How-To Flash bootloader to Felix 3.x / TEC mainboard:

Requirements:

- Arduino UNO / or compatible device (Link for references)
- <u>6 jumper wire Female / Male</u> (Link for references)
- Or 5 jumper wires Female / Female and 1 Female / Male
- USB cable

Step 1: Make the Arduino ready

Download and install the Arduino IDE software on your computer.

• Arduino IDE Software

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Arduino as ISP - YouTube			FELIXprinters Downloads		Arduino - Software		+
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	Download th		o IDE				
	000	write code and upload Windows, Mac OS X, a written in Java and bas source software. This software can be u	. 8 . 7 Ins Seftware (IDE) makes it ea is to the board, it runs on di Juna. The environment is ed on Processing and other op sed with any Arduino board. Larted page for installation	wi sy to G en- Ma Lin Lin Rela Sou	ndows Installer, for Y ndows 2/P file for nor ndows app Require: et a et al. et oS X 10 8 Mountain UX 32 bits UX 64 bits Code chams (sha512)	n admin install i Win 8.1 or 10	
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• Install and open the software, connect the Arduino UNO to your computer and load the "ArduinoISP" sketch.

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	Open	жo
ArduinoISP // ArduinoISP // Copyright (// If you requ // http:// // This sketch // using the f // // Pin 10 is u // // By default,	_128x64_lcd_felix Ambilight Example01-Simple test Example02-DisplayStrin Example03-graphicstest Example04-Touch Example05-ShowBMP Example06-Phonecal libraries SDCard Exten Example	
<pre>// to communic // on the ICSP // // // Klaar met het bra</pre>	01.Basics 02.Digital 03.Analog 04.Communication 05.Control 06.Sensors 07.Display 08.Strings 09.USB	nos, these pins can be .n on Due, Zero
	10.StarterKit_BasicKit 11.ArduinoISP	ArduinolSP

• From the Tools menu select the correct Arduino UNO board and port:

Auto Format	ЖТ	
Archive Sketch		
Fix Encoding & Reload		
Manage Libraries	企 第1	
Serial Monitor	☆ ₩M	
Serial Plotter	企業L	Boards Manager
WiFi101 Firmware Updater		Arduino AVR Boards
Board: "Arduino/Genuino Uno"		Arduine Yún
Port: "/dev/cu.usbmodem641 (Arduino/Genuino Uno)"		✓ Arduino/Genuino Uno
Get Board Info		Arduino Buemilanove or Diecimila
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Programmer: "Arduino as ISP" Burn Bootloader	•	Arduino/Genuino Mega or Mega 2560 Arduino Mega ADK
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Auto Format 9 Archive Sketch 7 Fix Encoding & Reload 9 Manage Libraries 09 Serial Monitor 09 Serial Plotter 09 WiFi101 Firmware Updater 9 Board: "Arduino/Genuino Uno" Port: "/dev/cu.usbmodem641 (Arduino/Genuino Uno)"	BI BM BL > Se	erial ports ev/cu.OBDII-Port
Auto Format 3 Archive Sketch 5 Fix Encoding & Reload 5 Manage Libraries 03 Serial Monitor 03	BI BM BL /d /d	erial ports

• Upload the ArduinoISP sketch to the Arduino:

ArduinolSP Arduino 1.6.8	
Upload	Ø
Arduinots	•
// ArduinoISP	
// Copyright (c) 2008-2011 Randall Bohn	
// If you require a license, see	
// http://www.opensource.org/licenses/bsd-license.php	
//	
<pre>// This sketch turns the Arduino into a AVRISP</pre>	
<pre>// using the following arduino pins:</pre>	
//	
// Pin 10 is used to reset the target microcontroller.	
//	
// By default, the hardware SPI pins MISO, MOSI and SCK pins are used	
<pre>// to communicate with the target. On all Arduinos, these pins can be found</pre>	d

• Wait until the sketch is compiled and uploaded, this normally take less then 30 sec.

Done uploading.)		
			Maximum is 32256 bytes.
Global variables	use 482 bytes (23%) of	dynamic memory,	leaving 1566 bytes for lo

Now the Arduino Uno is programmed as an in-circuit programmer.

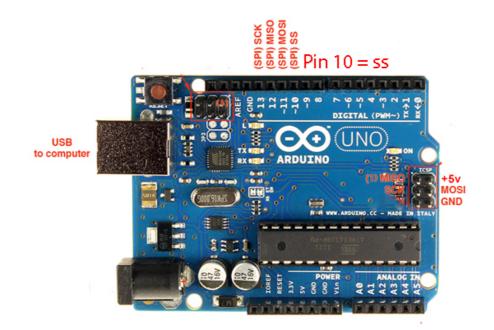
Step 2: Connect Arduino-programmer to Felix mainboard:

• Disconnect the Arduino from your computer and connect the Felix mainboard ISP port to the corresponding pins on the Arduino.



Pin 2: +5 volt Pin 3: SCK to Arduino SCK Pin 4: MOSI to Arduino MOSI Pin5: Reset to Arduino pin 10 (ss) Pin 6: GND to Arduino GND

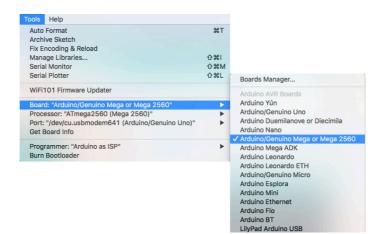
!! - For the +5v, GND, MISO, MOSI & SCK there are 2 option Male or Female - !! Reset pin must be connected to Pin 10!



• Now turn on the power of the printer, if everything is connected correctly the power led on the Arduino will turn on and you can connect the usb cable from the Arduino to your computer

Step 3: Burn Bootloader to Felix mainboard:

• Select from the Tools menu the Arduino Mega 2560 board and processor.



• Select programmer "Arduino as ISP"

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Board: "Arduino/Genuino Mega or Mega 2560"	•	
Processor: "ATmega2560 (Mega 2560)"	•	
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Get Board Info		
Programmer: "Arduino as ISP"	•	AVR ISP
Burn Bootloader		AVRISP mkll
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		ArduinoISP.org
		USBasp
		Parallel Programmer
		✓ Arduino as ISP
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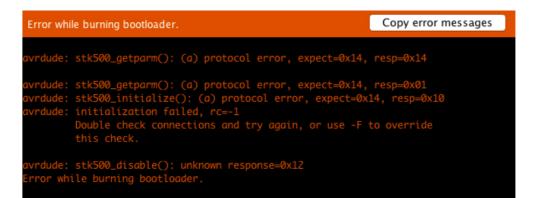
• Burn the bootloader to the Felix mainboard.

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	<mark>d: "Arduino/Genuino M</mark> ega or Mega 2560" essor: "ATmega2560 (Mega 2560)"	•
Port:	"/dev/cu.usbmodem641 (Arduino/Genuino Uno)" Board Info	•
Prog	rammer: "Arduino as ISP"	•
Burn	Bootloader	

• Check the RX and TX led's on the Arduino and wait for more info in the debug window or the message "Done burning bootloader". If everything went well you can connect the USB cable to the printer and upload the correct firmware the normal way.

Troubleshoot

• If you get an error similar like:



Try to change board driver version in the board manager

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Auto Format	ЖТ	
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Fix Encoding & Reload		
Manage Libraries	企 第1	
Serial Monitor	企₩M	
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Port: "/dev/cu.usbmodem641 (Arduino/Genuino Uno)"	•	Arduino Duemilanove or Diecimila
Get Board Info		Arduino Nano
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This is tested with version 1.6.10 so select it and press install

	Boards Manager	
Type All 🗘	Filter your search	
Leonardo, Arduino Leonardo Ethernet, A	uino Uno WiFi, Arduino Diecimila, Arduino Nano, Arduino/Genuino Mega, Arduino MegaADK, Arduino Arduino/Genuino Micro, Arduino Esplora, Arduino Mini, Arduino Ethernet, Arduino Fio, Arduino ET, Arduino ro, Arduino ATMegaNG, Arduino Robot Control, Arduino Robot Motor, Arduino Gemma, Adafruit Circuit Industrial 101, Linino One.	
Arduino SAM Boards (32-bits ARM C Boards included in this package: Arduino Due. <u>Online help</u> <u>More info</u>	ortex-M3) by Arduino version 1.6.11 INSTALLED	
	Cortex-M0+) by Arduino no Zero, Arduino/Genuino MKR1000, Arduino MKRZERO, Arduino MKR FOX 1200, Arduino MKR WAN 1300, p, Arduino M0, Arduino Tian, Adafruit Circuit Playground Express.	
	Close	

After the older version is installed try to burn the bootloader again.