

# BV120D

## Operating Instructions

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**BALDWIN BOX▲LL**  
COMMUNICATIONS

## **VIGIL BV120D**

The Vigil 2 BV120D is a Dual 120Watt Amplifier each with 2 off 500 mV balanced inputs with selectable priority. It is physically compatible with existing range with only a small wiring change if replacing an existing BV6060.

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 obtainable using a 22V battery supply.

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

Up to three BV120D Amplifier modules may be mounted in one BVMF equipment frame or two amplifier modules and one switched mode power supply / charger module.

Each Amplifier of the BV120D Module is equipped with two 500mV balanced line inputs incorporating a priority switching system. The priority is selected using a 4-way dil 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.

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 2-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.

## **BV120D Specification**

Rated output power less than 0.2% THD	120W @ 83.3 Ohms
Typical output power less than 1% THD	160W @ 62.5 Ohms
Output regulation 120W @ 83.3 Ohms	Better than 2 dB
Output Voltages obtainable	50 & 100V
Frequency response 120W @ 83.3 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
Cross talk between amplifiers @ 1kHz	Better than 70dB
Supply Voltage	22 – 35V DC

Supply current both amplifiers:

Sleep mode 26V battery	100mA
Quiescent 30V supply	300mA
Rated output power i.e. 2 x 120W	10A

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

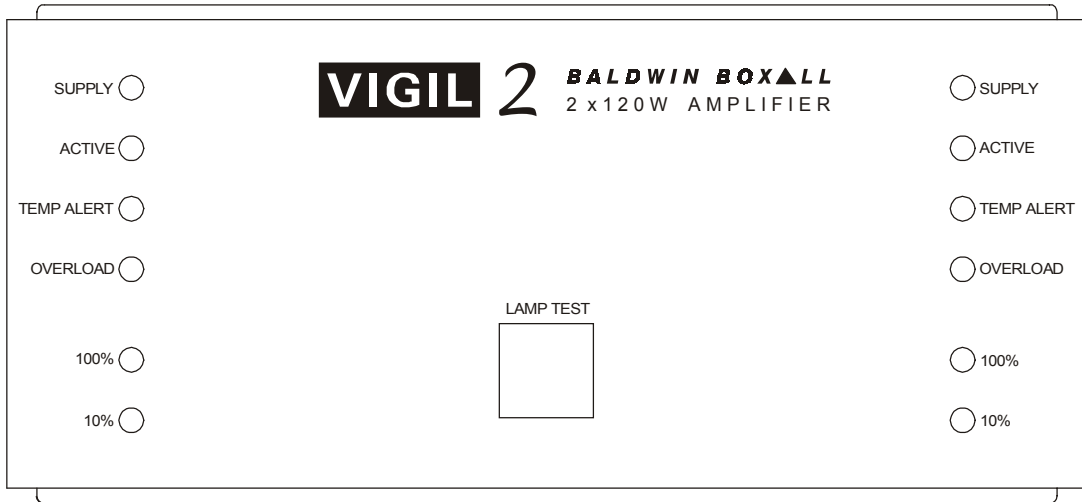
Front panel indicators per amplifier

Supply	DC supply connected
Temperature alert	Output stage above 90 °C
Overload	Protection circuit operating
Active	Amplifier is active, not in sleep mode
100%	Output100V output Voltage
10%	Output10V output Voltage
Lamp test switch for the above indicators	

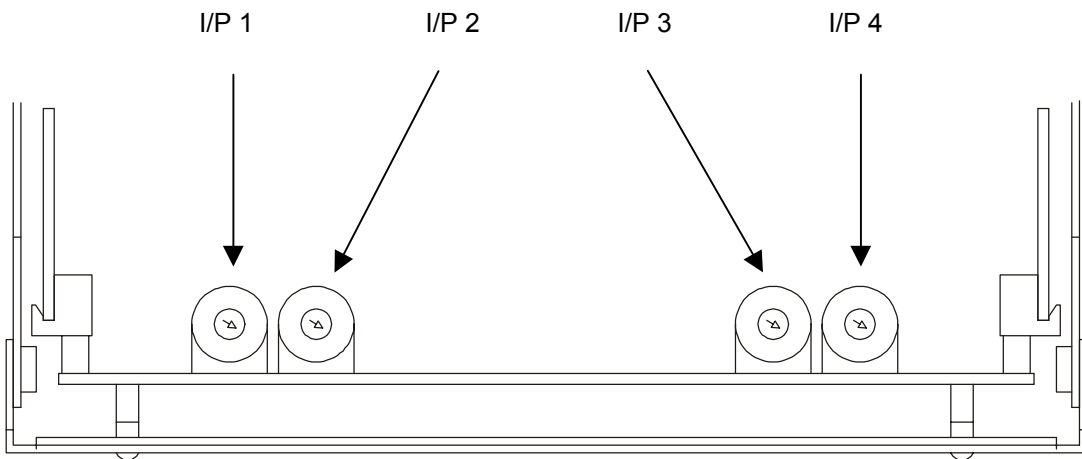
Terminations:

Loudspeaker line output	2 off 3 pin screw terminated connector
Balanced line inputs	4 off 4 pin screw terminated connector
DC supply input	2 off 2 pin crimp terminated connector

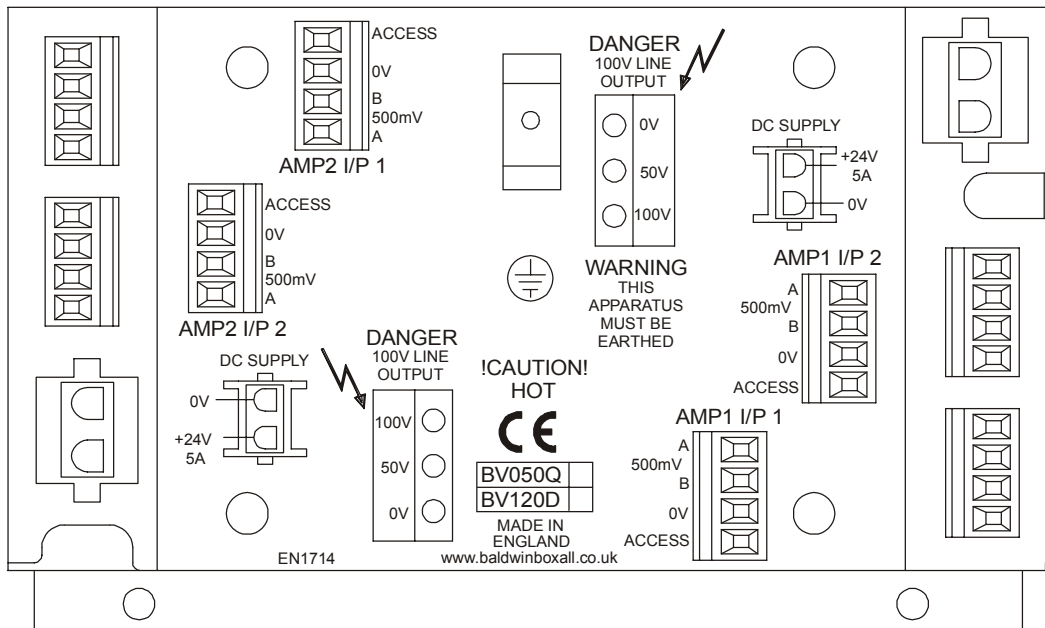
## Front Panel



### Adjust For Input Signal Gain



## Rear Panel



**Note :** *If replacing a BV6060 with a BV120D it may be necessary to change the i/p and access wiring to suit the installation.*

## Default Switch Settings

