

(2) Set the receiver dials at 1.5 mc (low end of band 2).

(3) Tighten the set screws in the vfo coupler.

(4) Proceed as in paragraph 5.3.8.(c) (VFO SHAFT). The procedure outlined in this paragraph implies correct KILOCYCLE dial readings but a full turn (100 ko) error. However this procedure is applicable to correction of any errors between the dial readings and the vfo shaft position. An example follows:

a. Suppose in 5.3.8.(c) (1 or 2), that zero beat occurs at a reading of 2.153 mc rather than 2.0 (0.153 mc high). At this setting the vfo shaft set screws are not accessible for loosening. The KILOCYCLE dial is turned until the screws can be reached and at the position where the second screw is loosened, the dial readings are 2.0 and 22 (2.022 mc). Since a correction of minus 0.153 mc was indicated from the zero beat dial readings, the vfo shaft is held stationary and the KILOCYCLE dial turned until the reading is 2.022 minus 0.153 mc or 1.869 mc. This is represented by readings of 1.8 on the MEGACYCLE dial and 69 on the KILOCYCLE dial. One vfo coupling screw is now tightened without moving the vfo shaft and the shaft turned until the second screw is accessible for tightening. The dials are then turned to a 2.0 mc reading and zero beat is heard at or very near this point. Fine corrections are then made by adjusting the KILOCYCLE dial position on the shaft or moving the fiducial line.

5.5. DIAL BULB AND STATIC DISCHARGE BULB REPLACEMENT.

5.5.1. DIAL BULB REPLACEMENT. - The lights for the slide rule dial are mounted in sockets which are clipped to the metal structure above the dial. To replace light bulbs, slide the clips off the metal structure and pull out the sockets. Press down on the bulb slightly and turn it a fraction of a turn counterclockwise. When replacing the sockets, press the wires up into the channel. To remove the KILOCYCLE dial light, reach under the drum of the MEGACYCLE dial and grasp the dial light socket; then pull it back far enough to replace the bulb.

5.5.2. STATIC DISCHARGE BULB. - The static discharge bulb, 1104, should be replaced if it fails to fire with application of 65 volts ac or 90 volts dc. Test as follows:

(a) Refer to figure 7-4 for location of the bulb.

(b) Unsolder wires from the base of the bulb.

(c) Connect bulb in series with a 30K-ohm resistor to 115-volt source and check to see that bulb fires. If bulb fires replace in mounting. If bulb fails to fire, replace with new bulb to insure receiver protection from high voltages on the antenna.

5.6. DIAL AND BAND CHANGE GEAR MAINTENANCE.

5.6.1. GENERAL. - The replacing and synchronizing of gears in the dial and band change mechanism of this receiver can be a difficult job. It is recommended that the unit be sent to the factory for servicing should any major repairs be required.

WARNING

IF DISASSEMBLY OF THE GEAR UNIT IS CONTEMPLATED, INSTRUCTIONS IN PARAGRAPHS 5.6.2. and 5.6.3. MUST BE FOLLOWED CLOSELY OR IT WILL BE IMPOSSIBLE TO SYNCHRONIZE THE GEARS UPON RE-ASSEMBLY.

5.6.2. DISASSEMBLY OF GEAR BOX.

(a) If the gear box is to be returned to the factory for servicing, proceed as follows:

(1) Set the receiver on its back. Remove the following knobs: SELECTIVITY, PHASING, BFO, PITCH, BAND CHANGE, KILOCYCLE tuning and ANT. TRIM. Remove the collar, tension washer, and flat washer from the KILOCYCLE shaft. Remove the screw securing the standoff to the gear panel. Remove the two collars and the one coupler on the BFO PITCH control shaft. Remove the eight screws that mount the front panel to the receiver frame. Remove the two screws that fasten the megacycle dial to the front panel. Lift the panel off carefully and allow it to hang to one side on the cable wires.

(2) Remove the right-hand end bracket from the chassis.

(3) Loosen set screws in the following couplers: VFO, r-f slug rack and i-f slug rack shafts, all accessible from the top of the receiver, and two band change shafts, accessible from the bottom.

(4) Remove the VFO mounting screws and the gear box mounting screws. Lift the gear box from the receiver.

(b) If repairs are to be made in the field the gear box may either be removed from the receiver or left in, depending on the extent of repairs. If the box is to be removed, turn the MEGACYCLE knob to its clockwise stop and the KILOCYCLE knob to