

CX263 : Zone Mixer

482.6mm / 19"



Cloud CX263 front view



Cloud CX263 rear view

General Description

The Cloud CX263 is an easy-to-use, three-zone, rack-mounting (1U) audio mixer. It combines simple control of background music with versatile microphone paging for up to three separate areas. It is suitable for use in many types of premises, including pubs, bars, clubs, shops, offices, hotels, etc.

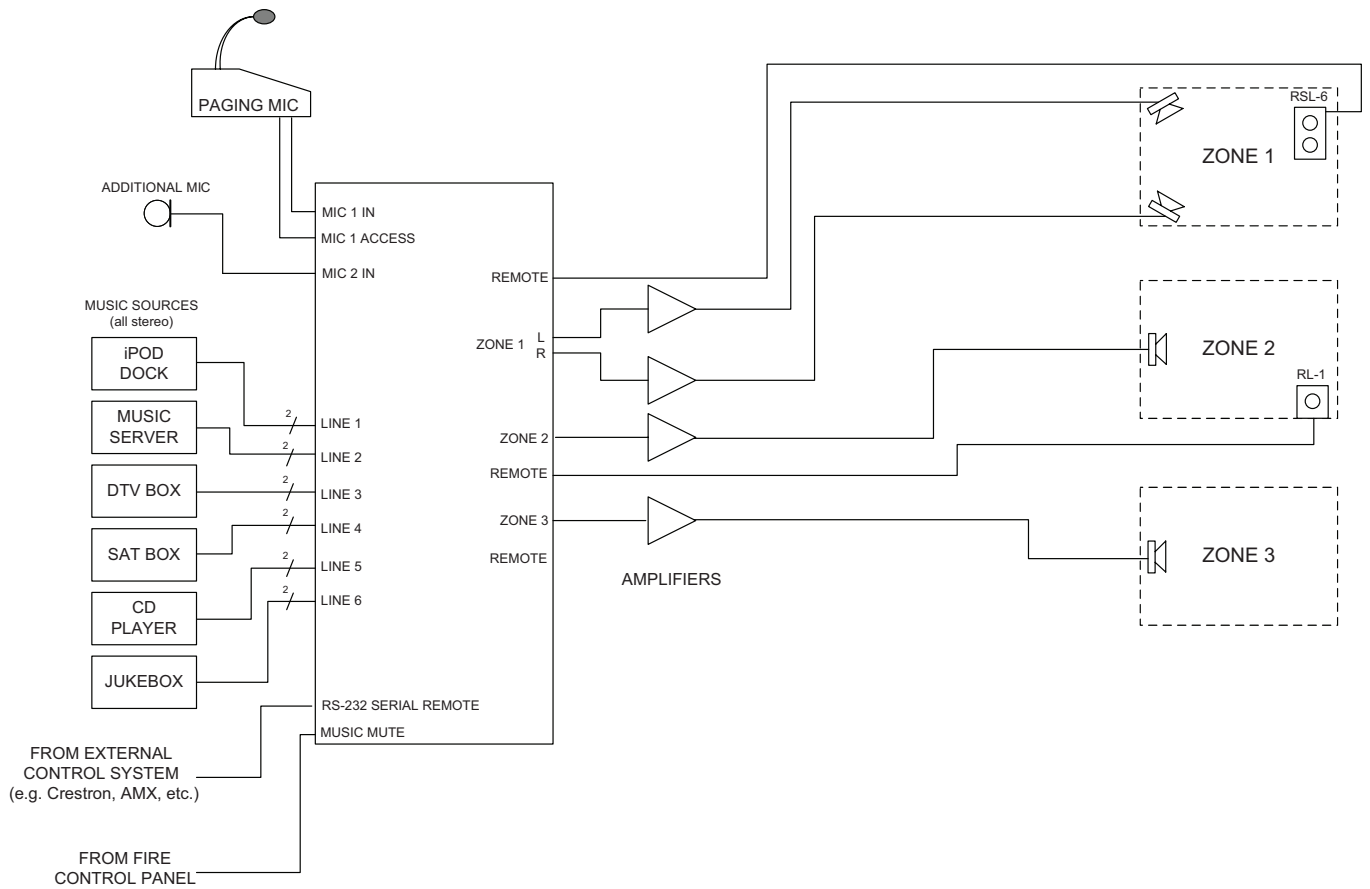
The CX263 has six stereo line inputs and two microphone inputs. It has three separate zone outputs, in each of which one of the line inputs and the microphone inputs may be mixed together. Separate user controls for music source selection, and music and individual mic levels are provided for each zone. One of the zone outputs is stereo, making it suitable for driving a main public area where music fidelity is more important. Bose® EQ cards may be fitted to any or all of the three outputs.

The CX263 is directly compatible with Cloud PM Series paging microphones. Alternatively, Mic 1 input may be configured to suit most OEM paging systems: paging may be activated by voice (VOX) or short-to-ground access connections, and Mic 1 may be configured to have priority over Mic 2 to prevent announcement clashes. Additionally, one line input may be set to have priority over any other selected to facilitate connection of a digital sound store or similar device.

Music level only, or music level and source selection may be controlled remotely in each zone if wished, using Cloud standard remote control plates. The CX263 may also be fitted with an optional RS-232 serial control interface; as well as allowing remote music control, the interface's command set includes remote control of other unit functions.

- Provides music and paging in three zones
- Front panel controls for music source, music level and Mic 1 / Mic 2 level in each zone
- Six (unbalanced) stereo line inputs with individual gain controls
- Two balanced mic inputs – 15V phantom power available on either or both
- 100 Hz hi-pass filter on both mic inputs
- Sensitivity (rear panel) and HF/LF EQ adjustment (front panel) for each mic input
- Three electronically-balanced zone outputs, one stereo, two mono
- HF/LF music EQ adjustment on each zone output
- Paging priority control on Mic 1 input via short-to-ground access connection or VOX triggering
- Mic 1 may be selected to have priority over Mic 2
- Selectable LINE 6 priority per zone, with choice of release times
- Music Mute control input (NO or NC) for interface to emergency system
- Compatible with standard Cloud remote control panels: RL-1 (music level) and RSL-6 (music level and source selection)
- Optional RS-232 port for serial remote control of:
 - Music level
 - Music source
 - Mic 1 zone access
 - Mic 1 muting per-zone or globally
 - Mic 2 global muting
 - Music Mute control
- Optional Bose® EQ cards available
- 1U 19" rack mounting unit

System Example



The example shows a CX263 used to provide music, announcements and paging in three separate areas (zones) of a premises such as a retail outlet. Area 1 is wired for stereo music, and can set its own music source and volume by means of the local RSL-6 remote control (optional). Areas 2 and 3 are mono only; Area 2 is fitted with an RL-1 remote control panel which allows local control of music level in that zone. Music sources and levels could be set from the front panel of the mixer itself if preferred.

Paging to any zone is achieved using a paging mic (such as the Cloud PM4) connected to Mic 1 input; this would typically be located somewhere other than within any zone. Additional announcements to any zone can be made from the separate microphone connected at Mic 2 input.

Note that the jukebox is shown connected to Line input 6; if Line 6 Priority is enabled in the mixer, then whenever the jukebox is in use it will always be heard in Zone 1, regardless of the music source setting.

Technical Specifications

Line Inputs

Frequency Response	20 Hz - 20 kHz, +0, -0.3 dB
Distortion	<0.05% typical, 20 Hz - 20 kHz
Sensitivity	100 mV (-17.8 dBu) to 1.5V (+6 dBu)
Input Gain Control	24 dB range
Input Impedance	48 k Ω
Headroom	>20 dB
Noise	<-84 dBu rms typical @ 0 dB gain, 20 Hz - 22 kHz
Equalisation	LF: ± 10 dB @ 50 Hz, HF: ± 10 dB @ 10kHz

Microphone Input

Frequency Response	100 Hz -3 dB (filter) to 20 kHz, ± 0.5 dB
Distortion	<0.05% typical, 20 Hz - 22 kHz

Line Inputs

Frequency Response	20 Hz - 20 kHz, +0, -0.3 dB
Distortion	<0.05% typical, 20 Hz - 20 kHz
Sensitivity	100 mV (-17.8 dBu) to 1.5V (+6 dBu)
Input Gain Control	24 dB range
Input Impedance	48 k Ω
Headroom	>20 dB
Noise	<-84 dBu rms typical @ 0 dB gain, 20 Hz - 22 kHz
Equalisation	LF: ± 10 dB @ 50 Hz, HF: ± 10 dB @ 10kHz

Microphone Input

Frequency Response	100 Hz -3 dB (filter) to 20 kHz, ± 0.5 dB
Distortion	<0.05% typical, 20 Hz - 22 kHz
Gain Range	10 dB to 50 dB
Input Impedance	>2 k Ω (balanced)
Common Mode Rejection	>70 dB @ 1 kHz
Headroom	>20 dB
Noise	-128 dB EIN, 20 Hz - 22 kHz (ZS 150 Ω)
Equalisation	LF: ± 10 dB @ 100 Hz, HF: ± 10 dB @ 5 kHz

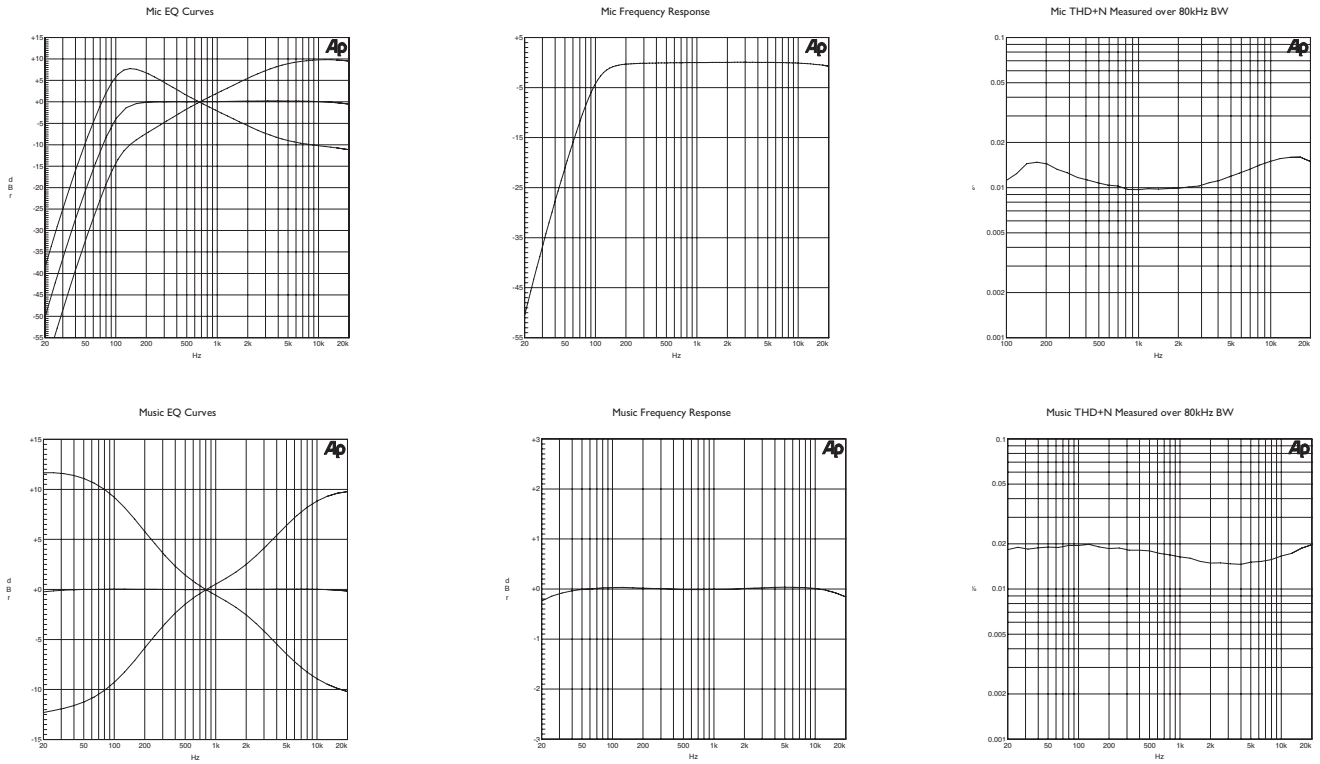
Outputs

Output	0 dBu (775 mV) balanced
Minimum load impedance	1.2 k Ω
Maximum output level	+20 dBu

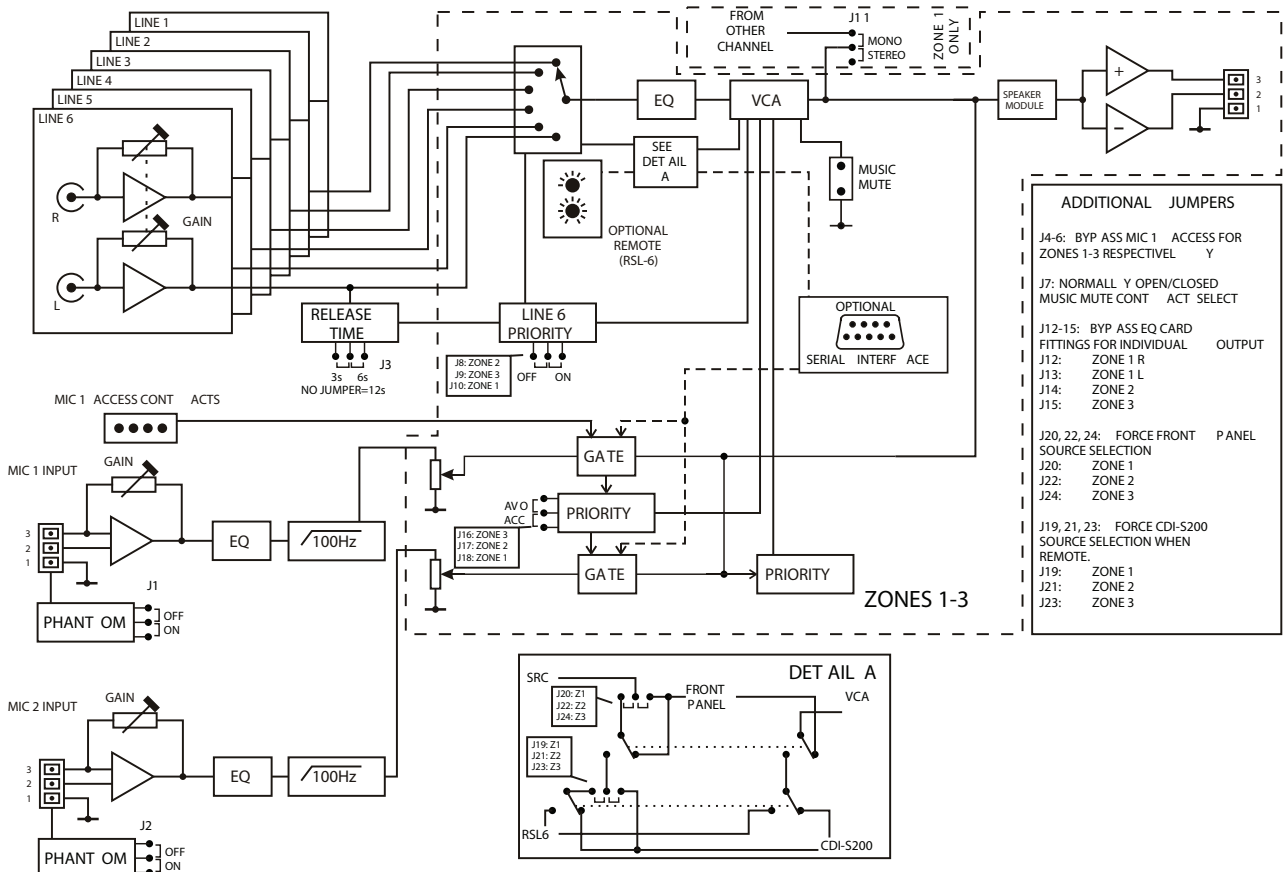
General

Power Input	230V/115V $\pm 10\%$
Fuse Rating	T100 mA 230V, T200 mA 115V
Fuse Type	20 mm x 5 mm 250V
Dimensions (w x h x d)	482.6 mm x 44 mm (1U) x 152.5 mm
Weight	2.15 kg

Graphs



Block Diagram



Architect's and Engineer's Specification

The mixer shall be equipped with six unbalanced stereo music inputs on rear panel phono sockets (RCA jacks), and two electronically balanced microphone inputs, one electronically balanced stereo (L & R) output and two electronically balanced mono outputs, all on rear panel multipin connectors.

The mixer shall have three channels designated Zone 1, Zone 2 and Zone 3. The channels shall be identical in design and features. The microphone inputs shall be mixed and summed with the music input selected in each channel separately. Each channel shall have its own front panel microphone level controls, one per microphone input. The music input to each channel shall be selected by 6-position front panel rotary switches. It shall be possible to control the level of the music source independently of the microphone levels in each channel.

Each music microphone input shall also have a rear panel input sensitivity control. Independent 2-band equalisation adjustment shall be provided on the rear panel for the music signal in each mixer channel. Independent 2-band equalisation adjustment shall be provided on the front panel for each microphone input; the controls shall be covered by a removable plate fixed with screws. Phantom power shall be available at either or both microphone inputs when selected by internal jumpers.

A control input shall be provided to activate microphone input 1 by external contact closure, with separate routing to each mixer channel. It shall be possible to configure the mixer such that this function is overridden and microphone input 1 is always active. It shall also be possible to configure the mixer to perform the following functions:

- i) detection of a signal on microphone input 1 will automatically reduce the music level by 30 dB,
- ii) detection of a signal on microphone input 1 will automatically override any signal on microphone input 2,
- iii) one line input will automatically override all others in all channels, even if unselected.

Optional remote control panels shall be available to permit control of i) music level in any mixer channel; ii) music source selection and music level in any mixer channel; it shall be possible to retrofit these to the mixer at any time. The remote control panels shall connect via a rear panel multipin connector. It shall be possible to disable either the front panel music level or the music level and music source selection controls by moving internal jumpers. An external control input shall be provided to allow muting of the music source by a fire alarm or other external emergency system via isolated, 'volt-free' contacts, and this input shall be configurable to respond to either a short or open external circuit. An optional RS-232 serial control interface module shall be available; this shall be retrofittable internally and present a 9-pin Dsub connector on the rear panel. The RS-232 command set shall include commands to select music source and music level in each mixer channel, to mute either microphone input, to activate the routing of microphone 1 input to any mixer channel and to activate the external music muting function.

The mixer shall accept internal Bose® Series IIS plug-in equaliser cards to permit use with compatible Bose® loudspeakers. It shall be possible to fit these in any or all of the main or utility outputs.

The mixer shall be built in a 1U steel chassis for mounting in a standard 19" rack. The mixer will be fitted with a front-panel power switch with LED indication. Two mains supply variants shall be available: 230 V or 115 V. Mains supply shall be connected via a detachable IEC cable.

The mixer shall be the Cloud CX263; the optional remote control panels shall be the Cloud RL-1 (music level only) and the Cloud RSL-6 (music level and source selection). The optional RS-232 serial remote control interface shall be the Cloud CDI-S200.