

# Multi-channel Amplifiers

CX-A6, CX-A4, CX-A850 & CX-A450



*The Cloud CX-A6, CX-A4, CX-A850 and CX-A450 are versatile and innovative multi-channel power amplifiers; all models exhibit very low levels of noise and distortion and utilise the highest quality components; they offer outstanding sound quality and rugged durability. The six channel CX-A6 provides 120 watts per channel, as does the CX-A4, a four channel variant; the CX-A850 has eight channels each rated at 50 watts, with the CX-A450 providing four channels rated also at 50 watts. Plug-in VCA*

*modules are available for applications where remote level control is required and a combined VCA and peak limiter module is available for the CX-A6 and CX-A4. Line distribution systems of both 70V and 100V are also catered for with the optional high performance transformer modules. All four models accept Cloud EQ modules for use with Bose® model 8, 25, 32 & 102 loudspeakers.*

## Applications

Applications for the Cloud range of multi-channel amplifiers are as many and varied as the units are versatile. They were primarily developed to complement the range of Cloud Zone Mixers, which have been extremely successful in multi-zone leisure and retail venues. All four amplifiers can be used in any application where a combination of different programmes and volume levels are required in different areas. The optional VCA modules, EQ modules & line output transformers enhance the flexibility and provide the sound system designer with innovative products capable of solving frequently encountered system design problems. All models have fan cooled power devices and power supplies and can comfortably deliver their full output over long periods without any adverse effect; when the amplifiers are operating at low power levels, the fan operates silently at a low speed, increasing to a high speed only when operating at high output levels.

## Input Facilities

All inputs are balanced for good interference rejection and use 3 pin XLR type connectors on the CX-A6 and CX-A4, whilst the CX-A850 and CX-A450 use 'Phoenix' type connectors. Full input routing options are provided, simplifying the installation cabling requirements. Each channel can accept its own independent input signal or one shared from another source. The flexibility afforded by this arrangement can allow all channels to be driven from one mono signal source or perhaps a single stereo source driving a number of stereo pairs. Each input offers level adjustment, adjacent to the respective XLR or 'Phoenix' type connector to enable perfect matching and control.

## Outputs

Outputs are terminated on the rear panel by robust binding posts on the CX-A6 and CX-A4 and 'Phoenix' type connectors on the CX-A850 and CX-A450 both types can accept cables up to 2.5mm<sup>2</sup>. Any two channels can be wired to operate in bridge mode providing twice the power output of a single channel into a load impedance of 8 ohms. Transformers are available for 100V and 70V line installations and distributed sound systems (see 'Accessories').

## Status Indicators

The front panel of the multi-channel amplifiers feature an array of LEDs showing the status of each channel. Separate LEDs indicate signal

presence, peak level and protect mode, allowing system status to be reviewed at a glance.

## Accessories

### VCA Modules

Two channel VCA modules are available for the CX-A6 and CX-A4, and a single channel module for the CX-A850 and CX-A450 multi-channel amplifiers. Two channel VCA modules can operate two channels independently using two RL-1 remote level plates or can be switched to operate two channels as a stereo pair with one remote level plate. Single channel VCA modules require one RL-1; two or more channels can be wired to a single RL-1. The CX-A6 can accommodate up to three VCA modules, the CX-A4 two modules with the CX-A850 and CX-A450 able to accommodate eight and four VCA modules respectively. A further option is available for the CX-A6 and CX-A4; a two channel Peak Limiter/VCA module performing the same functions as the standard VCA module with the added benefit of a Peak Limiter which is factory set to prevent clipping. The peak limit on/off switch is located on the rear panel but can be overridden internally.

### 100V/70V Transformer Modules

A high quality, single channel line transformer module is available for the CX-A6 and CX-A4. The CXL-100 has a power rating of 100 watts and has both 100V and 70V outputs. The sectionally wound transformer has an extended frequency response making

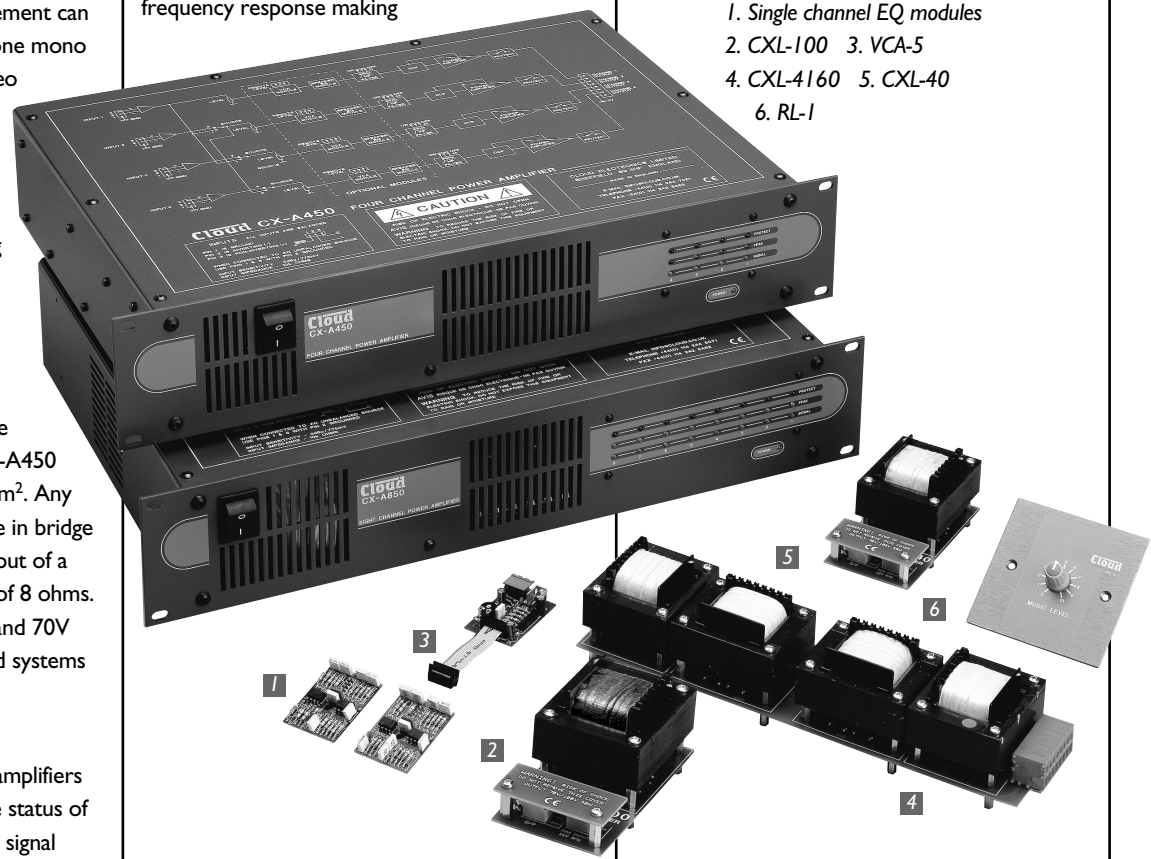
it ideal for high quality music systems; the module can be used where appropriate on any channel and the CXL-600 rack mounting panel (2U) can house up to six CXL-100 modules. A four channel 40W line transformer module, the CXL-4160, is available for the CX-A450; this unit also features sectionally wound transformers suitable for high quality music applications and the module is housed inside the CX-A450 chassis. Both 100V and 70V versions are available. The single channel CXL-40 has a power rating of 40 watts and has both 100V and 70V outputs and can be used with the CX-A450 and CX-A850. A total of six CXL-40 can be mounted on the CXL-600 rack mounting panel.

### CLOUD EQ Modules

All four multi-channel amplifiers can accept Cloud EQ modules. The CX-A6 and CX-A4 accept a two channel, internally fitted A4/A6 Model 8 or Model 32 EQ module to allow the use of Bose® model 8 loudspeakers and Bose® model 25, 32 & 102 loudspeakers respectively. The CX-A850 and CX-A450 accept single channel internally fitted Cloud EQ modules, Model 8 or Model 32.

Accessories below:

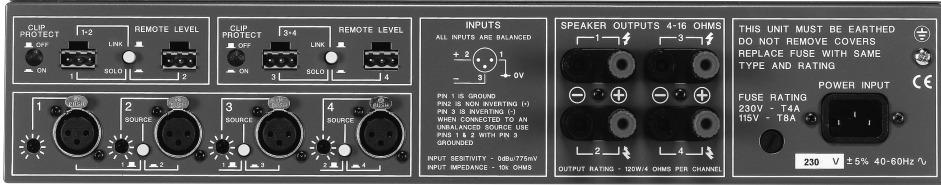
1. Single channel EQ modules
2. CXL-100
3. VCA-5
4. CXL-4160
5. CXL-40
6. RL-1



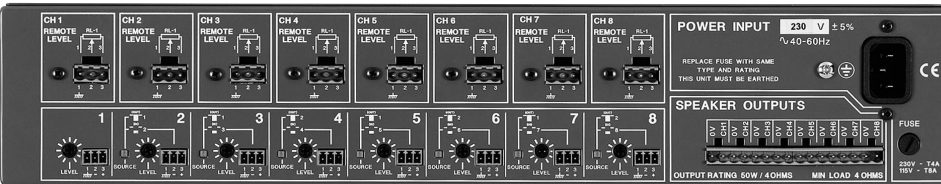
# Technical Specifications



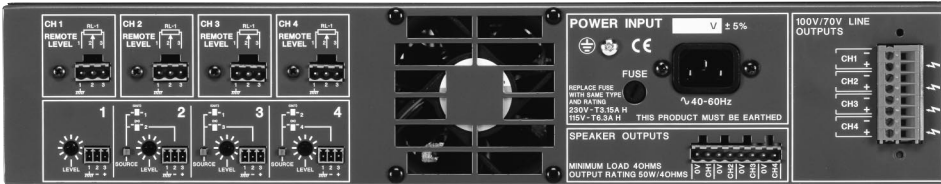
**CX-A6**



**CX-A4**



**CX-A850**



**CX-A450**

**CX-A6 General Specifications**

Inputs	Balanced via 3 pin XLR type connector
Outputs	Binding Posts for flexible cables up to 2.5mm <sup>2</sup>
Protection	VI limiting, DC offset, Thermal and Switch-on Delay
Status	LED indicators on each channel for Signal, Peak & Protect.
Cooling	Force cooled using two speed DC fan.
Dimensions	482.6mm x 88.0mm (2U) x 325.0mm deep (+ connectors)
Weight	10kg net

**CX-A6 Technical Specifications**

Rated Output	120 watts/4 ohm load (nominal) 85 watts/8 ohm load (nominal)
100V Output*	100 watts (minimum load 100 ohms)
70V Output*	100 watts (minimum load 50 ohms)
Bridged Output	240 watts/8 ohm load (nominal)
Frequency Response	±1dB 10Hz to 50kHz, switchable high pass filter -3dB @ 65Hz
THD	0.005%, typical, @1kHz, 100W in 4 ohms, one channel driven, measurement BW 22Hz to 80kHz
VCA Module THD	<0.03% 1kHz, measurement BW 20Hz to 80kHz
Input Sensitivity	0dBu (775mV)
Input Impedance	10kΩ balanced / 5kΩ unbalanced
Noise	>90dB rms below rated output, un-weighted, measurement BW 22Hz to 22kHz
Power Input	230V ±5% (115V ±5% available)
Fuse Rating	230V - T5A H 115V - T10A H
Fuse Type	20mm x 5mm High Breaking Capacity 250V AC

**CX-A4 General Specifications**

Inputs	Balanced via 3 pin XLR type connector
Outputs	Binding Posts for flexible cables up to 2.5mm <sup>2</sup>
Protection	VI limiting, DC offset, Thermal and Switch-on Delay
Status	LED indicators on each channel for Signal, Peak & Protect.
Cooling	Force cooled using two speed DC fan.
Dimensions	482.6mm x 88.0mm (2U) x 325.0mm deep (+ connectors)
Weight	9kg net

**CX-A4 Technical Specifications**

Rated Output	120 watts/4 ohm load (nominal) 85 watts/8 ohm load (nominal)
100V Output*	100 watts (minimum load 100 ohms)
70V Output*	100 watts (minimum load 50 ohms)
Bridged Output	240 watts/8 ohm load (nominal)
Frequency Response	±1dB 10Hz to 50kHz, switchable high pass filter -3dB @ 65Hz
THD	0.005%, typical, @1kHz, 100W in 4 ohms, one channel driven, measurement BW 22Hz to 80kHz
VCA Module THD	<0.03% 1kHz, measurement BW 20Hz to 80kHz
Input Sensitivity	0dBu (775mV)
Input Impedance	10kΩ balanced / 5kΩ unbalanced
Noise	>90dB rms below rated output, un-weighted, measurement BW 22Hz to 22kHz
Power Input	230V ±5% (115V ±5% available)
Fuse Rating	230V - T4A H 115V - T8A H
Fuse Type	20mm x 5mm High Breaking Capacity 250V AC

**CX-A850 General Specifications**

Inputs	Balanced via 3 pin plug-in screw terminal type connectors
Outputs	2-pin plug-in screw terminal type connectors to flexible cables up to 2.5mm <sup>2</sup>
Protection	VI limiting, DC offset, Thermal, Switch-on Delay & Dynamic Clipping Protection
Status	LED indicators on each channel for Signal, Peak & Protect.
Cooling	Force cooled using variable speed DC fan.
Dimensions	482.6mm x 88.0mm (2U) x 325.0mm deep (+ connectors)
Weight	8.8kg net

**CX-A850 Technical Specifications**

Rated Output	50 watts/4 ohm load (nominal) 35 watts/8 ohm load 50W (nominal)
100V Output*	40 watts (minimum load 250 ohms)
70V Output*	40 watts (minimum load 125 ohms)
Bridged Output	100 watts/8 ohm load (nominal)
Frequency Response	±0dB - 0.5dB 10Hz to 20kHz, switchable high pass filter -3dB @ 65Hz
THD+N	0.02%, typical, @1kHz, 60W in 4 ohms, one channel driven, measurement BW 22Hz to 80kHz
VCA Module THD	<0.03% 1kHz, measurement BW 20Hz to 80kHz
Input Sensitivity	0dBu (775mV)
Input Impedance	10kΩ balanced / 5kΩ unbalanced
Noise	>96dB rms below rated output, un-weighted, measurement BW 22Hz to 22kHz
Power Input	230V ±5% (115V ±5% available)
Fuse Rating	230V - T3.15A H 115V - T6.3A H
Fuse Type	20mm x 5mm High Breaking Capacity 250V AC

**CX-A450 General Specifications**

Inputs	Balanced via 3 pin plug-in screw terminal type connectors
Outputs	2-pin plug-in screw terminal type connectors to flexible cables up to 2.5mm <sup>2</sup>
Protection	VI limiting, DC offset, Thermal, Switch-on Delay & Dynamic Clipping Protection
Status	LED indicators on each channel for Signal, Peak & Protect.
Cooling	Force cooled using variable speed DC fan.
Dimensions	482.6mm x 88.0mm (2U) x 325.0mm deep (+ connectors)
Weight	7.15kg net

**CX-A450 Technical Specifications**

Rated Output	50 watts/4 ohm load (nominal) 35 watts/8 ohm load 50W (nominal)
100V Output*	40 watts (minimum load 250 ohms)
70V Output*	40 watts (minimum load 125 ohms)
Bridged Output	100 watts/8 ohm load (nominal)
Frequency Response	±0dB - 0.5dB 10Hz to 20kHz, switchable high pass filter -3dB @ 65Hz
THD+N	0.02%, typical, @1kHz, 60W in 4 ohms, one channel driven, measurement BW 22Hz to 80kHz
VCA Module THD	<0.03% 1kHz, measurement BW 20Hz to 80kHz
Input Sensitivity	0dBu (775mV)
Input Impedance	10kΩ balanced / 5kΩ unbalanced
Noise	>96dB rms below rated output, un-weighted, measurement BW 22Hz to 22kHz
Power Input	230V ±5% (115V ±5% available)
Fuse Rating	230V - T4A H 115V - T8A H
Fuse Type	20mm x 5mm High Breaking Capacity 250V AC



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