

AU-D7 TU-S7

Sansui Linear-A DD/DC Integrated Amplifier ■ Four Tone Controls

■ LED Peak Power Display

Sansui Digital Quartz PLL Synthesizer Tuner ■ 12 Preset Stations ■ Auto Tuning



TU-S7s



AU-D7s

An Audio Visual Delight

Sansui has done it again. Once more we've combined technology, contemporary art and human engineering in high fidelity components. Only after our Sansui engineers had perfected circuit designs worthy of the finest music was the project turned over to our competent design team—specialists all—which conceived the convenience features, control layout and the stunning (yet useful) display. The result?—just take a look at the matched AU-D7 integrated amplifier and the TU-S7 tuner. Better yet, have a long listen.

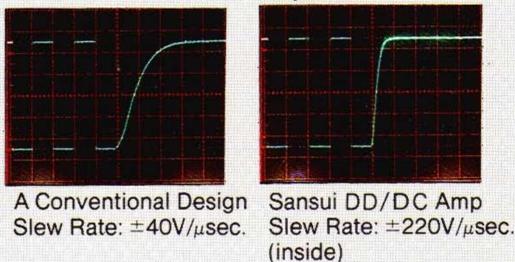


AU-D7 Linear-A DD/DC Integrated Amplifier: Designed for the Perfectionist

Sansui's DD/DC Driver Circuit: High speed and zero TIM

For the last decade, Sansui has been at the forefront in amplifier technology — technology designed to eliminate music marring distortion. That's just what the DD/DC (Diamond Differential DC) driver has accomplished with a kind of distortion that is particularly annoying during the reproduction of actual music (as opposed to static test signals): TIM or Transient Intermodulation distortion. It's almost immeasurable in the AU-D7 thanks to a slew rate and rise time twice that of conventional amps, $\pm 220V/\mu\text{sec}$. and $0.8\mu\text{sec}$. respectively.

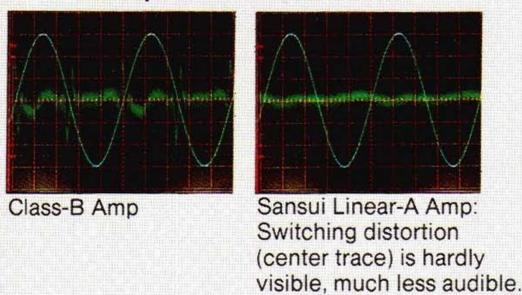
Slew Rate Response



Linear-A Output Circuit: Switching distortion bows out

Until recently about 99% of the power amps on the market have been of the Class-B variety, employing output devices which switch off when not amplifying, thus saving power and minimizing heat generation.

Output/Distortion Waveforms



Class-B amps, however, have a drawback: in the course of switching on and off, their transistors give rise to large amounts of switching and crossover distortion which "veil" reproduction, robbing it of its immediacy and transparency.

The alternative to Class-B is Class-A, which doesn't switch its transistors — they're always on. The tradeoff is efficiency. Class-A amps eat up so much power that they are impractical except in low-powered configurations.

Enter the Sansui Linear-A output circuit. It combines the advantages of Class-A and Class-B without any of the disadvantages. It can't generate switching or crossover distortion because, thanks to

a variable bias current, the output devices never switch off. And, because the bias current varies, Linear-A is efficient, in fact, nearly as efficient as Class-B.

By combining DD/DC and Linear-A designs, Sansui has produced a power amp that is almost immune to distortion. Reproduction is as close to "live" as you'll hear from any amp today.

Two-Amp Construction and Well-Regulated Power Supply: Reliably straight-forward

The AU-D7 utilizes only two basic amps: a high-gain phono equalizer and the power amp. There's no need for a separate pre-preamp when you elect to use an MC (Moving Coil) phono cartridge; the phono equalizer has adjustable gain to accommodate either an MM (Moving Magnet) or MC cartridge.

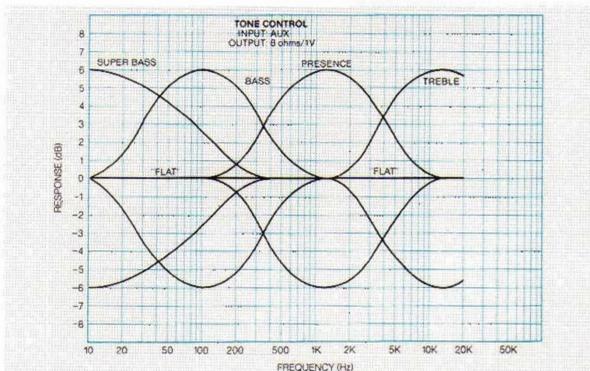
The massive, well-regulated power supply of the AU-D7 allows the power amp to respond to even the most demanding dynamic passages with ease.

The AU-D7 produces 80 watts per channel, min. RMS, both channels driven, into 8 ohms from 20 to 20,000Hz with no more than 0.02% total harmonic distortion.

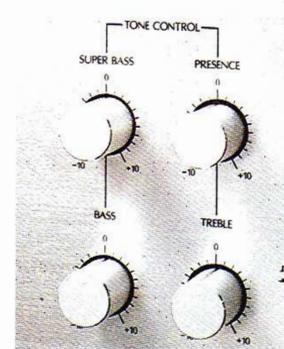
Four Tone Controls: Unusual precision

In addition to the standard bass and treble tone controls, Sansui has controls for midrange ("presence") and "super bass." The most innovative feature of the new tone controls, however, is that their control ranges *overlap*, thus greatly increasing versatility and precision. The four controls are:

- **TREBLE:** Centered at 15kHz, it provides adjustment of high frequencies.
- **PRESENCE:** Centered at 1.2kHz, it provides the subtle control you need for vocals and ambients.
- **BASS:** Similar to standard bass controls, centered at 100Hz.
- **SUPER BASS:** Centered at 10Hz. With its upper range overlapping the BASS



control, it helps intensify bass response in bass-weak compact speaker systems.



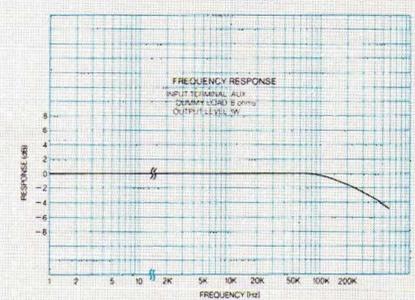
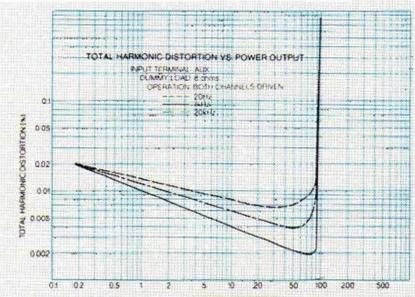
At its minimum position, it functions as a subsonic filter to eliminate harmful signals created by record warps and motor rumble.

Illuminated Display: Quick status identification

The front panel features a vertically aligned peak power display consisting of illuminated calibrations and two rows of 12 ultra-responsive LEDs for absolutely precise indication. A useful switch ups the sensitivity of the display 10 times for low-level listening. If desired, you may also switch off the display entirely.

Other Features

- **REC SELECTOR** adds more versatility to your recording and dubbing. For instance, you can listen to records while recording off the air.
- **DIRECT ACCESS INPUT SELECTORS** let you instantly choose the source you want to hear. Positions provided are PHONO-MM, PHONO-MC, TUNER, AUX, TAPE PLAY-1 and TAPE PLAY-2.
- **MODE SELECTOR** offers a full complement of five positions: Normal Stereo, Reverse (left to right, right to left), L + R (mono), L (left only from both speakers) and R (right only).
- **SPEAKER SWITCHES (A, B)** let you connect and drive two pairs of speaker systems at the same time. Selection is activated by relays located at the rear panel of the amplifier; sound quality is not degraded by lengthy connecting wires.

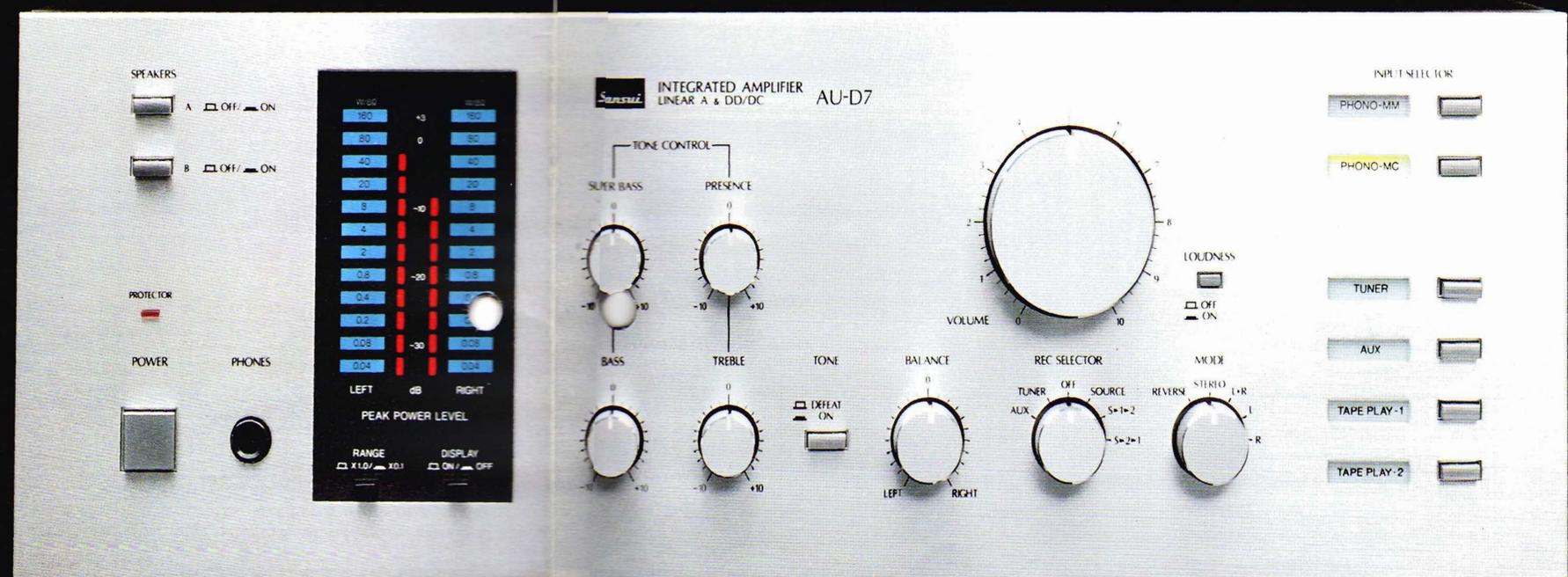


The Rackable, Stackable Choices from Sansui

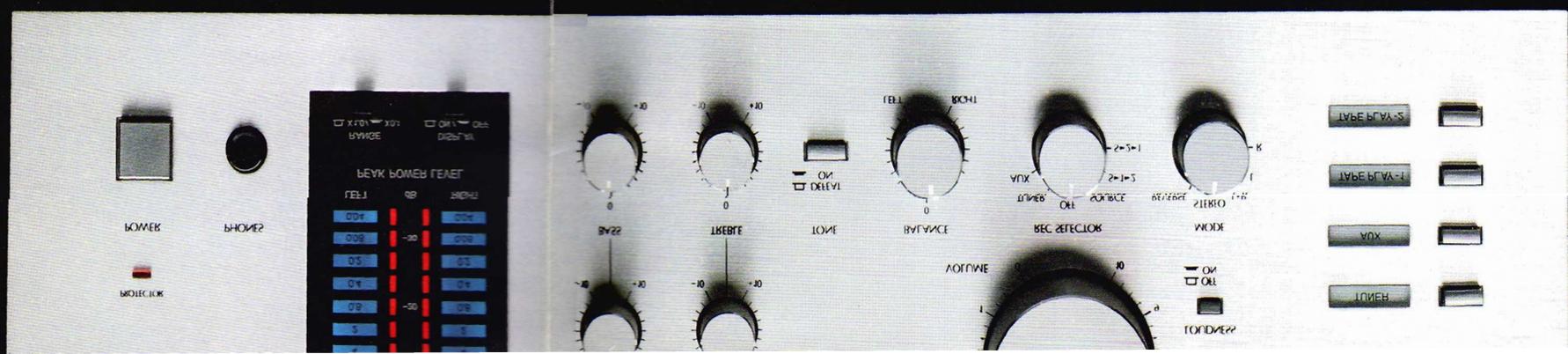
For rack mounting, choose the AU-D7 and TU-S7 in popular Sansui black. For stacking, its either silver hairline finish or black.



TU-S7s



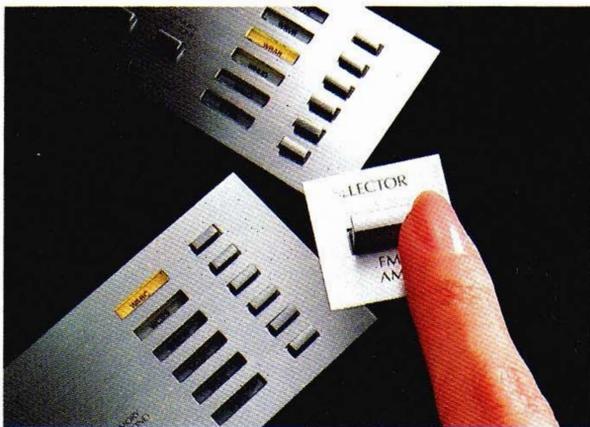
AU-D7s



TU-S7 Digital Quartz-PLL Synthesizer Tuner: 12 Preset Stations, Touch Tuning Convenience with Outstanding Specs

Twelve Preset Stations: One touch recall, instant identification

You can preset up to six FM and six AM stations and commit them to the memory of the TU-S7. All you have to do to tune in a desired station is touch the appropriate button. Stations are easily identified by the illuminated ID panel next to each of the six preset buttons. With the decal set included with the TU-S7, the call letters (or frequency) of each preset station may be entered. When you switch bands between FM and AM, the ID panel changes also so that all 12 stations may be identified.



Auto/Manual Tuning: Touch convenience

The light-touch UP/DOWN Tuning Buttons allow you to tune stations automatically or manually.

Automatic Tuning: A firm, sustained push of either the UP or DOWN button and the tuner begins scanning the tuning band (FM or AM) until a station is located. The SEARCH indicator lights while scanning and turns off when a station is found and tuned in.

Stepped Manual Tuning: A light touch of either button activates frequency scanning in predetermined steps, 100kHz [50kHz in some areas] for FM, 1kHz for AM.

Rapid Manual Tuning: In this mode, the tuner continues to scan frequencies as long as the button is held. This is for use when you want to move from one section of the tuning band to another quickly.

"Last One" Memory and Memory Backup: Bonus features

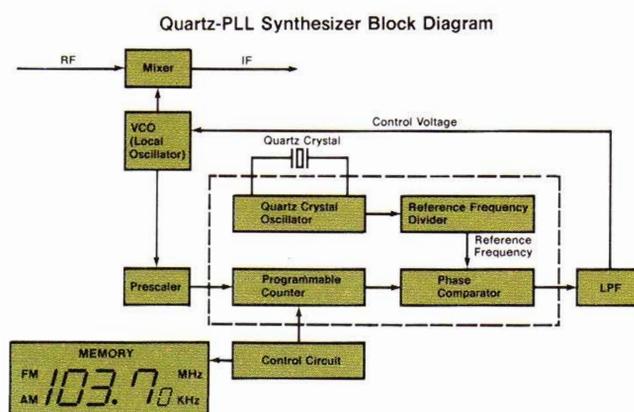
The station you were last listening to will be perfectly tuned in the next time you turn on the TU-S7. This is called the "Last One" Memory feature—of great value when making unattended, timer-controlled recordings off the air.

"Memory Backup" is a penlight battery powered circuit that keeps the memory

of the TU-S7 "alive" even when the unit is shut off or unplugged. The first of the five LEDs in the Signal Indicator turns off, letting you know when it's time to replace batteries.

Quartz-PLL Synthesizer Tuning: Accurate, precise and stable

In the TU-S7 Quartz-PLL synthesizer tuner, tuned stations are locked in with the same precision as a fine timepiece. Drift is virtually zero. Station frequencies are compared for phase difference with that of the quartz oscillator and instantly adjusted to maintain zero difference. Changes in temperature or humidity cannot affect performance.



Sensitive Frontend and Selective IF: Exceptionally high 83dB S/N ratio!

Despite their many conveniences, synthesizer tuners used to be scorned by audiophiles because of their poor signal-to-noise ratio. No more—the TU-S7 has a high S/N ratio of 83dB (mono) and 78dB (stereo). The secret lies in our superior frontend and IF sections.

The frontend has new high-Q variable capacitance diodes of the back-to-back type—as sensitive as a 4-gang variable capacitor—for dramatically improved adjacent-channel rejection performance. Interference noise is completely shut out. The new frequency-impedance-type DC power supply prevents the local oscillator from adding noise to the frontend, the detector or the multiplex decoder.

In the IF section, we've used a group of ceramic filters with superb group-delay response, resulting in high selectivity and low distortion. The detector is of the quadrature type, contained in a single IC.

Listen to the TU-S7 and you'll appreciate what the high 83dB S/N ratio means to your radio listening.

High Slew Rate DC Amp and Pilot Canceller: Still purer sound

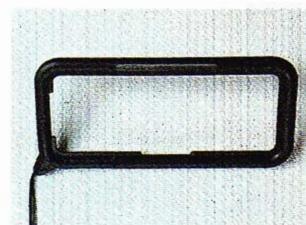
The detector composite output has an

unusually wide spectrum from DC to 53kHz—matched by the response of our stereo multiplex decoder. Frequency response will be limited only by the station itself. This is due to the NFB application and DC design featuring high slew rate of our decoder.

Incorporated into the decoder is an electronic 19kHz pilot canceller which tracks the varying level of the pilot signal. Together with the PLL (Phase-Locked Loop), it removes the last trace of muddiness from the output. Only pure music comes out of the TU-S7.

AM Loop Antenna: Noise is shut out

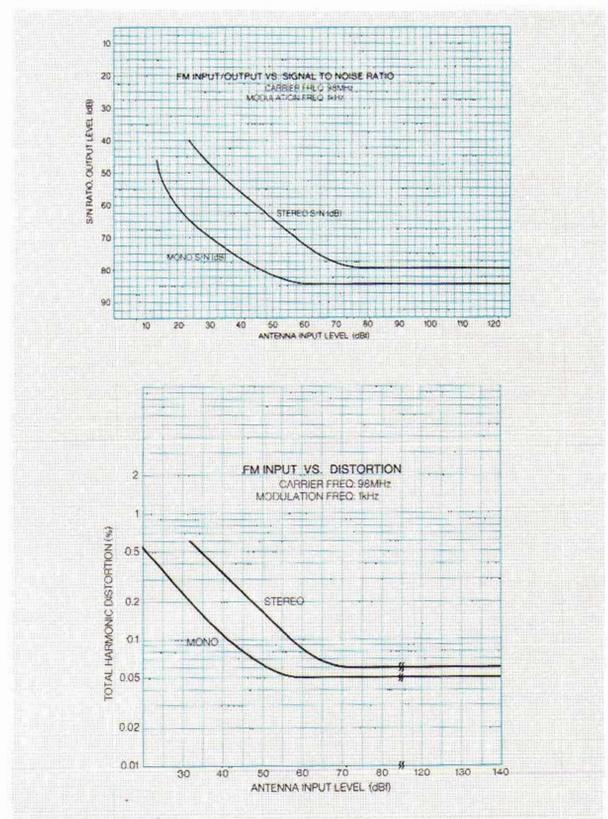
The TU-S7 incorporates a noise-resistant loop antenna for AM reception. Unlike a conventional bar antenna, the loop antenna is immune to noise generated by TV receivers, refrigerators and cars.



It's so sensitive that reception will be clear and strong even in concrete buildings.

Other Features

- LED SIGNAL METER shows the signal strength of both FM and AM stations.
- NOISE CANCELLER cuts high-frequency noise for better hi-fi reproduction.
- FM MUTING/MODE SWITCH eliminates irritating inter-station noise via a muting circuit while in the stereo mode. Muting is defeated when the tuner is set to the mono mode, allowing you to tune weak-signal stations.



FM 98.5 MHz

FM 98.5 MHz

SIGNAL 1 2 3 4 5

STEREO SEARCH

TUNING DOWN UP

MANUAL AUTO

MEMORY (CAL TONE)

FM-1

FM-2

FM-3

FM-4

FM-5

FM-6

TU-S7B

Sansui INTEGRATED AMPLIFIER AU-D7 LINEAR A & DD/DC

TONE CONTROL

SUPER BASS PRESENCE

BASS TREBLE

VOLUME

BALANCE

REC SELECTOR

TUNER OFF SOURCE REVERSE

AUX S=1=2 -S=2=1

LOUDNESS

OFF ON

MODE

STEREO L+R

INPUT SELECTOR

PHONO-MM

PHONO-MC

TUNER

AUX

TAPE PLAY-1

TAPE PLAY-2

INPUT SELECTOR

INPUT SELECTOR

AU-D7B



Specifications

AU-D7

POWER OUTPUT*

Min. RMS, both channels driven, from 20 to 20,000Hz, with no more than 0.02% total harmonic distortion

80 watts per channel into 8 ohms

LOAD IMPEDANCE*

8 ohms

TOTAL HARMONIC DISTORTION

OVERALL (from AUX) less than 0.02% at or below rated min. RMS power output

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

less than 0.02% at or below rated min. RMS power output

DAMPING FACTOR (at 1,000Hz, both channels driven) 200 into 8 ohms

SLEW RATE

±220V/μsec. (INSIDE)

RISE TIME

0.8μsec.

FREQUENCY RESPONSE (at 1 watt)

OVERALL (from AUX) DC to 300,000Hz +0dB, -3dB

RIAA CURVE DEVIATION (20 to 20,000Hz) +0.5dB, -0.5dB

INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)

PHONO 2.5mV, 47k ohms (MM); 250μV, 100 ohms (MC)

AUX, TUNER, TAPE 200mV, 47k ohms

MAXIMUM INPUT CAPABILITY (at 1,000Hz, 0.1% T.H.D.)

PHONO 200mV RMS (MM), 15mV RMS (MC)

OUTPUT VOLTAGE AND IMPEDANCE (at 1,000Hz)

TAPE REC (PIN) 200mV, 600 ohms into 47k ohm load

HUM AND NOISE

PHONO 86dB (MM), 67dB (MC)

AUX 110dB

CHANNEL SEPARATION (at 1,000Hz)

PHONO 55dB

AUX 90dB

CONTROLS

SUPER BASS +6dB, -6dB at 10Hz

BASS +6dB, -6dB at 100Hz

PRESENCE +6dB, -6dB at 1.2kHz

TREBLE +6dB, -6dB at 15kHz

LOUDNESS (volume control at -30dB position) +6dB at 50Hz +6dB at 10kHz

AC OUTLETS

switched max. 200 watts

unswitched total 200 watts

POWER REQUIREMENTS

POWER VOLTAGE 100, 120, 220, 240V 50/60Hz

POWER CONSUMPTION 270 watts

SEMICONDUCTORS

65 Transistors; 36 Diodes; 7 Zener Diodes,

25 LEDs; 8 FETs; 4 ICs

DIMENSIONS (AU-D7s)

430mm (16¹⁵/₁₆"W)

148mm (5⁷/₈"H)

328mm (12¹⁵/₁₆"D)

with Rack-Mounting Adaptors

480mm (18¹⁵/₁₆"W)

148mm (5⁷/₈"H)

339mm (13³/₈"D)

WEIGHT (AU-D7s)

11.3kg (24.9 lbs.) Net

12.6kg (27.8 lbs.) Packed

(AU-D7B)

with Rack-mounting Adaptors

11.5kg (25.4 lbs.) Net

12.8kg (28.2 lbs.) Packed

TU-S7

FM SECTION

TUNING RANGE

87.5 to 108MHz

50dB QUIETING SENSITIVITY

MONO 14.5dBf

STEREO 36.5dBf

SENSITIVITY

MONO (IHF) 10.5dBf (1.8μV IHF T-100)

SIGNAL TO NOISE RATIO

MONO 83dB (at 65dBf)

STEREO 78dB (at 80dBf)

FREQUENCY RESPONSE

STEREO 30 to 18,000Hz +0.3dB, -1.0dB

TOTAL HARMONIC DISTORTION

MONO less than 0.07% at 100Hz

less than 0.07% at 1,000Hz

less than 0.07% at 6,000Hz

less than 0.08% at 100Hz

less than 0.08% at 1,000Hz

less than 0.08% at 6,000Hz

1.0dB

CAPTURE RATIO

ALTERNATE CHANNEL SELECTIVITY 57dB (at 400kHz)

SPURIOUS RESPONSE RATIO 80dB

IMAGE RESPONSE RATIO 70dB

IF RESPONSE RATIO 80dB (Balanced)

RF INTERMODULATION 65dB

AM SUPPRESSION RATIO 55dB

STEREO SEPARATION 40dB at 100Hz

50dB at 1,000Hz

40dB at 10,000Hz

ANTENNA INPUT IMPEDANCE 300 ohms balanced, 75 ohms unbalanced

OUTPUT VOLTAGE AND IMPEDANCE

FIXED 0.5V, 2.2k ohms

AM SECTION

TUNING RANGE

525 to 1,605kHz

SENSITIVITY (Loop Antenna)

56dB/m (631μV/m)

SELECTIVITY (±9kHz)

30dB

SIGNAL TO NOISE RATIO

46dB

TOTAL HARMONIC DISTORTION less than 0.6% at 30% Mod. 80dB/m

IMAGE RESPONSE RATIO

45dB at 1,000Hz

GENERAL

POWER REQUIREMENTS

POWER VOLTAGE

120, 220, 240V 50/60Hz

POWER CONSUMPTION

12 watts

SEMICONDUCTORS

63 Transistors; 50 Diodes; 7 LEDs;

11 ICs; 3 Zener Diodes; 3 FETs

DIMENSIONS (TU-S7s)

430mm (16¹⁵/₁₆"W)

83mm (3¹/₈"H)

305mm (12¹/₈"D)

with Rack-mounting Adaptors

480mm (18¹⁵/₁₆"W)

83mm (3¹/₈"H)

305mm (12¹/₈"D)

WEIGHT (TU-S7s)

4.2kg (9.3 lbs.) Net

5.1kg (11.2 lbs.) Packed

(TU-S7B)

with Rack-mounting Adaptors

4.3kg (9.5 lbs.) Net

5.2kg (11.5 lbs.) Packed

*Power specifications measured pursuant to U.S. Federal Trade Commission trade regulations on power output claims for amplifiers.

•Design and specifications subject to change without notice for improvements.



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 ELECTRONICS (U.K.) LTD.

UNIT 10A, LYON INDUSTRIAL ESTATE, ROCKWARE AVENUE, GREENFORD, MIDDX UB6, OAA, ENGLAND/TELEX: 895 2103 (SANSUI G)