



The Twin-Seventy speaker assembly, above. At right, a finished cabinet.



Bogen DB110 Amplifier

SPECIFICATIONS (furnished by manufacturer): a combination preamp-control and power amplifier on one chassis. **Inputs:** high or low-level magnetic phono cartridge; microphone; two high-level sources (labeled Tuner and Aux.) **Controls:** combined selector and equalization switch (3 phono positions with RIAA, 78, or Pop equalization; Mic, Tuner, Aux); combined AC on-off and Volume; Bass (± 17 db, 40 cycles); Treble (+11 to -14 db, 15,000 cycles). Hum adjustment on back of chassis. **Outputs:** 4, 8, or 16 ohms to speaker; high-impedance output, not affected by tone and volume controls, to feed tape recorder. Two switched AC power outlets. **Response:** within 0.5 db from 15 to 50,000 cycles; -3 db at 10 and 85,000 cycles, 12 watts. **Distortion:** 0.125%, 0.25%, and 0.65% harmonic at 1, 5, and 12 watts respectively; 14 watts peak. **Damping Factor:** infinity. **Noise:** 81 db below rated output on high-level channels; 55 db below on phono channel. **Tubes:** 3-12AX7, 2-6V6GT, 5Y3GT. **Dimensions:** 5 $\frac{1}{4}$ in. high by 11 wide by 7 $\frac{1}{4}$ deep. **Price:** \$59.95. **Manufacturer:** David Bogen Company, Inc., 29 Ninth Avenue, New York 14, N. Y.

Here's another surprise from Bogen — the surprise being, of course, the price tag on the DB110 amplifier. It is one of the best-sounding amplifiers we've heard in this general price class, and (in our opinion, anyway) probably the best planned from the aspect of versatility.

There are six pin-jack connectors on the back panel. Two of them are alternate inputs for a magnetic phono cartridge, depending on whether you have a high or low-output cartridge. There is an input for a high-impedance microphone, and two for high-level sources such as tuner, tape recorders, or TV audio. The remaining jack is a high-impedance output to feed a tape recorder. It isn't affected by the tone or volume controls, so you can monitor on your hi-fi system while making a recording or turn the amplifier volume control off, as you please. A tape output at this price can be considered a bonus of real value. Also on the back panel are a hum adjustment, two switched AC power outlets, and the usual 4, 8, and 16-ohm speaker terminals.

First three positions on the selector switch are for the phono input; they're labeled RIAA, 78, and Pop. The 78

(This doesn't mean that the rest of the spectrum is flat, as one thinks of "flat" in relation to an amplifier. No speaker is flat; ± 5 db is good, nay, excellent, for a speaker.)

The Twin-Seventy, by comparison, is a hair more efficient, and holds up better at the low end. At 60 cycles, the drop is beginning to be noticeable, but it fades out more slowly than on the 8-50. Boosting the bass tone control gently will help; too much will cause frequency doubling. The bump at about 150 cycles, noted in connection with the 8-50, could not be heard on the Twin-Seventy.

Both speaker systems are very interesting units, well worth listening to carefully. Considering price and size, our favorite of the two is the 8-50, which is compact, listenable, and, in the utility model, interestingly priced.

— C. F.

MANUFACTURER'S COMMENT: We should like to compliment the writer for noticing that the Frazier-May horns have no outstanding characteristics, which is another way of saying they do not add coloring to the natural tonal qualities of music. This is simply because the damping minimizes both harmonic and intermodulation distortion and the recovery time of the driver cone is short enough to eliminate hangover and to permit reproduction of percussive sounds with true definition.

position has little high-frequency rolloff and is recommended for many 78 records, particularly those foreign-made, and the Pop curve is for noisy records. Somewhat limited choice of equalization? True — but the people at Bogen have alleviated this with a very clever expedient



Small DB110G amplifier: clever design, fine listening quality.

that many other manufacturers would do well to follow. In the instruction book (complete in other ways too) is a simple table giving bass and treble tone control settings that, combined with the basic equalization curves, furnish exact equalization for *any* record. — Remaining selector switch positions are for the microphone, radio, and auxiliary inputs.

The power switch is combined with the volume control, next to the pilot light. Individual bass and treble controls are on the right; we found that the true flat positions were very close to those indicated, and that their operating ranges met specifications on the unit we tested.

Our checks on the power amplifier section showed low distortion at all power levels up to maximum, lower than in many amplifiers selling for a good deal more. This was reflected in fine listening quality.

For those who may want to operate the amplifier on an open bookshelf or table, an alternative model (DB110G) is available at \$4.55 more. This has a gold-finished metal cage to conceal and protect the tubes. — R. A.