

BDM 304,304M,308,308M
316&316M

Operating Instructions

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BALDWIN BOXALL
COMMUNICATIONS

BDM 304, 308 and BDM 316

The BDM 304, 308 and 316 microphones are designed for use with our MITRE, ADEPT and VIGIL amplifier range and can be desk or wall mounted.

To Operate

1. Select zone(s) needed. 'Zone Select' LED(s) will flash indicating selected zone(s).
2. Press 'Speak' to make an announcement. The 'Speak Now' LED will illuminate indicating that the system is ready for use, along with 'Zone Select' and 'Zone Busy' LED's for any selected zones. If a pre-announcement chime is being used the 'Speak Now' delay function must be selected. The LED will illuminate after approx. 2.5 seconds.
3. If an announcement is required to all zones then simply press 'ALL'.
4. During the announcement the speech volume indicator will fluctuate. Try to keep the indication constant without the yellow segment illuminating. Maintaining a constant level will aid intelligibility.

Additional Features

Several important functions are incorporated into the microphone and may be selected as required. DIL switches are accessed via the side panel, refer to Fig 2.

1. Speak Now Indicator

The 'Speak Now' LED will operate in two different modes.

- a) Instantly illuminates when 'SPEAK' is pressed.
- b) Delayed by 2.5 seconds to allow time for chime to operate and finish.

2. Zone Select Cancel

This facility is selectable between cancel and no cancellation modes.

- a) When 'Speak' key is released, all zone selections will be cancelled. When a fresh announcement is to be made, zones must be re-selected.
- b) When 'Speak' key is released, the zones will remain selected. This is particularly useful when repeat messages to the same zones are made. To cancel zone selection each zone will need to be de-selected. (Default mode)

4. Output Level Option

The balanced audio output can be selected to either microphone (2.5mV) or line level (250mV), switchable by the DIL switch, refer to Fig 2 .

Twin screened cable runs, up to 100 metres, generally operates well at microphone levels.

However, if cable runs in excess of 100 metres are encountered or amplifier inputs are required to be wired in parallel, it is advisable to select the line level output and use amplifiers with line inputs. Using this higher level ensures that any unwanted interference signals induced on the cable are of a low level compared to the speech signal.

If the amplifier only has balanced microphone inputs, it is possible to convert them to line level using three resistors forming an attenuator as shown in Fig 1 below.

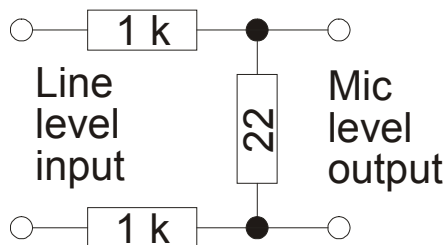


Fig 1

3. Limiter

Selecting the limiter will ensure that the signal level remains fairly constant irrespective of input level changes. Using it will prevent system overload when different personnel use the microphone or speak too close to the microphone.

Note: Sensitivity increases by 12dB when limiter is selected.

BDM304M/308M/316M

The BDM304M, BDM308M and BDM316M have the same features as the BDM304/308/316 but have a factory fitted surveillance option to allow for monitoring of the microphone capsule and control lines.

The surveillance frequency is factory set to either 20KHz or 1.5KHz (Default 20KHz).

The output surveillance level can be adjusted by VR1 on the surveillance option, which is located on the rear panel inside the microphone.

Note : 'Zone Busy' indication is not operational on BDM304/308M/316M.

Technical Specification

	<i>Microphone</i>	<i>Line</i>
Nominal output level	2.5mV	250mV
Maximum output level limiter operating	7mV	700mV
Output impedance	47 Ohms	400 Ohms
Frequency response	250Hz – 10KHz	
Power requirements	BDM308	24V DC 50mA standby 170mA max
	BDM316	24V DC 60mA standby 300mA max

BDM304, 308 and 316 Connections

Microphones are terminated to a 25 way 'D' connector. They are supplied with a BMS25 single gang socket box and connections are made using screw terminals.

FUNCTION

BMS 25 CONNECTIONS

ZONE	1		1
	2	NPN open	2
	3	collector	3
	4	outputs	4
	5	40V @ 100mA	5
	6	Max. to	6
	7	zone select	7
	8	relays etc.	8
	9	Connects	9
	10	to 0V when	10
	11	the zone and	11
	12	speak keys	12
	13	are selected	13
	14	together or	14
	15	all call only	15
	16		24
AUDIO -		Output floating	16
CABLE SCREEN -		Connect to 0V	17
AUDIO -		Output floating	18
0V			19
24V DC -		Supply input	20
ACCESS -		Amplifier connects to 0V when speak or	21
		All Call keys are pressed. 24V @ 30mA	
BUSY Indicator -		Switch to 0V to illuminate	22

Selector Location and Settings

Remove the two screws from right hand side and remove panel.

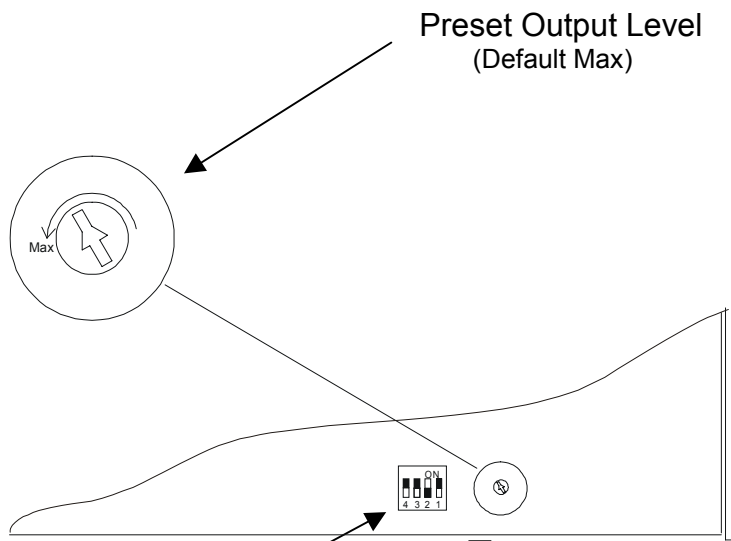


Fig 2

- | | |
|------------|--|
| DIL Switch | <ul style="list-style-type: none"> 1 on --- Mic level 2 on --- Line level 3 on --- Limiter 4 on --- Speak Now delay <p>(Default: 2 on. 1,3& 4 off)</p> |
|------------|--|

Remove Jumper From P11 situated behind DIL switch for zone cancel mode (Default: Jumper fitted)

Note: Ensure that the supply is disconnected before changing switch settings.

Zone Insert Labels

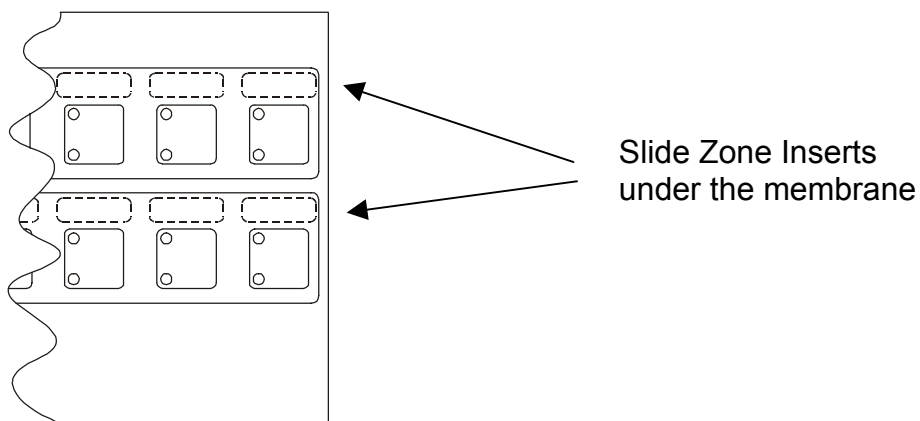


Fig 3

Note: Zone Insert Template is also available to download from www.baldwinboxall.co.uk

BDM308/316 INSERT TEMPLATE

