DP570 Multichannel Audio Tool

The Dolby DP570 provides unprecedented control and reference monitoring for the creation and delivery of Dolby Digital and Dolby E surround sound and metadata for DTV and DVDs.

The DP570 Multichannel Audio Tool greatly simplifies the preparation of content intended for Dolby® E and Dolby Digital encoding applications. Its ability to completely configure and control the monitoring environment and set metadata parameters makes it the key product for postproduction, DVD, and DTV facilities that master, author, or broadcast program material with Dolby surround sound audio. Users can monitor exactly what the consumer ultimately hears on these programs.

The DP570 makes it possible to take full advantage of audio metadata, the unique "data about the data" that Dolby Digital bitstreams deliver to consumer decoders. Metadata ensures that home listeners will hear programs as their producers originally intended. The DP570 enables the user to create new metadata, and to modify any metadata generated throughout the production and distribution process. In addition, it includes the ability to determine and to properly set the dialogue normalization (dialnorm) value using the ITU-R BS.1770-1 algorithm.

The effect audio metadata has upon the reproduced programming can be monitored in real time, without the need for a Dolby Digital encoder and decoder. The DP570 outputs metadata as a separate data stream, to be combined later with the multichannel audio by a Dolby E or Dolby Digital encoder.

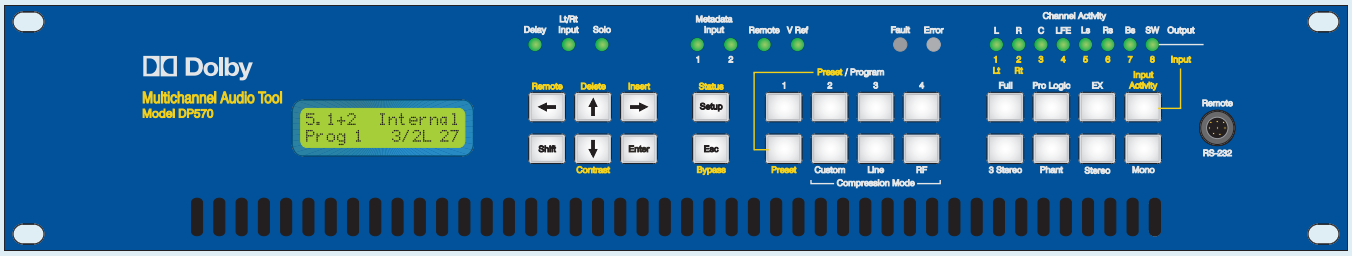
The DP570 accepts up to eight audio channels configured as four digital pairs, and it has two independent sets of outputs. One set provides the multichannel program signal in the SMPTE-recommended channel assignment, via a user-controllable built-in router. The second, the "emulator" set, facilitates monitoring in different listening modes without affecting the main audio path.

The DP570 is particularly useful in conjunction with audio consoles lacking adequate multichannel monitoring facilities. With the addition of the high-performance 24-bit Cat. No. 548 Analog Option Card, 5.1-channel, two-channel, and mono outputs are available to feed three speaker systems independently; the card also gives users control over levels, channel mutes, and channel solos. An additional input and built-in Dolby Pro Logic® II and Pro Logic decoders also allow proper monitoring of Lt/Rt sources and downmixes from all other inputs.

The DP570 contains extensive GPI/O control and includes a software remote application for use with a Windows®-based PC. Optionally, the Cat. No. 549 GPI/O Controller provides key remote control functions.

DP570 Multichannel Audio Tool

Front Panel



Display and Controls

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

Preset/Program Controls

Four user-definable presets for Dolby E program selection

Compression and Listening Mode Controls

Full access for monitoring of all consumer listening modes and monitoring configurations

Status LEDs

Indicate input/output channel activity, video reference, metadata input, solo, remote control, Lt/Rt input status, fault, and error

RS-232 Serial Remote Input Port

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

Core Measurement Algorithm

ITU-R BS.1770-1

Audio Sampling Rates

32 kHz, 44.1 kHz (0.1%), 48 kHz (0.1%)

Audio Word Length

Up to 24 bits

Video Frame Rates

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

Frequency Response

20 Hz to 20 kHz, 0.5 dB

Distortion

<0.01% at 1 kHz

<0.02%, 20 Hz to 20 kHz

Dynamic Range

>106 dB

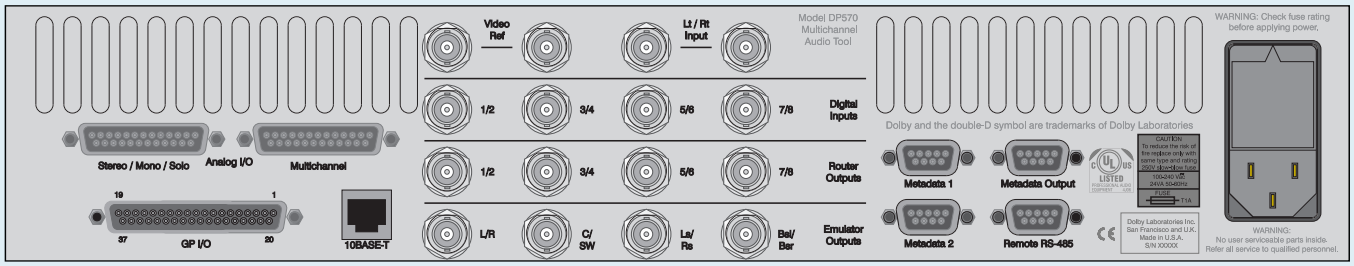
Audio Processing Delay

27 ms minimum (emulator outputs)

Presets

32 system setting presets can be stored/recalled

Rear Panel



Digital Audio Inputs

Five BNC female connectors, unbalanced, 75W, signal levels per AES-3ID-1995 (SMPTE 276M)

Loop-through on Lt/Rt input, external 75W termination required

Digital Audio Outputs

Router: four BNC female connectors, unbalanced, 75W, signal levels per AES-3ID-1995 (SMPTE 276M)

Emulator: four BNC female connectors, unbalanced, 75W, signal levels per AES-3ID-1995 (SMPTE 276M)

Analog Audio Outputs (with Optional Cat. No. 548)

Multichannel: 25-pin female D-connector

Stereo/mono/solo: 25-pin female D-connector

Digital-to-Analog Converter Resolution (with Cat. No. 548)

24 bits

Video Reference Input Port

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; signal levels per SMPTE 154, external 75W termination required

RS-485 Serial Remote Control Input Port

9-pin female D-connector for remote control and software upgrades

Metadata Input Ports

Two 9-pin female D-connectors, RS-485 (SMPTE 207M)

Compatible with metadata outputs on Dolby DP572

Metadata Output Port

9-pin female D-connector, RS-485 (SMPTE 207M)

Compatible with metadata inputs on Dolby DP571 and DP569

General Purpose Input/Output Port

37-pin female D-connector; user-assignable

Ethernet Port

RJ-45 female connector, 10 Base-T

Power Requirements

90–264 VAC, 50–60 Hz, auto-sensing, 40 W maximum; designed to operate from a centrally switched power source

Dimensions and Weight

2-U rackmount: 88 × 483 × 330 mm (3.5 × 19 × 13 inches) Net: 4.8 kg (10.5 lb)

Environmental Conditions

Operating: 0°C–50°C (32°F–122°F), natural convection cooling, 0%–98% relative humidity (noncondensing)

Nonoperating: –20°C to 70°C (–4°F 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 and Industry Canada ICES-003 Class A requirements, and is UL Listed for the 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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