TP500J | Tone Probe

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PRODUCT DESCRIPTION

Tone Probe 500J is a rugged audio amplifier used to detect alternating electrostatic fields set up by an applied Tone Generator on Twisted Pair Wiring, Single conductors, Co-axial cables or De-energised AC wiring. Simple one-button operation allows the user to identify cable and wire pairs, without direct metallic contact with the conductor, at any jointing position or cross connect along the route.
In noisy environments or locations where the speaker noise may be a disturbance the powerful speaker output can be bypassed by connecting the optional Receiver Headset 17A to the probe.

FEATURES

- High Gain
- One Button Operation
- Choice of Metallic or Nylon Probe Tip
- Headset Option
- Powerful Speaker
- Micro controlled key press timing.
- Confirmation tones.
- Battery-low warning.
- Auto shut off.
- Sealed electronics.
- Sealed battery.
- Large speaker.
- Wrist wrap.
- No switches.
- Floats.
- 3 Year Warranty
- Nautilus Design Characteristics:
  - Crush Proof
  - Water Proof
  - Dust Proof
  - Chemical resistant

BENEFITS

The Tone Probe 500 (TP 500) incorporates a number of unique features to significantly increase its operational life and reduce whole life costs, allowing network operators to make major savings in their purchasing and repair budgets.
Analysis of the failures of Tone Probes found they were typically crushed under foot, prevented from working by rain water entering the casing, dropped in water-filled trenches or flooded cable ducts or had their tips accidentally damaged.
Tempo designed the new TP 500J with a contoured body containing internal anti-crush ribs, and patented membrane venting system allowing it to breathe and float in water while remaining moisture-proof. The battery and electronics compartments are sealed, and protected by silicone rubber seals.
The probe's tips have been strengthened and are designed to be easily replaceable in the field, while battery power consumption and overall performance have also been improved to further prolong its life.
TP 500 is offered with a three year warranty, representing major cost saving to Network Operators.

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SPECIFICATIONS

Tone Probe 500J & 510J

Electrical:

Gain:	
Low:	45dB
High:	55dB
Input Impedance:	100MΩ
Probe Tip Resistance (min):	
Plastic Tip:	300Ω
Frequency Range:	
TP 500J:	880 - 1300Hz
TP 510J:	approx. 500Hz - 5kHz

Power Source:

Battery:	1 x 9V
Battery Life (nominal):	>60 hours
Allowable Attenuation:	Viable tone signal to 45dB

Environment:

Operating Temperature:	-10°C to +55°C
Storage Temperature:	-20°C to +60°C
Relative Humidity:	10% - 95%

Physical:

Length:	215mm
Width:	50mm
Depth:	38mm
Weight:	154.4g

Warranty: Three Years

Receiver Headset 17A

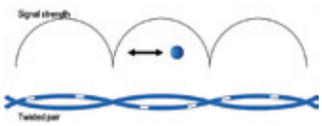
RELATED PRODUCTS

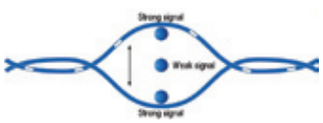
TP 510J Tone Probe

TP 510J has a broader frequency response, across approximately 500Hz – 5kHz, whereas TP 500J offers a very narrow response centred on 1kHz. Performance of TP 500J is optimised when paired with Tempo's TG 600J (1kHz pure sine wave output), whilst TP 510J can be used with any of Tempo's tone generator's.

Pair Tracing

Check that the tone is being sent before leaving the oscillator. The Tone Probe detects the electrostatic field around the wire pair and reproduces this after filtering to reduce mains interference. In most circumstances the low sensitivity setting will work well but if the signal is weak or noisy then choosing the higher sensitivity setting may help. Placing the probe alongside the pair gives a strong signal except where the wires cross. Here there should be a noticeable null. Move the probe back and forth along the wire to confirm this.





Placing the tip in the centre of an opened twist of the pair should give a minimum signal. If it does not decrease, suspect a split pair (two wires from different pairs) or a faulty pair one wire broken or high resistance.

• No Tone	*Suspect wrong cable or a complete cable disconnection or Tone Generator is disconnected.*
• Tone on one Wire	*One wire disconnection.*
• Quiet on one Wire, Loud on the other	*High resistance fault on low level wire.*
• Power hum on pair with tone	*Earth (ground) fault on one or both wires.*
• Power hum only	*Disconnection and earth fault.*
• Noise with tone	*Crosstalk (severe cable fault) or earth fault.*
• Can't kill tone with a short	*One wire disconnected or split pair or high resistance fault on one wire.*
• Hiss from adjacent pair	*ISDN or other digital service or base band modem transmission DO NOT INTERCEPT.*
• Continuous tone	*Dying battery of the TG 600J oscillator.*

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