

# SONY®

## MDS-E12

MiniDisc Recorder

The Sony MDS-E12 is a rack-mountable MiniDisc Recorder with an impressive range of features. Within its 1U height it provides Vari-speed playback, digital and analog I/O, and includes RS-232C control, a Track Multi Access function.



MDLP 

## Main Features

### ATRAC Type "R" technology

The latest version of ATRAC encode/decode DSP provides superb recording and playback quality.

### Wide Bit Stream technology for 20-bit precision

Handling signals during digital processing at a resolution of 20 bits brings a dramatic improvement in the accuracy with which ultra low-level signals are processed. This brings the benefit of higher recording quality, with a wider dynamic range.

### Flexible input/output interfacing

Coaxial connectors are provided for the IEC 60958 type II digital inputs and outputs. Unbalanced phono and balanced XLR connections are included for analog input and output signals.

### Rec level adjustment

Record level adjustable on both digital and analog inputs.  
Analog : knob on rear panel / Set-up menu in digital domain, adjustable L/R balance  
Digital : Set-up menu in digital domain

### Relay REC/PLAY

Connectors allow several MDS-E12 recorders, to be cascaded for continuous or extended recording applications.

### LP stereo recording mode

Incorporating the MDLP2/4\* standard, the MDS-E12 can record and playback in stereo for up to 320 minutes on an 80-minute disc. This is a very useful feature for recording extended meetings or conference proceedings, and for playback in PA applications. Combining this feature with the Relay function can provide recording and playback times of over 24 hours duration.

### 10-point Multi Access function (Hot Start)

The first few seconds of up to 10 tracks are held in memory to provide an instant, hot start, from any of these tracks.

### Vari-speed function

Provides variable-speed playback over a range of  $\pm 12.5\%$ , in 0.5% steps. When playing back an MDLP2/4 recording, the Vari-speed range is +0 to -12.5%, in 0.5% steps.

### Operation using a PC keyboard.

An optional PC-compatible keyboard with a PS/2\* interface can be connected for track naming, and to provide the same functions as the wired/IR remote commander.

### Auto Track Marking/Auto Time Marking

When a single, long duration track is recorded, these features allow the track to be divided into segments of identical duration using Auto Track marking. Auto Time Marking then stores as track name the segment start times by built-in clock for easy playback location. Segment duration can be set to be between 1 and 10 minutes.

### SF Edit

This feature enables recorded sound levels to be adjusted by rewriting tracks with a revised sound level. Fade In and Fade Out can also be added to recorded tracks. (SF Edit is not available in MDLP2/4 mode.)

### RAM Edit

The TOC of a disc, even a protected master disc, can be copied to RAM and edited.

\*MDLP2/4: MDLP provides two modes (MDLP2, MDLP4), 2x and 4x recording time. This recording format adopts ATRAC3 Technology.

# MDS-E12

## MiniDisc Recorder



## Other features

- Supplied Wired/IR Remote Controller
- Parallel I/O
- RS-232C Interface
- 24-bit AD/DA Converter
- AUTO CUE/AUTO PAUSE/AC TIMER functions
- Mono Recording (not available in MDLP2/4)
- Time Machine Recording (max. 6 seconds)
- Music Sync Recording
- Next Track Play allows the next track for playback to be pre-selected
- Shuffle Play, Program Play, All Track Repeat Play, 1 Track Repeat Play, A-B Repeat Play
- Mark and Locate Play
- Fluorescent display for excellent legibility

## Editing functions

COMBINE/MULTI\*\* TRACK COMBINE/DIVIDE/UNDO  
ERASE : ALL/TRACK/A-B/MULTI\*\* TRACK  
NAME : IN/ERASE/ALL ERASE/COPY/ALL COPY  
\*\*MULTI means effective on several tracks at the same time.

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An MDLP mode provides recording times of up to 320 minutes on a single disc. If even this duration is not sufficient, Relay REC/PLAY connectors enable several MDS-E12 units to be combined for applications requiring continuous recording and playback.

## Front Panel



### Supplied Remote Control Unit RM-DR1E



The RM-DR1E dual mode remote controller connects to the 3.5 mm Control-S jack with a supplied 5 m cable, but also operates as a conventional IR remote when not connected to the Control-S jack.

## Remotes

- Control S : 3.5 mm jack
- Parallel remote : 9-pin D-sub, female (milli standard)  
input-TTL, 10V max  
output-open collector 100 mA max
- RS-232C : 9-pin D-sub, male (inch standard)
- Relay Record/Play : IN / OUT 3.5 mm Stereo mini jack x 2

## Pin assignment of PARALLEL REMOTE port

Functions are assigned as follows.

The alternative functions are assigned via the SETUP menu.

Pin	INPUT	Preset Function	Alternative Functions
1	INPUT	PLAY	PLAY/PAUSE, PLAY, PAUSE, STOP,
2	INPUT	PAUSE	FF, REW, AMS+, AMS-, EJECT, REC,
3	INPUT	STOP	OFF, MARK, LOCATE
4	INPUT	AMS+	MUSIC SYNC, T.REC,
5	INPUT	AMS-	FADER PLAY *TRACK PLAY(1Tr-20Tr)
6	GND		
7	OUTPUT	PLAY	PLAY, PAUSE,
8	OUTPUT	PAUSE	NO DISC, REC,
9	OUTPUT	NO DISC	EDT, EOD, OFF

\*It is possible to assign each pin(1-5) to play one track of No.1Tr-20Tr.  
e.g) With multi-access function on, maximum of 5 tracks (using 1-5pin) can instant start.

## Rear Panel



## Specifications

### Inputs

	Connector type	Reference level	Maximum level	Impedance
ANALOG LINE IN	Phono	-10 dBu	+12 dBu	47 $\Omega$
	XLR-3-31	+4 dBu	+24 dBu	30 $\Omega$
DIGITAL COAXIAL IN	Phono	0.5 Vp-p $\pm$ 20%		75 $\Omega$

### Outputs

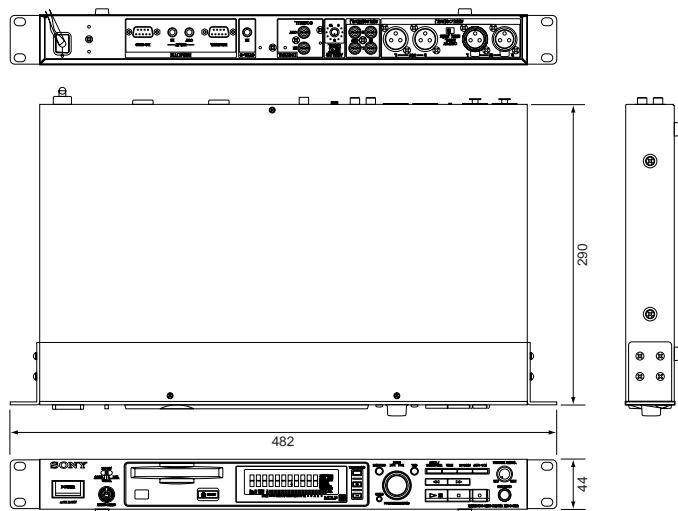
	Connector type	Reference level	Maximum level	Load impedance
ANALOG LINE OUT	Phono	-10 dBu	+8 dBu	More than 10 k $\Omega$
	XLR-3-32	+4/-10 dBu (Switchable)	+24/+10 dBu (Switchable)	More than 600 k $\Omega$
DIGITAL COAXIAL OUT	Phono	0.5 Vp-p		75 $\Omega$
PHONES	Stereo jack	0-10 mW adjustable		32 $\Omega$

### General

System	: MiniDisc Digital Audio System
Number of Channel	: 2 Channels
Laser	: semiconductor GaAlAs laser ( $\lambda = 780\text{nm}$ )
Rotational speed	: 400 – 900 rpm
Sampling frequency	: 44.1 kHz
Coding	: Adaptive Transform Acoustic Coding Type R(ATRAC-R)/ATRAC3
Wow and flutter	: below measurable limits
Frequency response	: 5 – 20 kHz $\pm$ 0.5 dB
Dynamic range	: digital, 100 dB / analog, 98 dB
S/N ratio	: digital, 100 dB / analog, 98 dB
Power requirement	: 120 V AC, 60 Hz
Power consumption	: 18 W
Operating temperature	: 0 °C – 40 °C
Storage temperature	: -5 °C – 60 °C
Weight	: 6.5 lbs/ (3.5 kg)
Dimensions	: 19"(W) x 1.75"(H) x 11.5"(D) 482(W) x 44(H) x 290(D) mm
Supplied accessory	: Wired/IR Remote Commander RM-DR1E CTRL-S connecting cable

## MDS-E12 MiniDisc Recorder

### Dimensions (Unit:mm)



### Mounting the unit

This unit can be attached to a standard 19 inch rack (type EIA). After detaching the four feet on the bottom of the unit, mount the unit on the rack.

### Distributed by

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