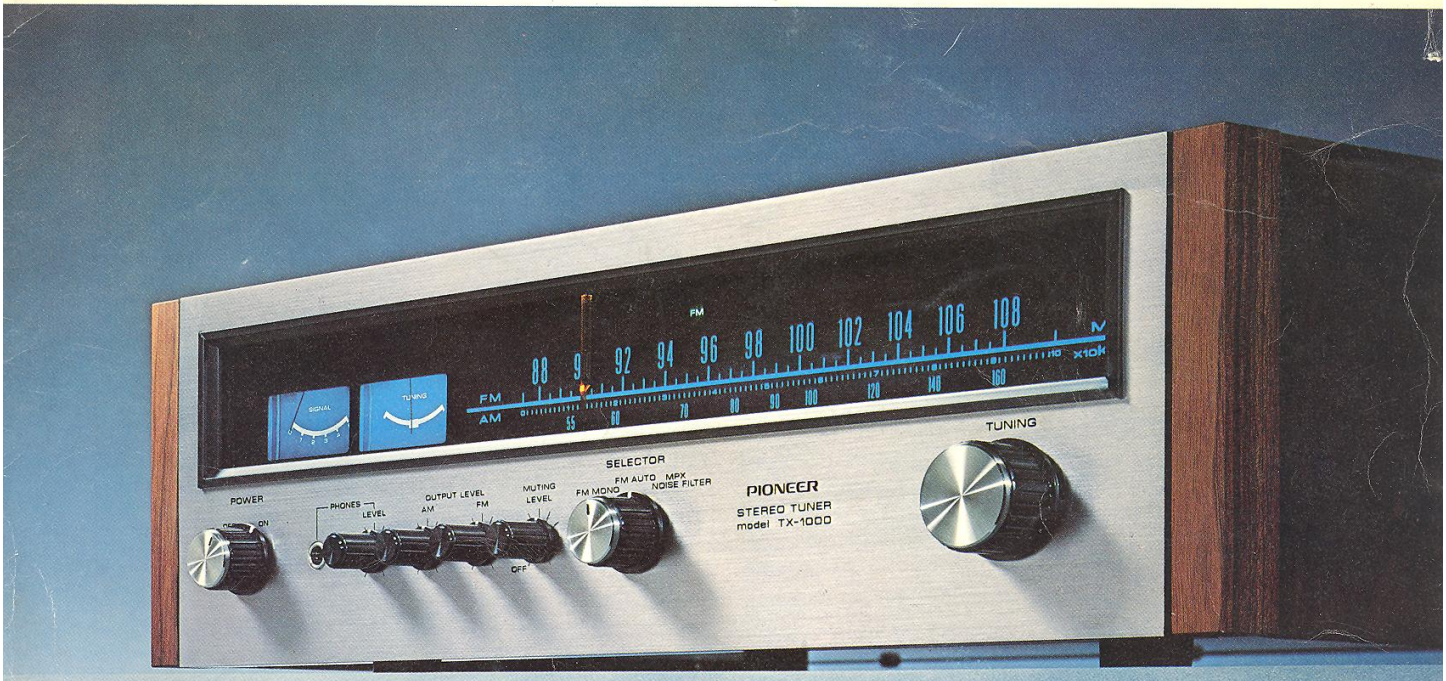
PIONEER®

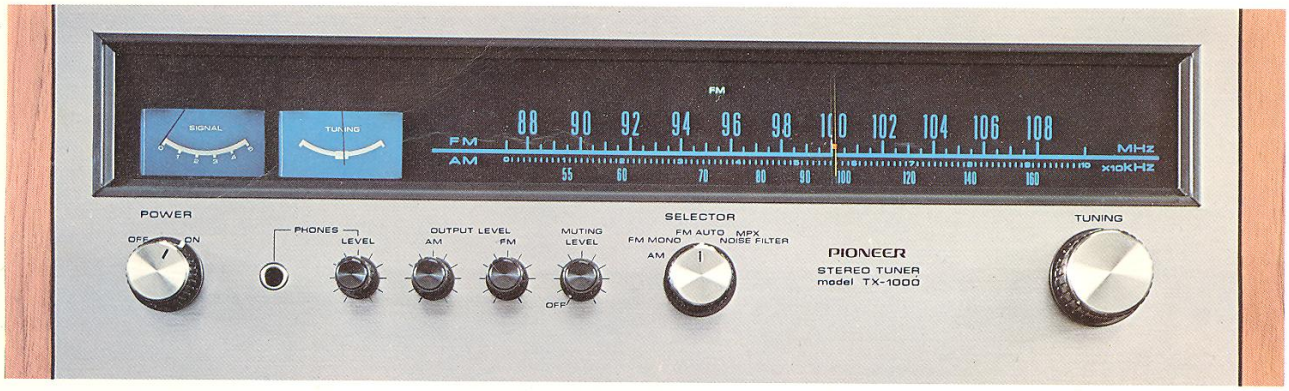
TX-1000

A professional quality stereo AM/FM tuner with outstanding sensitivity, low distortion and special design for optimum selectivity.



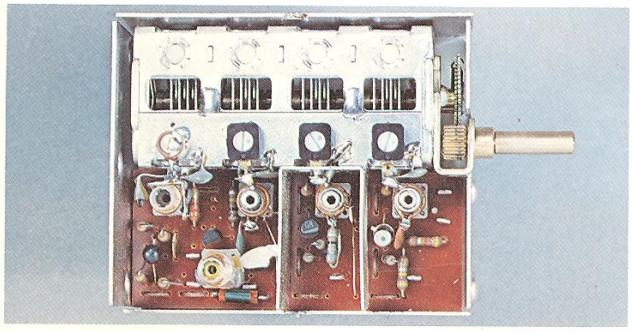
The TX-1000 from Pioneer is a one-of-a-kind stereo component, one of the new breed of AM/FM tuners that offers professional sophistication, sensitivity and extra-low distortion along with a host of new, advanced features for outstanding FM reception. Complete with the very latest design components and transistors, the TX-1000 provides all the requirements that the audio enthusiast demands in a tuner—and then some. MOS-type FETs in the front-end, an IF section featuring ultra-sharp crystal filters and ICs with outstanding limiting effect provide unsurpassed capture ratio and selectivity. The wide linear dial scale works with two sensitive tuning meters for pinpoint precision, and is complemented by multipath terminals and other refined features for perfect reception. Both AM and FM have separate output level controls. And even without an amplifier you can still listen to this unit through headphones plugged into the headphone jack. The Pioneer TX-1000 puts it all together for convenience and superb reception. Read on to learn why it's the finest component of its kind for your stereo money.

TX-1000



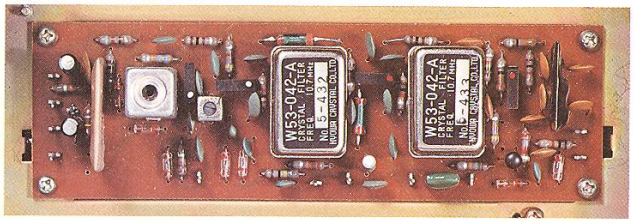
FM FRONT-END SECTION WITH MOS-TYPE FETS

Designed to play a key role in obtaining optimum reception even in areas of weak signals, the front-end section of the TX-1000 provides excellent sensitivity and signal-to-noise ratio as well as outstanding image rejection, cross-modulation rejection and spurious signal rejection. As the number of FM stations increases, spurious signal rejection becomes more and more the important consideration in the choice of a tuner. The TX-1000 has been designed to satisfy this consideration beyond a doubt. The circuitry employs four gang variable capacitors. In the first stage dual gate MOS-type FET is used, while the second stage features junction-type FET. Additionally, FETs are also used in the mixing circuit, which complements the stabilized colpitt's-type mixing oscillator. The result of these components is an image rejection ratio of 90 dB, spurious response of 95 dB and excellent interference rejection characteristics. The S/N ratio is also improved, and sensitivity is an excellent 1.7μV. All of these key front-end features add up to provide outstanding FM reception, even in weak signal areas, with freedom from signal overlap and noise.



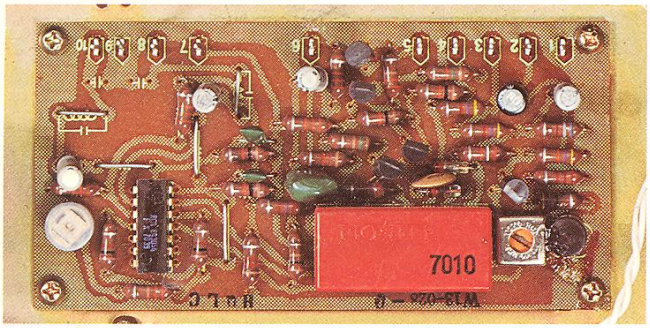
FM IF SECTION WITH IC'S AND CRYSTAL FILTERS

The FM IF section determines the tuner's effective selectivity. If its selectivity is poor, undesirable signals from adjacent stations on the dial will be picked up, the S/N ratio will suffer and signals will be distorted. Top tuner performance depends on the quality of the IF section. In the TX-1000, the IF section circuitry employs four ICs and a pair of crystal filters and IC filter. The ICs provide an excellent limiting effect for stable performance, while the outstanding selectivity of the crystal filters assures sharp signal reception. The result is a co tant performance, unaffected by temperature, humidity or age, and ideal selectivity characteristics of over 70dB and a 1.5dB capture ratio.



STABLE FM MPX SECTION

The FM stereo section of the TX-1000 employs a monolithic IC composed of a switching circuit, plus a differential amplifier for crosstalk-reduction. These integrated circuits assure stable performance plus excellent separation (more than 40dB) over a very wide frequency range. Other outstanding performance characteristics include an excellent S/N ratio and ultra-low distortion (less than 0.5%). The transformer is a completely sealed type for superior stability even in areas of great heat and humidity changes.

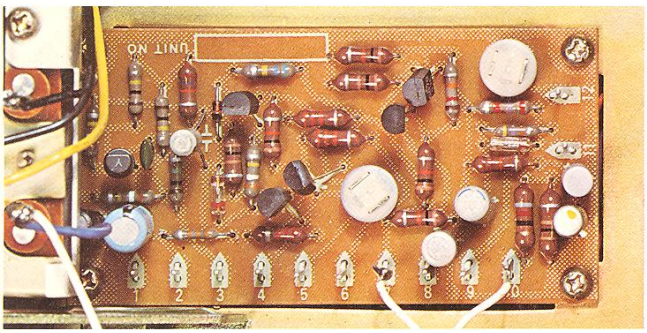


MPX NOISE FILTER

Simply flicking the noise filter to the ON position will correct high-frequency MPX noise which is often created during reception of FM stereo broadcasts.

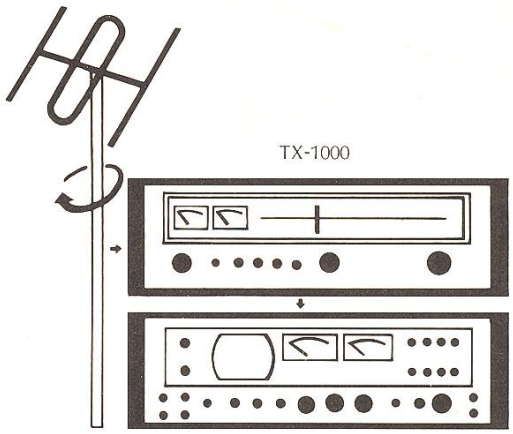
EFFECTIVE FM MUTING CONTROL

Unpleasant noise is often heard between FM stations during tuning. The TX-1000, however, has a muting switch, located on the front panel, to cut out these noises. The muting level can be set to match the local field strength conditions; all signals weaker than the setting will then be eliminated for easy, noise-free tuning.

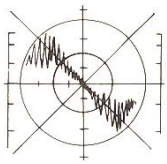


FM MULTIPATH TERMINAL

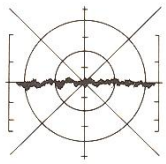
If a mountain or tall building is in or near the path of an FM signal being received, part of this signal will be reflected to the antenna and will interfer with the direct signal. This is called "multipath interference" and can result in phase shifts and amplitude modulation. It is a major cause of poor S/N ratio and distortion, but by changing the direction of the antenna this interference can often be reduced or eliminated. By connecting a stereo display unit (Pioneer Model SD-1000) or oscilloscope to the TX-1000's multipath terminal, you can use the resulting waveform to locate the best antenna position, height and direction. Minimal multipath interference will provide a flat, horizontal waveform, while more interference results in a correspondingly higher oscillation in the waveform. You will want to adjust for most horizontal waveform possible.



STEREO DISPLAY (SD-1000)



BEFORE ANTENNA ADJUSTMENT. PEAKING WAVEFORM INDICATES SERIOUS MULTIPATH INTERFERENCE.

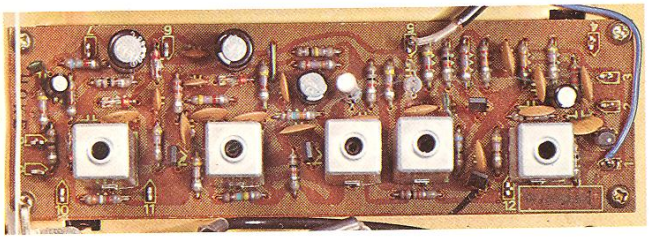


AFTER ANTENNA ADJUSTMENT. LEVEL WAVEFORM INDICATES LITTLE MULTIPATH INTERFERENCE.

AM TUNER SECTION

The AM tuner of the TX-1000 is designed for optimum sound quality and reception. It employs three-gang variable capacitors and a superheterodyne circuit one stage RF amplifier. Sensitivity and selectivity are thus excellent. The reverse AGC (automatic gain control) built into the IF amp and mixing circuit does not simply compensate for weak signals; because in a strong signal area it reduces distortion.

The TX-1000 also has a built-in high-sensitivity ferrite bar antenna.



LINEAR TYPE DIAL SCALE

The large TX-1000 dial scale was specially designed to be read at a glance. The linear design is not only easy-to-read, but also brings all stations closer together for easy tuning.

TWO LARGE TUNING METERS

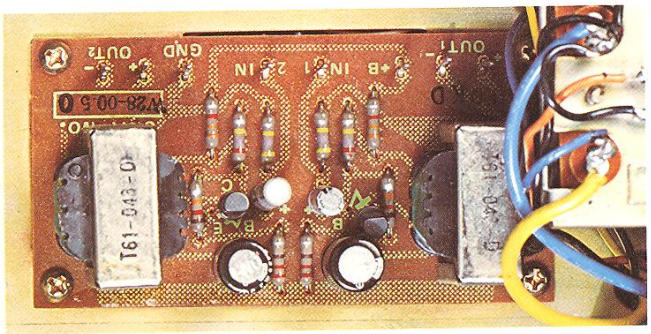
The TX-1000 uses two extra-large tuning meters: a signal strength meter and a center tuning meter. This permits precision tuning for minimum noise and maximum stereo separation.

UNIQUE AM AND FM OUTPUT LEVEL CONTROLS

The TX-1000 features separate AM and FM output level controls. Both can be set to compensate for differences in AM and FM signal strengths, so that the amplifier's master volume control does not require readjustment when the selector is switched. This is especially useful in areas where the AM and FM signal strengths are different.

HEADPHONE JACK

Conventional tuners do not allow you to listen to a broadcast without an amplifier, but the TX-1000 has a special amp for stereo headphones so that you may plug in any time. This amplifier is a transistor type, with special impedance change-over transistors for constant, clear sound and all necessary power. The headphone jack even has its own volume control for perfect listening at any time.

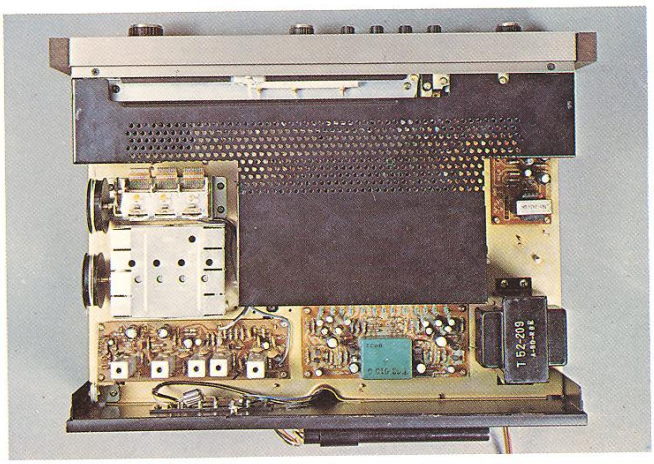


TAPE REC TERMINALS

The TX-1000 has TAPE REC terminals, so you may directly connect a tape deck for recording, even without an amplifier.

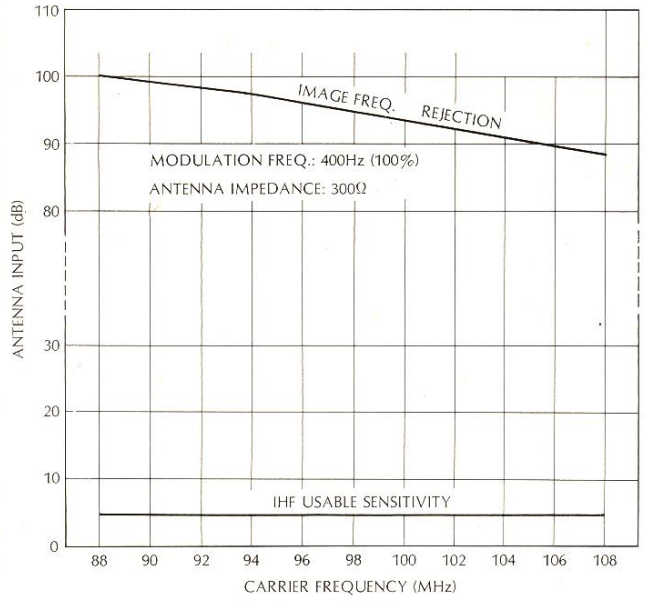
DISTINGUISHED DESIGN

The TX-1000 is a handsome stereo component, with stylish front panel and natural wooden case. Dimensions and styling are matched to complement other Pioneer hi-fi components to let you create an installation of systemized elegance.

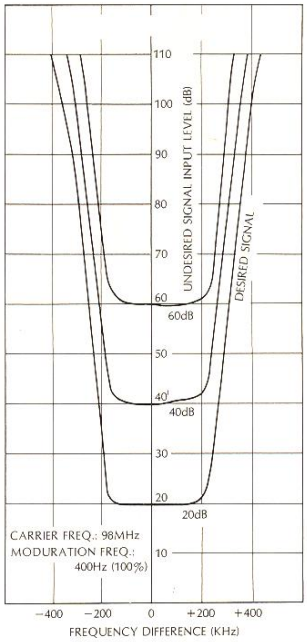


PIONEER

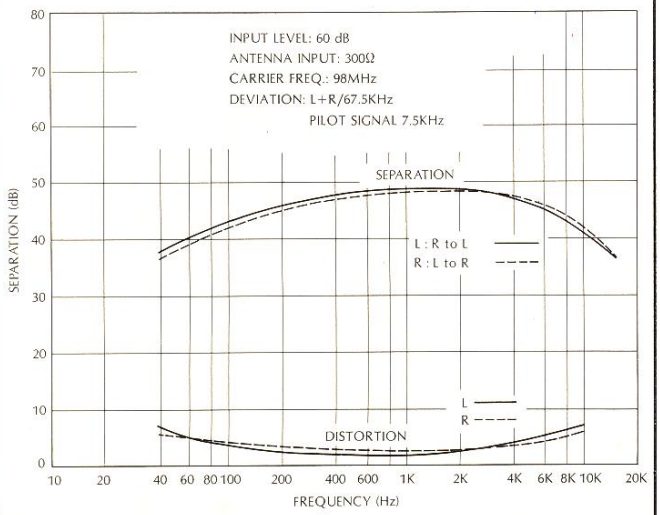
FM IHF SENSITIVITY & IMAGE FREQUENCY REJECTION



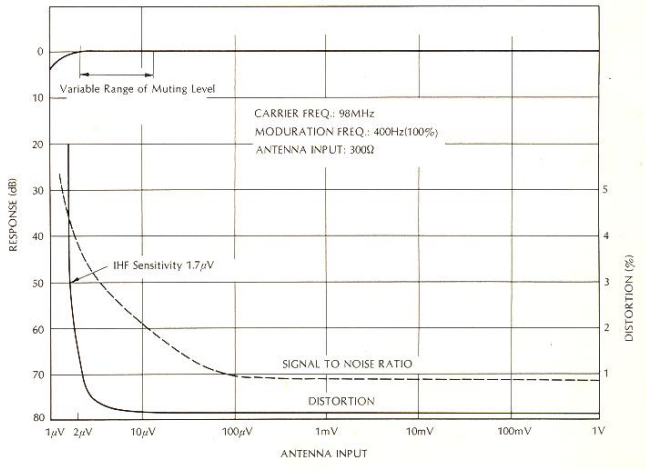
FM SELECTIVITY

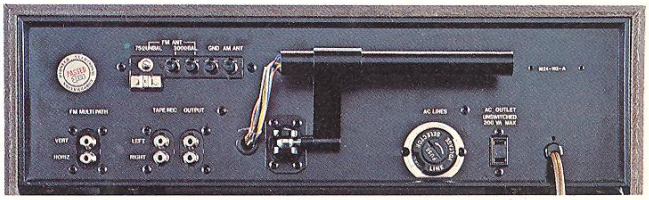


FM STEREO SEPARATION & DISTORTION



FM OUTPUT VS INPUT, S/N & DISTORTION





SPECIFICATIONS

SEMICONDUCTORS

FET(s):	4
IC(s):	6
Transistors:	30
Diodes:	19

FM TUNER SECTION

Frequency Range:	87.5 to 108 MHz (FW, FVZW) 88 to 108 MHz (KUW)
Usable Sensitivity (IHF):	1.7μV
Capture Ratio (IHF):	1.5dB
Selectivity (IHF):	More than 70dB
Image Rejection:	More than 90dB (98 MHz)
IF Rejection:	More than 100dB (90 MHz)
Spurious Rejection:	More than 95dB (98 MHz)
AM Suppression:	55dB
Signal-to-Noise Ratio:	70dB
Harmonic Distortion:	Mono: less than 0.3% (100% mod.) Stereo: less than 0.5% (100% mod.)
Tuning Indicator:	Signal strength type and center tuning type
Muting:	Switchable to ON-OFF (with level control)
Stereo Separation:	More than 40dB (1 KHz)
Sub Carrier Suppression:	More than 50dB
Noise Filter:	Switchable to ON-OFF
Output Voltage:	Controlable from 80mV to 2.4V (100% mod.)
Antenna Input:	Impedance 300 ohms balanced and 75 ohms unbalanced
Multipath Terminals:	Vertical and horizontal

AM TUNER SECTION

Frequency Range:	525 to 1,605 KHz
Usable Sensitivity (IHF):	8μV
Selectivity (IHF):	More than 30dB
Image Rejection:	More than 80dB (1,000 KHz)
IF Rejection:	More than 75dB
Signal-to-Noise Ratio:	More than 55dB
Output Voltage:	Controlable, from 60mV to 1.8V (100% mod.)
Antenna:	Built-in ferrite loopstic antenna

AUDIO SECTION

Recording Output/ Impedance:	750mV/2.5 Kohms (FM 100% mod.)
Headphone Output:	30mW/8 ohms (FM 100% mod.)
Level Control:	AM and FM

MISCELLANEOUS

Power Requirements:	120V (KUW) 110, 120, 130, 220, 240V (switchable FVW, FW)
Power Consumption:	27 watts (max.)
Dimensions (overall):	$16\frac{15}{16}$(W)×$5\frac{11}{16}$(H)×$13\frac{9}{16}$(D) inches 430(W)×145(H)×345(D)mm
Weight:	Without package: 19 lb./8.6 kg With package: 23 lb. 5 oz./10.6 kg

PIONEER

PIONEER ELECTRONIC CORPORATION / 15-5, 4-chome, Ohmori-Nishi, Ohta-ku, Tokyo 143, Japan
U.S. PIONEER ELECTRONICS CORPORATION / 178 Commerce Road, Carlstadt, New Jersey 07072, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. / Noorderlaan 83, 2030 Antwerp, Belgium

20,000A-F-2-72 Printed in Japan