

“FQ” Series Q-Circuit Filters

General Information

Refer to CI-1055 for tools required and recommended test equipment and setup.

Refer to CI-1054 for electrical specifications and typical response curves for various models.

The cavities are equipped with an adjustable coupling loop to facilitate insertion loss setting. The loop also has a variable capacitor attached which is externally adjusted to tune to the reject frequency either high or low. The size and position of the loop determines the insertion loss of the filter. The loop is preset at the factory as determined at time of order. To change to a new insertion loss, unlock the three holding set screws on the loop and rotate it to the new insertion loss required.

Tuning of the pass frequently is accomplished by adjusting the tuning rod. Pushing the tuning rod or the fine tuning bolt in, lowers the pass frequency of the filter. The capacitor is adjusted to obtain either the low or high pass reject frequency.

Tuning Procedure

The cavity has a coarse tuning adjustment for large changes in frequency and a fine tuning adjustment for small changes in frequency at the passband required. 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, for maximum signal.

To tune to the reject frequency, remove the cover from the capacitor located on the loop and adjust the capacitor for minimum signal at the reject frequency.

The tuning of the rod and capacitor should be repeated until both passband and reject frequency are obtained.

After final tuning, both fine and coarse tuning set screws must be tightened down securely and the capacitor cover is to be replaced.

