



VOLTCRAFT

Operating Instructions

DOV-PP116

LA Logic Probe

Item No.: 3402716

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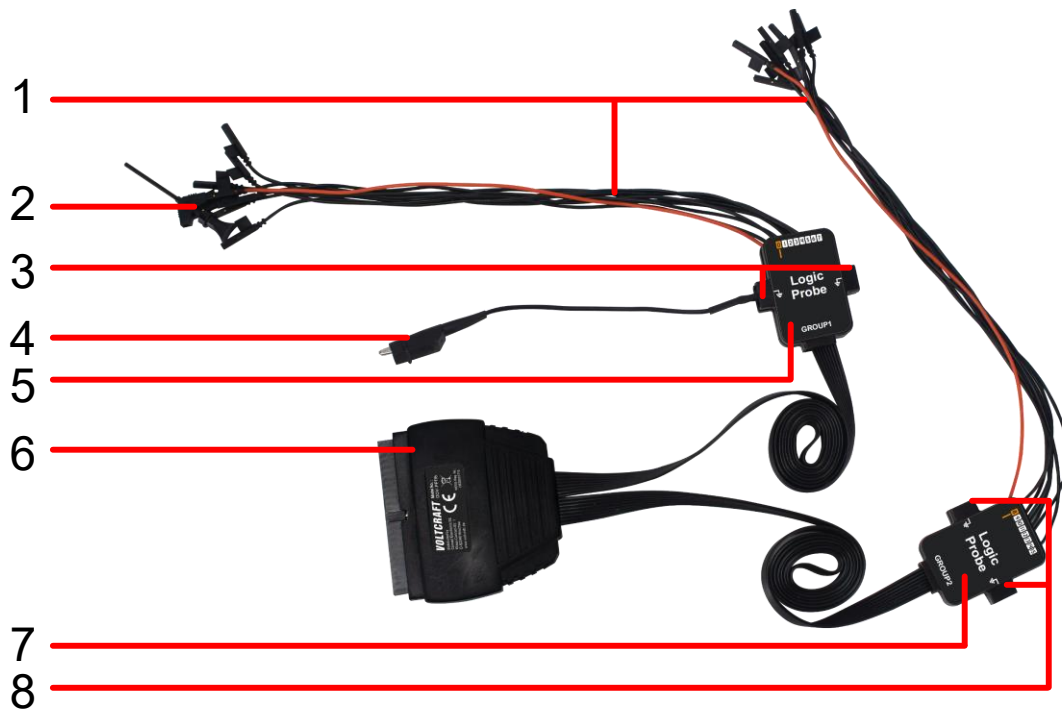
1. General Safety Requirements

- **Connect the probe correctly.** The grounding end of the probe corresponds to the grounding phase. Please don't connect the grounding end to the positive phase.
- **Use Proper Power Cord.**
- **Connect or Disconnect Correctly.**
- **Product Grounded.**
- **Check all Terminal Ratings.**
- **Do not operate without covers.**
- **Avoid exposed circuit.**
- **Do not operate if in any doubt.**
- **Use your Oscilloscope in a well-ventilated area.**
- **Do not operate in wet conditions.**
- **Do not operate in an explosive atmosphere.**
- **Keep product surfaces clean and dry.**

2.Product Overview

As a high-performance active logic probe, DOV-PP116 connects the digital signals under test to the digital oscilloscope with LA function to realize the logic analyzer function.

The DOV-PP116 features a total of 16 digital channels (D0-D15), divided into two channel groups (D0-D7 and D8-D15). Additionally, the DOV-PP116 comes standard with 16 signal leads (2 orange, 14 black), 4 ground leads, and 20 logic analyzer clips (2 orange, 18 black), enabling flexible connections to the signals under test and reference ground.

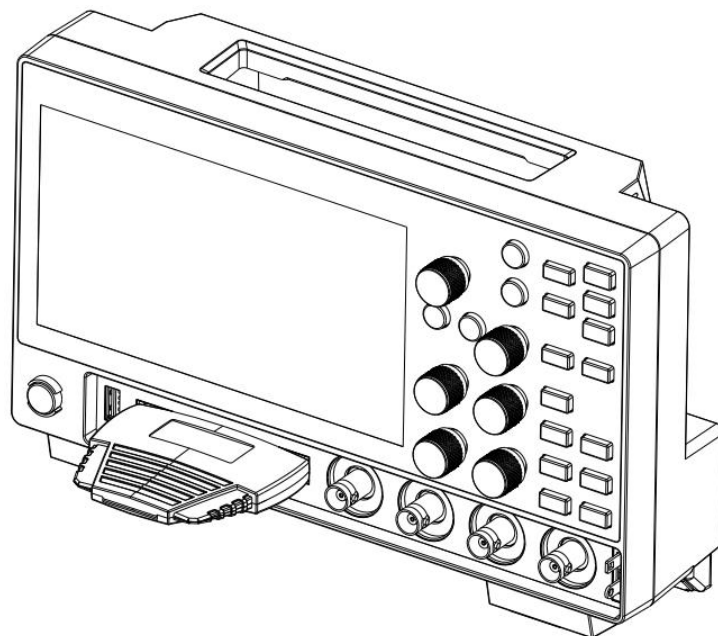


Description:

No.	Description
1	Signal leads, the orange color represents the first leads of each group.
2	Logic Analyzer Clips
3	GROUP1 Ground port
4	Ground leads
5	GROUP1 Junction Box
6	Probe Output Terminal
7	GROUP2 Junction Box
8	GROUP2 Ground port

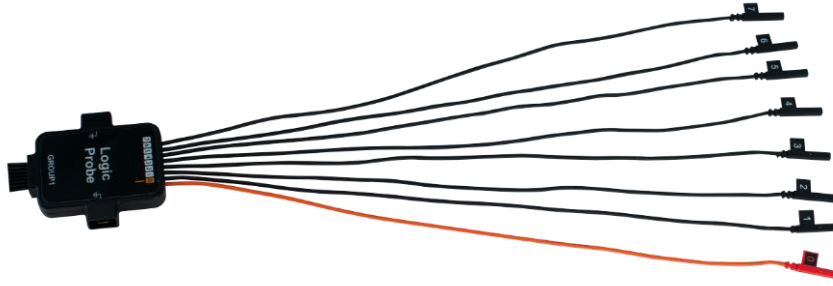
3.How to Use the Logic Probe

- (1) **Connect DOV-PP116 to the oscilloscope:** Connect the output terminal of the DOV-PP116 probe to the LA signal input terminal on the front panel of the oscilloscope, as shown in the figure below.

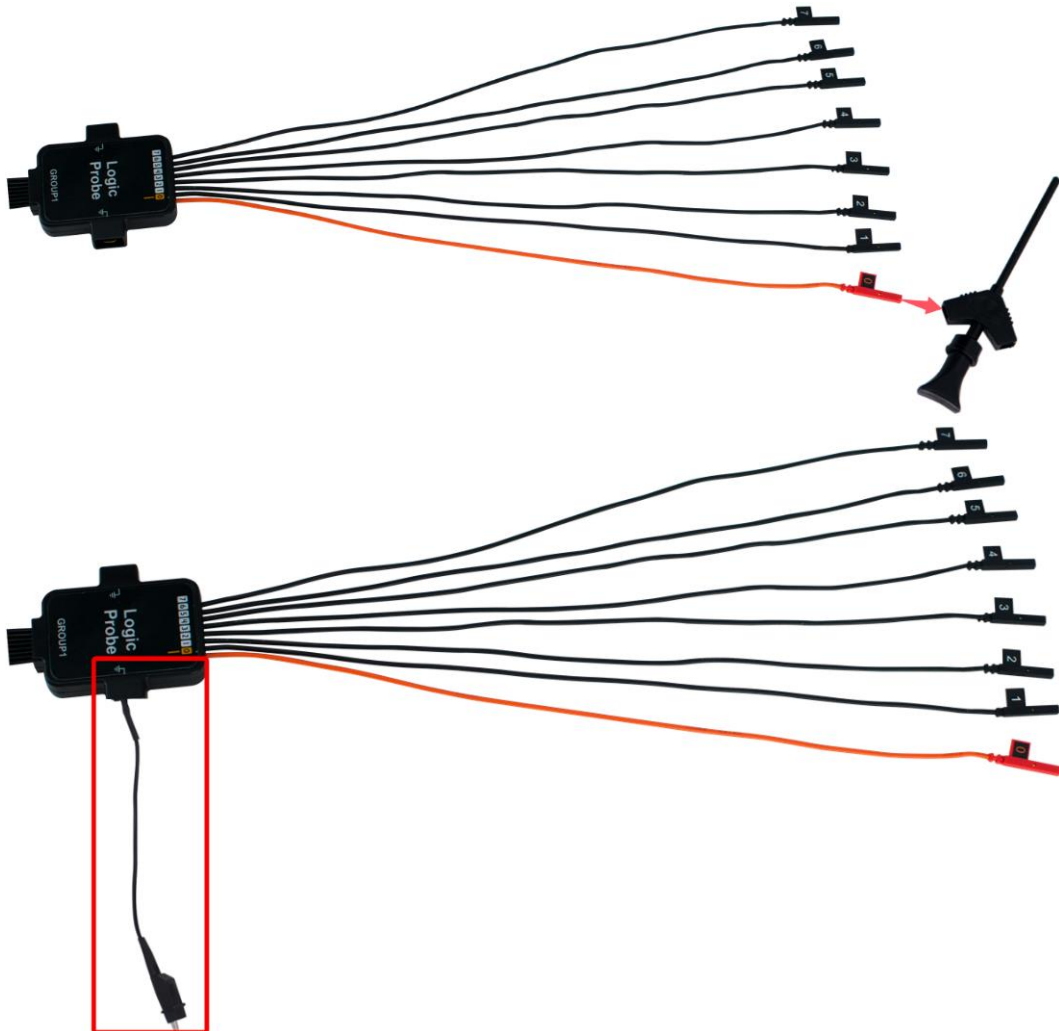


- (2) **Connect the signals under test to DOV-PP116:** Users can connect any number (≤ 16) of measured signals to the DOV-PP116 probe input terminal according to their testing needs. When connecting, it is important to ensure that the amplitude of the input signal does not exceed the maximum operating voltage range of the probe. The DOV-PP116 is designed to connect to the measured signals in the following steps, providing users with flexible signal detection options.

- ① Each measured signal can be individually connected via the input lead. The channel number for each corresponding input can be easily identified through the channel labels on the input lead and the tags on the probe input terminal, as shown in the figure below.



- ② Connect the input lead to the probe test clip, and then use the metal hook inside the test clip to connect to the measured signal node. Also, ground the corresponding distribution box (either end can be connected), as shown in the figure below.



- (3) **Set the probe:** press **LA** on the front of the oscilloscope to enable the logic analyzer function. Click the LA information display bar on the right of screen list to display the setting window. User can view and set the

following parameters under this menu: threshold level (the threshold levels of D0-D7 and D8-D15 can be adjusted independently), Label, Waveform Size (applicable to all channels; wherein, Large is only available when the number of active channels is no more than 8), Auto Arrange and so on.





Note: When the logic probe is first connected to the oscilloscope, it is recommended to perform a zero calibration for the probe. Click **ProbeCalibration** to zero calibration. The screen will pop up a prompt window. If you need to continue calibration, click **Start**. Please disconnect all the signals from the DOV-PP116 input terminal during the calibration.

- (4) **Function Inspection:** after finishing the above operations, the signal under test will be displayed on the corresponding digital channel on the oscilloscope screen. If no signal is displayed, please adjust the oscilloscope to select proper general settings (such as the trigger source, trigger level, trigger mode and so on). If the problem still persists, please check the electric connection and parameter setting again or try to use other probes (such as analog probe) to check the signal state of the test point.

4.Probe Specification

Characteristic	Description
Vertical	
Input channel	16 [D0:D15] , One group is D0 to D7, and one group is D8 to D15
Threshold range	±20.0 V, step by 10 mV
Threshold accuracy	± (100 mV+3% threshold setting)
Threshold selection	TTL, CMOS, ECL, PECL, custom
Maximum input voltage	±40 V peak CAT I
Maximum input dynamic range	±10 V + threshold
Minimum input signal swing	500 mVpp
Input impedance	100 kΩ 8 pF
Vertical resolution	1 bit
Horizontal	
Minimum detectable pulse width	5 ns
Maximum input frequency	200 MHz
Time delay between channels	± 5 ns
General Specification	
Indoor or outdoor use	Both are supported
Altitude	Operating: 3,000 m Non-operating: 15,000 m
Temperature	Working temperature: 0°C ~ 40°C Storage temperature: -20°C ~ +60°C
Relative humidity	≤90%
Overvoltage category	CAT II
Power consumption	5 W

5. Appendix

Name	Number	Diagram
Main Cable	1	 A complex cable assembly with multiple colored wires (red, black, white, green) connected to various connectors, including a logic analyzer hook and a logic probe.
Ground Cable-Alligator clip terminal	4	 A short black cable with an alligator clip terminal on one end and a small connector on the other.
Ground Cable-DuPont wire terminal	4	 A short black cable with a DuPont wire terminal on one end and a small connector on the other.
Logic Analyzer Hook	20	 A black logic analyzer hook with a long, thin probe tip and a hook-like base.
Packing Box	1	