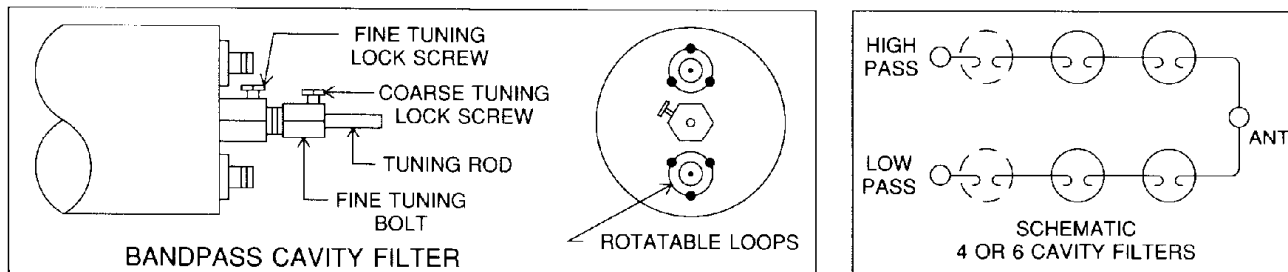


## “P” Series Bandpass Duplexers

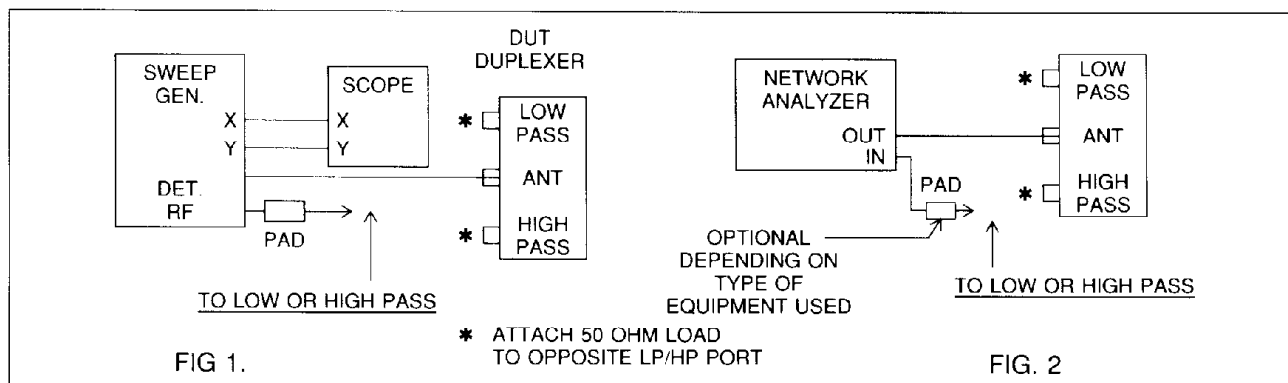
### Retuning Instructions

Before attempting field retuning, refer to page CI-1066 for some precautions which should be adhered to.

The duplexer is pre-tuned to the exact frequencies as ordered. No further tuning or adjustment is required. Retuning instructions are furnished for the purpose of readjustment in the event of frequency changes in the associated equipment in the field.



The duplexer is tuned using either test setup as shown in Figures 1 or 2. It is recommended to use a 6-10 dB, 50 OHM pad in the input lines in order to reduce VSWR reflections which may be introduced in the test equipment being used. (refer to CI-1070)



The cavity filters are equipped with adjustable coupling loops to facilitate insertion loss settings without removal or replacement of the loops. To change to a new insertion loss other than as was preset at time of delivery, unlock the three holding set screws on each loop and rotate each loop equally to obtain the required insertion loss.

If the insertion loss setting is changed, fine tuning will be necessary because changes in coupling affects resonance.

### Tuning Procedure

Each cavity has a coarse tuning adjustment for large changes in frequency and a fine tuning adjustment for small changes in frequency. Coarse tuning is accomplished by unlocking the coarse tuning lock screw and sliding the tuning rod in or out. Fine tuning adjustments are made by locking the coarse tuning lock screw securely and loosening the fine tuning lock screw, then rotating the fine tuning bolt.

1. Set the frequency to be passed into the high pass terminal and detect it at the antenna terminal with the low pass terminal terminated with 50 OHMS. Adjust the high pass tuning rods for maximum signal.
2. Set the frequency to be passed into the low pass terminal and detect it out the antenna terminal with the high pass terminal terminated with 50 OHMS. Adjust the low pass tuning rods for maximum signal.

Repeat steps 1 and 2 then tighten all tuning rod lock nuts securely into position. Finally check that both high and low are tuned to the new frequencies and VSWR (return loss) is 1.5:1 or greater at both frequencies.

Note: Pushing the tuning rod or turning the fine tuning bolt in, lowers the resonance of the filter.

WARNING: Do not tune with the TX keyed into the duplexer.

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