



## AR5000 FITTING OF OPTIONAL FILTERS ADDENDUM (paperwork V1.1)

In addition to the information provided in the hand book on pages 68 and 69 the following details may be useful when fitting Collins optional filters (as some PCB revision has taken place).

Remove the top cover with a posi-drive screwdriver (8 small & 2 larger screws). Locate the IF PCB. This is the large board at the rear of the set with the various IF filters fitted to it. The work can be either carried out with this board hinged forward but still in situ or with it removed completely.

- a) To hinge it forward; Disconnect mini-coax plug J8.  
Remove cable tie from wires going to connector J1 or disconnect J1 (easier).  
Remove 6 screws holding PCB in place.  
The front of the board can now be eased up and forward taking care not to stress any wiring. There should be enough free play on the wiring to allow this. Once clear of the small rear socket PCB, the board can now be hinged forward to expose its underside.
- b) To remove the board completely; Disconnect mini-coax plugs J7,8,9.  
Disconnect multi-wire plugs, J1,2,3,4,5,6,11.  
On +3 models, a further connector on the sub board (AFC-UNIT) will have to be removed. It is probably easier to remove this board completely to assist in later filter removal (2 screws).  
Remove the 6 board screws.  
Lift the front of the main board and slide it out towards the front of the set. The board will still not be completely free due to wires connected to the underside of it (not on early sets). If required, these can be disconnected from the small sub PCB along with a cable tie and the two wires forming the loop to the other connector although this shouldn't be necessary.

NOTE: In both cases, remove the connectors by pulling on the metal part of the coax-plug and the white plastic part of the multi-plug **not** on the wires going into them.

### To fit the optional Collins 500Hz filter proceed as follows;

Locate position MF1 on the board (see diagram, p69).

De-solder the vacant filter locating holes in the board. This should be possible working from the underside of the PCB with a de-soldering station or soldering iron and solder sucker (or solder wick). Note that an iron of at least 25 Watts is required (50 W preferable) with a suitable tip size in order to clear the solder from the earth pads.

It usually helps if a small amount of fresh solder is applied to the pad before clearing it.

The board may have to be worked from both sides to clear the holes.

Fit the 500Hz filter in the now cleared holes and solder the legs in place. Take care not to overheat the pins.

Refit the board and its connectors (these will usually only go back in one place).

Take care not to trap any wires.

Initialise the filter by connecting power to the set, switch the unit on while holding the 3 key.

Test the unit.

Replace the cover.

*If in any doubt, consult your dealer as damage to the PCB or set may be expensive to repair. Multi layer boards are used in this set.*

### To fit optional Collins 2.5kHz or 5.5kHz filters;

Locate filter CF1 if the 2.5KHz filter is to be fitted and CF3 if the 5.5KHz is to be used.

Removal of the relevant filter has to be carried out in order to vacate the slot for the new filter. De-solder each individual pin of the filter.

To do this, a de-soldering station or soldering iron and solder sucker will have to be used.

The soldering iron will have to be of at least 25 Watts (50W or 60W is ideal) equipped with a suitable size tip. If de-soldering is proving difficult, add a little new solder to the pin before de-soldering.

Once the filter has been removed, clear any solder pads required for the new filter.

Fit the new filter in the required location and solder its legs (take care not to overheat the filter).

Locate the unused surface mount component pads on the underside of the board. One set of pads is present for each input and output leg.

To make the filter functional, a wire link (or 0ohm resistor) has to be added across each relevant set of pads (See dia)... **see note \*\***

**overleaf for serial numbers higher than 070774.**

Refit the PCB and connectors taking care not to trap any wires.

Test the unit.

Replace the cover.

*If in any doubt, consult your dealer as damage to the PCB or set may be expensive to repair. Multi layer boards are used in this set.*

**See diagrams overleaf...**



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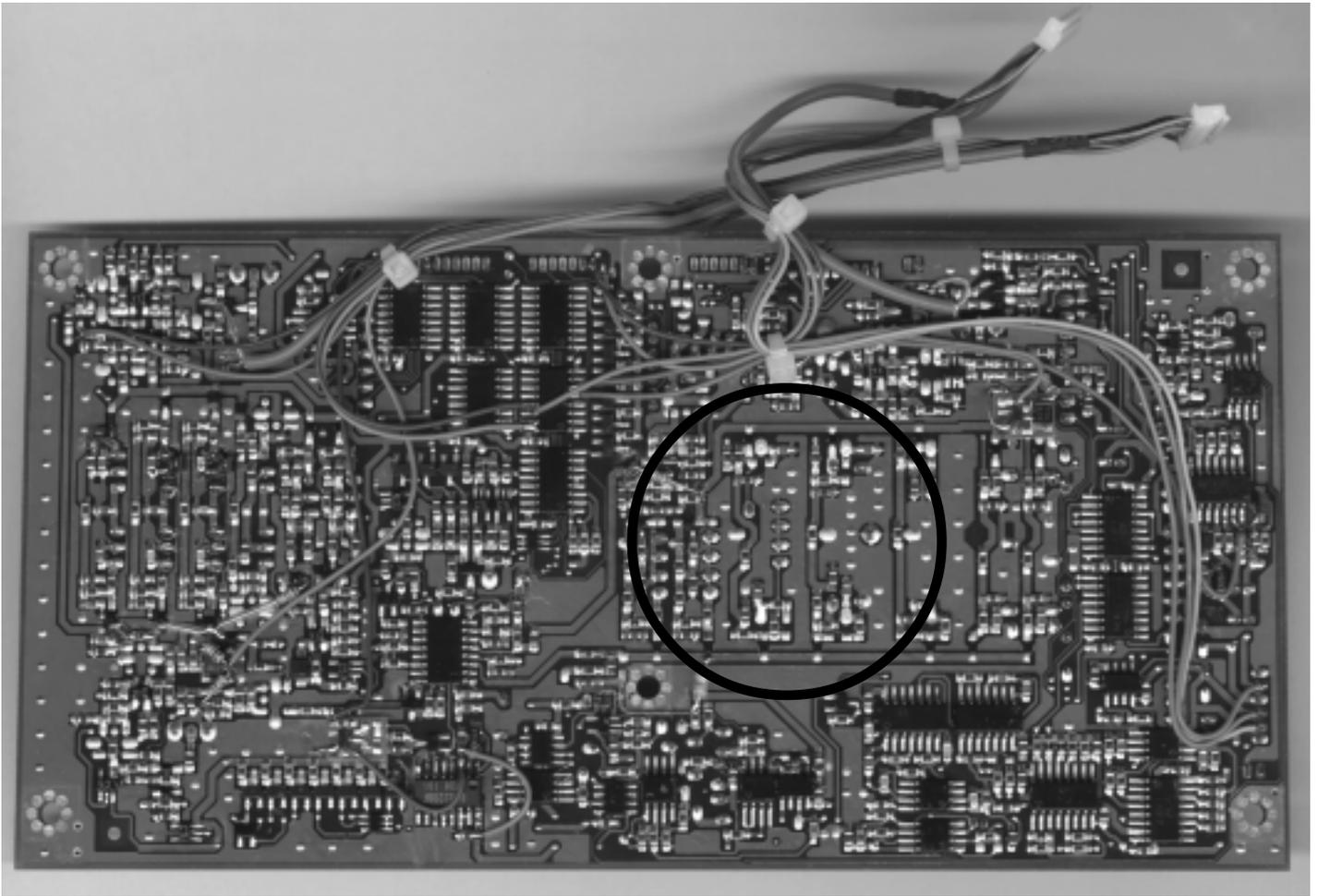
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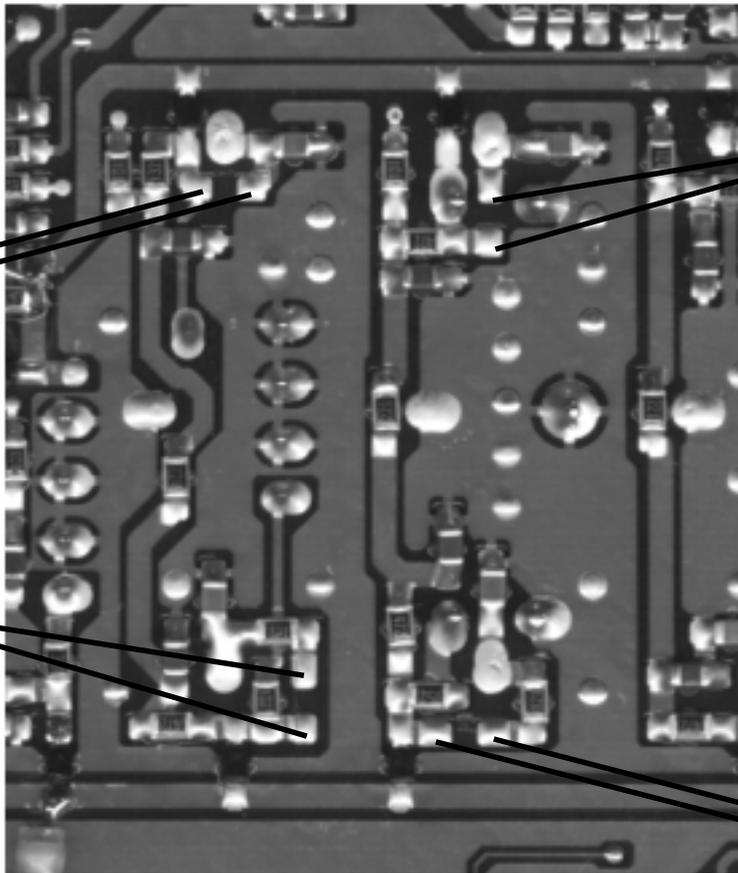
**\*\* From serial number  
070774 add resistors  
as follows:  
A = 470 OHM  
C = 680 OHM**

**\*\* (short) C**

**A (short) \*\***

**(short) D**

**B (short)**



**2.5 kHz filter: short circuit pads A-A and B-B (see note \*\*)  
5.5 kHz filter: short circuit pads C-C and D-D (see note \*\*)**

**Note: You are shorting the pads together,  
not linking pads of different letters!**