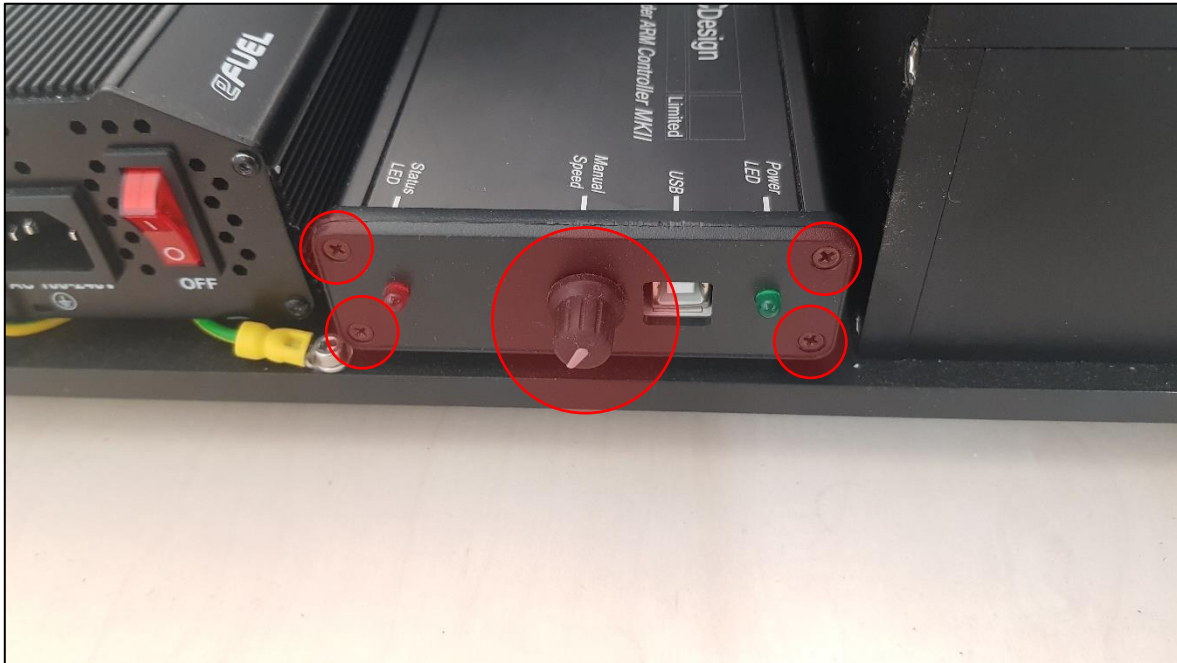
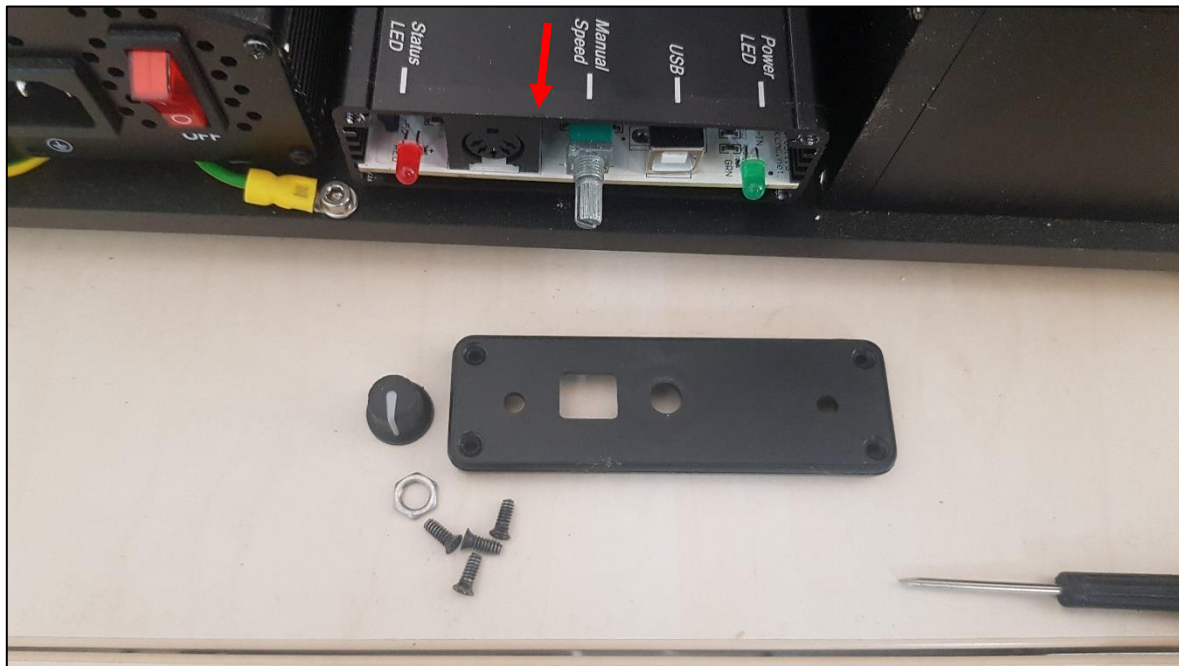


UPGRADING FIRMWARE

Connecting the JTAG Programmer



Remove the dial and the M6 nut behind it. Then remove the 4 screws securing the front plate in place.



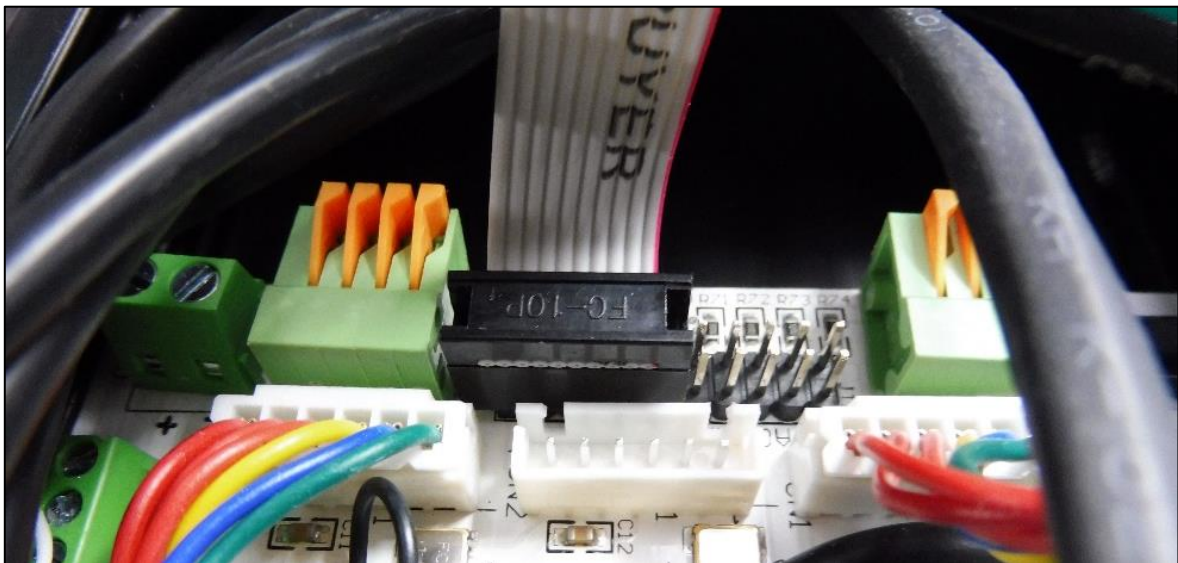
Once removed, slide the lid off the enclosure.



Connect the JTAG Programmer to the ribbon cable that's already attached to the controller board.



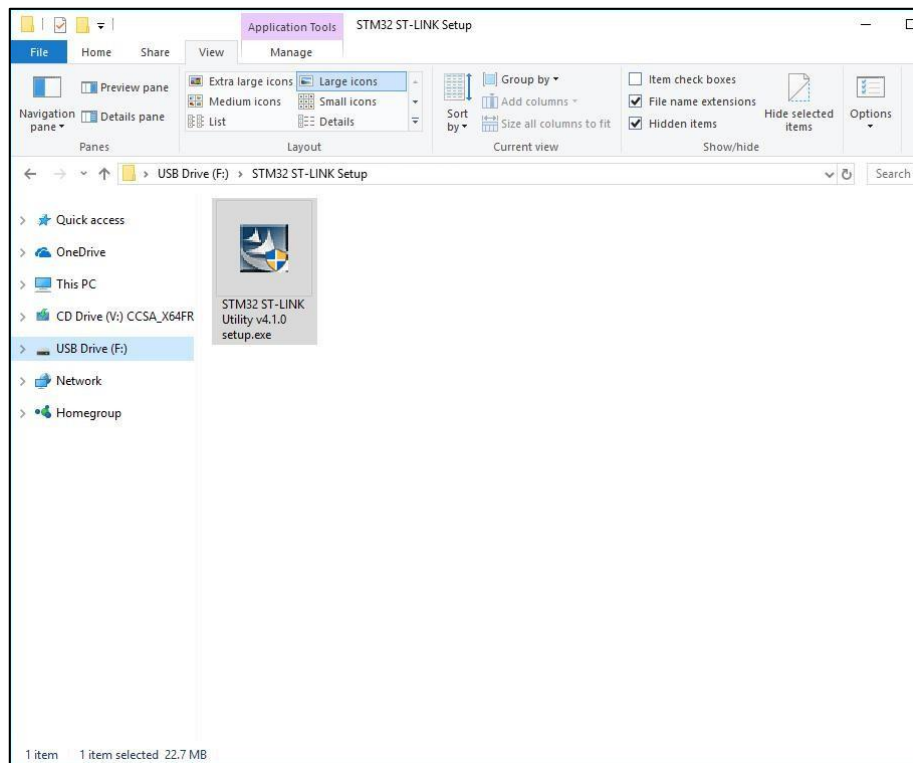
You can use a USB Male to Female extension cable if the JTAG does not reach your computer. (Not supplied with machine.)



IMPORTANT: If the ribbon cable gets removed or is not connected to the ARM Controller, then you'll have to connect the ribbon cable to "JTAG ST" on the controller Board.

Ensure it's connected as shown above with the red line on the right side.

Installing STM32 ST-LINK Utility and programming firmware

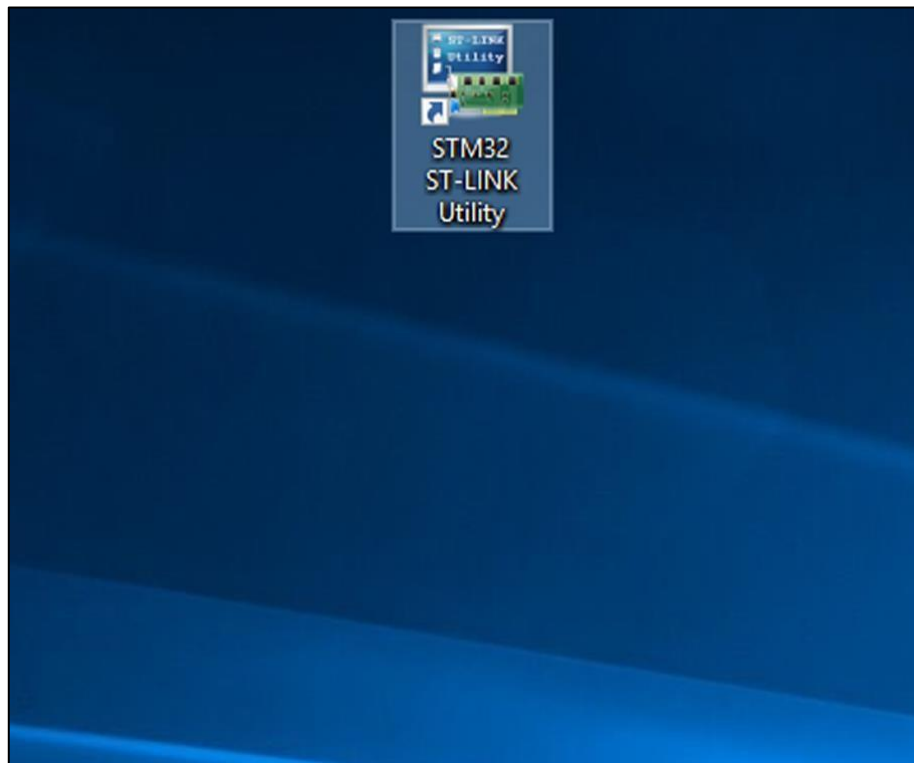


The STM32 ST-LINK Utility Setup Executable is located on the supplied USB memory stick as shown above.

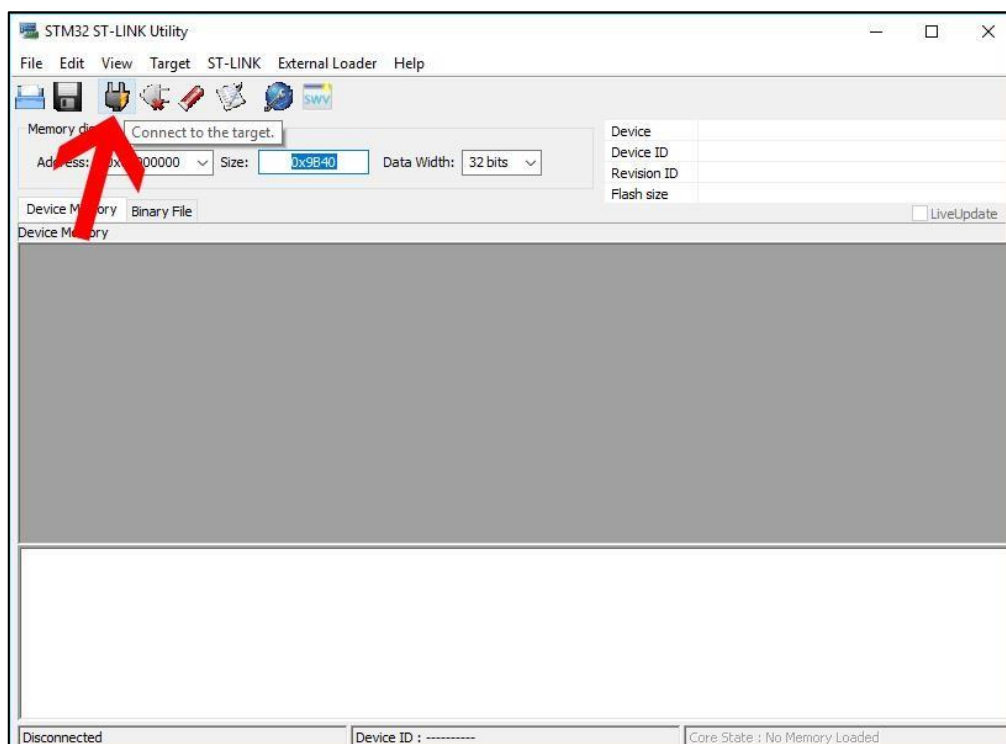
Follow the instructions on the wizard to install the Program.

Alternatively you can download the software via the official Website.

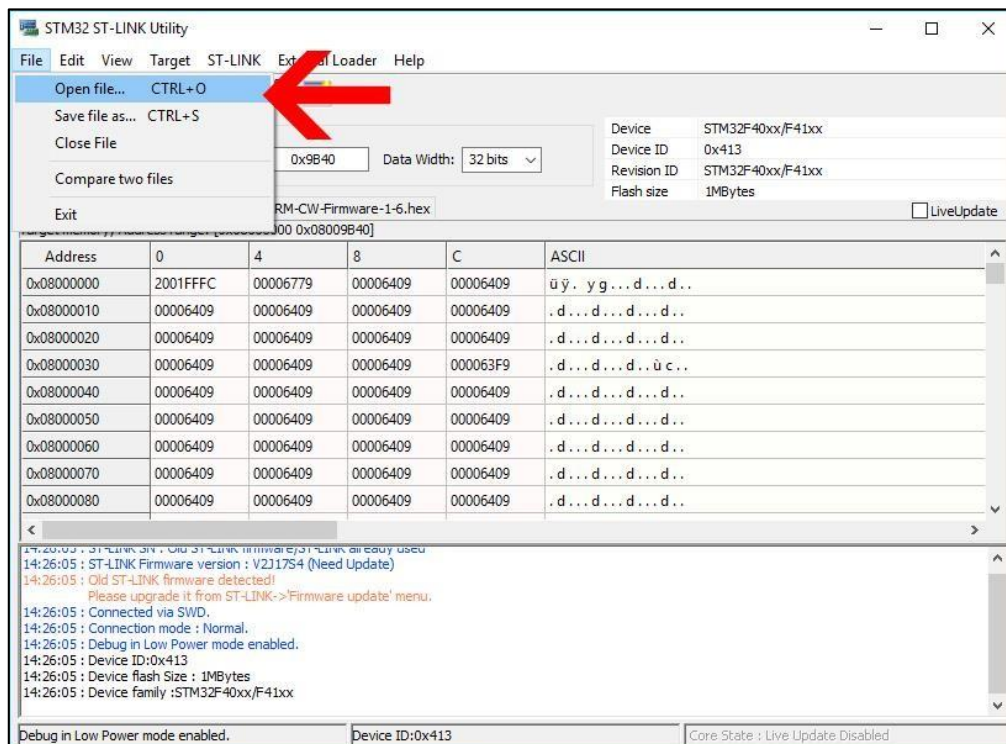
<http://www.st.com/en/development-tools/stsw-link004.html>



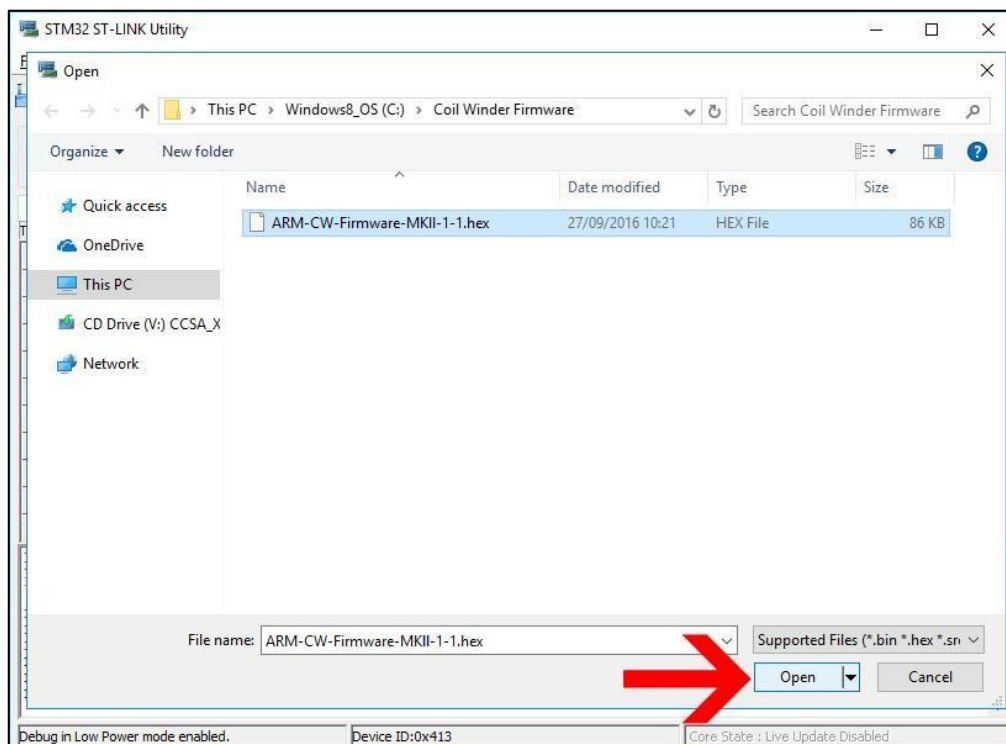
Once installed run the program.



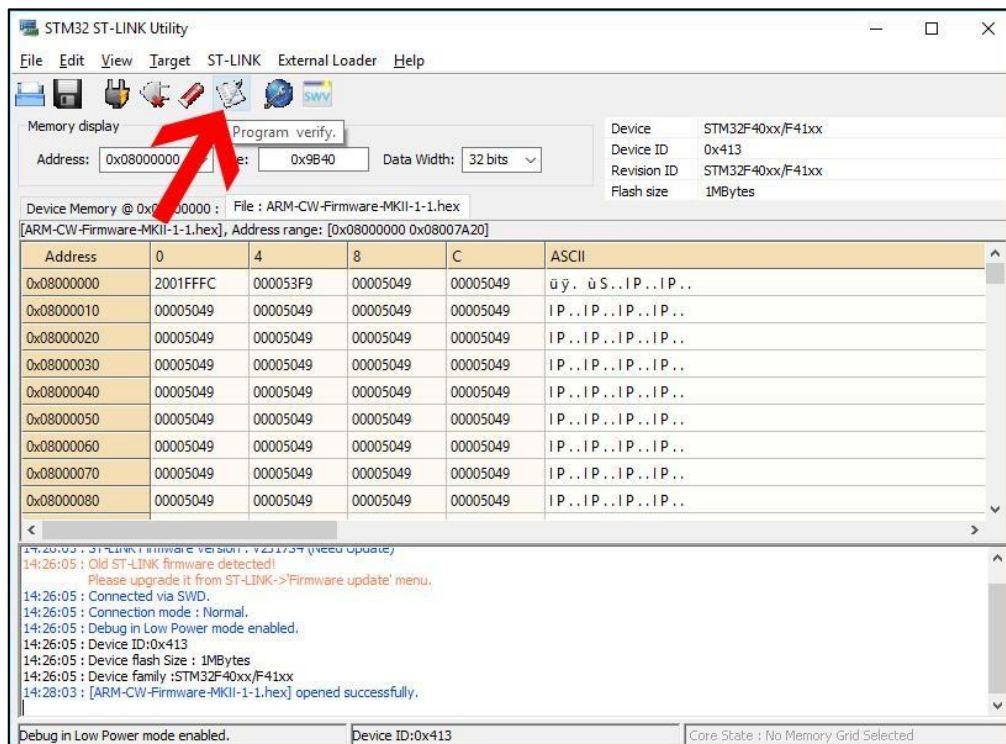
Ensure your JTAG Programmer is connected to your PC and click the Connect button.



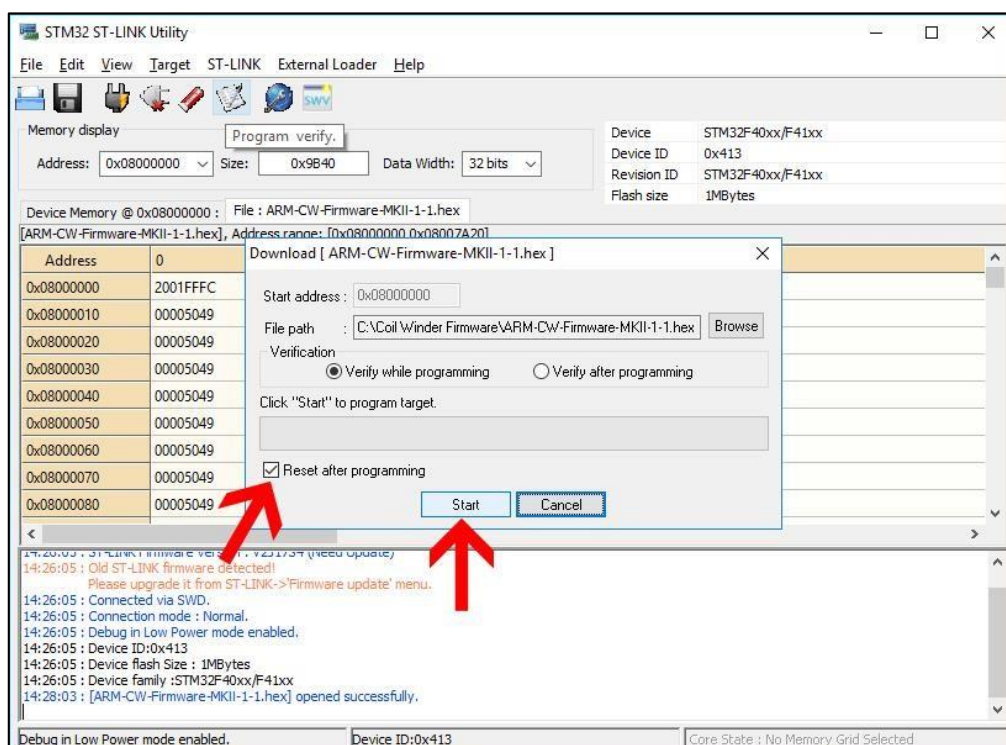
Along the top bar click “File” then select “Open file...” from the sub menu.



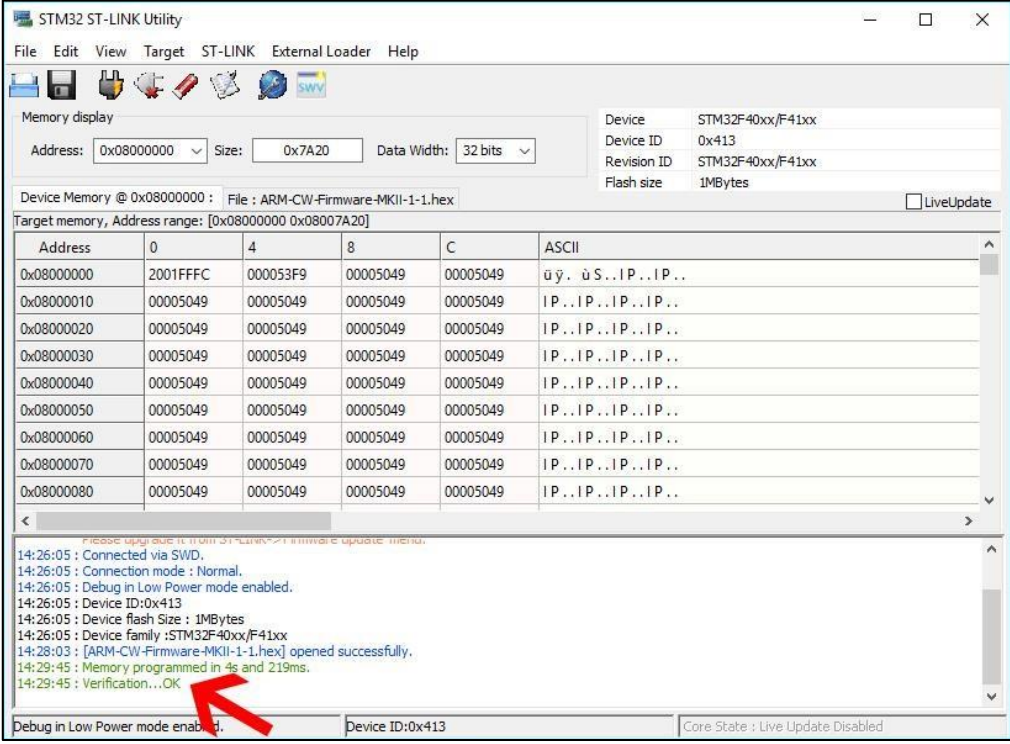
Locate the latest firmware file and click open.



Now click the Program Verify button.



Check the "Reset after programming" checkbox and click the start button.



The screenshot shows the STM32 ST-LINK Utility software interface. The top menu bar includes File, Edit, View, Target, ST-LINK, External Loader, and Help. Below the menu is a toolbar with various icons. The main window is divided into several sections:

- Memory display:** Address: 0x08000000, Size: 0x7A20, Data Width: 32 bits.
- Device Information:** Device: STM32F40xx/F41xx, Device ID: 0x413, Revision ID: STM32F40xx/F41xx, Flash size: 1MBytes.
- Device Memory @ 0x08000000:** File: ARM-CW-Firmware-MKII-1-1.hex, LiveUpdate checkbox.
- Target memory, Address range: [0x08000000 0x08007A20]**
- Memory Table:**

Address	0	4	8	C	ASCII
0x08000000	2001FFFC	000053F9	00005049	00005049	ü ý . ù S . I P . . I P . .
0x08000010	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000020	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000030	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000040	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000050	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000060	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000070	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .
0x08000080	00005049	00005049	00005049	00005049	I P . . I P . . I P . . I P . .

Below the table is a log window with the following output:

```
14:26:05 : Connected via SWD.  
14:26:05 : Connection mode : Normal.  
14:26:05 : Debug in Low Power mode enabled.  
14:26:05 : Device ID:0x413  
14:26:05 : Device flash Size : 1MBytes  
14:26:05 : Device family :STM32F40xx/F41xx  
14:28:03 : [ARM-CW-Firmware-MKII-1-1.hex] opened successfully.  
14:29:45 : Memory programmed in 4s and 219ms.  
14:29:45 : Verification...OK
```

A red arrow points to the "Verification...OK" message in the log. The status bar at the bottom shows "Debug in Low Power mode enabled", "Device ID:0x413", and "Core State : Live Update Disabled".

Once complete you should see a verification...OK message in your log and now your Coil winder has the latest Firmware.

Now re-assemble the coil winder following the beginning steps in reverse.