

10 CHANNEL MIXER AND AUDIO/VOICE EFFECTS M-100FX

Owner's Manual Bedienungsanleitung Mode d'emploi Manuale d'uso Manual del usuario

Thank you, and congratulations on your choice of the Edirol M-100FX.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 2; p. 4). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.





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




USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About WARNING and CAUTION Notices


 WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
 CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.


About the Symbols


	The  symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The  symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The  symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.



ALWAYS OBSERVE THE FOLLOWING


WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 


- Do not open (or modify in any way) the unit or its AC adaptor. 


- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 


- Never use or store the unit in places that are:
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are 
 - Humid; or are
 - Exposed to rain; or are
 - Dusty; or are
 - Subject to high levels of vibration.


- Make sure you always have the unit placed so it is level and sure to remain stable. Never place it on stands that could wobble, or on inclined surfaces. 

WARNING

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock. 

- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 

- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 

- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 

⚠ WARNING

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page when:
 - The AC adaptor or the power-supply cord has been damaged; or
 - If smoke or unusual odor occurs
 - Objects have fallen into, or liquid has been spilled onto the unit; or
 - The unit has been exposed to rain (or otherwise has become wet); or
 - The unit does not appear to operate normally or exhibits a marked change in performance.
- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.
- Protect the unit from strong impact. (Do not drop it!)
- Do not force the unit's power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord's outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.
- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.
- DO NOT play a CD-ROM disc on a conventional audio CD player. The resulting sound may be of a level that could cause permanent hearing loss. Damage to speakers or other system components may result.

⚠ CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.
- Always grasp only the output plug or the body of the AC adaptor when plugging into, or unplugging from, this unit or an outlet.
- Any accumulation of dust between the AC adaptor and the power outlet can result in poor insulation and lead to fire. Periodically wipe away such dust with a dry cloth. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time.
- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.
- Never climb on top of, nor place heavy objects on the unit.
- Never handle the AC adaptor body, or its output plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.
- Before moving the unit, disconnect the AC adaptor and all cords coming from external devices.
- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet.
- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.
- Should you remove the ground terminal screw, make sure to put them in a safe place out of children's reach, so there is no chance of them being swallowed accidentally.
- Always turn the phantom power off when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

(This instrument's phantom power: 48 V DC, 10 mA Max)

IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” on pages 2 and 3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

- Use a reasonable amount of care when using the unit’s buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable’s internal elements.
- To avoid disturbing your neighbors, try to keep the unit’s volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
 - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.

Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

Copyright

- When exchanging audio signals through a digital connection with an external instrument, this unit can perform recording without being subject to the restrictions of the Serial Copy Management System (SCMS). This is because the unit is intended solely for musical production, and is designed not to be subject to restrictions as long as it is used to record works (such as your own compositions) that do not infringe on the copyrights of others. (SCMS is a feature that prohibits second-generation and later copying through a digital connection. It is built into MD recorders and other consumer digital-audio equipment as a copyright-protection feature.)
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

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Features of the M-100FX

The M-100FX is a high-quality, 10-channel mixer with audio-processing effects built in, making it an ideal choice for use with video editing.

Supports microphones, cassette tape recorders, CD players, and MD players

The M-100FX provides ten analog channels, with phantom-powered XLR jacks for mic inputs 1 and 2. A connector for a plug-in-powered mic is also provided. For output, it provides phone jacks, RCA phono jacks, and digital output jacks (coaxial/optical).

Audio processing for a variety of vocal sources

The built-in audio/voice effects processing provides nine types of effects for processing vocal sources, as well as reverb and delay, making the M-100FX an ideal choice for video editing applications.

Easy connection to your personal computer

The M-100FX can be connected to your computer via its USB connector, and used as a high-quality audio device to obtain audio material for use with your non-linear video editing software.

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Check the contents of the package

The M-100FX package contains the following items. As soon as you open the package, please check that the following items are present. If anything is missing, please contact the dealer where you purchased the M-100FX.

■ The M-100FX (main unit)



■ AC adaptor

This is a dedicated AC adaptor. Do not use any other AC adaptor with the M-100FX, since doing so can cause malfunction.

■ Computer connection cable (USB cable)

Use this cable when connecting the M-100FX's USB connector to the USB connector of your computer.

■ Owner's manual

This is the manual you are reading. It explains the functionality and connections of the M-100FX, and gives actual examples of how you can use it.

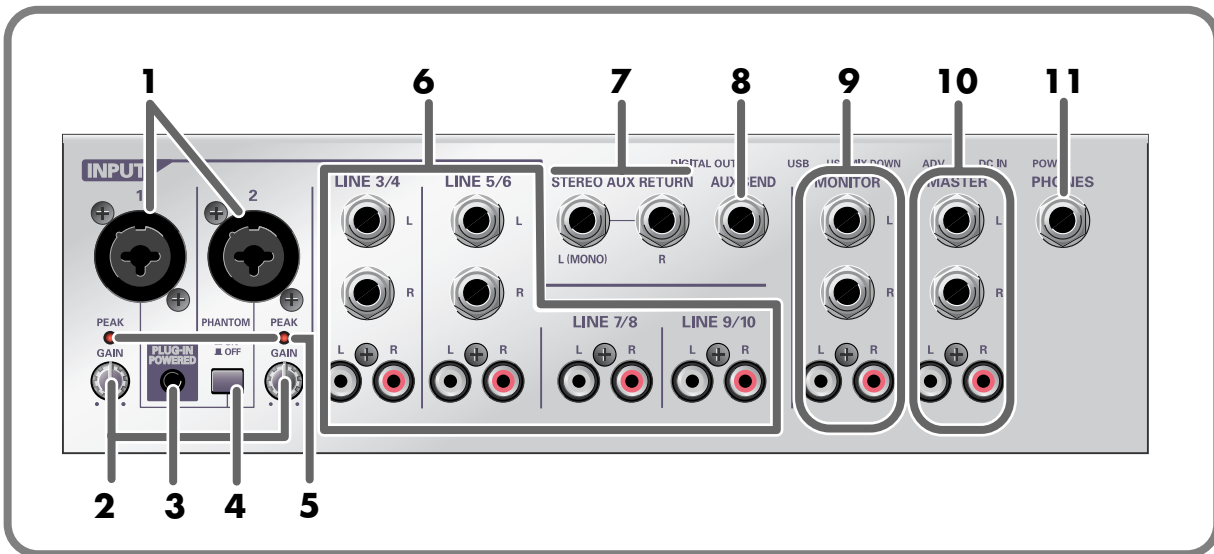
■ CD-ROM (special drivers)

This CD contains the special drivers you will need when connecting the M-100FX to your computer in Advanced mode. If you are not using Advanced mode, you will not need these drivers. (→ **Using Advance mode** (p. 163))

Basic operation

Names of things and what they do

Panel

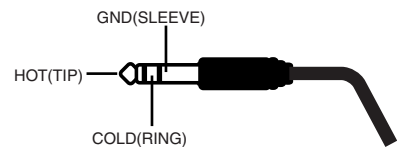


1Mic input jacks 1, 2 (INPUT 1, 2)

These are input jacks for analog audio. Each jack can be used either as an **XLR type** or **phone type** jack. You can use either a balanced or unbalanced connection for either type.

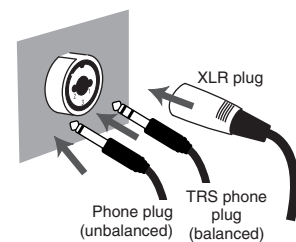
The XLR type jacks provide 48 V phantom power, allowing you to use condenser mics that require phantom power. If you are using such a mic, turn the **phantom power switch on**.

* This instrument is equipped with balanced (XLR/TRS) type input jacks. Wiring diagrams for these jacks are shown at right. Make connections after first checking the wiring diagrams of other equipment you intend to connect.



* Always turn the **phantom power off** when connecting any device other than condenser microphones that require phantom power. You risk causing damage if you mistakenly supply phantom power to dynamic microphones, audio playback devices, or other devices that don't require such power. Be sure to check the specifications of any microphone you intend to use by referring to the manual that came with it.

(This instrument's phantom power: 48 V DC, 10 mA Max)



2Input level knobs (GAIN)

These knobs adjust the input level to the **mic input jacks**.

3Plug-in powered input

This jack allows connection of a miniature condenser mic that requires a power supply. 5 V of power is supplied from the **plug-in powered mic input**. Only a plug-in power compatible mic may be used with this input. If mics are connected to both the plug-in powered mic input and to mix input jack 1 (XLR type/phone type), the signal from mic input jack 1 (XLR type/phone type) will be ignored.

* If a mic is connected to the plug-in powered mic jack, the input level knob (GAIN) will not adjust the input level.

4Phantom power switch (PHANTOM)

This is an on/off switch for the phantom power that is supplied to the **XLR type mic input jacks**.

** If a device that does not require phantom power is connected to the XLR type jack, you must turn **phantom power off**; failing to do so will cause malfunctions.*

5Peak indicators (PEAK)

These indicators respond to the level of the sound that is being input to the **mic input jacks**. If the input level is excessive, these indicators will light in red. Adjust the **input level knobs (GAIN)** so that the peak indicators do not light.

6Line input jacks 3/4–9/10 (LINE INPUT)

Cables with either phone plugs or RCA phono plugs can be connected here.

Line input jacks 3/4–5/6 provide both phone and RCA phono connections. If both are connected simultaneously, the sound from the phone jack will take priority; the sound from the RCA phono jack will be ignored.

Line input jacks 7/8–9/10 provide only RCA phono type connections.

Use the phone jacks to connect cables having phone plugs, such as those from electronic musical instruments or effects processors. Use the RCA phono jacks to connect cables having RCA phono plugs, from audio devices such as your stereo system or CD player.

7External input jacks (AUX RETURN)

These are supplementary input jacks for receiving external sources. If you output sound from the **external output jack (AUX SEND)** and process it with an external effects processor, you can use these external input jacks to receive the sound from the effects processor. You can also use these jacks to connect an external device in the same way as when using the line inputs.

Cables with phone plugs can be connected here. If you are inputting a monaural signal, connect it to the L (MONO) jack.

8External output jack (AUX SEND)

This is a supplementary output jack for sending sound to an external device such as an external effects processor. If you want to use an external effects processor to process sound from the M-100FX, connect this jack to the input jack of your effects processor.

A phone plug cable can be connected here.

This jack outputs the sound adjusted by the **REVERB/AUX send level knobs** of each channel. The signal sent from this jack is monaural.

9Monitor output jacks (MONITOR)

Connect these jacks to your external monitor system. These jacks output the sound that has been mixed and processed by the M-100FX. The **monitor volume knob** adjusts the volume of these jacks.

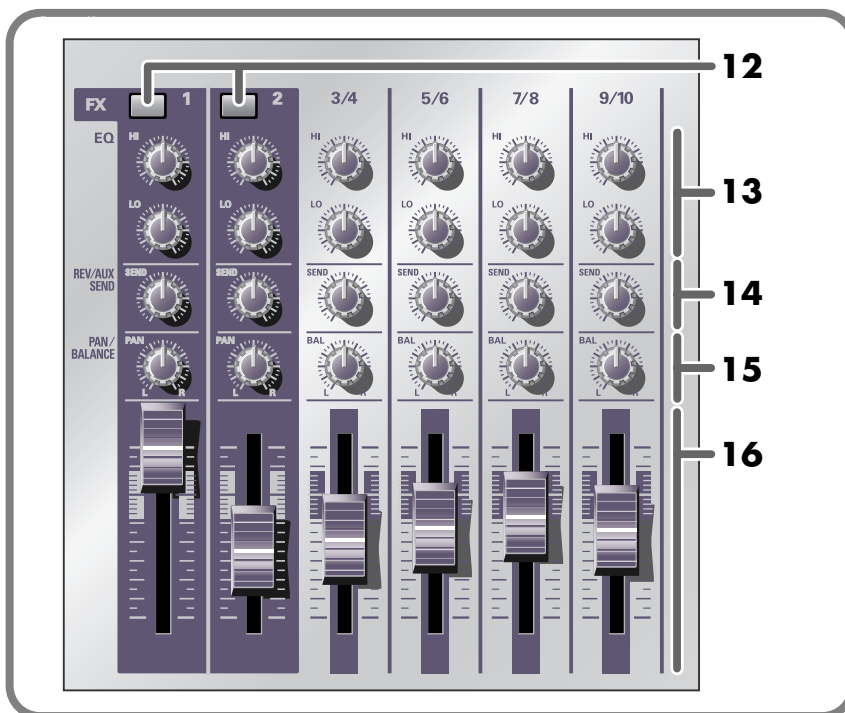
10...Master output jacks (MASTER)

Connect these jacks to your external monitor system or recorder. These jacks output the sound that has been mixed and processed by the M-100FX. The **master volume fader** adjusts the volume of these jacks.

11...Headphone jack (PHONES)

Connect your headphones to this jack. Even if you are using headphones, sound will still be output from the master output jacks. The **headphone volume knob** adjusts the volume of this jack.

Names of things and what they do



12...Effect switches (FX)

These switches select whether the **audio/voice effect** will be on (effect applied) or off (effect not applied). The switch will light in red when on. If the **effect switches** of both CH 1 and 2 are on, the **Stereo Control** feature will be activated. (→**Stereo Control** (p. 111))



What is an effect?

An “effect” is a type of processing that modifies or transforms the sound in a special way, sometimes giving it an entirely different character.

13...Equalizer knobs (HI/LO)

These knobs adjust the tone. **HI** adjusts the high-frequency range (10 kHz), and **LO** adjusts the low-frequency range (200 Hz).

14...Reverb/AUX send level knobs (REV/AUX SEND)

These knobs adjust the level of the signal that is sent to the internal reverb and the **external output jack**. If you are using the internal reverb, use the **reverb/AUX send level knobs** to adjust the depth of reverb.

15...Pan/balance knobs (PAN/BALANCE)

These knobs adjust the left/right balance of the sound that is sent to the **master output jacks**. For CH 1 and 2, these knobs adjust the pan. When converting a monaural input signal into stereo, they adjust the left/right balance (pan).

For CH 3/4–9/10, these knobs adjust the balance. They adjust the left/right balance of the stereo audio input signal.

* If sound is being input only to the L channel of CH 3/4–9/10 and you turn the **pan/balance knob** all the way to the R (right) position, you will not hear any of the input sound.

16...Input level faders

These faders adjust the volume of each input channel.



17... Audio/voice effect knob (AUDIO/VOICE FX)

This knob selects the type of effect.

18... Effect adjustment knobs (MODIFY) A, B

These adjust the depth or character of the effect.

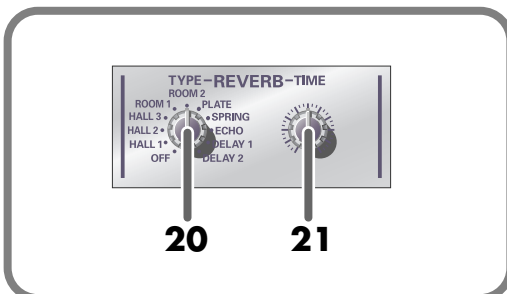
For details, refer to **Audio/Voice effects** (p. 31).

19... Effect balance knob (BALANCE)

This knob adjusts the balance between the original (unprocessed) sound and the effect sound. Turning the knob toward the **DRY** (left) position will make the sound closer to the original sound, and turning it toward **FX** (right) will increase the effect sound, producing a stronger effect.



The audio/voice effect can be applied only to the audio that is input from mic input jacks 1 and 2 (CH1, 2).



20... Reverb type select knob

This knob selects the type of reverb.

21... Reverb time adjustment knob

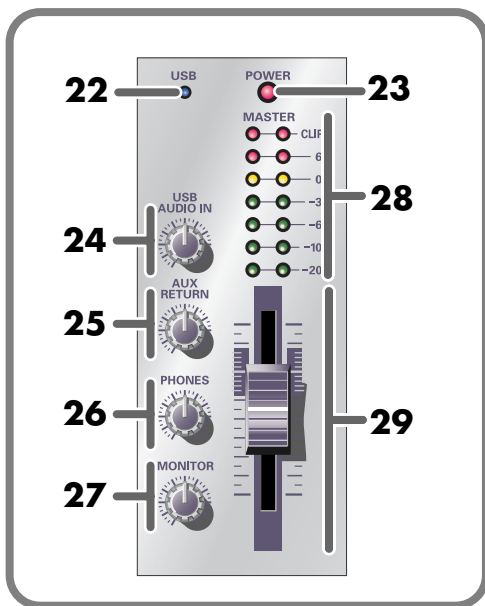
This knob adjusts the duration (length) of the reverberation.



What is reverb?

Reverb is an effect that creates the reverberation characteristic of sounds heard in an acoustical space such as a concert hall. It adds depth and spaciousness to the sound.

Names of things and what they do



22... USB indicator

When the M-100FX is connected to your computer via a USB cable, this indicator shows the status of the connection.

This indicator lights in green when the connection is usable. If a USB cable is not connected, the indicator will not be lit.

23... Power indicator

This indicator lights in red when the power switch is on.

24... USB input level knob

This knob adjusts the input level of the audio signal that is sent from your computer to the M-100FX via the USB cable.

25...AUX input level knob

This knob adjusts the input level of the audio signal that is input to the **external input jacks (AUX RETURN)**.

26...Headphone volume knob

This knob adjusts the volume of the sound that is output from the **headphone jack**.

27 ...Monitor volume knob

This knob adjusts the volume of the sound that is output from the **monitor output jacks**.

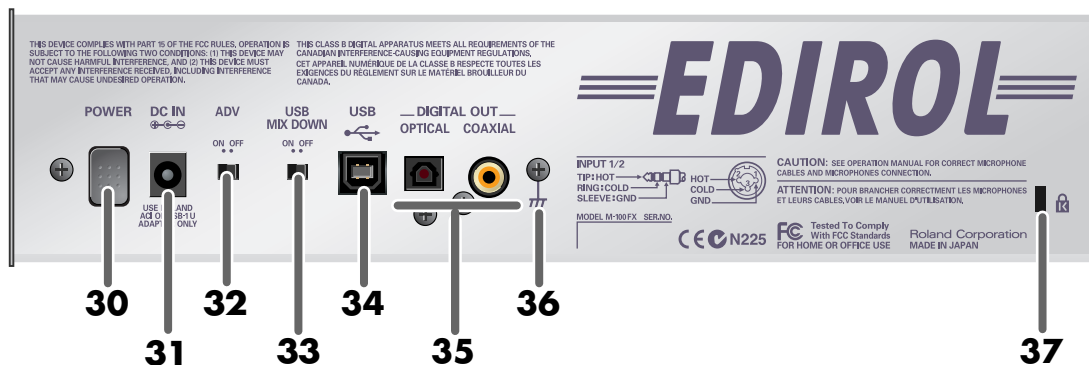
28...Master volume indicator

This indicator progressively lights from green to red to indicate the volume that is being output from the **master output jacks**. Use the **master volume fader** to adjust the volume so that this indicator does not reach the red indication.

29...Master volume fader

This fader adjusts the volume that is output from the **master output jacks**.

Rear panel



30...Power switch

Press this switch to turn the power on/off. The power is on when this switch is in the inward position.

31...AC adaptor jack

This is the power supply jack. Connect the included AC adaptor here.

32...ADVANCE (mode select) switch

This switches the operating mode when the M-100FX is connected to your computer via a USB cable. Normally, you will leave this in the **OFF** position.

You cannot change the setting of this switch while the M-100FX is operating.

After you change the setting, you must turn the power of the M-100FX off, then on again.

* Some music production and audio editing software uses more sophisticated software (such as WDM or ASIO) to transfer audio data between the computer and peripheral devices. If you are using this type of software, you must put the M-100FX in Advanced mode and install the special driver. If the M-100FX's ADVANCE switch is in the **ON** position, it will be in Advanced mode. For details on installing the special driver, refer to **Using Advance mode** (p. 163).

33...USB mix down switch

This switch selects whether audio signals sent from your computer via USB to the M-100FX will be returned to the computer. Normally, you will leave this in the **OFF** position.

* If this is ON, the same sound that is being output from the master output jacks will be sent to the USB connector. If this is OFF, the sound that is being output from the master output jacks minus the sound that is input from the USB connector will be sent to the USB connector.

34...USB connector

Use a USB cable connected here to connect the M-100FX to your computer.

35...Digital output jacks

These jacks send the digital audio signal from the M-100FX to an external digital audio device.

Use these jacks if you want to digitally connect the M-100FX to a digital audio device such as an MD or DAT recorder. You can also connect these connectors to amplified speakers that have digital input jacks.

OPTICAL	Use an optical digital cable to make connections
COAXIAL	Use a coaxial cable to make connections

* The **digital output jacks** output the same signal as the **master output jacks**.

Names of things and what they do

36...Ground terminal

In some cases, depending on the environment in which the unit is installed, the surface of the panel may sometimes feel rough and grainy. This is due to an infinitesimal electrical charge, which is absolutely harmless. However, if you are concerned about this, connect the ground terminal (see figure) with an external ground. When the unit is grounded, a slight hum may occur, depending on the particulars of your installation. If you are unsure of the connection method, contact the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page.

Unsuitable places for connection

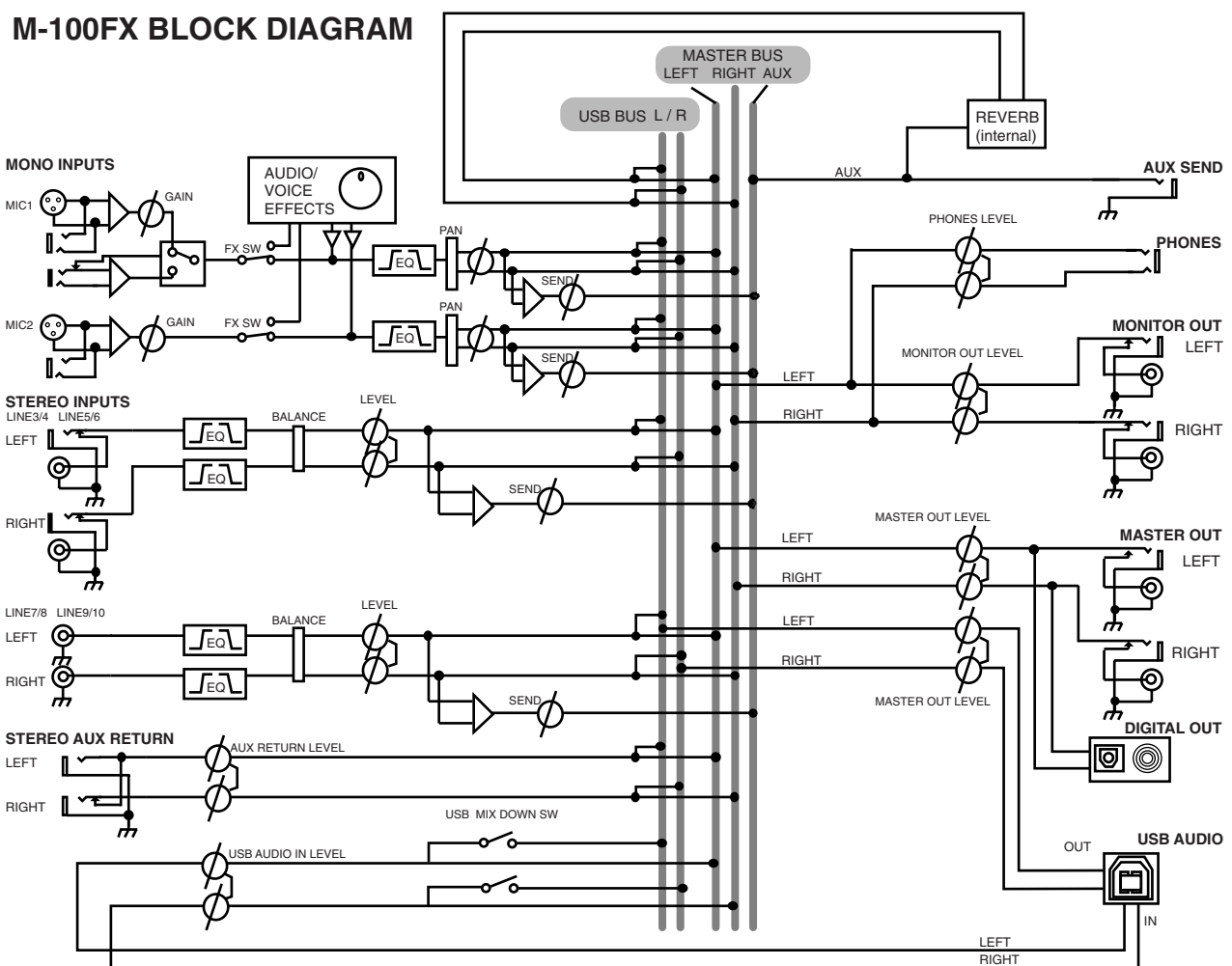
- Water pipes (may result in shock or electrocution)
- Gas pipes (may result in fire or explosion)
- Telephone-line ground or lightning rod (may be dangerous in the event of lightning)

37 ...Security Slot ()

<http://www.kensington.com/>

Block diagram

The following diagram shows the signal flow within the M-100FX.



Basic operation

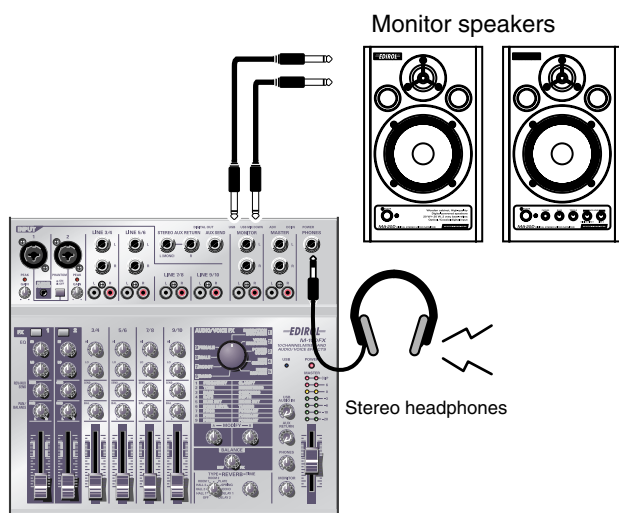
The M-100FX provides numerous connectors that can be connected to a wide variety of devices. This section explains how to connect the M-100FX with speakers, mics, audio devices, or your computer.

- * To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.
- * Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.
- * This section explains the devices that can be connected to the M-100FX, and any points of caution you must observe. For details on how you can use various combinations of connected devices, refer to **Applications** (p. 105).

Connecting monitor speakers or headphones

First we will connect equipment that will let you hear the sound.

Connect monitor speakers or headphones so that you can hear the sound you are mixing. Connect your monitor speakers to the **monitor output jacks**, or headphones to the **headphone jack**.

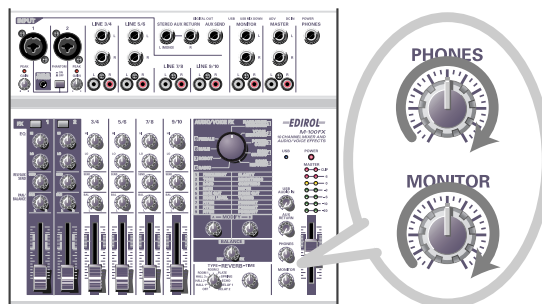


The monitor output jacks provide both phone type and RCA phono type connectors. The same signal is output from both types of connector. Use the connectors that are suitable for the cables you are using with your monitor speakers. If plugs are inserted into both the phone jacks and RCA phono jacks, sound will be output only from the phone jacks.

- * Before you connect monitor speakers or headphones, turn the **monitor volume knob** or **headphone volume knob**, as well as the volume of your monitor speakers, all the way to the minimum position.

■ Adjusting the volume

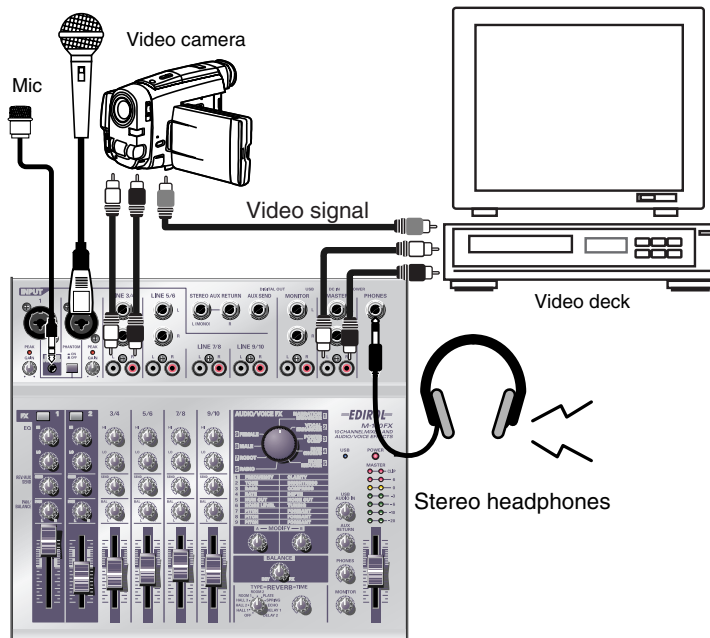
1. If you have connected monitor speakers, raise their volume to an appropriate level.
2. Turn the monitor volume knob or headphone volume knob toward the right to adjust the volume as desired.



- Connecting a mic.....(p. 20)
- Connecting audio devices(p. 23)
- Connecting the M-100FX to your computer(p. 25)
- Using the external input/output jacks (AUX).....(p. 28)
- Using the digital output jacks(p. 30)

Connecting a mic

■ Connecting a mic to input audio



Mic input jacks 1 and 2 (INPUT 1, 2) can accept mics with either XLR plugs or phone plugs. The XLR jacks can provide phantom power for condenser mics that require it. The phone jacks can accept either balanced or unbalanced connections.

If you are using a condenser mic that uses phantom power, turn on the **phantom power switch**.

- * You must leave the **phantom power** turned **off** unless you are using a condenser mic that requires phantom power. Malfunctions will occur if phantom power is supplied to a dynamic mic or an audio playback device. For details on the specifications of your mic, refer to the owner's manual supplied with your mic. (The M-100FX's phantom power supply is DC 48 V, 10 mA maximum.)

NOTE

Before you connect a mic, turn the **input level knob (GAIN)** to the minimum position in order to protect the circuitry.

HINT

Phantom power

This is a method of supplying power for a condenser mic or similar device via the mic cable. The built-in phantom power supply provides 48 V (direct current). The shape of the plug is identical to that of a conventional XLR plug.

About balanced and unbalanced connections



Balanced input is a method of transmitting a signal using three conductors, which are named “hot”, “cold”, and “ground”. The plug is divided into three sections. Plugs used for stereo signals are divided into three sections in the same way, but are wired differently. Do not mix these two type of connections. Stereo signals cannot be input to **mic input jack 1 or jack 2 (INPUT 1, 2)**.

Unbalanced input is the usual method of transmitting a signal using two conductors, a signal line and a ground. The plug is divided into two sections.

Types of mic

Mics can be broadly classified as either dynamic mics or condenser mics. The M-100FX can accept either type, and can also accept “plug-in powered mics”—the miniature condenser mics designed for connection to the mic jack of a computer or the recording jack of an MD (mini disc) recorder.

The plug-in powered mic jack accepts either monaural or stereo mics. If a stereo plug is connected to **mic input jack 1 (INPUT 1)**, channel 1 will process the left/right signals in stereo. If a plug-in powered mic is connected, and you connect a mic to the XLR jack, no audio will be input from the mic connected to the XLR jack. Only the signal from the plug-in powered mic will be sent to the mixer.

If you are using the plug-in powered mic jack, the input level knob (GAIN) will not adjust the input level.

NOTE

Only a **plug-in powered mic** can be connected to the plug-in powered mic jack. If a different type of mic, such a mic with a conventional stereo mini output plug is connected to this jack, the circuit may be damaged.

Basic operation

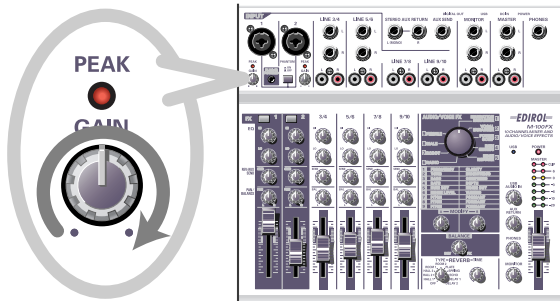
■ Adjusting the gain and level (volume)

After you have made connections, use the following procedure to adjust the volume appropriately.

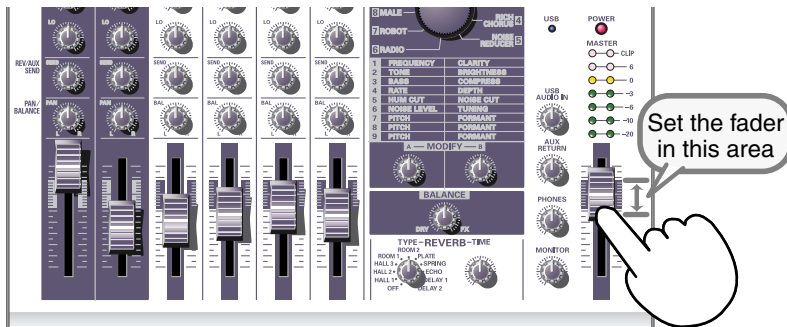
1. Lower the **input level knob (GAIN)**, **master volume fader**, **monitor volume knob**, and **headphone volume knob** to their minimum positions.

2. Adjust the gain.

While speaking/singing/performing into the mic, turn the input level knob toward the right for the channel to which your mic is connected. Adjust the input volume so it is as high as you can get it without causing the peak indicator to light.



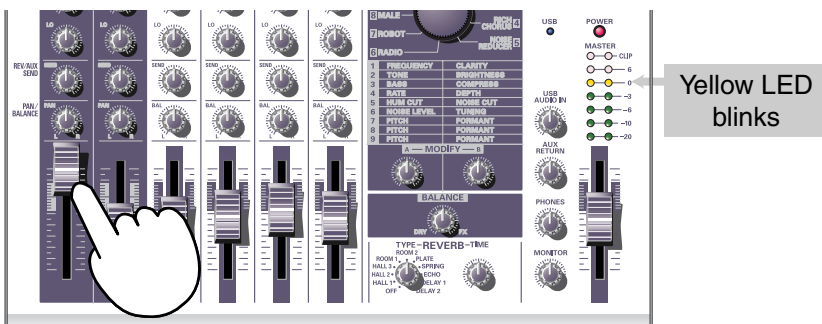
3. Set the **master volume fader** to the center of the area shown in the panel illustration below.



4. Adjust the input level.

Adjust the **input level fader** so that the yellow LED (0 dB) of the **master volume indicator** lights occasionally.

If you are simultaneously recording with more than one mic, slowly raise the input level faders of all input channels to adjust their levels.



NOTE

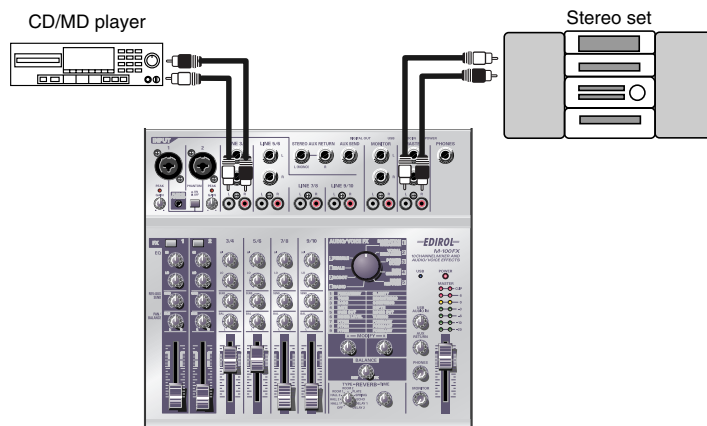
The peak indicator will light when the input signal level (volume) is excessive, indicating that the input signal is distorting.

To obtain the best audio quality, you should set the input level as high as possible; i.e., raise the gain as high as possible without allowing the peak indicator to light.

Connecting audio devices

Here's how to make connections so you can sing along with a CD.

* For details on connecting a mic to input (record) your voice, refer to **Connecting a mic** (p. 20).



■ Connecting a stereo set or MD

The cables you connect to **line input jacks 3/4** (LINE INPUT 3/4) and **line input jacks 5/6** (LINE INPUT 5/6) can have either a phone plug or an RCA phono plug. If you connect both types simultaneously, only the sound from the phone plug connection will be sent to the mixer section.

■ Connecting the recording device

If you want to record the mixed signal, connect the M-100FX's **master output jacks** to the LINE IN or recording (REC) jacks of your cassette tape recorder or MD recorder.

The **master output jacks** provide both phone and RCA phono jacks. Both types output the same signal; use the type of jacks that match the cable connected to the recorder or other device you are using. If you connect both types simultaneously, only the sound from the phone plug connection will be sent to your recorder or other devices.

■ Adjusting the input level (volume)

After you have made connections, adjust the volume as follows

Set the **input level faders** and **master volume fader** to the minimum position. If you have connected monitor speakers or headphones, turn the **monitor volume knob** and **headphone volume knob** to the minimum position.

MEMO

Each of the **line inputs 3/4, 5/6, 7/8, 9/10** (LINE INPUT 3/4, 5/6, 7/8, 9/10) have the very same circuitry. Use them as desired, according to the order of the devices you are connecting, or the location of the devices.

MEMO

The phone type and RCA phono type input jacks for the line inputs are connected to the same circuitry within the M-100FX. Use the connector that is appropriate for your cable.

NOTE

Before you connect an audio device to a jack, turn the **master volume fader** and **input level fader** to the minimum position in order to protect the circuitry.

MEMO

For details on adjusting the mic input level, refer to **Connecting a mic** (p. 20).

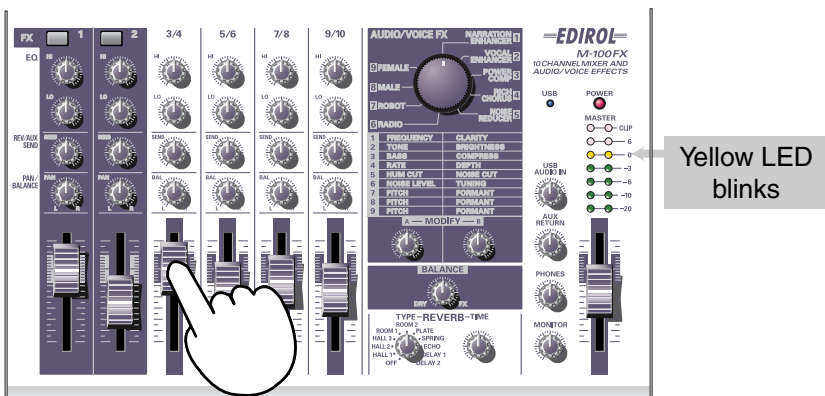
Basic operation

1. Set the **master volume fader** to the position indicated by the black marking on the panel.

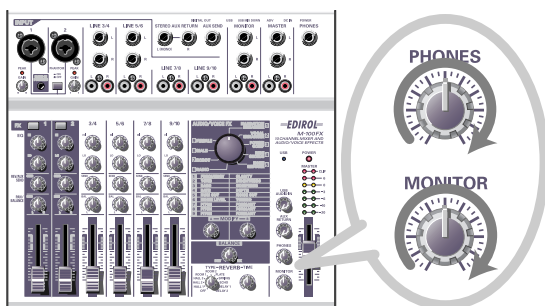


2. Produce sound on the device connected to the **line input jacks**.

Slowly raise the **input level fader** to increase the level. Set the level so that the yellow indicator (0 dB) of the **master volume indicator** lights occasionally. If you have connected devices to more than one line input jack (channel) and want to record them, raise the input level faders for each input channel you are using, and adjust them as desired.



3. If your recording device allows you to adjust the recording level, adjust the level so that the peak indicator of your recording device does not light, or so that the level meter stays within the appropriate recording level.
4. If you have connected monitor speakers, raise the volume of your monitor speakers to an appropriate level.
5. Turn the **monitor volume knob** or **headphone volume knob** to the desired volume.



Connecting the M-100FX to your computer

The M-100FX has a USB connector that lets you connect it to your personal computer. If the M-100FX is connected to your computer via a USB cable, the audio signal (sound) output from your computer can be mixed with the audio signals that are being input into the M-100FX, or the signals (sounds) mixed by the M-100FX can be sent to your computer.

The sounds mixed or processed by the M-100FX's effects can also be recorded into music production software or waveform editing software on your computer to create your own original audio data.

What is USB?

USB stands for Universal Serial Bus, and is an interface that lets you connect a variety of peripheral devices to your computer. A single USB cable can connect many different kinds of devices, and convey data at high speed.

You can also connect or disconnect peripheral devices without having to turn off the power first, and your computer will automatically detect the device that you connected. Some devices may require you to make settings or perform other procedures.

Your computer will detect the M-100FX as a device used to transfer audio signals to and from the computer.

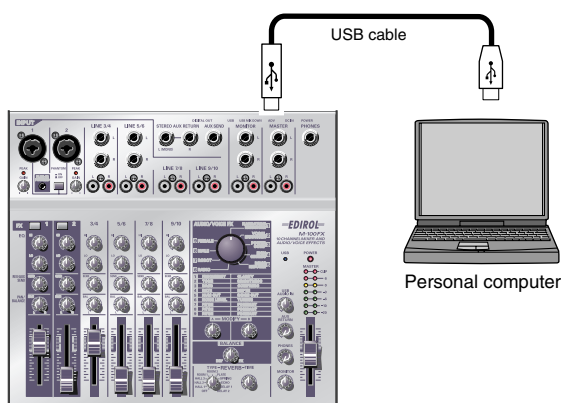
* The M-100FX supports USB Version 1.1.

In order to use the M-100FX via its USB connector, you must install a driver in your computer. For details on installing the driver, refer to **Connecting the M-100FX to your computer** (p. 124).

Install the driver as described in **Connecting the M-100FX to your computer** (p. 124).

To record audio into your computer, make connections as shown in the diagram below.

Connect the USB cable to the USB connector on the back of the M-100FX. For details on connecting your monitor speakers or headphones, refer to **Connecting monitor speakers or headphones** (p. 19).



NOTE

If you are using Windows and want to send the playback of an audio CD to the M-100FX via USB, you will need to use Windows Media Player 7 or later. If you are using Advanced mode on Mac OS9, you cannot send the playback audio from a music CD to the M-100FX.

MEMO

For details on connecting a mic to input your voice, refer to **Connecting a mic** (p. 20).

Basic operation

■ Adjusting the input level (volume)

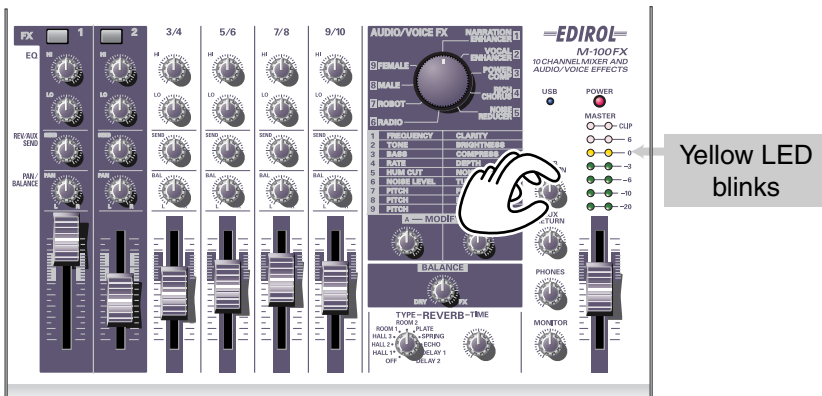
After you have made connections, here's how to adjust the volume appropriately for recording.

Set the **input level faders**, **master volume fader**, and **USB input level knob** to their minimum positions. If you have connected headphones, set the **headphone volume knob** to the minimum position.

1. Set the **master volume fader** to the middle of the area indicated in black on the panel.



2. While playing back audio on your computer, slowly turn the **USB input level knob** toward the right to increase the level. Set the level so that the yellow LED (0 dB) of the **master volume indicator** lights occasionally.



If you have connected devices to more than one line input jack (channel) and want to record them, raise the **input level faders** of all these channels to adjust their levels.

3. If you are recording the audio signal on your computer, make adjustments in your software so that the recording level is appropriate.

The **master volume fader** adjusts the volume of the audio that is sent from the M-100FX's USB connector to your computer.

MEMO

For details on adjusting the mic input level, refer to **Connecting a mic** (p. 20).

MEMO

If you are inputting (recording) audio into your computer, it is a good idea to make a note of the position of the **USB input level knob**. You may need to turn down the **USB input level knob** while recording.

- * Depending on your recording software, the signal that is being input for recording may be sent directly back to the USB audio output. In this case, a feedback loop will occur with the M-100FX's USB audio input, possibly producing a squealing noise or distortion. To prevent this, you can either set your recording software to stop outputting to USB, or turn the M-100FX's **USB input level knob** all the way to the left (the 0 position).
- * The master volume fader controls the volume of the digital output and the level (volume) at which the mixed signal is sent to USB. If you want to adjust the volume of your monitor speakers independently of the recording level, connect your monitor speakers to the M-100FX's **monitor output jacks** (analog) and use the **monitor output knob** to adjust the volume.

Basic operation

Using the external input/output jacks (AUX)

The **external output jack** (AUX SEND) outputs the sound adjusted by the **REVERB/AUX send level knobs** of each channel. The signal sent from the **external output jack** (AUX SEND) is monaural.

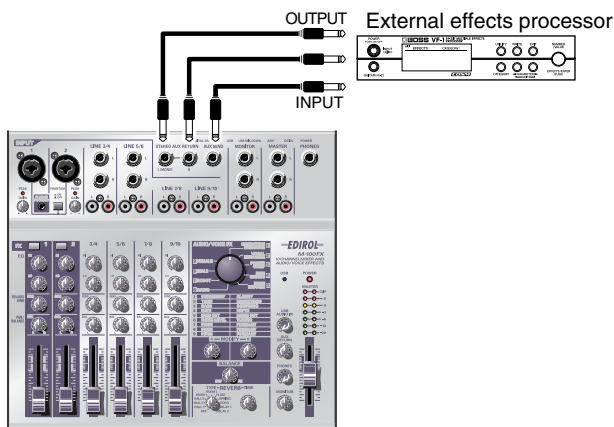
The **external input jacks** (AUX RETURN) are supplementary inputs for sound from an external device. Use these jacks when you are using an external effects processing device to process the sound sent from the **external output jack** (AUX SEND) and return the processed sound back to the M-100FX. Alternatively, you can connect any external device to these jacks in the same way as to the line inputs.

The **AUX input level knob** adjusts the volume of the audio signal received at the **external input jacks** (AUX RETURN).

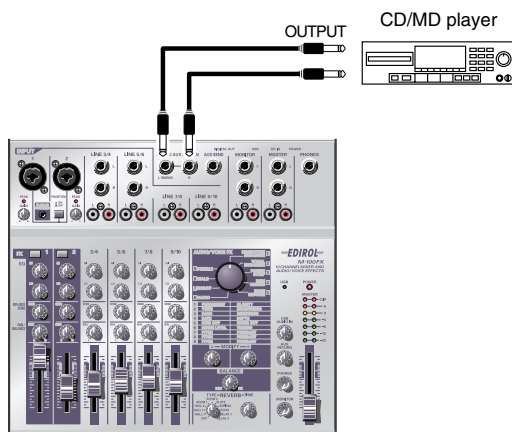
- * Before you connect a device to the **external input/output jacks**, turn the reverb/AUX send level knobs (REV/AUX SEND) of each channel and the **AUX input level knob** all the way to the left (minimum) in order to protect the circuitry. When you are finished making connections, gradually turn the knobs toward the right.

Here are some ways in which you can use these jacks.

- Send the **external output jack** (AUX SEND) output to an effects processing device, and send the processed signal back to the M-100FX's **external input jacks** (AUX RETURN).



- Input sound from a CD player or other external device into the M-100FX's **external input jacks** (AUX RETURN).

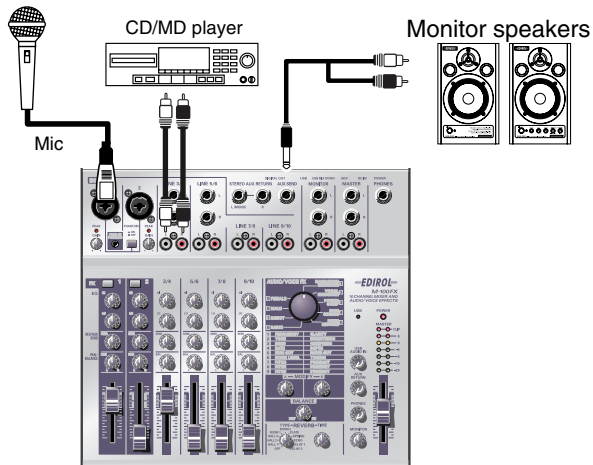


NOTE

If the input of each channel is stereo, the volume may be significantly different than the original signal. This is due to the conversion of the stereo signal into mono, and is not a malfunction.

- Independently listen to the sound of a specific channel.

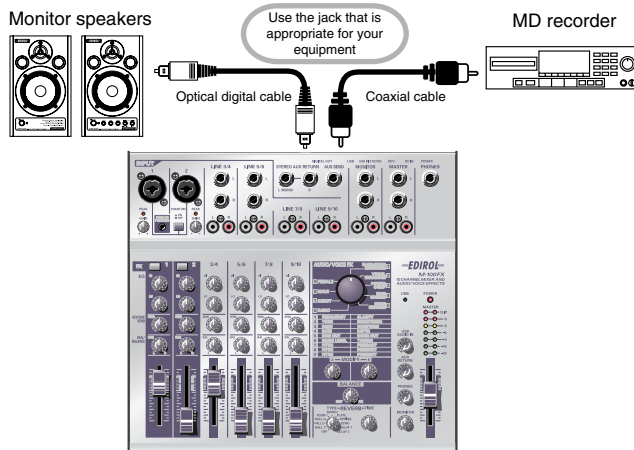
Turn the **reverb/AUX send level knob** (REV / AUX SEND) of the channel that you want to hear toward the right, and turn the **reverb/AUX send level knob** (REV / AUX SEND) of the other channels all the way toward the left. This lets you listen only to the sound of the desired channel.



- * If the **reverb type select knob** is not turned **OFF**, the same signal as sent from the **external output jack** (AUX SEND) will also be sent to the internal reverb. If you don't need to apply the internal reverb, turn the **reverb type select knob** to **OFF**.
- * In order to connect a CD player or similar device to the **external input jacks** (AUX RETURN), you may need an adaptor to convert the RCA phono connection (typically found on a CD player) to a phone plug. If you have any unused line input jacks, we suggest that you connect your device to the line input jacks.

Using the digital output jacks

The M-100FX provides two types of **digital output jack**; **OPTICAL** and **COAXIAL**. These two jacks output the same signal (sound). Use the jack that is appropriate for the cable and device you are connecting.



■ Connecting monitor speakers that have digital input jacks

If your monitor speaker system has a digital input jack, you can connect it to the **digital output jack** located on the rear panel of the M-100FX. Since the signal is sent in digital form to your monitor speakers, the signal will experience less degradation and noise.

Use the **master volume fader** to adjust the volume. This allows you to adjust the volume even if your monitor speakers cannot adjust the volume of a digital input signal.

■ Connecting an MD recorder

If you want to record the sound mixed by the M-100FX onto your MD or DAT recorder, connect your MD recorder to the M-100FX's **digital output jack**.

Use the **master volume fader** to adjust the volume.

MEMO

The sampling frequency is 44.1 kHz.

NOTE

Before you make connections, turn down the **monitor level knob** and **headphone volume knob** to the minimum position in order to protect the circuitry. If monitor speakers are connected, turn down the speaker volume as well.

Audio/Voice effects

What are the audio/voice effects?

You can apply **audio/voice effects** to **mic input jacks 1 and 2 (CH 1, 2)**. These effects use an internal digital signal processor (DSP) to process the sound from your mic(s) in a variety of ways, such as boosting the low-frequency range, giving the sound greater clarity, or changing the pitch.

How to apply effects

For details on connecting mics or other devices, refer to the explanations in **Basic operation** (p. 19).

- 1.** For the channel to which your mic is connected, press the **effect switch** to turn it on. It will light in red.
- 2.** Use the **audio/voice effect select knob** to select an effect.
- 3.** Use **effect modify knobs A/B** to adjust the character (parameters) of the effect.
- 4.** Use the **effect balance knob** to adjust the depth of the effect, or the proportion of the original sound and processed sound.

* Also refer to **Effect applications** (p. 113).

Effect types

1	NARRATION ENHANCER	Makes narrations or announcements sound clearer. Removes unwanted noises.	A	FREQUENCY	(p. 33)
	B		CLARITY		
2	VOCAL ENHANCER	Adjusts the tonal character of the voice to give it range and brightness. Conversely, you can make the character more subdued.	A	TONE	(p. 33)
	B		BRIGHTNESS		
3	POWER COMPRESSOR	Adds power to a voice that lacks strength in the low-frequency region. Can also be used to boost a voice that tends to be drowned out by other sounds.	A	BASS	(p. 34)
	B		COMPRESS		
4	RICH CHORUS	Gives spaciousness and depth to the sound. Raising the Balance knob will add a sense of modulation, producing a mysterious effect.	A	RATE	(p. 34)
	B		DEPTH		
5	NOISE REDUCER	Reduces electronic hum and hiss noise.	A	HUM CUT	(p. 35)
	B		NOISE CUT		
6	RADIO	Simulates the noise that is often produced by a radio or analog record, creating the sensation of an old recording.	A	NOISE LEVEL	(p. 35)
	B		TUNING		
7	ROBOT	Gives the sound a robotic feel, with little change in pitch.	A	PITCH	(p. 36)
	B		FORMANT		
8	MALE	Transforms a female voice into a male voice.	A	PITCH	(p. 36)
	B		FORMANT		
9	FEMALE	Transforms a male voice into a female voice.	A	PITCH	(p. 37)
	B		FORMANT		

■ Effect parameters

1. NARRATION ENHANCER

This effect makes a voice sound clearer. It also reduces the unwanted sibilant noise from a mic input, making the sound easier to listen to. You can use this when adding announcements, narrations, or readings to the video you are editing.

A. FREQUENCY

Effect knob A specifies the frequency region in which the **clarity** of the voice will be adjusted by **knob B**. As you turn **effect knob A** toward the right, the effect will be applied to a broader region.

B. CLARITY

This adjusts the strength with which the voice will be clarified. As you turn **effect knob B** toward the right, a stronger effect will be applied. If you apply an excessive amount of this effect to a voice that is already clear, the sound will become harsh or distorted.

2. VOCAL ENHANCER

This effect boosts or reduces the components of a sound that produce its basic character. You can use this to emphasize or correct the character of a voice when recording dialog or a song.

A. TONE

Turning **effect knob A** toward the right will boost the frequency region that contains the fundamental portion of the voice, giving it greater richness. If you want to make the sound less resonant and rich, turn the knob toward the left.

B. BRIGHTNESS

Effect knob B boosts the frequency region that makes a voice distinctive. Turn the knob toward the right to emphasize breath noises and expression, or toward the left to tame a harsh-sounding voice.



Sibilant: the noise that can occur when words having an “s” or “sh” sound are pronounced.

3. POWER COMPRESSOR

This effect can boost a thin voice that has insufficient low range, giving it more power. It can also give consistency to a voice that varies widely in volume, or give more prominence to a voice that tends to be obscured by other sounds.

If the volume is already sufficient and there are no other sounds that obscure the voice, avoid applying this effect excessively. Doing so may increase the noise, or suppress loud sounds, making the sound muffled.

A. BASS

This boosts or suppresses the low-frequency region of the voice. Turning **effect knob A** toward the right will produce a stronger emphasis. You can use this to augment the low frequencies for a voice that was recorded at a distance away from the mic.

B. COMPRESS

This reduces the volume difference between loud and soft sounds, raising the overall volume. As you turn **effect knob B** toward the right, sounds will tend to be adjusted to a higher level. Unlike simply increasing the volume, this prevents high-volume sounds from distorting.

4. RICH CHORUS

This effect adds a “chorus” effect produced by adding a pitch-modulated sound to the original sound, creating a spacious sensation. It can be used to produce fantasy-like effects that have a reduced sense of direction, or to add the impression of a backing chorus to vocal harmony.

A. RATE

Adjusts the rate of modulation. Turning **effect knob A** toward the right will produce faster modulation.

B. DEPTH

Adjusts the depth of modulation. Turning **effect knob B** toward the right will produce deeper changes in the pitch and volume, creating a more intense modulation effect.

Generally, the modulation rate can be set to a fairly slow speed, and if you want to add the feeling of a backing chorus, set the modulation depth to a setting only slightly to the left of center. Use deeper settings if you want to create a spacious, fantasy-like effect.



If the input sound is too low in volume, the effect will not be strong. Make the input sound louder.

5. NOISE REDUCER

This reduces “hiss” noise and the buzzing “hum” that is sometimes produced by electronic equipment.

This is an effective way to remove noise that occurs at a specific frequency, or to remove noise that occurs at a lower level than the voice.

A. HUM CUT

This selects either 50 Hz or 60 Hz as the frequency of the hum that will be removed. Set this to match the frequency of the electrical power in your area.

Turning **effect knob A** toward the left of center will cut 50 Hz hum. Turning the knob toward the right of center will cut 60 Hz hum. Hum will be cut more deeply as you turn the knob further away from the center, but this will also affect the tone of the audio signal, and may cause other undesired effects such as distortion.

B. NOISE CUT

This cuts the background noise that is heard when the voice is silent. The noise will be cut more significantly as you turn **effect knob B** toward the right.

If this setting is excessive, the beginning and end of your vocal phrases will be cut off unnaturally, and it may become difficult to understand the voice.

6. RADIO

This effect adds the noises characteristic of AM radio to the voice, producing the impression of a radio broadcast or an old recording.

A. NOISE LEVEL

Adjusts the volume of the AM radio noise. Turning **effect knob A** toward the left will increase the volume of the noises produced when the radio is tuned inaccurately.

B. TUNING

Simulates the sounds that occur when you tune the frequency of a radio. The simulated tuning will be “correct” when **effect knob B** is in the center position. Turning the knob to left or right will make the simulated tuning drift, roughening the sound.

7. ROBOT

This effect fixes the frequency of the voice at a single pitch, giving the voice a robotic character. You can use this to give a mechanical character to spoken words.

A. PITCH

Robot Voice fixes the pitch of the voice at a specific frequency. **Effect knob A** sets the pitch level. Turning the knob toward the right will raise this fixed pitch.

B. FORMANT

“Formants” are features of a voice that determine its character. **Effect knob B** adjusts the formants. Turning the knob toward the left will produce a low, heavy voice (as if the vocal cords were larger), and turning the knob toward the right will produce a high, thin voice (as if the vocal cords were smaller).

8. MALE

By modifying the pitch and formants of the voice, this effect transforms a female voice into a male voice.

This is convenient when you are recording a dialog or dramatic presentation by yourself. By setting the **effect balance knob** near the center, you can mix the modified sound with the original sound, producing the impression of a duet.

By applying this effect to an actual male voice, you can produce an even deeper and bigger voice.

A. PITCH

Adjusts the amount by which the pitch will be shifted. As you turn **effect knob A** toward the left, the pitch of the voice will be lowered. If the knob is turned all the way toward the right, the voice will be at the original pitch.

B. FORMANT

“Formants” are features of a voice that determine its character. **Effect knob B** adjusts the formants. Turning the knob toward the left will produce a deeper voice (as if the vocal cords were larger). If the knob is turned all the way toward the right, the formants will be as in the original voice.



If you apply this effect excessively, the sound may crack or distort.



You should input the voice of only one person. The clearer the original voice, the better the effect will be. The effect will not be satisfactory if the voice being input is too soft, or if more than one person is speaking, or if there is excessive background noise.



Formants These are fixed frequency regions in which the sound of a voice is emphasized, thus determining its basic character. The location and size of the formants depends on the size of the vocal cords, and differs between men and women, adults and children.



If you apply this effect excessively, the sound may crack or distort.



You should input the voice of only one person. The clearer the original voice, the better the effect will be. The effect will not be satisfactory if the voice being input is too soft, or if more than one person is speaking, or if there is excessive background noise.

9. FEMALE

By modifying the pitch and formants of the voice, this effect transforms a male voice into a female voice.

This is convenient when you are recording a dialog or dramatic presentation by yourself. By setting the **effect balance knob** near the center, you can mix the modified sound with the original sound, producing the impression of a duet.

By applying this effect to an actual female voice, you can produce a thinner and more delicate voice.

A. PITCH

Adjusts the amount by which the pitch will be shifted. As you turn **effect knob A** toward the right, the pitch of the voice will be raised. If the knob is turned all the way toward the left, the voice will be at the original pitch.

B. FORMANT

“Formants” are features of a voice that determine its character. **Effect knob B** adjusts the formants. Turning the knob toward the right will produce a more shrill voice (as if the vocal cords were smaller). If the knob is turned all the way toward the left, the formants will be as in the original voice.

NOTE

If you apply this effect excessively, the sound may crack or distort.

NOTE

You should input the voice of only one person. The clearer the original voice, the better the effect will be. The effect will not be satisfactory if the voice being input is too soft, or if more than one person is speaking, or if there is excessive background noise.

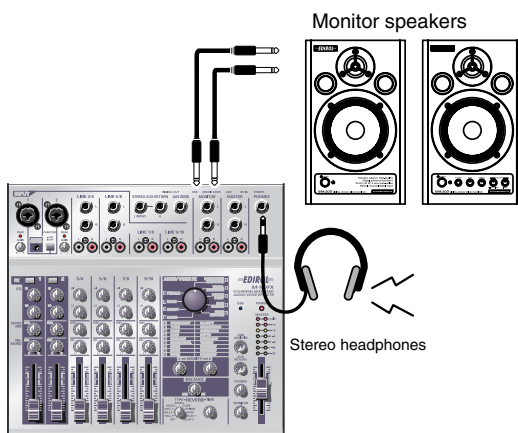
Grundlegende Bedienung

Der M-100FX bietet eine Vielzahl von Anschlüssen, die mit einer großen Auswahl von Geräten verbunden werden können. In diesem Abschnitt wird erklärt, wie Sie Lautsprecher, Mikrofone, Audiogeräte oder Ihren Computer an den M-100FX anschließen können.

- * Um Fehlfunktionen und/oder Schäden an Lautsprechern oder anderen Geräten zu verhindern, reduzieren Sie stets die Lautstärke und schalten alle Geräte ab, bevor Sie die Verbindungen einrichten.
- * Vergewissern Sie sich stets, dass die Lautstärke reduziert wurde, bevor Sie den Netzschalter betätigen. Beim Einschalten wird eventuell auch dann Sound ausgegeben, wenn der Lautstärkeregler ganz zurückgestellt wurde. Das ist jedoch normal und kein Anzeichen für eine Fehlfunktion.
- * In diesem Abschnitt erfahren Sie, welche Geräte an den M-100FX angeschlossen werden können, und welche Vorsichtsmaßnahmen Sie dabei ergreifen müssen. Weitere Informationen zur Verwendung verschiedener Kombinationen angeschlossener Geräte erhalten Sie unter **Applications** (S. 105).

Anschluss von Monitor-Lautsprechern oder Kopfhörern

Im ersten Schritt werden wir die Geräte anschließen, mit denen Sie sich den Sound anhören können. Schließen Sie die Monitor-Lautsprecher oder Kopfhörer an, damit Sie den Sound hören können, den Sie mischen. Verbinden Sie Ihre Monitor-Lautsprecher mit den **Monitor-Ausgangsbuchsen** bzw. Ihre Kopfhörer mit der **Kopfhörerbuchse**.

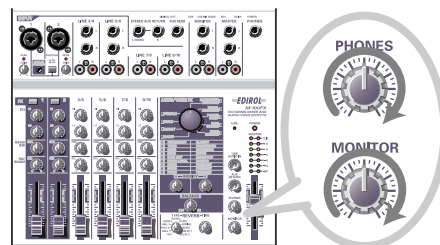


Die Monitor-Ausgangsbuchsen bieten Anschlüsse vom Typ Phone sowie vom Typ RCA-Phono. An beiden Anschlüssen wird das gleiche Signal ausgegeben. Verwenden Sie die Anschlüsse, die für die Kabel geeignet sind, die Sie mit Ihren Monitor-Lautsprechern einsetzen. Wenn sowohl die Phone-Buchse als auch die RCA-Phono-Buchsen mit Steckern verbunden werden, wird der Sound nur aus den Phone-Buchsen ausgegeben.

- * Bevor Sie Ihre Monitor-Lautsprecher oder Kopfhörer anschließen, drehen Sie den **Monitor-Lautstärke-Schaltknopf** oder **Kopfhörer-Lautstärke-Schaltknopf** sowie den Lautstärkeregler Ihrer Monitor-Lautsprecher in die **Minimalposition**.

■ Regelung der Lautstärke

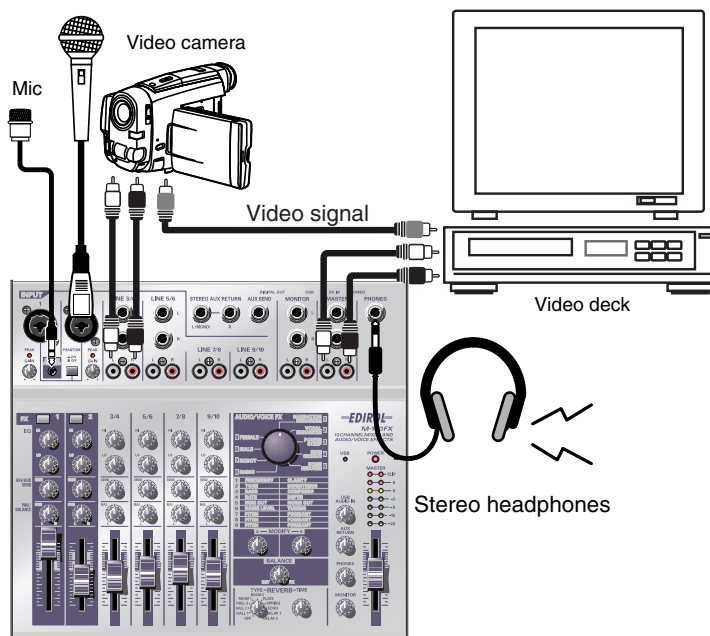
1. Wenn Sie Monitor-Lautsprecher angeschlossen haben, erhöhen Sie die Lautstärke auf den gewünschten Pegel.
2. Drehen Sie den Monitor-Lautstärke-Schaltknopf oder Kopfhörer-Lautstärke-Schaltknopf nach rechts, um die Lautstärke wie gewünscht zu regulieren.



- Anschluss eines Mikrofons(S. 39)
- Anschluss von Audiogeräten.....(S. 42)
- Anschluss des M-100FX an Ihren Computer.....(S. 44)
- Using the external input/output jacks (AUX).....(S. 28)
- Using the digital output jacks(S. 30)

Anschluss eines Mikrofons

■ Anschluss eines Mikrofons, um Sound einzuspeisen



Die **Mic-Eingangsbuchsen 1 und 2** (INPUT 1, 2) sind für Mikrofone geeignet, die über XLR-Stecker oder Phone-Stecker verfügen. Die XLR-Buchsen können Phantomstrom für Kondensatormikrofone bereitstellen, die diese Art Stromversorgung benötigen. Die Phone-Buchsen sind für symmetrische oder unsymmetrische Anschlüsse geeignet.

Wenn Sie ein Kondensatormikrofon verwenden, das Phantomstrom nutzt, schalten Sie den **Phantomstrom-Schalter** ein.

* Sie müssen den **Phantomstrom deaktiviert** lassen, wenn Sie kein Kondensatormikrofon verwenden, das Phantomstrom benötigt. Wenn ein dynamisches Mikrofon oder ein Gerät für die Wiedergabe von Sound mit Phantomstrom versorgt wird, treten Fehlfunktionen auf. Weitere Informationen über die Spezifikationen Ihres Mikrofons erhalten Sie im Benutzerhandbuch, das Ihrem Mikrofon beiliegt.

(Die Phantomstromversorgung des M-100FX beträgt maximal DC 48 V, 10 mA.)

NOTE

Bevor Sie ein Mikrofon anschließen, drehen Sie den **Input-Level-Schaltknopf (GAIN)** in die Minimalposition, um den Schaltkreis zu schützen.

HINT

Phantomstrom

Hierbei handelt es sich um eine Methode, mit der ein Kondensatormikrofon oder ähnliches Gerät über das Mikrofonkabel mit Strom versorgt wird. Die integrierte Phantomstromversorgung stellt 48 V (Gleichstrom) zur Verfügung. Die Form des Steckers ist identisch mit der Form eines konventionellen XLR-Steckers.

Über symmetrische und unsymmetrische Anschlüsse



Die **symmetrische Eingabe** ist eine Methode, mit der ein Signal mit Hilfe von drei Leitern übertragen werden kann, die als "heiß", "kalt", und "Erde" bezeichnet werden. Der Stecker ist in drei Abschnitte unterteilt. Stecker, die für Stereosignale verwendet werden, sind ebenfalls in drei Abschnitte unterteilt, werden jedoch anders verdrahtet. Bringen Sie diese beiden Anschlusstypen nicht durcheinander. Stereosignale können nicht in die **Mic-Eingangsbuchse 1 oder in die Buchse 2 (INPUT 1, 2)** eingespeist werden.

Die **unsymmetrische Eingabe** ist die übliche Methode für die Übertragung eines Signals mit Hilfe von zwei Leitern, einer Signalleitung und einer Erde. Der Stecker ist in zwei Abschnitte unterteilt.

Mikrofontypen

Mikrofone können grob als dynamische Mikrofone oder Kondensatormikrofone kategorisiert werden. Der M-100FX ist mit beiden Typen kompatibel und ist auch für "Plugin-Mikrofone" geeignet – die Miniatur-Kondensatormikrofone, die für den Anschluss an die Mikrofonbuchse eines Computers oder die Aufnahmebuchse eines MD-Recorders (Mini Disc-Recorders) entwickelt wurden.

Die Plugin-Mikrofonbuchse ist für monaurale Mikrofone oder Stereomikrofone geeignet. Wenn ein Stereostecker mit der **Mic-Eingangsbuchse 1 (INPUT 1)** verbunden wird, verarbeitet Kanal 1 die linken/rechten Signale in Stereo. Wenn ein Plugin-Mikrofon angeschlossen wird und Sie ein Mikrofon mit der XLR-Buchse verbinden, wird aus dem Mikrofon, das mit der XLR-Buchse verbunden ist, kein Sound ausgegeben. An den Mixer wird nur das Signal des Plugin-Mikrofons gesendet.

Wenn Sie die Plugin-Mikrofonbuchse verwenden, kann mit dem Input-Level-Schaltknopf (GAIN) der Eingangspegel nicht verändert werden.

NOTE

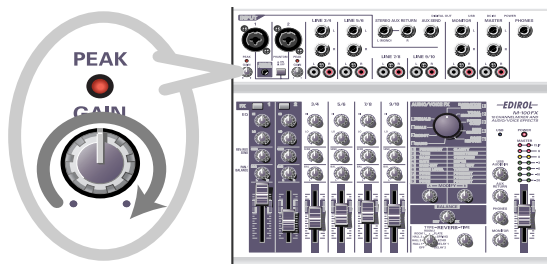
Mit der Plugin-Mikrofonbuchse kann nur ein **Plugin-Mikrofon** verbunden werden. Wenn ein anderer Mikrofontyp, z.B. ein Mikrofon mit einem konventionellen Stereo-Mini-Ausgangsstecker, mit dieser Buchse verbunden wird, kann der Schaltkreis beschädigt werden.

■ Anpassung der Verstärkung und des Pegels (der Lautstärke)

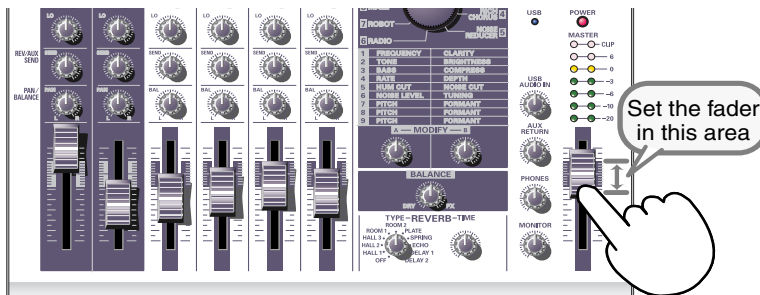
Nachdem Sie die Verbindungen hergestellt haben, gehen Sie wie folgt vor, um die Lautstärke entsprechend anzupassen.

1. Bringen Sie den **Input-Level-Schaltknopf (GAIN)**, **Master Volume Fader**, **Monitor-Lautstärke-Schaltknopf** und **Kopfhörer-Lautstärke-Schaltknopf** in ihre Minimalpositionen.
2. Regeln Sie die Verstärkung (Gain).

Während Sie in das Mikrofon sprechen/singen/vortragen, drehen Sie den Input-Level-Schaltknopf nach rechts bis zu dem Kanal, mit dem Ihr Mikrofon verbunden ist. Stellen Sie den Eingangspegel so hoch, wie Sie ihn stellen können, ohne dass die Peak-Anzeige aufleuchtet.



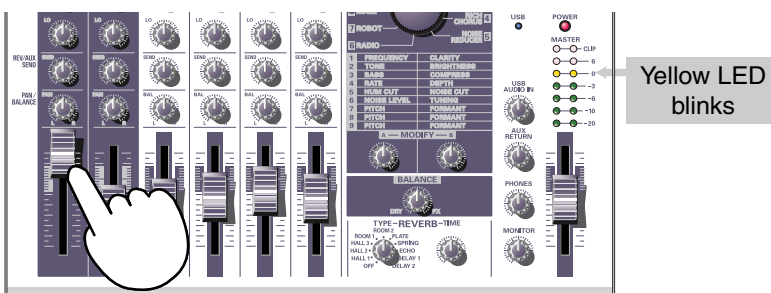
3. Stellen Sie den **Master Volume Fader** in die Mitte des Bereichs, der in der untenstehenden Abbildung des Bedienfelds gezeigt wird.



4. Regeln Sie den Eingangspegel.

Stellen Sie den **Input Level Fader** so ein, dass die gelbe LED (0 dB) der **Master-Volume-Anzeige** von Zeit zu Zeit aufleuchtet.

Wenn Sie mit mehreren Mikrofonen gleichzeitig aufnehmen, sollten Sie die Input Level Fader aller Eingabekanäle langsam nach oben schieben, um die Pegel anzupassen.



NOTE

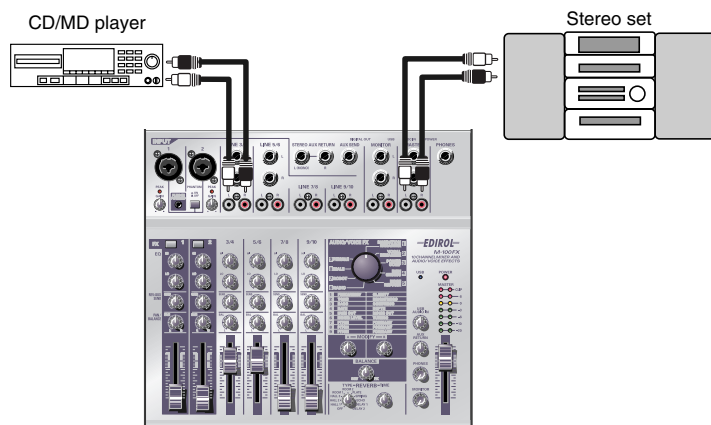
Die Peak-Anzeige leuchtet auf, wenn der Eingangssignal-Pegel (Lautstärke) zu hoch ist und zeigt damit an, dass das Eingangssignal verzerrt ist.

Um die beste Audio-Qualität zu erreichen, sollten Sie den Eingangspegel so hoch wie möglich stellen, d.h., erhöhen Sie die Verstärkung (Gain) so weit wie möglich, ohne dass die Peakanzeige aufleuchtet.

Anschluss von Audiogeräten

Nehmen Sie die Anschlüsse wie folgt vor, damit Sie mit einer CD mitsingen können.

- * Weitere Informationen zum Anschluss eines Mikrofons für die Eingabe (Aufnahme) Ihrer Stimme erhalten Sie unter **Anschluss eines Mikrofons** (S. 39).



■ Anschluss einer Stereoanlage oder eines MD-Geräts

Die Kabel, die Sie mit den **Leitungseingangsbuchsen 3/4** (LINE INPUT 3/4) und **Leitungseingangsbuchsen 5/6** (LINE INPUT 5/6) verbinden, können entweder über einen Phone-Stecker oder einen RCA-Phone-Stecker verfügen. Wenn Sie beide Steckertypen gleichzeitig anschließen, wird nur der Sound der Phone-Steckerverbindung in den Mixerabschnitt gesendet.

■ Anschluss des Aufnahmegeräts

Wenn Sie das gemischte Signal aufnehmen möchten, verbinden Sie die **Master-Ausgangsbuchsen** des M-100FX mit den LINE IN- oder Aufnahmebuchsen (REC) Ihres Kassettenrecorders oder MD-Recorders.

Die **Master-Ausgangsbuchsen** stellen Buchsen vom Typ Phone und RCA Phono zur Verfügung. Beide Typen geben das gleiche Signal aus; verwenden Sie den Typ Buchsen, die dem Kabel entsprechen, die mit dem Recorder oder anderem Gerät verbunden sind, das Sie verwenden. Wenn Sie beide Steckertypen gleichzeitig anschließen, wird nur der Sound der Phone-Steckerverbindung in den Recorder oder in andere Geräte gesendet.

■ Regelung des Eingangspegels (Lautstärke)

Nachdem Sie die Verbindungen hergestellt haben, regeln Sie die Lautstärke wie folgt

Bringen Sie die **Input Level Fader** und **Master Volume Fader** in die Minimalposition. Wenn Sie Monitor-Lautsprecher oder Kopfhörer angeschlossen haben, drehen Sie den **Monitor-Lautstärke-Schaltknopf** und den **Kopfhörer-Lautstärke-Schaltknopf** in die Minimalposition.



Jeder der **Leitungseingänge 3/4, 5/6, 7/8, 9/10** (LINE INPUT 3/4, 5/6, 7/8, 9/10) verfügt über denselben Schaltkreis. Verwenden Sie die Leitungseingänge wie gewünscht entsprechend der Reihenfolge der Geräte, die Sie anschließen, oder entsprechend der Position der Geräte.



Die Eingangsbuchsen vom Typ Phone und RCA Phono für die Leitungseingänge sind mit dem gleichen Schaltkreis innerhalb des M-100FX verbunden. Verwenden Sie den Anschluss, der für Ihr Kabel geeignet ist.

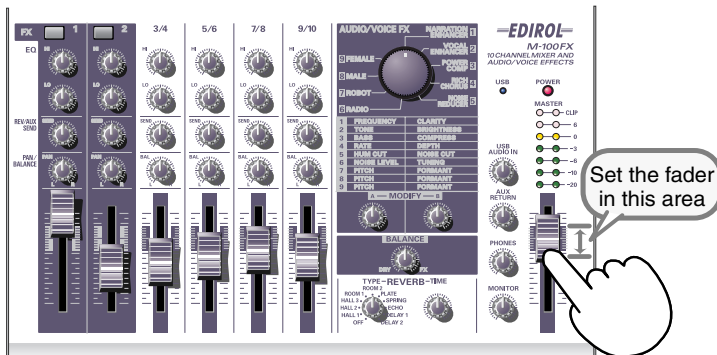


Bevor Sie ein Audiogerät mit einer Buchse verbinden, drehen Sie den **Master Volume Fader** und den **Input Level Fader** in die Minimalposition, um den Schaltkreis zu schützen.



Nähere Informationen zur Regelung der Mikrophon-Eingangspegel erhalten Sie unter **Anschluss eines Mikrofons** (S. 39).

1. Bringen Sie den **Master Volume Fader** in die Position, die im Bedienfeld schwarz markiert ist.

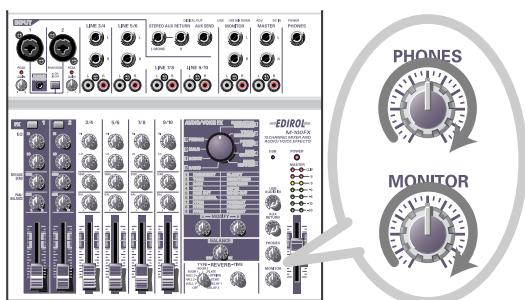


2. Geben Sie auf dem Gerät, das mit den **Leitungseingangsbuchsen** verbunden ist, Sound aus.

Schieben Sie den **Input Level Fader** langsam nach oben, um die Lautstärke zu erhöhen. Passen Sie die Lautstärke so an, dass das gelbe Licht (0 dB) der **Master-Volume-Anzeige** von Zeit zu Zeit aufleuchtet. Wenn Sie mit mehreren Leitungseingangsbuchsen (Kanälen) Geräte verbunden haben und Aufnahmen erstellen möchten, schieben Sie die Eingangspegelregler für jeden Eingangskanal, den Sie verwenden, nach oben, um die Lautstärke entsprechend Ihren Wünschen anzupassen.



3. Wenn es Ihnen Ihr Aufnahmegerät ermöglicht, den Aufnahmepegel anzupassen, verstellen Sie ihn so, dass die Peak-Anzeige Ihres Aufnahmegeräts nicht aufleuchtet, oder so, dass die Pegel-Messanzeige im Bereich einer angemessenen Aufnahme lautstärke bleibt.
4. Wenn Sie Monitor-Lautsprecher angeschlossen haben, erhöhen Sie die Lautstärke der Monitor-Lautsprecher auf den gewünschten Pegel.
5. Drehen Sie den **Monitor-Lautstärke-Schaltknopf** oder **Kopfhörer-Lautstärke-Schaltknopf**, bis die gewünschte Lautstärke erreicht wird.



Anschluss des M-100FX an Ihren Computer

Der M-100FX verfügt über einen USB-Anschluss, der es Ihnen ermöglicht, den M-100FX an Ihren PC anzuschließen. Wenn der M-100FX mit Ihrem Computer über ein USB-Kabel verbunden ist, kann die Ausgabe des Audiosignals (Sound) von Ihrem Computer mit den Audiosignalen gemischt werden, die in den M-100FX eingegeben werden, oder die Signale (Sounds), die vom M-100FX gemischt werden, können zu Ihrem Computer gesendet werden.

Die Sounds, die von den Effekten des M-100FX gemischt oder verarbeitet werden, können auch mit Software für die Musikproduktion oder mit Waveform-Bearbeitungssoftware auf Ihrem Computer aufgenommen werden, wenn Sie eigene originale Audiodaten erstellen möchten.

Was ist USB?

USB steht für Universal Serial Bus und ist eine Schnittstelle für den Anschluss einer Vielzahl unterschiedlicher Peripheriegeräte an einen Computer. Mit einem einzigen USB-Kabel können viele verschiedene Geräte angeschlossen und Daten mit Hochgeschwindigkeit übertragen werden.

Sie können Peripheriegeräte auch anschließen oder entfernen, ohne zuvor den Netzstrom abzustellen, und Ihr Computer wird das angeschlossene Gerät automatisch erkennen. Einige Geräte können es erfordern, dass Einstellungen vorgenommen oder andere Maßnahmen ergriffen werden.

Ihr Computer wird den M-100FX als Gerät erkennen, das verwendet wird, um Audiosignale zum Computer und vom Computer zu übertragen.

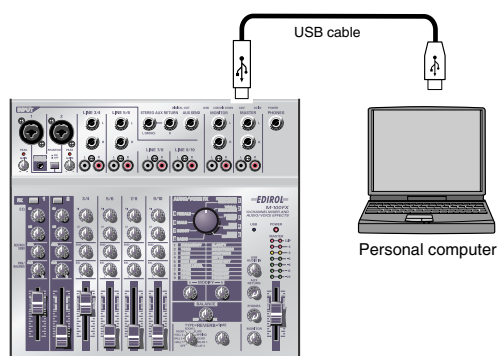
* Der M-100FX unterstützt USB Version 1.1.

Um den M-100FX via USB-Anschluss verwenden zu können, müssen Sie auf Ihrem Computer einen Treiber installieren. Nähere Informationen zur Installation des Treibers erhalten Sie unter **Connecting the M-100FX to your computer** (S. 139).

Installieren Sie die Treiber. Gehen Sie dabei vor wie in **Connecting the M-100FX to your computer** (S. 139) beschrieben.

Wenn Sie auf Ihrem Computer Sound aufnehmen möchten, stellen Sie die Verbindungen her wie im untenstehenden Diagramm angezeigt.

Verbinden Sie das USB-Kabel mit dem USB-Anschluss an der Rückseite des M-100FX. Weitere Informationen zum Anschluss Ihrer Monitor-Lautsprecher oder Kopfhörer erhalten Sie unter **Anschluss von Monitor-Lautsprechern oder Kopfhörern** (S. 38).



NOTE

Wenn Sie mit Windows arbeiten und die Wiedergabe einer Audio-CD via USB zum M-100FX senden möchten, müssen Sie den Windows Media Player 7 oder später verwenden. Wenn Sie unter Mac OS9 den erweiterten Modus einsetzen, können Sie den wiedergegebenen Sound einer Musik-CD nicht an den M-100FX senden.

MEMO

Weitere Informationen zum Anschluss eines Mikrofons für die Eingabe Ihrer Stimme erhalten Sie unter **Anschluss eines Mikrofons** (S. 39).

■ Regelung des Eingangspegels (Lautstärke)

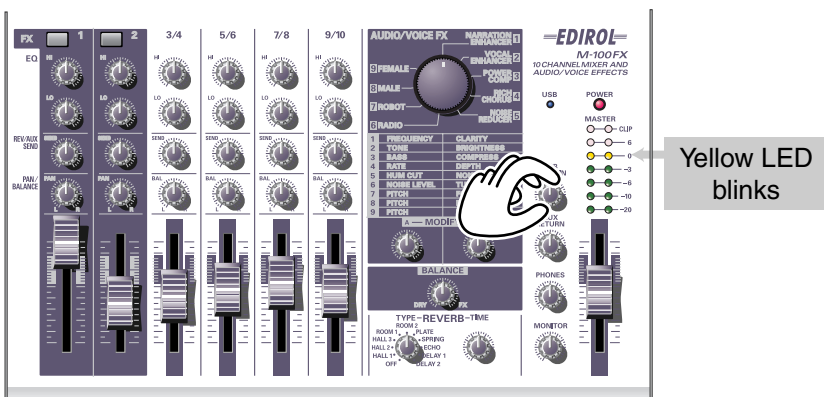
Nachdem Sie die Verbindungen hergestellt haben, sollten Sie die Lautstärke wie folgt für die Aufnahme regeln.

Bringen Sie die **Input Level Fader**, **Master Volume Fader** und **USB-Input-Level-Schaltknopf** in die Minimalposition. Wenn Sie Kopfhörer angeschlossen haben, bringen Sie den **Kopfhörer-Lautstärke-Schaltknopf** in die Minimalposition.

1. Bringen Sie den **Master Volume Fader** in die Position in der Mitte des Bereichs, der im Bedienfeld schwarz markiert ist.



2. Während Sie auf Ihrem Computer Sound wiedergeben, drehen Sie den **USB-Input-Level-Schaltknopf** nach rechts, um die Lautstärke zu erhöhen. Stellen Sie die Lautstärke so ein, dass das gelbe Licht (0 dB) der **Master-Volume-Anzeige** von Zeit zu Zeit aufleuchtet.



Wenn Sie mit mehreren Leitungseingangsbuchsen (Kanälen) Geräte verbunden haben und Aufnahmen erstellen möchten, verschieben Sie für alle diese Kanäle die **Input Level Fader**, um die Lautstärken anzupassen.

MEMO

Nähere Informationen zur Regelung des Mikrofon-Eingangspegels erhalten Sie unter **Anschluss eines Mikrofons** (S. 39).

MEMO

Wenn Sie in Ihren Computer Sound eingeben (aufnehmen), ist es eine gute Idee, auf die Position des **USB-Input-Level-Schaltknopfs** zu achten. Sie müssen eventuell den **USB-Input-Level-Schaltknopf** zurückdrehen, während Sie eine Aufnahme erstellen.

- 3.** Wenn Sie das Audiosignal auf Ihrem Computer aufnehmen, nehmen Sie Änderungen an Ihrer Software vor, um den Aufnahmepegel entsprechend anzupassen.

Der **Master Volume Fader** passt die Lautstärke des Sounds an, der vom USB-Anschluss des M-100FX an Ihren Computer gesendet wird.

- * Abhängig von Ihrer Aufnahmesoftware wird das Signal, das für die Aufnahme eingespeist wird, eventuell direkt zurück zum USB-Audio-Ausgang gesendet. In diesem Fall kommt es bei der USB-Audioeingabe des M-100FX zu einer Feedback-Schleife, wobei ein heulender Ton oder Verzerrung erzeugt werden kann. Um das zu verhindern, können Sie entweder Ihre Aufnahmesoftware so einstellen, dass die Ausgabe nicht mehr am USB-Anschluss erfolgt, oder Sie drehen den **USB-Input-Level-Schaltknopf** des M-100FX ganz nach links (Position 0).*
- * Der Master Volume Fader steuert die Lautstärke der Digitalausgabe und den Pegel (Lautstärke), mit dem das gemischte Signal zum USB-Anschluss gesendet wird. Wenn Sie die Lautstärke Ihrer Monitorlautsprecher unabhängig vom Aufnahmepegel anpassen möchten, verbinden Sie die Monitorlautsprecher mit den **Monitor-Ausgangsbuchsen** (analog) des M-100FX und verwenden Sie den **Monitor-Output-Schaltknopf**, um die Lautstärke anzupassen.*

Audio/Voice-Effekte

Welche Audio/Voice-Effekte gibt es?

Sie können **Audio/Voice-Effekte** auf die **Mic-Eingangsbuchsen 1 und 2 (CH 1, 2)** anwenden. Diese Effekte nutzen einen internen digitalen Signalprozessor (DSP) für die Verarbeitung des Sounds aus Ihrem Mikrofon bzw. Ihrer Mikrofone mit einer Vielzahl von Methoden, wie z.B. durch die Erhöhung des Niederfrequenzbereichs, womit der Sound eine größere Klarheit erhält, oder durch die Veränderung der Tonlage.

So wenden Sie Effekte an

Weitere Informationen zum Anschluss von Mikrofonen oder anderen Geräten erhalten Sie unter **Grundlegende Bedienung** (S. 38).

- 1.** Drücken Sie für den Kanal, mit dem Ihr Mikrofon verbunden ist, den **Effektschalter**, um es einzuschalten. Der Schalter leuchtet anschließend rot.
- 2.** Verwenden Sie den **Audio/Voice-Effektauswahlschaltknopf**, um einen Effekt auszuwählen.
- 3.** Verwenden Sie die **A/B-Schaltknöpfe für die Effektänderung**, um den Typ (die Parameter) des Effekts zu verändern.
- 4.** Verwenden Sie den **Effekt-Balance-Schaltknopf**, um die Tiefe des Effekts oder den Anteil des ursprünglichen Sounds und des bearbeiteten Sounds anzupassen.

* *Siehe auch **Effect applications** (S. 113).*

Effekttypen

1	NARRATION ENHANCER		(S. 49)		
	Lässt Kommentare oder Ankündigungen klarer klingen. Entfernt unerwünschte Geräusche.	<table border="1"> <tr> <td>A</td> <td>FREQUENCY</td> </tr> <tr> <td>B</td> <td>CLARITY</td> </tr> </table>		A	FREQUENCY
A	FREQUENCY				
B	CLARITY				
2	VOCAL ENHANCER		(S. 49)		
	Passt den tonalen Charakter der Stimme an und verleiht ihr Reichweite und Klarheit. Sie können den Stimmcharakter auch gedämpfter klingen lassen.	<table border="1"> <tr> <td>A</td> <td>TONE</td> </tr> <tr> <td>B</td> <td>BRIGHTNESS</td> </tr> </table>		A	TONE
A	TONE				
B	BRIGHTNESS				
3	POWER COMPRESSOR		(S. 50)		
	Lässt eine Stimme kraftvoll klingen, die im Niederfrequenzbereich schwach klingt. Kann auch verwendet werden, um eine Stimme zu verstärken, die von anderen	<table border="1"> <tr> <td>A</td> <td>BASS</td> </tr> <tr> <td>B</td> <td>COMPRESS</td> </tr> </table>		A	BASS
A	BASS				
B	COMPRESS				
4	RICH CHORUS		(S. 50)		
	Verleiht dem Sound Raum und Tiefe. Wenn Sie den Balance-Schaltknopf nach oben verschieben, wird der Klang leicht moduliert, womit ein geheimnisvoller Effekt	<table border="1"> <tr> <td>A</td> <td>RATE</td> </tr> <tr> <td>B</td> <td>DEPTH</td> </tr> </table>		A	RATE
A	RATE				
B	DEPTH				
5	NOISE REDUCER		(S. 51)		
	Reduziert elektrische Brumm- und Zischgeräusche.	<table border="1"> <tr> <td>A</td> <td>HUM CUT</td> </tr> <tr> <td>B</td> <td>NOISE CUT</td> </tr> </table>		A	HUM CUT
A	HUM CUT				
B	NOISE CUT				
6	RADIO		(S. 51)		
	Simuliert das Rauschen, das häufig von einer Radio- oder Analogaufnahme erzeugt wird, und vermittelt den Eindruck einer alten Aufnahme.	<table border="1"> <tr> <td>A</td> <td>NOISE LEVEL</td> </tr> <tr> <td>B</td> <td>TUNING</td> </tr> </table>		A	NOISE LEVEL
A	NOISE LEVEL				
B	TUNING				
7	ROBOT		(S. 52)		
	Verleiht dem Sound einen roboterhaften Charakter bei geringer Änderung der Tonlage.	<table border="1"> <tr> <td>A</td> <td>PITCH</td> </tr> <tr> <td>B</td> <td>FORMANT</td> </tr> </table>		A	PITCH
A	PITCH				
B	FORMANT				
8	MALE		(S. 52)		
	Transformiert eine weibliche Stimme in eine männliche Stimme.	<table border="1"> <tr> <td>A</td> <td>PITCH</td> </tr> <tr> <td>B</td> <td>FORMANT</td> </tr> </table>		A	PITCH
A	PITCH				
B	FORMANT				
9	FEMALE		(S. 53)		
	Transformiert eine männliche Stimme in eine weibliche Stimme.	<table border="1"> <tr> <td>A</td> <td>PITCH</td> </tr> <tr> <td>B</td> <td>FORMANT</td> </tr> </table>		A	PITCH
A	PITCH				
B	FORMANT				

■ Effektparameter

1. NARRATION ENHANCER

Dieser Effekt lässt eine Stimme klarer klingen. Er reduziert auch die unerwünschten Zischgeräusche einer Mikrofoneingabe und sorgt dafür, dass der Sound besser zu hören ist. Sie können diesen Effekt verwenden, wenn Sie dem Video, das Sie bearbeiten, Ankündigungen, Kommentare oder Texte hinzufügen.

A. FREQUENCY

Effekt-Schaltknopf A spezifiziert den Frequenzbereich, in dem die **Klarheit** der Stimme von **Schaltknopf B** reguliert wird. Während Sie den **Effektschaltknopf A** nach rechts drehen, wird der Effekt auf einen größeren Bereich angewendet.

B. CLARITY

Damit wird der Umfang angepasst, in dem die Klarheit der Stimme erhöht wird. Während Sie den **Effektschaltknopf B** nach rechts drehen, wird der Effekt verstärkt. Wenn Sie diesen Effekt auf eine Stimme, die bereits klar ist, übermäßig anwenden, wird der Klang schrill oder verzerrt.

2. VOCAL ENHANCER

Dieser Effekt verstärkt oder reduziert die Komponenten eines Sounds, die seinen grundlegenden Charakter ausmachen. Sie können ihn verwenden, um den Charakter einer Stimme zu unterstreichen oder zu korrigieren, wenn Sie einen Dialog oder Song aufnehmen.

A. TONE

Wenn Sie den **Effektschaltknopf A** nach rechts drehen, wird der Frequenzbereich verstärkt, der den fundamentalen Bereich der Stimme enthält, womit die Stimme ausdrucksstärker wird. Wenn Sie den Sound weniger resonierend und ausdrucksstark werden lassen möchten, drehen Sie den Schaltknopf nach links.

B. BRIGHTNESS

Effektschaltknopf B verstärkt den Frequenzbereich, der für eine Stimme charakteristisch ist. Drehen Sie den Schaltknopf nach rechts, um Atemgeräusche und Ausdruck zu betonen, oder nach links, um eine schrill klingende Stimme zu dämpfen.



Zischen: das Geräusch, das entstehen kann, wenn Worte mit “s” oder “sh” ausgesprochen werden.

3. POWER COMPRESSOR

Dieser Effekt kann eine dünne Stimme verstärken, deren Niederfrequenzbereich zu schwach ist, und sie kraftvoller klingen lassen. Mit diesem Effekt kann auch die Lautstärke einer Stimme, deren Lautstärke stark unterschiedlich ist, ausgeglichen werden, oder es kann eine Stimme verstärkt werden, die von anderen Klängen häufig überdeckt wird.

Wenn die Lautstärke bereits ausreicht und keine anderen Klänge vorhanden sind, von denen die Stimme verdeckt wird, sollten Sie es vermeiden, diesen Effekt übermäßig anzuwenden. Hiermit kann das Rauschen verstärkt oder es können laute Klänge unterdrückt werden, womit der Sound gedämpft klingt.

A. BASS

Hiermit wird der Niederfrequenzbereich der Stimme verstärkt oder unterdrückt. Wenn Sie den **Effektschaltknopf A** nach rechts drehen, wird der Effekt verstärkt. Sie können diesen Effekt verwenden, um die niedrigen Frequenzbereiche für eine Stimme zu erhöhen, die entfernt vom Mikrofon aufgenommen wurde.

B. COMPRESS

Hiermit wird der Unterschied in der Lautstärke zwischen lauten und leisen Klängen reduziert, wodurch die Gesamtlautstärke erhöht wird. Wenn Sie den **Effektschaltknopf B** nach rechts drehen, erreichen die Klänge allmählich einen höheren Pegel. Anders als bei der einfachen Erhöhung der Lautstärke wird damit verhindert, dass laute Klänge verzerrt werden.

4. RICH CHORUS

Dieser Effekt fügt einen "Chor"-Effekt hinzu, der erzeugt wird, indem der ursprüngliche Sound mit einem tonhöhenmodulierten Klang ergänzt wird, wodurch eine raumfüllende Wirkung erzielt wird. Er kann genutzt werden, um fantasieähnliche Effekte mit reduziertem Orientierungssinn zu erzeugen, oder um einer Vokalharmonie die Illusion eines Hintergrundchors hinzuzufügen.

A. RATE

Passt die Frequenz der Modulation an. Wenn Sie den **Effektschaltknopf A** nach rechts drehen, wird die Modulation beschleunigt.

B. DEPTH

Passt die Tiefe der Modulation an. Wenn Sie den **Effektschaltknopf B** nach rechts drehen, werden Tonhöhe und Lautstärke stärker verändert, womit ein intensiverer Modulationseffekt erzeugt wird.

Generell kann die Modulation auf eine ziemlich langsame Geschwindigkeit eingestellt werden, und wenn Sie die Illusion eines Hintergrundchors hinzufügen möchten, sollten Sie die Modulationstiefe auf eine Einstellung setzen, die nur leicht links von der Mitte liegt. Verwenden Sie tiefere Einstellungen, wenn Sie einen raumfüllenden, fantasieartigen Effekt erzeugen möchten.



Wenn der eingegebene Sound zu leise ist, ist der Effekt weniger wirkungsvoll. Stellen Sie den eingegebenen Sound lauter.

5. NOISE REDUCER

Damit werden "Zisch"-Geräusche und das "Brummen" reduziert, das manchmal von elektronischen Geräten erzeugt wird.

Dies ist eine effektive Methode, um Rauschen zu entfernen, das auf einer bestimmten Frequenz auftritt, oder um Rauschen zu entfernen, das in einem niedrigeren Bereich als die Stimme vorkommt.

A. HUM CUT

Hiermit werden entweder 50 Hz oder 60 Hz als Brummfrequenz ausgewählt, die entfernt werden wird. Stellen Sie diesen Wert auf eine Frequenz des elektrischen Stroms in Ihrem Gebiet ein.

Wenn Sie den **Effektschaltknopf A** so verstellen, dass er sich links von der Mitte befindet, wird 50 Hz Brummen entfernt. Wenn Sie den Schaltknopf so verstellen, dass er sich rechts von der Mitte befindet, wird 60 Hz Brummen entfernt. Brummen wird auch stärker ausgeblendet, wenn Sie den Schaltknopf so verstellen, dass er sich weiter von der Mitte entfernt befindet, aber hiervon ist auch der Ton des Audiosignals betroffen, und es kann zu weiteren unerwünschten Effekten, wie z.B. Verzerrungen kommen.

B. NOISE CUT

Damit werden die Hintergrundgeräusche entfernt, die zu hören sind, wenn die Stimme stumm ist. Die Geräusche werden stärker ausgeblendet, wenn Sie den **Effektschaltknopf B** nach rechts drehen.

Wenn Sie diesen Effekt übermäßig einsetzen, werden Anfang und Ende Ihrer Vokalphrasen unnatürlich ausgeblendet und es kann schwierig werden, die Stimme zu verstehen.

6. RADIO

Dieser Effekt ergänzt die Stimme mit den Geräuschen, die für AM-Radio typisch sind, und erzeugt die Atmosphäre einer Radioübertragung einer alten Aufnahme.

A. NOISE LEVEL

Regelt die Lautstärke des AM-Radio-Geräuschs. Wenn Sie den **Effektschaltknopf A** nach links drehen, wird die Lautstärke der Geräusche, die erzeugt werden, wenn das Radio unzureichend feineingestellt wurde, erhöht.

B. TUNING

Simuliert den Sound, der zu hören ist, wenn Sie die Frequenz eines Radios feineinstellen. Die simulierte Feineinstellung ist "korrekt", wenn sich der **Effektschaltknopf B** in der Position in der Mitte befindet. Wenn Sie den Schaltknopf nach links oder nach rechts drehen, wird die simulierte Feineinstellung verschoben, womit der Sound rauer wird.

7. ROBOT

Mit diesem Effekt wird die Frequenz der Stimme auf eine einzige Tonhöhe festgelegt, womit die Stimme einen roboterhaften Charakter erhält. Sie können diesen Effekt verwenden, um gesprochene Worte mechanisch klingen zu lassen.

A. PITCH

Robot Voice legt die Tonhöhe der Stimme auf eine bestimmte Frequenz fest. **Effektschaltknopf A** bestimmt die Tonhöhe. Wenn Sie den Schaltknopf nach rechts drehen, wird diese feste Tonhöhe erhöht.

B. FORMANT

„Formanten“ sind Merkmale einer Stimme, die ihren Charakter ausmachen. **Effektschaltknopf B** passt die Formanten an. Wenn Sie den Schaltknopf nach links drehen, wird eine tiefe, kräftige Stimme erzeugt (als wären die Stimmbänder größer), und wenn der Schaltknopf nach rechts gedreht wird, wird eine hohe, dünne Stimme erzeugt (als wären die Stimmbänder kleiner).

8. MALE

Durch Modifizierung der Tonhöhe und der Formanten der Stimme wird mit diesem Effekt eine weibliche Stimme in eine männliche Stimme verwandelt. Dieser Effekt ist nützlich, wenn Sie einen Dialog oder eine eigene Vorführungen aufnehmen. Durch Drehen des **Effekt-Balance-Schaltknopfs** in die Nähe der Mitte können Sie den geänderten Sound mit dem ursprünglichen Sound mischen und so ein Duett nachahmen.

Durch Anwendung dieses Effekts auf eine reale männliche Stimme können Sie eine sogar noch tiefere und kräftigere Stimme erzeugen.

A. PITCH

Passt den Umfang an, mit dem die Tonhöhe verschoben wird. Während Sie den **Effektschaltknopf A** nach links drehen, wird die Tonhöhe der Stimme verringert. Wenn der Schaltknopf ganz nach rechts gedreht wird, weist die Stimme die ursprüngliche Tonlage auf.

B. FORMANT

„Formanten“ sind Merkmale einer Stimme, die ihren Charakter ausmachen. **Effektschaltknopf B** passt die Formanten an. Wenn Sie den Schaltknopf nach links drehen, wird eine tiefere Stimme erzeugt (als wären die Stimmbänder größer). Wenn der Schaltknopf ganz nach rechts gedreht wird, entsprechen die Formanten der ursprünglichen Stimme.



Wenn Sie diesen Effekt übermäßig anwenden, kann der Sound knacksen oder verzerrt klingen.



Sie sollten nur die Stimme einer einzigen Person eingeben. Je klarer die ursprüngliche Stimme ist, um so besser kommt der Effekt zur Wirkung. Die Qualität des Effekts wird nicht zufriedenstellen, wenn die eingegebene Stimme zu leise ist, wenn mehrere Personen sprechen oder wenn die Hintergrundgeräusche zu laut sind.



Formanten Dabei handelt es sich um feste Frequenzbereiche, in denen der Klang einer Stimme betont und so der grundlegende Charakter bestimmt wird. Die Position und die Größe der Formanten hängt von der Größe der Stimmbänder ab und ist bei Männern und Frauen, Erwachsenen und Kindern unterschiedlich.



Wenn Sie diesen Effekt übermäßig anwenden, kann der Sound knacksen oder verzerrt klingen.



Sie sollten nur die Stimme einer einzigen Person eingeben. Je klarer die ursprüngliche Stimme ist, um so besser kommt der Effekt zur Wirkung. Die Qualität des Effekts wird nicht zufriedenstellen, wenn die eingegebene Stimme zu leise ist, wenn mehrere Personen sprechen oder wenn die Hintergrundgeräusche zu laut sind.

9. FEMALE

Durch Modifizierung der Tonhöhe und der Formanten der Stimme wird mit diesem Effekt eine männliche Stimme in eine weibliche Stimme verwandelt.

Dieser Effekt ist nützlich, wenn Sie einen Dialog oder eine eigene Vorführung aufnehmen. Durch Drehen des **Effekt-Balance-Schaltknopfs** in die Nähe der Mitte können Sie den geänderten Sound mit dem ursprünglichen Sound mischen und so ein Duett nachahmen.

Durch Anwendung dieses Effekts auf eine reale weibliche Stimme können Sie eine sogar noch dünnere und zartere Stimme erzeugen.

A. PITCH

Passt den Umfang an, mit dem die Tonhöhe verschoben wird. Während Sie den **Effektschaltknopf A** nach rechts drehen, wird die Tonhöhe der Stimme erhöht. Wenn der Schaltknopf ganz nach links gedreht wird, weist die Stimme die ursprüngliche Tonlage auf.

B. FORMANT

“Formanten” sind Merkmale einer Stimme, die ihren Charakter ausmachen. **Effektschaltknopf B** passt die Formanten an. Wenn Sie den Schaltknopf nach rechts drehen, wird eine schrillere Stimme erzeugt (als wären die Stimmbänder kleiner). Wenn der Schaltknopf ganz nach links gedreht wird, entsprechen die Formanten der ursprünglichen Stimme.

NOTE

Wenn Sie diesen Effekt übermäßig anwenden, kann der Sound knacksen oder verzerrt klingen.

NOTE

Sie sollten nur die Stimme einer einzigen Person eingeben. Je klarer die ursprüngliche Stimme ist, um so besser kommt der Effekt zur Geltung. Die Qualität des Effekts wird nicht zufriedenstellen, wenn die eingegebene Stimme zu leise ist, wenn mehrere Personen sprechen oder wenn die Hintergrundgeräusche zu laut sind.

Fonctionnement de base

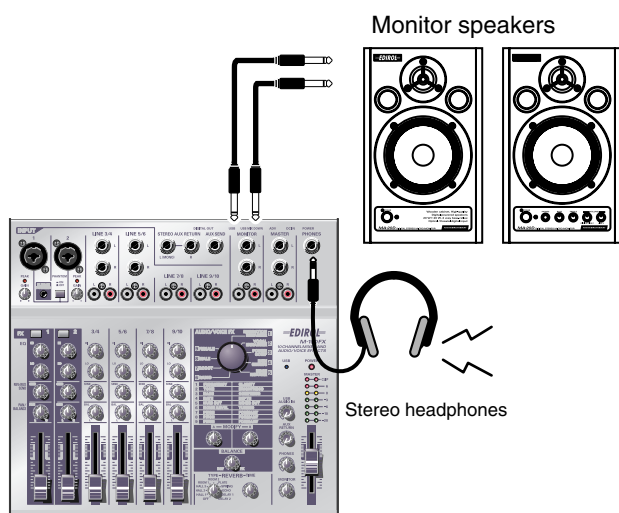
Le M-100FX dispose de nombreux connecteurs prévus pour le raccordement d'une grande variété de périphériques. Cette section explique comment relier le M-100FX à des enceintes, des micros, des périphériques audio ou à votre ordinateur.

- * Afin d'éviter un mauvais fonctionnement et/ou d'endommager les haut-parleurs et autres périphériques, diminuez toujours le volume et mettez toujours les périphériques hors tension avant d'effectuer toute connexion.
- * Baissez toujours le volume avant la mise sous tension. Même avec le volume à zéro, il se peut que vous entendiez des sons lors de la mise sous tension, mais cela ne signifie rien d'anormal.
- * Cette section décrit les périphériques que vous pouvez connecter au M-100FX, ainsi que les précautions à prendre. Pour plus de détails sur l'utilisation combinée des périphériques connectés, reportez à la section **Applications** (p. 105).

Connexion d'enceintes ou d'un casque

Vous allez d'abord connecter un équipement vous permettant d'écouter les sons.

Branchez des enceintes de contrôle ou un casque, vous permettant d'entendre le son que vous mixez. Branchez les enceintes de contrôle sur les **prises de sortie jack de contrôle**, ou un casque sur la **prise casque**.

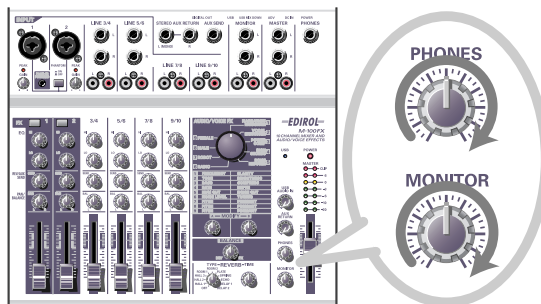


Vous avez le choix entre des jacks RCA et casque. Le même signal est envoyé sur ces deux sorties. Utilisez les connecteurs correspondants aux câbles des enceintes de contrôle. Si vous branchez à la fois un casque et des enceintes de contrôle, seul le casque recevra le signal.

- * Avant de brancher les enceintes ou le casque, tournez le **bouton MONITOR** ou **PHONES** au maximum vers la gauche pour baisser le volume et faites-en de même sur les enceintes.

■ Réglage du volume

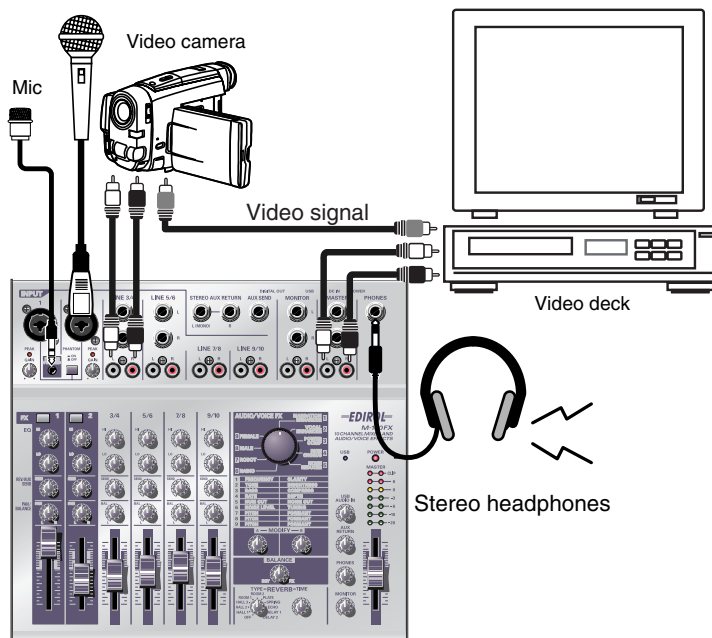
1. Si vous avez branché des enceintes, réglez le volume au niveau désiré.
2. Tournez le bouton de volume MONITOR ou PHONES vers la droite jusqu'à obtenir le niveau désiré.



- Branchement d'un micro (p. 55)
- Connexion de périphériques audio (p. 58)
- Connexion du M-100FX à votre ordinateur (p. 60)
- Using the external input/output jacks (AUX) (p. 28)
- Using the digital output jacks (p. 30)

Branchement d'un micro

■ Branchement d'un micro pour une entrée audio



Les **prises jack micro 1 et 2** (INPUT 1, 2) acceptent les micros à fiche XLR ou jack. Les jacks XLR sont capables de fournir une alimentation fantôme pour les micros à condensateur qui en ont besoin. Les jacks de type casque acceptent les connexions symétriques et asymétriques.

Si vous utilisez un micro à condensateur nécessitant une alimentation fantôme, appuyez sur le **commutateur PHANTOM** pour l'activer.

* Vous devez laisser l'**alimentation fantôme** sur **off** si vous ne connectez aucun périphérique nécessitant cette alimentation. Des dysfonctionnements peuvent se produire dans le cas contraire (branchement d'un micro dynamique ou appareil de lecture audio, par exemple). Pour plus de détails sur les caractéristiques de votre micro, reportez-vous à sa documentation propre.

(L'alimentation fantôme du M-100FX est du type 48 V, 10 mA maximum.)



Avant de brancher un micro, tournez le **bouton de niveau d'entrée (GAIN)** au maximum vers la gauche pour protéger les circuits.



Alimentation fantôme

Il s'agit d'un procédé permettant de fournir l'alimentation requise à un micro à condensateur ou tout périphérique similaire, via un câble de micro. L'alimentation fantôme intégrée fournit du 48 V (courant continu). La forme de la prise est identique à celle d'une prise XLR standard.

A propos des connexions symétriques et asymétriques



Les connexions **symétriques** permettent de transmettre un signal à l'aide de trois conducteurs, appelés "hot", "cold" et "ground". La prise est divisée en trois sections. Les prises utilisées pour les signaux stéréo sont également divisées en trois sections mais elles sont câblées différemment. Ne mélangez pas ces deux types de connexion. Les signaux stéréo ne doivent pas être entrés dans les **prises d'entrée jack 1 et 2** (INPUT 1, 2).

La **connexion asymétrique** est la méthode habituelle utilisée pour transmettre un signal à l'aide de deux conducteurs, une ligne signal et une terre. La prise est divisée en deux sections.

Types de micros

On peut classer les micros en deux catégories : les micros dynamiques et les micros à condensateur. Le M-100FX accepte les deux, en plus des "micros alimentés", c'est-à-dire des micros miniatures à condensateur conçus pour les mini-fiches d'un ordinateur ou d'un enregistreur MD (MiniDisc).

Le mini-jack d'entrée accepte les micros mono et stéréo. Si une fiche stéréo est branchée sur la **prise jack d'entrée 1** (INPUT 1), la voie 1 traitera les signaux gauche/droite en stéréo. Si vous branchez un micro alimenté, et que vous branchez un autre micro dans la prise XLR, aucun signal ne sera entré à partir du micro branché sur la prise XLR. Seul le signal entré dans la prise du micro alimenté sera envoyé au mixeur.

Si vous utilisez la prise du micro alimenté, le bouton de niveau d'entrée (GAIN) n'aura aucun effet sur le niveau d'entrée.

NOTE

Vous ne pouvez brancher qu'un **micro alimenté** dans la prise jack d'entrée de ce type de micro. Si un autre type de micro, comme un micro stéréo classique à mini-fiche, est branché à cette prise, vous risquez d'endommager les circuits.

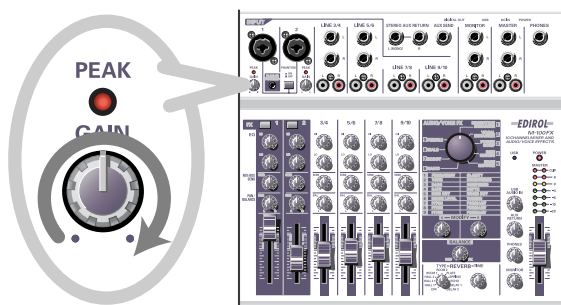
■ Réglage du gain et du niveau (volume)

Après avoir réalisé les branchements, appliquez la procédure suivante pour régler le volume.

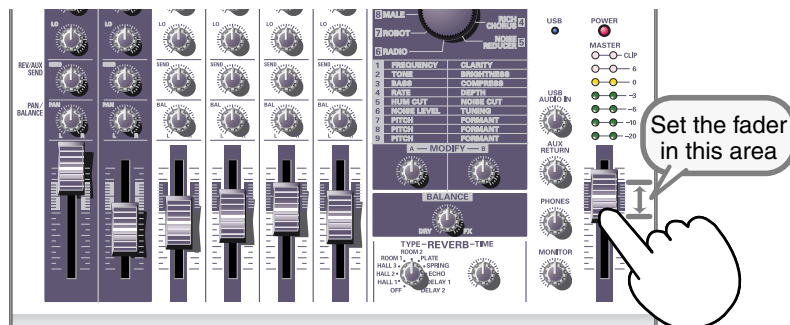
1. Baissez le **bouton de niveau d'entrée (GAIN)**, le **curseur du volume général**, le **bouton de volume de contrôle** et le **bouton de volume du casque** à la position minimum.

2. Réglez le gain.

Tout en parlant ou en chantant dans le micro, tournez le bouton de niveau d'entrée vers la droite de la voie sur laquelle votre micro est branché. Réglez le volume d'entrée au maximum, sans allumer le voyant de crête.



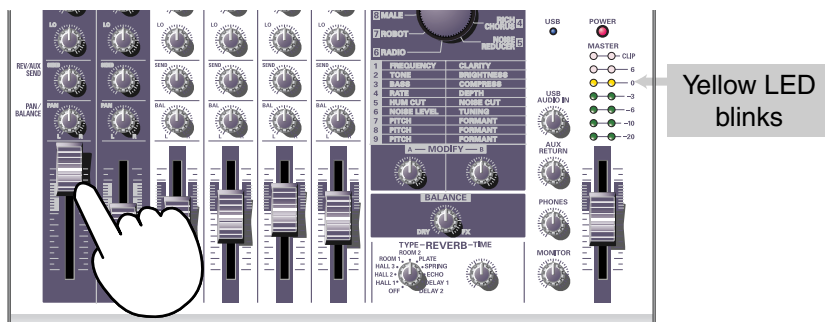
3. Montez le **curseur de volume général** au milieu de la zone (voir illustration ci-dessous).



4. Réglez le niveau d'entrée.

Réglez le **curseur de niveau d'entrée** de manière à ce que le voyant jaune (0 dB) du **témoin de volume général** ne s'allume que par intermittence.

Si vous enregistrez avec plusieurs micros, montez lentement les curseurs de niveau d'entrée de toutes les voies d'entrée pour régler les différents niveaux.



NOTE

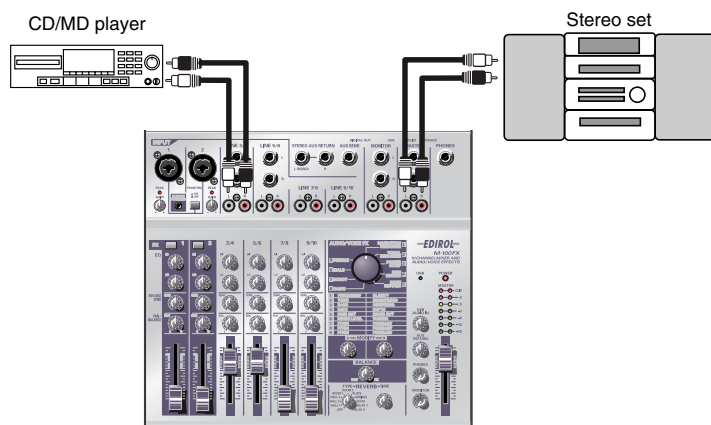
Le voyant de crête s'allume lorsque le niveau du signal d'entrée (volume) est excessif, indiquant une distorsion du son.

Pour obtenir une bonne qualité de son, vous devez monter le niveau d'entrée aussi haut que possible, c'est-à-dire monter le gain sans que le voyant de crête ne s'allume.

Connexion de périphériques audio

Voici comment procéder pour chanter par dessus un CD.

* Pour plus de détails sur le branchement d'un micro pour enregistrer votre voix, reportez-vous à la section **Branchement d'un micro** (p. 55).



■ Branchement d'une chaîne stéréo ou d'un MD

Les câbles que vous branchez sur les **prises jack 3/4** (LINE INPUT 3/4) et **prises jack 5/6** (LINE INPUT 5/6) sont équipés soit d'une fiche de type jack, soit d'une fiche RCA. Si vous branchez les deux types de fiches en même temps, seul le son du branchement jack sera envoyé au mixeur.

■ Branchement d'un appareil d'enregistrement

Si vous voulez enregistrer le signal mixé, branchez un câble de **sortie jack générale** du M-100FX sur les jacks d'entrée LINE IN ou REC de votre enregistreur de cassettes ou de MD.

Vous pouvez brancher aux **prises de sortie générale** des câbles de type jack ou RCA. Les deux fonctionnent de la même façon, il vous revient de choisir le type de sortie correspondant au format des prises d'entrée de votre appareil enregistreur. Si vous branchez les deux types de fiches en même temps, seul le son de la prise de type casque sera envoyé à l'appareil branché.

■ Réglage du niveau d'entrée (volume)

Une fois réalisés les branchements, réglez le volume de la façon suivante. Baissez les **curseurs de niveau d'entrée** et le **curseur du volume général** en position minimum. Si vous avez branché des enceintes ou un casque, tournez le **bouton du volume de contrôle** et le **bouton de volume du casque** jusqu'à la position minimum.

MEMO

Les **entrées ligne 3/4, 5/6, 7/8, 9/10** (LINE INPUT 3/4, 5/6, 7/8, 9/10) possèdent les mêmes circuits. Utilisez-les comme bon vous semble, selon l'ordre des périphériques à brancher ou leur emplacement.

MEMO

Les fiches jack et RCA des entrées ligne sont reliées au même circuit dans le M-100FX. Utilisez la prise adaptée à votre câble.

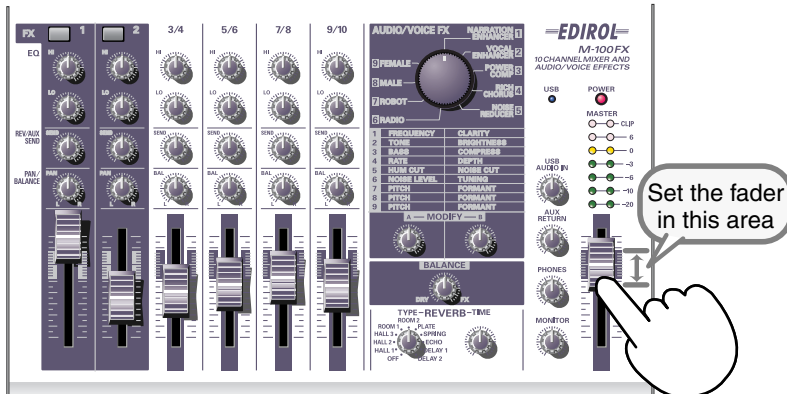
NOTE

Avant toute connexion, n'oubliez pas de baisser le **curseur de volume général** et le **curseur de niveau d'entrée** à leur position minimum pour éviter d'endommager l'appareil.

MEMO

Pour plus de détails sur le réglage du niveau d'entrée du micro, reportez-vous à la section **Branchement d'un micro** (p. 55).

1. Réglez le **curseur du volume général** sur la position indiquée par le repère noir.

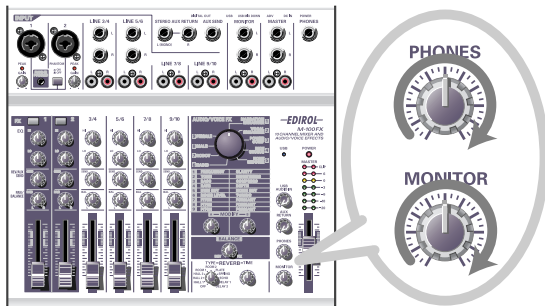


2. Lancez la lecture sur l'appareil branché aux **prises jack d'entrée ligne** .

Montez lentement le **curseur de niveau d'entrée** pour augmenter le volume. Réglez le niveau de manière à ce que le voyant jaune (0 dB) du **témoin de volume général** ne s'allume que par intermittence. Si vous avez branché des appareils sur plus d'une prise d'entrée ligne et que vous voulez les enregistrer, montez les curseurs de niveau d'entrée des voies utilisées jusqu'au niveau désiré.



3. Si votre appareil enregistreur vous permet de régler le niveau d'entrée, faites-le de manière à ce que le voyant de crête de votre appareil enregistreur ne s'allume pas et réglez le volume d'enregistrement à un niveau adéquat.
4. Si vous avez branché des enceintes, réglez le volume au niveau désiré.
5. Tournez le **bouton du volume général** ou le **bouton de volume du casque** jusqu'à obtenir le volume désiré.



Connexion du M-100FX à votre ordinateur

Le M-100FX est équipé d'une connexion USB qui permet de le relier à un ordinateur. Quand le M-100FX est connecté à un ordinateur via un câble USB, le signal audio provenant de l'ordinateur peut être mélangé aux signaux audio provenant d'autres appareils connectés au M-100FX ; inversement, les signaux audio du M-100FX peuvent être envoyés à l'ordinateur.

Les sons mixés ou traités par les effets du M-100FX peuvent également être enregistrés par des programmes de création musicale ou de traitement audio sur l'ordinateur, dans le but de créer des données audio originales.

NOTE

Si vous utilisez Windows et que vous voulez envoyer le son d'un CD audio au M-100FX via USB, vous avez besoin de Windows Media Player 7 ou supérieur. Si vous utilisez le Mode avancé avec Mac OS 9, vous ne pouvez pas envoyer le son d'un CD audio vers le M-100FX.

Qu'est-ce que la norme USB ?

L'acronyme USB signifie "Universal Serial Bus", une interface conçue pour permettre de connecter différents types de périphériques aux ordinateurs. Un seul câble USB permet de connecter plusieurs types de périphériques et de transférer les données à haut débit.

Vous pouvez en outre connecter et déconnecter les périphériques sans avoir besoin d'éteindre l'ordinateur, car celui-ci les détecte automatiquement. Certains périphériques utilisent des procédures et des réglages différents.

Votre ordinateur est capable de détecter le M-100FX en tant que périphérique et de l'utiliser pour des transferts audio dans les deux sens.

* Le M-100FX supporte USB Version 1.1.

Pour pouvoir utiliser le M-100FX via son connecteur USB, vous devez installer un pilote sur votre ordinateur. Pour plus de détails sur l'installation du pilote, reportez-vous à la section **Connecting the M-100FX to your computer** (p. 145).

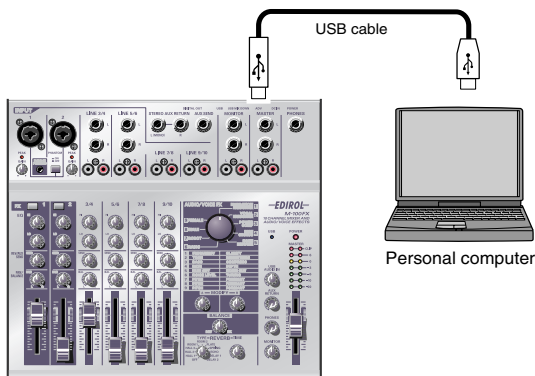
Installez le pilote comme décrit à la section **Connecting the M-100FX to your computer** (p. 145).

Pour enregistrer de l'audio sur votre ordinateur, effectuez les branchements en suivant le schéma ci-dessous.

Branchez le câble USB au connecteur USB à l'arrière du M-100FX. Pour plus de détails sur le branchement d'enceintes de contrôle ou d'un casque, reportez-vous à la section **Connexion d'enceintes ou d'un casque** (p. 54).

MEMO

Pour plus de détails sur le branchement d'un micro pour entrer votre voix, reportez-vous à la section **Branchement d'un micro** (p. 55).



■ Réglage du niveau d'entrée (volume)

Une fois les connexions réalisées, voici comment procéder pour régler les niveaux d'enregistrement.

Baissez les **curseurs de niveau d'entrée** , le **curseur du volume général** et le **bouton de niveau d'entrée USB** en position minimum. Si vous avez déjà branché le casque, tournez le **bouton de volume du casque** jusqu'à la position minimum.

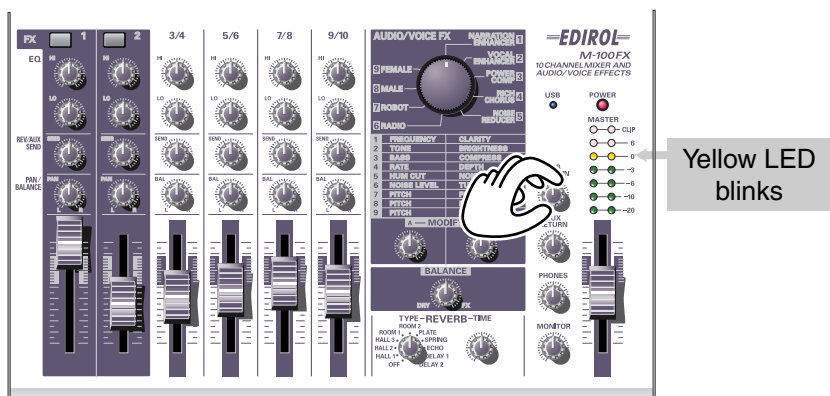
1. Réglez le **curseur du volume général** sur la position indiquée par le repère noir.



2. Après avoir lancé la lecture audio sur l'ordinateur, tournez lentement le **bouton de niveau d'entrée USB** vers la droite pour monter le niveau. Réglez le niveau de manière à ce que le voyant jaune (0 dB) du **témoin de volume général** ne s'allume que par intermittence.

MEMO

Pour plus de détails sur le réglage du niveau d'entrée du micro, reportez-vous à la section **Branchement d'un micro** (p. 55).



Si vous entrez (ou enregistrez) de l'audio dans l'ordinateur, il peut s'avérer utile de noter la position du **bouton de niveau d'entrée USB**. Vous aurez peut-être besoin de baisser le **niveau d'entrée USB** pendant l'enregistrement.

Si vous avez branché des appareils sur plus d'une prise d'entrée ligne et que vous voulez les enregistrer, montez les **curseurs de niveau d'entrée** des voies utilisées jusqu'au niveau désiré.

3. Si vous enregistrez un signal audio sur l'ordinateur, effectuez les réglages de niveau appropriés dans le logiciel concerné.

Le **curseur du volume général** sert à régler le volume de l'audio envoyé via le connecteur USB du M-100FX vers l'ordinateur.

- * Selon votre logiciel, le signal entré peut être renvoyé directement vers la sortie USB. Si tel est le cas, une boucle se créera avec l'entrée audio USB sur le M-100FX, entraînant un bruit strident ou de la distorsion. Pour éviter ce phénomène, vous pouvez soit inhiber la sortie USB de votre ordinateur, soit tourner le **bouton de niveau d'entrée USB** entièrement vers la gauche (position 0).
- * Le curseur du volume général sert à contrôler le volume de la sortie numérique et le niveau (volume) auquel le signal mélangé est envoyé vers la sortie USB. Si vous voulez régler le volume de vos enceintes de contrôle indépendamment du niveau d'enregistrement, branchez les enceintes aux **prises de sortie de contrôle (monitor)** (analogiques) du M-100FX et servez-vous du **bouton de sortie de contrôle (monitor)** pour régler le volume.

Effets audio/voix

Présentation générale des effets audio/voix

Vous pouvez appliquer des **effets audio/voix** aux **prises d'entrée micro 1 et 2 (CH 1, 2)**.

Ces effets reposent sur un DSP (processeur de signal numérique) pour traiter le son provenant des micros avec une multitude d'effets, comme le renforcement des basses, pour donner une plus grande clarté au son, ou en changeant la tonalité.

Comment appliquer les effets

Pour plus de détails sur la connexion de micros ou d'autres appareils, reportez-vous à la section **Fonctionnement de base** (p. 54).

- 1.** Sur la voie sur laquelle le micro est branché, appuyez sur l'**interrupteur d'effets** pour l'activer. Il s'allume en rouge.
- 2.** Utilisez le **bouton de sélection d'effets audio/voix** pour sélectionner un effet.
- 3.** Utilisez les **boutons de modification d'effets A/B** pour régler les paramètres de l'effet.
- 4.** Utilisez le **bouton d'équilibre des effets** pour régler la profondeur de l'effet, ou la proportion du son d'origine par rapport au son traité.

* Reportez-vous à la section **Effect applications** (p. 113).

Types d'effets

1	NARRATION ENHANCER					
	Donne de la clarté aux narrations et aux annonces. Supprime les bruits indésirables.				A	FREQUENCY
				B	CLARITY	
2	VOCAL ENHANCER					
	Règle la caractéristique tonale de la voix pour lui donner de l'ampleur et de la brillance. Inversement, vous pouvez adoucir le caractère de la voix.				A	TONE
				B	BRILLANCE	
3	POWER COMPRESSOR					
	Ajoute de la puissance aux voix déficientes en basses. Peut également être utilisé pour renforcer les voix ayant tendance à être noyées par les autres sons.				A	BASS
				B	COMPRESS	
4	RICH CHORUS					
	Donne de l'espace et de la profondeur au son. En tournant le bouton Balance, vous obtiendrez une sensation de modulation, ce qui crée un effet de mystère.				A	RATE
				B	DEPTH	
5	NOISE REDUCER					
	Réduit les bruits parasites.				A	HUM CUT
				B	NOISE CUT	
6	RADIO					
	Simule les craquements générés par un disque vinyle ou un poste de radio, créant une sensation d'enregistrement ancien.				A	NOISE LEVEL
				B	TUNING	
7	ROBOT					
	Donne une impression robotique au son, avec un léger changement de tonalité.				A	PITCH
				B	FORMANT	
8	MALE					
	Transforme une voix féminine en voix masculine.				A	PITCH
				B	FORMANT	
9	FEMALE					
	Transforme une voix masculine en voix féminine.				A	PITCH
				B	FORMANT	

■ Paramètres d'effets

1. NARRATION ENHANCER

Cet effet permet d'éclaircir la voix. Il réduit par ailleurs les bruits stridents transmis par les micros, rendant le son plus agréable à écouter. Vous pouvez utiliser cet effet pour les annonces, les narrations ou les commentaires d'une vidéo.

A. FREQUENCY

Le bouton d'effets A spécifie la gamme de fréquences dans laquelle la **clarté** de la voix sera réglée par le **bouton B**. A mesure que vous tournez le **bouton d'effets A** vers la droite, l'effet sera appliqué à une gamme plus large.

B. CLARITY

Règle le niveau d'éclaircissement de la voix. A mesure que vous tournez le **bouton d'effets B** vers la droite, l'effet sera plus marqué. Si vous appliquez cet effet trop fortement à une voix déjà claire, le son deviendra rêche ou distordu.

2. VOCAL ENHANCER

Cet effet renforce ou réduit les composantes d'un son constituant son caractère de base. Vous pouvez l'utiliser pour mettre en valeur ou corriger le caractère d'une voix quand vous enregistrez un dialogue ou une chanson.

A. TONE

En tournant le **bouton d'effets A** vers la droite, vous renforcerez la gamme de fréquences qui contient la plus grande partie de la voix, lui procurant une plus grande richesse. Si par contre vous voulez que le son résonne moins ou soit appauvri, tournez le bouton vers la gauche.

B. CLARITY

Le **bouton d'effets B** renforce la gamme de fréquences qui permet de distinguer une voix. Tournez le bouton vers la droite pour mettre en valeur les respirations et l'expression, ou vers la gauche pour "apprivoiser" une voix rêche.



Sifflements: les bruits obtenus avec des mots comportant des "s" ou des "ch".

3. POWER COMPRESSOR

Cet effet peut renforcer une voix fine manquant de basses, en lui donnant plus de puissance. Il peut également procurer une meilleure cohérence à une voix qui varie en volume, ou donner plus de place à une voix ayant tendance à être obscurcie par d'autres sons.

Si le volume est déjà suffisant et qu'aucun son n'obscurcit la voix, évitez d'appliquer cet effet de façon excessive. Vous risquez d'augmenter le bruit, ou de supprimer les sons forts, ce qui produit un son sourd.

A. BASS

Cet effet renforce ou supprime les fréquences basses de votre voix. En tournant le **bouton d'effets A** vers la droite, vous augmentez l'effet. Vous pouvez vous en servir pour monter les basses d'une voix qui a été enregistrée loin du micro.

B. CLARITY

Cet effet permet de réduire la différence de volume existant entre les sons forts et les sons faibles, ce qui contribue à monter le volume général. En tournant le **bouton d'effets B** vers la droite, les sons seront montés à un certain niveau. Contrairement à une augmentation de volume globale, cet effet évite la distorsion des sons forts.

4. RICH CHORUS

Cet effet ajoute une atmosphère de "chœurs" en ajoutant une modulation de tonalité au son d'origine, ce qui crée une sensation d'espace. Il peut s'utiliser pour produire un effet fantastique où l'on perd la notion d'orientation, ou pour ajouter une impression de chœurs derrière la voix principale.

A. RATE

Règle le taux de modulation. En tournant le **bouton d'effets A** vers la droite, la modulation est plus rapide.

B. CLARITY

Définit la profondeur de la modulation. En tournant le **bouton d'effets B** vers la droite, vous obtenez des changements de tonalité et de volume, ce qui augmente l'effet de modulation.

En général, on règle le taux de modulation sur une vitesse lente ; si vous voulez ajouter du feeling ou un chœur, déplacez la profondeur de modulation légèrement vers la gauche. Augmentez les paramètres pour obtenir un effet plus spacieux et plus étrange.



Si le son en entrée est trop faible, l'effet ne sera pas très discernable. Montez le volume du son en entrée.

5. NOISE REDUCER

Cet effet permet de réduire les sons indésirables que les appareils électroniques génèrent parfois.

Cet effet élimine les bruits dans une gamme de fréquences précise, par exemple les bruits de fréquences plus basses que la voix.

A. HUM CUT

Agit sur la fréquence 50 Hz ou 60 Hz à laquelle se produisent les bruits sourds. Réglez ce paramètre sur la fréquence applicable à votre pays/zone d'habitation.

En tournant le **bouton d'effets A** vers la gauche, la suppression s'appliquera à la fréquence 50 Hz. En tournant le bouton vers la droite, vous sélectionnez 60 Hz. Si vous tournez un peu plus le bouton, l'élimination des bruits indésirables sera renforcée, mais vous risquez d'entendre de la distorsion.

NOISE CUT

Cet effet supprime le bruit de fond présent lorsqu'il n'y a pas de chant. Cette réduction du bruit de fond s'amplifie à mesure que vous tournez le **bouton d'effets B** vers la droite.

Si ce réglage est excessif, le début et la fin des phrases vocales seront coupés de façon artificielle, et les paroles deviendront difficiles à comprendre.

6. RADIO

Cet effet ajoute les caractéristiques d'une transmission radio ondes courtes, donnant l'impression d'une émission de radio ou d'un enregistrement ancien.

A. NOISE LEVEL

Règle le volume du bruit radio. En tournant le **bouton d'effets A** vers la gauche, le volume des parasites radio augmente, comme si la station était mal réglée.

B. CLARITY

Simule le son que vous entendez quand vous balayez une gamme de fréquences radio. Ce balayage simulé est "juste" quand le **bouton d'effets B** se trouve au milieu. En tournant le bouton vers la gauche ou vers la droite, le son simulé se déplace, ce qui durcit le son.

7. ROBOT

Cet effet bloque la fréquence de la voix sur une seule tonalité, donnant une impression robotique. Vous pouvez appliquer cet effet pour donner un caractère mécanique aux voix parlées.

A. PITCH

Robot Voice bloque la tonalité de la voix sur une fréquence donnée. Le **bouton d'effets A** sert à régler la tonalité. En tournant le bouton vers la droite, vous augmentez la tonalité.

B. FORMANT

Les "Formants" représentent les caractéristiques d'une voix qui déterminent son caractère. Le bouton **bouton d'effets B** règle les formants. En tournant le bouton vers la gauche, vous obtenez une voix basse et ample. En le tournant vers la droite, vous obtenez une voix haute, plus fine.

8. MALE

En modifiant la tonalité et les formants de la voix, cet effet transforme une voix féminine en voix masculine.

Cette fonction est pratique lorsque vous voulez par exemple enregistrer un dialogue avec une seule voix. En réglant le **bouton d'équilibre d'effets** vers le milieu, vous pouvez mélanger le son modifié avec le son d'origine, ce qui donne l'impression d'un duo.

En appliquant cet effet à une voix masculine, vous obtenez une voix encore plus basse et plus profonde.

A. PITCH

Règle la variation de tonalité à appliquer. A mesure que vous tournez le **bouton d'effet A** vers la gauche, vous baissez la tonalité de la voix. Si vous tournez le bouton au maximum vers la droite, la voix reste à sa tonalité d'origine.

B. FORMANT

Les "Formants" représentent les caractéristiques d'une voix qui déterminent son caractère. Le bouton **bouton d'effets B** règle les formants. En tournant le bouton vers la gauche, vous obtenez une voix plus profonde. Si vous tournez le bouton au maximum vers la droite, les formants sont calqués sur la voix d'origine.



Si vous exagérez l'effet, le son risque de "craquer" ou d'être distordu.



Il vaut mieux n'appliquer cet effet qu'à une seule voix à la fois. Plus le son de la voix est clair à la source et meilleur sera l'effet. L'effet ne sera pas efficace si la voix source est trop faible, si plusieurs personnes parlent en même temps ou si le bruit ambiant est trop fort.



Formants Il s'agit de gammes de fréquences fixes à l'intérieur desquelles le son de la voix est compris et qui constituent son caractère de base. L'emplacement et la taille des formants dépendent des cordes vocales de chacun et varient donc selon qu'il s'agit d'hommes, de femmes ou d'enfants.



Si vous exagérez l'effet, le son risque de "craquer" ou d'être distordu.



Il vaut mieux n'appliquer cet effet qu'à une seule voix à la fois. Plus le son de la voix est clair à la source et meilleur sera l'effet. L'effet ne sera pas efficace si la voix source est trop faible, si plusieurs personnes parlent en même temps ou si le bruit ambiant est trop fort.

9. FEMALE

En modifiant la tonalité et les formants de la voix, cet effet transforme une voix masculine en voix féminine.

Cette fonction est pratique lorsque vous voulez par exemple enregistrer un dialogue avec une seule voix. En réglant le **bouton d'équilibre d'effets** vers le milieu, vous pouvez mélanger le son modifié avec le son d'origine, ce qui donne l'impression d'un duo.

En appliquant cet effet à une voix féminine, vous obtenez une voix encore plus fine et délicate.

A. PITCH

Règle la variation de tonalité à appliquer. A mesure que vous tournez le **bouton d'effet A** vers la droite, vous montez la tonalité de la voix. Si vous tournez le bouton au maximum vers la gauche, la voix reste à sa tonalité d'origine.

B. FORMANT

Les "Formants" représentent les caractéristiques d'une voix qui déterminent son caractère. Le bouton **bouton d'effets B** règle les formants. En tournant le bouton vers la droite, vous obtenez une voix plus aigue. Si vous tournez le bouton au maximum vers la gauche, les formants sont calqués sur la voix d'origine.

NOTE

Si vous exagérez l'effet, le son risque de "craquer" ou d'être distordu.

NOTE

Il vaut mieux n'appliquer cet effet qu'à une seule voix à la fois. Plus le son de la voix est clair à la source et meilleur sera l'effet. L'effet ne sera pas efficace si la voix source est trop faible, si plusieurs personnes parlent en même temps ou si le bruit ambiant est trop fort.

Nozioni di base

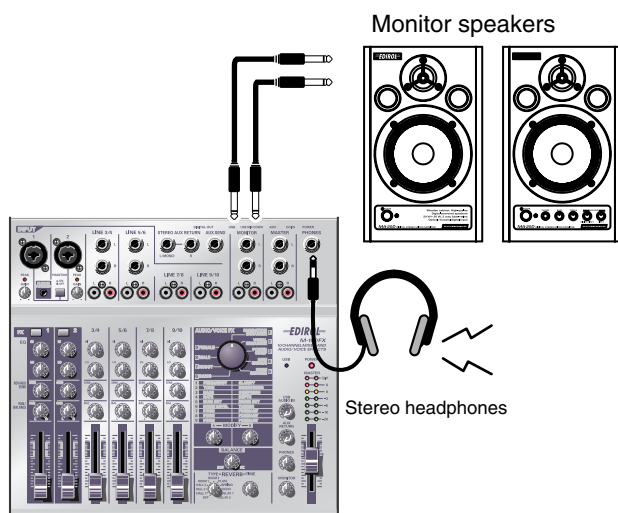
L'M-100FX presenta vari connettori che possono essere collegati a un'ampia gamma di dispositivi. Nella sezione che segue viene spiegato come collegare l'M-100FX a diffusori, microfoni, dispositivi audio o al computer.

- * Per evitare malfunzionamenti e/o danni ai diffusori o ad altri dispositivi, abbassare sempre il volume e accertarsi che tutti gli apparecchi non siano alimentati prima di effettuare i collegamenti.
- * Prima di accendere gli apparecchi, accertarsi che il livello del volume sia al minimo. Si potrebbero sentire comunque dei suoni all'accensione, anche se il volume è al minimo; è normale e non c'è motivo di preoccuparsi.
- * In questa sezione vengono illustrati i dispositivi che possono essere collegati all'M-100FX e le precauzioni da osservare. Per informazioni sulle possibili combinazioni dei dispositivi collegati, fare riferimento alla sezione **Applications** (pag. 105).

Collegare le casse monitor o le cuffie

Collegare innanzitutto i dispositivi che permettono di monitorare il suono.

Collegare le casse monitor o le cuffie in modo da poter sentire i suoni mixati. Collegare le casse monitor alle **prese di controllo dell'uscita**, o le cuffie alla **presa per le cuffie**.

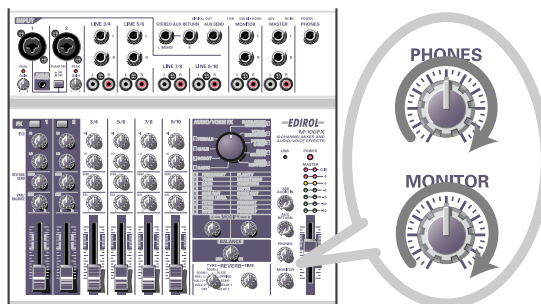


Le prese di controllo dell'uscita sono sia di tipo RCA che mini jack di tipo telefonico. Lo stesso segnale viene trasmesso da entrambi i tipi di connettori. Utilizzare i connettori adatti ai cavi utilizzati con le casse monitor. Se le spine sono inserite sia nelle prese RCA che nelle prese mini jack, il suono verrà trasmesso solo da queste ultime.

- * Prima di collegare le casse monitor o le cuffie, portare la **manopola del volume di controllo (monitor)** o la **manopola del volume delle cuffie** e anche il volume delle casse monitor, completamente al minimo.

Impostazione del volume

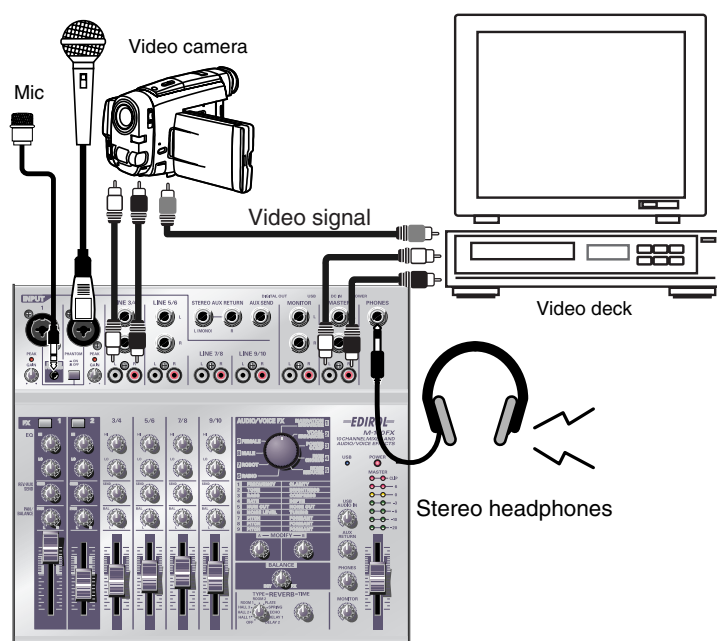
1. Dopo aver collegato le casse monitor, aumentarne opportunamente il volume.
2. Ruotare la manopola del volume di controllo o quella del volume delle cuffie verso destra sull'intensità desiderata.



- Collegamento di un microfono (pag. 71)
- Collegamento degli apparecchi audio (pag. 74)
- Collegamento dell'M-100FX al computer (pag. 76)
- Using the external input/output jacks (AUX)..... (pag. 28)
- Using the digital output jacks (pag. 30)

Collegamento di un microfono

■ Collegamento di un microfono all'ingresso audio



Nelle **prese d'ingresso microfono 1 e 2 (INPUT 1, 2)** si possono inserire microfoni provvisti di spine XLR o di mini jack. Le prese XLR forniscono la necessaria alimentazione phantom ai microfoni condenser. Le prese mini jack accettano collegamenti bilanciati o sbilanciati.

Se si collega un microfono condenser che utilizza l'alimentazione phantom, premere l'**interruttore phantom power**.

- * Il tasto **phantom power** deve rimanere in posizione **off** a meno di non utilizzare un microfono condenser che richiede questo tipo di alimentazione. Si potrebbero verificare dei malfunzionamenti se viene fornita un'alimentazione phantom a un microfono dinamico o a un dispositivo di riproduzione. Per informazioni sulle specifiche tecniche del microfono, consultare il manuale utente fornito insieme al microfono.

(L'alimentazione phantom dell'M-100FX è 48 V cc, 10 mA massimo.)

NOTE

Prima di collegare un microfono, ruotare la **manopola del livello d'ingresso (GAIN)** al minimo per proteggere i circuiti.

HINT

Phantom power

In questo modo è possibile alimentare un microfono condenser o un altro dispositivo simile tramite il cavo del microfono. L'alimentazione phantom integrata fornisce una corrente continua a 48 V. La forma della spina è identica a quella di una normale spina XLR.

Informazioni sui collegamenti bilanciati e sbilanciati



L'**ingresso bilanciato** è un tipo di trasmissione del segnale che utilizza tre conduttori chiamati "caldo (hot)", "freddo (cold)" e "massa (ground)". La spina è suddivisa in tre parti. Le spine utilizzate per i segnali stereo sono suddivise anch'esse in tre sezioni ma sono cablate diversamente. Non confondere questi due tipi di collegamenti. Non è possibile trasmettere i segnali stereo nelle **prese d'ingresso microfono 1 o 2** (INPUT 1, 2).

L'**ingresso sbilanciato** è il metodo seguito normalmente per trasmettere un segnale utilizzando due conduttori: uno per la linea e uno per la massa. La spina è suddivisa in due parti.

Tipi di microfono

I microfoni possono essere suddivisi in microfoni dinamici o condenser. L'M-100FX li accetta entrambi e anche i microfoni monofonici plug-in, ovvero dei microfoni condenser miniaturizzati per essere collegati alla presa microfono di un computer o alla presa di registrazione di un registratore di mini disc.

La presa per il microfono monofonico plug-in accetta sia i microfoni monofonici che quelli stereo. Se nella **presa d'ingresso mic 1** (INPUT 1) è inserita una spina stereo, il canale 1 elabora i segnali destro/sinistro in stereo. Se un microfono monofonico plug-in è inserito e si inserisce un microfono nella presa XLR, il microfono collegato alla presa XLR non trasmetterà alcun suono. Solo il segnale proveniente dal microfono monofonico plug-in verrà inviato al mixer.

Se si utilizza la presa microfono monofonica plug-in, la manopola del livello d'ingresso (GAIN) non avrà alcun effetto sul livello d'ingresso.

NOTE

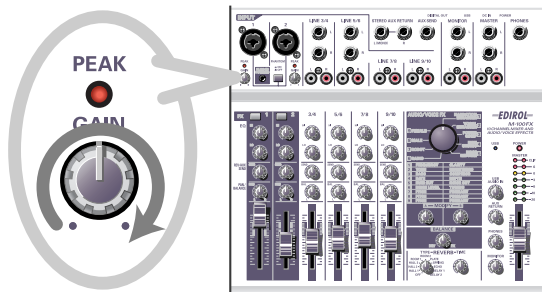
È possibile collegare solo un **microfono monofonico plug-in** alla presa corrispondente. Se in questa presa viene inserito un microfono di tipo diverso, come un microfono provvisto di una normale presa mini stereo, si rischia di danneggiare il circuito.

■ Regolazione del guadagno e del livello (volume)

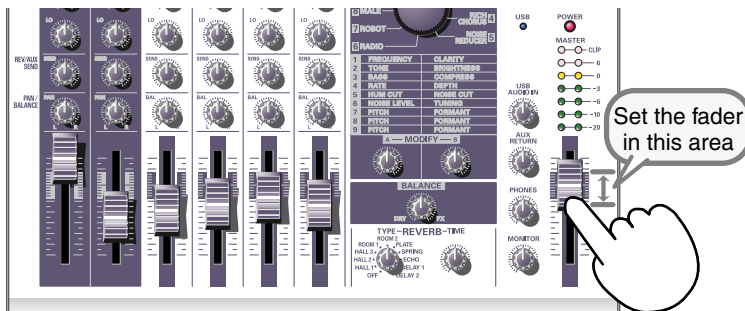
Dopo aver collegato i vari dispositivi, seguire la procedura sotto indicata per regolare opportunamente il volume.

1. Portare la **manopola del livello d'ingresso (GAIN)**, **l'attenuatore di volume master, la manopola del volume di controllo e la manopola del volume delle cuffie sul minimo.**
2. Regolare il guadagno.

Durante l'esecuzione (canto, voce, suono di uno strumento), ruotare la manopola del livello d'ingresso verso destra in corrispondenza del canale al quale è collegato il microfono. Regolare il volume d'ingresso al livello massimo consentito evitando tuttavia che si illumini l'indicatore di picco.



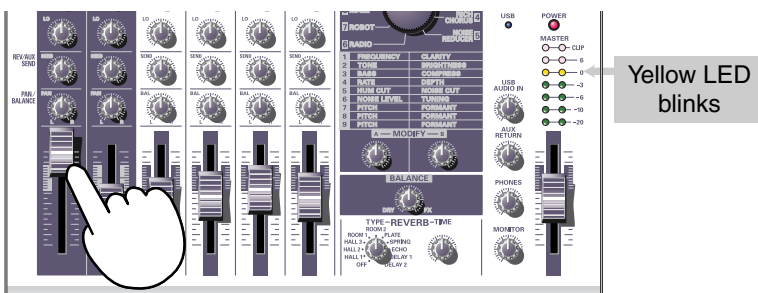
3. Spostare l'**attenuatore di volume master** al centro della zona illustrata nella figura sottostante.



4. Regolare il livello d'ingresso.

Regolare l'**attenuatore del livello d'ingresso** in modo che il LED (0 dB) giallo dell'**indicatore di volume master** si illumini di tanto in tanto.

Se si utilizzano contemporaneamente più microfoni durante la registrazione, aumentare lentamente gli attenuatori del livello d'ingresso di tutti i canali d'ingresso per regolarne i livelli.



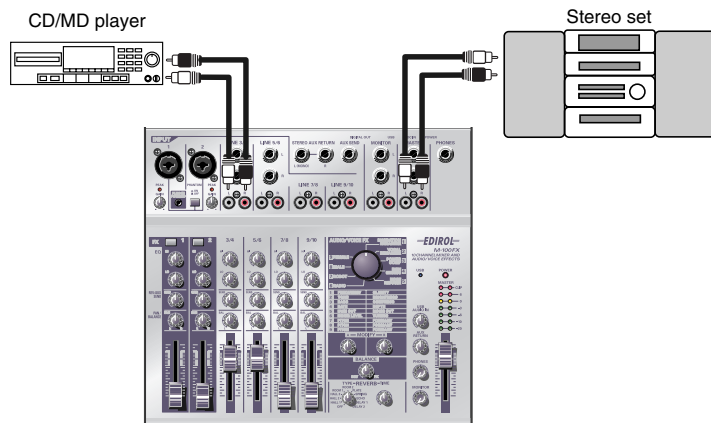
NOTE

L'indicatore di picco si illumina quando il livello del segnale in entrata è troppo alto e rischia quindi di essere distorto. Per una qualità audio ottimale, impostare il livello d'ingresso al massimo, aumentando ad esempio il guadagno al massimo evitando di far illuminare l'indicatore di picco.

Collegamento degli apparecchi audio

Nelle pagine che seguono viene spiegato come collegare i vari apparecchi per cantare mentre si riproduce contemporaneamente un CD.

* Per maggiori informazioni sull'uso di un microfono per registrare la propria voce, fare riferimento alla sezione **Collegamento di un microfono** (pag. 71).



■ Collegamento di uno stereo o di un MD

È possibile collegare alle **prese d'ingresso linea 3/4** (LINE INPUT 3/4) e alle **prese d'ingresso linea 5/6** (LINE INPUT 5/6) dei cavi provvisti di una presa di tipo mini jack o phono RCA. Se si collegano entrambi i tipi di cavi, solo l'audio proveniente dalla presa mini jack verrà inviato al mixer.

■ Collegamento dell'apparecchio di registrazione

Per registrare il segnale mixato, collegare le **uscite master** dell'M-100FX alle prese LINE IN o alle prese di registrazione (REC) del registratore per cassette o MD.

Le **prese d'uscita master** permettono di collegare sia spine mini jack che phono RCA. Il segnale trasmesso da queste prese è lo stesso; servirsi della presa che corrisponde al cavo collegato al registratore o all'apparecchio utilizzato. Se si collegano entrambi i tipi di cavi, solo l'audio proveniente dalla presa mini jack verrà inviato al registratore o all'altro apparecchio.

■ Regolazione del livello d'ingresso (volume)

Dopo aver collegato tutti gli apparecchi, regolare il volume come segue. Impostare gli **attenuatori del livello d'ingresso** e l'**attenuatore di volume master** sul minimo. Se sono collegate delle casse monitor o delle cuffie, ruotare le manopole **del volume di controllo** e del **volume delle cuffie** sul minimo.

MEMO

Gli **ingressi linea 3/4, 5/6, 7/8, 9/10** (LINE INPUT 3/4, 5/6, 7/8, 9/10) presentano praticamente lo stesso tipo di circuito. Possono quindi essere utilizzati liberamente, in base all'ordine degli apparecchi da collegare o alla loro ubicazione.

MEMO

Le prese d'ingresso mini jack e RCA per gli ingressi di linea sono collegate allo stesso circuito all'interno dell'M-100FX. Scegliere il connettore opportuno per il cavo utilizzato.

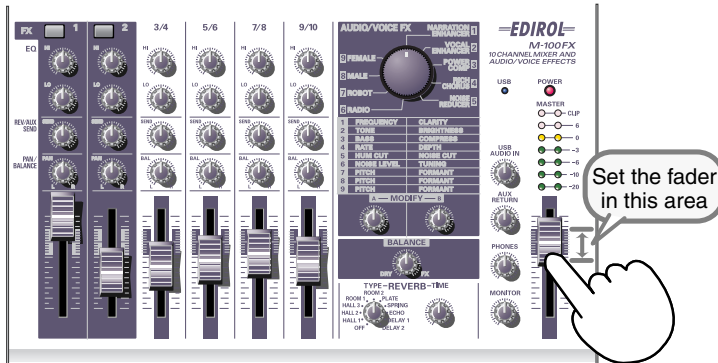
NOTE

Prima di collegare un apparecchio audio alla presa, portare l'**attenuatore di volume master** e l'**attenuatore del livello d'ingresso** sul minimo per evitare danni al circuito.

MEMO

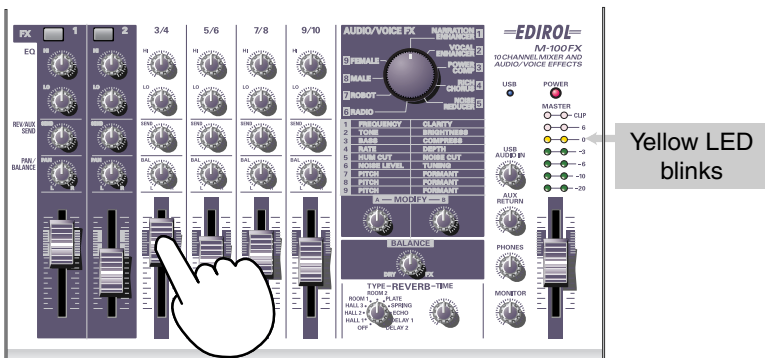
Per maggiori informazioni sul livello d'ingresso del microfono, fare riferimento alla sezione **Collegamento di un microfono** (pag. 71).

1. Impostare l'**attenuatore di volume master** sulla posizione segnalata in nero sul pannello.

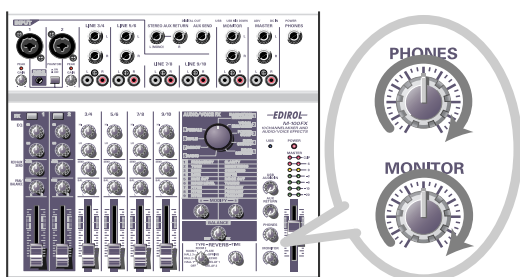


2. Produrre dei suoni utilizzando l'apparecchio collegato alle **prese d'ingresso linea**.

Spostare lentamente l'**attenuatore del livello d'ingresso** per aumentare il livello. Impostare un valore tale che il LED (0 dB) giallo dell'**indicatore di volume master** si illumini di tanto in tanto. Se sono collegati apparecchi diversi a più prese d'ingresso linea per registrarli, aumentare il livello degli attenuatori del livello d'ingresso per ogni ingresso utilizzato e regolarli ai livelli desiderati.



3. Se l'apparecchio di registrazione permette di impostare il livello di registrazione, regolarlo in modo da evitare che l'indicatore di picco dell'apparecchio in questione si illumini oppure in modo da mantenere l'indicatore di livello entro i valori di registrazione opportuni.
4. Dopo aver collegato le casse monitor, aumentarne opportunamente il volume.
5. Ruotare la **manopola del volume di controllo** o la **manopola del volume delle cuffie** sul livello sonoro desiderato.



Collegamento dell'M-100FX al computer

L'M-100FX è provvisto di un connettore USB che permette di collegare il computer. Se l'M-100FX è collegato al computer mediante un cavo USB, è possibile mixare l'audio proveniente dal computer con l'audio inviato all'M-100FX oppure è possibile trasmettere l'audio mixato dall'M-100FX al computer.

I suoni mixati o elaborati dagli effetti dell'M-100FX possono inoltre essere registrati sul computer tramite un software di creazione o di editing musicale per realizzare le proprie creazioni originali.

Cosa si intende per USB?

USB è l'acronimo inglese di Universal Serial Bus, e consiste in un'interfaccia particolare che permette di collegare al computer vari tipi di dispositivi. Un unico cavo USB permette di collegare vari tipi di dispositivi e di trasmettere i dati a grande velocità.

Questo sistema permette inoltre di collegare o scollegare i dispositivi senza dover prima togliere l'alimentazione: il computer rileva automaticamente la periferica collegata. Per alcuni dispositivi potrebbe essere necessario seguire altre procedure o impostare determinati parametri.

Il computer riconosce l'M-100FX come una periferica utilizzata per trasferire segnali audio da e verso il computer.

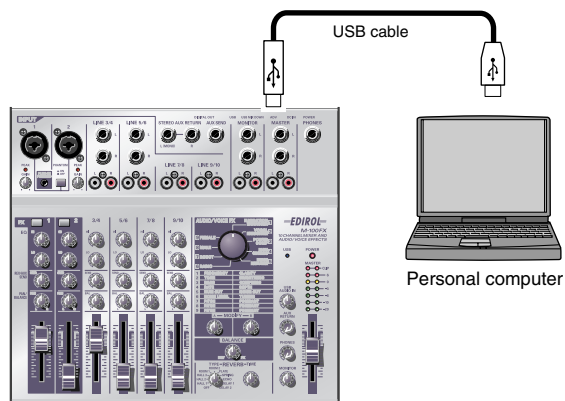
* L'M-100FX supporta la connessione USB Versione 1.1.

Per poter utilizzare l'M-100FX mediante il relativo connettore USB, è necessario installare un driver nel computer. Per maggiori informazioni sull'installazione del driver, fare riferimento alla sezione **Connecting the M-100FX to your computer** (pag. 151).

Installare il driver come descritto nella sezione **Connecting the M-100FX to your computer** (pag. 151).

Per registrare l'audio nel computer, effettuare i collegamenti come illustrato nella figura sottostante.

Collegare il cavo USB al connettore USB sul retro dell'M-100FX. Per maggiori informazioni sul collegamento delle casse monitor o delle cuffie, fare riferimento alla sezione **Collegare le casse monitor o le cuffie** (pag. 70).



NOTE

Se si lavora in ambiente Windows, per trasmettere la riproduzione di un CD audio all'M-100FX mediante la porta USB si dovrà utilizzare Windows Media Player 7 o versioni successive. Se si lavora in ambiente Mac OS9, in modalità Advanced, non sarà possibile trasmettere i dati audio riprodotti dal CD musicale all'M-100FX.

MEMO

Per maggiori informazioni sull'uso di un microfono per registrare la propria voce, fare riferimento alla sezione **Collegamento di un microfono** (pag. 71).

■ Regolazione del livello d'ingresso (volume)

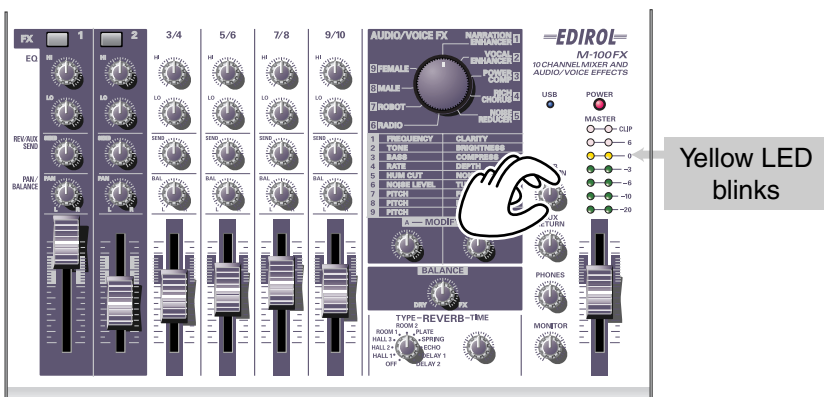
Dopo aver effettuato tutti i collegamenti, regolare il volume come indicato di seguito per la registrazione.

Impostare gli **attenuatori del livello d'ingresso**, l'**attenuatore del volume master** e la **manopola del livello d'ingresso USB** sul minimo. Se sono state collegate delle cuffie, impostare la **manopola del volume delle cuffie** sul minimo.

1. Impostare l'**attenuatore di volume master** a metà della posizione segnalata in nero sul pannello.



2. Durante la riproduzione dell'audio sul computer, ruotare lentamente la **manopola del livello d'ingresso USB** verso destra per aumentare il livello. Impostare un valore tale che il LED (0 dB) giallo dell'**indicatore di volume master** si illumini di tanto in tanto.



Se sono stati collegati diversi apparecchi a più prese d'ingresso linea per registrarli, aumentare il livello degli **attenuatori del livello d'ingresso** di tutti questi canali per regolarne il livello.

3. Per registrare il segnale audio sul computer, configurare il programma per avere il livello di registrazione opportuno. L'**attenuatore di volume master** regola il volume dell'audio trasmesso dal connettore USB dell'M-100FX al computer.

MEMO

Per maggiori informazioni sul livello d'ingresso del microfono, fare riferimento alla sezione **Collegamento di un microfono** (pag. 71).

MEMO

Se si stanno registrando i dati audio sul computer, si consiglia di prendere nota della posizione della **manopola del livello d'ingresso USB**. Potrebbe infatti essere necessario diminuire il valore della **manopola del livello d'ingresso USB** durante la registrazione.

- * A seconda del programma di registrazione utilizzato, potrebbe succedere che l'input da registrare venga rinviato direttamente all'uscita audio USB. In questo caso, nell'ingresso audio USB dell'M-100FX si verifica un loop con conseguente produzione di stridii o suoni distorti. Per evitare questo problema, configurare il software in modo da impedire l'output verso la porta USB oppure ruotare la **manopola del livello d'ingresso USB** dell'M-100FX completamente a sinistra (posizione 0).*
- * L'attenuatore di volume master controlla il volume dell'output digitale e il volume del segnale mixato e inviato alla porta USB. Per regolare il volume delle casse monitor indipendentemente dal livello di registrazione, collegare le casse monitor alle **prese di controllo dell'uscita** dell'M-100FX (analogiche) e regolare il volume con la **manopola di controllo dell'uscita** e regolare il volume.*

Effetti audio e voce

Descrizione degli effetti audio/voce

È possibile applicare **effetti audio/voce** alle **prese d'ingresso microfono 1 e 2 (CH 1, 2)**. Questi effetti si basano su un processore dei segnali digitali interno (DSP) che elabora il suono proveniente dal microfono in vari modi, enfatizzando, ad esempio, le basse frequenze, rendendo il suono più chiaro oppure cambiando il tono.

Applicazione degli effetti

Per maggiori informazioni sui microfoni o altri dispositivi, fare riferimento alle spiegazioni nella sezione **Nozioni di base** (pag. 70).

- 1.** Per attivare il canale cui è collegato il microfono, premere l'**interruttore effetti**. Diventerà rosso.
- 2.** Utilizzare la **manopola di selezione degli effetti audio/voce** per selezionare un effetto.
- 3.** Utilizzare le **manopole A/B di modifica degli effetti** per configurare i parametri dell'effetto.
- 4.** Utilizzare la **manopola di bilanciamento degli effetti** per regolare la profondità dell'effetto o la proporzione tra il suono originale e quello elaborato.

* Fare riferimento inoltre alla sezione **Effect applications** (pag. 113).

Tipi di effetti

1	NARRATION ENHANCER	Rende più chiaro il racconto o l'annuncio. Toglie i rumori indesiderati.	A	FREQUENCY	(pag. 81)
	B		CLARITY		
2	VOCAL ENHANCER	Regola il tono della voce rendendolo più squillante e ampio. Al contrario è possibile rendere il tono più pacato.	A	TONE	(pag. 81)
	B		BRIGHTNESS		
3	POWER COMPRESSOR	Rende più marcata la fascia delle basse frequenze della voce. Da utilizzare anche per dare enfasi a una voce che tende ad essere coperta da altri suoni.	A	BASS	(pag. 82)
	B		COMPRESS		
4	RICH CHORUS	Conferisce ampiezza e profondità ai suoni. Aumentando il livello della manopola del bilanciamento si aggiunge modulazione per dare	A	RATE	(pag. 82)
	B		DEPTH		
5	NOISE REDUCER	Riduce il ronzio elettronico e il sibilo.	A	HUM CUT	(pag. 83)
	B		NOISE CUT		
6	RADIO	Simula il rumore riprodotto spesso da una radio o da una registrazione analogica dando l'impressione di ascoltare una vecchia registrazione.	A	NOISE LEVEL	(pag. 83)
	B		TUNING		
7	ROBOT	Rende il suono "robotico" mantenendo praticamente sempre lo stesso tono.	A	PITCH	(pag. 84)
	B		FORMANT		
8	MALE	Trasforma una voce femminile in una voce maschile.	A	PITCH	(pag. 84)
	B		FORMANT		
9	FEMALE	Trasforma una voce maschile in una voce femminile.	A	PITCH	(pag. 85)
	B		FORMANT		

■ Parametri degli effetti

1. NARRATION ENHANCER

Questo effetto rende la voce più chiara. Riduce inoltre il sibilo proveniente dal microfono facilitando quindi l'ascolto. Consigliato quando si desidera inserire una voce narrante al video durante il montaggio.

A. FREQUENCY

La manopola A degli effetti permette di impostare la gamma di frequenze all'interno della quale la **chiarezza** della voce verrà modificata con la **manopola B**. Ruotare la **manopola A degli effetti** verso destra per applicare l'effetto a una fascia più ampia.

B. CLARITY

Permette di specificare di quanto verrà schiarita la voce. Ruotare la **manopola B degli effetti** verso destra per applicare un effetto più marcato. Se questo effetto viene applicato in modo eccessivo a una voce già di per sé chiara, il suono risultante rischia di essere distorto o duro.

2. VOCAL ENHANCER

Questo effetto enfatizza o riduce le componenti che caratterizzano un suono. Consigliato per enfatizzare o correggere le caratteristiche di base di una voce quando si registra un dialogo o una canzone.

A. TONE

Ruotare la **manopola A degli effetti** verso destra per dare ampiezza alla fascia delle frequenze contenente la componente fondamentale della voce e conferirle quindi maggiore espressività. Per avere un suono meno ampio e ricco, ruotare la manopola verso sinistra.

B. BRIGHTNESS

La **manopola B degli effetti** enfatizza la fascia delle frequenze che caratterizza una voce. Ruotare la manopola verso destra per dare maggiore risalto al respiro e all'espressione, o verso sinistra per addolcire una voce tendenzialmente dura.



Sibilant (sibilante): rumore che potrebbe verificarsi quando si pronunciano parole contenenti i suoni “s” o “sci/sce”.

3. POWER COMPRESSOR

Questo effetto permette di dare più corpo a una voce sottile, caratterizzata da una fascia limitata di basse frequenze. Permette inoltre di rendere più costante una voce che presenta grandi variazioni di volume o di far risaltare una voce che tende ad essere coperta da altri suoni.

Se il volume è sufficiente e non esistono altri suoni che nascondono la voce, cercare di applicare questo effetto con parsimonia. In effetti, se applicato in modo eccessivo, questo effetto rischia di aumentare il rumore o di eliminare i suoni forti e di smorzare il suono.

A. BASS

Questo effetto enfatizza o elimina la fascia delle basse frequenze della voce. Ruotare la **manopola A degli effetti** verso destra per dare maggiore enfasi. Consigliato per aumentare le basse frequenze di una voce che è stata registrata lontano dal microfono.

B. COMPRESS

Riduce le differenze di volume tra i suoni alti e bassi aumentando il volume generale. Ruotare la **manopola B degli effetti** verso destra per portare i suoni a un livello più alto. Rispetto a un semplice aumento del volume, questo effetto evita la distorsione dei suoni alti.

4. RICH CHORUS

Crea un effetto "chorus" grazie all'aggiunta di un suono con un tono modulato al suono d'origine per dare la sensazione dello spazio. Consigliato per creare effetti immaginari, senza una direzione ben definita, o per aggiungere l'impressione di un coro in sottofondo.

A. RATE

Regola la velocità della modulazione. Ruotare la **manopola A degli effetti** verso destra per una modulazione più rapida.

B. DEPTH

Regola la profondità della modulazione. Ruotare la **manopola B degli effetti** verso destra per modificare maggiormente il tono e il volume e avere un effetto di modulazione più pronunciato.

Generalmente è possibile impostare la velocità di modulazione a una velocità piuttosto ridotta; se si desidera dare l'impressione di un coro di sottofondo, impostare la velocità di modulazione su un valore leggermente a destra dal centro. Per creare un effetto immaginario, di spazio, impostare una maggiore profondità.



Se il volume del suono in entrata è troppo basso, l'effetto sarà limitato. Aumentare il volume del suono da registrare.

5. NOISE REDUCER

Questo effetto riduce il rumore sibilante e il ronzio prodotti a volte dagli apparecchi elettronici.

Consigliato per togliere dei rumori che si manifestano a determinate frequenze o che si verificano a frequenze inferiori rispetto a quelle vocali.

A. HUM CUT

Seleziona 50 Hz o 60 Hz come frequenza del ronzio da togliere. Selezionare la frequenza corrispondente all'alimentazione utilizzata.

Ruotare la **manopola A degli effetti** a sinistra rispetto al centro per togliere il ronzio a 50 Hz. Ruotare la manopola a destra rispetto al centro per togliere il ronzio a 60 Hz. Più la manopola viene allontanata dal centro, più il ronzio viene eliminato in profondità con tuttavia conseguenze sul tono del segnale audio ed eventualmente anche altri effetti indesiderati, come la distorsione.

B. NOISE CUT

Elimina il rumore di sottofondo che si sente in assenza del parlato.

L'eliminazione del rumore sarà maggiore quanto più la **manopola B degli effetti** viene spostata verso destra.

Se l'impostazione è eccessiva, l'inizio e la fine delle frasi risulteranno tagliate in modo innaturale risultando in eventuali difficoltà di comprensione.

6. RADIO

Questo effetto aggiunge alla voce i rumori tipici di una radio AM per dare l'impressione di una trasmissione radiofonica o di una vecchia registrazione.

A. NOISE LEVEL

Regola il volume del disturbo radiofonico AM. Ruotare la **manopola A degli effetti** verso sinistra per aumentare il volume dei disturbi prodotti quando la radio non è ben sintonizzata.

B. TUNING

Simula i suoni della sintonizzazione di una radio. La sintonizzazione simulata sarà "corretta" quando la **manopola B degli effetti** si trova in posizione centrale. Ruotare la manopola verso destra o sinistra per simulare il cambio di canale e avere quindi un suono disturbato.

7. ROBOT

Questo effetto blocca la frequenza della voce su un unico tono dando quindi l'impressione della voce di un robot. Consigliato per dare una nota meccanica al parlato.

A. PITCH

Con l'effetto Robot il tono della voce viene bloccato su una determinata frequenza. La **manopola A degli effetti** imposta il livello del tono. Ruotare la manopola verso destra per aumentare il valore di questo tono.

B. FORMANT

Con "formanti" si intendono le impronte sonore che caratterizzano una voce. La **manopola B degli effetti** regola le formanti. Ruotare la manopola verso sinistra per avere una voce bassa e grave (come se le corde vocali fossero più grandi); ruotarla invece verso destra per avere una voce alta e acuta (come se le corde vocali fossero più piccole).

8. MALE

Modificando il tono e le formanti della voce, questo effetto trasforma una voce femminile in una voce maschile.

Consigliato per la registrazione di dialoghi o di presentazioni. Posizionare la **manopola di bilanciamento degli effetti** verso il centro per mixare il suono modificato con quello originale e dare quindi l'impressione di un duetto.

Applicando questo effetto a una voce maschile si può creare una voce ancora più profonda e grave.

A. PITCH

Determina di quanto verrà modificato il tono. Ruotare la **manopola A degli effetti** verso sinistra per abbassare il tono della voce. Ruotare la manopola completamente verso destra per riportare la voce al tono originale.

B. FORMANT

Con "formanti" si intendono le impronte sonore che caratterizzano una voce. La **manopola B degli effetti** regola le formanti. Ruotare la manopola verso sinistra per avere una voce più profonda (come se le corde vocali fossero più grandi). Ruotare la manopola completamente verso destra per riportare le formanti allo stato della voce d'origine.



Se questo effetto viene applicato in modo eccessivo, il suono risulterà incrinato o distorto.



Si dovrebbe applicare sulla voce di una sola persona. Più la voce originale è chiara, migliore sarà l'effetto. Il risultato non sarà soddisfacente se la voce è troppo morbida o se più persone parlano contemporaneamente o se il rumore di fondo è eccessivo.



Formanti Si tratta di determinate fasce di frequenze all'interno delle quali il suono della voce viene enfatizzato e quindi caratterizzato. La posizione e le dimensioni delle formanti dipendono dalla grandezza delle corde vocali e cambiano tra uomo e donna, adulto e bambino.



Se questo effetto viene applicato in modo eccessivo, il suono risulterà incrinato o distorto.



Si dovrebbe applicare sulla voce di una sola persona. Più la voce originale è chiara, migliore sarà l'effetto. Il risultato non sarà soddisfacente se la voce è troppo morbida o se più persone parlano contemporaneamente o se il rumore di fondo è eccessivo.

9. FEMALE

Modificando il tono e le formanti della voce, questo effetto trasforma una voce maschile in una voce femminile.

Consigliato per la registrazione di dialoghi o di presentazioni. Posizionare la **manopola di bilanciamento degli effetti** verso il centro per mixare il suono modificato con quello originale e dare quindi l'impressione di un duetto.

Applicando questo effetto a una voce femminile si può creare una voce ancora più acuta e delicata.

A. PITCH

Determina di quanto verrà modificato il tono. Ruotare la **manopola A degli effetti** verso destra per aumentare il tono della voce. Ruotare la manopola completamente verso sinistra per riportare la voce al tono originale.

B. FORMANT

Con "formanti" si intendono le impronte sonore che caratterizzano una voce. La **manopola B degli effetti** regola le formanti. Ruotare la manopola verso destra per avere una voce più acuta (come se le corde vocali fossero più piccole). Ruotare la manopola completamente verso sinistra per riportare le formanti allo stato della voce d'origine.

NOTE

Se questo effetto viene applicato in modo eccessivo, il suono risulterà incrinato o distorto.

NOTE

Si dovrebbe applicare sulla voce di una sola persona. Più la voce originale è chiara, migliore sarà l'effetto. Il risultato non sarà soddisfacente se la voce è troppo morbida o se più persone parlano contemporaneamente o se il rumore di fondo è eccessivo.

Funcionamiento básico

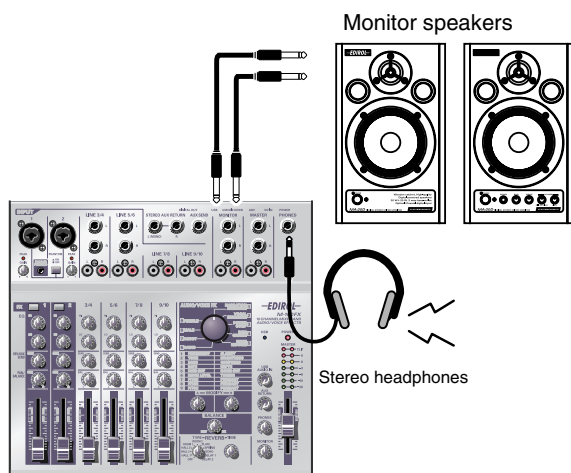
El M-100FX ofrece numerosos conectores que pueden conectarse a una gran variedad de dispositivos. En esta sección, se explica cómo conectar el M-100FX a altavoces, micrófonos, dispositivos de audio o un ordenador.

- * Para evitar anomalías en el funcionamiento o daños en los altavoces u otros dispositivos, baje siempre el volumen al mínimo y apague todos los dispositivos antes de realizar cualquier conexión.
- * Asegúrese siempre de tener bajado el volumen antes de encender la unidad. Aunque tenga el volumen completamente bajado, puede oír algún sonido al encender la unidad pero esto es algo normal y no es indicio de un mal funcionamiento de la misma.
- * En esta sección, se describen los dispositivos que pueden conectarse al M-100FX y las precauciones que debe tomar para ello. Para obtener información detallada sobre cómo utilizar las múltiples combinaciones de conexiones de dispositivos, consulte el apartado **Applications** (pág. 105).

Conexión de monitores o auriculares

Primero debe conectar el equipo de emisión de sonido.

Conecte los monitores o auriculares para oír el sonido que esté mezclando. Conecte los monitores a los **jacks de salida de monitor**, o los auriculares al **jack de auriculares**.

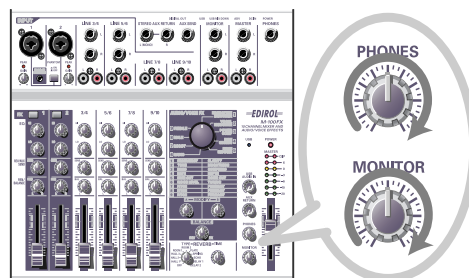


Los jacks de salida de monitor ofrecen tanto conectores de audio convencionales como conectores de audio RCA. La señal de salida es la misma para ambos tipos de conector. Utilice los conectores adecuados para los cables de los monitores. Si se conectan clavijas en los jacks de audio convencionales y en los RCA a la vez, sólo se emitirá sonido por los jacks convencionales.

- * Antes de conectar los monitores o los auriculares, gire el **control de volumen de los monitores** o el **control de volumen de los auriculares**, así como el de volumen de los monitores hasta la mínima posición.

■ Ajuste del volumen

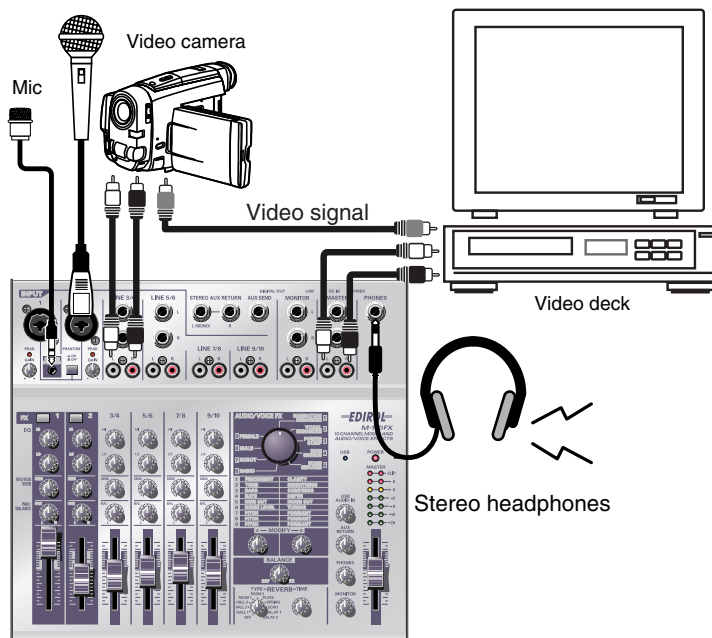
1. Una vez conectados los monitores, suba el volumen hasta un nivel adecuado.
2. Gire el control de volumen de los monitores o los auriculares hacia la derecha hasta establecer el volumen deseado.



- Conexión de un micrófono (pág. 87)
- Conexión de dispositivos de audio (pág. 90)
- Conexión del M-100FX a un ordenador (pág. 92)
- Using the external input/output jacks (AUX)..... (pág. 28)
- Using the digital output jacks (pág. 30)

Conexión de un micrófono

■ Conexión de un micrófono para entrar sonido



Los **jacks de entrada de micrófono** (INPUT 1, 2) permiten la conexión de cables de micrófono con clavijas XLR o clavijas de jack convencionales. Los jacks XLR disponen de una alimentación virtual (fantasma) para los micrófonos electrostáticos que lo necesiten. Los jacks de audio permiten conexiones tanto con balance como sin balance.

Si utiliza un micrófono electrostático que necesite alimentación virtual, active el **interruptor de alimentación virtual**.

- * Debe tener la **alimentación virtual desactivada** siempre que no utilice un micrófono electrostático que la exija. Se producirán anomalías en el funcionamiento si se suministra alimentación virtual a un micrófono dinámico o a un dispositivo de reproducción de audio. Para obtener información detallada sobre las características de su micrófono, consulte el manual del usuario específico del micrófono.

(El suministro de alimentación virtual del M-100FX es de 48 V de CC, 10 mA como máximo.)



Antes de conectar un micrófono, gire el **control de nivel de entrada (GAIN)** hasta la mínima posición para proteger los circuitos.



Alimentación virtual

Es un método de suministro de alimentación para micrófonos electrostáticos o dispositivos similares que se realiza a través del cable del micrófono. La fuente de alimentación virtual incorporada proporciona 48 V de corriente continua. La forma de la clavija es idéntica a la de las clavijas XLR convencionales.

Acerca de las conexiones con balance y sin balance



La **entrada con balance** es un método de transmisión de señal en el que se utilizan tres conductores, denominados “base”, “neutro” y “tierra”. El conector está dividido en tres secciones. Las clavijas que se utilizan para señales estéreo también están divididas en estas tres secciones, pero el cableado es diferente. No mezcle estos dos tipos de conexión. No pueden entrar señales estéreo en los **jacks 1 o jack 2 de entrada de micrófono (INPUT 1, 2)**.

La **entrada sin balance** es el método habitual de transmisión de señales mediante dos conductores, una línea de señal y un a toma de tierra. El conector está dividido en dos secciones.

Tipos de micrófonos

Generalmente, los micrófonos se clasifican en micrófonos dinámicos y micrófonos electrostáticos. El M-100FX permite utilizar ambos tipos, así como “micrófonos alimentados por el cable de conexión”, los micrófonos electrostáticos miniatura diseñados especialmente para conectarlos al jack de entrada de micrófono de un ordenador o al jack de grabación de una grabadora MD (Mini Disc).

El jack de micrófono alimentado por el cable de conexión permite la entrada tanto de micrófonos monoaurales como estéreo. Si se conecta una clavija estéreo al **jack de entrada de micrófono 1 (INPUT 1)**, el canal 1 procesará las señales derecha/izquierda en estéreo. Si ya hay un micrófono alimentado por cable de conexión conectado y conecta otro micrófono en el jack XLR, no se emitirá ninguna señal de audio del micrófono conectado al jack XLR. Sólo se transferirá al mezclador la señal del micrófono alimentado por cable de conexión.

Si utiliza el jack de micrófono alimentado por cable de alimentación, no podrá ajustar el nivel de entrada mediante el control de nivel de entrada (GAIN).

NOTE

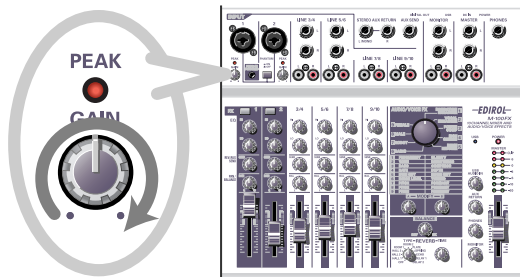
El jack de micrófono alimentado por cable de conexión sólo permite la conexión de un **micrófono alimentado por cable de conexión**. Si conecta otro tipo de micrófono en este jack, como un micro con una clavija de salida mini estéreo convencional, puede dañar los circuitos.

■ Ajuste de la ganancia y el nivel (volumen)

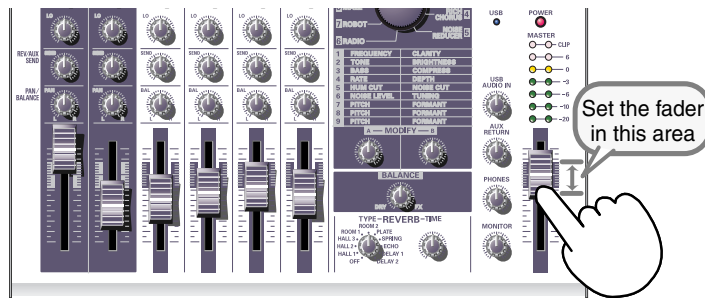
Una vez realizadas las conexiones, siga este procedimiento para ajustar el volumen adecuadamente.

1. Disponga el **control de nivel de entrada (GAIN)**, el **atenuador de volumen global (master)**, el **control de volumen de los monitores** y el **control de volumen de los auriculares** en la mínima posición.
2. Ajuste la ganancia.

Al mismo tiempo que habla, canta o utiliza el micrófono de algún modo, gire el control de nivel de entrada hacia la derecha en el canal donde haya conectado el micrófono. Disponga el volumen de entrada lo más fuerte posible sin que se encienda el indicador de pico.



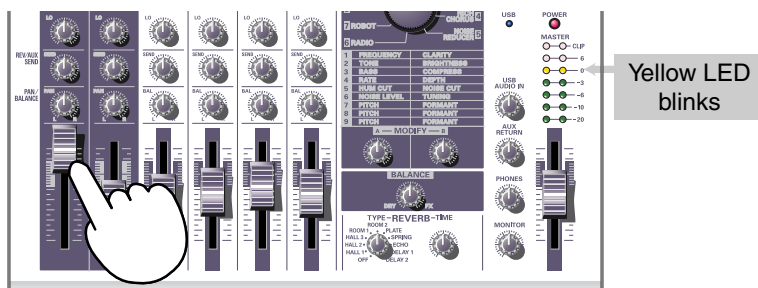
3. Disponga el **atenuador de volumen global** en el centro del área que se muestra en la siguiente ilustración del panel.



4. Ajuste el nivel de entrada.

Ajuste el **atenuador de nivel de entrada** de manera que el LED amarillo (0 dB) del **indicador de volumen global** se encienda de vez en cuando.

Si está grabando con más de un micrófono simultáneamente, suba lentamente los atenuadores de nivel de entrada de todos los canales ocupados para ajustar sus volúmenes.



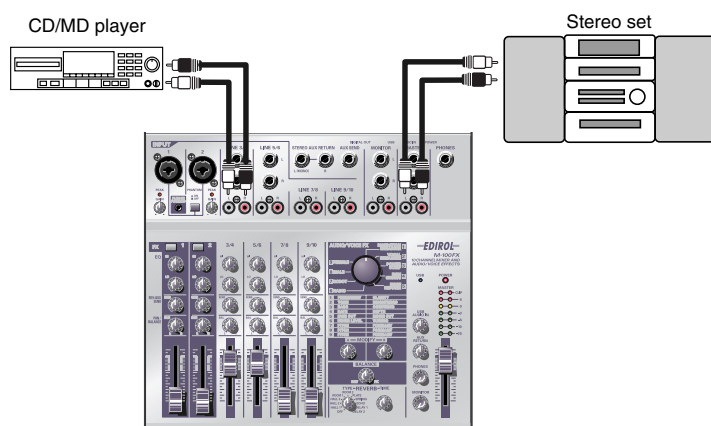
NOTE

El indicador de pico se enciende cuando el nivel de la señal de entrada (volumen) es excesivo e indica que la señal de entrada distorsiona. Para obtener la mejor calidad de audio, debe establecer el nivel de entrada lo más fuerte posible. Para ello, suba la ganancia lo máximo posible sin que se encienda el indicador de pico.

Conexión de dispositivos de audio

A continuación, se describe cómo debe establecer las conexiones para cantar al ritmo de un CD.

* Para obtener información detallada sobre la conexión de un micrófono para que transfiera su voz como señal de entrada (grabación), consulte el apartado **Conexión de un micrófono** (pág. 87).



■ Conexión de un equipo estéreo o MD

Las clavijas de los cables que conecte a los **jacks de entrada de línea 3/4** (LINE INPUT 3/4) y a los **jacks de entrada de línea 5/6** (LINE INPUT 5/6) pueden ser clavijas de audio convencionales o RCA. Si conecta ambos tipos simultáneamente, sólo se transferirá la señal de la conexión de la clavija convencional al mezclador.

■ Conexión del dispositivo de grabación

Para grabar la señal de la mezcla, conecte los **jacks de salida globales** del M-100FX en el conector LINE IN o los jacks de grabación (REC) de su grabadora de cintas o Mini Disc.

Los **jacks de salida globales** incluyen tanto jacks de audio convencionales como RCA. Ambos tipos emiten la misma señal de salida. Utilice el tipo de jack apropiado para el cable conectado a la grabadora o a otro dispositivo de grabación que utilice. Si conecta ambos tipos simultáneamente, sólo se transferirá la señal de la conexión de la clavija convencional a la grabadora o los otros dispositivos.

■ Ajuste del nivel de entrada (volumen)

Una vez haya establecido las conexiones, ajuste el volumen de la siguiente manera.

Disponga los **atenuadores de nivel de entrada** y el **atenuador de volumen global** en la mínima posición. Si ha conectado monitores o auriculares, gire el **control de volumen de los monitores** y el **control de volumen de los auriculares** hasta la mínima posición.



Todas las **entradas de línea 3/4, 5/6, 7/8, 9/10** (LINE INPUT 3/4, 5/6, 7/8, 9/10) tienen el mismo circuito. Utilícelas como desee, en función del orden de los dispositivos conectados o la ubicación de los mismos.



Los jacks de entrada convencionales y RCA para la entrada de señales están conectados al mismo circuito dentro del M-100FX. Utilice el conector apropiado para su cable.

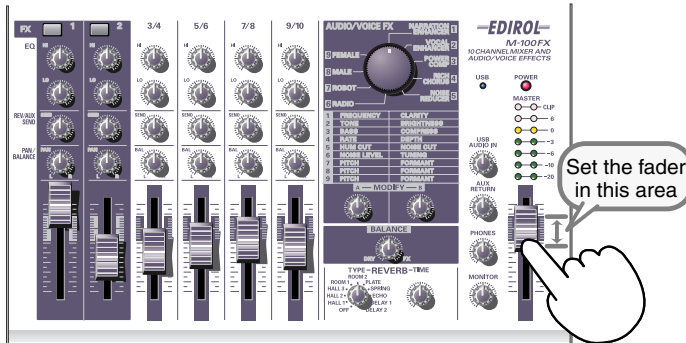


Antes de conectar un dispositivo de audio en un jack, gire el **atenuador de volumen global** y el **atenuador de nivel de entrada** hasta la mínima posición para proteger los circuitos.



Para obtener más información sobre el ajuste del nivel de entrada de un micrófono, consulte el apartado **Conexión de un micrófono** (pág. 87).

1. Disponga el **atenuador de volumen global** en la posición indicada por la marca negra del panel.

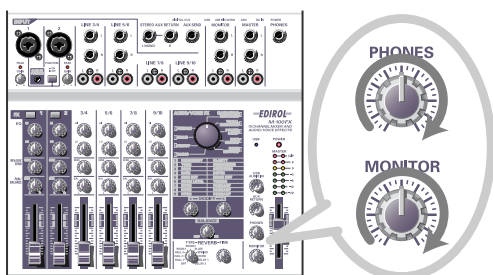


2. Emita audio desde el dispositivo conectado a los **jacks de entrada de línea**.

Suba lentamente el **atenuador de nivel de entrada** para aumentar el volumen. Ajuste el volumen de manera que el indicador amarillo (0 dB) del **indicador de volumen global** se encienda de vez en cuando. Si ha conectado dispositivos en más de un jack de entrada de línea (canal) y desea grabarlos, suba los atenuadores de nivel de entrada de cada uno de los canales de entrada en uso y ajústelos según sus preferencias.



3. Si el dispositivo de grabación le permite ajustar el nivel de grabación, ajuste el nivel de manera que no se encienda el indicador de pico del dispositivo de grabación o de manera que el medidor de nivel permanezca en el nivel de grabación adecuado.
4. Si ha conectado monitores, suba el volumen de los monitores hasta alcanzar un nivel apropiado.
5. Gire el **control de volumen de los monitores** o el **control de volumen de los auriculares** para establecer el volumen deseado.



Conexión del M-100FX a un ordenador

El M-100FX dispone de un conector USB que le permite conectarlo a un ordenador personal. Si conecta el M-100FX al ordenador mediante un cable USB, puede mezclar la salida de señal de audio (sonido) del ordenador con las señales de audio que se están mezclando en el M-100FX. También puede transferir las señales mezcladas (sonidos) por el M-100FX al ordenador.

El sonido mezclado o procesado por los efectos del M-100FX también puede grabarse en software de producción o de edición de ondas musicales en el ordenador para crear sus propios datos de audio.

¿Qué es USB?

USB significa Universal Serial Bus (Bus de Serie Universal) y es una interfaz que permite conectar varios tipos de dispositivos periféricos en un ordenador. Con un solo cable USB se pueden conectar muchos tipos diferentes de dispositivos y transmitir datos a alta velocidad.

También puede conectar o desconectar dispositivos periféricos sin tener que cortar la alimentación; su ordenador detectará automáticamente el dispositivo que haya conectado. Puede que algunos dispositivos exijan cierta configuración u otros procedimientos.

Su ordenador detectará el M-100FX como dispositivo utilizado para la transferencia de señales de audio hacia y desde el ordenador.

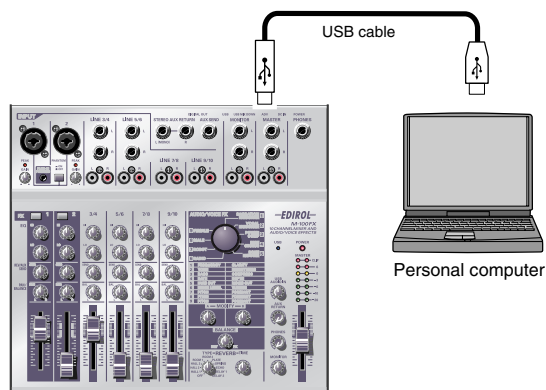
* El M-100FX soporta el USB Versión 1.1.

Para utilizar el M-100FX a través de su conector USB, debe instalar un controlador en su ordenador. Para obtener más información sobre la instalación del controlador, consulte el apartado **Connecting the M-100FX to your computer** (pág. 157).

Instale el controlador como se explica en el apartado **Connecting the M-100FX to your computer** (pág. 157).

Para grabar audio en el ordenador, establezca las conexiones como se muestra en el diagrama de abajo.

Conecte el cable USB al conector USB de la parte trasera del M-100FX. Para obtener más información sobre cómo conectar monitores o auriculares, consulte el apartado **Conexión de monitores o auriculares** (pág. 86).



NOTE

Si utiliza Windows y desea enviar la reproducción de un CD de audio al M-100FX vía USB, deberá servirse de Windows Media Player 7 o posterior. Si utiliza el modo Advanced de Mac OS9, no podrá enviar el audio de la reproducción de un CD de música al M-100FX.

MEMO

Para obtener información detallada sobre cómo conectar un micrófono para que transfiera su voz como señal de entrada, consulte el apartado **Conexión de un micrófono** (pág. 87).

■ Ajuste del nivel de entrada (volumen)

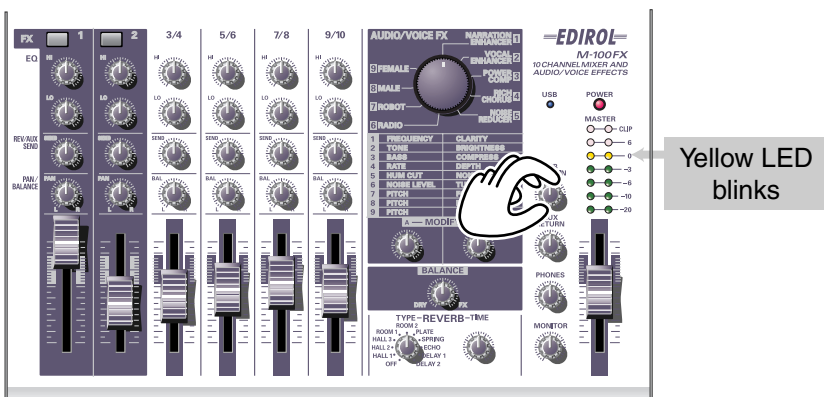
Una vez establecidas las conexiones, debe ajustar adecuadamente el volumen de grabación de la siguiente manera.

Disponga los **atenuadores de nivel de entrada**, el **atenuador de volumen global** y el **control de nivel de entrada USB** en la mínima posición. Si tiene auriculares conectados, disponga el **control de volumen de los auriculares** en la mínima posición.

1. Disponga el **atenuador de volumen global** en medio del área que aparece en negro en el panel.



2. Al mismo tiempo que reproduce audio en el ordenador, gire lentamente el **control de nivel USB** hacia la derecha para aumentar el nivel. Ajuste el volumen de manera que el LED amarillo (0 dB) del **indicador de volumen global** se encienda de vez en cuando.



Si tiene dispositivos conectados en más de un jack de entrada de línea (canal) y también desea grabarlos, suba los **atenuadores de nivel de entrada** de todos los canales que desee grabar para ajustar su nivel.

MEMO

Para obtener más información sobre el ajuste del nivel de entrada de un micrófono, consulte el apartado **Conexión de un micrófono** (pág. 87).

MEMO

Si entra (graba) audio en el ordenador, es útil anotarse la posición del **control de nivel USB**. Puede que tenga que disminuir el nivel de entrada girando hacia la izquierda el **control de nivel de entrada USB** mientras graba.

Funcionamiento básico

- 3.** Si graba la señal de audio en el ordenador, realice los ajustes necesarios en el software para que el nivel de grabación sea adecuado.

El **atenuador de volumen global** ajusta el volumen del audio que se envía del conector USB del M-100FX al ordenador.

- * *En función del software de grabación, puede que la señal de entrada para la grabación se reenvíe directamente a la salida de audio USB. En ese caso, se producirá un bucle de feedback con la entrada de audio USB del M-100FX, lo que puede ser causa de chirridos y distorsiones. Para evitarlo, puede configurar el software de grabación de manera que pare la salida a USB, o girar el **control de nivel de entrada USB** del M-100FX hasta el tope izquierdo (posición 0).*
- * *El atenuador de volumen global controla el volumen de la salida digital y el nivel (volumen) en el que se envía la señal de la mezcla a USB. Para ajustar el volumen de los monitores independientemente del nivel de grabación, conecte los monitores a los **jacks de salida de monitor** (analógicos) del M-100FX y utilice el **control de salida de los monitores** para ajustar el volumen.*

Efectos de audio/voz

¿Qué son los efectos de audio/voz?

Puede aplicar **efectos de audio/voz** a los **jacks de entrada de micrófono 1 y 2 (canales CH1, 2)**. Estos efectos disponen de un procesador de señal digital interno (DSP) para procesar el sonido del micrófono o los micrófonos de varias maneras, como potenciar el rango de frecuencias bajas, dar al sonido más claridad o cambiar el tono.

Cómo aplicar los efectos

Para obtener información detallada sobre cómo conectar micrófonos u otros dispositivos, consulte las explicaciones del apartado **Funcionamiento básico** (pág. 86).

- 1.** En el canal en el que esté conectado el micrófono, presione el **interruptor de efectos** para activarlo. Este se encenderá en rojo.
- 2.** Utilice el **control de selección de efectos de audio/voz** para seleccionar el efecto deseado.
- 3.** Utilice los **controles de modificación de efectos A/B** para ajustar el carácter (los parámetros) del efecto.
- 4.** Utilice el **control de balance de efectos** para ajustar la profundidad del efecto o la proporción de sonido original y sonido procesado.

* Consulte también el apartado **Effect applications** (pág. 113).

Tipos de efecto

1	NARRATION ENHANCER (Potenciador de la narración)		(pág. 97)
	Hace que las narraciones o los anuncios suenen con más claridad. Elimina ruidos no deseados.	A FREQUENCY (Frecuencia) B CLARITY (Claridad)	
2	VOCAL ENHANCER (Potenciador de la voz)		(pág. 97)
	Ajusta el tono de la voz para proporcionarle amplitud y brillo. De forma opuesta, también puede darle un carácter de segundo plano.	A TONE (Tono) B BRIGHTNESS (Brillo)	
3	POWER COMPRESSOR (Compresor de potencia)		(pág. 98)
	Potencia una voz a la que le falta fuerza del rango de frecuencias bajas. También puede utilizarse para potenciar una voz ahogada por otros sonidos.	A BASS (Bajos) B COMPRESS (Compresión)	
4	RICH CHORUS		(pág. 98)
	Proporciona sensación de espacio y profundidad al sonido. Si sube el control de balance, se añade un sentido de modulación, que produce un efecto	A RATE (Velocidad) B DEPTH (Profundidad)	
5	NOISE REDUCER (Reductor de ruidos)		(pág. 99)
	Reduce los ruidos seseantes y zumbidos electrónicos.	A HUM CUT (Corte de B NOISE CUT (Corte de	
6	RADIO (Aparato de radio)		(pág. 99)
	Simula el ruido que normalmente produce una radio o un disco analógico, lo que da la sensación de que se está escuchando una grabación antigua.	A NOISE LEVEL (Nivel de ruido) B TUNING (Sintonización)	
7	ROBOT (Robot)		(pág. 100)
	Confiere al sonido un carácter robótico, con un ligero cambio de tono.	A PITCH (Tono) B FORMANT (Formantes)	
8	MALE (Voz masculina)		(pág. 100)
	Transforma una voz femenina en una voz masculina.	A PITCH (Tono) B FORMANT (Formantes)	
9	FEMALE (Voz femenina)		(pág. 101)
	Transforma una voz masculina en una voz femenina.	A PITCH (Tono) B FORMANT (Modulador)	

■ Parámetros de los efectos

1. NARRATION ENHANCER (Potenciador de la narración)

Este efecto confiere más claridad a la voz. También reduce los silbidos no deseados de una entrada de micrófono y facilita así la audición de la señal. Puede utilizarlo cuando añada anuncios, narraciones o lecturas al vídeo que esté editando.

A. FREQUENCY (Frecuencia)

El control de efecto A determina el rango de frecuencias en el que se ajustará la **claridad** de la voz con el **control B**. A medida que gire el **control de efecto A** hacia la derecha, el efecto se aplicará a un rango más amplio.

B. CLARITY (Claridad)

Ajusta el grado de claridad que se conferirá a la voz. A medida que gire el **control de efecto B** hacia la derecha, se aplicará un efecto más intenso. Si aplica un grado excesivo de este efecto a una voz que sea clara de por sí, el sonido se volverá rudo o distorsionado.

2. VOCAL ENHANCER (Potenciador de la voz)

Este efecto potencia o reduce los componentes de un sonido que constituyen su carácter básico. Puede utilizarlo para enfatizar o corregir el carácter de una voz cuando grabe diálogo o canciones.

A. TONE (Tono)

Girando el **control de efecto A** hacia la derecha, se potenciará el rango de frecuencias que contenga la parte principal de la voz, con lo que se le conferirá una gran plenitud. Si desea que el sonido resuene menos y que pierda plenitud, gire el control hacia la izquierda.

B. BRIGHTNESS (Brillo)

Con el **control de efecto B**, se potencia el rango de frecuencias que hacen que una voz resalte. Gire el control hacia la derecha para enfatizar los ruidos respiratorios y de expresión, o hacia la izquierda para suavizar una voz ruda.



Silbido: el ruido que puede producirse cuando se pronuncian palabras que contienen los fonemas “s” o “sh”.

3. POWER COMPRESSOR (Compresor de potencia)

Este efecto puede potenciar una voz aguda con un rango de bajos insuficiente para conferirle más potencia. También puede conferir consistencia a una voz que varía de volumen continuamente o resaltar una voz que tiende a perderse entre los demás sonidos.

Si el volumen de la voz ya es suficiente y no hay otros sonidos que atenúen la voz, evite aplicar este efecto en exceso. Si lo hace, puede que aumente el ruido o que suprima sonidos fuertes, con lo que el sonido será más apagado.

A. BASS (Bajos)

Este efecto potencia o suprime el rango de frecuencias bajas de la voz. Si gira el **control de efecto A** hacia la derecha, se dará un mayor énfasis a las frecuencias bajas. Puede utilizar este efecto para aumentar las frecuencias bajas de una voz que se grabó a una distancia considerable del micrófono.

B. COMPRESS (Compresión)

Este efecto reduce la diferencia de volumen entre los sonidos fuertes y flojos al aumentar el volumen general. A medida que gire el **control de efecto B** hacia la derecha, se ajustarán los sonidos a un volumen más alto. A diferencia de los resultados obtenidos limitándose a aumentar el volumen, este efecto evita que distorsionen los sonidos de volumen alto.

4. RICH CHORUS

Este efecto confiere un efecto de "coro" añadiendo un sonido de tono modulado al sonido original, con lo que se crea una sensación de espacio. Puede utilizarse para producir efectos de fantasía con un sentido de dirección reducido o para que de la impresión de que un coro de fondo complementa la armonía vocal.

A. RATE (Velocidad)

Ajusta la velocidad de la modulación. Si gira el **control de efecto A** hacia la derecha, la modulación será más rápida.

B. DEPTH (Profundidad)

Ajusta la profundidad de la modulación. Si gira el **control de efecto B** hacia la derecha, se aumentará la profundidad del tono y el volumen, lo que generará un efecto de modulación más intenso.

Generalmente, la velocidad de modulación debe establecerse en un valor bastante bajo y si desea que parezca que haya un coro de fondo, debe disponer el control de profundidad de la modulación ligeramente a la izquierda de la posición media. Utilice valores de mayor profundidad para crear un efecto de fantasía y espacio.



Si el volumen de la señal de entrada es demasiado bajo, casi no se notará el efecto. Suba el volumen de la señal de entrada.

5. NOISE REDUCER (Reductor de ruidos)

Este efecto reduce los ruidos “seseantes” y los “zumbidos” que a veces producen los equipos electrónicos.

Es un efecto eficaz para eliminar los ruidos que se producen en una frecuencia específica o para eliminar ruidos que suenan por debajo del volumen de la voz.

A. HUM CUT (Corte de zumbidos)

Con este parámetro, puede seleccionar la frecuencia de 50 Hz o bien de 60 Hz como frecuencia de los zumbidos que deben eliminarse. Establezca este parámetro en la frecuencia de la corriente eléctrica de su zona.

Si dispone el **control de efecto A** a la izquierda de la posición media, se cortarán los zumbidos de 50 Hz. Si coloca el control a la derecha de la posición media, se cortarán los zumbidos de 60 Hz. A medida que aleje el control de la posición media, se cortarán los zumbidos más profundamente, pero el tono de la señal de audio también se verá afectado y puede que se generen efectos no deseados como distorsiones.

B. NOISE CUT (Corte de ruidos)

Este efecto corta los ruidos de fondo que se oyen cuando la voz está callada. Los ruidos se cortarán con más intensidad a medida que gire el **control de efecto B** hacia la derecha.

Si lo establece en un valor excesivo, se cortará el principio y el fin de las frases de forma artificial, y puede que resulte difícil entender la voz.

6. RADIO (Aparato de radio)

Este efecto añade a la voz los ruidos característicos de una radio AM, con lo que parece que se trate de una emisión de radio o de una grabación antigua.

A. NOISE LEVEL (Nivel de ruido)

Ajusta el volumen de los ruidos de radio AM. Si gira el **control de efecto A** hacia la izquierda, aumentará el volumen de los ruidos que se oyen cuando una cadena radio no está bien sintonizada.

B. TUNING (Sintonización)

Simula los sonidos que se oyen al ajustar la frecuencia de una radio. Los ruidos de sintonización serán “correctos” si coloca el **control de efecto B** en la posición media. Si gira el control hacia la izquierda o la derecha, los ruidos de sintonización simulados sonarán con más intensidad y el sonido se volverá más confuso y rudo.

7. ROBOT (Robot)

Este efecto fija la frecuencia de la voz en un único tono, con lo que se confiere a la voz un carácter robótico. Puede utilizarlo para dar un carácter mecánico a un texto hablado.

A. PITCH (Tono)

El efecto de voz robótica fija el tono de la voz en una frecuencia específica. El **control de efecto A** determina el nivel del tono. Si gira el control a la derecha, se subirá el tono fijado.

B. FORMANT (Formantes)

Los "Formantes" son características de una voz que determinan su carácter. El **control de efecto B** ajusta los formantes. Si gira el control hacia la izquierda, sonará una voz grave y pesada (como si las cuerdas vocales fueran más gruesas) y, si gira el control hacia la derecha, sonará una voz aguda y ligera (como si las cuerdas vocales fueran más finas).

8. MALE (Voz masculina)

Este efecto transforma una voz femenina en una voz masculina modificando el tono y los formantes de la voz.

Es especialmente útil si tiene que grabar un diálogo o una representación dramática usted solo. Colocando el **control de balance de efecto** cerca de la posición media, puede mezclar el sonido modificado con el sonido original, con lo que se consigue un efecto de dúo.

Si aplica este efecto a una voz masculina, obtendrá una voz todavía más profunda y potente.

A. PITCH (Tono)

Ajusta la proporción en que variará el tono. A medida que gire el **control de efecto A** hacia la izquierda, disminuirá el tono de la voz. Si gira el control hasta el tope derecho, la voz permanecerá en el tono original.

B. FORMANT (Formantes)

Los "Formantes" son características de una voz que determinan su carácter. El **control de efecto B** ajusta los formantes. Si gira el control hacia la izquierda, obtendrá una voz más profunda (como si las cuerdas vocales fueran más gruesas). Si gira el control hasta el tope derecho, los formantes serán los de la voz original.



Si aplica este efecto en exceso, puede que el sonido se quiebre o distorsione.



Conviene que la señal de entrada sea únicamente la voz de una persona. Cuanto más clara sea la voz original, mejor será el efecto. El efecto no será satisfactorio si la señal de entrada de la voz es demasiado débil, si habla más de una persona o si hay demasiado ruido de fondo.



Los **formantes** son rangos de frecuencias fijos en los que el sonido de una voz es más intenso, por lo que determinan su carácter básico. La ubicación y el tamaño de los formantes dependen del tamaño de las cuerdas vocales, el cual varía según si se es hombre o mujer, adulto o niño, etc.



Si aplica este efecto en exceso, puede que el sonido se quiebre o distorsione.



Conviene que la señal de entrada sea únicamente la voz de una persona. Cuanto más clara sea la voz original, mejor será el efecto. El efecto no será satisfactorio si la señal de entrada de la voz es demasiado débil, si habla más de una persona o si hay demasiado ruido de fondo.

9. FEMALE (Voz femenina)

Este efecto transforma una voz masculina en una voz femenina modificando el tono y los formantes de la voz.

Es especialmente útil si tiene que grabar un diálogo o una representación dramática usted solo. Colocando el **control de balance de efecto** cerca de la posición media, puede mezclar el sonido modificado con el sonido original, con lo que se consigue un efecto de dúo.

Si aplica este efecto a una voz femenina, obtendrá una voz todavía más fina y delicada.

A. PITCH (Tono)

Ajusta la proporción en que variará el tono. A medida que gire el **control de efecto A** hacia la derecha, aumentará el tono de la voz. Si gira el control hasta el tope izquierdo, la voz permanecerá en el tono original.

B. FORMANT (Formantes)

Los "Formantes" son características de una voz que determinan su carácter. El **control de efecto B** ajusta los formantes. Si gira el control hacia la derecha, obtendrá una voz más chillona (como si las cuerdas vocales fueran más finas). Si gira el control hasta el tope izquierdo, los formantes serán los de la voz original.

NOTE

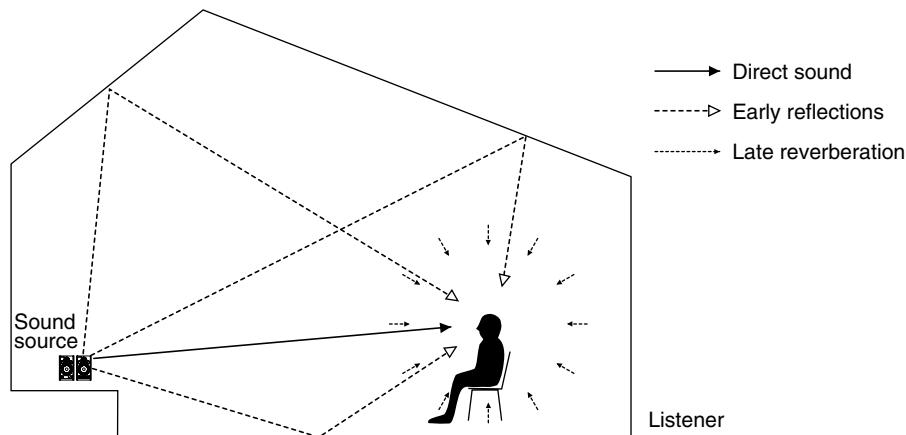
Si aplica este efecto en exceso, puede que el sonido se quiebre o distorsione.

NOTE

Conviene que la señal de entrada sea únicamente la voz de una persona. Cuanto más clara sea la voz original, mejor será el efecto. El efecto no será satisfactorio si la señal de entrada de la voz es demasiado débil, si habla más de una persona o si hay demasiado ruido de fondo.

Reverb

What is reverb?



When sound is produced in a building such as a concert hall or auditorium, the sound reflects from the walls and ceiling of the room and reaches the listener at a later time. This is called reverberation, usually abbreviated as “reverb”.

The character of reverb depends on the size of the space (hall, room, etc.), its shape, and the materials of the reflective surface (walls, etc.). The M-100FX can digitally simulate these aspects of reverb, and add the reverb to the original sound. This type of processing is referred to as “digital reverb”.

How to apply reverb

For details on connecting your mic and other equipment, refer to **Basic operation** (p. 19).

1. Use the **reverb type select knob** to select the desired reverb type.
2. Turn the **reverb/AUX send level knob** to adjust the reverb depth.
3. Use the **reverb time knob** to adjust the length of the reverb.

HINT

Direct sound: Sound that reaches the listener directly from the sound source.

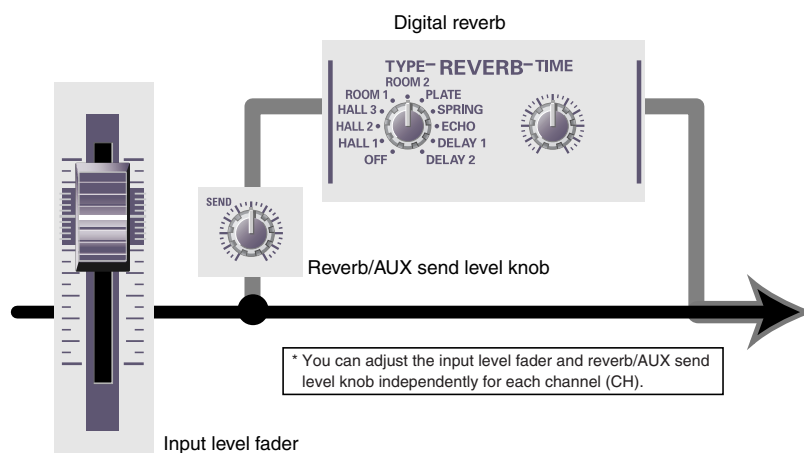
Early reflections: Sound that reaches the listener after being reflected once.

Late reverberation: Sound that reaches the listener after being reflected multiple times.

NOTE

Reverb is not applied to sound that is input from the computer via USB, nor to the sound that is input from the external input jacks (AUX RETURN).

How digital reverb works



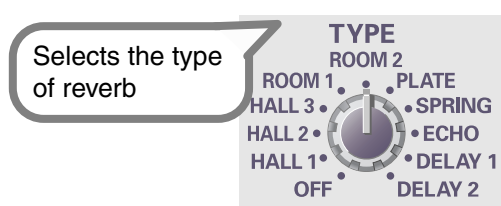
- The **reverb/AUX send level knob** of each channel adjusts the amount of sound that is sent to the digital reverb.

Turning a **reverb/AUX send level knob** toward the right will make the reverb deeper for that channel.

- The digital reverb processes the sound to produce the impression of a large hall or club.

You can use the **reverb type select knob** and **reverb time knob** to adjust the digital reverb. The **reverb type select knob** lets you choose one of ten types of reverberation. The **reverb time knob** adjusts the length of the reverb and the spacing of the early reflections. Turning the **reverb time knob** toward the right will lengthen the reverb time. If you switch the reverb type, the reverb time will be set to the default setting for that type, regardless of the actual position of the reverb time knob. The default setting for the reverb time is the center position of the **reverb time knob**.

■ Reverb types



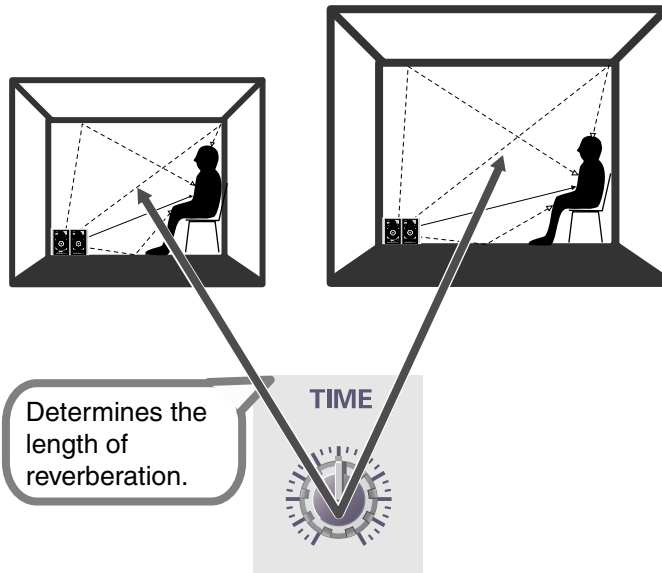
Type	Effect
OFF	No reverberation will be applied. Select this setting if you don't want to apply an effect.
HALL 1, 2, 3	Simulates the reverberation of a spacious room such as a concert hall or gymnasium.
ROOM 1, 2	Simulates the reverberation of a room such as a club or disco.
PLATE	Simulates the artificial reverberation produced by a plate reverb (a reverb unit using a metal plate). It produces denser reverberation than HALL or ROOM. This is particularly suitable for vocals.
SPRING	Simulates the artificial reverberation produced by a spring reverb (a reverb unit using a metal spring). It produces a distinctive "sproing" effect.
ECHO	Produces individually identifiable echoes. Reducing the delay time will create the echo effect typical of karaoke mics.
DELAY 1, 2	By adding a slightly delayed sound to the original sound, this produces a distinctive effect of greater depth. DELAY 2 is a special delay in which the sound alternates between left and right, and can be used to produce a disorienting sensation. This is effective when used with a stereo connection.

Reverb

■ Reverb time

Turning the reverb time knob toward the right will lengthen the reverberation.

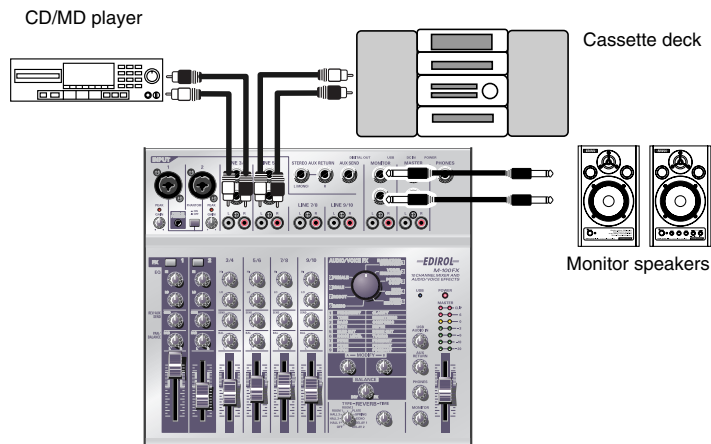
The default value is the setting when the reverb time knob is at the center position.



Applications

Mixing

“Mixing” is the process of adjusting the volume, tone, and pan of each channel to create the overall balance. In an actual recording studio, mixing consoles with many faders and knobs are used to adjust the volume balance of each channel and apply effects.



The basic function of the mixer is to mix together a variety of audio sources such as sound from the mics, audio from the video tape, CD, and cassette tape to combine them into a final mix.

As an example, here's how to mix the sounds from a music CD and a cassette tape.

1. Turn the **input level knobs (GAIN)**, **master volume fader**, **monitor volume knob**, and **headphone volume knob** to their minimum positions.
2. Connect your CD player to **line input jacks 3/4 (CH 3/4)**.
3. Connect your cassette tape recorder to **line input jacks 5/6 (CH 5/6)**.
Adjust the volume of the cassette tape recorder.
4. Connect your monitor speakers to the **monitor output jacks**. Alternatively, connect your headphones to the **headphone jack**.
Now you can hear the sound you will be mixing.
Adjust the following volumes.
Headphones Headphone volume knob
Monitor speakers..... Monitor volume knob
5. If you want to record the sound you are mixing, connect your recording device to the **master output jacks** or the **digital output jack**.
6. Use the **input level faders** of each channel to adjust the volume.
Raising the input level fader will increase the volume, and lowering it will decrease the volume.
Adjust the input level faders of each channel to create an appropriate balance.
You can slowly raise a fader upward from the minimum position to create a “fade-in”, or slowly lower a fader to the minimum position to create a “fade-out”.
You can create natural-sounding transitions between sounds by fading-in and fading-out.



In this example, you can create a gradual transition from the sound of the CD to the sound of the cassette tape by fading-in CH 3/4 while fading-out CH 5/6.

- 7.** Use the **equalizer (EQ) HI/LO knobs** of each channel to adjust the tone. Turning the equalizer (EQ) **HI** knob toward the right will emphasize the high-frequency portion of the sound, and turning it toward the left will de-emphasize this range. Turning the equalizer (EQ) **LO** knob toward the right will emphasize the low-frequency portion of the sound, and turning it toward the left will de-emphasize this range.

Effect	Operation
To make the CD sound more powerful	Turn the equalizer (EQ) LO knob toward the right
To make the CD sound more brilliant	Turn the equalizer (EQ) HI knob toward the right
To minimize the "hiss" noise of a cassette tape	Turn the equalizer (EQ) HI knob toward the left
To minimize the background noise entering a mic	Turn the equalizer (EQ) LO knob toward the left

- 8.** If you are recording, use the **master volume fader** to adjust the volume. You can create a fade-in by slowly raising the fader upward from the minimum position, or a fade-out by slowly lowering the fader down to the minimum position.

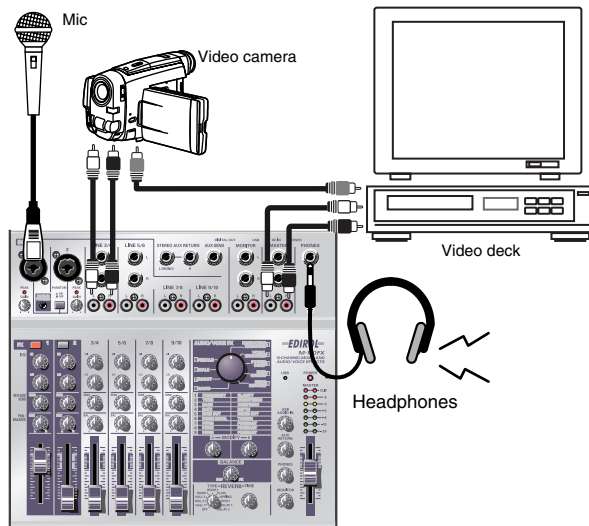


It is effective to use a fade-in when you start recording, and a fade-out when you finish recording.

Applying effects

Using the NARRATION ENHANCER

Here's a typical example of how you can use a mic to add realtime commentary to video that you recorded, and re-record the video and sound on another video deck.



1. Turn all **input level knobs** and **input level faders** down to the minimum position, and connect your monitor speakers or headphones.
(→**Connecting monitor speakers or headphones** (p. 19))
2. Connect the audio output of your video camera to the M-100FX's **line input jacks 3/4**.
Audio output is usually the red and white plugs.
3. Connect the video output of your video camera to the video input jack of your video deck.
Video is usually the yellow plug.
4. Connect the M-100FX's **master output jacks** to the line input jacks of your video deck.

If you want to adjust the audio from your video camera, use the CH 3/4 **input level fader** to adjust the input level.

5. Connect your mic to mic **input jack 1** (CH1), and adjust the gain and level.
(→**Connecting a mic** (p. 20))
6. Make effect settings.

In this example, we'll use the [1] **NARRATION ENHANCER** effect, which is particularly suitable for narrations.

1. Press the CH 1 **effect switch** to turn it on. It will light in red.
2. Turn the **audio/voice effect knob** to [1] **NARRATION ENHANCER**.

MEMO

If your cable has a different type of plug, you may need to obtain an adaptor plug or a different cable.

HINT

Equalizer LO knob

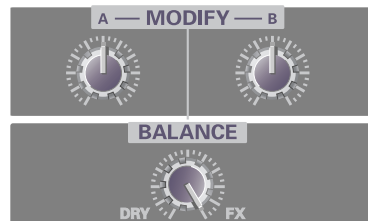
Turning this toward the left of center will reduce breath noise, making the sound more listenable.

Reverb/AUX send level knob

Turn this all the way to the left and no reverb will be applied, thus preserving the clarity of the voice.

Immediately after you have set the **audio/voice effect knob** to [1] **NARRATION ENHANCER**, the effect will have the default settings (see diagram below, or p. 113) regardless of the actual positions of **effect knobs A and B** and the **effect balance knob**.

Default settings for [1] NARRATION ENHANCER



Other effects can also be used to modify the character of the voice. For details on each effect, read **Effect types** (p. 32). You can also try out many other possibilities as described in **Effect applications** (p. 113).

- 7.** Set **effect knobs A and B** and the **effect balance knob** to the default positions shown in the diagram above.
- 8.** While you speak into the mic, slowly adjust **effect knobs A and B** to adjust the effect to your liking.
You may wish to practice your narration while watching the actual video.
- 9.** Begin editing your video while you add the narration.
You will probably want to use the following procedure.

Start recording on your video deck
 ↓
 Start playback on your video camera
 ↓
 Start recording your narration



The sound will become clearer as you turn **effect knob A** and **effect knob B** toward the right. For details on effects, refer to **Effect types** (p. 32).

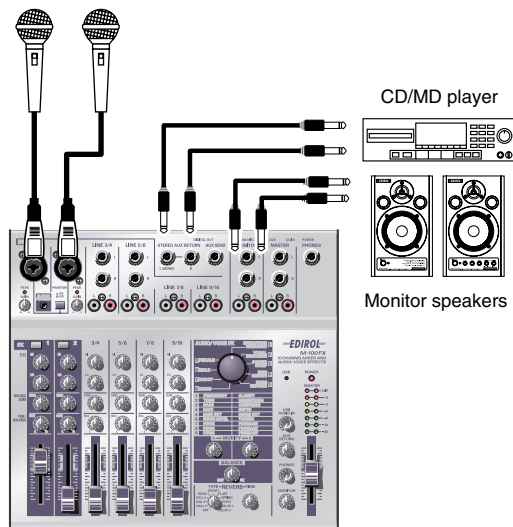


For details on operating your video camera and video deck, refer to the owner's manual for your device.

Applying reverb

Singing

Here's how you can use two mics to sing along with a CD.



1. Turn the **AUX input level knobs** to the minimum positions, and then connect your monitor speakers.
(→**Connecting monitor speakers or headphones** (p. 19))
2. As shown in the diagram, connect your CD player to the **external input jacks** (AUX RETURN).
The **external input jacks** (AUX RETURN) accept phone plugs. If your cable has a different type of plug, you will need an adaptor.
3. While playing back the CD, slowly turn the **AUX input level knob** toward the right to adjust the sound from your monitor speakers to an appropriate volume.
4. Connect a mic to **mic input jack 1** (CH 1) and adjust the gain and level.
(→**Connecting a mic** (p. 20))
5. Adjust the reverb.
Applying reverb to a karaoke vocal will create a pleasing effect. In this example, we'll use **HALL 1** to give a spacious presence to the vocal.
 1. Set the **reverb type select knob** to **HALL 1**.
 2. Use the **reverb/AUX send level knobs** of CH1 and CH2 to adjust the amount of reverb applied to each mic.
6. Use the **pan/balance knobs** to adjust the pan of each mic.
For a duet, it is effective to set CH1 to the left and CH2 to the right.
7. Play back the CD, and sing into the mics.

MEMO

The effect will depend on the type of reverb you select. Refer to **Reverb types** (p. 103) and try out various types of reverb.

HINT

If you are inputting a sound that does not require processing, such as that from a CD, you may find it convenient to connect it to the **external input jacks** (AUX RETURN) so that you can adjust the input volume simply by turning the **AUX input level knob**. Of course you can also connect it to the **line input jacks** and use the **input level fader** and knobs to adjust the volume.

HINT

Equalizer LO knob

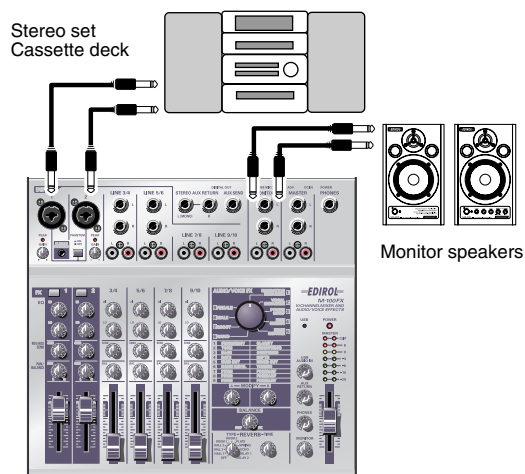
Turning this toward the left of center will reduce breath noise, making the sound easier to listen to.

Reverb/AUX send level knob

Rather than turning the knob all the way to the left, setting it to a position of approximately the first mark will add a small amount of reverb, giving a nice amount of luster to the sound.

Removing noise

Sound that was recorded outdoors may contain unwanted noises. Here's how you can minimize such unwanted noises.



1. Turn the **input level knob** and all **input level faders** to the minimum position, and connect your monitor speakers and headphones.
(→**Connecting monitor speakers or headphones** (p. 19))
2. As shown in the diagram, connect your cassette deck to the CH1 and CH2 **mic input jacks** (INPUT 1, 2). Connect the left channel of the cassette deck to CH1, and the right channel to CH2.
3. Adjust the gain and level.
(→**Adjusting the gain and level (volume)** (p. 22))
4. Simultaneously press the **effect switches** of CH1 and CH2 to select **Stereo Control**.

Stereo Control

Simultaneously pressing the CH1 and CH2 **effect switches** will select **Stereo Control**. In this state, the CH1 and CH2 **effect switches** will both light in red.



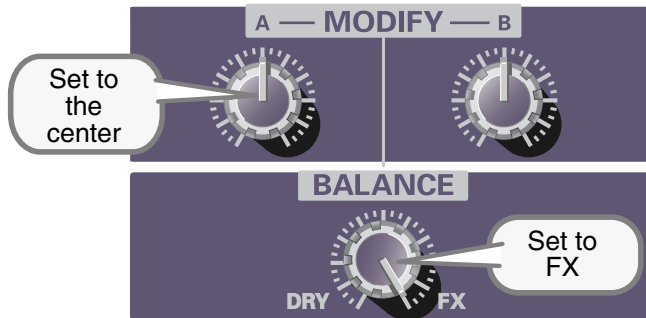
If you have selected Stereo Control, operating the CH1 input level fader or knobs will control both the left channel (CH1) and right channel (CH2) simultaneously. Nothing will happen when you operate the CH2 input level fader or knobs.

If you want to make additional adjustments to the sound, use the CH1 input level fader or knobs.

5. Set the **audio/voice effect knob** to [5] **NOISE REDUCER**.

Removing noise

6. Set **effect knob A** to the center position.



7. Turn the **effect balance knob** all the way toward FX (right).
8. Play back your cassette tape, and move **effect knob B**. Set **effect knob B** to the point at which the noise is removed from silent portions of the program material.

NOTE

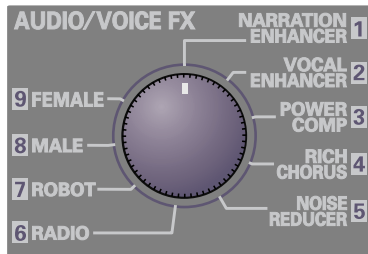
Be aware that if you turn **effect knob B** too far toward the right, even desired sounds may disappear.

Effect applications

This section describes various ways in which you can set **effect knobs A and B** and the **effect balance knob** for different applications.

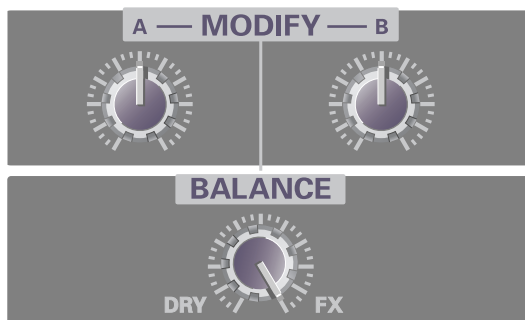
For details on the effect types and what they do, refer to **Audio/Voice effects** (p. 31).

1. NARRATION ENHANCER



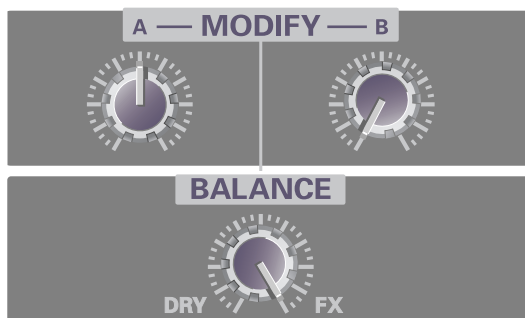
■ Default settings

These settings clarify a narration or announcement, making it more listenable, while removing unpleasant noises.

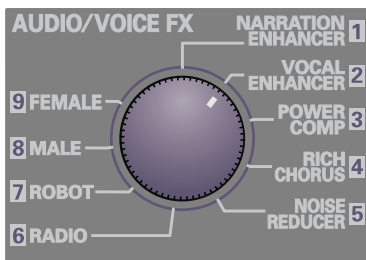


■ Removing only unpleasant noises

With these settings, the clarity of the voice will not be affected; only unpleasant sibilants and other noises will be removed.

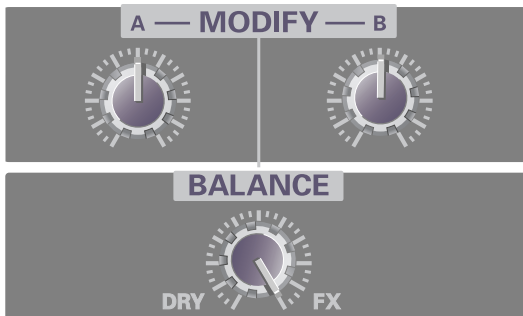


2. VOCAL ENHANCER



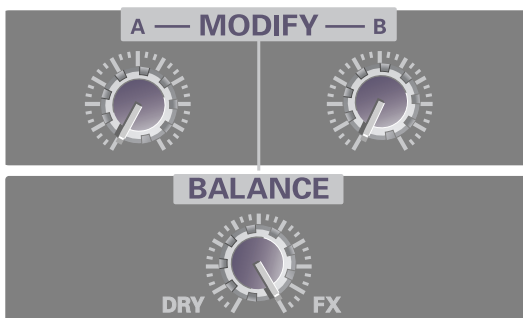
■ Default settings

These settings emphasize the fundamental portion of a voice and its distinctive attributes, giving the sound brightness and depth.

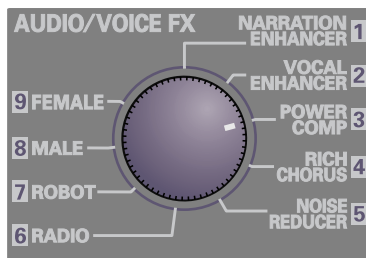


■ Reducing the obtrusiveness of the voice

These settings restrain the fundamental portion of a voice and its distinctive attributes, making the sound less obtrusive.

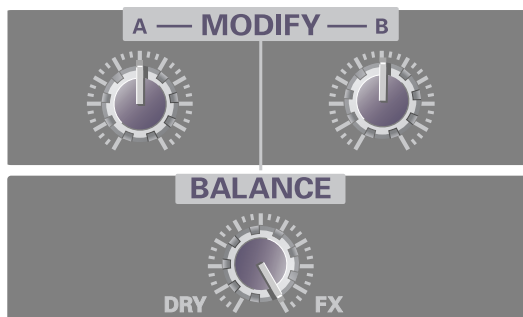


3. POWER COMP



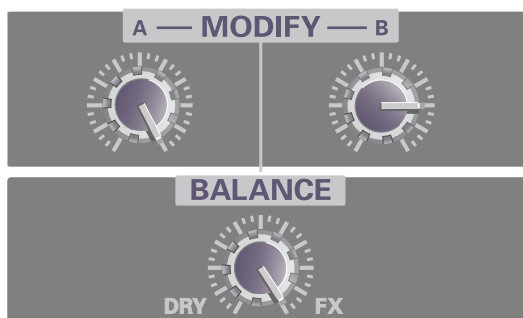
■ Default settings

These settings boost a voice that is weak in the low range, and smooth out variations in volume to make the level more consistent and powerful.

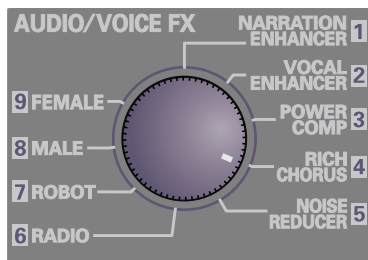


■ Creating a more powerful voice

These settings give more power to the low-frequency region, creating a more powerful sound. Applying these settings to music that already has a substantial low-frequency component can give the sound chest-thumping impact.

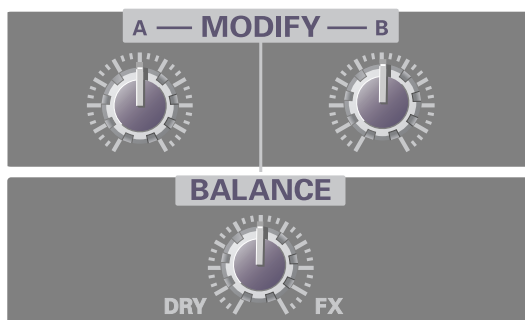


4. RICH CHORUS



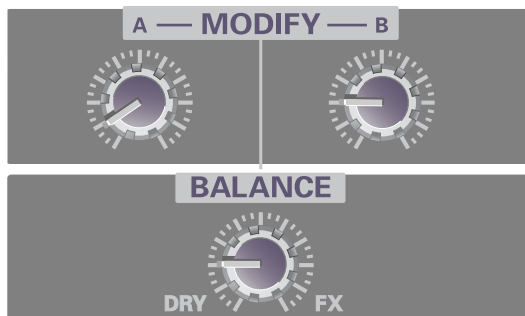
■ Default settings

These settings give the sound more spaciousness and depth.



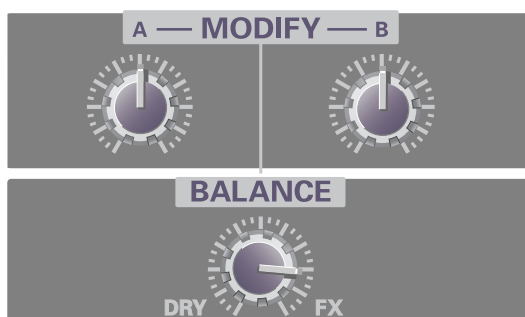
■ Adding light spacious to the sound

These settings lightly apply a slow chorus sound to create a subtle spaciousness. This is effective on backing chorus or scat singing.

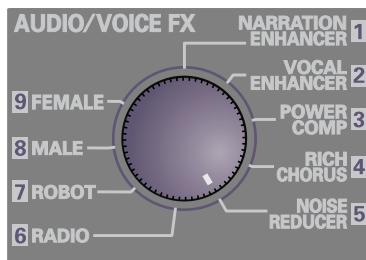


■ Creating a distinctive modulation effect

These settings add a greater sense of modulation to the chorus effect, producing a dramatic effect. This is effective with jingles.

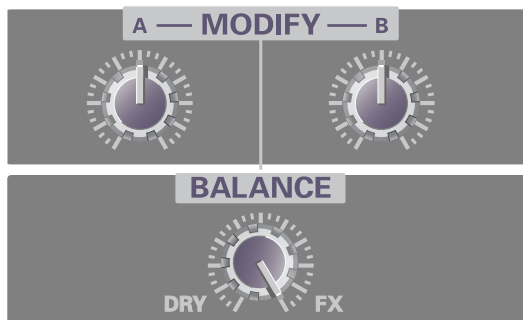


5. NOISE REDUCER



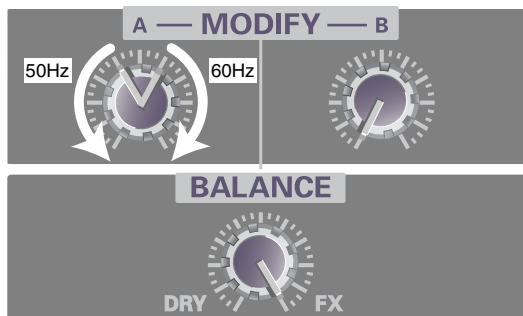
■ Default settings

These settings cut the noise during silent portions of the program. If you want to cut the noise to a greater extent, turn **effect knob B** toward the right. If a portion of the desired sound is being cut, turn **effect knob B** toward the left.

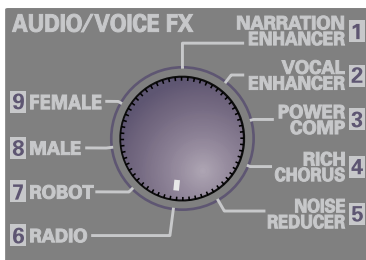


■ Removing hum noise

These settings cut the buzzing hum noise produced by electronic devices. If the electrical power in your area is 50 Hz, turn the knob toward the left to cut the hum. If your electrical power is 60 Hz, turn the knob toward the right.

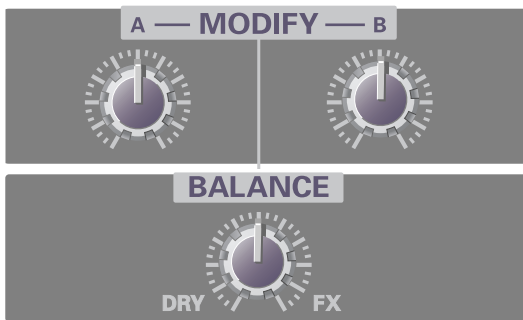


6. RADIO



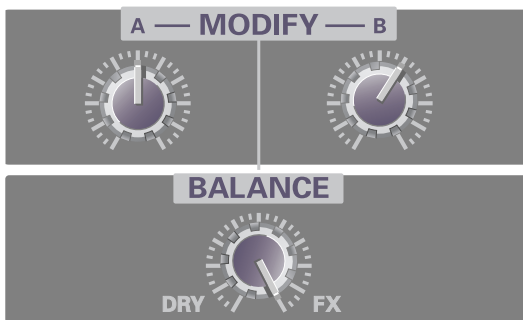
■ Default settings

These settings simulate the muffled sound produced by a radio.



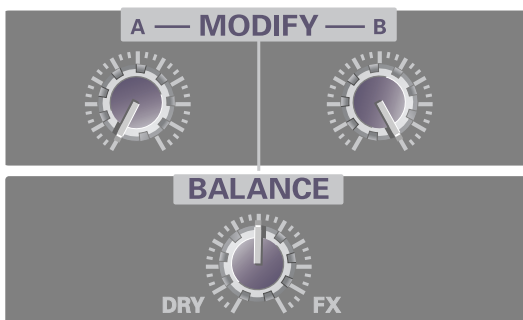
■ Simulating the sound of an old radio

These settings simulate the effect of speech heard through an old radio that is mistuned.

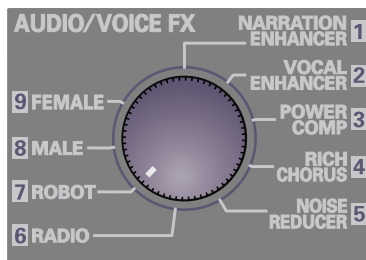


■ Simulating the sound of a megaphone

These settings add distortion and noise to simulate the effect of speaking through a megaphone.

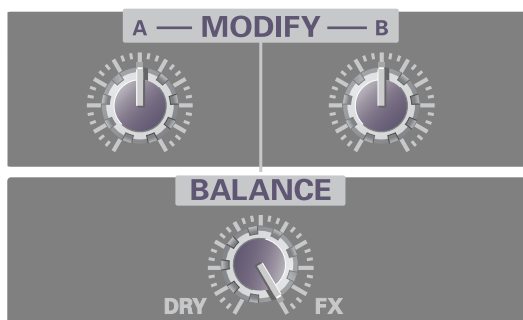


7. ROBOT



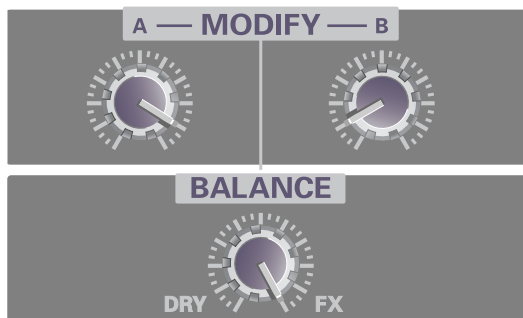
■ Default settings

These settings simulate a robotic, unpitched voice.



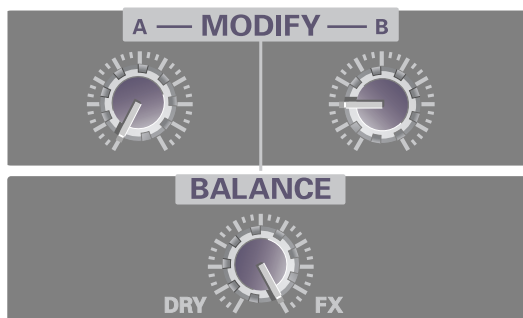
■ Space invader

These settings produce the sound of an alien voice that might be heard in an SF movie.

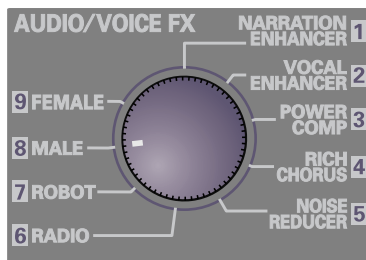


■ Big robot

These settings produce the impression of a large robot.

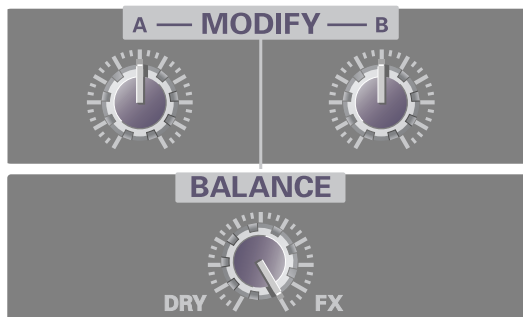


8. MALE



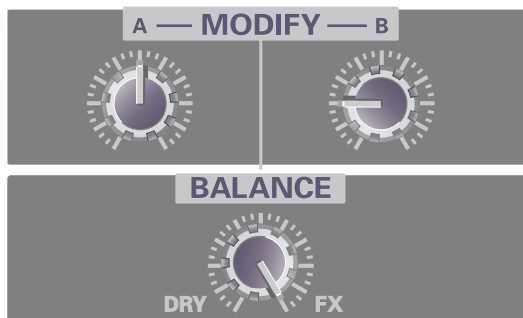
■ Default settings

These settings transform a female voice into a male voice.



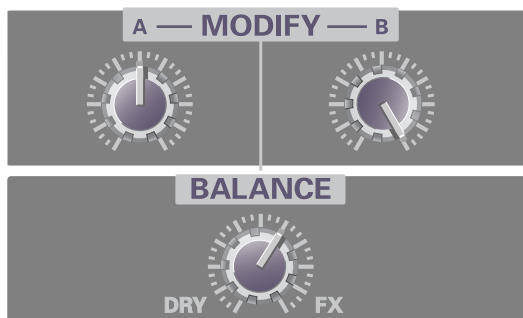
■ Anonymous interview

These settings modify the voice in a way that makes it difficult to identify.

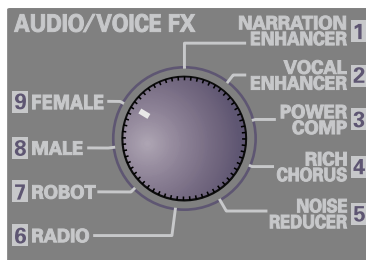


■ Duet

These settings transform a solo into a duet.

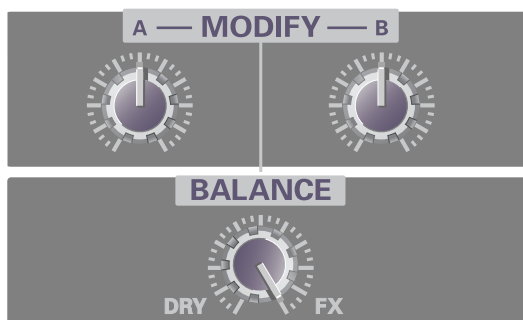


9. FEMALE



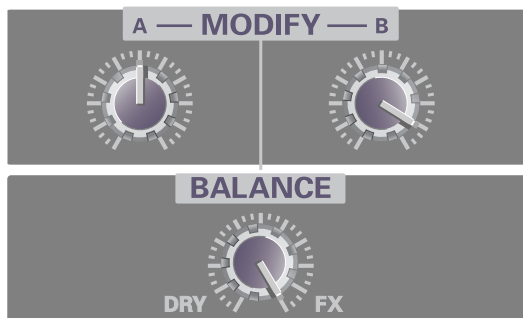
■ Default settings

These settings transform a male voice into a female voice.



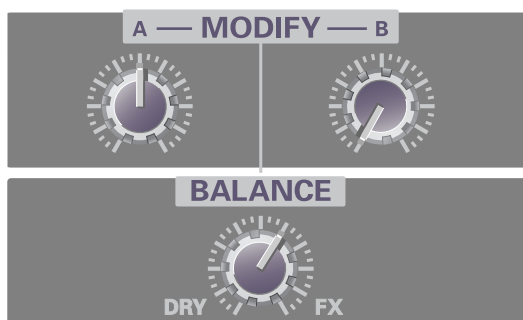
■ Child's voice

These settings produce a child-like voice.



■ Duet

These settings transform a solo into a duet.

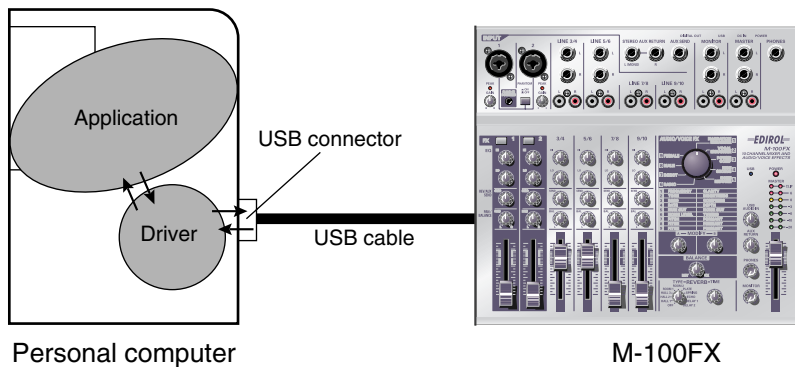


MEMO

Supplementary information

Connecting the M-100FX to your computer

■ What is a driver?



The “driver” is software that transfers data between your computer application and the M-100FX when your computer and the M-100FX are connected via a USB cable.

The driver passes data from your application software to the M-100FX, and from the M-100FX to your application.

The procedure for installation and settings will depend on your system.

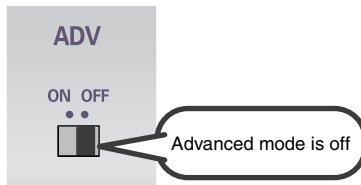
Proceed to the page for the system you are using.

- Windows XP/2000 users (p. 125)
- Windows Me users (p. 126)
- Windows 98 users (p. 128)
- Macintosh users (p. 135)

* If you are using the M-100FX with ASIO-compatible software or an application that supports 24-bit audio, you will need to install a special driver. Please read **Using Advance mode** (p. 163).

Windows XP/2000 users

1. With the M-100FX disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
2. Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.
3. Place the M-100FX's **ADVANCE (mode select) switch** in the **OFF** position.



4. Use the **USB cable** to connect the **M-100FX** to your **computer**.
 1. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
 2. Connect the **AC adaptor** to an electrical outlet.
 3. Use the **USB cable** to connect the **M-100FX** to your **computer**.
5. Lower the M-100FX's **master fader** to the minimum position, and turn **ON** the power switch.
The M-100FX will be detected automatically, and the driver will be installed.
6. When installation is complete, restart Windows.

Next, you will need to make the driver settings.
(→Settings and checking (p. 131))

NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

NOTE

Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

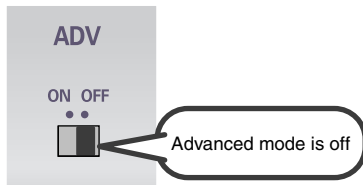
MEMO

If you are using Windows XP, the installation has been completed when the message near the taskbar saying that "**Found New Hardware**" has disappeared.

Connecting the M-100FX to your computer

Windows Me users

1. With the M-100FX disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
2. Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.
3. Place the M-100FX's **ADVANCE (mode select) switch** in the **OFF** position.



4. Use the **USB cable** to connect the **M-100FX** to your **computer**.
 1. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
 2. Connect the **AC adaptor** to an electrical outlet.
 3. Use the **USB cable** to connect the **M-100FX** to your **computer**.
5. Set the M-100FX's **power switch** to the **ON** position.
6. Windows will detect the M-100FX, and the **“Add New Hardware Wizard”** dialog box will appear.
Make sure that **Automatic search for a better driver (Recommended)** is selected, and click **[Next]**.



7. Driver detection will begin.



Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.



Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

- 8.** When the driver has been found, driver installation will begin.



- 9.** Once the driver has been installed, a dialog box will inform you of this. Click [Finish].

- 10.** Restart Windows.

Next, you will need to make the driver settings.
(→**Settings and checking** (p. 131))

NOTE

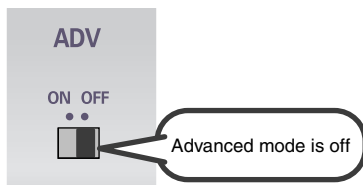
Depending on your system, a certain amount of time may be required for the device to be detected after the driver has been installed.

Connecting the M-100FX to your computer

Windows 98 users

The **USB composite device** driver is installed first, then the **USB audio device** driver is installed. Use the following procedure to install the drivers.

1. With the M-100FX disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
2. Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.
3. Place the M-100FX's **ADVANCE (mode select) switch** in the **OFF** position.



4. Use the **USB cable** to connect the **M-100FX** to your **computer**.
 1. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
 2. Connect the **AC adaptor** to an electrical outlet.
 3. Use the **USB cable** to connect the **M-100FX** to your **computer**.
5. Set the M-100FX's **power switch** to the **ON** position.
6. **USB composite device** will be detected automatically, and the “**Add New Hardware Wizard**” dialog box will appear.
Click [**Next**].



NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

NOTE

Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

MEMO

If this dialog box does not appear, refer to “**Find new hardware wizard**” does not execute automatically (p. 173).

- 7.** When “What do you want Windows to do?” appears, select “Search for the best driver for your device (Recommended)”, and click [Next].



- 8.** A dialog box like the one shown will appear. Check **CD-ROM drive**, and click [Next].



- 9.** A dialog box like the one shown will appear. Click [Next].



- 10.** File (driver) copying will begin.

If the Windows CD-ROM is not inserted in the CD-ROM drive, a “Insert Disk” dialog box may appear. In this case, insert the Windows CD-ROM into the CD-ROM drive and click [OK].



Connecting the M-100FX to your computer

- 11.** When installation of the **USB Composite Device** driver is completed, a dialog box like the one shown here will appear.
Click **[Finish]**.



- 12.** Next, the **USB audio device** will be detected automatically, and the “**Add New Hardware Wizard**” dialog box will appear.
Click **[Next]**, and proceed with the installation in the same way as in **steps 8–11** (p. 129).



- 13.** When installation of the **USB audio device** driver is complete, a dialog box like the one shown here will appear.
Click **[Finish]**.



- 14.** Installation of the **USB composite device** driver and **USB audio device** driver has been completed.
Restart Windows.

Next, you will need to make the driver settings.
(→**Settings and checking** (p. 131))

Settings and checking

■ Specifying the audio input/output destination

Windows XP/2000/Me users

1. Open **Control Panel**.
Windows XP
 Click the Windows **Start** button, and from the menu that appears, select **Control Panel**.
Windows 2000/Me
 Click the Windows **Start** button, and from the menu that appears, select **Settings | Control Panel**.

2. Open the **Sounds and Audio Devices Properties** dialog box (or in Windows 2000/Me, **Sounds and Multimedia Properties**).
Windows XP
 In “**Pick a category**”, click “**Sound, Speech, and Audio Devices**”. Next, in “**or pick a Control Panel icon**”, click the **Sounds and Audio Devices** icon.
Windows 2000/Me
 In **Control Panel**, double-click the **Sounds and Multimedia** icon to open the “**Sounds and Multimedia Properties**” dialog box.

3. Click the **Audio** tab.

4. For **MIDI music playback**, click the **t** located at the right of [**Default device**] (or in Windows 2000/Me, [**Preferred device**]), and select the following from the list that appears.



Sound playback	Windows XP
	EDIROL M-100FX
Sound recording	Windows 2000/Me
	USB Audio Device
MIDI music playback	Windows XP
	EDIROL M-100FX
	Windows 2000/Me
	USB Audio Device

5. Close the **Sounds and Audio Devices Properties** dialog box.
 Click [**OK**] to complete the settings.

This completes driver settings.

Next, you will need to make the Volume Control setting.

(→**Volume Control setting** (p. 133))

MEMO

Depending on how your system is set up, the **Sounds and Audio Devices** icon may be displayed directly in the **Control Panel** (the Classic view). In this case, double-click the **Sounds and Audio Devices** icon.

MEMO

If the **Sound and Multimedia** icon is not displayed, click “**Show all control panel options**” in the frame at the left.

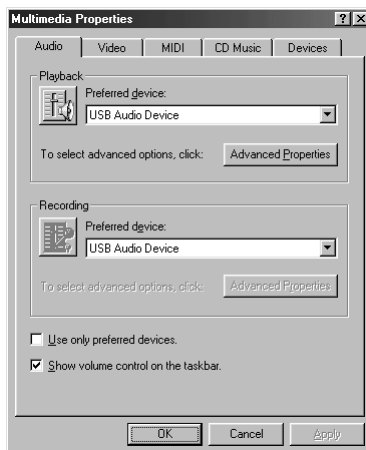
MEMO

For **MIDI music playback**, you can leave these settings as they are.

Connecting the M-100FX to your computer

Windows 98 users

- 1.** Open **Control Panel**.
Click the Windows **Start** button, and from the menu that appears, select **Settings | Control Panel**.
- 2.** Open the **Multimedia Properties** dialog box.
In **Control Panel**, double-click the **Multimedia** icon to open the “**Multimedia Properties**” dialog box.
- 3.** Click the **Audio** tab.



- 4.** In the playback and recording areas, click ▼ beside **Preferred Device**, and select the **USB Audio Device** from the list that appears.
- 5.** Close the **Multimedia Properties** dialog box.
Click **[OK]** to complete the settings.

This completes driver settings.

Next, you will need to make the Volume Control setting.

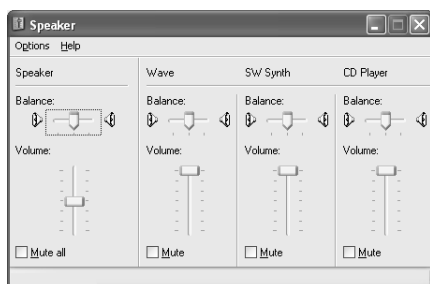
(→**Volume Control setting** (p. 133))

■ Volume Control setting

1. Open the **Volume Control**.

Click the Windows **Start** button, and choose **Programs** (in Windows XP, **All Programs**) | **Accessories** | **Entertainment** | **Volume Control**.

Example: Windows XP



2. Raise or lower the slider to adjust the volume of the M-100FX.

The M-100FX can use the Windows **volume control** to adjust the output volume.

You will be able to use the M-100FX at the best audio quality if you set the Volume Control volume to the maximum setting.

Items that can be set

CD Player (CD Audio)	Controls the volume of "audio CDs" on the internal CD-ROM drive of the computer. (*1)
WAVE	Controls the volume of sound output from the "EDIROL M-100FX" audio output device. Digital output and analog output will change.
Synthesizer (SW Synth)	Controls the volume of the software synthesizer built into Windows.

*1:

If the CD playback volume does not change when you adjust this control, then change the WAVE volume.

If you are using Windows 2000 and the **CD Player** is not displayed, check "**Enable digital music CDs for this CD playback device**" in **Digital CD Playback**.

(→When playing audio CDs from the computer's internal CD-ROM drive, or using the M-100FX to play game music (p. 134))

MEMO

If the Volume Control is not installed on your computer, use the **Control Panel** icon **Add or Remove Programs** to install it. For details on installation, refer to the Windows manual or Help.

NOTE

If Mute is checked or if the slider is lowered all the way, no sound will be output from the M-100FX.

When playing audio CDs from the computer's internal CD-ROM drive, or using the M-100FX to play game music

Windows XP/2000 users:

1. Open the System Properties dialog box.
Select **Start | Settings | Control Panel**, and in the **Control Panel**, double-click the **System** icon.
(**Windows XP**– Click the Windows **Start** button, and from the menu that appears, select **Control Panel**.)
2. Open the **Device Manager**.
Click the **Hardware** tab, and click the **Device Manager** button.
3. Open the CD-ROM drive's **Properties**.
In CD-ROM drive, double-click the **CD-ROM drive** that you are using. In **Digital CD Playback**, check the “**Enable digital CD audio for this CD-ROM device**” item.

Windows Me users:

1. Open **System Properties**.
Select **Start | Settings | Control Panel**, and in **Control Panel**, double-click the **System** icon.
2. Open the CD-ROM drive's **Properties**.
Double-click the **CD-ROM** icon, and then double-click the CD-ROM drive that you are using.
3. Click the **Properties** tab, and in **Digital CD Playback**, check the “**Enable digital CD audio for this CD-ROM device**” item.

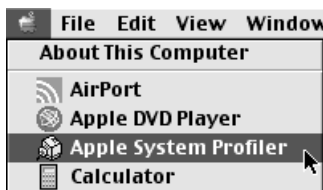
Windows 98 users:

1. Open the **Multimedia Properties** dialog box.
Select **Start | Settings | Control Panel**, and in **Control Panel**, double-click the **Multimedia** icon.
2. Click the **Music CD** tab, and check the “**Enable digital CD audio for this CD-ROM device**” item.

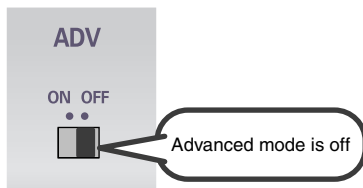
** Depending on your system, playback may still not be possible. For details, please contact the manufacturer of your computer. If you are using a PC-card (PCMCIA) type CD-ROM drive, playing back WAVE data from a CD-ROM or playing an audio CD may cause interrupted sound, or possibly no sound at all.*

Macintosh users

1. With the M-100FX disconnected, start up Macintosh.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
2. Exit all currently running software (applications).
If you are using a virus checker or similar software, be sure to exit it as well.
3. After starting up Mac OS, select **Apple System Profiler** from the **Apple** menu.
The “**Apple System Profiler**” dialog box will appear.



4. Click the **Devices and Volumes** tab.
5. Place the M-100FX’s **ADVANCE (mode select) switch** in the **OFF** position.



6. Use the **USB cable** to connect the **M-100FX** to your **computer**.
 1. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
 2. Connect the **AC adaptor** to an electrical outlet.
 3. Use the **USB cable** to connect the **M-100FX** to your **computer**.

7. Set the M-100FX’s **power switch** to the **ON** position.

8. Wait for approximately five seconds.
The M-100FX will use the driver included with Mac OS.
While you are waiting, the screen display will not change, but the M-100FX is being detected. Do not touch the mouse or keyboard.

NOTE

Once the connections have been completed, turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

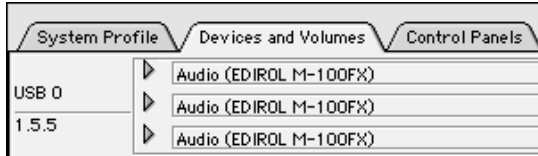
NOTE

Always make sure to have the volume level turned down before switching on power. Even with the volume all the way down, you may still hear some sound when the power is switched on, but this is normal, and does not indicate a malfunction.

Connecting the M-100FX to your computer

- 9.** In order to check that detection has been completed, once again go to “**Apple System Profiler**”, and select “**Update all information**” from the **Commands** menu.

In the **USB** area, three audio devices will be displayed.



If these are displayed correctly, driver installation has succeeded.

- 10.** In the **File** menu, click **Quit** to close “**Apple System Profiler**”.

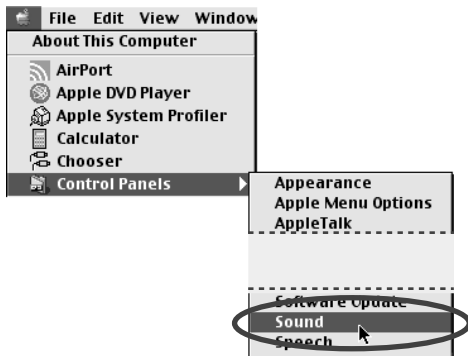
If they are not displayed correctly, disconnect the M-100FX, wait for about ten seconds, and then repeat the procedure from **step 2**.

Next, you will need to make the driver settings.

(→**Settings the sound input/output** (p. 137))

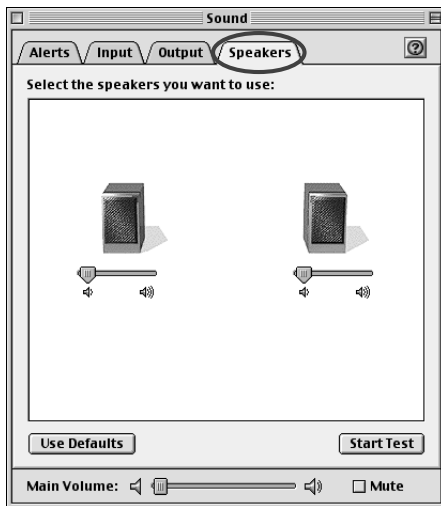
■ Settings the sound input/output

1. From the **Apple** menu, select **Control Panel - Sound**.



The **Sound** dialog box will appear.

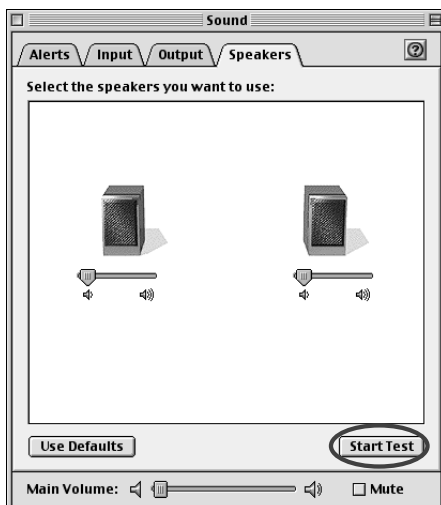
2. Click the Speakers tab or Speaker Settings.



NOTE

The main volume slider will not move.

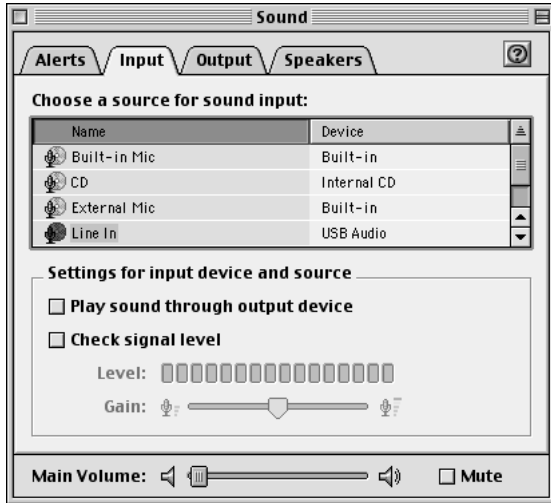
3. With the volume turned down on the **M-100FX** and on your peripheral audio equipment, click **[Start Test]**.



Test signals will be output from the M-100FX; left first, then right, as indicated in the screen.

Connecting the M-100FX to your computer

4. In the **Sound** dialog box, click the **Input** tab.
In **Choose a source for sound input (Device)**, select **USB audio**.



5. When you are finished making settings, close the **Sound** dialog box.
From the **File** menu, select **Quit**.

This completes driver settings.

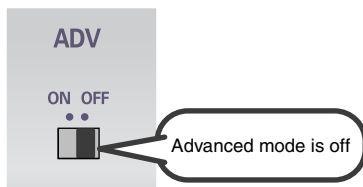
NOTE

Do not check “**Play sound through output device**”.

Connecting the M-100FX to your computer

Windows XP/2000-Anwender

1. Starten Sie Windows, wobei der M-100FX ausgesteckt ist.
Stecken Sie alle USB-Kabel außer der USB-Tastatur und der USB-Maus aus (falls vorhanden).
2. Beenden Sie alle aktuell ausgeführten Programme (Anwendungen).
Wenn Sie ein Virenschutzprogramm oder ähnliche Software verwenden, müssen Sie diese ebenfalls beenden.
3. Bringen Sie den Schalter **ADVANCE (Modusauswahl)** des M-100FX in die Position **OFF**.



4. Verwenden Sie das **USB-Kabel**, um den **M-100FX** mit Ihrem **Computer** zu verbinden.
 1. Verbinden Sie bei **ausgeschaltetem Netzschalter** den **Wechselstromadapter** mit dem **M-100FX**.
 2. Verbinden Sie den **Wechselstromadapter** mit einer elektrischen Steckdose.
 3. Verwenden Sie das **USB-Kabel**, um den **M-100FX** mit Ihrem **Computer** zu verbinden.
5. Bringen Sie den **Master Fader** des M-100FX in die Minimalposition und bringen Sie den Netzschalter in die Position **ON**.
Der M-100FX wird automatisch erkannt und der Treiber wird installiert.
6. Starten Sie Windows neu, sobald die Installation beendet ist.

Als nächstes müssen Sie die Einstellungen für den Treiber vornehmen.

(→**Einstellungen und Überprüfung** (S. 140))



Nachdem die Anschlüsse fertig gestellt wurden, schalten Sie die verschiedenen Geräte in der angegebenen Reihenfolge ein. Wenn Sie die Geräte in der falschen Reihenfolge einschalten, besteht die Gefahr von Fehlfunktionen und/oder Schäden an Lautsprechern und anderen Geräten.



Vergewissern Sie sich stets, dass die Lautstärke reduziert wurde, bevor Sie den Netzschalter betätigen. Beim Einschalten wird eventuell auch dann Sound ausgegeben, wenn der Lautstärkeregler ganz zurückgestellt wurde. Das ist jedoch normal und kein Anzeichen für eine Fehlfunktion.



Wenn Sie Windows XP verwenden, wurde die Installation fertiggestellt, sobald eine Meldung in der Task-Leiste angezeigt wird, die Sie darüber informiert, dass der **“Hardwareassistent”** nicht mehr aktiv ist.

Einstellungen und Überprüfung

Angabe des Audio-Eingabe/Ausgabeziels

Windows XP/2000/Me-Anwender

1. Öffnen Sie die **Systemsteuerung**.

Windows XP

Klicken Sie in Windows auf **Start** und wählen Sie im daraufhin angezeigten Menü **Systemsteuerung**.

Windows 2000/Me

Klicken Sie in Windows auf **Start** und wählen Sie im daraufhin angezeigten Menü **Einstellungen - Systemsteuerung**.

2. Öffnen Sie das Dialogfeld **Eigenschaften von Sounds und Audiogeräte**. (oder in Windows 2000/Me, **Eigenschaften von Sounds und Multimedia**).

Windows XP

Klicken Sie in **“Wählen Sie eine Kategorie”** auf **“Sounds, Sprachein- / ausgabe und Audiogeräte”**. Klicken Sie danach in **“oder wählen Sie ein Systemsteuerungssymbol”** auf das Symbol **Sounds und Audiogeräte**.

Windows 2000/Me

Doppelklicken Sie in der **Systemsteuerung** auf das Symbol **[Sounds und Multimedia]**, um das Dialogfeld **Eigenschaften für Sounds und Multimedia** zu öffnen.

3. Klicken Sie auf die Registerkarte **Audio**.

4. Klicken Sie bei **MIDI-Musikwiedergabe** auf das t, das sich rechts von **[Standardgerät]** befindet (bzw. in Windows 2000/Me rechts von **[Bevorzugtes Gerät]**) und wählen Sie folgende Option aus der angezeigten Liste aus.



Audiowiedergabe	Windows XP
	EDIROL M-100FX
Audioaufnahme	Windows 2000/Me
	USB-Audiogerät
Audiowiedergabe	Windows XP
	EDIROL M-100FX
Audioaufnahme	Windows 2000/Me
	USB-Audiogerät

5. Schließen Sie das Dialogfeld **Eigenschaften von Sounds und Audiogeräte**. Klicken Sie auf **[OK]**, um die Konfiguration abzuschließen.

Damit sind die Treibereinstellungen abgeschlossen.

Als nächstes müssen Sie die Einstellungen für die Lautstärkeregelung vornehmen.

(→ **Volume Control setting** (S. 133))



Abhängig von der Konfiguration Ihres Systems kann es vorkommen, dass das Symbol **Sounds und Audiogeräte** sofort in der **Systemsteuerung** (in der klassischen Anzeige) angezeigt wird. In diesem Fall doppelklicken Sie auf das Symbol **Sounds und Audiogeräte**.



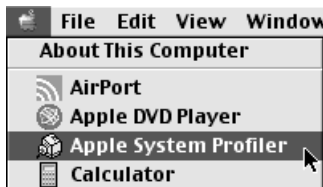
Wenn Sie das Symbol für **Sounds und Multimedia** nicht finden, klicken Sie auf **Alle Optionen der Systemsteuerung anzeigen** am linken Rand der Systemsteuerung.



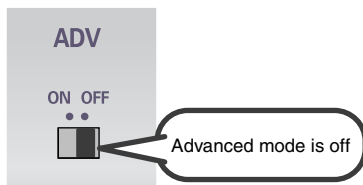
Unter **MIDI-Musikwiedergabe** können Sie diese Einstellungen so lassen, wie sie sind.

Macintosh-Anwender

1. Starten Sie den Macintosh, wobei der M-100FX angesteckt ist.
Stecken Sie alle USB-Kabel außer der USB-Tastatur und der USB-Maus aus (falls vorhanden).
2. Beenden Sie alle aktuell ausgeführten Programme (Anwendungen).
Wenn Sie ein Virenschutzprogramm oder ähnliche Software verwenden, müssen Sie diese ebenfalls beenden.
3. Nachdem Sie Mac OS gestartet haben, wählen Sie den **Apple System Profiler** im Menü **Apple**.
Daraufhin wird das Dialogfeld **“Apple System Profiler”** angezeigt.



4. Klicken Sie auf die Registerkarte **Devices and Volumes**.
5. Bringen Sie den Schalter **ADVANCE (Modusauswahl)** des M-100FX in die Position **OFF**.



6. Verwenden Sie das **USB-Kabel**, um den **M-100FX** mit Ihrem **Computer** zu verbinden.
 1. Verbinden Sie bei **ausgeschaltetem Netzschalter** den **Wechselstromadapter** mit dem **M-100FX**.
 2. Verbinden Sie den **Wechselstromadapter** mit einer elektrischen Steckdose.
 3. Verwenden Sie das **USB-Kabel**, um den **M-100FX** mit Ihrem **Computer** zu verbinden.

7. Bringen Sie den **Netzschalter** des M-100FX in die Position **ON**.
8. Warten Sie ungefähr fünf Sekunden lang.
Der M-100FX benutzt anschließend den Treiber, der im Mac OS enthalten ist. Während Sie noch warten, verändert sich die Bildschirmanzeige nicht, aber der M-100FX wird vom Computer erkannt. Arbeiten Sie währenddessen nicht mit der Maus oder mit der Tastatur.

NOTE

Nachdem die Anschlüsse fertig gestellt wurden, schalten Sie die verschiedenen Geräte in der angegebenen Reihenfolge ein. Wenn Sie die Geräte in der falschen Reihenfolge einschalten, besteht die Gefahr von Fehlfunktionen und/oder Schäden an Lautsprechern und anderen Geräten.

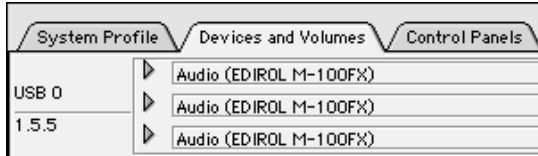
NOTE

Vergewissern Sie sich stets, dass die Lautstärke reduziert wurde, bevor Sie den Netzschalter betätigen. Beim Einschalten wird eventuell auch dann Sound ausgegeben, wenn der Lautstärkeregel ganz zurückgestellt wurde. Das ist jedoch normal und kein Anzeichen für eine Fehlfunktion.

Connecting the M-100FX to your computer

- 9.** Um zu prüfen, ob die Erkennung abgeschlossen ist, wechseln Sie erneut in den **Apple System Profiler** und wählen Sie **“Update all information”** im Menü **Commands**.

Im Bereich **USB** werden drei Audiogeräte angezeigt.



Wenn diese Geräte angezeigt werden, war die Treiberinstallation erfolgreich.

- 10.** Klicken Sie im Menü **File** auf **Quit**, um den **“Apple System Profiler”** zu beenden.

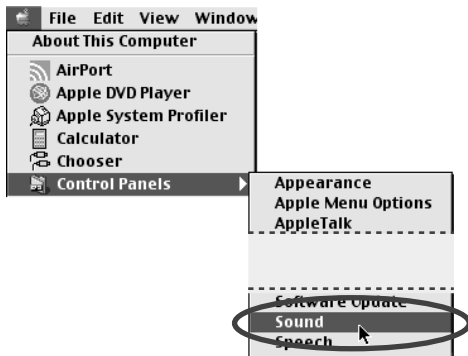
Wenn diese Geräte nicht angezeigt werden, trennen Sie den M-100FX vom Anschluss, warten ca. 10 Sekunden und wiederholen alle Schritte ab **Schritt 2**.

Als nächstes nehmen Sie die Einstellungen für den Treiber vor.

(→Anpassen der Soundedingabe/ausgabe (S. 143))

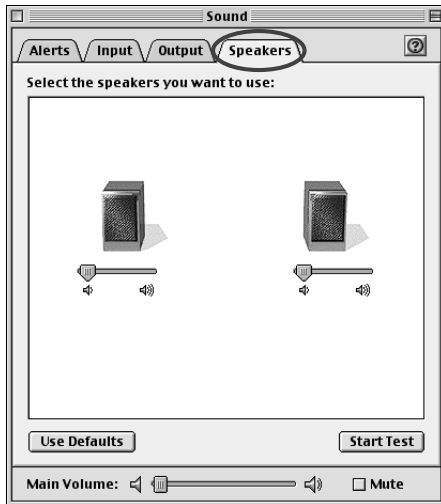
■ Anpassen der Soundeingabe/ausgabe

1. Wählen Sie im Menü **Apple** den Menüpunkt **Control Panel - Sound**.



Das Dialogfeld **Sound** wird angezeigt.

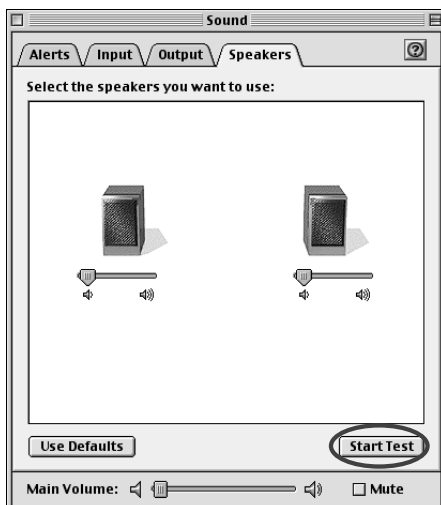
2. Klicken Sie auf die Registerkarte **Speakers** oder **Speaker Settings**.



NOTE

Der Lautstärke-Schieberegler bleibt dabei unverändert.

3. Reduzieren Sie die Lautstärke des **M-100FX** und Ihrer Peripherie-Audiogeräte und klicken Sie anschließend auf **[Start Test]**.

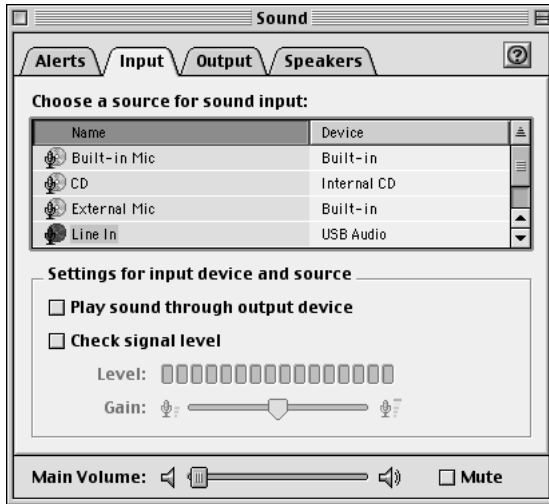


Anschließend werden Testsignale aus dem M-100FX ausgegeben; zuerst links, dann rechts, wie im Bildschirm angezeigt.

Connecting the M-100FX to your computer

- 4.** Im Dialogfeld **Sound** (Ton) klicken Sie auf die Registerkarte **Input** (Eingang).

Wählen Sie in **Choose a source for sound input:** (Wählen Sie ein Gerät für die Tonausgabe) die Option **USB Audio**.



- 5.** Nachdem Sie alle Einstellungen vorgenommen haben, schließen Sie das Dialogfeld **Sound**.

Wählen Sie im Menü **File** die Option **Quit**.

Damit sind die Treibereinstellungen abgeschlossen.

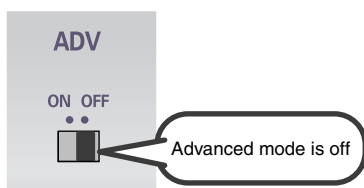
NOTE

Aktivieren Sie nicht **[Play sound through output device]**. (Ton über das Ausgabegerät abspielen).

Connecting the M-100FX to your computer

Windows XP/2000

1. Le M-100FX déconnecté, démarrez l'ordinateur.
Débranchez tous les câbles USB, à l'exception de ceux du clavier et de la souris (le cas échéant).
2. Quittez tous les logiciels (applications) actifs.
Si vous utilisez un anti-virus, quittez-le également.
3. Placez le commutateur **ADV** du M-100FX sur la position **OFF**.



4. Utilisez le **câble USB** pour relier le **M-100FX** à votre **ordinateur**.
 1. Avec l'**interrupteur d'alimentation** sur **OFF**, branchez l'**adaptateur secteur** sur le **M-100FX**.
 2. Branchez le **cordon secteur** sur une prise électrique.
 3. Utilisez le **câble USB** pour relier le **M-100FX** à votre **ordinateur**.
5. Baissez le **curseur du volume général** en position minimum, puis appuyez sur l'**interrupteur d'alimentation (ON)**.
Le M-100FX est détecté automatiquement, le pilote est installé.
6. Une fois l'installation terminée, redémarrez Windows.

Vous devez ensuite procéder à la configuration du pilote.
(→**Configuration et contrôle** (p. 146))

NOTE

Une fois les connexions effectuées, mettez sous tension les différents appareils dans l'ordre spécifié. Ne pas respecter cet ordre peut entraîner des dysfonctionnements et/ou endommager les enceintes ou tout autre appareil.

NOTE

Baissez toujours le volume avant la mise sous tension. Même avec le volume à zéro, il se peut que vous entendiez des sons lors de la mise sous tension, mais cela ne signifie rien d'anormal.

MEMO

Si vous utilisez Windows XP, l'installation est terminée lorsque le message près de la barre des tâches indiquant "**Nouveau matériel détecté**" disparaît.

Configuration et contrôle

■ Spécification de la destination d'entrée/sortie audio

Windows XP/2000/Me

1. Ouvrez le **Panneau de configuration**.

Windows XP

Cliquez sur le bouton **Démarrer** de Windows, puis dans le menu qui s'affiche, choisissez **Panneau de configuration**.

Windows 2000/Me

Cliquez sur le bouton **Démarrer** de Windows, puis dans le menu qui s'affiche, choisissez **Paramètres | Panneau de configuration**.

2. Ouvrez la boîte de dialogue **Propriétés Son et périphériques multimédia**. (dans Windows 2000/Me, **Propriétés Son et multimédia**).

Windows XP

Dans "**Choisissez une catégorie**", cliquez sur "**Son, voix et périphériques audio**". Dans "**ou choisissez une icône du Panneau de configuration**", cliquez sur l'icône **Sons et périphériques audio**.

Windows 2000/Me

Dans le **Panneau de configuration**, cliquez deux fois sur l'icône **Sons et Multimédia** pour ouvrir la boîte de dialogue "**Propriétés de Sons et multimédia**".

3. Cliquez sur l'onglet **Audio**.

4. Pour **Lecture MIDI**, cliquez sur le "t" situé à droite de [**Périphérique par défaut**] (identique avec Windows 2000/Me, [**Périphérique par défaut**]), puis sélectionnez ce qui suit dans la liste qui s'affiche.



Lecture audio	Windows XP
	EDIROL M-100FX
Enregistrement audio	Windows 2000/Me
	Périphérique audio USB
Enregistrement audio	Windows XP
	EDIROL M-100FX
	Windows 2000/Me
	Périphérique audio USB

5. Fermez la boîte de dialogue **Propriétés Son et périphériques multimédia**.

Cliquez sur [**OK**] pour confirmer.

Le paramétrage du pilote est terminé.

Vous devez ensuite procéder à la configuration du volume.

(→ **Volume Control setting** (p. 133))



Selon la configuration de votre ordinateur, l'icône **Sons et périphériques audio** s'affiche peut-être dans le **Panneau de configuration** (Vue classique). Dans ce cas, cliquez deux fois sur l'icône **Sons et périphériques audio**.



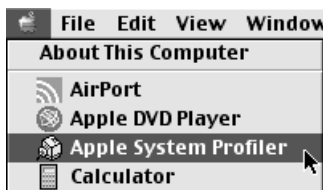
Si l'icône **Sons et multimédia** n'est pas affichée, cliquez sur **Afficher toutes les options du Panneau de configuration** sur le cadre de gauche.



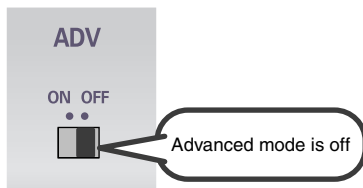
Pour **Lecture MIDI**, vous pouvez laisser les réglages tel quel.

Utilisateurs Macintosh

1. Le M-100FX déconnecté, démarrez le Macintosh.
Débranchez tous les câbles USB, à l'exception de ceux du clavier et de la souris (le cas échéant).
2. Quittez tous les logiciels (applications) actifs.
Si vous utilisez un anti-virus, quittez-le également.
3. Après avoir démarré Mac OS, sélectionnez **Informations système Apple** dans le menu **Apple**.
La boîte de dialogue "**Informations système Apple**" s'affiche.



4. Cliquez sur l'onglet **Périphériques/Volumes**.
5. Placez le **commutateur ADV** du M-100FX sur la position **OFF**.



6. Utilisez le **câble USB** pour relier le **M-100FX** à votre **ordinateur**.
 1. Avec le **commutateur d'alimentation** sur **OFF**, branchez l'**adaptateur secteur** sur le **M-100FX**.
 2. Branchez le **cordon secteur** sur une prise électrique.
 3. Utilisez le **câble USB** pour relier le **M-100FX** à votre **ordinateur**.

7. Placez l'**interrupteur d'alimentation** du M-100FX sur **ON**.

8. Attendez environ cinq secondes.
Le M-100FX utilise un pilote compris dans le système Macintosh (Mac OS). Pendant que vous patientez, l'affichage ne change pas, mais le M-100FX est bien en cours de détection. Ne touchez ni à la souris, ni au clavier.

NOTE

Une fois les connexions effectuées, mettez sous tension les différents appareils dans l'ordre spécifié. Ne pas respecter cet ordre peut entraîner des dysfonctionnements et/ou endommager les enceintes ou tout autre appareil.

NOTE

Baissez toujours le volume avant la mise sous tension. Même avec le volume à zéro, il se peut que vous entendiez des sons lors de la mise sous tension, mais cela ne signifie rien d'anormal.

Connecting the M-100FX to your computer

- 9.** Pour vérifier que la détection est positive, affichez à nouveau les **Informations système Apple** et sélectionnez **Mettre à jour toutes les informations** du menu **Commandes**.

Dans la zone **USB**, trois appareils audio sont affichés.



Si l'affichage est correct, l'installation du pilote a réussi.

- 10.** Dans le menu **Fichier**, cliquez sur **Quitter** pour fermer **Informations système Apple**.

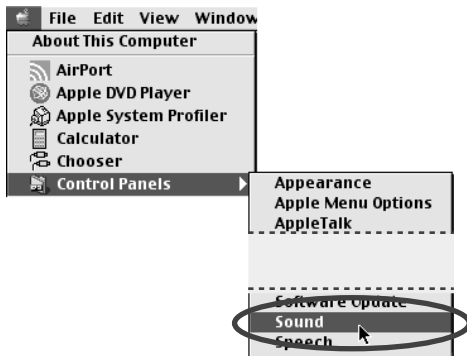
Si les appareils ne s'affichent pas correctement, débranchez le M-100FX, attendez environ dix secondes, puis répétez la procédure à partir de l'étape 2.

Vous devez ensuite procéder à la configuration du pilote.

(→Réglage de l'entrée et de la sortie du son (p. 149))

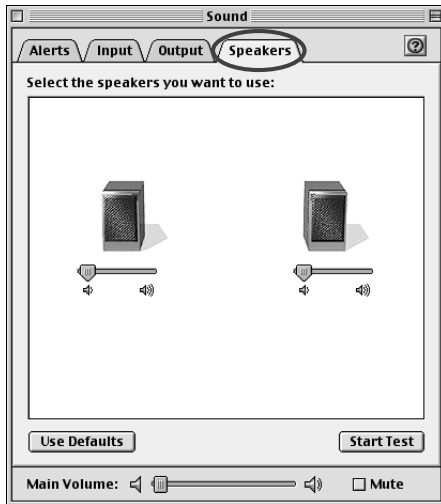
■ Réglage de l'entrée et de la sortie du son

1. Dans le menu **Apple**, sélectionnez **Tableaux de bord - Son**.



La boîte de dialogue **Son** s'affiche.

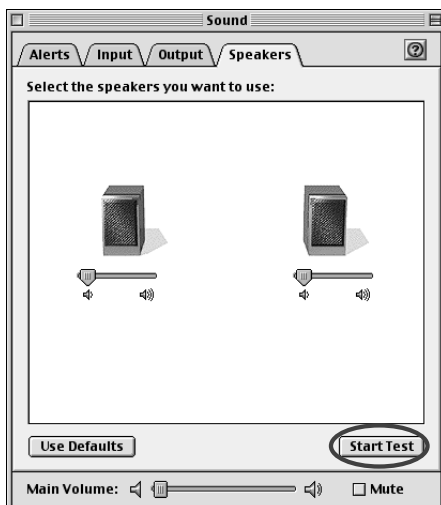
2. Cliquez sur l'onglet Haut-parleur ou Configuration des HP.



NOTE

Le curseur du volume général ne bouge pas.

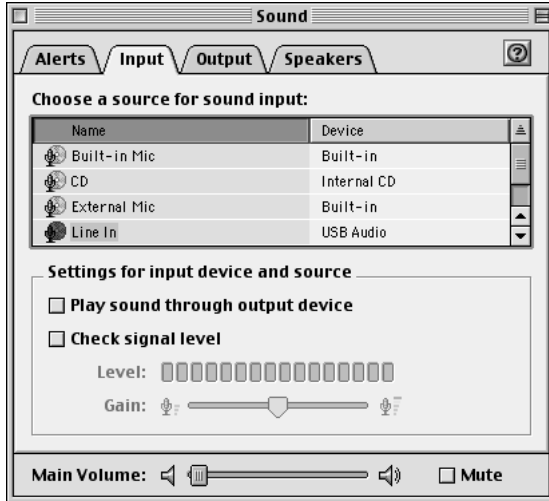
3. Baissez le volume sur le **M-100FX** et sur votre équipement audio, puis cliquez sur **[Lancer test]**.



Des signaux de test seront transmis par le M-100FX; à gauche d'abord, puis à droite, comme indiqué à l'écran.

Connecting the M-100FX to your computer

4. Dans la boîte de dialogue **Son**, cliquez sur l'onglet **Entrée**.
Dans **Choisir une source d'entrée audio (Périphérique)**, choisissez **USB Audio**.



5. Lorsque vous avez terminé la configuration, fermez la boîte de dialogue **Son**.
Dans le menu **File**, sélectionnez **Quit**.

Le paramétrage du pilote est terminé.

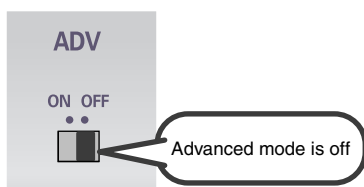
NOTE

Ne cochez pas “**Lecture du son par le périphérique de sortie**”.

Connecting the M-100FX to your computer

Utenti Windows XP/2000

- 1.** Dopo aver scollegato l'M-100FX, avviare Windows.
Scollegare tutti i cavi USB, ad eccezione della tastiera e del mouse USB, se utilizzati.
- 2.** Chiudere tutti i programmi in corso di esecuzione.
Se si utilizza un programma antivirus o simile, accertarsi che sia anch'esso chiuso.
- 3.** Spostare l'**interruttore ADVANCE (selezione del modo)** dell'M-100FX in posizione **OFF**.



- 4.** Utilizzare il **cavo USB** per collegare l'M-100FX al **computer**.
 - 1.** Mantenendo l'**interruttore di alimentazione** in posizione **OFF (spento)**, collegare l'adattatore **AC** all'M-100FX.
 - 2.** Collegare l'**adattatore AC** a una presa elettrica.
 - 3.** Utilizzare il **cavo USB** per collegare l'M-100FX al **computer**.
- 5.** Spostare l'**attenuatore master** dell'M-100FX sul minimo e spostare l'interruttore di alimentazione in posizione **ON (acceso)**.
L'M-100FX verrà rilevato automaticamente e il driver verrà installato.
- 6.** Alla fine dell'installazione, riavviare Windows.

Successivamente sarà necessario configurare il driver.
(→ **Configurazione e verifica** (pag. 152))



Una volta terminati i collegamenti, accendere i vari dispositivi nell'ordine indicato. Se i dispositivi vengono accesi nell'ordine sbagliato, si rischia di provocare malfunzionamenti e/o danni ai diffusori e agli altri dispositivi.



Prima di accendere gli apparecchi, accertarsi che il livello del volume sia al minimo. Si potrebbero sentire comunque dei suoni all'accensione, anche se il volume è al minimo; è normale e non c'è motivo di preoccuparsi.



Se si utilizza Windows XP, l'installazione risulterà conclusa una volta che il messaggio "**Trovato nuovo hardware**" non è più visualizzato nella barra delle applicazioni.

Configurazione e verifica

■ Indicazione della destinazione audio d'ingresso/uscita

Utenti Windows XP/2000/Me

1. Aprire il **Pannello di controllo**.

Windows XP

In Windows, fare clic sul pulsante **Start** e nel menu selezionare **Pannello di controllo**.

Windows 2000/Me

In Windows, fare clic sul pulsante **Start** e nel menu selezionare **Impostazioni | Pannello di controllo**.

2. Aprire la finestra di dialogo **Proprietà – Suoni e periferiche audio**. (oppure in Windows 2000/Me, **Proprietà - Suoni e multimedia**).

Windows XP

In “**Scegliere una categoria**”, fare clic su “**Suoni, voce e periferiche audio**”. Successivamente in “**o un’icona del Pannello di controllo**”, fare clic sull’icona **Suoni e periferiche audio**.

Windows 2000/Me

Nel **Pannello di controllo**, fare doppio clic sull’icona **Suoni e multimedia** per aprire la finestra “**Proprietà suoni e multimedia**”.

3. Fare clic sulla scheda **Audio**.

4. Per **Riproduzione musica MIDI**, fare clic su **ta destra di [Periferica predefinita]** (oppure in Windows 2000/Me, **[Periferica preferenziale]**), e selezionare quanto segue nell’elenco visualizzato.



Riproduzione audio	Windows XP
	EDIROL M-100FX
Registrazione audio	Windows 2000/Me
	Periferica audio USB
Riproduzione audio	Windows XP
	EDIROL M-100FX
Registrazione audio	Windows 2000/Me
	Periferica audio USB

5. Chiudere la finestra di dialogo **Proprietà – Suoni e periferiche audio**.

Fare clic su **[OK]** per completare le impostazioni.

La procedura di configurazione del driver è giunta al termine. Successivamente sarà necessario configurare il Controllo volume. (→Volume Control setting (pag. 133))



A seconda di come il sistema è configurato, l’icona **Suoni e periferiche audio** potrebbe essere visualizzata direttamente nel **Pannello di controllo** (visualizzazione classica). In tal caso fare doppio clic sull’icona **Suoni e periferiche audio**.



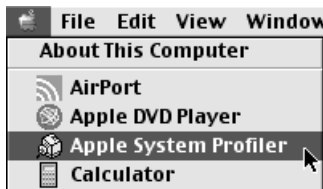
Se l’icona **Suoni e multimedia** non appare, fare clic su “**Visualizza tutte le opzioni del pannello di controllo**” nel riquadro sul bordo sinistro.



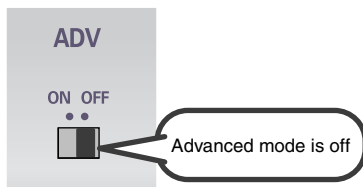
Riguardo all’opzione **Riproduzione musica MIDI**, lasciare le impostazioni come stanno.

Utenti Macintosh

1. Dopo aver scollegato l'M-100FX, avviare il Macintosh.
Scollegare tutti i cavi USB, ad eccezione della tastiera e del mouse USB, se utilizzati.
2. Chiudere tutti i programmi in corso di esecuzione.
Se si utilizza un programma antivirus o simile, accertarsi che sia anch'esso chiuso.
3. Dopo aver avviato Mac OS, selezionare **Apple System Profiler** nel menu **Apple**.
Viene visualizzata la finestra di dialogo "Apple System Profiler".



4. Fare clic sulla scheda **Devices and Volumes**.
5. Spostare l'**interruttore ADVANCE (selezione del modo)** dell'M-100FX in posizione **OFF**.



6. Utilizzare il **cavo USB** per collegare l'M-100FX al **computer**.
 1. Mantenendo l'**interruttore di alimentazione** in posizione **OFF (spento)**, collegare l'adattatore **AC** all'M-100FX.
 2. Collegare l'**adattatore AC** a una presa elettrica.
 3. Utilizzare il **cavo USB** per collegare l'M-100FX al **computer**.

7. Spostare l'**interruttore di alimentazione** dell'M-100FX in posizione **ON (acceso)**.

8. Attendere circa cinque secondi.
L'M-100FX utilizzerà il driver fornito con MacOS.
Durante l'operazione, l'M-100FX verrà rilevato anche se non viene visualizzato alcun messaggio in questo senso. Evitare di toccare il mouse o la tastiera.

NOTE

Una volta terminati i collegamenti, accendere i vari dispositivi nell'ordine indicato. Se i dispositivi vengono accesi nell'ordine sbagliato, si rischia di provocare malfunzionamenti e/o danni ai diffusori e agli altri dispositivi.

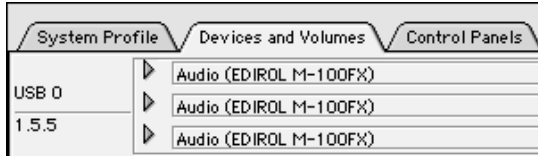
NOTE

Prima di accendere gli apparecchi, accertarsi che il livello del volume sia al minimo. Si potrebbero sentire comunque dei suoni all'accensione, anche se il volume è al minimo; è normale e non c'è motivo di preoccuparsi.

Connecting the M-100FX to your computer

9. Per accertarsi che l'apparecchio sia stato rilevato correttamente, riaprire **"Apple System Profiler"** e selezionare **"Update all information"** nel menu **Commands**.

Nell'area **USB**, verranno visualizzati tre dispositivi audio.



Se sono visualizzati correttamente, l'installazione del driver è riuscita.

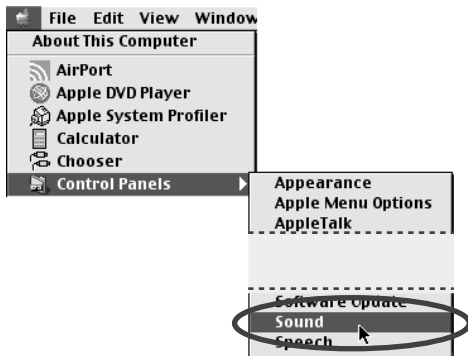
10. Nel menu **File**, fare clic su **Quit** per chiudere la finestra **"Apple System Profiler"**.

Se non sono visualizzati correttamente, scollegare l'M-100FX, aspettare circa dieci secondi, e ripetere la procedura a partire dal **passo 2**.

Successivamente sarà necessario configurare il driver.
(→ **Impostazione dell'ingresso/uscita audio** (pag. 155))

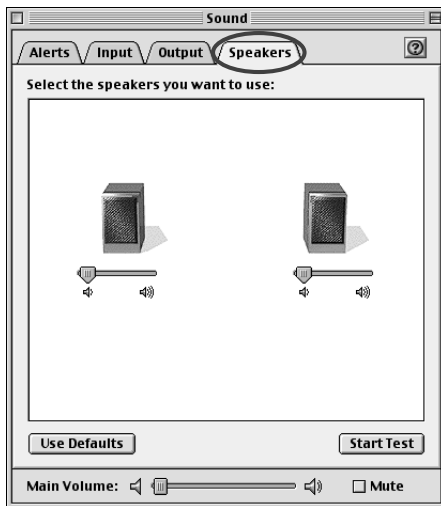
■ Impostazione dell'ingresso/uscita audio

1. Nel menu **Apple**, selezionare **Control Panel - Sound**.



Appare la finestra di dialogo **Sound**.

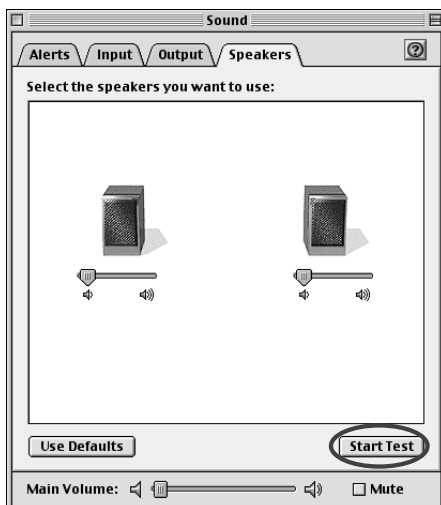
2. Fare clic sulla scheda **Speakers** o **Speaker Settings**.



NOTE

Lo slider **Main Volume** non si sposta.

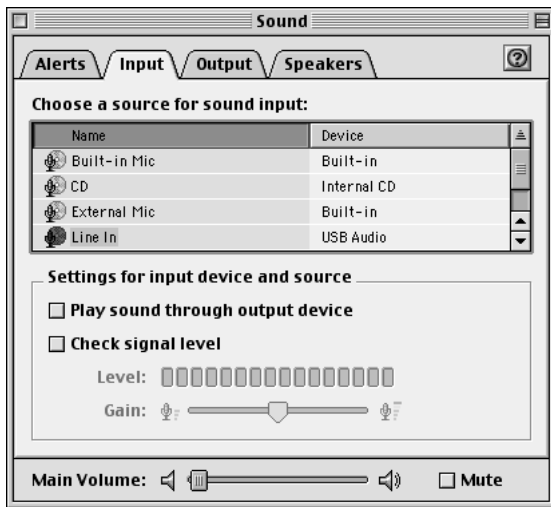
3. Mantenendo il volume al minimo sull'**M-100FX** e sugli altri apparecchi audio, fare clic su **[Start Test]**.



Come visualizzato sullo schermo, l'M-100FX emetterà dei segnali di controllo prima a sinistra e poi a destra.

Connecting the M-100FX to your computer

4. Nella finestra di dialogo **Sound**, fare clic sulla scheda **Input**.
In **Choose a source for sound input (Device)**, selezionare **USB Audio**.



5. Alla fine delle impostazioni, chiudere la finestra di dialogo **Sound**.
Nel menu **File** selezionare **Quit**.

La procedura di configurazione del driver è giunta al termine.

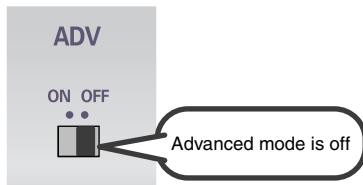
NOTE

Non selezionare “**Play sound through output device**”.

Connecting the M-100FX to your computer

Usuarios de Windows XP o 2000

1. Con el M-100FX desconectado, inicie Windows.
Desconecte todos los cables USB excepto el del teclado USB y el ratón USB (si se utilizan).
2. Salga de todo el software que se esté ejecutando (aplicaciones).
Si está utilizando un programa antivirus o software similar, asegúrese de salir también de éste.
3. Disponga el **interruptor ADVANCE (de selección de modo)** del M-100FX en la posición **OFF**.



4. Utilice el **cable USB** para conectar el **M-100FX** al **PC**.
 1. Con el **interruptor POWER** en la posición **OFF**, conecte el **adaptador de CA** al **M-100FX**.
 2. Conecte el **adaptador de CA** a una toma de corriente eléctrica.
 3. Utilice el **cable USB** para conectar el **M-100FX** al **PC**.
5. Baje el **atenuador de volumen global** hasta la mínima posición y disponga el interruptor **POWER** en la posición **ON**.
El sistema detectará el M-100FX automáticamente y se instalará el controlador.
6. Cuando finalice la instalación, reinicie Windows.

A continuación, deberá configurar el controlador.
(→**Configuración y comprobación** (pág. 158))



NOTE

Una vez completadas las conexiones, encienda los diferentes aparatos en el orden especificado. Si enciende los aparatos en un orden equivocado, puede causar anomalías en el funcionamiento o daños en los altavoces y otros aparatos.



NOTE

Asegúrese siempre de tener bajado el volumen antes de encender la unidad. Aunque tenga el volumen completamente bajado, puede oír algún sonido al encender la unidad pero esto es algo normal y no es indicio de un mal funcionamiento de la misma.



MEMO

Si utiliza Windows XP, la instalación finaliza cuando desaparece el mensaje que surge cerca de la barra de tareas que le indica "**Hardware nuevo encontrado**".

Configuración y comprobación

■ Especificación del destino de entrada/salida de audio

Usuarios de Windows XP/2000/Me

1. Abra el **Panel de control**.

Windows XP

Haga clic en el botón **Inicio** de Windows y, en el menú que aparece, seleccione **Panel de control**.

Windows 2000/Me

Haga clic en el botón **Inicio** y, en el menú que aparece, seleccione **Configuración | Panel de control**.

2. Abra el cuadro de diálogo **Propiedades de sonidos y dispositivos de audio**.

(o en Windows 2000/Me, **Propiedades de Sonido y multimedia**).

Windows XP

En “**Elegir una categoría**”, haga clic en “**Sonidos, voz y dispositivos de audio**”. A continuación, en “**o elegir un icono del Panel de control**”, haga clic en el icono **Sonidos y dispositivos de audio**.

Windows 2000/Me

En **Panel de control**, haga doble clic en el icono **Sonidos y multimedia** para abrir el cuadro de diálogo “**Propiedades de sonido y multimedia**”.

3. Haga clic en la ficha **Audio**.

4. Para la **reproducción de música MIDI**, haga clic en la **t** que aparece a la derecha de **[Dispositivo predeterminado]** (o **[Dispositivo preferido]**, en Windows 2000 o Me) y seleccione lo siguiente en la lista que aparece.



Reproducción de sonido	Windows XP
	EDIROL M-100FX
Grabación de sonido	Windows 2000/Me
	Dispositivo de audio USB
Grabación de sonido	Windows XP
	EDIROL M-100FX
Grabación de sonido	Windows 2000/Me
	Dispositivo de audio USB

5. Cierre el cuadro de diálogo **Propiedades de sonidos y dispositivos de audio**.

Haga clic en **[Aceptar]** para finalizar la configuración.

Esta acción finalizará la configuración del controlador.
A continuación, deberá configurar el Control de volumen.
 (→**Volume Control setting** (pág. 133))



En función de cómo tenga configurado el sistema, puede que el icono **Sonidos y dispositivos de audio** aparezca directamente en el **Panel de control** (en la Vista clásica). En ese caso, haga doble clic en el icono **Sonidos y dispositivos de audio**.



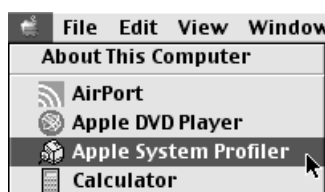
Si no aparece el icono **Sonido y multimedia**, haga clic en “**Mostrar todas las opciones del Panel de control**” que aparece en el marco izquierdo del panel.



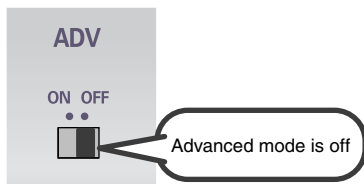
Para la **reproducción de música MIDI**, puede dejar la configuración tal como está.

Usuarios de Macintosh

1. Con el M-100FX desconectado, inicie Macintosh.
Desconecte todos los cables USB excepto el del teclado USB y el ratón USB (si se utilizan).
2. Salga de todo el software que se esté ejecutando (aplicaciones).
Si está utilizando un programa antivirus o software similar, asegúrese de salir también de éste.
3. Una vez que haya iniciado el sistema operativo Mac, seleccione **Apple System Profiler** del menú **Apple**.
Aparecerá el cuadro de diálogo “**Apple System Profiler**”.



4. Haga clic en la ficha **Devices and Volumes**.
5. Disponga el **interruptor ADVANCE (de selección de modo)** del M-100FX en la posición **OFF**.



6. Utilice el **cable USB** para conectar el **M-100FX** al **sistema**.
 1. Con el **interruptor POWER** en la posición **OFF**, conecte el **adaptador de CA** al **M-100FX**.
 2. Conecte el **adaptador de CA** a una toma de corriente eléctrica.
 3. Utilice el **cable USB** para conectar el **M-100FX** al **sistema**.

7. Establezca el **interruptor POWER** del M-100FX en la posición **ON**.
8. Espere unos cinco segundos.
El M-100FX utilizará el controlador integrado en el sistema operativo Mac. Mientras espere, el contenido de la pantalla no cambiará, pero el sistema estará detectando el M-100FX. No toque ni el ratón ni el teclado.

NOTE

Una vez completadas las conexiones, encienda los diferentes aparatos en el orden especificado. Si enciende los aparatos en un orden equivocado, puede causar anomalías en el funcionamiento o daños en los altavoces y otros aparatos.

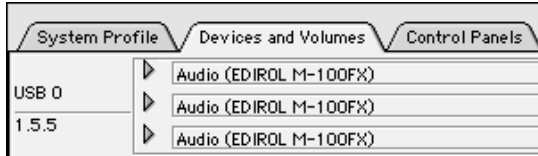
NOTE

Asegúrese siempre de tener bajado el volumen antes de encender la unidad. Aunque tenga el volumen completamente bajado, puede oír algún sonido al encender la unidad pero esto es algo normal y no es indicio de un mal funcionamiento de la misma.

Connecting the M-100FX to your computer

9. Para comprobar que el sistema ha detectado el controlador, diríjase otra vez a “**Apple System Profiler**” y seleccione “**Update all information**” en el menú **Commands**.

En el área **USB**, aparecerán tres dispositivos de audio.



Si éstos se muestran correctamente, la instalación del controlador se ha efectuado satisfactoriamente.

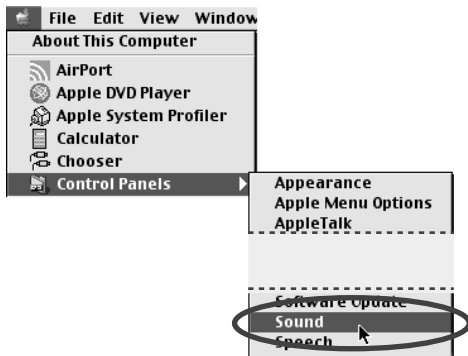
10. En el menú **File**, haga clic en **Quit** para cerrar “**Apple System Profiler**”.
Si no se muestran correctamente, desconecte el M-100FX, espere unos diez segundos y repita el procedimiento desde el **paso 2**.

A continuación, deberá configurar el controlador.

(→**Configuración de la entrada/salida de sonido** (pág. 161))

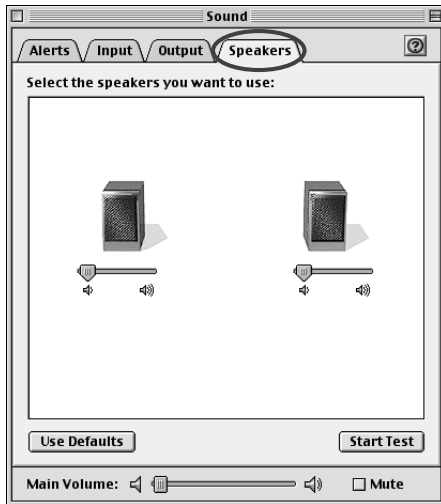
■ Configuración de la entrada/salida de sonido

1. En el menú **Apple**, seleccione **Control Panel - Sound**.



Aparecerá el cuadro de diálogo **Sound**.

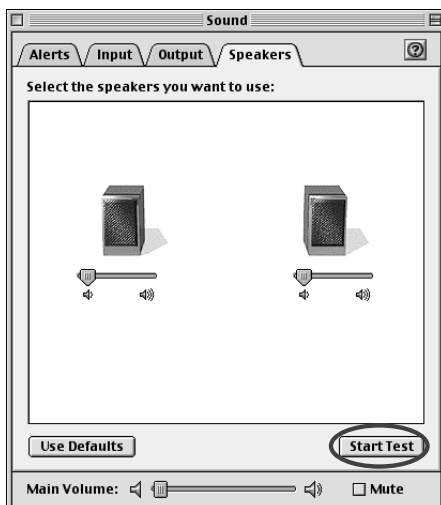
2. Haga clic en la ficha **Speaker** o **Speaker Settings**.



NOTE

El deslizador de volumen principal no se moverá.

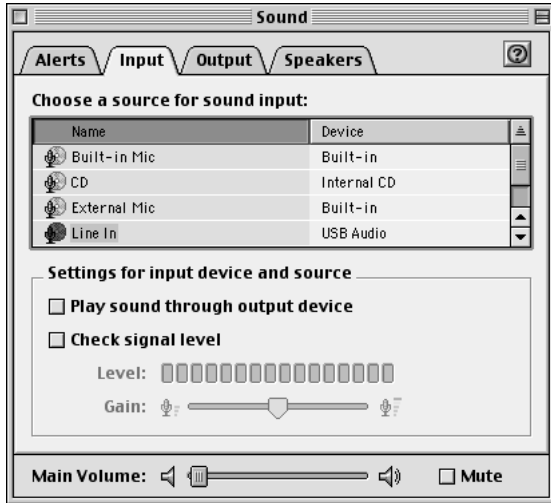
3. Con el volumen bajado en el **M-100FX** y en su equipo de audio periférico, haga clic en **[Start test]**.



Las señales de prueba saldrán del M-100FX; de la izquierda primero y de la derecha después, tal como se indica en la pantalla.

Connecting the M-100FX to your computer

- 4.** En el cuadro de diálogo **Sound**, haga clic en la ficha **Input**.
En **Choose a source for sound input (Device)**, seleccione **USB audio**.



- 5.** Cuando haya acabado con la configuración, cierre el cuadro de diálogo **Sound**.
En el menú **File**, seleccione **Quit**.

Con esto finalizará la configuración del controlador.

NOTE

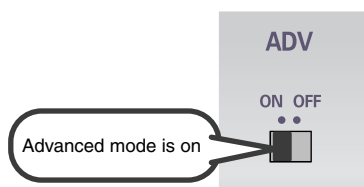
No seleccione "Play sound through output device".

Using Advance mode

If you want to use the M-100FX with ASIO-compatible software or an application that supports 24-bit audio, you must use Advance mode. This requires that you install a special driver.

- **ASIO** (Steinberg Audio Stream In/Out Interface)
This is an audio interface protocol promoted by the Steinberg Corporation. If the M-100FX is used with ASIO-compatible software, the audio synchronization will be more accurate, allowing you to utilize a more sophisticated music production environment.

Advanced mode



In this position, Advanced mode is on.

NOTE

In order for the setting of the **ADV (Advanced mode select) switch** to take effect, you must exit all sequence software or other applications that are using the M-100FX, and turn the power of the M-100FX off, then on again.

The special driver included on the CD-ROM lets you record/play/edit audio at higher quality and more stable timing.

In Advanced mode, the M-100FX is able to exchange audio data with your computer at a 24-bit depth and 44.1 kHz sampling frequency. Use Advanced mode if you are using the M-100FX with high-quality audio recording/playback/editing software such as applications that support 24-bit audio such as the Cakewalk series and Cool Edit, or ASIO-compatible applications such as Cubase VST, Logic Audio, or Singer Songwriter.

The procedure for installation and settings will depend on your system.

Proceed to the page for the system you are using.

- Windows XP users.....(p. 163)
- Windows 2000 users.....(p. 164)
- Windows Me/98 users.....(p. 165)
- Macintosh users(p. 168)

Installing the special driver (Windows)

■ Windows XP users

1. With the M-100FX disconnected, start up Windows.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
 - * If you are using Windows XP Professional, you must log on using a user name with an administrative account type (e.g., Administrator).
2. Click the Windows **Start** button, and from the menu that appears, select **Control Panel**. In **Control Panel**, double-click the **System** icon.
 - * If you are using Windows XP and cannot find **System**, click "**Switch to classic view**" to select the Classic view.
3. Click the **Hardware** tab, and then click [**Driver Signing**].
4. In the **Driver Signing Options** dialog box, select "**Ignore**" and click [**OK**].
 - * If the current setting is "Warn" or "Block", set it to "Ignore" here, then change it back to the original setting after you have finished installing the driver.
5. Click [**OK**] to close the **System Properties** dialog box.
6. Exit all currently running software (applications).
Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.
7. Insert the CD-ROM into the CD-ROM drive of your computer.
8. Click the Windows **Start** button. From the menu that appears, select "**Run...**".
9. In the "**Run...**" dialog box, input the following into the "**Open**" field, and click [**OK**].
D:\DRIVER\USB_XP2K\SETUPINF.EXE
 - * The drive name "**D:**" may be different for your system. Specify the drive name of your CD-ROM drive.
10. The **SetupInf** dialog box will appear.
You are now ready to install the driver.
11. Place the M-100FX's **ADVANCE (mode select) switch** in the **ON** position.
12. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
13. Connect the **AC adaptor** to an electrical outlet.
14. Use the **USB cable** to connect the **M-100FX** to your **computer**.
15. Set the M-100FX's **power switch** to the **ON** position.

Using Advance mode

16. The **Found New Hardware Wizard** will appear. Make sure that the screen indicates “**EDIROL M-100FX**”, select “**Install from a list or specific location (Advanced)**”, and click **[Next]**.

17. Select “**Don’t search. I will choose the driver to install,**” and click **[Next]**.

18. Make sure that the “**Model**” field indicates “**EDIROL M-100FX**”, and click **[Next]**.

* If the “*Driver Signing Options*” setting is not set to “*Ignore*” in step 4, the **Install Hardware** dialog box will appear. If the **[Continue Anyway]** button is displayed, click **[Continue Anyway]** to continue the installation. If you are unable to continue, click **[STOP Installation]** or **[OK]**, and try the driver installation once again from step 1.

19. The **Insert Disk** dialog box will appear. Click **[OK]**.

20. The **Files Needed** dialog box will appear. Input the following into the “**Copy files from**” field, and click **[OK]**.

D:\DRIVER\USB_XP2K

* If the “*Driver Signing Options*” setting is not set to “*Ignore*” in step 4, the **Install Hardware** dialog box will appear. Click **[Continue Anyway]** to continue the installation.

21. The **Found New Hardware Wizard** will appear. Verify that “**EDIROL M-100FX**” is displayed, and click **[Finish]**.

Wait until “**Found New Hardware**” appears near the taskbar.

22. When driver installation has been completed, the **System Settings Change** dialog box will appear. Click **[Yes]**.

Windows will restart automatically.

Next, you will need to make the driver settings.

(→ **Driver settings (p. 166)**)

■ Windows 2000 users

1. With the M-100FX disconnected, start up Windows. Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

* You must log on using a user name with an administrative account type (e.g., Administrator).

2. Click the Windows **Start** button, and from the menu that appears, select **Settings | Control Panel**. In **Control Panel**, double-click the **System** icon.

3. Click the **Hardware** tab, and then click **[Driver Signature]**.

4. In the **Driver Signing Options** dialog box, select “**Ignore**” and click **[OK]**.

* If the current setting is “*Warn*” or “*Block*”, set it to “*Ignore*” here, then change it back to the original setting after you have finished installing the driver.

5. Click **[OK]** to close the **System Properties** dialog box.

6. Exit all currently running software (applications).

Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.

7. Insert the CD-ROM into the CD-ROM drive of your computer.

8. Click the Windows **Start** button. From the menu that appears, select “**Run...**”.

9. In the “**Run...**” dialog box, input the following into the “**Open**” field, and click **[OK]**.

D:\DRIVER\USB_XP2K\SETUPINF.EXE

* The drive name “**D:**” may be different for your system. Specify the drive name of your CD-ROM drive.

10. The **SetupInf** dialog box will appear.

You are now ready to install the driver.

11. Place the M-100FX’s **ADVANCE (mode select)** switch in the **ON** position.

12. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.

13. Connect the **AC adaptor** to an electrical outlet.

14. Use the **USB cable** to connect the **M-100FX** to your computer.

15. Set the M-100FX’s **power switch** to the **ON** position.

* If the “*Driver Signing Options*” setting was not set to “*Ignore*” in step 4, a dialog box will inform you that the digital signature was not found. If the **[Yes]** button is displayed, click **[Yes]** to continue installation. If you are unable to continue, click **[No]** or **[OK]**, and try the driver installation once again from step 1.

16. The **Insert Disk** dialog box will appear. Click **[OK]**.

17. The **Files Needed** dialog box will appear. Input the following into the “**Copy files from**” field, and click **[OK]**.

D:\DRIVER\USB_XP2K

* If the “*Driver Signing Options*” setting was not set to “*Ignore*” in step 4, a dialog box will inform you that the digital signature was not found. Click **[Yes]** to continue installation.

18. The **Found New Hardware Wizard** will appear. Verify that “**EDIROL M-100FX**” is displayed, and click **[Finish]**.

19. When driver installation has been completed, the **System Settings Change** dialog box will appear. Click **[Yes]**.

Windows will restart automatically.

Next, you will need to make the driver settings.

(→ **Driver settings (p. 166)**)

■ Windows Me/98 users

1. With the M-100FX disconnected, start up Windows. Disconnect all USB cables except for a USB keyboard and USB mouse (if used).

2. Exit all currently running software (applications). Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.

3. Insert the CD-ROM into the CD-ROM drive of your computer.

4. Click the Windows **Start** button. From the menu that appears, select “**Run...**”.

5. In the “**Run...**” dialog box, input the following into the “**Open**” field, and click **[OK]**.

D:\DRIVER\USB_ME98\SETUPINF.EXE

* The drive name “**D:**” may be different for your system. Specify the drive name of your CD-ROM drive.

6. The **SetupInf** dialog box will appear. You are now ready to install the driver.

* If a message recommends that you restart Windows, restart Windows as directed, and then proceed to the next step.

7. Place the M-100FX’s **ADVANCE (mode select) switch** in the **ON** position.

8. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.

9. Connect the **AC adaptor** to an electrical outlet.

10. Use the **USB cable** to connect the **M-100FX** to your computer.

11. Set the M-100FX’s **power switch** to the **ON** position.

12. The driver will be installed automatically.

13. In the **SetupInf** dialog box, click **[OK]**.

* If a message recommends that you restart Windows, restart Windows as directed.

Next, you will need to make the driver settings.

(→ **Driver settings (p. 166)**)

Using Advance mode

Driver settings

Windows XP/2000/Me

Set the **Default Device** for **Sound Recording and Playback** (in Windows 2000/Me, **[Default Device]**) as follows.

Sound recording	EDIROL M-100FX Out
Sound playback	EDIROL M-100FX In

→ For details on how to make this setting, refer to **Specifying the audio input/output destination** (p. 131).

Windows 98

Set the **[Default Device]** for **playback and recording** as follows.

Playback	EDIROL M-100FX Out
Recording	EDIROL M-100FX In

→ For details on how to make this setting, refer to **Specifying the audio input/output destination** (p. 131).

■ About the input/output devices

Output devices
EDIROL M-100FX Out This sends audio data from the computer to the M-100FX. This is the setting you will normally use, such as when using the M-100FX with Media Player. You will also select this setting when using an application such as SONAR in WDM driver mode, or when using a Direct Sound application.
MME Out EDIROL M-100FX This sends audio data from the computer to the M-100FX. Use this setting if you are using the M-100FX with an application that does not have a WDM driver mode, or if you want to use 24-bit audio with an application does not support ASIO (such as Cool Edit). <i>* Windows XP/2000 only</i>
Input devices
EDIROL M-100FX In This receives audio data sent by the M-100FX to the computer. This is the setting you will normally use, such as when using the M-100FX with Media Player. You will also select this setting when using an application such as SONAR in WDM driver mode.
MME In EDIROL M-100FX This receives audio data sent by the M-100FX to the computer. Use this setting if you want to use 24-bit audio with an application that does not have a WDM driver mode or does not support ASIO (such as Cool Edit). <i>* Windows XP/2000 only</i>
ASIO device
If you are using the M-100FX with an ASIO-compatible application such as Cubase, select "EDIROL M-100FX" as the ASIO setting on your application. <i>* To prevent an audio oscillation loop or double monitoring, turn monitoring Off in your application, or use ASIO Direct Monitor.</i>



ASIO Direct Monitor

Since the M-100FX's INPUT is always monitored, the M-100FX does not support ASIO Direct Monitor. Support is simulated in order to improve usability.

■ Adjusting the audio latency

When using the M-100FX in **Advanced mode**, you can change the driver settings to adjust the **latency** of the audio. To adjust the latency, change the **Buffer Size** in the driver settings dialog box.

1. As described in **Opening the special driver settings dialog box** (p. 167), open the “Driver Settings” dialog box.

2. Adjust the driver buffer size.

The following setting will produce the shortest latency.

Windows:

Set “**Audio Buffer Size**” to the far left (Min).

Macintosh:

Set “**Buffer Size**” to the far left (Min).

3. Click [OK] to close the driver settings dialog box.

4. Restart the application that is using the M-100FX.

If you are using an application that has a function for testing audio devices, get it to perform its tests.

5. Play back audio data on your application.

If interruptions occur in the sound, repeat this procedure, and gradually increase the **buffer size** specified in **step 2** until interruptions no longer occur.

* Depending on the application you are using, there may be a **buffer size** or **latency** adjustment function among the audio settings of the application as well. For details, refer to the operation manual for your application.

Opening the special driver settings dialog box

If using Windows:

1. Open the “Control Panel” and double-click “EDIROL M-100FX”.

2. The “EDIROL M-100FX Driver Settings” dialog box will appear.

* In Windows XP, click “**Switch to classic view**” to switch the display to the classic view. **EDIROL M-100FX** will not be displayed unless the classic view is selected.

* In Windows Me, click “**View all Control Panel options**”.

If using Macintosh:

Open the **ASIO Control Panel** from the **Audio Settings** dialog box of your ASIO-compatible application. The name of the Audio Settings dialog box and the procedure for opening the ASIO Control Panel will differ depending on your application. For details, refer to the operation manual for your application.

Installing the special driver (Macintosh)

NOTE

This driver cannot be used in Mac OS X. If you are using a Macintosh in which Mac OS X is installed, you must start up using Mac OS 9, install the driver, and use it in Mac OS 9. You cannot use this driver in the Classic environment.

■ Installing the audio driver

1. With the M-100FX disconnected, start up Macintosh.
Disconnect all USB cables except for a USB keyboard and USB mouse (if used).
2. Exit all currently running software (applications).
Also close any open windows. If you are using virus checking or similar software, be sure to exit it as well.
3. Insert the CD-ROM into the CD-ROM drive of your Macintosh.
4. Double-click the **M-100FX Driver-E Installer** icon (found in the **Driver E (Mac OS 9)** folder of the CD-ROM).
5. Verify the installation location, and click **[Install]**.
The location for installation will depend on your system. Make sure that the startup disk for the system you are currently using is selected.
6. If a message like “**This installation requires your computer to restart after installing this software —**” is displayed, click **[Continue]**.
The other currently running applications will exit, and installation will continue.
7. A dialog box will indicate Installation completed. Click **[Restart]** to restart your Macintosh.
8. Place the M-100FX’s **ADVANCE (mode select) switch** in the **ON** position.
9. With the **power switch** turned **OFF**, connect the **AC adaptor** to the **M-100FX**.
10. Connect the **AC adaptor** to an electrical outlet.
11. Use the **USB cable** to connect the **M-100FX** to your computer.
12. Set the M-100FX’s **power switch** to the **ON** position.

■ Installing the ASIO driver

The M-100FX supports ASIO 1.0 24-bit audio.

The ASIO driver of the M-100FX supports the following audio input/output channels.

- Audio input24/16 bit 1 stereo ch. (2 monaural chs.)
- Audio output24/16 bit 1 stereo ch. (2 monaural chs.)

NOTE

In Advanced mode, the M-100FX cannot play back audio data from the Macintosh’s sound manager (such as audio CDs and alert sounds).

This section explains how to install the ASIO driver that allows the M-100FX to be used by your sequencer software or audio editing software.

1. From the **Driver E (Mac OS 9) - ASIO** folder of the CD-ROM, copy **M-100FX ASIO1.0 24bit** to the **ASIO Drivers** folder within the folder of the ASIO-compatible software you are using (e.g., Cubase VST, Logic Audio, Digital Performer, Metro, or SPARK LE).
2. Start up your ASIO-compatible software (e.g., Cubase VST, Logic Audio, Digital Performer, Metro, or SPARK LE).
3. Open the **Audio setting** dialog box of your ASIO-compatible software, and select **M-100FX ASIO1.0 24bit** as the **ASIO Device**.
The Audio setting dialog box will be named differently depending on your software. For details refer to the manual of your software.

NOTE

An M-100FX ASIO 1.0 16-bit driver is also included. If you are using software that does not support 24-bit audio, use M-100FX ASIO 1.0 16-bit.

Settings for your software

If your software is set to monitor audio data during recording, the audio data will loop, and will not be recorded correctly. Monitoring of audio data during recording must be turned **off**. For details on this setting, refer to the manual of the software you are using.

■ Settings for Cubase VST users

The explanation in this manual is based on the English version of Cubase VST 5.0. Please be aware that some menu items may be named differently in other versions of the software.

1. In Cubase VST, execute **Options - AudioSetup - System...**
2. As the **ASIO Device**, select **M-100FX ASIO 24bit**.
3. For the **Monitoring** setting, select **Global Disable**.
4. Click **[OK]** to close the dialog box.

■ Settings for Logic users

1. In Logic, choose **Audio - Audio Hardware & Drivers...**
2. In the “**Preferences**” dialog box, open the “**ASIO**” item.
3. Make sure that “**Software Monitoring**” is unchecked.

NOTE

Roland cannot guarantee operation of or provide support regarding sequencer software and audio editing software produced by another manufacturer. Please contact the manufacturer of the software you are using.

Troubleshooting

If you experience problems, read this chapter first. It contains tips for solving most problems.

Problems with the M-100FX

Sound contains crackles or distortion

- **Could the input volume be excessive?**

If the input volume (level) is excessive, the sound may be distorted. If you are inputting audio from the input jacks, adjust the input volume (level) of the M-100FX.

- **Are you mixing multiple channels?**

Even if the input volume (level) of one channel is appropriate, mixing two or more channels together may make the sound loud enough to produce distortion. Re-adjust the input level of each channel.

- **Are the EQ levels appropriate?**

If the **equalizer knobs (HI/LO)** are turned too far toward the right (+15 dB), the sound may distort. Use the **equalizer knobs (HI/LO)** to re-adjust the EQ levels of each channel.

- **Is there a problem with the level indication shown by the master volume indicator?**

If the sound is distorted even though there is no problem with the indication of the **master volume indicator**, the output volume is appropriate, but the input volume is excessive. Please adjust the input volume (level) of the M-100FX.

Noise is heard in the sound

- **Are you applying the audio/voice effect MALE or FEMALE?**

The mic is picking up unwanted sound from the background. Make the necessary changes in your location so that unwanted sound is not present while you speak into the mic.

Loud whining, howling, or squealing sounds are produced

- **Is a mic connected?**

Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

1. Changing the orientation of the microphone(s).
2. Relocating microphone(s) at a greater distance from speakers.
3. Lowering volume levels.

- **Are audio devices connected to the M-100FX?**

If the inputs and outputs of your audio device are both connected to the M-100FX, the signal may create a loop. Check your connections.

Hum noise is heard even when the volume is low

- **Is another device connected?**

This is hum noise. This type of noise may be produced because the M-100FX and connected device are picking up electromagnetic waves. This type of noise can also be produced by the AC power supply frequency (50/60 Hz) or a large motor. Try moving motorized devices farther away from the M-100FX, or connect the M-100FX to a different AC outlet. You can also try connecting your device to a different input jack.

Reverb effect is not applied

- **Could the reverb send level be too low?**

The reverb send level may be too low for you to hear the effect. Turn the **reverb/AUX send level knob** toward the right to increase the level.

- **Could the reverb type select knob be set to OFF?**

There will be no effect if the **reverb type select knob** is set to **OFF**. Turn the **reverb type select knob** to a position other than OFF.

Soft voices or sounds disappear

- **Could you be applying audio/voice effect 5.NOISE REDUCER?**

If a mic is connected to **mic input jacks 1 or 2** and the audio/voice effect NOISE REDUCER is applied, sound that is softer than a certain level may disappear. In this case, adjust the **input level knob (GAIN)** to raise the input level, or turn **effect knob B** toward the left.

If a device is connected to **mic input jacks 1/2** to input sound, try increasing the volume of the connected device.

Can't hear the audio/voice effect

- **Could the effect balance knob be set to the DRY (left) position?**

There will be no effect if the knob is set to the DRY position. If you want a stronger effect, turn the knob toward FX (right).

ROBOT/MALE/FEMALE audio/voice effect is not satisfactory, or is unstable

These effects are applied by detecting the frequency of the input audio. The effect will not be satisfactory if the input audio level is too low, or if there is a large amount of background noise, or if more than one person is speaking. Input the voice of one person at an appropriate level.

Too much (or too little) reverb

To adjust the reverb depth, use the **reverb/AUX send level knob** of each channel to adjust the amount of signal that is sent to the reverb.

The volume level of the device connected to the mic input jacks, line input jacks, or external input jacks is too low.

- **Could you be using a connection cable that contains a resistor?**

Use a connection cable that does not contain a resistor.

- **Is the device connected to the mic input jack?**

Turn the **input level knob** toward the right to adjust the input level.

Troubleshooting

Can't hear sound from a mic connected to mic output jacks 1/2 (channels 1/2)

- **Could you have connected a condenser mic that requires phantom power?**

Lower the **input level fader** to the minimum position, and then turn the **phantom power switch ON**.

- **Could a plug-in powered mic be connected?**

The input from the plug-in powered mic jack takes priority. Input from a mic connected to the XLR/phone jack of **mic input 1** will be ignored.

Input sound is all the way to left or right

- **Could the pan/balance knob be set all the way to left or right?**

Set the **pan/balance knob** to the center position.

Can't hear sound that is input to the RCA phono jacks of line inputs 3/4

- **Could a phone plug be connected to line input jacks 3/4–5/6?**

Both phone jacks and RCA phono jacks are provided for these inputs. If something is connected to both types of jacks, only the sound from the phone jacks will be input; the sound from the RCA phono jacks will be ignored.

The L and R channels are independent, so if a phone plug is connected to L and an RCA phono plug is connected to R, you will hear the audio from the phone plug input for the L channel, and the audio from the RCA phono plug input for the R channel.

Knobs and sliders of channels 1/2 feel different than those of channels 3/4–9/10

This is not a malfunction.

Problems related to the special driver



Problems common to Windows and Macintosh



Problems occurring only in Windows



Cannot install the driver correctly

- **Is the CD-ROM correctly inserted into your CD-ROM drive?**

Installation is not possible unless the CD-ROM included with the M-100FX is inserted in your CD-ROM drive. Make sure that the CD-ROM is correctly inserted into your CD-ROM drive.

- **Is the CD-ROM or the lens of the CD-ROM dirty?**

If the CD-ROM or the lens of the CD-ROM drive is dirty, the installer may not work correctly. Clean the disc and/or lens using a commercially-available CD cleaner or lens cleaner.

- **Are you installing the software from a networked CD-ROM drive?**

The software cannot be installed from a networked CD-ROM drive.

- **Is there sufficient free space on your hard disk?**

Delete unneeded files to increase the amount of free space. After deleting the unneeded files, empty the recycling bin.

- **Is the power of the M-100FX turned on?**

Make sure that the power switch of the M-100FX is set to the ON position.



- **Is the M-100FX connected correctly?**

Make sure that the USB connector of your computer is connected to the M-100FX by a USB cable. Check this, and if you are using Windows, close the **Sounds and Audio Devices Properties** dialog box (**Sounds and Multimedia Properties** in Windows 2000/Me, and **Multimedia Properties** in Windows 98), re-open the same dialog box once again, and specify the audio input/output destinations.

(→**Specifying the audio input/output destination** (p. 131))



“Find new hardware wizard” does not execute automatically



The “Insert Disk” dialog box does not appear



“Find new hardware wizard” ends before the process is completed

It may take about 15 seconds (or more) after the USB cable is connected for the M-100FX to be detected.

It has been found that in some cases, not all of the Windows 98 files required to support audio via USB are installed when a computer is shipped. Please contact the manufacturer of your computer.

- **Is the USB cable connected correctly?**

Make sure that the M-100FX and your computer are correctly connected via a USB cable.

- **Is USB enabled on your computer?**

Refer to the operation manual for your computer, and make sure that USB is enabled.

- **Does your computer meet the USB specifications?**

If you are using a computer that does not fulfill the electrical requirements of the USB specifications, operation may be unstable. In this case, you may be able to solve the problem by connecting a USB hub.

If the above actions do not solve the problem, it is possible that the M-100FX has been incorrectly detected by the computer. Re-install the driver.

(→**Installing the special driver (Windows)** (p. 163))



“Found unknown device” appears even though you installed the driver

- **If your computer or USB hub has two or more USB connectors, and you connect the M-100FX to a USB connector to which the M-100FX has never been connected before, the “Unknown device” dialog box may appear even on a computer onto which you have already installed the driver.**

Refer to **Installing the special driver (Windows)** (p. 163), and install the driver once again. This is not a malfunction.

If the “Found unknown device” dialog box appears even though the M-100FX is connected to the same USB connector as before, it is possible that the computer has detected the M-100FX incorrectly. Re-install the driver.

(→**Installing the special driver (Windows)** (p. 163))



An “Unknown driver found” dialog box appears, and you are unable to install the driver



Device Manager shows “?”, “!”, or “USB Composite Device”



Driver is not installed correctly

It is possible that the computer has detected the M-100FX incorrectly.

Re-install the driver.

(→**Installing the special driver (Windows)** (p. 163))

** If the problem still occurs after you have taken the above measures, please refer also to the Readme file for the USB driver. The Readme file is on the CD-ROM.*



Can’t install/delete/use the driver in Windows XP/2000

- **Did you log on to Windows as a user with administrative privileges?**

In order to install/delete/re-install the driver in Windows XP/2000, you must be logged into Windows as a user with administrative privileges, such as Administrator. For details, please contact the system administrator for your computer system.

- **Did you make “Driver Signing Options”?**

In order to install/re-install the driver, you must make “**Driver Signing Options**”.

(→**Installing the special driver (Windows)** (p. 163))

Deleting the special driver

■ Windows users

Here's how to uninstall the dedicated driver.

1. Start up Windows with the M-100FX disconnected.

Disconnect all USB cables other than a USB keyboard or USB mouse.

** If you are using Windows XP Professional/2000, log on as a user that has administrative privileges (e.g., Administrator).*

2. Insert the CD-ROM into the CD-ROM drive of your computer.

3. From the Windows **Start** menu, choose “**Run...**”.

In the **Run** dialog box, input the following into the **Open** field, and click **[OK]**.

Windows XP/2000 users:

D:\DRIVER\USB_XP2K\Uninstal.EXE

Windows Me/98 users:

D:\DRIVER\USB_ME98\Uninstal.EXE

** The drive name **D:** may be different on your system. Use the drive name for your CD-ROM drive.*

4. Follow the on-screen instructions to uninstall the driver.

■ Macintosh users

1. Turn off the power of the M-100FX.

Also disconnect the USB cable (by which the M-100FX is connected) from your Macintosh.

2. From the **system extensions** folder, drag “**USB M-100FX Driver**” into the **trash** to delete it.
3. Drag the ASIO driver you installed in **Installing the ASIO driver** (p. 168) into the **Recycle Bin** to delete it.
4. Restart the Macintosh.

Specifications

M-100FX:10-channel Mixer and Audio/Voice Effects

MIXER PART

■ Input

Connectors

Channel 1:

XLR type (phantom power), 1/4 inch TRS phone type (balanced / unbalanced)

Miniature phone type (plug-in powered mic)

Channel 2:

XLR Type (phantom power), 1/4 inch TRS phone type (balanced / unbalanced)

Channel 3/4, 5/6:

1/4 inch phone type, RCA phono type

Channel 7/8, 9/10:

RCA phono type

Frequency Response:

20 Hz to 20 kHz (0 dB/-2 dB)

Nominal Input Level

Channel 1, 2: -60 to +6 dBu (variable)

Channel 3/4 to 9/10: +4 dBu

Input Impedance

Channel 1, 2: 50 k ohms

Channel 3/4 to 9/10: 50 k ohms

Equalizer

HI: +/- 15dB (10 kHz shelving type)

LO: +/- 15dB (100 kHz shelving type)

Control:

GAIN knobs (Channel 1, 2)

Equalizer HI knobs

Equalizer LO knobs

Reverb/AUX send level knobs (Channel 1, 2, 3/4 to 9/10)

Pan/balance knobs (Channel 1, 2, 3/4 to 9/10)

Input level faders (Channel 1, 2, 3/4 to 9/10)

■ Output

Connectors

Master output jacks, Monitor output jacks

1/4 inch phone type (L, R), RCA phono type (L, R)

Nominal Output Level: 0 dBu

Output Impedance: 1 k ohms

Residual Noise Level: -84 dBu (input terminated with 150 ohms, IHF-A,
CH1/2 GAIN = -10 dB)

Headphones jack

Stereo 1/4 inch phone type

Nominal Output Level: +12 dBu

Output Impedance: 200 ohms

■ External Input/Output

Connectors

AUX Send

1/4 inch phone type

Nominal Output Level: 0 dBu

Output Impedance: 1 k ohms

STEREO AUX RETURN

1/4 inch phone type (L/MONO, R)

Nominal Input Level: -10 dBu

Input Impedance: 33 k ohms

■ Digital Output

Connectors

Digital output jacks

Optical type, Coaxial type (conform to S/P DIF)

■ Other connectors

USB connector

*0 dBu = 0.775 V rms

Specifications

EFFECT PART

Audio/Voice Effect (for Channel 1, 2)

Types: 9
Audio/Voice effect knob, Effect adjustment knobs

Reverb Unit

Types: 10
Reverb type select knob, Reverb time adjustment knob

Signal Processing

Bit Depth

AD/DA conversion: 24 bits
PC interface: 24 bits (Advance Mode: ON)
16 bits (Advance Mode: OFF)

Sample Rate

Digital output: 44.1 kHz
AD/DA conversion: 44.1 kHz

Others

Power Supply

DC 9 V (AC adaptor)

Current Draw

800 mA

Dimensions

287 (W) x 269.4 (D) x 72.3 (H) mm
11-5/16 (W) x 10-5/8 (D) x 2-7/8 (H) inches

Weight

2.1 kg / 4 lbs 11 oz

Accessories

USB Cable
AC adaptor
Owner's manual
CD-ROM

** In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

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MEMO

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.
Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.



For EU Countries

This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Tested To Comply With FCC Standards

FOR HOME OR OFFICE USE

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

For the USA

DECLARATION OF CONFORMITY Compliance Information Statement

Model Name : M-100FX
Type of Equipment : 10-channel Mixer and Audio/Voice Effects
Responsible Party : Edirol Corporation North America
Address : 425 Sequoia Drive, Suite 114, Bellingham, WA 98226
Telephone : (360) 594-4276

Information

When you need repair service, call your nearest EDIROL/Roland Service Center or authorized EDIROL/Roland distributor in your country as shown below.

EDIROL

EUROPE

EDIROL (Europe) Ltd.
Studio 3.4 114 Power Road
London W4 5PY
U. K.
TEL: +44 (0)20 8747 5949
FAX: +44 (0)20 8747 5948
http://www.edirol.com/europe

Deutschland
TEL: 0700 33 47 65 20
France
TEL: 0810 000 371
Italia
TEL: 02 93778329

U. S. A. / CANADA

EDIROL Corporation North America

425 Sequoia Drive, Suite 114
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TEL: (360) 594-4276
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Roland

AFRICA

EGYPT

Al Fanny Trading Office
9, EBN Hagar A1 Askalany Street,
ARD El Golf, Heliopolis,
Cairo 11341, EGYPT
TEL: 20-2-417-1828

REUNION

Maison FO - YAM Marcel
25 Rue Jules Hermann,
Chaudron - BP79 97 491
Ste Clotilde Cedex,
REUNION ISLAND
TEL: (0262) 218-429

SOUTH AFRICA

That Other Music Shop (PTY) Ltd.
11 Melle St., Braamfontein,
Johannesbourg, SOUTH AFRICA

P.O.Box 32918, Braamfontein 2017
Johannesbourg, SOUTH AFRICA
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.

17 Werdmuller Centre,
Main Road, Claremont 7708
SOUTH AFRICA

P.O.BOX 23032, Claremont 7735,
SOUTH AFRICA
TEL: (021) 674 4030

ASIA

CHINA

Roland Shanghai Electronics Co., Ltd.
5F. No.1500 Pingliang Road
Shanghai, CHINA
TEL: (021) 5580-0800

Roland Shanghai Electronics Co., Ltd. (BEIJING OFFICE)

10F. No.18 Anhuaxili
Chaoyang District, Beijing,
CHINA
TEL: (010) 6426-5050

HONG KONG

Tom Lee Music Co., Ltd. Service Division
22-32 Pun Shan Street, Tsuen
Wan, New Territories,
HONG KONG
TEL: 2415 0911

INDIA

Rivera Digitec (India) Pvt. Ltd.
409, Nirman Kendra Mahalaxmi
Flats Compound Off. Dr. Edwin
Moses Road, Mumbai-400011,
INDIA
TEL: (022) 2493 9051

INDONESIA

PT Citra IntiRama
Jl. Cideng Timur No. 15J-150
Jakarta Pusat
INDONESIA
TEL: (021) 6324170

KOREA

Cosmos Corporation
1461-9, Seocho-Dong,
Seocho Ku, Seoul, KOREA
TEL: (02) 3486-8855

MALAYSIA

BENTLEY MUSIC SDN BHD
140 & 142, Jalan Bukit Bintang
55100 Kuala Lumpur, MALAYSIA
TEL: (03) 2144-3333

PHILIPPINES

G.A. Yupangco & Co. Inc.
339 Gil J, Fuyat Avenue
Makati, Metro Manila 1200,
PHILIPPINES
TEL: (02) 899 9801

SINGAPORE

CRISTOFORI MUSIC PTE LTD
Blk 3014, Bedok Industrial Park E,
#02-2148, SINGAPORE 489980
TEL: 6243-9555

TAIWAN

ROLAND TAIWAN ENTERPRISE CO., LTD.
Room 5, 9fl. No. 112 Chung Shan
N.Road Sec.2, Taipei, TAIWAN,
R.O.C.
TEL: (02) 2561 3339

THAILAND

Theera Music Co., Ltd.
330 Vergn NakornKasem, Soi 2,
Bangkok 10100, THAILAND
TEL: (02) 2248821

VIETNAM

Saigon Music
138 Tran Quang Khai St.,
District 1
Ho Chi Minh City
VIETNAM
TEL: (08) 844-4068

AUSTRALIA/ NEW ZEALAND

AUSTRALIA

Roland Corporation Australia Pty., Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 9982 8266

NEW ZEALAND

Roland Corporation Ltd.
32 Shaddock Street, Mount Eden,
Auckland, NEW ZEALAND
TEL: (09) 3098 715

CENTRAL/LATIN AMERICA

ARGENTINA

Instrumentos Musicales S.A.
Av.Santa Fe 2055
(1123) Buenos Aires
ARGENTINA
TEL: (011) 4508-2700

BRAZIL

Roland Brasil Ltda
Rua San Jose, 780 Sala B
Parque Industrial Sala Jose
Cotia - Sao Paulo - SP, BRAZIL
TEL: (011) 4615 5666

CHILE

Comercial Fancy II S.A.
Rut: 96.919.420-1
Nataniel Cox #739, 4th Floor
Santiago - Centro, CHILE
TEL: (02) 688-9540

MEXICO

Casa Veerkamp, s.a. de c.v.
Av. Toluca No. 323, Col. Olivar
de los Padres 01780 Mexico D.F.
MEXICO
TEL: (55) 5668-6699

URUGUAY

Todo Musica S.A.
Francisco Acuna de Figueroa 1771
C.P.: 11.800
Montevideo, URUGUAY
TEL: (02) 924-2335

VENEZUELA

Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal, Nivel
C2 Local 20 Caracas
VENEZUELA
TEL: (212) 285-8586

EUROPE

AUSTRIA

Roland Austria GES.M.B.H.
Siemensstrasse 4, P.O. Box 74,
A-6063 RUM, AUSTRIA
TEL: (0512) 26 44 260

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Roland Benelux N. V.
Houtstraat 3, B-2260, Oevel
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Fin-00201 Helsinki, FINLAND
TEL: (09) 68 24 020

GERMANY

Roland Elektronische Musikinstrumente HmbH.
Oststrasse 96, 22844 Norderstedt,
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TEL: (040) 52 60090

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STOLLAS S.A.
Music Sound Light
155, New National Road
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Audio House, Belmont Court,
Donnybrook, Dublin 4,
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107 564 Moscow, RUSSIA
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SPAIN

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Calle Bolivia 239, 08020
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MIDDLE EAST

BAHRAIN

Moon Stores
No.16, Bab Al Bahrain Avenue,
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State of BAHRAIN
TEL: 211 005

CYPRUS

Radex Sound Equipment Ltd.
17, Diagorou Street, Nicosia,
CYPRUS
TEL: (022) 66-9426

IRAN

MOCO, INC.
No.41 Nike St., Dr.Shariyati Ave.,
Roberoye Cerahe Mirdamad
Tehran, IRAN
TEL: (021) 285-4169

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Halilit P. Greenspoon & Sons Ltd.
8 Retzif Ha'aliya Hashnya St.
Tel-Aviv-Yafo ISRAEL
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