Connector: BNC
> Input voltage: 2.0 Vp-p (into 75 Ω)
> Output impedance: 75 Ω ±10%
> Sampling frequencies: 44.1, 48, 88.2, 96, 176.4 and 192 kHz

Audio performance

Mic amp EIN (equivalent input noise)
-129 dBu or lower

Frequency response
MIC/LINE IN
At 44.1/48 kHz, 20 Hz – 20 kHz: +0 dB/-0.4 dB (JEITA)
At 88.2/96 kHz, 20 Hz – 40 kHz: +0 dB/-0.8 dB (JEITA)

S/N ratio
109 dB
(**MIC/LINE IN**, **GAIN** knob at minimum, 20 kHz SPCL LPF + A-Weight)
110dB
(**LINE OUT**, **MONITOR** knob at maximum, 20 kHz SPCL LPF + A-Weight)

THD + N
SERIES 102i
0.0016%
(**MIC IN**, 1 kHz sine wave, **GAIN** knob at minimum, 20 kHz SPCL LPF)
0.0023%
(**LINE IN**, 1 kHz sine wave, **GAIN** knob at minimum, 20 kHz SPCL LPF)
0.0014%
(**LINE OUT**, 1 kHz sine wave, **MONITOR** knob at maximum, 20 kHz SPCL LPF)

SERIES 208i
0.0013%
(**MIC IN**, 1 kHz sine wave, **GAIN** knob at minimum, 20 kHz SPCL LPF)
0.0019%
(**LINE IN**, 1 kHz sine wave, **GAIN** knob at minimum, 20 kHz SPCL LPF)
0.0014%
(**LINE OUT**, 1 kHz sine wave, **MONITOR** knob at maximum, 20 kHz SPCL LPF)

Crosstalk
100 dB or more
(**MIC/LINE** → **LINE OUT**, 1kHz sine wave, **GAIN** knob at minimum)

Computer system requirements

Check the TEAC Global Site (**http://teac-global.com/**) for the latest information about supported operating systems.

Windows

Supported operating systems
Windows 10 32-bit
Windows 10 64-bit
Windows 8.1 32-bit
Windows 8.1 64-bit
Windows 7 32-bit SP1 or later
Windows 7 64-bit SP1 or later
(Windows Vista and Windows XP are not supported)

Computer hardware requirements
Windows computer with a USB port that supports at least USB 2.0 or USB 3.0

CPU/processor speed
2 GHz or faster dual core processor (x86)

Memory
2 GB or more

ATTENTION
Operation of this unit was confirmed using standard computers that meet the above requirements. This does not guarantee operation with all computers that meet the above requirements. Even computers that meet the same system requirements might have processing capabilities that differ according to their settings and other operating conditions.

Mac

Supported operating systems
macOS Mojave (10.14 or later)
macOS High Sierra (10.13 or later)
macOS Sierra (10.12 or later)

Computer hardware requirements
Mac with a USB port that supports at least USB 2.0 or USB 3.0

CPU/processor speed
2 GHz or faster dual core processor

Memory
2 GB or more

iOS device
Apple iOS device running iOS 10 or later

Supported audio drivers

Windows
USB Audio Class 2.0, ASIO 2.2, WDM (MME), MIDI

Mac
Core Audio, Core MIDI

iOS device
Core Audio for iPhone

General

Power

DC12V AC adapter (PS-P1220E)

Power consumption

SERIES 102i: 7.2 W
SERIES 208i: 14 W

Dimensions

SERIES 102i: 186 × 65 × 160 mm (width × height × depth)
SERIES 208i: 296 × 65 × 160 mm (width × height × depth)

Weight

SERIES 102i: 1.1kg
SERIES 208i: 1.6kg

Operating temperature range

5–35°C (41–95°F)

10 - Specifications

Dimensional drawings

SERIES 102i

160mm

186mm

65mm

SERIES 208i

160mm

296mm

65mm
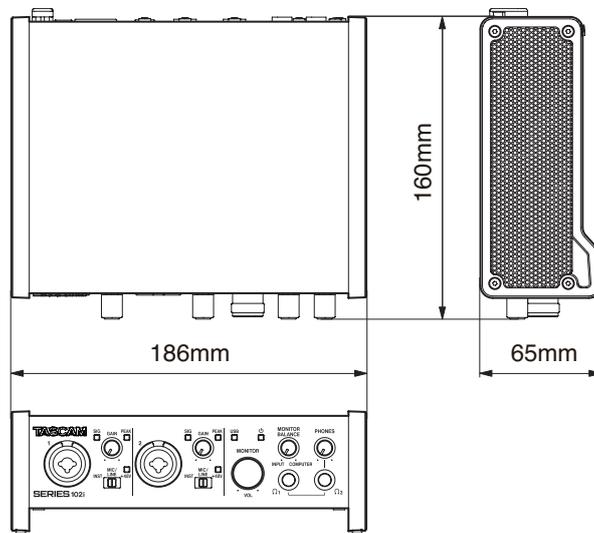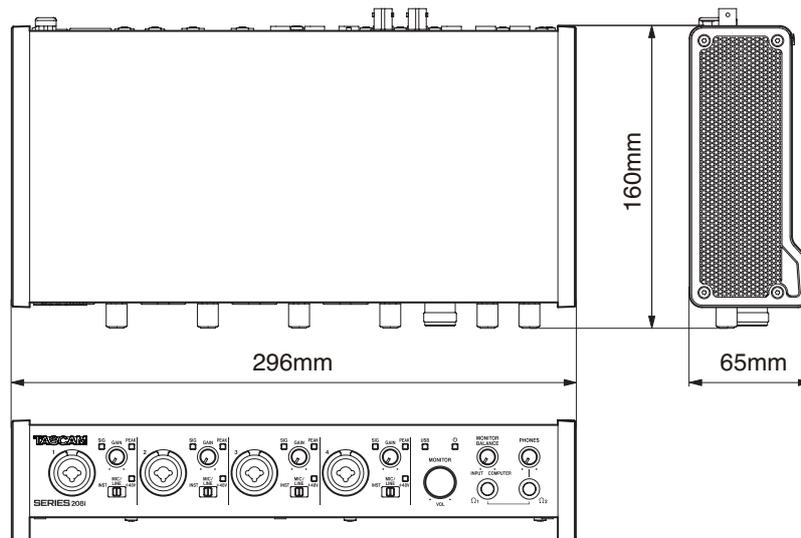
- Illustrations in this manual might differ in part from the actual product.
- Specifications and external appearance might be changed without notification to improve the product.

Block diagrams

SERIES 102i/208i
DSP BLOCK DIAGRAM

TASCAM