Plum's DSO 150 EuroScope Build Guide rev 1.0
Eurorack Version by Shay Shezifi
31.01.18

Jye Tech DSO 150

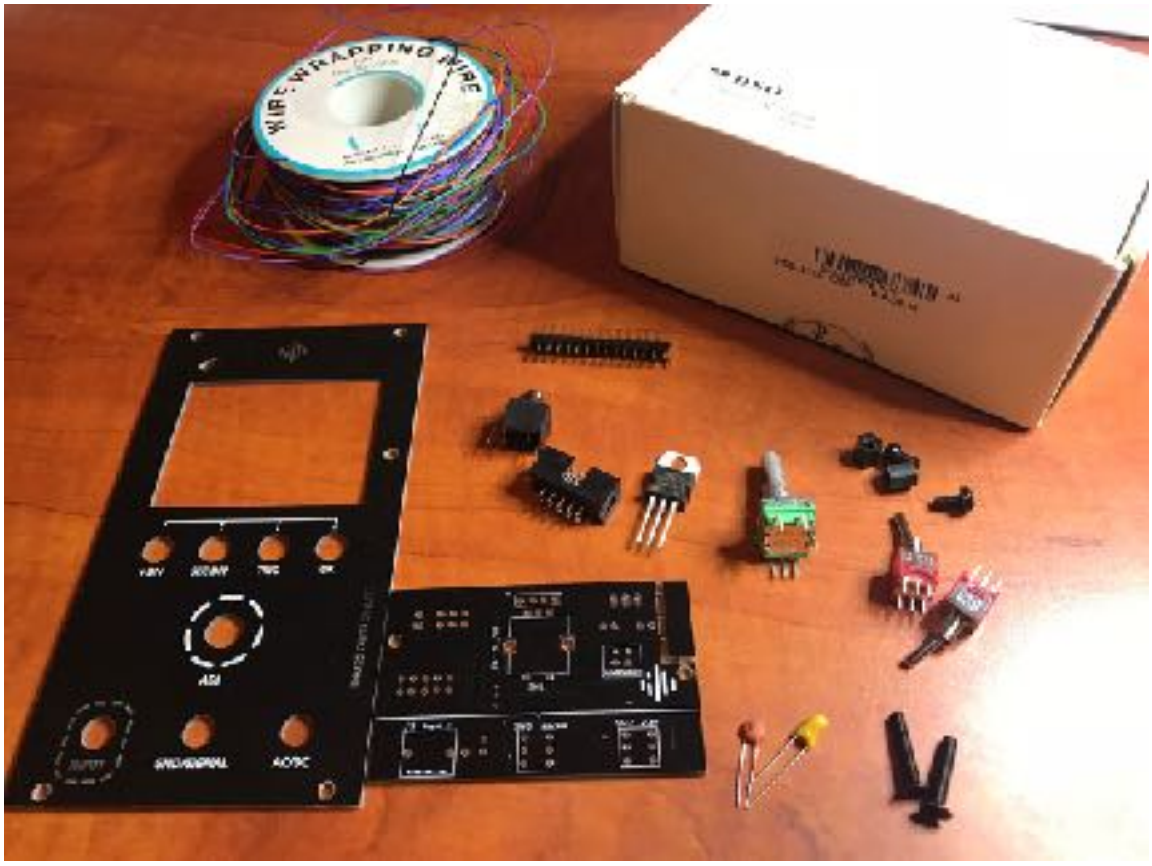
Eurorack Conversion Kit rev1.0

Build Guide

DSO 150 Is a cheap mini oscilloscope from JYE TECH.
This conversion kit lets you the ability to convert it to Eruorack module and contains two parts:
- 14 Hp Panel
- Conversion Board

This is an easy DIY project, just follow this instructions guide.

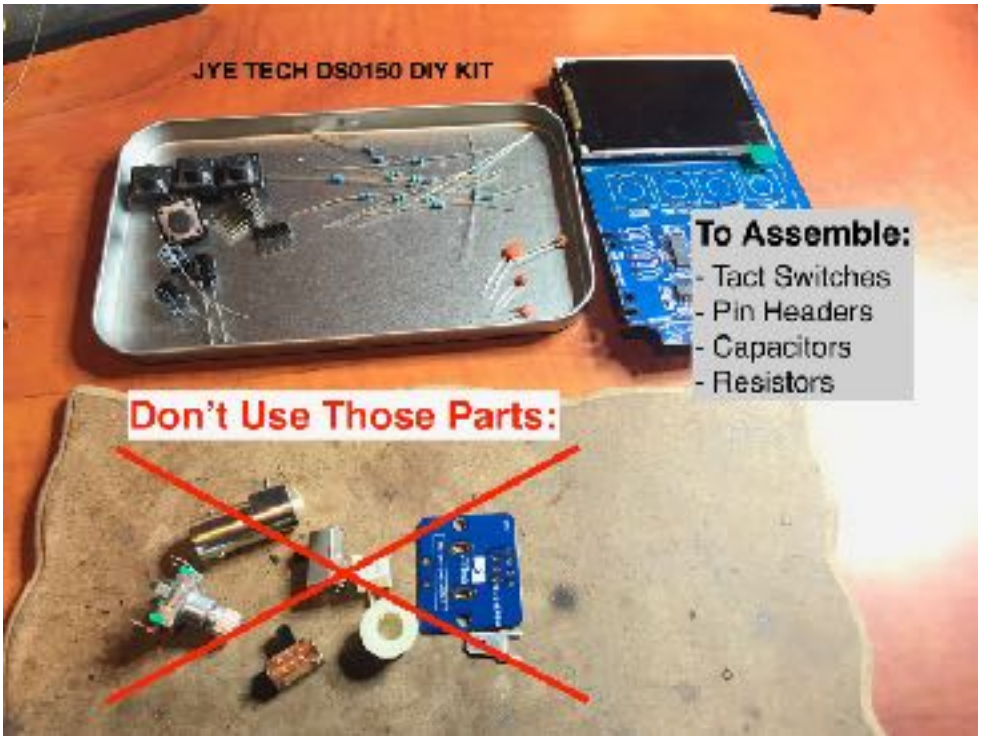
Bill Of Materials



Q	Part/Value	Ref	Source	Notes
1	DSO150 Eurorack panel			
1	DSO150 Conversion Board			
1	**Original** Dso150 (15001K) **DIY KIT**		Banggood	There's other places to buy this kit, but you need pay attention to: 1. buy only the original kit of jye tech version 2017. I've checked this source and it is the original kit. 2. buy the DIY Kit and not the assembled one.
1	L7809CV - 9v Voltage Regulator	IC1	Tayda	
1	0.33uF - **Tantalum** Capacitor		Tayda	!! Tantalum !! - **Polarized Capacitor**

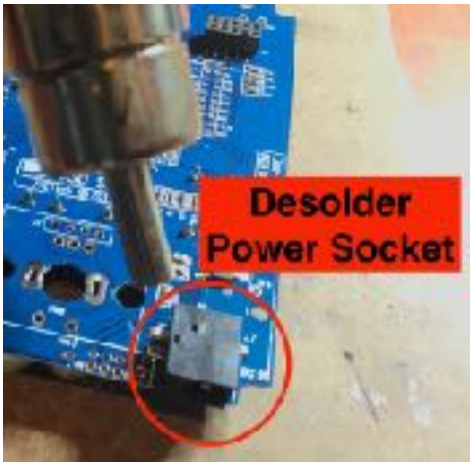
Q	Part/Value	Ref	Source	Notes
1	0.1uF – Ceramic Capacitor		Tayda	
1	2X1 Male Pin Headers		Tayda	Cut 2 from row of 40 pins
1	10 Pin Eurorack Power Socket		Tayda	Box Header Type
2	3M - 6mm Standoffs (Spacers) + 2 3M Screws		AliExpress	The Nylon/Plastic Type are better. To mount the conversion board to dso150 main board.
2	3M – 12mm-16mm Black Screws		AliExpress	To mount the panel to DSO150 mainboard and fix the screen position.
1	EC12E_SW Encoder	SW1	Mouser	
1	PJ301M-12 "Thonkiconn"	J3	Thonk	
2	DPDT (ON-ON) Sub Miniature Toggle Switch	SW2, SW3	Thonk	
1	Encoder Knob		Thonk	I used Sifam Large Soft Encoder Knob – 12mm (D-Shaft Illuminated)
8	10cm Wrapping Wires			

Phase 1:
Assembling DSO 150 KIT



Basically, you need to follow the instructions in the user manual that come with your DSO150 DIY Kit **BUT** you need to do only the steps below (and skip the others):

1. In the mainboard (Marked as "Step 1") You need to solder only the Tact Switches (Step 6) and desolder (or cut) the power socket.



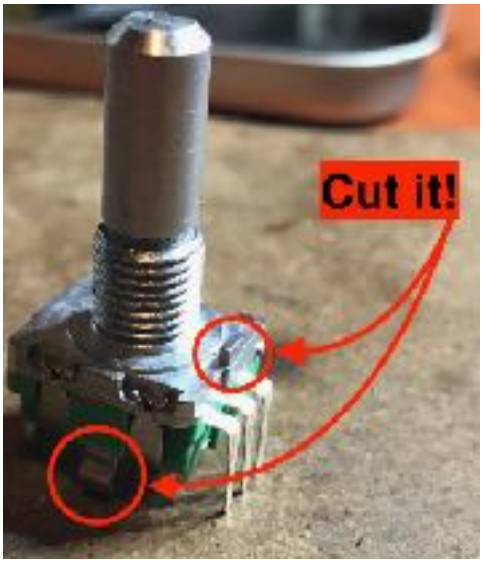
2. In the Analog Board (Marked as "Step 2") You need to solder only the Resistors (Step 1), Capacitors (Steps 2 & 4) and the Pin-Header (Step 6).

Phase 2:
Assembling Conversion Board

1. Solder the Regulator, The Capacitors (Put attention to the Tantalum Capacitor polarity) and the power header

2. * Connect the board to power supply and check for 9v (+/- 10%) at J2

3. Prepare the encoder:

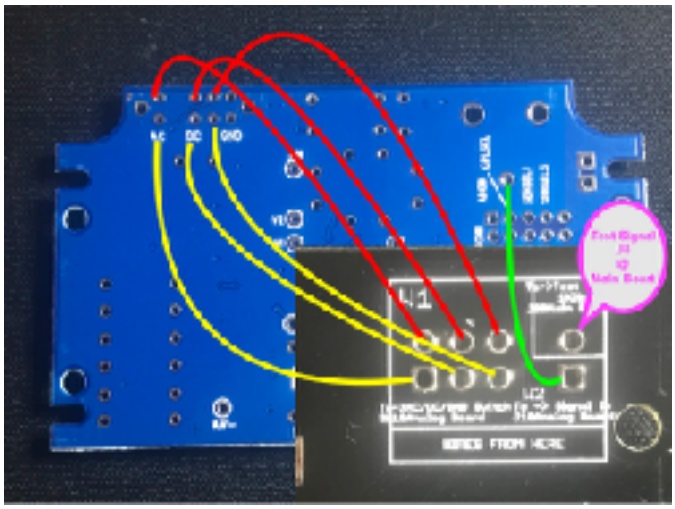


4. Put in place all interface parts (do not solder them yet)
   - Encoder (SW1)
   - Thonkiconn (J3)
   - Toggle Switches (SW2, SW3)

5. Mount the conversion board to the DSO150 mainboard with 2 3M 6mm Standoffs spacers, **Do Not forget to put in place the pin headers (J1, J2)**, If you need to expand the holes in the DSO150 mainboard you can rotate in them a sharp knife or scissors.

6. Solder the pin headers on both boards (J1, J2)

7. Wiring! :



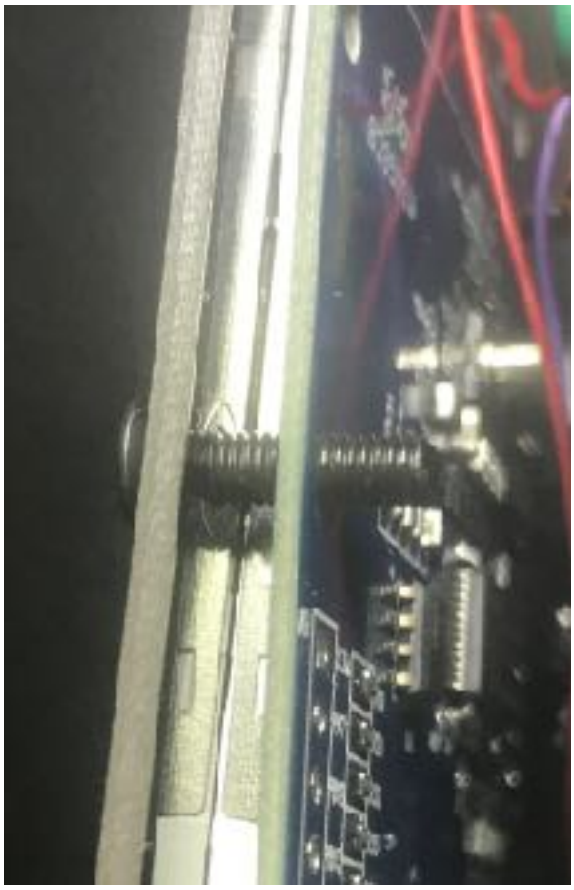
W1 – 6 Wires to SW1 @ DSO 150 analog board, from left to right:
- 2 wires of AC
- 2 Wires of DC
- 2 Wires for switches signal output, You do not need to wire the GND.

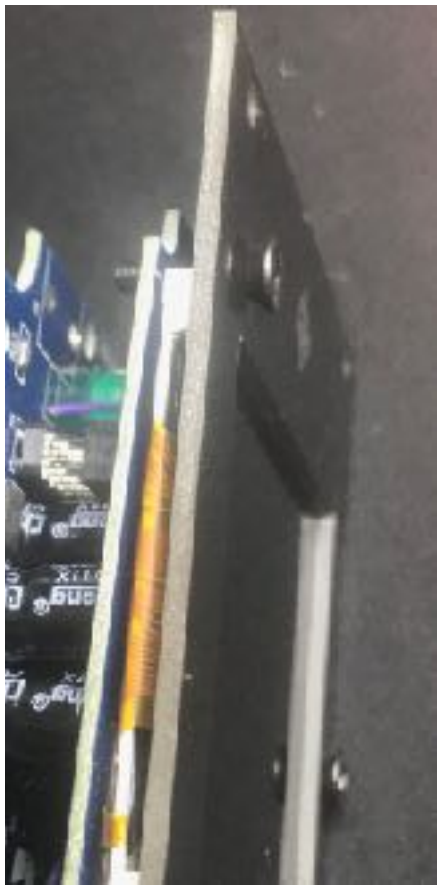
W2 – The square pad need to be wired to the signal input, It's the lower hole of J1 (BNC Connector).

The round pad Need to be wired to test signal tone (J8 @ DSO 150 Main Board).

* Before you mount the panel. Its good time to adjust trimmers C3 and C5 (Step 5 @ DSO 150 user manual).
The test signal tone is normalized to the input jack, so you don't need to plug anything to the audio input for calibration, just connect your module to a power supply and follow the DSO 150 manual calibrations instructions.

8. Mount the panel to DSO150's Mainboard with two 3M 12mm-16mm





9. Solder The Interface parts:
   - Encoder (SW1)
   - Thonkiconn (J3)
   - Toggle Switches (SW2, SW3)

Enjoy Your New DSO 150 EuroScope!