# How to adjust the probe compensation
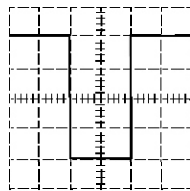
Frequency Compensation

Before taking any measurements using a probe, first check the compensation of the probe and adjust it to match the channel inputs. Most oscilloscopes have a square wave reference signal available at a terminal on the front panel used to compensate the probe. Connect the probe to the signal source on your oscilloscope. Set the probe to 10X position. Adjust trimmer until seeing flat-top square wave on the display.
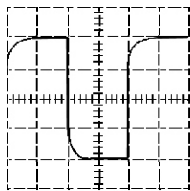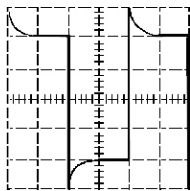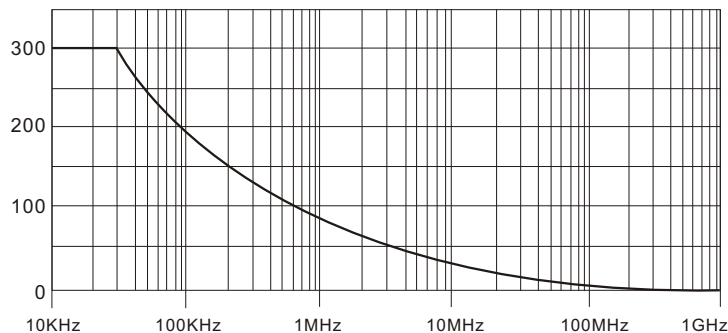

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Voltage vs Frequency Rating Curve

CAT II: IEC Measurement Category II. Inputs may be connected to mains(up to 300 VAC) under Category II overvoltage conditions.

▣ Equipment protected throughout by DOUBLE INSULATION or REINFORCED INSULATION

⚠ Review this user manual carefully to avoid injury and prevent damage to this product or any products connected to it. To avoid potential hazards, use this product only as specified.

Probe Characteristics	
Operation Environment	-10~50℃，0~85%RH
Storage Environment	-20~60℃，0~90%RH
Size of the equipment	1.2m
Mass of the equipment	57g
Bandwidth	1X: DC~6MHz 10X: DC~250MHz
Rise time	1X: 58ns 10X: 1.4ns
Attenuation Ratio	10:1 or 1:1 Switchable
Input Resistance	1X: 1MΩ ±2% 10X: 10MΩ ±2%
Input capacitance	1X: 85pF±10pF 10X: 15pF±5pF
Maximum Input	1X: CAT II 150V AC 10X: CAT II 300V AC
Compensation Range	10pF～35pF

Accessory Kit		
Item	**Description**	**Quantity**
1	Probe Tip	1
2	Hook Tip	1
3	Adjustment Tool	1
4	Locating Sleeve	1
5	Marker Rings (green,yellow, blue,and pink)	8
6	Ground Lead	1
7	Ground Spring	1
8	Insulating Cap	1

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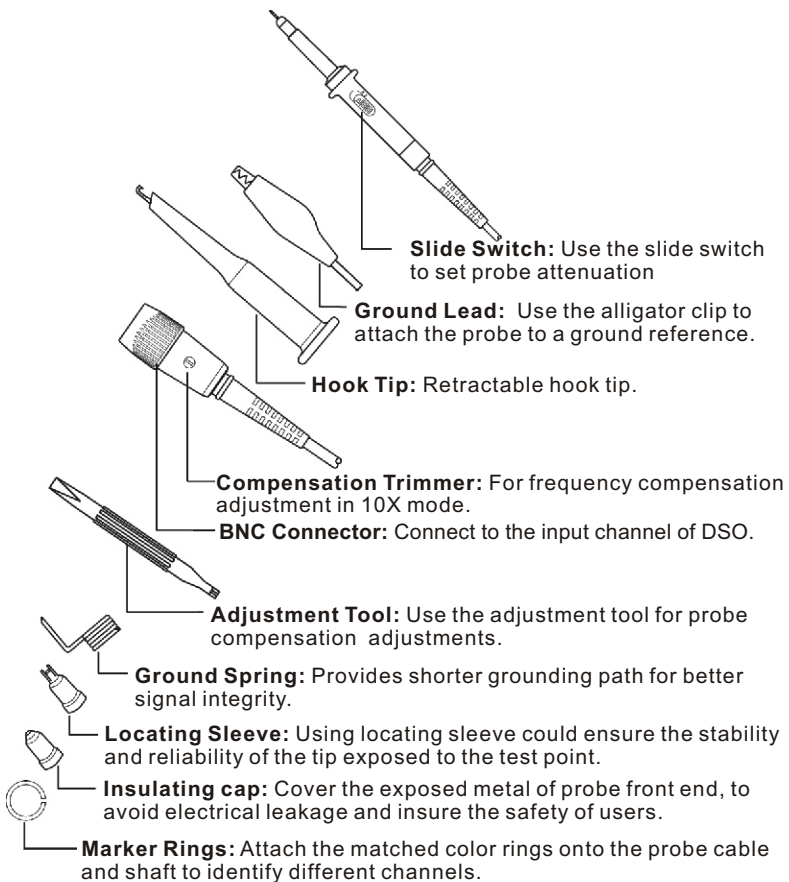
RIGOL®

User's Manual

RP1100 Passive Probe

Accessories and Features

RP1100 is provided with several accessories designed to make probing and measurement simpler. Please take a moment to familiarize yourself with these accessories and their uses.

Slide Switch: Use the slide switch to set probe attenuation

Ground Lead: Use the alligator clip to attach the probe to a ground reference.

Hook Tip: Retractable hook tip.

Compensation Trimmer: For frequency compensation adjustment in 10X mode.

BNC Connector: Connect to the input channel of DSO.

Adjustment Tool: Use the adjustment tool for probe compensation adjustments.

Ground Spring: Provides shorter grounding path for better signal integrity.

Locating Sleeve: Using locating sleeve could ensure the stability and reliability of the tip exposed to the test point.

Insulating cap: Cover the exposed metal of probe front end, to avoid electrical leakage and insure the safety of users.

Marker Rings: Attach the matched color rings onto the probe cable and shaft to identify different channels.

Note: Contents of this document are subject to change without notice.

Operating Basics

Operating Basics
All probes including active and passive probes have their own service life, which is much shorter than oscilloscopes. Because the probe is connected and disconnected frequently, the material fatigue would make the probe break down. The service life of the probes depends on whether you carefully use it or not.

The following are the causes of the probe malfunctions and useful tips to avoid it:

1, Probe tip break off
Causes of formation:
i.Probes fall off or other physical impacts.
ii.High pressure on probes.
iii.Probes are connected with hot objects that make metal tip fade and the plastic part melt down.
Tips:
— To avoid probe tip break off, please do not keep the probe on the test points when it is not in use.
— Do not put high pressure on the probe.
— Do not connect probes with hot objects.
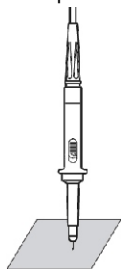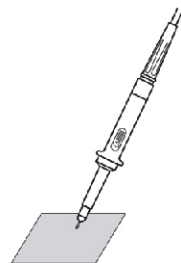
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2. Probe wires break off or wire aging:
Causes of formation:
i.The connection part between probes and wires is curl too much.
ii.Probe wires are tightened and twisted.

Tips:
— Hold the probe body and do not curl the connection part between probes and wires too much.
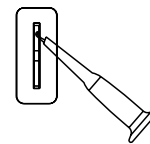— Do not tighten and twist probe wires.

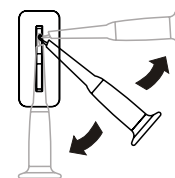**3. Retractable hook tip break off:**
Causes of formation:
i.Probe is shaken hardly after retractable hook tip is connected with tested objects.
Tips:
— Do not shake the probe after retractable hook tip is connected with tested objects.
— Do not keep the retractable hook tip on the tested objects when it is not used.
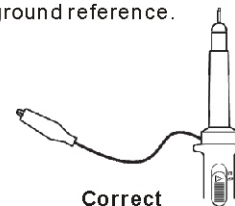
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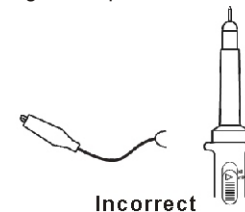4. Ground lead break off or missing:
Causes of formation:
i.Connect or disconnect the ground lead with probe frequently.
ii.Strain the ground lead after alligator clip is connected with the ground reference.
Tips:
— You'd better not separate the ground lead from the probe.
— Do not strain the ground lead after alligator clip is connected with the ground reference.

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