

## Using CHIRP with a RT-Systems USB-Adapter to program the YAESU VX-8R

Matthias, DD1US, August 13<sup>th</sup> 2018

Hello,

Recently I got hold of a second hand handheld transceiver YAEU VX-8. Included was also an adapter from RT Systems to connect the radio to the USB port of a PC in order to manage the various settings and memories. However, the software CD which came with the adapter was missing.



When checking the website of RT-Systems it turned out that the software which comes with the adapter is not free to download but I would have to purchase it again.

So, I looked for alternative solutions and thanks to the hint of a friend I found CHIRP. CHIRP is a free OS platform independent software which supports various transceiver vendors and models.

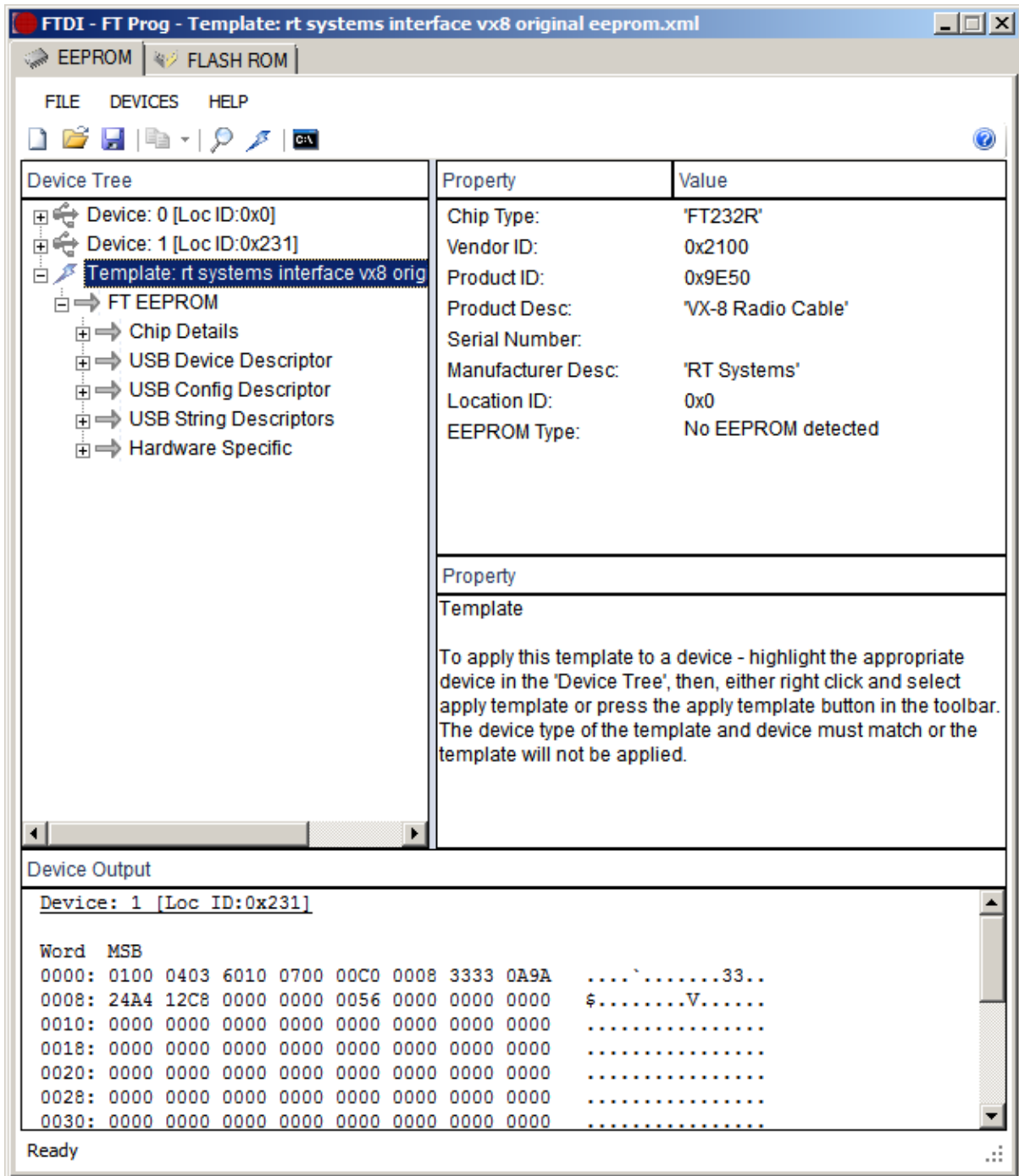
Unfortunately, the RT-Systems USB adapter is not configured as a standard USB-Serial adapter and as CHIRP needs a serial COM port to communicate with the radio I had to modify the EEPROM of the RT-Systems adapter.

The RT-Systems adapter is configured with a vendor ID 2100 and product ID 9E50. When plugging in this adapter to my Windows PC the corresponding drivers are automatically loaded to support the original RT-Systems software. In order to load the COM-port drivers of the FTDI chip FT232R I had to modify the EEPROM of the chip.

Fortunately, FTDI is offering a nice tool free of charge on their website. The program is called FT-Prog and after a simple installation process it detects the RT-Systems adapter as well as other adapters connected to the respective PC. You just click on "Scan and Parse" and the connected adapters show up.

Before modifying the EEPROM I read the existing content from the adapter and saved it on my HDD. In order to do this, you select the corresponding device from the list and click on "Save as template". FT-Prog is creating an XML file with all the settings of the FTDI chip.

This is how the saved file looks like:

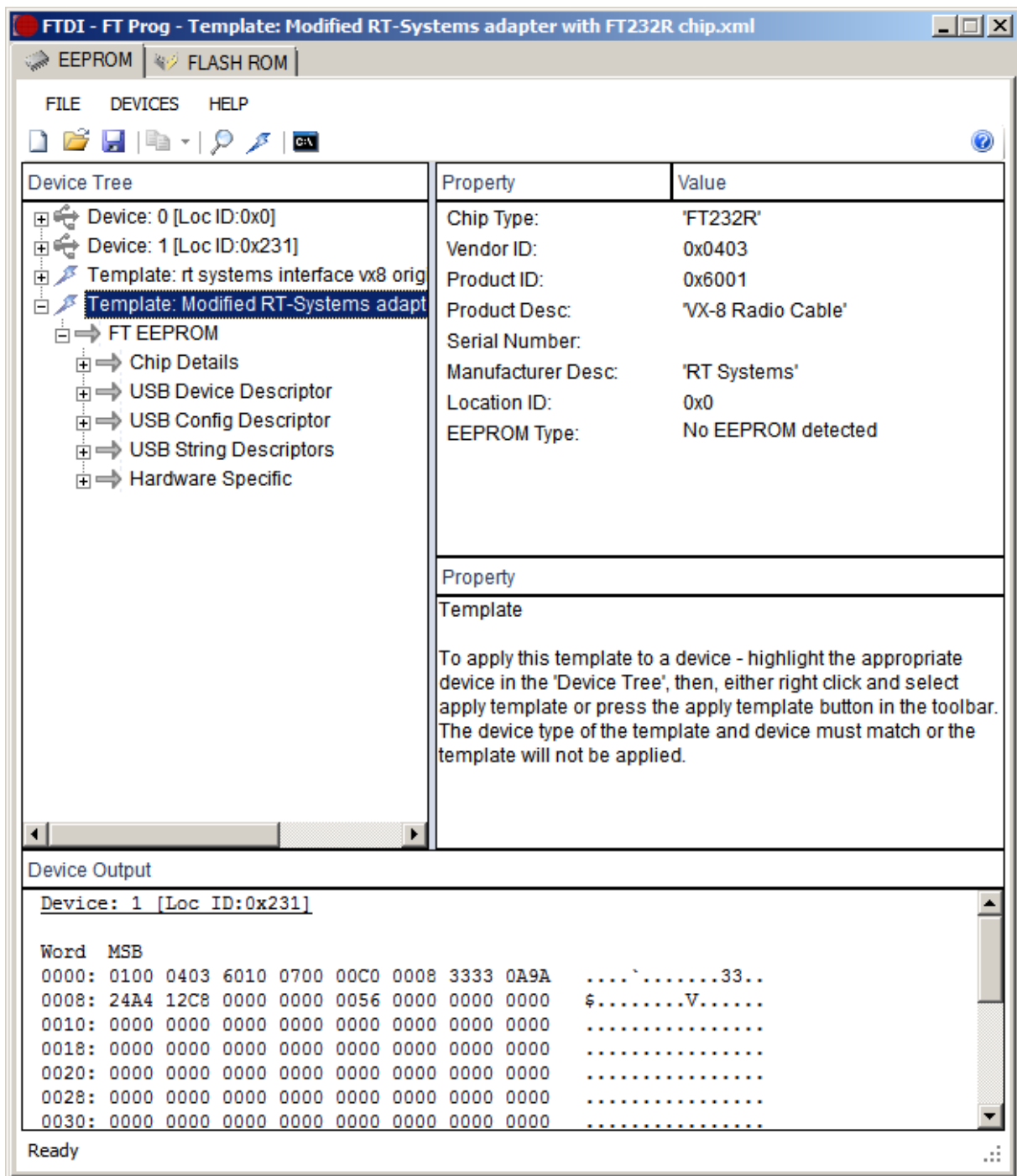


Changing the EEPROM is very simple. You go to the menu “USB Device Descriptor” and set the “Custom VID/PID” to “FTDI default”. The program recognizes itself the correct IDs for the FTDI chip used in the adapter.

The rest of the settings can be left as they are. Now make sure that you have selected only the device you want to modify and click on “Modify Devices”.

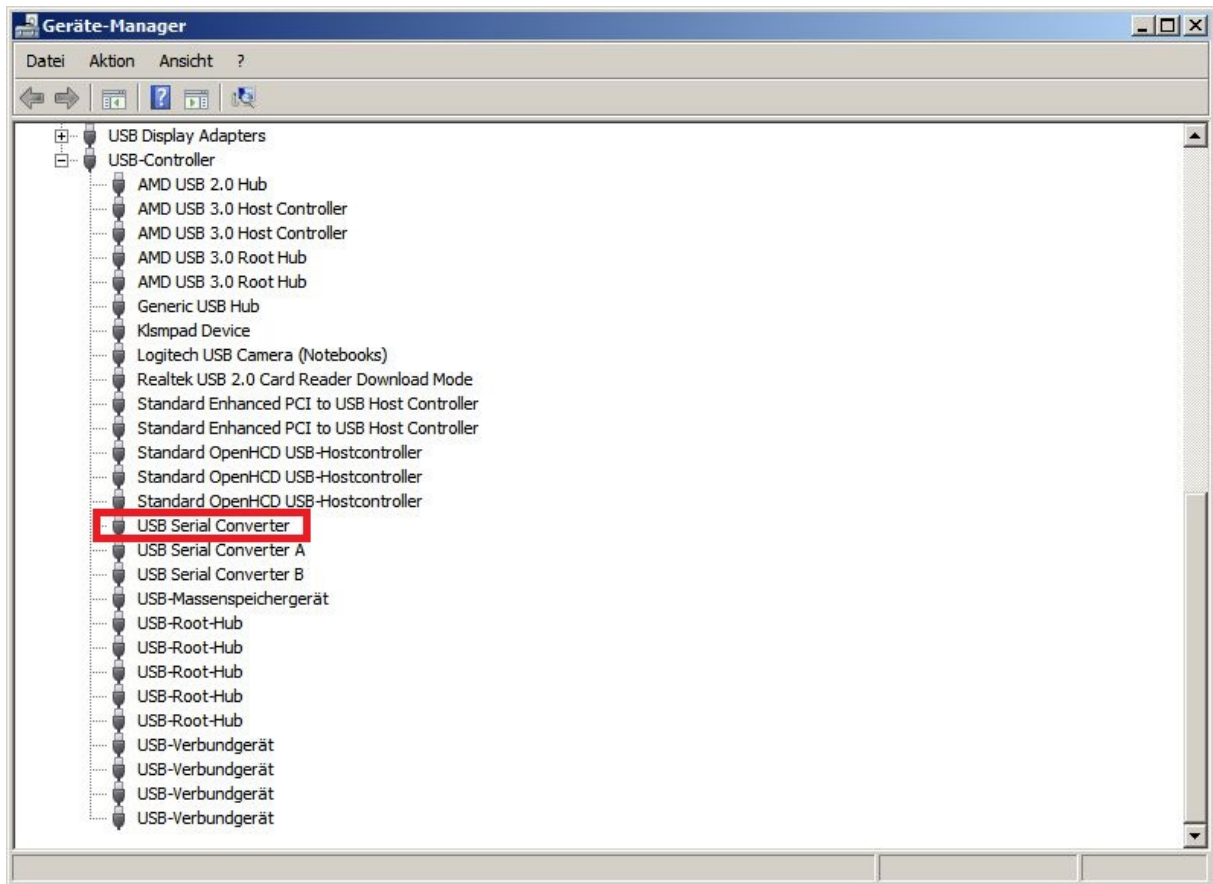
Finally, I saved the modified settings in a second XML file to have them at hand if needed.

This is how the changed settings look like:

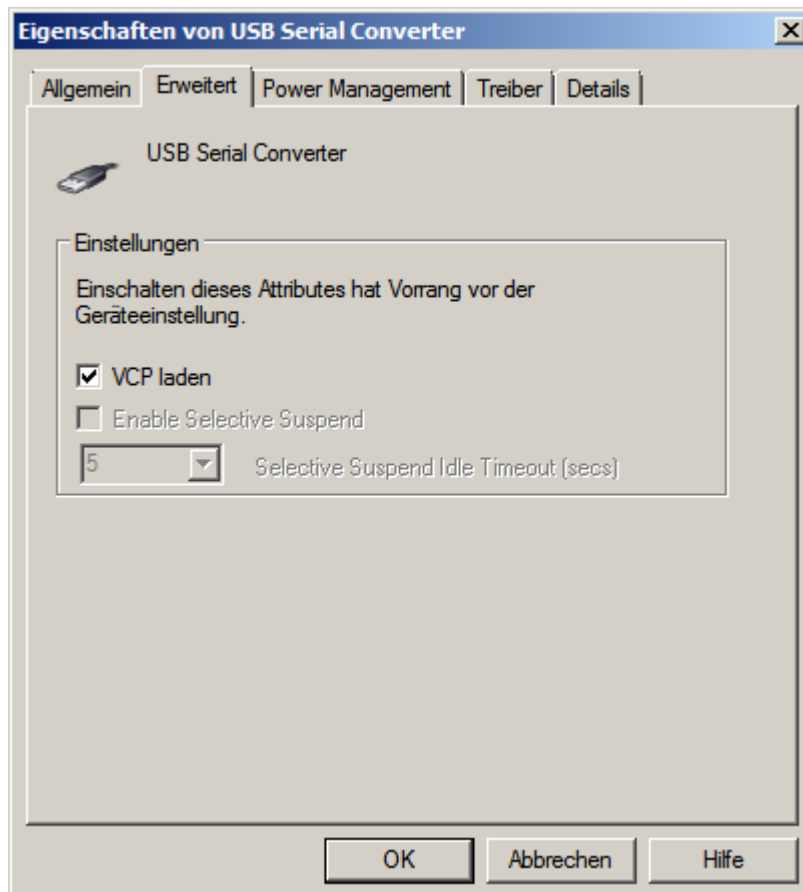


That's all. Now the EEPROM is modified and the adapter acts as a standard USB-Serial adapter.

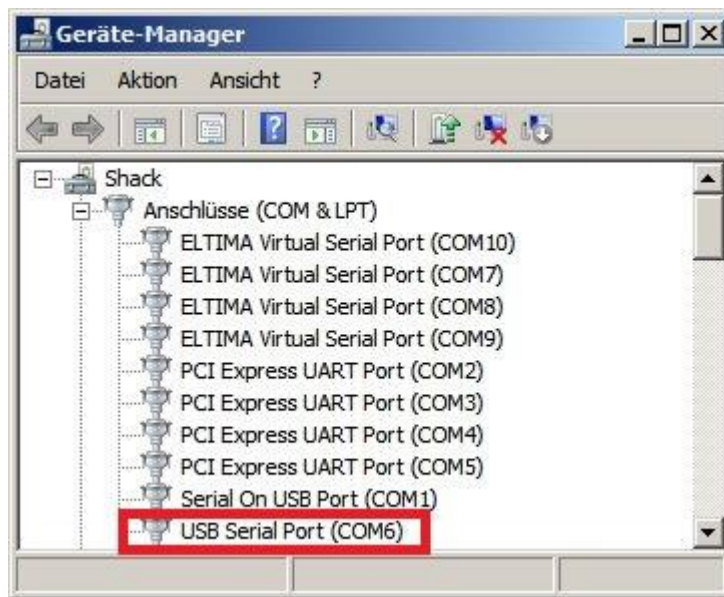
Un-plug and re-plug the adapter from the PC and you should see Windows installing the corresponding driver. Check in the "Windows Device Manager" under "USB-Controller". In my case the adapter showed up as "USB Serial Converter".



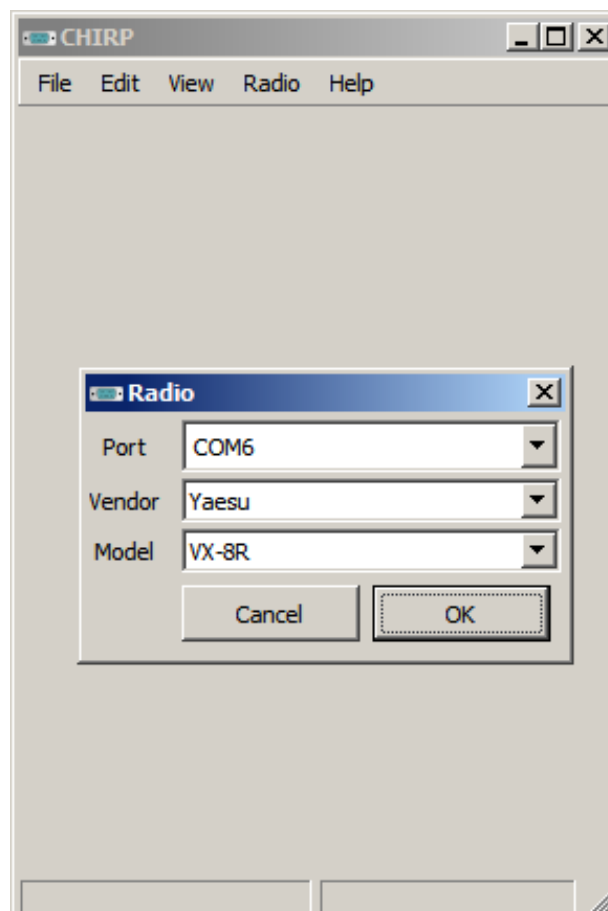
You have to change its extended settings to "Load VCP".



Then you will see also the device under the list of COM-ports as USB Serial port.



Finally, you can now assign the COM port number you like and access the adapter with CHIRP.



If you have remarks or questions please feel free to send them to my Email address below.

Best regards

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