

## CONGRATULATIONS

You have just purchased the new Pal VFO "PLUS" designed to monitor as high as 27.505 plus. By removing one crystal your transceiver will now monitor 25 channels above the CB band. By being crystal controlled for stability and frequency drift, it is the finest VFO made.

Please follow instructions for best performance.

### PRELIMINARY PROCEDURE

1. Check your transceiver schematic with your dealer to determine the particular type of oscillator circuit used.
2. Remove the crystal which operates channels 13 thru 16 or in some cases 13-17-21-23.

### VFO INSTALLATION

1. If your crystal oscillator uses crystals which are grounded to the chassis, then the special coax cable can be inserted into the crystal holder. Be sure the center of the cable is on the HOT side and the shield on the GROUND side. Make firm connections.
2. If your crystal oscillator circuit has a floating ground, then the center of cable should be inserted in the HOT side of the crystal holder and the shield connected to the closest chassis ground.

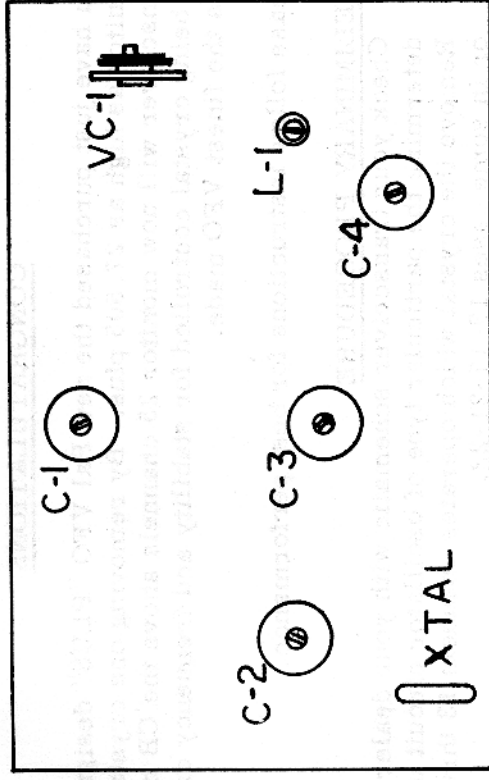
### ADJUSTMENT OF VFO VARIABLE OUTPUT CONTROL

1. Remove cover from the VFO.
2. Set your receiver to any channel showing a strong signal on the front panel meter.
3. Reset your receiver to channel 13, now on VFO, and tune the VFO dial to the same channel as in step 2.
4. Adjust the variable output control so that the needle swing is the same as in step 2. This is very important to minimize harmonics. The variable output control is a yellow, blue or white thumbwheel located near rear end of circuit board standing out about 3/4 inch on right side. Replace cover.

NOTE: Many synthesized transceivers move up 10 kc's each on ch-14 & 15 and 20 kc's on ch-16.

With this VFO installed and it is covering such a high range in frequency, possibly your transceiver should be aligned at the top end of the band, or channel 23. This is to increase sensitivity across the new range of frequencies received.

Good luck with your new Pal VFO and happy monitoring.



### ALIGNMENT INSTRUCTIONS - VFO DIAL

1. Adjust VFO dial to channel 13.
2. Set coil, L-1, to transceiver channel 13 crystal frequency. Clockwise lowers & counterclockwise raises.
3. Readjust VFO dial to channel frequency 27.435. (Dial reads 435) which remains through steps 4. through 8.
4. Frequency on counter should read 320 kHz above transceiver crystal frequency.
5. If the counter reads low, multiply the difference of step 4. by 9 and add to the counter reading.
6. If counter reads high, multiply difference of step 4. by 9 and subtract from the counter reading.
7. Adjust C-1 to read the compensating error frequency calculated in step 5. or 6.
8. Adjust L-1 to read the correct frequency, 320 kHz above the transceiver crystal frequency.
9. Repeat above steps until the VFO dial properly tracks, completing the alignment.
10. Adjust C-3 and C-4 for maximum output signal near mid-band dial setting. Typical output is near 4 volts P-P with VC-1 set to max.

\* \* \* NOTE \* \* \*

The above alignment is to be done only by qualified and properly equipped dealers and technicians.