New Firmware v2.2

We already finished a new Firmware package as a major release.

By the use of this FW your PMSDR emulates the entire Si-570 command set via USB.

This will open a wide software window to all the available control programs for Si570 USB based SDR receivers.

Figure-1: FW 2.2 is ready to use

Beside Winrad and whose Derivates you might use now the most common software packages without any additional software-interface, like:

■ New Software to run

SDR-RADIO [4],
Rocky [3],
PowerSDR-sr40 [5],
CFGSR [6],
DSP-RADIO (for MacOS) [7] …

As previously announced, any SDR control software will probably be suitable, which controls the SDR hardware by the emulation of the Softrock USB-Command-Set.

At the same time we had to prepare a new DLL (v3.4). This version does support the actual FW (v2.2.0), as well as previous FW versions.

The feature list will be presented subsequent to the “How to Program” section of this supplement.

■ How to program the new FW

The installation process itself somewhat differs from the procedure, already described in the PMSDR-Manual. That’s the reason that we have to discuss it more detailed:

If you haven’t already done so, please download the distributable FW update package from the PMSDR website [1].

In addition to FW and DLL, it contains also a directory which includes the necessary new USB drivers for your PMSDR.

As a summary, you will find the files:

Elad_Encoder.dll
ExtIO_PMSDR.dll
PMSDR_v22.hex

as the directory as well:

PMSDR-LibUSB

To begin with, please copy both DLL files in to your working Winrad directory. For example in to c:/Program Files/HDSDR.

Afterwards we are ready to start the flashing process itself. Use the supplied *.hex file, and start the update procedure as described in the manual.

Contrary to the manual procedure, the flash process is finished, as soon as you will read „**Programming Flash Completed**“.

The manual mentioned note, talking about a security based question of overwriting an existing data file, will also not occur!

By the use of the **EXECUTE** function of the flash program, you finally start the flashed code to be active inside your PMSDR.

A last manual note describes a closer look into the DEMO folder of the program. The manual does explain that you will find an entry in there. Please note that this is no longer valid for the new FW v2.2 and followers!

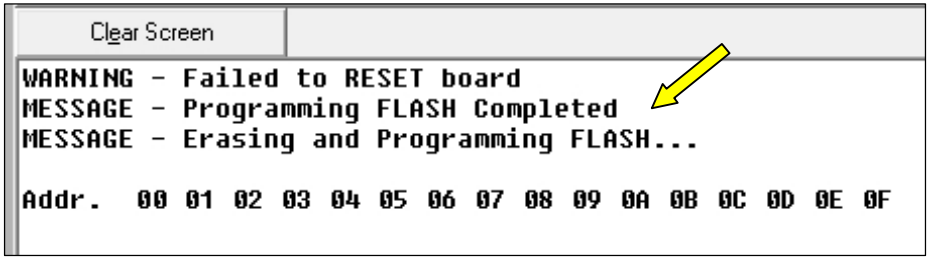

Figure-2: Flashing successfully finished

As usual, your Windows-System will look for available drivers, and does wake you up by the well known Ding-Dong sound.

Don’t try to let it automatically search for the drivers, but choose the manual mode by guiding it to the **PMSDR-LibUSB** directory, mentioned above!

For sure the system will find the drivers immediately, and install them as needed.

Just to be sure, open the hardware managers control panel, and look for an entry like Figure-3.

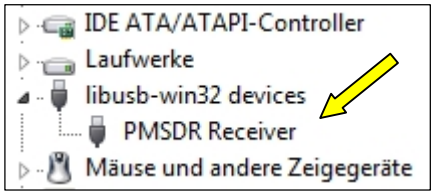

Figure-3: LibUSB driver successfully installed

As from now, you might start so far your favourite Winrad application, as you have done prior to that.

With immediate effect the door is now wide open to the previously described new software world!

■ FW Advantages

☑ PMSDR will be found as a (Softrock) compatible Si570-USB tool. (It does work by the use of LibUSB-win32 drivers; DLL V3.4r0 or followers are essential);
☑ It does support the entire Softrock USB-Commands of the Si570 chip, respectively it is full compatible;
☑ Also the conventional USB-Commands are still supported;
☑ Display the actual USB-Modes;

☑ Optimised procedure calls for addressing Si570-Registers;
☑ Accelerated handling of the conventional PMSDR USB-Commands.

■ DLL Advantages

☑ Full support of the brand-new PMSDR v2.2 Firmware.
☑ Fully automated detection of PMSDR software level.
☑ Fully automated detection and activation of LibUSB-Win32 drivers (if already installed), or activation of Microchip-Drivers for older FW versions up to v2.1.8;
☑ Frequency tuning: Free cursor positioning! You might set the frequency-cursor while in PAN-Adapter- and/or CAT-Mode to a position of your choice. It does no longer jump to the previously fixed 12 KHz position by default!
☑ Direct support of WoodBox-Radio's TMATE tuning knob. Neither 3rd. party software like VSPE or com0com are no longer needed. This does permit the use of the TMATE and the CAT interface at the same time!
☑ Kenwood-TS50 CAT support.

☑ Bugfix: minor bug fixed inside the CAT modul.
☑ Bugfix: HDSDR can't unhide the DLL Window. The “H” key does call now the DLL in to the operating desk foreground, as it was designed for!

☞ As a consequence to the new v2.2 FW, the well known **ExtIO_PMSDR.dll** is required for Winrad versions (or Derivates) only!

● **TMATE**

WoodBoxRadio’s tuning knob [2] is fully supported by now.

Figure-4: TMATE tuning knob

(The illustration has been taken from TMATE’s user-manual.)

„Fully Supported“ is the term to assess the use of the knob without any user attention! An automatic function inside the v3.4 DLL detects the existence of the TMATE and does activate it! It is also advantageous that you might use your TMATE and your CAT interface at the same time!

■ ROCKY: How to use

As a perspective view in to the new shiny software world, we will hand over some short advices for how to deal with Rocky [3]. Rocky is easy to configure, so it makes sense to start with. Turn your attention to the Tick-Boxes in other programs, where you have the choice for the Hardware-Environment. Look around and choose the Si-570 USB settings!

Go ahead and download Rocky from [3]. Further down on the same page you will find some easy to

understand hints for how to set up the program for the very first time.

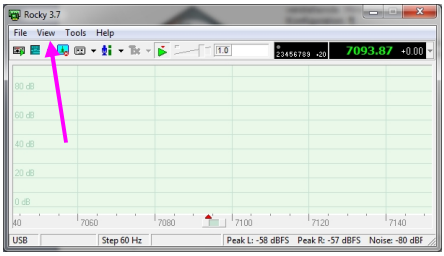

Figure-5: Rocky-v3.7 start window

Open the file folder ⇨ View/Settings. Therein, underneath **AUDIO** and **DSP**, you will find the most important settings which you have to check.

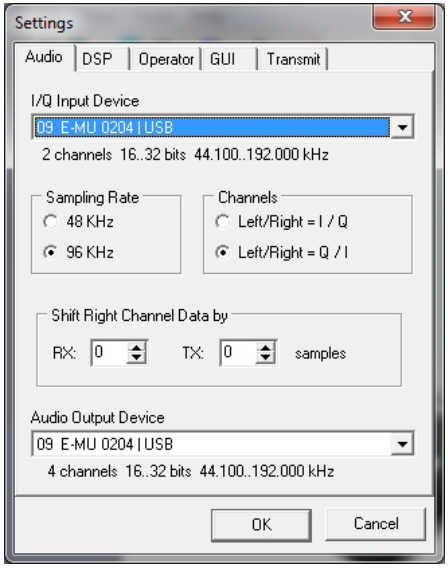

Figure-6: AUDIO settings

- **Audio peculiarity …**

Please note: ROCKY is very sensitive to selected soundcard settings. Very often it does not work, if you choose two different cards for In- and Out-Put. Unfortunately it does not tell as why! By „Trial and Error“ you will figure out which setting is working well! Play around unless the START button will generate an output!

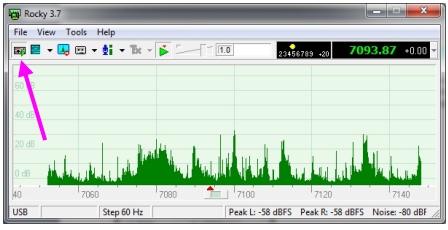

Figure-7: Rocky v3.7 in Action

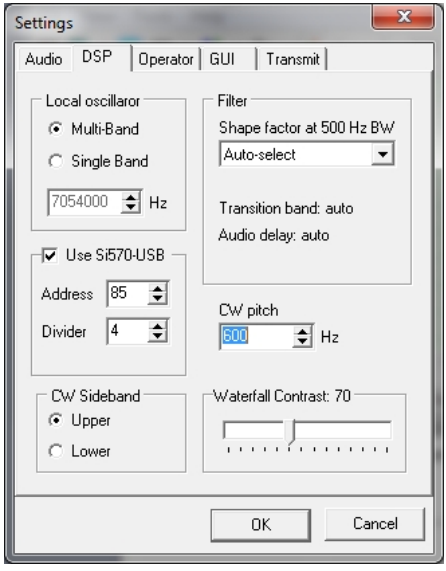

Figure-8: DSP Controls

Check the DSP-Settings as indicated!

You will find a German User-Manual (v3.6) for ROCKY as a link on the same page [3]! (Thanks to Eike (DM3ML)!).

Pay attention: Connecting more than one USB Si-570 unit at the same time to your PC will cause at least serious software trouble! Your PC can not handle that!

Related to the very nice features of Simon Brown's (HB9DRV) **SDR-Radio**, we would like to introduce it here also. (You will find features such as: Integrated decoding for Digi-Modes; Remote control of the SDR hardware (PMSDR) via LAN/WAN/Internet).
A detailed indication will cover a lot of space. So please have a frequently look into our Home-Page. Probably we will create an other supplement which covers this subject matter.

■ Links

[1] http://www.iw3aut.altervista.org/downloads.htm

[2] http://www.woodboxradio.com/uk/tmate.html

[3] http://www.dxatlas.com/rocky

[4] http://sdr-radio.com/

[5] http://powersdr-sr40.sourceforge.net/

[6] http://home.ict.nl/~fredkrom/pe0fko/CFGSR/

[7] http://homepage.mac.com/smrozek/Sebastian_Mrozek/Download.html