

BV6060

Operating Instructions

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BALDWIN BOXALL
COMMUNICATIONS

VIGIL BV6060

Up to three BV60+60 Amplifier modules may be mounted in one 2 unit equipment frame or two amplifier modules and one power supply - charger module.

The BV60+60 Module consists of two identical 60 Watt amplifiers with two 0dBm balanced line inputs incorporating a priority switching system. The priority is selected using the 2 way dual in line switches. 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, refer to Figure 1.

LED indicators on the front panel show clearly which input or inputs are busy and the channel gain may be individually set using the front panel control. 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 a 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 (IMP18) to indicate a fault condition due to the gain reduction. The inputs to the amplifier are presented on two separate four way plug in terminal connectors, each connector provides a balanced audio input, 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 for each amplifier is independent and presented on a 2 way crimp connected plug and socket, refer to Figure 2. This allows each amplifier to be fed from two separate power supplies (BVPS) thus enhancing system integrity if a BV60+60 serves one zone with dual loudspeaker circuits.

The front panel LED indicators include an output level status indicator consisting of 3 LED's indicating 5V, 50V and 100V maximum output level. A supply healthy indicator is also provided together with overload, over temperature and input busy indicators, refer to Figure 3.

BV60+60

<i>Rated Output Power Less than 0.2% THD</i>	Note 1 :	60W 166.6 Ohms
<i>Typical Output Power Less than 1% THD</i>	Note 1 :	90W 110 Ohms
<i>Output Regulation 60W 166.6 Ohms</i>	Note 1 :	Better than 1.7dB
<i>Output Voltages Obtainable</i>		50 & 100 V
<i>Frequency Response 60W 166.6 Ohms</i>		35Hz - 20KHz
<i>Input Sensitivity & Impedance</i>		0.5V 20K Ohms Balanced
<i>Input Common Mode Rejection Ratio 50Hz-30KHz</i>		Better than 40dB Typically 60dB
<i>Output Noise reference Rated Output</i>		Better than 85dB
<i>Cross Talk Between Amplifiers Better than</i>		70dB @ 1KHz 50dB @ 10KHz
<i>Supply Voltage</i>		22-35V DC
<i>Supply Current both amplifiers</i>		
Standby @ 26V		150mA
Rated Output Power i.e. 2 x 60W		9.2A
<i>Fuse Protection per amplifier DC</i>		Automotive Blade (Type 7.5A)
<i>Output Stage Protection</i>		
Thermal		Heatsinks above 90° C
Load Line		Output Stage Current & Voltage
Action		Reduces input to a safe level using a low distortion voltage controlled attenuator
<i>Front Panel Indicators per amplifier</i>		
DC Supply		
High Temperature Alert (Heatsinks above 90° C)		
Overload (Protection Circuit Operating)		
Maximum Output (100V Output Voltage)		
50% Output (50V Output Voltage)		
5% Output (5V Output Voltage)		
Input 1 Accessed		
Input 2 Accessed		
Lamp Test Switch for above indications		
<i>Terminations</i>		
2 Loudspeaker Line Outputs		3 Pin Screw Terminated Connector
2 Balanced Line Inputs		4 Pin Screw Terminated Connector
2 DC Supply Inputs		2 Pin Crimp Terminated Connector

NOTE 1 : USING BVPS 240V AC SUPPLY, 100V LINE OUTPUT AT 1KHz, PER AMPLIFIER.

BV60+60 Plan View - Showing switch locations

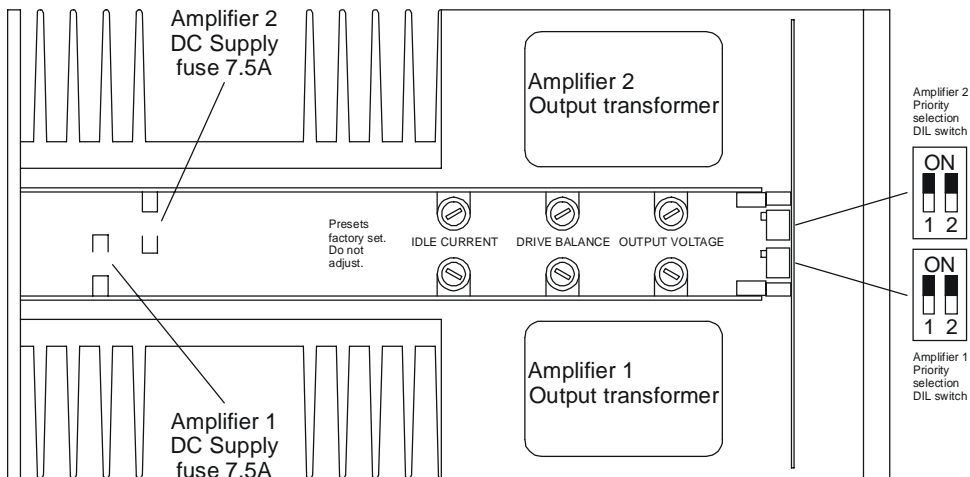


Fig. 1

BV60+60 Rear Panel View

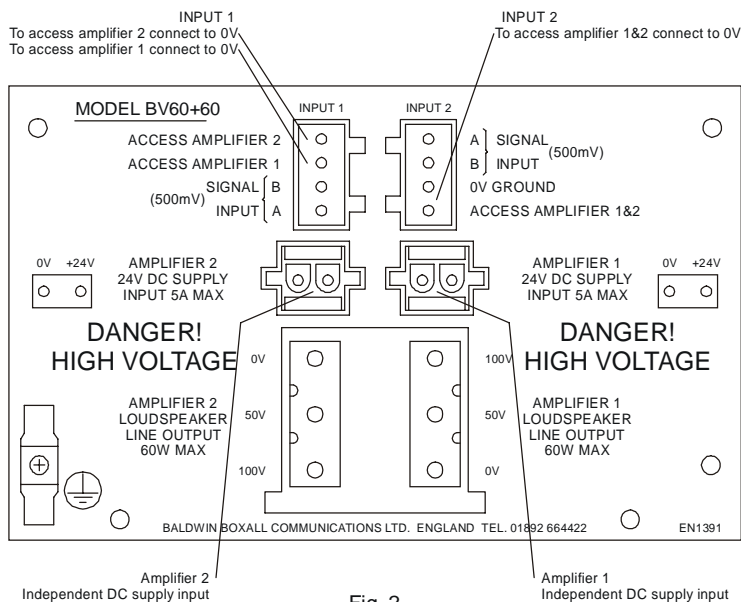


Fig. 2

BV60+60 Front Panel

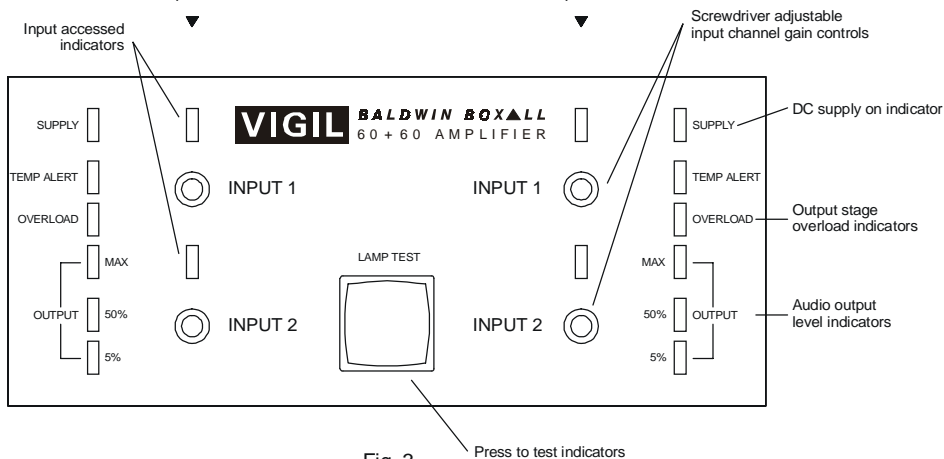


Fig. 3

BV60+60 Block Diagram

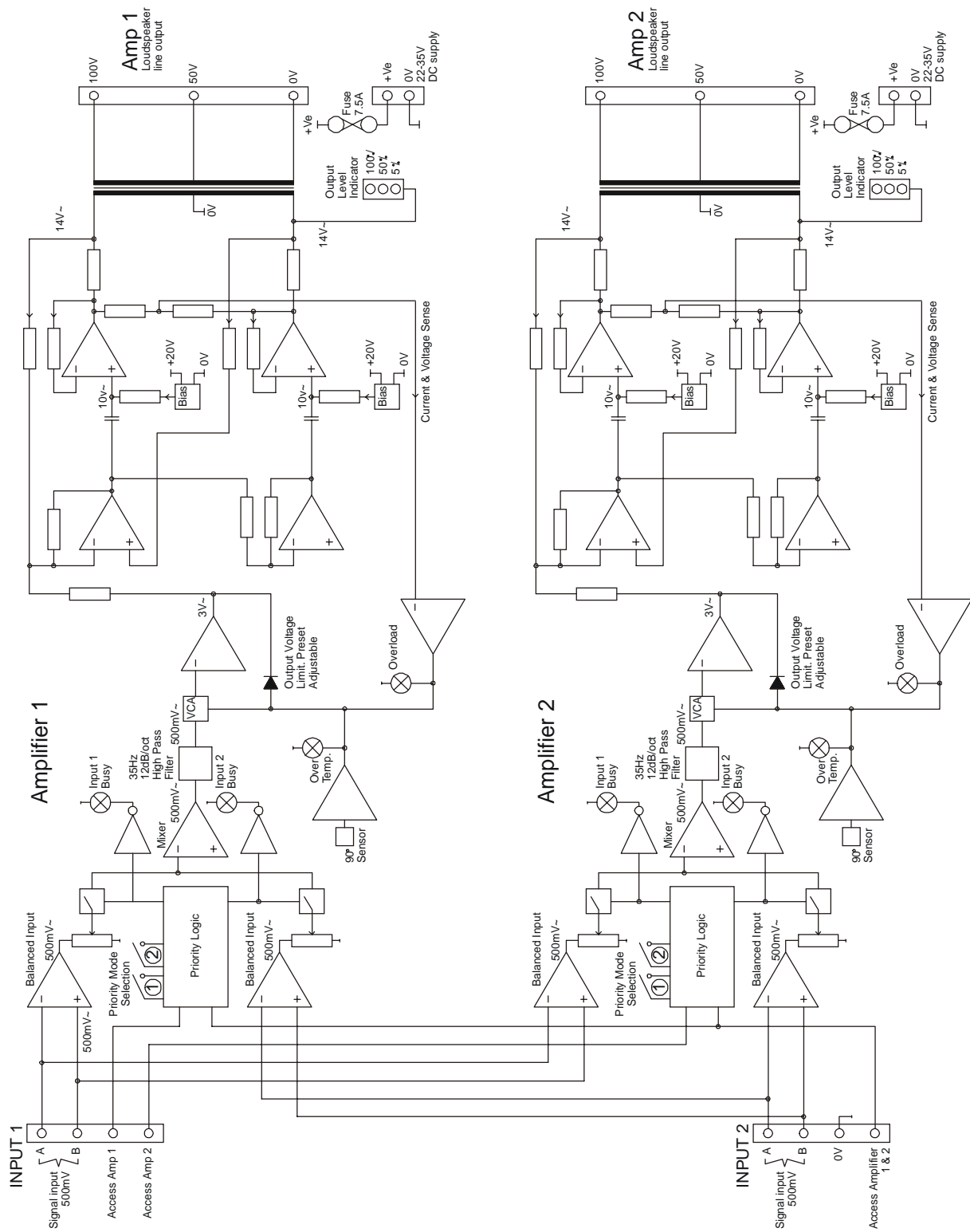


Fig. 4