



## CP650 Digital Cinema Processor

The Dolby® CP650 series is designed for easy operation in today's multiplex environment. A variety of models provide flexibility of configuration choices from film playback to digital cinema audio.

External setup software allows complete control of all processor calibration settings from a laptop computer, including the EQ Assist™ system that enables a rapid initial equalization of the theater. Audio processing configurations may include Dolby Surround 7.1 (D-cinema audio), 5.1 digital PCM (D-cinema audio), Dolby Digital Surround EX™ (film and bitstream), Dolby Digital (film and bitstream), Dolby Pro Logic®, and digital noise reduction processing (Dolby A-type and Dolby SR).



# CP650 Digital Cinema Processor

## Front Panel

### Setup Control Panel Access Door

Mic input level control  
Bypass output level control  
Test points  
RS-232C port (9-pin female D-connector)  
for PC connection

9-pin female D-connector, balanced, for a microphone or microphone multiplexer; phantom power available

### Main Display

Shows current format signal level and processor condition

Displays setup and calibration information for use with menu buttons

### Menu Buttons

Steps through menu pages  
Selects parameters within a page (use main fader knob for parameter choices)  
Store settings

### Mute Button

Mutes all audio outputs

### Fader Display

Shows fader setting, projector in use, bypass power supply condition

### Format Buttons

Preprogrammed and user defined audio format control

### Bypass Button

Selects main or bypass power supply in the CP650, this acts as a power switch

## Rear Panel

### Automation Connector

25-pin female D-connector for controlling and indicating format, fader select, projector status, and mute

### Remote Unit/Fader Input

Terminal strip connector for  
Dolby Cat. No. 779 remote control unit,  
Dolby Cat. No. 771 remote fader,  
external auditorium faders (100 kΩ linear potentiometer)

### Hearing Impaired Output

RCA-type female phono connector  
Center-weighted sum of L, C, R  
Output level: 200 mV fixed

### Digital Reader Inputs\*

25-pin female D-connectors for two  
Dolby Digital readers

### Main Audio Output

25-pin male D-connector, balanced or floating  
Maximum level, balanced loads:  
+26 dBu (15.5 V)  
Maximum level, unbalanced loads:  
+20 dBu (7.75 V)  
Dolby level output adjust range:  
-31 to -12 dBu (20-780 mV)

### Option Card I/O

25-pin female D-connector for digital bitstream input and surrounds output when equipped with the Cat. No. 790 option card  
L, C, R mid and high crossover outputs with Cat. No. 791 option card

### Nonsync Inputs

RCA-type female phono connectors for two stereo nonsync sources  
Input impedance: 21 kΩ  
Sensitivity: 0.2-4 V (NS 1), 0.06-1.5 V (NS 2)

### Six-Channel Audio Input

25-pin female D-connector for external six-channel analogue source  
Input impedance: 10 kΩ (L, R), 27 kΩ (C, Ls, Rs, SW)  
Operating level: 300 mV

### RS-232C Serial Data Input Port

9-pin female D-connector to connect external PC for setup and automation control

### Ethernet Connector

RJ-45 female for automation control and subtitling timing data

### Motor Start

9-pin female D-connector for Dolby Digital reader motor start timing and projector changeover

### Microphone Input

XLR female connector, balanced, for Auditorium Assist, PA, or B-chain alignment mic (or multiplexer)  
Phantom power available (+15 V)

### Optical Inputs

9-pin female D-connectors, balanced, for two stereo solar cells or analogue LED readers  
Power available for external cell preamp circuits ( 14 V/40 mA)

### Loudspeaker Equalization

L, C, R, Ls, Rs, Bsr, Bsr: digital 27-band, 1/3-octave  
Le, Re (with optional Cat. No. 791): digital 27-band, 1/3-octave  
SW: Digital parametric

### Distortion

Typically 0.005% in Dolby SR mode (output -10 dBu, input 10 dB over Dolby level)

### Dynamic Range

Typically 105 dB with fader set to 7

### Power Requirements

100-120 and 200-240 VAC, 50-60 Hz,  
100 W maximum (including built-in bypass power supply where applicable)

### Dimensions and Weight

3-U rackmount chassis; faceplate:  
133 x 483 mm (5.25 x 19 inches)  
Maximum projection behind equipment rack rail:  
365 mm (14.4 inches)  
Maximum projection in front of mounting plate:  
38 mm (1.5 inches)  
Net: 10.4 kg (23 lb)

### Environmental Conditions

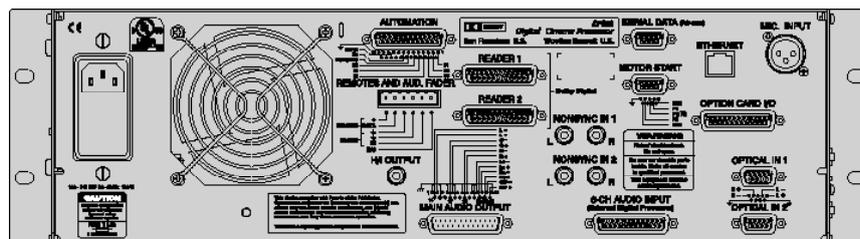
Operating: 0°C-40°C (32°F-104°F),  
forced-air cooling, 20%-80% relative humidity (noncondensing)

### 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 specifications. It is UL Listed for the US and Canada.

Europe: This unit complies with the requirements of Low Voltage Directive 3/23/EEC and EMC Directive 89/336/EEC and carries the CE marking accordingly.

Visit [www.dolby.com/warranty](http://www.dolby.com/warranty) for the latest product warranty information.



## Dolby Laboratories, Inc.

100 Potrero Avenue, San Francisco, CA 94103-4813 USA T 1-415-558-0200 F 1-415-863-1373  
Wootton Bassett, Wiltshire SN4 8QJ England T 44-1793-842100 F 44-1793-842101

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