

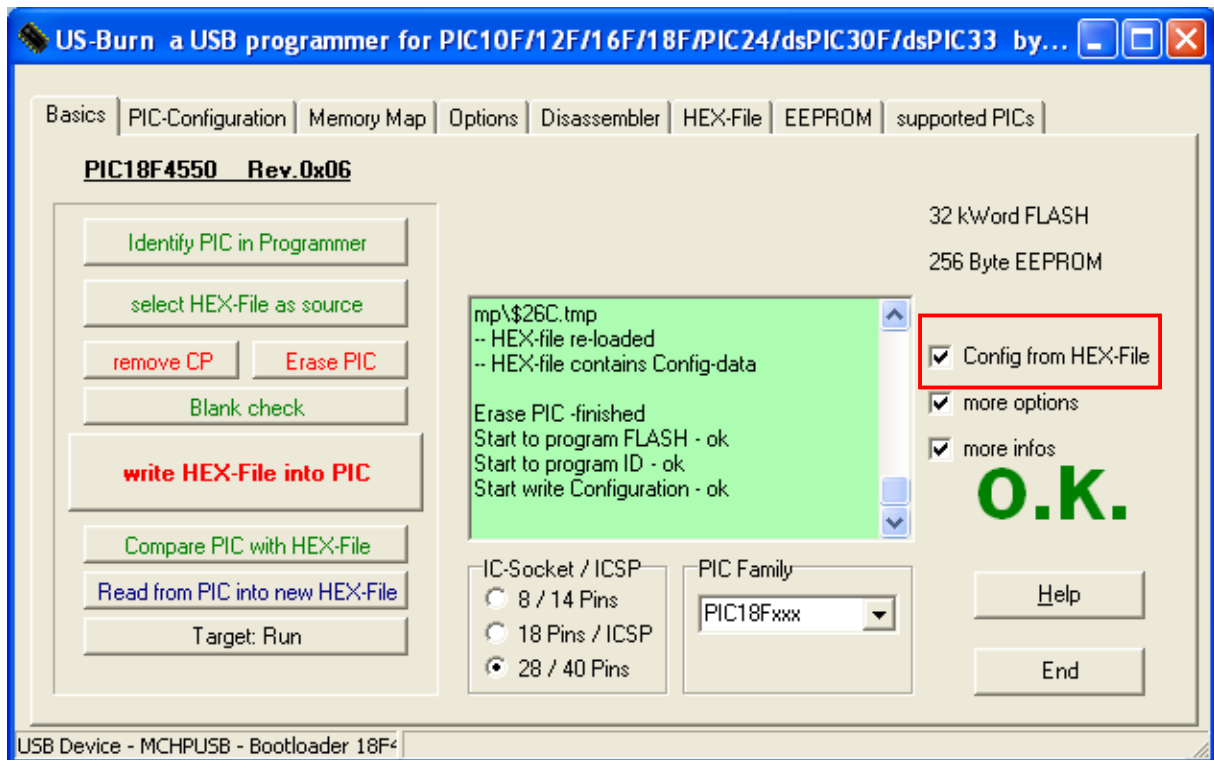
1 Burning in the bootloader

First, the brand new, unprogrammed PIC 18F4550 is inserted into a burner of your choice (I use a self made Brenner 8 from SPRUT: <http://www.sprut.de/electronic/pic/projekte/brenner8/index.htm>).

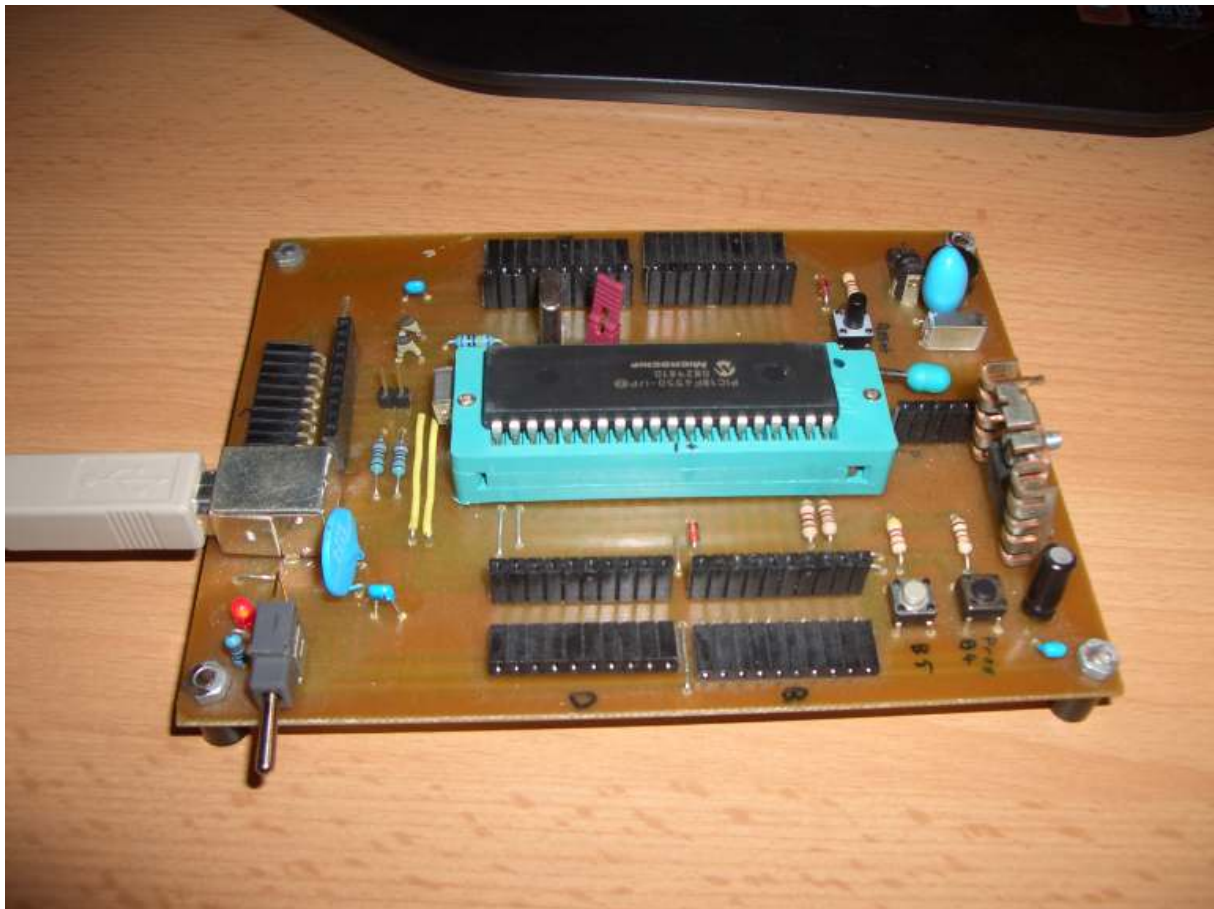


Next, the USB-Bootloader needs to be burned into the PIC. The hex file of the bootloader has been installed to your hard disc with the Microchip USB Framework installation: C:\Microchip Solutions\USB Precompiled Demos\USB Device - MCHPUSB - Bootloader 18F4550.hex

Use the configuration bits that are contained in the pic.

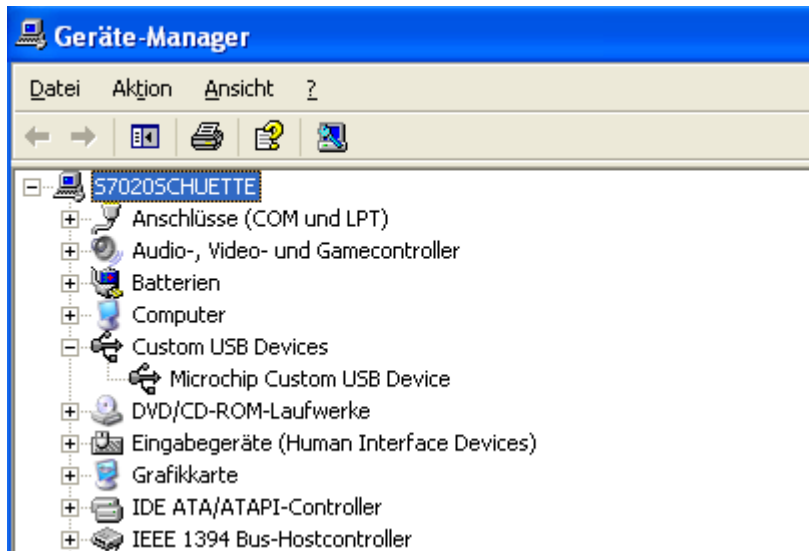


once this is finished, the PIC can be placed in the final circuit and connected to the PC via USB:

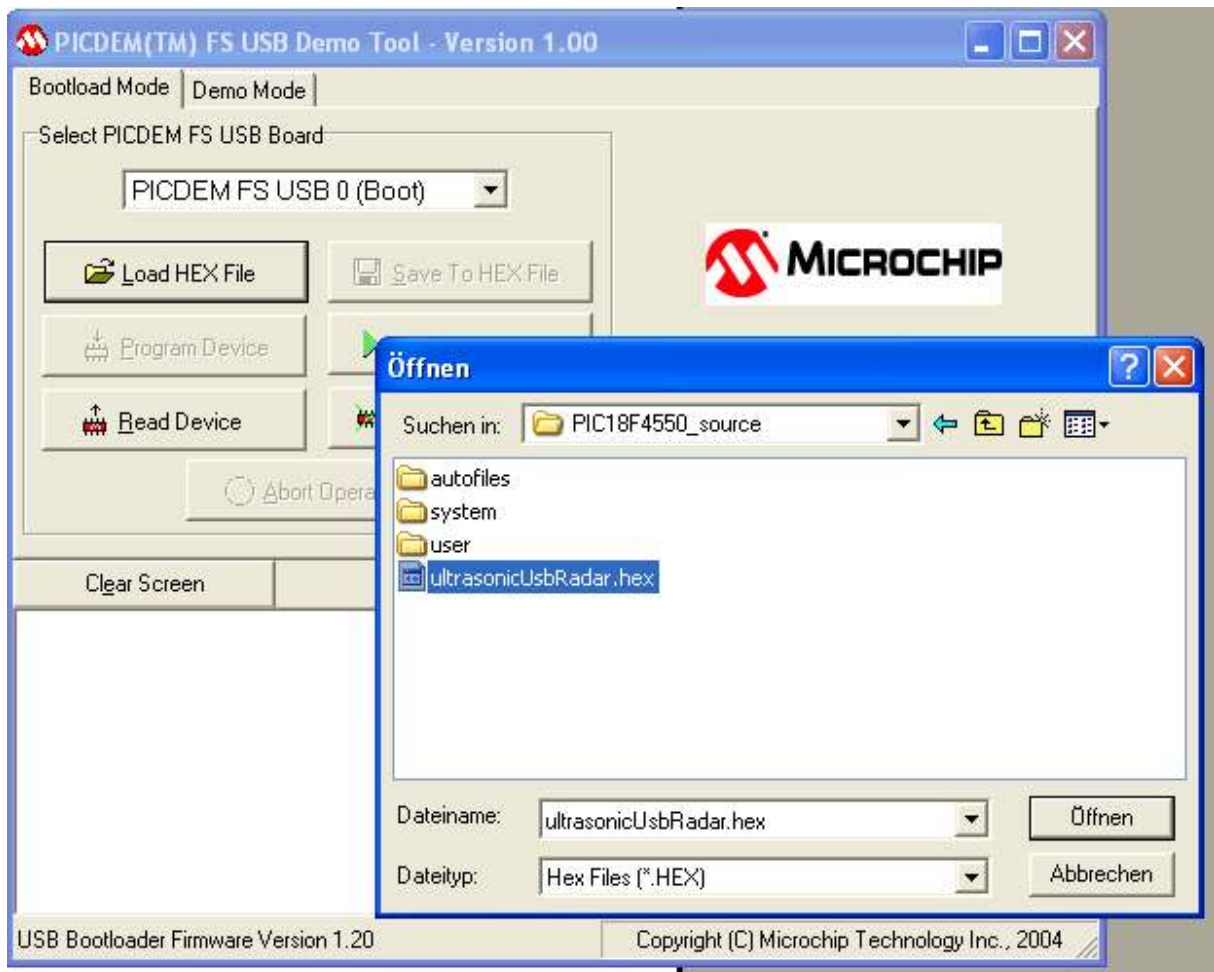


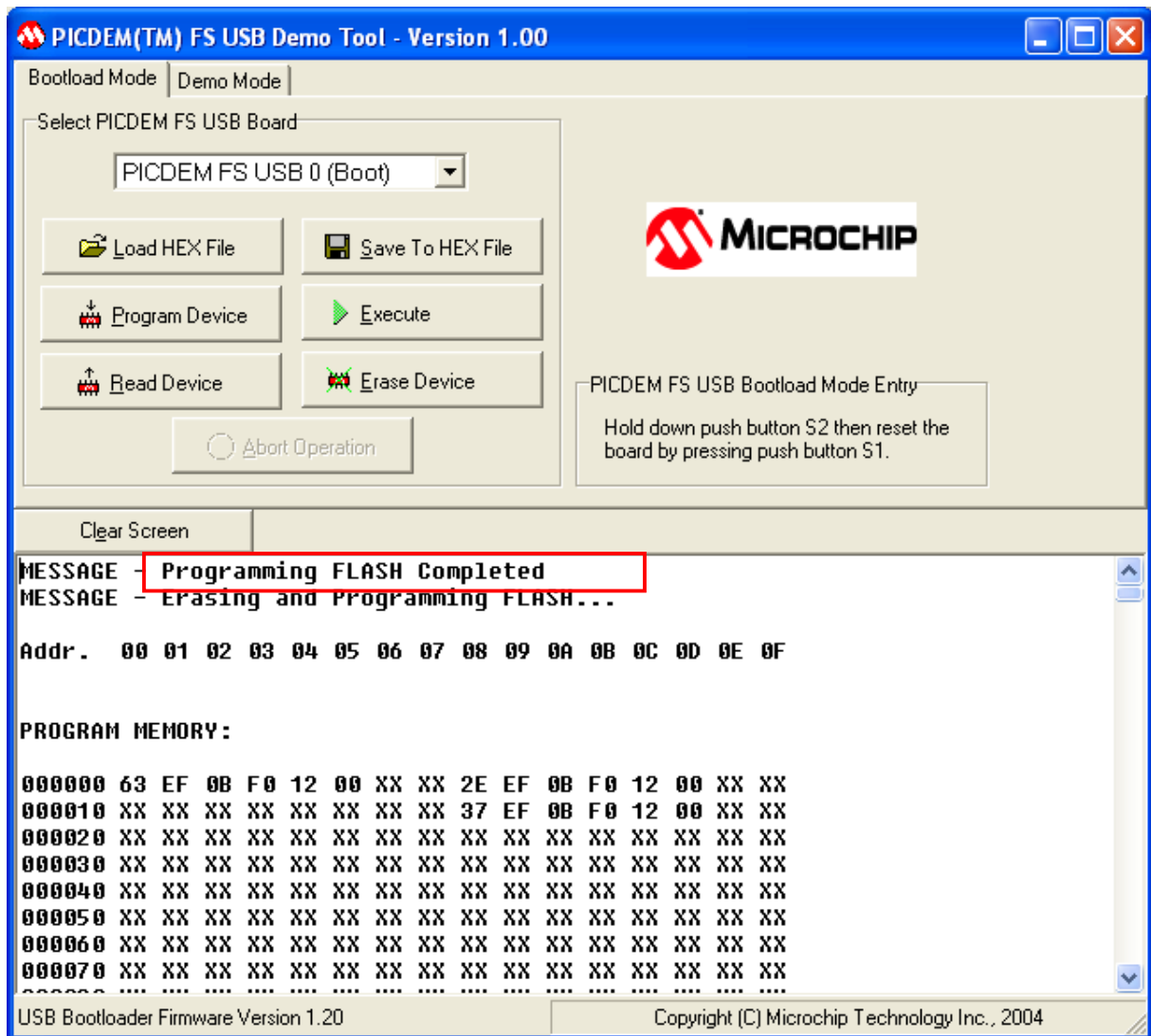
Now, to get the whole thing running, the US2BRadar firmware needs to be programmed into the PIC (hex file from my homepage). To do this, hold down the button of PORT4 (pull to ground) while pressing reset. The PIC now starts in USB boot mode.

Now XP/Vista asks for a driver. You supply XP/Vista with the driver provided by the Microchip USB Framework installation (C:\Microchip Solutions\USB Device - MCHPUSB - Generic Driver Demo\Driver and inf) and the device is recognized and listed in the hardware manager:



Now you start the PDFSUSB Demo application (C:\Microchip Solutions\USB Tools\Pdfsusb\PDFSUSB.exe) to burn the hex file from my homepage. Therefore select the PIC in the drop down box, open the hex file and press the "program device" button.

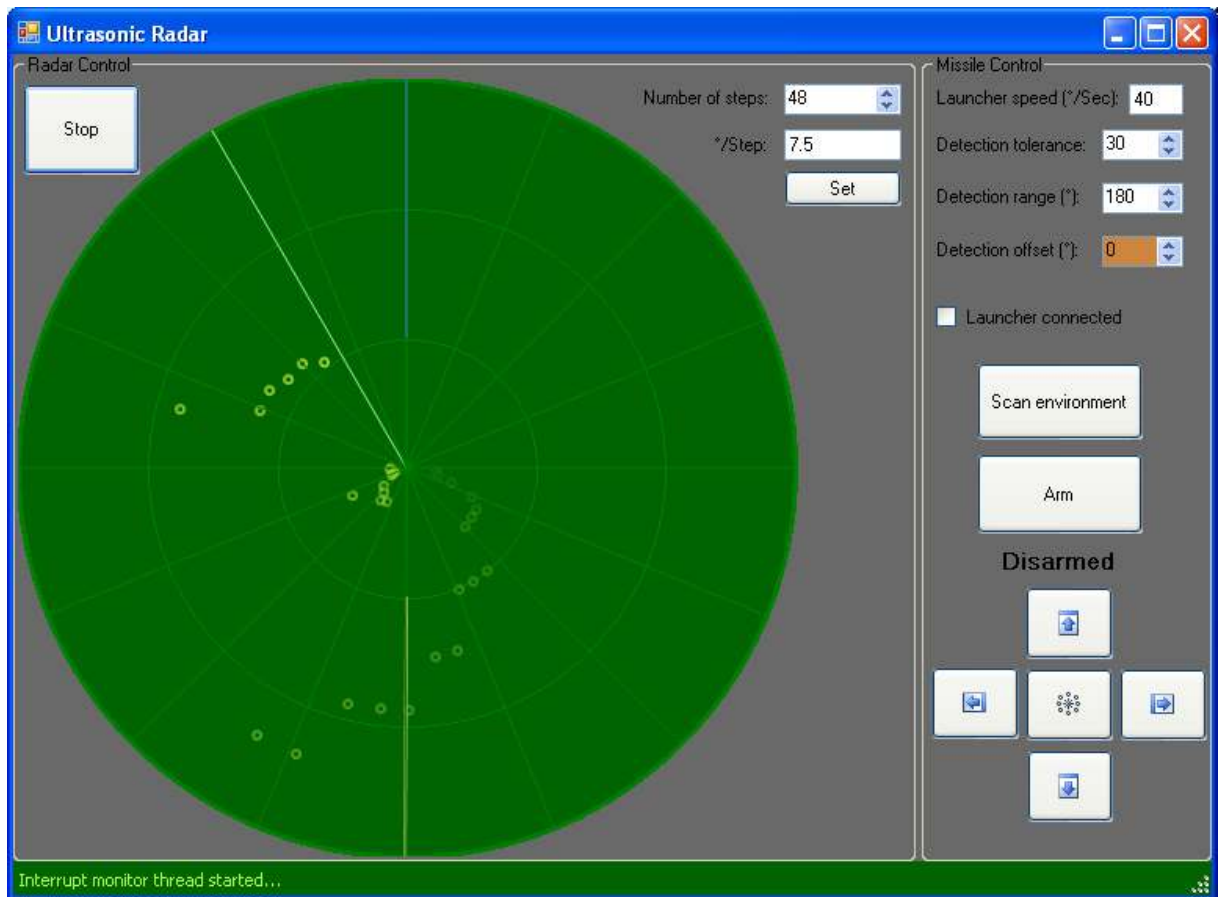




Now reset the PIC (with button click or by interrupting supply voltage) and you are ready.

Now you can start the C# application

(C:\UltrasonicUSBRadar\UltrasonicUSBRadar\bin\Debug\UltrasonicUSBRadar.exe) and there you go.



Just press the button in the upper left corner to start the radar.