

I would really be grateful if you start to build the Optical Tester, that you go to the Photrio thread and say hi. Also please post photos of your completed tester.

Please refer to Photrio for further build help & to let us know you are building the tester
[Build a Optical Shutter Tester Cheap, Easy & it Works | Photrio.com Photography Forums](#)

V1 Arduino firmware load 05/03/2024

If not already done so, download the code from the github page.

<https://github.com/billbill100/Camera-Shutter-Tester-Optical-Cheap-Easy-It-Works>

click on the green **<> Code** button, which will allow you to download all of the files as a zip file.
Un-zip the downloaded file.

Flashing firmware onto the Arduino Board.

A program called AVRDUDESS is required. This is included in this Github page, or can be downloaded from
<https://github.com/ZakKemble/AVRDUDESS/releases/download/v2.14/AVRDUDESS-2.14-setup.exe>

To view the web page (for those who want more details

[AVRDUDESS – A GUI for AVRDUDE | Zak's Electronics Blog \(zakemble.net\)](#)

Watch this video, from 2.30 to 5.15

<https://youtu.be/Wcaql0jtlUg>

It explains how to load the .hex file onto your Arduino. Watch the video first, then read the below before trying to load the .hex file to your Arduino. *Ignore the first & last part of the video, it is not relevant. Watch between 2.30 and 5.15*

At 3.31, connect your Arduino to your computer using an appropriate USB cable. The drop-down menu in AVRDUDESS should find the correct com port, if not, go to Device Manager (press Windows Key + X then select Device Manager) on your computer to find which com port has been assigned to the Arduino board.

Note:- If the correct driver is not on your computer, you will need to download and install it. Most Chinese Nano clones use the CH340 driver. Drivers are included on the Github. This video shows how to install the drivers.

[How to Install CH340 Drivers - SparkFun Learn](#)

At 3.34 this is where you browse to your downloaded and un-zipped code download and select the .hex files, for example Shutter_Tester_LED_0_0_1.hex.

A4 4.18 'Arduino Uno (Atmega328P) is selected.

You will also notice, when selecting this, the com port changes to 1 and the file path disappears. **BE SURE** to select the correct COM port and file path again.

*** To complicate things, there are two different bootloaders which could be in your Nano.

Most Chinese Nano boards have the old bootloader.

For the old bootloader (described at 4.18), you will need to select the settings below.

Select 'Arduino' in the Programmer box.

Select 'ATmega328P' in the MCU box.

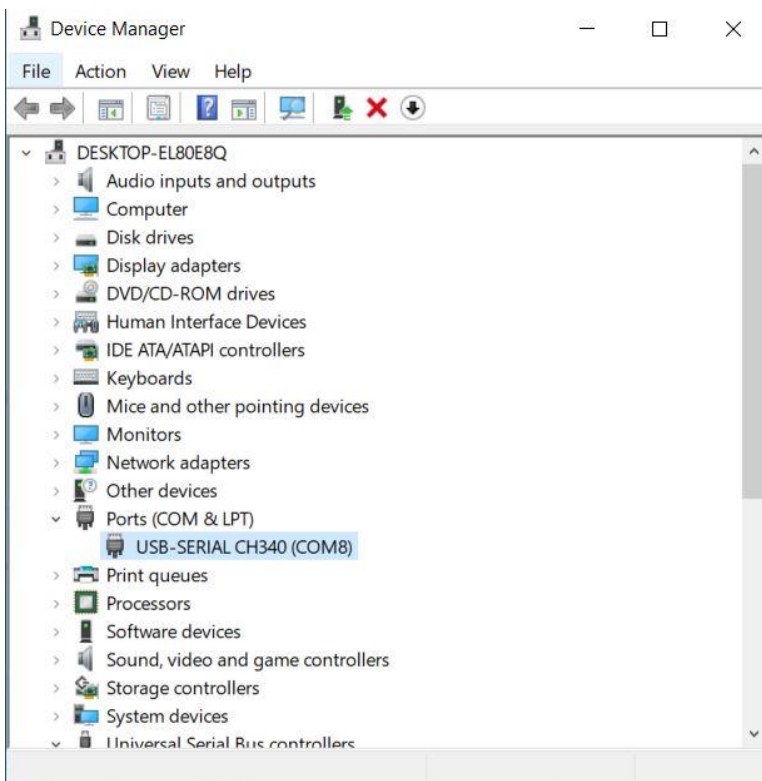
Select 'Arduino Nano (ATmega328P)' in the presets box.

(If this does not work, or you have the new bootloader, select 'Arduino Uno (ATmega329P)' as shown in the video).

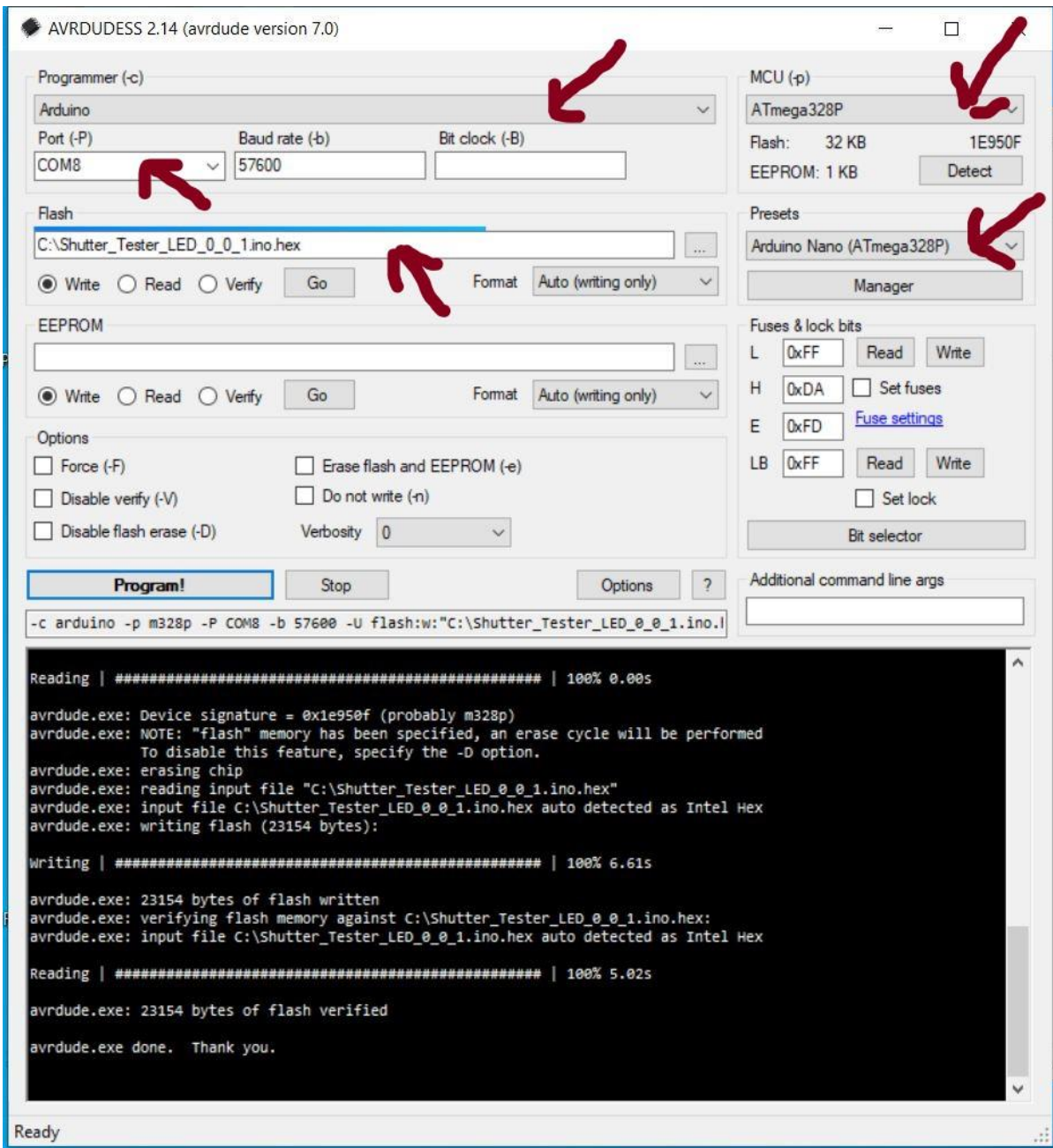
You will also notice the com port changes to 1 and the file path disappears. **BE SURE** to select the correct COM port and file path again.

Below are four screenshots,

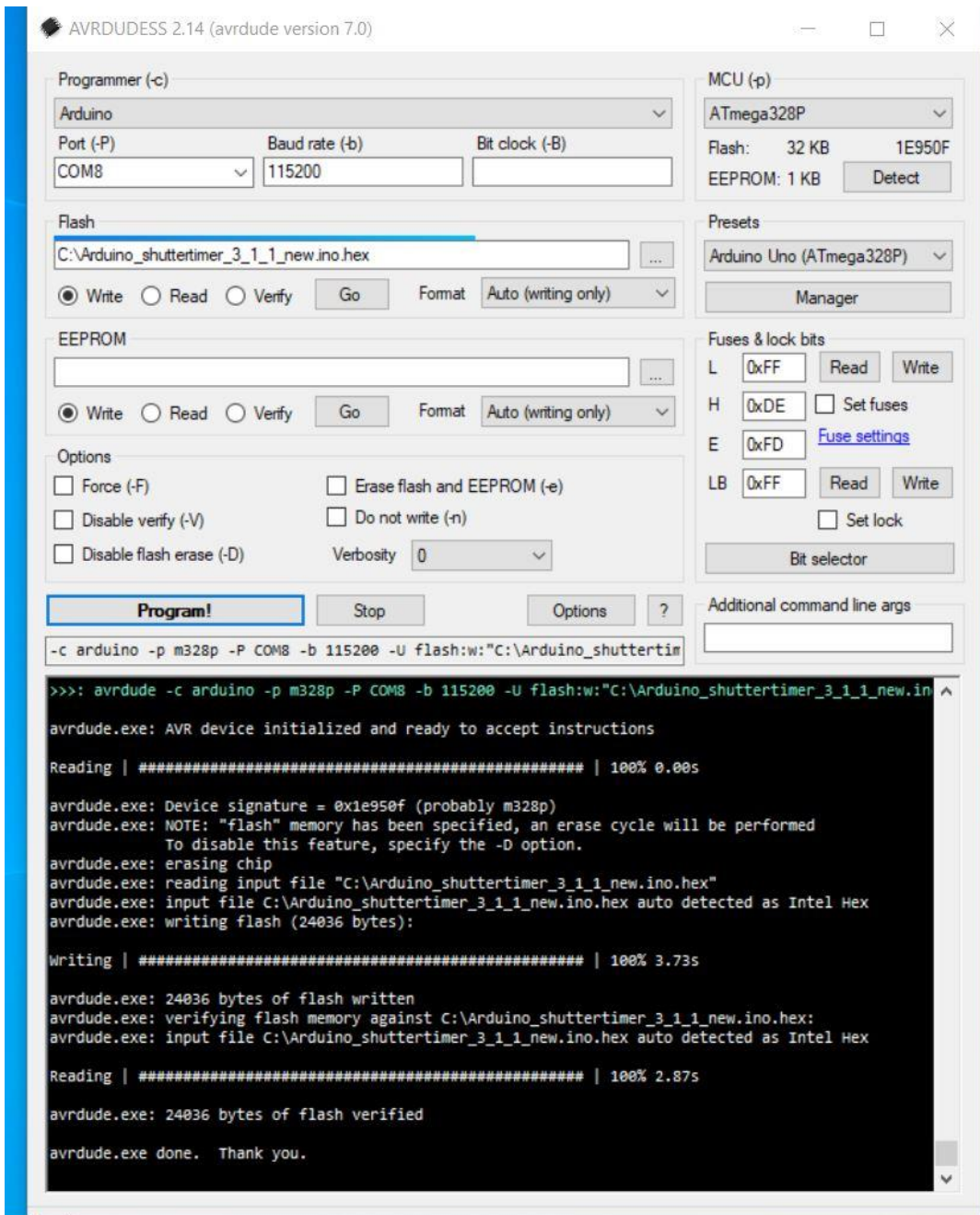
- 1) showing the com port in Device Manger (your com port number will be different),
- 2) Loading software as Nano (old bootloader)
- 3) Loading software as Uno (new bootloader)
- 4) Loading with wrong bootloader selected, showing errors.



Device Manger



Loading firmware as Nano (old bootloader)



Loading firmware as Uno (new bootloader)

Programmer (-c) Arduino

Port (-P) COM8 Baud rate (-b) 115200 Bit clock (-B)

Flash C:\Arduino_shuttertimer_3_1_1_ori.ino.hex

Write Read Verify Go Format Auto (writing only)

EEPROM

Write Read Verify Go Format Auto (writing only)

Options

Force (-F) Erase flash and EEPROM (-e)

Disable verify (-V) Do not write (-n)

Disable flash erase (-D) Verbosity 0

Program! Stop Options ?

MCU (p) ATmega328P

Flash: 32 KB 1E950F

EEPROM: 1 KB Detect

Presets Arduino Uno (ATmega328P) Manager

Fuses & lock bits

L 0xFF Read Write

H 0xDE Set fuses

E 0xFD Fuse settings

LB 0xFF Read Write

Set lock

Bit selector

Additional command line args

```
-c arduino -p m328p -P COM8 -b 115200 -U flash:w:"C:\Arduino_shuttertim
```

```
>>>: avrdude -c arduino -p m328p -P COM8 -b 115200 -U flash:w:"C:\Arduino_shuttertimer_3_1_1_ori.ino
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 1 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 2 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 3 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 4 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 5 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 6 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 7 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 8 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 9 of 10: not in sync: resp=0x88
avrdude.exe: stk500_recv(): programmer is not responding
avrdude.exe: stk500_getsync() attempt 10 of 10: not in sync: resp=0x88
avrdude.exe: opening programmer "arduino" on port "COM8" failed

avrdude.exe done. Thank you.
```

Loading with wrong bootloader selected, showing errors.