

SANSUI SD5000



PROFESSIONAL 4-TRACK 2-CHANNEL STEREO TAPE DECK

Ask any recording engineer what three things make the difference between a good tape deck and a great tape deck, and he'll tell you tonal quality, tape protection and operating ease. These are exactly what the new Sansui SD-5000 is all about. The tonal quality of this three-motor four-head deck is without precedent, largely made possible by Sansui-developed contourless heads, a 3-stage EENF type playback equalizer amplifier and a recording/bias level selector. The professional quality heads give the SD-5000 a wide frequency response range, high input saturation capability and an extremely wide dynamic range. The 3-stage equalizer amplifier enhances the transparency of reproduced sound. The bias/recording level selector gives you the option of using low-noise or standard tapes. And if this weren't enough, the SD-5000 boasts an excel-

lent 60dB signal-to-noise ratio. Tape protection is ensured by the use of entirely electrical circuitry to control tape travel. Tape slack or stretching are things of the past. Operating convenience is the third major area where the SD-5000 stands out. It offers such features as a cue button which lets you hear where the sound is on a tape during fast forwarding or rewinding, auto reverse and shut-off, microphone/line input mixing, self-locking pause switch, tape travel direction lamps, an echo recording DIN plug for lively echo effects and a record selector which permits add-on recordings. In every way that counts, the Sansui SD-5000 stands apart from the best decks currently on the market. In every way but price, that is. Compare it with the rest and you'll discover that feature-for-feature, value-for-value, spec-for-spec, the SD-5000 is one of the smartest stereo investments you'll ever make.

Sansui

THE THREE IMPORTANT DESIGN CONSIDERATIONS OF THE SD-5000

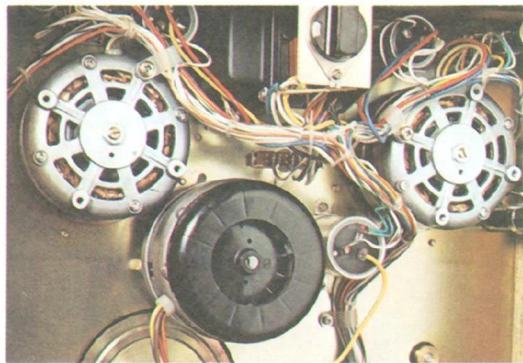
Tonal quality, tape protection and operating convenience. All three of these areas of deck design must be completely satisfied if the deck is to offer optimum quality and service. Some manufacturers place more emphasis on one or two of these areas, generally tonal quality and convenience. But what good is the best tonal quality if tape movement is erratic and damages the recorded tape? Sansui engineers gave equal weight to all three areas. Which easily makes the SD-5000 the most well-rounded deck in its price range. And in a lot of higher ranges as well.

TAPE PROTECTION

1 ALL-ELECTRONIC DELAY RELAY CIRCUIT: Switch any one of these feather-light pushbutton controls—say from fast forward or reverse to play—and this circuit delays tape movement just long enough to prevent tape slack, jerky starts or other erratic movement. No matter how quickly you switch controls, this Sansui-designed circuit automatically governs the capstan/reel motors for proper revolution and tape tension with unfailing accuracy.

2 TAPE SHIFTERS MINIMIZE WEAR: When it is not essential for the tape to be in contact with the heads during recording and playback, these shifters move the tape away from the head surfaces to reduce resistance and minimize tape wear.

3 TWIN 6-POLE INDUCTION MOTORS: The eddy current type take-up motor ensures fast, quiet and responsive tape rewinding yet prevent turning the reels too forcefully in the rewind mode.



4 FOOLPROOF RECORDING PROCEDURE: Just as with high-performance studio machines, two hands are required to activate the SD-5000's critical recording function. This eliminates accidental erasures of valuable recordings. To record with the SD-5000, it is necessary to push both the record and play buttons. Another safety feature is the deck's Recording Selector. This control must be set to STEREO to enable stereo recording.

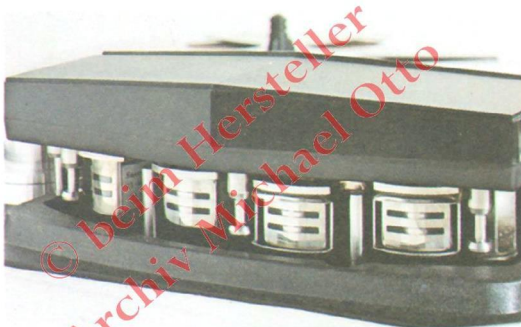
5 DIE-CAST TAPE TRANSPORT BASE: The important heads, capstan, pinch roller and tape guides are firmly mounted on a solid die-cast base to eliminate harmful vibration, minimize wow and maintain high accuracy throughout years of use. And each important part of the tape transport mechanism—capstan, pinch roller, impedance roller, bearing shaft and flywheel—has been precision manufactured to keep wow and flutter to negligible proportions.

6 COMPLETE AUTOMATIC SHUT-OFF CIRCUIT: This circuit is automatically activated by the deck's tape tension arm, whenever tape travel is irregular, or if a malfunction should occur within the deck itself. The tension arm activates the circuit by hanging down when the tape end is wound up on the opposite reel and can no longer support the arm.

7 METAL REEL: A standard accessory with the SD-5000, this reel permits easy tape threading, protects the tape and gives the unit a more professional appearance.

TOP TONAL QUALITY

8 LARGE-CORE, WIDE-RANGE CONTOURLESS HEADS: Exceptionally large for a 4-track deck, these heads are designed to withstand large inputs and take in high-amplitude signals with ease. Frequency response range at $\pm 3\text{dB}$ extends from 20 to 20,000Hz at $7\frac{1}{2}$ ips. Low-end response is flat, free of contours and the lowest notes are picked up with exceptional clarity. Super-precision machined, their micro-precision head gaps permit them to record and reproduce high notes above 20,000Hz as well. As a result, only minimal high-frequency recording equalization was given to the recording head, enabling its high-end saturation level to be raised.

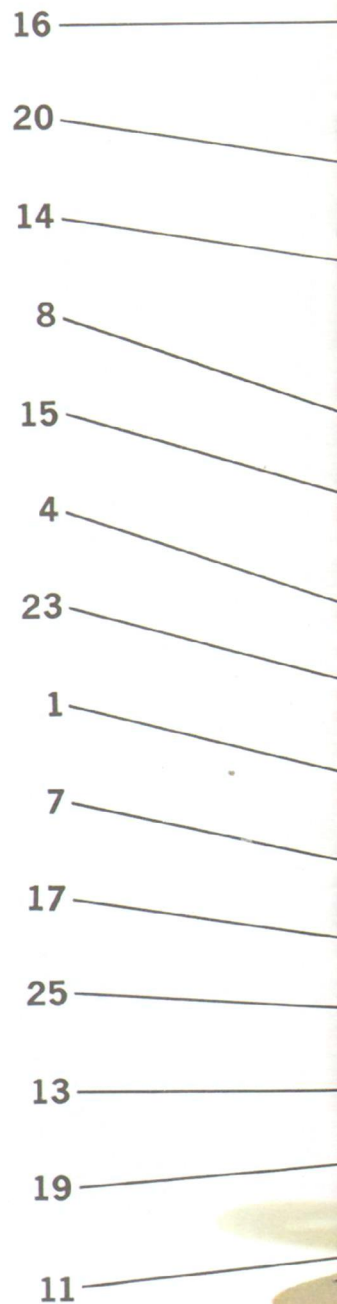


9 SOLID STATE EENF TYPE EQUALIZER: Combined with the top quality of the heads, this expensive 3-stage emitter-to-emitter (EE) negative feedback (NF) equalization amplifier determines the final tonal quality of the SD-5000. Designed to have a saturation level far higher than the tape itself for distortion-free sound even with high-amplitude input signals, this component provides for a wide dynamic range, high S/N ratio and low distortion.



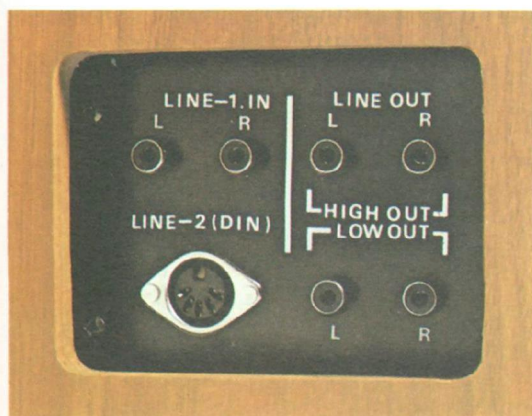
10 60dB SIGNAL-TO-NOISE RATIO: This high figure is your assurance of complete tonal quality. Without it, even if the deck had a wide frequency range and large input capacity, it could produce "muddy" sound.

11 RECORDING/BIAS LEVEL SELECTOR: Depending on whether you use standard tape or the professional low-noise type, this control permits you to change over the deck's recording bias and recording level simultaneously. Using the low-noise tape with the SD-5000 gives you a wider dynamic range and even better tonal quality than you get from standard tapes.





12 TWO OUTPUT VOLTAGE LEVELS: In addition to the standard 0.775V output terminals, the SD-5000 is equipped with 0.225V terminals. The advantage of the lower levels can be seen when you consider that the recording output level of a preamplifier and output level of a tuner are much lower than the standard 0.775V level. In the past, when the tape monitor switch was turned on, the volume would increase considerably, requiring the operator to turn down the volume control. Using the lower level terminals on the SD-5000, output voltage becomes the same as the input voltage for more convenient tape monitoring.



13 PUSH-PULL BIAS OSCILLATOR CIRCUIT: An important factor in tonal quality, this elaborate circuit was designed to minimize the distortion of the bias waveform, rather than raising the bias frequency itself. The resultant 0.3% distortion factor along with the high S/N ratio, goes a long way toward improving the transparency of sound.

14 4/8-POLE HYSTERESIS SYNCHRONOUS CAPSTAN MOTOR: Absolutely the best type motor for the all-important capstan, this 2-speed unit maintains accurate speeds despite fluctuations in power supply voltage or changes in the tape load. Speed is changed by a convenient pushbutton.

CONVENIENT OPERATION

15 AUTO REVERSE: Simply place a strip of sensing foil at the end of the tape, and the SD-5000 automatically reverses itself, giving you continued, interruption-free enjoyment of stereo or mono playback.

16 FOUR DIGIT TAPE COUNTER: Ideal for thin, high-performance long tapes that are beyond the capabilities of 3-digit counters, this feature helps you quickly find any desired spot on a tape. Complete with a one-touch reset button.

17 LARGE VU METERS WITH EXPANDED SCALES: Monitoring of each channel is more precise than ever thanks to the expanded scale in the important low-decibel region of each meter.

18 MICROPHONE LINE INPUT MIXING CAPABILITY: Separate recording level controls for the microphone inputs and the rear panel LINE-1 inputs are provided, allowing you to mix in your own sounds with those of the recording.

19 HEADPHONE JACK: Provided for stereo headphones with 8Ω impedance, such as the Sansui SS-20, SS-10 or SS-2. Permits monitoring recordings or private stereo listening.

20 STOPPER FIN REEL CLAMPS: These three-fin type reel clamps are equipped with stopper fins that fit into place with the bottom fins for surer, faster loading and securing of reels.

21 REMOTE CONTROL CAPABILITY: The SD-5000's all-electronic tape transport section permits it to be remote controlled from a distance of up to four meters (13 feet) by connecting the Sansui SRC-2 remote control unit. This unit, an accessory component, is available at extra cost.



22 SELF-LOCKING PAUSE SWITCH: Convenient for avoiding commercials and commentary when recording FM broadcasts, this switch may be either pushed lightly to stop the tape momentarily, or pushed in all the way for locking. Released, the recording continues without any tell-tale click.

23 CUE BUTTON: Extremely helpful for finding out where the last recording on the tape has ended when the deck is programmed for fast forwarding or rewinding.

24 TAPE TRAVEL DIRECTION LAMPS: The SD-5000 incorporates a special circuit which holds one of its playback heads and the capstan in a "live" or stand-by state, ready for instant use. Arrow-head direction lamps indicate in which direction the tape will move when activated. This instant starting capability is especially useful in locating specific selections quickly.

25 RECORD SELECTOR FOR ADD-ON RECORDING: This four-position (STAND-BY, STEREO, L, R) recording mode selector permits changing from one mode to another without the slightest click noise. A feature found on professional recording equipment, the selector in the STAND-BY position does not permit recording even if the Play and Record buttons are engaged. It is just another safety feature built-in to avoid accidental erasing. The selector also permits these interesting add-on recording techniques:

- a) With the Play and Record buttons engaged, the selector set at STAND-BY and the monitor switch set at PLAYBACK, the deck plays back the recorded tape. When it comes to a desired spot, the operator can turn the selector to STEREO, L or R, and the deck will immediately start recording in that mode without any pause or click noise.
- b) The operator may record monophonically in one channel only, rewind, then record monophonically in the other channel.
- c) The operator may mix microphone input signals with the sound recorded in one channel, then record the mixture in the other channel. This procedure may be repeated as often as desired.

26 SOURCE/PLAYBACK TAPE MONITOR SWITCH: Useful for monitoring the quality of a recording, this switch permits ready comparison of the original program source and the recorded sound as it is immediately reproduced by the playback head.

27 ECHO RECORDING: The SD-5000 comes complete with an echo recording plug which allows the operator to add exciting reverberation effect to sound as it is recorded. Since the method by which it is done is entirely electronic, the tonal quality of the original sound is never affected. A great feature for the fan looking for an enhanced sense of liveliness in his recordings.

In Every Way That Counts, The SD-5000 Stands Apart



TAPE PROTECTION

- All-electronic tape protection circuit.
- Smooth, steady tape travel no matter how frequently or rapidly you press the control buttons.
- Tape speed (either 7½ or 3¾ ips) is switched electronically.
- Automatic shut-off circuit prevents tape movement if incorrectly threaded.
- Two-point recording procedure and Record Selector prevent accidental erasures.

TONAL QUALITY

- Extra large, Sansui-developed contourless heads ensure wide frequency response range, high input saturation and very wide dynamic range.
- Three-stage EENF type playback equalizer amplifier adds transparency to reproduced sound.
- Excellent 60dB signal-to-noise ratio.
- Recording/bias level selector permits the use of low-noise or standard tapes.

EASY OPERATION

- Automatic reverse (activated by sensing strips).
- 7½ and 3¾ ips tape speeds.
- Automatic shut-off circuit.
- Large, expanded scale VU meters.
- Microphone/line input mixing.
- Feather-touch pushbutton controls.
- Record Selector for add-on recording.
- Three-fin type reel clamps.
- Cue button for locating sound during fast forwarding or rewinding.
- Tape-direction indicators.
- Source/Playback tape monitor switch.
- Echo Recording Plug.
- Headphone jack.
- Metal reel.



The SD-5000 is almost a "must" for any top quality stereo system. It's completely at home in this 200 watt all-Sansui system consisting of the 5000X an AM/FM Multiplex stereo receiver, the 80 watt SP-3500 speaker systems, the SR-2050C 2-speed Automanual turntable and the SS-20 stereo headphone set.

Standard Accessories The SD-5000 comes with the following accessories: Metal reel, oil, cleaner, polishing cloth, sensing foil, input/output cords (2), spare fuses (2), splicing tape, reel spacers (2), echo recording plug (DIN) and operator's manuals.

Optional Extras: The following equipment is available as optional extras: Remote control unit (Model SRC-2), 50k Ω /600 Ω microphone (Model SDM-1), 10k Ω microphone (Model SDM-2), head demagnetizer (Model SHE-1), head cleaner (Model SHC-1), 7" plastic reel (Model RS-7), 7" metal reel (Model RSM-7), dust cover (Model SDC-5) and spare parts kit.



SPECIFICATIONS

TRACK SYSTEM	4-track 2-channel STEREO/MONO recording forward play back forward and reverse 7" maximum
REEL SIZE	7 1/2 ips and 3 3/4 ips
TAPE SPEEDS	7 1/2 ips and 3 3/4 ips
TAPE SPEED ACCURACY	within 0.5%
HEADS	4-track 2-channel ERASE 4-track 2-channel RECORD 4-track 2-channel FORWARD PLAY 4-track 2-channel REVERSE PLAY
MOTORS	Two-speed Hysteresis Synchronous type for Capstan drive (4-pole, 8-pole), 6-pole Eddy Current type for Take-up Reel drive, 6-pole Induction type for Supply Reel drive
CAPSTAN DRIVE SYSTEM	Belt Drive type
WOW AND FLUTTER	less than 0.08% at 7 1/2 ips less than 0.12% at 3 3/4 ips
FAST WIND TIME	approximately 120 seconds for 1,800 ft. length tape
FREQUENCY RESPONSE	15 to 25,000Hz (20 to 20,000Hz ± 3 dB) at 7 1/2 ips 15 to 15,000Hz (30 to 12,000Hz ± 3 dB) at 3 3/4 ips
S/N RATIO	better than 60dB (3% THD level to weighted noise level)
CROSSTALK	better than 50dB (channel to channel, at 1,000Hz) better than 60dB (between adjacent tracks, at 1,000Hz)
HARMONIC DISTORTION	
PLAYBACK AMPLIFIER	less than 0.15% at 1,000Hz 1.2V output
TAPE DISTORTION (record/playback total)	less than 1.2% at 1,000Hz OVU less than 3% at 1,000Hz +6VU
ERASURE	better than 60dB
INPUT SENSITIVITY AND IMPEDANCE	
MICROPHONE	0.5mV (50 k Ω)
LINE	70mV (100k Ω)
DIN	14mV (100k Ω)
OUTPUT LEVEL	
HIGH OUTPUT	1.2V maximum (OVU=0.775V)
LOW OUTPUT	0.35V maximum (OVU=0.225V)
DIN	0.35V maximum (OVU=0.225V)
HEADPHONES	10mV at 8 Ω
BIAS OSCILATOR FREQUENCY	100kHz
CONTROLS	
LINE - 1	Left, Right
MIC/LINE - 2(DIN)	Left, Right
PLAYBACK	Left, Right
SWITCHES	
TAPE TRANSPORT	REVERSE, FAST REWIND, STOP, FAST FORWARD, FORWARD
TAPE SPEED	7 1/2 ips (19cm/sec.), 3 3/4 ips (9.5cm/sec.)
PAUSE	OFF, ON
RECORDING SELECTOR	STAND-BY, STEREO, LEFT, RIGHT
RECORD	push to record
MONITOR	SOURCE, PLAYBACK
REC BIAS	STANDARD, HIGH
CUE	push ON
SEMICONDUCTORS	Transistors 20, Diodes 14
POWER REQUIREMENTS	
POWER VOLTAGE	100, 110, 117, 200, 220, 240V 50/60Hz
POWER CONSUMPTION	average 120VA, 110W
DIMENSIONS	486mm(19 1/2")H x 420mm(16 1/2")W x 253mm(10")D
WEIGHT	20.2 kg (44.4 lbs.)

Design and specifications subject to change without notice for improvements.