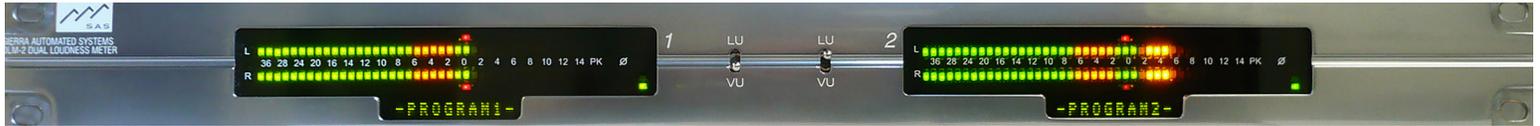


DLM-2 Dual Loudness Meter

SAS DLM-2 DUAL RACK MOUNT LOUDNESS UNITS METER



The SAS DLM-2 Dual Loudness Meter is a valuable resource for your studio. The new SAS DLM-2 Dual Loudness meter is a stand alone rack mount dual stereo display. It incorporates two completely independent SAS world famous stereo level meters with phase indication. Each of the two meter dynamics are switchable from VU/PPM, Volume Units with Peak Program meter or LU, Loudness Units. SAS's DLM-2 helps broadcasters maintain their desired loudness level across all audio programming and minimize listener complaints. These meters are more useful for production purposes than the traditional peak and VU meters of yesterday. You could say loudness meters actually show you what you should be hearing!

The SAS level meter. Each SAS Meter has two 40 LED bars showing level information for two channels of audio. The meters display in two modes: VU/PPM and LU. Audio Input is AES3 digital. Each meter also provides a 'sticky' Peak Dot above each bar. This instantaneous peak indicator will illuminate when any sample is at or above -3dBFS. It will stay illuminated for 3 seconds after the audio level stays below this threshold. Each meter also provides a Phase Meter. The phase relationship is shown on a vertical 7 segment display - perfect correlation is one green LED at the bottom. Hard out of phase lights up the bar with red LEDs toward the top to get the operators attention.

VU/PPM Mode. The VU/PPM Mode shows a lighted bar with VU ballistics (true RMS averaged over 300 milliseconds). The 'zero' reference is -20 dbFS, 20 db below full scale. There are two red 'marker' LEDs at the zero reference. 'Nominal' levels are achieved when the VU bars are flirting with the zero markers. There is also a dot which is typically riding above the VU bar which represents a PPM ballistic (true RMS with a 5 millisecond attack time and release of 20db/1.7 seconds). The dot will typically ride 6 to 10 db above the top of the VU bar.

LU Mode. The LU Mode measures and displays Loudness using the BS-1770 Standard and a 'zero' target of -24 LUFS (loudness units below full scale). The Loudness value is derived with a pre-filter applied to the audio before it is measured and displayed. There is a LU bar for each channel which looks similar to a VU bar. The bar represents 'instantaneous' loudness, which is a 'windowed' function (similar to average) over 400 milliseconds. There is also a brighter 'block' of six LEDs which displays the Short Term Loudness value of the stereo program. This singular value combines loudness measurements of both channels and is averaged over 3 seconds. The center LED of the block aligns with the scale value representing the value. When the block is within a +/- 3 dB window of the marker LEDs (-24 LUFS) the markers illuminate brighter to reinforce to the mixer that the program is within the ideal target range. The zero markers represent -24 LU in loudness mode.

Meter Displays (optional) Each meter can be optionally fitted with an alphanumeric LED display. This display can be connected to an SAS RS-485 port. It appears as a Single Output Controller (SOC) and will display the SAS System Source Name which is connected to the meter.

Meters without the optional display have a blank area. It is ideal for a label, such as a P-Touch laminated label. White text on black background is recommended.

DLM-2 Dual Loudness Meter Specifications

Standalone operation
No external encoder is required

Audio Inputs
2 each AES Input, XLR 3 Pin Balanced Input. One for each meter.

Power Requirements
Requires 12 to 24V DC, 500mA power.

Dimensions
Rack Mount: 1.5"h x 19"w x 3"d

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