



VU8

Operating Manual

SAFETY INSTRUCTIONS

CAUTION: To reduce the risk of electrical shock, do not remove the cover or rear panel of this unit. Do not expose this appliance to rain or moisture. No user serviceable parts inside. Please refer servicing to qualified personnel only.

Retain Instructions:

Please retain all safety and operating instructions for future reference.

Ventilation:

Do not impede the flow of air through the ventilation openings. Take care when selecting appropriate installation locations so obstacles do not obscure proper ventilation.

Heat:

This product should be situated away from other heat sources such as fire, high heat emitting devices, heaters, etc.

Power Source:

Make sure the product is set to the correct voltage for the location in which it is being used.

Grounding and Polarization:

Never defeat the products power grounding means.

Power-Cord Protection:

Power supply cords should be connected or placed in a fashion that could allow possible exposure to damage. Take care to avoid wear and tear, rubbing, squashing, etc.

Cleaning:

The product should be cleaned only with a soft cloth. Do not use any corrosive products on the unit.

Inactivity:

The power cord of the product should be unplugged from the outlet when left unused for a long period of time.

Service requirement:

Service by qualified service personnel when:

- The power supply cable has been damaged in any way
- Liquid has been spilled onto or into the product
- The product has been exposed to rain
- The product exhibits faults or obvious performance degradation
- The product has been damaged in a way that exposes components

The user should not attempt to service this product beyond what is described in this operating manual.

FOREWORD

Dear Customer,

Firstly, we would like to thank you for purchasing our VU8 multi-channel meter bridge. With much thought and effort, our engineers have developed a product we know you will be satisfied with.

The 'meter bridge' is an essential piece of audio equipment used when making critical decisions in the studio. They are typically used to indicate both perceived loudness (VU meter) and peak audio signals (PPM). In today's digital recording world, PPM peak audio meters are particularly valuable due to the critical monitoring required to prevent exceeding 0 dB and causing digital clipping.

We are extremely proud to offer you our new VU8 meter bridge solution. It's a great addition to the SM Pro Audio product line up and we know you will enjoy many years of trouble free operation.

Please read this manual thoroughly to best understand the safety and operational procedures of the VU8.

Regards,

SM ProAudio

VU8 Main Features

The VU8 is a professional multi-channel VU meter:

- 8 x needle meter displays
- 8 x peak LED indicators
- Average & PPM meter modes
- 8 x combo TRS/XLR inputs
- 8 x combo TRS outputs
- 1 x monitor headphone amplifier
- 4 x stereo pair monitor selector
- Internal power supply

** It should be pointed out, that extreme output volumes may damage your ears and/or your headphone units. Turn down the LEVEL controls before you switch on the unit.*

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1. INTRODUCTION

In purchasing the new VU8, you have acquired a multi-channel meter bridge of high class that meets the demands of the home and professional studio. This sturdy 1RU allows for up to 8 channels of audio to accurately metered average or peak programming audio metering display. Peak led indicators and a handy headphone monitoring amplifier are also included making the VU8 an indispensable tool for audio professionals.

2. THE DESIGN

2.1 High quality components and design

The philosophy behind SM Pro Audio products guarantees a no-compromise circuit design and fault-tolerant component selection. All SM Pro Audio products go through a rigorous planning and production procedure from start to finish.

2.2 Inputs and outputs

All inputs and outputs are secured firmly to the exterior chassis housing thus ensuring robust quality and confidence under all conditions.

3. INSTALLATION

Your SM Pro Audio VU8 was carefully packed in the factory and the packaging was designed to protect the unit from rough handling. We do however still recommend that you carefully examine the packaging and its contents for any signs of damage that may have occurred in transit.

** If you happen to receive a damaged unit, please notify your dealer and shipping company immediately.*

3.1 What's included in the box

You should have the following included inside your shipping box:

- 1 x VU8 multi-channel meter bridge
- 1 x Power cable
- 1 x Operational user guide (the one you are reading!)

3.2 Rack-mount installation

The SM Pro Audio VU8 can be used stand alone on your desktop, however it is best installed into "one" standard 19" compatible audio rack-mount unit space.



VU8 front panel

Please remove all cables (including power) before installing the VU8 into your audio rack.

Sturdy rack mounting ears are present on each side of the VU8's front panel. Simply mount the VU8 into an available rack-space position and secure with rack-mount bolts/screws.

** Note: Please take into consideration ventilation of your equipment. A well-ventilated equipment rack will ensure optimum operation and longevity of your equipment. It's often a good idea to leave 1 free rack-bay position between your equipment to allow.*

3.3 Mains Voltage & front panel power switch



Mains Voltage

Important - Before you connect your VU8 to the mains power supply, please make sure that your local voltage matches the voltage required by the unit. Check on the side of the external box packaging.

The VU8 has a professional internal power supply. Each VU8 is shipped to the end user destination with the appropriate voltage of your mains power supply in mind.

To connect the VU8 to your mains power source simply connect the included standard IEC mains power cable to the VU8's three (3) pin power connector socket.

Power on/off switch & LED power indicator

The VU8's power switch can be found on the right hand side of the front panel. To enable power to the VU8 or 'turn on', simply place the power on/off switch into the down position. The power switch features an internal LED indicator that illuminates when activated to indicate the VU8's operational state as 'on' and ready for operation.



To power down or 'turn off' the VU8, simply place the power on/off switch into the up position. The power switch internal LED indicator will NOT illuminate to indicate the VU8's operational state as 'off'.

** It's always good practice to protect your ears, and other audio equipment by taking appropriate care when powering up any audio equipment. Being aware of your gain structure, and performing a structured power up sequence with your equipment will help to avoid unexpected audio signals bursts. It's a good idea to power up devices in sequence from the start of the signal chain to the end of the signal chain.*

3.4 Audio Connections



VU8 rear panel

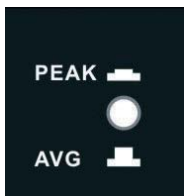
Analog Inputs – Combo connector inputs

8 x combo (XLR & TRS) connectors are provided as channel inputs. Connect the source audio material you would like to meter to these connections.

Analog outputs – TRS connector outputs

8 x TRS connectors are provided as channel outputs. Connect the outputs of the VU8 to your destination audio device.

4. FRONT PANEL CONTROLS & INDICATORS



4.1 Average/PPM meter mode switch

The 8 x needle meters can be configured to operate in either average or peak program metering modes. The toggle switch will change modes as desired across all 8 channels.

Average – VU metering mode

When the meter mode switch is configured in the 'out' position all 8 x channel needle meters are set to VU mode.

The needle response, or ballistics as it is known, is set quite slow in order to deliver a stable indication of the overall signal level. By doing this, the VU meter can be used effectively to indicate average loudness of a signal. This is perfect for balancing the general levels of different audio signals.

Peak – PPM metering mode

When the meter mode switch is configured in the 'in' position all 8 x channel needle meters are set to PPM (peak program meter) mode.

The needle response in PPM meter mode is set much faster in order to indicate short sharp peaks above average level. The PPM meter can be used to accurately indicate how much headroom is being used. This is perfect for metering during the digital audio recording process due to the nature of digital clipping when overloads occur. Digital overloads can be brutal as they simply distort immediately once all the available headroom has been used. Digital overloads sound nasty and something you should avoid.



4.2 Independent (8x) VU/PPM needle meter displays

8 x accurate needle meters are provided for use. Each meter displays scale marks from -20 to +3dB.

4.3 Independent (8x) channel peak LED indicators

Eight (8) peak LED indicators are provided. Each individual LED will illuminate when the respective channels average or peak signal levels have breached the maximum headroom.



4.4 Headphone channel monitor connections & control

The VU8's headphone monitor section allows for the simple monitoring of audio channels in pairs. A rotary dial is provided for the selection of channel pairs 1&2, 3&4, 5&6, 7&8. Simply select which channel pair you would like to monitor via headphones.

Stereo headphones can be connected to the provided 1/4" stereo headphone jack output. A rotary headphone gain control is provided to adjust monitoring levels as desired.

** Take care when listening through headphones. It should be pointed out, that extreme output volumes may damage your ears and/or your equipment. Turn down the headphone gain control prior to connecting your headphones. Slowly rotate the headphone gain control to an acceptable listening level.*



5. APPLICATION

5.1 General use of the VU8

Make the necessary input and output connections

The VU8 is designed to connect in-line between any audio equipment. Simply connect the outputs of any piece of equipment you would like to meter to the VU8's channel inputs. You can then connect the outputs of the VU8 to your destination device (analog/digital recorder, etc.). The VU8 does not affect your audio signal in anyway; it simply displays metering information on the incoming signal and passes the signal through to the output connectors.

General information

The VU8's meter scale is calibrated in decibels and extends from -20 and up to +3dB. It is important to understand that a 0 V.U. reading does not stand for 0dB. As the standard level chosen for feeding signals to analogue recording machines is +4 dBu, 0 V.U. typically corresponds to +4 dBu.

Visual monitoring enables audio professionals to keep signal levels within desired limits. A meter can be and extremely useful tool in the studio when balancing channel signals, checking for overloads, setting appropriate levels to help maximize signal to noise ratios, and for general fault checking. There is nothing like a needle and LED to draw your attention!

6. SPECIFICATIONS

INPUTS

Input channels: 8
Connector: COMBO (XLR / ¼" TRS)
Type: Balanced/unbalanced

OUTPUTS

Output channels: 8
Connector: TRS
Type: Balanced/unbalanced

POWER

Type: Internal

** The VU8's internal power supply is configured prior to shipping from the factory to match the destination receiving countries local mains power system. If you are in doubt as to the correct voltage of your unit please check with your dealer.*

SM Pro Audio is constantly striving to maintain the highest professional standards. Modifications may be made over time to improve the performance and operation of this unit. As such, specifications and appearance may differ from those listed or shown.

7. WARRANTY

7.1 WARRANTY CARD &/OR WEBSITE REGISTRATION

To be protected by this warranty the purchaser of the product must complete an SM Pro Audio product registration procedure.

Product registration is available via two methods:

- Complete and return the enclosed warranty card within 14 days of the date of purchase to SM Pro Audio (see address below).
- Complete an online product registration form at the SM Pro Audio website. www.smproaudio.com

7.2 WARRANTY

- SM Pro Audio warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year from the original date of purchase.
- SM Pro Audio will at its sole discretion either repair or replace the product if any defects occur that are not caused by normal wear or inappropriate use within the warranty period.
- This warranty does not apply if the product has been damaged by negligence, non-authorized modifications, accident, abuse, misuse, misapplication, or as a result of unauthorized service other than performed by that of SM Pro Audio's service department.
- All freight charges incurred for transport of justified warranty claims are at the buyer's expense.
- All other warranty claims other than those indicated above are excluded.

7.3 HOW TO REQUEST A RETURN AUTHORIZATION NUMBER

To obtain warranty service, the purchaser must call SM Pro Audio during normal business hours before returning the product (Tel.: +61 3 9555 8081). An SM Pro Audio representative will discuss any issues with you over the telephone and then issue a return authorization number if deemed appropriate.

Please ship original shipping cartons along with your return authorization number to the following address:

SM Pro Audio
Service Department
Warehouse 25
Roberna Business Park
26-28 Roberna St
Moorabbin 3189
Melbourne, Victoria
Australia

7.4 WARRANTY REGULATIONS

- Warranty can only be serviced when accompanying proof of purchase is provided. Dealers invoice and date stamp required.
- SM Pro Audio will endeavor to repair or replace any product under the terms of this warranty within 30 days of receipt of the product at SM Pro Audio.
- Modifications performed in order to comply with any applicable technical or safety standards in any country which is not the country for which the product was originally developed and manufactured shall not be considered a defect in materials or workmanship. SM Pro Audio shall not be held responsible for any costs incurred or resulting from any such modification whether performed correctly or not.
- This warranty does not cover defects of parts caused by normal operational wear. These parts are typically switches, knobs, and other similar components.

Product damage caused by the following conditions are not covered by this warranty:

- Operation of the unit in a way that does not comply with the safety regulations applicable in the country where the product is used.
- Damages or defects caused by conditions beyond the control of SM Pro Audio.

7.5 WARRANTY TRANSFERABILITY

This warranty is non transferable and available exclusively to the original purchaser.

7.6 DAMAGE CLAIMS

Failure of SM Pro Audio to provide proper warranty service does not entitle the purchaser to claim further damages. SM Pro Audio's liability shall in no way exceed the invoiced value of the product.

7.7 OTHER WARRANTY RIGHTS

This warranty does not exclude or limit any statutory rights provided by national law.

The information contained in this manual is subject to change without notice.

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