

# **BV440M**

## **Operating Instructions**

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**BALDWIN BOX▲LL**  
COMMUNICATIONS

## **VIGIL BV440M**

The Vigil 2 BV440M is physically compatible with the existing range, with an Increased power output of a single 440Watt.

CLASS D is 80% efficient, switching output stages reduces unwanted heat dissipation and power input, therefore smaller batteries will be required for standby. Rated output power is attainable using a 22V battery supply.

Each amplifier has a Sleep mode automatically reducing the standby requirements to 50mA per amplifier when operating on batteries.

440Watt versions can be paralleled to produce higher single output powers.

BV440M Amplifier module may be mounted in one BVMF equipment frame and one switched mode power supply / charger module.

The BV440M Module is equipped with two 500mV balanced line inputs incorporating a priority switching system. The priority is selected using a 4-way diil switch.

Switch 1 when selected "on" provides input 2 muting when 1 is accessed.

Switch 2 when selected "off" enables the first input irrespective of access conditions.

When both switches are selected "on" Input 1 will override input 2, therefore it is possible to have both inputs mixing together or cascade priority depending on the requirements.

Switch 3 & 4 when selected on sets unit to Master, both off sets unit to Slave.

Channel gain may be individually set using the potentiometers on the board behind the front panel.

The output stage is protected against overload conditions i.e. short circuits etc by means of sensing the current and voltage and presenting this DC signal to a voltage controlled attenuator. Should the amplifier be subjected to an abnormal load the input to the power amplifier is attenuated to a safe level using the VCA. The amplifiers output voltage is also sensed and should it exceed 100V the VCA will be activated and again will reduce the input signal ensuring safe operation without creating unnecessary distortion.

Over temperature protection is provided using a sensor attached to the output stage heatsink and should the temperature exceed 90 Degrees Celsius the VCA attenuates the input signal to a safe level and illuminates a warning LED. If the system is under surveillance it will cause the surveillance detector to indicate a fault condition due to the gain reduction. The inputs to the amplifier are presented on two separate four-way plugs in terminal connectors; each connector provides balanced audio's input, ground and access DC control input. The output is presented on a 3-way plug/screw termination connector providing 50V or 100V output. The 24V DC input together with the necessary interface connections, which enables several amplifiers to be paralleled are presented on a 6-way crimp connected plug and socket.

The front panel LED indicators include an output level status indicator consisting of 2 LEDs indicating 10% and 100% maximum output level. A supply healthy indicator is also provided together with overload, over temperature and active indicator.

## BV440 Specification

Rated output power less than 0.2% THD	440W @ 22.7 Ohms
Typical output power less than 1% THD	520W @ 19.3 Ohms
Output regulation 440W @ 22.7 Ohms	Better than 1.4 dB
Output Voltages obtainable	50 & 100V
Frequency response 440W @ 22.7 Ohms	35 Hz – 20 kHz
Input sensitivity and impedance	500mV @ 40kOhms balanced
Input common mode rejection ratio (50Hz – 30kHz)	Better than 40 dB :typically 60 dB
Output noise reference to rated output	Better than 85 dB
Supply Voltage	22 – 35V DC

### Supply current:

Sleep mode 26V battery	70mA
Quiescent 30V supply	250mA
Rated output power	20A

### Output stage protection:

Thermal	Output stage above 90 °C
Load	Output stage current
Action	Reduces input to a safe level using a low distortion voltage controlled attenuator

### Front panel indicators:

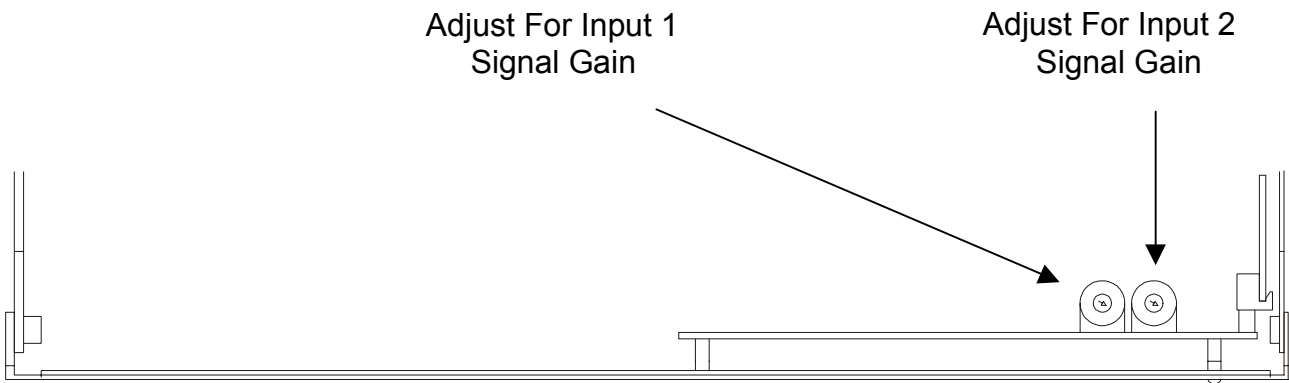
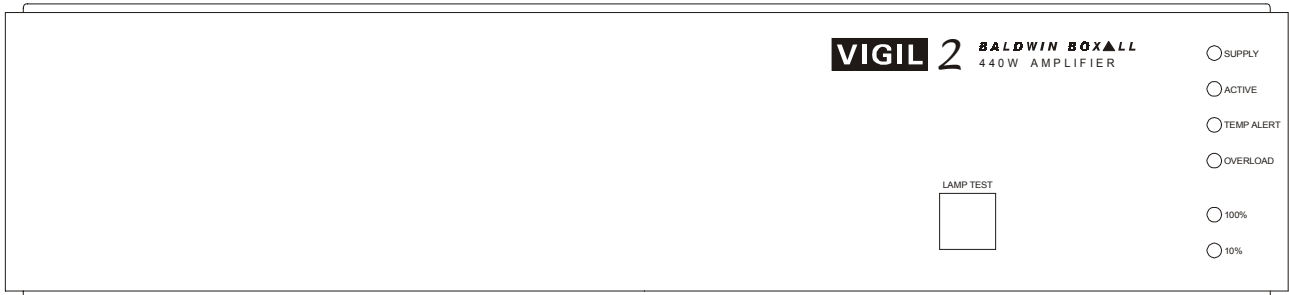
Supply	DC supply connected
Temperature alert	Output stage above 90 °C
Overload	Protection circuit operating
Active	Amplifier is active, not in sleep mode
100% output	100V output Voltage
10% output	10V output Voltage

### Lamp test switch for the above indicators

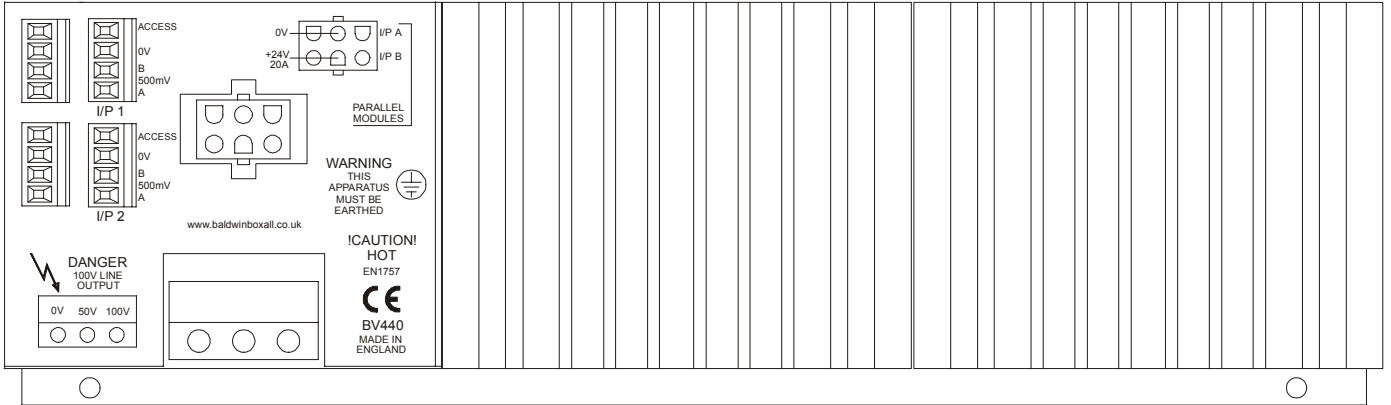
### Terminations:

Loudspeaker line output	1 off 3 pin screw terminated connector
Balanced line inputs	2 off 4 pin screw terminated connector
DC supply input and paralleling facility	6 pin crimp terminated connector

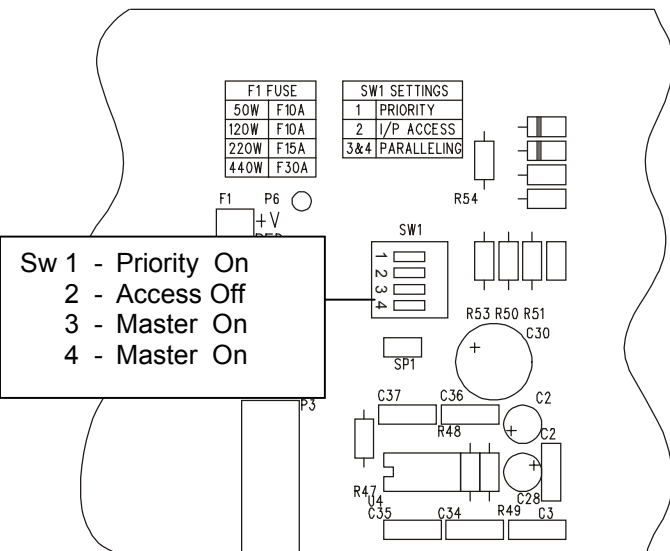
# Front Panel



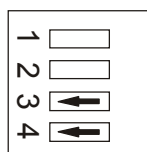
# Rear Panel



## Default Switch Settings



When Paralleling Amplifiers make sure that the control Amplifier is set to Master and all subsequent Amplifiers are set to slave.



Sw 3 - Slave On  
 4 - Slave On

