TASCAM
TEAC Professional Division

D00963220B

FRONTIER DESIGN GROUP

FireOne

FireWire Audio/MIDI Control

OWNER'S MANUAL
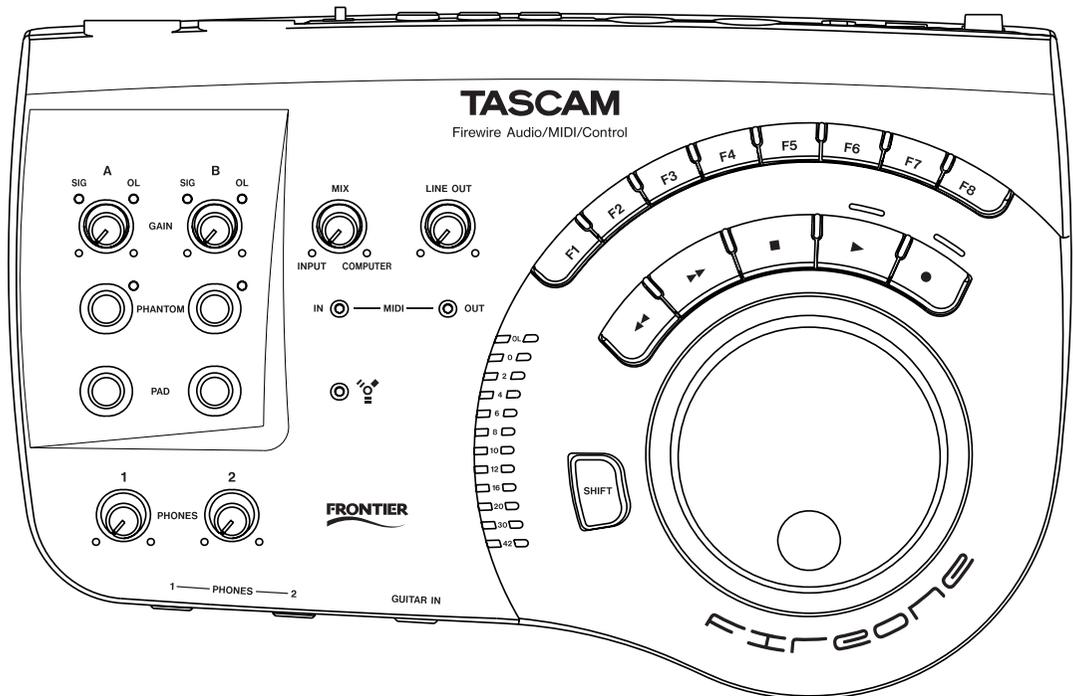
IMPORTANT SAFETY PRECAUTIONS

⚡ **CAUTION** RISK OF ELECTRIC SHOCK DO NOT OPEN ⚠	CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.
⚡	The lightning flash with arrowhead symbol, within equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
⚠	The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

This appliance has a serial number located on the rear panel. Please record the model number and serial number and retain them for your records.
Model number _____

Serial number _____

> **WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.**

1   Read these instructions.

2   Keep these instructions.

3   Heed all warnings.

4   Follow all instructions.

5   Do not use this apparatus near water.

6   Clean only with dry cloth.

7   Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8   Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9   Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11 Only use attachments/accessories specified by the manufacturer.

12 Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.

13 Unplug this apparatus during lightning storms or when unused for long periods of time.

14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.**Do not expose** this apparatus to drips or splashes.

• Do not place any objects filled with liquids, such as vases, on the apparatus.

• Do not install this apparatus in a confined space such as a book case or similar unit.

• The apparatus should be located close enough to the AC outlet so that you can easily grasp the power cord plug at any time.

• An apparatus with Class I construction shall be connected to an AC outlet with a protective grounding connection.

• Batteries (battery pack or batteries installed) should not be exposed to excessive heat such as sunshine, fire or the like.

• Excessive sound pressure fro earphones and headphones can cause hearing loss.

• The apparatus draws nominal non-operating power from the AC outlet with its STAND-BY/ON in the Stand-By position.

Contents

Overview

Thank you for choosing the TASCAM FireOne. With an integrated design that includes professional-quality mic preamplifiers, high-resolution analog-to-digital conversion, MIDI, and control surface features, we have designed FireOne to be the perfect addition to your computer-based digital audio workstation. With the ability to be powered from its FireWire interface or from the included power adapter, FireOne is equally at home in the studio or on the road.

FireOne is designed to be compatible with a wide variety of audio software for Windows XP and Mac OS X. The included Digital Audio Workstation (DAW) application software provides an incredibly rich music composition, recording and editing environment. The FireOne's high-definition recording capabilities (up to 192 kHz, 24-bit) are supported by DAW applications, giving you the immediately ability to record audio with amazing clarity and resolution.

This owner's manual will help you familiarize yourself with FireOne's features and operation. It will discuss how to connect FireOne to your other equipment, and it will discuss how to use FireOne with your computer. A troubleshooting guide will help identify and correct common problems. Please read this guide carefully and keep it handy for future reference.

Features

The FireOne's audio input section provides the ability to connect a wide variety of microphone, line, or instrument signals. Conversion is fully 24-bit and you can select from a variety of sample rates (up to 192 kHz). The quiet, low-distortion mic preamps with switchable phantom power give you the flexibility to use virtually any type of microphone, and the pad switches allow you to accommodate unusually hot signals up to line-level sources. The second (B) input can also be switched to "instrument" mode, whereupon a high-impedance source such as an electric guitar or bass can be connected to the ¼" phone jack conveniently located on the front panel.

The output section offers left and right analog outputs on ¼" TRS jacks. An output level control permits easy adjustment of your speaker levels, while two front-panel headphone outputs with individual output level controls allow you and a friend to comfortably listen to the FireOne's audio outputs.

MIDI IN and OUT jacks are provided on the FireOne which allow you to connect MIDI keyboard controllers, external synthesizers, or anything else that makes use of the ubiquitous MIDI protocol.

FireOne's unique complement of transport controls, function keys, and a large weighted scrub/shuttle wheel offer instant access to the software controls you need the most. The way each audio software application deals with control surfaces varies somewhat, so please refer to the Application Guide for details on function key and wheel use in the various DAW applications covered by that document.

In The Box

The FireOne box contains the items listed below. When opening the package please be certain all the items listed are included. If any items are missing, please consult your TASCAM supplier.

- FireOne main unit
- FireOne AC power adapter
- 6-pin to 6-pin FireWire cable
- A CD-ROM containing the Windows and Macintosh software, control surface plug-ins for various audio recording applications

- A second CD-ROM containing the DAW application software
- This manual
- A warranty card

Copyright, etc

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i.LINK is a trademark of Sony Corporation.

HUI is a trademark of LOUD Technologies Inc.

Pro Tools is a trademark of Digidesign, a division of Avid Technology, Inc.

All other trademarks are the property of their respective holders.

1 - Introduction

Precautions and notes for placement and use

Please use the FireOne only within its operating temperature range of 5°C to 35°C (41°F to 95°F). Please avoid use or storage in dusty or humid environments because these conditions can cause malfunction.

To maintain top performance, and prolong operating life, observe the following notes, precautions and environmental conditions:

- Avoid exposing it to extremes of temperature and humidity and avoid mechanical shocks.
- Keep the unit away from strong magnetic fields (TV sets, computer monitors, large electric motors, etc.).
- Relative humidity should be 30 to 90 percent.
- As the unit may become hot during operation, always leave sufficient space above the unit for ventilation. Do not operate this unit in a confined space such as a bookcase, and do not put anything on top of the unit.

- Avoid placing this unit on top of any heat-generating electrical device such as a power amplifier.
- Always use the supplied AC adapter with the standard home electrical power outlet. Use of other AC adapters may damage the FireOne.
- Use the unit on a table or rack that is level and sturdy.
- Wipe dirt from the unit with a dry cloth. Never use thinner, benzene or other solvents because they may cause acrylic parts and coated surfaces to dissolve, labels to be eroded or other damage.

Beware of condensation

If the unit is moved from a cold to a warm place, or used after a sudden temperature change, there is a danger of condensation; vapor in the air could condense on the internal mechanism, making correct operation impossible.

To prevent this, or if this occurs, let the unit sit for one or two hours at the new room temperature before using.

Conventions used in this manual

Within this manual, the following typographic conventions are used:

- The name of a control or connector on the unit is written in the following way: PHONES.
- The name of a control or connector on another unit is written in the following way: **AUX IN**.
- When referring to the screen display of the host computer, we refer to any prompts, messages, etc. in the following typeface: Press any key to continue.
- If you have to type something into the computer, we write it this way: FILENAME.EXT.

- The names of keys to be pressed on the computer keyboard are written in this typeface with square brackets enclosing them [F1].
- Keys that are to be pressed together are joined by a "+" symbol, so that [Ctrl]+[F1] means "press and hold the Control key and press the F1 key."
- Whenever we refer to the software application to control and set up the FireOne, we refer to it as the "Control Panel" or the "software Control Panel."

System Requirements

FireOne is supported under Windows XP Service Pack 2. No support for earlier versions such as Windows 98 or Windows ME is offered.

FireOne is supported by Macintosh OS X, version 10.4 and later. Earlier versions of Macintosh operating systems are not supported.

Software Application Guide

Since much of the FireOne's control surface operation pertains directly to your DAW software, TASCAM has prepared an Application Guide on using the FireOne with a number of different DAW programs. This Application Guide is available online in PDF format on the TASCAM Web site.

To read it, you will need an application capable of displaying PDF files, such as the Adobe Acrobat Reader (version 4 or above), available as a free download from the Adobe Web site at **www.adobe.com**.

Updates

Since software applications and operating systems often evolve and develop after their initial release, we suggest you check the TASCAM site (**www.tascam.com**) regularly for updated FireOne drivers.

FireWire connection notes

NOTE

Some manufacturers may use a different nomenclature to refer to their FireWire™ connections, such as Sony's "i.LINK", or simply "1394").

FireOne is supplied with a 2 m (6-foot) cable. If you wish to use a longer cable, the length should not be more than 3 m (9 feet) and the cable should be the best possible quality available to avoid data loss, which results in audio dropouts.

While the IEEE 1394 standard permits devices to be "daisy-chained" via devices that contain more than one FireWire port, not all such configurations may work correctly, especially in the case of intermediate equipment being powered off. In any case where daisy-chaining is being used and one or more of the connected devices is not functioning properly, we strongly suggest recabling such that the FireOne is the only unit connected to the associated FireWire port or buss on the host computer. Always perform all FireWire connections and disconnections with the power to both the FireOne and the computer turned off. If connections are made or broken with power to the FireOne or computer turned on, this may result in your computer crashing, or "freezing" and possible loss of data. When turning the power of the FireOne on and off while it is connected to the computer, turn on the power before launching the DAW software, and quit the software before turning off the FireOne.

FireOne comes with a high-quality 6-pin to 6-pin interface cable. We strongly suggest you use this cable, or one of equal quality, for optimum performance.

NOTE

If your computer possesses only a 4-pin type IEEE 1394 connector, you must use the FireOne's external AC adapter, as there is no bus power provided by a 4-pin connection.

2 - Features of the FireOne

The controls and connectors of the FireOne are described in the following sections. Note that the specific functionality of the control surface buttons may vary with the application that it's being used with. Please refer to the Application Guide for more details.

Top panel
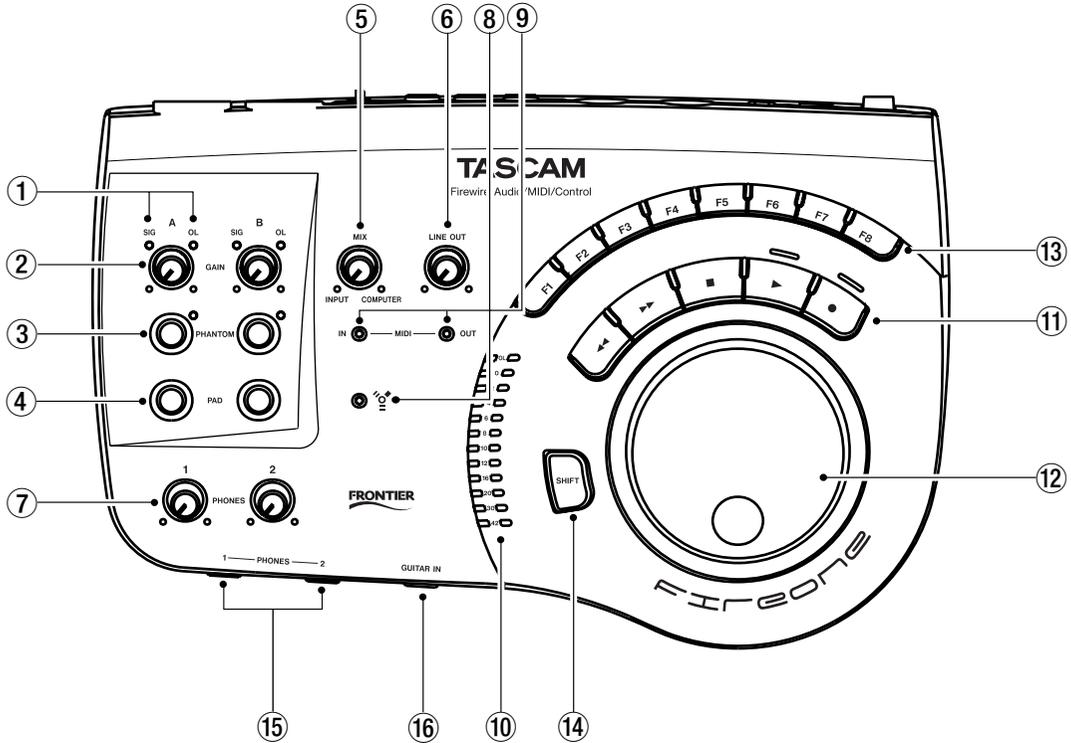
① **SIG and OL indicators**

Each input has indicators located just above its associated **GAIN** control to assist in setting the proper input signal levels. The **SIG** indicator flashes green to indicate that an audio signal is present at that input connector. The **OL** indicator flashes red when a signal approaching the FireOne's clipping level is detected (the signal level that causes **OL** to flash is -2.5dBFS).

When one of these indicators lights, it indicates an overloaded input, and you should reduce the level of the input to the channel gradually, until the **OL** indicator stops flashing.

> **WARNING**
>
> *If you ignore the OL indicator, peaks in the incoming signal will be internally clipped at the A/D converter input, resulting in distortion in the recorded signal!*

② **GAIN controls**

The **GAIN** controls allow the signals at FireOne's input jacks to be amplified or attenuated, such that the signal at the input to the A/D converter can be optimized. Careful optimization of the signal levels will maximize the signal-to-noise ratio of the recorded signal, while preventing distortion due to overload. The signal level indicators described below will help you to set the proper levels. In the section on metering, we'll also describe a way to use FireOne's stereo meters to help you set the input level most accurately.

③ **PHANTOM switches and indicators**

The XLR connectors on the FireOne inputs can be used to supply phantom power to microphones which require its use. Each input has an associated **PHANTOM** pushbutton switch, and an LED indicator to indicates the status of +48 V phantom power on the channel.

> **WARNING**
>
> *Microphones should not be connected to or disconnected from the FireOne with phantom power switched on. Unbalanced ribbon microphones should never be connected to phantom-powered connectors.*

④ PAD switches

The **PAD** switch is used to attenuate input signals by 20 dB. Use the **PAD** switch with high-level output devices that would otherwise overdrive the inputs and cause distortion.

⑤ MIX control

The **MIX** control is used to balance the audio levels from inputs with signals coming from the host computer. When the knob moved fully counter-clockwise (pointer at "7 o' clock"), only the signals connected to the FireOne input jacks will be heard at the **LINE OUT** and **PHONES** outputs. When the **MIX** control is turned fully clockwise (pointer at "5 o'clock"), only the audio coming from the host computer will be heard. At any adjustment point between these two extremes, the expected proportion of both the inputs and the host computer generated audio will be heard.

⑥ LINE OUT level control

The **LINE OUT** control is used to adjust the level of audio on FireOne's **LINE OUTPUT** connectors. In most cases, the line outputs will be connected to an amplifier or powered speakers and will control the audio level in your studio. This control is independent of the headphone levels.

⑦ PHONES level controls

Each of the two **PHONES** jacks on the front of the FireOne can drive a set of headphones. The independent **PHONES LEVEL** controls permit you to adjust the listening level of each **PHONES** output independently.

⑧ FireWire indicator

This indicator lights when a valid FireWire (IEEE.1394) connection is made between the FireOne and the host computer.

⑨ MIDI IN and OUT indicators

These light momentarily when MIDI activity is detected on the external **MIDI IN** and **OUT** ports.

⑩ STEREO METERS

The 12-segment stereo meters on FireOne permit high-resolution observation of input and output signal levels. The first 9 segments (-42dB … -4dB) are green. The next two segment (-2dB, 0dB) are amber. The last segment (**OL**) is red. The point in the FireOne signal flow that is metered corresponds to the program that is sent to both the **LINE OUT**'s and the **PHONES**.

> **NOTE**
>
> *The metering point is just after the MIX control, which suggests the following method for adjusting input signals:*

1. Turn the MIX control completely counterclockwise so that only the input signals are present on the meters.

2. Adjust the input signals with the input GAIN controls such that the loudest peaks in the signals will only occasionally light the amber (-2dB) indicators.

This permits maximum signal at the input to the converters but prevents clipping, affording the highest signal-to-noise ratio for the recording signal.

⑪ TRANSPORT controls

A standard set of transport buttons (◄◄, ►►, ■, ►, and ●) are provided. In most cases these controls will map naturally to the transport controls in the audio application software you're running on your computer.

⑫ JOG/SHUTTLE wheel

A weighted **JOG/SHUTTLE** wheel on the FireOne is used to help you quickly locate to a section of your current project. Depending on the application-specific plug-in and settings, you may also be able to use this jog wheel for other functions. A set of LED's under the wheel provides various forms of visual feedback, and can be used as a visual metronome display when you set your application to send MIDI clock information to the FireOne Virtual MIDI port.

⑬ FUNCTION keys

A set of 8 buttons labeled F1, F2, …, F8 are provided in an arc just above the transport buttons. These perform a variety of functions, depending on the control surface capabilities of the host software. See the application-specific notes for information on how to set up these controls with the audio software you use.

⑭ SHIFT button

SHIFT is used to double the capabilities of the FireOne control surface, by providing an alternate function for each control listed above (transport, **JOG/SHUTTLE** wheel, and **FUNCTION** keys) as supported by the host software.

⑮ PHONES 1 and 2 outputs

Two **PHONES** outputs with independent level controls are provided on the FireOne, so you and a friend can both listen at the levels you're comfortable with.

Note that plugging in headphones doesn't affect the level at the **LINE OUT** connectors – you can adjust room and phones levels independently.

⑯ GUITAR IN

The connector labeled **GUITAR IN** on the front panel is an instrument-level input that can be used in place of the "combo" (XLR/phone) jack on the rear panel. A slide switch on the rear panel of the FireOne ("FRONT-REAR") selects which of the two connectors is routed to input B. The guitar input is matched to the higher-impedance of instrument outputs.

2 - Features of the FireOne

Rear panel
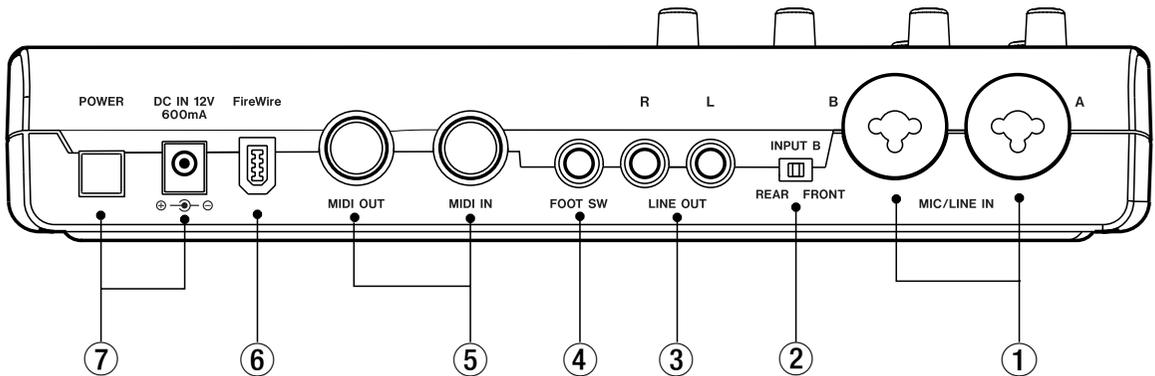
① **MIC/LINE IN** connector

The flexible combo (XLR/phone) jacks connect a wide variety of possible input sources to FireOne's high-quality internal microphone preamplifiers.

Note that when ¼" jacks are used, that FireOne accommodates both unbalanced (TS) and balanced (TRS) sources.

② **REAR/FRONT** switch

This slide switch selects whether the rear-panel combo jack, or the front-panel **GUITAR IN** jack is used as the source for FireOne input **B**.

③ **LINE OUT** connectors

Two ¼" TRS phone jacks carry the Left and Right program material to your external amplifier and speakers. The **LINE OUT** control on the top panel is used to set the listening level.

④ **FOOTSWITCH** jack

A footswitch can be connected to this jack, and can be set to provide control functionality (ex: Punch-In, Start-Stop) to your application software. See the application-specific notes for information on how to set up the external footswitch input with the audio software you use.

⑤ **MIDI IN** and **MIDI OUT** connectors

Standard **MIDI IN** and **MIDI OUT** 5-pin connectors allow you to hook up external MIDI controllers, tone generators, etc. The MIDI messages are not processed by the FireOne, but passed to application software as with any other external MIDI port.

⑥ **FireWire (IEEE 1394)** connector

The IEEE 1394 (or FireWire") connector is the main connection between FireOne and the host computer. A high-quality FireWire cable is provided with FireOne for this purpose. Please see the warnings addressing FireWire hookup in the "Firewire connection notes" section above.

⑦ **POWER** jack and switch

FireOne can be powered either by the **FireWire** bus, or via its own included AC adapter. As noted in the "Firewire connection notes" section, using bus power requires that the FireWire node connected to the FireOne provide the necessary bus power, and that a standard 6-pin FireWire cable such as the one provided with **FireOne** be used.

> **NOTE**
>
> *The 4-pin FireWire connectors found on many notebook computers do not carry power, and hence cannot be used to power the FireOne. In such a case, you must power the FireOne from its own AC adapter.*

Control panel Installation

Windows XP

A setup program is provided on the CD-ROM. This program will install the FireOne Windows driver onto your computer, as well as a Windows Control Panel applet and plugins for Cakewalk SONAR and Steinberg Cubase and Nuendo. To install the software:

• Make sure FireOne is not yet connected to the host computer (the software will instruct you at the appropriate point to connect it).

• Insert the CD-ROM into the drive. In the start-up window, click on "Install Driver" to begin installation (if the start-up window does not appear, locate "FireOne Setup.exe" on the CD-ROM and double-click it).

• Follow the onscreen instructions, which will guide you through the installation process. Make sure to select any application-specific plugins that you will need at the appropriate step.

NOTE

The first time you install FireOne, you will need to install the "TASCAM Null Driver" and then the standard FireOne driver. If you need to reinstall the driver at a later time, you will not need to install the Null Driver again, and you can click OK to skip this step at the appropriate point.

Mac OS X

Drivers for FireWire audio devices are a standard feature of Macintosh OS X. However, there is additional FireOne-specific software that you will need to load onto your computer to allow you to control certain features, and to make it compatible with certain host applications. To install the software onto your computer:

• Make sure FireOne is not yet connected to the host computer (the software will instruct you at the appropriate point to connect it).

• Locate the "FireOne Setup.mpkg" file on the CD-ROM and double-click it.

• Follow the onscreen instructions, which will guide you through the installation process. Make sure to select any application-specific plugins that you will need at the appropriate step.

• The following software components will be installed:
  FireOneCP:FireOne Control Panel (in /Applications)

  FireOneUB.bundle:FireOne plugin for Digital Performer (in /Library/Audio/Plug-Ins/MOTU Control Surface)

  FireOneCN.bundle:FireOne plugin for Cubase/Nuendo (in Cubase.app/Contents/Components)

• When installation is complete, "TASCAM FireOne" should appear in the Windows Device Manager under "Sound, game, and video controllers." If it does not, repeat the installation process.

• When installation is complete, connect the FireOne, start the FireOneCP applet (in /Applications) and verify that you can make adjustments to the FireOne. The Digital Performer and Cubase/Nuendo plugins will now be available for you to use.

4 - Control panel settings

Certain FireOne settings are controlled by the FireOne Control Panel applet which was installed onto your host computer when you installed the driver software. The following settings are available.
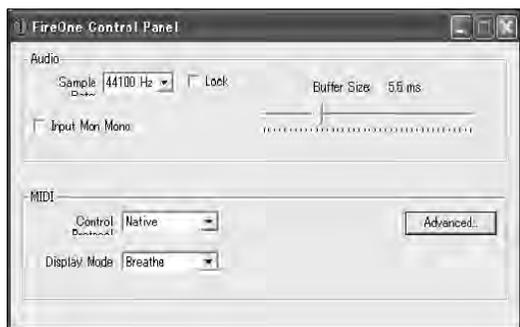
Sample rate

FireOne supports a number of sample rates ranging from (44.1kHz to 192kHz). A combo-box in the FireOne Control Panel permits choosing one of these rates as the default. Applications can also change the active sample rate, so make sure to check the documentation that came with your audio software to see how to manage the sample rate in your recording projects.

Buffer size

FireOne buffers the amount of audio that it uses to communicate with audio applications. The amount of buffering directly determines the latency of audio passing from FireOne's inputs, through your DAW application, and back to its outputs. The FireOne Control Panel's Buffer Size slider allows you to select a buffer size that is compatible with your needs and with the performance of your host computer. In general, remember that more buffering affords greater protection from "clicks and pops," but also increases the latency.

You may need to experiment with the slider to determine the best setting for your needs. This setting does not affect audio monitored via the **INPUT** setting of the **MIX** knobs, which is zero-latency at all times.

Control Surface Mode

The control surface features of FireOne use a virtual MIDI port to communicate with the host computer. The specific MIDI messages that are used to communicate button presses and jog/shuttle movements depend on the Control Surface Mode setting in the FireOne control panel.

It is important that the Control Surface Mode setting is proper for the application(s) that you are using.

At the time of this writing, two modes are supported:
1. FireOne Native protocol (Mackie Control emulation mode)
2. FireOne HUI emulation mode (for use with Pro Tools software).

Jog/Shuttle Display Mode

FireOne includes a set of LEDs arranged in a ring under the jog/shuttle wheel. The Display Mode setting offers the following possibilities:

- Always Off
- Always On
- Breathe
- Metronome
- MIDI Clock Rotate
- MIDI Clock Flash
- Jog Slow Rotate
- Jog Track

Sampling Rate Lock

Normally, any audio application can change FireOne's sample rate. When "Sample Rate Lock" is enabled, only the FireOne control panel is permitted to change the sample rate.

Input Mon Mono

The direct input monitor is normally stereo, with Input A being heard in the left channel and Input B being heard in the right. Enabling "Input Mon Mono" causes the direct input monitor to be mono, with Input A and B being heard in both the left and right channels equally.

5 - Connections

FireWire connections

Using the included cable, connect the FireOne to your computer as shown in the illustration.
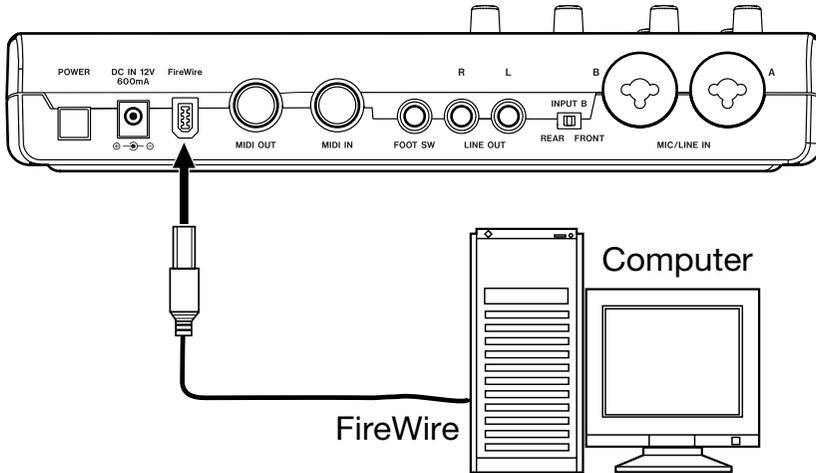
Audio connections

Connect the output signal of your mic, guitar, keyboard, or other audio device to the FireOne, where it will be converted into digital audio and sent via FireWire to your computer. Connect the output of the FireOne to your speakers (via an amp) or headphones, so you will be able to monitor the audio signals coming into the FireOne or being produced by your computer.

Mic

Connect your mics to the **MIC/LINE IN** (**B**/**A**) jacks (XLR). If you are using a condenser mic that requires phantom power, turn on the phantom power.
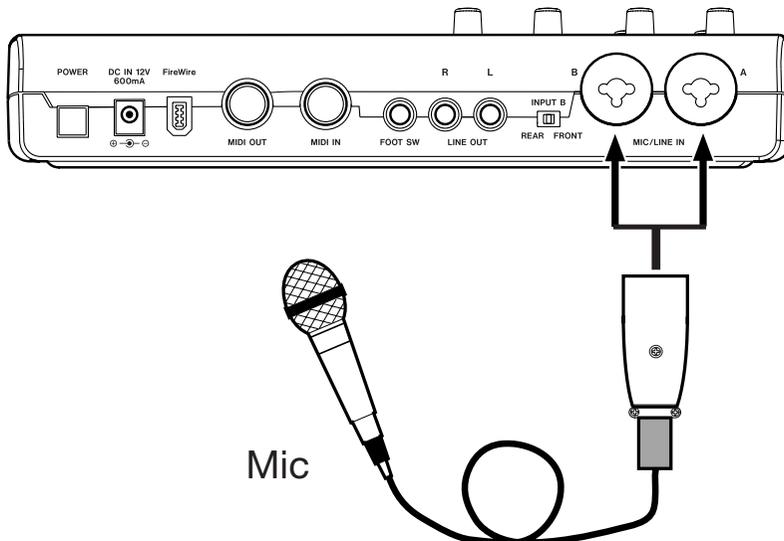
Guitar

Connect your guitar to the **GUITAR IN** jack (1/4" phone jack) and set the **REAR/FRONT** switch to **FRONT**.

Guitar
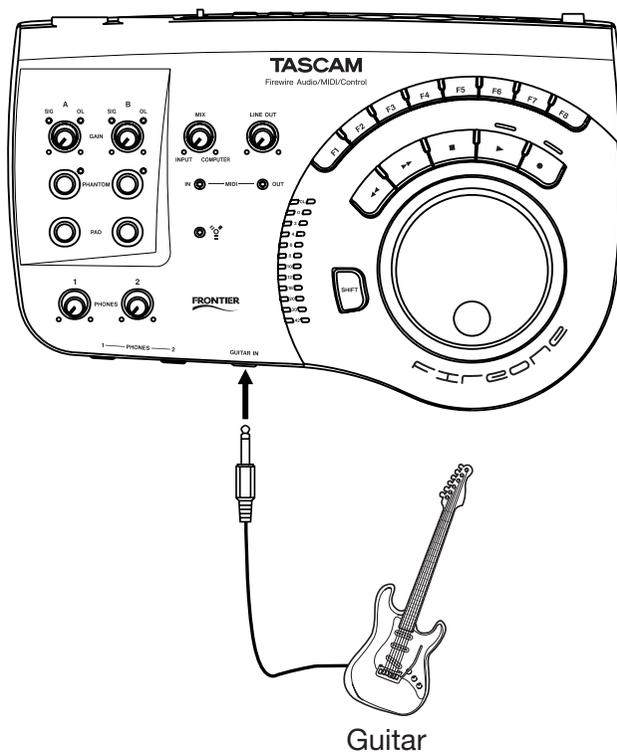
Keyboard/drum machine/sound module/cassette deck/MD/CD etc. (analog connection)

Connect the analog audio output of these devices to the **MIC/ LINE IN** (**B**/**A**) jacks (1/4" phone jack). If you use the **B**, set the **REAR/FRONT** switch to **REAR**.

Keyboard/ Drum machine/ sound module/ cassette deck/ MD/CD etc.

OUT
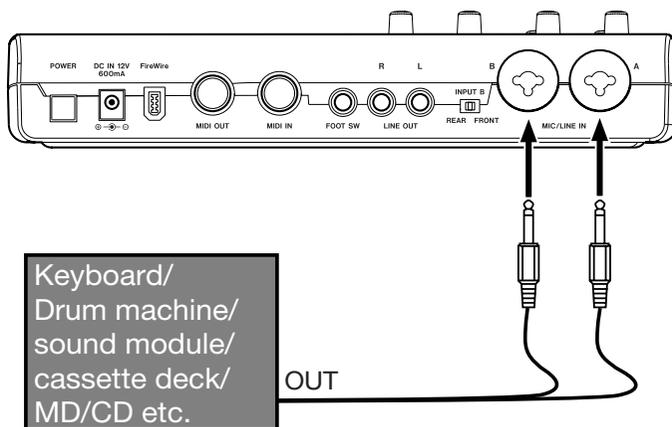
5 - Connections

Analog record player

The output of an analog record player cannot be connected directly to the FireOne.

You must connect a phono preamplifier between your analog record player and the FireOne.

Alternatively, you can connect it via an audio amplifier that has **PHONO** inputs.
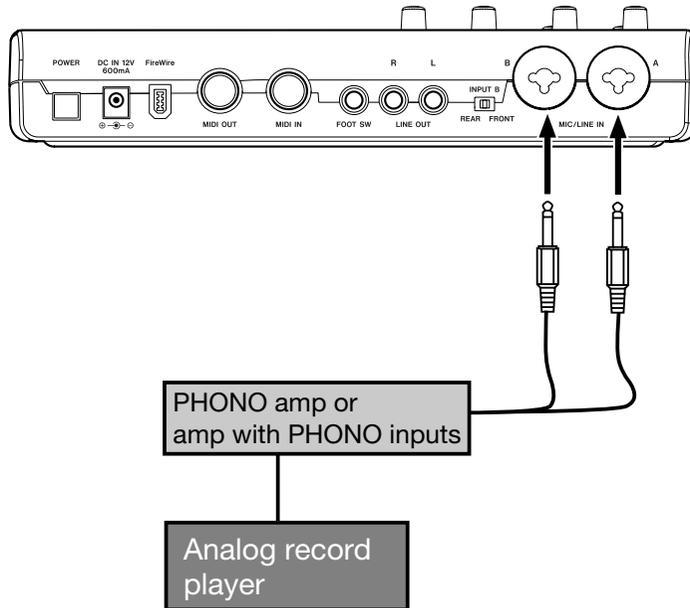
Speakers/headphones
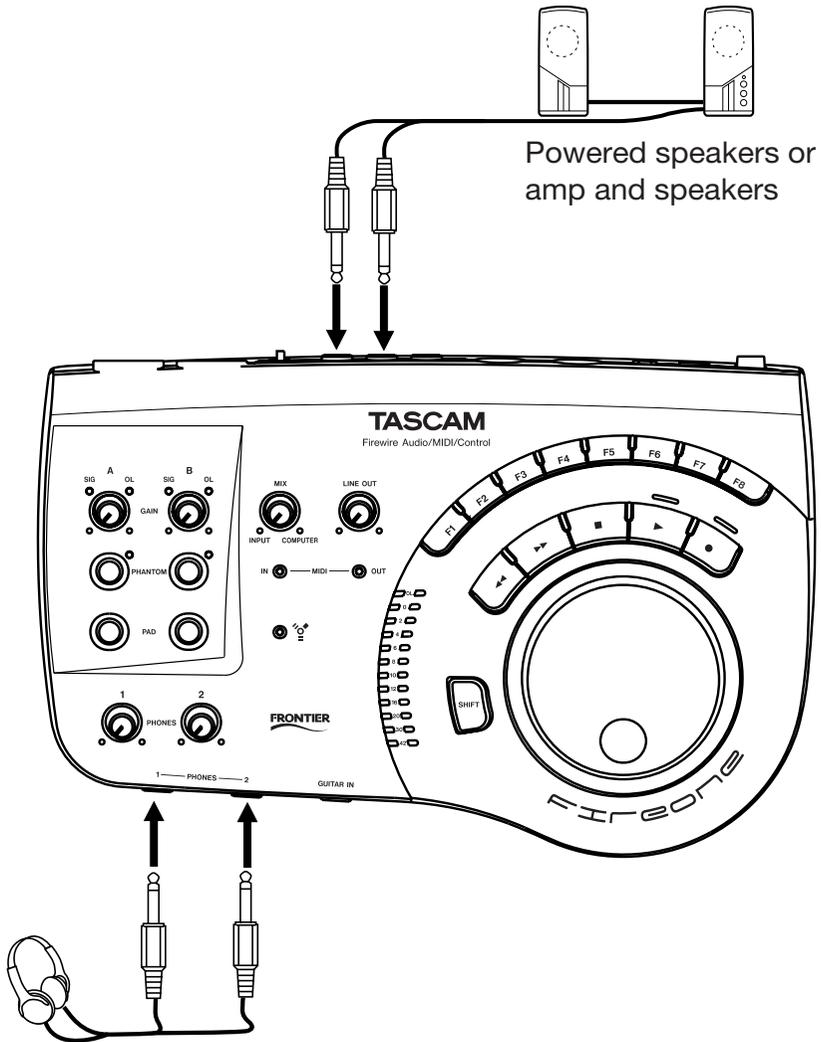
Powered speakers or amp and speakers

Headphones

5 - Connections

MIDI connections

Connect your sound module, keyboard/synthesizer, drum machine, or other MIDI device to the FireOne as shown below.
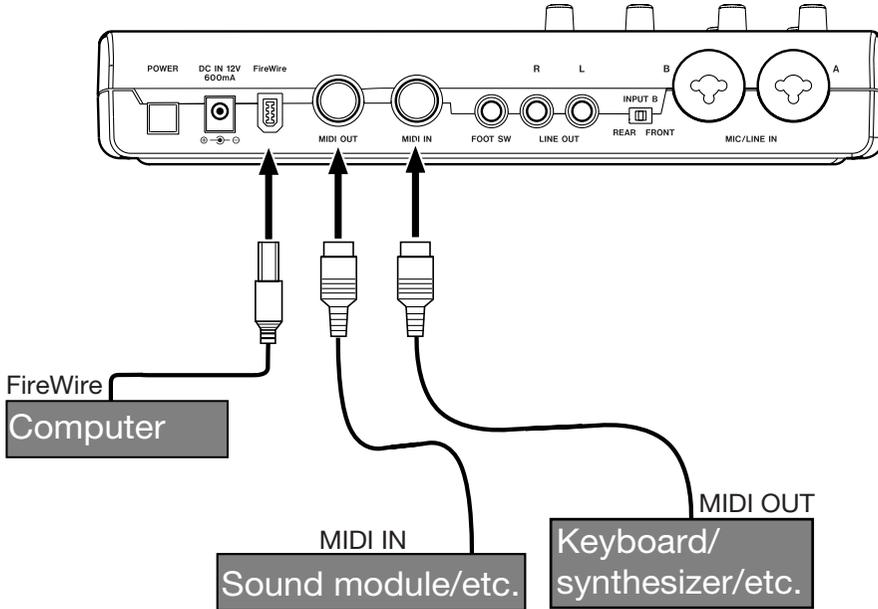
You can use the **MIDI IN/MIDI OUT** connectors to transmit and receive MTC (MIDI Time Code). This allows the MTC-compatible DAW (Digital Audio Workstation) computer application to synchronize with your MIDI equipment.
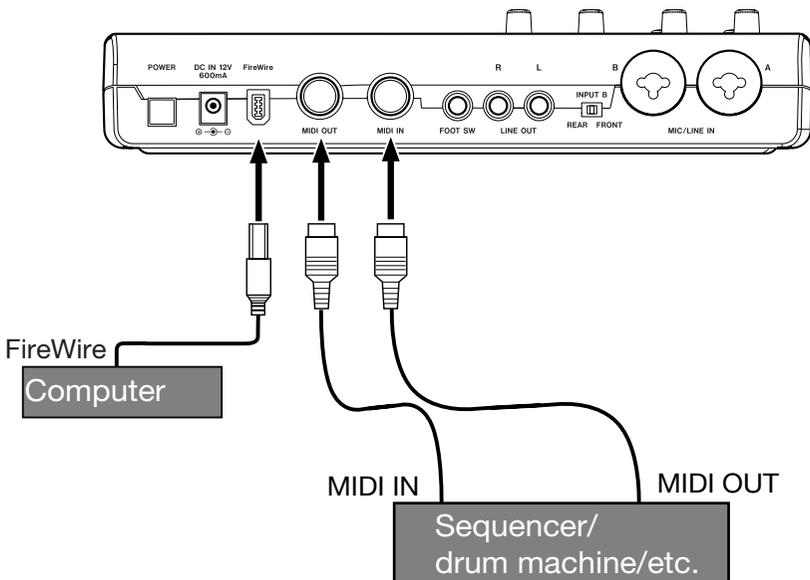
FireOne is a device dependent on a number of interrelated software and hardware components. If you experience problems with your FireOne, here are a few suggestions to check first:

Host Connection troubleshooting

Problem	Solution
FireWire light is OFF.	• Check FireWire cable connection between host and FireOne, and make sure that power is switched ON. • Try external FireOne power supply; host computer's FireWire power may be inadequate. • [Windows] FireOne driver may not be loaded. Reinstall driver.
FireOne does not appear as an audio or MIDI device selection in my DAW software.	• [Windows] Check Device Manager (Control Panel | Sytem | Hardware). If "FireOne" does not appear under "Sound, video, and game control lers" run the "FireOne Setup" program again and follow the on-screen instructions. • [Macintosh] With the FireOne connected to the computer and powered ON, run the "Audio MIDI Setup" program (in /Applications/Utilities) and verify that FireOne appears in the "Properties For:" pop-up list. If not, check FireWire cable connection, and re-power the FireOne.
FireOne MIDI port names are displayed as "plug 1" and "plug 2"	• [Macintosh] Run the "FireOne Setup.mpkg" installer on the CD-ROM which will rename the MIDI ports to "FireOne MIDI" and "FireOne Control."

Control surface troubleshooting

Problem	Solution
No selection for FireOne in application's control-surface setup	• Install the FireOne plug-in appropriate for your DAW application. This applies to: Cakewalk SONAR, Steinberg Cubase & Nuendo, MOTU Digital Performer.
FireOne MIDI ports do not appear as a selection in application's control-surface setup.	• Make sure FireOne is connected and powered-on. • [Windows] Make sure FireOne appears under "Sound, video, and game controllers" in Windows Device Manager • [Macintosh] Make sure FireOne appears as a device in the "Audio MIDI Setup" program's "MIDI Devices" panel. • See application software's instructions for enabling MIDI ports.
FireOne is set up as a control surface; however, no buttons operate the DAW software	• Make sure that the FireOne Control MIDI port is being used for control surface input and output, and not the external FireOne MIDI port. • Make sure that the appropriate control surface protocol is set in the FireOne control panel. This will be Native in most cases (exception: Pro Tools). • Review the application-specific instructions for your DAW on the CD-ROM or TASCAM web site.

6 - Troubleshooting

Audio troubleshooting

Problem	Solution
General: I can't hear the audio output.	• Make sure LINE OUT signal is connected to an amplifier and speakers, and that they are powered on and have proper level settings. • Adjust FireOne LINE OUT knob appropriately. • If you are monitoring using headphones, make sure they are properly connected at the PHONES volume control is set for a comfortable listening level. • Make sure FireOne MIX knob is set according to whether you want to hear inputs, computer playback, or both.
I can't hear the microphone or instrument connected to the FireOne inputs	• Check that the signal source is on, connected, and providing adequate signal level to the FireOne input. (FireOne SIG LED will flash.) • Adjust FireOne input GAIN knob for best signal without overload. • If the input signal level is relatively low (microphone) make sure that the PAD switch is OFF or signal will be too low to use. • If the input is a condenser microphone, turn on FireOne's PHANTOM power for that input channel. • Make sure FireOne MIX knob is set according to whether you want to hear inputs, computer playback, or both.
I can't hear playback from the host computer's DAW software.	• Make sure that the FireOne device is selected as the output destination of the host application software. Refer to documentation for the host software for this procedure. • Make sure that the FireOne MIX knob is set to COMPUTER or to your preferred mix of inputs and DAW playback.
I can't record from FireOne into the computer.	• Make sure that FireOne device is selected as the input source for the tracks you are trying to record. Refer to documentation for the host software for this procedure. • Make sure that the SIG lights for the FireOne are indicating adequate signal levels for the incoming audio.
The recorded audio is distorted	• Adjust the input trim control is set properly, so that the OL (overload) LED does not come on during recording. • If the signal level is too "hot" and easily causes the OL light to come on, engage the FireOne's PAD switch to reduce the signal level on the associated input.
The audio has clicks and pops	• [Windows] Adjust the latency setting in the FireOne control panel to provide more buffering and prevent overruns. • [Macintosh] Adjust the latency (audio buffer size) setting in your audio application, if it has one.

FireOne Block Diagram
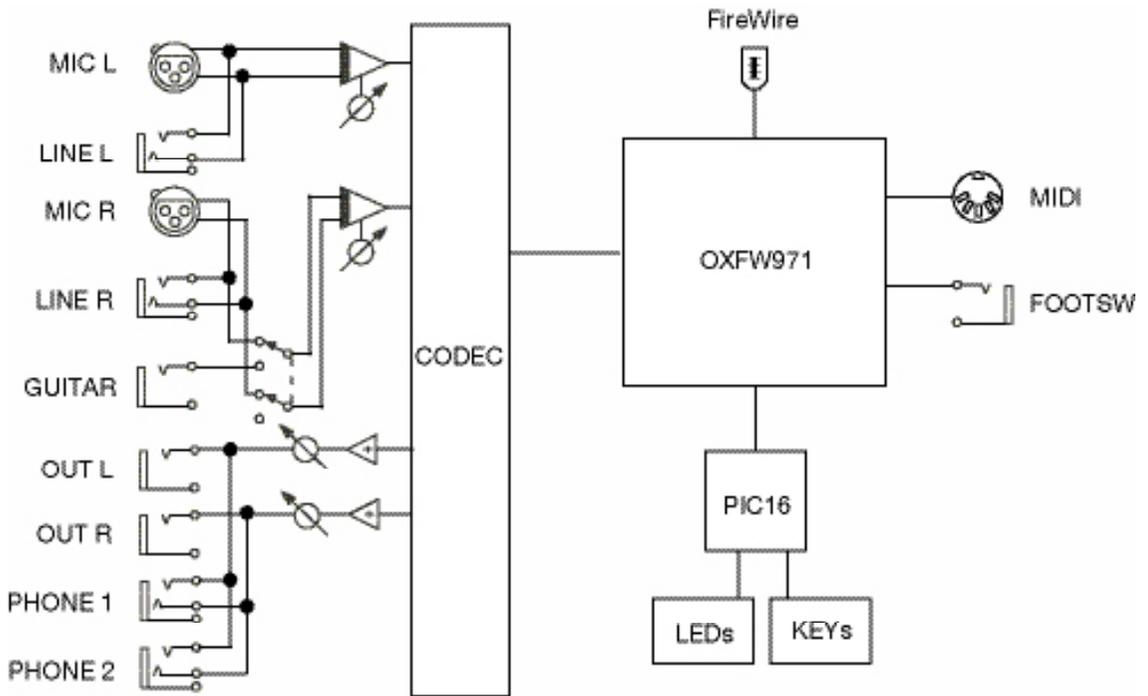
8 - Specifications

FireOne Specifications

Inputs / Outputs

MIC Input
Connector	XLR-3-31 (1: GND, 2: HOT, 3: COLD)
Input impedance	1.3 kΩ
Input level	-60 dBu (Trim max) to -7.8 dBu (Trim min)
Headroom	16 dB
Maximum gain	53 dB
Pad	20 dB

LINE Input
Connector	1/4" inch Phone jack (Tip: HOT, Ring: COLD, Sleeve: GND)
Input impedance	4 kΩ
Input level	-49 dBu (Trim max) to +4 dBu (Trim min)
Headroom	16 dB
Maximum gain	53 dB
Pad	20 dB

LINE Output
Connector	1/4" inch Phone jack (Tip: HOT, Sleeve: GND)
Output impedance	100 Ω
Reference output level	-10 dBv
Maximum output level	+6 dBv

Headphone Output
Connector	1/4" inch Phone jack (Tip: L, Ring: R, Sleeve: GND)
Output load impedance	32 Ω
Maximum output level	+4.7 dBu (at Distortion 1%)
Output power	55 mW + 55mW

Firewire
Connector	IEEE1394 (6 pin)
Format	IEEE1394 (Isochoronous)
Baudrate	400 Mbps

Footswitch
Connector	1/4" inch Phone jack (Tip: HOT, Sleeve: GND)
Input impedance	100 Ω
Input level	TTL level

MIDI input/output
Connector	5 pin DIN connector
Format	MIDI

GUITAR input
Connector	1/4" inch Phone jack (Tip: HOT, Sleeve: GND)
Input impedance	1 MΩ
Input level	-61 dBv (Trim max) to -8 dBv (Trim min)
Headroom	16 dB
Maximum Gain	53 dB

Performance

Bit depth	16, 24 bits	
Sample rates	44.1, 48, 88.2, 96, 176.4, or 192 kHz	
Frequency response (@ Norminal level, MIC to LINE OUT)		
	20 Hz - 20 kHz	±1.0 dB (44.1 kHz/48 kHz)
	20 Hz - 40 kHz	±0.5 dB/-4.0 dB (88.2 kHz/96 kHz)
	20 Hz - 80 kHz	±0.5 dB/-20 dB (176.4 kHz/192 kHz)
Noise level (Trim max 150Ω, 22Hz-22kHz)		
	MIC to LINE OUT	<-80 dBu
Dynamic range (Trim min)	MIC to LINE OUT	105 dB @ 44.1 kHz
THD (Trim min, 22Hz-22kHz)	<0.006%	1 kHz, MIC to LINE OUT
Crosstalk (@ 1 kHz)	MIC to LINE OUT	>80 dB
Phantom power	+48 V, 10 mA	
Delay		
MIC to LINE OUT	48 kHz	<5 msec
	96 kHz	<2 msec
	192 kHz	<1 msec

Physical characteristics

Power	U.S.A./Canada	120 VAC, 60 Hz
	U.K./Europe	230 VAC, 50Hz
	Australia	240 VAC, 50Hz
Power consumption	4 W (U.S.A.>/Canada)	
	4 W (U.K./Europe)	
Dimensions (w x h x d)	260.7 x 168.3 x 54.0 mm (102.64" x 66.26" x 21.26")	
Weight	1.2 kg (2.65 lb)	

Dimensional drawing

54.0 mm (21.26")

260.7 mm (102.64")

168.3 mm (66.26")
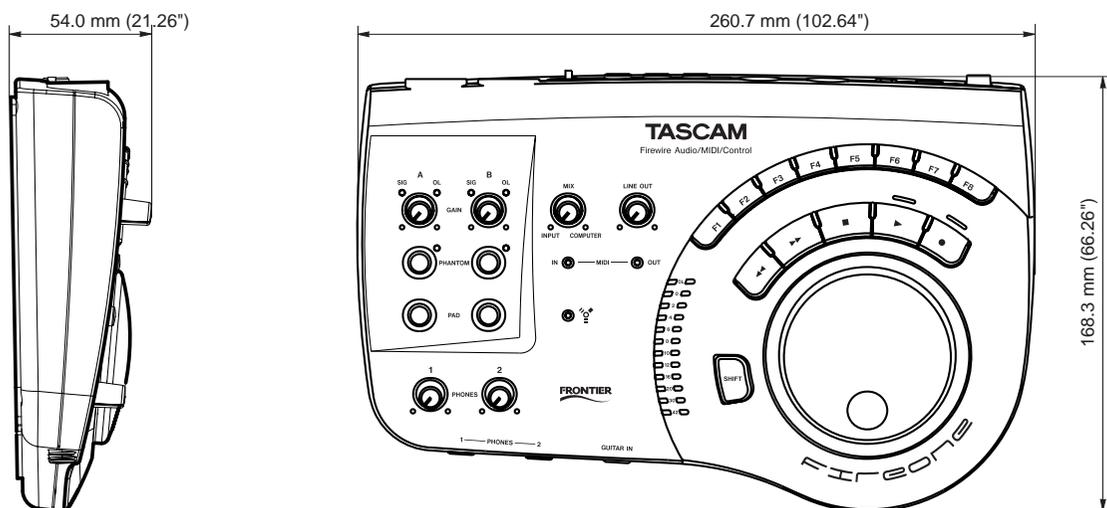
TASCAM
TEAC Professional Division

FireOne