

**CAUTION**

The probe cable is a sensitive part of the probe and, therefore, you should be careful not to damage it through excessive bending or pulling. Avoid any mechanical shocks to the product to guarantee accurate performance and protection. Do not use the probe assembly if the red wear indicator in the cable has become visible.

**WARNING**

Some of the probe tips / accessories are very sharp. You should handle these with care to avoid personal injury.

**WARNING**

Use only Grounded instruments. Do not connect the probe's ground lead to a potential other than earth ground. Always make sure that the probe and oscilloscope are grounded properly.

**WARNING**

Connect the probe to the oscilloscope and connect the ground lead to earth ground before connecting the probe to the circuit under test. Disconnect the probe input and the probe ground lead from the circuit under test before disconnecting the probe from the oscilloscope.

**WARNING**

Indoor Use Only. Do not operate in wet / damp environments. Keep product surfaces dry and clean.

**WARNING**

Do not operate in an explosive environment.

## Safety and Regulatory Information



The CE mark is a registered trademark of the European Community. ISM GRP 1-A denotes the instrument is an Industrial Scientific and Medical Group 1 Class A product. ICES/NMB-001 indicates product compliance with the Canadian Interference-Causing Equipment Standard.



This symbol indicates the Environmental Protection Use Period (EPUP) for the product's toxic substances for the China RoHS requirements.

**CAT II**

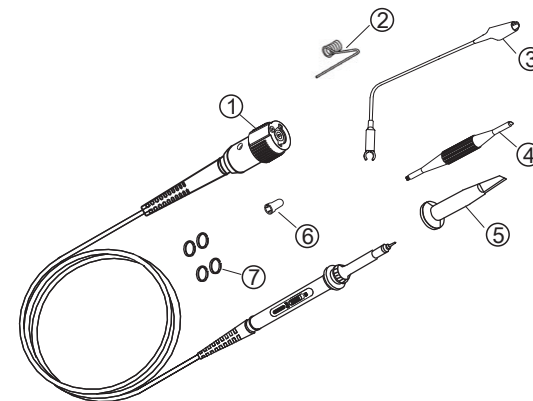
IEC Measurement category II is for measurements performed on circuits directly connected to the low voltage installation. Example. Household appliances portable tools, and similar equipment.

**NOTE**

If your probe requires cleaning, disconnect it from the instrument and clean it with mild detergent and water. Make sure the probe is completely dry before connecting it to the instrument.

# Hantek HT300B and HT500B Passive Probes

## Quick Start Guide



Qingdao Hantek  
Electronic Co., Ltd.

**Hantek**

The Hantek HT300B 300 MHz and HT500B 500 MHz passive probes are high impedance probes with switchable attenuation ratio (1:1 and 10:1). These are compatible with hantek digital storage oscilloscopes or similar oscilloscopes with 1 Mohm BNC input.

**NOTE** The BNC connector of these probes has a pin hole without a pin. This is as per the design and does not indicate any damage or fault in the probe.

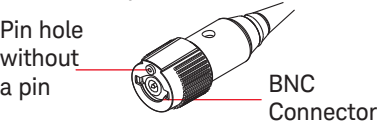


Table 1 - Probe and its Supplied Accessories

ID	Part	Quantity	
		For HT500B	For HT300B
①	Passive probe	2	2
②	Ground Spring	2	-
③	Ground Lead	2	2
④	Adjustment Tool	1	1
⑤	Hook Tip	2	2
⑥	Protective Cap	1	1
⑦	Channel Identification rings	2 sets of each color with two rings in each set	

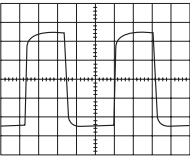
These probes have been designed and calibrated for use with instruments having an input impedance of 1M  $\Omega$  paralleled by 20pF. However, these may be recalibrated for use with instruments having an input capacitance of 15 to 40pF.

Adjusting Probes for Low-Frequency (LF) Compensation

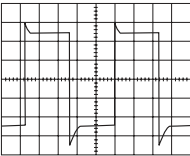
The probe should be adjusted for LF compensation when it is connected to an oscilloscope input for the first time. LF compensation matches the probe cable capacitance to the oscilloscope input capacitance. This matching assures good amplitude accuracy from DC to the upper bandwidth limit frequencies. A poorly compensated probe clearly influences the overall system performance (probe and oscilloscope) and introduces measurement errors resulting in inaccurate readings and distorted waveforms.

To perform LF compensation:

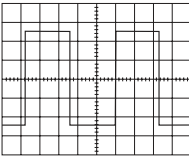
- 1 Connect the probe to the oscilloscope’s front-panel calibration output (a square wave label is usually seen near this output).
- 2 Use the supplied adjustment tool to adjust the LF compensation to an optimum square wave response as shown in the figure below.



Undercompensated



Overcompensated



Optimum

Table 2 - Electrical Characteristics

Characteristic	Value	
Attenuation Ratio	1:1 / 10:1	
Input Capacitance	1:1 - 100pf	10:1 - 15pf
Compensation range (when terminated into 1 Mohm)	15pf - 40pf	
Input Resistance	1:1 - 1M $\Omega$	10:1 - 10M $\Omega$
Maximum Input Voltage	1:1 - 150V rms CAT II 10:1 - 300V rms CAT II	
Bandwidth	For HT300B	For HT500B
	1:1 - 6 MHz 10:1 - 350 MHz	1:1 - 6 MHz 10:1 - 500 MHz

Table 3 - Physical & Environmental Characteristics

Characteristic	Value
Probe Body	95mm
Cable Length	1200mm
Weight	55g
Temperature	-10 $^{\circ}$ C to +55 $^{\circ}$ C (Operating) -40 $^{\circ}$ C to +70 $^{\circ}$ C (Non-operating)
Altitude	3,000 m (9,842 ft) (Operating) 12200 m (40,026 ft) (Non-operating)
Humidity	5% to 95% RH up to 30 $^{\circ}$ C (Operating) 5% to 65% RH above 30 $^{\circ}$ C up to 55 $^{\circ}$ C