

wires, cut to size and pre-tinned, for each of twelve construction steps. The instruction manual shows a full-size pictorial view, in color, of the section of the set being constructed. The kit I tested took ten hours to construct and align, and I believe this would be a typical time for the job.

The LT-110's measured IHFM usable sensitivity was 2.5 microvolts, and total harmonic distortion at 100 per cent modulation was under 1 per cent for most signal strengths. Frequency response was plus or minus 1.5 db from 20 to 20,000 cps. The drift was the least I have ever measured on an FM tuner—less than 2 or 3 kilocycles from a cold start. The LT-110's hum was very low, being -60 db in reference to 100 per cent modulation, and its capture ratio was 6.7 db.

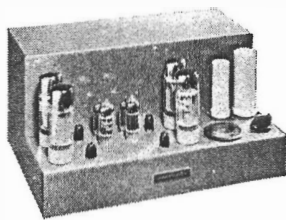
The stereo performance of the LT-110 was very good. At times the quality of stereo programs seemed to leave something to be desired, but I ascertained that any audible deficiencies were due not to the LT-110 but to the transmitted signal.

The LT-110 has two means of filtering out noise that may occur during stereo reception if signal strengths are marginal. First, there is a switchable subchannel filter that is quite effective in reducing noise—at the expense, however, of a reduction in channel separation at high frequencies. I found that this loss of separation was hardly detectable. Also supplied is a noise filter that cuts off the higher frequencies rather drastically. I would use this only as a last resort.

I had only two criticisms of the LT-110. Although its distortion at 100 per cent modulation was acceptably low at signal strengths from perhaps 8 to 1,000 microvolts, at higher signal levels distortion increased (although it would probably not be discernible to the ear). Of course, if one is located near a strong station it would be possible to attenuate the signal in the antenna circuit, but this is somewhat inconvenient. My other criticism is that the LT-110 provides no indicator to show when a stereo broadcast is being received. Scott recommends switching from stereo to mono position on the selector switch, in which case the sound is supposed to be louder in the stereo position. The difference, unfortunately, is not too apparent. A positive indicator would be a welcome addition to this otherwise highly satisfactory tuner.

The price of the LT-110 kit is \$159.95.

MARANTZ 8B STEREO AMPLIFIER



● IN HIGH-FIDELITY circles, the name Marantz connotes quality of an exceptional degree. The engineer-

ing and extraordinary quality control that go into Marantz products have built an enviable reputation for the company among knowledgeable audio hobbyists. The Model 8B dual 35-watt stereo power amplifier is a good example of the Marantz approach to high fidelity.

The Model 8B is basically similar to the Model 8 dual 30-watt amplifier, which it supersedes. A comparison of their circuits reveals the addition of some phase-correcting components in the feedback loops of the Model 8B, as well as redesigned output transformers. The Model 8 was unusual in having a tertiary feedback winding on the output transformers instead of taking feedback from a voice-coil output. The Model 8B goes one step further, with two feedback windings and various factory-adjusted components to trim the output transformers for improved stability.

Each amplifier comes with a certificate that gives specifications for that particular unit. In the past I have found this data to be so accurate and so reliable that I ordinarily use it as a check on the accuracy of my test equipment. The specifications accompanying the Model 8B were no exception in this respect.

The power response of the Model 8B at 2 per cent harmonic distortion was perfectly flat down to 20 cps at 40 watts per channel (with both channels being driven). It rolled off slightly at the high end, to about 32 watts at 20,000 cps. At 0.5 per cent harmonic distortion the output was over 35 watts per channel from 30 to 10,000 cps, dropping to 32 watts at 20 cps and 28 watts at 20,000 cps. Measurements were made on the 8-ohm output tap, which usually gives somewhat lower output than the 16-ohm tap.

Intermodulation distortion was unmeasurable below 2 watts per channel and rose smoothly to 0.3 per cent at 20 watts per channel and 0.5 per cent at 40 watts per channel. One of the most noteworthy characteristics of the Model 8B was the similarity between its channels. Both channels measured almost identically in all respects. The suggestion is that variations in tubes and components have practically no effect on the performance of the amplifier.

The Model 8B was outstanding in other respects. Its 6CA7 output tubes operate at only 70 per cent of their rated dissipation. Various capacitive loads caused no instability and had only a slight effect on the unit's near-perfect square-wave response. The hum-and-noise measurement was extremely good, being 101 to 104 db below 10 watts, depending on the input termination.

After all this, I have nothing to say about the sound of this amplifier. Quite frankly, I have never heard a Marantz amplifier, and I'm not sure anyone ever has. It contributes no detectable noise, hum, distortion, or coloration to the sound, delivering simply an enlarged replica of the input signal to the loudspeaker. This, plus the probability that the Model 8B will continue to maintain the same level of performance for a long time, seems to me like enough justification for its \$249.00 price tag.