



A 4024



A 4026



Operating Manual

A 4024 30W Desk Mount Amplifier
A 4026 30W Rack Mount Amplifier

Redback® Proudly Made In Australia

IMPORTANT NOTE:

Please read these instructions carefully from front to back prior to installation.
 They include important setup instructions.
 Failure to follow these instructions may prevent the amplifier from working as designed.

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1.0 FEATURES

- 3 Inputs suitable for either microphone or line level, or for use as microphone and line level coupled together.
- Bass and treble controls (on both microphone and auxiliary inputs).
- Full 30W RMS output (100V and 4 -16Ω outputs).
- VOX muting.
- Internationally accepted IEC mains socket (240V AC operation only).
- Stereo RCA sockets for all auxiliary inputs (configured to mono internally allowing standard stereo equipment to be directly connected).
- Mute trigger
- Fully balanced microphone inputs.
- Tape output, suitable for recording, or for connection to a second amplifier.
- Ten year warranty.

2.0 CONNECTING UP THE UNIT

Microphone Inputs

There are three mic inputs on the rear of the amplifier. These are 3 pin XLR female connectors which are wired to a microphone as shown in figure 1.

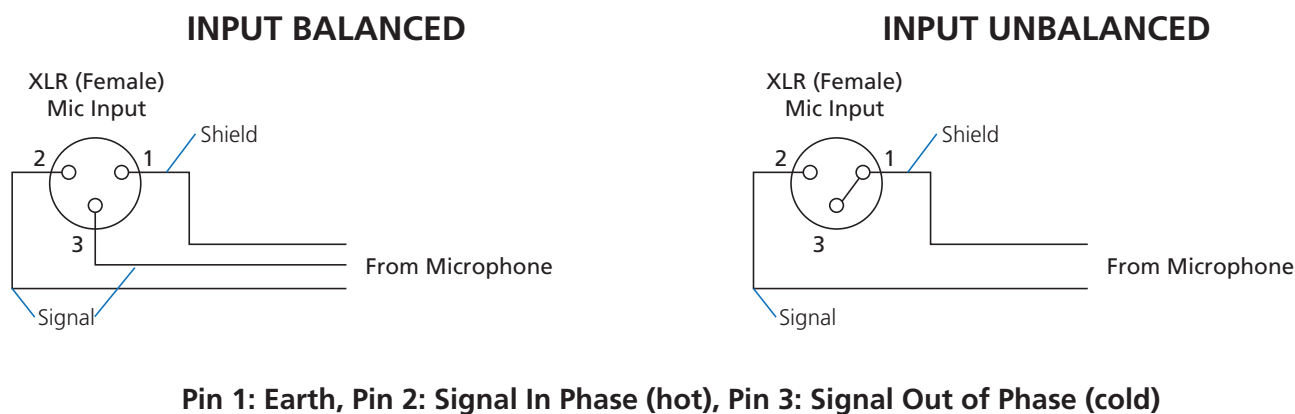


Fig 1. XLR Microphone Connections.

Microphone Connections

Connector Type:XLR 3Pin Female
Pin 1:Earth
Pin 2:Signal Inphase (hot)
Pin 3:.....Signal Out of Phase (cold)

Phantom power

Phantom power (15V DC) is provided on the microphone input XLR connectors. This is always present.

Speaker Outputs

Screw terminals are provided for both VC (voice coil) and 100V outputs. Minimum impedance when only VC output is used is 8-16Ω @ 30W total load.

A combination of 100V and VC is possible however we do not recommend this. If more than 30W is used then the unit may shut down due to overloading.

Speakers fitted with 100V line transformers may be connected to the 100V output terminals on the rear of the amplifier. Always ensure the total load of the fitted speakers does not exceed the rated output of the amplifier (ie 30 watts for the A 4024/26 amplifier) otherwise damage may result. When fitting speakers with line transformers the impedance of the load cannot be measured using a standard multimeter. An impedance meter such as Q 2007 is required. Fig 2 lists the impedance at certain loads of speakers fitted with 70V and 100V line transformers. So for a total load of 30 watts using 100V line transformer fitted speakers, the impedance of the speaker load should be 333Ω.

i **About 70V & 100V Line Speaker Systems**

Wiring speakers in parallel for 70/100V line: Where several speakers are to be used at one time, on one circuit, it becomes necessary to use speakers fitted with line-matching transformers. This is to overcome the effects of connecting speakers in parallel and cable losses. The amplifier generally has an output voltage of 100 volts (70 volts is typically used in North America, however operation is similar). In this configuration the total wattage load on the amplifier is derived from adding all the line transformer primary tap ratings together. For example, 70 one watt speakers will have a total speaker load of 70 watts. Or alternatively, it is conceivable to connect 100 one watt speakers to a 100 watt, 100 volt line amplifier.

Measuring 70/100V Line Speaker Impedance: To measure amplifier system load, you must use an impedance meter in order to measure the ac resistance of the connected speaker network. Impedance cannot be measured with a standard multimeter, as this measures the dc resistance. Use the Q 2004 or similar impedance meter.

Load	70V	100V
0.5W	9.4kΩ	20kΩ
0.66W	7.12kΩ	15kΩ
1W	4.7kΩ	10kΩ
1.25W	3.76kΩ	8kΩ
2W	2.35kΩ	5kΩ
2.5W	1.88kΩ	4kΩ
3W	1.56kΩ	3.3kΩ
5W	940Ω	2kΩ
7.5W	626Ω	1.3kΩ
10W	470Ω	1kΩ
15W	313Ω	666Ω
20W	235Ω	500Ω
30W	156Ω	333Ω
40W	117Ω	250Ω
60W	78Ω	166Ω
100W	47Ω	100Ω
125W	37Ω	80Ω
250W	19Ω	40Ω
500W	9.4Ω	20Ω

Fig 2. Speaker Load Impedance Values

Tape Out

This is a mono output configured for a stereo lead for direct connection to a stereo source. This is suitable for connection to an auxiliary input on external equipment. This is also suitable for driving 600Ω loads.

VOX Muting

VOX muting is provided on input one, which, when activated, automatically mutes inputs 2 and 3. VOX can be selected ON or OFF via DIP switch 1 (located on the rear of the amplifier). This is factory set in the OFF position. VOX sensitivity is adjusted via the trimpot on the front of the unit.

Output Muting

An output mute is provided which will mute the output of the amplifier when the Mute Trigger terminals are closed. The output will remain muted while the contacts are closed. This is ideal for emergency override situations.

5.0 OPERATION

Once all inputs and outputs are connected:

- 1 Turn bass and treble to midway point.
- 2 Turn all volume controls to zero.
- 3 Turn power switch on. Power indicator should illuminate.
- 4 Turn on microphone or auxiliary input source and adjust appropriate volume control to desired level.

The microphone and auxiliary for each input are mixed together, e.g. mic 1 and aux 1 are mixed. Both the mic and auxiliary inputs can be run together but note there is only the one volume control for both of these.

Redback® 30W Public Address Amplifiers

6.0 TROUBLE SHOOTING

NO POWER

(Power LED light does not illuminate)

Check mains fuse. Only replace with M205, 240V AC 0.5A rated fuse.

DISTORTED OUTPUT

Check that the speaker type is correct for the output that you are using. Check for any short circuits on the speaker line.

VERY LOW OUTPUT

Make sure that the input is the correct level (check for shorted connectors). Check for any short circuits on the speaker line.

CONTINUALLY BLOWS FUSES

Make sure that the speaker line is not shorted. Check also speaker types, ratings and if on correct output.

AMPLIFIER KEEPS ON CUTTING IN & OUT

Make sure that there is adequate ventilation around the amplifier. Check the vent slots on the case are not covered or blocked. Check also speaker types, ratings and for any short circuits on the speaker line.

7.0 SPECIFICATIONS (* Specifications Subject to Change Without Notice)

POWER OUTPUT:.....	30 Watts RMS	CONTROLS:	
T.H.D.:	typically < 0.5% @ 1kHz	Input 1 (Mic 1 / Aux 1):.....	Volume
FREQUENCY RESPONSE:		Input 2 (Mic 2 / Aux 2):.....	Volume
Microphone:	52Hz - 10kHz, ±3dB	Input 3 (Mic 3 / Aux 3):.....	Volume
Auxiliary:.....	40Hz - 10kHz, ±3dB	Bass:.....	±10dB @ 100Hz
SPEAKER OUTPUTS:.....	100V (330Ω) (floating)	Treble:	±13dB @ 10kHz
or 8 - 16Ω (0V referenced)		Power:.....	On/Off Switch
NOISE LEVEL:		POWER SUPPLY:	240V AC
All volume controls min: ..	typically 76dB below rated output	INDICATORS:	Power on LED
(All inputs display same signal to noise ratio)		Peak Limit LED
OUTPUT CONNECTORS:		PROTECTION:.....	AC Fuse 0.5A
Speakers:.....	Screw Terminals	DC Fuse 2 x 3A (internal)
Tape Output:	RCA Stereo Socket	DIMENSIONS:	
INPUT SENSITIVITY:		A 4024:	≈ 300W x 220D x 80H mm
Mic 1:.....	2.6mV Balanced or 3.2mV Unbalanced	A 4026:	≈ 483W x 220D x 88H mm
Mic 2:.....	2.6mV Balanced	WEIGHT:	A 4024: ≈ 4.1kg
Mic 3:.....	2.6mV Balanced	A 4026: ≈ 5.1kg
Aux 1:.....	150mV	COLOUR:	Black
Aux 2:.....	150mV	ACCESSORIES:.....	IEC Mains Lead
Aux 3:.....	150mV		
INPUT CONNECTORS:			
Mics 1-3:	3 pin XLR balanced		
Aux 1-3:	RCA Stereo Socket		
Mute Trigger:	Euro Connector		
240V AC Power:.....	IEC Type Chassis Socket		