

General

The SLM series loudness meters are portable desktop units that display the average (VU) and peak content of an audio signal simultaneously. The meter includes a pair of "sticky" peak LEDs (for each stereo pair) that may be set to display peaks that exceed a preset limit, a phase correlation meter and status LEDs to display lock or signal error.

The SLM meters are available in models that may be used to monitor either analog or AES digital audio signals. The meter packages that are offered include the SLM1 a stereo meter pair, the SLM2 a dual stereo meter pair and the SLM4 a quad stereo meter pair. Each stereo pair in the SLM1 and SLM2 has its own seven segment LED phase indicator. The SLM4 has an expanded 28 segment LED phase indicator that may selectively be assigned to any one of the four meter pairs. SLM meters may be ordered as "A" versions for the analog audio or "D" versions for AES audio. Specify requirements for balanced (110Ω) or unbalanced (75Ω) AES digital audio inputs.

Analog Audio Versions

- SLM-1A** Stereo Loudness Meter - 1 Stereo analog audio input
- SLM-2A** Stereo Loudness Meter - 2 Stereo analog audio inputs
- SLM-4A** Stereo Loudness Meter - 4 Stereo analog audio inputs

AES/EBU Digital Audio Versions

- SLM-1D** Stereo Loudness Meter - 1 AES/EBU Digital audio input
- SLM-2D** Stereo Loudness Meter - 2 AES/EBU Digital audio inputs
- SLM-4D** Stereo Loudness Meter - 4 AES/EBU Digital audio inputs.

Each bar graph indicator comprises a dual set of 41 LEDs with VU and PPM activity areas clearly defined. The units are mounted in a table top swivel stand for vertical viewing. The SLM meters are powered by a 6 Volt AC adapter.

A rear panel dip switch array allows for configuration of various parameters such as meter ballistics and calibration levels of the SLM meters, please refer to the Dip Switch Settings table in this manual. Connections to the SLM meters are made via pluggable 3-pin screw terminals when connecting analog or balanced AES signals or via BNC connectors when connecting unbalanced AES signals. If a viable AES signal is connected to the SLM the "LOCK" status LED will illuminate. If the signal is lost or corrupted the "ERROR" status LED will illuminate.

For more information and special applications please consult the factory.

Product Specifications

Analog Audio Version

Meter Calibration	0VU = +4 dBu (or specify when ordering)
Input Impedance	>20k Ohm balanced
Input Level	+24dBu max
Frequency Response	+/- 0.25 dB, 20 Hz to 20 kHz
Peak Hold Indicator Threshold	+21 dBu

Digital Audio Version

Meter Calibration	0VU = -20 dBFS config. w/ DIP SWITCHES
Input Standard AES/EBU 110 Ohm	Transformer balanced screw terminal
Input Standard 75 Ohm	Unbalanced BNC
Input Level	0.2-5V p-p
Sampling Frequency Range	30kHz to 96kHz
Frequency Response	+/- 0.25 dB, 20 Hz to 20 kHz
Peak Hold Indicator Threshold	-3 dB below Full Scale

General

AC Adapter	6 Volts, 2 Amperes
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Setup and Installation

SLM1 & SLM2 Dip Switch Settings

		ON	OFF
BS1 (SW4)	Ballistics 1	Peak Hold Off	Peak Hold On
BS0 (SW4)	Ballistics 2	PPM Type 2	PPM Type 1
CAL1 (SW2)	Calibration 1	See Table 2	
CAL2 (SW1)	Calibration 2	See Table 2	

Ballistics

PPM Type 1 - 1.5 second/24dB decay.

PPM Type 2 - 3.0 second/24dB decay.

Peak Hold - This feature holds 'PPM' peaks above "nominal" for 3 seconds.

Peak LED - This LED holds instantaneous peaks above -3dB for 3 seconds.

SLM1 & SLM2 Analog

	Calibration 1	Calibration 0	Nominal Level
0	ON	ON	0dBu
1	OFF	ON	+4dBu
2	ON	OFF	+8dBu
3	OFF	OFF	+12dBu

SLM1 & SLM2 Digital

	Calibration 1	Calibration 0	Nominal Level
0	ON	ON	-20dBFS
1	OFF	ON	-18dBFS
2	ON	OFF	-16dBFS
3	OFF	OFF	-14dBFS

SLM1 & SLM2 Dip Switch Settings

		ON	OFF
CAL0 (SW1)	Calibration 0	0dBu	+4dBu
CAL1 (SW2)	Calibration 1	Map2	Map2
BS0 (SW3)	Ballistic 0	PPM Type 1	PPM Type 2
BS1 (SW4)	Ballistic 1	Peak Hold Off	Peak Hold On
PH0 (SW5)	Phase 0	See Table 3	
PH1 (SW6)	Phase 1	See Table 3	
PH2 (SW7)	Phase 2	Dot	Bar
PH3 (SW8)	Phase 3	GPI Enable Cycle	Reserved

Ballistics

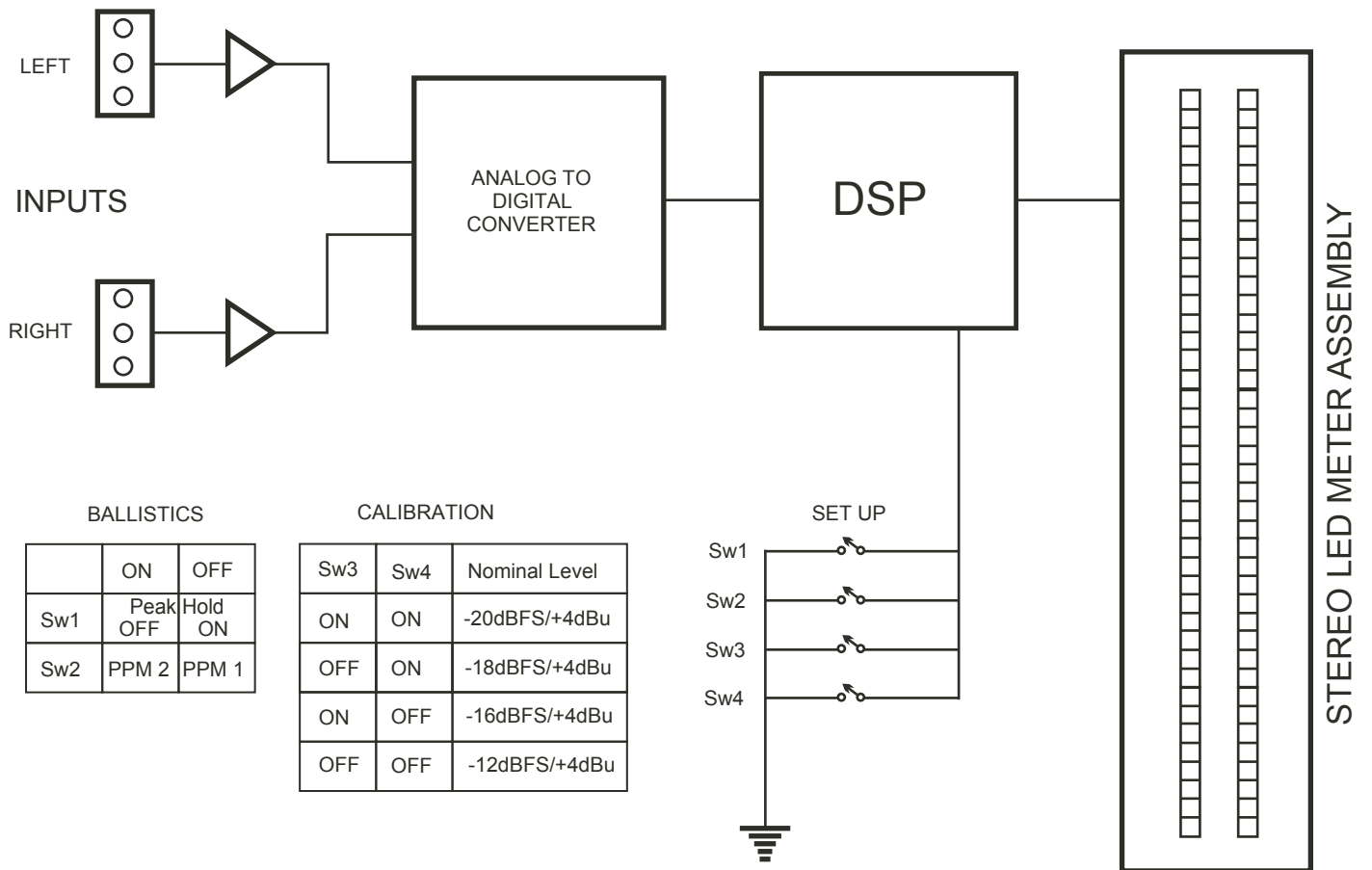
PPM Type 1 - 1.5 second/24dB decay.

PPM Type 2 - 3.0 second/24dB decay.

Peak Hold - This feature holds 'PPM' peaks above "nominal" for 3 seconds.

Peak LED - This LED holds instantaneous peaks above -3dB for 3 seconds.

	Phase 1	Phase 0	Nominal Level
0	ON	ON	Reserved
1	OFF	ON	Reserved
2	ON	OFF	Reserved
3	OFF	OFF	Reserved



Warranty

All Ward-Beck Systems Ltd. Products are warranted against defective materials and workmanship for a period of one year from the date of shipment

Ward-Beck Systems Ltd. Will repair or replace, as its opinion and without charge, all said products or parts thereof which upon factory inspection prove to be defective during the warranty period. Provided that:

1. The original serial numbers are intact and have not been tampered with
2. The purchaser shall return any equipment or parts thereof to Ward-Beck Systems Ltd. Only after obtaining prior authorization and shipping instructions from the factory. (Ward-Beck Systems Ltd. Reserves the right to inspect or repair the equipment on the purchaser's premises)
3. The purchaser assumes the obligations for all expenses in connection with the shipping and return of such goods, once authorization has been obtained

This warranty does not cover items normally considered expendable, such as fuses and lamps.

This warrant does not cover damages caused by misuse, accident, neglect, unauthorized alteration, repair by unauthorized personnel, or damages caused by act of God, war, or civil insurrection.

In no event shall Ward-Beck Systems Ltd. Be liable for consequential damages. Ward-Beck Systems Ltd shall have the rights to final determination as to the application of this warranty.

Ward-Beck Systems Ltd. Reserves the right, at any time and without notice, to make changes in its equipment, components, specifications or design, as may be warranted by progress in state-of-the-art technology.

Ward-Beck Systems Ltd. Reserves the right to make design changes, additions to, and improvements in its products, without obligation to install such revisions in products previously manufactured.

The warranty set forth herein is in lieu of all other warranties expressed or implied, including the warranties of merchantability and fitness.

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