

# DOLBY DA20

## DIGITAL FILM SOUND PROCESSOR

The Dolby DA20 makes it possible to decode and play back Dolby Digital soundtracks in theatres equipped with analog cinema processors. Interface kits are available from Dolby Laboratories for the CP65, CP55, CP45, and CP200.

The DA20 is equipped for use with two projectors outfitted with either inboard Dolby Digital soundtrack readers or Dolby Laboratories' penthouse-style digital soundhead. Once installed, its operation is essentially transparent, requiring virtually no attention from the projectionist. There are no operating controls. LEDs indicate digital or analog operation, the modulation level of each channel on Dolby Digital soundtracks, signal presence at the unit's outputs, and which projector is in use.

The DA20's highly integrated design provides a straightforward interface with existing Dolby cinema processors, offers an expansion capability for present and future special applications, and requires only minimal maintenance. Like all professional Dolby cinema equipment, the DA20 has been thoughtfully and thoroughly engineered, and is built to exacting standards. It is also backed by a worldwide team of installation and maintenance technicians trained by Dolby.



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### DA20 Specifications

#### Construction

3-U rack-mount chassis with plug-in modules accessible behind removable front panel

#### Signal Inputs

Digital film reader: Inputs for two Dolby Digital soundheads or comparable inboard digital readers, 25-pin female D-connectors

Audio: For use with Dolby CP200 Cinema

Processors only, 25-pin female D-connector

Motor start: Control line for detecting projector motor start, 9-pin female D-connector

#### Signal Outputs

Left, Center, Right, Left Surround, Right Surround, Mono Surround, and Subwoofer

Level: 300 mV at Dolby level (20 dB below maximum modulation) to match Dolby cinema processors, 25-pin male D-connector

#### Other Connections

Auxiliary data port: Standard 8-bit data available on RS-232, 9-pin female D-connector

cinema processor interface: Format control via cables specific to each Dolby cinema processor senses the currently selected format and provides automatic switching as required, also carries projector changeover status, 25-pin male D-connector

#### Internal Controls

System delay: Adjustable from 16 to 528 perforations in 1-perforation increments to achieve sound-picture sync with different mounting positions of the digital soundhead

Surround delay: 0–140 ms, adjustable in 10 ms increments

Cinema processor type: Switch selects operating protocol and signal switching for Dolby cinema processors

#### Frequency Response

L, C, R, Ls, Rs, S: 20 Hz–20 kHz,  $\pm 0.5$  dB

SW: 20 Hz–120 Hz,  $\pm 0.5$  dB

#### Noise Level

>72 dB below Dolby level at DA20 outputs, CCIR/ARM weighted

#### Dynamic Range

92 dB

#### Projector Speed Tolerance

23–26 fps, nominal, +7 to -11%

#### Front-Panel Indicators

Signal-present LED for each channel, illuminates when signal above -40 dB is present at the DA20 output

Four-LED signal-level meter for each channel  
Dolby Digital LED indicates valid digital data is being processed

Dolby SR LED indicates that system has selected analog operation

Motor 1/Motor 2 LEDs indicate projector motor sensing used for changeover

Projector changeover LEDs indicate status of the changeover control lines

Power supply status LEDs indicate voltage (+15, -15, and +5 VDC)

Numeric LED indicates data recovery efficiency while reading the digital film print

#### Power Requirements

85–264 VAC, 50–60 Hz; 100 W maximum, 60 W typical

#### Dimensions and Weight

3-U rack-mount: 133 x 483 x 362 mm

(5.25 x 19 x 14.25 inches)

Net: 9 kg (20 lb)

#### Environmental Conditions

0° to 40° C (32° to 104° 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 specifications. It is designed to comply with UL standards.

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 below

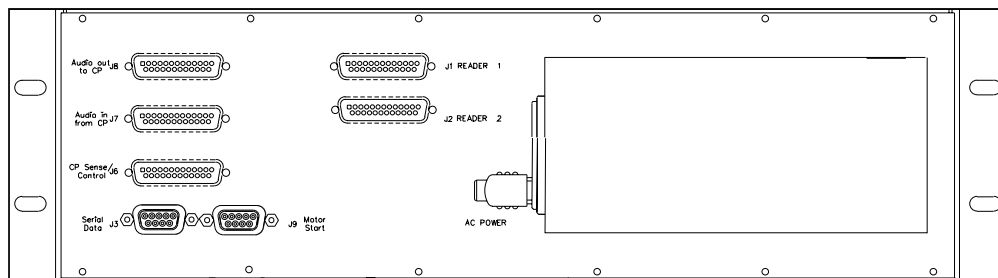
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Equipment manufactured by Dolby Laboratories is warranted against defects in materials and workmanship for a period of one year from the date of purchase. There are no other express or implied warranties and no warranty of merchantability or fitness for a particular purpose.

#### LIMITATION OF LIABILITY:

It is understood and agreed that Dolby Laboratories' liability, whether in contract, in tort, under any warranty, in negligence, or otherwise, shall not exceed the cost of repair or replacement of the defective components and under no circumstances shall Dolby Laboratories be liable for incidental, special, direct, indirect, or consequential damages (including but not limited to damage to software or recorded audio or visual material), or loss of use, revenue, or profit, even if Dolby Laboratories or its agents have been advised, orally or in writing, of the possibility of such damages.