How to compile firmware from source

FELIXprinters

31 October 20177

Revision 1

FELIX printers

1 Introduction

This guide shows how to compile firmware from the firmware source files and upload it to the printer. We'll cover the Tec line and also the Pro line.

This guide is especially useful if you don't have a windows pc at hand or if you want to make some adjustments to the firmware.

2 Prerequisites

To compile the firmware as explained in this manual you will need the following:

- Arduino IDE installer. You can download it here:
  https://www.arduino.cc/en/Main/Software
  This manual assumes you will use version 1.8 or newer.
- The source code of the Felix firmware. You can download it from our site:
  http://www.felixprinters.com/download
    - Navigate to your printer and download the firmware source files.
- Please unzip the contents of the source file to a convenient location on your computer.
- Windows 7/8/10, mac OS X
- You must have administrative privileges on your computer.

3 Install Arduino software

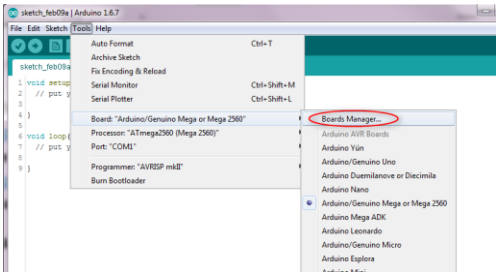
- Install the Arduino IDE by executing the installer.
- Open the Arduino IDE.

3.1 Additional steps for the FELIX pro series

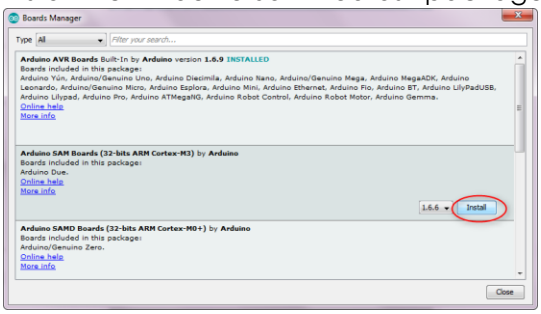
If you have a felix pro printer, please read this chapter, otherwise continue to next chapter.

The pro series has a 32 bit controller which is not standard installed in the Arduino software. So we need to manually install it.

- Install the Arduino Due board files: ***Tools->Board->Boards Manager***

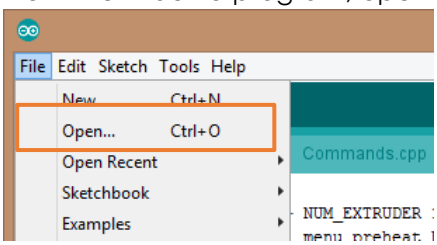


- Install the “Arduino Sam Boards” package by clicking “More info” and then “install”:

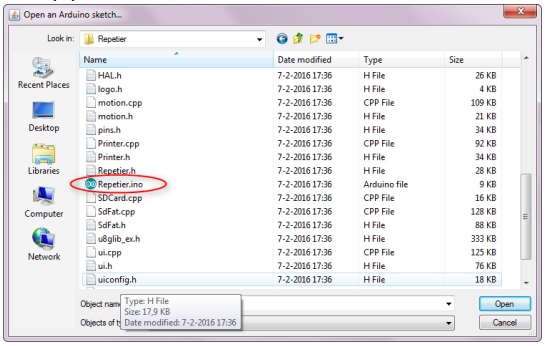


4 Upload firmware

- From the Arduino program, open the firmware file.

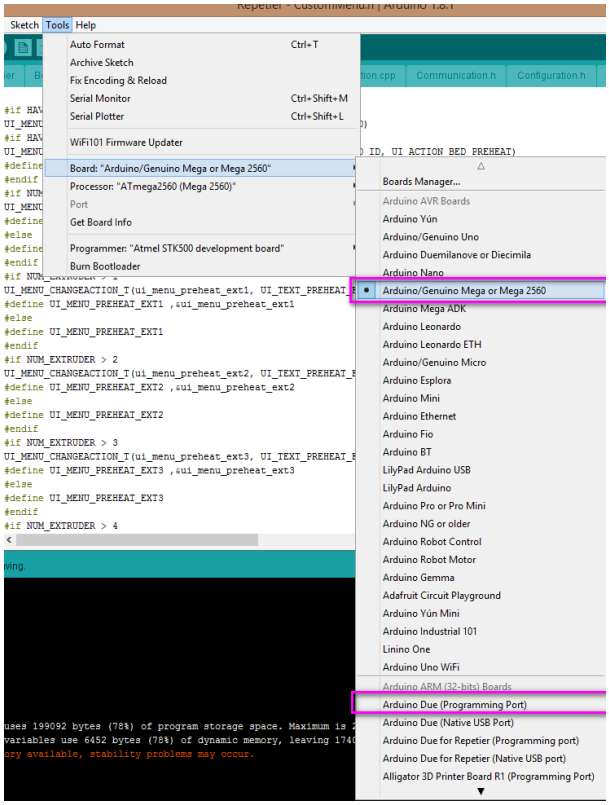


- From within the IDE, open the file “Repetier.ino” that is located in the “Repetier” subdirectory of the unzipped firmware file.

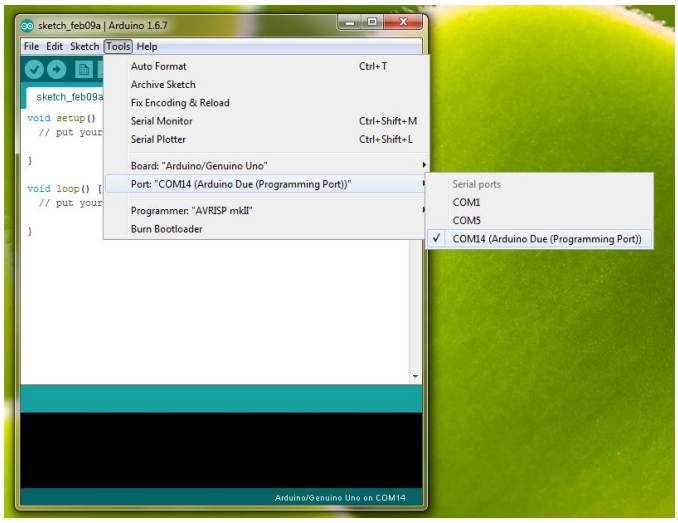


The files that belong to the firmware are opened in the IDE.

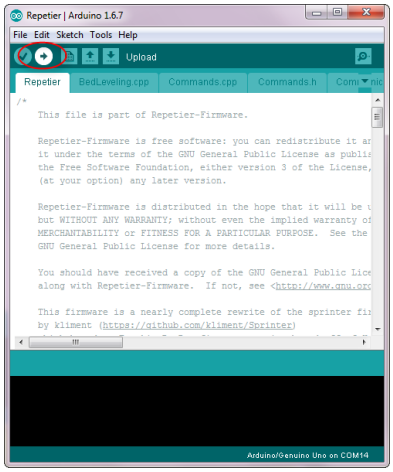
- Now select the correct board to upload the firmware to.
    - In case you have a tec series. Choose "**Arduino/Genuine Mega or Mega 2560"**
    - In case you have a pro series Select the "**Arduino Due for Repetier (Programming port)**" board.



- Select the right COM port (Arduino Due (Programming Port)).



- Press the green arrow-to-the-right (upload) button to compile and upload the firmware:



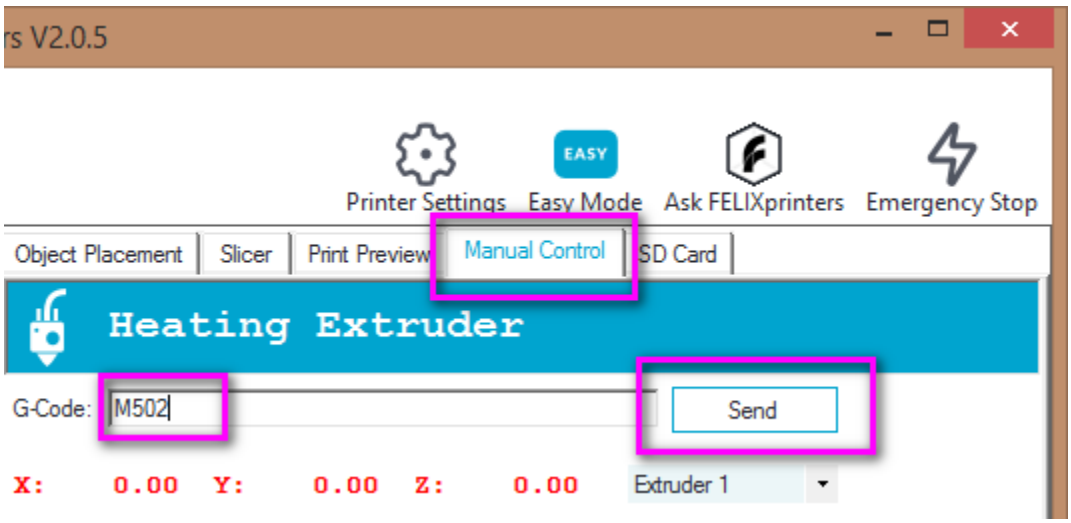
The firmware starts to compile. After compiling it immediately starts to upload it to the printer.

5 Reset EEPROM

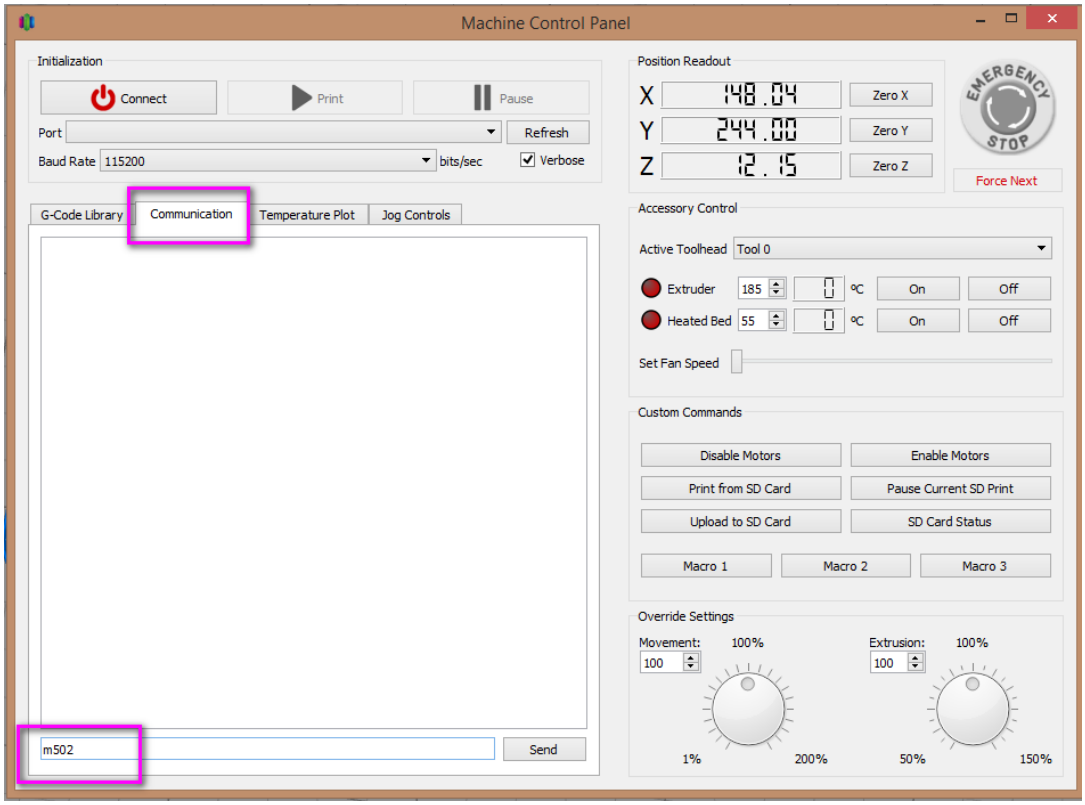
The EEPROM is basically the harddrive of the printer control board. It has several parameters stored responsible for correct operation of the printer. To make sure to have a clean slate it is strongly recommended to erase this memory after flashing new firmware.

To do this go to the command line and send g-code command **M502** and then **M500.** The first one loads default values into EEPROM, the second command stores these newly loaded values. So they are still maintained when turning off the printer.

In repetier-host:



In simplify3D:



If you are unable to continue or have any questions, you can check at the support section of our website or you can contact us directly:

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Email: support@felixprinters.com

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Kind regards,

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