The Dolby SEU4 is for use during soundtrack mixdown to encode discrete four-channel program material (Left, Center, Right, and Surround) for Dolby Surround release. The resulting matrix-encoded two-channel Left total/Right total (Lt/Rt) material can be distributed via any consumer stereo medium, such as two-channel broadcast television (including DTV); VHS videotape; computer and console games; CDs; and two-channel DVDs.

At the heart of the SEU4 is a precision 4:2 spatial encoder that combines discrete left, center, right, and surround input signals into a Lt/Rt distribution pair that is matrix-encoded with the original four-channel directional information. 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 decoding.

The Model SEU4 is not designed for the final mixing of matrix-encoded theatrical film soundtracks. (Dolby Laboratories manufactures dedicated film sound encoders for that purpose.) It can be used, however, to preview the effects of the matrix process on discrete four-channel elements (“4-2-4” monitoring) that subsequently will be included in a film soundtrack’s final mix.

Among the SEU4’s many features are adjustable trim controls and four-segment LED meters for each input (left, center, right, and surround); a surround-active LED; balanced floating transformerless inputs and outputs; two-channel external processor loop connectors with status LEDs for interface with other audio equipment; an active internal jumper to enable or disable the surround channel; and a rear-panel D-connector for remote control and metering.

When creating a mix encoded in Dolby Surround, monitoring the results through a Dolby Model SDU4 Surround Decoder Unit is essential to ensure both proper surround playback and compatibility with both stereo and mono playback.
SEU4 Specifications

**Frequency Response**

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

**Distortion (THD)**

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

**Signal-to-Noise Ratio (S/N)**

(CCIR/ARM weighting, referenced to Dolby level)

- >80 dB all channels

**Signal Connections (on rear panel)**

- Left, Center, Right, and Surround XLR inputs
- Lt and Rt XLR outputs
- External Processor Loop (EPL) XLR send and return on the Lt and Rt channels. All inputs and outputs have level adjustments for matching studio line levels

**Input Circuit**

- 0 dB = 0.775 Vrms
- Four balanced floating transformerless inputs; input gain adjustment accommodates a range of 300 mV (-8.2 dB) to 2 Vrms (+8.2 dB); input impedance >10 kΩ; maximum common mode voltage is 4 Vrms (5.8 Vpeak)

**Output Circuit**

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

**Remote Control**

- A rear-panel 15-pin D-connector provides signals for remote metering and control

**External Processor Loop (EPL)**

- A two-channel EPL is provided to permit insertion of external equipment such as a peak limiter; the loop is engaged via a jumper on the remote control connector

**Front-Panel Controls and Indicators**

- Ten screwdriver-adjustable trim controls for the four input channels, two EPL sends, two EPL returns, and the two output channels; four-segment LED meters indicate L, C, R, and S input levels; single LEDs indicate surround active and EPL in/out status

**Power Requirements**

- 230 V version: 198 – 264 VAC, 50–60 Hz, uses one 20 mm T250 mA fuse
- Multivoltage version: 95–132 V, 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

**Environmental Conditions**

- 0° to 40° C (32° to 104° F)

**Warranty**

- One-year limited, parts and labor; see disclaimer below

**Specifications subject to change without notice.**

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