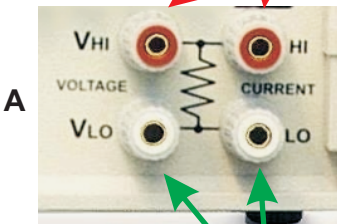


AMPTEC RESEARCH 620A-4 Igniter Tester

Two Wire (2) Resistance Measurement configuration

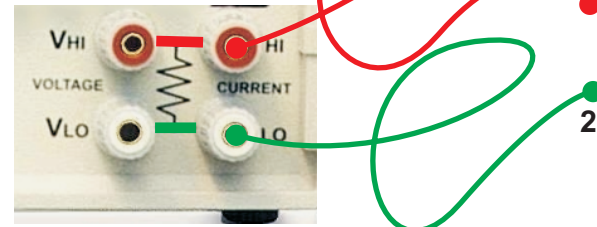
For the **Two Wire (2) Resistance Measurement configuration or set-up** start by electrically shorting the AMPTEC 620A-4 Igniter Tester's top two (**red**) binding posts together - short **Vhigh to Ihigh**). The top 2 binding posts can be unscrewed some to expose their gold plated base posts. Any bare copper wire wrapped between the top (red) posts electrically connecting them to each other will work as a short (tighten down the posts onto the shorting wiring). Perform a similar "shorting" process between **Vlow** and **current lo**).

Short VHigh to Current High (red posts)
shown unshorted



Short VLO to Current Lo (White posts)

Shown shorted now



Shown shorted now

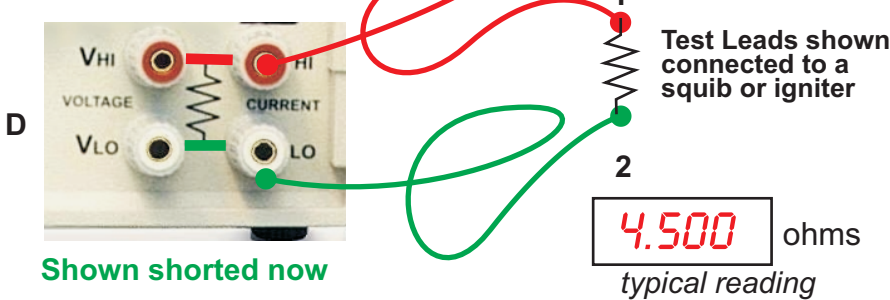
Now that you have the meter's binding posts shorted into 2 Wire mode shorted there are several things you need to keep in mind. Any test leads connected (see red wire 1 and green wire 2 above) to the High and Low side of the meter are now "in-series" with any future resistance measurement. The longer the test lead wiring the higher the resistance offset. You can compensate for this 2 wire (test lead) offset by shorting the leads at **point 1** to **point 2** at their ends to each other and recording the resistance reading (see *diagram C* below). Lets say there is **3.500** ohms of test lead resistance noted. Measure the squib or igniter and record its resistance as well (say **4.500** ohms).

Shown shorted now



Shown shorted now

Shown shorted now



Shown shorted now

Do the math

4.500 Ω	Test Lead and Squib (total system resistance)
<i>minus</i>	<i>subtract</i>
3.500 Ω	Test Lead only resistance
1.000 Ω	Squib/Igniter resistance

Afterwards "Do the Math" see *example* . That is, subtract the "Test lead only (shorted) resistance" from the Total system resistance (Test Leads and squib under test) . The remainder is the resistance of just the squib or Igniter. A lot of 1 watt squibs have a 1 amp fire current and have a resistance around 1.0 ohm with a variety of tolerances (± .1 ohms etc).