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About CMA Twelve

Congratulations to you for being the owner of Questyle Audio CMA Twelve DAC/Headphone Amplifier.

CMA Twelve is the new flagship DAC/Headphone Amplifier of Questyle Audio. It inherits Questyle's classic desktop design style and marks the anniversary of the revolutionary Current Mode Amplification technology invented 12 years ago.

CMA Twelve adopts Questyle's core patented technologies of Current Mode Amplification, True DSD and 3X Clock Asynchronous Transmission, which allows the CMA Twelve to have outstanding performance from its DAC and pre-amplifier. The pre-amp out is user switchable between Fixed and Adjustable mode to match it with power amplifiers or active speakers.

CMA Twelve supports 4-PIN balanced output. It is designed with four groups of Current Mode amplifiers, exhibiting forceful driving power and an ultra-low distortion level of a mere 0.0005%. Plus the high-performance BIAS Control System, it will bring you an exceptional listening experience. CMA Twelve is Questyle's first device to feature the 4.4mm jack and Questyle is committed to continue with this trend.

In addition to S/PDIF, Optical and USB inputs, CMA Twelve supports professional interfaces of AES and XLR that are used in professional recording studios, and the live recordings can be monitored in real time via its 6.35mm headphone output. It is user switchable between Studio and Standard mode.

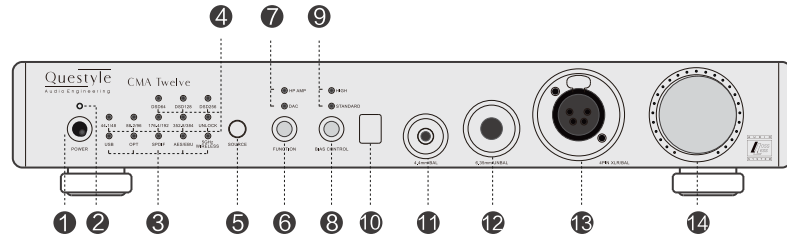
To avoid resonance, CMA Twelve chassis is made of 10mm-thick aircraft-grade Aluminum 6063 with high precision machining technique of 0.02mm. Especially the "mutual-bit" structure, silicone material and pure aluminum help to reduce resonance to a lowest level.

There are two versions of CMA Twelve, the first is the CMA Twelve Standard, the other being the CMA Twelve Master. The CMA Twelve Master has a "MASTER" laser marking, and it features the ROGERS Ceramic PCB and selected components to ensure the ultimate performance on sound quality and specifications.

In the Box

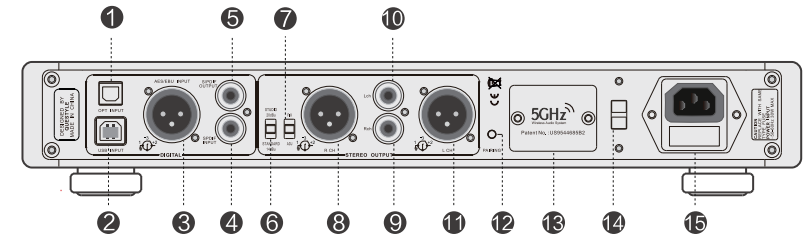
CMA Twelve	1pc
Power Cord	1pc
Remote Control	1pc
CMA Twelve User Manual	1pc
CMA Twelve Test Report	1pc
Warranty Card	1pc
CMA Twelve Driver CD	1pc

Front View



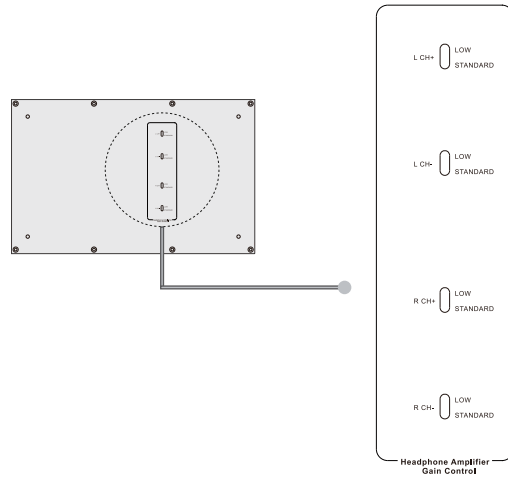
- ① Power switch
- ② Power indicator: it flashes quickly with orange light to show the system is starting and stays the orange light on to show the system has successfully started. It flashes slowly to show the system is in mute. If the indicator flashes quickly with red light, it means the system is in malfunction and you need to switch off the CMA Twelve, unplug your headphone and restart the CMA Twelve. If the problem is not solved, please contact your dealer or the After-Sales Support.
- ③ Source indicators: USB, OPT, S/PDIF, AES/EBU and 5GHz Wireless signals
- ④ Sample rate indicators
- ⑤ Source switch
- ⑥ Function switch between Headphone Amplifier and Pre-amplifier mode
- ⑦ Function indicators of Headphone Amplifier and Pre-amplifier (DAC) mode
- ⑧ BIAS Control switch: BIAS Control is like the “Turbo” mode of a car, which can perfectly drive headphones or speakers of different specifications and easily bring their full abilities to fruition. It can be switched to High or Standard mode.
- ⑨ Indicators of High BIAS and Standard BIAS mode
- ⑩ Remote control sensor
- ⑪ 4.4mm balanced headphone output
- ⑫ 6.35mm headphone output
- ⑬ 4-PIN balanced headphone output
- ⑭ Volume control

Rear View



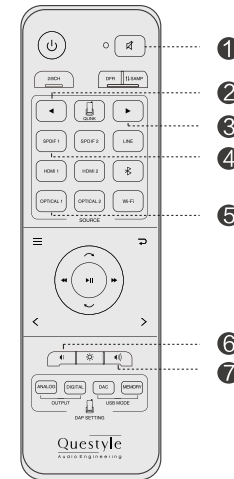
- ① OPT input
- ② USB type B input
- ③ AES/EBU input
- ④ S/PDIF input
- ⑤ S/PDIF output
- ⑥ Pre-amp output switch between Studio and Standard mode
- ⑦ Pre-amp output volume switch between Fixed and Adjustable. When you switch it to Fixed, the output will be at max level and the volume is unadjustable.
- ⑧ Pre-amp right channel balanced output
- ⑨ Pre-amp right channel unbalanced output
- ⑩ Pre-amp left channel unbalanced output
- ⑪ Pre-amp left channel balanced output
- ⑫ 5GHz Wireless Pairing switch
- ⑬ Antenna housing. In order to get clear signals, please DO NOT use metal or other shielding materials to cover this part.
- ⑭ 220V/110V voltage switch (Please make sure the indicated voltage is in accordance with the local voltage)
- ⑮ AC power socket

Bottom View



Headphone Amplifier Gain Control switch: the default setting is “Standard” mode. When you use IEMs, please set it to “Low” mode. Make sure the four switches are at the same mode setting.

Remote Control



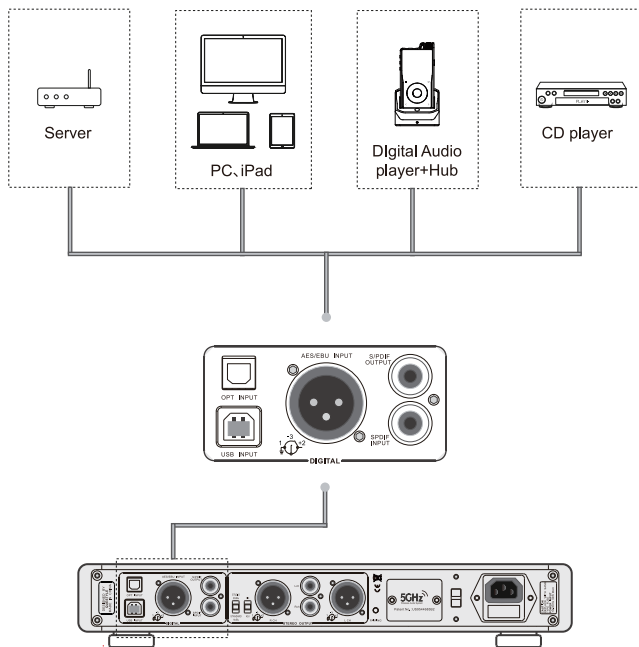
- ① Mute
- ② Source selection backward
- ③ Source selection forward
- ④ S/PDIF input signals
- ⑤ OPT input signals
- ⑥ Volume down
- ⑦ Volume up

Note: this is an all-in-one remote for Questyle products. When you pair the remote with CMA Twelve, only some of the buttons on the remote are available.

How to Match with CMA Twelve

1. Digital Input

CMA Twelve has OPT, S/PDIF, AES/EBU and USB inputs. Digital audio signals from your PC, music server, CD or Blue-ray can be sent to CMA Twelve (CMA Twelve supports USB Audio Class 2.0 standard driver). The core patented technologies of Current Mode Amplification, True DSD and 3X Clock Asynchronous Transmission allow the CMA Twelve to have outstanding performance from its DAC and pre-amplifier.

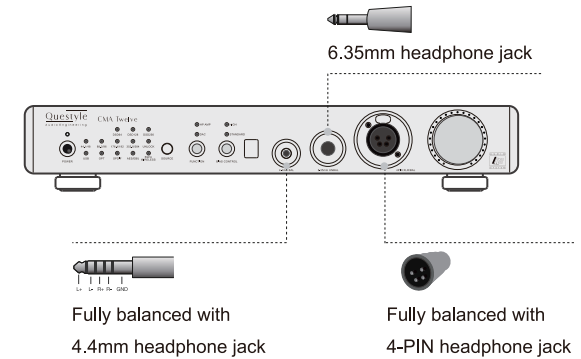


NOTE

You don't have to install a USB driver if your music server supports Linux UAC 2.0.

2. Used as a DAC/Headphone Amplifier

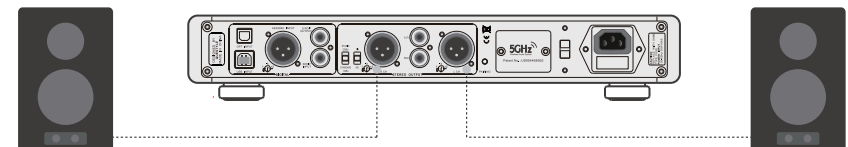
CMA Twelve has a 6.35mm headphone jack, a 4-PIN balanced headphone jack and a 4.4mm balanced headphone jack. When you switch the "Function" to HP AMP (Headphone Amplifier) mode, the CMA Twelve can be used as a DAC/Headphone Amplifier.



NOTE

- ① Headphone jacks on the front panel include a 6.35mm headphone jack, a 4-PIN balanced headphone jack and a 4.4mm balanced headphone jack. You are NOT allowed to plug in all of the three jacks at the same time. With the 4-PIN balanced headphone jack plugged in, the other two jacks are NOT allowed to be used.
- ② CMA Twelve has DC output protection which will be enabled to cut off the output automatically and protect your headphones if a malfunction or error is found.
- ③ CMA Twelve has Headphone Amplifier Gain Control switch. The default setting of the Gain Control is "Standard" mode. When you use IEMs, please set it to "Low" mode.

3. Used as a DAC/Pre-amplifier or a Pre-amplifier only

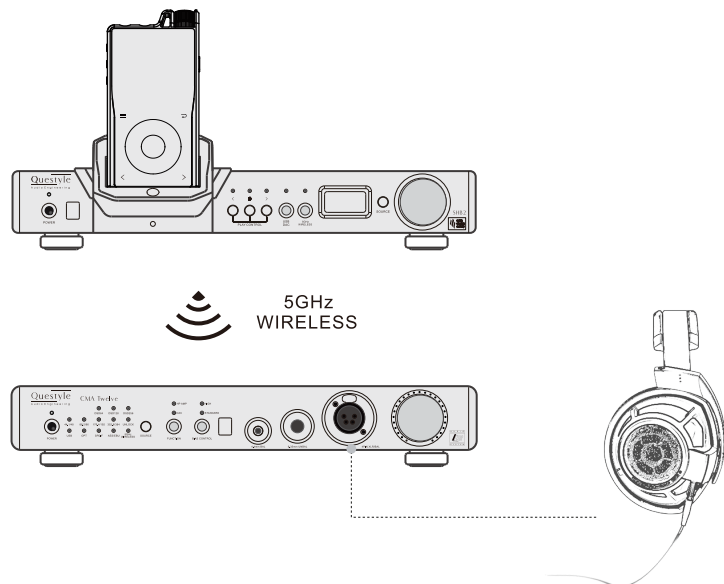


- Switch the “Function” to DAC mode.
- Set the Pre-amp output volume between FIX (Fixed) and ADJ (Adjustable). At the bottom of CMA Twelve, you can find the FIX/ADJ switch. When you switch it to ADJ, you can adjust the volume via the CMA Twelve volume control, which is for connecting the CMA Twelve to active speakers or power amplifiers without volume control function. When you switch it to FIX, the output will be at max level and the volume is unadjustable via the CMA Twelve volume control, which is for connecting the CMA Twelve to amplifiers or pre-amps with volume control function.
- When you switch the Pre-amp output to Standard mode, the max output level will be 14dBu. When you switch it to Studio mode, the max output level will be 20dBu.

- Switch the “Source” to 5GHz Wireless.
- Press and hold the Pairing switch and the 5GHz Wireless indicator will flash quickly, then press the pairing button on the transmitter (SHB2). CMA Twelve and the transmitter are successfully paired when the indicator stays light on. (Once the pairing with the transmitter is done, the 5GHz Wireless will directly start to work every time the 5GHz Wireless mode is on, so you don’t have to do the pairing again.) When the indicator is red, it indicates signals of high sample rate (Sample rate > 96kHz). When it is orange light, it indicates signals of general sample rate.
- You can match the CMA Twelve with headphones, speakers or other output devices depending on your needs.

4. 5GHz Wireless Receiving

CMA Twelve has the 5GHz Wireless Receiving feature. It can pair with Questyle Audio Super Hub SHB2. They will communicate with each other via 5GHz Wireless Transmission-Receiving and bring you a wonderful music listening experience.



USB Driver Installation and JRiver/Foobar Setup

USB Driver Installation and JRiver/Foobar Setup are the same on Questyle Audio’s desktop devices (including CMA Twelve, SHB2, CMA400i and CMA600i). Visit Questyle Audio website (www.questyle.com) and click “Download” - “User Manual” - “USB Driver Installation and JRiver/Foobar Setup” to view detailed instructions.

Specifications

Headphone Amplifier Section	
Gain	8.6dB (2.7, Standard) / -1.4dB (0.85, Low)
Max Output Power(Po)	247mW @ 300Ω; 1W @ 32Ω (6.35mm headphone jack) 825mW @ 300Ω; 2W @ 32Ω (balanced headphone jack) To enhance the reliability of CMA Twelve, we have designed a power-limiting circuit for low impedance, the output power is limited to 1.2W@32Ω for balanced headphones.
THD+N	0.00070% @Po=100mW, 300Ω 0.00167% @ Po=50mW, 32Ω
SNR	112 dB, non-weighting
Frequency Response	DC-20kHz (+0,-0.4dB) @ 0dBFS, 24Bit, 192kHz DC-80kHz (+0,-3dB) @ 0dBFS, 24Bit, 192kHz
Output	a 6.35mm jack, a 4-PIN balanced headphone jack and a 4.4mm balanced headphone jack
DAC and Pre-Amp Output Section	
Signal	S/PDIF input and output, PCM 44.1k-192k/16-24Bit standard USB: 44.1k-384k/16Bit-32Bit PCM and DSD Native, DSD64, DSD128, DSD256, as well as DSD64, DSD128, DSD256 of DoP format
PC OS to Match USB Input	Win XP, Vista, Win7, Win8, Win10, MAC OS and Linux (supporting UAC 2.0)
Digital Input & Output	SPDIF input and output, Optical input, AES/EBU input Support 44.1kHz-192kHz/16Bit-24Bit PCM
Core Audio Stream Supported by USB	WASAPI, ASIO, KS
Analog Output	Balanced XLR x1 pair, unbalanced RCA x1 pair
Max Analog Output Amplitude	Standard 14dBu: XLR: 5.084V RCA: 2.549V Studio 20dBu: XLR: 8.887V RCA: 4.475V
Analog Output THD+N	Studio 20dBu: RCA: minimum at 0.00115% XLR: minimum at 0.00085%
Analog Output SNR	RCA: >109dB XLR: >112dB (non-weighting)
Whole Device	
Voltage	100-120V or 220-230V switchable
Power Consuming	<30W
Size	330*200*55mm (jacks are not included)

Note: Data listed above are collected from Audio Precision AP2722 testing.

Cautions

1. Do not use your CMA Twelve in a hot or humid environment.
2. Unplug your CMA Twelve in lightning weather or during a long period without using.
3. Do not have your CMA Twelve covered by anything.
4. Only the specified or manufacturer-supplied power cord can be used for your CMA Twelve.
5. Clean your CMA Twelve with a piece of dry cloth or the special detergent.
6. If your CMA Twelve fails to work, please contact your dealer or manufacturer.

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