UPDATING THE FIRMWARE IN THE CS-BFD

This document goes into painstaking details on how to update the firmware in the CS-BFD. For those of you who are familiar with computers, most of this will be an overkill. These instructions assume your radio is bricked. We have another set of instructions that show how to do the same thing if your CS-BFD is not bricked.

1. **Remove the five Philip head screws holding the back cover on and you should see the following:**

   **You will notice there are four jumper blocks.**

The four-pin jumper block that does not have a jumper on is used for firmware debugging.

The jumper block closest to external power jack is used to determine the source of its power. If the jumper is between the center pin and the pin closest to the top of the display, then the power is derived from the radio. If the jumper is between the center pin and the bottom of the display, then the power is derived from an external power supply.

The jumper block that is closes to the middle of the board and located near the square inductor is used to supply power to the keyboard backlight. If the jumper is between the middle pin and the pin closest to the power supply jumper block, then the backlight for the keys are always on. If the jumper

The jumper block closest to the four-pin jumper block is used to set the computer in boot mode. If the jumper is between the center pin and the pin closest to the four-pin jumper, then the computer is in boot mode. If the jumper is between the center pin and the bottom of the bottom of the display, then the computer is in normal mode.

2. **Make a directory on your computer called Dfuse. For those who are more advanced, the name is not important. You can share these programs with directories that already exist.**
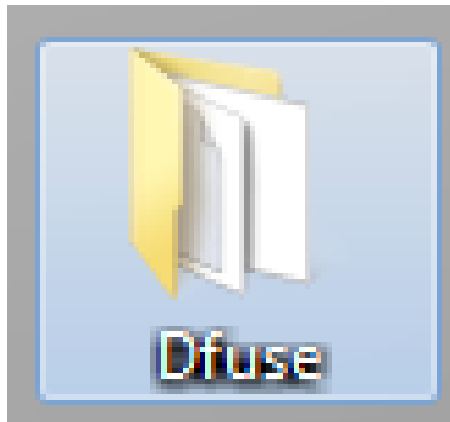
3. **Load the program called en.stsw-stm32080.zip into that directory. That program can be found by doing a google search of "ST Dfuse" and getting the information directly from the source or by loading it from www.connectsystems.com website and finding it in the Software pulldown menu under the CS-BFD heading.**
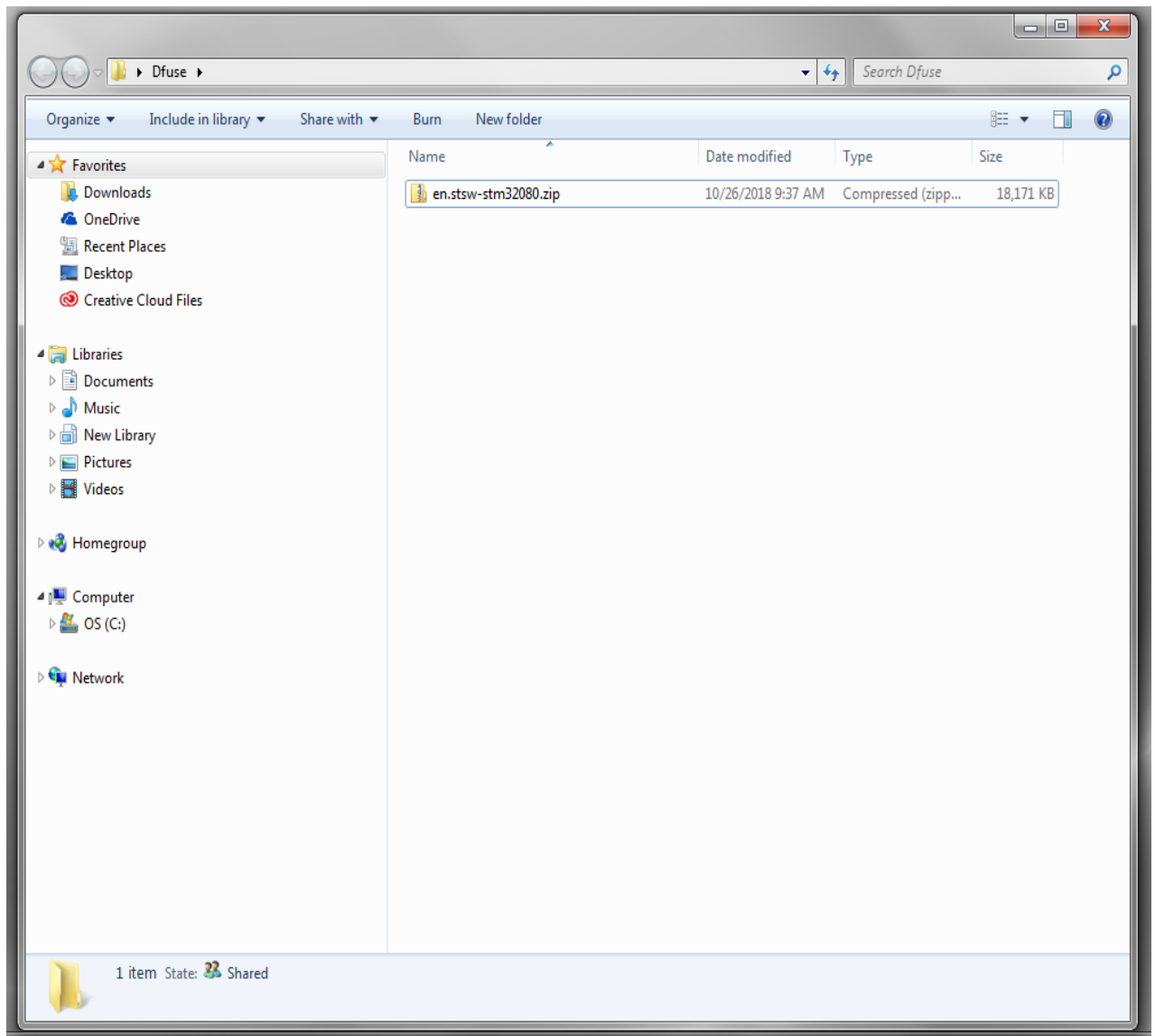
4. Unzip that directory
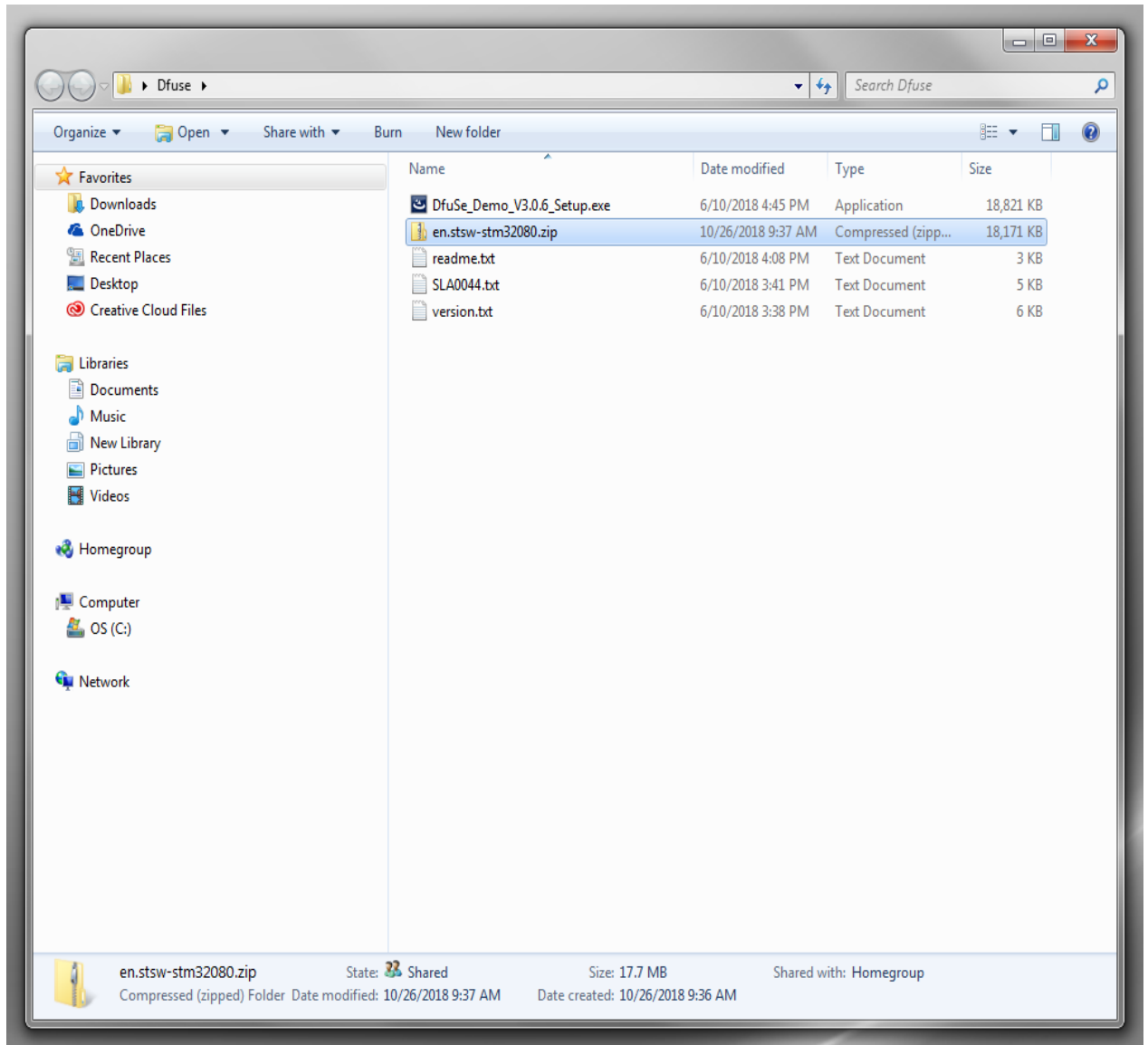
You now have the following programs:
- **DfuSe_Demo_V3.0.6_Setup.exe. This is the actual program you will use.**
- **Readme.txt. This is an explanation of this program**
- **SLA0044.txt. This is the license agreement for using this program**
- **Version.txt. This is an internal document that shows features that were added to the latest versions of software.**

5. Download the latest firmware for the CS-BFD that should be located in the same area as the DfuSe_Demo_V3.0.6_Setup.exe and put it in the same directory. You should get a directory that looks similar to the directory shown below.
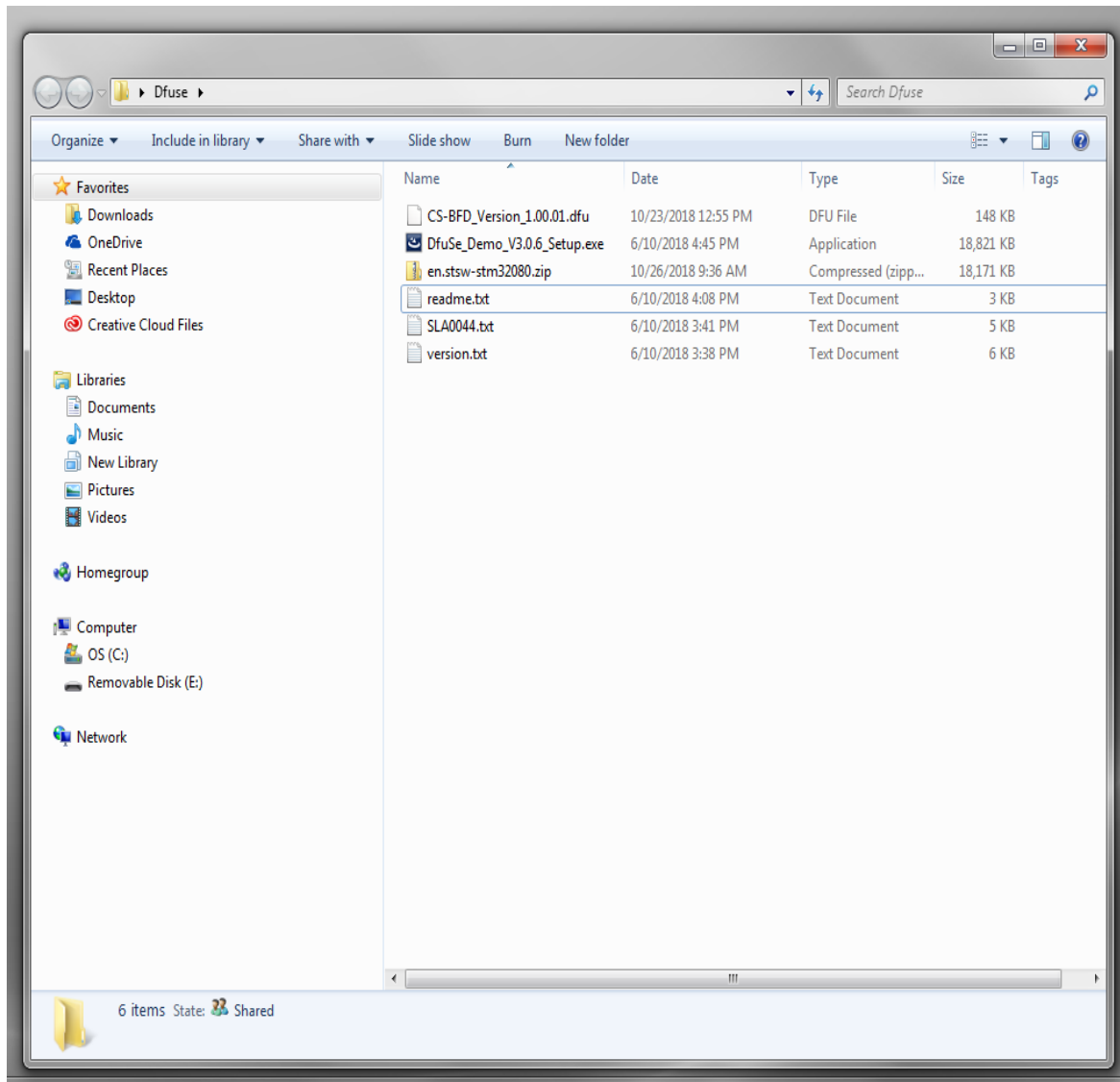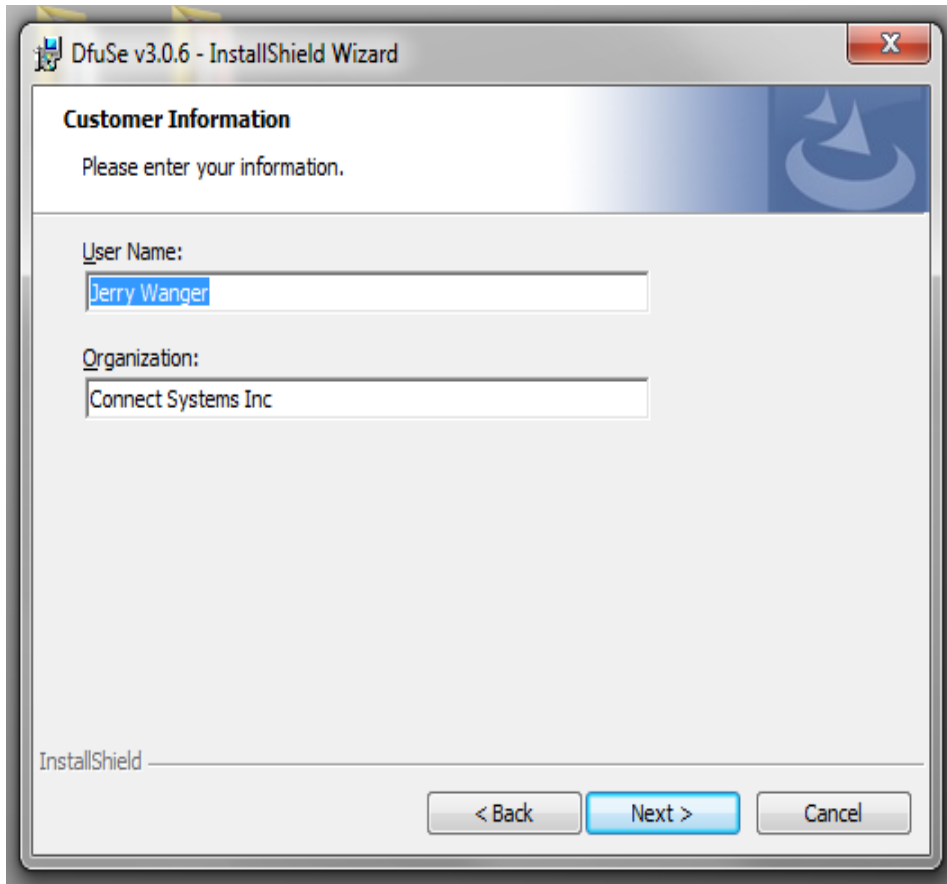
6. **Highlight the executable program as shown below and then double click it to run it.**
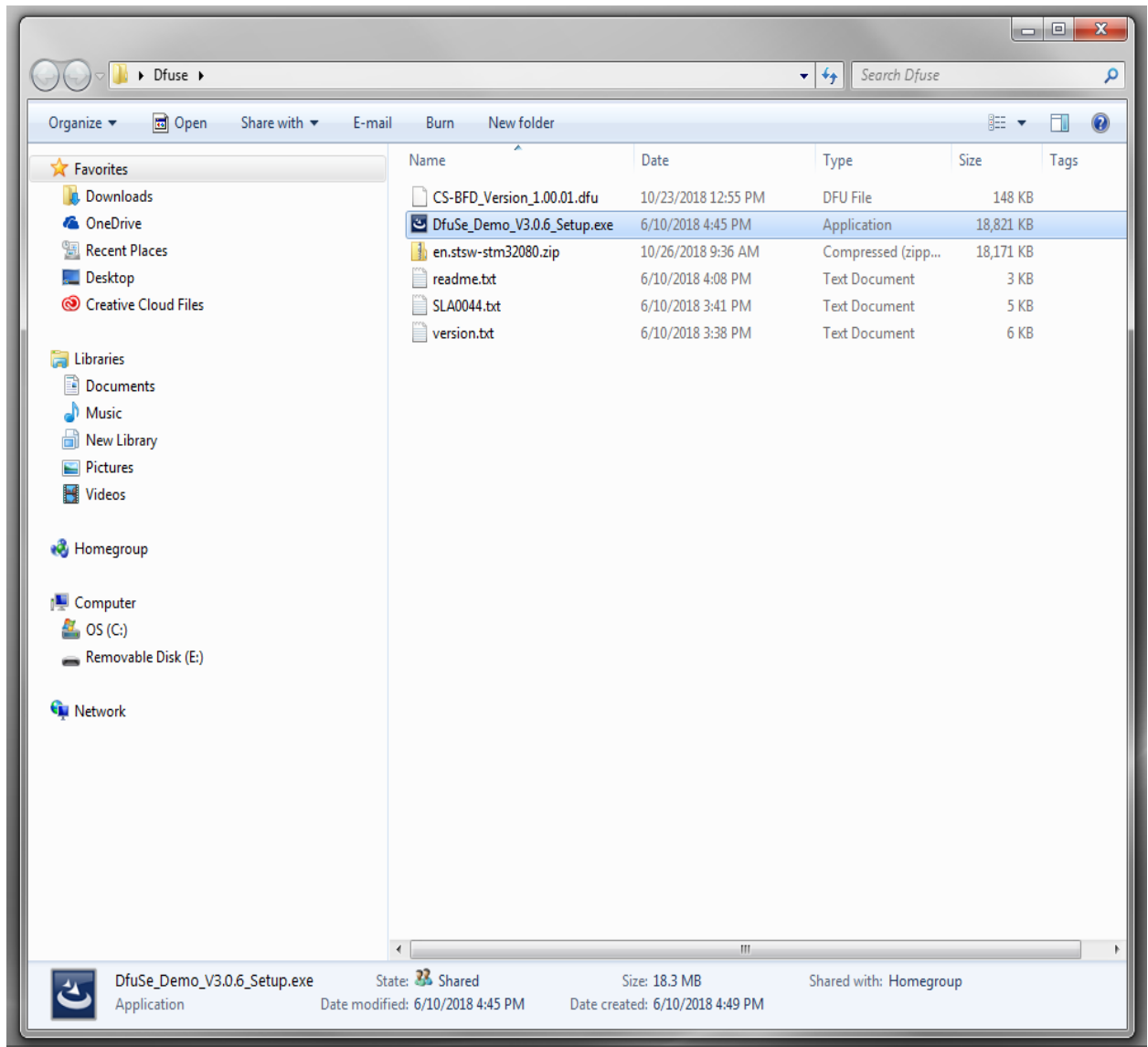
7. **You will get to the following screen as shown below. Press the "Next" key.**
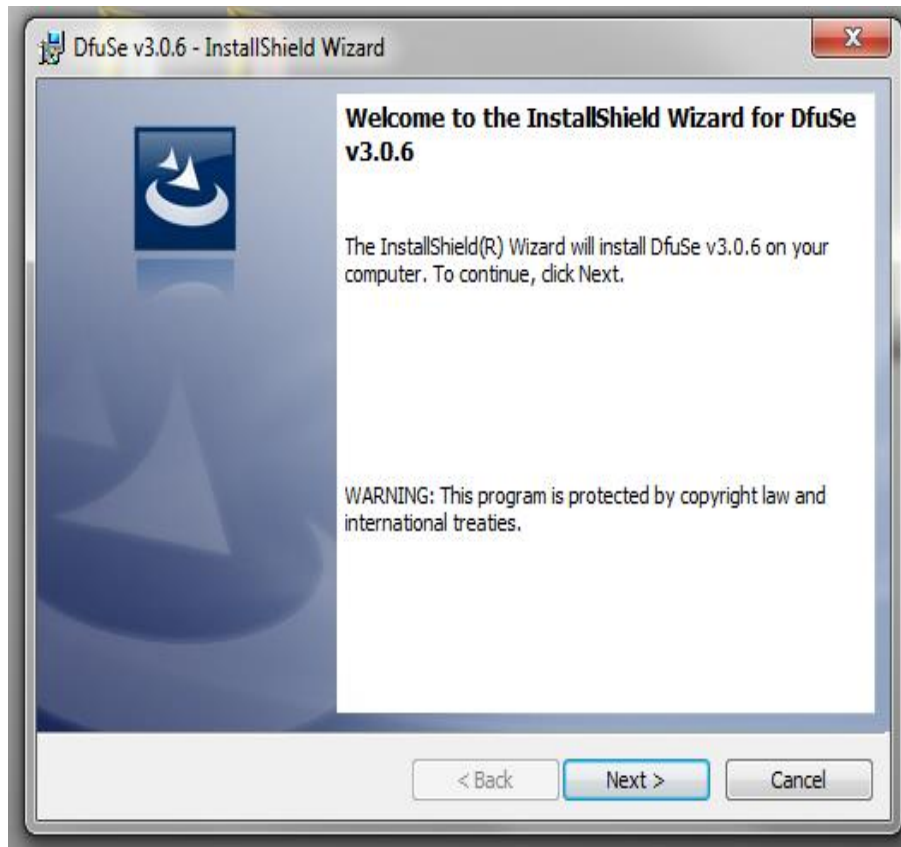
8. Fill in the User Name. That is your name. Then your organization. If you have nothing to put there use the name "Ham". Then press the next key.
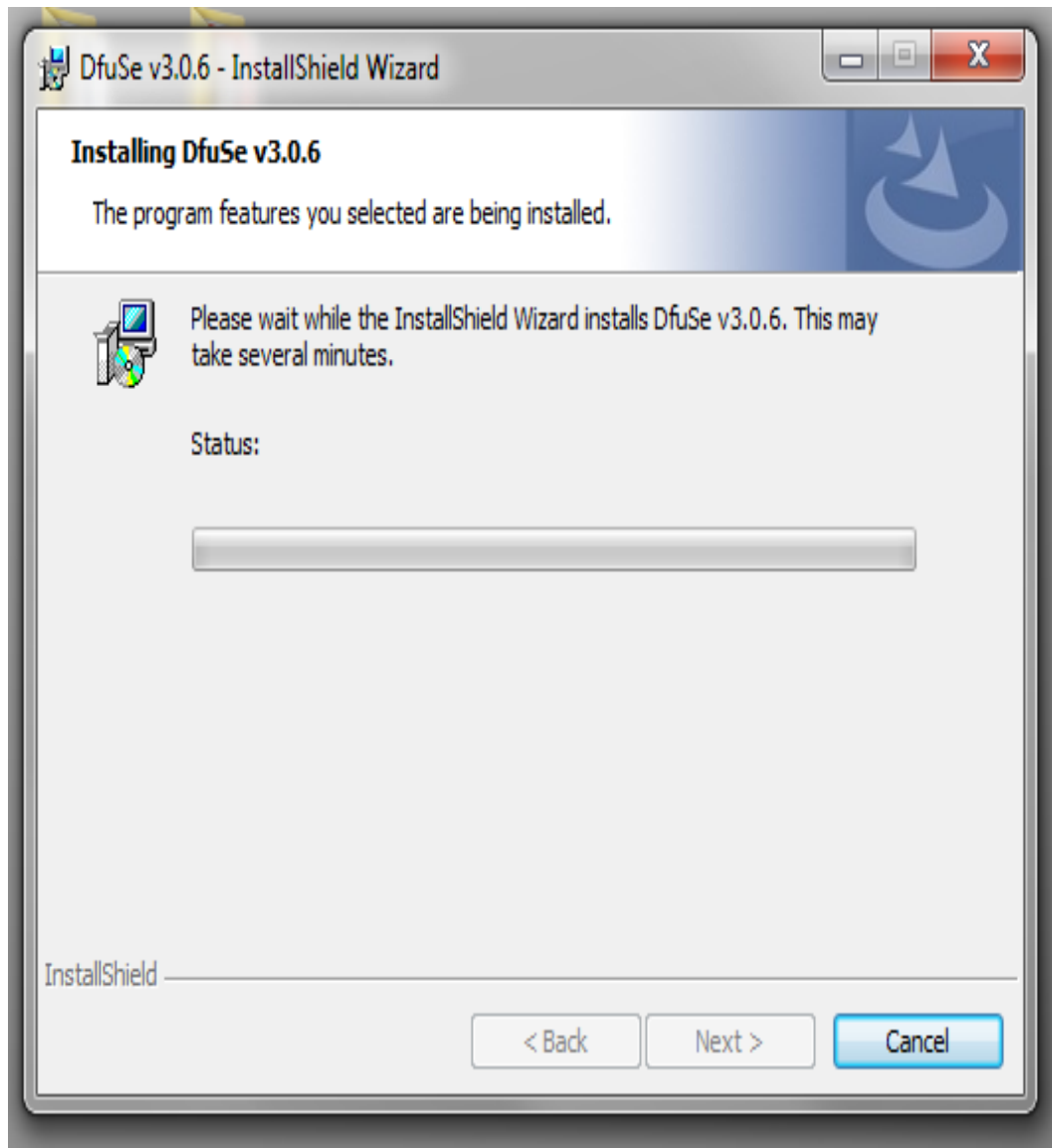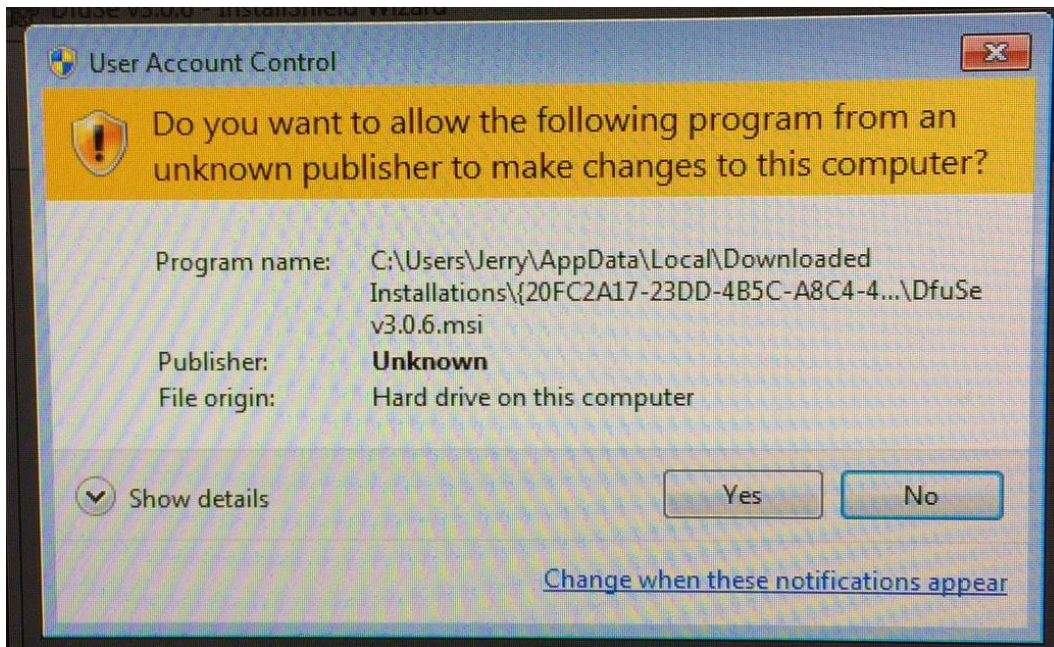
9. **You now get the following screen. You have a choice to press the Back key to modify what you just entered, the Cancel key to abort from this program, or the Next key to continue installing the program. Press the Next key to continue installing the program.**
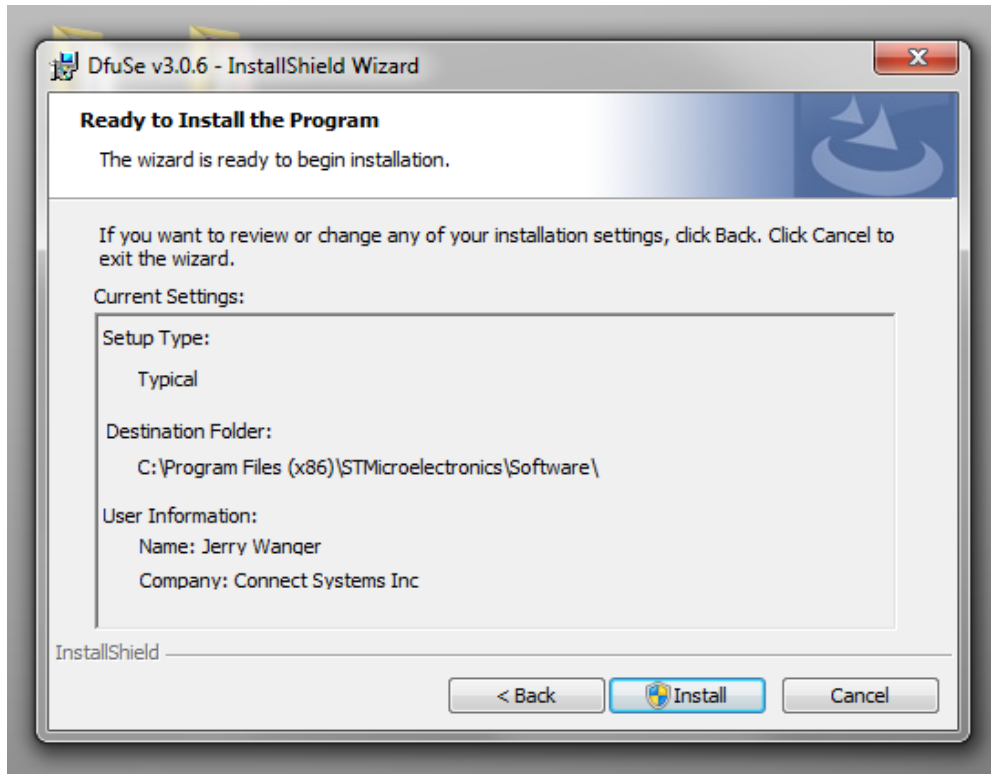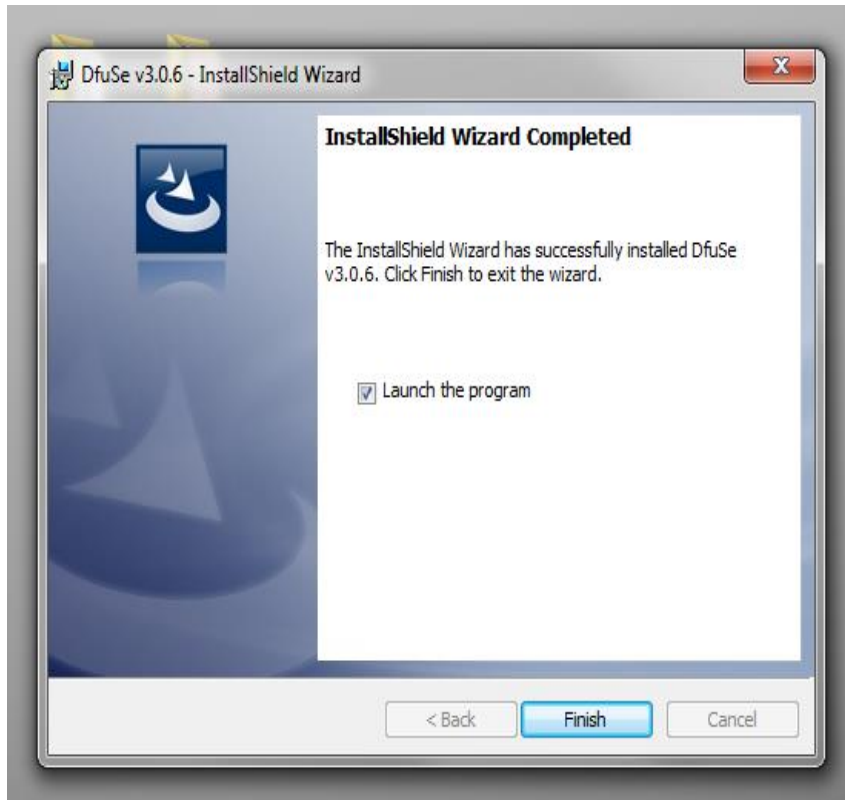
10. You will then start with the following screen.

11. **If you get the following screen or something similar, press the Yes key as there is nothing wrong with this program.**

User Account Control

Do you want to allow the following program from an unknown publisher to make changes to this computer?

Program name: C:\Users\Jerry\AppData\Local\Downloaded Installations\{20FC2A17-23DD-4B5C-A8C4-4...\DfuSe v3.0.6.msi
Publisher: **Unknown**
File origin: Hard drive on this computer

Show details   Yes   No

Change when these notifications appear

**12.** **You will get the following screen when everything is finished. Press the Finish key.**

13. You now have the following screen as shown below. If the program has been installed before, find the shortcut and double click on it. You will get the same screen.
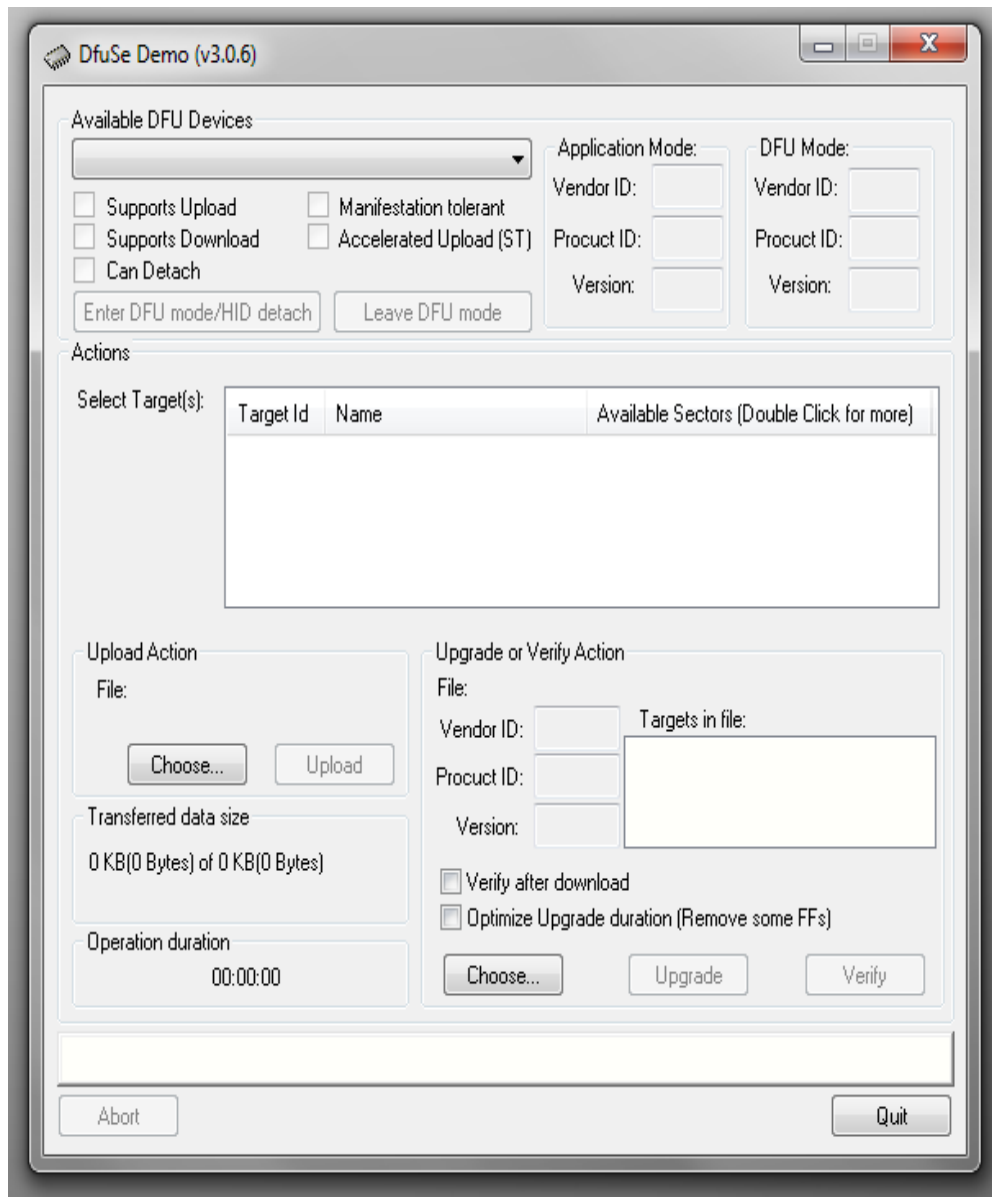
14. Plug one end of the special USB cable that came with the unit into the USB2 port of the CS-BFD and the other end into your USB port of your computer. The difference between a standard USB cable and the special USB cable is the power connection in the special USB cable is not there. Only three of the wires are used.

15. Attach the CAT5 cable from the display port of the radio to the Primary port of the CS-BFD. Turn on the radio by pressing the power key for ten seconds. Because the CS-BFD is bricked, the display might not turn on.

16. Remove the CAT 5 cable and the display should now be turned off if it is not off already.

17. Put the Boot Mode jumper into the Boot mode and then plug the CAT 5 cable back in the Primary port of the CS-BFD.

**18. The computer screen should now look like the following:**
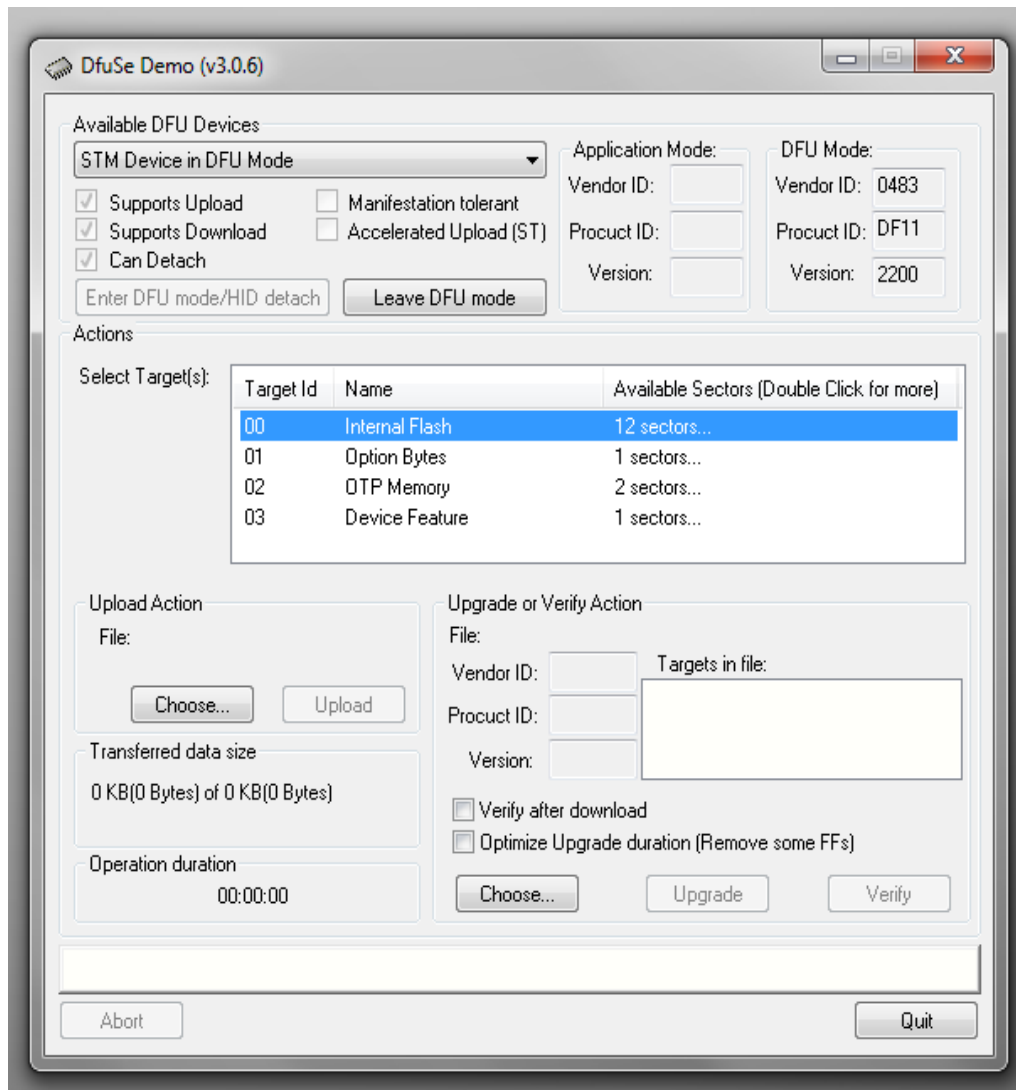
19. Check the "verify after download" check box.

20. Press the Choose key under the "Optimize Upgrade duration (Remove some FFs)" check box. You should get the following screen:
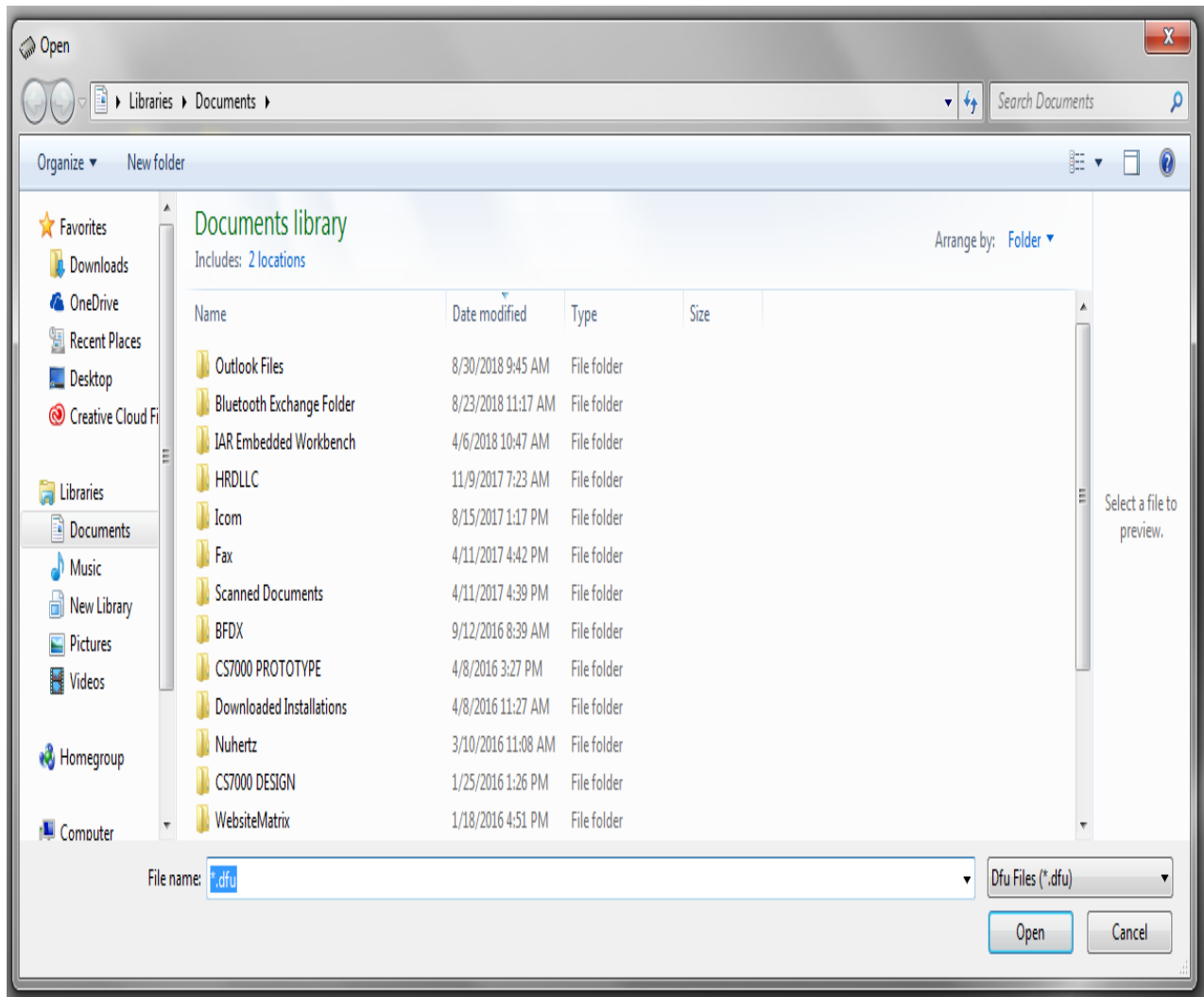
21. Locate the file you downloaded earlier that represents the new firmware for the CS-BFD. The file name should be "CS-BFD_Version_1.00.01.dfu or something similar. Highlight the file and then double click on it.   The screen should now look like the following:
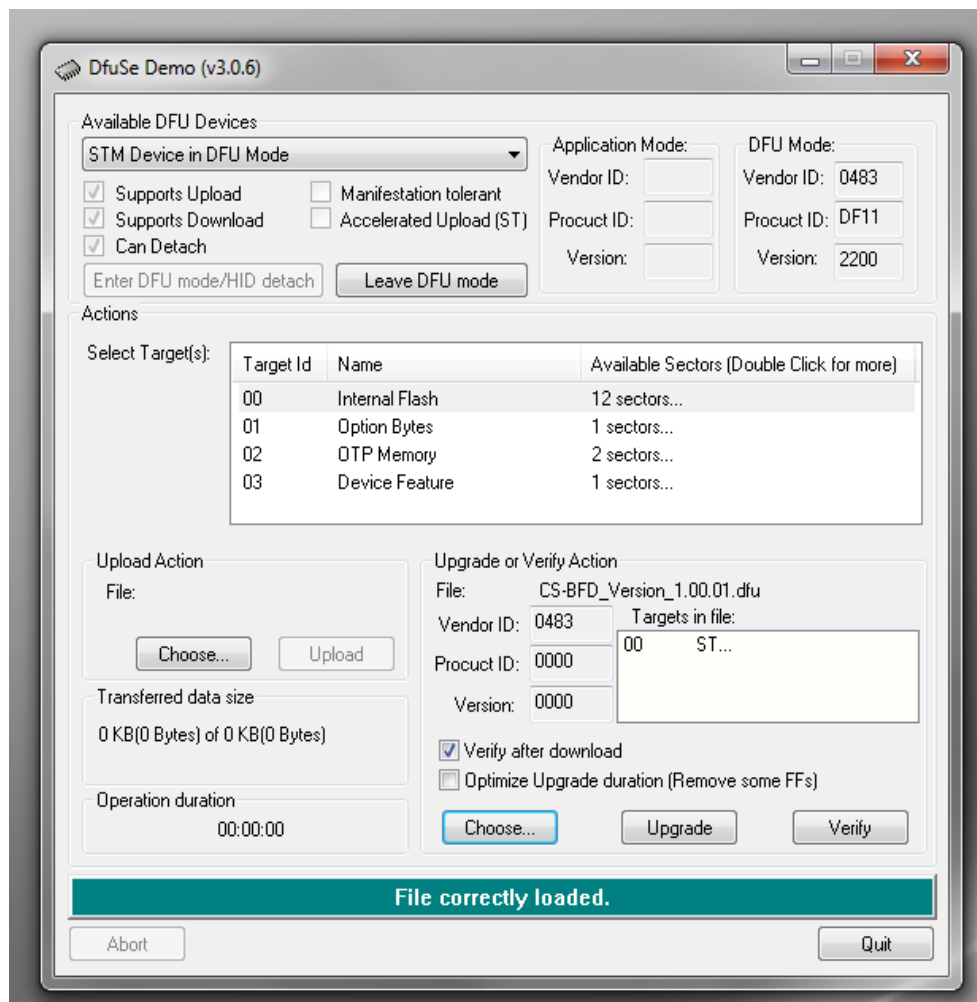
22. Press the Upgrade button and you get the following screen:
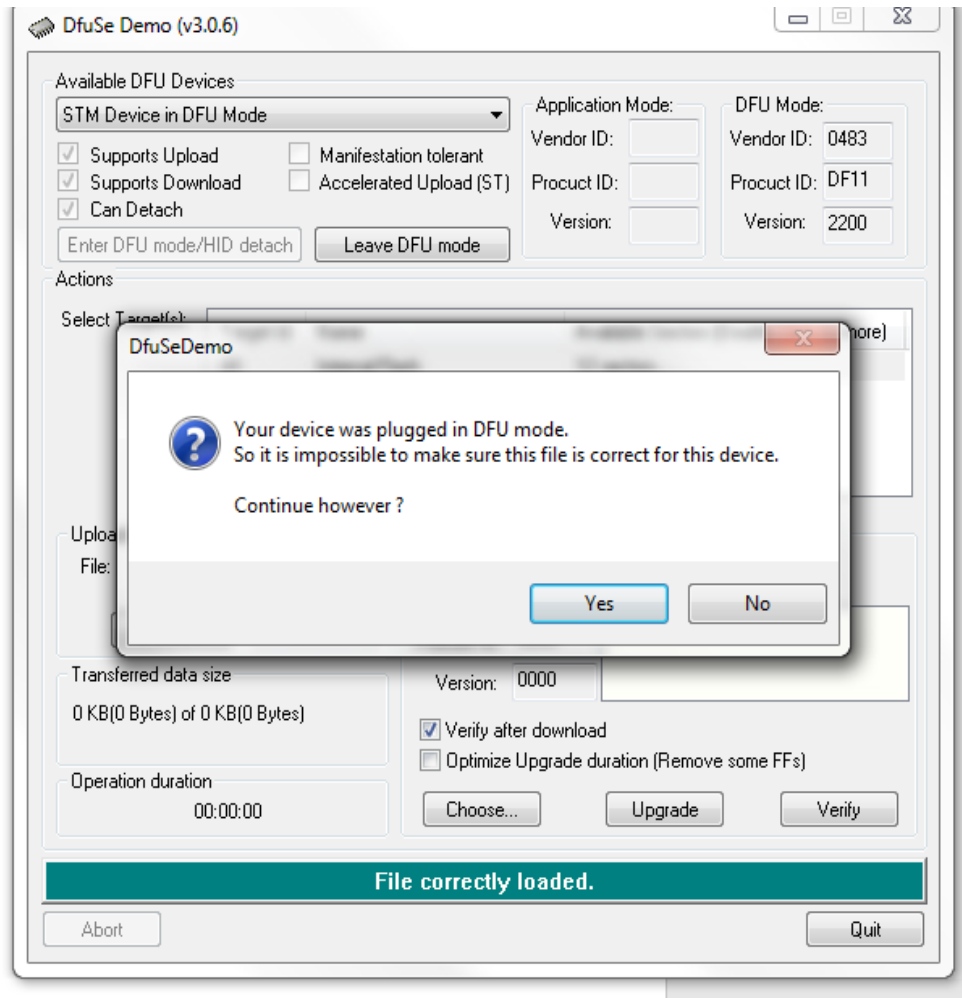
23. Press the Yes button and in a few seconds, you get the following:
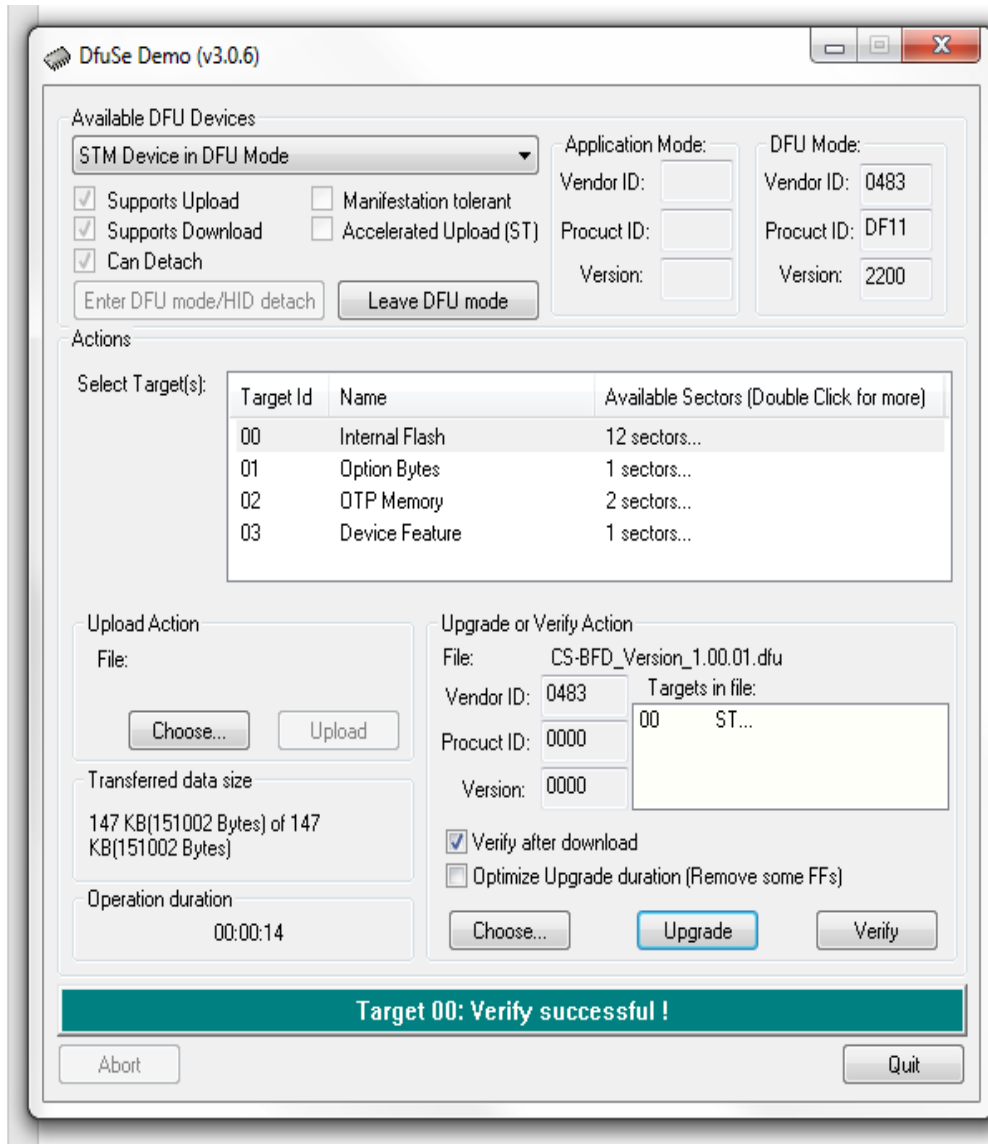
Press the Quit key and you are now finished.

24. Move the Boot mode jumper back to the normal mode.

25. Remove the special USB cable and turn off the power supply attached to the radio for at least five seconds. Turn on the power supply attached to the radio and then press the power button on the CS-BFD until the screen turns on. You are now ready to use the radio and the CS-BFD.