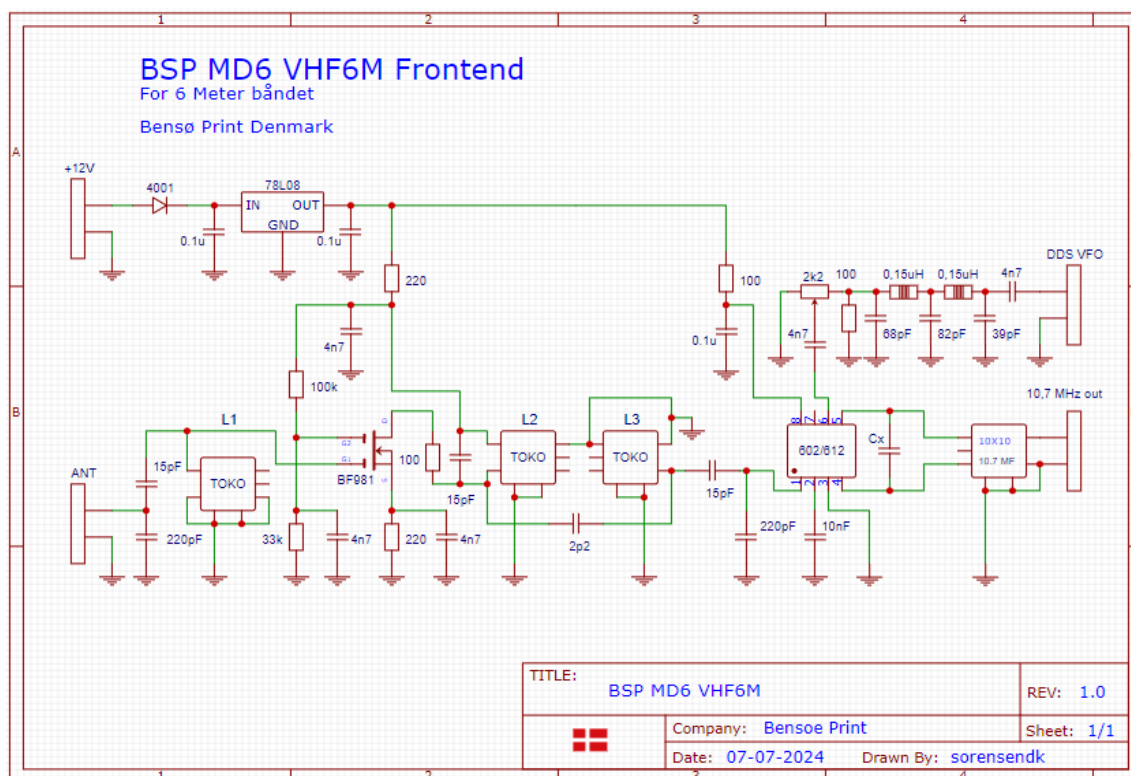
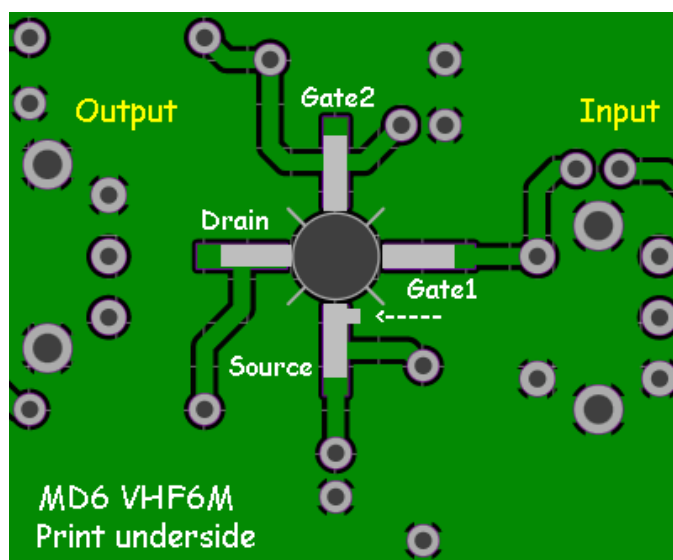




BSP MD6 VHF6M is a so-called 'front-end module'. Its task, like our other front-end modules, is to retrieve and 'mix' the frequency range you want to listen to, to the intermediate frequency of 10.7 MHz. Therefor the modul is the 'first step' in a 'double super receiver'.

Remember, a good antenna makes it...





The text on BF 981 must face downwards.



For reasons of space, we use Toko RF transformers and not air coils in the module.

Warning: Use a custom 'plastic trimming stick', the kernels are a bit 'delicate'.

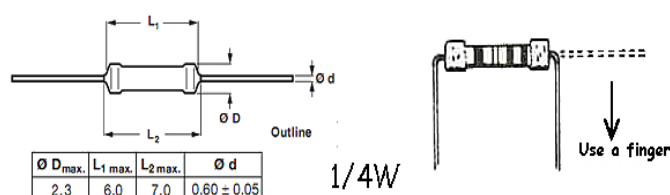
In general, the module is built according to a 'known recipe' with a tuned input circuit and a 'capacitance-coupled filter' consisting of 2 tuned circuits. The mix to 10.7 MHz. happens as in our other front-end modules via an NE 612 mixer circuit.

The built-in 'PLL filter' may be a bit like 'shooting sparrows with cannons', but can be instrumental in dampening the mixing of signals from extraneous stations.

Assembling the PCB:

It is recommended that a soldering tip with the same width as the diameter of the small pads (2mm) is used, with 'reasonably thin' solder lead.

Should you happen to misplace a component in the plated solder pad, then use a 'solder wick' or a desoldering pump, first from the top (if possible) and then from the bottom.

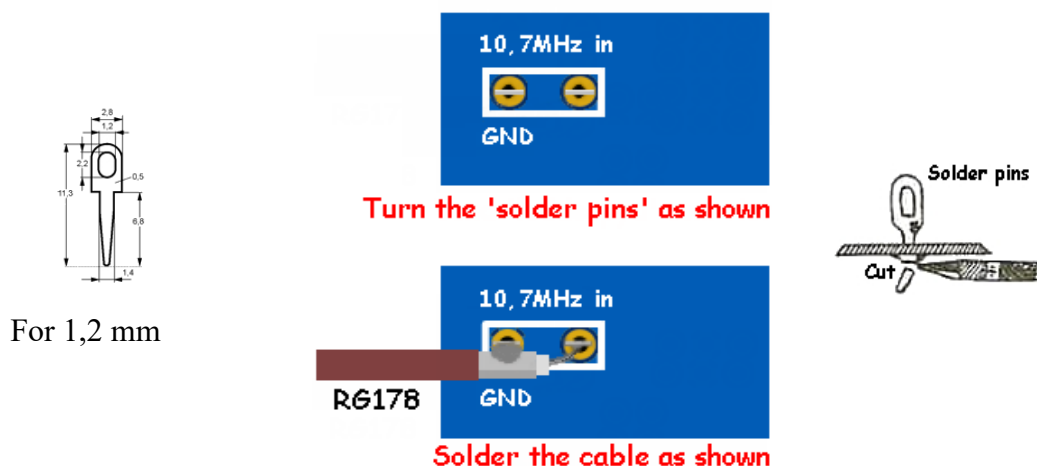


To create some distance between the print itself and the bottom of the 'soon-to-be cabinet', start by mounting 3 mm. threaded rods or 'solderable brass tubes' in the four mounting holes.



If you use brass tubes without threads, you can initially mount them into the 'four mont holes' with a 3 mm screw and nut, solder the tube onto the print and remove the bolt and nut again. **Be careful... A soldered brass tube stays hot for quite a while (ouch).**

Installation of RG 178:



Fit all solder pins. PS: In the places where screen cables are to be mounted, turn the 'pins' as shown in the picture when they are mounted.

Then mount the 'lowest components' first, resistors, chokes, one-module ceramic capacitors, two-module capacitors (100 nF.), 7808, NE 612 (must be soldered, don't use IC socket) and finally the IF can and Toko cans, save BF981 as the last assembly.

Trimming and testing:

Is there a hole through? ***

When the module is fully assembled, connect the module to a 10.7 MHz. intermediate frequency (IF), e.g. one of those from our 'MD6 series' and a VFO signal is fed, e.g. from the MD6 VFO.

In order to make the test as optimal as possible, the 'IF' must have a AF amplifier (eg MD6 AF-LF) and a speaker, and a 'S-meter' must be connected.

Connect some form of antenna to the antenna input and connect 12 – 13.5V.

Start by setting the VFO to the middle of the 6 m band (51 MHz.). Now you just have to have a signal to trim to and here is perhaps a problem, i.a. because the signal should preferably be a bit strong for the untrimmed module?

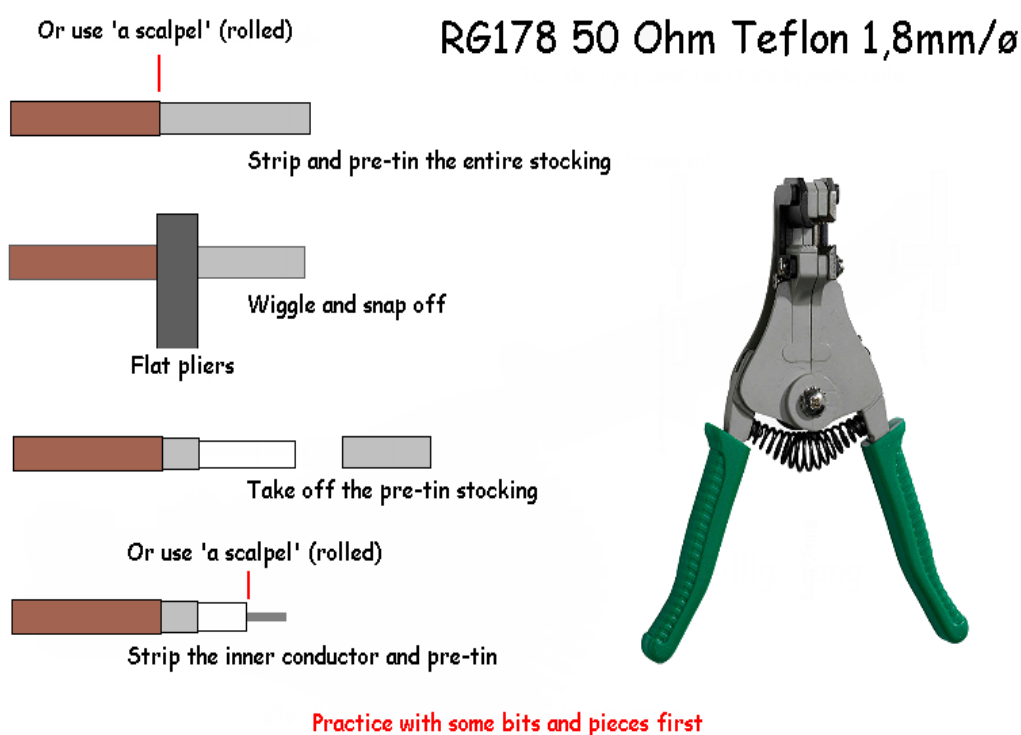
If you are in possession of a 'Signal Generator', it is all a bit easier. In our own first test, there was a 'hole' immediately at 51 MHz. and only a small adjustment to achieve spec. was necessary. Here, the initially used 22pF were changed to 15pF, in order to achieve a 'better core setting' in the Toko cans.

Besides the best, a Signal Generator. Choose a known active frequency, a signal from an acquaintance, or one of our VFO modules set up as a 'generator' can also be used. 'Play around with the 'cores' to get optimum sensitivity throughout the 50 to 52 MHz range.



10.7 MHz, one of the most peaceful IF frequencies on the SW band.

For the internal HF connections in the cabinet:



*** Parts list ***

Resistors (1/4 W 7 mm):

100 3 pcs. 220 2 pcs. 33k 1 pcs. 100k 1 pcs.

Trim Potmeter:

2,2k 1 pcs.

Capacitors (keramiske 1 module):

2p2pF 1 pcs. 15pF 3 pcs. 39pF 1 pcs. 68pF 1 pcs.
82pF 1 pcs. 220pF 2 stk, 4,7nF 5 pcs. 10nF 1 pcs.



2 modul

2 module:

100nF 3 pcs.

Diode:

1N4001 1 pcs.

Transistor:

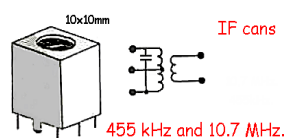
BF 981 1 pcs.

ICs:

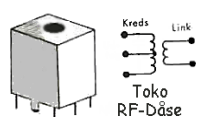
78L08 1 pcs. NE602 / 612 1 pcs.

Solder pins:

1,2mm hul 8 pcs.

IF-can:

10,7 MHz. Green or Kank 3334R ($C_x = 39\text{pF}$).
(Ca. 4,8uH. - 3uH.) 1 pcs.

Toko-cans:

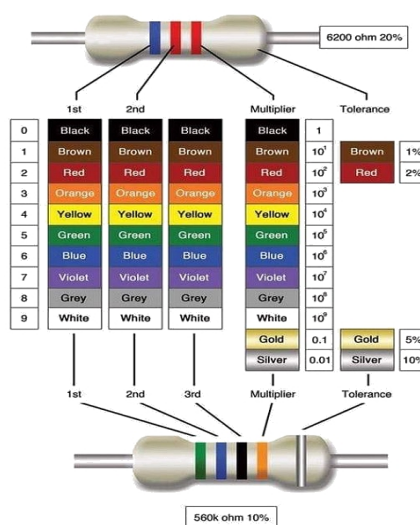
(50 MHz. 300nH.) 3 pcs.

Fixed Inductions

0.15uH 2 pcs.

PCB:

BSP MD6 VHF6M.

**Component purchase:****Bensø Print:**[Project2024](#)[Price List](#)

and

Your local dealers in your country...

Projekt2024
