



585 Time Scaling Processor



The Dolby 585 is an advanced, real-time audio solution for the time scaling and pitch shifting of multichannel audio.

Broadcasters, studios, and postproduction facilities often have to change the frame rate of programs or time scale their content to fit allotted time slots. During these conversions, a program's audio pitch will change, often changing the sound of the program. Correcting this pitch change is simple and quick with the Dolby® 585 and produces unparalleled, natural-sounding results.

An intelligent algorithm adapts the 585's processing to the audio it receives. Your audio mix will always sound natural, regardless of whether the program contains speech, music, effects, or a variety of content. The unit maintains phase coherence across all channels, it also ensures high-quality results that can be downmixed, and it preserves Dolby surround (matrix) encoding. A five-step sensitivity control adjusts how focused the algorithm is on the details of the audio material; the "5-high" default setting is appropriate for nearly all material.

The 585 will process PCM audio from any multichannel system, with special consideration for decoded Dolby E and Dolby Digital

audio and their associated metadata. The 585 can process up to eight channels of audio simultaneously as one complete audio program or multiple separate programs. For example, it can process a 5.1-channel program and a stereo program at the same time, four stereo programs, or even eight mono programs.

Multichannel audio can be pitch shifted up or down by as much as 15 percent in real time. Alternatively, the unit can store audio in its internal memory for time scaling. In this mode, the 585 can scale audio programs up to 15 percent longer or shorter than the original while maintaining proper pitch. Memory capacity is approximately 23 minutes of mono audio, 11.5 minutes of stereo audio, and four minutes of 5.1-channel audio.

For time scaling or pitch shifting multichannel audio material for film, music, DVD, or DTV applications, the Dolby 585 Time Scaling Processor is a simple, easy-to-use solution giving unparalleled high quality, every time.

Dolby 585 Time Scaling Processor

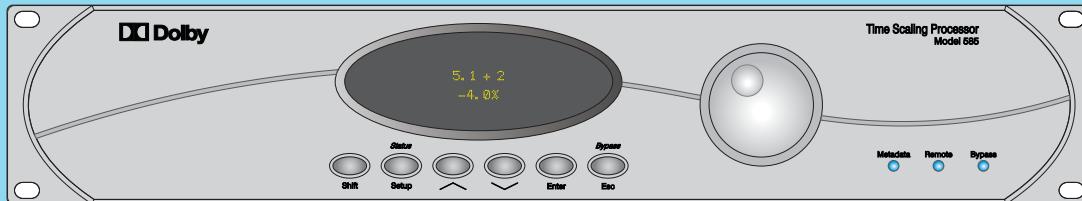
585 Front Panel

Display and Controls

Displays current operating mode, program configuration, setup parameters, and pitch shifting or time scaling percentage

Setup and Operating Controls

Six buttons under display for menu navigation, function selection, and adjustment of settings; large rotary knob for adjustment of settings and menu navigation



585 Rear Panel

Digital Audio Inputs

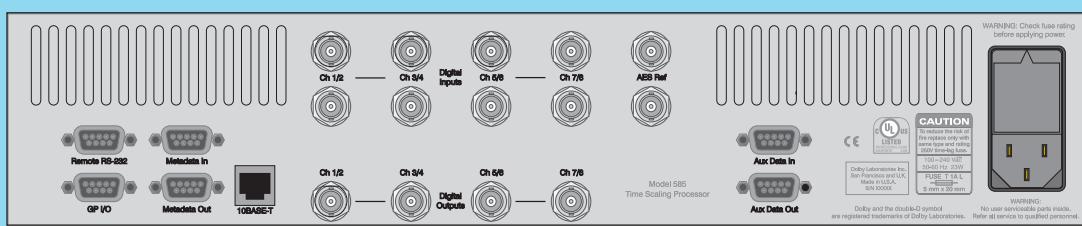
Four BNC female connectors with loop-through, unbalanced, 75Ω, signal levels per AES-3ID-1995 (SMPTE 276M), external 75Ω termination required

Digital Audio Outputs

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

AES Reference Input

BNC female with loop-through, unbalanced, 75Ω, signal levels per



AES-3ID-1995 (SMPTE 276M), external 75Ω termination required

RS-232 Serial Input Port

9-pin female D-connector for software upgrades

Auxiliary Ports

Two 9-pin female D-connectors, RS-422, full duplex

Metadata Input/Output Ports

9-pin female D-connector, 115 kbps, pinout per RS-485 (SMPTE 207M)

General Purpose Input/Output Port

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

Time Scaling/Pitch Correction Algorithm

Dolby proprietary, real-time processing

Channel Modes/Program Configurations

Processes up to eight discrete channels of audio; accepts decoded Dolby E programs, including 5.1, 5.1 + 2, 4 × 2, 8 × 1

Pitch Shifting Range

±15% (0.1% increments), or –282 cents to +242 cents (in 2-cent increments)

Discrete settings for 24 to 25 fps and 25 to 24 fps conversions

Time Scaling Range

±15% (0.1% increments)

Time Scaling Storage Limits

Internal memory:

- mono: 23 min 11 s
- stereo: 11 min 35 s
- 4 channels: 5 min 48 s
- 5.1 channels: 3 min 50 s
- 8 channels: 2 min 54 s

Audio Sampling Rates

48 kHz, ±15% (40.8 to 55.2 kHz)

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

400 to 480 ms, user-adjustable

Output Word Length

24-bit audio output

Power Requirements

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

Dimensions and Weight

2-U rackmount: 88 × 483 × 324 mm (3.5 × 19 × 12.75 inches)

Net: 6.5 kg (14.25 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. It 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

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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