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**ACOUSTAT
TRANS-NOVA
TWIN-200
POWER
AMPLIFIER**

Manufacturer's Specifications

Power Output: 200 watts per channel, 8 ohms, 20 Hz to 20 kHz; 325 watts per channel, 4 ohms, 20 Hz to 20 kHz.

THD: 0.1%.

SMPTE-IM Distortion: 0.1%.

Damping Factor: Greater than 1,000 at all frequencies below 1 kHz; greater than 100 at 20 kHz.

Slew Rate: 165 V/ μ S.

Input Impedance: 47 kilohms.

Input Sensitivity: 1.3 volts.

Output Impedance: Forward driven, 0 to 1 kHz, 40 milliohms at 20 kHz; 200 milliohms at 50 kHz.

Power Consumption: 100 watts idling, 750 watts at rated power.

Dimensions: 17 in. (43.18 cm) W x 5 in. (12.7 cm) H x 14 in. (35.56 cm) D.

Weight: 40 lbs. (18 kg).

Price: \$1,095.00.

Company Address: 3101 Southwest First Terr., Fort Lauderdale, Fla. 33315.

For literature, circle No. 94



“When Acoustat found the basic power amp output configurations weren’t suited for MOS-FETs, they devised the anisotropic output configuration.”

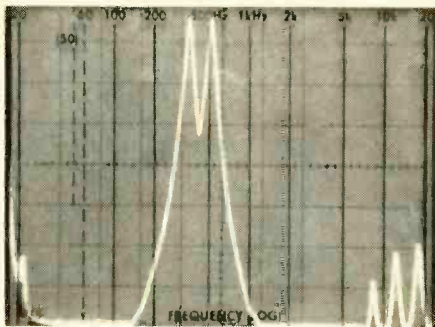


Fig. 2—Twin-tone (9 and 10 kHz) test signal displayed on spectrum analyzer for calculation of CCIF IM and IHF IM.

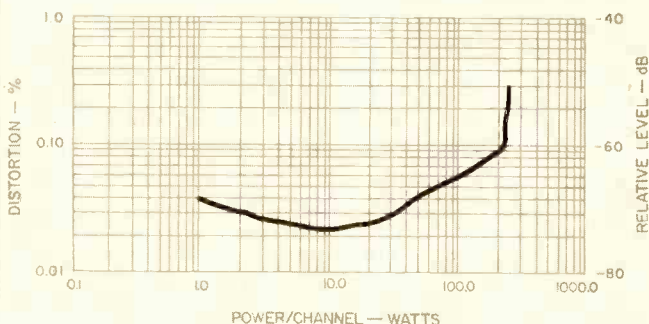


Fig. 3—Power output per channel vs. harmonic distortion, 1-kHz test signal, 8-ohm loads.

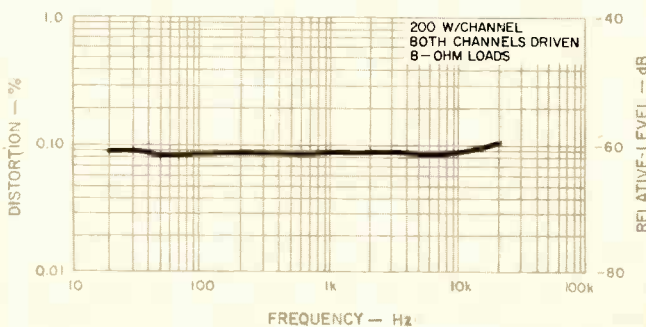


Fig. 4—Harmonic distortion vs. frequency.

Measurements

The TNT-200 delivered just over 200 watts per channel over the entire range of audio frequencies from 20 Hz to 20 kHz for its rated harmonic distortion level of 0.1%. SMPTE-IM distortion was a bit higher than claimed, rising to a nonetheless inaudible 0.2% for rated output into 8-ohm loads, but CCIF IM and IHF IM, calculated from the spectrum analysis of Fig. 2 (linear sweep from 0 Hz to 20 kHz), were 0.046% and 0.149% respectively. Dynamic headroom measured 1.4 dB, while IHF slew factor was greater than 5. Damping factor was obviously higher than I was able to measure in the bench setup, even though I used short, 14-gauge connecting wire from the amplifier’s output terminals to the input terminals of the test instruments.

IHF input sensitivity (for 1-watt output) measured 100 millivolts; sensitivity for rated output was 1.4 volts. Frequency response extended from 4 Hz to 135 kHz between -1 dB cutoff points, and from 2 Hz to 400 kHz for a -3 dB cutoff. Signal-to-noise ratio, referenced to rated output, measured 109 dB (A-weighted). Figure 3 is a plot of harmonic distortion versus power output, for a 1-kHz signal driving an 8-ohm load. When the load was switched to 4 ohms, maximum power output per channel was 325 watts, as claimed. I lowered the load impedance to 2 ohms briefly, and under those load conditions the amplifier was able to deliver in excess of 400 watts per channel to the load. A 1- μ F capacitor, paralleled across the 8-ohm resistive load on each channel, did not result in any instability. Figure 4 is a plot of harmonic distortion versus frequency for the 8-ohm load condition.

Use and Listening Tests

I am not prepared to say that the sound of the Acoustat TNT-200 is markedly superior to that of several other high-grade power amplifiers I have listened to in recent months. I did note an effortlessness in the way the amplifier delivered power to a variety of loads, and an almost complete transparency of sound which characterizes several previously favored amplifiers. It has been said that FETs behave more like tubes than do bipolar devices, and indeed that is true. Since I never became emotionally involved in the debate over “tube sound versus transistor sound,” as have some of my colleagues, I can’t honestly say the sound of the Acoustat TNT-200 replicates that of any tube amplifier of yesteryear. Nor would I want it to. The Acoustat’s sound merits serious consideration and auditioning in its own right. It’s a clean and robust sound that appeals to me.

With an amplifier capable of producing this level of power, it’s important to consider some qualities which are not sonically related, such as long-term reliability. The fact that Acoustat offers a limited 5-year warranty is an encouraging sign. Perusal of the components in this sturdily built amplifier gave further evidence that it is not likely to require frequent service. I suspect the reason for the relatively high cost of the TNT-200 is the high cost of those MOS-FETs and the rest of its bill of materials. Perhaps, in time, amplifiers built this way will come down in price as more and more serious listeners begin to appreciate the virtues they offer and stop measuring amplifiers on a watts-per-dollar basis.

Leonard Feldman