

CM212F

12-Channel Professional Mixing Console



Description

The CM212F is a 12-channel professional mixing console engineered to meet the demands of audio professionals, music producers, and performers. It features 8 XLR mono input channels plus 2 stereo input channels. The console offers 48V phantom power, a 24-preset DSP effects processor, USB recording capability, and an LED status display. Each channel provides precise control with 3-band EQ, mute, and PFL switches, delivering exceptional sound quality and flexible operation.

Features

- Supports 8 XLR mono input channels plus 2 stereo input channels.
- Each channel features 3-band EQ adjustment, MUTE switch, and PFL switch.
- Built-in 48V phantom power for condenser microphones.
- Built-in 24-preset DSP digital effects processor.
- Built-in USB port for recording and music playback.
- LED screen for status display.
- Multiple input channels allow mixing to stereo and group outputs.
- High-quality built-in digital effects deliver a wide range of impact effects directly; a SEND socket also enables connection to external effect units.
- Monitoring section includes a convenient phones socket for monitoring main stereo output, PEL signal, or group 1 – 2 signals.
- AUX SEND and RETURN sockets enable signal routing to external effect processors and monitoring systems via the AUX bus.
- Built-in phantom power facilitates direct connection of condenser microphones requiring external

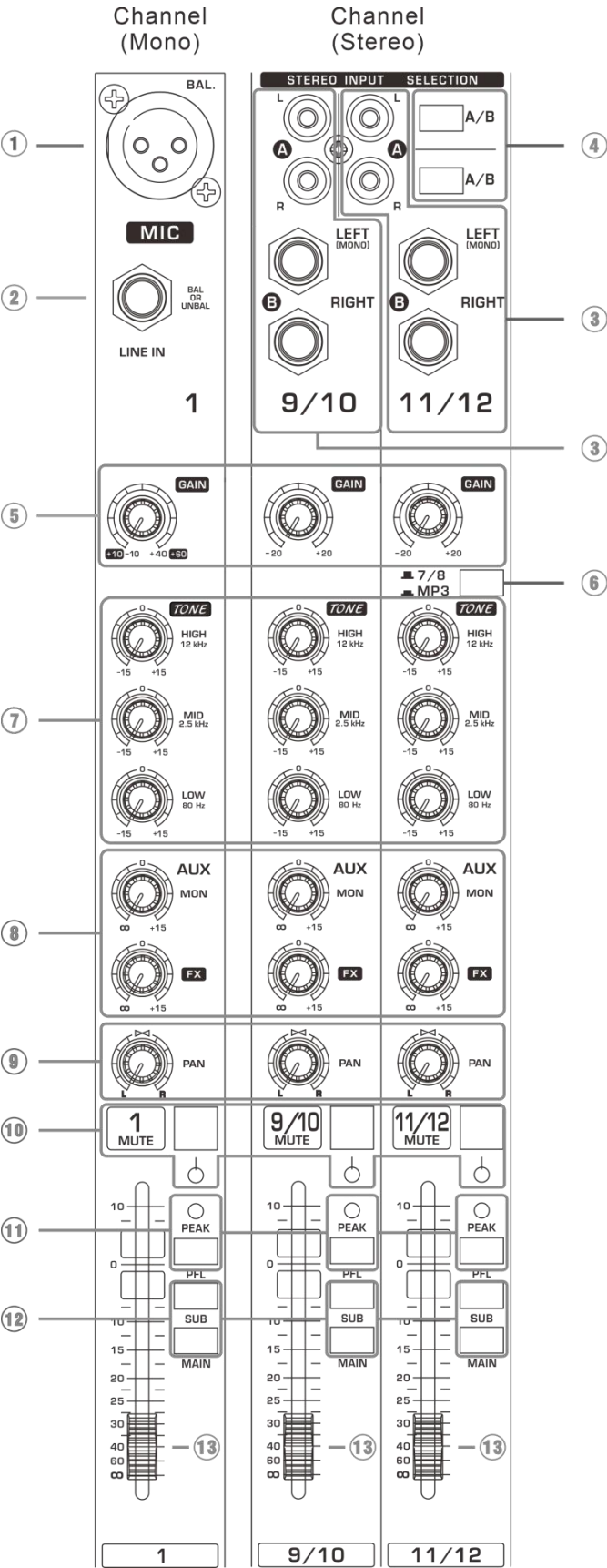
power.

- Mono input channels feature XLR microphone inputs and TRS line inputs, while stereo input channels are equipped with TRS line inputs and RCA line inputs. This comprehensive connectivity allows the console to interface with a wide variety of source devices, including microphones, line-level equipment, stereo synthesizers, and more.

Specifications

Model	CM212F
Frequency Characteristics (MAIN OUT)	20Hz-20kHz+1dB, -3dB@+4dBu, 600Ω (With gain control at the minimum level)
Total Harmonic Distortion (MAIN OUT)	0.1%(THD+N)@+4dBu, 20Hz-20kHz, 600Ω (With gain control at the maximum level)
Hum & Noise	-128dBu Equivalent input noise (Channel 1-8)
	-100dBu Residual output noise (ST OUT)
	-88dBu (92dB S/N) ST & GROUP main attenuator at nominal level; set all channel sending switches to OFF.
	-81dBu (85dB S/N) AUX & EFFECT main control at nominal level; all channel mixer controls at the minimum level.
	-64dBu (68dB S/N) ST & GROUP main attenuator and a channel attenuator at nominal level. (Channel 1-8)
Crosstalk (1kHz)	-70dB, among each input channel -70dB, among input / output channel (CH INPUT)
Channel Input Equalization: ±15dB	HIGH 10kHz slope; MID 2.5kHz slope; LOW 100Hz slope
Maximum Amplitude of Variation of Graphical Equalizer ±12dB	Seven bands (125, 250, 500, 1k, 2k, 4k, 8k)
Internal Digital Effect	16 types of programs, parameter control
Mono / Stereo Input Peak Indicator	In each channel: When the post EQ signal (In ST sound channel, when the post EQ signal or post microphone amplifier signal) enters the range of the cutoff level value of 3dB, the indicator will be red.
Virtual DC+48V Power (Balanced Input)	When the virtual +48V switch is turned on, the virtual power will be provided.
Power Consumption	51W
Package Dimensions (mm)	440×360×90
Product Dimensions (mm)	485×163×440
Gross Weight	4.5kg
Net Weight	5.5kg

Channel Control Part



Mono Channel Input Port

- ① MIC Jack
These are balanced XLR input jacks.
- ② LINE Port
These are balanced headphone input jacks. Balanced or unbalanced headphone plugs can be inserted to these jacks.

Note When an input channel can provide both MIC jack and LINE port, you can use one of the jacks, but not both. Only one jack of each channel can be connected at a time.

- ③ Stereo Channel Input Port
These are unbalanced input jacks. Two types of jacks: Headphone type and RCA pin type. Use these jacks to input stereo signals.
- ④ Signal Input Selection
Stereo channel input jack selection. A/B selects RCA pin type input or headphone type input.

Note Although a channel has both a headphone jack and an RCA pin jack, only one of the jacks can be used, but not both. Only one jack of each channel can be connected at a time.

- ⑤ GAIN Control
Adjust the input signal level. In order to obtain the optimum balance between SNR and dynamic range, adjust the input signal level to make the peak indicator (⑨) light only at the maximum input level.
- ⑥ Stereo Input ③ & MP3 Player Signal Switching
- ⑦ Equalizer
This three-band equalizer can adjust the channel in three frequency bands: high, mid and low. Set the knob to the 0 position to produce a flat frequency response. Turn the knob to the right to enhance the corresponding frequency band, while to the left to attenuate it. The following table shows the EQ type, base frequency and maximum attenuation / enhancement for the three frequency bands.

Frequency Band	Type	Base Frequency	MAX. Attenuation / Enhancement
HIGH	Ramp	12 kHz	± 15 dB
MID	Ramp	2.5 kHz	
LOW	Ramp	80 Hz	

⑧ AUX & **FX** Control

The AUX knob controls the signal level sent by this channel to the AUX1 bus; the **FX** knob controls the signal level sent by this channel to the **FX** bus.

Please note that the signal level varies with the channel attenuator settings.

Normally, these knobs should be set near the **0** position.

⑨ PAN Control

PAN control determines the positioning of the channel signal on the SUB1-2 bus or stereo L and R bus.

⑩ MUTE Switch

If press this switch, this channel will stop sending signals to all buses (except for PFL monitoring), and all outputs have no signal output, only for this channel. At this time, the indicator is yellow. Do not press this switch for normal use.

⑪ PEL Switch

This switch is used to monitor the channel pre-attenuator signal. To set this switch to ON, please press this switch (—) to make the indicator on. When the switch is turned on, the mixing console will output the channel pre-attenuator signal to PHONES and C-R OUT jacks for monitoring.

PEAK Indicator

It detects the peak level of the post-equalizer signal, and lights up red when the level reaches 3dB below the cutoff level.

(Peak monitoring and PFL monitoring share this indicator.)

⑫ SUB MAIN Switch

Use these switches to send the channel signal to the group SUB1-2 bus. Use these switches to send the channel signal to the main channel MAIN L R bus.

Set thus switch to ON (—) to send the signal to the corresponding group bus.

⑬ Channel Attenuator

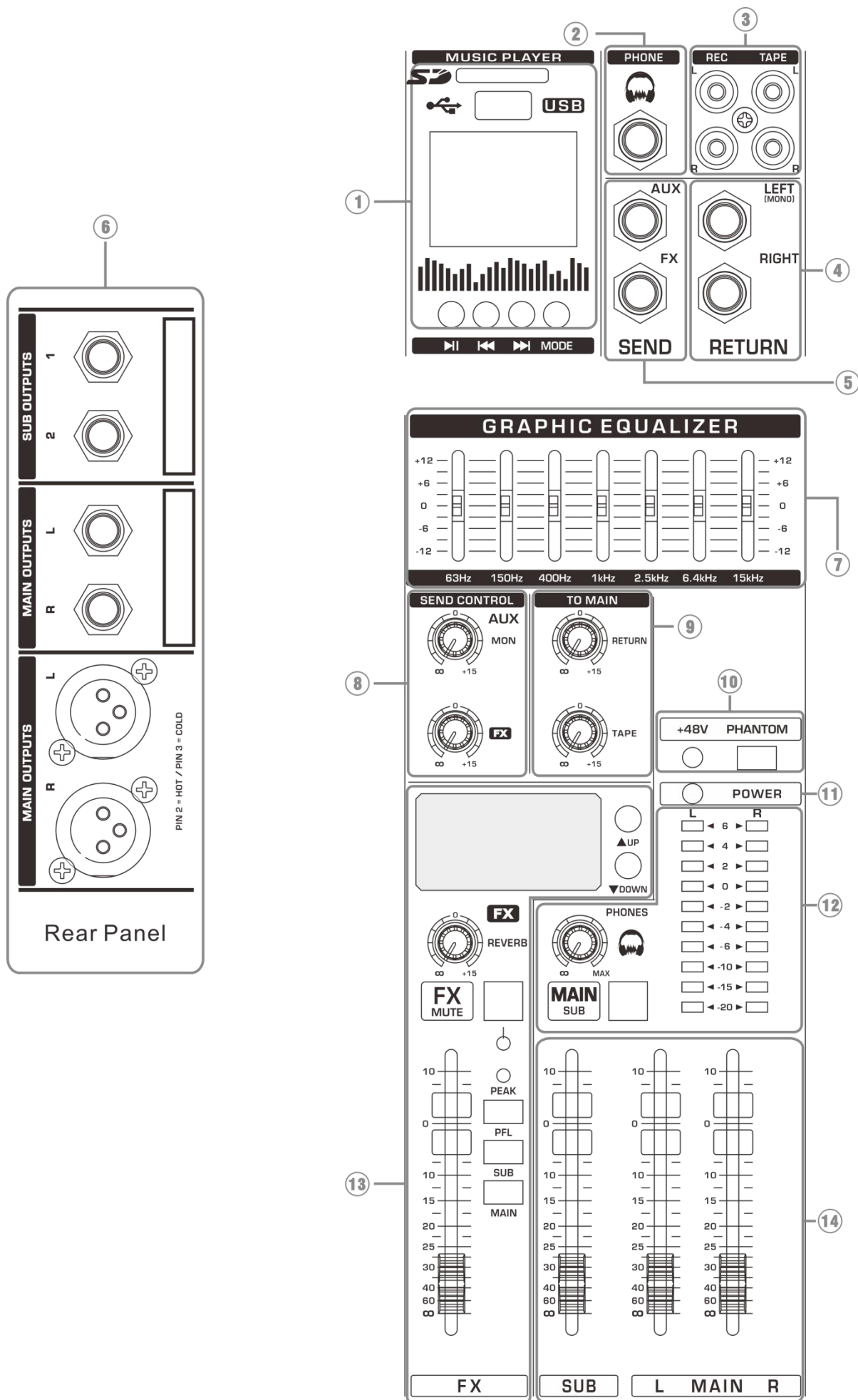
Adjust the output level of the signal input to this channel.

Use these attenuators to adjust the volume balance between channels.



Turn the attenuator knob of the unused channel to the lowest position, so as to reduce noise.

Main Control Part



① USB Player

Insert a USB flash disk with music files in MP3 or WMA format into the player jack. The music player will send the signal to the main bus or group bus and can support 320K files in MP3 format.

② PHONES Jack

Headphone connection jack. This is a balanced headphone type output jack.

Note

The signal monitored by this jack is selected through the level meter signal switch and the channel PFL switch.

③ REC OUT / TAPE IN (L/R) Jack

REC OUT

These are unbalanced RCA pin-type output jacks. Connect an external recorder through these jacks to record the same signal output from the MAIN OUT jack.

TAPE IN

These unbalanced RCA pin-type input jacks are used for inputting stereo audio source signals. Use these jacks when connecting a stereo source signal (CD or DAT) directly to the mixing console for monitoring.

Note

You can use the TAPE IN control on the main control section to adjust the signal level.

④ RETURN L (MONO) / R Jack

These are unbalanced headphone-style input jacks. The signals received by these jacks will be sent to the stereo bus. These jacks are generally used to receive return signals from external effectors (reverb, delay, etc.).

This jack is also used as an auxiliary stereo input. If only connect the L (MONO) jack, the mixing console will take the signal as a mono signal and send the same signal to the L and R jacks.

⑤ SEND Jack

• AUX 1-2

These are impedance balanced headphone type output jacks, used to output the signals from the AUX. For example, use these jacks to connect effectors or cue boxes or other monitoring systems.

• **FX** / EFF

This is an impedance balanced headphone type output jack and outputs the signal from the **FX** bus. For example, use this jack to connect an external effector.

⑥ Main Output Part

MAIN OUT (L/R) Jack

These jacks output the tuning signal whose level is controlled by the MAIN attenuator of the main control part. The output in the stereo (L and R) channel. For example, use these jacks to connect the power amplifier driving the main speaker.

• XLR Jack

XLR balanced output jack.

• Headphone Jack

TRS headphone type balanced output jack.

SUB OUT 1-2 Jack (for some models)

These are impedance balanced headphone type output jacks, used to output Group 1-2/3-4 signals. Use these jacks to connect the input jacks of an MTR, external mixing console or other similar devices.

⑦ MAIN OUT (L/R) GRAPHIC EQUALIZER

The seven-band equalizer adjusts the sound signal sent to the MAIN OUT jack. The equalizer attenuates or enhances each frequency band (63, 150, 400, 1K, 2.5K, 6.4K and 15KHz) within $\pm 12\text{dB}$.

⑧ SEND Control

• AUX Control

Adjust the signal level output to the SEND AUX jack.

• **FX** Control

Adjust the signal level in the **FX** bus. This signal is output from the **FX** jack.

⑨ RETURN Control

Adjust the signal level sent from the RETURN jack (L(MONO) and R) to the stereo bus.

If a signal is provided only to the RETURN L (MONO) jack, the mixing console will output the same signal to both the L and R stereo buses.

TAPE Control

Adjust the signal level sent from the TAPE jack to the stereo bus.

⑩ PHANTOM +48V Switch

This switch can turn on or off the phantom power supply. If the switch is on (—), the mixing console will supply power +48V to all channels with MIC input jack. When using one or more condenser microphone, please set this switch to ON (—).

Note

When this switch is set to ON, the mixing console will supply DC +48V power to pin-2 and pin-3 of all XLR-type jacks.



- When not using phantom power, be sure to set this switch to OFF (■). When the switch is turned ON (—), connecting to unbalanced equipment or a non-grounded transformer may cause humming or damage to the equipment. However, please note that no problems will occur even if the switch is left ON (—), when connecting to a balanced dynamic microphone.
- To prevent damage to the speakers, be sure to turn off the amplifier (or powered speaker) before switching this ON (—), or OFF (■).

⑪ POWER Indicator

When the mixing console is powered on, this indicator will be on.

⑫ PHONES/C-R Control

Control the signal level output to the PHONES jack and the C-R L and R jacks.



Signal Switch

This switch, in conjunction with the channel PFL switch, selects the level signal sent to the PHONES jack and the C-R OUT jack through the PHONES/C-R control.

Level Meter

The LED display indicates the signal level (the signal level sent to the C-R OUT and PHONES jacks) selected by the selection switch described in ⑧. It corresponds to the "0" point of the standard output level. When the output level reaches the cutoff level, the indicator will be red.

⑬ FX Digital Effect Control

- ▲ UP ▼ DOWN Button

Select the internal digital effect. As shown in the table below, you can choose from 16 types of effects.

01	HALL1	05	REVERB	09	DELAY 4	13	DELAY 8
02	HALL2	06	DELAY 1	10	DELAY 5	14	PINPENG 1
03	ROOM1	07	DELAY 2	11	DELAY 6	15	PINPENG 2
04	ROOM2	08	DELAY 3	12	DELAY 7	16	PINPENG 3

- REVERB DELAY Control

Adjust the parameters of the selected effect (depth, speed, etc.).

- FX MUTE** Switch

Enable or disable the internal effector. (■) When this switch is turned on, the internal effector will be enabled. (■) When this switch is pressed, the internal effector will stop working, and the indicator will be yellow.

- PFL Switch

To output the internal effector signal to the PFL bus, please set this switch to ON (■).

- SUB Switch

Set this switch to ON (■) to output the internal effector signal to the group 1-2 bus.

- MAIN Switch

Set this switch to ON (■) to output the internal effector to the main channel L-R bus.

- FX PTN Attenuator**

Adjust the signal level sent from the internal effector to the SUB and MAIN buses.

⑭ MAIN and SUB Attenuator

- MAIN Attenuator

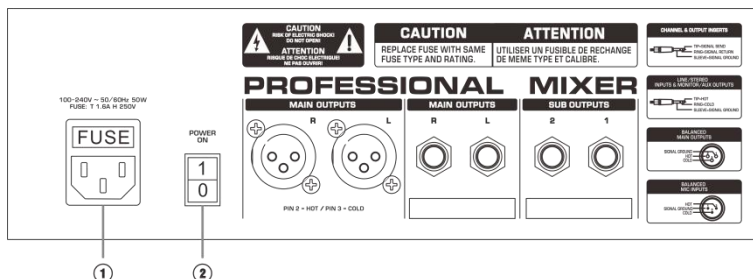
Adjust the signal level sent to the MAIN OUT (L-R) jack. SUB Attenuator (1-2)

- Adjust the signal level sent to the SUB OUT (1-2) jack.

⑮ USB Attenuator

Adjust the signal level sent to the MAIN (L-R) bus.

Power Input Part



① AC IN Connection Port

Power input port, power consumption of about 30W.

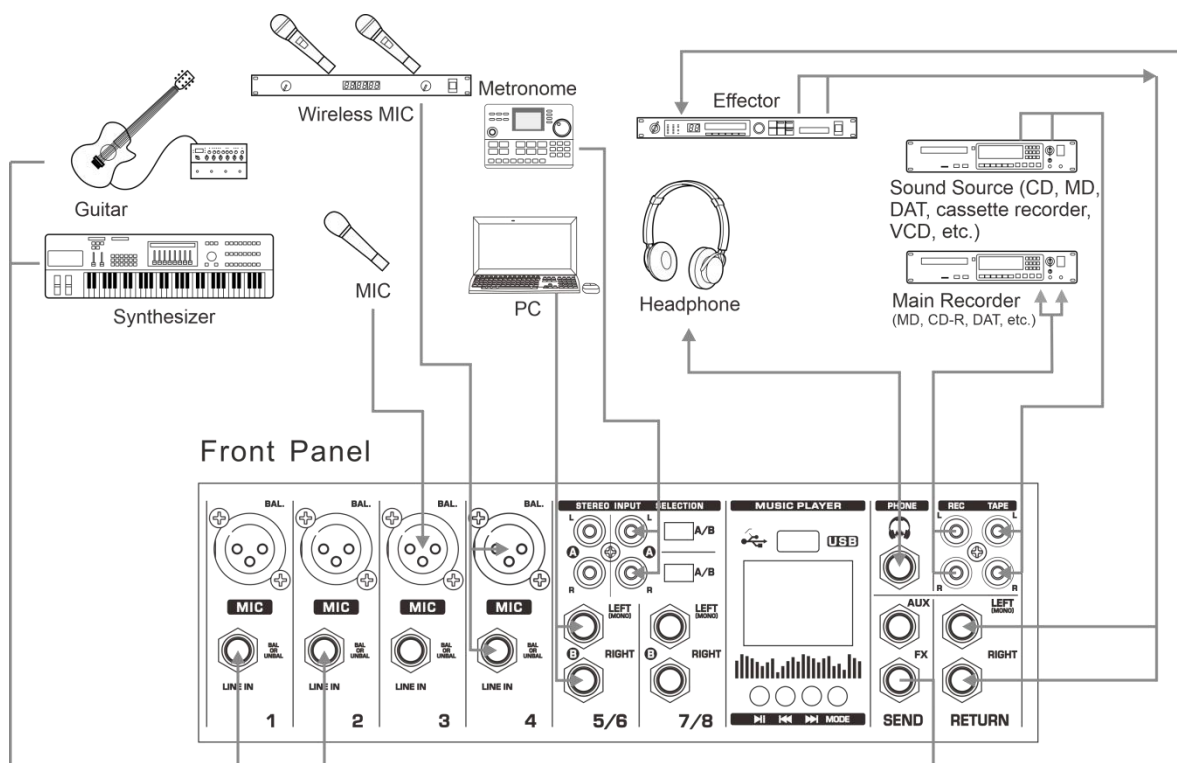
② POWER ON Switch

Use this switch to set the power of the mixing console to ON or STANDBY.



Please note that when the power switch is set to STANDBY, there is still a small amount of electric current in the system. When the mixing console is not used for a long time, please make sure to pull out the power adapter from the power outlet.

System Diagram



Rear Panel

The outputs of some models are on the front panel.

