

Arduino IDE Software Load V1

Arduino IDE (Integrated Development Module) is a computer program used to communicate with the Arduino processor boards, Nano, for example. The program allows writing & development of Arduino code and has many other features and uses.

One such feature, is the ability of the Arduino module (nano in this case) to send data directly to the program for display on the computer screen. This is called 'Serial Monitor'.

This feature is used to display not only the same information as that of the LCD, but also a lot more, that simply would not be possible with the LCD alone.

Note:- For ESP32, Only the Serial Monitor function of the software will work, which is all that is required for the Shutter Tester project. It is not possible to compile or load code or 'sketch' onto the ESP32 without additional setup, which is outside the scope of this document.

To get started, download & install the Arduino 2.x software from [Software | Arduino](#)

To watch a tutorial for the install process, watch this video.

[\(284\) How To Install Arduino IDE 2.0 On Windows 10/11 \[2023 Update \] Arduino Uno Complete Guide - YouTube](#)

Note:- The video past 6.04 (For Arduino boards only) describes the normal way of loading code onto the Arduino (in Arduino language, a program file is called a 'sketch') by demonstrating how to load the Blink sketch. By all means follow this example and try it. Note it will overwrite the Shutter Tester code, if you have already flashed it onto the board. This is not an issue as the code can be re-flashed.

Note:- The Shutter Tester code can only be loaded using a flashing tool, as described in the firmware loading document. It cannot be loaded as per the video above. This is due to the complexities of the code, which now uses multiple libraries, coding blocks & additional coding techniques, incompatible with loading via Arduino IDE.

With Arduino IDE loaded onto the computer, study the screenshot below.

The board type Nano and the COM port must be selected. Assuming any required drivers, have been loaded, the software should detect which COM port the board is connected to.

Select the 'Serial Monitor' icon to open the window to view output from the Shutter Tester.

The window opens horizontally, quite low down, so it has to be dragged up to increase size.

Baud rate for Arduino is 115200. Baud rate for ESP32 is 460800

shuttertimer_2_lasers_3_1_2_ori | Arduino IDE 2.2.1

File Edit Sketch Tools Help

Arduino Nano

shuttertimer_2_lasers_3_1_2_ori.ino

```
1
2 // shutter tester for Arduino Nano.
3 // https://www.photrio.com/forum/threads/build-a-shutter-tester
4 // If you use this code & build a tester, please say 'Hi' & 'T
```

Output Serial Monitor x

Message (Enter to send message to 'Arduino Nano' on 'C... Both NL & CR 115200 baud

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PARAMETER	LASER2	LASER1
Shutter Speed MicroS	2317	1989
Shutter Speed millis	2.3	2.0
Shutter Speed Seconds	0.002	0.002
Shutter Speed Fraction	1/432	1/503
Curtain Travel MicroS	8628	8300
Curtain Travel Millis	8.6	8.3

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AVERAGES	LASER2	LASER1
shutter Speed Av mS 3	2	1
Curtain Travel Av mS 3	9	8
Shutter Speed Av Vul 3	1/443	1/839
shutter Speed Min mS 3	2	-1
shutter Speed Max mS 3	2	2
shutter Speed St Dev 3	0.19	1.47
Curtain Travel St Dev 3	1.53	1.53

Ln 128, Col 1 Arduino Nano on COM8

Select board & COM port

Select Serial Monitor Window

Drag up to maximise window

Select baud rate

Shows connected to board & using which COM port