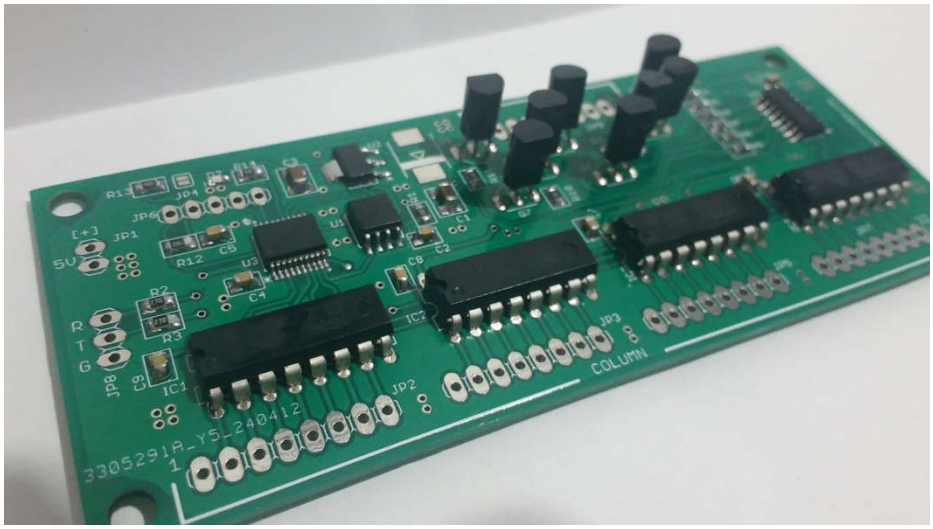
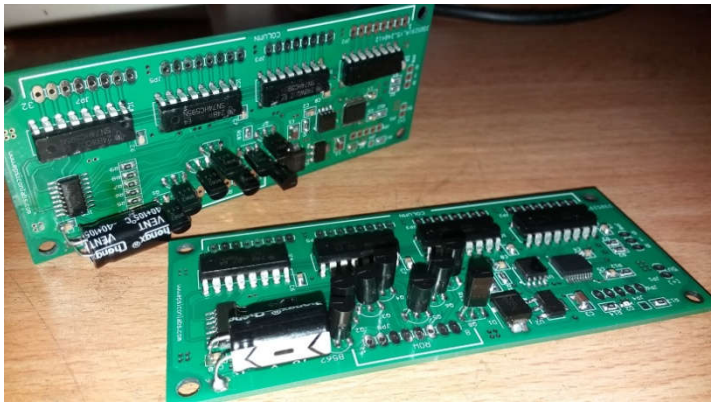
LED Matrix Driver

8X32



- 8 Rows.
- 32 Columns.
- 20mA max current of each column output.
- 400mA max current of each row output.
- Single 5V operation.
- UART communication interface.
- Fully compatible with LED Matrix Studio Software.
- Board is re-writable.
- End user programmable interface with PC software.



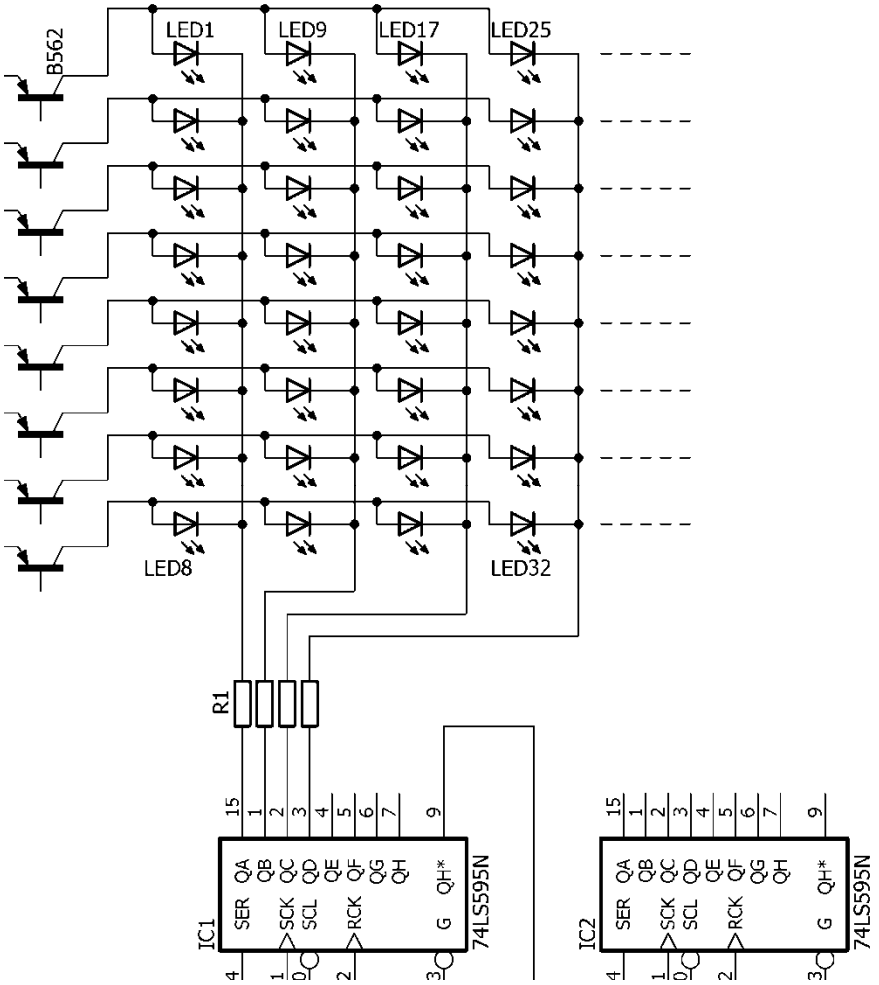
Absolute maximum ratings,

PARAMETER	VALUE	UNIT
Single Row Source current	500	mA
Single Column Sink current	20	mA
Supply Voltage	5	V

Recommended ratings,

PARAMETER	VALUE	UNIT
Single Row Source current	400	mA
Single Column Sink current	15	mA
Supply Voltage	4 – 5	V

LED Matrix Arrangement,



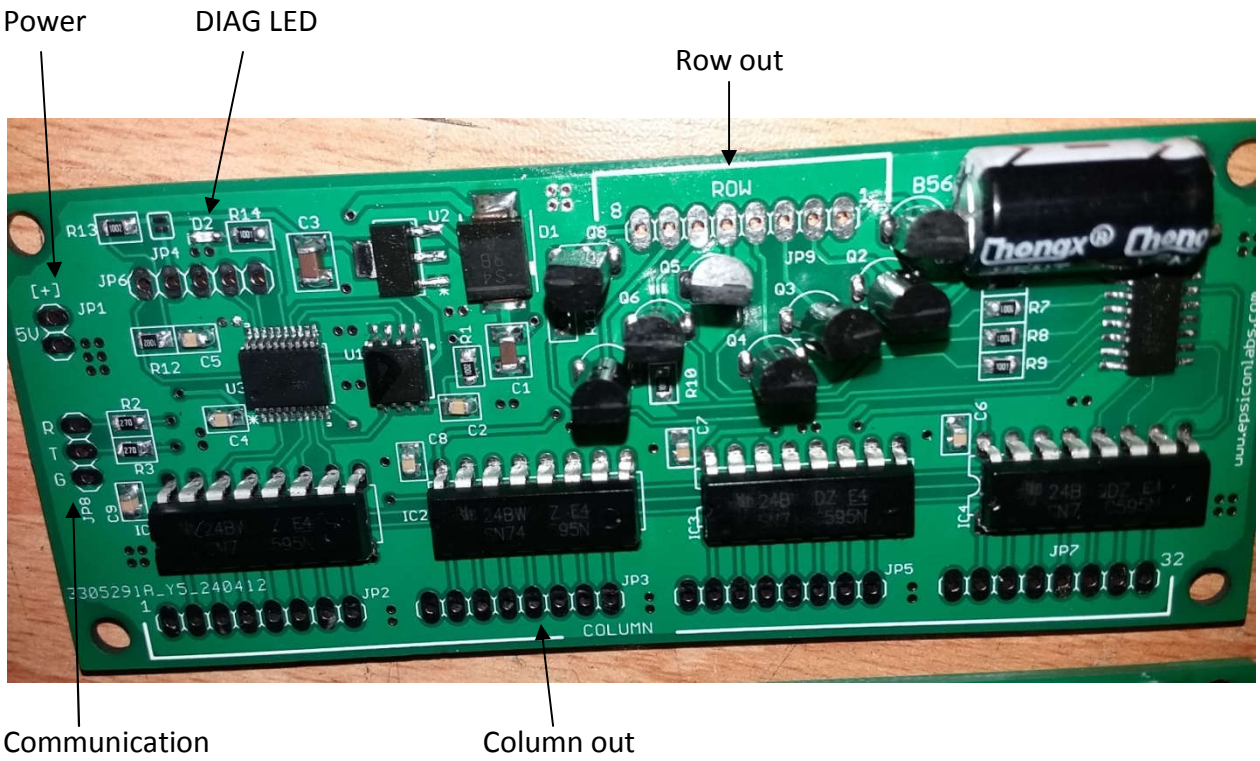
R1 (Column series resistor) must be selected according to the LED current requirement. User must connect the column resistor externally.

Communication interface,

PARAMETER	VALUE
Baud rate. (speed)	9600 bps
UART type	RS232 TTL*
Stop bits	1
Parity	no

** Only logic level supported. 3.3V TTL recommended.*

Board external connectivity arrangement,

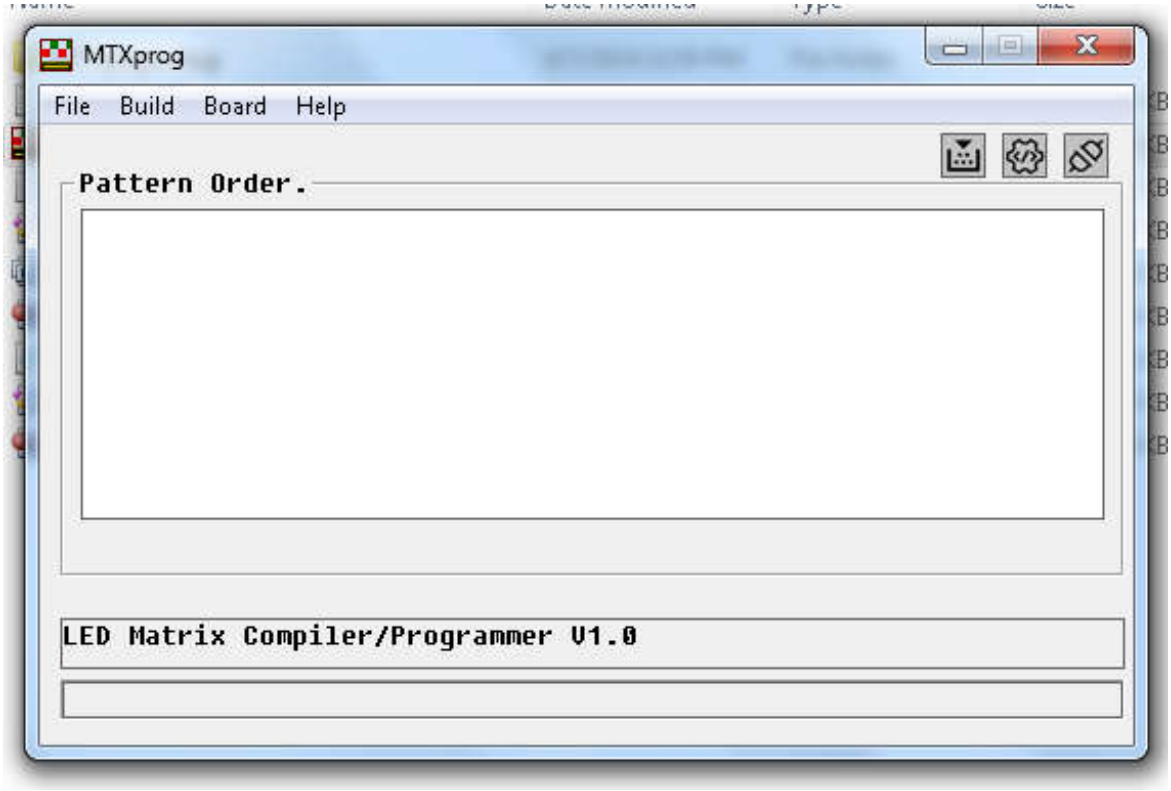


You can use any USB to RS232 TTL adapter to communicate with the board. Connectivity between boards must be as follows,

MATRIX BOARD	RS232 MODULE
T	RX
R	TX
GND	GND

Setting up board with software,

After power up, board automatically switches into programming mode for 20 seconds and then switches to RUN mode. Indicator LED blinks during programming mode. Board doesn't respond to the uart commands during RUN mode. Therefore you must connect to the board during programming mode. Once you connect to the board, it will remain connected until you restart the board.



Making pattern file used in this software,

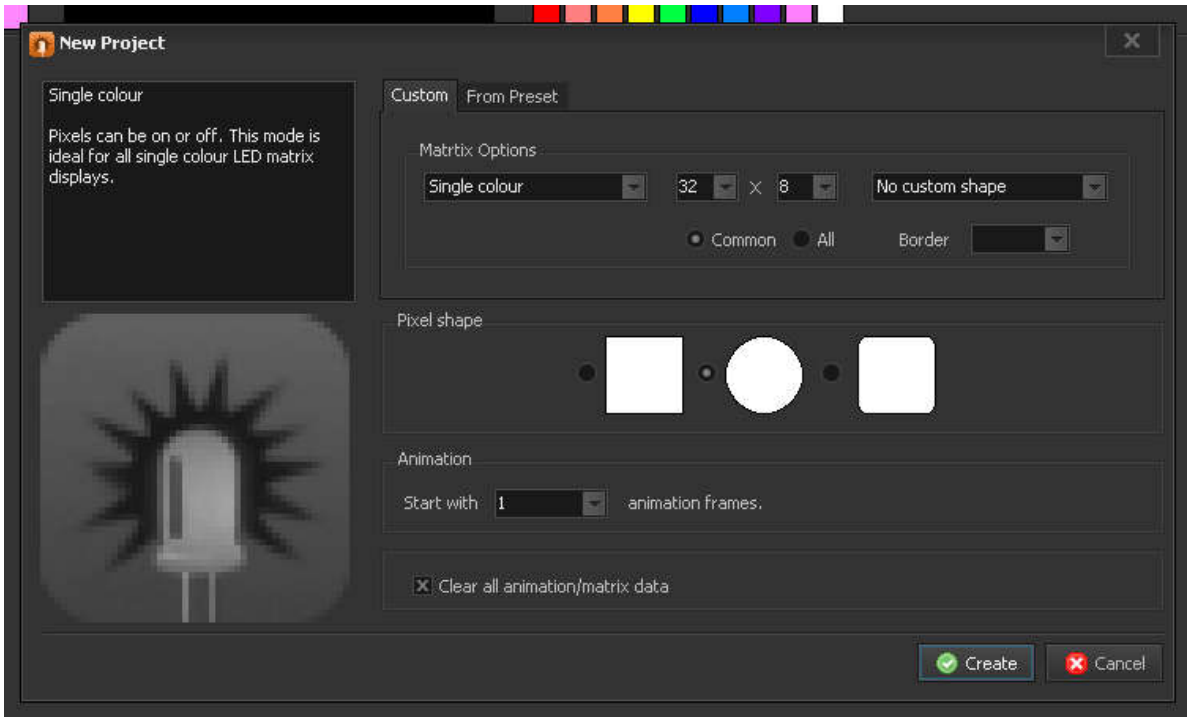
Pattern file,

This is an animation bit pattern file generated by any pixel animation design software. You can use one of the following software to generate bit pattern file. Operating those

Software’s are different from each other and please refer their manuals for more information.

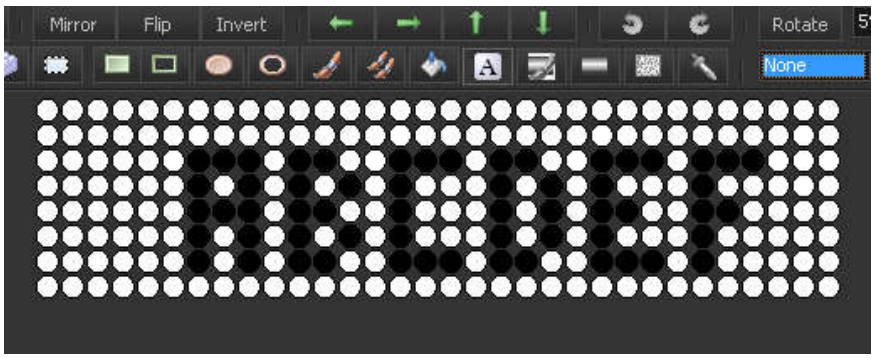
1. LED matrix studio.
2. Synfig studio.
3. Inkscape.
4. GIMP (single frame only).
5. Pencil2D.
6. Sprite editor.

a.) Details on making pattern file using LED Matrix Studio Software,

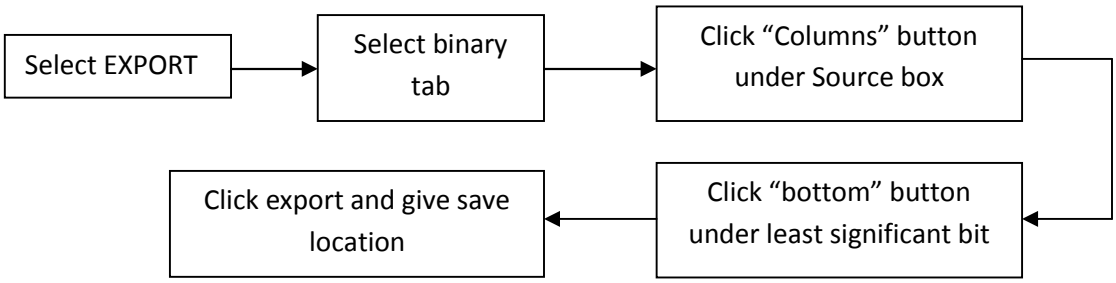


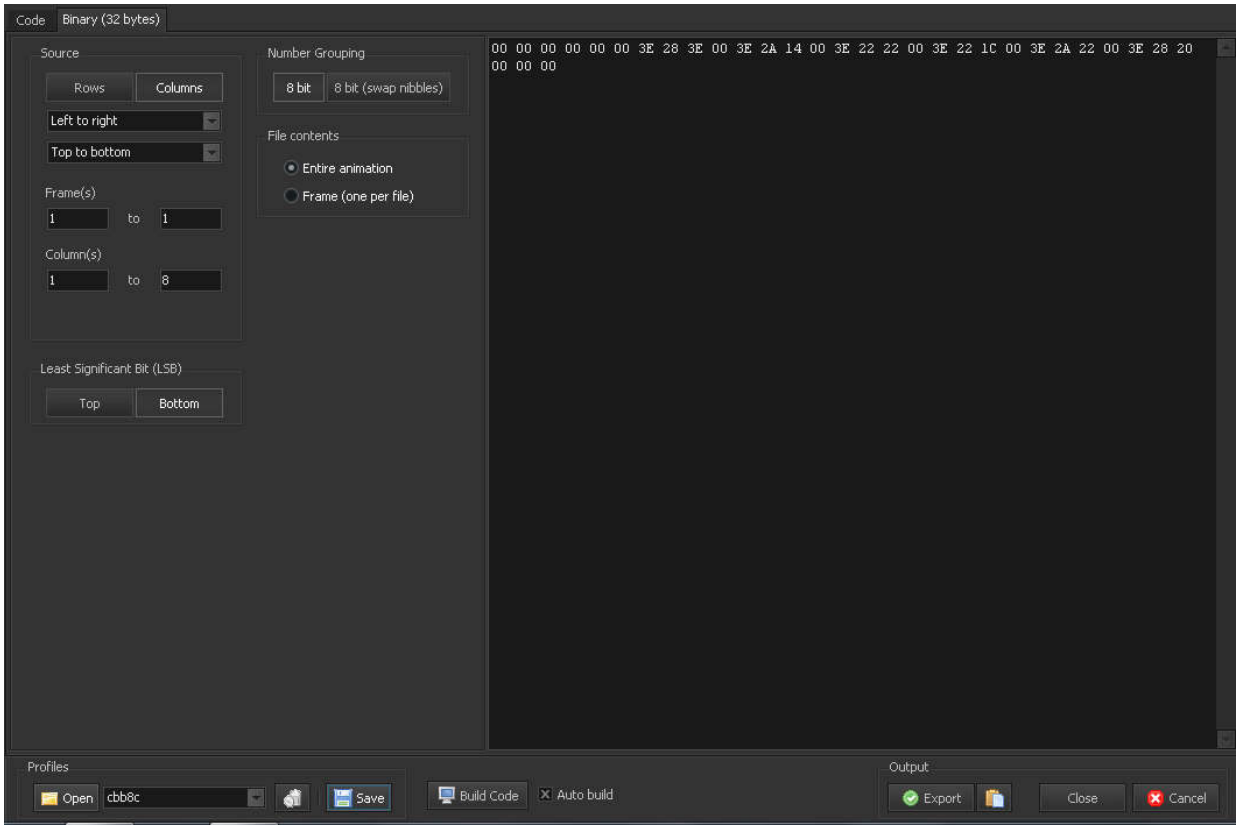
Start new project with all settings same as above image. Click create to make matrix.

b.) Create your frame by frame animation. There are no frame limits.



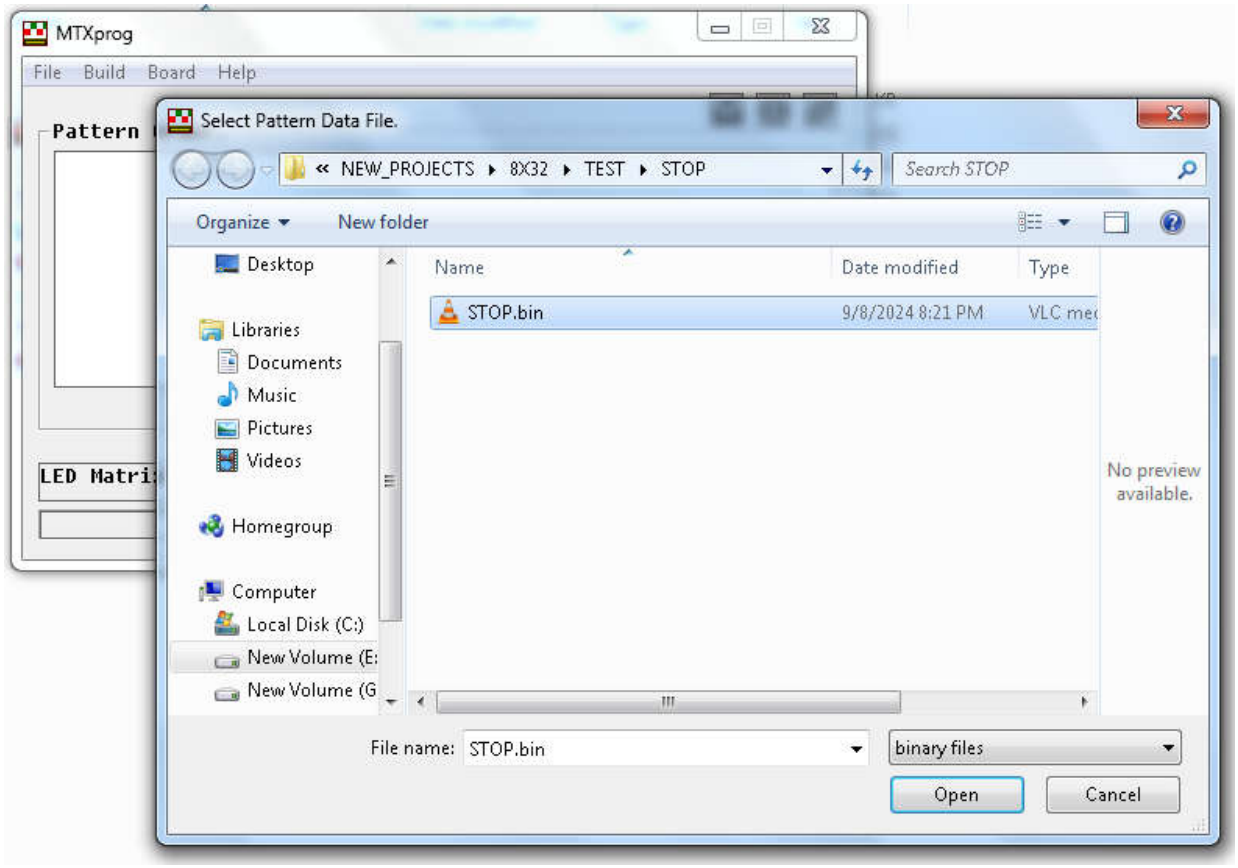
c.) After creating entire animation, follow these steps to generate pattern file,

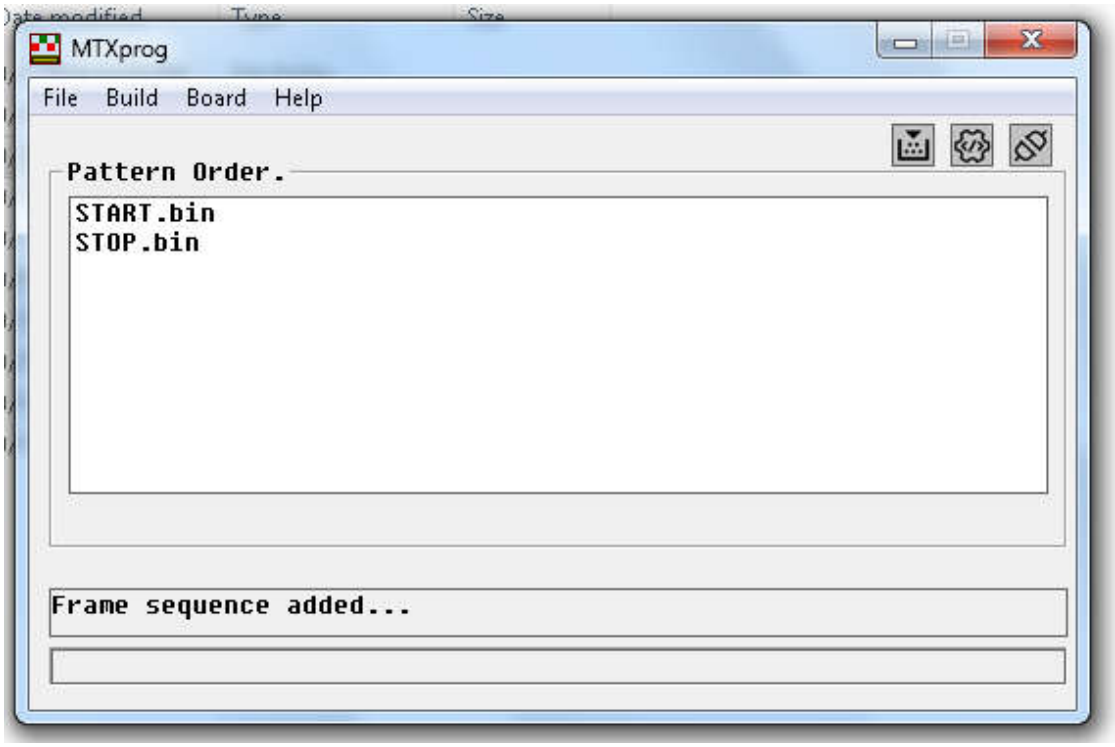




You successfully saved the bin file. Load it onto the MTXProg software.

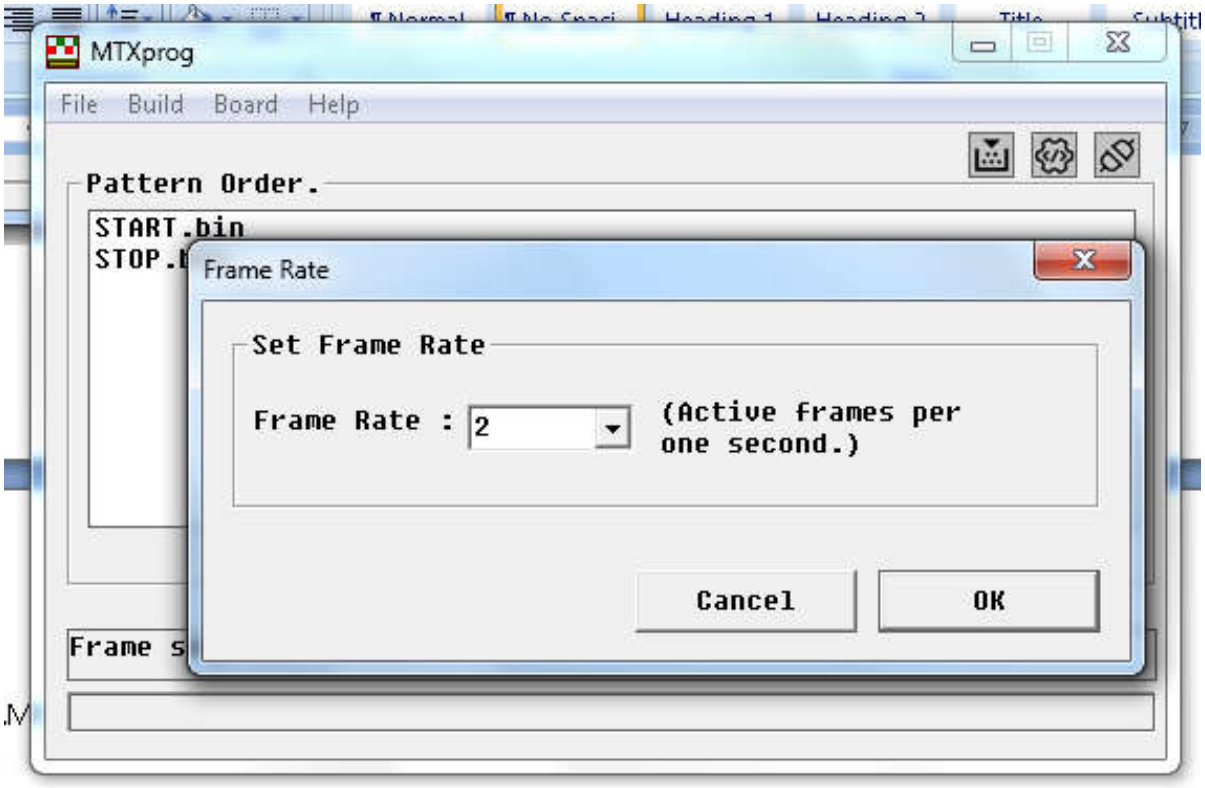
STEP 1 – ADD ONE OR MORE PATTERN FILES





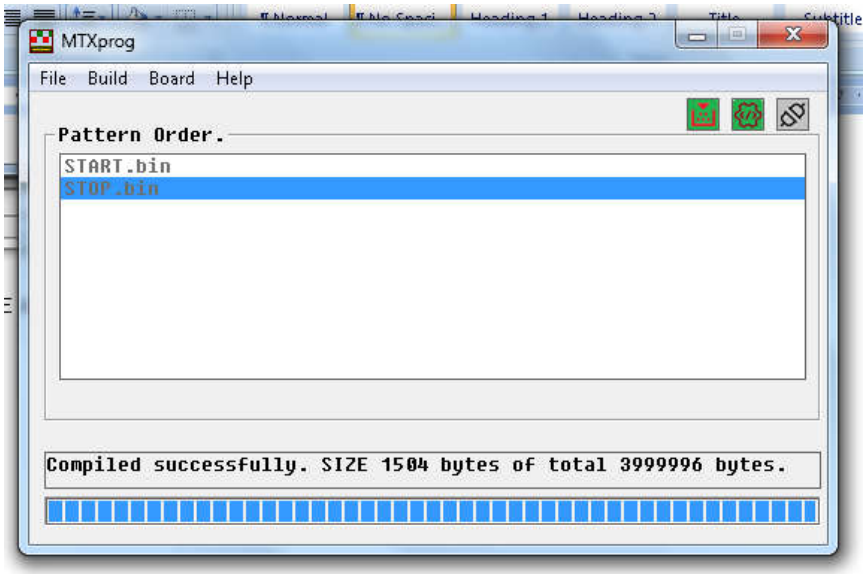
STEP 2 – SET FRAME RATE (frame running speed per one second),

Menu →Board → set frame rate,



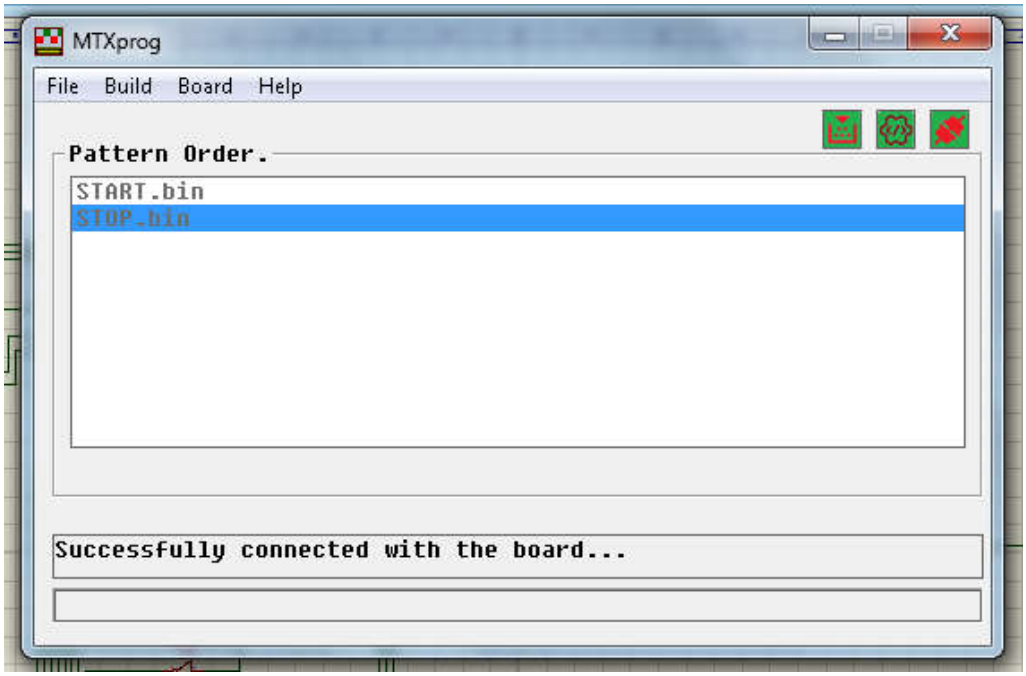
STEP 3 – COMPILE ALL PATTERNS,

Menu →Build → Compile



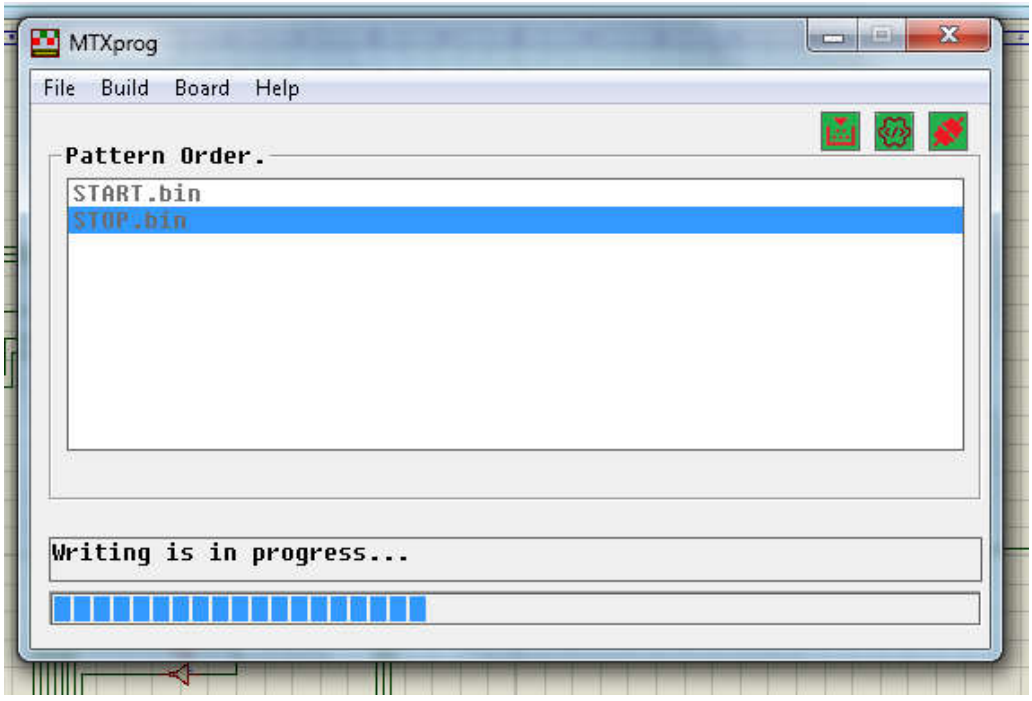
STEP 4 – CONNECT WITH THE BOARD

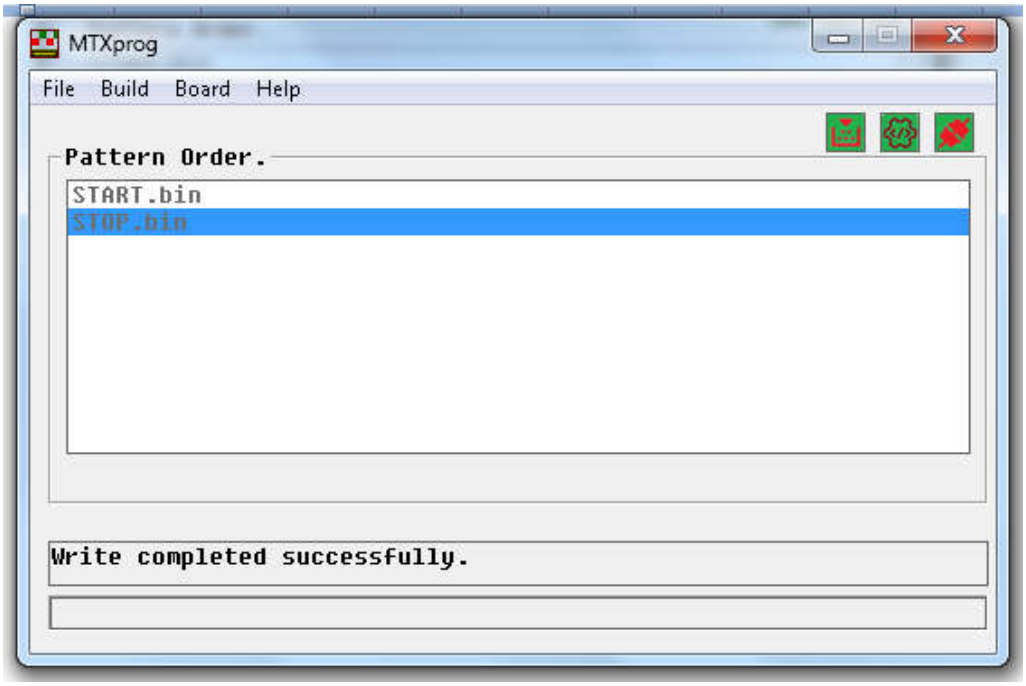
Menu →Board → Connect



STEP 5 – WRITE COMPILED MEMORY IMAGE TO THE BOARD

Menu →Board → Write





Time duration to complete the writing process may vary according to the memory image file capacity.

AFTER COMPLETING THE WRITE PROCESS, RESTART THE BOARD. BOARD WILL AUTOMATICALLY SWITCH TO RUN MODE AFTER 20 SECONDS.