

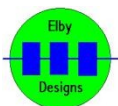


ES15 Smooth & Stepped Generator

Construction Guide

Revision 1.1

August 31, 2020



ELBY Designs - Laurie Biddulph

3 Therese Street, Bridport, TAS 7262, Australia

elby-designs@bigpond.com <http://www.elby-designs.com>

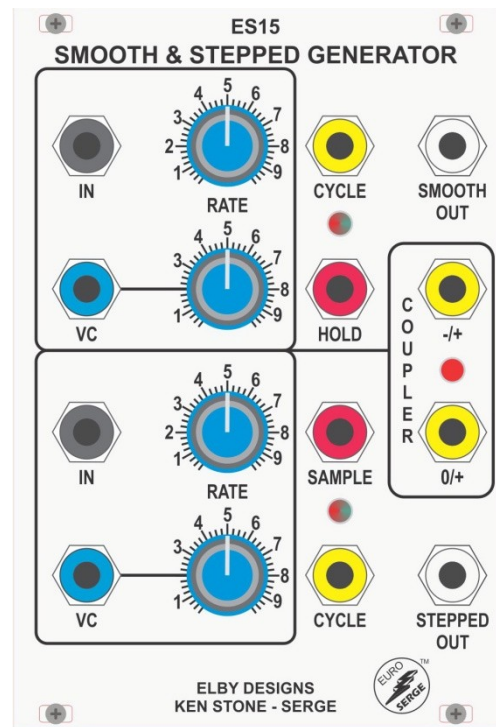
ES15 Smooth & Stepped Generator

Construction of the ES15 requires the assembly of 5 boards:-

- Column 1 - Panther Jack-Switch PCB ([3D Model](#)) ([Overlay](#))
- Column 2 - Panther Pot PCB ([3D Model](#)) ([Overlay](#))
- Column 3 - Panther Jack-LED PCB ([3D Model](#)) ([Overlay](#))
- Column 4 - Panther Jack-LED PCB ([3D Model](#)) ([Overlay](#))
- Backboard - ES15 PCB ([3D Model](#)) ([Overlay](#))

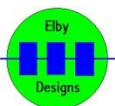
Constructors should refer to the PCB Overlays for any specific comments regarding the board assemblies, the [Bill of Materials](#) for the current value of all components and [General Construction Notes](#) for general PCB assembly guidelines.

1. Fit all components to the boards following normal assembly guidelines except for the LEDs and R409
2. Mount the Column 3 assembly to the front panel and secure firmly using the supplied nuts for the 2 outer jacks
3. Form and install the 2 LEDs and solder in to place
4. Remove the assembly from the panel
5. Mount the Column 4 assembly to the front panel and secure using the supplied nuts for all jacks.
6. Form and install the LED and then solder in to place
7. Mount the other assemblies to the front panel
8. Mount the backboard ensuring the correct alignment of the IDC connectors



Calibration

1. Set all controls to minimum
2. Patch [SMOOTH CYCLE] to [SMOOTH IN]
3. Monitor [SMOOTH OUT]
4. Adjust P301 for 1.6kHz
5. Patch [STEPPED CYCLE] to [STEPPED IN]
6. Monitor [STEPPED OUT]
7. Adjust P401 for 550Hz
8. Install R409
9. Patch a 10Hz 5VDC square wave signal to [SAMPLE]
10. Confirm that [STEPPED OUT] is generating STEPPED voltages
11. Patch a 10Hz 5VDC square wave signal to [HOLD]
12. Confirm that [SMOOTH OUT] is being cycled on and off



ELBY Designs - Laurie Biddulph

3 Therese Street, Bridport, TAS 7262, Australia

elby-designs@bigpond.com <http://www.elby-designs.com>