

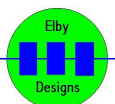


IF113 – 5-Pulser

Construction Guide

Revision 2.0

August 17th, 2018



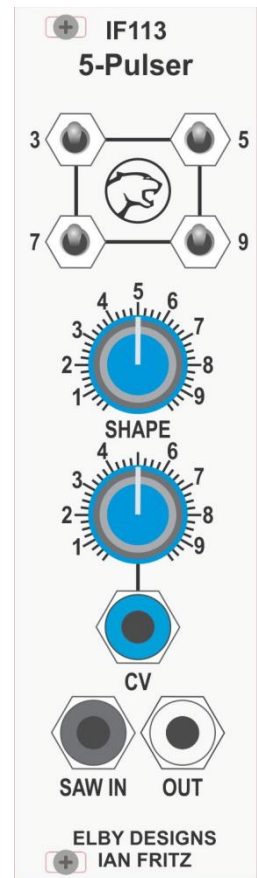
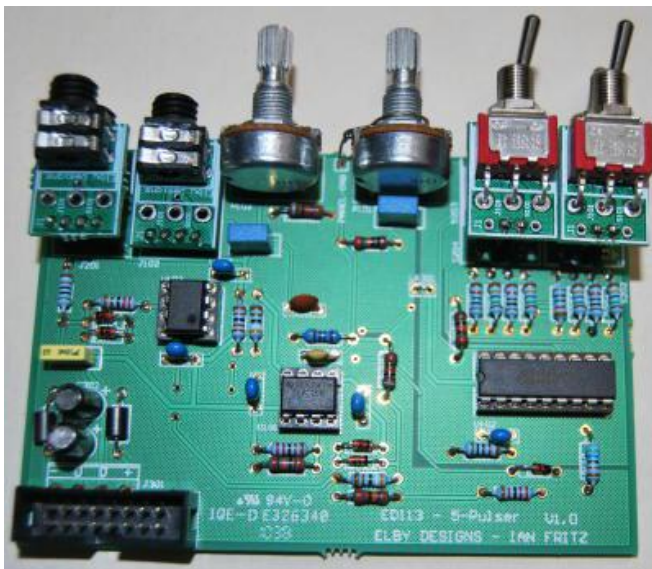
IF113 - 5-Pulser

Construction of the IF113 requires the assembly of 1 board:-

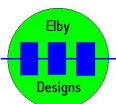
IF113 Main PCB ([3D Model](#))

Constructors should refer to the [PCB 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 2x Switch Carrier assemblies on to the V1.2 Carrier PCBs ([3D Model](#))
2. Assemble the 2x Jack Carrier assemblies ([3D Model](#))
3. Fit all components to the boards excluding the Carrier assemblies
4. Mount the Carrier assemblies but do not solder
5. Offer the board up to the panel and secure using the supplied nuts and washers
6. Check that the Main PCB is at right-angles to the front panel and then solder the jacks in to place.
7. Mount the Carrier boards on to the header but do not solder them,
8. Offer the assembly up to the front panel and secure use the supplied nuts and washers
9. Ensure that the switch bodies are parallel to the edge of the panel and then solder all the Carrier assemblies into place – this can be done from the topside as the holes are plated.



The IF113 does not require any calibration and should work as soon as power is applied.



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DIAGNOSTICS

The following points should be checked to establish operation of the IF113.

Remove all i.c. and check the power rail voltages as follows:-

Location	Reading
U101_4	-12V
U101_8	+12V
U102_2	0V
U102_3	+12V
U103_4	-12V
U103_7	+12V

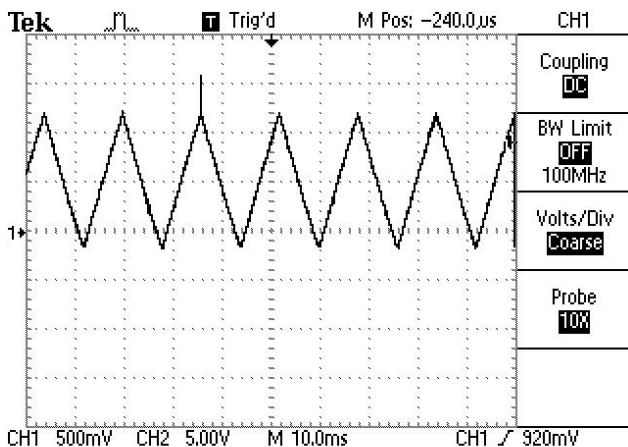
If all are confirmed then reinsert the i.c. and recheck the voltages.

Apply a sawtooth signal of approximately 10V peak-peak centred around 0V to the IN jack.

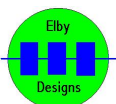
Set all switches to ON and adjust the SHAPE pot to around 9 o'clock.

Use an oscilloscope and monitor the following points:-

U102_5 – Buffered Input Signal



An error here would suggest a problem around U101 and the IN jack.



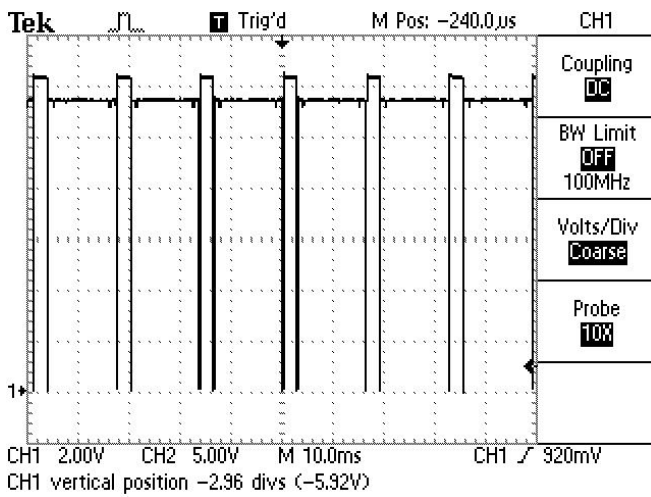
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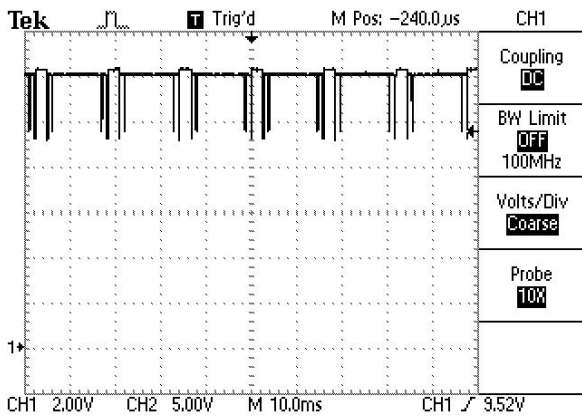
U102_1 – Scaled Output #1



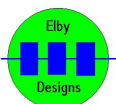
Similar readings should be observed on U102_17, U102_15, U102_13 & U102_11.

An error here would suggest a problem around U102.

U103_6 – Mixed Output



An error here would suggest an error around U103 and the selector switches.



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