



## 737 Soundtrack Loudness Meter



**The Dolby 737 Soundtrack Loudness Meter monitors the subjective loudness of trailers and other film soundtracks as they are being prepared.**

Intended for use on soundstages and at optical transfer and film QC facilities, the 737 reads the non-equalized outputs of a cinema processor or mixing console. It can evaluate anything from a trailer or commercial to elements of a feature's complete soundtrack for comparison purposes, and alerts mixers to the potential for audience complaints about loudness levels when the film is played in the cinema.

The 737's operation is based on the measurement technique known as Leq(m), developed by Dolby Laboratories after extensive research into the perceived loudness of film soundtracks. Unlike conventional audio meters such as VUs and PPMs, the 737 monitors loudness over time—for the entire length of a trailer, scene, or complete feature—and mimics the varying sensitivity of the human ear at different frequencies, taking particular note of those that are most annoying.

The 737's measurement is displayed in decibels that can be interpreted as an "annoyance factor" number. On material with an occasional loud sound, the number will be relatively low, while on material with loud sounds sustained over time the number will be high.

In the 737, its six input channels are followed by weighting filters, a true averaging power meter that can be started and stopped remotely, and a trip circuit that indicates a preset maximum level has been exceeded. In addition to showing measurement results on its front panel display, the 737 can drive an external moving-coil meter or chart recorder.

Use of the Dolby® 737 meter has contributed to the adoption of loudness standards for trailers and commercials in most areas throughout the world, a reduction in the number of audience complaints, and an improved moviegoing experience.

# Dolby 737 Soundtrack Loudness Meter

## 737 Front Panel



### Push-Button Controls

Calibrate, Start, Stop

### Leq(m) LED Display

Two-digit LED shows current and final Leq(m) value

### Trip LED

Indicates when preset maximum Leq(m) value is exceeded

### Trip Set

16-position, screwdriver-adjustment for setting trip level

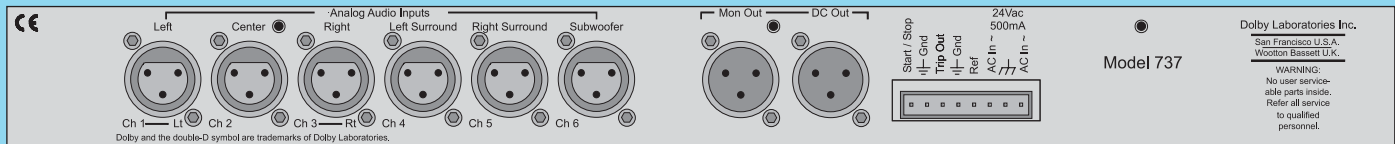
### Calibration LEDs

For setting input levels

### Input Trimpots

Six trimpots for input level calibration

## 737 Rear Panel



### Analog Audio Inputs

6 × 3-pin female XLR connectors, balanced:

L, C, R, Ls, Rs, SW

Sensitivity: -10 to +12 dBu

Impedance: 30 k $\Omega$ , 220 pF

Input Range: 72-95 dB-Leq(m)

### Monitor Output

3-pin XLR male connector, unbalanced

Measurement mode: mono mix, weighted by filters

Calibration mode: mono mix, unweighted

Impedance: 100 $\Omega$

Level: 0 dBu nominal, adjustable from

-20 to 0 dBu for Dolby level

Maximum level: +20 dBu

### DC Output

3-pin XLR male connector, unbalanced,

for driving external meter or chart recorder

Operating range: 0-1.25 VDC; 0 VDC

corresponds to 70 Leq(m)

Output resistance: 1 k $\Omega$

### Power/Control

8-pin pluggable screw terminal connector

Trip indicator: open collector output; 100 mA max to ground for tripped, 24 VDC max for not tripped

Start/Stop command: open circuit for Start, ground for Stop, maximum open circuit leakage 100  $\mu$ A; the unit sources 1 mA when held low (Stop)

Power supply: 24 VAC, 500 mA

### Measurement Accuracy

Weighting filter: (m)-weighting,  $\pm 0.5$  dB, 30 Hz to 16 kHz

Measurement:  $\pm 0.25$  dB, within the range of 75-90 dB-Leq(m)

LED display:  $\pm 1$  digit

### Trip Indicator Range

78-92 dB-Leq(m), adjustable

### Measurement Time

Maximum measurement length: 10 hours

### Power Requirements

100 to 135 VAC using external power transformer shipped with unit to 110 V countries, 200 to 240 VAC with transformer shipped to 230 V countries, 10 W

### Dimensions and Weight

44 × 483 × 267 mm (1.75 × 19 × 10.5 inches)

Net: 3.9 kg (8.5 lb)

### Environmental Conditions

10° to 40°C (50° to 104°F); natural convection cooling

90% maximum relative humidity (noncondensing)

Nonoperating (storage): 0° to 70°C (32° to 158°F)

### Regulatory Notices

US: This unit complies with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

Europe: This product complies with the requirements of Low Voltage Directive 73/23/EEC and EMC Directive 89/336/EEC and carries the CE marking accordingly.

### Warranty

One-year limited parts and labor; see disclaimer.

Specifications subject to change without notice.

### Reference

*Are Movies Too Loud?* Ioan Allen, SMPTE Journal, (March 22, 1997); also available at [www.dolby.com](http://www.dolby.com)

### Disclaimer of Warranties

Equipment manufactured by Dolby Laboratories is warranted against defects in materials and workmanship for a period of one year from the date of purchase. There are no other express or implied warranties and no warranty of merchantability or fitness for a particular purpose, or of noninfringement of third-party rights (including, but not limited to, copyright and patent rights).

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