PB3 100/300
Instructions for installation of additional fixed shunt capacitance.

The following instructions detail the installation of 1 or 2 type HT-58 doorknob capacitors in parallel with the variable shunt capacitor built in to the match network.

Materials required:

(1) Single shunt cap connecting strap, MSI p/n 00000536
(1) Second shunt cap interconnect strap, MSI p/n 00000537
(As required) 1 or 2 type HT-58 ceramic doorknob caps, values as required, rated 5kV minimum.
(2) (or 4, a/r) 6-32 x ¼" brass screw, MSI p/n 00-600401-01
(2) (or 4, a/r) #6 phosphor-bronze internal tooth lock washer, MSI p/n 00-602156-11

Installation:

Fixed shunt cap(s) are installed on the left sidewall of the generator cabinet, near the front inductor standoff. Two #6 clearance holes are provided for this purpose, the holes are located ~1" below the top edge of the cabinet wall and ~3" from the front edge of the wraparound (hole for single cap) and ~4" from the front edge of the wraparound (hole for second cap in dual cap installations).

To install the shunt capacitor kit, first attatch the main cap interconnect strap to the 10-32 stud on the top left (as viewed from the front of the generator) of the variable shunt capacitor (mounted to the floor of the generator). (The RF input line is also connected to this point, leave it in place.) [See fig.1] (In this and the following images of the installation, other parts of the generator are omitted for clarity)

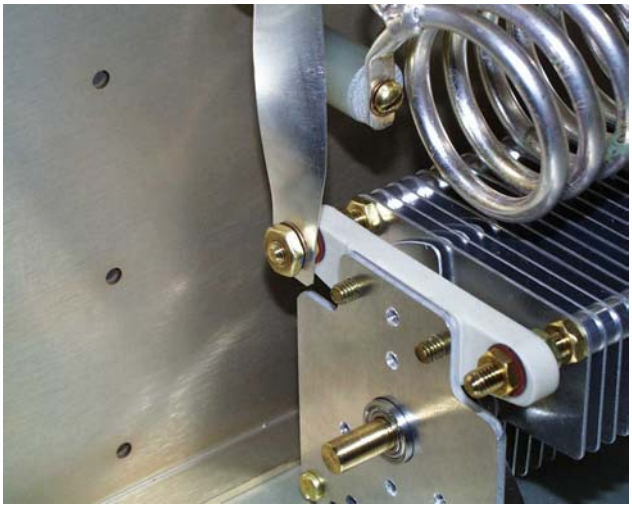

Fig. 1- Interconnect strap to variable cap connection detail

If a single fixed shunt cap is to be used, it is mounted in the hole nearest the front of the generator. The cap is mounted to the wall of the generator using a 6-32 x ¼" brass screw and #6 phosphor-bronze internal-tooth lockwasher. The loose end of the interconnect strap is connected to the remaining terminal of the cap, also using a brass screw and internal tooth lockwasher. [See fig. 2]

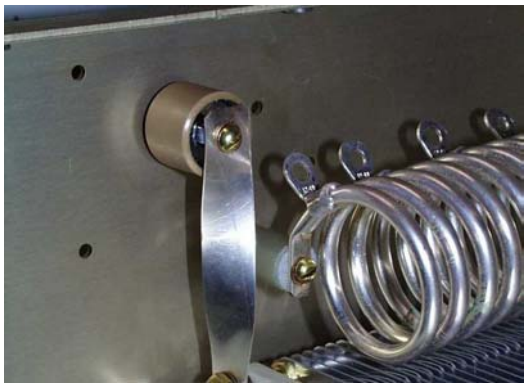

Fig 2- Single shunt cap mounting location detail.

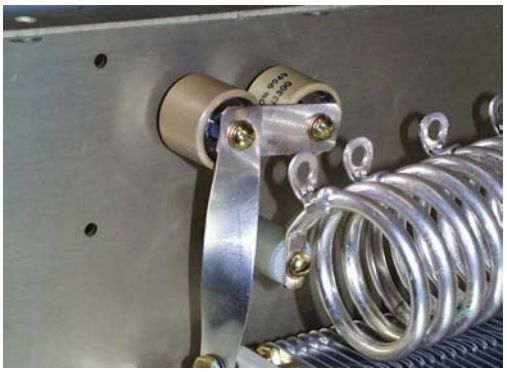

Fig. 3- Dual cap mounting location detail. (Note difference in angle of coil taps compared to fig. 2)

If a dual cap installation is to be used, the first cap is connected as above, and the second cap is installed in the adjacent hole and connected in parallel with the first using the short interconnect strap. Note: When a dual cap setup is used in a PB3-300, the tap connections on the inductor must be bent slightly with a pliers to allow proper clearance between the coil taps and the shunt capacitors. [See fig. 3]

Figures 4 and 5 show additional views of the dual cap installation.

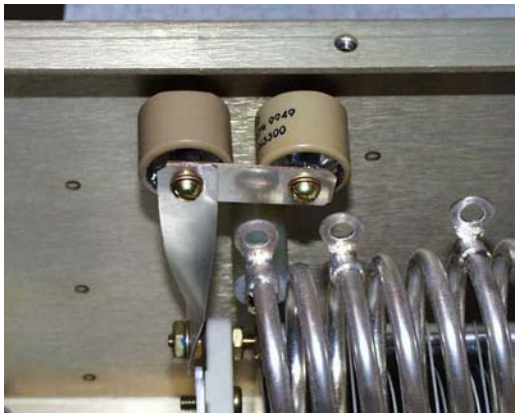

Fig. 4- Top view of dual cap installation.

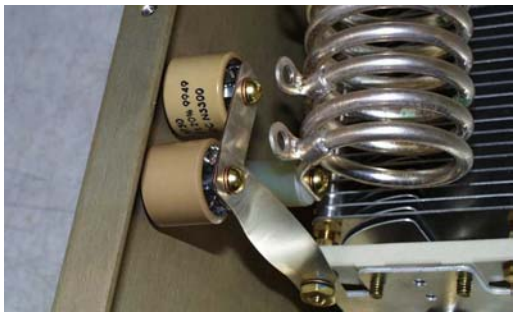

Fig. 5- Oblique view of dual cap installation.