



SEU₄ Dolby Surround Encoder



The Dolby SEU₄ is for use during soundtrack production to encode discrete four-channel program material for Dolby Surround release.

The Dolby® SEU₄ combines discrete left, center, right, and surround input signals into a matrix-encoded analog Lt/Rt distribution signal. The resulting two-channel Left total/Right total (Lt/Rt) material can be distributed via any consumer stereo medium, such as two-channel broadcast television, VHS tape, computer and console games, and CDs.

Encoded programming is compatible with both mono and stereo playback, and can be heard in full four-channel surround over home systems equipped with Dolby Surround Pro Logic® and Pro Logic II decoding.

When creating a mix encoded in Dolby Surround with the SEU₄, monitoring the results through the companion Dolby Model SDU₄ Surround Decoder is essential to ensure both proper surround playback and compatibility with stereo and mono playback. The Dolby DP564 Multichannel Audio Decoder is also available for monitoring Dolby Surround and other Dolby formats. Please note that the DP564 requires a digital (PCM) input.

SEU4 Dolby Surround Encoder

Front-Panel Controls and Indicators

Status LEDs for level calibration and channel activity display; screwdriver-adjustable trim controls for calibration of the four input channels, two output channels, two External Processor Loop sends, and two External Processor Loop returns

Inputs (0 dBr = 0.775 V_{RMS})

Four balanced floating transformerless XLR inputs for L, C, R, S; input gain adjustment accommodates a range of 300 mV (−8.2 dBr) to 2 V_{RMS} (+8.2 dBr); input impedance >10 kΩ; maximum common mode voltage is 4 V_{RMS} (5.8 V_{peak})

Outputs

Two balanced floating transformerless XLR outputs for Lt, Rt. Output gain adjustment accommodates a range of 250 mV (−9.8 dBr) to 2.5 V (+10.2 dBr); output impedance is 25Ω; maximum output level is +26 dBr into balanced 600Ω loads, less into lower impedances; maximum output is +20 dBr into unbalanced 600Ω loads

Remote Control

15-pin female D-connector provides signals for remote control and metering

External Processor Loop (EPL)

XLR send and return on Lt and Rt channels, to permit insertion of external equipment such as a peak limiter; engaged via a jumper on the remote control connector

Frequency Response

20 Hz–20 kHz ± 1 dB (L, C, and R channels)
100 Hz–7 kHz ± 3 dB (Surround channel)

Signal-to-Noise Ratio (S/N)

>80 dB all channels (CCIR/ARM weighting, referenced to Dolby level)

Distortion (THD)

0.25% or less at the main balanced outputs into balanced loads of 600Ω or greater, at any output level up to +24 dBr, and at any master level control setting
0.1% typical at Dolby level, 1 kHz, with input and output levels adjusted to +4 dBr

Power Requirements

230 V version: 198–264 VAC, 50–60 Hz, uses one 20 mm T250 mA fuse

Multivoltage version: 85–132 VAC, 50–60 Hz, uses one 1.25-inch 500 mA slow-blow fuse, or 187–264 VAC, 50–60 Hz, uses one 20 mm T250 mA fuse

Power consumption 20 W; designed for operation from a centrally switched power source

Dimensions and Weight

1-U rackmount: 43 × 483 × 260 mm
(1.75 × 19 × 10.25 inches)

Net: 5 kg (11 lb)

Environmental Conditions

0° to 40°C (32° to 104°F)

Regulatory Notices

The 230 V unit 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.

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).

Limitation of Liability

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