Equipment Profiles

This Month:

- Teac Model AS-200U Amplifier
- Sony Model DR-6A Stereo Headset
- Marantz Model 22 AM/FM Receiver
- University "Project M" Speaker System
- Ampex Micro-52 Stereo Cassette Deck

Teac Model AS-200U Amplifier

Fig. 1

MANUFACTURER'S SPECIFICATIONS

Power Amplifier Section: RMS Power/Channel, 50 watts at 8-ohm load; 60 watts at 4-ohm load. THD: 0.5% at rated output. IM Distortion: 0.5% at 40 watts output or better. Frequency Response: 29 Hz to 80 kHz +0, −1 dB. Residual noise: less than 0.5 mV. Input impedance: 100 k-ohms. Input Sensitivity: 0.7 volts for rated output.

Preamplifier Section: Output voltage: 1 volt. Record Output Voltage: 150 mV. Input Sensitivity. Phono 1 & 2: 2 mV: All High-Level Inputs: 150 mV. Frequency Response, High-Level Inputs: 30 Hz to 30 kHz +0, −1 dB: Phono: within 0.5 dB of RIAA curve, Tone-Control Range: Bass, ±10 dB at 100 Hz; Treble: ±10 dB at 10 kHz. S/N: Better than 70 dB on phono: better than 90 dB on high-level inputs.

Power consumption: 22 watts at no signal, 180 watts at rated output.

Dimensions: 11⅞" W x 5½" H x 11⅞" D. Price: $299.50.

Combining excellence in performance with totally pleasing aesthetics, TEAC Corporation's new integrated amplifier, Model AS-200U will appeal to the serious audio enthusiast who insists upon separate components. The "separateness" of this smart-looking entry actually extends beyond the normal definition of an "integrated amplifier," for the preamplifier section can be electrically separated from the power-amplifier section by removing two metal "jumpers" from the rear panel, enabling the user to interpose all manner of accessories, such as expanders, reverberation units, tone-control-contouring devices and the like. Actually, one could even use the preamplifier section in a completely independent manner from the power amplifier since, with the jumpers removed, about the only thing the two components share is a power supply and a chassis upon which they're built.

Aesthetically, too, the front panel is arranged to convey the "duality" of the product. In Fig. 1, the front panel is shown with its hinged lower panel door closed. All one sees is an attractive matte gold, black and walnut front panel equipped with a minimum of controls, as might befit a dual power amplifier. These most often used controls are Balance, Volume, a push-push power switch mounted below a small indicator lamp, and a series of four push buttons for signal source selection (tuner, phono, Aux-1 and Aux 2) as well as three more matching push buttons for tape monitoring functions.

Upon opening the hinged lower section of the panel, the "secondary" preamplifier controls are exposed. These consist of a lever switch for selecting either one of two identical phono inputs, a mode switch (for selecting stereo, mono, stereo reverse, and even right or left channels to both outputs), bass and treble controls, tone-control defeat and low- and high-filter lever switches as well as another lever for introducing or defeating the loudness-contour circuits. A speaker-selector switch selects main, remote, or both speaker systems and has an "off" position for headphone listening. The usual headphone jack completes the layout of this normally "hidden" portion of the panel. From a human engineering point of view, the layout is *almost* flawless. We wish the headphone jack had not been located behind the trap door, so that it might be used without having to keep the "door" open.

The rear panel of the AS-200U is shown in Fig. 2. Two switched and one unswitched convenience outlets are provided. A center-channel preamp output jack enables the use of a third, external power amplifier for feeding monophonic "mixed" programming to another location. Speaker terminals for main and remote speakers are color coded and spring-loaded, making wire connection as simple as threading an oversized needle and also practically eliminating the possibility of shorted speaker leads. The Amp-Preamp jumpers have already been

Fig. 2—Rear panel view.

mentioned, and above them is a pair of thermal-overload-relay reset buttons. In addition to the usual inout and tape out jacks, there is a REC/PLAY DIN connector, wired in accordance with European and other imported tape recorder standards. A spring-loaded grounding terminal completes the rear-panel layout.

A unique feature of the AS-200U is the provision of multiple tape input and output connections which enable a very elaborate system to be set up with central control.

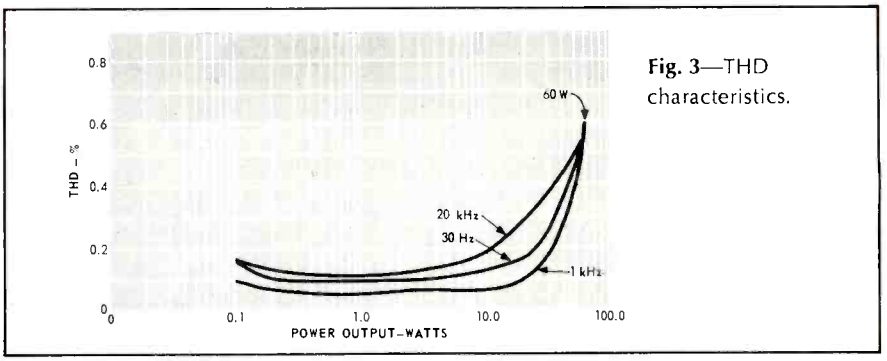

Fig. 3—THD characteristics.

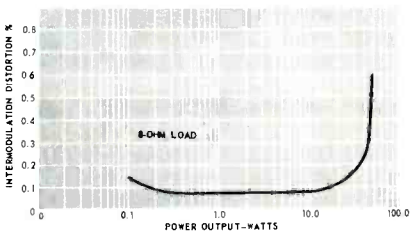

Fig. 4—IM characteristics.

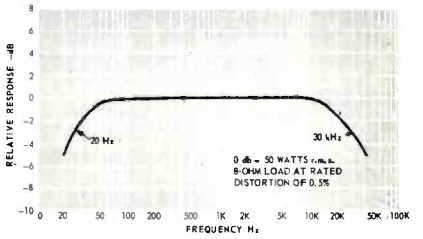

Fig. 5—Power bandwidth.

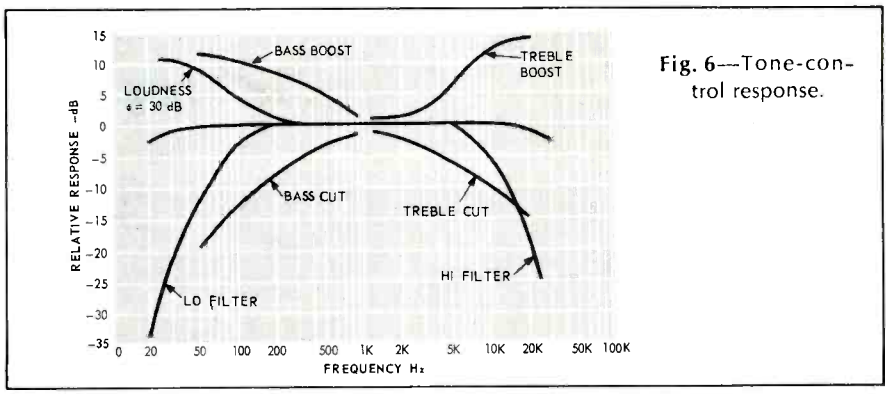

Fig. 6—Tone-control response.

Measurements

The TEAC AS-200U measures even better than it looks. We could not find a single discrepancy between published and measured specs and, in the case of IM distortion and Power Bandwidth, the unit we tested actually exceeded published claims. Harmonic Distortion characteristics are shown in Fig. 3, while IM is plotted in Fig. 4. Note that 0.5% IM distortion is reached at a power output of about 45 watts, as opposed to the 40 watts claimed. Power bandwidth is shown in Fig. 5, while preamplifier characteristics such as tone-control and filter action, as well as loudness-contour curve for a −30 dB volume control setting is shown in Fig. 6. Structurally, the amplifier is laid out in a very professional manner and only the best quality of components are used. Another convenient feature we discovered upon removing the walnut enclosure was the ease with which this unit can be converted to "overseas" operation at 220 or 240 volts. Line-voltage requirements are changed simply by removing a small plug and reinserting it in the proper position in its socket for 100-, 117-, 220-, or 240-volt operation.

Listening Tests

The TEAC AS-200U Amplifier sounds like the powerful piece of equipment that it is. Driving a pair of inefficient but good-quality bookshelf-type speaker systems, we were able to reach levels beyond anything we (or the neighbors) might ever desire. Adding a second pair of remote speakers hardly "made a dent" in the power capability of this amplifier—this despite the fact that protective series resistance is added internally when two pairs of systems are played simultaneously. As explained in the operating instruction booklet, this nicety is incorporated to allow users to connect two pairs of 4-ohm systems *without* creating a resultant impedance of less than 4 ohms, which would be below the safety point for the output transistors. In any event, the only way we could make the overload relays "pop" was by applying a direct short across the speaker terminals and driving the amplifier with signal. And then they popped *fast*—long before any possible damage might have taken place. After four hours of high-level operation, the output transistors were only moderately warm to the touch—a good indication of conservative heat-sink design and good overall thermal stability. Sound seemed very well balanced, and transient response was excellent. Damping factor (though not stated by the manufacturer) was found to be in excess of 30, measured with respect to an 8-ohm load.

In all, we liked the sound we heard and we liked the control features which made that sound possible. If you own a tuner and need only a high-quality integrated preamplifier-amplifier to complete your home sound system or if you'd like to start with tape and/or phonograph facilities and leave the FM for later, the TEAC AS-200U represents a $300 investment in a well designed and produced piece of high fidelity equipment that should not be overlooked.

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