

## 7. How to Contact ProAVM

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## 8. Declaration of Conformity

**Name of Manufacturer:** ProAVM  
**Address of Manufacturer:** 61 Station Road  
Irthlingborough  
Northants  
NN9 5QE

**Product:** LIM-IT Stereo, or Dual Mono, Line Level Limiter

**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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## LIM-IT Stereo, or Dual Mono, Line Level Limiter

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### 1. Introduction

The ProAVM LIM-IT is a high quality limiter for stereo or dual mono line limiting applications. The limiter has a complex programme dependent attack and release time system which is coupled with FET gain reduction to give a clean sound, free of the harshness often associated with VCA based designs.

The two channels possess tightly matched limiting characteristics and may be used entirely independently or linked for stereo operation. Clear indication of the amount of limiting is given by a pair of LED indicators, and the electronically balanced inputs and outputs may be individually unbalanced without affecting gain, allowing easy integration into any system.

The LIM-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 LIM-IT  
1 x IEC Mains lead

If any items are missing or damaged please inform your supplier immediately.  
Ensure that the LIM-IT has been supplied for the correct mains/line voltage for your country.

### 4. Controls and Connectors

|                    |   |
|--------------------|---|
| Inputs             | 3 pin female XLRs, electronically balanced. May be unbalanced without affecting gain by linking pins 1 and 3 inside the mating plug.<br>Pin 1 Ground<br>Pin 2 Hot (Phase)<br>Pin 3 Cold (Non-phase) |
| Input Gain         | Individual multiturn adjustments for input gain.  |
| Stereo Link Switch | A two position switch selecting stereo (link on) or independent dual mono (link off) operation.   |
| Limit Indicators   | The yellow LED indicates greater than 3dB of gain reduction. The red LED operates when there is less than 3dB of gain reduction left before overload, beyond which distortion rises rapidly.        |
| Outputs            | 3 pin male XLR, electronically balanced. May be unbalanced without affecting gain by linking pins 1 and 3 inside the mating plug.<br>Pin 1 Ground<br>Pin 2 Hot (Phase)<br>Pin 3 Cold (Non-phase)    |
| Output Level       | Individual multiturn adjustments for output level.  |
| Power LED          | Lights continuously to confirm correct operation of power supply.   |
| Mains Fuse         | 20mm antisurge mains fuse.<br>100mA(T) for 230V units<br>250mA(T) for 115V units<br>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.

#### Connections

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.

#### Stereo Link

With the stereo link set to OFF, each channel has an independent level detector and limiter so limiting applied to one channel has no effect on the other. The two mono channels can hence carry entirely different signals. In this mode the LED indicators display the limit status of channel A only.

With the stereo link set to ON, one channel reaching the limit point will cause gain reduction of both channels. This preserves the level ratio between the left and right components of a stereo signal. In this mode the LED indicators show limit status of the overall stereo signal.

#### Gain Settings

In general, the input gain controls determines the input level required before limiting commences and the output level controls affect the limited output level that is generated. Below the limit point, the gain between input and output will be a product of both these settings. To attain predictable results, the following adjustment procedure is recommended.

Note: the stereo link should be set to ON whilst adjustments are being made (so that the LED indicators are active for both channels), but input signal should only be applied to the channel being adjusted (so that there is no interaction between channels).

#### 1. Output Levels

Apply an input signal to the LIM-IT channel being adjusted such that the yellow LED is ON, i.e. limiting has commenced. Monitor the corresponding output and adjust its output level control (clockwise to increase) to give the level required. Default factory setting is +8dBu but this can be adjusted between 0 and +12dBu.

#### 2. Input Levels

If a calibrated oscillator is available, apply an input signal to the LIM-IT channel being adjusted equal to the desired limit level. Turn the relevant input level control fully anticlockwise then, whilst monitoring the output, wind the control clockwise until the output level stops increasing.

Alternatively, apply the expected input signal and adjust the input level control until the yellow LED starts to flicker.

### 6. Specifications

|                                   |   |
|-----------------------------------|---|
| Inputs                            | Electronically balanced, 20kohm input impedance     |
| Maximum input level               | +26dBu  |
| Input CMRR                        | 60dB typical  |
| Interchannel crosstalk            | -85dB (1kHz)  |
| Outputs                           | Electronically balanced, 600ohm min. load impedance |
| Limited output level              | 0 to +12dBu   |
| Output noise                      | -80dB re. limit point (RMS, 20Hz-22kHz)             |
| Harmonic distortion               | 0.02%(1kHz THD, +8dBu O/P)                          |
| Frequency response                | ±0.5dB (25Hz-20kHz)                                 |
| Power supply                      | 230V AC (default) or 115V AC                        |
| 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                        |