

Scott's Sleek, Convenient Digital Tuner

The Equipment: Scott Model T-33S, a digital stereo FM tuner in metal case. Dimensions: 17 15/16 by 5 13/16 inches (front panel); 11 9/16 inches deep, plus allowance for connections. Price: \$999.95. Warranty: three years parts, two years labor. Manufacturer: H. H. Scott, Inc., 111 Powder Mill Rd., Maynard, Mass. 01754.

Comment: The Scott T-33S, the successor to the 433 (HF test reports, October 1971), makes a striking first impression, largely because of its unusual front panel. The brushed aluminum surface is broken only by a pair of meters (one for signal strength, one for multipath indication), a numeric readout window (no slide-rule dial here), and a window through which lighting indicators for MEMORY, STEREO, and STATION appear, either singly or in combination. Below these are arranged a stereo tape output jack, nine labeled pushbuttons (also of brushed aluminum) controlling scan mode and audio mode, and a horizontal MEMORY CARD READER slot. The rectangular shapes of the windows and pushbuttons give a feeling of functionality coupled with a certain starkness, particularly because the tape jack and slot are placed on raised, square-cornered surrounds.

The front panel does, however, accurately reflect the character of the T-33S. Tuning is accomplished by means of a digitally controlled frequency synthesizer that can be adjusted in precise 0.1 MHz steps and by no smaller amount. The user is informed of the frequency to which the unit is tuned by the digital display, which reads from 87.5 to 107.9 MHz. Steps of 0.1 MHz, rather than the 0.2 MHz separating U.S. FM channels, were chosen to make the tuner compatible with European frequency assignments. In practice, this is somewhat of a nuisance, as it makes manual frequency scanning tedious and slow. This is compensated by the automatic scanning modes and the memory tuning mode that have been provided.

Of all modes, memory tuning is by far the most convenient. A card with the station frequency punched in code is inserted in the slot, and the unit immediately tunes itself to that channel. The method for card-punching (a slightly fussy operation) is detailed in the instruction manual, and this need only be done once. (Scott supplies both cards

and punch; a holder for the card library would also have been a nice touch.)

Semiautomatic scanning can be started by pushing either STATION or STEREO (they can't be used together) and one of the SCAN buttons. Tuning is then shifted up or down (depending on which SCAN was pushed) at the rate of five channels per second, stopping at the first station that is sufficiently strong (if STATION was pressed) or the first that can be received in stereo (if STEREO was pressed). With the CHANNEL button engaged (the manual mode), tuning shifts up or down by 0.1 MHz each time one of the SCAN buttons is pressed. You can set the tuner for continuous scanning by pushing the buttons for STEREO scanning and MONO audio and a SCAN button; if you have quick reflexes, you can grab the desired channel (or close by it) by pushing CHANNEL as your station comes up.

Several additional user conveniences are offered by the Scott. Audio output is available both from a pair of pin-type jacks and a DIN socket on the back panel. The level controls, also at the back, affect these outputs but not the tape output at the front. Antenna input connections accepting both 300- and 75-ohm impedances are provided. A back-panel switch (nicely accident-proof) chooses between nominal 115- and 230-volt AC power, while a second switch chooses between 75-microsecond de-emphasis for the U.S. and 50 microseconds for Europe. It would be even nicer if this list of conveniences included provisions for 25-microsecond de-emphasis—for Dolby-encoded broadcasts—and a really readable instruction manual.

Listening tests, backed up by tests at the CBS labs, show that the T-33S has some highly creditable features. Mono quieting is excellent, reaching 50 dB at only 5 microvolts' input. Stereo quieting reaches a promising 43 dB at 50 microvolts but is only 1/2 dB better at 500 microvolts. While this is not bad, one might hope for more quieting at that level in a tuner of this sophistication. The filter (engaged by one of the front-panel buttons) is quite effective at reducing high-frequency stereo noise, but it also reduces high-frequency program content and channel separation quite noticeably.

Total harmonic distortion remains low right up to 10 kHz, where it can be a problem for some tuners. The claim

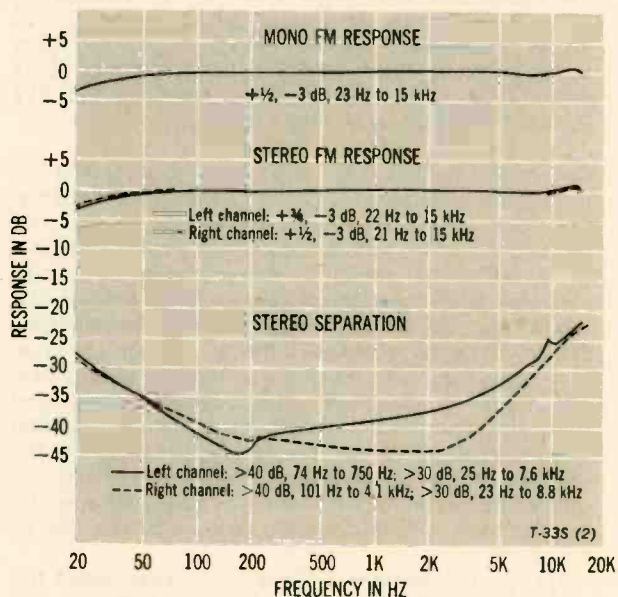
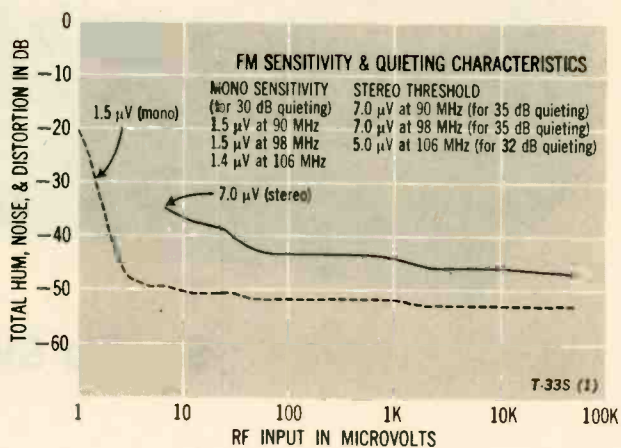
of 40 dB of channel separation at 1 kHz is met and exceeded in one channel and barely missed in the other. This measurement falls to less than 30 dB in both channels by 10 kHz but remains quite acceptable. The mute function (another of those buttons) is nonadjustable, and it suppresses very weak stations quite well, becoming erratic only when there is severe signal fluctuation. The stereo threshold, also nonadjustable, is 7.0 microvolts, a level low enough to ensure that no acceptable stereo will be switched to mono. The least attractive measurement in our test sample—and the only respect in which it fell significantly short of its specs—was capture ratio, at 3 dB. A second sample, however, checked out exactly on spec at 1.2 dB.

The T-33S, which Scott calls its second-generation digital tuner, can be called a product of the second-generation (or at least, newly reorganized) H. H. Scott, Inc. As such, it easily beats all the true digital tuners we have tested for convenience of operation. Not incidentally, it is also capable of providing good listening.

CIRCLE 143 ON READER-SERVICE CARD

Scott T-33S Additional Data

Capture ratio	3 dB		
Alternate-channel selectivity	70 dB		
S/N ratio	68 dB		
THD	Mono	L ch	R ch
80 Hz	0.20%	0.84%	0.53%
1 kHz	0.21%	0.37%	0.29%
10 kHz	0.25%	0.90%	0.70%
IM distortion	0.27%		
19-kHz pilot	69 dB		
38-kHz subcarrier	better than 72 dB		



COMING NEXT MONTH

The January test report section will be expanded to include ten products—twice our normal coverage.