OpenSprinkler Firmware Updater Instructions

Preparation

To start, you need a regular-size A male to B male USB cable. Most printers use this type of cable. See picture on the right.

It's recommended that you use the Export Configuration feature in the OpenSprinkler web interface to save a copy of your current programs and settings, so you can restore them after the update.

Please run the osFWUpdater program in the subfolder corresponding to your operating system:

- **On Windows: osFWUpdater.exe in the Windows subfolder.**
- **On Mac: osFWUpdater in the MacOSX subfolder.**
  - o Note: if you encounter error **Application is damaged and can't be opened**, you need to temporarily change the settings in **Security and Privacy** (under **System Preferences**) to allow applications downloaded from anywhere. For details, check this webpage.
- **On Linux: osFWUpdater_x64 in the Linux subfolder.**
  - o Note: you need to either run the program in **sudo**, or add udev rules for the USB devices. An example udev rules is provided. If the pre-compiled executable doesn't run, you can re-build the program in the **Source** subfolder. You need to install Qt fo compile the source.

Check Hardware Version

To find out your hardware version, check the label at the back of your OpenSprinkler. If you can't find the label, there is a simple rule: if your OpenSprinkler has a **green**-colored 24VAC terminal block, it's hardware v2.0; if it has an **orange**-colored terminal block, it's v2.1.

Driver

- **Linux does not need driver for any version of OpenSprinkler.**
- **On Mac, you need to install driver for**
  - o OpenSprinkler Hardware 2.2: CH341 driver → http://raysfiles.com/drivers/ch341ser_mac.zip
  - o OpenSprinkler Hardware 2.1 and 2.0 do not need driver for Mac.
- **On Windows, you need to install driver for**
  - o OpenSprinkler Hardware 2.2: CH341 driver → http://raysfiles.com/drivers/ch341ser.exe
    (Only needed for Windows XP; newer Windows systems do not need driver for CH341).
  - o OpenSprinkler Hardware 2.1: USBasp driver → http://www.fischl.de/usbasp/
    (Windows 8 and 8.1 require disabling driver signature enforcement, Check video tutorial).
  - o OpenSprinkler Hardware 2.0: USBtiny driver → https://learn.adafruit.com/usbtinyisp/drivers

Firmware Update

1. **For OpenSprinkler Hardware v2.1**: please **enter bootloader** first
   → turn off controller, press and hold pushbutton B2 while plugging in the USB cable; then **release the button within 1-2 seconds** after plugging in the cable. The screen should remain off. If the screen lights up, please repeat the above procedure.

   All other versions of OpenSprinkler: just plug in the USB cable.

2. Run the osFWUpdater program. Click on **Download Firmware** to obtain the latest firmware.

3. Next, click on **Detect Hardware**. The program will automatically detect your OpenSprinkler Hardware version. If you encounter an error, check if the driver is installed, and if the USB cable is plugged in correctly.

4. **If you have OpenSprinkler Hardware v2.1**: please enter bootloader again (follow Step 1 above), then click on **Upload Selected Firmware**.

   All other versions of OpenSprinkler: just click on **Upload Selected Firmware**.

   The program by default selects the latest firmware available. If needed, you can also manually select a prior firmware from the **Firmware** dropdown lists.

5. Check the LCD: the device will reset its internal memory, and restart after it's done.

6. Check out the new firmware features. **If everything looks ok**, use the web interface's **Import Configuration** feature to restore your previous programs and settings.

Video Tutorial available at: *http://youtu.be/oUb9A_kK_3Q*