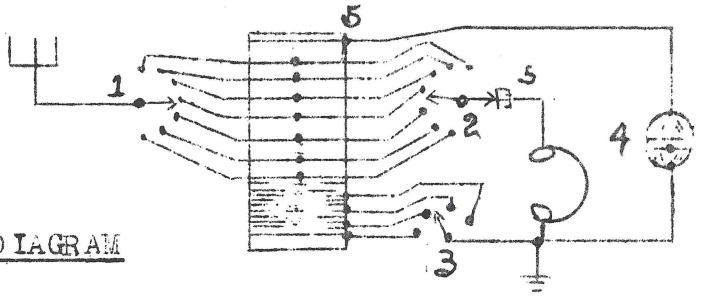
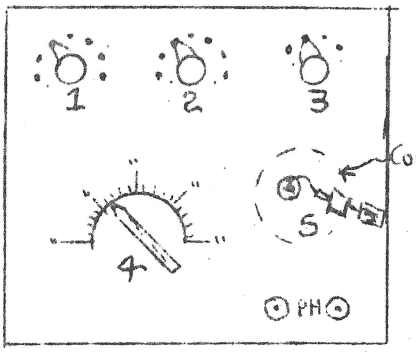
MRL N° 17 - "PINOLE SPECIAL" CRYSTAL SET. DP-65



DIAGRAM



PANEL LAYOUT. ¼"-1"

P-A-R-T-S	L-I-S-T
1 #17 Coil, tapped	MRL .
1 .0004 (or .0005 or .00035 mfd.var.)	
1 Compo. panel 1/8" x 7" x 8".	
1 Bar knob or dial. 2 Phone tip jacks.	
3 switch levers 18 switch points 6 stops.	
1 MRL Steel galena crystal 1 Crystal stand (or Fixed Pyrites xtal)	

IF YOU MAKE COIL:

1 MRL 2XM coil form & cement & bracket for mounting.
100' #22 DCC wire (coil & sw. pt. leads).
Solder, hardware, etc. 5 ft. 7/26 tinned wire for hooking parts.

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This receiver has a good DX record, mostly due to close coupling between the tuning circuit and aerial. It is very flexible. At switch (1) you can regulate the tuning by tuning the aerial to desired station - depending upon length of aerial. At (3) you can have a low-inductance and high-capacity circuit by adjusting the switch, and with a greater range as a result. Switch (2) controls selectivity of circuit by letting more RF current flow thru condenser circuit instead of thru the Crystal. It prevents leakage of current thru Crystal and phones, instead of being tuned by the condenser.

The coil has 111 turns of #22 DCC wire. You start from (5) and make taps as follows: 20-36-46-51-56-66-76. When making taps, let a piece of heavy paper 1" wide run under the turns to be tapped. These taps connect both to switch (1) and to switch (2). To continue the coil, make taps at 83-89-96-111 which run to switch (3). When making leads to switch points, we usually wind some #22 DCC wire on a form of some kind. Then, paint it with MRL Light coil cement and let it dry a half hour. You will find this will hold the covering on when you scrape it, and prevent shorts. You may raise the coil a little with washers, so the leads to the crystal stand will pass under it. There is no effect due to coil being so close to crystal. After coil is mounted, then, solder taps to switch points. Be sure to tin the switch points good before attempting to solder onto them. When switch leads are soldered, try pulling on them to see if they are solid.

This is a very easy set to build, once the coil is wound. We have reports of hundreds of miles on this receiver. We recommend our MRL Steel galena, but you may use a fixed Iron Pyrites if desired. Set has lots of volume and flexibility with the 3 switches and var. condenser.

You will note as you change switch (2) you will make the set more selective without changing position of stations. This is quite a help to an Auto-transformer coupled (close coupled) as this circuit is. Most single coil circuits are very broad. This is called 'Auto-transformer' because part of the circuit from aerial thru coil to ground is called the primary. Part covered by condenser is secondary. Therefore, many turns are used both by the primary and secondary to 'step-up' the current from aerial. As the aerial is usually long, it is necessary to have but a few turns in the primary circuit to balance up with the sec.

Pleased to have any reports from experimenters.

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