

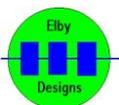


## ES21 10-Step Sequencer

### Construction Guide

Revision 1.0

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# ES21 10-Step Sequencer

Construction of the ES21 requires the assembly of 4 separate boards:-

Column 1 - ES21 Support PCB ([3D Model](#))

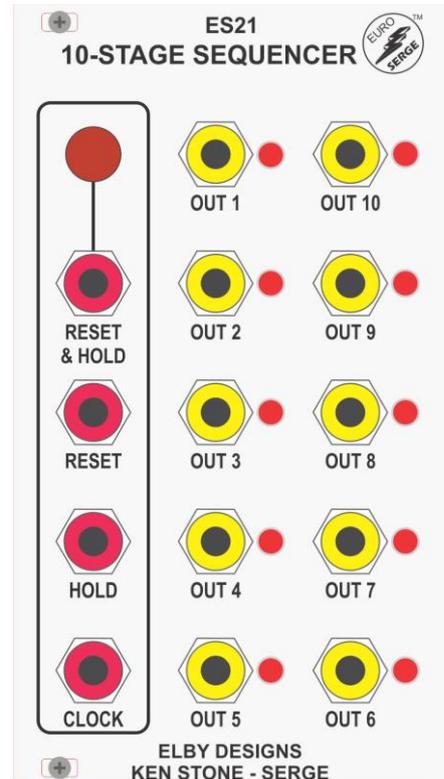
Column 2 - ES21 Support PCB ([3D Model](#))

Column 3 - ES21 Support PCB ([3D Model](#))

Main - ES21 PCB ([3D Model](#))

Constructors should refer to the printed 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. You are advised to check all of these documents on our website to ensure you have the latest copy.

1. Start by preparing the 10x LEDs as per the instructions in the General Construction Notes <sup>1</sup>
2. Fit all components to the boards following normal assembly guidelines excluding the 10x LEDs and MANUAL pushbutton switch
3. Fit the Column 2 assembly to the front panel.
4. Mount 5x LEDs ensuring the correct orientation of the LED wires in to the board and solder in to place
5. Remove the assembly and repeat for the Column 3 assembly
6. Mount the pushbutton switch on to the Column 1 assembly but do not solder
7. Offer the assembly up to the front panel and secure using the supplied nuts and then solder in to place
8. Mount the other assemblies on to the front panel and secure in to place
9. Fit the back-board assembly ensuring the correct alignment of the IDC Receptacles in to their respective sockets



## Calibration

The ES21 does not require any set-up or calibration

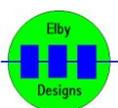
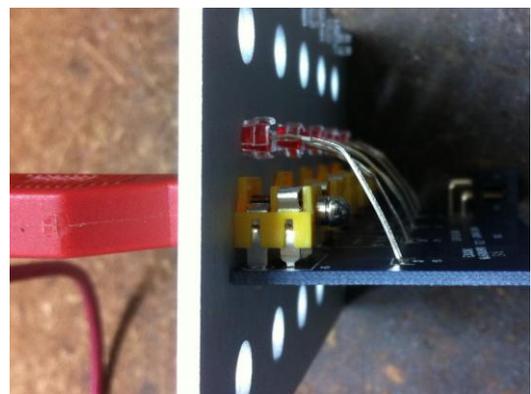
## Addendum

Due to a PCB error we are currently supplying the LM339 comparator IC (U102) on a small piggy-back board which you simply mount on to the respective IC socket.

On the V0.1 revision of the ES21 Support Board, J6\_4 has been cut and should not be soldered to the connector.

<sup>1</sup> If using the supplied red LEDs it is possible to mount these direct to the pcb without using the wire leads. It is important to form the LED legs so that they gently curve down to the pcb maintaining maximum clearance between the LED legs and the jack body as shown in the photo to the right.

This is particularly important when using the 4mm jacks.



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