

# Z8II & Z4II

Multi-zone Venue Mixers



**Cloud**  
Clearly better sound

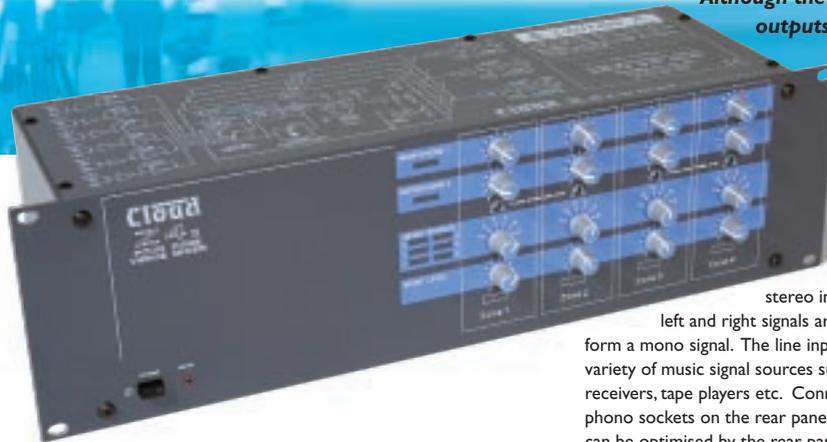
# Z8<sub>II</sub> & Z4<sub>II</sub> Multi-zone Venue Mixers

The Z8<sub>II</sub> offers the 'complete solution' for multi-zone, multi-functional venues. With the ability to accept an array of input sources such as CD, Video, Satellite etc. the Z8<sub>II</sub> is an ideal choice. The Cloud Z8<sub>II</sub> has been developed specifically to meet these needs, and can act as a user-friendly master control for the entire sound system. Accordingly, the Z8<sub>II</sub> offers direct connection of up to six music sources, two microphones and a paging mic, all of which can be selected to operate in up to eight different output zones, in any combination.

The dedicated paging microphone input features a pre-settable level control for each zone, plus a signal routing facility that can interface with the Cloud CDPM8i eight zone paging mic with pre-announcement chime and most commercially available paging mics. The two microphone inputs can be set to operate in any of the eight zones via front panel mounted level controls. Recognising that each zone may have different acoustic properties or be fitted with different loudspeakers, separate equalisation is provided on each zone for music signals, and each of the three mic inputs has its own bass and treble controls. Plug in Bose® filter cards are available which equalise the output for a range of Bose® loudspeakers. All inputs have gain trimmers located adjacent to the respective input socket, for perfect level matching.

Simple, remote or in-zone control of music level and source selection is a standard feature, using the Cloud RSL-6 option. Two active modules are now available: the DM-1, a two input microphone module with balanced inputs, common equalisation, switchable priority over music signals and a high pass filter (can be used in multiples). The LM-1 features a line input, a balanced mic input with switchable priority and remote control of the host mixer's music source and level. Configurable line 6 priority on any or all zones is also useful to interface priority music signals derived from such sources as a jukebox or spot announce machine.

Although the Z8<sub>II</sub> operates in mono, all the music inputs are via stereo RCA phono connectors with internal mono mixing. All the zone outputs are balanced, with a nominal 0dBu level, and use detachable 3 pole screw terminals (Phoenix type). Offering similar features, a four zone variant, the Z4<sub>II</sub> is also available. Both units are 19" rack mountable, requiring only 3U of rackspace. Effective and simple control of sound for leisure venues, hotels, sports centres, retail complexes and larger licensed premises has never been easier. Thanks to Cloud's legendary reliability and superb audio quality, it has never been better.



## Line Inputs

The Z4<sub>II</sub> and Z8<sub>II</sub> have six line level inputs; for installer convenience,

stereo inputs are provided and the left and right signals are summed internally to form a mono signal. The line inputs are suitable for a wide variety of music signal sources such as CD players, receivers, tape players etc. Connection is by way of RCA phono sockets on the rear panel and the gain of each input can be optimised by the rear panel pre-set controls.

## Microphone Inputs

Two mic inputs are provided on both the Z4<sub>II</sub> and Z8<sub>II</sub>; these have electronically balanced, low noise circuitry and connection is by way of 3 pin XLR type connectors. Each input is suitable for microphones with a rated impedance in the range of 200 to 600 ohms. Pre-set gain controls are provided and each zone has two front panel mounted mic level controls; this allows the two microphone channels to be routed to any zone at the optimum level or not at all. The microphone signals are not controlled by the remote control facilities. All microphones have priority over the music signals; when a mic signal is detected, the music signal will be reduced by 30dB, smoothly restoring to it's previous level when the announcement ceases. Phantom power can be provided by setting internal jumpers.

## Paging Microphone Inputs

A dedicated paging microphone input is provided; this electronically balanced input has low noise circuitry and is suitable for 200 to 600 ohm microphones; connection is via a 3 pin XLR type connector. A pre-set input gain control is provided on the rear panel and each zone also has a pre-set paging mic level control mounted on the front panel.

The paging mic signal can be switched to operate in any zone by grounding the respective zone access contact on the rear panel; this convention not only suits the Cloud CDPM range but is also compatible with industry standard paging mics. The paging mic has full VOX (voice triggered) priority over both Mic 1 and Mic 2 and when operating, also reduces the music signal by 30dB.

## CDPM(4i, 8i, 12i & 16i) Paging Microphones

The CDPM range of zone paging microphones are available for use with the Z4<sub>II</sub> and Z8<sub>II</sub>. A key feature of the CDPM range is that they have been designed to allow up to 32 microphones to be connected to one mixer (microphones connecting directly to the mixer require the optional analogue interface card, microphones connect to each other using CAT5 cable). When the microphones are used in multiples, intelligent circuitry in the CDPM detects when another microphone is in use and illuminates the 'Busy' LED to indicate this, the CDPM's operation is blocked until it detects 'Busy' has cleared. Individual microphones can be configured to

"broadcast when busy" if this is desirable. The host mixer provides power for one microphone, external power supplies will be required for each additional unit.

The CDPM range feature logic controlled zone selection that routes the announcement to any combination of the 4, 8, 12 or 16 zones. The operation of the logic circuitry can be configured so that the zone selection is retained or automatically reset after use, and each zone can be set to have access disabled to prevent unwanted announcements in particular zones from individual microphones. A "call all" facility is provided for instant announcements to all enabled zones. The CDPM range also feature a pre-announcement chime which can be disabled if required. The CDPM range should be connected to the paging mic input of the Z4<sub>II</sub> or Z8<sub>II</sub>, this input has priority over all other signals.

## Microphone Equalisation

Pre-set treble and bass controls are provided for each of the three microphone inputs and these are located on the rear panel. The equalisation is optimised for speech together with a high pass filter operating at 100Hz; this reduces handling noises and breath blasts to a minimum and therefore improves intelligibility.

## Applications

Key applications for this versatile venue mixer include:

- Leisure venues, retail shops and licensed premises where the whole system requirements can be controlled by a single 'Venue Mixer'.
- Large hotel sound system with special requirements for fitness suites, swimming pool, conference rooms and bars in addition to general requirements.
- Sports centre where the sound system is required to provide selective paging and a choice of music in several zones, with the option to have a remotely located active module with direct input facilities.



CDPM 8i and CDPM 4i  
paging microphones



1. DM-1 2. XLR-FI  
3. RSL-6 4. RL-1 5. LM-1  
6. Bose® EQ Card



### Zone Controls

Each zone has the following front panel user controls:

**Music source** The rotary 6 position switch is used to select the desired music source. The line 6 input can be configured to have priority over any other selected source (see 'Line 6 priority' section).

**Music level** This control adjusts the level of the selected music source.

**Mic level controls** Each zone has two front panel mounted level controls; these controls provide independent level control of Mic 1 & Mic 2; the paging microphone level can be separately adjusted for each zone by a small pre-set level control mounted on the front panel. The microphone signals are not controlled by the remote control facilities. The paging microphone has full priority over both Mic 1 and Mic 2 and all microphones have priority over any music signal present on the same zone.

### Remote Music/Level Control

The music programme selection and music level for each zone can be controlled remotely if required by connecting the optional RSL-6 remote source/level control plates. A rear panel mounted switch allows any zone to operate with local control or remote control and if appropriate, internal jumpers allow the use of a remote level control (RL-1) with front panel source select. When using the

remote control function, the operation of the respective front panel control is defeated.

The RSL-6 is connected to the mixer using two core cable with screen.

### Music Equalisation

The pre-set music treble and bass controls for each zone are located on the rear panel adjacent to the zone output socket. The equalisation characteristics are optimised for music signals.

### Line 6 Priority

The signal on line 6 can be configured to have full priority over the selected music signal on a zone by zone basis. This function is useful to interface priority music signals derived from a Juke Box or spot announce machine.

### Facility Port

Each zone has a facility port; these are intended to extend the capabilities of the unit on a zone by zone basis by allowing the connection of a remotely located active control device such as the DM-1 & LM-1; the facility port can also be used as a means to directly inject a signal into a specific zone via a line level balanced input.

The DM-1 is a two input microphone module which can be used in multiples when wired in a 'daisy chain' format; tamperproof HF & LF controls are provided.

The LM-1 has a line input, a balanced mic input and remote control of the mixer's music source and level (a built-in RSL-6).

### Remote Music Mute

A facility to remotely mute the music signals is provided. A rear panel mounted 2 pole connector can interface with a fire alarm control panel to provide music muting when an alarm condition exists.

### Outputs

All zones have a single, mono, balanced output via a 3 pin, detachable screw terminal connector. The nominal output level is 0dBu (775mV) although, with a headroom of 20dB, the unit can provide a maximum signal of +20dBu (7.75V). The output can be terminated into an unbalanced load without signal loss.

### External Voltage Control of Music Source and Level

The Cloud Z8<sub>11</sub> and Z4<sub>11</sub> can be used as part of an automated sound system by controlling the music level and music source by an external 0-10V DC voltage. The microphone signals cannot be voltage controlled and will remain fixed at the levels set by the rotary controls.

### Multi-zone Applications

Where the specification calls for more than 8 zones, the venue mixers can be used in multiples. The signal sources can be connected to the inputs of additional mixers; this can satisfy the requirements of complex systems by the use of selected or common audio sources to specific zones as required. A venue can therefore benefit from flexible program options yet retain a simple operator interface.

# TECHNICAL SPECIFICATIONS

## Line Inputs

Frequency response	20Hz-20kHz $\pm 0.5$ dB
Input level	-12dBu(200mV) to +8dBu(2.0V)
Input impedance	47k $\Omega$
Input gain range	20dB
Headroom	>20dB
Noise	-90dB rms 22Hz-22kHz (0dB gain)
Equalisation	HF $\pm 10$ dB@10kHz
	LF $\pm 10$ dB@50Hz

## Microphone Inputs

Frequency response	-3dB 100Hz (filter) $\pm 0.5$ dB 20kHz
Gain range	10dB-50dB
Input impedance	>2k $\Omega$ (balanced)
CMR	>70dB@1kHz
Headroom	>20dB
Noise	-120dB EIN 22Hz-22kHz (150 $\Omega$ )
Equalisation	HF $\pm 10$ dB@5kHz
	LF $\pm 10$ dB@100Hz

## Zone Outputs

Nominal output level	0dBu (775mV)
Minimum load impedance	600 $\Omega$
Maximum output level	+20dBu (7.75mV)

## General Specifications

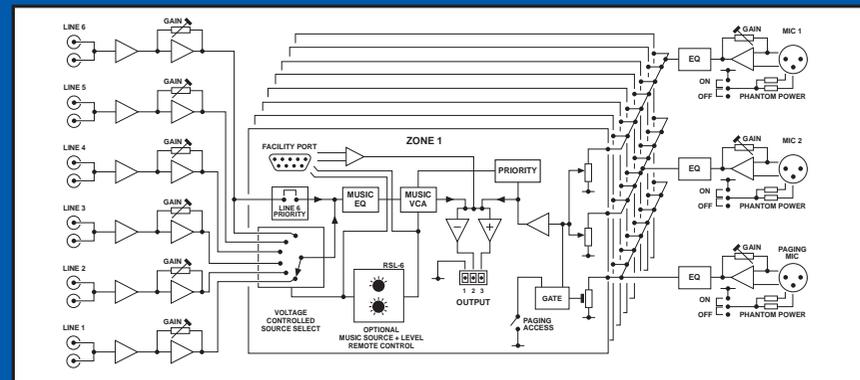
Power consumption	Z8-28VA Z4-20VA
Power requirements	230V $\pm 10\%$ AC 40-60Hz or 115V $\pm 10\%$ AC 40-60Hz
Fuse rating	Z8 T125mA for 230V input or T250mA for 115V input
	Z4 T100mA for 230V input or T200mA for 115V input
Fuse type	20mm x 5mm class 3 T 250V
Width	482.6mm (19")
Height	132.5mm (3U)
Depth	160.0mm (+connectors)
Weight	Z8 4.40 Kg
	Z4 3.83 Kg



Z8<sub>11</sub>



Z4<sub>11</sub>



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