

CM20

Digital Mixing Console



Description

CM20 is a unique multi-function digital mixing console, which features small size, light weight, full functions, intuitive and easy operation, and sensitive response speed. Application scenarios: performances, conferences, rentals, schools, churches, cultural halls, weddings, concerts, families, bands and other occasions.

Features

Operating System:

- Based on Linux operating system, no fear of viruses, more secure and stable.
- 4-core CPU processor, 1G main frequency, quick boot in 17 seconds, running faster.
- 10.1" high-definition touch display, Chinese and English operation interface, free switching, easy to use.
- The parameters will be automatically saved when power-off, no need to worry about data loss.

Input/Output:

- 20-channel signal inputs.
- 16-channel MIC/Line inputs, 2 groups of 3.5 RCA stereo inputs, 1 group of digital input: sound card, MP3, AES digital input/output.
- 16-channel signal outputs.
- Main output L/R, 12-channel AUX1-12 auxiliary outputs, 1-channel headphone monitor output.

Remote signal expansion:

- Can connect two stage interface boxes with 16 inputs and 8 outputs at the same time to realize input and output IO expansion. It supports up to 52 channels of signal input and 32 channels of signal output.

Support Dante:

- Directly connected to Dante box for Dante signal input and output, and multi-track recording.

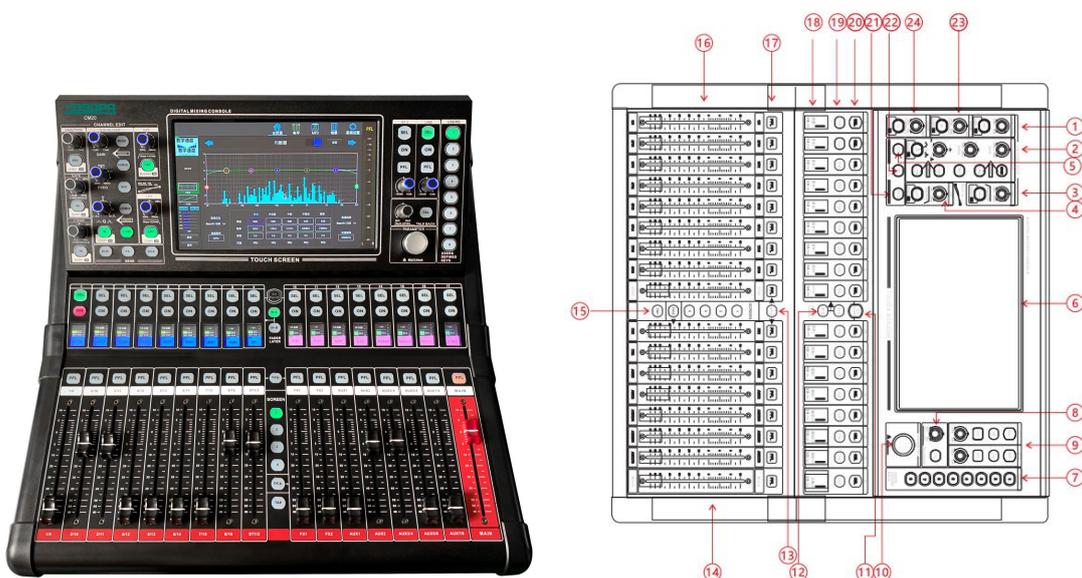
Specifications

Model		CM20	
Input	MIC/LINE IN: 1-16 (Local)	Balanced, XLP and 1/4 TRS plugs	
	Input Sensitivity (XLR/TRS)	XTR1.5mv, TRS 7mv	
	Input Analog Gain	-32db to 10db , 0.6~0.7 step	
	Maximum Input Level (XLR/TRS)	+19dBu/+29dBu	
	Input Impedance (XLR/TRS)	MIC > 5K, LINE > 10K	
	MIC IN Stereo Link	Support	
	Parameter Link	Equalization, Dynamics, Delay, Distribution, Sending	
	Polarity	Normal/Flip	
Stereo Line Input	ST1/ST2	3.5 RCA plug	
	ST3 Port (Digital)	USB audio stream, USB MP3, AES	
	Input Sensitivity	Nominal 4dB	
	Input Analog Gain	-32db to 10db, 0.6~0.7 step	
	Maximum Input Level	+29dB	
	Input Impedance	>7KΩ	
	Stereo Link	Support	
	Parameter Link	Equalization, Dynamics, Delay, Distribution, Sending	
	Polarity	Normal/Flip	
	Output	Mixing 1-12AUX & L/R Output (Local)	Balanced, XLR, L/R, 8AUX
Output Impedance		<75Ω	
Nominal Output		+4dbu=0db level meter value	
Residual Output Noise		=-91dbu	
Mixing Insert		Assign FX to the mixing channel	
Dynamic Range		112dB	
SNR		XLR≥ 92db, TRS≥82db	
Maximum Output Voltage		4VAC MAX	
Distortion		< 0.0003% (1KhzFull Power)	
Frequency Response		20HZ-20KHZ+/-0.5db	
Sampling Rate		48KHz ±100PPM	
ADC/DCA		24-bit Delta-sigma	
FX		Internal FX	2xFX engine, send > return or insert
		Type	Reverb, Delay, Chorus, Flanger, Symphonic Chorus, etc.
	2 Dedicated Stereo FX Returns	Fader, pan, mute, send to mix/LR, 5-band EQ	
System	Linux System	Switching between Chinese and English	
Control	Fader	17 ALPS 100mm electric faders	
	Touch Screen	10.1" TFT, 1024*800 resolution	
	DCA Group	8 groups	
	Mute Group	8 groups	
	Network	TCP/IP Ethernet for PC and iPad applications	
	System Upgrade	USB upgrading	
	Wired Connection	Windows PC software connection	
	Wireless Connection	Windows PC/iPad/android	

Input Processing	Input Source	Local CH1-CH16, ST1/ST2 local ST3 digital
	Equalizer	5-band PEQ, (20HZ--20KHZ) \pm 12dB, Q0.3~15 adjustable
	High & Low Pass	12db/24db, (BT/BS/LRK), 20-20K
	Noise Gate	Bypass switch
	Threshold	-135db to -40db
	Attack/Release	50us-300ms/10ms-5s
	Compressor	Bypass switch
	Threshold Ratio	-40db+6db/1:1 to infinity
	Delay	20ms max.
Remote Expansion	Can connect two interface boxes	
Output Processing	Output Channel	Main output L/R, 12AUX auxiliary output
	Equalizer	15-31-band PEQ, (20HZ--20KHZ) \pm 12dB, Q0.3~15 adjustable
	High & Low Pass	12db/24db, (BT/BS/LRK), 20-20KHZ
	Compressor	Bypass switch
	Threshold Ratio	-40db+6db/1:1 to infinity
	Delay	30ms max.
USB	Drive	CH340(USB A)
	Device	Use a USB hard disk (U disk)
	Stereo Recording	2-channel (wav/mp3)48KHz 24
	Stereo Playback	2-channel (WAV/MP3)32-96KHz,16-24 bits
USB Audio	Sound Card	USB B
Dante	Support	
Automix	Support	
Power Supply	100-240VAC, 50-60H, 150W	

Front / Rear Panel

Front Panel



1. Input Channel Gain/+ 48v Switch

1).(GAIN) Gain Control

Rotate the knob to increase or decrease the input signal level.

2).48V Phantom Power Button

Long press this button for 3s to turn on the 48V power supply of the current channel and light up the button, indicating the MIC jack has 48V voltage.

Note: Do not turn on phantom power until the microphone is connected.

2. EQ/Equalizer

1).EQ Parameter Knob

From top to bottom: Gain, frequency and Q value.

2).PEQ Knob

The parameter equalizer shortcut keys are: Treble, mid-treble, mid-tone, mid-bass and bass (from top to bottom), light up the corresponding button, match the 3 parameters on the left, and rotate the knob to adjust the EQ parameters.

Note: EQ adjustment is only effective when the EQ switch (IN button) is on.

3/4. Channel HPF/LPF(High-pass & Low-pass Filter)

1).(HPF) High-pass Knob/High-pass Switch

Rotate this knob to reduce the low frequency signal, and use the HPF button to turn on or off the high pass frequency.

2).(LPF) Low-pass Knob/Low-pass Switch

Rotate this knob to reduce the high frequency signal, and use the LPF button to turn on or off the low pass frequency.

High and low pass filters can be processed as crossover regulation.

5. AUX Channel Signal Send Button

In the fader layer INA or INB state, if the corresponding auxiliary output button light flashes, it indicates that the current fader is in the state that the channel is sent to the corresponding auxiliary output, and the send size is controlled by the corresponding fader or the send bar on the screen.

6. 10.1" HD Capacitive Touch Screen

7. 8 User-defined Buttons

The factory default function is the scene mode call button, which can be changed by user-defined button functions.

8. Intercom MIC Function Button (TALK BACK)

Can set any input or output channel for talkback function.

9. Stereo Input 1/2(ST1/ST2) Control Area

Use the SEL button to enter the channel page, mute switch, monitor switch, and volume knob (equivalent to a fader).

10. Multi-function knob

This knob is used with the touch screen for parameter adjustment.

11. Connect Remote Network Expansion Button (EXPAND)

When the local input and output of the host is not enough, the machine can be used with a special stage interface box. After connecting through the network cable, press and hold this button to connect. After the connection is completed, the button starts to flash, indicating that the connection is successful. At this time, the interface box can be operated on the host to achieve remote audio expansion and control of input and output.

12/13. Input Fader Page Button/GEQ Mode Button

Input/output channel fader page button.

When the IN-A button is on, the fader controls the level of the input channel corresponding to the first layer. When the IN-B button is on, the fader controls the level of the input channel corresponding to the second layer.

The GEQ button is valid when selecting the output channel. When this button is on, the fader controls the gain of the output equalizer.

14. Right Faders

Used for four effect channels and auxiliary output and master output level adjustment (electric fader).

15. Quick Recall the First Four Scene Modes/DCA Group Settings/TAP Effect Beat Buttons

1).Click the corresponding button to quickly recall the scene parameters, long press to quickly save the parameters to the corresponding scene.

2).Click to edit the DCA group, and set the DCA group by programming the corresponding input and output channels.

3).Short, Delay, Medium, Delay, Long Delay, are beat effects. Click the TAP button to change the echo delay time.

16. Input Channel Fader

Used to control the current input channel level (electric fader).

17. PFL Monitor Switch

Press this button to output the signal from the monitor and headphone.

18. Small Display Screen for Channel Guide

The small screen will display the current channel fader volume, name, level signal and other information.

19. Mute ON Switch

Channel mute switch. When it is off, the channel will be in mute state, you will not hear the signal of this channel.

20. SEL Channel Selection Button

The button is lit, indicating that the channel has been selected and the channel parameters can be edited.

21. DCA Send Button

Click this button to set which DCA group the currently selected channel is to be programmed into.

22. FX Channel Signal Send Button

Press this button to start flashing, indicating that the fader is in the signal level state of the corresponding channel sent to the FX effect channel, and the send size is controlled by the corresponding fader or the send bar on the screen.

23. GATE/Noise Gate

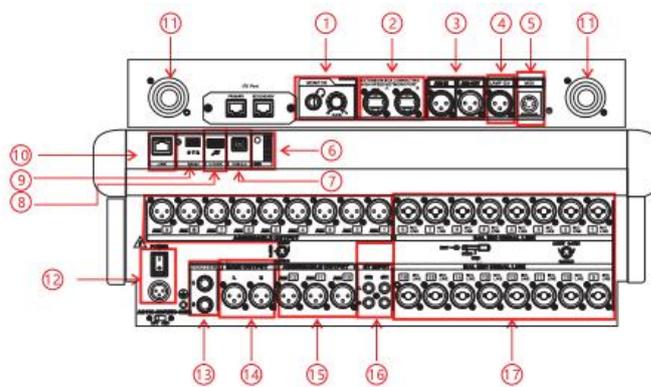
This knob can adjust the threshold value of the noise gate, and the IN button controls the on and off of the noise gate.

24. COMP/Compressor

This knob can adjust the threshold value of the compressor, and the IN button controls the on and off of the compressor.

Rear Panel





1. Monitor Headphone Jack/Monitor Knob

Plug earphones into this jack. It is recommended that the impedance of the earphones is greater than 150ohm. The monitor level knob is used to control the monitor signal level.

2. Network Expansion Interface

It can be connected to a special interface box for input and output expansion, and controlled through the network transmission.

3. AES Digital Signal Input/Output Interface

LAMP-12V Output Interface, which can be connected to external gooseneck lamps of the same voltage.

5. MIDI Signal Input Interface

6. 3.5 Stereo Headphone Input Interface

7. Square USB Interface

Connected to the computer for software debugging, and used as the audio input interface of the sound card after connecting to the computer.

8. USB Interface

The MP3 audio input playback recording and system upgrade interface.

9. Central Control RS232 Interface

Connected to 232 central control device for control.

10. Network Interface

Can be connected to a router for wireless remote control or to the network directly for PC control.

11. Two Cooling Fans

12. Power Input Interface&Switch

110v-220v power supply interface.

13. Effect Switch Jack

This is the connection for the foot switch. You can connect it here if necessary.

14. Main Output LR Output Interface (Balanced&Unbalanced)

L / R output signal to power amplifier or other sound reinforcement system.

15. AUX1-12 Auxiliary Output Interface

AUX1-12 auxiliary output signal to power amplifier or other sound reinforcement system.

16. Two ST Stereo Inputs

Stereo line input interface.

17. MIC/Line Input Interface

All are balanced input ports, with 16 XLR jacks, which can be connected to audio signal sources with XLR cables or 1/4" TRS lines.