

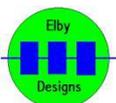


ED702 – Synth-A-Scope

Construction Guide

Revision 0.2

May 1, 2020



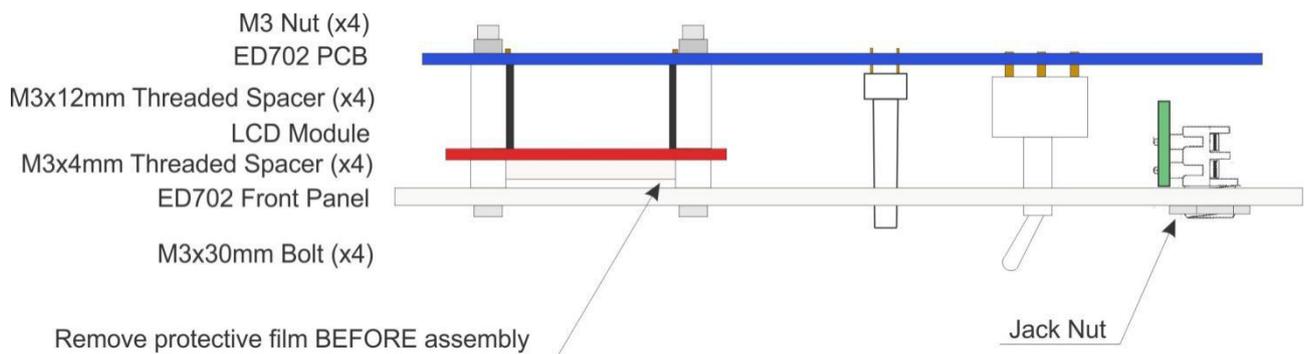
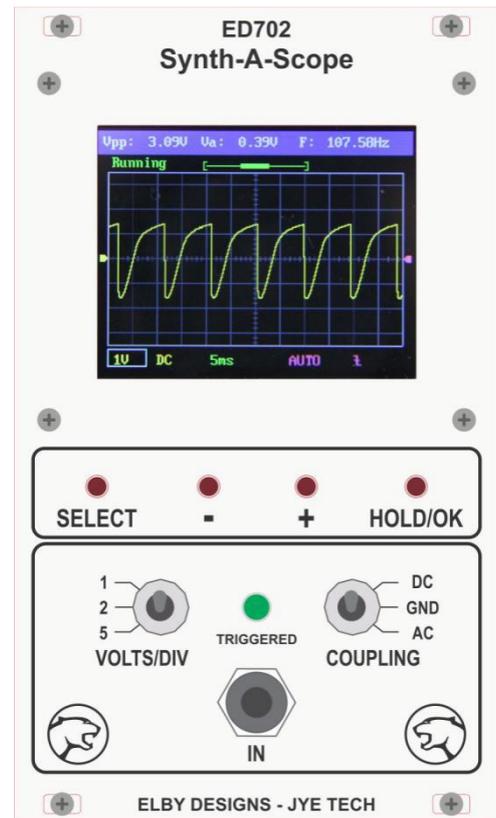
ED702 - Synth-A-Scope

Construction of the [ED702](#) requires the assembly of 1 board:-

1. ED702 PCB ([3D Model](#))

Constructors should refer to the [Top Component Overlay](#) and [Bottom Component Overlay](#) for any specific comments regarding the board assemblies, the [Bill of Materials](#) for the current value of all components and [General Construction Notes](#) for general PCB assembly guidelines.

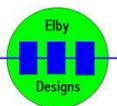
1. Assemble the jack carrier board for J1 ([3D Model](#))
2. Populate the main board with all components except D3, J1, S1, S2, S3, S4, S5 and S6
3. Remove the protective film from the LCD
4. Fit the 4x M3x30mm bolts to the front panel using the 4x M3x4mm spacers
5. Carefully slide the LCD on to the bolts and secure using the 4x M3x12mm spacers. Note the orientation by referring to the 2 headers
6. Fit the LED lens mount
7. Position all the remaining items on to the board but do not solder. Note that D3 needs to be mounted in reverse to that shown in the PCB footprint.
8. Carefully offer the board up to the front panel being careful when inserting the headers from the LCD module
9. With everything in position secure the main board to the front panel using the 4x M3 Nuts.
10. Finger tighten the nut on the jack J1
11. Solder all components in to place ensuring that the pushbutton switches are square to the board and move freely. Ensure that the LED D3 is firmly seated in the lens mount before soldering.
12. Finally, add a wire link to D3 as shown on the [overlay](#) and in the [3D Model](#)



Calibration

The only adjustment required is the 'compensation' capacitor. We recommend that you select a patch lead and dedicate to this module. As such it should be long enough to reach the furthest patch point in your system or 'expander' module.

1. Connect the patch lead to the ED702 and a square wave running at around 1kHz with an amplitude of around 4Vpk-pk
2. Set the ED702 to 'AC' Coupling and '5' Volts/Div
3. Adjust C3 for the best square wave shape



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