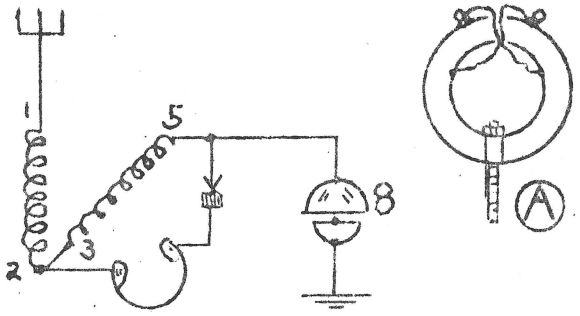
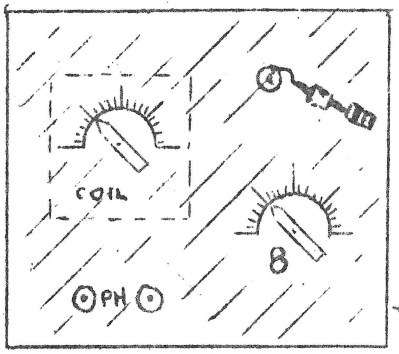
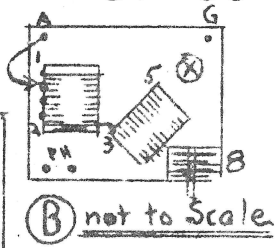
MRL Nº 20 - VARIABLE-SELECTIVITY CRYSTAL. DP-66







PANEL LAYOUT

Scale: $\frac{1}{4}$"-1"

P-A-R-T-S L-I-S-T

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1 Variometer, Variocoupler or coils (1-2-3-5-)
1 .0004 var. cond. (8) or - .00035 or .0005.
1 Compo. panel 1/8" x 7" x 8".
2 Phone tip jacks.
1 MRL Steel galena crystal (or) MRL Iron pyrites (fixed) crystal.
1 Cabinet to suit.
2 Bar knobs & scales (or dials).
1 Crystal stand.
2 B-Posts for A-G at rear of cabinet.

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For being such a simple Crystal set, this is indeed very selective. Very little interference is encountered. By adjusting the coupling of coils (1-2) and (3-5) one may vary the selectivity, as well as increase the range of the set. By placing coils closer together (or parallel) the distributed capacity and inductance is increased, thereby raising the tuning of the coils - enabling you to get higher stations on your dial. Pulling them farther apart - or at right angles to each other lessens the dist. cap. and inductance, enabling you to play the lower stations on your dial.

COILS: You may use a standard Variometer or Vario-coupler. Only difference between them is that connecting a Vario-coupler's coils in series makes it a Variometer. For coil (1-2) you may use a form 3" in dia. x 3" long with a 1/4" hole thru center for shaft. To get holes centered correctly, lay the form down on a sheet of paper. Trace around outside of form onto the paper. Take a compass or dividers and locate center. Draw a line from center thru each side of circle. Now, lay the form on paper in same position again and by means of a square, draw lines up to the center of form. Divide this line in center, and your form is divided so rotor will rotate in exact center of form and not rub on the sides. Wind this full of #22 DCC wire. You may tap it every 25 Ts if you desire for a greater range in tuning of set. --For coil (3-5) use form 2" in dia. x 2" long. Center holes same as for (1-2). You can run the lead wires out the back if desired (see A). Be sure to use flexible wire, as phone cord, etc. so it won't break after using. Wind this full of #28DCC as you have a much smaller winding space than on 3" form.

If you are using the "breadboard" layout (Fig.B) you will find a certain position of angle (1-2-3) to set the coils so they cover all your stations well. After getting right position, you can screw them down. Of course, a different sized antenna will give different results.

We prefer a fixed Iron Pyrites crystal, but you may use Steel Galena. Police calls and Amateurs may be received by using smaller coils or taps so you may use less coil turns.

Use panel layout as shown, scale $\frac{1}{4}$" to 1". You will find this set has wonderful possibilities. Has lots of volume as it is direct-coupled to the aerial and ground. Due to crystal and phone being connected only to one coil instead of across (1-5) - no static or line noises are received. Build it up and see what it will do on DX....

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