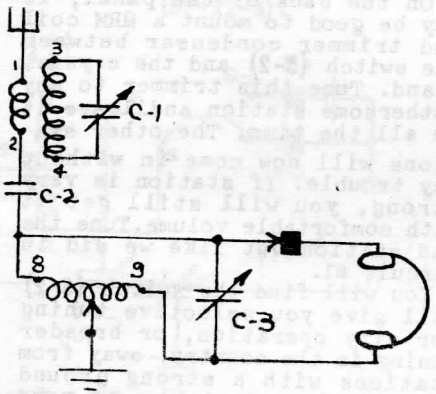
MRL #1 CRYSTAL SET. (DP-26)



PARTS LIST:

C-1 .00035 Variable Condenser.
C-2 .0001 mica Condenser.
C-3 .00035 Variable Condenser.
1-2-3-4. MRL QRM Coil (page 23).
8-9 MRL #1 Crystal Set Coil.
1 Knocked down Crystal Stand.
1 Steel galena or Diode Xtal.
1 Switch lever.
12 " points.
2 " stops.
2 1¼" Bar knobs and scales.
1 Compo. panel 1/8" x 6" x 7"
5 ft. #18 str. hookup wire.
3 ft. #22 " " " for coil
2 1" Fahnstock clips for A-G.
2 Phone tip jacks.

This is the set that started us in the mail-order business. We were so surprised at its performance, we figured others may like to build it. It has piled up an inch stack of reports - some running over 2000 miles and 500 miles at night on a magnetic speaker, under good conditions.

See page 23 for data on QRM coil. This may be mounted on the rear of left-hand condenser. The field of the QRM does not interfere with the tuning coil, so may be placed in any position.

Coil (8-9) is wound on a 2XM celluloid form 2" dia. x 4¾" in length. Starting at end with the small ring, wind 75 turns #22 DCC. Tap at 3-6-9-12-15-20-25-30 35-40-45-50, making 12 taps in all. See winding page 23. Best way to mount the coil is horizontally; above the condensers. Suspend it by a 6-32 x 1½" R.H. machine screw and several nuts. Mount "hot" and near the switch points. This coil tunes the primary, or A-G circuit, and helps in selectivity and volume of the set. There is no particular setting of the switch, except where it works best. When making connections to switch points, be sure to solder the joints well. Tin the pts. first, and then hold a screwdriver on the joint until it cools. Having good joints is most important for a trouble-proof set.

Condenser (C-2) is very important, and the type depends on your type of aerial, as height, length and location. We have used a 15 mmfd. trimmer with good success. Also, a .0001 mica up to .01 is OK. Try several until you find one best for your particular conditions. The smaller the condenser, the more taps you will have to use on the coil.

Any type of crystal may be used, as Steel galena, Xtal diode, or a Carborundum with 3 volts in series. There are so many variations, you are not limited to certain types.

For an aerial, naturally the higher the better. Length of 50' in the city, to 100 ft. in the country, away from stations with a strong ground wave.

Naturally, phones of high impedance are better. They give less leakage of high frequency current around the crystal.

When tuning, bring in the loudest station, as strong as possible. Then, slowly turn (C-1) until it cuts down, or out altogether. Leave it on this station and go ahead and tune the other stations. If very loud and near, it will be loud enough for comfort when you hit it.

Some may prefer a 50-500 mmfd. trimmer on the QRM Coil. However we prefer the use of 2 .00035 mfd. variables to tune from the front of panel. In this way you may control the tuning of some good DX stations.