PDM-24

24-Channel Digital Mixing Console

Description

This product is a powerful, professional performance-grade digital mixing console distinguished by its unique design, intuitive operation, fast response, and robust signal-processing capability. It features 24 input channels with built-in microphone preamplifiers and 21 mix buses, delivering high-efficiency audio performance. The console operates at a 48 kHz sampling rate and is equipped with high-resolution 192 kHz ADC and DAC converters, ensuring precise and high-fidelity sound reproduction.

Features

- 10.1-inch capacitive touchscreen with a resolution of 1280×800.
- 8 signal inputs in total, including 24 XLR analog input channels with microphone preamplifiers (8 COMBO connectors), 1 stereo USB playback input, and 2 digital expansion inputs.
- 24 XLR input channels support: 2 GEQ insert modules, 48V phantom power on/off, phase reverse, digital gain, 0–500 ms delay, pan and level control, user-definable channel name and color, 5-band parametric EQ (parametric / high-shelf / low-shelf selectable), high-pass filter, low-pass filter, noise gate, sidechain mute, and sidechain compression.
- 20 signal outputs in total, including 12 XLR analog outputs, 1 stereo USB recording output, 2 XLR monitor outputs, 1 stereo TRS headphone monitoring output, and 2 digital expansion outputs.
- 12 XLR output channels support: 4 GEQ insert modules, 0–500 ms delay, pan and level control, user-definable channel name and color, 9-band parametric EQ (parametric / high-shelf / low-shelf selectable), high-pass and low-pass filters.
- 17 motorized faders with 100 mm throw.
- 21 mix buses in total, including 16 mono buses, 4 effects buses, and 1 stereo main output bus.
- Built-in 4 effects buses, offering 8 effects types: reverb, echo, chorus, wah, tremolo, distortion, pitch shift, and flanger, freely configurable for flexible application.
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- Six 31-band GEQ modules in total, including two 31-band GEQ modules for inputs and four 31-band GEQ modules for outputs.
- One talkback input with talkback function, controlled via two dedicated control buttons.
- 8 DCA groups and 4 mute groups.
- 100 scene memories, including 4 quick-access scene recall buttons.
- Expansion slot supports optional modules, including Dante 2×2, AES, and stereo sound card expansion cards.
- USB stereo playback and recording supported.
- Wireless network control, compatible with iOS, Android, and PC platforms.
- RS-232 central control interface for third-party control systems, with three commonly used baud rates selectable.
- 12 V console lamp power output with adjustable brightness for illumination.
- Bilingual interface support (Chinese / English), with the control app automatically adapting to the system language.
- Two-level panel lock to prevent accidental operation.

Specifications

Model		PDM-24
Channel Processing	Input Processing Channels	24 microphone or line inputs, 1 stereo USB playback, 1 talkback microphone input, 2 expandable digital inputs.
	Output Processing Channels	16 mono BUS buses, 1 stereo MAIN bus, 1 stereo monitor, 1 stereo USB recording, 2 expandable digital outputs.
	Internal Effects Processor	4 ×effectors, mono effects, FX1 and FX2 with echo and reverb, FX3 and FX4 with chorus, wah, tremolo, distortion, pitch shift, and flanger
	GEQ Modules	6 × 31-band GEQ modules, including 2 GEQ modules for input channels; 4 GEQ modules for output channels
	Noise Gate	Threshold: -100dB to -20dB, with noise gate and side chain mute modes
	Compressor	Threshold: -48dB to +12dB Attack time: 3ms to 100ms Release time: 2x, 4x, 6x, 8x, 16x, 32x (release time is a coefficient multiplied by the attack time) Compression ratio: 1.0 to 127, Soft knee: 0 to 20dB
	Equalizer	Input: 5 bands, output: 9 bands Frequency :20Hz to 20kHz (-20dB/+12dB) Q value :0.404 to 28.852 Types :Parametric, high shelf, low shelf
	High-Pass / Low-Pass Filters (HPF / LPF Z)	High-pass: 20Hz to 400Hz (6/12/24/36/48dB slope) low-pass: 120Hz to 20kHz (6/12/24/36/48dB slope)
	Delay	0 to 500ms
	Phase	Standard/Inverted
	Scene Files	Up to 100 scenes can be saved

	Effect Library Files	Up to 100 effect presets can be saved
	Signal Processing Capability	40-bit floating-point processing, 48kHz sample rate
	A/D Converter	32-bit, 192kHz, 115dB dynamic rang
	D/A Converter	24-bit, 192kHz, 127dB dynamic range
Connectors	Microphone/Line Input XLR Interface	24, including 8 combo jacks, balanced input
	Talkback Input XLR Interface	1
	XLR Output Interface	16
	Minitor Output XLR Interface	2 Stereo
	Headphone Output TRS Interface	1 Stereo
	Digital Input / Output Expansion Interface	Supports DANTE 2X2, AES, USB stereo sound card
	USB Interface	2, for connecting USB flash drives for stereo recording/playback, connecting WiFi module for wireless control
	Lamp XLR Interface	DC 12V output, switch and brightness can be configured
	Serial Port	RS232 DB9 serial port, configurable baud rate
IN 1-24 Inputs	Input Impedance	Unbalanced 5kΩ, balanced 10kΩ
	Frequency Response	20Hz to 20kHz (+/-0.5dB)
	Maximum Input Level	22dBu
	Phantom Power	+48V(IN1toIN24)
	Gain	-12dB to 40dB
	S/N	112dB (gain = 0dB, A-weighted)
	Dynamic Range	114dB (gain = 0dB, A-weighted)
	Equivalent Input Noise	-110dBu (gain = 40dB, output = +4dB)
OUT 1-12 Outputs	THD	0.005% (gain = 0dB, output = 0dBu, unweighted) 0.006% (gain = 40dB, output = +20dBu, unweighted)
	Frequency Response	20Hz to 20kHz (+/-0.5dB)
	Maximum Output Level	+22dBu
	Output Impedance	＜100Ω
	Crosstalk	-110dB@1kHz
	Noise Floor	-86dBu (gain = 0dB)
Monitor and Headphone	Output Impedance	＜50Ω
	Maximum Output Level	+20dBu
	Noise Floor	-81dB (potentiometer = MAX, volume = 0dB)
Talkback Microphone	Input Impedance	Unbalanced 3kΩ, balanced 6kΩ
	Maximum Input Level	+6.5dBu (potentiometer = MAX, intercom volume = MAX)
Digital I/O	Digital I/O	AES/EBU, DANTE 2X2, stereo sound card USB stereo playback and recording, supports mp3, wav, and flac file playback.
	USB Format	3.0
	Recording Format	Wav
General	Maximum Gain	80dB from analog input to output

	Channel Crosstalk	-110dB
	Display Screen	10.1 "touch screen 1280x800 resolution
	Linear Potentiometers	17 X 100mm electric linear potentiometers
	System	Android
	Network	External WiFi module, supports control from iOS, Android, and PC
Hardware	Power	AC 100-240V 50/60Hz
	Power Dissipation	50W
	Work Temperature	5℃~40℃
	Dimensions (W×D×H)	Machine: 626x527.28x225.72mm Package:775x665x370mm
	Weight	Net Weight:15kg Gross Weight:23kg
	Accessories	WiFi Module
		Power Cable

Front / Rear Panel
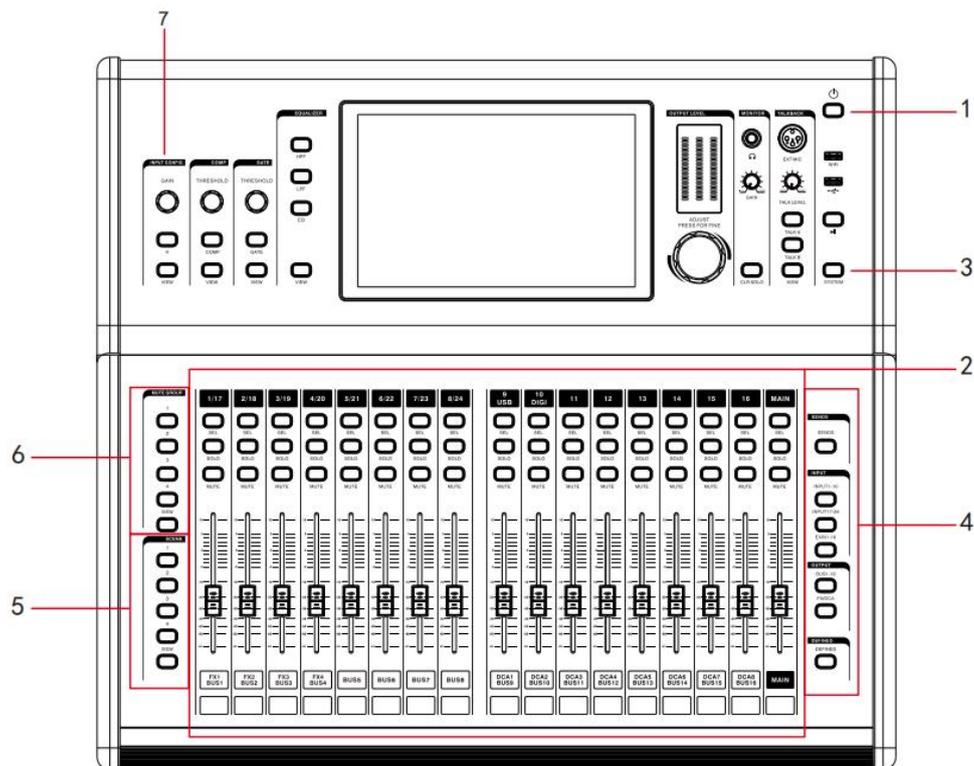
1. Power Button:Long press to turn on/ off
2. Fader Control Area: 17 motorized faders, each channel has Channel Select (SEL) button, Solo (SOLO) button, and Mute (MUTE) button.
3. SYSTEM button: Touch to enter the system page.
4. 7 X Function buttons:

   (1) SENDS button: Single click to enter quick configuration of send signal status. The SENDS indicator flashes to indicate the current send status. During the configuration process, observe the changes in the channel status bar on the right side of the display. Short press the SENDS button to exit the send status after configuration.

   A. Configuring single input channel to multiple buses: Select the input layer to be configured, single touch on the desired input channel bar on the screen, then short press the SENDS button. In the send status, use the BUS SOLO button to enable or disable send to a bus, use the BUS MUTE button to configure send pre-fader or post-fader. Adjust the fader for the desired send level to the current bus.

   B. Configuring multiple input channels to a single bus: Select the bus layer to be configured, single touch on the desired bus channel bar on the

display, then short press the SENDS button. In the send status, use the input channel SOLO button to enable or disable send to the bus, use the input channel MUTE button to configure send pre-fader or post-fader. Adjust the fader of the input channels for the desired send level to the current bus.

(2) INPUT1-16 button: Single touch to switch to the INPUT1-16 layer page. Area 2 faders and buttons are used for controlling channels 1 to 16.

(3) INPUT17-26 button: Single touch to switch to the INPUT17-26 layer page. Area 2 faders and buttons are used for controlling channels 17 to 24, USB, and DIGI channels.

(4) EXIN1-16 button: Expansion function button, currently no function.

(5) BUS1-16 button: Single touch to switch to the BUS1-16 layer page. Area 2 faders and buttons are used for controlling buses BUS1 to 16.

(6) FX/DCA button: Single touch to switch to the FX/DCA layer page. Area 2 faders and buttons are used for controlling FX buses FX1 to 4 and DCA groups DCA1 to 8.

(7) DEFINE button: Single touch to switch to the custom layer page. The content displayed on the custom layer page is configured in SYSTEM->Custom-> Custom Layer Page. Area 2 faders and buttons are used for controlling channels on the custom layer page.

5. Scene Configuration Area:

(1) 4 Scene buttons: Short press the buttons to quickly load scene mode parameters.

(2) VIEW button: Quickly switch to the scene configuration page.

6. Mute Group Configuration Area:

(1) 4 Mute Group buttons: Short press the buttons to control the mute group on/off.

(2) VIEW button: Quickly switch to the mute group configuration page.

7. Input Configuration Area:

(1) GAIN knob: Adjusts the gain parameter of the current input channel.

(2) Φ button: Configures the phase polarity of the current input channel.

(3) VIEW button: Quickly switches to the input configuration parameter page.
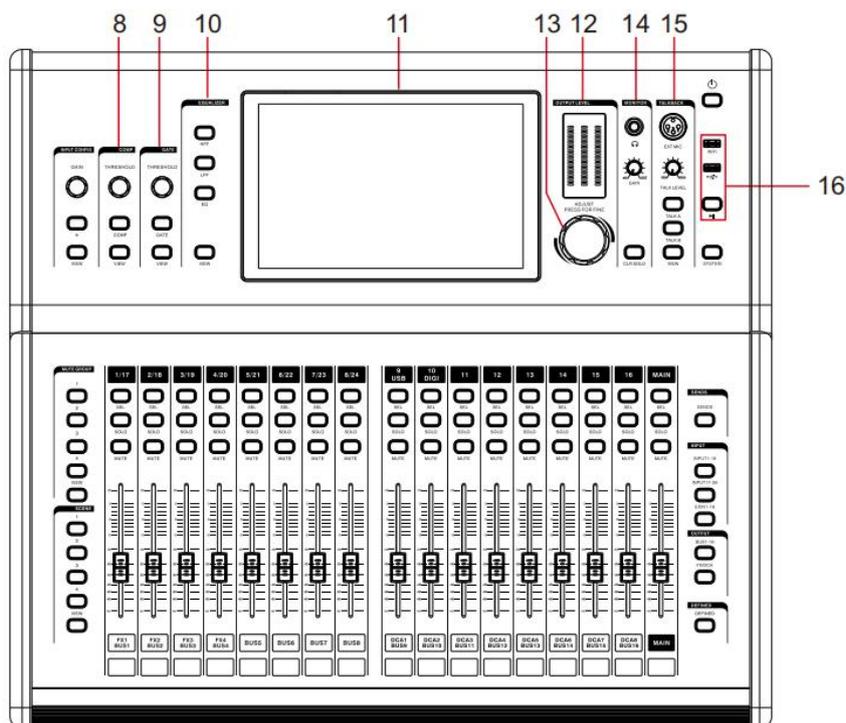
8. Compressor Configuration Area:

(1) THRESHOLD knob: Adjusts the threshold parameters of the compressor for the current input channel.

(2) COMP button: Configures the on/off switch of the compressor for the current input channel.

(3) VIEW button: Quickly switches to the compressor configuration parameter page.

9. Noise Gate Configuration Area:

(1) THRESHOLD knob: Adjusts the threshold parameter of the noise gate for the current input channel.

(2) GATE button: Configures the on/off switch of the noise gate for the current input channel.

(3) VIEW button: Quickly switches to the noise gate configuration parameter page.

10. EQ (Equalizer) Configuration Area:

(1) HPF button: Configures the high-pass filter switch for the current channel.

(2) LPF button: Configures the low-pass filter switch for the current channel.

(3) EQ button: Configures the EQ switch for the current channel.

(4) VIEW button: Quickly switches to the equalizer configuration parameter page.

11. Display Screen:

High-definition touch screen with commonly used touch operations on layer pages: swipe left or right to switch layers, single touch to select channels, double touch to enter channel editing page.

12. Level Meters:

Real-time display of signal levels for main output left and right channels and monitor output.

13. Master Knob:

Adjusts parameters.

14. Monitor Area:

(1) CLR SOLO button: Press shortly to turn off monitoring for all channels.

(2) Headphone jack: Connects headphones.

(3) Headphone volume knob: Adjusts the monitoring volume.

15. Intercom Microphone Configuration Area:

(1) Intercom microphone interface: Connects an intercom microphone.

(2) Intercom microphone volume knob: Adjusts the volume of the intercom microphone.

(3) TALK A and TALK B buttons: Select different output destinations for A and B routes. The system page configures the working mode of the A and B buttons: locked and unlocked mode. In locked mode, pressing the A or B button once will continuously activate the intercom. In unlocked mode, the button must be held down to maintain intercom communication.

(4) VIEW button: Quickly switches to the intercom microphone configuration page.

16. Other Interfaces and Buttons:

(1) Two USB ports: One for connecting a Wi-Fi module for wireless network connection with a tablet/phone/computer, and the other for connecting a USB

flash drive for recording/playback, scene import/export, effect library import/export, and system updates.

(2) Play/Pause button: Single press to quickly play or pause USB music. Double-pressing this button enters the multimedia playback page.
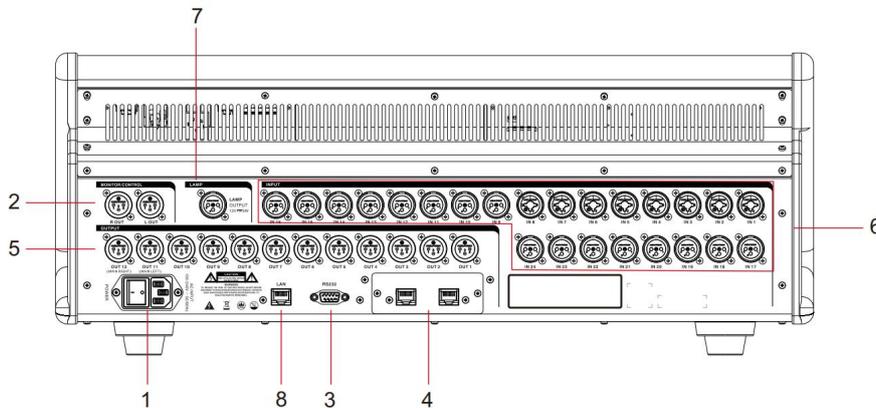
1. Power input and switch

2. Monitor outputs: It has the same function as the earphone monitoring port on the front panel, but the interface is different.

3. Central control interface: RS232 interface, baud rate can be configured.

4. Expansion Slots: This slot is optional. Available cards are AES/EBU, Bluetooth, Dante, and sound cards. All are stereo mode cards

5.Output interfaces: 12× XLR output interface. The output interface can be customized to connect to different buses, the default OUT11&12 output to the main output bus

6. Input interfaces: 24× XLR input interfaces. IN1-8 is Combo ports for connecting to XLR lines or 1/4 "TRS lines for connecting to audio signal source.

7. LAMP interface: Table lamp interface, the machine provides 12V power output.

8.LAN interface: Connecting to Ethernet.