

How to flash hex file onto Arduino ATmega2560?

To flash the hex file, you will need the following components:

1. Arduino ATmega2560 Microcontroller Board
2. STK Programmer
3. Jumper Wires F/F

The steps to be followed are as below:

1. Connect the jumper wires to STK programmer pins - MOSI, MISO, SCK, RES, VTG and GND with respective pin of the Arduino ATmega2560 ICSP pins.

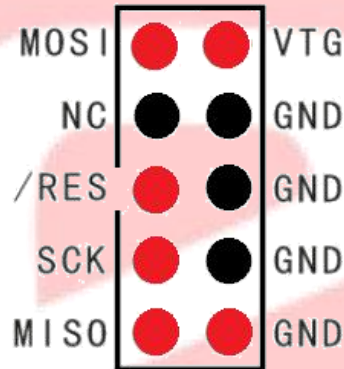


Figure 1: STK Programmer Pinout

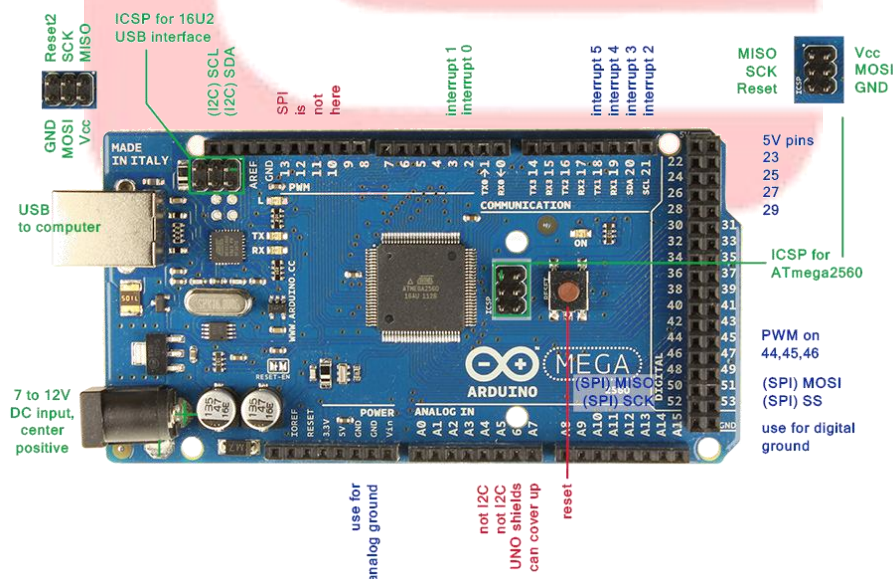


Figure 2: Arduino Mega 2560 ICSP Pins

2. Connect one end of USB Cable A to B to STK programmer and another end of USB cable to the PC USB port.

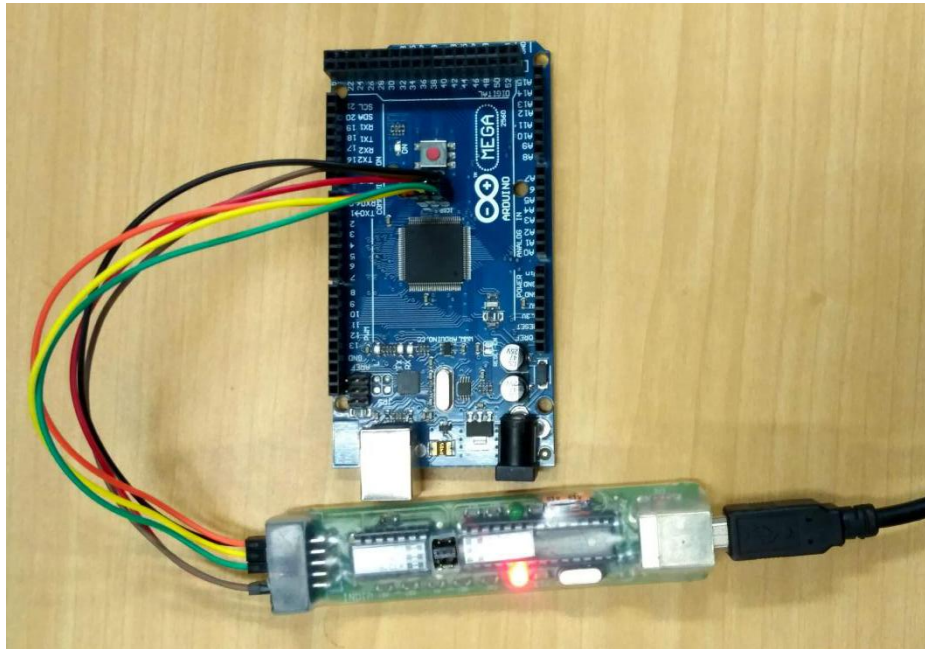


Figure 3: USB Cable and STK Programmer

3. Open [AVRDude](#) folder available in Resources folder. Type cmd in address bar and press enter to open the path in command prompt.

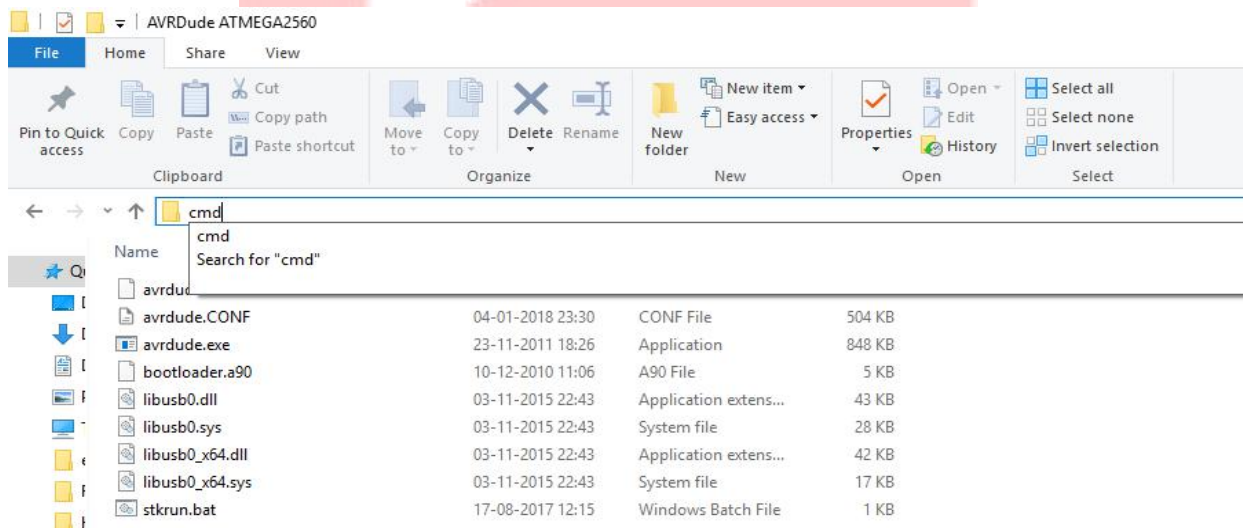


Figure 4: Path in Command Prompt

4. In command prompt, type `stkrun<space><file.hex>`. You can drag and drop the file on command prompt and press enter. Refer to Figure 5.

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.17134.407]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\Public\Hardware Testing\Resources\AVRDude ATMEGA2560>stkrun "C:\Users\Public\Hardware Testing\Test Files\White line following.hex"

C:\Users\Public\Hardware Testing\Resources\AVRDude ATMEGA2560>avrdude -c stk500v2 -p m2560 -P NEX-USB-ISP -U flash:w:"C:\Users\Public\Hardware Testing\Test Files\White line following.hex":i

avrdude: AVR device initialized and ready to accept instructions

Reading | ##### | 100% 0.06s

avrdude: Device signature = 0x1e9801
avrdude: NOTE: FLASH memory has been specified, an erase cycle will be performed
        To disable this feature, specify the -D option.
avrdude: erasing chip
avrdude: reading input file "C:\Users\Public\Hardware Testing\Test Files\White line following.hex"
avrdude: writing flash (2230 bytes):

Writing | ##### | 100% 4.41s

avrdude: 2230 bytes of flash written
avrdude: verifying flash memory against C:\Users\Public\Hardware Testing\Test Files\White line following.hex:
avrdude: load data flash data from input file C:\Users\Public\Hardware Testing\Test Files\White line following.hex:
avrdude: input file C:\Users\Public\Hardware Testing\Test Files\White line following.hex contains 2230 bytes
avrdude: reading on-chip flash data:

Reading | ##### | 100% 3.67s

avrdude: verifying ...
avrdude: 2230 bytes of flash verified

avrdude: safemode: Fuses OK

avrdude done. Thank you.

C:\Users\Public\Hardware Testing\Resources\AVRDude ATMEGA2560>
```

Figure 5: Flashing HEX file