

## Reflex Firmware Update Instructions.

You will Need:

Reflex-FWUDv1.xx.zip that this help file is contained in. Unzip it to a folder.

A USB Cable

Power to the Reflex LiveLoop

Arduino IDE for your platform (see links below)

### First you need to install the CH340 driver.

#### Windows:

Locate ch341ser.exe in the supplied zip file, unzip to a folder and double click to install.

\*Windows 7: Locate DRIVER2\_CH340.zip, unzip to a folder and double click to install.

**Mac OS: SIERRA (sept2016): NOTE: At this time you must purchase PL2303/CH34x at [www.mac-usb-serial.com](http://www.mac-usb-serial.com) Eventually it will be available from the manufacturers. This is the only way!**

El Capitan/Yosemite: Unzip the install MacOS/CH34x\_Install.zip and start the install process.

Once this is done, reboot your computer.

**BUT WAIT.** If you are running Yosemite **AND** this signed driver won't work:

Run the command in Terminal: `sudo nvram boot-args="kext-dev-mode=1"` and reboot

Just like Yosemite, **El Capitan** requires kext driver signing. How this can be disabled in OSX 10.11 is changed however.

To get the drivers to work in El Capitan you need to use the new tool csrutil as follows:

a.. Reboot and press CMD+R immediately after hearing the startup sound to boot to Recovery Mode

b.. Open Terminal

c.. Execute the following command: `csrutil enable --without kext`

d.. Reboot After rebooting you should see your serial port in the Arduino IDE. (after Upload below, "csrutil clear" to reset if desired)

**Linux:** Should work right away!

Now you'll need to download the Arduino IDE

**MacOS** <https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/arduino/arduino-1.0.5-macosx.zip>

**Windows** <https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/arduino/arduino-1.0.5-r2-windows.zip>

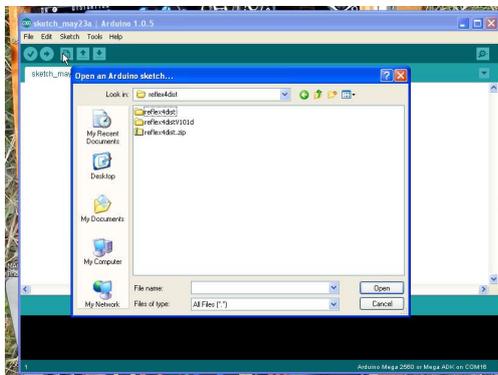
**Linux32** <https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/arduino/arduino-1.0.5-linux32.tgz>

**Linux64** <https://storage.googleapis.com/google-code-archive-downloads/v2/code.google.com/arduino/arduino-1.0.5-linux64.tgz>

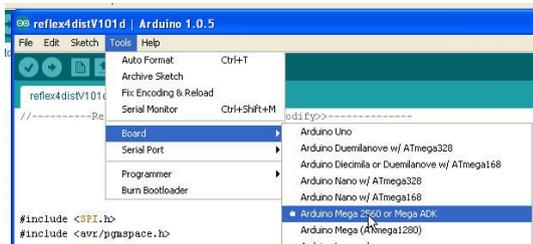
Install the Arduino software and start it up.

Copy the reflex4distV1xx folder from the .zip into the Arduino created folder (good practice!)

Open the reflex4distV1xx.ino file included with the Reflex-FWUDv1.xx.zip firmware update with Arduino's dropdown **File / Open...**



In **Tools** dropdown, select **Board**, then select **Arduino Mega2560 or Mega ADK** (6 down)



View COM ports available, then plug in USB to Reflex LiveLoop modular and note new the port in **Tools / Serial Port** dropdown menu..

Select that port for upload

Power up the Reflex



Arduino continued

Click **Upload Arrow** to begin uploading.  
The EQ LED will begin to flash blue.

Wait until the Blue LED stops flashing (about 10 seconds)  
and the Reflex startup splash occurs.



**If the firmware update is basic, you're done! If it's a core update, see below.**

Core Update:

If the Reflex Core also is being updated, then once the Blue LED stops flickering, the LED circle will flash which is requesting a core update.

Be at the ready to press the Record button (red) and Play button (green) together.  
If you missed it last time, then just power up the Reflex again.



Immediately after EQ LED stops flashing blue, the LED circle will begin flashing.  
Within 10 seconds, press Record button and Play button together, and firmware update will continue.  
Note: DO NOT CUT POWER AT THIS POINT or the Reflex may not be able recover.

Once the LED circle stops "chasing" & flashing, unplug the USB, power down and power up.  
The Reflex LiveLoop is now firmware updated.

Version number: From the Arduino IDE, you can read the present Version by opening the serial port viewer (the little magnifying glass button on the far right) while the Reflex is still connected.

Q&A:

Q: The CH341 drivers included aren't for my platform

A: Go To [http://www.wch.cn/download/CH341SER\\_MAC\\_ZIP.html](http://www.wch.cn/download/CH341SER_MAC_ZIP.html) and browse the .zip files

Q: "Since the firmware update, some functions don't work or the unit hangs up"

A: If at power-up the LED circle flashes, the firmware update is incomplete. Press/hold Rec & Play on power-up

Q: The suggested version of Arduino IDE won't run on my new system.

A: You can try the Arduino website as they have all of the newest versions, and will work to upload FW to the Reflex

Q: "I liked the old version better than this one, how can I go back to it?"

A: Just go to the Reflex LiveLoop site (<http://www.freshnelly.com/reflex/reflex.htm>) Support, select Vx.xx

Q: "Is there an open source version to modify?"

A: We are working on an open source version that is easy to understand. Check the site for news!

You may have noticed this version is "encrypted". This is to discourage users modifying the firmware before it has been made "user friendly"

Q: "I have tried everything and still won't work since the firmware update, what do I do?"

A: Despite internal auto-recovery, a power spike or glitch may have corrupted data inside the core as it was being updated. In this case contact us at [reflex@freshnelly.com](mailto:reflex@freshnelly.com) for info on returning the small digital board once unplugged from the motherboard.

**WARNING: NEVER unplug the power header when powered up & USB plugged in.** It may damage the Reflex or your computer's USB interface or both. This has been endurance tested, but is good practice.

**CAUTION: If the small board gets detached somehow from the mother board, make certain the pins line up and the silver marks also line up. Failure to do so will destroy the board!**