

of the rack mounting. They also serve to protect the controls if it becomes necessary to place the unit face down on your workbench for service.

The lettering was done with Tekni-Cals, and the engraved plates are obtainable from Central Engravers <sup>4</sup> at 5 cents per letter.

#### ***The Shielding Enclosure***

The two ends and the back of the shielding enclosure are made of 0.51-inch solid sheet aluminum, while the top is made of perforated sheet of the same weight. One of the SeeZak P1417 panels is used for the bottom cover. Aluminum angle stock, 1/2 inch by 1/2 inch, is used to join the pieces with the help of 1/4-inch No. 6 sheet-metal screws spaced every two inches. All of the above pieces, including the angle stock, may be obtained cut to size if desired.<sup>5</sup>

#### ***Adjustment***

After checking out the filament circuit and grounding the center tap of  $T_1$ , reduce the sensi-

<sup>4</sup> 529 South State, Belvidere, Illinois.

<sup>5</sup> From Dick's, 62 Cherry Ave., Tiffin, Ohio.

tivity control of the r.f. voltmeter to near minimum. Select the proper band with  $S_1$  and apply excitation. Adjust  $C_1$  for a grid current of approximately 150 ma. Apply plate voltage and load, and resonate the output circuit with  $C_2$ . With a plate voltage of 3000 and grid current of 160 to 170 ma., alternately adjust  $C_3$  and  $C_2$  to increase the plate current to 300 ma. or slightly over. In observing the r.f. voltmeter, you will note that maximum output does not always occur at the point of resonance as indicated by the dip in the plate current.

The amplifier may be checked for linearity as described in the *Radio Amateur's Handbook*.

I am very grateful for the technical advice and suggestions of Bill Orr, W6SAI, and George Stinson, W9KDK. Their analysis of the problems encountered, as well as their suggestions for changes during construction, made this a much better amplifier, and a pleasure to build. Operating at an input of 1 kw. or less, this amplifier actually "coasts" and will give you years of trouble-free service.

**QST**

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