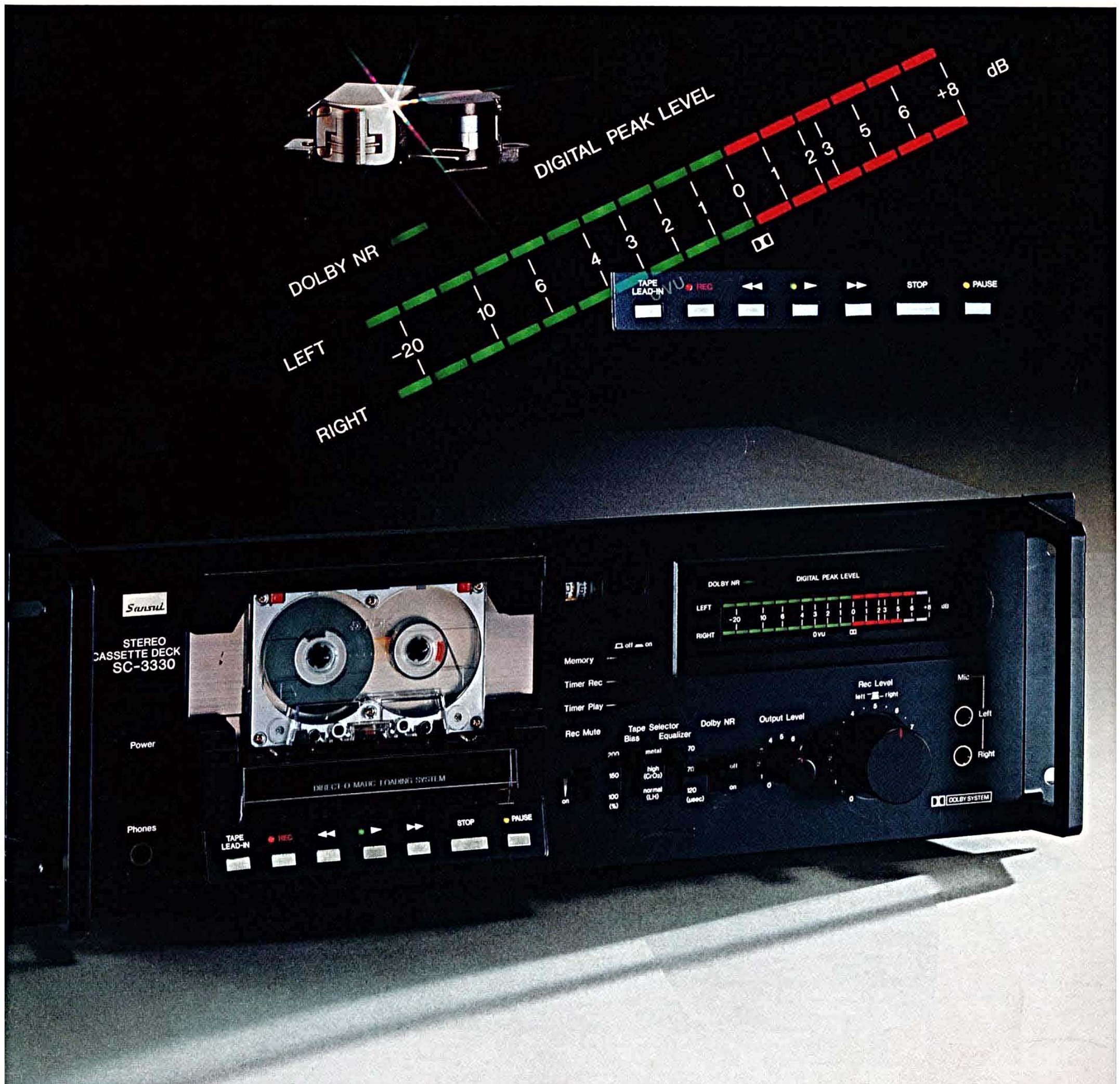


# SC-3330 | Metal-Tape-Capable

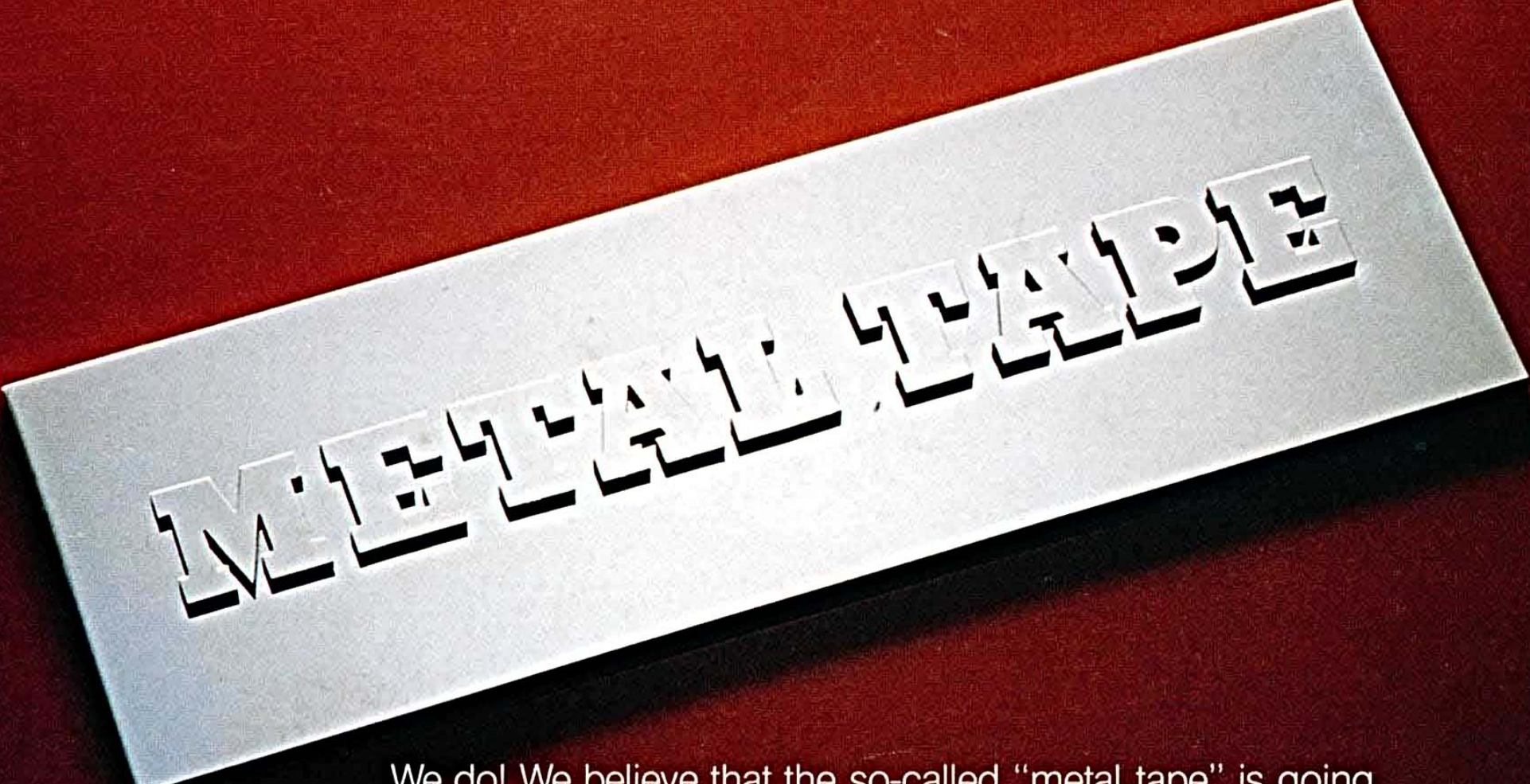
Sansui Metal-Tape-Capable Direct-O-Matic 2-Motor Stereo Cassette Deck with FH REC/PLAY and Double-Gap Erase Heads and Full Logic Control.



Only hi-fi, everything hi-fi.



# DO YOU BELIEVE IN METAL?



METAL TAPE

We do! We believe that the so-called "metal tape" is going to revolutionize hi-fi. It means that every music lover, with a modest investment in the right equipment, can now enjoy superb recording and playback fidelity and pure musical reproduction in his (or her) own home. Because metal tape in the popular and convenient cassette format has all the quality *and more* that in the past has only been offered on expensive, bulky open-reel decks.

Sansui's new line of Direct-O-Matic Stereo Cassette decks are all metal-tape-capable. All, including the feature-packed SC-3330, have our new FH\* REC/PLAY head, and a newly-developed Double-Gap Erase Head, making them eminently compatible with the demands of metal tape, specifically its higher Residual Flux Density (which means it can record and play back more sound information more faithfully) and its higher Coercivity (which means it is devilishly hard to erase without special heads).

Improved electronics, separate drive mechanisms for capstan, and reels, a smooth and dependable two-motor drive system, Full Logic Control, a built-in Dolby NR system and many other advantages are among those you'll want to investigate in the SC-3330.

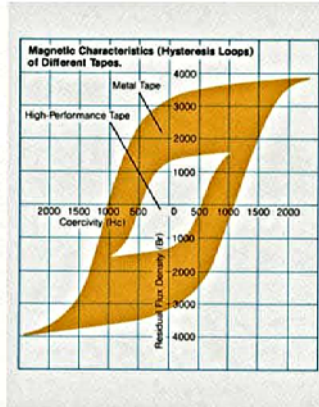
We believe in the new metal tape. And we've even improved our newest decks to offer better performance from ordinary tapes, too. You will become a believer when you hear the performance of this all-new metal-tape-capable deck from Sansui, where it's *all* hi-fi.

\*Sansui's formulation of sendust material.

**At last! A cassette tape with twice the information-storage capacity of conventional types.**

Metal tape uses particles of pure iron as magnetic material to achieve twice the information storage and reproduction capacity of previously-developed "chrome" tape. The magnetic characteristics in relation to cassette tape performance are quite different from conventional tape: Residual Flux Density (Br) is twice that of conventional tape, meaning that the Maximum Output Level (MOL) can be increased enormously by an approximate 10dB in the high frequency range and much higher magnetic storage capacity is realized across the entire frequency range. Frequency range and the dynamic range of the high frequencies have been expanded, and distortion and signal-to-noise ratio have gleaned wide-scale improvement, all due to the higher MOL.

The SC-3330 has a switch with a position for metal tape to allow you to take full advantage of this epoch-making development. Cassette performance as good as open reel, and better, is finally a reality.

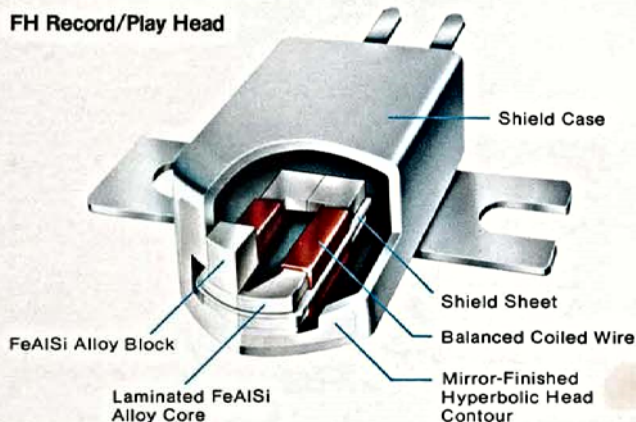


**Ultra-Hard FH: A REC/PLAY head for the full potential of metal tape.**

Sansui uses a new FH alloy to take full advantage of the potentials of metal tape. Conventional heads saturate

when trying to record or play metal tape, making it impossible to realize the superior sound quality metal tape brings to cassettes. Our new head uses a special Ferric Aluminum Silicon (FeAlSi) alloy for extra hardness and a magnetic flux density more than sufficient to withstand the high bias current required by metal tape. And it does it *without* saturating. Linearity is superb right up into the highest frequencies and noise and distortion are inaudible. The low-frequency response is likewise improved, because the surface of the head is mirror-finished to a *hyperbolic* curve to minimize contour effect.

**FH Record/Play Head**

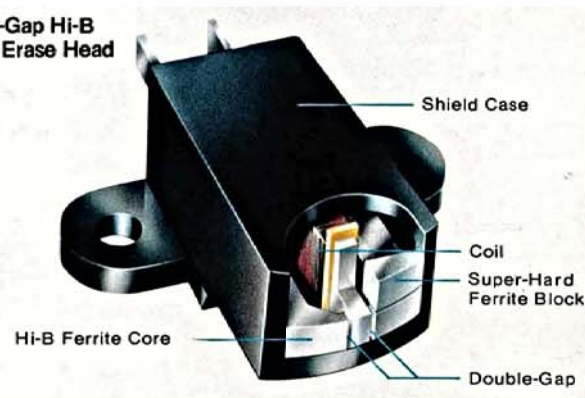


**DOUBLE-GAP ERASE: Reaches the high 70dB erasability needed for metal without strain.**

Since metal tape has a high coercivity (Hc) and a low demagnetization factor, thorough erasure is a thorny problem. Conventional heads cannot withstand the huge bias current required for proper erasure of metal tape. They saturate and overheat before achieving an effective Magnetic Flux Density (erasability).

In the SC-3330, Sansui uses a brilliant new erase head. It has a double gap construction and a new variety of ferrite capable of withstanding a 200% increase in bias current. The double gap construction means that erasure is doubly complete: erasure is, in effect, carried out twice, for a magnificently thorough erasure factor of over 70dB.

**Double-Gap Hi-B Ferrite Erase Head**



**FH alloy to the core for longer life, wider dynamic range.**

The tape contact area of the rec/play head is permeated with magnetic current produced by coils wound around the head's core; musical signals are then recorded on the tape with the magnetic current. Not only does the Sansui head use ultra-hard FH (FeAlSi) alloy across the tape contact area; it uses this superb alloy right into the head's core, in a laminated one-body construction. Magnetic transfer, or magnetic permeability characteristics, are much better than if we had used two or more different materials for the core and the tape contact surface, as do our competitors. Transient response is flawless; even rapid, pulsive signals in the high frequencies are reproduced with unprecedented accuracy.

The advantages don't stop there. Dynamic range is wider (20 to 18kHz); distortion lower; and signal-to-noise ratio higher (69dB). Channel separation is an incredible 45dB (metal tape). And since all surfaces coming into contact with tape are made of the ferric aluminum silicon (FeAlSi) alloy, abrasion is consistently low. All of these advantages contribute to better performance with conventional tape formulae as well, and a longer head life.

**ELECTRONICS: Our high-performance METAL amps for EQ/BIAS are in powerful push-pull configurations for less loss.**

Besides high-performance tape heads, taking full advantage of the benefits of metal tape necessitates bias circuitry and an equalizer amp much more powerful than before. The SC-3300 contains a newly-developed bias oscillation circuit in

push-pull formation, along with a high-performance equalizer amp. Splendid metal tape performance is backed up by lower distortion in the bias frequency itself, a much higher signal-to-noise ratio and a stable supply of current to the heads. The 3-stage direct-coupled equalizer amp provides wide-range amplification of the signal with no loss in signal transfer.

**FULL LOGIC CONTROL: Feather-touch operation, two-motor drive, LSI circuitry and low 0.04% wow/flutter.**

The rotary parts are the most important mechanisms inside a cassette deck. The SC-3330 ensures that the rotary parts function properly by using two DC motors, one exclusively for driving the capstan and the other for fast forward and rewind. Improvement in rotation accuracy is borne out in figures like a low 0.04% wow/flutter rate (WRMS). Feather-touch operation of the buttons is fast and accurate because of the logic control circuitry, contained in a single highly-reliable LSI (Large-Scale IC).

**You can believe the claims! Metal tape actually does increase REC/PLAY fidelity by enormous margins in every measure on Sansui DIRECT-O-MATIC decks.**



**Feather-Touch ELECTRONIC TAPE LEAD-IN improves your recording/playback skills.**

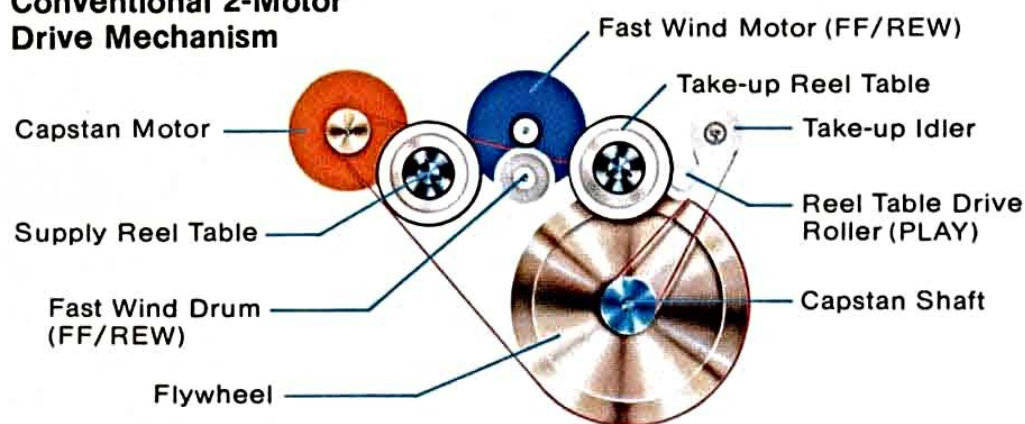
Sansui's original Tape Lead-In device advances your tape past the first 45cm or so where dropouts are likely to occur due to defects in the first portion of the tape. We've improved on our original design by making operation electronic, controlled by a reliable IC.

**Two-Motor, Separate Capstan/Reel Drive Mechanism: Reliable tape transport to reduce wow/flutter to negligible level.**

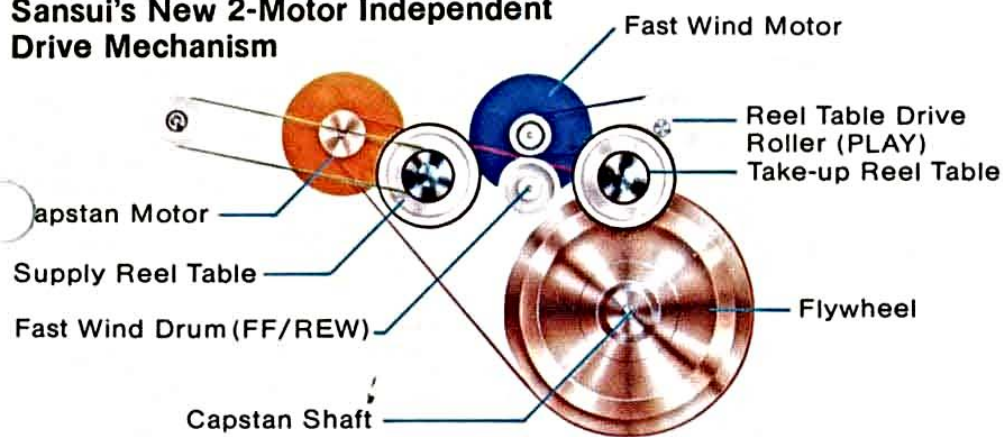
Smooth and even tape speed and optimum head-to-tape contact are assured by three Sansui features. First, we've used our "Roller-Coupled Holdback Tension Mechanism" to take up any slack in tape, while applying backward tension to the supply-reel disc. Second, we've used a separate capstan/reel drive mechanism to eliminate reel drag on the capstan. And last, we've formed an end-of-tape detecting mechanism around a purely electrical circuit highlighting a Hall-effect IC.

By these and other careful measures in the tape transport system, the SC-3330 offers the smooth tape travel required for high-fidelity sound recording and reproduction.

**Conventional 2-Motor Drive Mechanism**



**Sansui's New 2-Motor Independent Drive Mechanism**



**DIRECT-O-MATIC: Sansui's original no-fuss tape mounting system is now imitated by our competitors.**

Sansui's Direct-O-Matic system is a unique way of holding cassettes *without* a moving compartment, and without need for "ejection." Advantages include: better tape handling, easier head and mechanism maintenance, easier viewing of the tape label and of how much tape is left to play. A special clamping system, with two clamps in the bottom section, grips the cassette firmly to ensure correct left/right stereo image and other sound benefits.

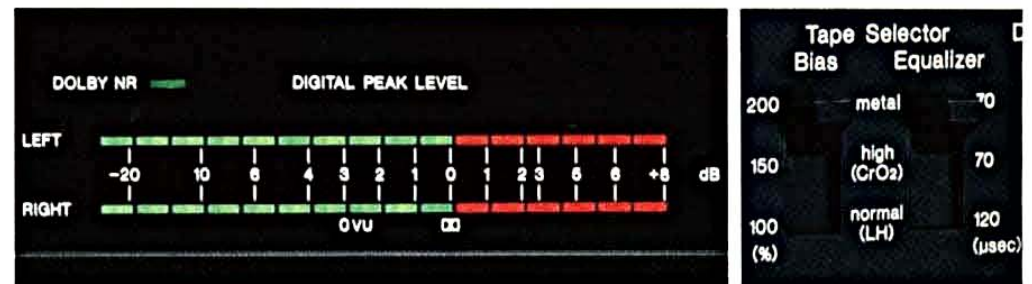
**REC MUTE: Silence is necessary, sometimes.**

Use this feature when you want to "insert" short "blanks" of silence between taped selections. One-touch oper-

ation during recording creates a silent break on your tape without having to readjust input levels. Use it in combination with the PAUSE button for additional convenience.

**DIGITAL BAR-GRAPH PEAK METER: Bright 2-color LEDs in each channel.**

The SC-3330 contains a responsive, two-color combination 16 LED peak-level indicator—one for each channel—to ensure proper level in recording. The wide dynamic-range scales make accurate recording on the new metal tape possible without difficulty; the LEDs respond quickly but fade slowly, making pinpoint level control possible.



**Bias/EQ switches are INDEPENDENT for more versatility. METAL TAPE position on both.**

To get the most out of every tape (metal or otherwise) you must use correct bias and equalization. The SC-3330 features independent bias and equalization switches for metal, "high" (chrome), and "normal" (LH) tape.

**Memory Stop**

Push the Memory button, reset the counter to "000" and operate the deck in PLAY or REC. When playback or recording ends, REWIND the tape: it will automatically stop when the counter reads "999" and you are ready to play the just-played or just-recorded selection again, or to record new material.

**Very carefully planned POWER SUPPLY ends mutual interference and stabilizes performance.**

Since REC/PLAY amp and the logic circuit are powered from separate coil windings, mutual interference is minimized. A stable current supply is further ensured by separate left and right power supplies for the stabilizing current applied to the amp circuitry.

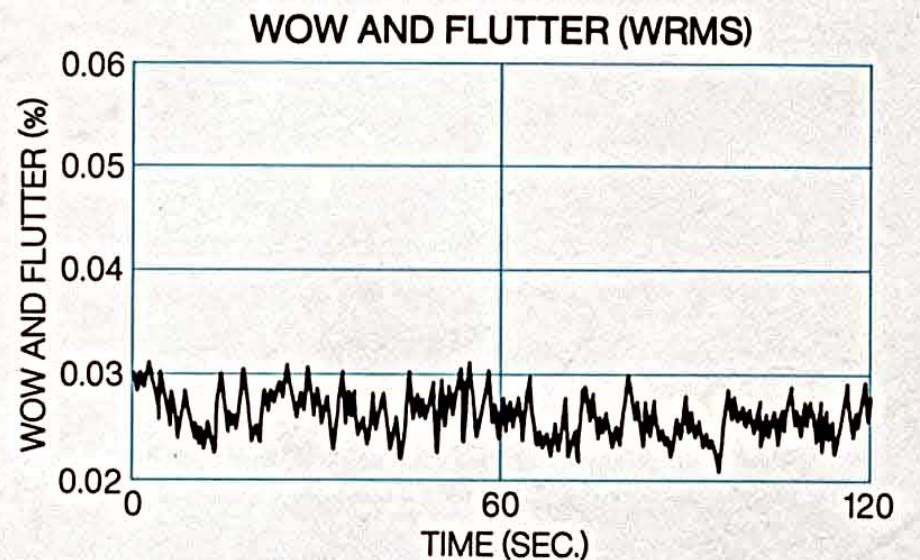
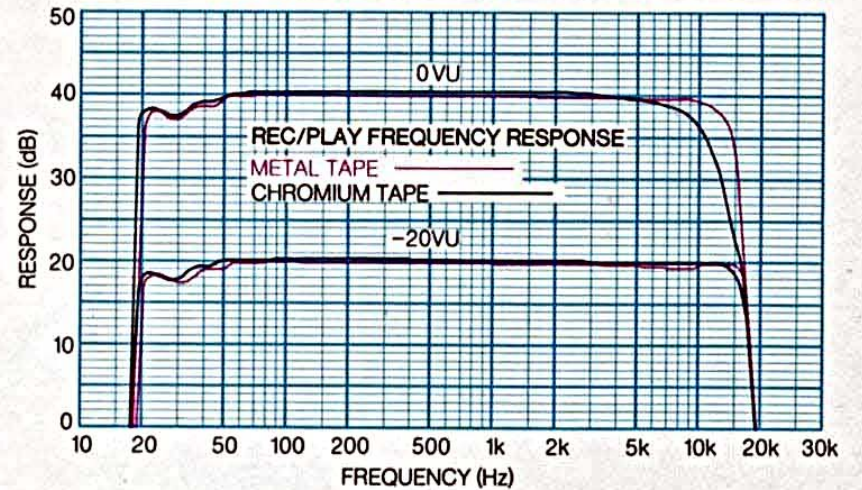
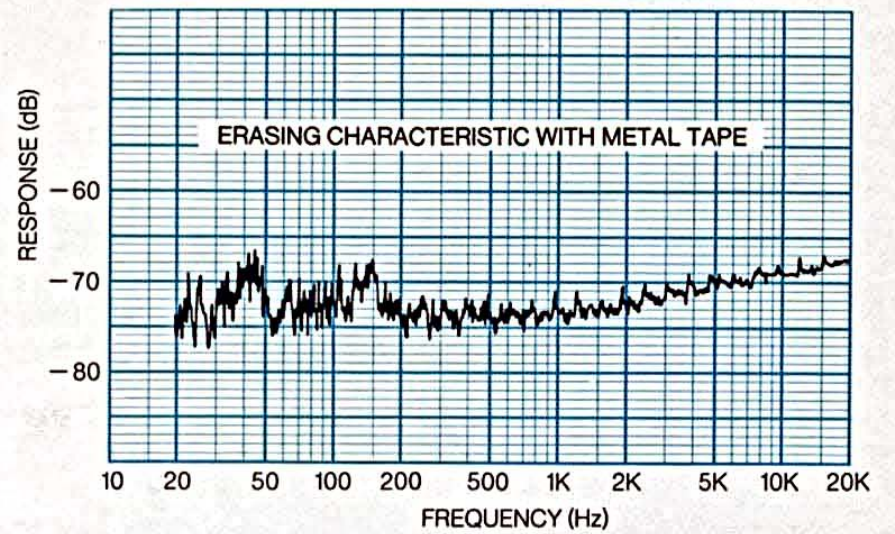
**Other Sansui Hi-Fi Features.**

- BUILT-IN DOLBY NOISE REDUCTION SYSTEM\* in a dependable IC reduces tape hiss and improves signal-to-noise ratio by 10dB or more above 5kHz.
- TIMER RECORDING/PLAY capability allows automatic, unattended start of recording or playback with connected timer such as Sansui's AT-15L by one-touch push buttons.
- CASSETTE AND COUNTER ILLUMINATION allows easier viewing of cassette tape and counter. Cassettes are lit from behind.
- SEPARATE L/R MIC INPUTS assure the best possible results from mics of any quality.
- FULL-AUTO SHUTOFF and QUICK CHANGE MODE FACILITY.
- HEADPHONE JACK, backed up by a pushpull drive circuit, delivers low-distortion, high-output. Your headphones can be used as a hi-fi monitor.
- REC/OUTPUT Level Controls.

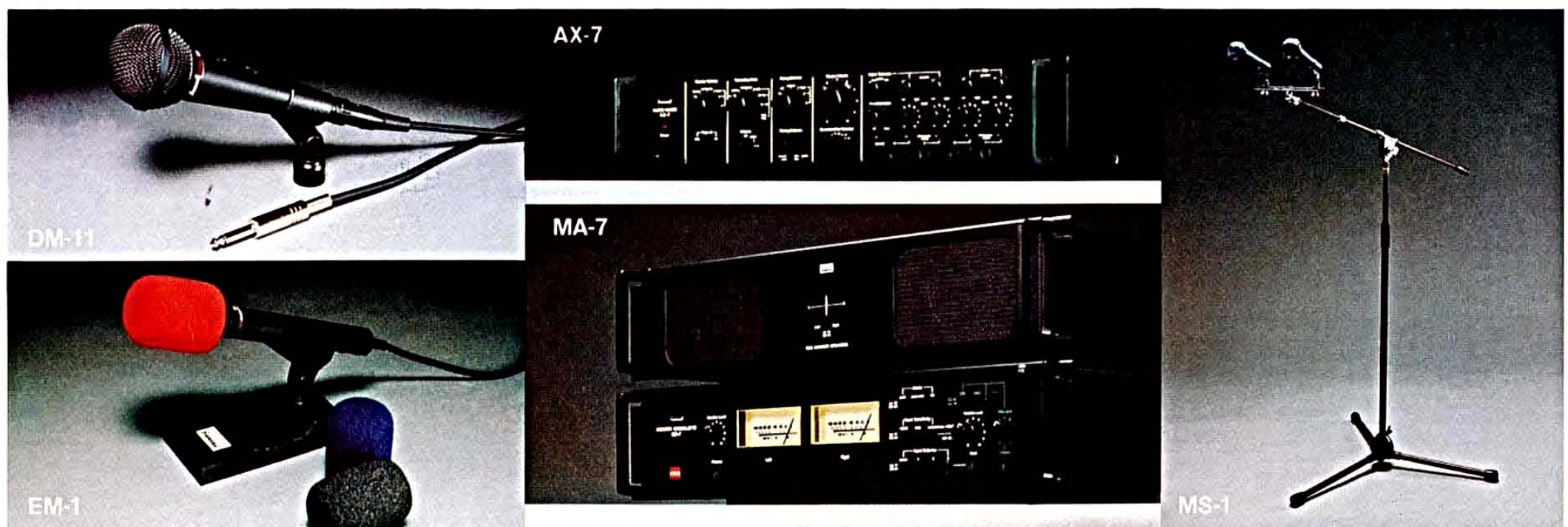
\*Dolby is a trademark of Dolby Laboratories.

# Specifications

|  |   |
|--|---|
| <b>TRACK</b>                                       | 4-Track (2-Channel) Record/Playback   |
| <b>TAPE SPEED</b>                                  | 4.8cm/sec. (1 7/8 ips)  |
| <b>HEADS</b>                                       | REC/PB (FH Head)<br>Erase (HiB Double-Gap Ferrite)  |
| <b>MOTOR</b>                                       | Electronically Controlled DC Motor (Capstan)<br>Electronically Controlled DC Motor (Reels)  |
| <b>WOW &amp; FLUTTER</b>                           | within 0.04% (WRMS)   |
| <b>TAPE SPEED ACCURACY</b>                         | within $\pm 1.5\%$  |
| <b>FAST WIND TIME</b>                              | Approximately 70 seconds (C-60)   |
| <b>FREQUENCY RESPONSE (RECORD/PLAYBACK)</b>        |   |
| METAL TAPE (-20VU)                                 | 20-18,000Hz, 20-16,000Hz $\pm 3$ dB   |
| METAL TAPE (0VU)                                   | 20-13,000Hz $\pm 3$ dB  |
| CHROMIUM TAPE (-20VU)                              | 20-17,000Hz, 20-16,000Hz $\pm 3$ dB   |
| CHROMIUM TAPE (0VU)                                | 20-9,000Hz $\pm 3$ dB   |
| NORMAL TAPE  | 20-16,000Hz, 20-15,000Hz $\pm 3$ dB   |
| <b>SIGNAL TO NOISE RATIO (RECORD/PLAYBACK)</b>     |   |
| METAL  | 59dB (without DOLBY)<br>(Weighted, at 3% THD, 1kHz)<br>69dB (with DOLBY)<br>(Above 5kHz, at 3% THD)   |
| <b>ERASURE FACTOR</b>                              |   |
| METAL TAPE   | more than 70dB  |
| <b>INPUT SENSITIVITY AND IMPEDANCE (0VU, 1kHz)</b> |   |
| MIC (LEFT, RIGHT)                                  | 0.3mV, 200-5k ohms  |
| LINE   | 70mV, 100k ohms   |
| <b>OUTPUT LEVEL (0dB=+3VU=200pwb/mm)</b>           |   |
| LINE   | 390mV (output control max. imp. 47k ohms)   |
| PHONES   | 65mV/8 ohms   |
| <b>BIAS FREQUENCY</b>                              | 85kHz   |
| <b>SPECIAL FEATURES</b>                            | Direct-O-Matic Loading, 2 Motors, IC Logic Circuit for Two Motor Control and Feather Touch Operate Buttons, Electronic Tape Lead-In, Separate Transport Mechanism, Roller Back Tension Mechanism, Timer Record/Play, Illuminated Memory Tape Counter, Rec Mute, Bias/Equalizer Selector Switches, 32 LED Peak Level Meter |
| <b>POWER REQUIREMENTS</b>                          |   |
| VOLTAGE  | 100, 120, 220, 240V 50/60Hz   |
| CONSUMPTION  | 26 watts (Rated)  |
| <b>SEMICONDUCTORS</b>                              | 60 Transistors; 9 ICs; 41 Diodes; 36 LEDs   |
| <b>DIMENSIONS</b>                                  | 430mm (16 1/8") W<br>160mm (6 3/8") H<br>304mm (12") D  |
| with Rack-mounting Adaptors                        | 482mm (19") W<br>160mm (6 3/8") H<br>316mm (12 3/8") D  |
| <b>WEIGHT</b>                                      |   |
| with Rack-mounting Adaptors                        | 7.9kg (17.4 lbs.) Net<br>8.2kg (18.1 lbs.) Net<br>9.5kg (20.9 lbs.) Packed  |



Design and specifications subject to change without notice for improvements.



**DM-11** Unidirectional Dynamic Microphone

**EM-1** Unidirectional Electret Condenser Microphone

**AX-7** "Audio Console" Home Disco Mixer Control Amplifier

**MA-7** "Monitor Console" with Cue Monitor Speakers

**MS-1** Microphone Boom Stand with Arm



SANSUI ELECTRIC CO., LTD.  
14-1 IZUMI 2-CHOME, SUGINAMI-KU, TOKYO 168 JAPAN/TELEPHONE: 323-1111/TELEX 232-2076

SANSUI ELECTRONICS CORPORATION  
1250 VALLEY BROOK AVENUE, LYNDHURST, NEW JERSEY 07071, U.S.A./TELEX: NEW JERSEY 422633 SEC UI

SANSUI AUDIO EUROPE N.V.  
NORTH TRADE BUILDING, NOORDERLAAN 133-BUS 1, 2030 ANTWERP, BELGIUM/TELEX: 33538