



**HANDHELD INDUCTIVE LOOP TESTER
MODEL HILT 9000
Rev 2.0**

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.
3. The tester shall weigh less than 2 lbs.
4. The tester shall be housed in a handheld carrying case.
5. 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.
6. The battery level shall be reported on the display.
7. The tester shall be capable of measuring electrical characteristics of inductive loops and presenting them to the user.
8. 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 20 KHz to 80 KHz (in 1KHz steps).
9. 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).
10. 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).
11. 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 .
12. For 0 Ω to 99.9 Ω , the resolution shall be 0.1 Ω with an accuracy of +/- (2% x reading + 0.1 Ω).
13. For 100 Ω to 999 Ω , the resolution shall be 1 Ω with an accuracy of +/- (2% x reading + 1 Ω).
14. The tester shall be capable of measuring the quality (Q) of a loop: 1 to 50 at an arbitrary frequency.
15. 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.
16. The tester shall be capable of measuring a loop inductance change ($\Delta L/L$) with resolution to 0.002%.
17. The tester shall be capable of measuring the working parameters of an active loop connected to a detector.
18. 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:
 - Detector Operating Mode: Scanning or Continuous
 - Frequency of oscillation
 - Amplitude of oscillation
19. The tester shall include a hard carrying case designed to hold the tester, test leads, and operating manual.
20. 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.