The Multipoint Option (MPO)

The Multipoint Option comprises:

- Multipoint (to allow spatial temperature measurement)
- Integrated software with Multitrack™ functionality
- Thermocouples
- Associated hardware and cabling

The Multipoint™ Option (MPO) is specifically designed for battery testing in the ARC. The MPO allows for temperature measurements to be taken at user defined points on the battery under various test conditions. The most common test type will be a charge/discharge sequence. The data will be logged in conjunction with the logging set-up in the ARC software.

The MPO has Multitrack™ functionality that will force the system to track the thermocouple experiencing the highest temperature. This will therefore ensure there is no heat loss to the calorimeter.

The Multipoint Option is available with 8, 16 or 24 thermocouples. Systems delivered will be configured for the option supplied and appropriate software will be installed.

Figure 1 shows a large cell with thermocouple connections and Figure 2 shows image creation stage of the software set-up.
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The MPO is a fully integrated part of the ARC, both in software and hardware, and all data obtained can be analysed in the ArcCal+ software.

During software set-up thermocouple locations and anode/cathode location can be defined graphically.

Figure 3 shows the MPO data graphed. The plot can be zoomed and spatial measurements observed. Figure 4 shows the MPO data in a numerical table as each data point is logged.

Example: Spatial temperature of an 18650

Figure 5 is an example of some simple MPO data. Five measurements are taken on an 18650 cell during a fast discharge.

Note: The OSU must be purchased with this option.