Modular Tester user guide: vi tracker

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Allows testing of components, tracing faults in PCB's and more. Method is similar to Huntron / Polar /VUdata and others.

Although simple testers like the "octopus" and Hameg, who use a single voltage transformer and at most a few series resistors, work but they lack the multitude of voltages, frequencies and resistors as used in professional models and this tester.

A sine wave voltage is applied over the component to test through a current limiting resistor, the voltage V over the component and current I through the component are plotted as XY data. Hence the name VI tracker.

Voltages, frequencies, series resistors and channels can be selected:

Voltages: 0.5, 6, 10 and 20v peak to peak.

Frequencies: 20, 50, 100, 200, 500, 1000 and 2000 Hz.

Resistors: 10, 100, 1000 and 10000 Ohm.

Channels: 1, 2, 1&2 alternating, 1&2 simultaneous.

Voltage levels are selected to be more in line with current electronics than the older generation of testers but inappropriate settings might damage parts under test.

Make sure the test subject is powered off.

Two channels are available to allow side by side comparison of PCBs with a common ground connection. Channels can be display alternating or simultaneously.

After power on the module shows the splash screen and goes to sleep.

Press the right rotary encoder and hold until the splash screen appears.

Press the right rotary encoder to toggle between Voltage and Frequency selection.

Turn the right rotary encoder to select voltage or frequency.

Press the left rotary encoder to toggle between Resistor and Channel selection.

Turn the left rotary encoder to select resistor or channel(s).

Some voltage-resistor combinations are not allowed, the software will change the other parameter in case you select an invalid combination.

Press right encoder long for the menu, turn to select, press to select or toggle setting:

Return: return to main screen.

Calibrate : auto-calibration of all circuits, this should be done once, results will be stored.

Go to sleep: put the module to sleep.

Calibration

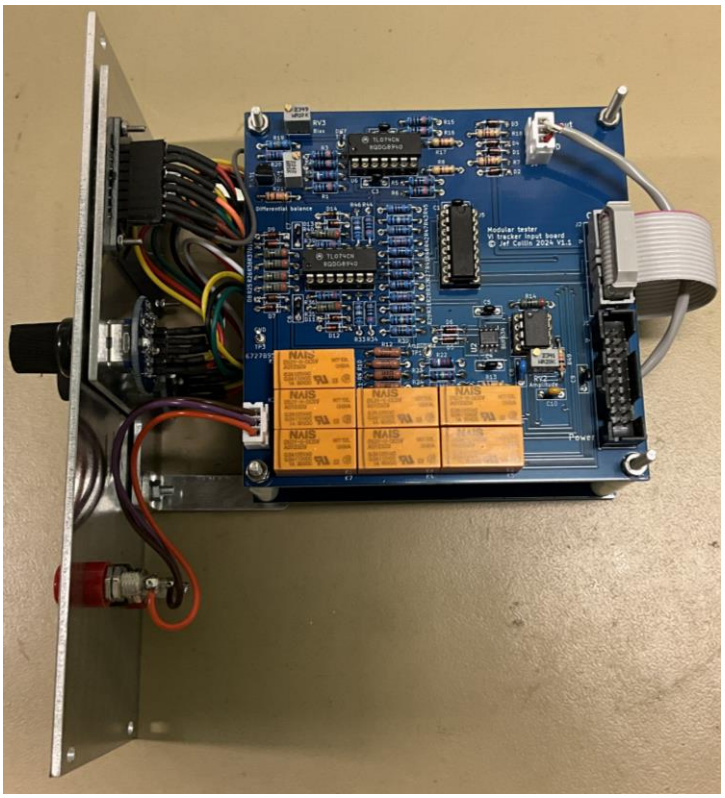
Output voltage level, select 6V range and adjust RV2 for 6V peak to peak at TP1.

Check the other ranges.

Ripple of differential amplifier, adjust RV1 for minimum ripple at TP2.

ADC bias, adjust RV3 until the horizontal line on the display is in the middle of the crosshair. Short the test pins and check vertical line.

Perform auto-calibration from the menu and re-adjust if required.


Modular tester
VI tracker input board
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Power