



August 31, 2014

Upgrade miniVNA - Bluetooth Module



I own an old [miniVNA](#) model and I am happy with it. When measuring outdoors, I do not mind carrying a laptop with me. Dan [YO3GXX](#) created the SW for Android and described the miniVNA for Bluetooth connectivity on its site. Its modification is quite radical and no longer allows to use a USB connection cable. I tried to make the cheapest and easiest modification with minimal intervention in the miniVNA.

What will we need ? Based on the Bluetooth module HC-06 with the adapter. It can be bought for example on EBay for about \$ 5.



Bluetooth module HC-06 with adapter

Since miniVNA uses a 115200 bd communication speed and the module has a default setting of 9600. It needs to be reset beforehand. We will do this using the [USB UART TTL](#) converter and some terminal program.

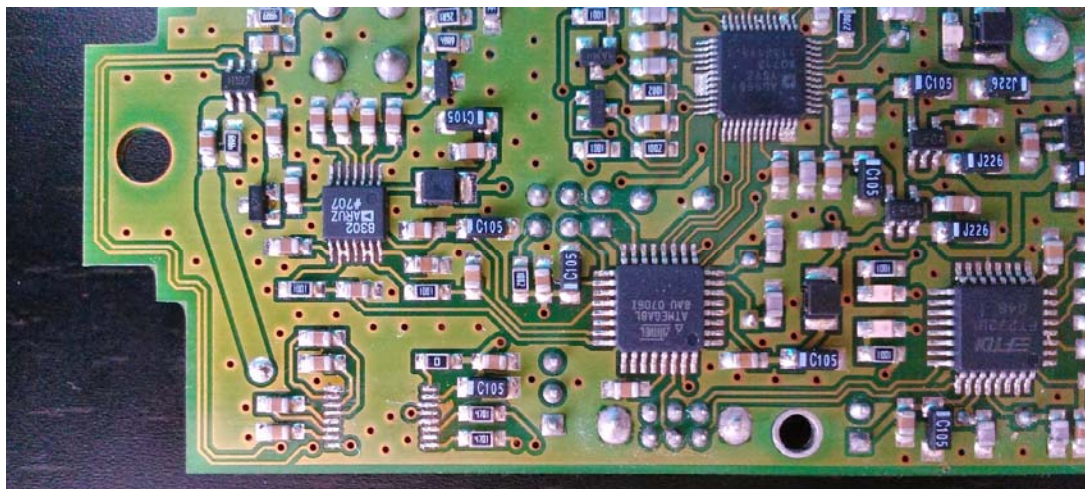
You need to send this AT change speed command to the module:

AT + BAUD2

The answer should be OK115200.

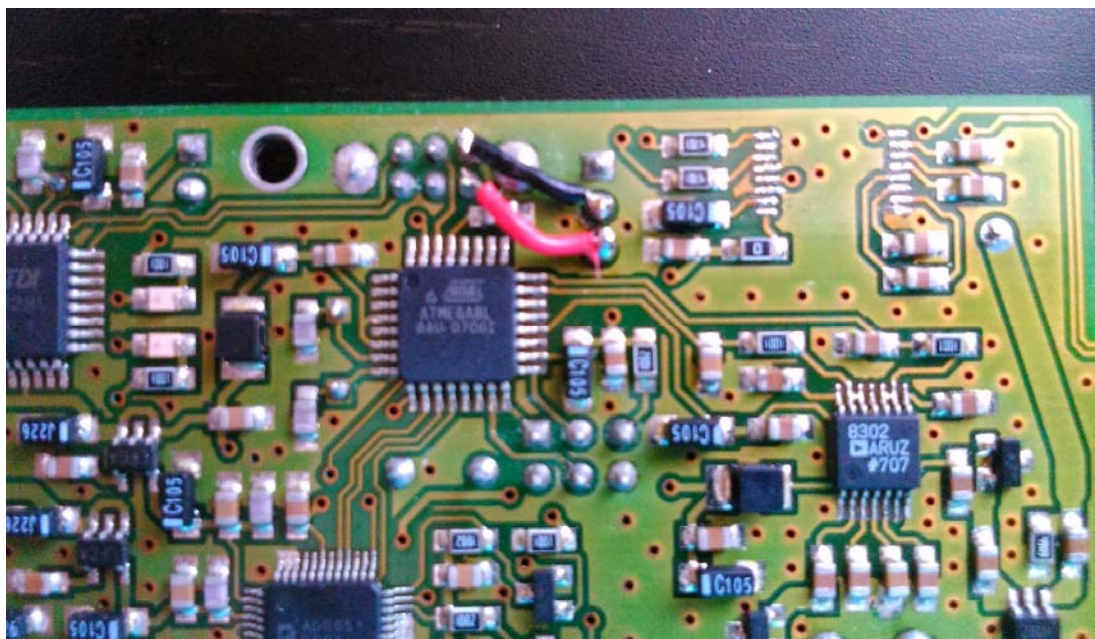
We can also change the name of the device using AT + NAMEminivna.
This makes the Bluetooth module ready.

MiniVna will be dissected. The original miniVna enabled USB connection in addition to the RS232 serial link. The switch is a slider switch that switches the RX, TX processor between the USB and the serial line. We will use it. For the serial line, the MB3221 was on the board. It is necessary to remove the board (hot air or simply cut the feet and then clean it with a lump). This is the only radical intervention.



Removed MB3221

Next, connect the switch to the original connector that served to connect the serial line.



Connected to the serial line connector.

Now we have just left the free space to place the Bluetooth module and connect power to the J6 and RX, TX Bluetooth module to J4. Next, you need to drill a hole in the box by the side to allow the switch to be accessible even when the box is closed. Between USB and Bluetooth connectivity, select this switch.



The final module connection

On the Android Market, we download the app and install it. We pair Bluetooth on your phone or tablet and we can start using it.



Sample application screen

Now we have both variations in the miniVNA. With a simple adjustment, we have expanded our options mainly in outdoor measurement. If you use miniVNA in a workshop via a USB cable, just switch the switch. To power a wireless version, I use a power bank designed to charge mobile phones.

Sent [Ondrej Kolonicny](#) v [14:35](#)