

BVR16, 32, 48 & 64MU Microphones

Utilising software issue 'BVAM8-7'

Operating Instructions

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BALDWIN BOX▲LL
C O M M U N I C A T I O N S

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BVR16, 32, 48 & 64M – Voice Alarm Microphones

The BVR M range is designed specifically for the Voice Alarm market to interface with the VIGIL range of amplifiers. The units connect to the BVR20 (Microdrive) controller and the VIGIL amplifiers to provide the following facilities:-

16, 32, 48 & 64 Zone Selection	All Call
6 Message Selection	Background Music Selection
Fault Indicators	Speech Level Indicator
'Speak Now' Indicator	Monitoring of Microphone Speech and Signal Paths
Zone Status Indicators	

Data path is monitored using parity checking and hand shaking techniques.

VA Microphone Control Panel

Selector Switches

- 16, 32, 48, or 64 Zone selects
- 6 Message and Cancel
- 1 Live Microphone
- 1 Music Select
- 1 Emergency Message and Fire Microphone
- 1 System Fault Accept / Lamp Test

Each message has indications for fault and message in use i.e. active.

Emergency All Call Option

One of the requirements of BS5839 pt8 is for an 'Emergency Call All Microphone' that bypasses the data link and signal processing devices.

This is a 'factory fit' option only and is not fitted as standard since there may be more than one BVR Microphone installed.

See page 4 for instructions if this option is fitted.

Microphone Indications:

- 4 LED Bar to indicate speech level
- Speak Now
- Microphone Speech path fault

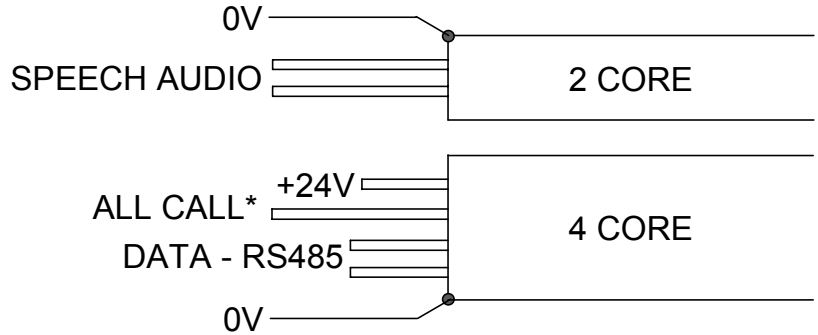
Zone Status Indications

7-segment display indicates true status of zone i.e. the message being broadcast, microphone emergency or normal paging and fault conditions.

Communications to Central Equipment

The Microphones as supplied are fitted with a 3 metre leads that should be terminated to Fire Proof cabling (MICC / FP200 or similar) for connection to the Central Equipment.
It is strongly recommended that separate cables be used for the audio pair to eliminate potential interference from the data signal.

Function	Colour
0V	Black
Speech Audio Pair	Orange
Speech Audio Pair	Yellow
+24V	Red
All Call *	Purple *
RS 485 Data pair	Green
RS 485 Data pair	Blue
EMC Ground	Screen
Not used	Brown
Not used	Pink
Not used	White



* Emergency All Call feature only when fitted

MICROPHONE SIGNAL Balanced audio at +10dBm (2.5V) from a source impedance of 400R.

DATA SIGNAL 9600 baud half duplex RS485

Microphone capsule and signal paths are monitored using a 20KHz signal.
Data signal path is monitored using parity checking and hand shaking techniques.

Micro Controller: PIC17C43 with watchdog restart.

Microphone Type: Capsule 200 Ohms Dynamic noise cancelling, or
Fist mic with PTT . 1.8m coil cord

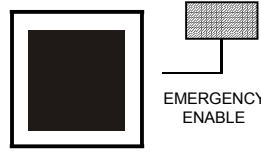
Frequency Response: 100Hz – 5kHz

Sizes:

Mic Type	Front Panel Size			Bezel Size		Bezel Cut-out Size	
	H	L	W	L	W	L	W
BVR16M	80mm	306mm	180mm	337mm	211mm	317mm	191mm
BVR32M	80mm	536mm	180mm	566mm	211mm	546mm	191mm
BVR48M	80mm	726mm	180mm	756mm	211mm	546mm	191mm
BVR64M	80mm	536mm	348mm	N/A	N/A	N/A	N/A

To Broadcast a Live Emergency Microphone Message

- 1) Lift plastic cover and depress Switch.
The 'Emergency Enable' indicator will illuminate



- 2) Pre-recorded message 2 being broadcast, (example):



Currently Broadcasting
Message 2

- 3) Press 'Select Zone' of the desired zone or zones.
If no zones are selected an 'All Call' will be performed.



Zone Selected

- 4) Press 'Speak' key



Broadcast Emergency
Microphone

Wait for the Speak Now indicator to illuminate and speak into the microphone at approximately 150mm.

- 5) Release 'Speak' key at end of announcement



Return to Broadcasting
Message 2 (Example)

To Broadcast a Live Emergency Microphone Message using 'EMERGENCY CALL ALL'

Note: this is a factory fit option only, and is not fitted as standard.

In case of situations that prevent the console from functioning correctly (e.g. processor or communications faults) the "EMERGENCY CALL ALL" button can be used.

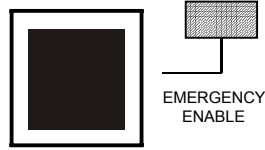
This will broadcast a message to all zones and is at the highest Priority (i.e. it will override all other broadcasts).

This method of paging is completely independent of all settings on the console and therefore should not be used unless absolutely necessary.

- 1) Press the 'Emergency All Call' button.
- 2) Speak into the microphone.
- 3) Release the 'Emergency All Call' button.

**To Broadcast An Emergency Recorded Message, Preceded by “Start of Test”
and concluded by “End of Test” Message**

- 1) Lift plastic cover and depress Switch.
The ‘Emergency Enable’ indicator will illuminate



- 2) Zone Available



Currently silent (no broadcast)

- 3) Press zone select of the desired zone or zones.
If no zones are selected an ‘All Call’ will be performed.



Zone Selected

- 4) Press Test Message, e.g. message 6



Broadcasting Message 6
“Start of Test”.

- 5) Allow the message to sound at least once, and then either set the Fire Detection System into the Fire Alarm condition or select the appropriate message (e.g. Evacuate – Message 1) as shown below.

- 6) Press the zone select of the desired zone or zones



Zone selected, currently
broadcasting Start of Test,
Message 6

- 7) Select message, e.g. Evacuate (message 1)



Broadcasting message 1
Evacuate

- 8) At the end of the test,
Press zone select of the desired zone or zones



Broadcasting message 1

- 9) Press cancel to cancel message selected in
step (8) and broadcast End of Test, message 7.



Broadcasting message 7
“End of Test”.

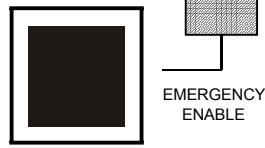
- 10) At the end of the ‘End of Test’ message the zone
will automatically clear.



No broadcast

To Broadcast An Emergency Recorded Message

- 1) Lift plastic cover and depress Switch.
The 'Emergency Enable' indicator will illuminate



- 2) Zone Available



Currently silent (no broadcast)

- 3) Press zone select of the desired zone or zones
If no zones are selected an 'All Call' will be performed.



Zone Selected

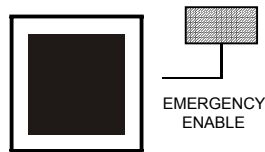
- 4) Press required function, e.g. message 2



Broadcasting Message 2

To Cancel Message

- 1) Lift plastic cover and depress Switch.
The 'Emergency Enable' indicator will illuminate



- 2) Message 2 being broadcast



Broadcasting Message 2

- 3) Press zone select of the desired zone or zones



Zone Selected

- 4) Press cancel



Zone silent, no broadcast
No alarm present on Fire Panel

After the Emergency depress Emergency Enable switch to return to Non Emergency mode.

To Broadcast a Non Emergency (Paging) Microphone Message

1) Zone Available



Zone silent, no broadcast

2) Press zone select of the desired zone or zones
If no zones are selected an 'All Call' will be performed.



Zone Selected

3) Press Speak key



Broadcast Paging Microphone

Wait for the Speak Now indicator to illuminate and speak into the microphone at approximately 150mm.

4) Release Speak key at end of announcement



Zone silent, no broadcast

Zone Fault Indication

Amplifier or loudspeaker circuit fault.

If a zone indicates a fault then an internal buzzer will sound until the 'Fault Accept' button is pressed.









The fault indication will remain until the fault is rectified.



***Note:* Even when a fault has been rectified the 'F' indication will remain on the zone display to indicate that a fault has occurred. To remove the 'F' indication the recessed switch below the 'Data Link Fault' must be pressed.**

If another fault is identified by the system the buzzer will be re-activated and will sound until the 'Fault Accept' is pressed again.

To Select Background Music (Aux 1-4), or Cancel Selection

- | | | |
|--|---|---------------------------|
| 1) Zone Available |  | Zone silent, no broadcast |
| 2) Press 'Select Zone' of the zone or zones req'd. |  | Zone Selected |
| 3) To select BGM Aux 1:
Press 'Select AUX MUSIC' once
Goto step (8) |  | Aux 1 selected |
| 4) To select BGM Aux 2:
Press 'Select AUX MUSIC' twice
Goto step (8) |  | Aux 2 selected |
| 5) To select BGM Aux 3:
Press 'Select AUX MUSIC' three times
Goto step (8) |  | Aux 3 selected |
| 6) To select BGM Aux 4:
Press 'Select AUX MUSIC' four times
Goto step (8) |  | Aux 4 selected |
| 7) To Deselct BGM:
Press 'Select AUX MUSIC' five times
Goto step (8) |  | No BGM |
| 8) Press 'PTT' to Broadcast your selection |  | Displays your selection. |

Zone Displays



Zone silent, no broadcast



Zone selected



Emergency Microphone Broadcast



Message 1 (Evacuate) broadcast



Message 2 (Fire Alert 1) broadcast



Message 3 (Fire Alert.2) broadcast



Message 4 (Bomb Alert) broadcast



Message 5 (All Clear) broadcast



Message 6 (Test Messages)



Message 7 (End of Test)



Paging Microphone Broadcast

Continued overleaf...

Zone Displays continued



Background Music – Aux 1



Background Music – Aux 2



Background Music – Aux 3



Background Music – Aux 4



Cancel Background Music



Amplifier or Loudspeaker circuit fault

Note: *Even when a fault has been rectified the 'F' indication will remain on the zone display to indicate that a fault has occurred. To remove the 'F' indication the recessed switch below the 'Data Link Fault' must be pressed.*

Status Indicators (Not 7 segment LEDs)

There are various LEDs that indicate the status of zones, messages or faults.

Indicator	Status	Colour	Description
'System Fault'	Flashing with Buzzer	A L L	A Fault has been detected but not accepted by User. Press 'Accept / Lamp Test' to accept the fault. Another yellow indicator to show where the fault has been detected will also be illuminated.
'System Fault'	Illuminated	F A	A Fault has been detected and accepted by the User.
Message Fault and 'System Fault'	Illuminated Flashing with buzzer	U L T	The relevant message has a fault that could prevent it from being broadcast. This will show a flashing 'System Fault' until accepted by the user.
'Mic' Fault and 'System Fault'	Illuminated Flashing with buzzer	I N D I C A T O R S	The microphone has an audio fault that could prevent live announcements from being made. This will show a flashing 'System Fault' until accepted by the user.
'Proc Fault' and 'System Fault'	Illuminated Flashing with buzzer	A R E Y E L L O W	A Processor fault has occurred that could prevent all functions of the console except "Emergency All Call" . This will show a flashing 'System Fault' until accepted by the user.
'Data LK Fault' and 'System Fault'	Illuminated Flashing with buzzer	A R E Y E L L O W	There has been a Communication failure between the console and the central system that could prevent all functions of the console except "Emergency All Call" . This will show a flashing 'System Fault' until accepted by the user.
'Proc Restart' and 'System Fault'	Illuminated Flashing with buzzer	A R E Y E L L O W	The Processor on the console has failed and restarted (e.g. after a power failure or similar). This will show a flashing 'System Fault' until accepted by the user. To cancel the indicator the recessed switch below 'Data LK Fault' should be pressed.
'Healthy'	Illuminated	A L L	There are no detected faults and the system is functioning OK.
'Emergency Enable'	Illuminated	G R E E N	Emergency Messages and Fire Microphone (priority 1) can be accessed.
'Speak Now'	Illuminated	G R E E N	The microphone is live & announcements can be made.
'Aux Music'	Illuminated	G R E E N	BGM has been selected or is being broadcast to at least one zone.
Message 'Active'	Illuminated	G R E E N	The relevant recorded message has been selected or is being broadcast to at least one zone.

BVRM DIL Switch Settings.

1	2	3	4		Emergency Mode		Paging Mode	
0	0	0	0	FM1	Input 1	Priority 1	Input 1	Priority 12
1	0	0	0	FM2	Input 2	Priority 2	Input 2	Priority 13
0	1	0	0	FM3	Input 3	Priority 3	Input 3	Priority 14
1	1	0	0	FM4	Input 4	Priority 4	Input 4	Priority 15
0	0	1	0	PM1	Input 5	Priority 12	Input 9	Priority 16
1	0	1	0	PM2	Input 6	Priority 13	Input 10	Priority 17
0	1	1	0	PM3	Input 7	Priority 14	Input 11	Priority 18
1	1	1	0	PM4	Input 8	Priority 15	Input 12	Priority 19
0	0	0	1	PM5	Input 9	Priority 16	Input 13	Priority 20
1	0	0	1	PM6	Input 10	Priority 17	Input 14	Priority 21
0	1	0	1	PM7	Input 11	Priority 18	Input 15	Priority 22
1	1	0	1	PM8	Input 12	Priority 19	Input 16	Priority 23
0	0	1	1	AUX1	Input 13	Priority 20	Input 17	Priority 24
1	0	1	1	AUX2	Input 14	Priority 21	Input 18	Priority 25
0	1	1	1	AUX3	Input 15	Priority 22	Input 19	Priority 26
1	1	1	1	AUX4	Input 16	Priority 23	Input 20	Priority 27

5	6	7	8	BVR20 (Units)
0	0	0	0	1 only
1	0	0	0	1-2
0	1	0	0	1-3
1	1	0	0	1-4
0	0	1	0	1-5
1	0	1	0	1-6
0	1	1	0	1-7
1	1	1	0	1-8
0	0	0	1	1-9
1	0	0	1	1-10
0	1	0	1	1-11
1	1	0	1	1-12
0	0	1	1	1-13
1	0	1	1	1-14
0	1	1	1	1-15
1	1	1	1	1-16

When using RS485 port it is necessary to allocate a parallel input to the fire microphone or microphones to enable access faults. The parallel input must exist and unterminated. Several fire microphones may be allocated to the same input.