Product Information

MDS-B5   MD Recorder
MDS-B6P   MD Player

Product concept & Target Application

- Sound effect play back machine for broadcaster, theater, PA
- Program play back machine for broadcaster
- BGM, announce play back machine for B&I application
- Sound source production machine for broadcaster, production (B5 only)

Sales points & Features

Features & Benefits

- **Direct duplication link for high-speed cloning includes audio & text (B5)**
  Allows making a complete copies of ATRAC data at high-speeds (linking up to 10 units). This technology is also effective for eliminating fragmentation of on heavily edited discs when you want to change the order of the TOC.

- **Multi-Access hot start**
  Allows instant memory start up to 10 tracks by using the supplied remote commander, IBM type keyboard or parallel remote port.

- **RAM-TOC editing**
  Lets you decided whether or not to save your edited TOC information to the disc(B5). Allows temporally editing of a pre-mastered disc(B5 / B6P).

- **Powerful editing new features : Nm Copy, Undo, Cue point, Head trim, Head trim all, End trim**
  This allows you to more efficient editing

- **74 minutes stereo &148 minutes monaural recording (B5)**

148 minutes monaural recording is useful for archiving or recording long-length program

● **Next track selection**
Let you select the next track for playback while listening to the current selection.

● **IBM keyboard connectability on front panel**
Allows you to use IBM 101 type (English) keyboard as controller & tytler with supplied keyboard.

● **Program play list and Hot start assign list memory**
B5 can records above information on the disc. B5 and B6P automatically set up by the list information at disc in . This allows you to save the time of setting up.

Technical advantages

1. MiniDisc Technologies
Sony created the format to be a durable and highly reliable magnetic sound recording medium, virtually unaffected by external magnetic fields, and one that remains its inherent quality despite repeated recording and playback.

1) The discs
The MiniDisc itself is a 64mm disc housed in a rigid protective cartridge , much like a computer disc. Smaller than any other format MiniDisc can still contain up to 74 minutes 16bit / 44.1kHz stereo recording (monaural 148 minutes).
There are 2-type of discs, play-back only and recordable. Play-back only MiniDisc have been designed for pre-recorded music sold by record companies. Manufactured using the same process as CDs. Since they can not be recorded, it's impossible to inadvertently "record over" the music recorded on them.
Recordable Mini Disc are Magneto-Optical discs. A key feature of this technology is that it allows the recordable MiniDisc to re-recorded a virtually unlimited number of times. Once recorded, however, the life of the sound data is the same as that of a CD. And the disc endure over a million recording operations without degradation.

2) Adaptive Transform Acoustic Coding (ATRAC)

At the MiniDisc size, it can hold only about 1/5th of the data of a CD. However, the MiniDisc is recorded using Sony's Adaptive Transform Acoustic Coding (ATRAC) system, designed for high fidelity audio using the latest in digital data compression technology. One ATRAC feature is its ability to make use of psycoacoustic principles to minimize the audibility of quantization noise. ATRAC makes use of the scientifically proven principles to adopt the audio signals to the ear's changing sensitivity. It operates in such a way to "hide" in frequency regions where there are high signal levels corresponding to a lot of musical activity. This effectively renders quantization noise inaudible. As a result, ATRAC allows MiniDisc to offer the same 74-minute recording and playback time as CD, with virtually no loss in sound quality

3) Random Access

The MiniDisc format has been designed for completely random access, which is most important feature. Recordable MiniDisc have special "Pre-grooves" that allow quick and easy access to any point on the disc.

In addition, the recordable MiniDisc also contain a User Table-Of-Contents (UTOC) area, Allowing the tracks to be renumbered in any order in a matter of seconds. Track number addresses (Start and Finish) are recorded in the UTOC area on the inner circumference of the disc , which is similar to a floppy disc directly. This enables track number editing in seconds, rather than having to wait for the actual performance time to rewrite a track address as is required in time division systems.

4) Buffer Memory

One of the biggest problems in using optical discs has been that of skipping due to shock and vibration. Fortunately this problem has been dramatically minimized in the MiniDisc system through the adoption of

a high capacity semiconductor memory. The memory acts as a buffer, holding digital data before it's sent for conversion in to analog signals for play back. If the player or recorder is exposed to shock or sudden movement the semiconductor memory will continue to output digital data to maintain performance.
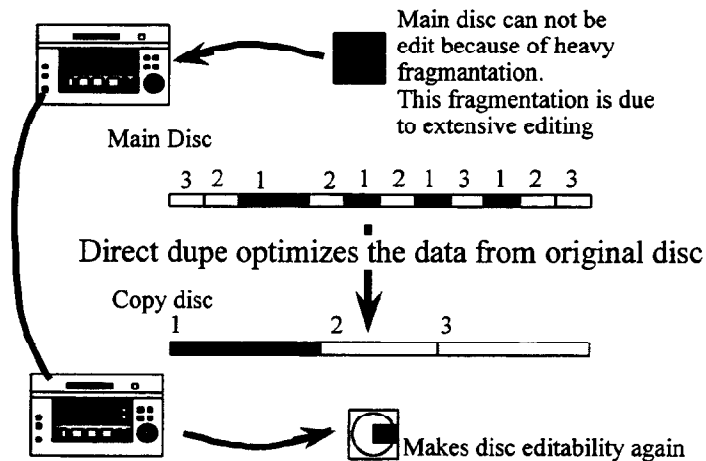
2. Direct duplication link

1) This makes complete copies without any lack of audio quality and TOC information.
2) 4 times faster than normal dubbing though digital I/O
3) All operation is made by master unit. Sub units automatically sets up and starts
   duplicating. Customer have no need to touch the sub units.

Customer can easily make
Compleat copy by
4 x speed!

Main

out

Sub   in

Up to
10 units
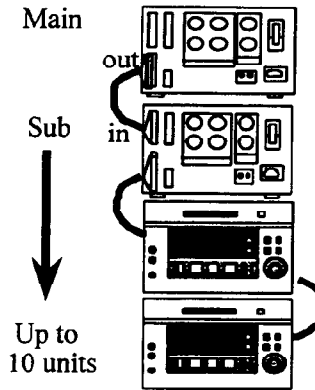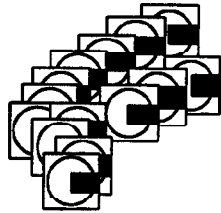
4) This function is also ideal for eliminating fragmentation on heavily edited disc.
Because, sub(slave) units rewrite the ATRAC compression data from the of the disc
by   the   order   of   the   TOC   information.   This   is   the   kind   of
"SpeedDISC(Norton)"function.

Main disc can not be
edit because of heavy
fragmantation.
This fragmentation is due
to extensive editing

Main Disc

3 2   1   2 1 2 1 3   1 2 3

Direct dupe optimizes the data from original disc

Copy disc
1   2   3

Makes disc editability again

5) The information from the main(master) units is based on the TOC information on the
disc, however duplication is possible in program mode, ram toc edit mode, and single
play mode.

You can easily make many different versions of a
disc depending on the playback mode chosen

Main Disc

Specify the tracks and edit

by Program play mode
by Single play mode
by Ram Toc edit mode

Direct dupe

Whole copy

Copy of selected tracks

Copy of selected track

Copy of another
edited version
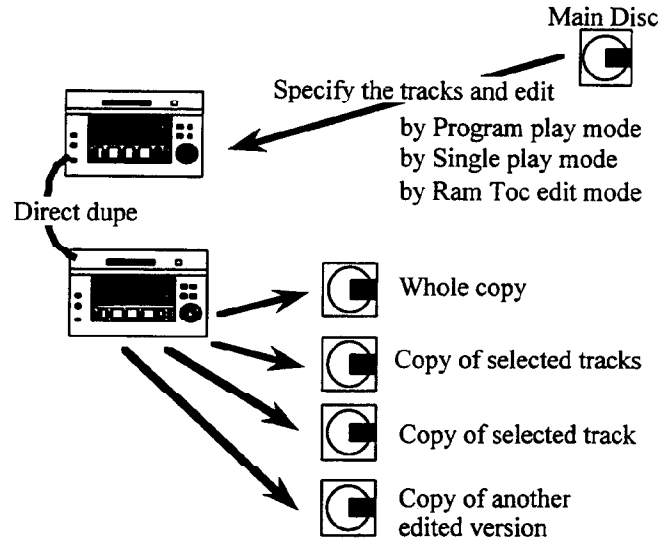
In any case, TOC information correspoded of the playback
mode, will also be recorded on the DISC in the sub units.

By this function, we have to promote this machine not only as the system for simple

duplication ,but also small 2units package for the "Best solution of",

Easy & Quick Back up
Optimization
Making various version

Specifications

Digital audio signal format

System	MiniDisc digital audio system
Disc	MiniDisc
Modulation	8 to 14 Modulation
Digital audio channel	2 channels, channel
Sampling frequency	44.1kHz
Error correction	ACIRC
Rotation mode	CLV(about 400 to 900r.p.m)

Audio characteristics

Frequency response	20Hz to 20kHz,+-0.5dB
SN ratio	More than 88dB

	(with A-weight filter, recordable disc)
	More than 95dB
	(with A-weight filter, premastered disc)
Total harmonic distortion	Less than 0.05%
	(at reference level, 1kHz, recordable disc)
	Less than 0.05%
	(at reference level, 1kHz, premastered disc)

*The reference level is the level at -20dB from the full bit on the peak level meter scale

Wow and flutter	Below measurement level
	(+-0.001%, W.Pcak)

Inputs / Out puts

Analog input	XLR-3,Female (MDS-B5)
	Reference level +4dBu (factory setting) ~ -12dBu
Analog output	XLR-3,Male
	Reference level +4dBu (factory setting) ~ -12dBu
	Max level +24dBu
Digital input(AES/EBU	XLR-3,Female(MDS-B5)
Digital output	XLR-3,Male
Digital input(Coaxial)	RCA Phono (MDS-B5)
Digital output	RCA Phono

Remote Interface

REMOTE (25pin)	D-sub 25pin (Female) Parallel
RS-232C	D-sub 9pin (Male) Serial
Keyboard input	PS2 type input
Supplied remote input	Mini plug

General

Power requirement	AC120V,60Hz (for the U.S. and Canada)
	AC220 to 230V,50/60Hz (for Europe)
Power consumption	30W
Dimensions(w/h/d)	Approx. 212 x 139 x 375mm
Weight	Approx. 5 kg

Supplied Accessories

      Wired remote controller RM-DC2 (B5) x 1

      AC power code x 1

      Direct duplication cable x 1

      Key board template x 2

      Operation manual x 1