Also, due to the fact that the traces run too close to the mounting holes (again, plenty of room on the board to reroute), insulated spacers must be used to mount the board to the chassis.

Listening Notes

For ease of use I took music from CD for listening. I used only a few CDs which I know to be well recorded and natural sounding. These included the Opus 3 Test Record 1, *Depth of Image* (this disc should be a requirement for anyone claiming to be an audiophile); the DMP jazz sampler *A Taste of DMP*; Joe Jackson's *Body and Soul* (A&M); Eric Marianthel's *Voices from the Heart* (GRP); Chick Corea's *Electric Band* (GRP), and James Newton Howard (Sheffield #23).

Stock Dyna and AVA Mod—The ST-70 is *the* classic tube amp, and it still sounds good. It definitely has a warm, smooth, romantic quality to it, with fair but not tight bass. The AVA mod slightly tightens up the bass, probably due to the increased power supply capacitance. Neither of these versions has a good high end, because of the limitations in the design of the driver circuit. I'm not saying it sounds bad, because it doesn't. It sounds pretty good, especially for a $200 or $300 amp.

My first impression in switching to a tube amp from a "modern" transistor amp is the openness in the sound, the transparency to the music. This was fairly true here, but not completely. The dynamic range of the music sounded compressed and slightly harsh, with a slight veiling of the soundstage (though not as veiled as my backup Carver amp). Music was reproduced with a fair amount of detail and imaging, but it was apparent in listening to the other mods that these two versions were in a different league than the rest. Acoustic guitar reproduction was extremely natural sounding.

Sutherland—This mod definitely changed the sound of the amplifier from warm and rounded, to more neutral. The music came through very clean and detailed, without being harsh. The sound was open without the veiling noted above, although the soundstage seemed to be more recessed. Cymbals and bells sounded clean and airy. The bass reproduction was about the same as the stock Dyna, probably limited by the power supply. There was a noticeable lack of impact with too much smoothness. The dynamics of the music were better but still not as good as the three mods below.

Vacuum Tube Audio—After listening to this version for a minute or two, I felt like crying. This was *music*. I was no longer listening to a modified ST-70, but to a great amplifier. The imaging was incredible, over and over again in my listening notes this was noted. I listened to this amp for a solid three hours straight, playing all of the CDs noted earlier, plus a few more. In searching for the right words to describe the sound, I applaud the improved clarity, transparency and detail in the music. The music sounded live and realistic, and the 3D image of the soundstage defines the word holographic. Bass notes were reproduced with depth and tautness totally lacking in the AVA and Sutherland mods.

Curcio—Musical ecstasy part 2. My first impressions were the tight and clean character of the music. It was reproduced with full dynamics, with dead quiet during the gaps. Reproduction was very transparent and revealing, although it seemed a little dry, almost sterile, probably a characteristic of the 6DJ8, which has none of the usual "tube sound." It seemed to improve after an hour or two of listening. The soundstage wasn't pushed forward or pulled back, but just right, although it didn't seem quite as spacious in height and width as the VTA. Depth was very good. Bass notes were solid, tight, deep and natural.

GSI—This mod had several characteristics of the last two: lots of space, transparency, cleanliness and quiet. Not as revealing as the Curcio, about the same as the VTA; with excellent soundstage imaging, similar to the Curcio. Not as sterile sounding as the Curcio, more neutral like the VTA. Bass reproduction was very good. Overall, a very good performance.

These last three mods are all very good, each just a little different from the others. Your choice is a matter of personal taste. It was fun and educational to make the comparisons.

SUPPLIERS

Audio by Van Alstine
2202 River Hills Dr.
Burnsville, MN 55337, (612) 890-3517
(ST-70 rebuild kit, $200; bare board, $75)
Fast Reply #MD539

Curcio Audio Engineering
PO Box 8003
State College, PA 16803
(driver board, A&T $175; power regulator, A&T $150; bare board $35)
Fast Reply #MD529

[Note: Curcio's mod is available in kit form from Old Colony Sound Lab including all new sockets, connectors and tubes.—Ed.]

GSI Musical Electronics
228 Washington Ave.
Belleville, NJ 07109, (201) 751-7505
(driver board, A&T $200; bare board, $100)
Fast Reply #MD526

Sound Values
Box 551
Dublin, OH 43017, (614) 889-2117
(used ST-70s, $199; new ST-70 kits, $499)
Fast Reply #MD528

Sutherland Engineering
619 E. 8th St.
PO Box 1363
Lawrence, KS 66044, (913) 841-3355
(driver board, A&T $80; power supplies, A&T $100)
Fast reply #MD530

Vacuum Tube Audio
965-D Imperial Hwy.
LaHabra, CA 90631, (714) 991-2463
(driver/power supply board kit, $150; bare board, $60)
Fast reply #MD532

MANUFACTURERS' COMMENTS

Audio by Van Alstine

Mr. Mottram's evaluation of our Super Seventy amplifier is invalid since the Super Seventy he attempted to build from his own parts is miswired and defective.

After completing his tests, Mottram sold the Super Seventy in question to Gregg McArthur of Los Angeles. Because the amplifier as received by Gregg did not sound anything like another Super Seventy he had purchased directly from me, Gregg contacted me and sent me the amplifier for evaluation. Thus, the blank Super Seventy board Mottram bought from us and then built with his own parts is now in my possession.

Our easy-to-build audio board has been massacred by assembly error and improper parts selection.

The first two sections of the power supply are defective since Mottram installed the power supply capacitors in the wrong locations on the PC card (he confused the high and low voltage parts and has 440V across the 400V rated parts). Thus the B + supply is being pulled down and all operational voltages are wrong.

His choice of bias supply capacitors is off 50% in value (low) from our specifications and thus there is excess ripple and inadequate regulation on the bias supply.