

SANSUI 7000



AM/FM MULTIPLEX STEREO TUNER AMPLIFIER Now, from Japan's most respected audio-only specialist, comes a stereo receiver of unprecedented musical magnitude—the all-new 260 watt Sansui 7000 AM/FM Multiplex Stereo Tuner Amplifier. Imagine the impact! But this awesome power output is only the beginning of the 7000 story. For while specifically designed to fill the need for a receiver in the big upper bracket power range, the 7000 is nonetheless a unit of surpassing completeness and versatility in every other respect. Nothing has been neglected. Endowed with a wide, wide 20 to 30,000Hz power bandwidth, it suppresses distortion of any kind to less than 0.4%. Sansui also went out of its way to make the 7000 particularly appealing to party people, giving

it a special microphone mixing circuit for fun-sharing disc jockey improvisation. Plus it will connect up to three sets of speaker system and permit the simultaneous use of a reel-to-reel tape recorder and a cassette tape deck. The 7000 also has all of the painstaking craftsmanship and advanced engineering that you've come to expect from Sansui, and is housed in a luxurious walnut cabinet. In the great Sansui tradition, the 7000 is a solid, superior piece of stereo equipment. No gimmicks, no gadgetry. Just a fine stereo receiver you can proudly use and display for years to come. The 7000. From Sansui. The audio specialists who know you best.

Sansui

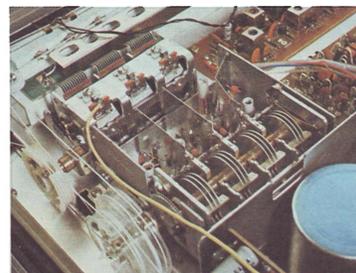


THE 7000 IN ITS RIGHTFUL PLACE. The magnificent 260 watt 7000 would be a credit to any quality stereo setup, but it is at its brilliant best when teamed with the rest of Sansui's top-of-the-line components as pictured above. These are the 80 watt 5-way 6-speaker SP-3000 speaker systems, the 2-speed Automanual SR-2050C turntable, the 3-motor 4-head SD-7000 stereo tape deck, the SS-20 stereo headphone set and the RA-500 Reverberation Amplifier. IC and FET-equipped, the distinguished 7000 features a 20 to 30,000Hz power bandwidth, limits distortion to less than 0.4%, handles up to three sets of speaker systems and permits a reel-to-reel tape recorder and a cassette tape deck to be used at the same time. Plus it's got a special microphone mixing circuit that lets everybody get in on the act, bringing parties and get-togethers alive as they've never come alive before.

TUNER SECTION

1 MOS FET FM Frontend:

A pair of dual-gated MOS (metal oxide semiconductor) FETs that do not distort even the highest amplitude signals combine with a frequency-linear variable capacitor for substantially improved intermodulation distortion and image ratio characteristics. Exceptional sensitivity of 1.8 μ V (IHF) is also achieved, permitting the tuner to pull in hi-fi stereo broadcasts even in fringe signal areas.



2 FM IF Amplifier:

The IF amplifier, the heart of the FM tuner, combines a 6-element 3-stage ceramic filter amplifier and a high-density IC limiter that is triggered by an antenna input as faint as 1.5 μ V. This affords a drastically improved selectivity figure of 60dB and a capture ratio of 1.5dB for greatly improved distortion, separation and phase characteristics in the treble range during FM stereo reception.

3 Stable FM Multiplex Circuit:

The 7000's elaborate FM multiplex circuit design employs an adjustment-free molded coil that does not deteriorate with the passage of time, along with no less than 16 transistors. It assures exceptional reliability and stability for pleasant, noise-free FM stereo reception at all times.

4 Leak-proof Filters:

To avoid any leakage of the FM stereo pilot signal into the output signal, which could result in beat interference with audio signals, intermodulation distortion, or beat interference with the recording bias frequency, the 7000 employs a 2-stage SCA filter and a sharp-cutting LC carrier leak filter. Which means beat interference and intermodulation distortion due to carrier leakage are now a thing of the past.

5 FM Muting Switch and Level Control:

Disturbing loud noise is usually heard between stations when tuning in on an FM station. The 7000 completely cancels out such annoyance with its noise-lock system muting circuit, for which a switch is provided on the front panel. In addition, in order to obtain optimum muting both in strong and weak signal areas, a muting level control is provided on the rear panel.

6 Wide Dial, FM Linear Scale:

The use of a high-precision, frequency-linear 4-gang variable capacitor in the FM frontend has permitted the Sansui engineers to equip the 7000 with an extra wide dial, with an FM band linear dial scale evenly graduated in 250kHz steps from 88MHz to 108MHz. The dial incorporates a dramatic smoked glass blackout dial plate and an easy-to-read self-lighting dial pointer.



7 Two Large Tuning Meters:

Two large meters aid in pinpointing FM stations with extreme accuracy. One, a signal strength meter, measures the strength of the input signal, the other, a center tuning meter, permits adjusting the tuner at the center of the discriminator where distortion is minimal.

8 300 Ω and 75 Ω Antenna Terminals:

In addition to regular 300 Ω balanced antenna input terminals, the 7000, like any other quality Sansui tuner amplifier, is complete with 75 Ω unbalanced antenna input terminals for connecting a coaxial cable antenna, ensuring quality reception in fringe signal or noise-filled areas.

9 High-sensitivity Selectivity AM Tuner:

The AM tuner of the 7000 boasts high sensitivity and selectivity, thanks to the adoption of an AM frontend combining a one-stage RF amplifier and a 3-gang variable capacitor together with a ceramic filter IF amplifier. The high sensitivity is due in part to the adoption of a large ferrite bar antenna. Further, the antenna input circuit adopts a high impedance design to completely eliminate the possibility of interference by adjacent stations.

10 Unique Pantograph AM Ferrite Bar Antenna:

The large ferrite bar antenna for AM reception, adopting Sansui's unique pantograph design, can be adjusted freely in any direction, and is easy to handle and store. The antenna folds into the rear panel for trouble-free moving.



11 Smooth Tuning Mechanism:

A unique Sansui-designed tuning dial mechanism and a large flywheel combine to make tuning smoother than ever.

PREAMPLIFIER SECTION

12 3-stage Direct-coupled Equalizer Amplifier:

The phono equalizer circuit, so critical to quality tonal reproduction, adopts a 3-stage direct-coupled E-E (emitter to emitter) negative feedback design, utilizing three transistors in the order of NPN-PNP-NPN. This design permits complete freedom in selecting the emitter voltage, so Sansui engineers have been able to set the operating point of the amplifier at an optimum level. The design not only utilizes a PNP transistor, but skilfully combines AC and DC negative feedback to achieve an ideal signal-to-noise ratio, distortion factor, dynamic range and stability.



13 2-stage Negative Feedback Control Amplifier:

The elaborate two-stage negative feedback control amplifier drives the tone control circuit with a minimum of distortion. The actual tone controls, of a low-distortion negative feedback type, are provided with 2dB click stops to permit accurate matching of the tonal quality of reproduced sound to the program source or room acoustics. Adopting a double-construction friction design, they permit adjustment of each channel separately.

14 Connects Two Tape Decks:

The 7000 features both pin jack terminals and DIN sockets for connecting two tape decks and permitting simultaneous recording into both. A tape monitor switch permits playback of a recorded tape or monitoring sound as it is recorded, and a front panel 3-pin phone type dubbing jack permits dubbing from one tape deck to the other.

POWER AMPLIFIER SECTION

17 Separable Pre- and Power Amplifier Sections:

To permit adopting the 7000 into a more sophisticated electronic crossover stereo system, its preamplifier and power amplifier sections can be separated simply by unplugging the rear panel jumper connectors. The preamplifier output circuit adopts an emitter follower, low impedance design, and is free from the possibility of hum noise or the attenuation of treble notes. The mixture of microphone and other program sources can also be recorded from this circuit into a tape recorder.

18 Awesome 260 Watt Music Power Output:

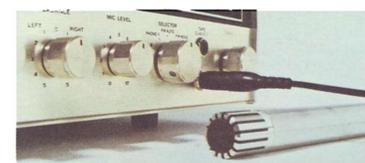
The power amplifier in the 7000 boasts super big performance capabilities, such as music power of 260 watts at 4 Ω and 190 watts at 8 Ω , continuous power of 100 watts per channel at 4 Ω and 70 watts per channel at 8 Ω , distortion factor below 0.4%, and power bandwidth of from 20 to 30,000Hz. Reproduced sound is free from distortion from the faintest level to the maximum output level.

19 Power Limiter Circuit:

The 7000's big output could damage small input speaker systems if the volume control were handled carelessly. To eliminate such possibility, the tuner amplifier is equipped with a power limiter circuit that cuts the power output to half the maximum (i.e., to 120 watts at 4 Ω in music power and 35 watts per channel at 8 Ω in continuous power).

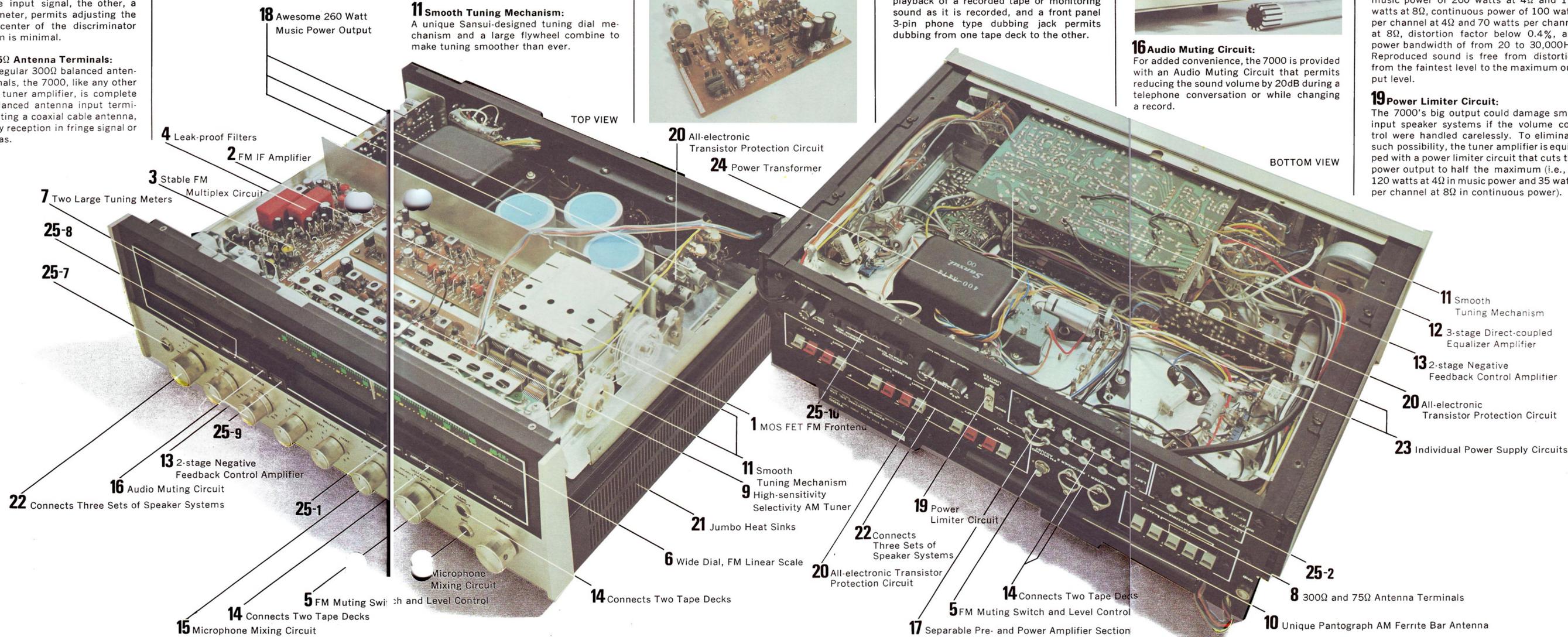
15 Microphone Mixing Circuit:

Not only is the 7000 provided with a phone type microphone jack on its front panel, but its microphone input circuit is designed so that the signals from the microphone are mixed with other input signals and come out in the center of the two speaker systems. The volume of sound from the microphone is independently adjustable for disc jockeying and other purposes, and the resultant mixture can be recorded from the preamplifier output terminals. The 7000 is also complete with a high-performance dynamic microphone with a 10-foot long cord.



16 Audio Muting Circuit:

For added convenience, the 7000 is provided with an Audio Muting Circuit that permits reducing the sound volume by 20dB during a telephone conversation or while changing a record.



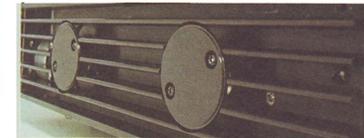
20 All-electronic Transistor Protection Circuit:

Protection of the power transistors is complete, not only because the 7000 exclusively utilizes heat-resistant silicon transistors, but because it incorporates an ideal temperature compensation circuit and large heat sinks. In addition, the power transistors are fully protected from DC and overcurrent by an all-electronic, quick-response protection circuit of 5 transistors and an SCR (silicon controlled rectifier), as well as by a pair of quick-acting fuses.



21 Jumbo Heat Sinks:

The big power output capability of the 7000 is insured under any circumstance thanks to the incorporation of a complete temperature compensation circuit and jumbo heat sinks.



22 Connects Three Sets of Speaker Systems:

The 7000 connects up to three sets of speaker systems, and each individual set or combination of two sets can be connected on the front-panel 5-position Speaker Selector.

OTHER FEATURES

23 Individual Power Supply Circuits:

The tuner, preamplifier and power amplifier sections are all equipped with a separate constant-voltage, stabilized power supply circuit. That of the power amplifier section is equipped with a ripple filter and a special circuit to prevent pop noise when power is turned on. Thus power of optimum level is supplied to each section with exceptional stability.

24 Power Transformer:

Sansui's intimate knowledge and long experience in building transformers is reflected in a design featuring a copper short ring within and a humproof band on the outside.

25 Complete System of Accessory Circuits:

- 1) Two mode switches—one for STEREO/MONO, and the other for NORMAL/REVERSE.
- 2) Two phono input circuits.
- 3) Fool-proof one-touch terminals for connecting antennas and speaker systems.
- 4) Program source indicators.
- 5) FM stereo indicator.
- 6) Walnut cabinetry.
- 7) Headphone jack.
- 8) NF type low- and high-cut filters.
- 9) Loudness Control.
- 10) Two AC outlets.



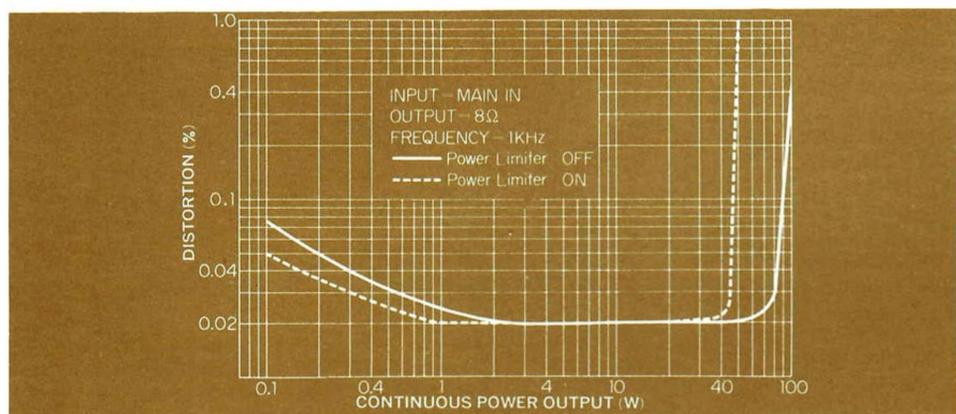
SPECIFICATIONS

Power Amplifier Section

POWER OUTPUT

| | Power Limiter ON | |
|-------------------|------------------|---------------------|
| MUSIC POWER (IHF) | 260W | 120W (at 4Ω load) |
| | 190W | 96W (at 8Ω load) |
| CONTINUOUS POWER | 100/100W | 50/50W (at 4Ω load) |
| | 70/70W | 35/35W (at 8Ω load) |

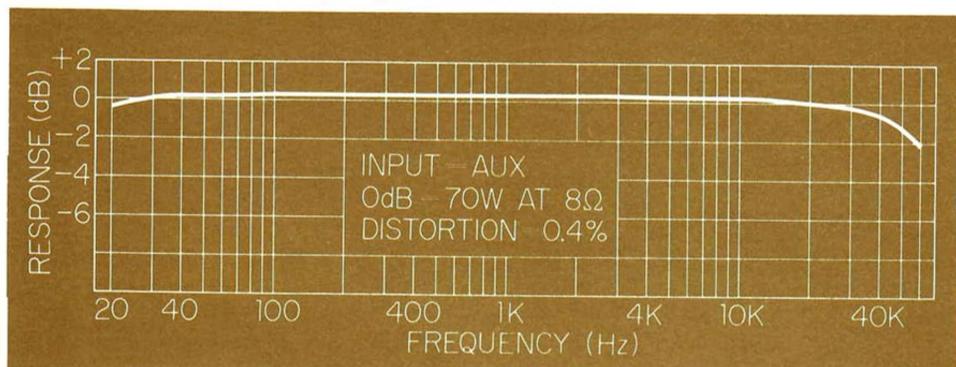
TOTAL HARMONIC DISTORTION less than 0.4% at rated output



INTERMODULATION DISTORTION less than 0.4% at rated output

(60Hz: 7,000Hz=4:1 SMPTE method)

POWER BANDWIDTH (IHF) 20-30,000Hz



FREQUENCY RESPONSE (at normal listening level)
20-50,000Hz +0dB -1dB

CHANNEL SEPARATION (at rated output, 1,000Hz)

better than 60dB

HUM AND NOISE (IHF) better than 90dB

INPUT SENSITIVITY (for rated output, 1,000Hz) 0.8V

INPUT IMPEDANCE 100kΩ

LOAD IMPEDANCE 4-16Ω

DAMPING FACTOR 30 at 8Ω load

Preamplifier Section

OUTPUT VOLTAGE

MAXIMUM OUTPUT VOLTAGE 1.6V

RATED OUTPUT VOLTAGE 0.8V

TOTAL HARMONIC DISTORTION less than 0.1% at rated output voltage

FREQUENCY RESPONSE (AUX) 20-30,000Hz ±1dB

CHANNEL SEPARATION (at rated output, 1,000Hz)

PHONO better than 50dB at closed circuit

AUX better than 50dB at 10kΩ load

HUM AND NOISE (IHF)

PHONO better than 70dB

AUX better than 80dB

INPUT SENSITIVITY (at rated output, 1,000Hz)

PHONO-1 2mV (50kΩ)

PHONO-2 2mV (50kΩ)

MIC 4mV (10kΩ)

AUX 200mV (50kΩ)

TAPE MON (Pin) 200mV (50kΩ)

TAPE RECORDER (DIN) 200mV (50kΩ)

RECORDING OUTPUT (at rated input, 1,000Hz)

TAPE REC (Pin) 200mV

TAPE RECORDER (DIN) 30mV

EQUALIZER PHONO

TONE CONTROLS

BASS

RIAA NF type

±10dB at 100Hz (2dB step),

±14dB at 20Hz

±10dB at 10,000Hz (2dB step)

+8dB at 50Hz +3dB at 10,000Hz

(Volume Control at -30dB)

TREBLE

LOUDNESS CONTROL

SWITCHES

SELECTOR

PHONO-2/PHONO-1/FM AUTO/FM

MONO/AM/AUX

SOURCE/PLAYBACK

STEREO/MONO

NORMAL/REVERSE

-10dB at 50Hz

-10dB at 10,000Hz

OFF/SYSTEM-A/SYSTEM-B/

SYSTEM-C/SYSTEM-A+B/

SYSTEM-A+C

AUDIO MUTING

POWER LIMITER

NORMAL, -20dB

260W/120W 2 steps (Music power)

Tuner Section

FM:

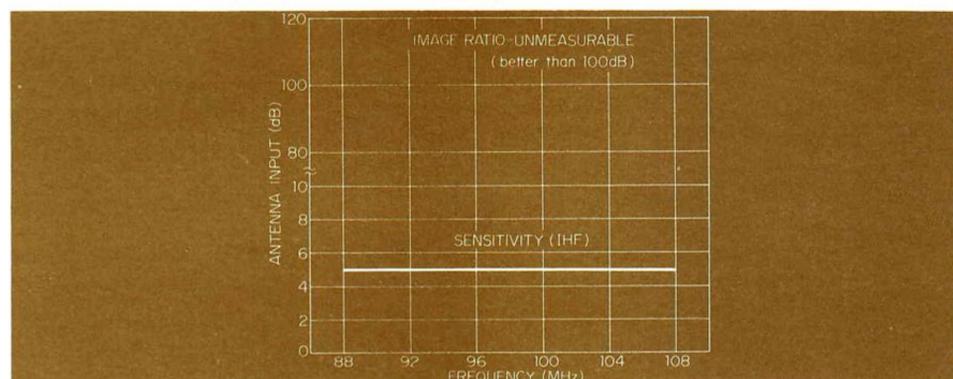
TUNING RANGE

88-108MHz

SENSITIVITY (20dB quieting)
(IHF)

1.4μV

1.8μV



TOTAL HARMONIC DISTORTION less than 0.5% (MONO)

0.8% (STEREO)

SIGNAL TO NOISE RATIO

better than 65dB

SELECTIVITY

better than 60dB

CAPTURE RATIO (IHF)

1.5dB

IMAGE FREQUENCY REJECTION better than 100dB

IF REJECTION

better than 100dB

SPURIOUS RESPONSE REJECTION better than 100dB

FM STEREO SEPARATION better than 35dB at 1,000Hz

SPURIOUS RADIATION

less than 34dB

ANTENNA INPUT IMPEDANCE 300Ω balanced/75Ω unbalanced

CONTROL

FM Muting Level (rear panel)

SWITCH

FM MUTING

ON/OFF

AM:

TUNING RANGE

535-1,605kHz

SENSITIVITY (IHF)

10μV at 1,000kHz (terminal)

200μV/m at 1,000kHz (bar antenna)

IMAGE FREQUENCY REJECTION better than 100dB at 1,000kHz

IF REJECTION

better than 100dB at 1,000kHz

SELECTIVITY

better than 25dB at 1,000kHz

OTHER SPECIAL FEATURES

Signal Strength Meter / FM Tuning Meter / Heavy Fly-wheel Tuning

Knob / FM Stereo/Mono Automatic Switching / FM SCA Filter / AM

Ferrite Bar Antenna

General

SEMICONDUCTORS

Transistors-72; FET-2; IC-1; Diodes-24; Zener Diodes-3; SCR-1;

ACCESSORY

Dynamic Microphone

(Impedance 10kΩ)

POWER REQUIREMENTS

POWER VOLTAGE

100/110/117/127/220/230/240/

250V, 50/60Hz

POWER CONSUMPTION

450VA (max. signal)

DIMENSIONS

140mm(5½")H x 444mm(17½")W x 327mm(12⅞")D

WEIGHT (NET)

15kg (33 lbs.)