

7. How to Contact ProAVM

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8. Declaration of Conformity

Name of Manufacturer: ProAVM
Address of Manufacturer: 61 Station Road
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Product: LINE-IT Multifunctional Line Level Amplifier

Declaration: The product described above complies with the requirements of the Low Voltage Directive (73/23/EEC) and the protection requirements of the EMC Directive (89/336/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Standards:

EN 60065:1993	Safety requirements for mains operated electronic and related apparatus for household and similar general use
EN 55103-1:1997	Electromagnetic compatibility - Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use (emissions - environmental categories E1 to E5)
EN 55103-2:1997	Electromagnetic compatibility - Product family standard for audio, video, audiovisual and entertainment lighting control apparatus for professional use (immunity - environmental categories E1 to E5)

9. Warranty

This product is shipped with a 5 year return to base warranty. Please return the product to the company that you bought it from.

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LINE-IT Multifunctional Line Level Amplifier

V1.00 © ProAVM 2006

1. Introduction

The ProAVM LINE-IT offers three common signal processing functions - stereo line amplifier, stereo to mono converter and M+S encoder/decoder - in one, at no cost penalty.

Changing situations such as OBs, RSLs and hire will use all three regularly, while studio users can take advantage of a single, high quality function with the other two available for occasional use or when the need arises to reconfigure your system.

Line mode is for buffering, amplification, and the driving of long lines.

Mono mode provides two individual mono mixes of the stereo input to drive, for example, mono transmitters, monitoring loops and loggers.

In sum and difference mode, the LINE-IT decodes Middle+Side recordings made with the MIC-IT, or encodes signals already at line level.

The LINE-IT is housed in a compact and robust metal case with mounting holes for wall or under desk mounting. An optional 1U rackmounting kit, RACK-IT, is available from ProAVM dealers.

2. Safety & Electrical Hazard

This unit contains high voltages which could be fatal. YOU MUST ALWAYS ISOLATE THE UNIT FROM THE MAINS SUPPLY BY COMPLETELY DISCONNECTING IT BEFORE ATTEMPTING TO OPEN THE CASE.

THIS EQUIPMENT MUST BE EARTHED.

Do not expose this equipment to rain or any other source of water.

In common with all mains operated equipment, only suitably trained competent personnel should attempt to adjust, modify or repair this equipment or operate it with the cover removed. In case of query please contact your local agent or ProAVM. Any unauthorised adjustment, modification or repair of this equipment may invalidate any warranty and/or safety approvals that apply.

Please read all of this manual and familiarise yourself with the controls before attempting to use this equipment. To ensure safety, it is the responsibility of the user to install and operate this equipment in a manner that is within the manufacturers specifications.

3. Unpacking The Equipment

This package should contain, in addition to this manual:

1 x LINE-IT
1 x IEC Mains lead

If any items are missing or damaged please inform your supplier immediately.

Ensure that the LINE-IT has been supplied for the correct mains/line voltage for your country.

4. Controls and Connectors

Line Inputs	3 pin female XLRs, electronically balanced. Balanced inputs may be unbalanced without affecting gain by linking pins 1 and 3 inside the mating plug. Pin 1 Ground Pin 2 Hot (Phase) Pin 3 Cold (Non-phase)
Input Gain	Individual multiturn adjustments for channel gain. Nominal gain range -25 to +10dB.
Line Outputs	3 pin male XLR, electronically balanced. Balanced outputs may be unbalanced without affecting gain by linking pins 1 and 3 inside the mating plug. Pin 1 Ground Pin 2 Hot (Phase) Pin 3 Cold (Non-phase)
Output Mode Switch	A three position switch selecting one of three output modes. See section 5 of this manual for details.
Power LED	Lights continuously to confirm correct operation of power supply.
Mains Fuse	20mm antisurge mains fuse. 100mA(T) for 230V units 250mA(T) for 115V units DISCONNECT MAINS BEFORE ATTEMPTING TO CHANGE FUSE.
Mains	IEC male connector.

5. Operation

Refer to section 4 for a description of the controls and connectors.

The LINE-IT is designed to integrate easily into a wide variety of systems. The balanced connections may be unbalanced if required, and the wide range of gain available can accommodate disparate signal levels.

Output Mode Selection

The LINE-IT supports three different output modes for maximum versatility, and these are selectable via a front panel three position switch.

STD mode - Simple stereo operation, with outputs A and B following inputs A and B respectively.

MON mode - Mono operation, with a mono mix of inputs A and B fed to both outputs. Gain is automatically adjusted such that with gain set to 0dB, a 0dBu signal at both inputs results in a 0dBu output signal.

S+D mode - Sum and difference mode, with the sum (input A + input B) signal on output A and the difference (input A - input B) signal on output B. Gain is automatically adjusted such that with gain set to 0dB, a 0dBu signal at both inputs results in a 0dBu sum signal.

Connections

Inputs and Outputs

Refer to section 4 of this manual for the pin assignments of the XLR connectors. The mating (cable) connectors generally have the pin numbers moulded into their body close to the pins themselves. For unbalanced use, connect pin 3 to pin 1 inside the mating connector and connect the signal to pin 2, with pin 1/3 as ground. To achieve specified performance, leads should be of quality screened cable and not exceed 10m in length.

Gain Settings

Apply the expected input signal level to the LINE-IT. Monitor the output and adjust the gain control (clockwise to increase gain) to give the level required.

6. Specifications

Inputs	Electronically balanced, 20kohm input impedance
Maximum input level	+26dBu
Input CMRR	60dB typ.
Outputs	Electronically balanced
Maximum output level	+26dBu (10kohm load), +25.5dBu (600ohm load)
Nominal gain range	-25dB to +10dB
Noise	-98dB re +8dBu O/P (RMS, 20Hz-22kHz, 0dB gain)
Harmonic distortion	0.005% (1kHz THD, +8dBu O/P)
Frequency response	<±0.1dB (20Hz-20kHz)
Power supply	230VAC (default) or 115VAC
Power consumption	7VA
Inrush current	<1A
Dimensions (excluding connectors)	294mm x 114mm x 44mm
Fixing centres	4 x 5mm hole on 276mm x 74mm rectangle
Weight	0.8kg unpacked, 1.0kg packed