Application Note

Battery Impedance Measurements

The QuadTech 7000 Series Precision LCR Meters are particularly well suited to measure the internal impedance of batteries. The advantages to using a 7000 Series instrument for battery impedance measurement are:

- **Automatic** Measurement
- The 7000 Series Instrument measures the **AC resistance**. The battery voltage would effect a DC resistance measurement.
- The 7000 Series instrument measures **capacitance** well when D_f is large.
- The **4-Terminal Kelvin** connection makes it easy to block the DC voltage without effecting the measurement.

A blocking capacitor is required in the IH lead to avoid battery discharge into the instrument. The capacitor should be installed into the test fixture and should have a reactance of less than 10Ω at the test frequency (160μF at 120Hz).

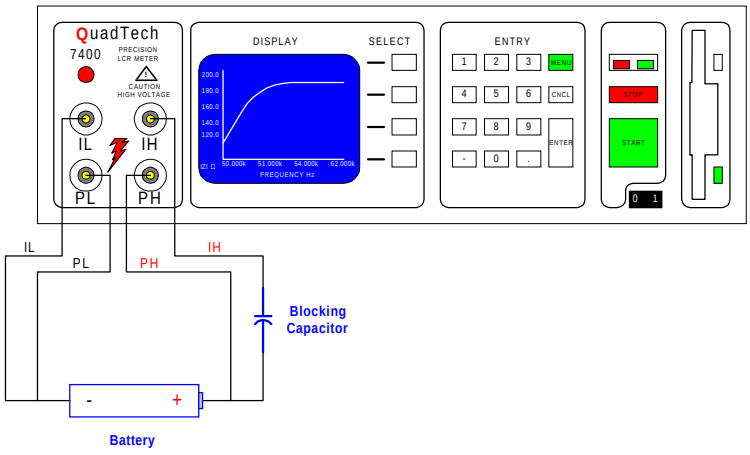

Figure 1: QuadTech 7400 Precision LCR Meter

For complete product specifications on the 7000 Series Precision LCR meters or any of QuadTech's products, visit us at http://www.quadtech.com/resources/dataindex.html. Do you have an application specific testing need? Call us at 1-800-253-1230 or email engineering at rroetzer@quadtech.com and we'll work with you on a custom solution. Put QuadTech to the test because we're committed to solving your testing requirements.

Telephone: 1- 800-253-1230, Website: **http://www.quadtech.com**
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