

# VIGIL EVAS BVRD2M

#### **Operating Instructions**



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This equipment has been designed and manufactured to conform to both CE & UKCA requirements

Failure to use the equipment in the manner described in the product literature will invalidate the conformity.

A "Declaration of Conformity" statement and a "Declaration of Performance" is available on request.

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#### Amendment Record

Change Note Number	Nature of Amendment	Date of Amendment
	Issue I: Initial release	September 2007
ECR3082	Issue 2: Update for LPCB changes	August 2016
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Voltages in excess of 30 Volts RMS or 50 Volts DC are considered Hazardous and in certain circumstances can be lethal.

If Functional Testing, Maintenance, or Repair is to be completed with the Mains Power (and/or battery backup) connected then this should only be undertaken by personnel who are fully aware of the danger involved and who have taken adequate precautions and training.

This Manual contains Warnings, Cautions and Notes.

Warnings describe potential threats to health or life, e.g.



#### WARNING

Before attempting to remove this component, ensure the Mains Power Supply and Battery Backup have been disconnected.

Cautions describe potential threats to the equipment, e.g.



#### CAUTION

Notice must be taken of all cautions. If a Caution is ignored the equipment may be damaged.



#### CAUTION: ELECTRO-STATIC SENSITIVE DEVICES

Observe the relevant precautions for the protection of Electrostatic Sensitive Devices when handling this equipment.

**Notes** are statements that are useful to the user in the context of a particular section of the manual, e.g.



NOTE: Do not speak into the microphone until the "Speak Now" LED is illuminated.

#### COMMENTS

Comments regarding the content of this manual are welcome and should be addressed to hello@baldwinboxall.co.uk.

## I Introduction

#### I.I BVRD2M TECHNICAL DESCRIPTION

The VIGIL EVAS BVRD2M is a DSP controlled Voice Alarm Routing Matrix that is fully compliant with BS5839 part 8 and EN54 part 16.

The BVRD2M master unit provides eight electronically balanced inputs, each with 3 band parametric (plus bass and treble) equalisation, an optional limiter / compressor, and independent priority settings.

Inputs 1 and 2 are normally reserved for fire microphones and are configurable with an "All Call" processor bypass.

There are seven electronically balanced outputs, each with 10 band parametric EQ and selectable audio delay of up to 1 second.

Up to six CD quality messages, each of a maximum of 57 seconds, can be stored in DSP memory. Each message has independent level, surveillance and timing settings.

The unit is fully monitored and includes a real time clock that is used for date stamping the stored fault / event log.

## I.2 FRONT PANEL CONTROLS & SETTINGS



A	Access Control / System Configuration Key Switch	Unless Key is turned (and password entered), access to configuration options is not available to prevent upauthorised or accidental changes to system setup
Р		Shows either the summer system status, or if in
Б	40 x 2 Character LCD	Shows either the current system status, or, if in
	Dispiay	Configuration mode the options and menus available
С	Multi Function Encoder	Used for changing values and entering text when in
		Configuration Mode
D	"Left" navigation button	Press to move left through available menus and options
E	"Right" navigation button	Press to move right through available menus and options
F	"Select" navigation	Press to choose the currently selected option
	button	
G	"Back" navigation button	Press to move back to the previous menu
Н	Status LEDs	"VA Active" - Emergency Message or Broadcast Active
Н	Status LEDs	"VA Active" - Emergency Message or Broadcast Active "OK" - No faults detected
Н	Status LEDs	"VA Active" - Emergency Message or Broadcast Active "OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display
Н	Status LEDs	"VA Active" - Emergency Message or Broadcast Active "OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual
Η	Status LEDs	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual</li> <li>intervention to clear. Potentially Fail Safe operation only</li> </ul>
Η	Status LEDs	"VA Active" - Emergency Message or Broadcast Active "OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate
H	Status LEDs	"VA Active" - Emergency Message or Broadcast Active "OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly).
H	Status LEDs	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> </ul>
Η	Status LEDs "Fault Accept" button	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> <li>Press to accept a fault and silence the buzzer</li> </ul>
H	Status LEDs "Fault Accept" button "Fault Reset" button	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> <li>Press to accept a fault and silence the buzzer</li> <li>Press to reset a displayed fault</li> </ul>
H I J	Status LEDs "Fault Accept" button "Fault Reset" button	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> <li>Press to accept a fault and silence the buzzer</li> <li>Press to reset a displayed fault (Note: only available if key switch is turned)</li> </ul>
H I J K	Status LEDs "Fault Accept" button "Fault Reset" button "Lamp Test" button	<ul> <li>"VA Active" - Emergency Message or Broadcast Active</li> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic 1 &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> <li>Press to accept a fault and silence the buzzer</li> <li>Press to reset a displayed fault (Note: only available if key switch is turned)</li> <li>Press to check LEDs and sounder</li> </ul>

## I.3 REAR PANEL CONNECTIONS



A	Dual 24V PSU Inputs	The BVRD2M requires two seperate 24V DC supplies. A fault will be announced if either of the supplies is not connected.
В	Aux 24V Output	Auxillary 24V supply derived from both PSU inputs. Max output 1A.
С	Open Collector Control Outputs	6 x NPN collector outputs (max 40V @ 100mA) for busy etc
D	Reset DSP Button	Initiates a Processor / Firmware restart
E	Analogue Inputs I -4 Pull Down Switch	Analogue inputs 1-4 are usually pulled high (18V). When used for ANS, the inputs must be pulled low.
F	Analogue Voltage Sensing Control Inputs	6 x analogue voltage sensing inputs for monitored input access, ambient noise sensors, remote volume controls, etc.
G	Simple Contact Closure Control Inputs	3 x contact closure inputs for unmonitored input access etc.
Н	CAN BUS Connections	2 x CAN BUS ports to enable additional Modules to be connected. Refer to section 1.7 for details of these modules.
I	RS485 Port	2 x RS485 half duplex ports for communicating to control
	Connections	microphones, fire detection systems, fault reporting etc.
J	Common Fault Output Relay Contacts	I x volt free relay changeover contact for Common Fault
К	Optocoupled Control	2 x opto coupled sounder circuit inputs:
	Inputs from Fire	EM input "All Evacuate" has processor bypass option,
	Detection System	I/P1 is programmable
L	Audio Inputs I & 2	Electronically balanced line -20dB audio inputs.
		Normally reserved for Fire Microphones as both inputs
		have processor bypass option.
M	Bypass Surv Level	Must be set to match BVRD Mic (3V3 if not selectable)
N	Audio Inputs 3 - 8	Electronically balanced line -20dB audio inputs.
0	Audio Outputs I - 7	Electronically balanced line 0dB audio outputs
Р	Monitor Output	Not normally used
Q	Auxillary Front Panel	Feature not implemented.
R	BVRDNET Expansion	BVRDNET Terminations (when fitted)
S	USB Port	Parallel port with the front USB Connector

## I.4 BVRD2M SPECIFICATIONS

#### I.4.1 Audio Input Specifications

Input Sensitivity	80mV (-20dB) to 3V (+12dB)		
Frequency Response	-3dB @ 30Hz and 20KHz		
Signal to Noise Ratio	Better than 70dB		
Phantom Power	12V		
3 Band Parametric Equa	lisation		
Frequency	50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1KHz, 1.25KHz, 1.6KHz, 2KHz, 2.5KHz, 3.15KHz, 4KHz, 5KHz, 6.3KHz, 8KHz, 10KHz, 12.5KHz, 16KHz		
Band width	0.05 oct, 0.1 oct, 0.2 oct, 0.33 oct, 0.5 oct, 0.66 oct, 1 oct, 2 oct		
Lift and Cut	±12dB in 1dB steps		
Low Filter			
Frequency	250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1KHz, 1.2KHz, 1.6KHz, 2KHz, 2.5KHz		
Slope	3dB/oct and 6dB/oct		
Lift and Cut	±12dB in 1dB steps		
High Filter	•		
Frequency	500Hz, 630Hz, 800Hz, 1KHz, 1.25KHz, 1.6KHz, 2KHz, 2.5KHz, 3.15KHz, 4KHz, 5KHz		
Lift and Cut	±12dB in 1dB steps		
High Pass Filter			
Frequency	100Hz, 150Hz, 200Hz, 250Hz, 300Hz		
Slope	18dB/oct, 12dB/oct, 6dB/oct		
Compressor			
Ratio	1.4:1, 2:1, 4:1, 8:1 and limiter		
Attack	0 to 99mS		
Release	0 to 999mS		
Messages Flash PROM			
Storage Medium	Flash PROM (non volatile)		
Maximum Message Length	57 Seconds		
Frequency Response	-3dB @ 50Hz and 18KHz		
Signal to Noise Ratio	Better than 65dB		
Power Requirement	22V to 35V @ 500mA max		

#### I.4.2 Audio Output Specifications

Nominal Output Level	0.775dB (0dB)
Maximum Output Level	4.5V (+15.5dB)
Frequency Response	-3dB @ 30Hz and 20KHz
Output noise ref to 0dB	Better then -85dB
10 Band Parametric Equ	alisation
Frequency	50Hz, 63Hz, 80Hz, 100Hz, 125Hz, 160Hz, 200Hz, 250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1KHz, 1.25KHz, 1.6KHz, 2KHz, 2.5KHz, 3.15KHz, 4KHz, 5KHz, 6.3KHz, 8KHz, 10KHz, 12.5KHz, 16KHz,
Band width	0.05 oct, 0.1 oct, 0.2 oct, 0.33 oct, 0.5 oct, 0.66 oct, 1 oct, 2 oct
Lift and Cut	±12dB in 1dB steps
Low Filter	
Frequency	250Hz, 315Hz, 400Hz, 500Hz, 630Hz, 800Hz, 1KHz, 1.2KHz, 1.6KHz, 2KHz, 2.5KHz
Slope	3dB/oct and 6dB/oct
Lift and Cut	±12dB in 1dB steps
High Filter	
Frequency	500Hz, 630Hz, 800Hz, 1KHz, 1.25KHz, 1.6KHz, 2KHz, 2.5KHz, 3.15KHz, 4KHz, 5KHz
Lift and Cut	±12dB in 1dB steps
Audio Delay	Selectable from 0 to 1 second

#### I.4.3 Control Inputs / Outputs

Control Inputs		
Fire Panel I/P I	I x opto coupled sounder circuit programmable input from the fire detection system	
Analogue Voltage Sensing	6 x analogue voltage sensing inputs for monitored input access, ambient noise sensors, remote volume controls, etc.	
Simple Contact Closure	$3 \times$ contact closure inputs for unmonitored input access etc.	
Control Outputs		
NPN Collector outputs	6 x NPN collector outputs (max 40V @ 100mA) for busy etc	
Relay Contacts	I x volt free relay changeover contact for Common Fault	
Serial Ports		
RS485	2 x RS485 half duplex ports for communicating to control microphones, fire detection systems, network control, fault reporting etc.	
CANBUS	I x CANBUS port to communicate to surveillance modules etc	
USB	I x front panel mounted USB port to configure the system, fault diagnosis, fault reporting, download messages etc.	

## I.5 BVRD2S SLAVE UNIT

#### I.5.1 Main Features

Adding a BVRD2S to a BVRD2M increases the number of inputs available by 12, the number of outputs by 16 and adds another 12 messages.

Up to five slave units can be added to each master, making a maximum total of 68 inputs, 87 outputs and a maximum of 30 messages.

The slave units mount directly on top the master unit. To minimise rack wiring, the power and communications between master and slave units are through an internal data link.

#### 1.5.2 Rear Panel Connections

Figure 1.3 — BVRD2S Rear Panel



All connections are made to the BVRD2S using RJ45 connectors.

The "Bypass All Call Enable" switch can be used to prevent an "All Call" message from being broadcast to the selected outputs.

This is often required if one of the outputs is being used as a local monitor.

## I.6 BVRD2SLT (LIGHT) SLAVE UNIT

For installations that do not require the full range of additional inputs, outputs or messages, the Light (LT) slave is available that increases the number of inputs available by 6, the number of outputs by 8 and adds another 6 messages.

#### I.7 BVRD2M CANBUS MODULES

There are currently five CANBUS modules available:

#### I.7.1 BVRDACO / BVRDNCO

- 10 x BEL line surveillance with earth leakage fault detection (BVRDNCO as BVRDACO without changeover function)
- 11 x amplifier surveillance, 10 with auto change over
- 1 x RS485 half duplex ports for communicating to control microphones, etc.

#### I.7.2 BVRDADC

- 10 x DC line surveillance with earth leakage fault detection
- 11 x amplifier surveillance, 10 with auto change over
- 1 x RS485 half duplex ports for communicating to control microphones, etc.

#### I.7.3 BVRDFPI

- 24 x opto coupled inputs from fire detection systems
- 1 x common fault volt free change over relay contacts
- 1 x RS485 half duplex ports for communicating to control microphones, etc.

#### I.7.4 BVRDCI

- 16 x analogue voltage sensing inputs for monitored and unmonitored input access, ambient noise sensors, remote volume controls etc.
- 4 x volt free change over relay contacts for busy etc.
- 4 x NPN open collector outputs (max 40V @ 100mA)
- 1 x RS485 half duplex ports for communicating to control microphones, etc.

#### I.8 SIMPLIFIED SCHEMATIC DIAGRAMS

#### I.8.1 BVRD2M & BVRD2S Schematic Diagrams





#### I.8.2 CAN BUS Module Schematic Diagrams



#### Figure 1.6 — BVRDACO Loudspeaker Line Monitor



Figure 1.7 — BVRDACO Amplifier / Line Fault Detection

#### Figure 1.8 — BVRDFPI Fire Panel Interface





#### Figure 1.9 — BVRDCI Access Interface Module

## **I.9** TYPICAL INSTALLATION EXAMPLES



Figure 1.10 — Typical 15 Zone Single Circuit Wiring Diagram



Figure 1.11 — Typical 15 Zone Dual Circuit Wiring Diagram

VIGIL EVAS BVRD2M Operating Instructions

## 2 Hardware Installation

The BVRD2M and BVRD2S are both housed in 1 unit 19" Rack Mount chassis.



#### CAUTION

It is important that slide rails or rack runners are used to support the weight of the unit(s) when installed.

#### 2.1 ATTACHING SLAVE UNIT(S)

The BVRD2S slave unit(s) mount directly on top the master unit.

To minimise rack wiring, the power and communications between master and slave units are via an internal data link.

# BVRD2S Slave Data Link Connector BVRD2M Master Data Link Connector

Figure 2.1 — Data Link Connectors

To attach a Slave unit:

- First, remove the dust covers from the data link connectors on the Master and Slave units.
- Place the Slave unit on top of the Master unit as shown in Figure 2.2.





- Carefully line up the data link connectors and gently push the two units together.
- Once fitted together, fit the four securing screws supplied through the tabs in the slave unit as shown in Figure 2.3.

Figure 2.3 — Securing Slave to Master Unit



- Repeat the above procedure if further Slave units are to be added.
- Once completed, the Master and Slave units are ready to be fitted in the Rack or Enclosure.

## **3** Operating Instructions

#### 3.1 INTRODUCTION

The VIGIL EVAS BVRD2M is primarily configured using the USB Configuration Software, however all settings are also available on the 40 x 2 character LCD front panel display. The navigation controls as shown in Figure 3.1.

The amount of information that can be displayed at any one time is limited by the size of display, therefore a comprehensive Menu Structure is used that (depending on the Access Level) allows access to all configurable options.

The front panel controls are used to navigate through the Menu options, and also to edit text if required (e.g. Input and Output names etc).

A Key-switch is fitted to the front panel that prevents any unauthorised or accidental changes to system configuration.

There are also a range of Access Levels that limit the changes that can be made once the key has been turned.



NOTE: It is not recommended to change system settings using the Front Panel unless you are suitably trained as there is no "undo" facility.

## 3.2 FRONT PANEL NAVIGATION CONTROLS



A	Access Control /	Unless Key is turned (and password entered), access to
	System Configuration	configuration options is not available to prevent
	Key Switch	unauthorised or accidental changes to system setup
В	40 x 2 Character LCD	Shows either the current system status, or, if in
	Display	Configuration mode the options and menus available
С	Multi Function Encoder	Used for changing values and entering text when in
		Configuration Mode
D	Left navigation button	Press to move left through available menus and options
E	Right navigation button	Press to move right through available menus and options
F	"Select" navigation	Press to choose the currently selected option
	button	
G	"Back" navigation	Press to move back to the previous menu
	button	
Н	Status LEDs	"VA Active" - Emergency Message or Broadcast Active
		6, 6
		"OK" - No faults detected
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly).
		"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly). "DSP OK" - flashes to indicate DSP has no faults
1	"Fault Accept" button	"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly). "DSP OK" - flashes to indicate DSP has no faults Press to accept a fault and silence the buzzer
I	"Fault Accept" button "Fault Reset" button	"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly). "DSP OK" - flashes to indicate DSP has no faults Press to accept a fault and silence the buzzer Press to reset a displayed fault
I	"Fault Accept" button "Fault Reset" button	"OK" - No faults detected "General Fault" - Fault detected, shown on LCD Display "System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic I & 2 will operate correctly). "DSP OK" - flashes to indicate DSP has no faults Press to accept a fault and silence the buzzer Press to reset a displayed fault (Note: only available if key switch is turned)
I J K	"Fault Accept" button "Fault Reset" button "Lamp Test" button	<ul> <li>"OK" - No faults detected</li> <li>"General Fault" - Fault detected, shown on LCD Display</li> <li>"System Fault" - Critical Fault that requires manual intervention to clear. Potentially Fail Safe operation only available (hard wired All Call on Mic 1 &amp; 2 will operate correctly).</li> <li>"DSP OK" - flashes to indicate DSP has no faults</li> <li>Press to accept a fault and silence the buzzer</li> <li>Press to reset a displayed fault (Note: only available if key switch is turned)</li> <li>Press to check LEDs and sounder</li> </ul>

#### 3.3 ACCESS LEVELS

There are five Access Levels to allow different personnel the relevant level of access to the system configuration options.

Table 3.1 illustrates the commands and options available to each Access Level.

Access Level 1 does not require the key-switch to be turned.

Access Level 2 requires the key-switch to be turned.

Access Levels 3-5 require the key-switch to be turned and the correct PIN number to be entered before the relevant system configuration options are available.

	Access Level				
Configuration Command / Option	I	2	3	4	5
View all Current Faults	✓	1	1	1	✓
Lamp Test	✓	1	1	1	✓
Monitor inputs and outputs via loudspeaker		✓	1	1	✓
Mute fault sounder		1	1	1	✓
Reset faults		1	1	1	✓
View event and fault log		1	1	1	✓
Set date and time		1	1	1	✓
Tests		✓	1	1	1
View, but not change all other settings		✓	1	1	✓
Set limiter/compressor			1	1	✓
Set chime			1	1	1
Set ANS			1	1	✓
Set audio output delay			1	1	✓
Set fade			1	1	1
Set equalisation of inputs/outputs			1	1	✓
Set volume levels of inputs/outputs			1	1	✓
Set surveillance and bypass volumes				1	✓
Configure system				1	✓
Download messages				1	✓
Download operating system					✓
Clear event log					✓
Change PINs for levels 3, 4 & 5	Ī				✓

Table 3.1 — Typical Options available to each Access Level

## 3.4 NAVIGATING THE MENU STRUCTURE AND SETTING PARAMETERS

The "Multi Function Encoder", "Left", "Right", "Select" and "Back" buttons (as shown in Figure 3.1) are used to navigate through the menu structure.

There are two conventions used throughout the menu to indicate A) an adjustable parameter, B) an available sub-menu.

#### Figure 3.2 — Cursor Operation

A) When the cursor <u>underlines</u> a character it indicates an adjustable parameter. This may be a unique identifier e.g Input 0<u>1</u>, 0<u>2</u>, 0<u>3</u>... etc,





B) [Square brackets] indicate an available submenu. If active the cursor will flash on the first character.

To alter the value of a parameter, move the cursor using the "Left" and "Right" buttons until it is underlined. Rotate the Encoder until the required value / option etc is displayed.

To select a sub-menu, move the cursor using the "Left" and "Right" buttons until the first character is flashing and then press the "Select" button.

The sub-menu will then be displayed.



NOTE: Some sub-menus may not be accessable depending on the Access Level in use.

To return to the previous menu, press the "Back" button.

There are some settings (such as Audio Output) where the function can be assigned from a range of options. The currently selected function is shown by a "\*" next to the relevant menu.

Audio O/P 01 (Aud OP 01 ) [Zone\*][Listen][Reserve]

# 4 System Configuration -Audio Settings

## 4.1 AUDIO INPUT SETTINGS: GENERAL DESCRIPTION

The BVRD2M can accommodate up to 8 audio inputs, and using BVRD2S slave units the maximum number of inputs is increased to 68.

The Audio Inputs are electronically balanced with an input sensitivity of 80mV (-20dB) to 3V (+12dB).

Each Audio Input has 3 band parametric (plus bass and treble) equalisation, and an optional limiter / compressor.

Audio Inputs 1 and 2 have a "Bypass" facility that allows them to broadcast to all zones in the unlikely event of a processor failure.

Audio Inputs 1 to 8 also have dual chime & priority settings to enable them to be used both for normal paging and for Emergency broadcasts with a different chime & priority to override DVA messages if required.

# 4.2 AUDIO OUTPUT SETTINGS: GENERAL DESCRIPTION

The BVRD2M provides up to 7 audio inputs, and using BVRD2S slave units the maximum number of outputs is increased to 87.

The Audio Outputs are electronically balanced with a nominal output level of 0.775mV (0dB). The maximum output level available is 4.5V (+15.5db)

Each Audio Output has 10 band parametric (plus bass and treble) equalisation, and an optional audio delay.

The Audio Outputs can be set to be either a "Zone" Audio output, a "Listen" output (to enable local monitoring in certain installations) or a "Reserve" Audio output.

Each "Zone" Audio Output has a priority structure where each available Audio Input and DVA message has a priority from 1-15.

All Audio Output settings are made in the "Audio Output" menus.

# 4.3 DVA MESSAGE SETTINGS: GENERAL DESCRIPTION

The BVRD2M DSP Module can store up to 6 messages, each up to 57.3 seconds in length. The messages and all have independent surveillance and timing adjustments.

Each BVRD2S can store up to 12 additional messages (2 x DSP Modules), up to a maximum of 30 messages.

Each message time slot can be reduced to the message length if it is shorter than 57.3 seconds, and the repeat timer can be set to play the message after the required number of seconds (i.e. an alert message).

If required, multiple message slots (upto three adjacent slots subject to configuration restrictions) may be combined to allow for longer messages to a maximum of 170 seconds.

#### 4.4 CHIMES: GENERAL DESCRIPTION

The BVRD2M can store up to 9 Pre-announcement Chimes or Tones, each of a maximum of 8 seconds length.

The Chimes all have independent timing adjustments.



NOTE: When a Chime (or Tone) is broadcast it is mixed with the relevant audio channel. Care should be taken to allow the Chime (or Tone) to finish before making an announcement.

#### 4.5 BYPASS INPUTS: GENERAL DESCRIPTION

There are two input sources that can bypass all signal processing devices, in the event of failure, to perform a broadcast to all zone outputs.

When directly accessed, Inputs 1 and 2 (which are usually reserved for fire microphones) route their signals directly to all outputs via non volatile volume controls.

These inputs have independent level controls and the overall output level is set using a master control.

If zoning is required on input 1 or input 2 they will automatically be routed via the DSP using input 7 and 8 respectfully.

In the bypass mode these inputs have a fixed priority level where input 1 will override input 2.

#### 4.6 ENTERING OR CHANGING NAMES OF INPUTS / OUTPUTS ETC

The names of all Inputs, Outputs, DVA Messages, and Faults can be changed to suit the installation.



NOTE: Access Level 4 or above is required to change the names.

In the following example the name of Audio Output 3 will be changed.

1. Navigate to the Audio Output menu using the front panel controls:

Turn the key, enter the Level 4 access code, then move the cursor to the "Configure" option

Enter your PIN **XXXX** : Access Level 4 [Monitor][Tests][Event log][**C**onfigure]

Press "Select" to enter the Configuration menu, then move the cursor to the "Audio" option.

Configuration
[Audio][Control][Time/date][Text][Learn]

Press "Select" to enter the Audio Configuration menu, then move the cursor to the "Outputs" option.

```
Audio configuration
[Inputs][Outputs][DVA][Chimes][Bypass]
```

The Audio Outputs menu will now be displayed.

Audio	O/P	0 <u>1</u> (	Aud	OP	01		)	
[Zone*	'][Li	sten	] [F	Rese	erve	]		

2. Select Audio Output 3 using the Rotary Encoder

Audio	0/P 0 <u>3</u>	(Aud OP 0	3)	
[Zone*	][Liste	n ][Reser	ve ]	

3. Press the Rotary Encoder to edit the Name - the cursor will appear under the first character.

Audio O/P 03 (**A**ud OP 03 ) [Zone\*][Listen ][Reserve ] 4. Turn the Rotary Encoder to select the required character.

Audio O/P	03 ( <b>R</b> ud OP 03	)
[Zone*][Li	[Reserve]	]

5. Press the "Right" key to step to the next character.

Audio 0/P 03 (	R <u>u</u> d OP 03	)
[Zone*][Listen	][Reserve]	

6. Turn the Rotary Encoder to select the required character.

Audio O/P 03	R <u>e</u> d OP 03	)
[Zone*][Lister	][Reserve	]

7. Press the "Right" key to step to the next character.

Audio	O/P	03	(Re <u><b>d</b></u>	OP	03		)	
[Zone'	*][L:	iste	n ][F	Rese	erve	]		

8. Turn the Rotary Encoder to select the required character.

Audio O/P 03 (Re <u>c</u> OP 03	)
[Zone*][Listen ][Reserve	]

9. Continue to enter the required text, and when completed press the Rotary Encoder. The cursor will return to the Audio Output number and the name change will be stored.

```
Audio O/P 0<u>3</u> (Reception )
[Zone*][Listen][Reserve]
```