

Handheld Inductive Loop Tester



Model HILT 9000

The HILT 9000 is an easy to use, quick and accurate tool designed to test and measure the parameters of inductive loops used in the Traffic Signal, Vehicle Data Collection, and Parking industries.

The tester is housed in an impact resistant case with one set of 6 foot test leads and adapters. An 8 button user interface provides an easy test set up without the layers of frustrating, hidden menus. A 16 character by 2 line LCD offers a clear view of measurement results as well as a continuous reading of the battery status. To conserve battery life, the unit automatically turns the power off when not used for more than 30 seconds.

All ATSI test equipment ships with a standard 12 month warranty and Free Life-Time Telephone Technical Support.

The Complete Loop Test Kit is carried in a sturdy, injection-molded plastic carrying case designed to hold not only the HILT and its accessories, but also the Loop Finder and Megohmmeter for a complete loop analysis kit.

Features

- Quick and Accurate Measurement of Inductive Loop Parameters:
 - Inductance: 20 μ H to 2400 μ H
 - Frequency: 20KHz to 80KHz
 - Resistance: 0 Ω to 1000 Ω
 - Quality (Q) of Loop
- View Real Time Inductance Change
- Measure newly installed loops at locations without power or a detector
- Automatic Power Shutoff
- Optional interface card for access to rack-mount connection points in cabinet



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Importance of an Accurate Q

The HILT measures the actual Q as it is based on a phase shift between voltage and current in the inductor (loop), as required by the definition of Q .

Why is this important? This means you are receiving an accurate measurement based on the actual test conditions...not on "ideal conditions" that produce a high Q measurement that similar products may utilize.

The Q (Quality) of your loop effects whether a detector is properly "seeing" a vehicle. The HILT's measurement of a loop's Quality provides you more accurate information to help you successfully troubleshoot a questionable detection system.

Purchasing Specification

1. The tester shall measure the parameters needed to assess the capabilities of the widest possible range of inductive loops.
2. The tester shall be lightweight, portable and battery-operated, using two commonly available 9V alkaline batteries.
 - 2.1 The Tester shall weigh less than 2 lbs.
 - 2.2 The Tester shall be housed in a handheld carrying case.
 - 2.3 The Tester shall include a 16 character by 2 lines LCD to indicate test results to the operator. The display shall be designed to be easily readable in direct sunlight.
 - 2.4 The battery level shall be reported on the display.
3. The Tester shall be capable of measuring electrical characteristics of inductive loops and presenting them to the user.
 - 3.1 The Tester shall be capable of measuring the inductance (L) of a loop: 20 μ H to 2400 μ H for any user selectable frequency from 20KHz to 80KHz (in 1KHz steps).
 - 3.1.1 For 20 μ H to 99.9 μ H, the resolution shall be 0.1 μ H with an accuracy of +/- (3% x reading + 0.1 μ H).
 - 3.1.2 For 100 μ H to 2400 μ H, the resolution shall be 1 μ H with an accuracy of +/- (3% x reading + 1 μ H).
 - 3.2 The Tester shall be capable of measuring the DC resistance (R) of a loop: 0.0 Ω to 1000 Ω with resolution of 0.1 Ω .
 - 3.2.1 For 0 Ω to 99.9 Ω , the resolution shall be 0.1 Ω with an accuracy of +/- (2% x reading + 0.1 Ω).
 - 3.2.2 For 100 Ω to 999 Ω , the resolution shall be 1 Ω with an accuracy of +/- (2% x reading + 1 Ω).
 - 3.3 The Tester shall be capable of measuring the quality (Q) of a loop: 1 to 50 at an arbitrary frequency.
 - 3.4 The Tester shall be capable of measuring the quality (Q) of a loop: 1 to 15 at a user selectable frequency. The Tester shall indicate condition when $Q > 15$.
 - 3.5 The Tester shall be capable of measuring a loop inductance change ($\Delta L/L$) with resolution to 0.002%.
4. The Tester shall be capable of measuring the working parameters of an active loop connected to a detector.
 - 4.1 The Tester shall be capable of measuring the following parameters of an inductive loop by connecting to an active loop detection system with the supplied test leads:
 - 4.1.1 Detector Operating Mode: Scanning or Continuous
 - 4.1.2 Frequency of oscillation
 - 4.1.3 Amplitude of oscillation
5. The Tester shall include a hard carrying case designed to hold the Tester, test leads, and operating manual.
6. The purchaser's interest in the Tester shall be protected by a 12-month limited warranty on parts and labor. The continuing utility of the Tester shall be further protected by the availability of repair, update, calibration, and extended warranty services from the manufacturer.



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