



instructables

How to Upload Bootloader to Any Arduino !



by Nematic!

Let's say you brought an Arduino and tried to upload your very first program from Examples and it says Error

avrdude: stk500_getsync()

What this means is that your Arduino has a missing bootloader. So today I will show you how to upload a Bootloader to Any Arduino!

So let's Get Started !



Step 1: Watch the Video !

[//www.youtube.com/embed/LO8nnQZCrMU](https://www.youtube.com/embed/LO8nnQZCrMU)

If you don't want to read all the stuff you can watch my video!

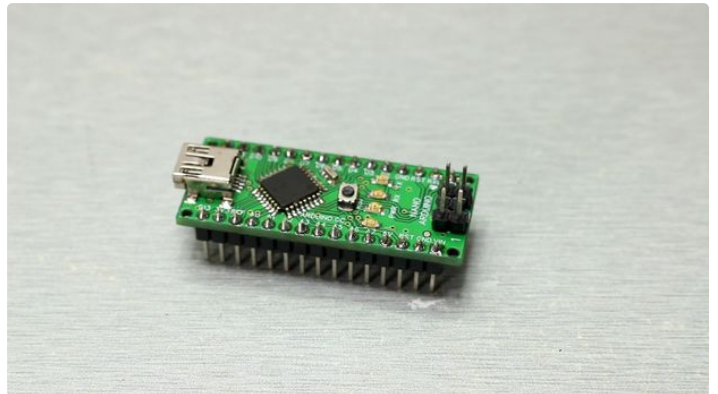
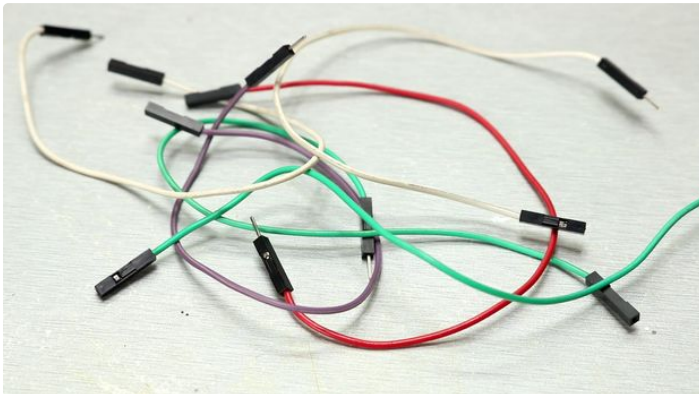
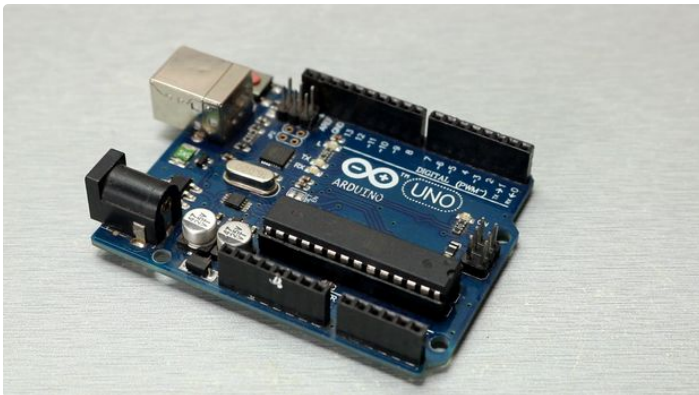
Step 2: Everything We Need !

List:

- 1) Arduino with the working bootloader if you don't have one borrow it
- 2) USB Cable
- 3) Arduino or Atmega chip on which you want to upload bootloader
- 4) Jumper wires

Optional (for uploading on chip)

- 5)a 16 MHz crystal
- 6)a 10k resistor
- 7)Two 18 to 22 picofarad (ceramic) capacitors.

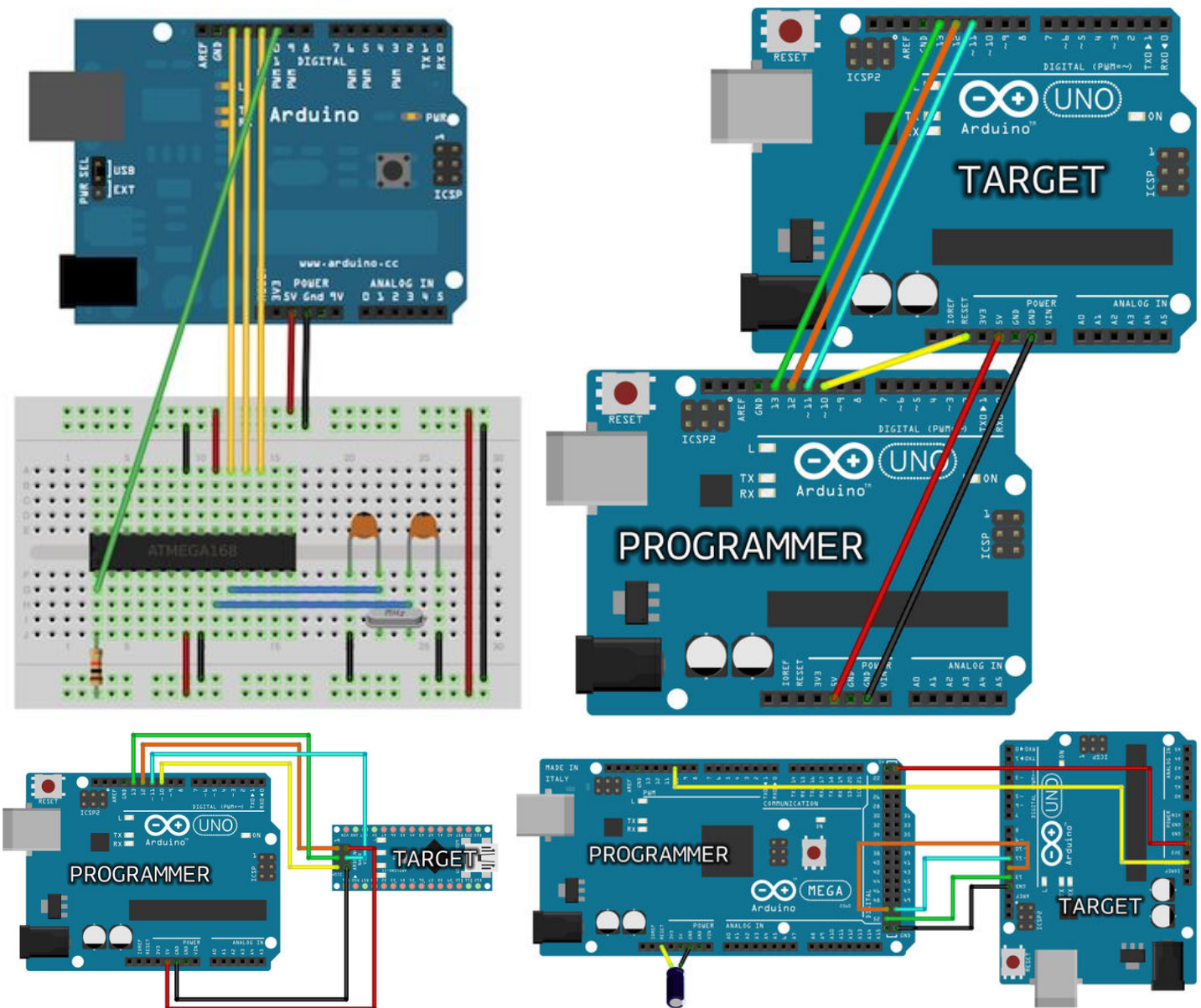




Step 3: Circuit Diagram

Here are the couple of different possibilities in which you can upload the bootloader to Arduino.

- 1) First Picture Represent Uploading bootloader from Uno to AtMega 328p-AU
- 2) The second Picture Represent Uploading Bootloader from Uno to Uno
- 3) The third Pic represent Uploading bootloader from Uno to Nano
- 4) The fourth Pic represent Uploading Bootloader from Mega to UNO



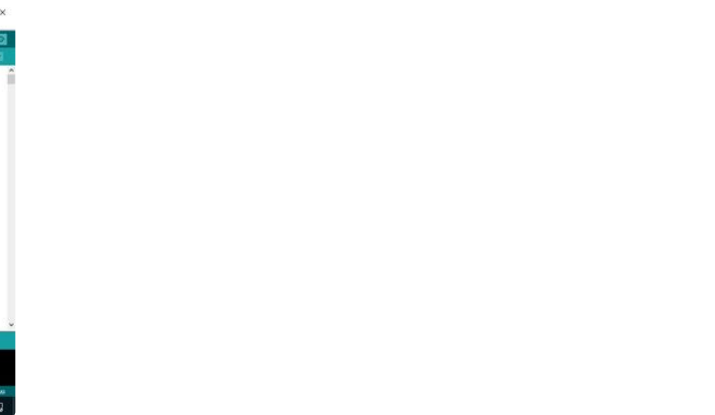
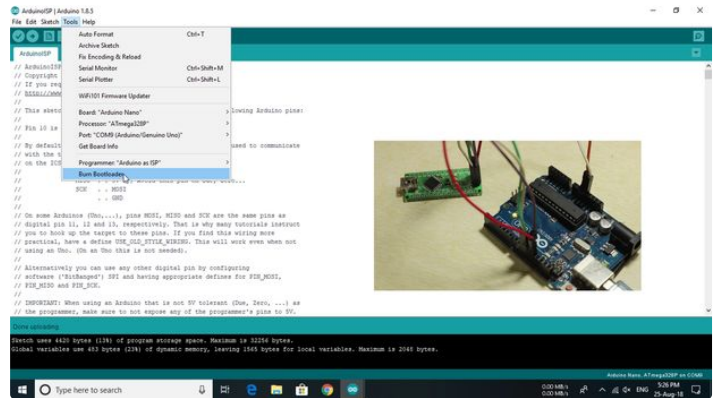
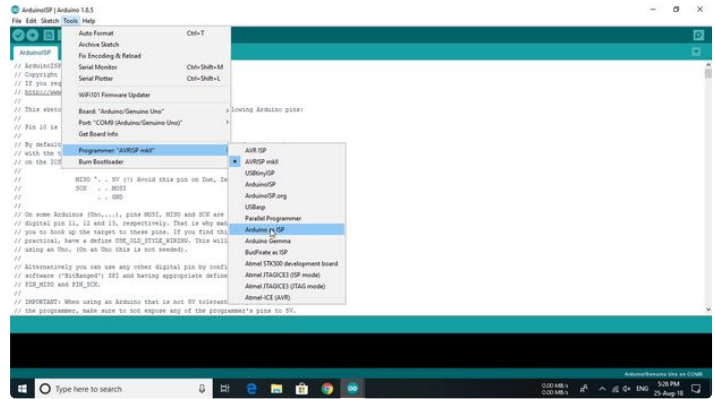
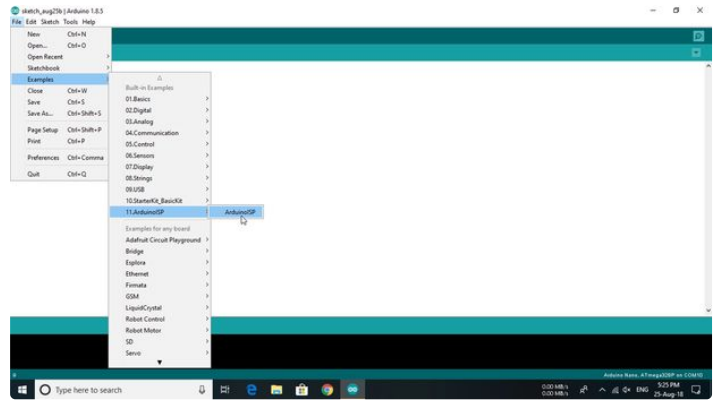
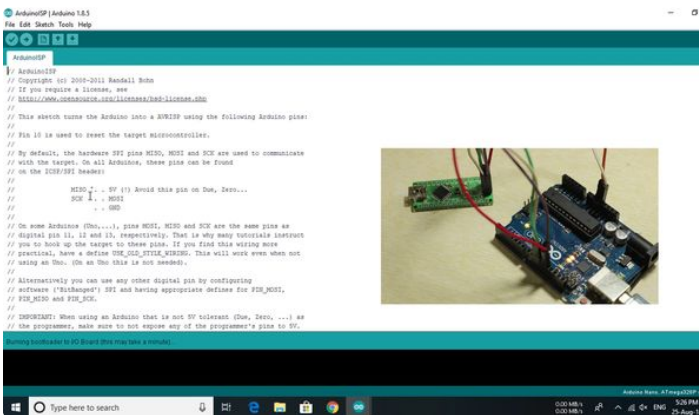
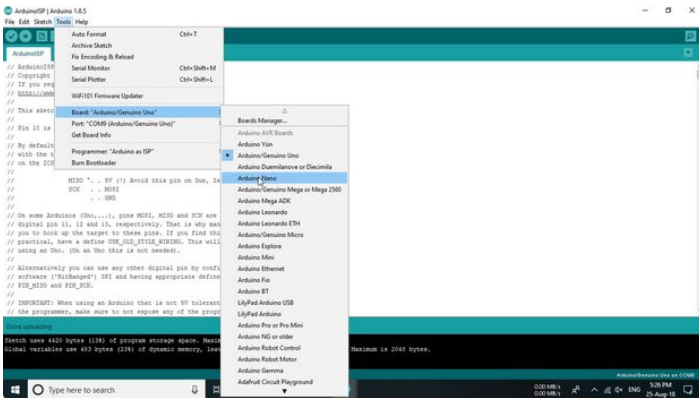
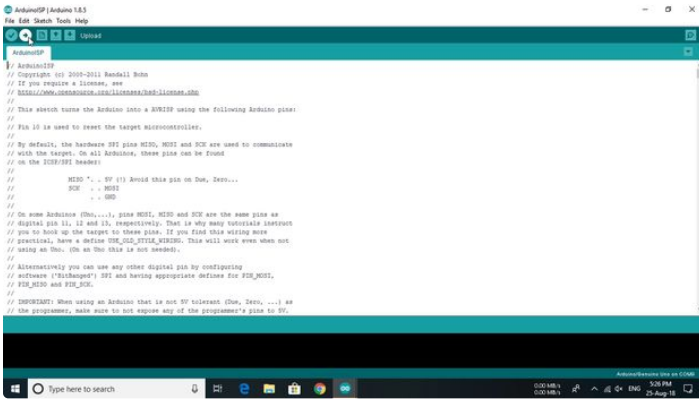
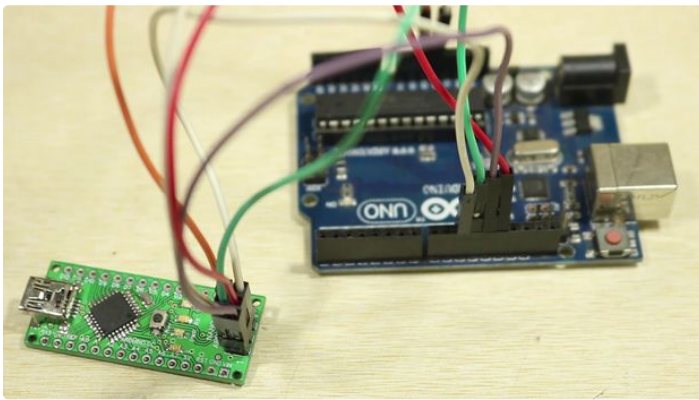
Step 4: Burn Bootloader !

- 1) Wire up the Arduino board and microcontroller as shown in the diagram earlier.
- 2) Upload the ArduinoISP sketch onto your Arduino board. (You'll need to select the board and serial port from the Tools menu that corresponds to your board.)
- 3) Select "**Your Board Which Is Target**" from the

Tools > Board

- 4) Select "Arduino as ISP" from Tools > Programmer

Once finished check if the board is working properly by uploading Blink Sketch on it.



Step 5: Thank You !

If you blink code runs then Congratulations you have uploaded Bootloader Successfully!

If you like my work

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