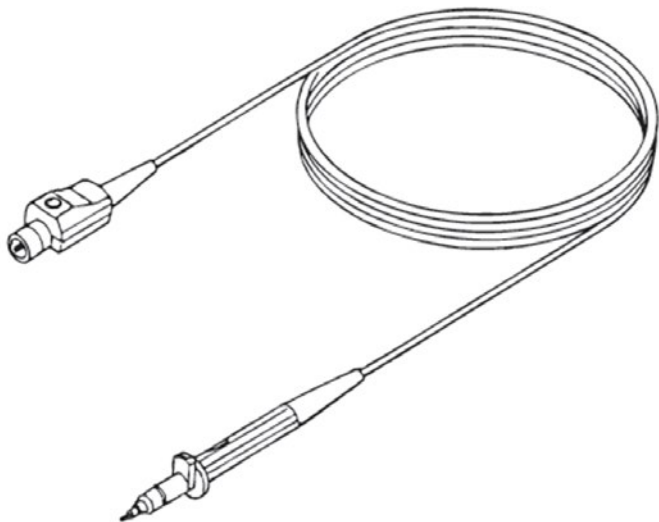




TELEDYNE LECROY
Everywhere**you**look™



Operator's Manual

PP006D

Passive Probe



TELEDYNE LECROY
Everywhere you look™

700 Chestnut Ridge Road
Chestnut Ridge, NY, 10977-6499
Tel: 845-425-2000, Fax: 845-578-5985
teledynelecroy.com

PP006D Passive Probe Operator's Manual

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Manufactured under an ISO 9000 Registered Quality Management System.



This electronic product is subject to disposal and recycling regulations that vary by country and region. Many countries prohibit the disposal of waste electronic equipment in standard waste receptacles. For more information about proper disposal and recycling of your Teledyne LeCroy product, visit teledynelecroy.com/recycle.

Terms and Symbols

The following symbols appear on the product or in its documentation:

**WARNING**

High Voltage. Risk of electric shock or burn.

**WARNING or
CAUTION**

Condition or practice could result in injury or loss of life, or damage to equipment.

**DOUBLE INSULATION****PROTECTIVE (EARTH) TERMINAL**

Introduction

The Teledyne LeCroy PP006D is a passive probe with a wide range of probing accessories. It is designed to give high-impedance probing capability to a circuit when attached to a Teledyne LeCroy oscilloscope.



To avoid electric shock, keep fingers behind the probe's finger guard during use.



The cable has an interior wear indicator that becomes visible when the wire jacket is excessively worn. If the wear indicator is visible, do not use the probe.



Rated for indoor use only. Do not operate where conductive pollutants may be present.

Specifications

System Attenuation	Input Impedance		B/W	Probe Length	Compensation Range
	R (M Ω)	C (pF)	(MHz)	(m)	(pF)
10x	10 $\pm$ 2%	12.5 $\pm$ 10%	500 (-3 dB)	1.5	14 - 25

Attenuation Ratio 10:1 $\pm$ 2% (excepting characteristics of oscilloscope)

Max. Input Voltage Circuits not directly connected to Mains: 350 Vrms,
..... 1400 V transient overvoltage

..... Measurement Category II*: 300 Vrms



To reduce risk of fire or electric shock, do not exceed the voltage or category ratings of the probe. See voltage derating curve on p.4.

Pollution Degree* 2

Operating Altitude Up to 3000 meters (9843 ft)

Max. Operating Temp.. 5 °C to 40 °C (41 °F to 104 °F)

Humidity..... Up to 80% RH (5 °C to 31 °C)

..... Decreasing linearly to 50% RH at 40°C

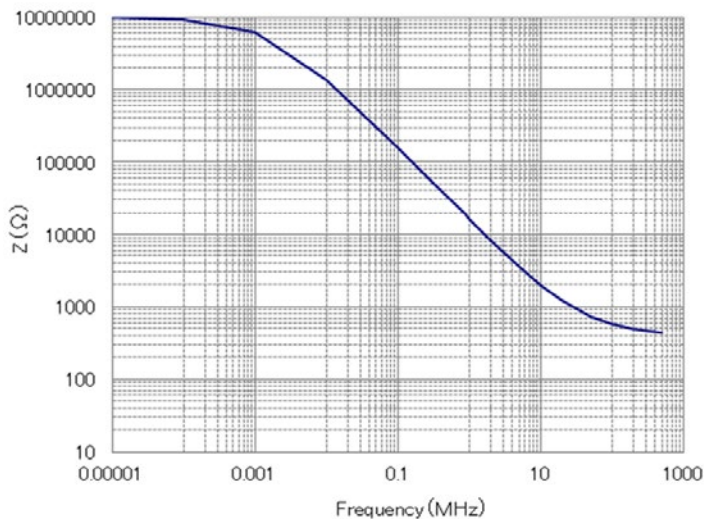
* As defined in IEC/EN 61010-031. See definitions below.

Definitions:

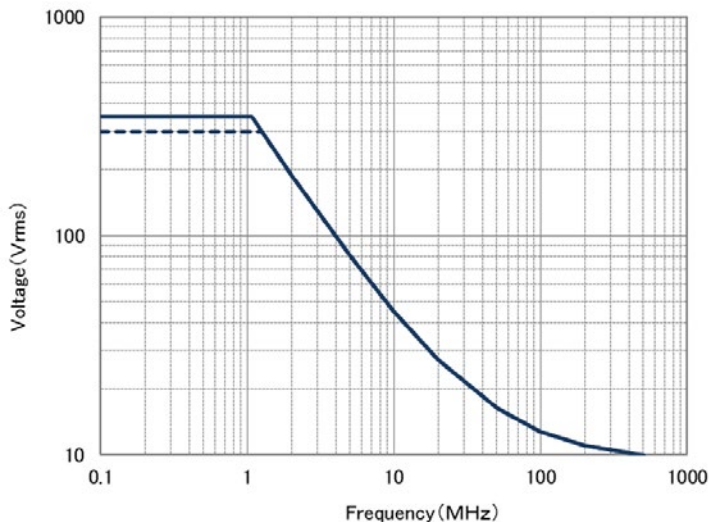
Measurement Category II (CAT II) refers to measurements performed on circuits directly connected to utilization points (socket outlets and similar) of the low-voltage mains installation.

Pollution Degree 2 refers to an operating environment where normally only dry, non-conductive pollution occurs. Temporary conductivity caused by condensation is to be expected.

Input Impedance Profile



Voltage vs. Frequency Derating Curve



—— Not directly connected to Mains
- - - - CAT II

General Safety Information



Observe generally accepted safety procedures in addition to those listed here to avoid personal injury or damage to equipment. **The overall safety of any system incorporating this accessory is the responsibility of the assembler of the system.**

Connect only to grounded instruments. Use only with compatible Teledyne LeCroy oscilloscopes that have their BNC input connected to an earth ground. Do not connect the probe reference lead to any point which is at a potential other than earth ground.

Connect and disconnect properly. Connect probe to the oscilloscope before connecting it to the test circuit. Disconnect the probe input and reference lead from the test circuit before disconnecting from the oscilloscope. Do not connect/disconnect probes that are attached to a live voltage source.

Do not overload. Do not apply any potential to the probe leads that exceeds the maximum rating of the probe.

Always comply with the Voltage vs. Frequency Derating Curve.

Observe all terminal ratings. Observe all markings on the oscilloscope before connecting. Consult the oscilloscope product manual for further ratings information.

Do not remove probe casing.

Do not excessively bend cables.

If the cable wear indicator is visible, do not use the probe.

Use indoors only within operational environment listed. Do not use in wet or explosive atmospheres. Keep product surfaces clean and dry.

Handle with care. Probe tips are extremely sharp and may puncture skin or cause other bodily injury if not handled properly.

Keep fingers behind the finger guard of probe body and accessories.

Do not operate with suspected failures. Before each use, inspect the probe and accessories for damage such as tears or other defects in the probe body, cable jacket, accessories, etc. If any part is damaged, cease operation immediately and sequester the probe from inadvertent use.

EC Declaration of Conformity



The probe conforms to the applicable European Union requirements per Low Voltage Directive (LVD) 2014/35/EU.

Compliance was demonstrated to the following specification as listed in the Official Journal of the European Communities:

IEC/EN 61010-031:2015 Safety requirements for electrical equipment for measurement, control and laboratory use – Part 031: Safety requirements for handheld probe assemblies for electrical measurement and test.

EU RoHS Compliance

The probe and accessories conform to the 2011/65/EU RoHS2 Directive.

Disposal



The probe complies with the applicable European Union requirements to Directives 2012/19/EU and 2013/56/EU on Waste Electrical and Electronic Equipment (WEEE) and Batteries.

Probe Compensation

Proper compensation of the probe is required to assure amplitude accuracy of the waveform being measured by matching the probe to the oscilloscope's input capacitance. Compensation should be adjusted whenever the probe is connected to or transferred between oscilloscopes.

1. Connect the sprung hook to the oscilloscope's CAL OUT terminal and the ground lead to the GND terminal. Connect the cable to any input channel.
2. Turn on the input channel and press AUTO SETUP.
3. Adjust the time base and channel Volts/div settings until the signal contains two cycles as shown below.
4. Use the trimmer tool to adjust the low-frequency trimmer located on the BNC Compensation Box until you achieve a flat-topped square wave like the center illustration in the figure below.



CAUTION: Do not apply excessive pressure. The tip of the trimmer is made of plastic and can break easily.



Over-compensated, correct, and under-compensated waveforms

Cleaning

- Clean only the exterior of the probe, cables, and accessories. Use a soft cotton cloth moistened with a mild detergent and water solution. Do not allow any portion of the probe to be submerged at any time.
- Dry the probe and accessory thoroughly before attempting to make any voltage measurement.
- Do not subject the probe to solvents or solvent fumes as these can cause deterioration of the probe body, cables, and accessories.

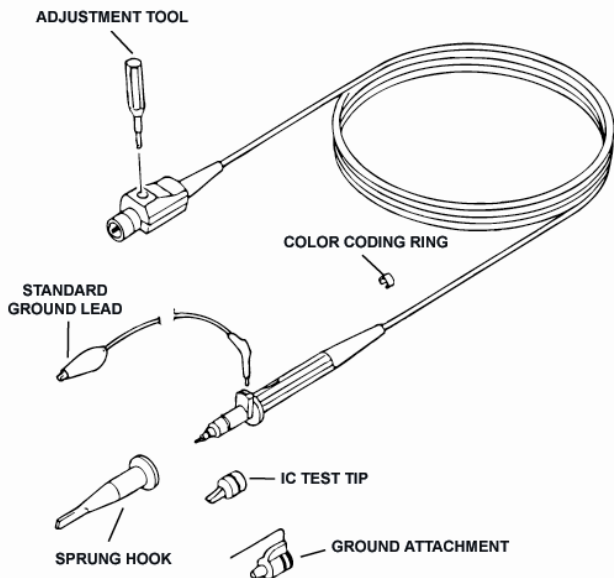
Service

Refer all repairs to qualified service personnel. Contact Teledyne LeCroy at the following address to arrange to return the probe for service:

Teledyne LeCroy, Inc.
700 Chestnut Ridge Road
Chestnut Ridge, NY, 10977-6499
Ph: 800-553-2769 or 845-425-2000
Fax: 845-578-5985
contact.corp@teledynelecroy.com

For the most complete and up-to-date list of sales and service centers by country, visit teledynelecroy.com/support/contact.

Replaceable Parts



Description	Quantity
Adjustment Tool	1
Color Coding Rings (yellow, red, blue, green)	1 set of 4
Standard Ground Lead	1
IC Test Tip	1
Sprung Hook	1
Ground Attachment	1

All replacement parts are in Standard Accessory Replacement Kit **PK118**.

Warranty

NOTE: THE WARRANTY BELOW REPLACES ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS, OR ADEQUACY FOR ANY PARTICULAR PURPOSE OR USE. TELEDYNE LECROY SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER IN CONTRACT OR OTHERWISE. THE CUSTOMER IS RESPONSIBLE FOR THE TRANSPORTATION AND INSURANCE CHARGES FOR THE RETURN OF PRODUCTS TO THE SERVICE FACILITY. TELEDYNE LECROY WILL RETURN ALL PRODUCTS UNDER WARRANTY WITH TRANSPORT PREPAID.

Teledyne LeCroy warrants this oscilloscope accessory for normal use and operation within specification for a period of one year from the date of shipment. Spare parts, replacement parts and repairs are warranted for 90 days.

In exercising its warranty, Teledyne LeCroy, at its option, will either repair or replace any assembly returned within the warranty period to the Customer Service Department of an authorized service center. However, this will be done only if the product is determined by Teledyne LeCroy's examination to be defective because of workmanship or materials, and the defect is not caused by misuse, neglect, accident, abnormal conditions of operation; or, damaged by attempted repair or modifications by a non-authorized service facility.

The customer will be responsible for the transportation and insurance charges for the return of products to the service facility. Teledyne LeCroy will return all products under warranty with transportation charges prepaid.

This warranty replaces all other warranties, expressed or implied, including, but not limited to, any implied warranty of merchantability, fitness, or adequacy for any particular purposes or use. Teledyne LeCroy shall not be liable for any special, incidental, or consequential damages, whether in contract or otherwise.

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