

TYT TH-9800 (v.1704)

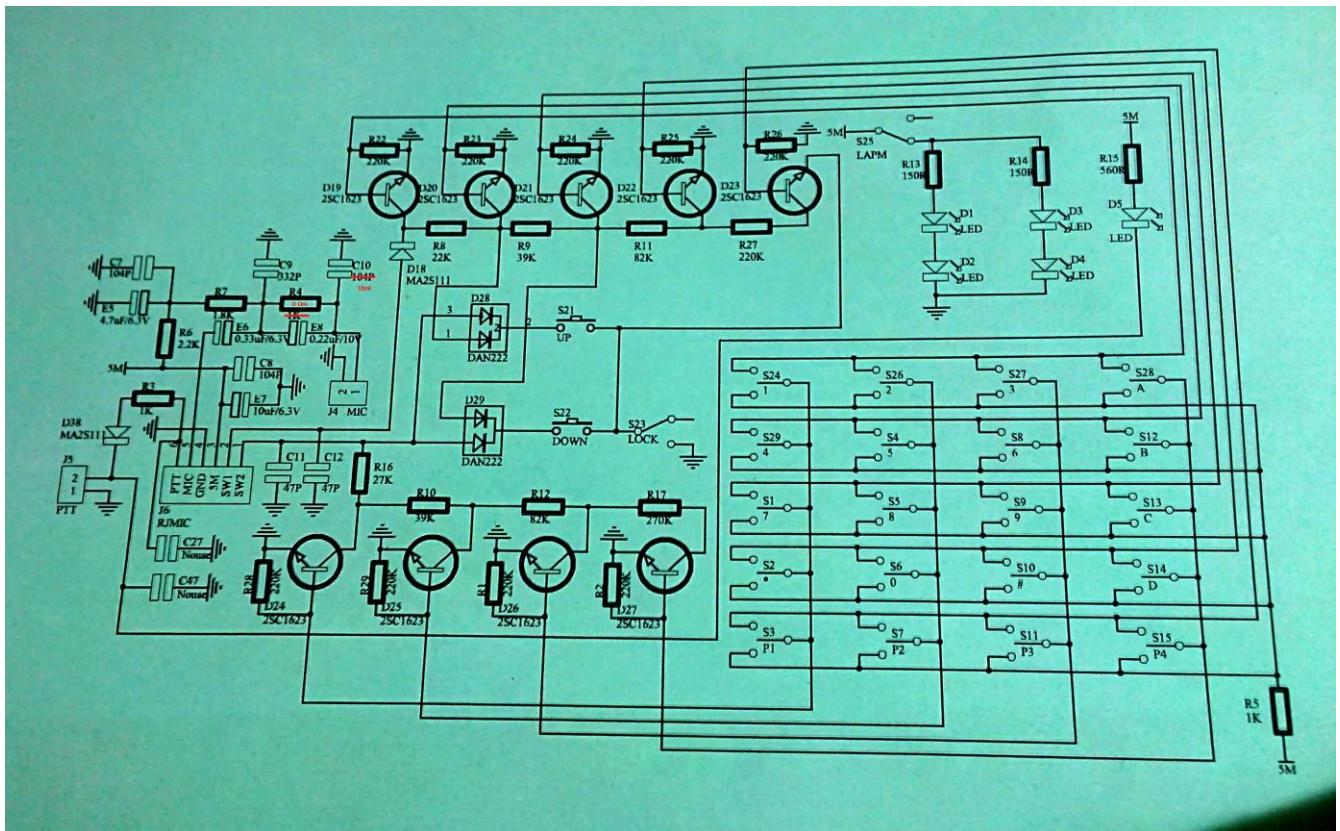


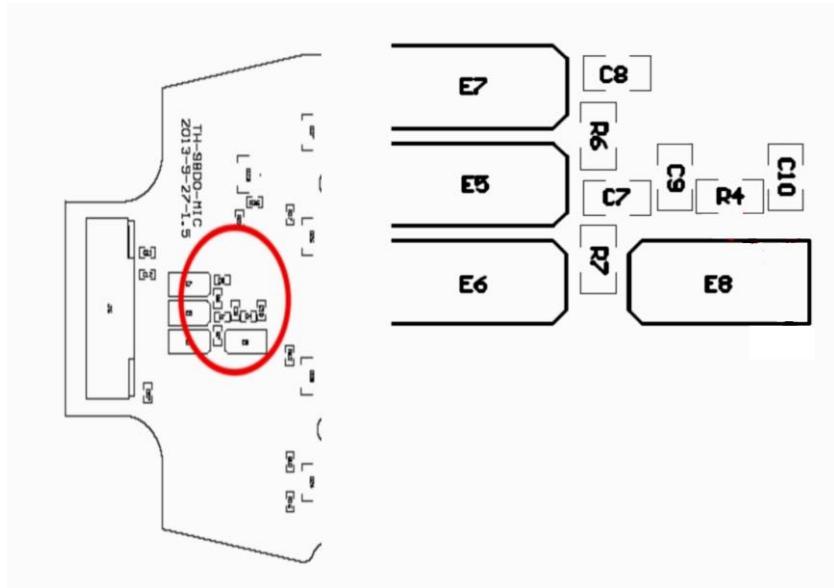
Good enough for mobile operation. Mic is only modified like below in terms of hardware:

- C10 is replaced with 10nF
- R4 is replaced with 0 Ohm

Software part is modified like below:

- Menu #34(bandwidth) is set to MID.
- AM TX is emulated with -2.5hz in FW mode, but RX is set to AM





Current:

off: 10mA

on(depends on volume level): 300mA - 1.5A

Power distribution

Band\PWR, W	Low	Mid2	Mid1	High
2m	5	10	15	50
70sm	5	10	20	30
11m	9	15	30	60

Current distribution:

Band\PWR, A	Low	Mid2	Mid1	High
2m	2.7	3.4	4.5	8
70sm	2.9	3.5	5	8
11m	2.6	3.5	4.5	6.42

Software modification

There is nothing too much special. Almost all cold be done with official SW or with chirp:

- <http://www.tyt888.com/?mod=download>
- [https://trac.chirp.danplanet.com/chirp\\_daily/LATEST/](https://trac.chirp.danplanet.com/chirp_daily/LATEST/).

It assumes main settings as well as memory channels. On another hand, seem like only betta version (aka daily builds) works with the radio. However, it's necessary to modify binary FW file to limit Tx bands to be closer to amateur one (IARU Region 1). Have not found the way how it could be done with chirp. Here, how limitation is done below (original post: <http://www.vklogger.com/forum/viewtopic.php?f=23&t=12397>).

The TX/RX limits are stored near the end of the file between 0x10F30 and 0x10FBF:

00010ED0: FF	yyyyyyyyyyyyyyyyyyyy
00010EE0: FF	yyyyyyyyyyyyyyyyyyyy
00010EF0: FF	yyyyyyyyyyyyyyyyyyyy
00010F00: F Rx Lower F F Rx Upper F F Tx Lower 18 3 Tx Upper F	yyyyyyyyyyyyTH9800jjj
00010F10: F Limit F F Limit F F Limit F F Limit F	yyyyyyyyyyyyyyyyyyyy
00010F20: F . . . . F F . . . . F F . . . . F F . . . . F	yyyyyyyyyyyy . . . . yyy
00010F30: 00 00 60 02 00 00 30 03 00 00 60 02 00 00 30 03	30 Mhz . . . . 0.
00010F40: 00 00 70 04 00 00 40 05 00 00 70 04 00 00 40 05	50 Mhz . . p . . @.
00010F50: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Not Used . . . . .
00010F60: 00 00 80 10 00 95 39 13 00 00 00 00 00 00 00 00 00 00	108 Mhz . . . . .
00010F70: 00 00 40 13 00 00 00 18 00 00 40 13 00 00 40 17	150 Mhz . . @ . . @.
00010F80: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00	Not Used . . . . .
00010F90: 00 00 00 35 00 95 99 39 00 00 00 00 00 00 00 00 00 00	350 Mhz . . . . .
00010FA0: 00 00 00 40 00 00 20 51 00 00 00 40 00 00 00 48	450 Mhz . . @ . . H
00010FB0: 00 00 00 75 00 00 00 95 00 00 00 00 00 00 00 00	850 Mhz . . . . .
00010FC0: FF	yyyyyyyyyyyyyyyyyyyy
00010FD0: FF	yyyyyyyyyyyyyyyyyyyy

It's a bit confusing how to do conversion. Editor shows HEX values, but it's necessary to read it as decimal. For example (based on original values, see pict above), initial Tx band is 4013 – 4017 for 150 MHz assumes 0134 – 0174 MHz or, 0040 – 0048 for 450Mhz corresponds to 400 – 480 MHz

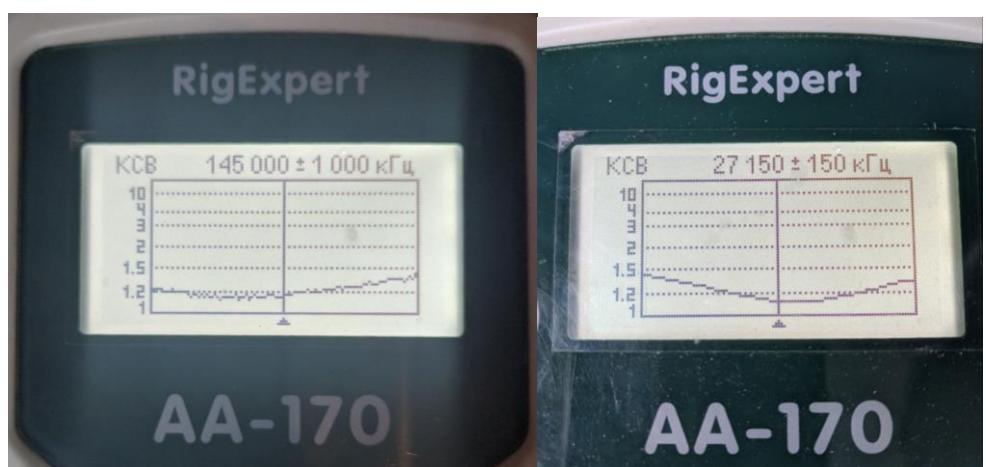
Finally, for Tx limits like:

- 26.6 – 30 MHz
- 50 – 54 MHz
- 144 – 148 MHz
- 430 – 450 MHz

Final values will be:

## Diamond CR-9800A (USA version)

The lowest element needs to be expanded for 22mm to align 70sm band. The second element needs to be cut for 15mm to align 2m band. The third element needs to be replaced for a longer one (+50mm for 11m band).it's diameter is 1.5mm only.



## Diamond K600S Trunk Mount

Good one, but better grounding is required for HF bands (11/10m). Would be good to short-circuit to car body. There is another option to use Capacitive Grounding like it's done here: <https://www.eham.net/articles/21303>

There is another hint. The mount assumes to be installed on flat surface and if trunk lid is rounded off it'll be necessary to make a rubber gasket to reduce gap.





