

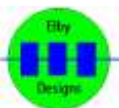


ES11 Triple Comparator & Schmitt Trigger

Construction Guide

Revision 1.01

May 6th, 2019



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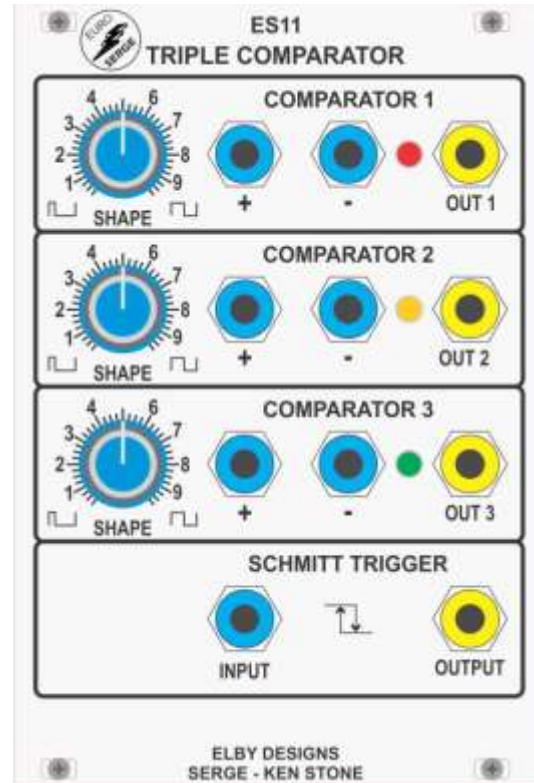
ES11 Triple Comparator & Schmitt Trigger

Construction of the ES11 requires the assembly of 4 boards:-

- Column 1 - Panther Pot PCB ([3D Model](#))
- Column 2 - Panther Jack PCB ([3D Model](#))
- Column 3 - Panther Jack PCB ([3D Model](#))
- Column 4 - Panther Jack LED PCB ([3D Model](#))
- Main Board - ES11 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](#) document 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. Fit all components to the boards following normal assembly guidelines except for the LEDs
2. Fit the 4x1K Resistor Network on to the main board as shown in the 3D Model
3. Mount the Column 4 assembly to the front panel
4. Fit and solder the 3x LEDs noting the orientation of each LED and being careful when forming the legs to not stress the body-leg junction
5. Mount the 3 remaining column boards and then the Main Board ensuring correct alignment of the IDC connectors



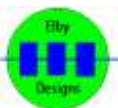
Calibration

Equipment required:

1. 20Hz 5VAC p-p triangle wave

Calibration procedure:

1. Set all [SHAPE] controls to minimum
2. Inject the triangle wave form into the [-] input of COMPARATOR 1
3. Monitor [OUT 1]
4. Adjust P101 for the narrowest negative-going pulse
5. Inject the triangle wave form into the [-] input of COMPARATOR 2
6. Monitor [OUT 2]
7. If no pulse is observed, adjust P101 marginally anti-clockwise until a pulse just appears
8. Inject the triangle wave form into the [-] input of COMPARATOR 3
9. Monitor [OUT 3]
10. If no pulse is observed, adjust P101 marginally anti-clockwise until a pulse just appears
11. Check all 3 comparators to confirm operation



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