

V1 Arduino firmware load.

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

[billbill100/Multi-Trigger-3-AstroSplash-Digital-Display: Adds a digital display showing timings, to the HiViz Timer-Trigger and AstroSplash range of products \(github.com\)](https://github.com/billbill100/Multi-Trigger-3-AstroSplash-Digital-Display)

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 the Github page above, 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 \(zakemble.net\)](https://zakemble.net/avrduess-a-gui-for-avrduede/)

Watch this video, from 2.30 to 5.15

<https://youtu.be/WcaqI0jtUg>

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

At 3.34 this is where you browse to your downloaded and un-zipped code download and select one of the .hex files

A4 4.18 'Arduino Uno (Atmega328P) is selected. **As Saravanan says this is very important ***.**

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.

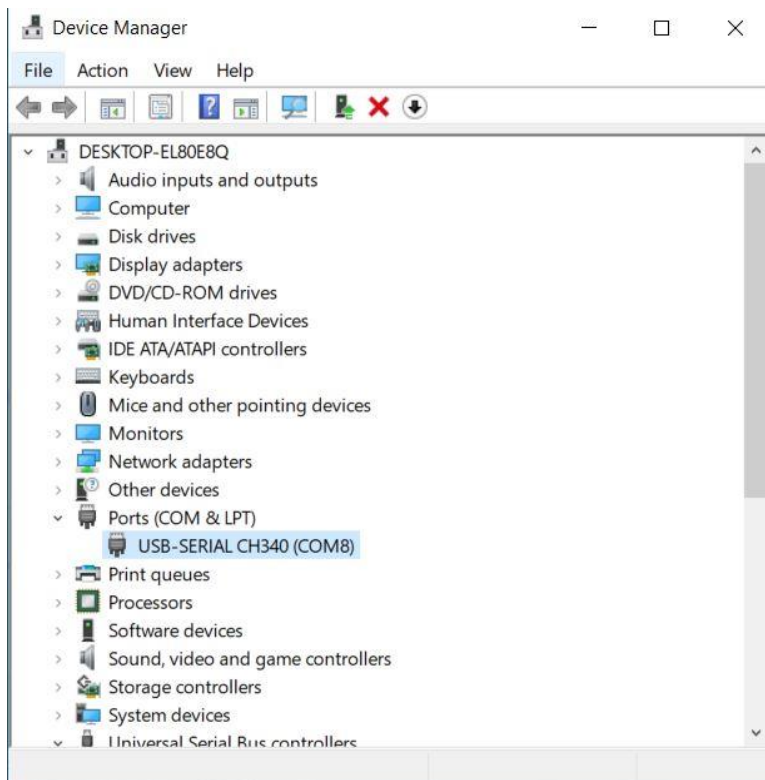
*** To complicate things, there are two different bootloaders which could be in your Nano. Most Chinese Nano boards have the old bootloader. For the old bootloader at 4.18, you will need to select 'Arduino Nano (ATmega328P)' in the Preset box.

For the new bootloader, select 'Arduino Uno (ATmega329P)' as shown in the video.

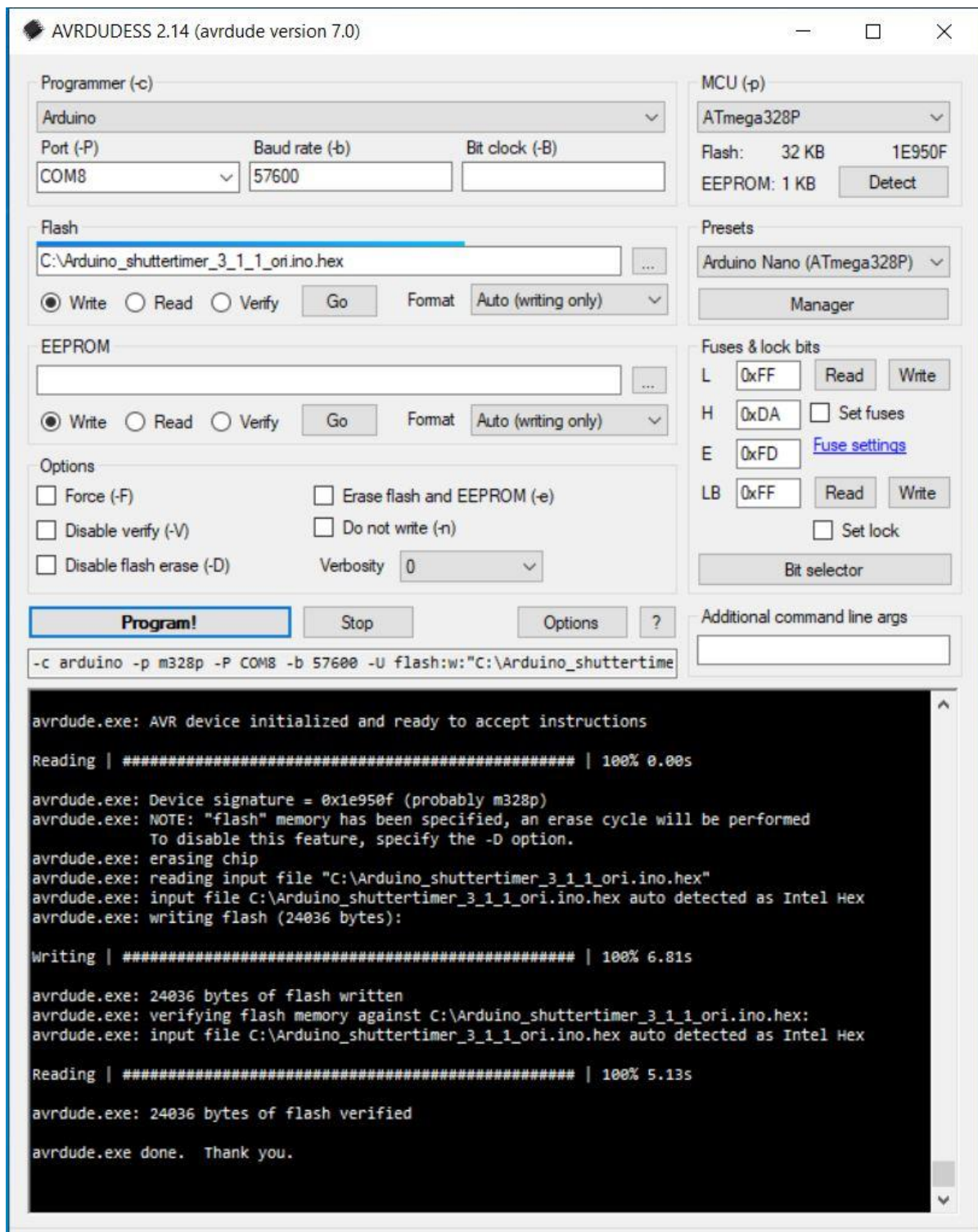
It is suggested to select 'Arduino Nano (ATmega328P)' in the Preset box, as the first option. If this does not work, then try 'Arduino Uno (ATmega328P).'

Below are four screenshots,

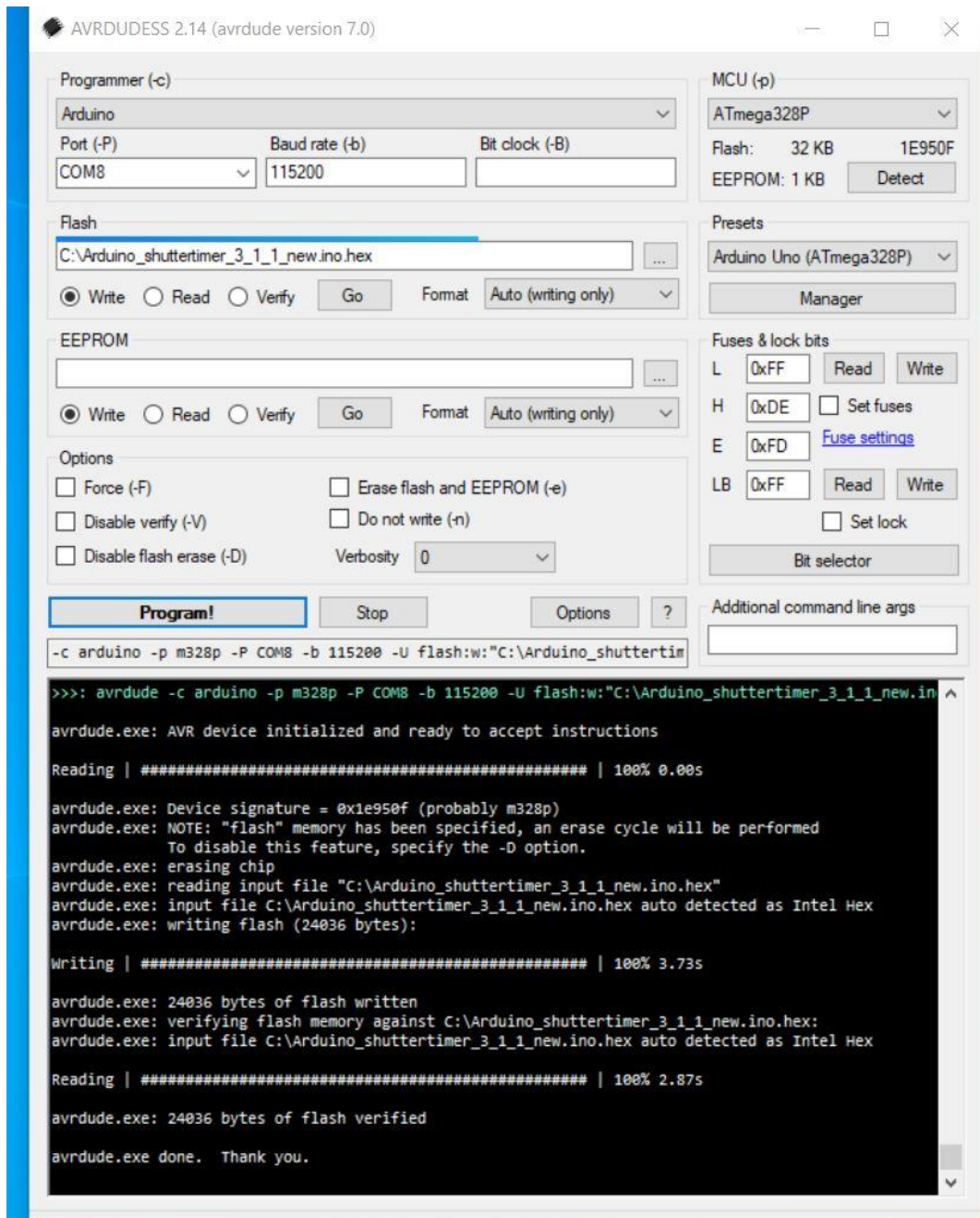
- 1) showing the com port in Device Manger (your com port number will be different),
- 2) Loading software as Nano (old bootloader)
- 3) Loading software as Uno (new bootloader)
- 4) Loading with wrong bootloader selected, showing errors.



Device Manger



Loading software as Nano (old bootloader)



Loading software as Uno (new bootloader)

The screenshot shows the AVRDUDESS 2.14 interface with the following settings:

- Programmer (-c):** Arduino
- Port (-P):** COM8
- Baud rate (-b):** 115200
- Bit clock (-B):** (empty)
- Flash:** C:\Arduino_shuttertimer_3_1_1_ori.ino.hex
- Flash Mode:** Write
- EEPROM:** (empty)
- EEPROM Mode:** Write
- Options:**
 - Force (-F)
 - Disable verify (-V)
 - Disable flash erase (-D)
 - Erase flash and EEPROM (-e)
 - Do not write (-n)
 - Verbosity: 0
- MCU (p):** ATmega328P
- Flash:** 32 KB, 1E950F
- EEPROM:** 1 KB, Detect
- Presets:** Arduino Uno (ATmega328P)
- Fuses & lock bits:**
 - L: 0xFF (Read, Write)
 - H: 0xDE (Set fuses)
 - E: 0xFD (Fuse settings)
 - LB: 0xFF (Read, Write)
 - (Set lock)
- Additional command line args:** (empty)

The command line at the bottom is: `-c arduino -p m328p -P COM8 -b 115200 -U flash:w:"C:\Arduino_shuttertim`

The terminal output shows the following error sequence:

```
>>>: 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.