



## DM100 Dolby Bitstream Analyzer



**The Dolby DM100 is a portable, handheld diagnostic tool that can monitor and generate Dolby Digital, Dolby E, and PCM bitstreams.**

The DM100 Dolby® Bitstream Analyzer is a uniquely efficient tool for end-to-end system testing. With its built-in test-signal generator, the DM100 allows audio system integrators and service engineers to quickly monitor and check the integrity and composition of Dolby Digital, Dolby E, and PCM signals routed through production, broadcast, cable, and satellite facilities, or even a home theater system.

The DM100 accepts digital input signals via XLR, BNC, and Toslink™ optical connectors. The unit identifies the format of the input signal—Dolby Digital, Dolby E, or PCM—and activates the appropriate built-in decoder. A standard 1/8-inch stereo headphone jack can be switched to monitor any two decoded channels or a downmix of the whole program, while a small built-in speaker provides a mono output.

A preselected set of useful Dolby Digital and Dolby E test bitstreams is stored in internal nonvolatile RAM, and users can change the set in the field via software download from the included CD-ROM. The DM100 can generate the selected

bitstream simultaneously on all the output connectors, even while receiving and decoding an input signal. The DM100 is also capable of generating two-channel PCM signals. In this mode, the user can select the output waveform type (white noise, pink noise, sine, square), amplitude, and frequency. A serial port allows software upgrades and error and status logging via a Windows®-based PC.

A pass-through mode permits modification of the input signal's AES channel status bits before passing the signal to the output connectors. The input signal can still be monitored at the same time. Monitoring capabilities include error detection at the AES3 layer and within the coded audio layers (that is, for Dolby Digital and Dolby E bitstreams), including SMPTE 337 formatting information.

The DM100 is powered by four AA batteries or by an included wall-mounted DC power supply, and it ships with a soft carrying case.

# DM100 Dolby Bitstream Analyzer

## DM100 Front Panel

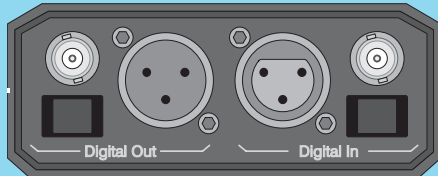
### Display and Controls

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

### Status LEDs

Indicate critical bitstream and system information

## DM100 Top Panel



### Digital Audio Inputs

AES/EBU 110Ω via XLR female connector  
BNC female connector, unbalanced, 75Ω,  
signal levels per AES-31D-1995 (SMPTE 276M)  
Fiber-optic via Toslink connector  
One input active at any time

### RS-232 Serial Input/Output Port

8-pin female mini-DIN connector for software upgrades and logging functions

### Volume Control

Headphone and speaker level

### Digital Audio Outputs

AES/EBU 110Ω via XLR male connector  
BNC female connector, unbalanced, 75Ω,  
signal levels per AES-31D-1995 (SMPTE 276M)  
Fiber-optic via Toslink connector

## DM100 Side Panels

### Video Reference Input

NTSC/PAL program or black; signal level per  
SMPTE RP 154-1994; RCA female connector

### Headphone Output

+11.5 dBu max into 600Ω, adjustable level  
1/8-inch standard headphone jack



### Audio Sampling Rates

32, 44.1, and 48 kHz for Dolby Digital and PCM  
48 kHz for Dolby E

### Video Frame Rates

29.97 or 25 fps

### Frequency Response

Digital outputs: 20 Hz to 20 kHz,  $\pm 0.25$  dB

### Distortion

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

### Dynamic Range

>100 dB

### Output Word Length

Up to 24 bits

### Case

ABS plastic handheld enclosure

### Power Requirements

External 6 VDC, 400 mA power adapter  
(included), or four AA batteries

### Dimensions and Weight

100 × 200 × 41 mm (4 × 7.9 × 1.6 inches)  
Net: 0.68 kg (1.5 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)

### Supplied Accessories

Owner's manual  
Warranty card  
Carrying case  
DC power adapter  
RCA-to-BNC and BNC-to-RCA adapters  
CD-ROM of Dolby Digital and Dolby E  
test bitstreams

### 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. The 110 V  
power transformer is UL Listed.  
Europe: This unit is designed to comply with the  
requirements of 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).

### 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 or accused infringing devices, 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), cost of defense, or loss of  
use, revenue, or profit, even if Dolby Laboratories or its agents have been  
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