Public Address System

OTM9208 OTM9212 OTM9216

8/12/16-CHANNEL PROFESSIONAL MIXING CONSOLE

PRODUCT DESCRIPTION:

THE OTM9208/OTM9212/OTM9216 8/12/16-CHANNEL PROFESSIONAL MIXING CONSOLE IS A HIGH-PERFORMANCE MIXER DESIGNED TO MEET THE NEEDS OF AUDIO PROFESSIONALS, MUSIC PRODUCERS AND PERFORMERS. THERE ARE 4/8/12/20-CHANNEL XLR MONO INPUT OPTIONAL AND 2-CHANNEL STEREO INPUT. THE SERIES OF DEVICES FEATURES 48V PHANTOM POWER, A 24 DSP EFFECTS PROCESSOR, USB RECORDING, AND AN LED STATUS SCREEN, OFFERING PRECISION WITH 3-BAND EQ, MUTE AND PFL SWITCHES ON EACH CHANNEL, WHICH ACHIEVES A NEW LEVEL OF AUDIO MIXING, PROVIDING EXCELLENT SOUND QUALITY AND FLEXIBLE CONTROL.

FEATURES:

- SUPPORT 4/8/12/20-CHANNEL XLR MONO INPUT AND 2-CHANNEL STEREO INPUT.
- EACH CHANNEL WITH 3-BAND EQ ADJUSTMENT, MUTE SWITCH, AND PFL SWITCH.
- BUILT-IN PHANTOM POWER 48V FOR MICROPHONE INPUT.
- BUILT-IN USB PORT FOR RECORDING AND MUSIC PLAYING.
- BUILT-IN 24 DSP DIGITAL EFFECT PROCESSOR.
- BUILT-IN BLUETOOTH
- WITH AN LED SCREEN FOR STATUS DISPLAY.
- DUE TO THE HIGH QUALITY OF THE BUILT-IN DIGITAL EFFECTS, IT CAN DIRECTLY PROVIDE A WIDE RANGE OF IMPACT EFFECTS.
- IT ALSO COMES WITH A SEND SOCKET WHICH CAN BE USED TO CONNECT TO AN EXTERNAL EFFECTOR.
- IT CAN PROVIDE MULTIPLE INPUT CHANNELS AND MIX THESE SIGNALS INTO STEREO AND GROUPING OUTPUT SIGNALS THE MONITOR IS EQUIPPED WITH THE CONVENIENT PHONES SOCKET.
- THIS SOCKET CAN BE USED TO MONITOR THE MAIN STEREO OUTPUT SIGNAL, PEL SIGNAL OR 1 TO 2 GROUP SIGNALS AND 2 AUX.
- THE VIRTUAL POWER SUPPLY CAN PROVIDE CONVENIENCE FOR THE CONNECTION OF THE CAPACITOR MICROPHONE WHICH REQUIRES THE EXTERNAL POWER SUPPLY.
- THE MIXING CONSOLE IS ALSO EQUIPPED WITH AN AUX SEND SOCKET AND A SINGLE RETURN SOCKET. AUX COMMUNICATION BUS SIGNAL CAN SEND THE SIGNAL TO THE EXTERNAL EFFECTOR AND THE MONITORING SYSTEM.
- THE MONAURAL INPUT CHANNEL IS EQUIPPED WITH THE XLR MICROPHONE INPUT SOCKET AND THE TRS HEADPHONE LINEAR SOCKET. THE STEREO INPUT CHANNELS ARE EQUIPPED WITH TRS LINEAR INPUT SOCKETS AND RCA LINEAR INPUT SOCKET. BECAUSE OF THESE WIDE VARIETIES OF SOCKETS, THIS MIXING CONSOLE CAN BECONNECTED TO MANY DIFFERENT TYPES OF SOUND SOURCE DEVICES, SUCH AS MICROPHONES, LINEAR LEVEL DEVICES STEREO OUTPUT SYNTHESIZERS AND SO ON.

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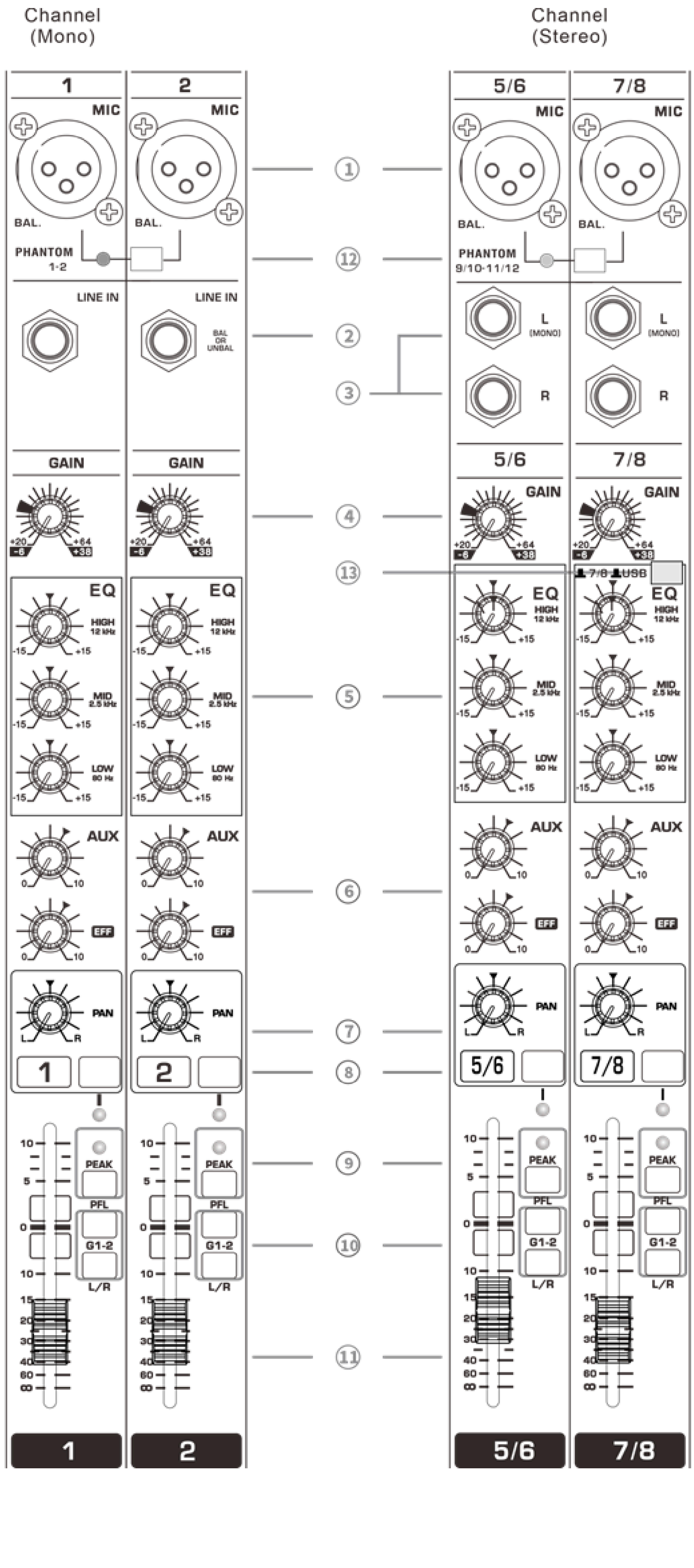
SPECIFICATIONS:

Model	OTM9208	OTM9212	OTM9216
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	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		
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)	405×175×490	520×175×490	640×175×490
Product Dimensions (mm)	340×400×135	460×400×135	570×400×135
Gross Weight	5.3kg	6.5kg	7.5kg
Net Weight	4.2kg	5.4kg	6.3kg

CHANNEL CONTROL PART

CH8 : 1-4
CH12 : 1-8
CH16 : 1-12
CH24 : 1-20



CH8 : 5/6 + 7/8
CH12 : 9/10 + 11/12
CH16 : 13/14 + 15/16
CH24 : 21/22 + 23/24

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.

Stereo Channel Input Port

③ These are unbalanced input jacks. Use these jacks to input stereo signals.

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.

④ 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 (⑪) light only at the maximum input level.

⑤ 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	

⑥ 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.

⑦ PAN Control
PAN control determines the positioning of the channel signal on the SUB1-2 bus or stereo L and R bus.

⑧ 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.

⑨ 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.)

⑩ SUB. GROUP / MAIN. MASTER 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.

⑪ Channel Attenuator
Adjust the output level of the signal input to this channel. Use these attenuators to adjust the volume balance between channels.

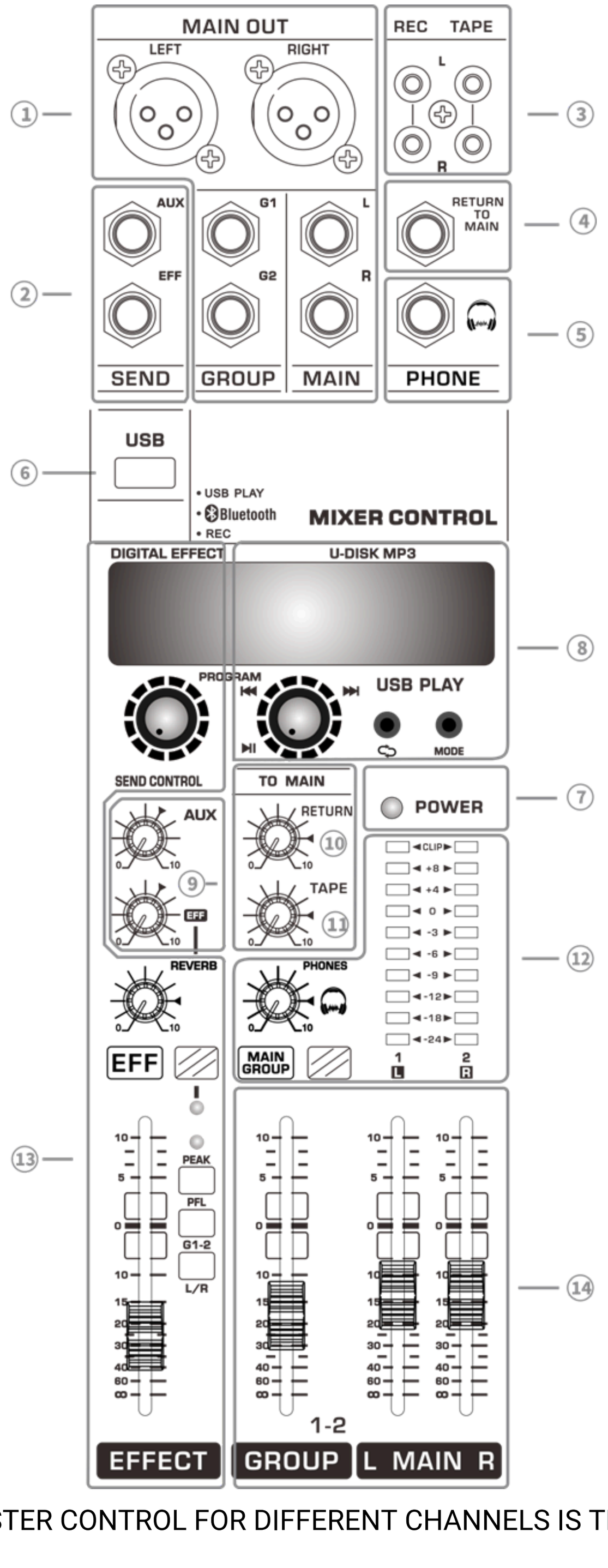
Note

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

⑫ PHANTOM +48V Switch
This switch is used to turn on or off the phantom power. (▬) The mixing console will supply power +48V to all channels equipped with a MIC input jack. When using one or more condenser microphones, please set this switch to the ON position (▬).

⑬ STEREO Channel and USB Player Input Switch
(▬) When the switch is off, it is set to stereo channel input.
(▬) When the switch is on, it is set to USB player input.

MAIN CONTROL PART



NOTE: THE MASTER CONTROL FOR DIFFERENT CHANNELS IS THE SAME.

① MAIN. GROUP OUT 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.

GROUP OUT 1-2 Jack

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.

② SEND Jack

- AUX 1-2

  These are impedance balanced headphone type output jacks, used to output the signals from the AUX.

- 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.

③ REC OUT / TAPE IN (L/R) Jack

REC OUT

Connect an external recorder through these jacks to record the same signal output from the MAIN OUT jack.

TAPE IN

Use these jacks when connecting a stereo source signal (CD or DAT) directly to the mixing console for monitoring.

④ RETURN IN Jack

This jack is used as an auxilliary input. If connect the jack, the mixing console will send the same signal to the L and R jacks.

⑤ PHONES Jack

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

⑥ USB Port

Insert a USB flash drive into this port to play music from the USB flash drive. Insert the USB from your computer, and then it will switch to the sound card mode, allowing you to input the music from the computer into the mixing console.

⑦ POWER Indicator

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

⑧ 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.

This button is for loop play.

This button is a mode switch.

MODE .BLUETOOTH.USB.USB RECORD.

PROGRAM

Turn the shuttle knob left or right to control playing the previous or next tracks.
Press this shuttle knob to play/pause.

⑨ 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.

⑩ RETURN Control

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

⑪ TAPE Control

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

⑫ PHONES/C-R Control

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

MAIN GROUP 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 MAIN GROUP. 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 Digital Effect Control

- **PROGRAM**

  Turn the shuttle knob left or right to select the internal effect and press it down to confirm.

- REVERB DELAY Control

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

- 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. GROUP Switch

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

- MAIN. MASTER 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.

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: