I would really be grateful if you start to build the Digital Display, 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 digital Display.
[Build a B&W film developing timer & twiddler - Cheap, Easy & it Works | Photrio.com Photography Forums](#)

(There is no separate thread for the Trigger-Timer digital Display)

GitHub repository where all documentation & code can be found. [billbill100 (github.com)](#)

MultiTrigger 3 Digital Parts V1.0   28/02 2024

Below are links to the parts required to make the MultiTrigger 3 Digital Display.

Links are valid now, but of course could become dead in the future.

Links are a guide only. Use a supplier that ships your country.

Ordering from China either from eBay sellers or AliExpress, the parts will be much cheaper.

Note, often if buying from AliExpress, there is a free express shipping option, if buying parts over a set value.

From the links below, total cost was £9.57 (11.61 inc UK tax). This includes £1.99 shipping. Find something else for £2.60 or more & save the £1.99 :o)

1. Arduino Nano Development Board.
They can be purchased with mini/micro/c USB connector & with or without soldered header-pins. Pick which one suits your needs. (Soldered type C is a safe choice)
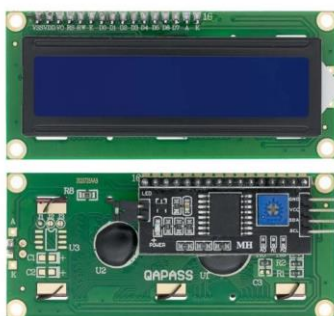

[Mini / Type-C / Micro USB Nano 3.0 With the bootloader compatible Nano controller for arduino CH340 USB driver 16Mhz ATMEGA328P - AliExpress](#)

2. LCD
Choose Green or Blue, but ensure you pick the one that includes the I2C module

[LCD1602 I2C Display Module Blue Green Screen 5V PCF8574 IIC Adapter Llate for Arduino - AliExpress](#)

3. Case for LCD

This is a nice case for the LCD. It can be fitted to the back of the Trigger-Timer using a wooden block.

The Arduino Nano board can be hot-glued to the inner bottom shelf. Note the photo shows the two sides revered. The side with the cut-out aligns with the header-pins of the I2C module.

Transparent Acrylic Shell for LCD1602 LCD Screen with Screw/Nut LCD1602 Shell Case holder (no with 1602 LCD) - AliExpress

4. Dupont wires.

Get female to female Dupont Wires.

1 pack of 10cm wires if placing the nano in the LCD housing (else 20cm)

1 pack 20cm wires for power & test wires.

A small length of 2 core cable is also required to run to the AstroSplash box.

Dupont Line 10cm/20CM/30CM Male to Male+Female to Male + Female to Female Jumper Wire Dupont Cable for arduino DIY KIT - AliExpress

2 core cable.
Electric Wire Extension Cable | Jst Electrical Connector | 2 Wire Electric Cable - 2pin - Aliexpress

5. Resisters

The Trigger-Timer outputs around 8 volts on the test sockets. As the Arduino pin input voltage is max 5V, two resisters are used on each input to drop the voltage. **10k resisters** are required.

[100PCS/lot 1/4W Metal film resistor 1R~22M 1% 100R 220R 1K 1.5K 2.2K 4.7K 10K 22K 47K 100K 100 220 1K5 2K2 4K7 ohm resistance - AliExpress](#)

5. veroboard

The Nano can be mounted onto a piece of vero board, cut to length & width, which will then slide into the slots inside the HiViz box. Alternatively, the Nano can just be hot-glued to the base of the box.

[TZT 5pcs 9x15 9*15cm Single Side Prototype PCB Universal Board Experimental Bakelite Copper Plate Circuirt Board yellow - AliExpress](#)

Additional useful parts

Glue Gun.

Cheap glue gun, but surprisingly it works ok.
[20W Hot Melt Glue Gun DIY Mini Household Industrial Guns Heat Temperature Thermo EU Electric Repair Tool Use 7mm Glue Sticks - AliExpress](#)

Soldering Iron Kit.

Cheap soldering iron kit that has everything to get started. Works fine.
[Adjustable Temperature 80W Soldering Iron Internal Heating Type Household Electronic Welding Repair Tool and Tin Wire Bracket - AliExpress](#)

Change Log

V 1.0