

PM4/8/12/16: Multi-zone Paging Microphones



General Description

The PM Range of Paging Microphones are designed for general purpose multizone applications and can also be used with non-Cloud products.

Four models of the PM are available: the PM4, PM8, PM12 and PM16. The models differ only in the number of zone select buttons on the front panel (4, 8, 12 or 16 respectively), and consequently in the maximum of zones that can be supported.

The PM range's basic feature set provides:

- Individual and multiple zone selection
- Definable zone groups with group selection
- Pre-announcement chime with internal chime sounder
- TALK and CALL ALL buttons
- BUSY L.E.D.
- Configurable two-layer announcement priority system
- Auto-zone reset after announcement
- Zone disable function

The PM is designed to interface directly with recent Cloud products - such as the DCM-1 - via the Cloud Digital Paging Interface, which uses standard CAT-5 cable and RJ45 connectors.

It may also be used with any other audio system equipped with 'short-to-ground' paging access for selecting the zone(s) to be paged. This includes the following current* Cloud products:

- Z4ii and Z8ii Venue Mixers
- CX163 and CX263 Mixers
- 36/50 and 46/50 Integrated Mixer Amplifiers
- Other, older Cloud products may also be compatible; please contact Cloud's Technical Department for Advice or visit the Cloud website (www.cloud.co.uk)

Multiple PMs may be interconnected (via the Digital Paging Interface) to permit paging from more than one location. A total cable run of up 1 km is permissible, with a maximum of 32 PM units. Different models of PM may be intermixed on a single network. It is also possible to configure a PM to address only a subset of the available zones.

The PM is also compatible with the older Cloud CDPM range of digital paging microphones. PM microphones and CDPM microphones may be freely intermixed on the Digital Paging Interface.

Technical Specifications

Paging Zones

Up to sixteen Zones are available in an installation. All PMs are fitted with sixteen access terminal so that any PM can be used as the mixer interface in a multiple PM system

PM4	Four zones. Can interface upto sixteen zones from linked PMs
PM8	Eight zones. Can interface upto sixteen zones from linked PMs
PM12	Twelve zones. Can interface upto sixteen zones from linked PMs
PM16	Sixteen Zones

Features

Pre announcement chime	Choice of four chimes selected by internal jumper. Chime can be set off/on by internal jumper. Internal sounder. Can be set off/on by internal jumper. Chime Level control preset.
Interconnectable	PMs of any combination of zone sizes can be daisy chained using CAT5 cable
Bank shift	A PMs pageable zones can be shifted around the available sixteen zones. Set by internal jumpers
Zone barring	A PM can be barred from accessing zones. Set by internal jumper
Group lock	The group buttons can be locked to prevent tampering. Set by internal jumper
Priority	A PM can be set to high priority enabling it to interrupt a low priority PM. Set by internal jumper
Microphone level	Preset allows a PMs level to be trimmed
Auto zone reset	Allows a zone selection to be retained after a page. Set by internal jumper

Performance

Directivity	Unidirectional, cardioid pattern
Microphone element	Electret condensor
Sensitivity (1KHz)	68 dB \pm 3 dB (0 dB=1V/ μ bar 1KHz indicated by open circuit)
Frequency response	80 Hz ~ 16,000Hz
Internal compressor	

Controls - Elastomer push buttons with SMD tact switches

Zone	Select a zone for paging
Zone Light	Indicates a zones selection
Clear	Clear all selected zones
Talk	Open a call to selected zones
Call all	Open a call to all zones available to the PM
Group	Four group buttons give programmable zone selection
Busy Light	Indicates when paging system is in use

Connections

Analogue	Use with traditional short to ground mixers
Microphone	Internal three poles screw terminal. Hot, cold and screen
Access	Internal sixteen poles screw terminal allows any model of PM to interface the full sixteen zones available to an installation
Digital	Use to interconnect PMs or interface to digital enabled mixers such as the Cloud DCM-1
RJ45 OUT	Carries switching data and transmits analogue audio to the next daisy chained unit or mixer. Also receives power when connected to a mixer
RJ45 IN	Carries switching data and receives analogue audio from other PMs
Power	Internal two poles screw terminal. Power from mixer via access cable
2.1 mm concentric power jack	Use an external PSU
RJ45 OUT socket	Power from mixer via CAT5 cable

Power - Voltage

Internal screw terminal	12 -24VDC
External 2.1mm jack	12 - 24VDC, 9-17VAC
RJ45 OUT socket	12 -15VDC from mixer

Power - Consumption

PM4	55mA
PM8	61mA
PM12	67mA
PM16	73mA

Physical - Dimension

Width	245mm
Height (not including gooseneck)	65mm
Depth	170mm
Gooseneck	300mm
Weight	1.2kg

Physical - Finish

Cabinet	Black rubberised ABS
Base	Slate grey painted steel
Gooseneck	Black painted brass
Mounting	Rubber feet

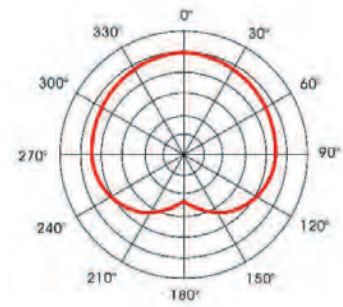
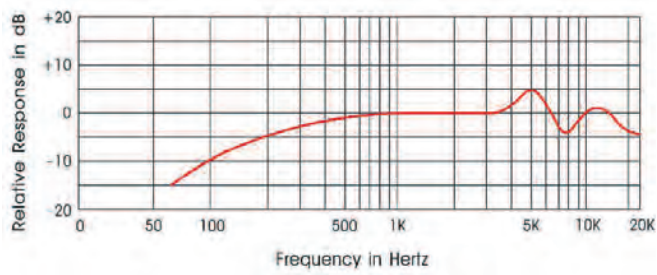
Cables - Analogue

Audio	Twin core screened (Microphone cable)
Access	Screened multicore. 1 core per zone, 1 core for ground, plus 1 core for power if powered by mixer
Maximum length	100m

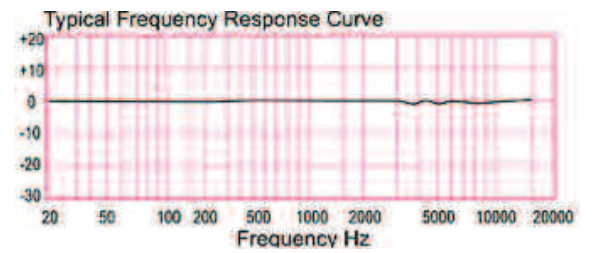
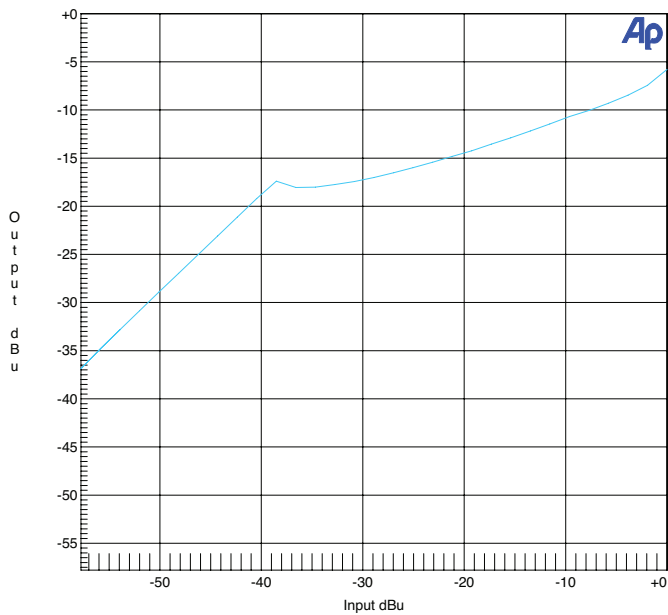
Cables - Digital

Type	Cat 5
Maximum length	1km tota;
Maximum connected PMS	32

Graphs



Cloud Electronics Ltd PM4-16 Compressor characteristics. 05/05/09 11:59:18



Architect's and Engineer's Specifications

The paging microphone shall be capable of paging up to 16 zones either individually, in user-definable groups, or all zones simultaneously. The microphone shall be available in versions with 4, 8, 12 or 16 zone paging buttons. It shall also be possible to interconnect up to 32 paging microphones with full operational transparency, via standard CAT-5 cabling.

The microphone shall become active when a non-latching "TALK" button is pressed. Zone selection shall be by electronically latching buttons, with selection confirmed by a LED. A non-latching "CALL ALL" button shall also be provided, selecting paging to all supported zones. Four "GROUP" buttons shall also be provided, and it will be possible for the user to define a group of zones for each. A "CLEAR" button will be provided to cancel incorrect zone selections. There shall be a legend area adjacent to each button for user's zone identification.

The microphone itself shall be mounted on a gooseneck and be non-removable.

The paging microphone will interface directly to compatible mixers via a digital interface carrying audio, zone selection and power on a single CAT-5 cable. It will also be equipped with an analogue interface consisting of an audio output and a separate short-to-ground control port, permitting its use with any other mixers equipped with this type of access. The analogue zone selection interface shall be able to sense when any paralleled system is active.

The microphone will be capable of being powered via either type of interface, or from a local external PSU. The unit will operate from both DC (12-24V) and AC (9-17V) supplies.

It shall be possible to set various configuration options which will not be resettable by the user and which will be reinstated after a power interruption: i) setting zone selection to either remain in place post-announcement, or to self-cancel; ii) offsetting zone numbering, allowing a microphone to address a different (consecutively-numbered) set of zones; iii) locking group definitions so they cannot be altered by the operator; iv) assigning two levels of priority, whereby 'high' priority will take precedence when messages conflict when multiple microphones are in use; v) enabling one of four pre-set internally-generated pre-announcement chimes to be selected and setting the chime level.

The paging microphone shall be built in a compact housing with a non-slip base for desktop use.

The paging microphone shall be the Cloud PM Series; Model PM4 (4 zones), PM8 (8 zones), PM12 (12 zones) or PM16 (16 zones).