

SECTION 1

GENERAL DESCRIPTION

Technical Specifications

Circuit: All silicon transistor FM stereo tuner Superheterodyne, 43 transistors (including 5 Field-Effect Transistors), 34 diodes

FM Section (Monophonic)

Frequency range: 87-108 MHz
Intermediate frequency: 10.7 MHz
Antenna input impedance: 300 ohms (balanced), 75 ohms (unbalanced)

Frequency Response: 20 to 15,000 Hz ± 0.5 db
Usable sensitivity: 1.5 μ V (IHF)
Quieting sensitivity: 1.0 μ V (300 ohm) for 30 db of quieting
3.0 μ V (300 ohm) for 50 db of quieting
100 μ V (300 ohm) for 70 db of quieting

Image rejection: Better than 90 db (IHF)

IF rejection: Better than 100 db (IHF)

Spurious rejection: Better than 100 db (IHF)

Alternate channel selectivity (IHF): Better than 90 db

Capture ratio: 1.0 db (IHF)

AM suppression: Better than 50 db (IHF)

Harmonic distortion: Better than 0.2% at 100% (1000 μ V input) modulation

Frequency drift: Less than ± 20 kHz at 23-131°F (100 MHz)

Hum and noise: 70 db down

Muting operation: 3 μ V ~ 26 μ V (continuously variable)

FM Section (Stereophonic)

Stereo operation sensitivity: 3 μ V
Stereo separation: Better than 40 db, at mid-frequency, 100% modulation
Better than 30 db, at 50 Hz, 100% modulation
Better than 30 db, at 10 kHz, 100% modulation

Better than 20 db, at 15 kHz, 100% modulation

Frequency response: 30 to 15,000 Hz ± 0.5 db

Harmonic distortion: Less than 0.35%, at 400 Hz, (1000 μ V input) 100% modulation

SCA suppression: 50 db
19 kHz (pilot), 38 kHz (sub-carrier)

suppression: Better than 70 db

Audio outputs: Each channel FIXED 700 mV, (at 400 Hz, 100% modulation) impedance 10k ohms
VARIABLE 0~2V, impedance 1k ohms at maximum output

General

Power requirements: AC 117 volts, 60 Hz

Power consumption: 20 watts, 23 VA

Indicators: Tuner input meter, Tuning meter, Stereo indicator (lamp)

Dimensions: 3-3/4(h) \times 15-3/4(w) \times 12-1/4(d)"
Weight: 20 lb 14 oz

General Information

The SONY ST-5000 FW is one of the most advanced FM Stereo tuners available today. Its front end employs new and revolutionary silicon field-effect transistors that yield excellent sensitivity and noise figure, and at the same time can handle very strong signals without overload.

FET's in the local oscillator section also afford great stability and freedom of drift due to temperature. This negates the need for automatic frequency control and greatly simplifies the tuning operation for the set owner.

Nine IF stages, that employ three multi-unit solid-state filters, provide high sensitivity, very sharp response and an essentially flat response within the selected channel. This results in excellent adjacent-channel rejection and very low distortion.

A unique electronic switching system in the multiplex section gives smooth and clickless switching between mono and stereo modes of operation. Switching is fully automatic and immune to the effects of inter-station noise.

An ingenious muting circuit, employing one FET and nine transistors, cuts out inter-station noise without killing those weak stations. This combination results in a receiver capable of "pulling-