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[root](#)

IC-R7000 Audio Modifications [message #385]

Messages: 145

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The following modifications provide the following facilities.

- base band audio output, to utilizing digital transmissions such as AIS etc.
- a CTCSS filter insertion point, to eliminate annoying hum from the speaker Both these mods are best tackled at the same time.

1. Undo the screws holding the IF unit in position. Disconnect interconnecting cables.
2. As as indicated by the circuit diagram & board layout the baseband signal is taken from the discriminator output via a 10K resistor. Solder the 10K resistor to R97 on the solder side of the board and solder the other side to the inner braid of some thin audio coax cable. Connect the other end to the spare connector on the rear panel. Use some 3mm heat-shrink tube to cover the 10K resistor & hold in position with some hot glue. Connect the earth braid to a convenient earthing point with some insulated wire.
3. Remove C86 & connect some thin stereo coaxial cable (red = filter input & yellow=filter output) to each now empty pad. Connect the earth braid to a convenient earthing point with some insulated wire. The coaxial cable should be long enough to reach where the filter is installed. In my case I put this at the bottom where the IR receiver & Speech unit can be mounted.
4. Re-install the IF unit by screwing it in position & restoring the interconnecting cables.
5. An essential requirement is that both the input & output of the filter are capacitively coupled. For the filter unit, I used a recovered a CTCSS board from a Motorola SYNTRX FM radio. It contains the essential HP filter required to filter out the CTCSS tones, but in addition it contains a LP filter, which I will use to feed a CTCSS detector/display (for info purposes). I used a hacksaw to cut off only the circuitry that I wanted. Alternatively a filter could be home brewed.
6. A switch could be provided to to enable straight through audio should this be required.



