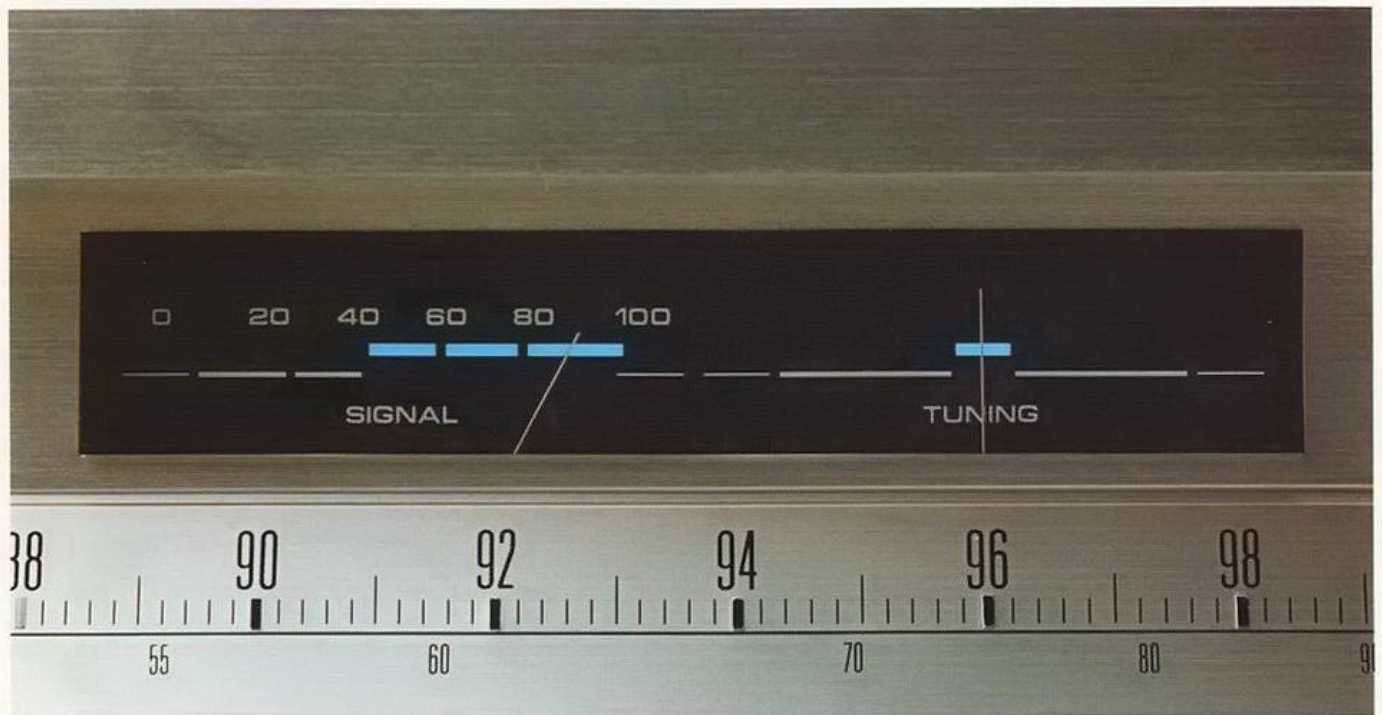
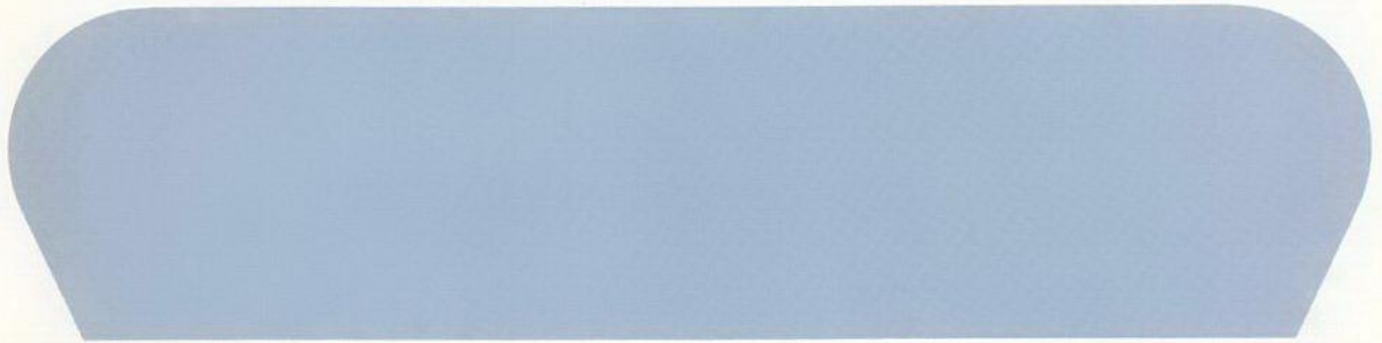


PIONEER TX-6800

STEREO FM/AM HIGH FIDELITY TUNER



 PIONEER®

PIONEER TX-6800

Improved Performance-to-Cost Ratio Gives You
Lower Tuning Error for Lower Price
in This New Pioneer Model.

- Clean Audio Output: Flat 20Hz to 15kHz +0.5dB -1.0dB.
- Extra-Long Tuning Dial with LEDs.
- Straight-Rule Twin Tuning Meters.
- Pioneer-Exclusive ICs with Automatic Pilot Canceller.



*Walnut grained vinyl top and side panels are used in the construction of this cabinet.

A Very Clean Audio Output

When designing the TX-6800 stereo AM/FM tuner, PIONEER put sound quality first on the list of objectives. We made sure the audio output is as clean as possible—free of distortion and noise. Our goal was achieved: the frequency response reaches from the almost inaudible low of 20 Hertz to the upper reaches of your hearing at 15,000 Hertz, plus 0.5dB, minus 1.0dB or better. Special ICs developed exclusively for PIONEER are used throughout, wherever it was possible to eliminate bulky discrete parts without harming performance quality. In fact, these special ICs enable us to reduce cost *and* improve performance quality, not only in this model but in our most expensive tuners and receivers as well. Here are the details:

FM FRONT END SECTION

FET Assures High Sensitivity

Radio-frequency signals entering the tuner via the antenna are passed through the front end. It is here that the broadcast signal to which you have tuned on the 3-gang variable capacitor (via the tuning system) is sorted out from all the others. PIONEER has employed an FET (Field-Effect Transistor) in this section to see that the signal selected is stripped of noise and distortion; this permits us to step up the sensitivity of the section to achieve more "reach." The usable sensitivity in FM mono, for instance, is a respectable 10.8dBf (1.9 μ V). At the same time, the spurious response ratio is improved to 70dB.

THE FM IF SECTION

The First PIONEER-Exclusive IC

A one-stage buffer amplifier and the PIONEER-developed IC No. PA-3001A team up here to amplify the IF or Intermediate Frequency. The special advantage of the IC here is low-noise performance: the signal-to-noise ratio obtained is an excellent 80dB (mono) or 74dB (stereo).

Phase-Linear Ceramic Filters

Also, in the IF section, a pair of phase-linear ceramic filters are put on line among

the IC and IF amplifier.

Without them, the high frequencies in the final audio output would be far less clean and clear. A further advantage is that the ceramic filters offer excellent interference rejection characteristics.

Our New Quadrature Discriminator

We call this new circuit a "One-Pack Phase Shifter" because it packs the conventional micro inductor and the discriminator with new bobbin material in one shielded case. The benefits include the following: (1) Positive protection against distortion. (2) Improvement of input vs. distortion characteristics. (3) Reduction of noise for a better S/N. (4) Increased stability against temperature/humidity changes.



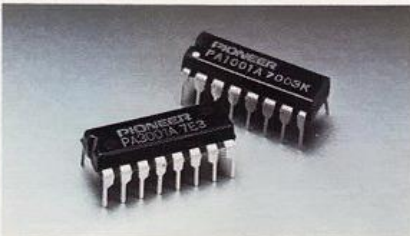
FM STEREO SECTION

In the multiplex section of the TX-6800, we use a microelectronic integrated circuit (the PIONEER-exclusive IC No. PA-1001A) which contains a thoroughly reliable PLL or Phase-Locked Loop circuit. Unlike the old-fashioned "demodulators" which were subject to wide errors in performance depending on outside influences like temperature and humidity, our PLL is entirely error free. Always-stable, very wide stereo separation in FM is the result.

A Built-In PILOT CANCELLER Circuit

The multiplex "switching signal" mentioned earlier is a 19kHz signal which is broadcast along with the two stereo channels. Its only function is to "trigger" the multiplex section to separate the left and right channels; once that function is done, it must be removed *entirely* lest it interferes with the audio signals processed in the following sections of the tuner.

Old-fashioned tuners used a low-pass filter for removing that "switching signal," now called the "Pilot." But such filters tend to "chop off" desired *audio* frequencies, too. We've avoided this with the use of a built-in Automatic Pilot Signal Canceller, quite different in concept and operation from the



"active filter" type; another advantage is an improvement of carrier leakage by 20dB over conventional types. Also, it should be pointed out that this Automatic Pilot Signal Canceller is incorporated *within the PA-1001A itself* and thus enjoys the same high reliability and protection from outside influences.

AM FIDELITY IS IMPROVED

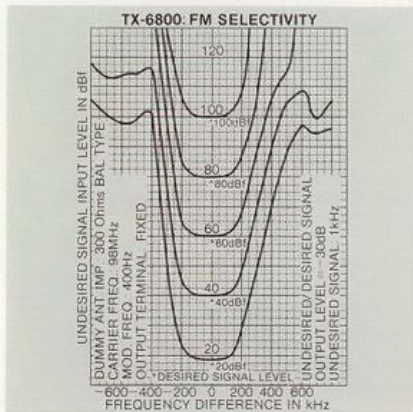
- **BETTER FREQUENCY RESPONSE**—A high-density IC (HA-1138) is used in the AM section of the PIONEER TX-6800 to contribute greatly to improved frequency response, permitting a flatter, more faithful reproduction over a wider range.
- **AM DISTORTION REDUCED**—The IC likewise serves to reduce the sound-spilling distortion in AM reproduction, especially in the very low frequencies around 100Hz.
- **VARIABLE CAPACITOR**—Our use of a 2-gang system in the variable capacitor for AM permits finer tuning and higher linearity. AM sound you might once have thought to be "lo-fi" is received and reproduced with more pleasant results.

STILL MORE ADVANTAGES

- **EXTRA-LONG TUNING DIAL**—It's unusual to find a tuner in this price range with such a good tuning "feel." The major contribution to more convenient and accurate station selection in the TX-6800 is its long (300mm) tuning dial for AM/FM. The FM band, by the way, is "frequency linear"—divided into equidistant sections.
- **STRAIGHT-RULE METERS**—The Twin Tuning Meters on this model reflect PIONEER's policy of providing maximum readability and impeccable accuracy. The straight-rule scales of the SIGNAL meter (for AM/FM signal strength) and the TUNING meter (for FM center-of-channel) are calibrated for easy reading and finished in PIONEER blue for eye appeal.



- **FM MUTING SWITCH**—This front-panel feature permits you to cut out inter-station tuning noise while tuning FM stations. In the OFF/MONO position the muting circuit is taken off line to permit tuning of distant/weak stations; reception mode is then switched to monophonic.
- **LED INDICATORS**—These long-life Light-Emitting Diodes let you know tuner status for AM, FM and STEREO FM at a glance.
- **FUNCTION SWITCH**—Select AM or FM; a special back-up circuit prevents pop noise as the switch is used.



TX-6800 SPECIFICATIONS

FM SECTION

Usable Sensitivity:	Mono; 10.8dBf (1.9 μ V)
50dB Quieting Sensitivity:	Mono; 15dBf (3.1 μ V) Stereo; 38dBf (44 μ V)
Signal-to-Noise Ratio (at 65dBf):	Mono; 80dB, Stereo; 74dB
Distortion (at 65dBf)	
100Hz:	Mono; 0.1%, Stereo; 0.2%
1kHz:	Mono; 0.1%, Stereo; 0.2%
6kHz:	Mono; 0.15%, Stereo; 0.25%
Frequency Response:	20 to 15,000Hz +0.5dB, -1.0dB
Capture Ratio:	1.0dB
Alternate Channel Selectivity:	60dB
Spurious Response Ratio:	70dB
Image Response Ratio:	60dB
IF Response Ratio:	80dB
AM Suppression Ratio:	55dB
Muting Threshold:	17.2dBf (4.0 μ V)
Stereo Separation:	40dB (1kHz), 35dB (30—15,000Hz)
Subcarrier Product Ratio:	50dB
SCA Rejection Ratio:	50dB
Antenna Input:	300 ohms balanced 75 ohms unbalanced

AM SECTION

Sensitivity:	300 μ V/m (IHF, ferrite antenna) 15 μ V (IHF, external antenna)
Selectivity:	35dB
Signal-to-Noise Ratio:	50dB
Image Response Ratio:	40dB
IF Response Ratio:	70dB
Antenna:	Built-in ferrite loopstick antenna

SEMICONDUCTORS

FET:	1
ICs:	3
Transistors:	8
Diodes:	15

MISCELLANEOUS

Power Requirement:	120V 60Hz only
Power Consumption:	14 watts
Dimensions:	Without package: 17-3/4(W) x 5-15/16(H) x 11-3/16(D) inches 451(W) x 151(H) x 284(D) mm
Weight:	Without package: 11 lb. 11 oz./5.3kg

NOTE: Specifications and design subject to possible modification without notice.



PIONEER ELECTRONIC CORPORATION / 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153, Japan
U.S. PIONEER ELECTRONICS CORP. / 85 Oxford Drive, Moonachie, New Jersey 07074, U.S.A.
PIONEER ELECTRONIC (EUROPE) N.V. / Luithagen-Haven 9, 2030 Antwerp, Belgium
PIONEER MARKETING SERVICES PTY. LTD. / P.O. Box 317, Mordialloc, Victoria 3195, Australia