

CIRCUIT BOARD BASICS

There are no holes to drill for components, which are surface mounted on the bottom of the boards. There are five feedthrough holes on all boards marked "FT." Drill these holes and use a piece of wire for the feedthrough. Refer to the layout guides in **Figs. A-F**.

Each tube socket on the board has a center-point indicated with a pad. Drill a small hole through each and drill holes for the tube socket pins. Also drill holes for the mounting posts, marked "M"—five on the 6V6 boards and four on the power supply board. For the 6V6 boards use a #4 bolt that has a small diameter head because the clearance for screw heads on the 6V6 boards is not great. If you must use a screw head with a diameter too large, place an

insulating washer under it.

For the power board, bolt head diameter is not important. The top of this board is dedicated only to ground conductor and with the four feedthroughs it enhances the overall conduction. If desired, you can use a single sideboard (bottom only) for the power board and eliminate this extra ground layer and the feedthroughs. Note that there is one non-ground conductor on the top of the 6V6 board, the filament trace.

You may install two types of relays on the power board:

1. solid-state as shown on the layout
2. mechanical, which is mounted in the eight pad holes below the solid-state outline.

If you use the mechanical relay, a two sideboard is best, but with some small thru-hole wire jumpers a single sideboard is OK. With a thru-hole type configuration, you will need to remove the board to replace it, if ever. The two inner-most pins shown going to ground are not necessary and can be snapped off if desired.

Note: I cut an extra 6V6 shaped board, without the component pattern but with the ground plane and filament trace side and epoxied it onto the top of the component board, resulting in a double thickness board that is much stronger. I admit this was not needed, but at the time I liked the idea.

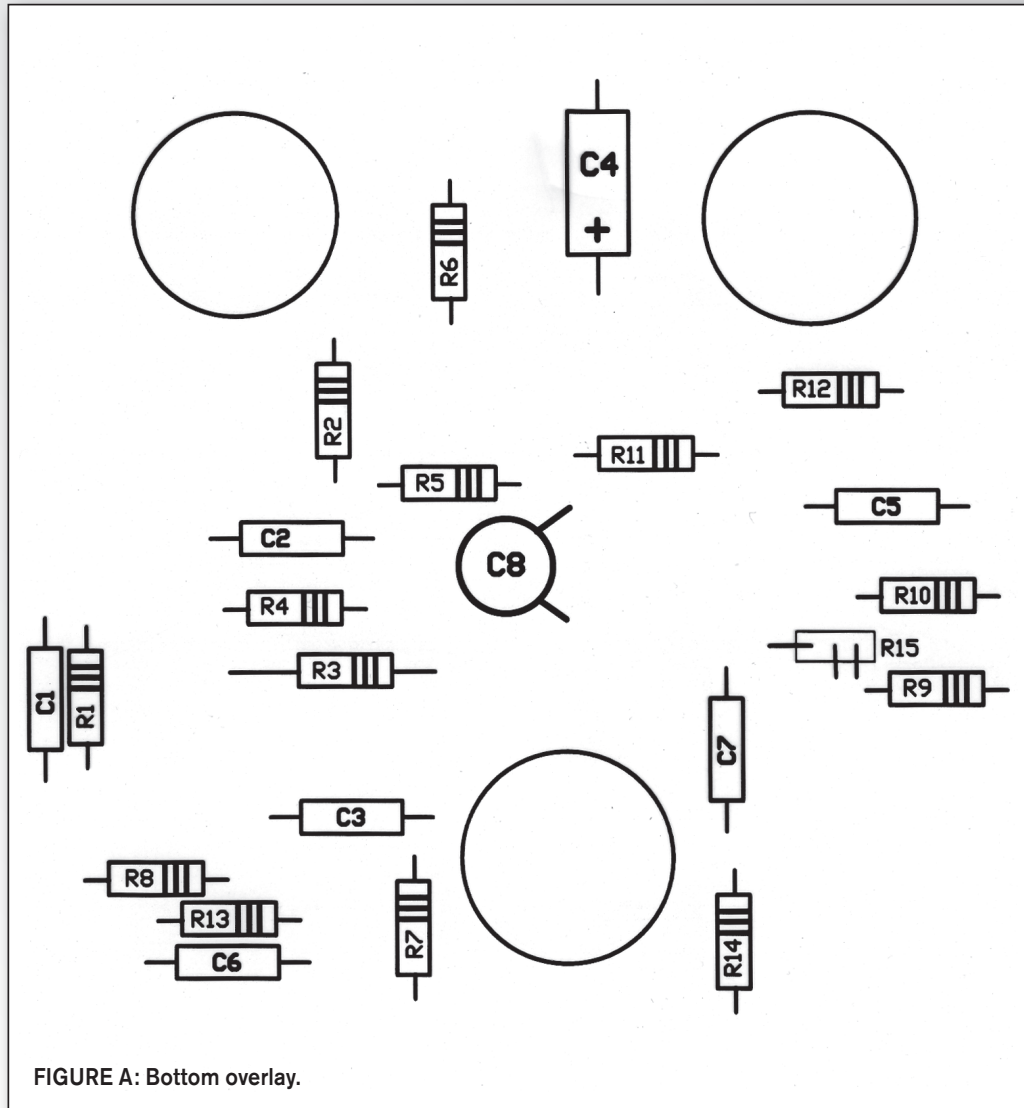


FIGURE A: Bottom overlay.

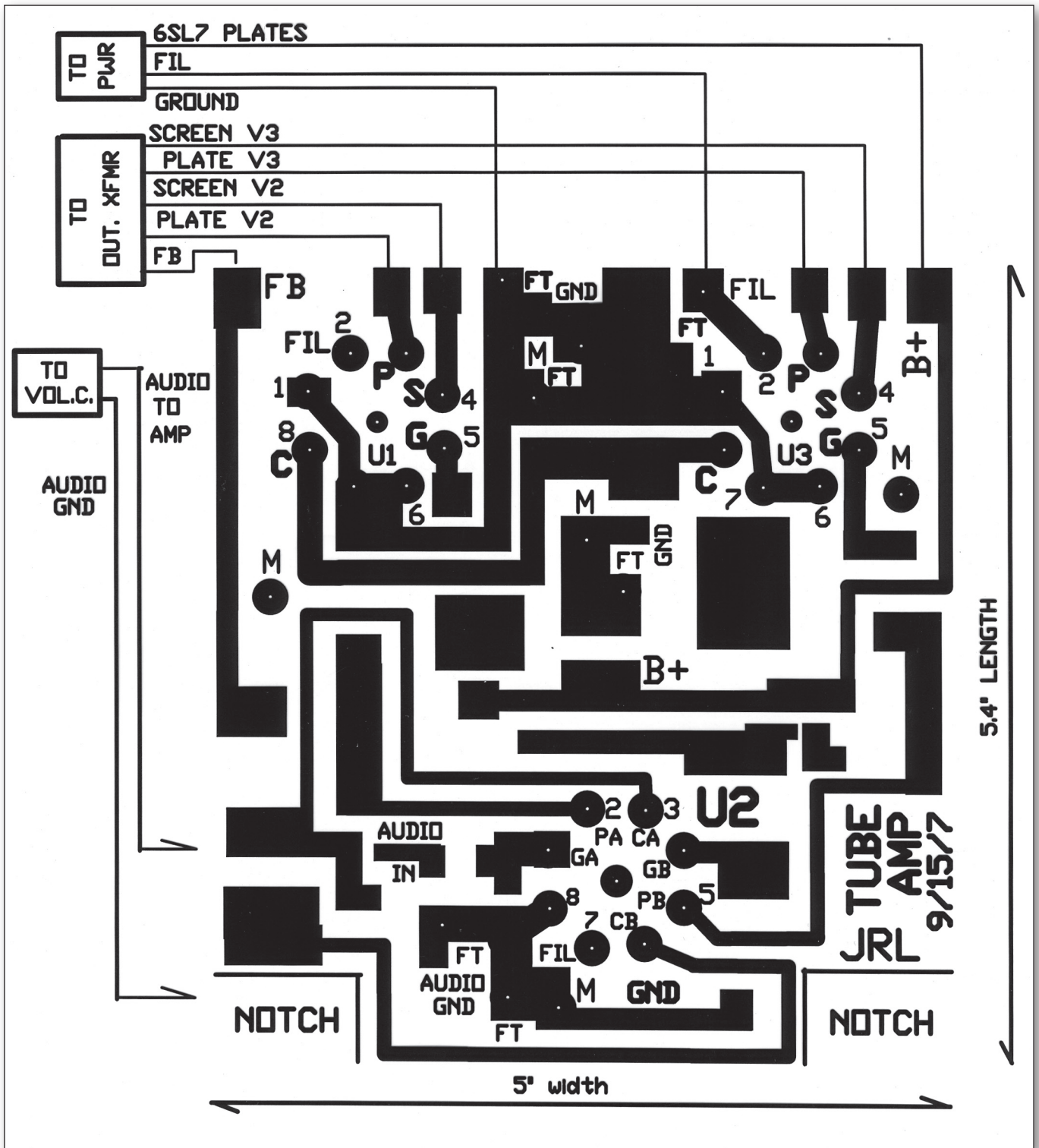


FIGURE B: Bottom layer, with parts surface-mounted on bottom, except tube sockets, which are on top.

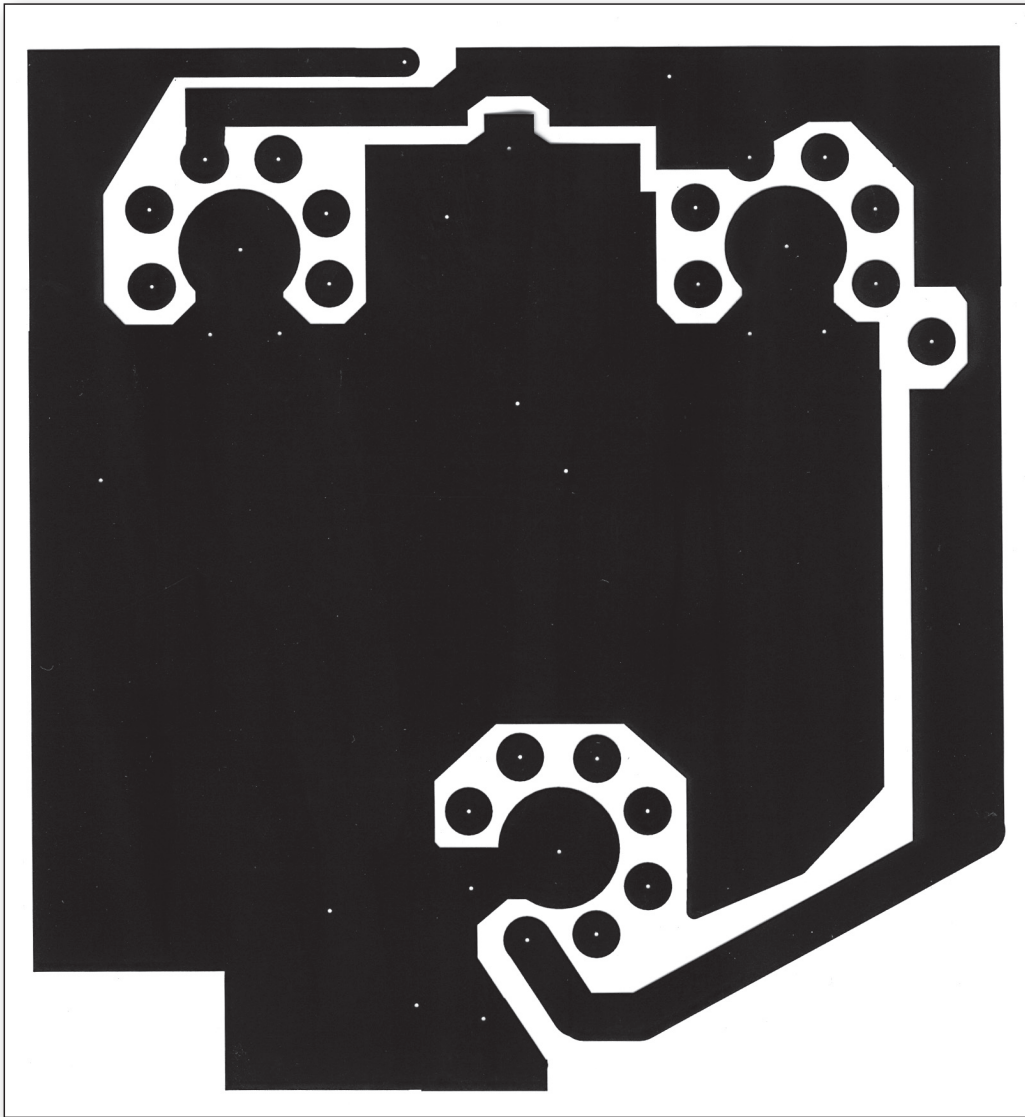


FIGURE C: Top layer.



FIGURE D: Power supply top layer.

