

SANDIN IP FUNCTION GENERATOR KIT ASSEMBLY INSTRUCTIONS

This DIY kit assembly guide assumes that the builder is familiar with basic thru-hole soldering techniques and has the ability to identify and mount the electronic components included. A complete bill of materials are included on the opposite column. Resistor color-bands can be identified using the tool here:

http://www.musicfromouterspace.com/analogsynth_new/ELECTRONICS/TOOLBOX/toolbox.html#RESCHART

If you're new to DIY electronics kits or find anything confusing about these directions, please visit www.lzxindustries.net/bitvision for links to helpful resources and videos about soldering and component identification.

STEP BY STEP

- 1) Mount all diodes, ensure that the black band on the diode matches the orientation of the white band shown on the PCB layout. Solder and clip leads.
- 2) Mount all resistors and ferrite beads (unmarked solid gray parts that look like resistors), solder and clip leads.
- 3) Next mount all Integrated Circuits (ICs). Ensure that the notch on the top of each chip matches the orientation of the notch shown on the PCB silkscreen. Solder and clip leads. Take care to not overheat IC pins while soldering.
- 4) Mount IDC power header, ensuring that the notch in the plastic box matches the notch on the PCB layout. Turn over and hold flat against tabletop and solder all pins.
- 5) Mount all ceramic capacitors. Solder and clip leads.
- 6) Mount all electrolytic capacitors, ensuring that the long lead (positive side) is placed thru the square solder pad with the + sign next to it. Solder and clip leads.
- 7) Remove washers and nuts from the horizontal-mount potentiometers. Clip off the protruding metal knob below the potentiometer shaft with flush cutters. Mount potentiometers on PCB and solder all lugs.
- 8) Remove protective plastic from metal frontpanel. Mount jacks and DPDT toggle switch onto frontpanel. Ensure that all parts are firmly attached and straight. Mount assembled PCB onto frontpanel and secure potentiometer washers and nuts onto potentiometers from frontpanel face.
- 9) Using appropriate lengths of hookup wire, follow wiring diagram on opposite page to wire jacks and DPDT switch to labelled PCB pads.
- 8) Thoroughly check your work for accidental solder bridges or overlooked solder joints. You're done!

BILL OF MATERIALS

Diodes

D1, D2, D3, D4 1N5711

Resistors

R2 100R
R1 330R
R13, R33 499R
R17, R32 1K
R16 4.32K
R3, R4, R5, R6, R7, R8 4.99K
R12 5.62K
R9, R10, R11 10K
R14 24K
R51 100K

Ceramic Capacitors

C1, C2, C3, C5 0.1uF (104)

Electrolytic Capacitors

C11, C12 10uF

Integrated Circuits (ICs)

IC1, IC2 LM6172

Ferrite Beads

F1, F2 Ferrite Bead

Other Parts

- (2) Panel-Mount 3.5mm Jack
- (3) Horizontal-Mount 10K Potentiometer
- (1) DPDT Mini-Toggle Switch
- (1) 2x8 Polarized IDC Power Header
- (1) Sandin IP Function Generator Frontpanel
- (1) Sandin IP Function Generator Printed Circuit Board

Included Accessories

- (2) M3 Machine Screw for Mounting
- (1) 16-pin IDC Power Connector Cable

Not Included in Kit

- 22-26 gauge Hookup Wire

Wiring Diagram

