Upgrading Firmware (= flashing Marlin)

What's up with upgrading firmware?

Firmware is the brains of the printer. Or, it's the code that determines how the brain functions. Over time, we add features and fix mistakes of the past, which makes JellyBOX work better. When there is a new firmware version, you should upgrade.

Upgrading Firmware (Flashing Marlin)

You'll need

a. Latest relevant IMADE3D Marlin release of https://github.com/IMADE3D/Marlin/releases
b. Arduino IDE 1.6.5 https://www.arduino.cc/en/Main/OldSoftwareReleases#previous
   i. Arduino 1.6.5 WORKS FOR SURE.
   ii. 1.6.9, 1.6.10 verified as not working
   iii. On both mac and pc you can run multiple arduino versions no problem.
c. Jellybox (duh)
d. USB cable. Type B. One came with your Jellybox, but most type B cables will work.
e. PC, Mac, or Linux computer.

1. Get the latest firmware (Marlin)
   a. Download "Source code (zip)" from https://github.com/IMADE3D/Marlin/releases
2. Unzip the downloaded file (extract)
   a. If you don't know what that means, check out this guide at ehow.
3. Connect the printer over USB
4. Open Marlin in Arduino IDE
   a. Open "Marlin-JB-XXX/Marlin/Marlin.ino" file. This will open Arduino IDE automatically. You should see many many many tabs open. If not, try again.
   b. No Arduino IDE? Get Arduino IDE 1.6.5 https://www.arduino.cc/en/Main/OldSoftwareReleases#previous
   c. Don't see the ".ino" extension? Look up online how to show file extensions, OR, just try opening all three files that are called "Marlin" until it opens Arduino IDE with lots of tabs.
5. In Arduino IDE menu, choose Tools > Board > Arduino Mega or Mega 2560
6. In Arduino IDE menu, choose Tools > Processor > ATmega2560 (Mega 2560)
7. In Arduino IDE menu, choose Tools > Port - … and select the port on your computer that recognized the Arduino
   a. If your computer does not recognize the Arduino, please follow the Arduino Troubleshooting Guide https://www.arduino.cc/en/Guide/Troubleshooting as this is very operating-system specific.
8. Add the U8glib library
   a. In Arduino IDE menu, choose Sketch > Include Library > Add .Zip Library > …and now navigate to and select this folder (yes, folder, not .zip!) "Marlin-JB-XXX/ArduinoAddons/Arduino_1.6.x/hardware/marlin/avr/libraries/U8glib"
   b. This makes the LCD controller work and only needs to be done once per computer and Arduino IDE installation.
   c. If you get an error, try adding U8glib library again.
9. Now you're ready to flash the firmware (upgrade :-) Yay.
10. In Arduino IDE menu, choose Sketch > Verify/ Compile
    a. This is a verification step. If all goes well, it's unnecessary.
    b. If it throws any errors, try to read them and figure out what's happening. Contact your favorite search engine and/or us with any trouble.

    c. Sometimes, on Mac and PC, this just fails for no good reason and restarting the computer fixes it. Magic, eh!
11. In Arduino IDE menu, choose Sketch > Upload
12. Wait for the process to finish. When you see "Upload Done," you're done!
13. Pat yourself on the back and get on with your 3D printing life.