

G-5500

Sansui Pure Power DC Stereo Receiver Featuring High-Value/High-Power 60 Watts/Ch Minimum RMS, 20Hz to 20kHz, with Low 0.03% Total Harmonic Distortion and Mic Mixing.

Sansui

Only hi-fi, everything hi-fi.



Sansui's Pat. Pend. DC Achieves Pure Musical Performance

PURE SANSUI

At Sansui, every engineering decision is based, ultimately, on music. Pure music.

Reproducing perfect sinewaves on a graph or oscilloscope screen was not our goal in refining the basic electronic performance of the G-5500 to a level no other receiver has dared to claim. Such perfection *is* achieved in this Sansui Pure Power DC Stereo Receiver, however, largely because it is the surest way to guarantee its performance excellence when judged by the best precision "test instrument" ever "invented"—the human ear.

In creating this remarkable receiver we've surpassed conventional high fidelity requirements by a wide margin. Greatly expanded frequency response. Superior signal-to-noise ratios. The reduction of all forms of distortion far below audibility. But beyond the hi-fi basics, the emphasis is on startlingly clear and distinct sound image reproduction and impressive dynamic response. And vital to these achievements is our Pure Power DC or Direct Coupled power amplifier design, introduced in the following pages.

For the first time in hi-fi, here is a stereo receiver to equal the quality and value of separate components in the same price range. Tuner and phono equalizer specifications are strictly hi-fi. And no combination of separates can offer wider flexibility or easier handling.

Your decision, too, should be based on pure music. Hear it in the Pure Power DC Stereo Receiver G-5500 from Sansui, where it's *all* hi-fi.

Power amp's DC circuit configuration is special, featuring high current driving.

Sansui has given the G-5500 Pure Power DC Stereo Receiver all the benefits of our most advanced DC circuit designs. The configuration of the power amp is Sansui's own, exclusive DC type with a current-differential push-pull driver circuit (Pat. Pend.). The high current drive this circuit permits is the major reason for the dramatic improvement in slew rate, rise time and TIM (transient intermodulation) distortion; you'll enjoy superb "transient response" for more musical reproduction.

Naturally, not a single capacitor is used in the negative feedback loop or input/output of this DC power amp. Thus there's none of the problems capacitors can cause, such as distortion and unwanted coloration of the sound.

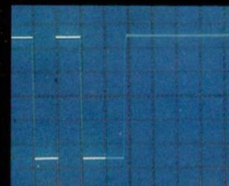
High slew rate and fast rise time add up to superb "transient response."

The power amplifier section of the G-5500 features a super-high $56\text{V}/\mu\text{Sec}$. slew rate and very fast $1.4\mu\text{Sec}$. rise time. Thus, however pulsive and complex the input signal, the amp responds quickly and accurately with negligible phase delay. Superb transient response—determining the musical quality of the reproduced signal—also indicates that the amp's TIM (transient intermodulation) distortion is ideally minimized to assure amazing fidelity and clear sound image reproduction.

Frequency range is extra wide from DC (zero Hz) to 200kHz.

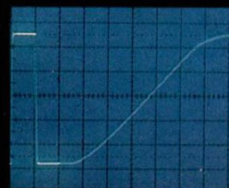
The DC power amp in the G-5500 also offers one of the widest frequency ranges in the industry—from DC (that is, zero Hertz) to 200,000Hz. The audible difference is in tight bass and brilliant high-frequency sound—clean as could be, always. And boosting the value as well as the power performance of the G-5500 is the fact that the DC amp delivers a big 60 watts per channel, min. RMS, both channels driven into 8 ohms, from 20Hz to 20kHz, with *no more than 0.03% total harmonic distortion*.

SLEW RATE & RISE TIME (Power Amp)



INPUT SQUARE WAVE

V: $0.5\text{V}/\text{div}$.
H: $50\mu\text{Sec}$, $1\mu\text{Sec}/\text{div}$.

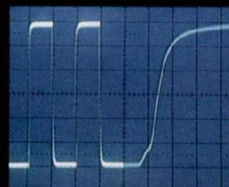


A CONVENTIONAL RECEIVER

Slew Rate: $21\text{V}/\mu\text{Sec}$
Rise Time: $4\mu\text{Sec}$

V: $10\text{V}/\text{div}$.

H: $50\mu\text{Sec}$, $1\mu\text{Sec}/\text{div}$.



G-5500

Slew Rate: $56\text{V}/\mu\text{Sec}$
Rise Time: $1.4\mu\text{Sec}$

V: $10\text{V}/\text{div}$.

H: $50\mu\text{Sec}$, $1\mu\text{Sec}/\text{div}$.

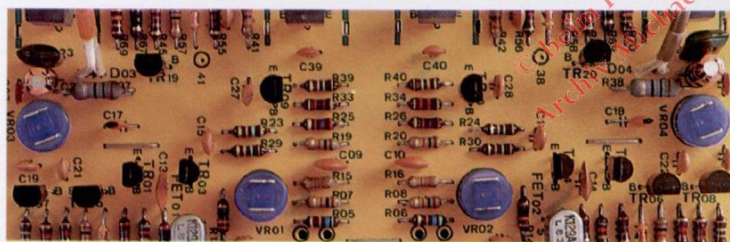
The Sansui G-5500: Pure DC Power Amp, Accurate MOS FET FM for More Musicality, Higher Value

This Sansui-Exclusive DC amp offers superwide DC (zero Hz) to 200,000Hz frequency response and high slew rate/fast rise time with low TIM.

Sansui-exclusive circuitry in DC power amplifier features Dual-FET differential input for superb tonal quality

The input of the power amplifier of the G-5500 is formed of a Dual-FET differential amplifier stage. It's then connected to a following current-mirror loaded, cascode-connected amplifier of low-noise transistors, a current differential push-pull driver amplifier stage (Sansui patent pending), a three-stage differential predriver amplifier, and, finally, a two-stage Darlington-connected OCL output circuit that holds four large power transistors of excellent linearity in parallel in *each* channel.

Capacitors, which are the traditional cause of coloration and phase distortion, are eliminated in this highly stable, highly advanced circuitry. Thus tonal transparency is improved more than ever conceived possible; dynamic response is likewise dramatically bettered; and musical accuracy comes closer to perfection than ever before possible.



Advanced power supply system: A dramatic improvement over conventional power-supply designs

An amplifier's power supply is like a fuel pump in an engine. Everyone knows it's there, but few people realize what a significant role it plays. What a good, bad or mediocre power supply system can do, or not do, for tonal quality cannot be easily seen in specifications. Yet the difference is audibly clear, more so with DC amplifiers. This is the reason Sansui has taken extra care with the power supplies in the G-5500. In fact, it is a hallmark of Sansui quality in all our new receivers and stereo amplifiers.

The G-5500 uses a large, well-regulated power transformer. And, for plentiful power reserve, there's a pair of quality capacitors with the ability to keep source impedance very low across a very wide frequency range. The result is that reproduced stereo sound images retain amazingly high resolution.

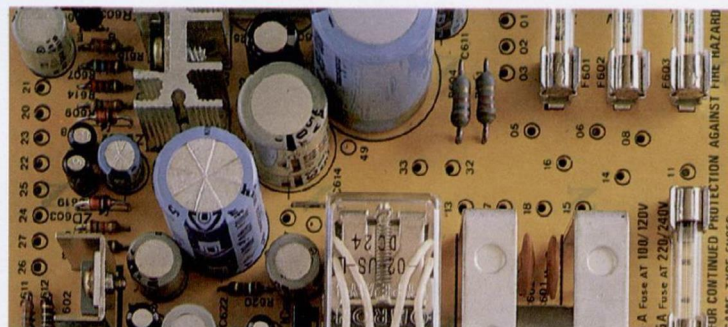
Thanks to such a well-designed power supply system, reproduced bass sound is very clear-cut, midranges are rich, and musicality is lifelike across the entire audio-frequency range.

Reliable power protection circuitry with IC assures always safe operation

The G-5500 has one of the best protection circuit teams ever devised—a dual function circuit consisting of:

(1) DC detection/protection circuit: The moment a DC (Direct Current) component having a voltage/current value exceeding a prescribed value appears at the output, this circuit instantly opens the output circuit to protect your valuable speaker systems.

(2) Overcurrent detection/protection circuit: I ever the output terminals are short-circuited, this circuit instantly opens the output circuit and prevents an overcurrent from flowing into your speaker systems.



Phono Equalizer,

The preamp in the G-5500 features an accurate transistor differential input phono circuit and creative Mic Mixing facility

The phono circuit uses select component parts for tonal accuracy and high 220mV overload

Sansui uses the best available components and most elaborate circuit configuration in the phono equalizer in the G-5500, for it's here that the overall tone quality is determined. There is a PNP transistor differential input, followed by a buffer amp and a one-stage class-A output, formed by an array of four transistors per channel. The excellent open-loop response the circuit features (response before application of negative feedback) means superb transient response. Thus you can expect to hear well-defined sonic images, realistic attacks and distinct texture from the G-5500 in your room. RIAA equalization—an

important parameter of any phono equalizer—is an accurate $\pm 0.2\text{dB}$ from 20 to 20,000Hz, thanks to quality polypropylene capacitors and metallized-film resistors. Other equalizer parameters are equally impressive: 220mV (RMS) phono overload and better than 78dB hum and noise. You're assured of unclipped reproduction from whatever source, however wide its dynamic range.

Our elaborate 4-transistor (per channel) tone control circuit can be bypassed

Like the more expensive Pure Power Sansui receivers, the G-5500 has a differential input in its tone control circuit, while an array of four low-noise transistors forms the circuit itself. The circuit is of the NF configuration to reduce distortion. The Bass and Treble controls have 11 click stops for accurate tone adjustment.

The good thing about this control circuit is that you can bypass it by a front-panel Defeat Switch. Since there's then only one resistor in the signal path, a ruler flat response is obtainable without the usual noticeable high-frequency rise.



Mic Mixing facility invites you to take active part in hi-fi creativity

The Sansui G-5500 offers a built-in Mic Mixing facility, an exceptional extra in a receiver of this price. There is a separate control to adjust microphone level so you can match live sounds with any musical source—records, tapes or broadcasts. (Recording of mixed sound is not possible.)



The Subsonic Filter cleans up harmful ultra low frequency signals

You can safely play a warped record and enjoy unmuddied reproduction, thanks to the Subsonic Filter on the G-5500. It effectively cuts out harmful, very low (below 16Hz) signals with a 6dB cut-off slope. Since only the inaudible, infrasonic component is eliminated, the music you hear is affected in no way whatsoever.

Extra-Handy Extra Features

- *Large, 41-Click Volume Control* assures smooth and accurate operation.
- *-20dB Audio Muting Switch* reduces sound volume instantly to 1/10 of the original volume.
- *Loudness Control* gives you natural tonal balance during low level listening. Both highs and lows are accentuated.
- *Speaker Switches*, A and B, have ON/OFF positions. You can connect two pairs of speaker systems and operate them individually. Thus you may place one pair in another room.
- *Two Tape Monitor Switches* handle monitoring of either of two connected tape decks, and dubbing from Tape 1 to Tape 2.

The FM/AM tuner section features hi-fi specifications as well as superb radio receiver parameters.

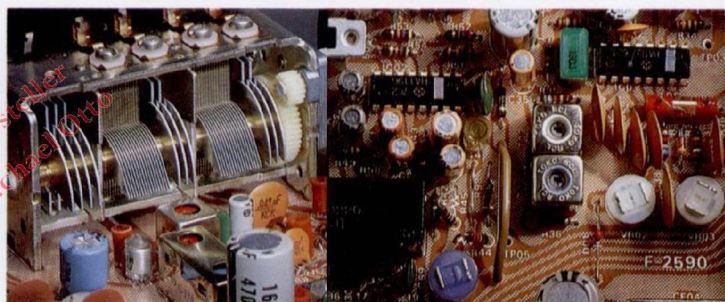
FM Frontend features accurate tracking and enhanced FM sensitivity

The advanced FM frontend in the G-5500 features a low-noise dual-gated MOS FET as an RF amplifier and a wide-gap 3-gang tuning capacitor. While the RF amp lets the G-5500 accept strong inputs without overload, as well as receiving faint ones accurately, the new tuning capacitor lets it retain its high sensitivity (37dBf 50dB Quieting Sensitivity) to all station frequencies located across the FM band.

IF section features improved phase response and group-delay characteristics for hi-fi reproduction

The task of the IF section is to amplify the still faint IF signals, eliminating AM noise and discriminating for audio signals only. It is in the IF section that the hi-fi quality of an FM tuner is determined. So, we've used extra elaborate circuitry in the IF of the G-5500, a two-stage IF amp, built around an array of ceramic filters (six elements in all). It improves FM selectivity so that you'll pull in *only* the station you want with no noticeable interference. Also, stations as close apart as 250kHz on the dial are received with pinpoint accuracy. The improved phase response and group-delay characteristics mean you get hi-fi reproduction always.

There are also: an IC limiter to eliminate amplitude-modulated noise, a new quadrature detector (discriminator) to reduce noise and distortion over a wide range, and a Sansui-exclusive DDC (Differential Demodulator Circuit) that puts an end to the beat noise caused by SCA signals, and thus eliminates intermodulation distortion. Finally, a carrier leak filter cuts the multiplex signal that might cause noise when you record.



The PLL Multiplex Demodulator reduces crosstalk for always-wide stereo separation

Stereo FM separation is improved and phase deviation minimized, thanks to the advanced PLL (Phase-Locked Loop) stereo multiplex demodulator contained in an adjustment-free IC (Integrated Circuit). Stability is always perfect, unaffected by aging or environmental changes.

You'll be amazed at the AM quality

Gone are booms and whistles in AM reception, for the high-integration IC—a circuit equivalent to 22 transistors and 11 diodes—in the G-5500's AM section increases tuning stability and reliability. Together with a bi-resonator Jaumann IF ceramic filter and a sensitive AM ferrite bar antenna with space wound wire, it helps improve AM sound for truly hi-fi reproduction.

Responsive Twin Tuning Meters

Twin tuning meters—one for signal strength and one for center of channel—are a must for accurate, low-distortion FM reception. The ones on the G-5500 are so accurate you needn't rely on your ears for precision tuning. The signal strength meter for FM and AM indicates the signal strength of broadcasts. FM Muting is provided to eliminate annoying inter-station noise while tuning FM. A Dolby* de-emphasis circuit for FM Dolby adaptor and other special extras are provided on the G-5500 Pure Power DC Stereo Receiver from Sansui, where it's *all* hi-fi.

*Dolby is a trademark of Dolby Labs, Inc.

Specifications

AUDIO SECTION

POWER OUTPUT*

Min. RMS, both channels driven, from 20Hz to 20,000Hz, with no more than 0.03% total harmonic distortion

60 watts per channel into 8 ohms

Min. RMS, both channels driven, at 1,000Hz, with no more than 0.03% total harmonic distortion

65 watts per channel into 8 ohms

TOTAL HARMONIC DISTORTION*

OVERALL (from AUX) less than 0.03% at or below rated min. RMS power output

OVERALL (from AUX) less than 0.015% at 1kHz, 60W power output

INTERMODULATION DISTORTION

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

OVERALL (from AUX) less than 0.03% at or below rated min. RMS power output

50 into 8 ohms

DAMPING FACTOR

LOAD IMPEDANCE*

8 ohms

SLEW RATE

56V/ μ Sec.

RISE TIME

1.4 μ Sec.

FREQUENCY RESPONSE (at 1 watt)

POWER AMP SECTION DC to 200,000Hz +0dB, -3dB

OVERALL (from AUX) 5 to 50,000Hz +0.2dB, -2.0dB

RIAA CURVE DEVIATION (20 to 20kHz)

+0.2dB, -0.2dB

HUM AND NOISE (IHF)

PHONO 78dB

AUX 95dB

CHANNEL SEPARATION (at 1,000Hz)

PHONO 55dB

AUX 65dB

INPUT SENSITIVITY AND IMPEDANCE (at 1,000Hz)

PHONO 2.5mV, 47k ohms

AUX 150mV, 47k ohms

MIC 6mV, 10k ohms

(PHONO: Max. input capability more than 220mV RMS at 0.1% distortion)

OUTPUT VOLTAGE AND IMPEDANCE (at 1,000Hz)

TAPE REC (PIN) 150mV, 47k ohms

(DIN) 43mV open

CONTROLS

BASS +10dB, -10dB at 50Hz

TREBLE +10dB, -10dB at 10kHz

LOUDNESS +8dB at 50Hz, +6dB at 10kHz

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

MUTING (Audio) -20dB

FM SECTION

TUNING RANGE

88 to 108MHz

SENSITIVITY

MONO (IHF) 10.8dBf (1.9 μ V IHF T-100)

(DIN) 1.1 μ V

STEREO 18dBf

50dB QUIETING SENSITIVITY

MONO 15dBf (3.1 μ V IHF T-100)

STEREO 37dBf (38.9 μ V IHF T-100)

SIGNAL TO NOISE RATIO AT 65dBf

MONO 72dB

STEREO 68dB

FREQUENCY RESPONSE

MONO

STEREO

30 to 15,000Hz +0.2dB, -1dB

30 to 15,000Hz +0.2dB, -1dB

DISTORTION AT 65dBf

MONO

less than 0.15% at 100Hz
less than 0.13% at 1,000Hz
less than 0.25% at 6,000Hz
less than 0.25% at 100Hz
less than 0.18% at 1,000Hz
less than 0.25% at 6,000Hz

STEREO

CAPTURE RATIO

ALTERNATE CHANNEL SELECTIVITY

70dB at 400kHz

SPURIOUS RESPONSE RATIO

80dB at 98MHz

50dB at 98MHz

IMAGE RESPONSE RATIO

IF RESPONSE RATIO

Balanced

75dB at 98MHz

RF INTERMODULATION

AM SUPPRESSION RATIO

STEREO SEPARATION

60dB at 98MHz

55dB at 98MHz

35dB 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 (300 μ V/m)

SELECTIVITY (± 10 kHz)

35dB at 1,000kHz

IMAGE RESPONSE RATIO

45dB at 1,000kHz

IF RESPONSE RATIO

38dB at 1,000kHz

GENERAL

AC OUTLETS

switched max. 100 watts

unswitched total 150 watts

55 Transistors; 25 Diodes;

3 FETs; 4 ICs; 2 LEDs

SEMICONDUCTORS

POWER REQUIREMENTS

POWER VOLTAGE

POWER CONSUMPTION

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

200 watts

DIMENSIONS

464mm (18 $\frac{1}{8}$ ")W

181mm (7 $\frac{1}{8}$ ")H

408mm (16 $\frac{1}{8}$ ")D

12.8kg (28.2lbs.) Net

15kg (33.1lbs.) Packed

simulated rosewood grain

WEIGHT

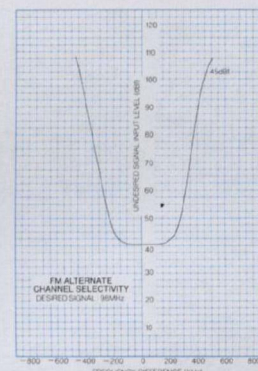
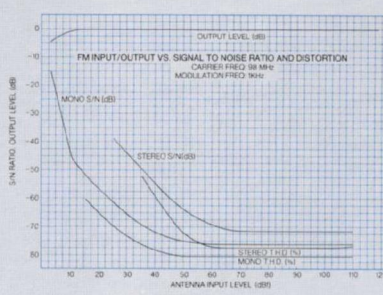
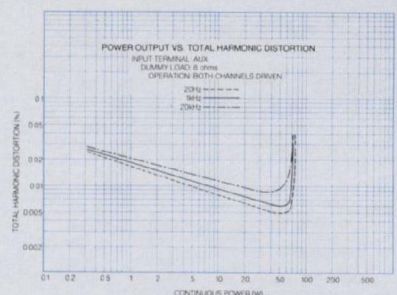
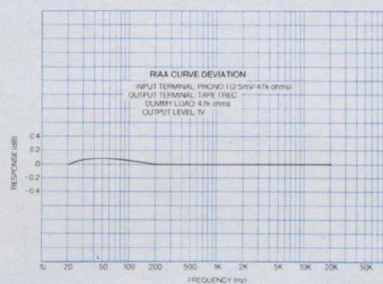
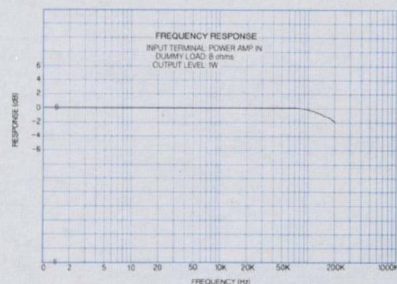
FINISH

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

•The FM performance of the G-5500 is measured pursuant to the new Institute of High Fidelity standard, IHF-T-200, except specifications with the legend IHF-T-100.

•For European models, some specifications might change to comply with local safety regulations and standards.

•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
55-11 QUEENS BLVD., WOODSIDE, NEW YORK 11377, U.S.A./TELEX: NEW YORK 422633 SEC UI
SANSUI AUDIO EUROPE N.V.
NORTH TRADE BUILDING, NOORDERLAAN 133-BUS 1, 2030 ANTWERP, BELGIUM/TELEX: 33538

Printed in Japan (80003K)