

# DENON

DESIGN INTEGRITY

AM/FM STEREO TUNER  
**TU-800**



**THE FIRST NAME  
IN DIGITAL AUDIO**



# DENON

## *AM/FM stereo tuner for the age of high-quality 3-step IF bandwidth selection with super narrow position*

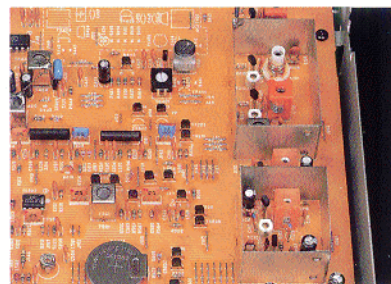
# TU-800

AM/FM STEREO TUNER

The TU-800 incorporates DENON's latest and most advanced FM front end. This circuit helps to ensure superior performance characteristics in every respect. It precisely picks out the desired reception frequency even among very closely spaced stations. Signal-to-noise ratio and freedom of distortion do full justice to CDs. Other outstanding features include a DTD (Dynamic Twin Drive) demodulator, automatic IF bandwidth selection in three steps, and a 30-station random preset memory. The TU-800 is everything a state-of-the-art tuner should be.

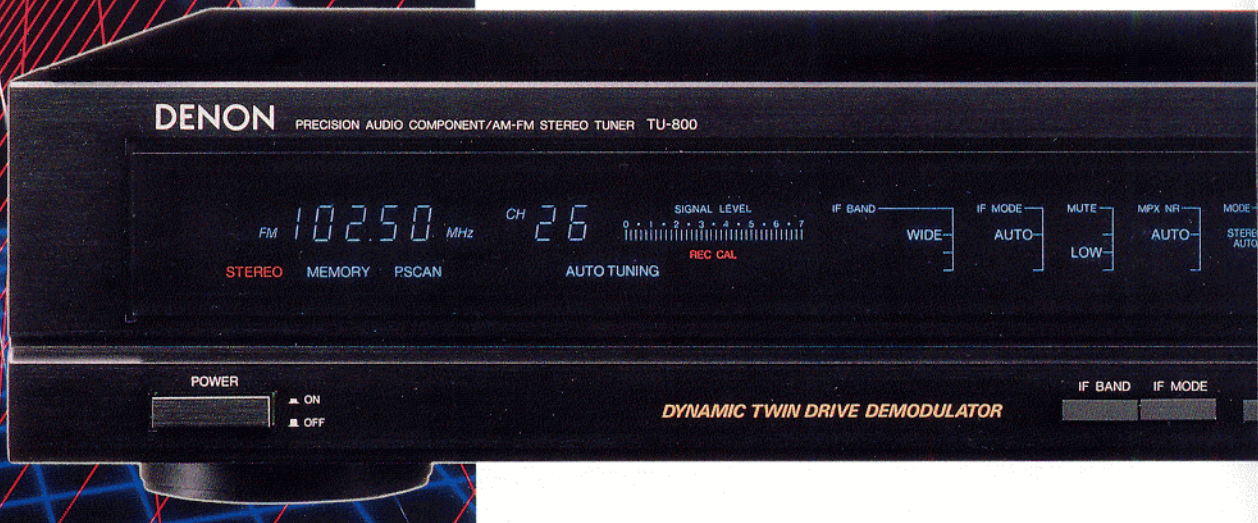
### ■ New Design FM Front End

The front end uses stringently selected components in a highly perfected circuit structure. It has a low-noise RF stage and a mixer stage capable of withstanding powerful input levels, achieving high sensitivity and a wide RF dynamic range. Thus it is fully compatible with cable systems delivering multiple, powerful input signals.



### ■ Newly Developed FM Demodulation Circuit

— DTD (Dynamic Twin Drive) demodulator Phase-locked loop (PLL) circuits provide superior FM demodulation, but usually suffer from a high distortion rate. DENON's new high-S/N, ultralow-distortion DTD demodulator overcomes this problem perfectly. Central to this circuit is the newly developed V.C.O. (Voltage-Controlled Oscillator), which is equipped with

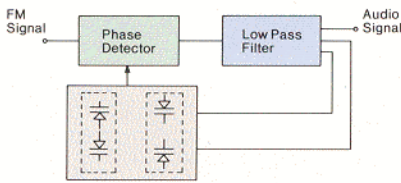




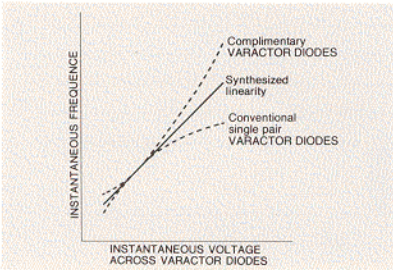
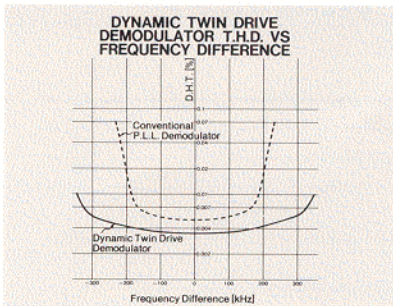
# Quality digital audio tuning

four varactor diodes configured in two mutually cooperative sets of two. For a frequency/voltage curve based on the main set of varactors, the other set inverts the instantaneous voltage applied to it, thus preserving excellent signal linearity and incredibly low demodulation distortion.

### DYNAMIC TWIN DRIVE DEMODULATOR



Dynamic Twin Drive V.C.O.

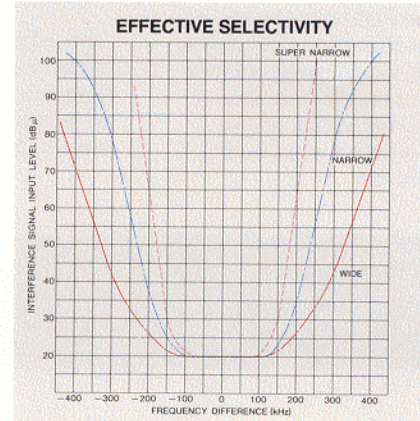
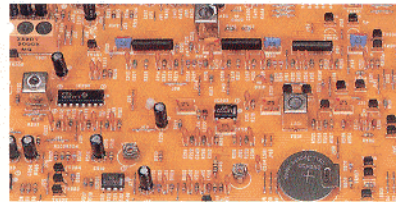


### ■ New CPU for Easy Operation

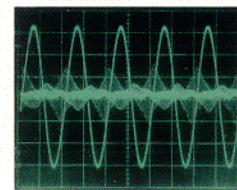
The amazingly easy operation of this tuner proves that indeed, "simple is best." This level of easy operability is attained by equipping it with new computer-controlled functions.

### ● 3-Step IF Bandwidth Selection

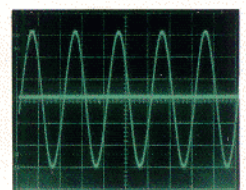
When FM broadcasting is received, the tuner automatically discerns the strength of the incoming signal and the amount of noise generated by obstacles, etc, and the optimum IF bandwidth (wide, narrow, super narrow) is selected accordingly (manual selection is also possible). As a result the signal is always received in the ideal mode.



Example for interference removal by automatic IF band switching



(1)



(2)

- Desired signal: 98 MHz, input 65 dBμ, 30% stereo modulation
  - Interference signal: 98.3 MHz, input 80 dBμ
- Oscillograph clearly shows noise components caused by interference (-50 dB).
- Under same conditions as for (1), desired station is received at 98 MHz. IF bandwidth is automatically switched from WIDE to NARROW, and noise is reduced to -75 dB (no interference).

### ● 30-Station Random Preset Memory

Up to 30 AM/FM stations can be preset at random; that is, any stations desired can be present on channels 1-30. When a desired station is recalled, both the frequency and the channel number are displayed. Of course this also works perfectly with cable systems, for maximum convenience.

### ● Auto Memory

Storing broadcast stations into memory is now easier than ever before. You can specify a range of preset numbers, such as for example 3 through 20, and let the tuner automatically assign the stations received by auto scan to these presets.

### ● Preset Scan

This feature lets you listen to each memorized station for 5 seconds. The tuner skips stations whose current field strength or reception conditions are poor, so that you quickly find what you want.



Optional wood side panels are available



## Other Special Features

### ● MPX-NR Switch

Noise is often a problem when receiving stereo broadcasts from weak FM stations. By setting the Multiplex Noise Reduction switch to auto position, a high-blend function is activated which significantly reduces noise to create a highly listenable signal. The high-blend function is automatically defeated when strong signals are received.



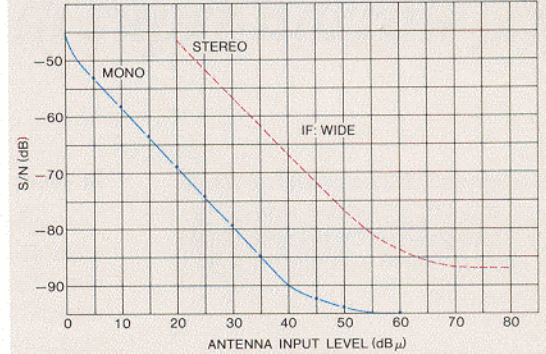
### ● Low-Impedance Output

The low-impedance output of approximately 600 ohms is compatible with all amplifiers.

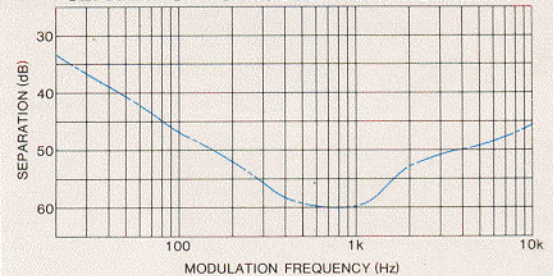
### ● Large FL Display

The large fluorescent display numerically indicates the reception frequency and preset channel number as well as other functions, for extreme ease in operation.

ANTENNA INPUT LEVEL VS. SIGNAL-TO-NOISE RATIO



SEPARATION VS. MODULATION FREQUENCY



## SPECIFICATIONS

### FM Section

Tuning frequency	87.5–108.0 MHz
Usable sensitivity	0.9 $\mu$ V (10.2 dBf)
S/N 50 dB sensitivity ( $\mu$ V at 75 ohms and 0 dBf at $10^{-15}$ W)	Mono 1.6 $\mu$ V (15.3 dBf) Stereo 20 $\mu$ V (37.2 dBf)
Signal to noise ratio (A-weighted)	Mono 96 dB Stereo 88 dB
Total harmonic distortion	Mono 0.02% (1 kHz, 100% mod) Stereo 0.04% (1 kHz, 90% mod)
Capture ratio	1.2 dB
AM suppression	70 dB
Image rejection	100 dB
IF rejection	100 dB
Effective selectivity	Super Narrow 80 dB ( $\pm$ 300 kHz) Narrow 80 dB ( $\pm$ 400 kHz) Wide 50 dB ( $\pm$ 400 kHz)
Frequency response	20 Hz–15 kHz, +0.5, -1.0 dB
Stereo separation	60 dB (1 kHz)

### AM Section

MW	
Tuning frequency range	520–1710 kHz
Usable sensitivity	18 $\mu$ V
Signal to noise ratio	53 dB
Total harmonic distortion	0.3% (1 kHz)
Image rejection	45 dB
Effective selectivity	55 dB ( $\pm$ 10 kHz)

### General

Power supply	AC 120 V, 60 Hz
Power consumption	18 W
Dimensions	434 (W) $\times$ 88 (H) $\times$ 320 (D) mm
Weight	4.0 kg

\* Specifications are subject to change without notice