

MIXING CONSOLE

用户手册



PRECAUTIONS

—For safe operation—

WARNING

Installation

- Connect this unit's AC power adaptor only to an AC outlet of the type stated in this Owner's Manual or as marked on the unit. Failure to do so is a fire and electrical shock hazard.
- Do not allow water to enter this unit or allow the unit to become wet. Fire or electrical shock may result.
- Do not place a container with liquid or small metal objects on top of this unit. Liquid or metal objects inside this unit are a fire and electrical shock hazard.
- Do not place heavy objects, including this unit, on top of the power cord. A damaged power cord is a fire and electrical shock hazard. In particular, be careful not to place heavy objects on a power cord covered by a carpet.

Operation

- Do not scratch, bend, twist, pull, or heat the power cord. A damaged power cord is a fire and electrical shock hazard.
- Do not remove the unit's cover. You could receive an electrical shock. If you think internal inspection, maintenance, or repair is necessary, contact your dealer.
- Do not modify the unit. Doing so is a fire and electrical shock hazard.

- If lightning begins to occur, turn off the power switch of the unit as soon as possible, and unplug the power plug from the electrical outlet.
- If there is a possibility of lightning, do not touch the power plug if it is still connected. Doing so may be an electrical shock hazard.
- Use only the included AC power adaptor (PA-30) for this unit. Using other types may be a fire and electrical shock hazard.

In case an abnormality occurs during operation

- If the power cord is damaged (i.e., cut or a bare wire is exposed), ask your dealer for a replacement. Using the unit with a damaged power cord is a fire and electrical shock hazard.
- Should this unit and AC adaptor be dropped or the cabinet be damaged, turn the power switch off, remove the power plug from the AC outlet, and contact your dealer. If you continue using the unit without heeding this instruction, fire or electrical shock may result.
- If you notice any abnormality, such as smoke, odor, or noise, or if a foreign object or liquid gets inside the unit, turn it off immediately. Remove the power plug from the AC outlet. Consult your dealer for repair. Using the unit in this condition is a fire and electrical shock hazard.

CAUTION

Installation

- Keep this unit away from the following locations:
 - Locations exposed to oil splashes or steam, such as near cooking stoves, humidifiers, etc.
 - Unstable surfaces, such as a wobbly table or slope.
 - Locations exposed to excessive heat, such as inside a car with all the windows closed, or places that receive direct sunlight.
 - Locations subject to excessive humidity or dust accumulation.
- Hold the power plug when disconnecting it from an AC outlet. Never pull the cord. A damaged power cord is a potential fire and electrical shock hazard.
- Do not touch the power plug with wet hands. Doing so is a potential electrical shock hazard.

- To relocate the unit, turn the power switch off, remove the power plug from the AC outlet, and remove all connecting cables. Damaged cables may cause fire or electrical shock.

Operation

- Do not cover or wrap the AC power adaptor with a cloth or blanket. Heat may build up under the cloth or blanket, melting the case, or causing fire. Use only in a well-ventilated environment.
- If you know you will not use this unit for a long period of time, such as when going on vacation, remove the power plug from the AC outlet. Leaving it connected is a potential fire hazard.

—For correct operation —

Connector pin assignments

- XLR-type connectors are wired as follows
Pin 1: ground; Pin 2: hot (+); Pin 3: cold (–).
- INSERT TRS phone jacks are wired as follows
Sleeve: ground; Tip: send; Ring: return.

Replacement of Consumable Parts

- The performance of components with movable contacts—such as switches, rotary controls, faders, and connectors—deteriorates over time. While the rate of wear may vary greatly according to usage conditions, some amount of wear is unavoidable. When parts wear out, consult your dealer about appropriate replacements.

- Always turn the power off when the mixer is not in use.
- Even when the power switch is in the “STANDBY” position, electricity is still flowing to the mixer at the minimum level. When you are not using the mixer for a long time, make sure you unplug the AC power adaptor from the wall AC outlet.

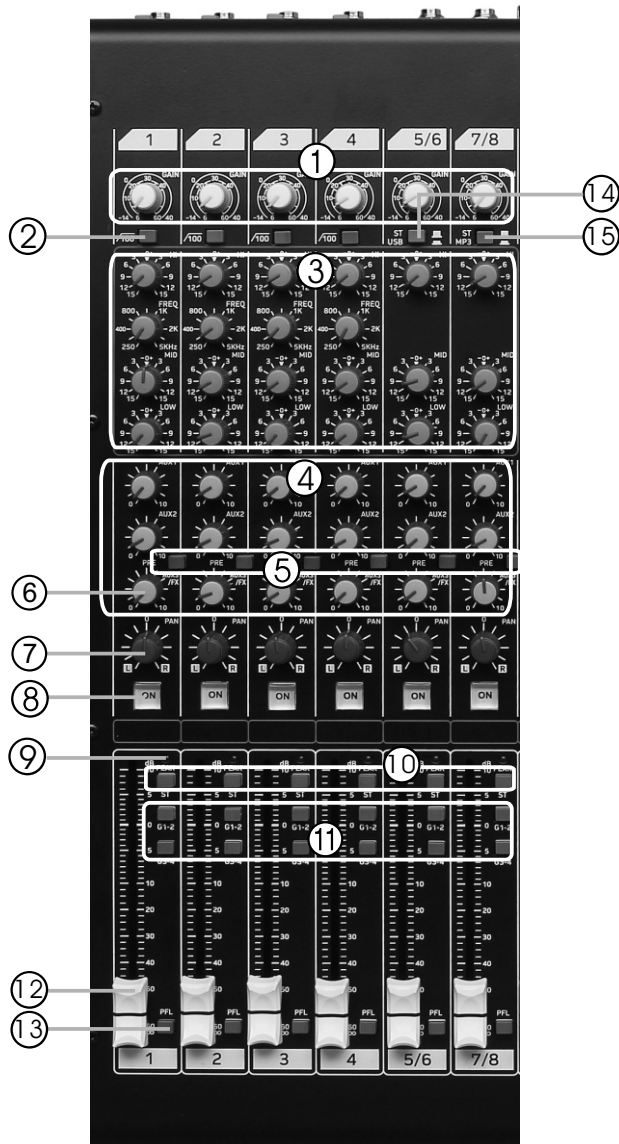
Copying of commercially available music data and/or digital audio files, except for personal use, is strictly prohibited.

Illustrations in this manual are for explanatory purposes only, and may not match the actual appearance of the product during operation.

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Front & Rear Panels

Channel Control Section



① GAIN Control

Adjusts the input signal level. To get the best balance between the S/N ratio and the dynamic range, adjust the level so that the peak indicator (②) comes on only at about maximum input level.

② 100Hz Switch (High Pass Filter)

This switch toggles the HPF on or off. To turn the HPF on, press the switch in (). The HPF cuts frequencies below 80 Hz. (But note that regardless of the switch setting, the mixer does not apply this HPF to the line inputs of stereo input channels.)

③ Equalizer

• Mono channel

This three-band equalizer adjusts the channel's high, mid, and low frequency bands. Setting the knob to the ▼ position produces a flat frequency response. Turning the knob to the right boosts the corresponding frequency band, while turning to the left cuts the band. The following table shows the EQ type, base frequency, and maximum cut/boost for each of the three bands.

Band	Type	Base Frequency	Maximum Cut/Boost
HIGH	Shelving	10 kHz	±15 dB
MID	Peaking	250 Hz – 5 kHz (variable)	
LOW	Shelving	100 Hz	

④ AUX1-3

The AUX1 knob controls the signal level that the channel sends to the AUX1 bus; the AUX2 knob controls the signal level to the AUX2 bus; the AUX3 knob controls the signal level to the AUX3 bus.

These knobs should generally be set close to the ▼ position.

If you are using stereo channels, the signals from the L (odd) and R (even) channels are mixed and sent to the AUX1 and AUX3 buses

⑤ PRE Switch

Selects whether the pre-fader or the post-fader signal is fed to the AUX2 bus. If you set the switch on (■), the mixer sends the pre-fader signal—the signal prior to passage through channel fader ⑫—to the AUX2 bus, so that AUX2 output is not affected by the fader. If you set the switch off (■) the mixer sends the post-fader signal to the AUX2 bus.

Note that this switch applies to AUX2 only. The signal to the AUX1 bus always passes through the channel fader first.

⑥ EFFECT Control

Adjusts the level of the signal sent from the channel to the EFFECT bus. Note that the signal level will also vary according to the setting of the channel fader.

If you are using stereo channels (CHs 9/10, 11/12, 13/14, 15/16), the signals from the L (odd) and R (even) channels are mixed and then sent to the EFFECT bus.

⑦ PAN Control PAN/BAL Control BAL Control

The PAN control determines the positioning of the channel's signal on the Group 1-2/3-4 buses or on the Stereo L and R buses.

The BAL control knob sets the balance between left and right channels. Signals into the L input (odd channel) feed to the Group 1/3 bus or to the Stereo L bus; signals into the R input (even channel) feed to the Group 2/4 bus or the Stereo R bus.



On channels where this knob provides both PAN and BAL controls (9/10 and 11/12), the knob operates as a PAN control if you are inputting through the MIC jack or into the L (MONO) input only, and operates as a BAL control if you are inputting into both L and R inputs.

⑧ ON Switch

This switch assigns the channel's signal to the Stereo L and R buses. To send the signal to the Stereo bus, set the switch on by pressing it in (■).

⑨ PEAK Indicator

Detects the peak level of the post-equalizer signal, and lights up red when the level reaches 3 dB below the clipping level. On stereo input channels equipped with XLR jacks (CHs 9/10 and 11/12), detects both the post-equalizer and post-mic-amp peak levels, and lights up red if either of these levels reaches 3 dB below the clipping level.

⑩ ON ST Switch

This switch assigns the channel's signal to the Stereo L and R buses. To send the signal to the Stereo bus, set the switch on by pressing it in (■). The switch lights up orange to indicate that it is on.

⑪ GROUP Switches

Use these switches to send the channel's signal to the Group 1-2 and/or Group 3-4 buses. Setting the switch on (■) causes the signal to be sent to the corresponding group buses.



These switches allow you to assign the signal to either or both groups regardless of the setting of the ST switch ⑩.

⑫ Channel Fader

Adjusts the output level of the signal being input to the channel. Use these faders to adjust the volume balance among the various channels.



To reduce noise, set the fader sliders for unused channels all the way down.

⑬ PFL (Pre-Fader Listen) Switch

This switch lets you monitor the channel's pre-fader signal. To set the switch on, press it in (■) so that it lights up. When the switch is on, the mixer outputs the channel's pre-fader signal to the PHONES and C-R OUT jacks, for monitoring.

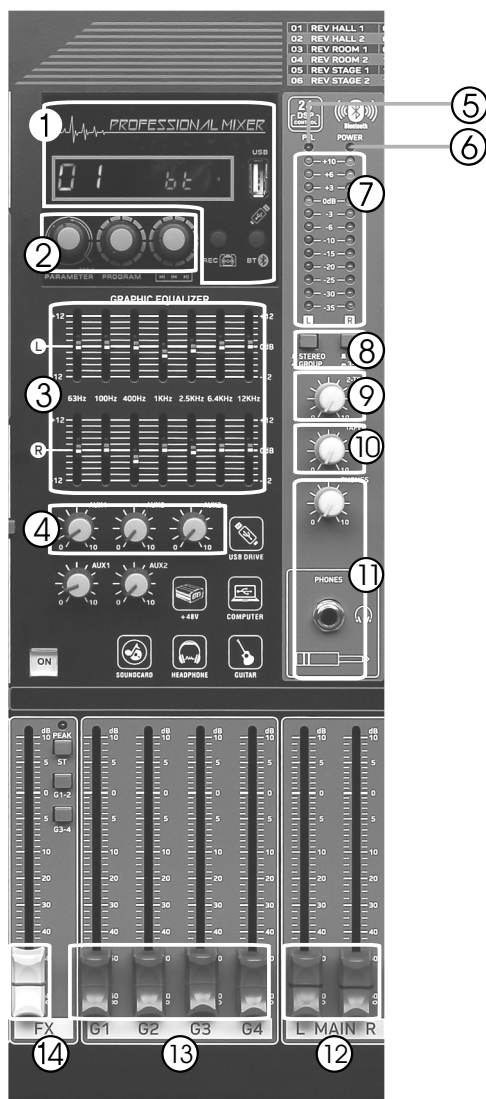
⑭ ST/USB

The switch is used to switch the signal input between the channel and USB.

⑮ ST/MP3

The switch is used to switch the signal input between the channel and MP3.

Master Control Section



① Music Player

High sound quality music player, the U disk with Mp3. WMA and other music files is inserted into the player jack, and the high quality music is played through USB knob control. This player has bluetooth function and recording function.

② DSP Digital Effects

PROGRAM dial, select internal digital effects.
PARAMETER Control that adjusts the parameters of the selected effect (depth, speed).

③ ST stereo equalizer

The seven-band equalizer regulates the sound signal sent to the ST OUT jack. The equalizer weakens or enhances each frequency band in the range of 12dB (63Hz 100Hz 400Hz 1KHz 2.5kHz 6.4kHz 12KHz).

④ MASTER SEND AUX1-3

Adjust the signal level output by aux 1-3 socket.

⑤ PFL light

When the PFL monitor switch is turned on, the indicator lights up.

⑥ The POWER indicator light

The indicator lights up when the mixer power is turned on.

⑦ Level meter

The LED display indicates the signal level of the selector switch by (4) above. The zero point corresponding to the standard output level. When the output level reaches the cut-off level, the indicator lights red.

⑧ Level signal switch

These level meter switches, in conjunction with channel PFL switches, select signals sent to the phone jack and level meter via phone control.

⑨ 2-TR

ST control to adjust the signal level sent from the 2-TR jack to the stereo communication bus.

⑩ TAPE

ST control, adjust the signal level sent from TAPE socket to stereo communication bus.

⑪ PHONES control

Controls the signal level output to the phone jack.

⑫ MAIN MAIN attenuator

Adjust the signal level of the sending MAIN OUT socket.

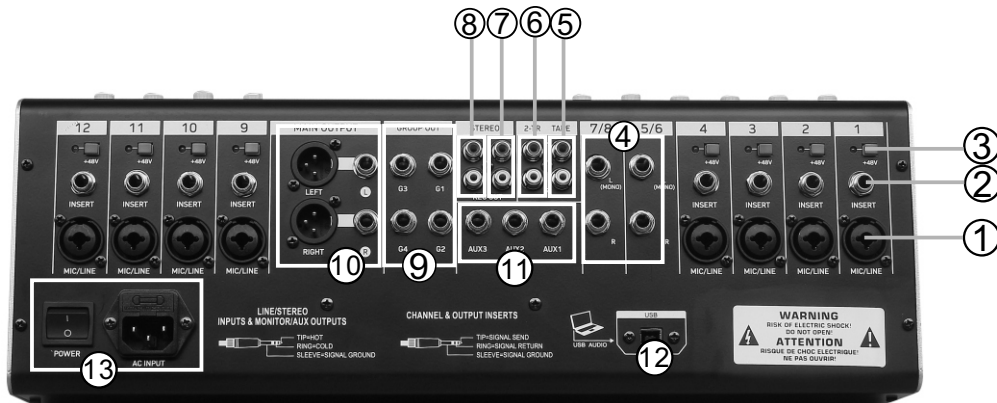
⑬ GROUP attenuator (1-2.3-4)

Adjust the signal level sent to the GROUP OUT 1-4 socket.

⑭ FX attenuator

Adjust the signal level of sending FX effect signal to ST L-R / GROUP1-2/3-4 communication bus.

Rear Input/Output Section



① Channel Input Jacks

- **MIC jacks**
These are balanced XLR-type input jacks.
- **LINE jacks**
These are balanced phone-type input jacks. You can connect either balanced or unbalanced phone plugs to these jacks.



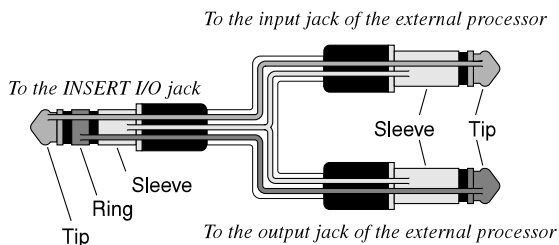
Where an input channel provides both a MIC jack and a LINE jack, you may use either one of these jacks but you may not use both at the same time. Please connect to only one of these jacks on each channel.

② INSERT I/O Jacks

These are unbalanced phone-type input/output jacks. Each of these jacks is positioned between the equalizer and fader of the corresponding input channel (CHs 1 to 8). These jacks can be used to independently connect these channels to devices such as graphic equalizers, compressors, and noise filters. These are TRS (tip, ring, sleeve) phone jacks that support bidirectional operation.



Connection to an INSERT I/O jack requires a special separately-sold insertion cable such as illustrated below.



The signal output from the INSERT I/O jacks is reverse-phased. This will not be a problem if connecting the jack to an effector. If using the jack to output to an external device, however, please be aware of possible phase conflicts with other signals.

③ +48V switch

When the +48V switch is turned on, the MIC balanced XLR input jack of the channel provides +48V power.

④ Stereo channel input jack

These unbalanced input jacks are available in two types. Ear models use these jacks to input stereo signals, sending L signals to odd channels and R signals to even channels.

⑤ TAPE input jack

These unbalanced RCA pin inputs are used to input stereo source signals. Use these jacks when you want to connect a stereo source signal (CD or DAT) directly to a mixing console for monitoring.

Front & Rear Panels

⑥ 2TR IN Jacks

These unbalanced RCA-pin-type input jacks are used to input a stereo sound source. Use these jacks when you want to connect a stereo sound sources (CD or DAT) directly to the mixer for monitoring.



You can adjust the signal level using the 2TR IN control in the Master Control section.

⑦ ST OUT(L, R) Jacks

These non - balanced RCA pin - type output sockets. By connecting these jacks to an external active speaker, the same signal as the OUTPUT of the ST OUT jacks can be played.

⑧ REC OUT (L, R) Jacks

These are unbalanced RCA-pin-type output jacks. By connecting these jacks to an external recorder, you can record the same signal that is being output from the ST OUT jacks.



The mixer's ST Master Fader does not operate on the signal output from these jacks. Be sure to make appropriate level adjustments at the external recording device.

⑨ GROUP OUT (1-4) socket

These are impedance balanced ear type output sockets for GROUP1-2/3-4 signals. These sockets can be connected to the input sockets of the MTR\ external connector mixer or other similar equipment.

⑩ MAIN OUT output socket

These output sockets control the tuning signal of the level signal by the ST attenuator in the main control section. Outputs in stereo (L and R) channels, for example, can be connected to a power amplifier that drives the main speaker using these sockets.

⑪ SEND Jacks

• AUX1-4

These are impedance-balanced phone-type output jacks.

These jacks output the signal from AUX1-4 , respectively.

You use these jacks, for example, to connect to an effector or to a cue box or other such monitoring system.

⑫ USB Audio input

⑬ POWER Switch

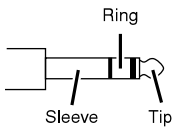
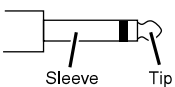
Use this switch to set the mixer power to ON or OFF

List of digital effects

Number	Program	Parameter	Instructions
1	REV HALL 1	Reverb Time	Simulate reverberation of large space such as concert hall.
2	REV HALL 2	Reverb Time	
3	REV ROOM 1	Reverb Time	Simulates the reverberation of the acoustic environment in a small space (room)
4	REV ROOM 2	Reverb Time	
5	REV STAGE 1	Reverb Time	Simulate the reverberation of a large stage.
6	REV STAGE 2	Reverb Time	
7	REV PLATE	Reverb Time	Simulate the metal reverberation unit to produce more sharp reverberation.
8	DRUM AMB	Reverb Time	Short reverberation, especially for drum sets.
9	EARLY REF	Room Size	This effect separates only the early reflection from the reverberation, creating a more "showy" effect than normal reverberation.
10	GATE REV	Room Size	This effect cuts the reverberation tail in half,producing a more powerful sound.
11	SINGLE DLY	Delay Time	The effect of repeating the same sound only once.Shortening the delay time doubles the effect.
12	DELAY	Delay Time	Add feedback delay for multiple delay signals.
13	VOCAL ECHO	Delay Time	Used for the echo of a common chorus.
14	KARAOKE	Delay Time	Used as an echo for karaoke.
15	PHASER	LFO* Freq	Loop changes phase to add modulation to sound.
16	FLANGER	LFO* Freq	Add a debug sound to the to sound tproduce a pulsating sound similar to that of a jet engine.
17	CHORUS 1	LFO* Freq	Multiple layers of sound are added with different delay times to create a thick replaying sound.
18	CHORUS 2	LFO* Freq	
19	SYMPHONIC	LFO* Depth	Add a richer texture to the sound
20	TREMOLO	LFO* Freq	The effect of adjusting the volume in a loop.
21	AUTO WAH	LFO* Freq	Wow effect with periodic filter modulation. The [PARAMETER] knob can adjust the speed of the LFO* modulated to the "wah" filter.
22	RADIO VOICE	Cutoff Offset	Recreate the low-fidelity sound of an am radio. The PARAMETER knob is used to adjust the frequency band to be enhanced.
23	DISTORTION	Drive	Add mutation distortion to the sound.
24	PITCH CHANGE	Pitch	This effect changes the pitch of the signal.

* "LFO" means low frequency oscillator. LFO is commonly used to periodically modulate another signal with different waveform shapes and modulation rates.

Connector Polarities

MIC INPUT, ST OUT	Pin 1: Ground Pin 2: Hot (+) Pin 3: Cold (-)	INPUT  OUTPUT 
LINE INPUT (mono channels), GROUP OUT, ST OUT, C-R OUT, AUX1, AUX2, EFFECT*	Tip: Hot (+) Ring: Cold (-) Sleeve: Ground	
INSERT I/O	Tip: Output Ring: Input Sleeve: Ground	
PHONES	Tip: L Ring: R Sleeve: Ground	
RETURN, LINE INPUT (stereo channels)	Tip: Hot Sleeve: Ground	

* These jacks will also accept connection to monaural phone plugs. If you use monaural plugs, the connection will be unbalanced.

Connection installed

Connection installation Procedure

- (1) Before connecting to the microphone or other Musical Instruments, be sure to turn off the power switch of all devices. All channel attenuators and main control attenuators on the mixer must also be set to minimum Settings.
- (2) For each connection, connect one end of the cable to the relevant microphone or instrument and connect the other end to the appropriate LINE or MIC jack on the mixing console. (LINE socket: Same as Olympic 1-8. MIC socket: Channels 1-8, 9-10, 11-12.)



Note: If an input channel is equipped with MIC jack and LINE jack at the same time, one of them can be used, but not both. Only one socket of each channel can be connected at a time.

- (3) In order to avoid damaging the speaker, please switch on the power in the following order: peripherals - mixer - power amplifier (or power speaker).



When shutting down the system, turn off the power in the reverse order: power amplifier, (power speaker) - mixer - peripherals.

注意事项

—安全操作须知—

⚠ 警告

安装

- 只能将本AC电源适配器接插在本用户手册所规定或本适配器上所示规格的AC电源插座。否则可能会导致火灾或触电。
- 请勿让水进入本装置或使之受潮。否则可能会导致火灾或触电。
- 请勿将装有液体或细小金属物品的容器放在本装置上。否则液体或细小金属物品落入本装置内可能会导致火灾或触电。
- 请勿将重物(包括本装置)压在电源线上。否则可能会损伤电源线,进而导致火灾或触电。特别注意,切勿将重物压在被地毯覆盖的电源线上。

操作

- 请勿划伤、弯折、扭曲、拉伸或加热电源线。否则可能会损伤电源线,进而导致火灾或触电。
- 请勿打开本装置罩壳。否则可能导致触电。如果认为内部需要检修、维护保养或修理,请与代理经销商联系。
- 请勿擅自改造本装置。否则可能会导致火灾或触电。

- 如果出现闪电雷击,请尽快关闭本装置电源开关,并拔出电源插头。
- 当出现闪电时,在接插状态请勿触碰电源插头。否则可能导致触电。
- 本装置只能与随主机附带的AC电源适配器(PA-30)配合使用。使用其他型号的适配器可能会导致火灾或触电。

操作过程中发生异常时

- 若电源线损坏(如断线或芯线裸露),请从代理经销商获取更换品。用损伤的电源线继续使用本装置可能会导致火灾或触电。
- 若AC适配器从高处跌落或外壳损坏,请立即关闭电源开关,从AC电源插座拔出电源插头,并与代理经销商联系。若忽视本条注意事项继续使用,可能会导致火灾或触电。
- 当发现任何异常时,如冒烟、异味、噪音或有异物、液体进入装置内部,请立即关闭电源开关。并将电源插头从AC电源插座中拔出。请代理经销商代为修理。这时若继续使用可能会导致火灾或触电。

⚠ 注意

安装

- 请避免在如下场合使用本装置:
 - 暴露在飞溅的油沫、蒸汽之下,如靠近厨灶、加湿器等地方。
 - 不稳定的表面,如摇晃的桌面或斜面。
 - 暴露在过热环境下,如窗户紧闭的车内或受阳光直射的地方。
 - 暴露在高潮湿的环境下或灰尘积聚的地方。
- 从AC电源插座拔出电源插头时请抓住插头部分。切勿直接拽拉线缆。否则可能会损伤电源线,进而导致火灾或触电。
- 请勿用湿手接触电源插头。否则可能会导致触电。

- 若要移动本装置的位置,请先从AC电源插座拔出电源插头,并拔出所有连接电缆。否则可能会损伤电缆,进而导致火灾或触电。

操作

- 请勿用布或毯子盖住或包裹AC电源适配器。否则热量会在布或毯子内积聚,熔化适配器外壳或导致火灾。只能在通风良好的环境下使用。
- 如果准备长时间不使用本装置,如将要去度假等,请将电源插头从AC电源插座拔出。否则可能会导致火灾。

— 正确操作须知 —

连接插口各针的分工

- XLR 型连接插口应按如下所示布线
针 1：地线；针 2：热线 (+)；针 3：冷线 (-)。
- INSERT TRS 耳机插口布线如下
套筒：地线；尖端：信号发送；环：返回信号。

来自蜂窝手机电话的干扰

- 在本设备附近使用手机可能会产生噪音。产生噪音时，请在远离该装置的地方使用移动电话。

耗材更换

- 经常动态接触的零部件，如开关、旋转控制、衰减器和连接插口等零部件的性能随着时间推移会逐渐下降。虽然磨损速度随使用条件不同有很大变化，但一定程度的磨损是不可避免的。当零部件出现故障时，请与代理经销商联系更换。

- 当不使用调音台时，请关闭电源。
- 即使电源开关被置于“STANDBY”（待机）位置，调音台中仍有微量的电流。当确定长时间不使用时，请务必将电源插头从 AC 电源插座拔出。

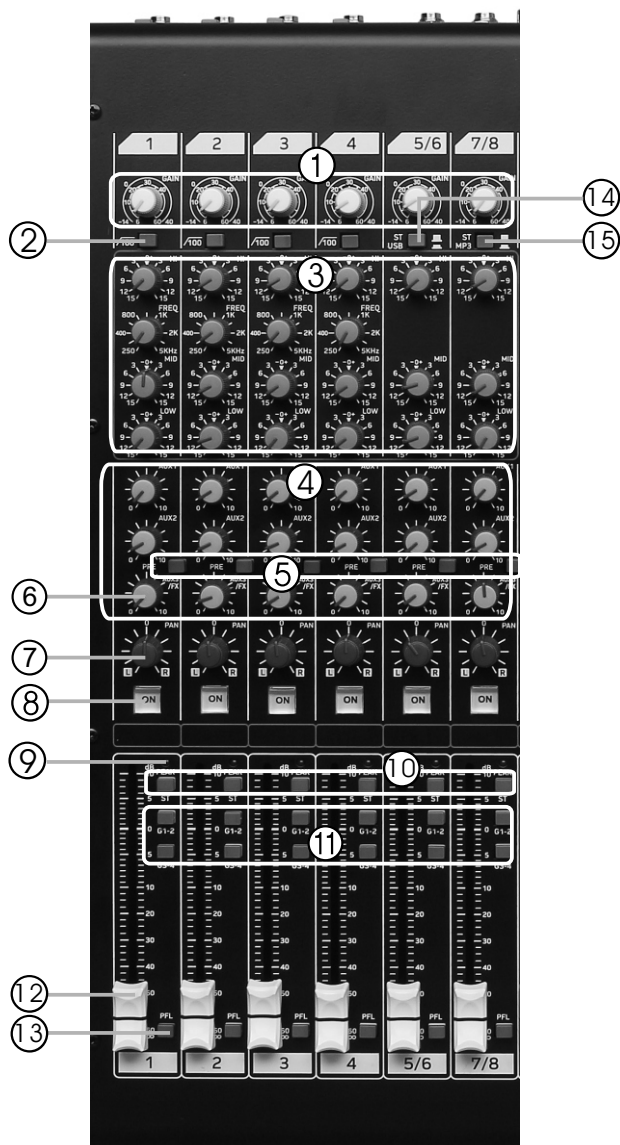
除非用于个人目的，严禁复制作为商品的音乐作品数据和 / 或数字音频文件。

本手册中的图示仅仅用作说明，可能与实际使用时的外观有差异。

本用户手册中所使用的公司名和产品名都是各自所有者的商标或注册商标。

前面板和后面板

通道控制部分



① GAIN(增益)控制

调节输入信号电平。为了获得信噪比与动态范围的最佳平衡，调节输入信号电平使峰值指示灯仅在最大输入水平亮灯。

② 100Hz 开关 (高通过滤器)

该开关使 HPF 开或关。若要打开 HPF，请按下该开关 ()。HPF 将削去100Hz 以下的频率。(但是请注意，无论开关设置如何，调音台不会将该 HPF 应用于立体声输入通道的线路输入。)

③ 均衡器

• 单声通道

该三段均衡器可在高、中和低三个频率带调节通道。将旋钮设定在  位置可产生平坦的频率响应。将旋钮转向右侧可增强相应的频率带，而转向左侧可削弱该频率带。下表为三个频率带的 EQ(均衡器) 类型、基础频率和最大削弱 / 增强。

频率带	类型	基础频率	最大削弱 / 增强
HIGH (高)	斜坡	10 kHz	± 15 dB
MID (中)	峰值	250 Hz - 5 kHz (可变)	
LOW (低)	斜坡	100 Hz	

④ AUX1 -3

AUX1 旋钮控制由该通道发送到 AUX1 总线的信号电平；
AUX2 旋钮控制由该通道发送到 AUX2 总线的信号电平。
AUX3 旋钮控制由该通道发送到 AUX3 总线的信号电平。
一般情况下这些旋钮应设定在靠近 ▼ 位置。

如果正在使用立体声通道，将混合 L(奇)和 R(偶)通道的信号并发送到 AUX1、AUX2 和 AUX3 通讯总线。

⑤ PRE 开关

选择是否将前置衰减器或后置衰减器的信号发送到 AUX2 总线。若将开关置于 (■)，则调音台将前置衰减器信号 - 通过通道衰减器 ⑫ 之前的信号 - 发送到 AUX2 总线，因此 AUX2 输出不受通道衰减器的影响。若将开关设置为关 (■)，调音台将后置衰减器信号发送到 AUX2 总线。

请注意该开关仅作用于 AUX2。发送到 AUX1 总线的信号总是首先通过通道衰减器。

⑥ EFFECT 控制

调节从通道发送到 EFFECT 总线的信号水平。请注意，信号水平随通道衰减器的设置不同而变化。

若正在使用立体声通道(通道 9/10、11/12、13/14、15/16)，将混合从 L(奇)和 R(偶)通道的信号，然后发送到 EFFECT 总线。

⑦ PAN 控制

PAN/BAL 控制
BAL 控制

PAN 控制决定通道信号在 Group 1-2/3-4 总线或立体声 L 和 R 总线上的定位。

BAL 控制旋钮设定左右通道之间的平衡。进入到 L 输入(奇数通道)的信号发送到 Group 1/3 总线或立体声 L 总线；进入到 R 输入(偶数通道)的信号发送到 Group 2/4 总线或立体声 R 总线。

备注

在控制旋钮可同时提供 PAN 和 BAL 控制的通道(9/10 和 11/12)，如果将通过 MIC 插口输入或仅输入到 L (MONO) 输入插口，则该旋钮发挥 PAN 控制功能，如果同时输入到 L 和 R 输入插口，则发挥 BAL 控制功能。

⑧ ON 开关

该开关将通道信号输出到立体声 L 和 R 总线。若要将信号发送到立体声总线，请按下该开关 (■) 将它设定为开。

⑨ PEAK(峰值)指示灯

检测后置均衡器信号的峰值电平，且当电平到达截止电平以下 3 dB 时亮红灯。在配有 XLR 插口的立体声输入通道(9/10 和 11/12)中，将同时检测后置均衡器和后置麦克风放大器的峰值电平，并当这些电平达到截止电平以下 3 dB 时亮红灯。

⑩ ST 开关

该开关将通道信号输出到立体声 L 和 R 总线。若要将信号发送到立体声总线，请按下该开关 (■) 将它设定为开。该开关亮黄灯，表示处于开的状态。

⑪ GROUP 开关

使用这些开关将通道信号发送到组 1-2 和 / 或组 3-4 总线。将开关设定为开 (■) 使信号发送到相应的分组总线。

备注

无论 ST 开关 ⑨ 的设置如何，利用这些开关可将该信号输出到其中一个或两个分组总线。

⑫ 通道衰减器

调节输入到该通道信号的输出电平。利用这些衰减器调节各通道之间音量平衡。

备注

为了减少噪音，将未使用通道的衰减器旋钮调节到最低位置。

⑬ PFL (前置衰减器监听) 开关

该开关用来监控通道前置衰减器信号。若要将该开关设定为开，请按下该开关 (■) 使之亮灯。当开关打开后，调音台将通道前置衰减器信号输出到 PHONES 和 C-R OUT 插口以便进行监控。

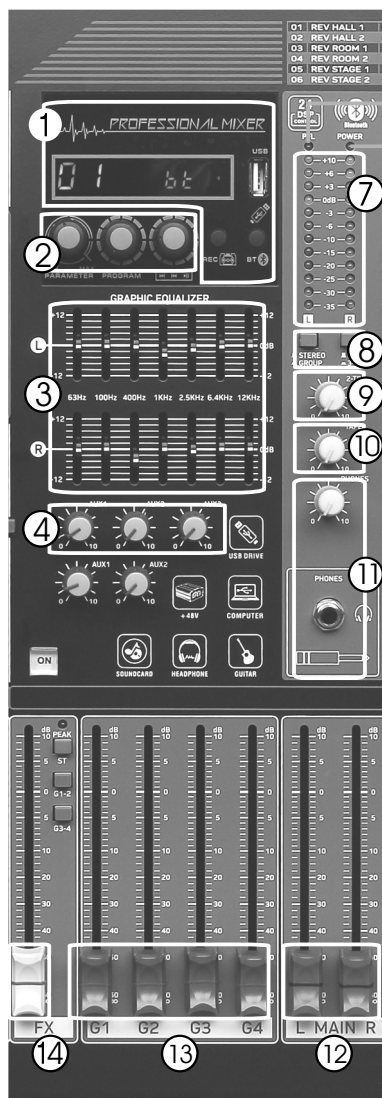
⑭ ST/USB

该开关用来切换该通道与 USB 之间的信号输入。

⑮ ST/MP3

该开关用来切换该通道与 MP3 之间的信号输入。

主控制部分



① 音乐播放器

高音质音乐播放器，将存有MP3.WMA等音乐文件的U盘插入播放器插口，通过USB旋钮控制播放出高品质音乐。此播放器自带蓝牙功能和录音功能。

② DSP数码效果

PROGRAM（程序）转盘，选择内部数码效果。
PARAMETER控制，调节所选效果的参数（深度，速度）。

③ ST立体声均衡器

该七频段均衡器调节发送到ST OUT插口的声音信号。均衡器在12dB的范围内削弱或增强各频率带（63Hz 100Hz 400Hz 1KHz 2.5KHz 6.4KHz 12KHz）。

④ MASTER SEND AUX1-3

调节AUX1-3插口输出的信号电平。

⑤ PFL指示灯

当PFL监听开关打开后该指示灯亮灯。

⑥ POWER指示灯

当调音台电源打开后该指示灯亮灯。

⑦ 电平计

LED显示指示由上述（4）选择开关的信号电平。相应于标准输出电平的0点。当输出电平达到截止电平时指示灯亮红灯。

⑧ 电平信号开关

这些电平计开关与通道PFL开关一起选择通过PHONES控制发送到PHONES插口和电平计的信号。

⑨ 2-TR

ST控制，调节从2-TR插口发送到立体声通讯总线的信号电平。

⑩ TAPE

ST控制，调节从TAPE插口发送到立体声通讯总线的信号电平。

⑪ PHONES控制

控制输出到PHONES插口的信号电平。

⑫ MAIN主衰减器

调节发送MAIN OUT插口的信号电平。

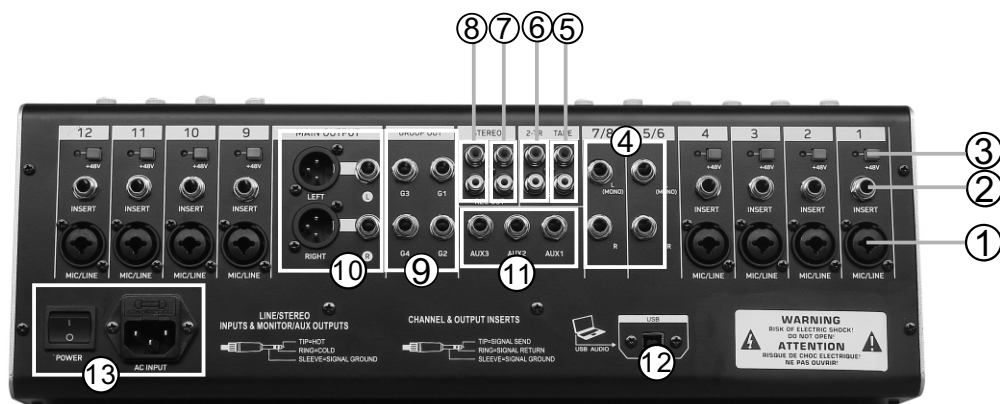
⑬ GROUP衰减器（1-2.3-4）

调节发送到GROUP OUT 1-4插口的信号电平。

⑭ FX衰减器

调节发送FX效果信号到ST L-R /GROUP1-2/3-4通讯总线的信号电平。

后面板输入 / 输出部分



① 通道输入插口

- MIC 插口
这些是平衡式 XLR 型输入插口。
- LINE 插口
这些是平衡式耳机型输入插口。
可将平衡式或非平衡式耳机插头插入这些插口。



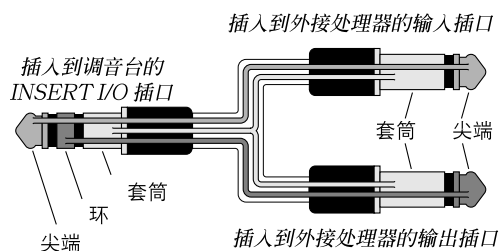
当某输入通道同时提供 MIC 插口和 LINE 插口时，您可使用其中一个插口，但不能同时使用两种。一次只能连接到各通道的一个插口。

② INSERT I/O 插口

这些非平衡式耳机型输入/输出口。每个插口都位于相应的输入通道的增益和均衡通道之间。



连接到 INSERT I/O 插口需使用下图所示选购的专用接插电缆。



INSERT I/O 插口的输出信号被反相。当将该插口与效应器相连接时，反相不会产生任何问题。但是，当用该插口向某外接设备输出信号时，请注意可能会与其他信号发生相位冲突。

③ +48V开关

当+48V开关打开后，该通道的MIC平衡式XLR型输入插口提供+48V电源。

④ 立体声通道输入插口

这些是非平衡式输入插口。可提供两种插口类型：耳机型使用这些插口输入立体声信号。将 L 信号输出到奇数通道，将 R 信号输出到偶数通道。

⑤ TAPE输入插口

这些非平衡RCA针式输入插口被用来输入立体声声源信号。当希望将立体声声源信号（CD或DAT）直接连接到调音台进行监控时，请使用这些插口。

前面板和后面板

⑥ 2TR IN 插口

这些非平衡 RCA 针式输入插口被用来输入立体声信号。当希望将立体声源信号 (CD 或 DAT) 直接连接到调音台进行监控时, 请使用这些插口。

 可利用主控制部分的 2TR IN 控制调节信号电平。

⑦ ST OUT (L、R) 插口

这些非平衡式 RCA 针式输出插口。通过这些插口连接到外接有源音箱, 可播放与 ST OUT 插口输出相同的信号。

⑧ REC OUT (L、R) 插口

这些是非平衡式 RCA 针式输出插口。通过这些插口连接到外接录音机, 可录制与 ST OUT 插口输出信号相同的信号。

 调音台的 ST 主衰减器对从这些插口输出的信号不产生任何影响。请务必在外接录音设备侧进行适当的电平调节。

⑨ GROUP OUT (1 至 4) 插口

这些是阻抗平衡式耳机型输出插口, 可输出 Group 1-2/3-4 信号。利用这些插口可连接到 MTR、外接头调音台或其他类似设备的输入插口。

⑩ MAIN OUT 输出插口

这些输出插口由主控制部分的 ST 衰减器控制电平信号的调音信号。立体声 (L 和 R) 通道中的输出, 例如: 可利用这些插口连接到驱动主扬声器的功率放大器。

⑪ SEND 插口

• AUX1-3
这些是阻抗平衡式耳机型输出插口。这些插口分别输出来自 AUX1-3 的信号。例如, 可利用这些插口连接到效应器或提示箱或其它监控系统。

⑫ USB 音频输入

⑬ POWER (电源) 开关

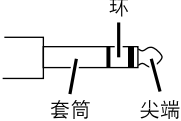
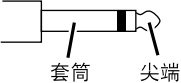
利用该开关将调音台电源设定为 ON (开) 或 STANDBY (待机)。

数字效果一览表

序号	程序	参数	说明
1	REV HALL 1	Reverb Time	模拟音乐厅等大空间的混响。
2	REV HALL 2	Reverb Time	
3	REV ROOM 1	Reverb Time	模拟小型空间 (房间) 声学环境的混响。
4	REV ROOM 2	Reverb Time	
5	REV STAGE 1	Reverb Time	模拟大舞台的混响。
6	REV STAGE 2	Reverb Time	
7	REV PLATE	Reverb Time	模拟金属混响单元, 产生棱角更加鲜明的混响。
8	DRUM AMB	Reverb Time	短促的混响, 特别适用于套鼓。
9	EARLY REF	Room Size	此效果只将早期反射部分与混响隔离开, 创造比普通混响更 “艳丽” 的效果。
10	GATE REV	Room Size	此效果将混响的尾部切断一半, 产生更强有力的声音。
11	SINGLE DLY	Delay Time	一种将相同的声音仅重复一遍的效果。缩短延迟时间会产生加倍的效果。
12	DELAY	Delay Time	添加多个延迟信号的反馈延迟。
13	VOCAL ECHO	Delay Time	用于普通合唱的回声。
14	KARAOKE	Delay Time	用于卡拉 OK (大家跟唱) 的回声。
15	PHASER	LFO* Freq	循环改变相位, 向声音添加调制。
16	FLANGER	LFO* Freq	为声音添加调试声, 产生一种类似于喷气机引擎的起伏声。
17	CHORUS 1	LFO* Freq	用不同的延迟时间添加多层声音, 从而创建一种厚重的重奏感声音。
18	CHORUS 2	LFO* Freq	
19	SYMPHONIC	LFO* Depth	添加质地更丰富的声音。
20	TREMOLO	LFO* Freq	一种循环调节音量的效果。
21	AUTO WAH	LFO* Freq	具有周期滤波器调制的哇音效果。[PARAMETER] 旋钮可以调节对 “wah” 滤波器进行调制的 LFO* 的速度。
22	RADIO VOICE	Cutoff Offset	重新创造调幅收音机的低保真声音。[PARAMETER] 旋钮用来调整要增强的频段。
23	DISTORTION	Drive	在声音上添加突变失真。
24	PITCH CHANGE	Pitch	此效果改变信号的音高。

* “LFO” 指低频振荡器。LFO 通常用于以不同的波形形状和调制速度周期性调制另一种信号。

连接插口的极性

MIC INPUT、ST OUT	针 1：地线 针 2：热线 (+) 针 3：冷线 (-)	INPUT  OUTPUT 
LINE INPUT (单声通道)、 GROUP OUT、ST OUT、C-R OUT、 AUX1、AUX2、EFFECT*	尖端：热线 (+) 环：冷线 (-) 套筒：地线	
INSERT I/O	尖端：输出 环：输入 套筒：地线	
PHONES	尖端：L 环：R 套筒：地线	
RETURN、 LINE INPUT (立体声通道)	尖端：热线 套筒：地线	

* 这些插口也可以接插单声通道耳机插头。当使用单声通道插头时，该连接为非平衡式连接。

连接安装

连接安装步骤

- (1)

在连接到麦克风或其他乐器之前，请务必先关闭所有设备的电源开关。另外还必须将调音台的所有通道衰减器和主控制衰减器调到最小设置。
- (2)

对于每个连接，请将电缆的一端连接到相关麦克风或乐器上，将另一端连接到调音台上的相应 LINE 或 MIC 插口。
(LINE 插口：通道 1 至 8。MIC 插口：通道 1 至 8、9/10、11/12。)



当某输入通道同时配有 MIC 插口和 LINE 插口时，可使用其中一个插口，但不能同时使用两种。一次只能连接到各通道的一个插口。



- (3)

为了避免损坏扬声器，请按照如下顺序接通电源：外围设备 → 调音台 → 功率放大器（或功率扬声器）。

当关闭系统时，请按照相反的顺序关闭电源：功率放大器，（功率扬声器）→ 调音台 → 外围设备。