

用户手册
电流模耳机放大器
CMA800R

Questyle
Audio Engineering



CMA800R
Current Mode Headphone Amplifier

USER'S MANUAL

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Thanks for selecting Questyle Audio CMA800R Current Mode Headphone Amplifier. Quest is endless. CMA800R, Questyle new flagship current mode headphone amplifier, is a dedicated quest for perfect sound.

CMA800R extends Questyle Audio's outstanding Current Mode Amplification technology, brings with less than 0.00038% ultra-low distortion, 650kHz wide frequency, 118dB SNR. These parameters are far beyond any other headphone amplifiers can achieve. Besides, CMA800R is the world first headphone amplifier with Mono Full Balance function, in Mono full balance function distortion is less than 0.00026%. This low distortion will definitely bring a new innovation on the headphone amplifier.

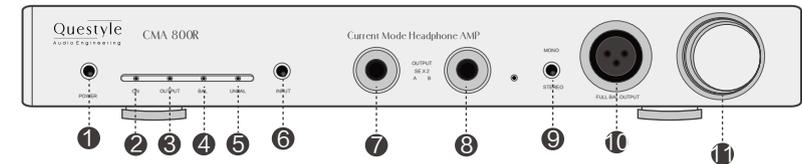
Features

- Current Mode Amplification , 0.00038% ultra-low distortion and ultra-high efficient amplification
- Balance (XLR) input and Unbalance (RCA) input, support Mono Full Balance input
- Dual 6.35mm standard headphone jacks, a 3-pin Full Balance output, a pair RCA Pre-amp output
- Provide Mono Full Balance function
- Provide Pre-amplifier output function
- Customized Plitron toroidal transformer
- Schottky rectifier, 22pcs 1000uF Nichicon FG Audio specific capacitor
- Amplification circuit all adopts DALE military resistors and WIMA capacitors
- All transistors are working in pure Class A status
- Perfect ON/OFF Anti-Pop Noise protection and DC protection circuit design
- Each device has its AP test report attached with User Manual

Check List

CMA800R	1pc
Power Cord	1pc
User Manual	1pc
Test Report	1pc

Front View

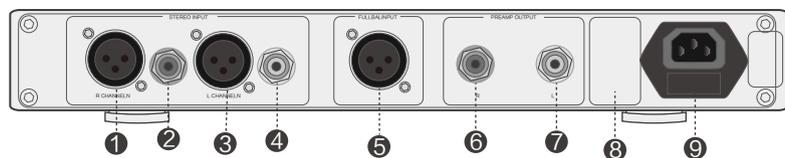


- ① AC Power ON/OFF button
- ② AC Power indicator
- ③ Output status indicator. "On" means device normally output to headphone, "off" means abnormal. When AC power turns on/off, the anti-Pop noise protection will delay output indicator several seconds to turn on, so as to protect headphone.
- ④ Balance input indicator
- ⑤ Unbalance input indicator
- ⑥ Input switch between balance and unbalance
- ⑦ 6.35mm headphone jack
- ⑧ 6.35mm headphone jack
- ⑨ Switch bar between standard Stereo and Mono mode. In standard Stereo mode, CMA800R output to headphone via 6.35mm jacks. In Mono mode, 2pcs CMA800R separately drive headphone left /right channel.
- ⑩ Full Balance Output, works only in Mono mode.
- ⑪ Volume control

Caution:

- 1) To protect headphone, please don't frequently plug headphone in and out.
- 2) Please turn volume down before you change headphone.

Rear View



- ① Right channel balance input
- ② Right channel unbalance input
- ③ Left channel balance input
- ④ Left channel unbalance input
- ⑤ Full Balance input in Mono mode
- ⑥ Pre-amp output , Right channel
- ⑦ Pre-amp output , Left channel
- ⑧ Fuse
- ⑨ AC power socket

Technology

1) What is Current Mode Amplification Technology

(Global PCT No.: PCT/CN2014/075775)

Current Mode Amplification, means the amplification is processed in Current

version, instead of Voltage version.

Current Mode Amplification, same as Voltage mode, also take transistors as amplification components. But the amplification circuit loop is totally different from that in voltage mode, in the whole closed-loop all the capacitors in between those transistors which affects speed and bandwidth are working under ultra-low impedance, so it can easily achieve large bandwidth and ultra low distortion.

2) Why we choose Current Mode Amplification

Low distortion and large bandwidth is what all amplifiers want to achieve. Only with ultra large bandwidth and high speed processing can an amplifier wonderfully process sudden pulse wave signal, and achieve real playback of music signal speed and transparency.

Traditional Voltage mode amplifiers always cause a Transient Intermodulation Distortion (TIMD), which brings a harsh "metallic sound", badly destroyed the sound. To eliminate TIMD, designers usually adopts feedback circuit loop (low feedback, partial feedback or negative feedback) in hardware but these don't totally settle the problem, and cost is very high.

While Questyle gives up the traditional voltage mode format, designed with a "Current Mode" amplification. When the components is working in Current mode, amplifier Slew Rate (SR) achieves a linear increase as input signal amplitude increases, it is in proportion to input signal amplitude. When it's input with large amplitude signal, Current Mode amplifier SR is much larger than traditional Voltage mode devices, it can totally eliminate TIMD and ensures large amplitude signal and low distortion real playback.

3) The world first headphone amplifier with "Mono Full Balance"function

CMA800R is the world first headphone amplifier that can work as Mono block. With 2 pieces of CMA800R both in "Mono" mode (device automatically turn to "Full Balance" function), separately drive left and right channel of headphone, they provides sound with unbeatable dynamics. Considering the Current Mode Amplifi-

cation technology, the Hi-end components applied, CMA800R will definitely be a reference design for future headphone amplifiers. "Reference" is the definition of "R".

4) Rigorous Test and Sound Control

During the development stage, we use AP(Audio Precision) to analyze signal data for objective test. Besides, we always keep our eyes closed in listening different sounds for subjective feeling, so as to get unbeatable specifications. Each CMA800R will be tested with over 30 factors of specification before being shipped out. Test report will be put into carton box, and one copy be taken into our record.

Specification

Gain	15.5dB
Max Output Power	180mW (7.5Vrms) @300Ω, standard Stereo Mode
	710mW (15Vrms) @300Ω, Mono Mode
SNR	114 dB, standard Stereo Mode
	118 dB, Mono Mode
THD+N	0.00038%@1kHz, 300Ω standard Stereo Mode
	0.00026%@1kHz, 300Ω Mono Mode
Frequency Response	DC-200kHz (+0, -0.3 dB); DC-650kHz(+0, -3 dB)
Sensitivity	1.2Vrms
Impedance	47KΩ
Input	XLR stereo, RCA Stereo, and XLR Mono Full Balance input
Output	Dual 6.35mm Stereo headphone Jacks, a XLR Mono Full Balance output, A pair RCA Pre-amp output
Work Status	Pure Class A
Voltage	100-120V or 220 - 230V, Internal switchable
Power Consumption	13W
Dimension	330*200*55 mm