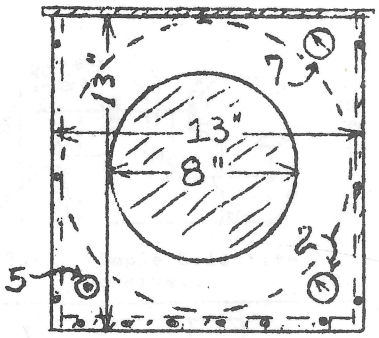
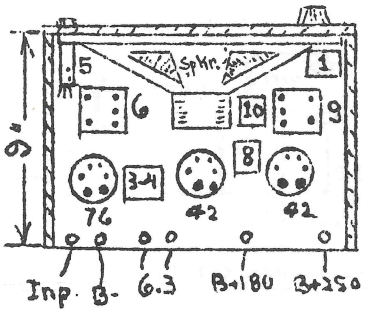
MRL 6-WATT CLASS B POWER AMPLIFIER.

DP 38 MRL



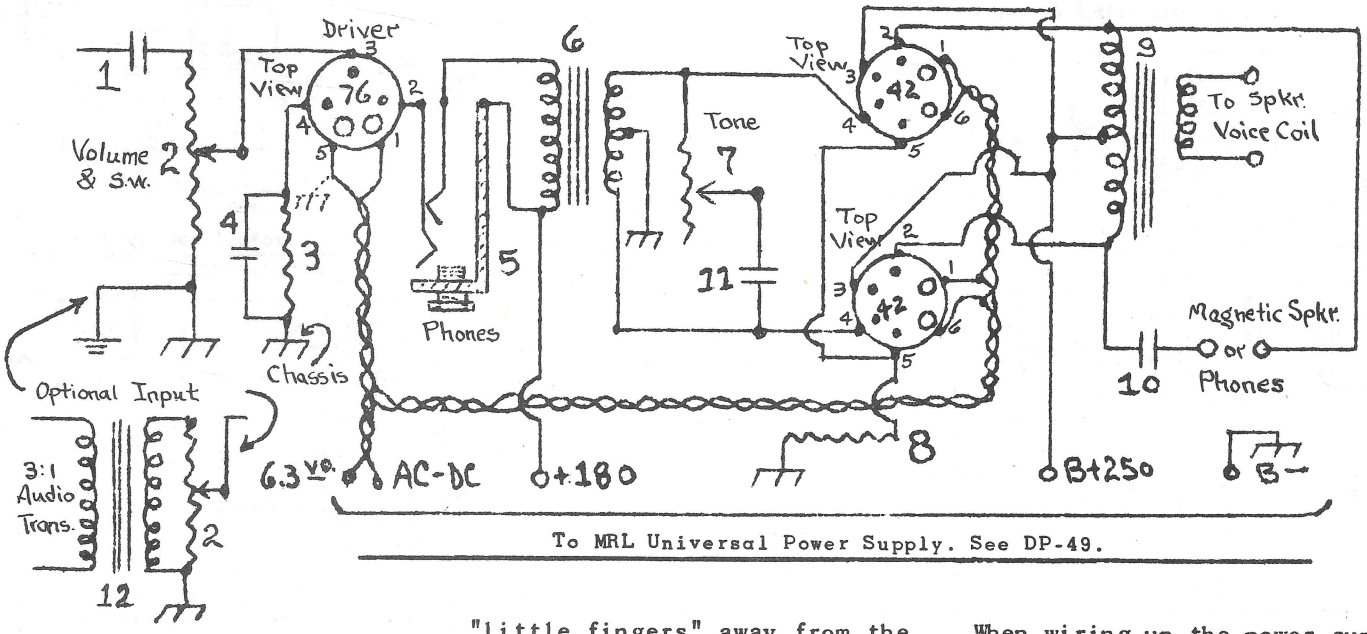
1. Panel View. 1/8" - 1"

A Detail Print by Modern Radio Labs.



2. Top View. Back is open.

3. Schematic.



PARTS LIST.

1 Box, as per dimensions.
1 3:1 audio trans. if desired. 12
1 Push-pull input transformer. 6
1 " output " 9
1 500K vol. control & switch. 2
1 50K tone control. 7
1 Dyn. or mag. speaker 12" pref.
2 .01 x 600 condensers. 1 - 11
1 .1 x " .10
1 25 x 50 v. " .4
1 200 ohm 1 watt resistor. 8
1 2K " " .3
1 Double phone jack. 5
1 5-prong base socket. 76
2 6-prong " .42's.
2 1" pointer knobs.
6 Binding posts or cable.
1 76 tube. 2 42 tubes.
Hookup wire, hardware, solder.

Details must be lacking, due so space, but if you follow layouts and diagrams - you should have no difficulty.

The panel forms the front of the box and is fastened to the base - that makes the bottom of the box. Make the panel 13" sq. and the base about 9" x 12½" if using ¼" plywood stock for box. Fasten the top of the box and ends together as one unit. When completed - the ends screw to the base and the panel to the front of the box- making it easy to get to the wiring if desired. Do not make a back - but a door may be made of screen to keep "little fingers" away from the hot stuff.

Cut as large a hole as possible for your speaker and cover it with grille cloth. If desired - you may use a piece of Celotex, or other material, between speaker and panel to better the tone and cut down harmonic vibrations and rattles.

Mount the baseboard parts in approximate positions as shown. Trace the numbers back to the diagrams. Drill holes for the volume and tone controls and the jack. If you wish - you may add a jack, or tip jacks for phones on the output for magnetic spkr. but this won't do your phones any good! Use the two knobs on these controls.

Selection of speakers is optional, but as this has a 6-watt output - I'd get a big one, and you'll get "better acquainted with the neighbors!" We used to get RCA #100 magnetic speakers, but doubt if they may be obtained in salvage stores now. The dynamics have a much better tonal range and reproduction.

A PM speaker is a little easier to install, altho the external field dynamics give a better tone. In the latter - the field is energized by the power supply and acts as another filter choke to smooth out some hum.

The .01 condenser is about OK for tone control - but if you want lower tone - use a .1 mfd.

When wiring up the power supply filament - be sure to ground one side. Note we have grounded it at (5) on the 76 tube. This grounding gives a bias for the tubes and cuts down hum.

Note connections to sockets R top view - which has an advantage in top-base wiring here.

Our Universal Power Supply is ideal for this layout - altho any supply with 6.3 v. filament is alright.

Plugging in the phones cuts out the speaker - and shows you just how much the speaker amplifies in the push-pull stage.

For general use we prefer the 3:1 audio transformer as it has many advantages. It has less effect on the output of Crystal sets, Transistor rigs, etc. than the condenser-resistor input.

A microphone may be used on the front end - but the transformer should match the mike.

This amplifier makes a good public address system. You can have a lot of fun with it when you bring in those weak DX stations to room volume.

This was one of our original DPs - having sold hundreds of them over the years. We used to build these units up so these plans are authentic. Lots of Fans have reported good results.

Build this rig up permanently, as it can make a good Hi-Fi unit as well as for DX. Other tubes may be substituted if desired.