

## Collins 75S-3B/C: Installing Inrad Filters

Inrad has designed an adapter board to allow the use of the new series Collins filters in the 75S3B/C radios. The filters available are listed below. All filters have a center frequency of 455 kHz.

Filter #	Bandwidth (-3 dB)
#712-S	300 Hz
#705-S	500 Hz
#720-S	2000 Hz
#706-S	2500 Hz
#726-S	2900 Hz
#724-S	3800 Hz
#707-S	5800 Hz

Two specially designed networks are included on the adapter board to match the input and output impedance of the new series filters to the radios. The original filters had a very high impedance whereas the new series are 2000 ohms. The resulting signal level through the adapter board is very close to that which the original filters had.

The adapter is constructed on a double-sided FR4 PC board with plated through holes. Surface mount components are used in the production units. The board contains pads for through the hole components that can be supplied for special uses. Gold-plated pins are swaged into the board so it may be plugged directly into the 75S3B/C filter sockets as seen in Figure 1.

Installation consists of plugging the adapter, assembled with the filter of choice, into the radio. The resonating capacitors in the radio can be set to fully CW, and then backed off 1/4 turn. If a sweep generator is available, the resonating capacitors can be adjusted for minimum ripple in the passband.

Note that the filters function only when plugged with the label lettering readable from the meter side of the radio. If they are plugged in the other way, no damage results, but they do not function.

SSB and/or CW filters can be plugged into the CW1 and CW2 slots. For an AM filter installation, refer to the Collins operating manual for the radio.



Figure 1