

PM412 PM416 PM424

12/16/24-Channel 4-Group Bus Mixing Console



PM412

PM416

PM424

Description

This series of 4-group mixing consoles is available in 12, 16, and 24-channel models, featuring versatile mono and stereo inputs with balanced XLR and line connections. Built-in effects, 3-band EQ, and compressors provide precise control over each channel. With 4 group buses, AUX/FX sends, PFL monitoring, and intuitive main/group faders, the series delivers professional-quality mixing for live sound, studio recording, and small to medium-sized venue applications.

Features

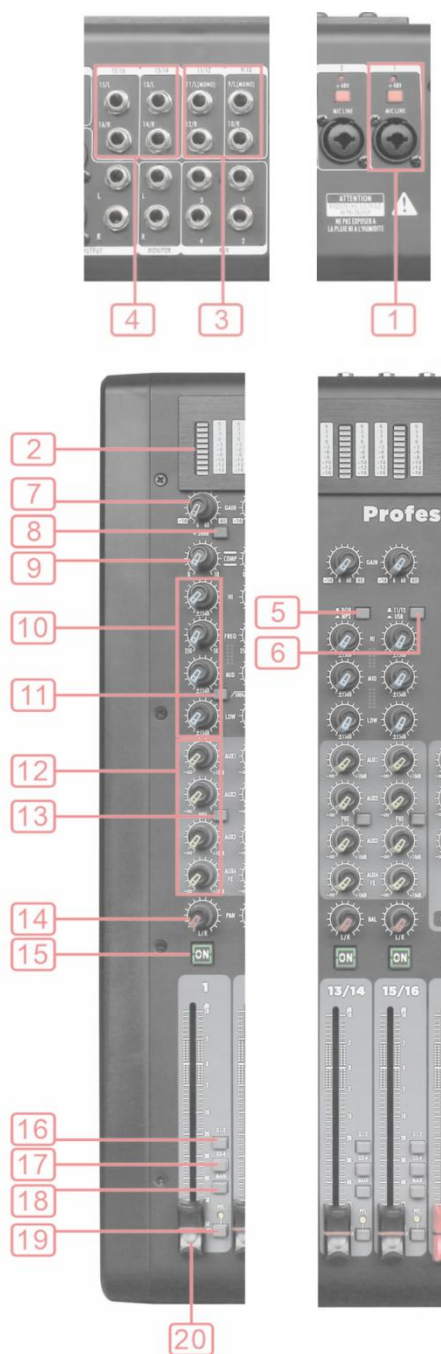
- 6, 10, or 18 balanced XLR mono inputs and 4 stereo inputs.
- 6, 10, or 18 independent input channels with 100Hz high-pass filters (HPF).
- 4, 8, or 16 independent input channels with PAD attenuation switches.
- 4, 8, or 16 independent input channels with adjustable COMP compressors.
- Independent +48V phantom power switch for each input channel.
- 3-band EQ adjustment for all input channels.
- 4 AUX SEND auxiliary outputs.
- Built-in DSP with 100 digital effects presets.
- 8 input channels with independent 10-segment LED level meters for channel-level monitoring.
- Built-in USB audio playback function supporting a variety of formats, including WAV, WMA, APE, FLAC, and MP3.
- Dual-channel headphone monitoring.
- 2 × 10-segment LED level meters.

- 4 GROUP OUT outputs.
- Dual-channel MAIN OUT stereo outputs.
- MONO OUT output.
- High-reliability 60mm smooth-travel faders.

Specifications

Model	PM412	PM416	PM424
Maximum Output Level	13db		
Signal-to-Noise Ratio	≥85dB (1MV IN 1V OUT)		
Total Harmonic Distortion	≤0.02% @ 0dB 1KHz		
Frequency Response	20Hz~20KHz±0.5dB		
Channel Crosstalk	<-75dB @ 1KHz		
MIC Input Impedance	600Ω		
LINE Input Impedance	10KΩ		
Output Impedance	75Ω		
MIC IN	-60dB		
LINE IN	-40dB		
Stereo Input Impedance	10KΩ		
Channel Gain Adjustment	-30dB		
3-Band EQ Adjustment Range	±15dB		
HIGH Frequency	12KHz		
MID Frequency	120Hz~4KHz		
LOW Frequency	80Hz		
Power Output	45W		
Power Supply	100V-240V/50Hz		
Package Dimensions (1 pc)	510×240×530 (mm)	618×240×530 (mm)	820×240×530 (mm)
Product Dimensions	400×450×130 (mm)	500×450×130 (mm)	705×450×130 (mm)
Gross Weight (1 pc)	8kg	10kg	13kg
Net Weight	5.8kg	7.1kg	9.9kg

Input Channel Section



1. Mono Input Jack

MIC/LINE: XLR or phone jack for connecting your microphone and/or instrument.

2. SIG Indicator

Lights up when a signal is present at the channel. The LED indicates the output level.

3. Mono/Stereo Input Jacks

MIC: Balanced XLR microphone input

(1: Ground, 2: Hot, 3: Cold).

LINE (L/MONO, R): Unbalanced phone-type line input jacks.

4. Stereo Input Jack

LINE L/R: Stereo input jacks (unbalanced) for line-level instruments such as keyboards and audio devices. Two connector types are provided: phone and RCA.

5. LINE/MP3 Switch

Switches the audio source input signal between the LINE stereo input and the MP3 Player. Supported formats: WAV, WMA, APE, FLAC, MP3.

6. LINE/USB2.0 Switch

Switches the audio source input signal between the LINE stereo input and the USB2.0.

7. GAIN Control Knob

Adjusts the input signal level. For optimal signal-to-noise ratio and dynamic range, set the gain so that the PEAK indicator lights briefly only at the highest input peaks.

8. PAD Switch

When activated, the input signal from the mono MIC/LINE jack is attenuated by 20dB. Leave this switch off when connecting microphones or other low-level sources; turn it on when connecting line-level devices.

9. COMP Knob

Adjusts the amount of compression applied to the channel. Turning the COMP knob clockwise simultaneously adjusts threshold, ratio, and output gain.

Threshold: +22dBu~-8dBu

Ratio: 1:1~4:1

Output Gain: 0dB~+7dB

Attack Time: approx. 25ms

Release Time: approx. 300ms

10. EQ (HIGH/MID/LOW)

Three-band equalizer for adjusting the high, mid, and low frequencies of the channel.

Center position provides a flat response; turn clockwise to boost, counterclockwise to cut. Mono channels include a MID-frequency control for adjusting the midrange.

* The MID frequency is adjustable from 250Hz to 5kHz. When the MID frequency knob is centered, the MID frequency is 2.5kHz.

11. 100Hz Switch (High-Pass Filter)

Enables or disables the HPF. Press to activate the HPF. The HPF cuts frequencies below 100Hz.

12. AUX/FX Control Knobs

Adjust the level of the signal sent from the channel to the AUX and FX buses.

These knobs can send either pre-fader or post-fader signals depending on the bus configuration.

13. AUX PRE Switch

Selects whether the AUX send signal is pre-fader or post-fader. When the switch is pressed, the mixer sends a pre-fader signal to the AUX bus, so the AUX output is not affected by the channel fader. When the switch is released, the mixer sends a post-fader signal to the AUX bus.

14. PAN/BAL Control Knob

PAN: Determines the stereo position of the channel signal in the GROUP1/2

or MAIN L/R buses.

BAL: Adjusts the balance between left and right channels. Signals input to the L jack (odd channels) go to GROUP1 or MAIN L; signals input to the R jack (even channels) go to GROUP2 or MAIN R.

15. ON Switch

Sends the channel signal to the bus. Lights green when on.

16. G1-2 Switch

Sends the channel signal to the GROUP 1/2 buses.

17. G3-4 Switch

Sends the channel signal to the GROUP 3/4 buses.

18. MAIN Switch

Sends the channel signal to the MAIN L/R buses.

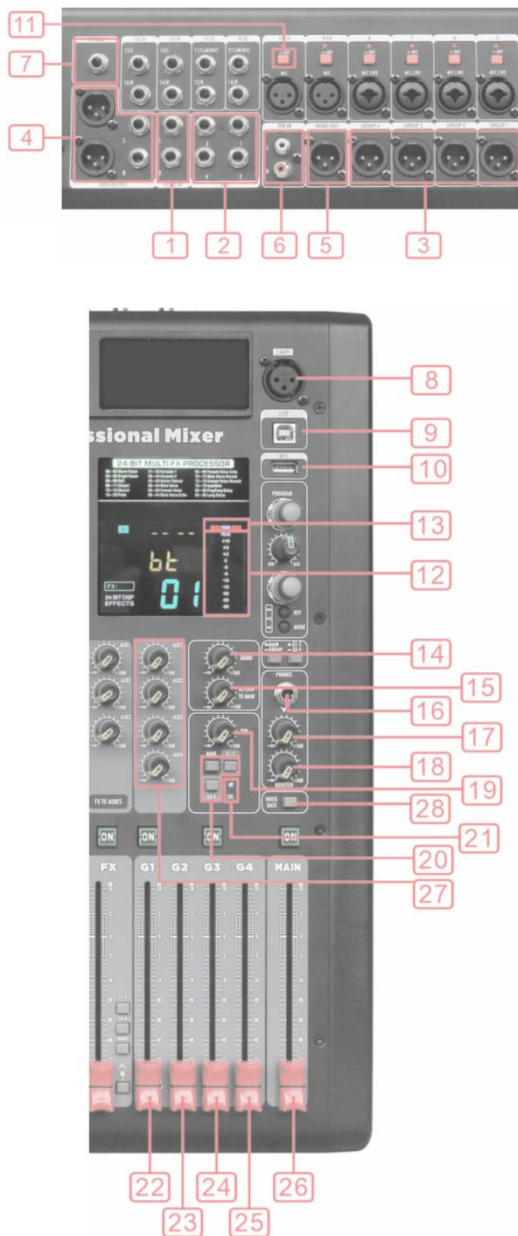
19. PFL (Pre-Fader Listen) Switch

Monitors the pre-fader signal of the channel. Press to light the LED. When on, the pre-fader signal is sent to the PHONES jack and MONITOR OUT for monitoring.

20. Channel Fader

Adjusts the channel signal level. Use the fader to balance levels between channels.

Master Section



1. MONITOR OUT Jacks

Connect these TRS phone-type jacks to a monitor system.

2. SEND Jacks (AUX/FX)

These TRS phone jacks output signals from the AUX/FX buses. Pre-fader send is recommended for monitoring systems, while post-fader send is best for connecting external processors (e.g., effects units).

3. GROUP OUT (1-4) Jacks

These TRS phone jacks output the GROUP 1-2 and 3-4 signals. They can be used to connect external effects units or stage/studio monitoring systems.

4. MAIN OUT (L/R) Jacks

These jacks provide the stereo output of the mixer. For example, they can be connected to power amplifiers driving the main speakers. When controlling levels with the MAIN OUT fader while recording the stereo output, these jacks can also be connected to recording devices.

5. MONO OUT Jack

Connect this balanced XLR jack to an active subwoofer.

6. 2TR IN Jacks

These RCA jacks accept a stereo audio source. Use them to connect devices such as CD players directly to the mixer.

7. RETURN L (MONO)/R Jacks

Signals received at these jacks are sent to the MAIN L/R buses.

8. LAMP Jack

This XLR-type connector supplies DC12V for a work lamp.

9. USB2.0 Type-B Port

Connect to a computer via a USB cable. The signal from the MAIN L/R bus is sent to the computer.

10. USB2.0 Type-A Port

Insert a USB drive or card reader to play songs via the lossless music player.

11. PHANTOM +48V Switch

Turns phantom power on or off for the corresponding channel. When on, +48V phantom power is supplied to the channel's XLR microphone input.

12. Level Meters

The LED meters display signal levels for MAIN L/R, GROUP buses, or the signal selected via the PFL switch. The "0" mark corresponds to nominal output level.

13. POWER Indicator

Lights when the mixer is powered on.

14. MONO Control Knob

Adjusts the level of the pre-MAIN L/R signal sent as a mono output to the MONO OUT jack.

15. RETURN Control Knob

Adjusts the signal level from the RETURN jacks / L (MONO) and R sent to the MAIN L/R buses.

16. PHONES Jack

Connect a pair of headphones to this TRS phone jack.

17. PHONES Control Knob

Adjusts the signal level sent to the PHONES jack.

18. MONITOR Control Knob

Adjusts the signal level output to the MONITOR OUT jacks.

19. 2TR Control Knob

Adjusts the signal level from the 2TR IN jacks.

20. 2TR Bus Assignment Switches (G1-2 /G3-4/MAIN)

These switches determine which bus the 2TR signal is routed to:

G1-2 Switch: Sends the signal to GROUP 1/2.

G3-4 Switch: Sends the signal to GROUP 3/4.

MAIN Switch: Sends the signal to MAIN L/R.

21. 2TR SIG Indicator

Lights when a signal is present at the 2TR IN jacks.

22. GROUP 1 Fader

Adjusts the signal level sent to the GROUP OUT 1 jack.

23. GROUP 2 Fader

Adjusts the signal level sent to the GROUP OUT 2 jack.

24. GROUP 3 Fader

Adjusts the signal level sent to the GROUP OUT 3 jack.

25. GROUP 4 Fader

Adjusts the signal level sent to the GROUP OUT 4 jack.

26. MAIN OUT Fader

Adjusts the signal level sent to the MAIN OUT jack.

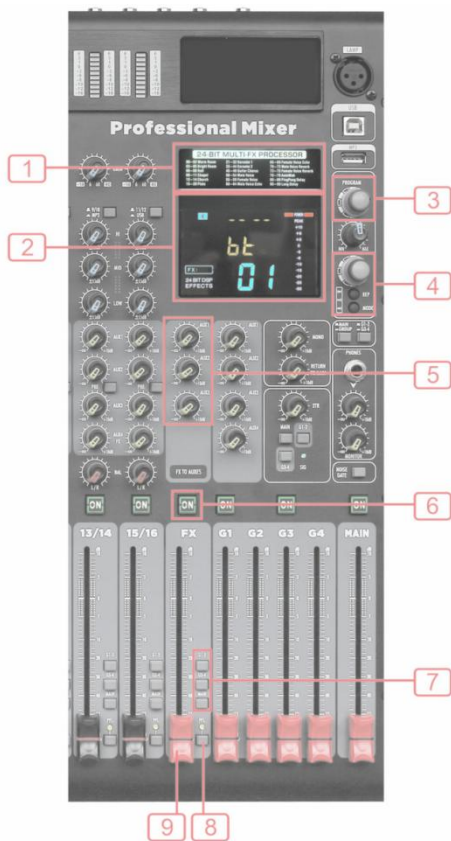
27. AUX SEND Control Knobs (AUX1-4/FX)

Adjusts the signal level sent to the SEND (AUX/FX) jacks.

28. NOISE GATE Switch

Press to enable the noise gate function for the main channel.

Built-in Effects / Player Section



1. Effects Program List

Lists the built-in effect programs.

2. Display

Shows the real-time status of the decoder/effects.

3. PROGRAM Knob

Select one of the 99 built-in effects. Turn the knob to choose the desired effect, then press the knob to confirm selection.

4. Lossless Music Player Functions

EQ: Adjusts the music equalization of the player.

MODE: Switches the playback mode of the player.

<■>: Controls track navigation (Previous, Next, Play/Pause).

5. AUX1-3 Knobs

Adjusts the signal level sent from the built-in effects unit to the AUX buses.

6. ON Switch

Turns the corresponding built-in effect on or off. The LED lights green when the effect is active.

7. Bus Assignment Switches

These switches determine which bus the built-in effect signal is sent to. When on, the signal is routed to the corresponding bus.

G1-2 Switch: Assigns signal to GROUP 1-2 buses.

G3-4 Switch: Assigns signal to GROUP 3-4 buses.

MAIN Switch: Assigns signal to MAIN L/R buses.

8. PFL Switch

Sends the effect signal to the PFL bus when activated.

9. FX RTN Fader

Adjusts the signal level sent from the internal digital effects unit to the GROUP 1-2/3-4 and MAIN L/R buses.

Power Section



1. POWER Switch

Turns the device power on or off.

2. AC INPUT Jack

Connect the supplied power cord here. First, connect the cord to this device, then plug the other end into an AC outlet.