

Flashing the Boards

All Platforms

First, install the Python Firmware Uploader with pip:

```
$ pip install pyfwup
```

Linux and macOS may require either `pip install --user`, or `sudo`.

Challenges with generally have a firmware `.bin` file to be flashed to the device. To flash a firmware file, start with the device unplugged, then use the following command:

```
$ microprog <bin_filename>
```

The program will prompt for you to plug the device into your USB port. Plug your device in, wait for flashing to complete, and you're done!

```
sh-5.0 $ microprog firmware.bin
Plug the target board in now.
If the board is already plugged in, you may need to unplug and replug it before it will be found.

Board found!
Programming 1448 bytes...
Programming complete!

Running newly-programmed application.

sh-5.0 $ █
```

Windows

On Windows the process has an extra step for **only** the first time. After flashing the board, you'll need to use Zadig to install `libusb-win32` for the programmed device again. Steps 2-5 in [Setting up the Environment](#) describe this process, though Zadig may report a name other than "Unknown Device #1".