ES36 NCOM

Construction Guide

Revision 1.0

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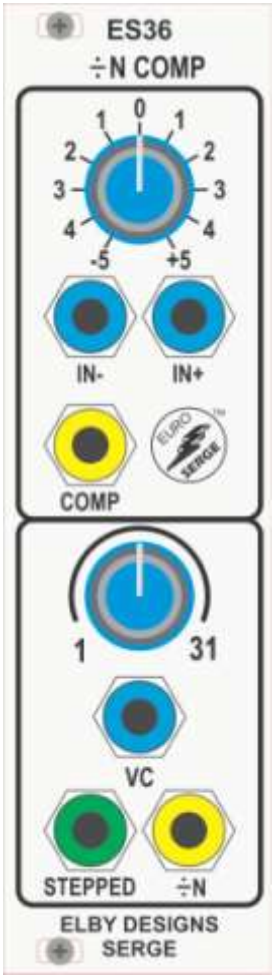
ES36 NCOM

Construction of the ES36 requires the assembly of 1 board:-



Main Board - ES36 Main PCB (3D Model) (PCB Overlay)

Constructors should refer to the printed Component Overlay for any specific comments regarding the board assembly, 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. Assemble the 3 Carrier Board assemblies (3D Model)
2. Fit all components to the main board following normal assembly guidelines except for the sub-assemblies
3. Fit 3x sub-assemblies to the main board and then offer the assembly up to the front panel and secure using the supplied nuts
4. Solder the sub-assemblies in to place

Calibration

1. Monitor TP1
2. Adjust P401 for 5.115VDC

Functional Check

Check out the operation of this module by:-

- applying the sawtooth wave from an oscillator to the [IN-] input in the comparator section.
- Listen to the [COMP] output, and turn the Comparator Knob.
- From about the '0' to about '4', the control should vary the pulse width from zero to full.
- The sound will cut off below and above these positions.
- With the control set for a narrow pulse width (just above the '0' position), plug the output from a slowly varying Positive control voltage into the [IN+] input of the Comparator. The pulse width should be controlled from minimum to maximum without cutting the sound off at either end of the VC control.
- Adjust the knob slightly if the sound cuts off at either extreme.

- Disconnect the VC from the [IN+] and set the knob to about '1'.
- Monitor the [÷N] output.
- Turn the Divider control fully CCW.
- Turn the oscillator frequency up to a fairly high pitch, and turn the Divider control up.
- The pitch will step through the sub-harmonic series.
- Turn the knob fully CCW again and apply a varying VC to the [VC] input.
- Listen for voltage control of this division.
- Note that the setting of the comparator knob or VC of the Comparator section will control the pulse width at the output of the divider section.

- The [STEPPED] output is a staircase wave with the number of steps proportional to the division setting.