Probe Compensation for the Atlas *LCR* – Using Standard Hook Probes

Why is Probe Compensation necessary?
Probe Compensation is needed to ensure that the Atlas LCR takes the probe characteristics into account when analysing components. The probe's inductance, capacitance and resistance are effectively subtracted from all subsequemt measurements so that displayed readings relate to the component under test rather than the probes as well.

How often should Probe Compensation be performed?
It is generally not necessary to perform a probe compensation unless you are changing the probe types or the readings for an open circuit is more than ±2pF or the readings for a short circuit are more than 1Ω and/or ±2µH. Simply removing the probes and re-attaching them does not require a probe compensation procedure.

A Simple and Reliable Procedure
The procedure detailed here is an enhancement of the procedure given in the Atlas LCR User Guide. This ensures a more repeatable compensation result.

1. Ensure that the Atlas LCR is switched off.
2. Clip the test leads to a short length of tinned copper wire, such as the wire on a resistor.
3. Don't touch the test clips or connections.
4. Press and hold the on-test button until the display shows "Probe Compensation". Ensure that you are not touching the test clips or connections.

The display will show:

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Please short the probes
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- as the clips are already shorted, the message should disapear in a second or two.

The display will then show:

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now open the probes
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5. Unclip the red clip from the tinned copper wire and let go of the test leads and connections.

The display will then show "OK" within a couple of seconds.

Testing the Compensation
Ensure nothing is connected to the test clips. Briefly press the on-test button. The Atlas LCR should then measure a capacitance close to 0pF (±1pF).

Now connect the two clips to the tinned copper wire and briefly press the on-test button. The Atlas LCR should then measure a resistance of close to 0Ω (<1Ω) and an inductance of close to 0µH (±1µH)

If necessary, try the compensation procedure again.

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