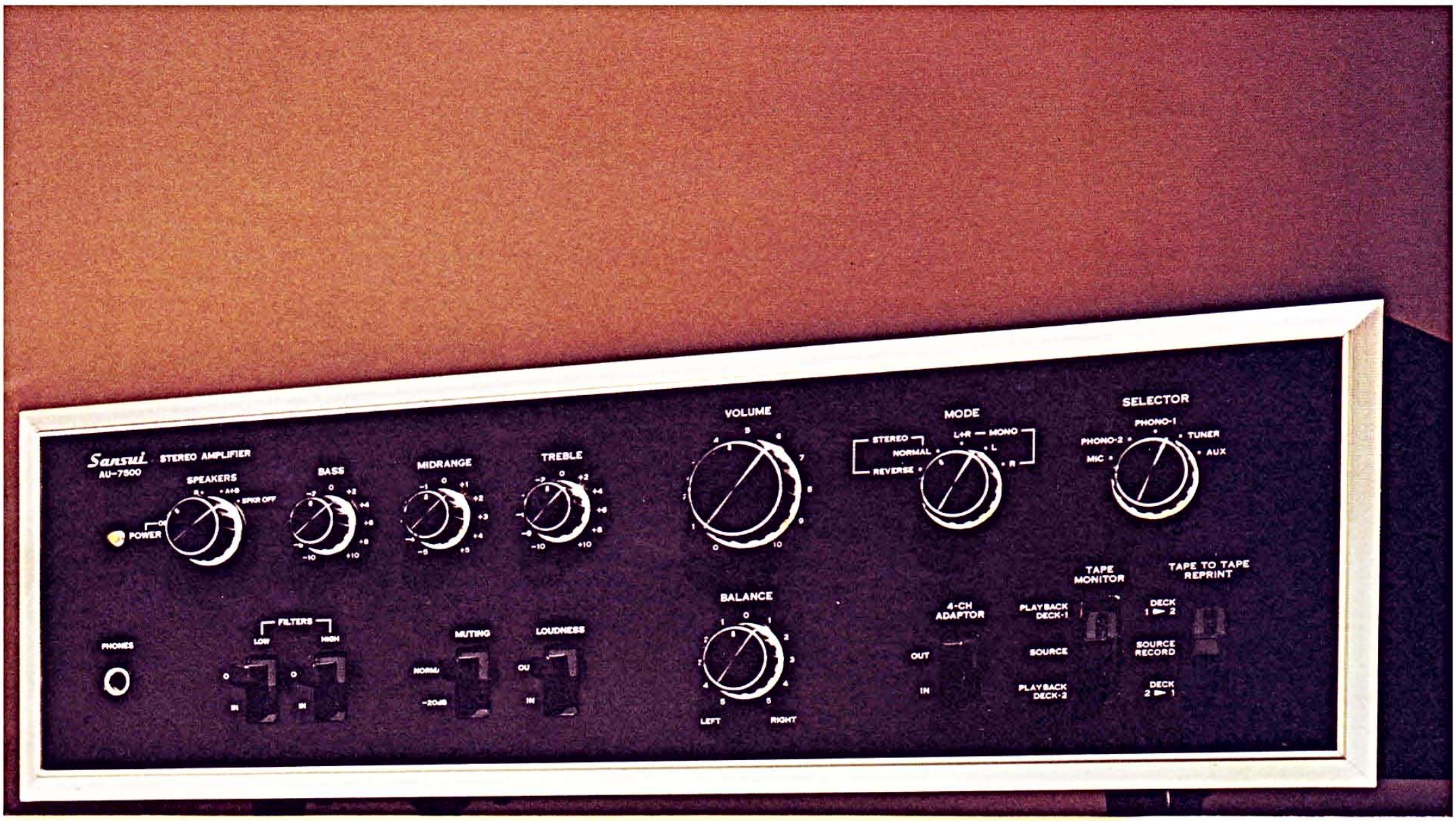
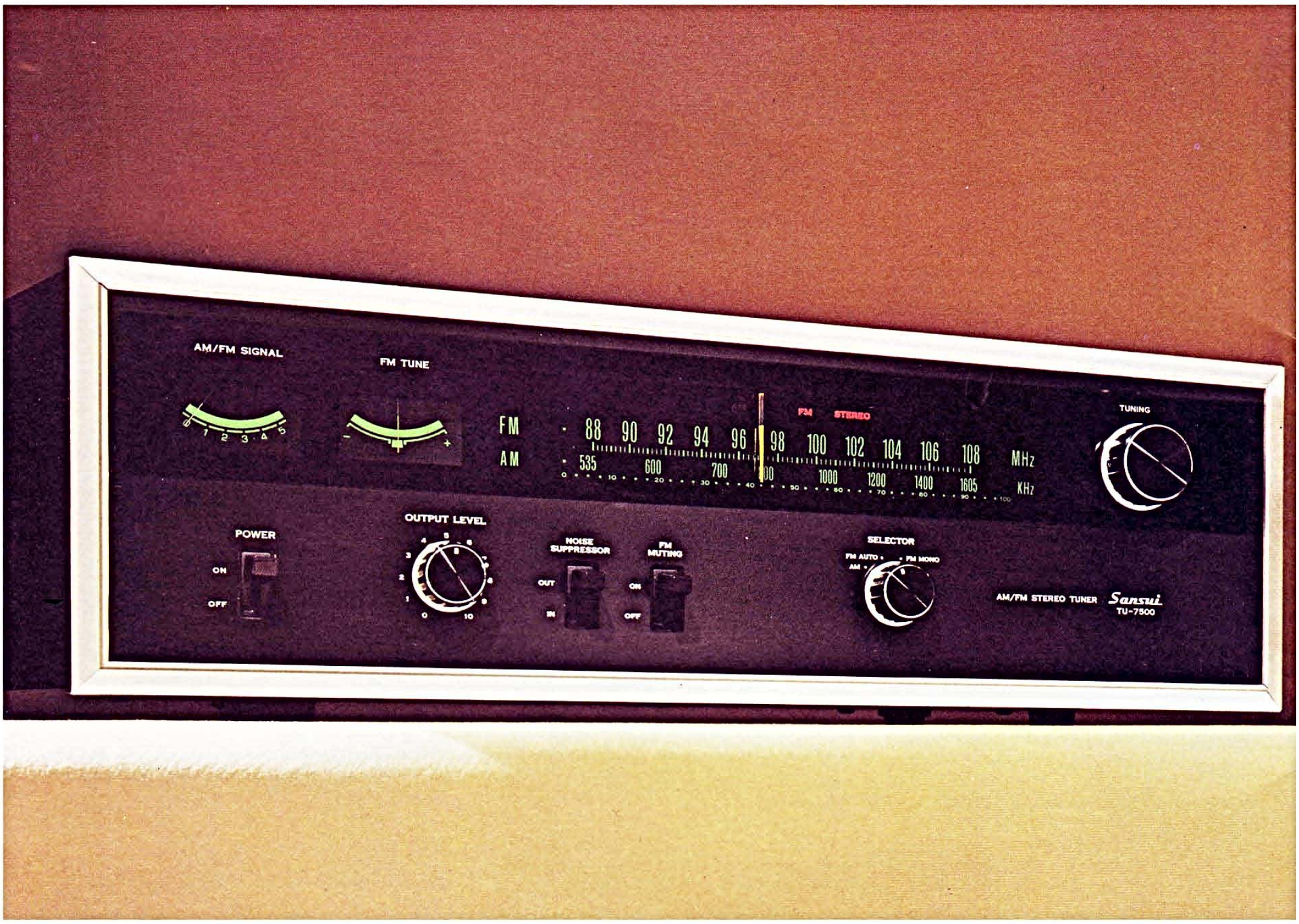
SANSUI AU7500



SOLID STATE INTEGRATED AMPLIFIER This professional stereo component, an integrated amplifier with unusually wide power bandwidth, says a lot about the way Japan's foremost audio-only specialist meets the demanding requirements of the stereo world today. A perfect power match for the TU-7500 stereo tuner, the AU-7500 represents a significant milestone in Sansui's pursuit of excellence. Not only are these two products the most advanced of any 2-channel products ever made by Sansui, they also represent the pinnacle of the company's up-to-the-minute knowledge of audio acoustics and electronics. The AU-7500 boasts such performance characteristics as total harmonic distortion and intermodulation distortion which has been limited to below 0.1% throughout the audio spectrum and well beyond. With its super-wide power bandwidth of 5—40,000Hz, you can achieve RMS power of 43 watts into 8 ohms, along with total harmonic distortion of only 0.1%. Inside the AU-7500 are a PNP-NPN-PNP heterojunction three-stage direct-coupled equalizer amplifier with an input capacity of no less than 300mV RMS resulting in such a wide dynamic range. There are also low-noise PNP transistor tone control circuits and a direct-coupled OCL pure complementary power amplifier employing two 6,800μF jumbo power supply capacitors. Finally, this professional amplifier is blessed with a variety of convenience features, including a 4-channel adaptor switch, the ability to connect up to three tape decks, and provisions for tape-to-tape dubbing. And in terms of tonal quality, the AU-7500 quite simply has no equal.

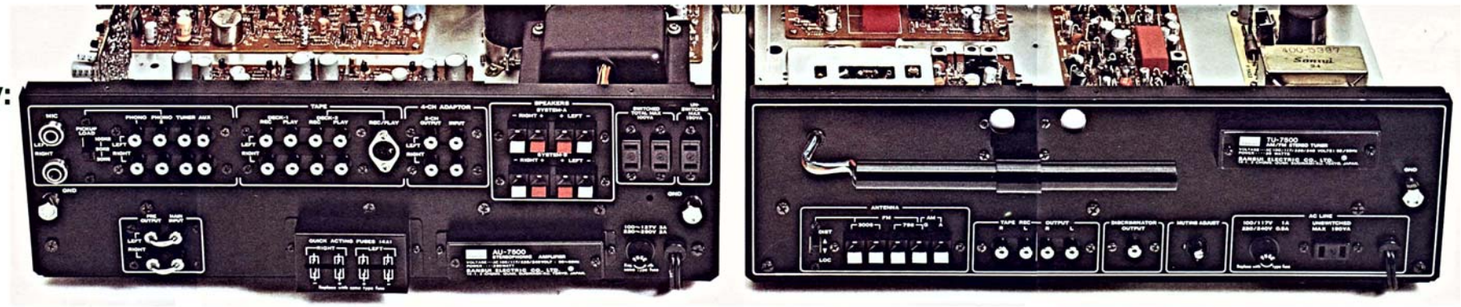
Sansui

SANSUI TU7500



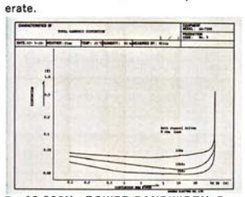
AM/FM MULTIPLEX STEREO TUNER The TU-7500 tuner is a perfect complement to the AU-7500. It fulfills, and then some, its most fundamental requirement which, simply, is the ability to receive any station at any time and any place with superb tonal quality. Sansui engineers devoted extra research hours in accomplishing this quality, and the results are not only noticeable, they are obvious. Particular attention in the design of the TU-7500 was placed on the phase characteristics, a property often overlooked in tuner design but one that has considerable bearing on the quality of the sound you hear. This is especially true—and significant—in light of the new era of 4-channel sound field reproduction. All in all, the TU-7500 offers excellent phase linearity throughout, which means for you an improved distortion factor, signal-to-noise ratio and stability. And, best of all, when it is matched with the AU-7500, you have an unparalleled combination of audio design and manufacture. From Sansui, the audio-only specialists.

A dramatic combination of professional capability and tonal quality: Sansui's AU-7500 and TU-7500.

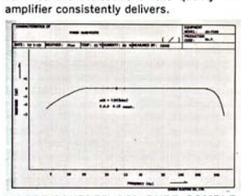


THE AU-7500

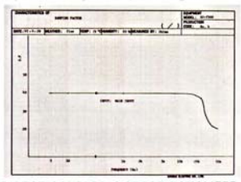
0.1% DISTORTION OVER AND BEYOND THE AUDIO SPECTRUM: The graph below tells all. Both total harmonic distortion and intermodulation distortion of the AU-7500 stay below 0.1% and well beyond the entire audio spectrum. Look closely and discover that our claim of 0.1% is even quite moderate.



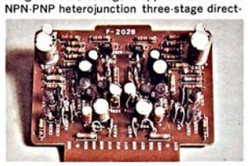
5—40,000Hz POWER BANDWIDTH: Even at peak power, delivering its 43 watts of RMS power per channel into 8 ohms with total harmonic distortion of 0.1%, the AU-7500's output power bandwidth is an incredible 5Hz to double the upper limit of the audible frequency range—40,000Hz. Coupled with the exceptional dynamic performances described below in this brochure, these power characteristics are indicative of the quality this amplifier consistently delivers.

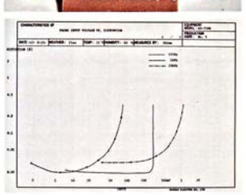


DIRECT-COUPLED OCL PURE COMPLEMENTARY POWER AMPLIFIER: The completely direct-coupled OCL (output-capacitor-less) pure complementary amplifier is driven by two (plus and minus) powerful, stable power supplies from two 6,800μF jumbo capacitors. This amplifier permits negative feedback to be evenly applied from the DC range on up to the super highs. As the graph below indicates, its damping factor is perfectly flat all the way to the deep low frequencies, which helps in reducing the irregular movement of the speaker cones to an unprecedented degree. In the important differential amplifier, selected low-noise silicon transistors and ripple filters work together to create extremely high stability. Combined with the NPN-PNP power transistors of matched properties, it dramatically suppresses the switching distortion that often occurs near the crossover point, while at the same time drastically limiting distortion that tends to increase when the input is of very low-amplitude signals.

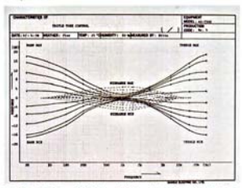


DIRECT-COUPLED 3-STAGE EQUALIZER WITH WIDE DYNAMIC RANGE AND 300mV RMS PHONO INPUT CAPACITY: A high 44V DC voltage is applied to the PNP-NPN-PNP heterojunction three-stage direct-coupled equalizer amplifier. The latter draws power from a specially stabilized power supply and accepts up to 300mV RMS in phono input with ease, giving an unprecedented wide dynamic range.

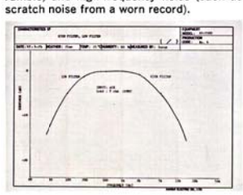




LOW-NOISE TONE CONTROL AMPLIFIER: From its first stage to its output stage, the tone control amplifier exclusively employs select low-noise silicon transistors for low distortion, a high signal-to-noise ratio and wide response. For perfect control effects, it is equipped with Sansui's unique Triple Tone Controls, permitting you a midrange control in addition to the conventional bass and treble controls. The bass and treble controls are set in click stops of 3dB each and are adjustable within ±15dB, while the midrange is adjustable ±5dB in steps of 1dB each. With the controls set at center, the amplifier provides a completely flat response.



12dB OCT. HIGH AND LOW FILTERS: Sharp-cutting 12dB/oct. negative feedback type high and low filters are provided on the AU-7500 to eliminate common low-frequency noise (such as turntable motor rumble) and high-frequency noise (such as scratch noise from a worn record).



4-CHANNEL ADAPTOR TERMINALS & SWITCH: The AU-7500 is ready for 4-channel when you are. Special facilities are provided on the amplifier to connect and control a 4-channel adaptor so you don't have to sacrifice tape monitor jacks as you have to do with many stereo amplifiers. Pushing down the lever switch activates the 4-channel adaptor. And if desired, a tape deck may also be connected to those jacks.

TWO TAPE MONITOR AND TWO PHONO INPUT CIRCUITS: The AU-7500 features two tape monitor circuits so that you may connect up to two tape decks simultaneously—and then record or reproduce on either deck with the simple changeover of a front-panel switch, or record into both simultaneously. There is also a tape-to-tape reprint switch on the front panel that allows a recorded tape to be copied from one deck to another, and vice versa. If you choose not to connect a 4-channel adaptor, you may connect a third tape deck to the 4-channel adaptor jack. Then there are also two phono input circuits—one with impedance of 50kΩ, the other switchable between 30kΩ, 50kΩ and 100kΩ to let you use a wide variety of cartridges.

LEFT, RIGHT MICROPHONE JACKS: Two microphone jacks on the AU-7500 are designed to connect the expensive 50kΩ high-impedance type microphones for stereo recording. Furthermore, the jacks are the equally expensive communications type.

Sansui SDM-2 Dynamic Microphone available as an optional extra.

PRE- AND POWER AMPLIFIERS SEPARABLE: The preamplifier and power amplifier sections may be separated for independent use simply by unplugging the jumper connectors. You'll discover the convenience of this feature if you ever choose to upgrade your system by introducing the multi-amplifier electronic crossover system, among other uses.

CONNECTS TWO PAIRS OF SPEAKER SYSTEMS: You can connect up to two pairs of speaker systems with the AU-7500, and drive them either separately or simultaneously—or cut them both off—by a front-panel control.

COMPLETE PROTECTION CIRCUIT: The AU-7500 employs a newly-designed protection circuit utilizing three transistors, six diodes and a relay to protect the vital power transistors and your speaker systems in the event speaker terminals are accidentally shorted or other abnormal conditions occur. Even greater protection is afforded by four quick-acting fuses. The protection circuit also serves as an automatic muting circuit, to switch the speaker output circuit off for a few seconds immediately after the amplifier is turn on, thus cutting out the unpleasant pop noise.

MATCHING, ELEGANT APPEARANCE: Sansui's traditional design for its AU series of components is responsible for the AU-7500's striking good looks. The amplifier is streamlined in sophisticated black and trimmed by a gold frame for rich styling. Its dimensions are the same as the TU-7500, meaning you can place the two side by side, or on top of each other. *Wooden cabinets are available at extra cost.*

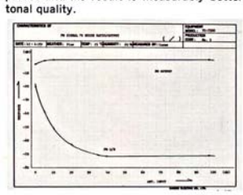
OTHER CONVENIENCE FEATURES:

1) An audio muting switch reduces volume by −20dB over the entire frequency range.
2) A loudness switch is included to compensate lows and highs at low listening levels.
3) A convenient mode switch lets you select STEREO, REVERSE, MONO L+R, MONO L, MONO R.
4) A DIN connector socket simplifies tape deck connections.
5) Headphono jack.
6) Three AC outlets are provided, two of which are controlled by the power switch.
7) Two large ground terminals.

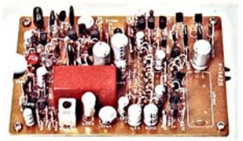
THE TU-7500

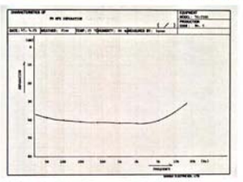
SUPER-SENSITIVE FM FRONTEND WITH DUAL-GATED MOS FET: Instead of the conventional FET usually used in tuners, the frontend of the TU-7500 uses a dual-gated MOS FET (metal-oxide-semiconductor field effect transistor) that is far less noisier. Moreover, Sansui has included double tuning circuits between the RF and mixer stages to significantly reduce image interference, while the tuning capacitor is an ultra-precision frequency-linear 4-gang variable capacitor. All in all, you'll find that the TU-7500 gives steady stereo reception even in fringe signal areas.

PHASE-LINEAR FM IF AMPLIFIER: The FM IF amplifier combines three stages of a new uni-wafer type two-resonator ceramic filter and a three-stage limiter with three IC's. Thorough research was undertaken to eliminate phase deviation and the TU-7500 affords outstanding phase linearity. Its capture ratio, AM suppression, signal-to-noise ratio and selectivity have been improved and the result is measurably better tonal quality.



DIFFERENTIAL MPX DEMODULATOR CIRCUIT: The TU-7500's multiplex circuit incorporates a Sansui-developed differential demodulator circuit (patents pending) to eliminate SCA and sub-carrier contents from the multiplex signal. The SCA filter, traditionally the cause of poor separation in the high ranges, is no longer used, and the tuner is now able to offer substantially improved separation from the low to high range. The TU-7500 reproduces a clear treble sound without muddiness, one of the natural features of FM.





HIGHLY SELECTIVE AM IF AMPLIFIER: The AM IF amplifier of the TU-7500 employs a new wide-band, high-selectivity coil and a two-resonator ceramic filter for improved tone quality and selectivity. Another benefit of this AM IF amplifier is higher sensitivity.

AM/FM NOISE SUPPRESSOR SWITCH: double-function switch works in collaboration with the front-panel SELECTOR control. Turned on during AM reception, the switch activates a built-in whistle filter circuit to shut out beat noise above 7kHz. During FM stereo reception, the switch will activate the built-in multiplex noise canceler and cancel disturbing high-frequency noise in FM stereo material without impairing its frequency properties.

STABILIZED POWER SUPPLY: One of the most important features of the TU-7500 is its stabilized power supply, one that eliminates frequency drift even in the face of fluctuations in the load current or power supply voltage. Ripples in the supplied power are negligible. Overall, this feature contributes to better tone quality and eliminates the need for an AFC circuit.

TWO METERS FOR PERFECT TUNING: The TU-7500 has a pair of meters to ensure pinpoint accuracy in FM tuning. One is a signal strength meter, the other a center tuning meter that helps you to tune in on the center of the discriminator where distortion is minimal.

FOUR-CHANNEL READY: If discrete 4-channel broadcasts become a reality, the TU-7500 will be ready. A discriminator output jack is provided on the rear panel for connecting a 4-channel FM broadcast adaptor.

FM LINEAR SCALE AND SMOOTH DIAL MECHANISM: Another feature for ease-of-tuning is the wide horizontal linear dial scale for FM, evenly graduated in 250kHz steps. You'll especially appreciate this feature if you're living in an urban area congested by FM signals. The dial mechanism is exceptionally smooth and easy to adjust for an extra-large flywheel is utilized in Sansui's unique design.

FM MUTING SWITCH AND MUTING LEVEL ADJUSTOR: A front-panel switch cuts out unpleasant tuning noise often heard between FM stations. This facilitates quiet FM tuning. The muting level is adjustable with a control on the rear panel, permitting you to adjust the signal strength in your area and ensuring that you won't mute weak stations in a fringe signal area.

CONVENIENT TWO OUTPUT TERMINALS: The TU-7500 provides two output terminals, one with level control for feeding an amplifier and another with fixed level for off-the-air recording. Thus, when you switch the amplifier's function from record playing to radio reception, the sound volume does not change with suddenness. Moreover, you can adjust output level free while recording.

300Ω, 75Ω FM ANTENNA TERMINALS: The TU-7500 connects both a conventional feeder cable antenna and a 75Ω coaxial cable when an outdoor FM antenna is required. The coaxial cable is free of interference waves and other noises such as automobile ignition noise.

FM ANTENNA INPUT ATTENUATION SWITCH: This switch attenuates the tuner's FM input sensitivity when switched to LOCAL, enabling distortion-free and steady FM reception either in strong or weak signal areas.

MATCHING DESIGN: The appearance of the TU-7500 is designed to match both the Sansui AU-7500 and AU-6500 integrated amplifiers and has dimensions identical to these amps.

SPECIFICATIONS

AU-7500

POWER OUTPUT	
IHF MUSIC POWER	150W (4Ω) at 1,000Hz
CONTINUOUS POWER (each channel driven)	43/43W (8Ω) at 1,000Hz
CONTINUOUS POWER (both channels driven)	40+40W (8Ω) at 1,000Hz
CONTINUOUS POWER (both channels driven at rated distortion 20 to 20,000Hz)	32+32W (8Ω)
TOTAL HARMONIC DISTORTION (at rated output)	
POWER AMPLIFIER ONLY	less than 0.1%
INTERMODULATION DISTORTION (70Hz: 7,000Hz=4:1 SMPTE method)	
POWER AMPLIFIER ONLY	less than 0.1%
IHF POWER BANDWIDTH (each channel driven at 8Ω)	5 to 40,000Hz
FREQUENCY RESPONSE (at 1W power output)	
PHONO-1 AND -2	RIAA equalization curve ±0.5dB (30 to 15,000Hz)
OVERALL (from AUX)	10 to 30,000Hz ±1.0dB
POWER AMPLIFIER ONLY	10 to 50,000Hz ±1.0dB
LOAD IMPEDANCE	4 to 16Ω
DAMPING FACTOR	approximately 40 at 8Ω load
RATED INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)	
PHONO-1	2.5mV (50kΩ)
PHONO-2	2.5mV (30kΩ, 50kΩ, 100kΩ)
Maximum input capacity	300mV RMS (THD: less than 0.5%)
MIC	2.5mV (50kΩ)
TUNER	100mV (50kΩ)
AUX	100mV (50kΩ)
TAPE MONITOR-1 (Pin)	100mV (50kΩ)
TAPE MONITOR-2 (Pin)	100mV (50kΩ)
TAPE MONITOR-2 (DIN)	100mV (50kΩ)
4-CH ADAPTOR	100mV (50kΩ)
POWER AMPLIFIER ONLY	800mV (40kΩ)
RATED OUTPUT VOLTAGE AND IMPEDANCE (at 1,000Hz)	
TAPE REC-1 (Pin)	100mV
TAPE REC-2 (Pin)	100mV
TAPE REC-2 (DIN)	30mV
4-CH ADAPTOR	100mV
PREAMPLIFIER	0.8V (THD: less than 0.08%)
(Maximum Output Voltage)	4.0V (THD: less than 0.5%)
CROSSTALK (at 1,000Hz, rated output)	
PHONO-1	better than 50dB
PHONO-2	better than 50dB
MIC	better than 50dB
TUNER	better than 50dB
AUX	better than 50dB
POWER AMPLIFIER ONLY	better than 65dB
IHF HUM AND NOISE	
PHONO-1	better than 75dB
PHONO-2	better than 75dB
MIC	better than 75dB
TUNER	better than 80dB
AUX	better than 80dB
POWER AMPLIFIER ONLY	better than 100dB
CONTROLS	
BASS	+15dB, −15dB at 50Hz
MIDRANGE	+5dB, −5dB at 1,500Hz
TREBLE	+15dB, −15dB at 15,000Hz
LOUDNESS	+10dB, at 50Hz, +10dB at 15,000Hz
LOW FILTER	−12dB at 50Hz (12dB/oct)
HIGH FILTER	−11dB at 10,000Hz (12dB/oct.)
SWITCHES	
SELECTOR	MIC. PHONO-1. PHONO-2. TUNER. AUX
MODE	STEREO-REVERSE. STEREO-NORMAL. MONO-L+R MONO-L. MONO-R
TAPE MONITOR	PLAYBACK DECK-1. SOURCE. PLAYBACK DECK-2
TAPE TO TAPE REPRINT	DECK-1 to 2. SOURCE RECORD. DECK-2 to 1
MUTING	NORMAL. −20dB
LOUDNESS	OUT, IN
LOW FILTER	OUT, IN
HIGH FILTER	OUT, IN
4-CH. ADAPTOR	OUT, IN
SPEAKER SELECTOR	POWER OFF. A. B. A+B. SPKR-OFF
SEMICONDUCTORS	Transistors: 38 Diodes: 15 Zener Diode: 1
POWER REQUIREMENTS	100 110 117 127 220 230 240 250V 50/60Hz
POWER CONSUMPTION	
MAXIMUM CONSUMPTION	315VA
RATED CONSUMPTION	100W
DIMENSIONS	140mm (5 9/16″)H×440mm (17 3/8″)W ×322mm (12 11/16″)D
WEIGHT	12.7kg (28.0 lbs.)

TU-7500

FM SECTION	
TUNING RANGE	88−108MHz
SENSITIVITY (IHF)	1.9μV
TOTAL HARMONIC DISTORTION	
(mono)	less than 0.3%
(stereo)	less than 0.5%
SIGNAL TO NOISE RATIO	better than 70dB
SELECTIVITY	better than 70dB
CAPTURE RATIO (IHF)	2dB
IMAGE FREQUENCY REJECTION	better than 75dB at 98MHz
IF REJECTION	better than 90dB
SPURIOUS RESPONSE REJECTION	better than 80dB
STEREO SEPARATION	better than 40dB at 400Hz
SPURIOUS RADIATION	less than 34dB
ANTENNA INPUT IMPEDANCE	300Ω balanced, 75Ω unbalanced
ANTENNA ATT.	20dB
FREQUENCY RESPONSE (stereo)	30−15,000Hz +0.5dB, −2.5dB
AM SECTION	
TUNING RANGE	535−1605kHz
SENSITIVITY (Bar Antenna)	50dB/m
SELECTIVITY (±10kHz)	better than 25dB
IMAGE FREQUENCY REJECTION	better than 80dB/m at 1,000kHz
IF REJECTION	better than 80dB/m at 1,000kHz
OUTPUT	0−1V
REC OUTPUT	0.3V
CONTROLS AND SWITCHES	
SELECTOR	AM, FM AUTO, FM MONO
FM MUTING	ON, OFF
NOISE SUPPRESSOR	OFF, ON
FM ATT. SWITCH	LOCAL, DISTANT
SEMICONDUCTORS	Transistors: 39 FETs: 3 Diodes: 21 ICs: 3
POWER REQUIREMENTS	
POWER VOLTAGE	100, 117, 220, 240V, 50/60Hz
POWER CONSUMPTION	20 Watts
DIMENSIONS	440mm (17 3/8″)W×140mm (5 9/16″)H× 322mm (12 11/16″)D.
WEIGHT	8.0kg (17.6 lbs.)

Design and specifications subject to change without notice for improvements.

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