

# SONY AUDIO

# STR-V7

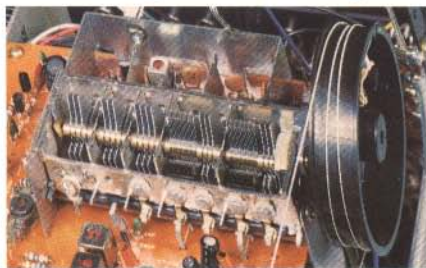
FM STEREO/FM-AM RECEIVER

150 watts per channel, minimum RMS at 8 ohms from 20Hz to 20kHz with no more than 0.07% Total Harmonic Distortion



The Sony STR-V7 has been designed for perfectionist listeners who want the best in today's generation of super-power receivers. The best in performance... and value. One glance at the STR-V7, and the clean, elegant styling may belie its rugged performance capabilities. But this exceptional appearance also invites you to listen. And when you listen to the STR-V7, you won't want to turn off the sound. Or pass up the value. Performance and value that only Sony's advanced audio technology and engineering provide.

### Outstanding FM Tuner Design



MOS FET front-end electronics with integral 5-gang tuning capacitor.

From MOS FET RF front-end amplifier to built-in Dolby FM decoder and FM bandwidth selector, the FM tuner section is built to deliver the best performance. The best under all broadcast-signal conditions, whether you're in a weak, distant signal area or crowded, metropolitan dial location.

An enclosure surrounds the MOS FET front-end circuitry, including the integral 5-gang tuning capacitor and precision-built local oscillator. This combination

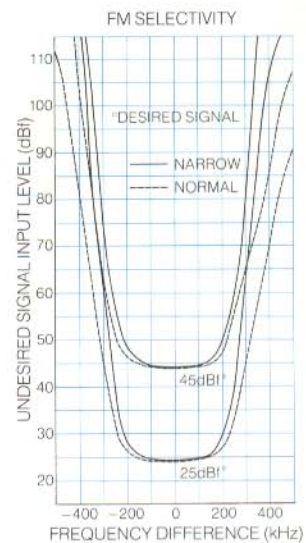
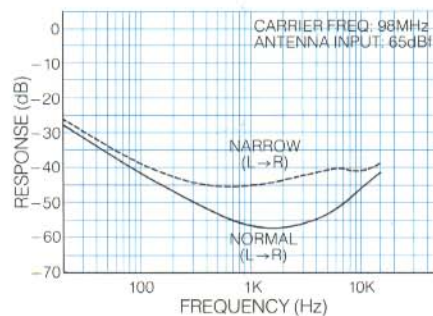
results in higher frequency stability and exceptionally accurate dial calibration. In addition, the MOS FET RF front-end helps provide the STR-V7 with its steep quieting slope, high interference rejection, high signal-overload capability and low noise. It also assures high stability with all types of signals.

### High Selectivity, Low Distortion

The STR-V7 also incorporates advanced circuitry to achieve excellent performance in the critical areas of selectivity, distortion and stereo separation. Sony's specially-designed, uni-phase, 4-element ceramic filters are employed in the IF-stage differential amplifier, together with five stages of limiters. This design assures a wide, flat passband, a smooth response slope and uniform phase characteristics. Which enables us to achieve high selectivity and low distortion, as well as excellent capture and S/N ratios. And a P-L-L multiplex IC is employed for wide stereo separation.

To enhance this outstanding performance, the V7 features a "selectivity switch," or FM IF bandwidth

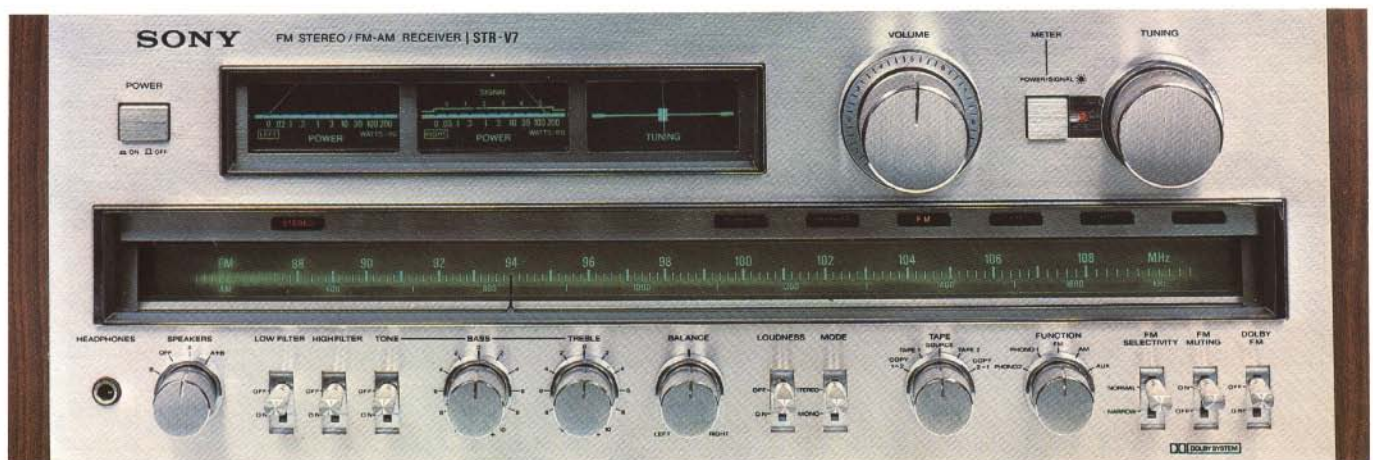
### SEPARATION VS. FREQUENCY CHARACTERISTIC



selector, for optimum reception under all types of signal conditions. In the "normal" position, the lowest distortion and widest stereo separation can be achieved. But when alternate-channel interference is a problem, the "narrow" position provides higher selectivity, lower noise and interference.

### Optimum Dolby FM

The feature-laden V7 includes a built-in Dolby noise reduction system for decoding Dolbyized FM broadcasts. Which means you can take advantage of the low noise and wider dynamic range provided through Dolbyized FM. And since the Sony V7 also includes the 25-microsecond de-emphasis required for Dolby reception, there's no loss in treble response which would occur with the standard 75-microsecond roll-off, and there's no need for adding any



external accessories.

But the best in FM performance and value doesn't stop here. The V7 assures the best in tuning accuracy and convenience, too. For example, the precision of frequency-linear FM and AM dial calibration. The convenience of smooth, flywheel-coupled tuning action. And the silence provided by FM interstation muting as you tune up and down the band. To help you pinpoint the desired station, there's also a center-station meter, plus a second meter that can be switched for signal-strength.

### Special Phono EQ Amp

The direct-coupled preamplifier section, which includes our newly designed, low-noise transistors, provides wide, flat frequency response for high-level inputs, exceptionally accurate RIAA phono equalization and excellent S/N ratios with all input sources. And its phono overload capability of 250mV assures more than adequate headroom with any of today's high-output phono cartridges.

The V7's special phono EQ circuitry also makes it possible to use a low-output, moving-coil phono cartridge with the receiver, without the need for an external step-up transformer or pre-preamplifier. The V7's low-noise, high-gain amplification stage and input impedance switching yield excellent performance with a moving coil phono-input source. Whichever type of cartridge is used, RIAA response remains accurate



Tape switch allows tape-to-tape dubbing in both directions.

within  $\pm 0.5\text{dB}$ , with special DC negative feedback to maintain stable performance independent of voltage fluctuations.

### Precision Control

The full-featured V7 provides for flexible operation and precision control. Connections are included for two phono sources, an auxiliary source and two tape decks. The tape enthusiast will especially appreciate the V7's comprehensive monitoring and tape-copy facilities, which include provision for tape-to-tape dubbing in both directions.

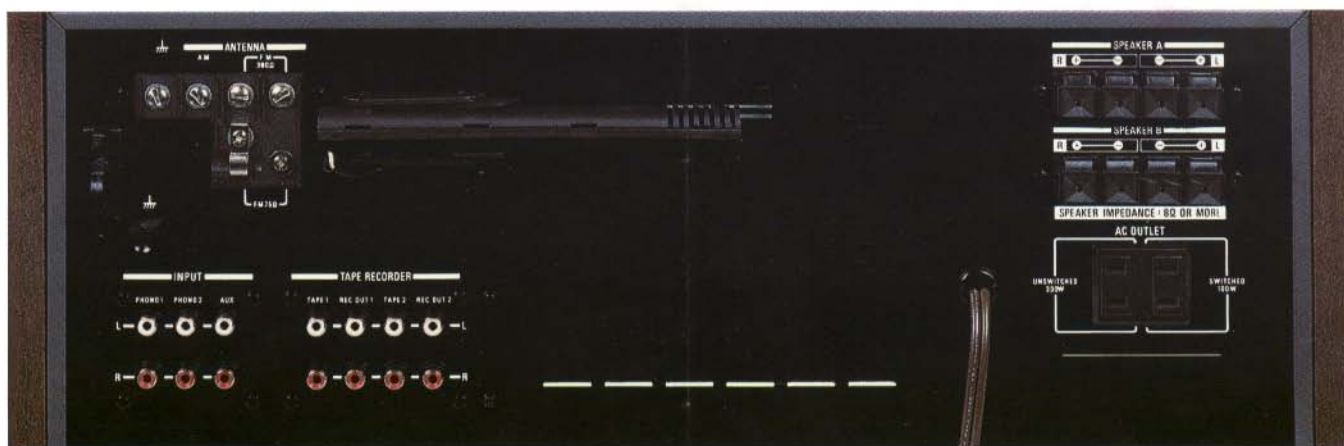
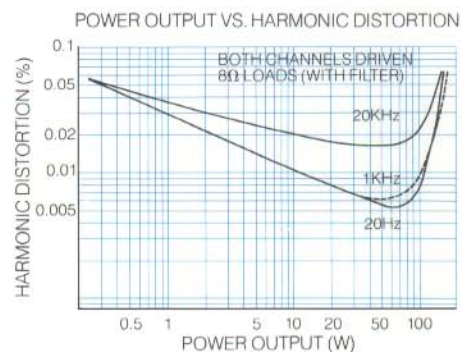
Precision control starts with the V7's stepped-attenuator volume control, which eliminates tracking error between channels, a common problem in conventional potentiometers. And for precise tonal compensation, there are negative-feedback, stepped attenuator bass and treble controls. A tone-control defeat switch is also

included for accurate A/B comparisons between flat and contoured response. High and low filters are included for program source noise elimination. And a loudness compensation switch provides both high and low frequency boost, for realistic tonal balance at low volume levels.

### Rugged Power Performance

The V7's direct-coupled DC power amplifier section delivers clean, rugged power—enough to drive even inefficient speakers to resounding levels. With plenty of power reserve to handle sharp transient attack tones with clarity. And to deliver clean, well-defined bass, and transparent mid-range and treble with all musical content.

To accurately monitor power being fed to speakers, the V7 features two power-output meters, which indicate output levels in watts per channel, from 0.03 to 200 watts. The easy-to-read meters offer maximum overload warning. In addition, they help achieve accurate stereo-channel balancing at both high and low-output levels.



This type of accuracy is typical of the entire power amp design, from its differential comparator input stage to its parallel-connected, true-complementary-symmetry output stage, with positive and negative power-supply voltages. A design which assures low noise, high phase linearity and excellent low-frequency performance. The V7 power amp section also incorporates a high efficiency, high-regulation toroidal-coil transformer, together with two 15,000 $\mu$ F capacitors. This combination assures the utmost operating stability and provides the V7 with its clean, effortless "feel" of power across the entire frequency range.



Toroidal-coil transformer and 15,000 $\mu$ F capacitors provide high stability.

## FEATURES

- MOS FET RF front-end electronics unitized into 5-gang tuning-capacitor assembly
- Two stages of uni-phase IF filters
- Phase-Locked-Loop IC stereo multiplex stage
- FM bandwidth selector for optimum reception under both crowded and normal signal conditions
- Dolby\* noise reduction system for decoding Dolbyized FM broadcasts, including automatic 25 microsecond de-emphasis switching
- Center-station tuning meter, with separate meter/switching for signal-strength indication
- Easy-to-read, frequency-linear FM and AM dial scales
- FM interstation-noise muting switch
- Newly-designed, direct-coupled preamplifier section, with low noise, high-gain phono EQ circuitry allowing direct connection of moving-coil-cartridge phono input—no external step-up transformer or pre-preamplifier needed
- Connections for 2 phono sources, auxiliary source and 2 tape decks, with tape-to-tape dubbing in either direction
- Professional-quality, stepped-attenuator volume control

- Stepped-attenuator bass and treble controls
- Tone-control defeat switch, allowing A/B comparisons between flat and contoured response
- High and low filters, plus loudness compensation switch
- Large, easy-to-read power meters for accurate power output level monitoring, as well as easy channel balancing
- Direct-coupled DC power amplifier section, with differential input stage and parallel, true-complementary-symmetry, Darlington-connected output stage
- Toroidal transformer and 15,000 $\mu$ F power-output capacitors
- Complete protection circuitry to safeguard amplifier/speakers against excessive current, thermal overload, DC components and short-circuiting at speaker terminals
- Connections for 2 pairs of speakers, with spring-loaded terminals for simple installation, positive connections
- 2 AC convenience outlets
- Wooden side panels included

\*TM Dolby Laboratories, Inc.

## SPECIFICATIONS

### FM TUNER SECTION

#### Antenna terminals:

300 ohms, balanced  
75 ohms, unbalanced

**Usable sensitivity:** 9.3dBf (1.6 $\mu$ V)

#### 50dB quieting sensitivity:

Mono—14.2dBf (2.8 $\mu$ V)  
Stereo—37.3dBf (40.0 $\mu$ V)

**S/N ratio:** Mono—75dB  
Stereo—70dB

**Capture ratio:** 1.0dB

#### Alternate channel selectivity:

Narrow bandwidth position—80dB  
Normal bandwidth position—50dB

**Image rejection:** 80dB

**IF rejection:** 100dB

**Spurious rejection:** 100dB

**AM suppression:** 60dB

#### Total harmonic distortion:

Mono, at 1kHz—0.08%  
Stereo, at 1kHz—0.15%

**IM distortion:** Mono—0.08%  
Stereo—0.15%

#### Frequency response:

30Hz—15kHz, +0.2, -1.5 dB

#### Stereo separation:

At 100Hz—40dB

At 1kHz—48dB

At 10kHz—43dB

**Subcarrier suppression:** 60dB

### AM TUNER SECTION

**Sensitivity:** Ext. ant.—100 $\mu$ V

**S/N ratio:** 50dB

**Selectivity:** 35dB

**Image rejection:** 40dB

**IF rejection:** 40dB

### POWER AMPLIFIER SECTION

#### Continuous power output (RMS):

150 watts per channel minimum  
RMS at 8 ohms from 20Hz to  
20kHz with no more than 0.07%  
Total Harmonic Distortion:

#### Total harmonic distortion:

No more than 0.07% at rated output

**IM distortion:** (60 Hz: 7kHz = 4:1)

At rated output—0.07%

**Damping factor:** 40 at 8 ohms

**Residual noise:** 0.3 $\mu$ V

**Speaker outputs:** 2 per channel

**Headphone output:** 1

### PREAMPLIFIER SECTION

#### Input sensitivity & impedance:

Phono 1—2.5mV, 50k ohms

Phono 2 (for MC cartridge)—

0.25mV, 100 ohms

Aux., Tape—150mV, 100k ohms

**Phono overload:** Phono 1—250mV

Phono 2—25mV

#### Output level & min. load impedance:

Rec. out.—250mV, 4.7k ohms

#### Frequency response:

Phono—RIIA,  $\pm$ 0.5dB  
Aux., Tape—5Hz—50kHz,  
+0, -2.0dB

#### Tone control range:

Bass— $\pm$ 10dB at 100Hz

Treble— $\pm$ 10dB at 10kHz

**Filters:** High—6dB/oct. above  
9kHz; Low—6dB/oct. below 50Hz

**S/N ratio:** (IHF-A weighted)

Phono 1 re: 2.5mV input—80dB

Phono 1 re: 10mV input—92dB

Aux., Tape re: 150mV input—100dB

### GENERAL SPECIFICATIONS

**Power requirements:** AC 120V, 60Hz

**Power consumption:** 250W

**AC convenience outlets:**

1 unswitched, 300W max.

1 switched, 100W max.

#### Dimensions:

7 $\frac{9}{16}$ "H x 20 $\frac{1}{2}$ "W x 17 $\frac{3}{4}$ "D

**Weight:** 48 lbs. 6 oz.

All specifications are subject to change without notice.

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