

G-4700

Sansui Pure Power DC FM/AM Stereo Receiver with Exclusive Digitally Quartz-Locked Tuning System, 50 Watts/Ch, 20 to 20kHz, at 8 ohms, 0.05% THD.

Sansui

Only hi-fi, everything hi-fi.



- Patented Digitally Quartz-Locked Tuning
- Digital Tuning Dial Display
- Pure Power DC Amp Section
- LED Peak Power-Level Display



QUARTZ

SIGNAL ■■■■■■

TUNE ■ ● ■

FM 103.2 MHz

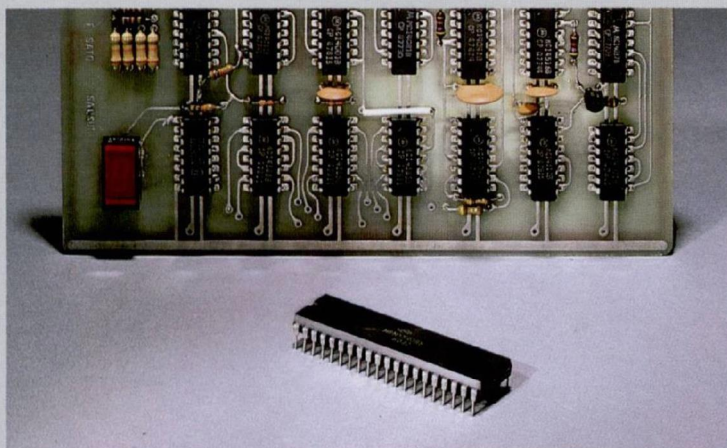
Stations CANNOT go adrift with Sansui's patented Digitally Quartz-Locked Tuning System.

This is a Sansui-exclusive feature. The Sansui quartz system uses an accurate "time base"—the timing counter on a quartz crystal—to help keep the FM station you want locked in via a circuit loop monitored by a digital processor. If the station tries to drift out of tune, the error is detected by a frequency counter and converted into digital data "bits." These, in turn, are used to bring the station back into line instantly.

Most other quartz tuners use analog phase reference controls that compare phase of two frequencies between the local oscillators and quartz crystals, in order to check and correct errors. But our Digitally Quartz-Locked Tuning System doesn't; instead it has a digital control system. It uses the "time base" generated in the quartz crystal, and detects errors by *digitally* counting the frequency on this undeviating reference. Therefore, unlike other quartz tuners using analog reference controls, ours avoids harmonics harmful to accurate tuning with the use of a digital reference control.

Better spurious rejection ratio, higher sensitivity and a better signal-to-noise ratio are among the audible advantages. And purer, more faithful reproduction of musical sound is the final product.

A reminder: Sansui has received patents on our quartz/digital system. And to ensure long-term reliability of its operation we've packed it all in a single LSI (Large-Scale Integrated Circuit) which can never fail.



The Large-Scale Integrated Circuit (LSI) you see in the foreground now compactly houses all the discrete parts, wiring and ICs grouped behind it. This Sansui innovation assures computer-grade reliability in our Digitally Quartz-Locked Tuning System.

Unique Locking System: Your station is digitally quartz locked the moment you stop moving the tuning knob.

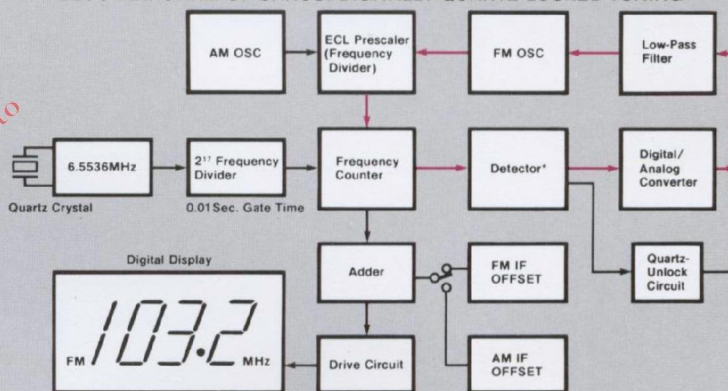
Another Sansui-exclusive innovation sets our locking system apart from others. And makes the G-4700 a whole lot

easier to use. Your locked-in station *stays* locked in until you move the tuning knob.

Many "locking" tuners and receivers use a touch-sensitive knob which acts as an on/off switch for the locking system. This means your fingers must grasp, then release, then grasp and again release the knob—repeating this troublesome process until you're sure your station is tuned and locked. In the Sansui system, however, the locking on/off switching is determined not by touch but by movement.

And a reminder: This Sansui-exclusive tuner circuitry includes a built-in RE-LOCK system. Your station is memorized for instant recall whenever you re-power the unit.

BLOCK DIAGRAM OF SANSUI DIGITALLY QUARTZ-LOCKED TUNING



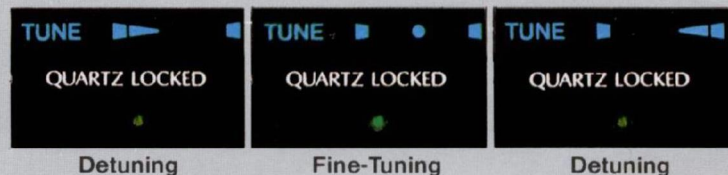
*The detector drops hundredths (.0x) of 5 or below and rounds off hundredths of 6 or above to the next tenth.

FM/AM Tuning Dials: We provide a bright and clean digital display PLUS the traditional analog rule-scale.

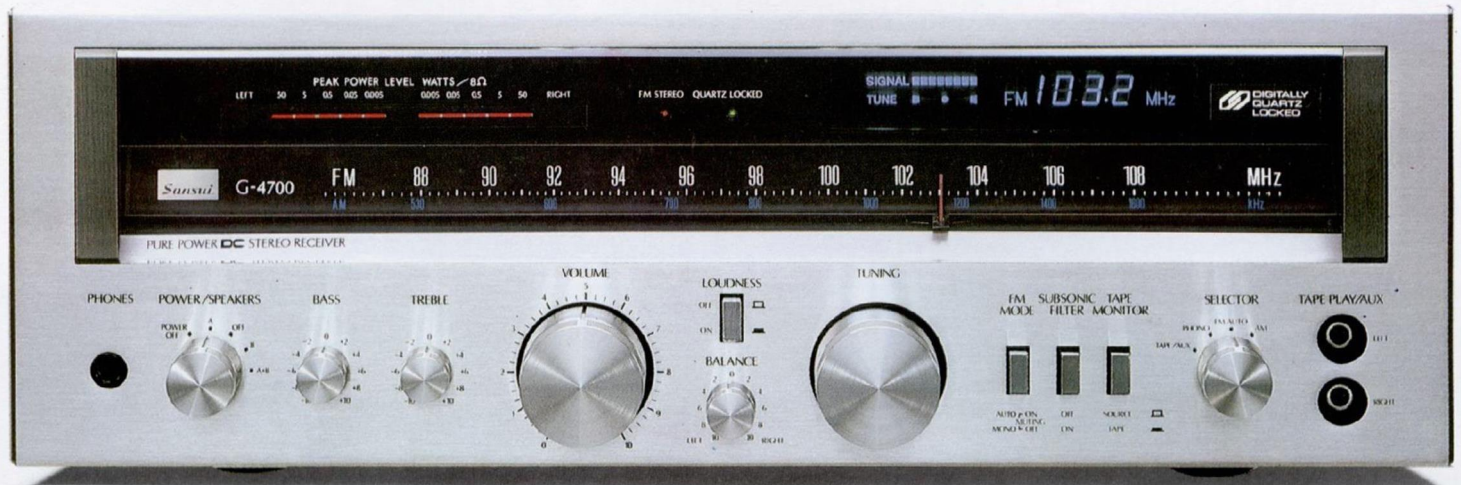
The Sansui FM quartz/digital system has a wider locking range than most. And the analog dial scale is wide and extremely clearly calibrated in FM-linear sections to make that tuning smoother and easier still.

But when the station you want is faint, or "crowded" between others, make a note of its assigned frequency, then simply dial that frequency on the bright digital display. As you do, watch the row of dots to the left of the display: these indicate signal strength (for AM and FM), the more showing, the better.

For FM tuning, also watch the lower left part of the digital display. The righthand and lefthand arrows show when you are nearing the station's best position; the center dot lights (and the arrows go dark) when you have tuned to the exact center of the station. Now, stop moving the knob and your station will be automatically locked by the Sansui-patented quartz/digital system, and the QUARTZ LOCKED indicator will light.



The Sansui G-4700: Faithful hi-fi reproduction and drift-free tuning in this Pure Power DC Receiver with the Digital Dial.



Sansui is hoping you will NOT base your buying decision merely on the fact this powerful stereo receiver has widely versatile controls, a bright LED Peak-Level display and a computer-age Digital Dial for FM/AM tuning. We'd much rather you'd look behind all this for the things that REALLY distinguish the G-4700 from the crowd. One, the fact that this reasonably-priced model has exactly the same Sansui-patented Digitally Quartz-Locked Tuning System found on our larger and more expensive models. Two, the fact that its power amp is identical to the pure DC types we've perfected for Sansui's very finest separate amps. And three, the fact that its tuning section delivers *strictly* hi-fi sound (rare in a receiver). If these are facts that appeal to your sense of good sound (and to your pocketbook), please read on.

THE AMPLIFIER: Dynamic Musicality with Sansui-Exclusive DC Circuit Techniques.

DC

Sansui's Pure Power Amp improves all four vital specifications—TIM, THD, Slew Rate and Rise Time.

Still another advantage you won't find in any other receiver is the Sansui-exclusive Pure Power DC amplifier in the G-4700. Our original DC technology greatly improves all four major factors that influence final tonal quality.

First, of course, is TIM (Transient Intermodulation)

distortion. We've lowered it dramatically to ensure clean *transients* at the output. Then come the slew rate and rise time, both improved to exceptional levels. Both are vital in helping the amp respond more quickly and accurately to the *pulsive* musical waveforms fed to it.

All this is achieved without the least sacrifice of power or THD (total harmonic distortion). In fact, this Pure Power DC amp section delivers an adequate 50 watts per channel, min. RMS, both channels driven into 8 ohms, from 20 to 20,000Hz, with no more than 0.05% THD.

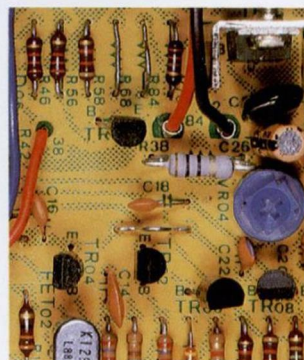
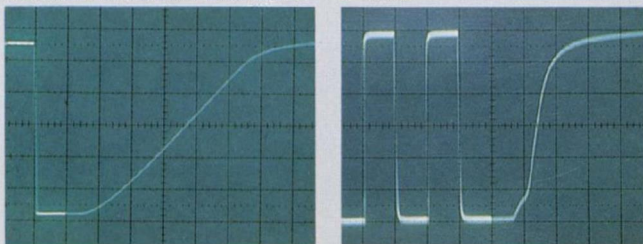
How? DC circuitry so good we've applied for a patent on it makes sure you get your music's worth.

"DC" amps are becoming rather common—but not with this uncommonly effective, Sansui-exclusive design: The input of the power amp in the G-4700 is of ICL (Input-Capacitor-Less) design with a Dual-FET differential. This is followed by a current-mirror-loaded differential, then by a current-differential push-pull drive (Pat. Pend.). Finally, a two-stage Darlington-connected OCL (Output-Capacitor-Less) output.

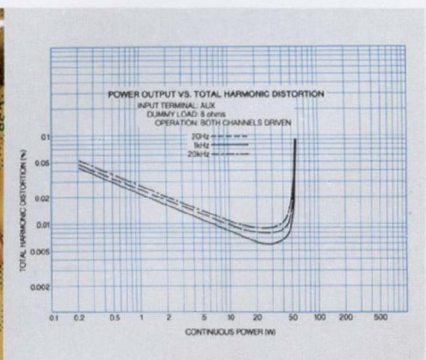
Phase distortion and other problems caused by capacitors are entirely avoided because this circuit has no capacitors whatever. Furthermore, we use two FETs (Field-Effect Transistors) with carefully matched thermal characteristics for the highly-stable input stage. In the output, mounted on extra-wide heat sinks for better heat dissipation, are special output transistors chosen for their extra-high linearity. In other words, what you put into the power amplifier in this receiver comes out clean and pure to ensure best musicality.

SLEW RATE & RISE TIME (Power Amp)

A CONVENTIONAL RECEIVER G-4700



DC Power Circuit Board



PEAK POWER LEVEL WATTS / 8Ω

LEFT 50 5 0.5 0.05 0.005 0.005 0.05 0.5 5 50 RIGHT

LED

Peak Power-Level Display: It tells you what you can't always trust your ears to reveal.

How much power should you feed to the speaker systems you connect to the G-4700? Some can take all 50 watts per channel with ease. Other speakers might have the tendency to peak out before the output reaches its maximum—a danger that can cause unpleasant sound (or worse) when musical dynamics are loud and punchy. This is why we've put an elaborate *electronic* metering system on the front panel.

The LEDs (Light-Emitting Diodes) respond quickly and accurately to actual output levels. They let you know exactly how much power is going out to your speaker systems over the range of from 0.005 to the full 50 watts in each channel, moment by moment. The LED Peak Power-Level Display adds color and movement, too.

Phono equalization is achieved without noise, without distortion, without false coloration at high 200mV overload.

Think how small the electrical signals sent out from your phono cartridge are. Then consider how important it is to amplify these tiny pulses up to a level that can be handled by the amplifier section in the G-4700. If any noise, distortion or false coloration were to enter the signal path, those tiny signals would be damaged beyond repair. That's why the G-4700's phono equalizer is built with such care.

Two low-noise PNP and NPN transistors matched in a Darlington-pair arrangement form the amp. Phono overload is a high 200mV. And the equalizer's dynamic range—the ability to distinguish "soft" sounds amidst the "loud"—is impressive.

THE TUNER: Faithful Reception and Reproduction with Sansui-Patented, Error-Free System.

Backup circuitry in the tuner is equally advanced for strictly high fidelity sound.

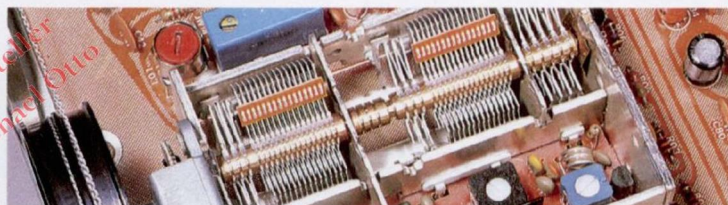
Tuning accuracy as provided by the Sansui-exclusive quartz/digital system would be useless if the rest of the tuner was any less advanced. We pride ourselves in providing *strictly* hi-fi sound reproduction with Sansui tuners and receivers, and the G-4700 is no exception:

In the backup circuitry for instance are two high-integration/high-performance ICs—one each in the PLL MPX for FM stereo and the quadrature detector/discriminator. Together they ensure a high 75dB (mono) signal-to-noise ratio perform-

ance with low distortion.

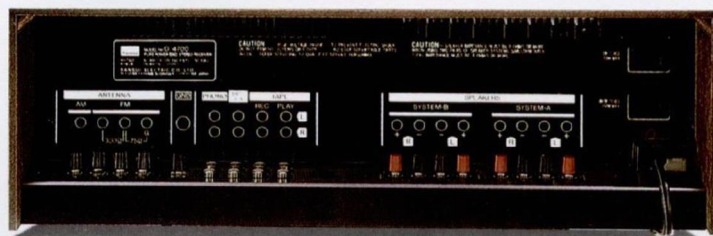
A third IC, a new hybrid type, is found in the local oscillator and mixer to work with the quartz/digital system for still more stability in the face of changing temperature and humidity conditions. Then, for the FM frontend, a frequency-linear 3-gang tuning capacitor is coupled with a MOS FET RF amp to offer dependable reception, never marred by interference.

Noise, too, is shut out with the use of an array of linear-phase ceramic filters with superb group-delay response. And what's said for FM goes equally for AM, since once high-quality audio signals have been obtained from the FM and AM sections respectively, they are channeled through the very same circuitry for reproduction as distortion-free audio sound from the output of the G-4700.



And that's not all...

- BASS/TREBLE Tone Controls—Each permits tonal adjustments up to ± 10 dB (at 50Hz and 10kHz respectively).
- Tape Deck Facilities—The rear panel has a full stereo set of inputs/outputs to permit the recording and playback of a connected deck. The front panel has stereo *input* terminals for TAPE/AUX for a second deck (playback only) or another unit. Thus when you use them for playback of a second deck, you can record (dub) a tape to another deck through the rear-panel REC OUT terminals.
- Phono Subsonic Filter—Cuts off super-low frequencies (below 16Hz) with 6dB/oct. curve to prevent speaker damage when you play, for instance, warped records.
- Loudness—Restores natural frequency response when you listen at low volume.
- Balance—Adjust left/right channel output with changes reflected in LED Power-Level readout.
- Speakers—(A, B, A+B, OFF) for remote speaker systems.
- FM Mode/Muting—Push in to receive (in monophonic) any FM station too weak for adequate reproduction in stereo. It also cancels inter-station tuning noise when in the out (stereo) position.



Specifications

AUDIO SECTION

POWER OUTPUT*

Min. RMS, both channels driven, from 20Hz to 20,000Hz, with no more than 0.05% total harmonic distortion

50 watts per channel into 8 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.05% total harmonic distortion

52 watts per channel into 8 ohms

TOTAL HARMONIC DISTORTION*

OVERALL (from AUX) less than 0.05% at or below rated min. RMS power output

OVERALL (from AUX) less than 0.02% at 1kHz, 50W power output

INTERMODULATION DISTORTION

(70Hz:7,000Hz=4:1 SMPTE method)

OVERALL (from AUX) less than 0.05% at or below rated min. RMS power output

30 into 8 ohms

DAMPING FACTOR

LOAD IMPEDANCE*

8 ohms

FREQUENCY RESPONSE (at 1 watt)

OVERALL (from AUX) 10 to 70,000Hz +1dB, -2dB

RIAA CURVE DEVIATION (30 to 15kHz) +0.5dB, -0.5dB

HUM AND NOISE (IHF)

PHONO 76dB

AUX 95dB

CHANNEL SEPARATION (at 1,000Hz)

PHONO 50dB

AUX 50dB

INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)

PHONO 2.5mV, 47k ohms

AUX 150mV, 47k ohms

(PHONO: Max. input capability more than 200mV RMS at 0.5% distortion)

OUTPUT VOLTAGE AND IMPEDANCE (at 1,000Hz)

TAPE REC (PIN) 150mV, 47k ohms

CONTROLS

BASS +10dB, -10dB at 50Hz

TREBLE +10dB, -10dB at 10kHz

LOUDNESS +9dB at 50Hz

+6dB at 10kHz

SUBSONIC FILTER -3dB at 16Hz (6dB/oct.)

FM SECTION

TUNING RANGE 88 to 108MHz

50dB QUIETING SENSITIVITY

MONO 15dBf

STEREO 38dBf

SENSITIVITY

MONO (IHF) 10.8dBf (1.9μV IHF T-100)

(DIN) 1.2μV

STEREO 19dBf

SIGNAL TO NOISE RATIO AT 65dBf

MONO 75dB

STEREO 70dB

FREQUENCY RESPONSE

MONO 30 to 15,000Hz +0.5dB, -1.0dB

STEREO 30 to 15,000Hz +0.5dB, -1.0dB

DISTORTION AT 65dBf

MONO

less than 0.18% at 100Hz
less than 0.15% at 1,000Hz
less than 0.25% at 6,000Hz
less than 0.3% at 100Hz
less than 0.25% at 1,000Hz
less than 0.3% at 6,000Hz

STEREO

CAPTURE RATIO

ALTERNATE CHANNEL SELECTIVITY

50dB at 400kHz

SPURIOUS RESPONSE RATIO

70dB at 98MHz

48dB at 98MHz

IMAGE RESPONSE RATIO

IF RESPONSE RATIO

Balanced

90dB at 98MHz

AM SUPPRESSION RATIO

50dB at 98MHz

STEREO SEPARATION

30dB at 100Hz

40dB at 1,000Hz

ANTENNA INPUT IMPEDANCE

300 ohms balanced

75 ohms unbalanced

AM SECTION

TUNING RANGE

530 to 1,600kHz

SENSITIVITY (Bar antenna)

50dB/m (300μV/m)

SELECTIVITY

33dB at 1,000kHz

SIGNAL TO NOISE RATIO

46dB

TOTAL HARMONIC DISTORTION

less than 0.5% at 30% Mod. 80dB/m

IMAGE RESPONSE RATIO

46dB at 1,000kHz

IF RESPONSE RATIO

38dB at 1,000kHz

GENERAL

AC OUTLETS

switched max. 50 watts

unswitched total 150 watts

SEMICONDUCTORS

72 Transistors; 38 Diodes;

12 LEDs; 5 FETs; 8 ICs

POWER REQUIREMENTS

POWER VOLTAGE

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

POWER CONSUMPTION

160 watts

DIMENSIONS

433mm (17 1/8") W

155mm (6 1/8") H

355mm (14") D

8.6kg (19lbs.) Net

10kg (22lbs.) Packed

Simulated rosewood grain

FINISH

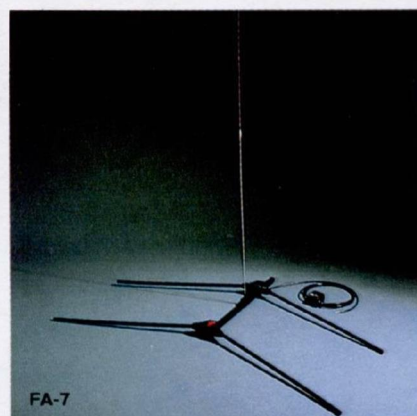
*Power specifications measured pursuant to U.S. Federal Trade Commission trade regulation on power output claims for amplifiers.

●The FM performance of this receiver is measured pursuant to the new Institute of High Fidelity standard, IHF-T-200, except specifications with the legend IHF-T-100.

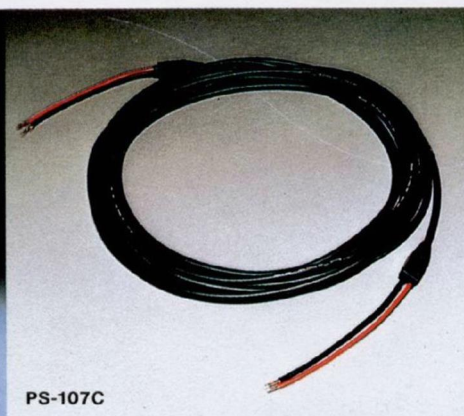
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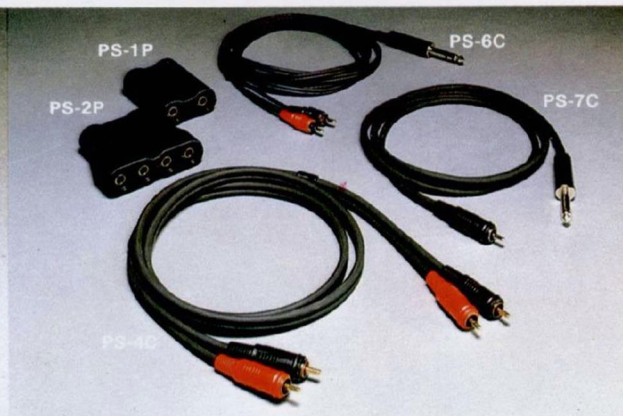
●Digitally Quartz-Locked System: U.S. Pat. No. 3991382.



FA-7 Compatible FM/AM Antenna System



PS-107C/112C Wide-Range Triaxial Speaker Cables



PS-4C/5C Hi-Fi Pin Cords

PS-6C/7C Stereo/Mono Phone Plug Cords

PS-1P/2P Extension Plug Adaptors



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Printed in Japan (M9005K2)

G-4700

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Min. RMS, both channels driven, at 1,000Hz, with no more than 0.05% total harmonic distortion

52 watts per channel into 8 ohms

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OVERALL (from AUX) less than 0.05% at or below rated min.

RMS power output

OVERALL (from AUX) less than 0.02% at 1kHz, 50W power output

INTERMODULATION DISTORTION

(70Hz: 7,000Hz=4:1 SMPTE method)

OVERALL (from AUX) less than 0.05% at or below rated min.

RMS power output

DAMPING FACTOR LOAD IMPEDANCE*

30 into 8 ohms

8 ohms

FREQUENCY RESPONSE (at 1 watt)

OVERALL (from AUX) 10 to 70,000Hz +1dB, -2dB

RIAA CURVE DEVIATION (30 to 15kHz) +0.5dB, -0.5dB

HUM AND NOISE (IHF)

PHONO 76dB

AUX 95dB

CHANNEL SEPARATION (at 1,000Hz)

PHONO 50dB

AUX 50dB

INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)

PHONO 2.5mV, 47k ohms

AUX 150mV, 47k ohms

(PHONO: Max. input capability more than 200mV RMS at 0.5% distortion)

OUTPUT VOLTAGE AND IMPEDANCE (at 1,000Hz)

TAPE REC (PIN) 150mV, 47k ohms

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BASS +10dB, -10dB at 50Hz

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(DIN) 1.2V

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STEREO 70dB

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IMAGE RESPONSE RATIO

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IMAGE RESPONSE RATIO

IF RESPONSE RATIO

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Sansui Pure Power DC FM/AM Stereo Receiver with Exclusive Digitally Quartz-Locked Tuning System, 50 Watts/Ch, 20 to 20kHz, at 8 ohms, 0.05% THD.

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Only hi-fi, everything hi-fi.

*© beim Hersteller
Archiv Michael-Otto*



Compo Hi-Fi GmbH
Importeur von Spitzenmarken

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