105 Bonnie Drive
Butler, PA 16002
724-283-4681
724-283-5939 (fax)
www.bwieagle.com

PRODUCT INFORMATION BULLETIN

EAGLE STITT TESTER
Ground Circuit Impedance Tester
MODEL 80-2000

DESCRIPTION

The Eagle Stitt Tester is a compact, hand-held device used to accurately measure low impedances, such as those found in grounding circuits. The device produces a small, 60 Hertz current which flows in the circuit being tested. The Tester accurately determines the value of this current, as well as the amount of voltage produced by this current, and automatically calculates the impedance of the circuit. The impedance is read directly in Ohms from a large, LED display on the front of the Tester.

The Eagle Stitt Tester is accurate to within 0.1 Ohm, and will determine the impedance of a circuit between 0.0 and 9.9 Ohms. Since the Tester makes use of a Kelvin measurement method, neither the resistance of the connection points, nor the resistances of the current and voltage-carrying wires involved in the measurement have any effect on the accuracy of the resultant impedance measurement. The Tester will display the true impedance of the circuit being tested, ignoring any connection resistance or lead resistance.

The Eagle Stitt Tester is also useful for testing circuit breaker, contactor, and relay contact resistance. With the two green alligator clips connected to two separate points on one side of the contact, and the red and black clips connected to two separate points on the other side, the contact resistance is determined

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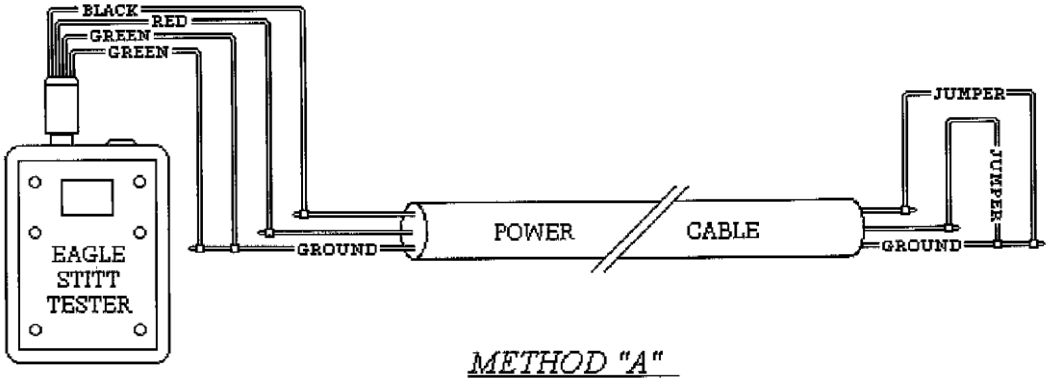
CONNECTING THE TESTER

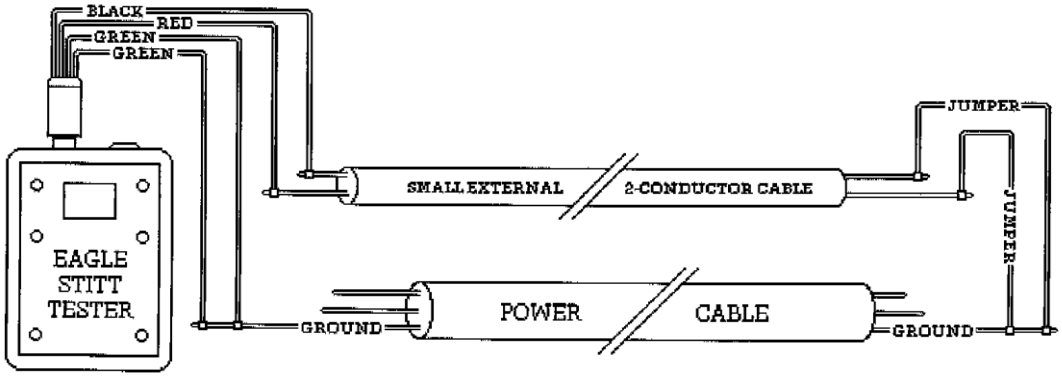
The Eagle Stitt Tester may be used to measure the impedance of a ground circuit using one of two methods:
Method “A” makes use of the cable which supplies power to the equipment to carry the required current and voltage signals provided by the tester. When using Method “A”, THE POWER MUST BE REMOVED FROM THE CIRCUIT BEING TESTED!
Method “A” is particularly useful when the ground circuit to be measured is quite long.

The other method which may be used is Method “B”.
Method “B” requires a small, external, 2-conductor cable to carry the current and voltage signals required to make the test. Using Method “B”, it is possible to safely make the test without removing power from the equipment.
Of course, Method “B” is not practical for measuring ground circuit impedance over extremely long distances, since the external cable would be quite long.

When using either method, it is very important to connect the tester as shown in the diagrams. Make sure that the two green alligator clips from the tester are connected to *two separate points* on the ground wire. Also, it is important that the jumpers installed at the far end of the circuit connect to *two separate points* on the ground wire.



METHOD "A"



METHOD "B"

OPERATION

With the Tester properly connected to the circuit, press and release the yellow button on the top of the unit. The Tester will turn on and the circuit impedance in Ohms will appear on the display. The reading will remain on the display for 30 seconds, at which time the Tester will automatically turn itself off. To turn the Tester off manually, press and hold the yellow button for three seconds.

The display should indicate between 0.0 and 9.9 Ohms. If the display indicates “OL”, either one or more of the connections is not properly made, or the impedance being measured exceeds 9.9 Ohms.