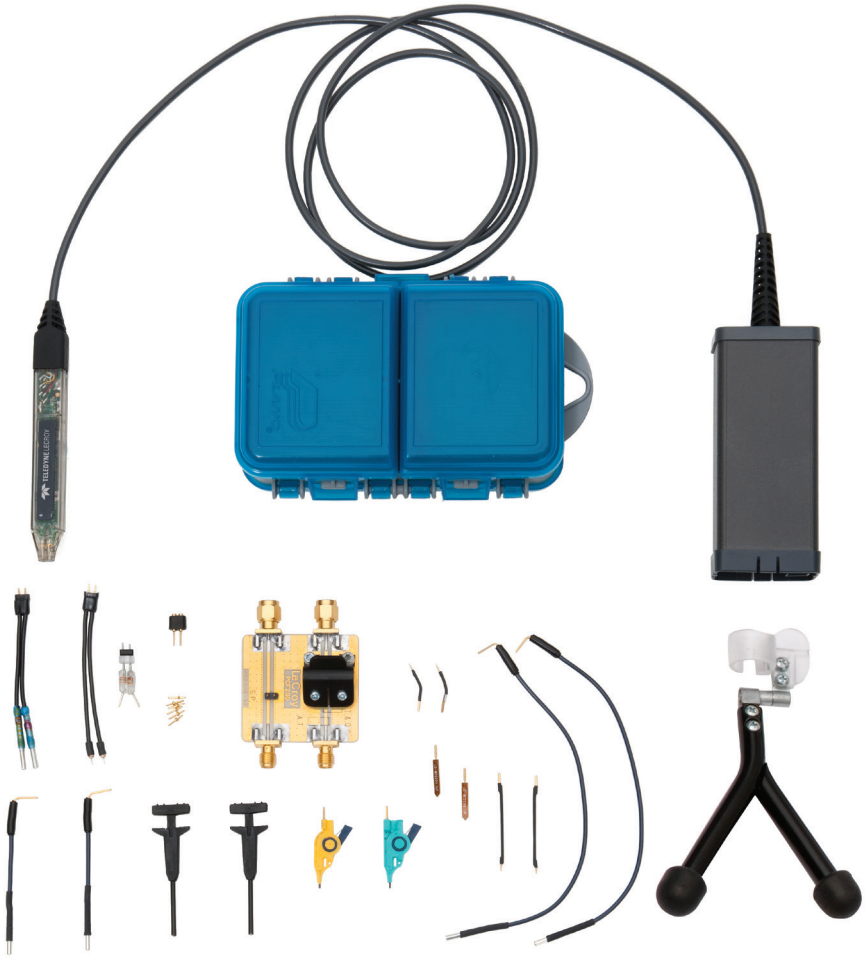




TELEDYNE LECROY
Everywhereyoulook™



Operator's Manual

ZD500, ZD1000, ZD1500
Differential Probes

ZD500, ZD1000, ZD1500
Differential Probes
Operator's Manual
July, 2014





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Warranty

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 its warranty period to the Customer Service Department or an authorized service center. However, this will be done only if the product is determined by Teledyne LeCroy's examination to be defective due to workmanship or materials, and the defect is not caused by misuse, neglect, accident, abnormal conditions of operation, or damage resulting from 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.

924705-00

July, 2014

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Safety Instructions

This section contains instructions that must be observed to keep this oscilloscope accessory operating in a correct and safe condition. You are required to follow generally accepted safety procedures in addition to the precautions specified in this section. **The overall safety of any system incorporating this accessory is the responsibility of the assembler of the system.**

Symbols

These symbols may appear on the probe body or in this manual to alert you to important safety considerations.



CAUTION. Potential for damage to probe or instrument it is connected to. Attend to the accompanying information to protect against personal injury or damage. Do not proceed until conditions are fully understood and met.



ELECTROSTATIC DISCHARGE (ESD) HAZARD. The probe is susceptible to damage if anti-static measures are not taken.



DOUBLE INSULATION

Precautions

Connect and disconnect properly. Connect probe to the measurement instrument before connecting the test leads to a circuit/signal being tested.

Use only within operational environment listed. Do not use in wet or explosive atmospheres.

Use indoors only.

Keep product surfaces clean and dry.

Be careful with sharp tips. The tips may cause bodily injury if not handled properly.

Do not operate with suspected failures. Do not use the probe if any part is damaged. Cease operation immediately and sequester the probe from inadvertent use.

Operating Environment

The accessory is intended for indoor use and should be operated in a clean, dry environment. Before using this product, ensure that its operating environment is maintained within these parameters:

Temperature: 5° to 40° C.

Humidity: Maximum relative humidity 90 % for temperatures up to 31° C decreasing linearly to 50 % relative humidity at 40° C.

Altitude: Up to 10,000 ft (3,048 m).

Introduction

The ZD Series of Differential Probes (ZD500, ZD1000 and ZD1500) are high bandwidth active differential probes. The probes feature low noise, very high input impedance and high common mode rejection, and are ideally suited for signal integrity measurements in high-speed digital systems. With low input capacitance and high input resistance, circuit loading is minimized.

The ZD Series probes can be used with Teledyne LeCroy's WaveSurfer, WaveRunner, WavePro, and WaveMaster series platforms with firmware version 6.4.1.x or later.

With the ProBus interface, the ZD Series probes become an integral part of the oscilloscope. The probe can be controlled from the oscilloscope's graphical user interface. The oscilloscope provides power to the probe, so there is no need for a separate power supply or batteries.

Key Benefits

- High frequency performance
- Low input capacitance
- Wide dynamic range
- ProBus interface
- A wide variety of tips, leads, and grabbers for probing

Standard Accessories

The ZD Series probe is shipped with the following standard accessories:

Standard Accessory	Quantity	Part Number
Straight Tip	4	PACC-PT001
Solder-in Lead	2	PACC-ZD002
Right Angle Connector (Long)	2	PACC-LD004
Micro-Grabber	2	PK006-4
Mini-Grabber	2	PACC-CL001
Spring-loaded Ground (Long)	2	PACC-ZD003
Spring-loaded Ground (Short)	2	PACC-CD008
Small IC Adapter	2	PACC-ZD006
Tip Saver	2	PACC-ZD004
Y-lead Adapter	1	PACC-ZD001
Swivel Tip Adapter	1	PACC-ZD005
Probe Calibration Fixture	1	PCF200
Freehand Probe Holder	1	PACC-MS001
Instruction Manual	1	
Certificate of Calibration	1	

Features and Accessories

The ZD Series probes are provided with numerous features and accessories to make probing and connecting to different test points easier than ever.

- The small, low mass probe head is designed for ease of use and high performance.
- The probe tip socket fits easily onto 0.025 inch square pins for direct access to test points. Several different adapters are available which connect directly in the probe socket.
- The ground socket will accept several different ground leads to provide a short ground path for low noise susceptibility.

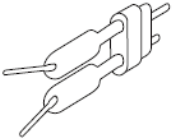
Tips

Straight Tip



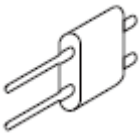
The straight tip is rugged and designed for general probing. Fits in either probe socket.

Swivel Tip Adapter



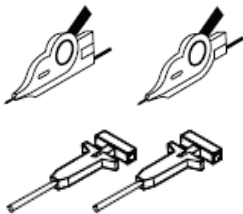
The swivel tip adapter is designed for multi-purpose browsing and features adjustable tip spacing to reach test points .300" apart with Z-axis compliance. Resistive compensation to reduce inductive peaking is included.

Tip Saver



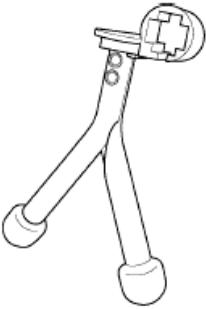
To prevent excessive wear on the probe input leads, it is recommended to use tip saver in most probing scenarios. The tip saver offers full system bandwidth and will not degrade signal under test.

Micro- and Mini-Grabbers



The micro- and mini-grabbers are ideal for connecting to small IC legs or pins very tightly spaced.

Freehand Probe Holder



The *FreeHand* lets you focus on the oscilloscope screen instead of on maintaining contact to multiple test points. It allows the user to concentrate on what is really important – the waveform.

It is designed to keep most of the weight on the probe tip and will prevent lost contact when a bump to the table shakes the circuit under test.

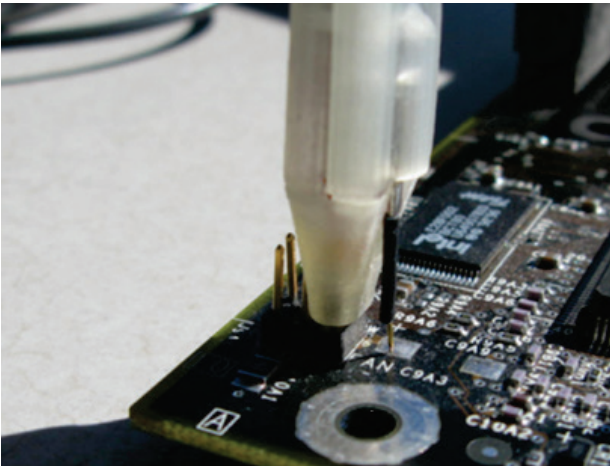
Additionally, the ZD probe can be mounted horizontally or vertically in the *FreeHand*, giving added measurement flexibility.

Grounds



The bendable ground leads on the Long and Short Spring-Loaded Bendable Grounds are designed to be attached to the offset ground socket or be attached to either socket of the probe head.

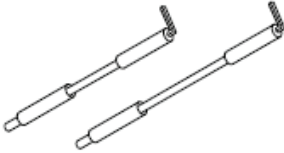
Below is an example using the short spring-loaded, bendable ground.



Leads

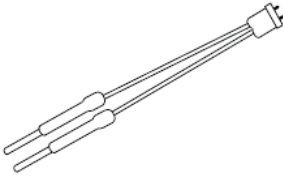
While longer leads provide greater flexibility when connecting the probe to a circuit, the added inductance may degrade the fidelity of high frequency signals.

Short and Long Right Angle Lead This lead has a socket on one end and a square pin on the other to connect to the input or ground socket of the probe body, and may be used for general purpose probing or can be connected to the Mini-Grabber or Micro-Grabber accessories.



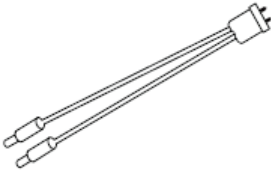
Y Lead Adapter

This lead is used for both ground and input lead simultaneously. It has two sockets on one end and two square pins on the other and may be used for general purpose probing. Resistive compensation to reduce inductive peaking is included.



Solder-In Lead

This lead can be soldered directly to the test points for a secure probe connection.



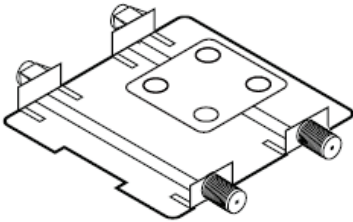
Small IC Adapter

The Small IC adapters are designed for probing the leads of an IC. One side is insulated to prevent shorting one pin to the adjacent pin. The IC adapters can probe between IC legs with a width as narrow as .010" up to .100". Resistive compensation to reduce inductive peaking is included.



Probe Calibration Fixture

The probe deskew fixture (PCF-200) is provided as a standard accessory with ZD500, ZD1000, and ZD1500 probes.



The fixture can be used one of two ways:

1. The fixture may be used to determine the effect of probe input loading on the circuit under test and verification of the probe response to the signal being measured.
2. The fixture may be used as a convenient way to deskew several probes/oscilloscope channels. This can be accomplished in the following ways:
 - Connect a fast edge to one or both inputs and terminate the corresponding output to a scope channel. Trigger the scope on this signal for a common time reference. Connect the probe tip(s) to the appropriate connection point. Solder-in probe tips and browser tips may be inserted under the clamping mechanism. Display the probe signals on the oscilloscope screen and use the channel deskew adjust to align them to a common point.
 - Connect the WavePro 7 Zi and Zi-A or WaveMaster 8 Zi and Zi-A fast edge output to one of the inputs. Set the Zi Series oscilloscope to trigger on the internal Fast Edge source. Set the trigger delay to zero. Now, on the vertical dialog, use the Probe Cal - Cable Deskew button to align one signal/channel at a time to the specified zero delay trigger point (center of screen). Repeat for as many probes as you have connected, each time aligning them to the common point.

Probe Operation

Handling the Probe

The ZD Series probes are precision test instruments. Exercise care when handling and storing the probe. Always handle the probe by the probe body or compensation box. Avoid putting excessive strain or exposing the probe cable to sharp bends.



ESD Sensitive: The tips of the ZD Series probes are sensitive to Electrostatic Discharge (ESD). Avoid causing damage to the probe by always following anti-static procedures (wear wrist strap, etc.) when using or handling the probe.

Connecting the Probe to an Oscilloscope

The ZD Series probe has been designed for use with Teledyne LeCroy's WaveSurfer, WaveRunner, WaveMaster, and WavePro platforms equipped with the ProBus interface. When you attach the probe output connector to the oscilloscope's input connector, the oscilloscope recognizes the probe, provides proper termination and activates the probe control functions in the user interface.

Operation with an Oscilloscope

When the ZD Series probes are connected to any compatible Teledyne LeCroy oscilloscope, the displayed scale factor and measurement values are automatically adjusted.

Control through the oscilloscope's interface can be found on the channel dialog that corresponds with the connected probe. Refer to your oscilloscope's manual for specific operation instructions.

Turning the **Volts/Div** knob controls the oscilloscope's scale factor to give full available dynamic range up to 2.25 V/div.

Connecting the Probe to the Test Circuit

To maintain the high performance capability of the probe in measurement applications, care must be exercised in connecting the probe to the test circuit. Increasing the parasitic capacitance or inductance in the input paths may introduce a "ring" or slow the rise time of fast signals. Input leads which form a large loop area will pick up any radiated electromagnetic field which passes through the loop and may induce noise into the probe input.

Using one of the available accessories makes the ZD Series probe with its small profile and low mass head ideally suited for applications in dense circuitry.

Care and Maintenance

Cleaning

The exterior of the probe and cable should be cleaned, using a soft cloth moistened with water. The use of abrasive agents, strong detergents, or other solvents may damage the probe. Always ensure that the input leads are free of debris.



CAUTION. The probe case is not sealed and should never be immersed in any fluid.

Calibration Interval

The recommended calibration interval is one year. (Performance Verification and Adjustment Procedures are included in this manual.)

Service Strategy

The ZD Series probe utilizes fine pitch surface mount devices. It is therefore impractical to attempt to repair in the field. Defective probes must be returned to a Teledyne LeCroy service facility for diagnosis and exchange. Defective probes under warranty are repaired or replaced. A probe that is not under warranty can be exchanged for a factory refurbished probe for a modest fee. You must return the defective probe in order to receive credit for the probe core.

Returning a Probe for **Calibration** or **Service**

Return a probe for calibration or service by contacting your local Teledyne LeCroy sales representative. They tell you where to return the product. All returned products should be identified by both **model** and **serial number**. Provide your name and contact number, and a description of the defect or failure (if possible).

Products returned to the factory require a **Return Material Authorization (RMA)** acquired by contacting your nearest Teledyne LeCroy sales office, representative or the North America Customer Care Center.

- Return shipment should be prepaid.
- Teledyne LeCroy cannot accept COD or Collect Return shipments.
- We recommend air-freighting.

NOTE: It is important that the RMA be clearly shown on the outside of the shipping package for prompt redirection to the appropriate department.

Follow these steps for a smooth product return.

1. Contact your local Teledyne LeCroy sales or service representative to obtain a Return Material Authorization.
2. Remove all accessories from the probe. Do not include the manual.
3. Pack the probe in its case, surrounded by the original packing material (or equivalent) and box.
4. Label the case with a tag containing
 - The RMA
 - Name and address of the owner
 - Probe model and serial number
 - Description of failure
5. Package the probe case in a cardboard shipping box with adequate padding to avoid damage in transit.

6. Mark the outside of the box with the shipping address given to you by the Teledyne LeCroy representative; be sure to add the following:
 - ATTN: <RMA assigned by the Teledyne LeCroy representative>
 - FRAGILE
7. Insure the item for the replacement cost of the probe.
8. **If returning a probe to a different country, also:**
 - Mark shipments returned for service as a "Return of US manufactured goods for warranty repair/recalibration."
 - If there is a cost involved in the service, put the service cost in the value column and the replacement value of the probe in the body of the invoice marked "For insurance purposes only."
 - Be very specific as to the reason for shipment. Duties may have to be paid on the value of the service.

Replacement Parts

The probe connection accessories and other common parts can be ordered through the North America Customer Care Centers.

Replacement Part	Part Number
Straight Tip	PACC-PT001
Solder-in Lead	PACC-ZD002
Right Angle Connector (Long)	PACC-LD004
Micro-Grabber	PK006-4
Mini-Grabber	PACC-CL001
Spring-loaded Ground (Long)	PACC-ZD003
Spring-loaded Ground (Short)	PACC-CD008
Small IC Adapter	PACC-ZD006
Tip Saver	PACC-ZD004
Y-lead Adapter	PACC-ZD001
Swivel Tip Adapter	PACC-ZD005
Probe Calibration Fixture	PCF200
Freehand Probe Holder	PACC-MS001

Performance Verification

This procedure can be used to verify the warranted characteristics of the ZD Series High Impedance Active Probe.

The recommended calibration interval for the models ZD Series is one year. The complete performance verification procedure should be performed as the first step of annual calibration. Test results can be recorded on a photocopy of the Test Record provided in Appendix A at the end of the manual.

Performance verification can be completed without removing the probe covers or exposing the user to hazardous voltages. Adjustment should only be attempted if a parameter measured in the Performance Verification Procedure is outside the specification limits.

NOTE: Adjustment should only be performed by qualified personnel

This procedure tests the following specifications:

- Output Zero Voltage
- LF Attenuation Accuracy

Required Test Equipment

The following table lists the test equipment and accessories (or their equivalents) that are required for performance verification of the ZD Series Probes.

This procedure has been developed to minimize the number of calibrated test instruments required.

Only the parameters listed in boldface in the Minimum requirements column must be calibrated to the accuracy indicated.

Because the input and output connector types may vary on different brands and models of test instruments, additional adapters or cables may be required.

List of Required Equipment.

Description	Minimum Requirement	Test Equipment Examples
Digital Oscilloscope	ProBus Interface; Windows-based	Teledyne LeCroy WaveRunner Zi or WaveSurfer Xs
Digital Multimeter (DMM) with test probe leads	4.5 digit DC: 0.1% Accuracy AC: 0.1% Accuracy	Agilent Technologies 34401A Fluke 8842A-09
Function Generator	Sine Wave output amplitude adjustable to 14.14 Vp-p 5 Vrms into 1 M Ω at 70 Hz	Agilent Technologies 33120A Stanford Research DS340
Power Supply	0-12 V, settable to 10 mV	HP E3611A
BNC Coaxial Cable (2 ea.)	Male to Male, 50 Ω , 36" Cable	Pomona 2249-C-36 Pomona 5697-36
BNC Tee Connector	Male to Dual Female	Pomona 3285
Calibration Fixture	ProBus Extender Cable	Teledyne LeCroy PROBUS-CF01
Terminator, Precision, BNC	50 $\Omega \pm 0.05\%$	Teledyne LeCroy TERM-CF01
Banana Plug Adapter (2 ea.)	Female BNC to Dual Banana Plug	Pomona 1269
BNC to Mini-grabber	BNC Mail to Mini-grabber Cable, 36"	Pomona 5187-C-36
2.54mm square pin short	Pins connected together to short the probe inputs	Samtec TSW-102-07-G-S

Preliminary Procedure

1. Connect the ZD Series probe to Channel 1 of the oscilloscope.
2. Turn the oscilloscope on and allow at least 30 minutes warm-up time for the ZD Series and test equipment before performing the Verification Procedure.
3. Turn on the other test equipment and allow them to warm up for the manufacturer's recommended timeframe.
4. While the instruments are reaching operating temperature, make a photocopy of the Performance Verification Test Record (located in Appendix A), and fill in the necessary data.
5. Select the channel to which the probe is connected. Set the oscilloscope scale factor to 20 mV/div.
6. Disconnect the Probe from the oscilloscope. Verify that the scale factor changes from 20 mV/div to 2 mV/div.
7. Reconnect the Probe to the oscilloscope.

The warranted characteristics of the ZD Series are valid at any temperature within the Environmental Characteristics listed in the Specifications. However, some of the other test equipment used to verify the performance may have environmental limitations required to meet the accuracy needed for the procedure. Be sure that the ambient conditions meet the requirements of all the test instruments used in this procedure.

NOTE: The correct operation of the ZD Series controls requires software version 6.4.1.x or higher. The software version in the test oscilloscope can be verified by selecting **Utilities, Utilities Setup...** from the menu bar, then the **Status** tab.

Contact your local Teledyne LeCroy representative or visit teledynelecroy.com if the software in your oscilloscope requires updating.

Functional Check

The functional check will verify the basic operation of the probe functions.

It is recommended that the Functional Check be performed prior to the Performance Verification Procedure.

1. Return to the factory default settings by:
 - a. Selecting **File, Recall Setup...** from the menu bar.
 - b. Then touching the **Recall Default** button.
2. Touch the **C1** trace label to open the **C1 Vertical Adjust** dialog.
3. Verify that the probe sensed (ZD Series) is displayed as a dialog tab.

Verification Procedure

A. Output Zero Voltage

1. Leave the probe connected to C1 of the oscilloscope. Set the vertical sensitivity for C1 to 20 mV/ and the horizontal scale to 1.0 us/.
2. Turn on measurement P1 and set it to measure the mean of C1. Turn statistics on.
3. Insert the square pin short into the probe input sockets to short the inputs.
4. Initiate an AutoZero (control on the ZD series dialog tab of C1).
5. Wait an additional 15 minutes, then record the press the 'Clear Sweeps' button.
6. Record the mean of P1: mean (C1) as **Output Zero** on the Test Record.
7. Verify the absolute value of Output Zero is less than the value given on the probe data sheet.

B. LF Attenuation Accuracy

1. Connect the BNC tee to the output of the function generator.
2. Carefully insert the Straight Tips (supplied in accessory kit) into the sockets of the probe head. Attach the red lead of the mini-grabber to the positive (+) signal input and the black lead to the negative (-) input of the probe head.
3. Connect the BNC connector of the mini-grabbers to the BNC tee on the output of the function generator.
4. Attach a BNC cable to the unused female port of the BNC tee, connect a dual banana plug adapter to the other end of the cable and plug the dual banana plug adapter into the DMM input. Be sure the side of the banana plug adapter corresponding to the BNC shield (marked "GROUND") is connected to the **LOW** or **COMMON** input of the DMM.
5. Set the DMM to read AC volt and set the range to measure 5.0 Vrms.
6. Set the mode of the function generator to sine wave, the frequency to 70 Hz and the output amplitude to 5 Vrms \pm 10 mV as measured on the DMM.
7. Record the output voltage to 1 mV resolution as "Generator Output Voltage" in the Test Record. Be careful not to alter the output amplitude after the reading is recorded.
8. Remove the probe from C1 of the scope and re-connect using the Probus extender cable. Connect one end of a BNC cable to the probe end of the extender cable, and the other end to the precision 50 Ω adapter.
9. Set the vertical scale of C1 to 1 V/. Select the probe dialog tab and record the value listed for 'Effective Gain, top range' on the test record.
10. Take the recorded generator output voltage and divide by the effective gain. Record this value as 'Expected Output Voltage, top range' on the test record.
11. Connect the banana plugs of the precision 50 Ω adapter to the input of the DMM. Measure the output voltage and record this as 'Measured Output Voltage, top range' on the test record.
12. Calculate the gain error by taking $100 * [(Measured Output Voltage) - (Expected Output Voltage)] / (Expected Output Voltage)$. Record this value as the % Gain Error. Verify that this is within the limits given on the data sheet.
13. Connect the signal generator to the DMM input and set the output amplitude of the signal generator to 500 mVrms \pm 1 mV as measured on the DMM.

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14. Record the output voltage to 1 mV resolution as "Generator Output Voltage, low range" in the Test Record. Be careful not to alter the output amplitude after the reading is recorded.
15. Set the vertical scale of C1 to 200 mV/. Select the probe dialog tab and record the value listed for 'Effective Gain, low range' on the test record.
16. Take the recorded generator output voltage and divide by the effective gain. Record this value as 'Expected Output Voltage, low range' on the test record.
 - a. Connect the banana plugs of the precision 50Ω adapter to the input of the DMM. Measure the output voltage and record this as 'Measured Output Voltage, low range' on the test record.
 - b. Calculate the gain error by taking $100 * [(Measured Output Voltage) - (Expected Output Voltage)] / (Expected Output Voltage)$. Record this value as the % Gain Error. Verify that this is within the limits given on the data sheet.

This completes the Performance Verification of the ZD Series. Complete and file the Test Record, as required to support your internal calibration procedure.

Apply suitable calibration label to the ZD Series housing as required.

Performance Verification Test Record

This record can be used to record the results of measurements made during the performance verification of the ZD Series Probes. Photocopy this page and record the results on the copy. File the completed record as required by applicable internal quality procedures. The section in the test record corresponds to the parameters tested in the performance verification procedure. The numbers preceding the individual data records correspond to the steps in the procedure requiring the recording of data.

Results to be recorded in the column labeled **Test Result** are the actual specification limit check. The test limits are included in all of these steps. Other measurements and the results of intermediate calculations that support the limit check are to be recorded in the column labeled **Intermediate Results**.

Permission is granted to reproduce these pages for the purpose of recording test results.

NOTE: Use a new Test Record for each probe, probe tip module, and lead assembly.

NOTE: The function generator used in this Performance Verification Procedure is used for making relative measurements. The output of the generator is measured with a DMM or oscilloscope in this procedure. Thus, the generator is not required to be calibrated.

Items Tested

Item	Serial Number	Date	Technician
ZD500			
ZD1000			
ZD1500			

Equipment Used

Instrument	Model	Serial Number	Calibration Due Date
Oscilloscope			
Digital Multimeter			
Function Generator			

Test Record

OUTPUT ZERO VOLTAGE

Step	Description	Intermediate Data
A-6	Output Zero (Test limit $0V \pm 5\text{ mV}$)	

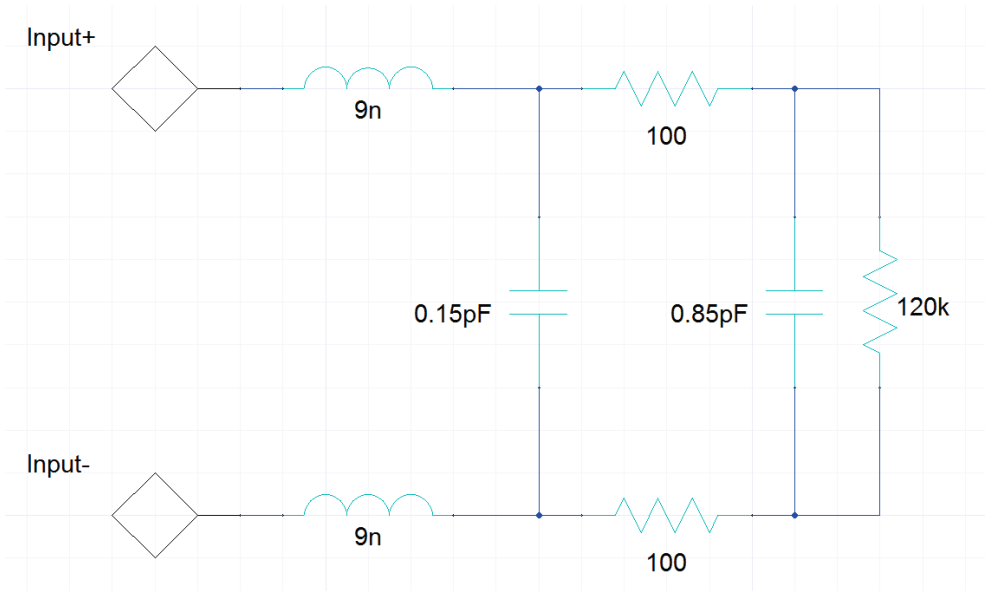
LF ATTENUATION ACCURACY

Step	Description	Intermediate Data
B-7	Generator Output Voltage	V
B-9	Effective Gain, top range	
B-10	Expected Output Voltage, top range	V
B-11	Measured Output Voltage, top range	V
B-12	Gain Error, top range (Test Limit $\leq \pm 1.0\%$)	%
B-14	Generator Output Voltage	V
B-15	Effective Gain, low range	
B-16	Expected Output Voltage, low range	V
B-17	Measured Output Voltage, low range	V
B-18	Gain Error , top range (Test Limit $\leq \pm 1.0\%$)	%

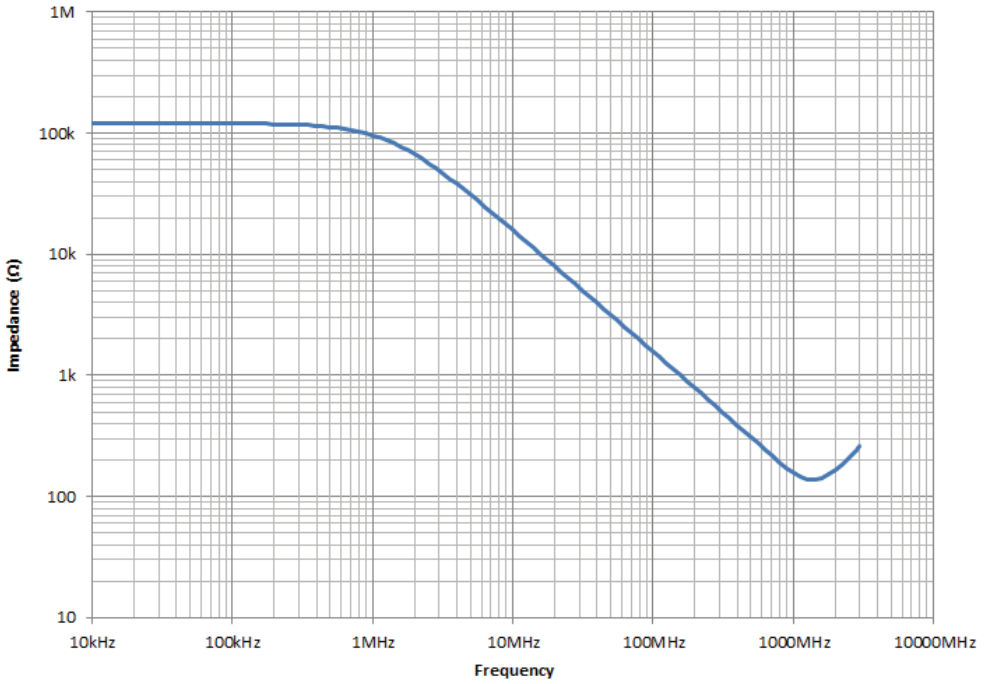
Probe Input Loading

Attaching any probe to a test circuit add some loading to the circuit under test. In most applications the high impedance of the probe, compared to the impedance of the circuit under test, imparts an insignificant load to the test circuit. However, at very high frequencies the capacitive reactance of the probe tip or lead may load the circuit enough to affect the measurement. These probes are designed to minimize these effects at high frequencies. Refer to the figures in this topic for equivalent input circuit information.

ZDxxxx Differential Input Equivalent Circuit



ZDxxxx Impedance vs. Frequency Derating Curve



Reference Specifications

Please refer to the Teledyne LeCroy website at teledynelecroy.com for detailed specification information.

Certifications

This section contains the probe's Electromagnetic Compatibility (EMC), Safety and Environmental certifications.

EMC Compliance

EC DECLARATION OF CONFORMITY - EMC

The **probe** meets intent of EC Directive 2004/108/EC for Electromagnetic Compatibility. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities:

EN 61326-1:2006, EN 61326-2-1:2006 EMC requirements for electrical equipment for measurement, control, and laboratory use.

European Contact:

Teledyne LeCroy Europe GmbH
Waldhofer Str 104
D-69123 Heidelberg
Germany
Tel: (49) 6221 82700

AUSTRALIA & NEW ZEALAND DECLARATION OF CONFORMITY—EMC

The probe complies with the EMC provision of the Radio Communications Act per the following standards, in accordance with requirements imposed by Australian Communication and Media Authority (ACMA):

CISPR 11:2003 Radiated and Conducted Emissions, Group 1, Class A, in accordance with EN61326-1:2006 and EN61326-2-1:2006.

Australia / New Zealand Contacts:

Vicom Australia Ltd.
1064 Centre Road
Oakleigh, South Victoria 3167
Australia

Vicom New Zealand Ltd.
60 Grafton Road
Auckland
New Zealand

Safety Compliance

EC DECLARATION OF CONFORMITY – LOW VOLTAGE

The probe meets intent of EC Directive 2006/95/EC for Product Safety. Compliance was demonstrated to the following specifications as listed in the Official Journal of the European Communities:

EN 61010-1:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements

EN 61010-2:030:2010 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-030: Particular requirements for testing and measuring circuits


EN 61010-031/A1:2008 Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 031: Safety requirements for hand-held probe assemblies for electrical measurement and test.

Environmental Compliance

END-OF-LIFE HANDLING



The probe is marked with this symbol to indicate that it complies with the applicable European Union requirements to Directives 2002/96/EC and 2006/66/EC on Waste Electrical and Electronic Equipment (WEEE) and Batteries.

 The probe 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, please visit teledynelecroy.com/recycle.

RESTRICTION OF HAZARDOUS SUBSTANCES (ROHS)

This product and its accessories conform to the 2011/65/EU RoHS2 Directive, as it is classified as Industrial Monitoring and Control Equipment (per Article 3, Paragraph 24) and is exempt from RoHS compliance until 22 July 2017 (per Article 4, Paragraph 3).

ISO Certification

Manufactured under an ISO 9000 Registered Quality Management System. Visit teledynelecroy.com to view the certificate.

Contact Teledyne LeCroy

Teledyne LeCroy Service Centers	
<p>United States and Canada - World Wide Corporate Office Teledyne LeCroy Corporation 700 Chestnut Ridge Road Chestnut Ridge, NY, 10977-6499, USA Ph: 800-553-2769 / 845-425-2000 FAX: 845-578-5985 teledynelecroy.com Support: contact.corp@teledynelecroy.com Sales: customersupport@teledynelecroy.com</p>	<p>United States - Protocol Solutions Group Teledyne LeCroy Corporation 3385 Scott Boulevard Santa Clara, CA, 95054, USA FAX: 408-727-0800 teledynelecroy.com Sales and Service: Ph: 800-909-7211 / 408-727-6600 contact.corp@teledynelecroy.com Support: Ph: 800-909-7112 / 408-653-1260 psgsupport@teledynelecroy.com</p>
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