

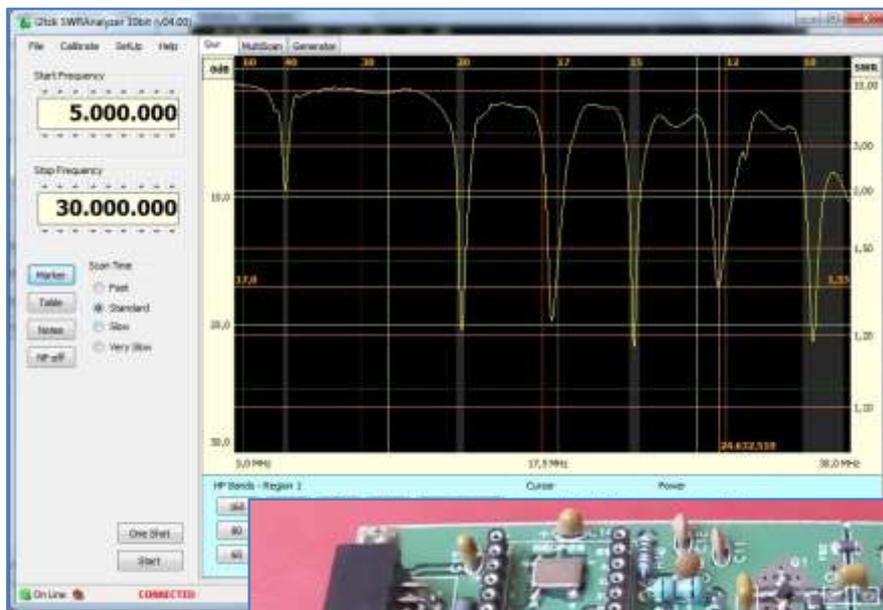


Fox Delta

Amateur Radio
Projects & Kits

SWR ANALYZER V6.02

Firmware Update



December, 2014

1 Firmware update

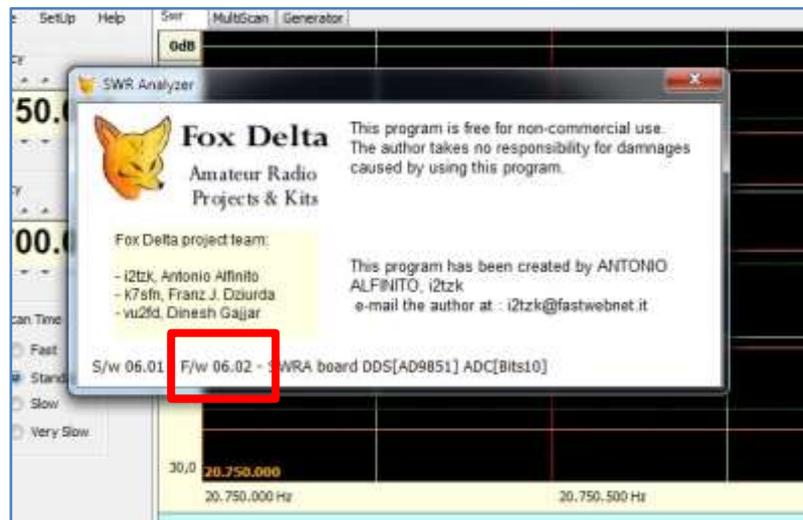
The SWR Analyzer AAZ-0914 unit is based on Microchip's PIC18F2550 28DIP chip, the component's kit provided by FoxDelta includes the microprocessor programmed and ready to work.

The firmware implements a special function (bootloader provided by Microchip) that is used to update the 18F2550 with new firmware version via the USB port, **no external pic programmer is required**.

Please refer to: <http://www.microchip.com> for details about the hex code linked to the SWRA firmware, or any further information and their copyright notice.

To **program from scratch** the flash memory of the 18F2550 a **pic programmer is needed**, please burn the file: **Swr Analyzer vX.XX FULL.hex** included in the f/w releases. This file also includes an embedded copy of the bootloader code.

To verify the current installed version
select from the menu bar:
[Help][About]



Latest firmware release is available here: <http://www.i2tzk.com>

The firmware updating procedure requires to:

- Execute the Windows bootloader program
- Activate the SWR Analyzer "Update Mode" and connect it
- Update the firmware

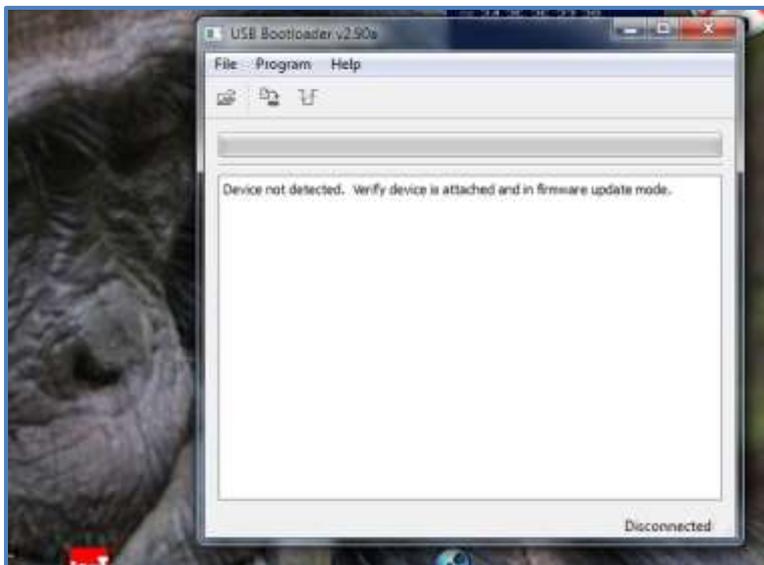
1.1 The updating procedure

The program “HIDBootLoader.exe” (provided by Microchip) is used, this is the Windows interface to access the bootloader function and flash the microprocessor memory.

- Download from the Microchip website <http://www.microchip.com> or from the FoxDelta server the bootloader program.
- At present, last available release is named: “Microchip Bootloader 2.90a.zip”
- Create a temporary folder and unzip there the file “Microchip Bootloader 2.90a.zip”:
 - HIDBootLoader.exe
 - libgcc_s_dw2-1.dll
 - mingwm10.dll
 - QtCore4.dll
 - QtGui4.dll
- Download from the FoxDelta server the last version of the f/w you want to update and copy on the folder created above the file “..... **UPDATE**.hex”.

For example: **SWR Analyzer v6.02 UPDATE.hex**

- Remove the USB cable connecting the FoxDelta hardware
- Navigate to the folder where the program “HIDBootLoader.exe” has been unzipped and launch it.

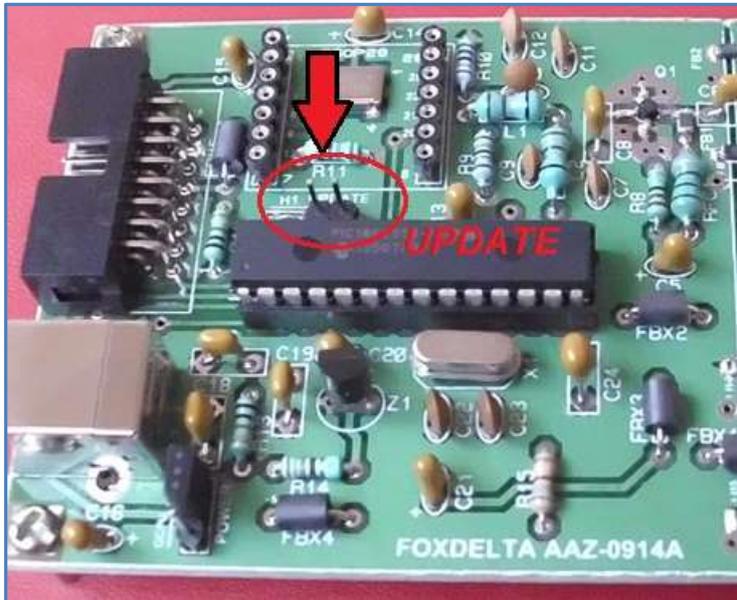


Notice:

All buttons are disabled.

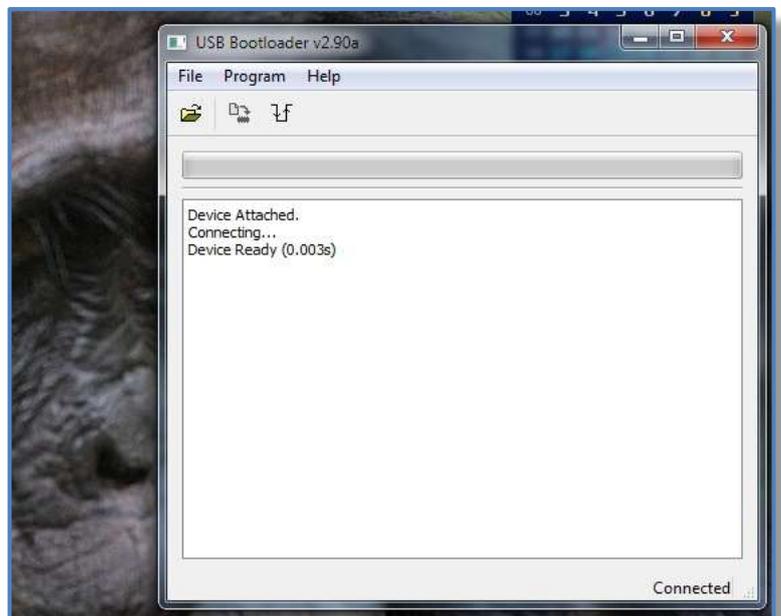
Message: “Device not detected.....”
is presented.

- **Activate the “update mode”** shorting the header “UPDATE” located next to the processor then connect the AAZ-0914 board to the USB port.

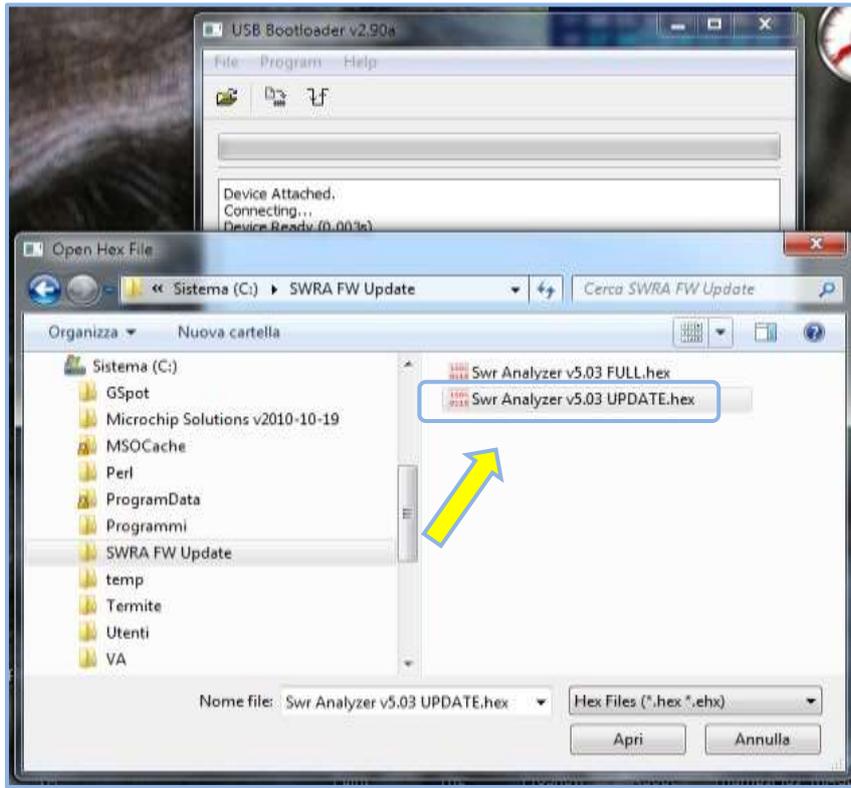


Notice:
The header “Update” must be **shorted before** to connect the USB cable.

After a while, the USB Bootloader program identifies that the AAZ-0914 is ready to be programmed and the message **“Device Ready”** appears, menus and buttons are enabled.

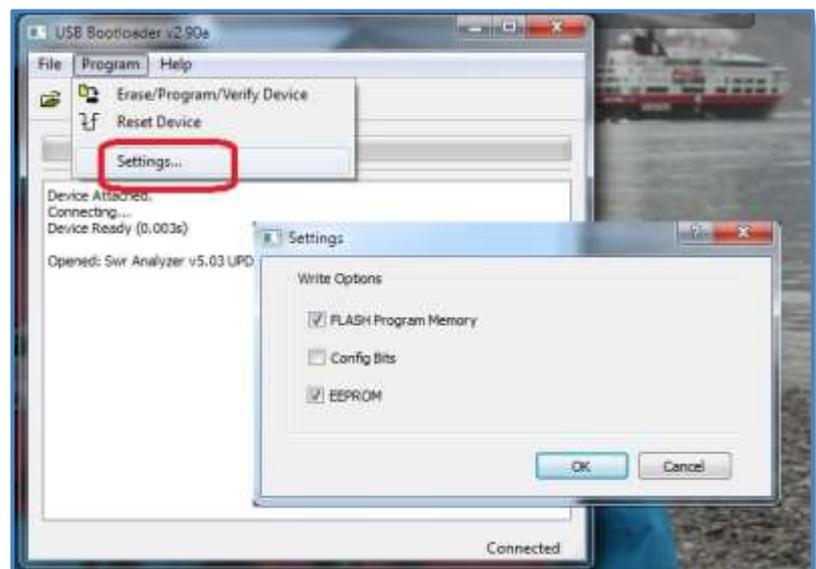


- Select from the menu bar: **[File] [Import Firmware Image]**, navigate to the folder where the new firmware hex file has been unzipped and select it.



Be aware of the **UPDATE** file selection.

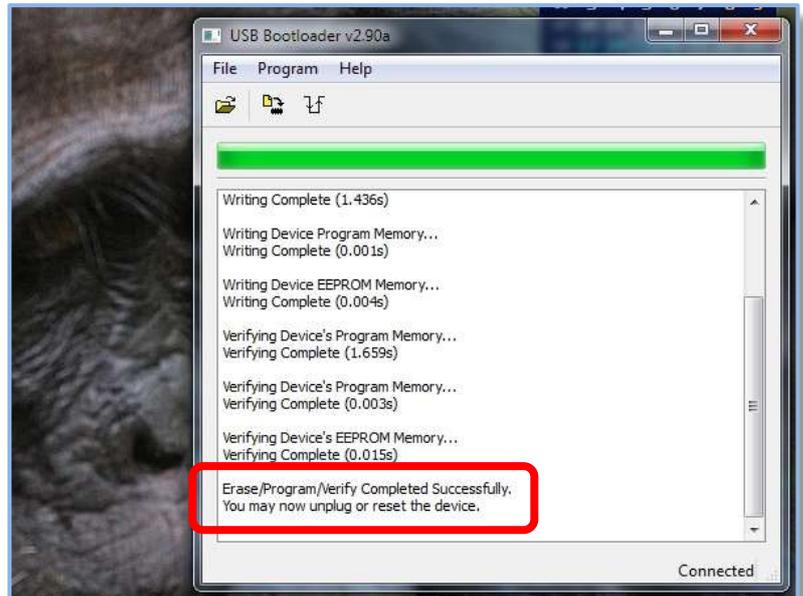
- Verify that in the floating panel **[Program] [Settings]** the options: “FLASH Program Memory” and “EEPROM” are checked.



- Select from the menu bar **[Program] [Erase/Program/Verify Device]**, the updating process starts and a green bar shows the progress.

Do not remove the USB cable or power off the SWRA AAZ-0914 unit during this step.

**Please WAIT for the message:
“Erase/Program/Verify Completed Successfully”**



- The SWR Analyzer unit is now updated, do not forget to **remove the jumper “Update”**.
- Exit the update function selecting **[Program] [Reset Device]** or unplug and plug again the USB cable.
- Launch the SWR Analyzer Windows program, select from the menu bar: **[Help][About]** and verify that the shown **F/W version** is one expected (new f/w has been installed) and it is properly working.