



DP572 Dolby E Decoder



The Dolby DP572 decodes Dolby E encoded program material for use in broadcast and postproduction facilities prior to final DTV and HDTV transmission.

The DP572 Dolby® E Decoder is designed to ease the transition by DTV broadcasters and program producers from two-channel to multichannel audio. The DP572 decodes up to eight channels of high-quality audio, plus Dolby Digital metadata, from a Dolby E signal encoded on a single AES3 pair, external fiber, satellite link, digital videotape, digital audiotape, or from a video server. It is easily integrated into postproduction and broadcast facilities. The DP572 can accept both PCM and Dolby E signals and can switch automatically to provide seamless integration of multichannel and archived stereo programming.

Dolby E Advantages

With Dolby E, coded audio frames match video frames, ensuring that audio-follow-video edits are free of mutes, glitches, or other aberrations. This makes it possible to switch, route, and perform edits directly on the digital bitstream without decoding and reencoding. Dolby E audio also carries Dolby Digital metadata generated by the program's producers for final delivery to the home viewer's Dolby Digital decoder.

In multichannel programming, a "5.1 + 2" Dolby E configuration is typically used, with six of the eight channels carrying a 5.1

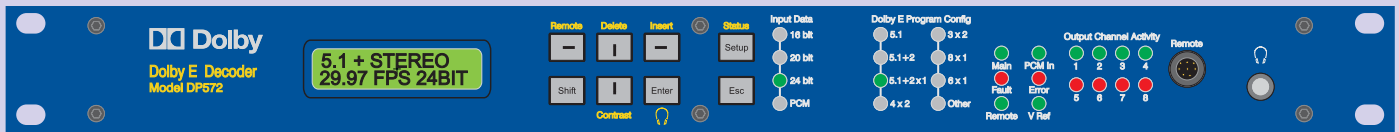
program and the other two an Lt/Rt (matrix surround-encoded) or stereo two-channel program. Alternate channel configurations are available for multilingual or other specialized applications. Front-panel status LEDs and the LCD indicate the configuration of the Dolby E source signal.

In addition to inputs for Dolby E audio, a second input, PCM delay, has multiple functions. These include insertion of a voiceover into the decoded Dolby E program, insertion of local stereo audio without the need for additional equipment, or automation of switching between stereo and multichannel programming within a transmission chain. When using this input, the DP572 creates appropriate metadata to automate the rest of the Dolby broadcast audio chain. The DP572 requires a standard video black reference signal, and can also be utilized in 24-frame applications when accompanied with the DP579 Dolby E Tri-Level Sync Interface. Outputs are provided for SMPTE timecode.

For a complete Dolby E broadcast solution, the DP571 Dolby E Encoder is the ideal companion unit.

DP572 Dolby E Decoder

DP572 Front Panel



Display and Controls

Two-line by 16-character LCD with control keys for status indication and setup

Status LEDs

Indicate output channel activity, video reference, Dolby E program configuration, fault, error, main input, PCM delay, and input data (bit depth)

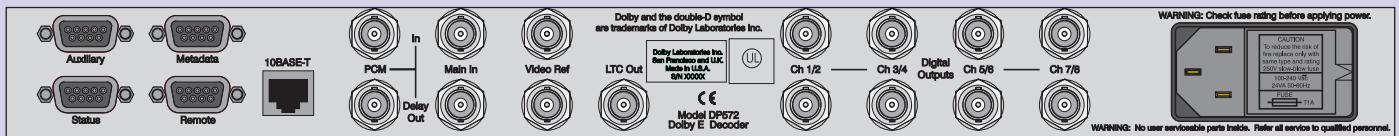
RS-232 Serial Port

8-pin female mini-DIN connector; for remote control and software upgrades

Headphone Output

Standard 6.35 mm (1/4 inch) stereo headphone jack for confidence monitoring

DP572 Rear Panel



Digital Audio Input

BNC female with loop-through, unbalanced, 75Ω, signal levels per AES-31D-1995 (SMPTE 276M) specifications, external 75Ω termination required

Digital Audio Outputs

Two BNC female connectors for each output: 1/2, 3/4, 5/6, 7/8; unbalanced, 75Ω, signal levels per AES-31D-1995 (SMPTE 276M)

Reference Video Input

BNC female with loop-through, unbalanced, NTSC program or black for 29.97 fps, PAL

program or black for 25 fps; Dolby Black for 24 fps; 23.98, 24, 30 fps when using a DP579 Dolby E Tri-Level Sync Interface; signal levels per SMPTE 154, external 75Ω termination required

PCM In/Delay Out

Two BNC female, unbalanced, 75Ω, signal levels per AES-31D-1995 (SMPTE 276M)

Linear Timecode Output

BNC female, unbalanced, per SMPTE 12M

Serial Remote Control Input

9-pin female D-connector, per SMPTE 207M (RS-485); system firmware can be updated via remote control input

Status Port

9-pin female D-connector, 0–5 V TTL levels

Auxiliary Output Port

9-pin female D-connector, RS-232, full duplex

Metadata Port

9-pin female D-connector; compatible with metadata inputs on DP569, DP570, or DP571

Audio Coding Algorithm

Dolby E

Dolby E Program Configurations

5.1 3 x 2 5.1 + 1 + 1 6 x 1
5.1 + 2 8 x 1 4 x 2 Others selectable

Audio Sampling Rate

48 kHz

Video Frame Rates

29.97 fps (NTSC)
25 fps (PAL)
23.98, 24, 30 fps (requires DP579 Dolby E Tri-Level Sync Interface)

Frequency Response

20 Hz to 20 kHz, ± 0.25 dB

Distortion

<0.01% at 1 kHz
<0.02%, 20 Hz to 20 kHz

Dynamic Range

>110 dB

Delay

Decoding: Fixed, one video frame
PCM delay channel: Selectable, one video frame or minimal delay

Power Requirements

90–264 VAC, 50–60 Hz, auto-sensing, 15 W maximum; unit is designed to operate from a centrally switched power source

Dimensions and Weight

1-U rackmount: 44 × 483 × 324 mm
(1.75 × 19 × 12.75 inches)
Net: 2.7 kg (5.9 lb)

Environmental Conditions

Operating: 0° to 50°C (32° to 122°F), natural convection cooling 0–98% relative humidity (noncondensing)
Nonoperating: –20° to 70°C (–4° to +158°F)

Regulatory Notices

North America: This unit complies with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. The unit also complies with Industry Canada ICES-003 Class A requirements, and is UL Listed for both US and Canada.

Europe: This 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

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