

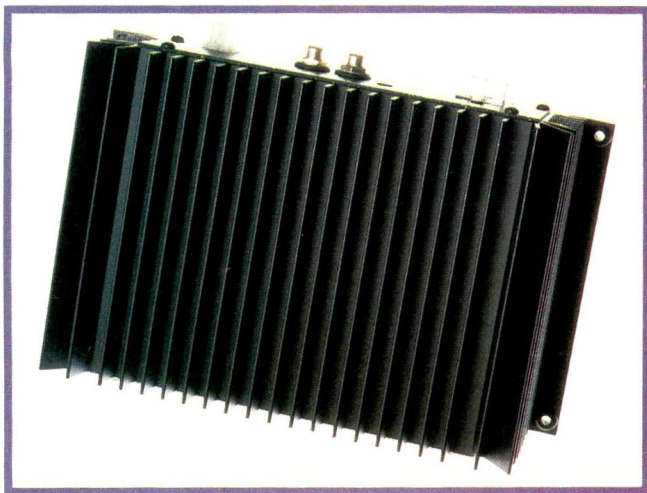


thermal overloads. If car battery voltage drops below 10 V, the amp shuts down.

The MRA-150 is more simply configured than any of the others tested: No provision is made for mono bridging, nor are there any provisions for biamp operation. (Of course, if you do want to install a biamped system, you can always use two of these amplifiers with a separate electronic crossover.) Although this amplifier was not the most powerful of those measured, its fairly high dynamic headroom of 2.0 dB means that during short, transient musical peaks it can deliver nearly 95 watts of undistorted power. I noted too that with no signal applied this amplifier drew less than 1 ampere of current, less than any of the other amplifiers tested.

Linear Power Model 1002

Linear Power's Model 1002 car amplifier is one of six stereo models, which range from 16 to a full 250 watts per channel (referred to 4-ohm loads). The Model 1002, at 50 watts per channel, falls between those two extremes. Its output stages are transformerless, d.c.-coupled, and fully complementary. Two protection circuits are provided. One is a thermal protection circuit that prevents damage from high-frequency oscillation. This circuit is also triggered when an improper input voltage is applied or when ambient temperatures become excessive. The second protection circuit is a current-sensing device which guards against



THE PROTON D275 HAS
tremendous dynamic headroom
which enables it to push out peaks
of 300 watts for short transients.

such abnormalities as short circuits. Both protection circuits reset themselves automatically. Conservatively rated individual components are used throughout the design, as are glass-epoxy circuit boards. A 15-ampere power fuse is incorporated, and users are warned that over-fusing will void the warranty.

Linear Power specifically warns against using the 1002 with speakers having impedances of less than 4 ohms. Where four-speaker systems are to be used, it is permissible to wire a pair of 8-ohm speakers in parallel for each channel. However, if speakers with impedances of 4 ohms (or less) are used, such speakers must be wired in series for each channel. That's rather unfortunate, since this amplifier exhibited one of the highest damping factors for the group, and series wiring defeats the purpose of a high damping factor, which is to keep bass tight and free of any artificial "overhang."



Proton D275

Like Proton's home amplifiers and receivers, the D275 features a design, called Dynamic Power on Demand (DPD), which gives tremendous dynamic headroom. (Proton claims 6 dB, and I measured 5.5 dB.) The D275's steady-state power is rated at 75 watts per channel when connected to 4-ohm loads, but its headroom means that it can actually push out peaks of around 300 watts per channel for short musical transients lasting 20 ms or less.

The amplifier can also be bridged for mono operation by means of a pushbutton switch. In mono, it is rated to deliver a steady-state power level of 150 watts into a 4-ohm load. However, its dynamic headroom in bridged mode, though still impressively high, is not quite as great as when the amplifier is operated stereophonically.

In addition to the switch that selects the correct sensitivity for either preamp- or speaker-level inputs, the D275 has input-sensitivity controls. These can be used to more precisely match the output levels of the signal source in use, or for balancing a biamped or triamped system.

While all of the car amplifiers tested for this report showed