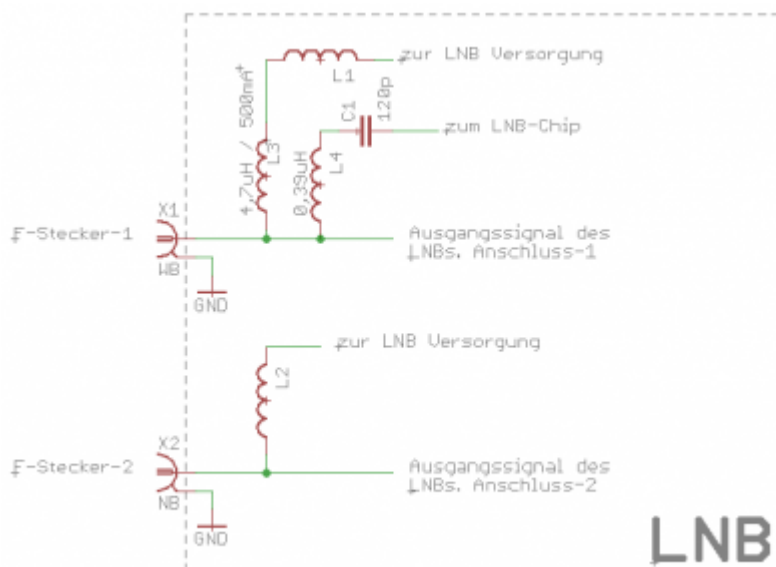# LNB modification: Megasat Diavolo V2
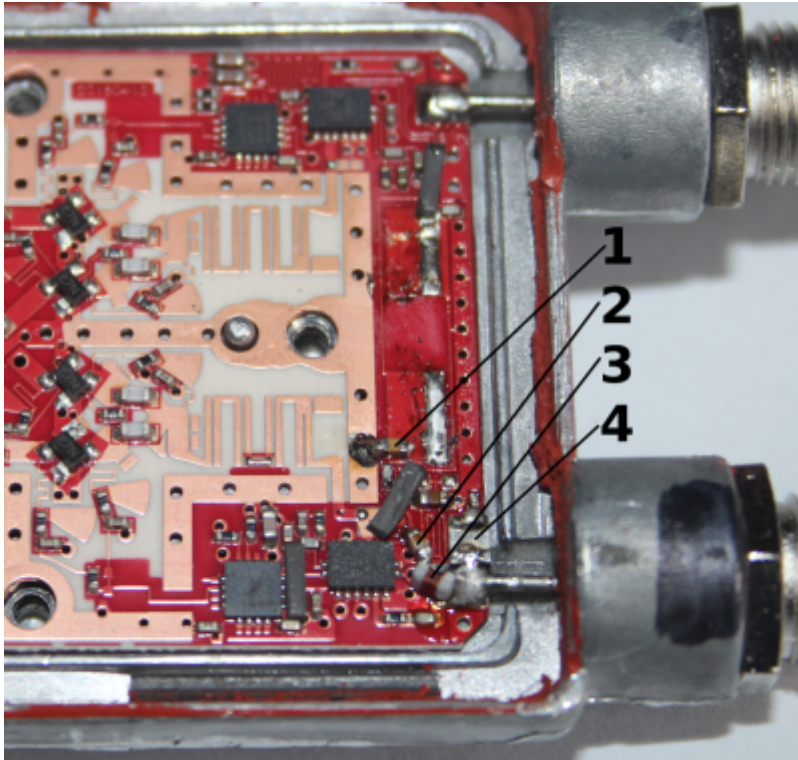
for the Amsat downconverter

In THIS description the conversion of an LNB is described. Since the LNB manufacturers are constantly changing the layout and wiring of their LNBs, there is an addendum for another Diavolo version.

The other description refers to boards with the MT230 chip. Megasat also delivers boards with the T1017 chip, which requires a slightly different wiring. However, the principle is the same:

Even if the components to be installed are the same, the wiring around the quartz is a bit different. With the T1017 chips, a quartz is placed in parallel on the quartz inputs of the T1017. I am surprised that this is even possible, but what are the manufacturers not doing to save a few cents?

This is how it looks in the LNB :

1) First the quartz is removed. It's not that easy, because it is soldered on quite tightly. If you sizzle too long, the conductors will loosen from the board. So a sense of proportion and feeling are required here.

2) Mark the lower plug, because this will be the connection for the WB (DATV) transponder. The reference frequency is fed to the LNB via this connection.

3) Under (4) there is a printed choke made of conductor tracks. These are disconnected directly at the connector. The SMD choke 4.7uH 500mA is soldered over this separation point. To do this, remove the solder resist above under the choke and then solder it on

4) (2) and (3) is the series oscillating circuit of 390nH and 120pF. As shown in the picture, these components are mounted between the plug and a soldering eye, to do this remove the solder resist from this soldering eye.

5) As a ground reference for the clock, a 100nF capacitor must be soldered in at position (1) (value not critical, somewhere between 10nF and 100nF).

The clock is thus led to pin XO1 (pin 12) of the two T1017s and XO2 (pin 11) is connected to ground via the 100nF capacitor.

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Last update: **2021/03/27 19:23**