

From : Various Packet Radio Sources

Preface

This article was found on the g4apl's system hard disk. A number of MC80's are used at the GB7CIP/GB7CR and GB7CP Amateur Packet Radio stations. Hope you find this helpful de Paul g4apl

Title : MC80 Radio Modifications

Date/Time :1997

MC80 filter mod
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There have been a number of UHF MC80s with 12.5KHz filters on the market recently. If you are unable to obtain suitable 25KHz filters for 9600 baud operation, there is a cheap way round this. Maplin supply 50KHz ceramic 10.7MHz FM radio type filters that work quite well. Replace the two xtal filters with these, leaving the last ceramic type in place. OK, the impedance matching is not too good, but I have a very successful 9K6 link in place with a really good recovered "eye".

The signal/noise ratio is obviously worse, but with a good link, this is no problem. A bonus is that xtal drift is much less important (a problem with 25KHz rigs at 9K6).

Quite severe mis-tuning still results in a good "eye". It's just a quick, cheap way out of trouble - not the best way, but it works.

THE END

Motorola MC80 connections
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Motorola MC80 DC power and speaker connections:

Viewed from rear of set:

15 connector IDC socket:

(15) -> 0 0 0 Pin 4 is +ve 12V
S 0 0 Pin 6 is -ve (chassis is -ve)
0 0 0
- 0 + Speaker connects between pins 12 + 2
0 S 0 <- (1)

For 6/10W model use 4A fuse in +ve line, for 25W model use 6.3A fuse.
Speaker is 8 ohms, rated at a couple of watts.

There are 3 other pins in the 15 position connector but I am not
sure what they are for. The radio works without any connection to
them anyway...perhaps someone can shed some light on what they are for.

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Removal of the Tone Squelch Board

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Here are details of how to remove the Private Line (Tone Squelch) board from the Motorola MC80 Mobile radio:

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Removing the Private Line (PL) board from a Motorola MC80

1. Locate the PL board. It is the board at the back of the radio when viewed with the volume pot towards you. The frequency that the tone squelch operates at is marked on a "Vibrasponder" which is visible through an oblong hole in the PL PCB.
2. Unscrew the 4 screws holding the PL board to the chassis.
3. There is a loom of wire which is connected to the PL board. The colours, assignments and main PCB connections of these wires are:

Function Wire colour Main PCB pin/connection

RX Filter out Yellow-Brown 35
 Hang up switch Green 32
 Squelch Blue-white Squelch defeat switch
 on the front panel.
 RX filter in Brown 14
 +13.2V Red 17
 PTT out White-Yellow 37
 PL Tone in Red (Heavy wire) 12
 PTT in Yellow Small PCB above vol.
 pot.
 PL Tone out Violet 3
 Ground Black 33

4. Most of these wires are connected to the main PCB by push on connectors. Remove all of these by pulling them out with a pair of long nosed pliers. The "PTT in" wire should be cut at the PL board end as it is necessary to connect this wire to pin 37 on the main PCB, to enable PTT.
5. Link pins 14 and 35 on the main PCB. This connects the RX filter into circuit and enables you to hear received audio !

This completes the removal of the PL board from the MC80.

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I hope that this is of use to someone ! 73 John Gi6IRL @ GB7TED

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ID'ing Motorola radios
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Hi all,

I keep getting asked how to read a model number Motorola Radio's, well here it is. Please don't ask me for conversion details, as refusal often offends [smile]

On the rear of each radio is hopefully a part number that will consist of 14 separate numbers and letters, here they are broken down in "simple terms."



**UHF MC80 as used at GB7CIP
9600bd 70cm Radio Link**

on
a

1st # Normally an M this is the European identifier

2nd # Again part of the ID normally an A

3rd # " " " " " " " " U for universal mount

4th # anything from a zero to 3, 0 up to 1w, 1 1-6w, 2 1-10w, and 3 is a 25w.

5th # this one requires a bit of space

a 2 is a 4mtr rig

a 3 is a 2mtr rig

a 4 is a 70cms rig

a 6 is a band 3 rig, steer clear, it is of no use to us amateurs!!

6th and 7th # is the type of signalling board, ie EZA EVA YEA standard, all common signalling sequences used in the PMR world, you know them as tiddley pops!.

8th # is hopefully an A WHICH DENOTES 12Volt

9th # is the type of radio, 1 carrier squelch, 3 is CTCSS or sub audible tone, 5 is a trunking set (FORGET IT!!), 9 is a select five "tiddley pop radio"

10th # is J 32 channel, or a G for trunking (FORGET IT!!).

11th and 12th # is the channel spacing, 00 is 25k, 13 20k, 22 12.5k (filter)

13th and 14th # is just the series and package model.

Although this was taken from a Motorola MC Micro radio configuration it DOES ring true for 99% of all Motorola Radios, with the above info in your pocket at a rally you can suss out whether it is worth spending a few quid on. At least you'll know if it is a trunking radio or a band three which as I stated earlier, aint no good for us to use... Good luck and happy hunting..

Best 73. Dusty, G8OWN @ GB7WRG.#19.GBR

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