



BCycle™

Software for

580 BATTERY TEST SYSTEM

BCycle™ is the dedicated control and measurement software for Scribner's 580 Battery Test System. BCycle provides all of the necessary functions and features to program and perform battery and capacitor test routines and record test data. Created by the developers of ZPlot®, ZView®, CorrWare® and FuelCell®, BCycle is powerful, flexible, and easy-to-use software that operates on Microsoft Windows® XP and 7 platforms.

BCycle is used to create, edit and execute test procedures. Complex test procedures are easily implement using flexible built-in experiments with multiple termination criteria

- Built-in experiments – OCV, CC, CC-CV, CV, CP, Repeat Loop, Run External Utility
- Multiple step types ranging from simple charge/discharge cycling to complex load profiles
- Control modes - constant current (CC), voltage (CV), or power (CP)
- Global max and min alarm V and I for safety
- Set limits of current, voltage, power or resistance that when met will automatically switch the control mode, e.g. CC to CV
- Up to 18 end conditions per step based on V_{cell} , V_{ref} , I, P, Q, E, dV/dt , dV_{ref}/dt , dI/dt
- Data acquisition rate based on fixed time or rate of change dV/dt , dI/dt with min and max time between points
- Comment fields available for each step as well as the overall procedure
- View entire step parameters on one screen
- Insert, delete or change step order
- Cut, copy and paste experiment to save time
- Fixed or auto current range selection – global or step-specific
- For each channel, the status, step/cycle and live data are displayed
- Real-time graphs of user-selected channels and parameters

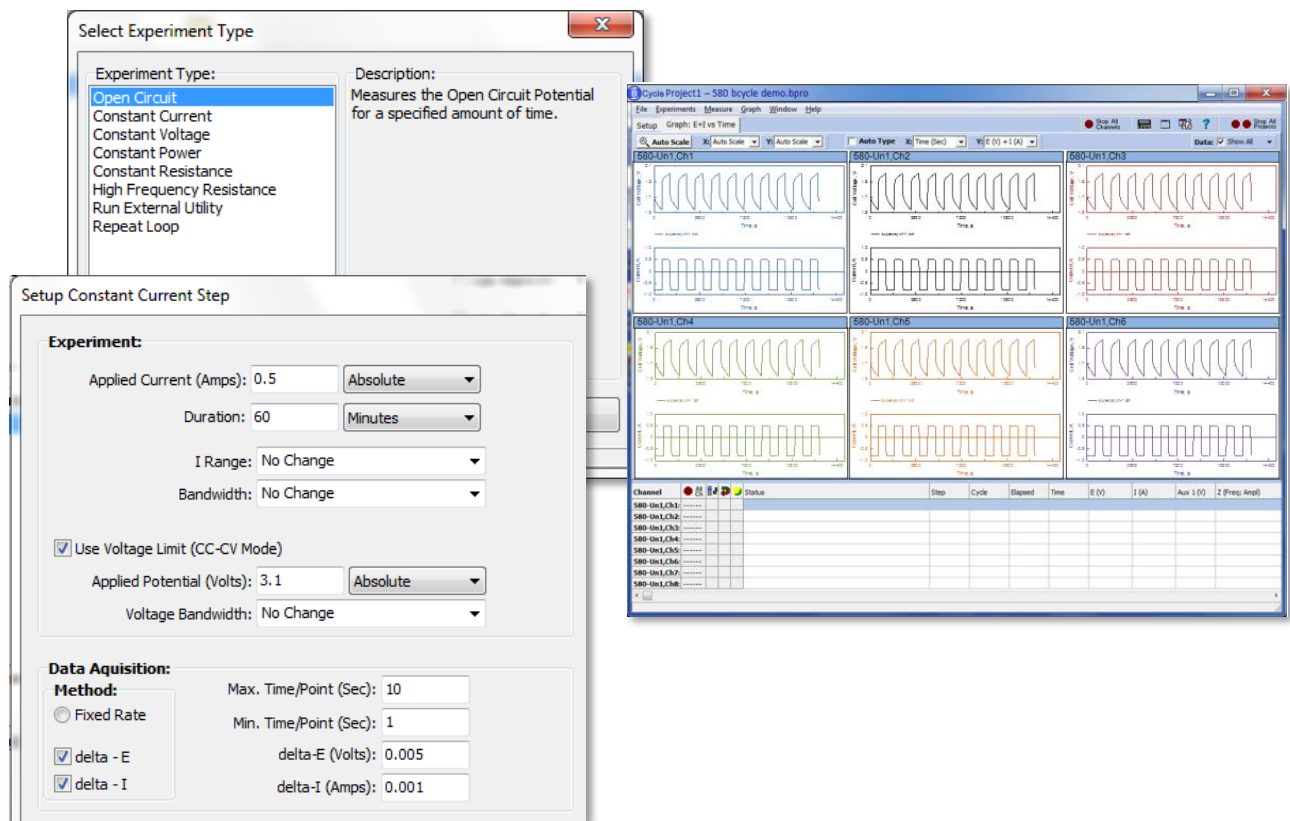
Terminate this step if the following condition occurs:

Voltage			
<input type="checkbox"/> E <	V (Volts):	0	
<input checked="" type="checkbox"/> E >	V (Volts):	3.15	
<input type="checkbox"/> Eref <	V (Volts):	0	
<input type="checkbox"/> Eref >	V (Volts):	5	
<input type="checkbox"/> dE/dt <	dV (Volts):	dt (Sec):	10
<input type="checkbox"/> dE/dt >	dV (Volts):	dt (Sec):	10
<input type="checkbox"/> dE_Ref/dt <	dV (Volts):	dt (Sec):	10
<input type="checkbox"/> dE_Ref/dt >	dV (Volts):	dt (Sec):	10
Current			
<input checked="" type="checkbox"/> I <	A (Amps):	0.005	
<input type="checkbox"/> I >	A (Amps):	1	
<input type="checkbox"/> dI/dt <	dt (Amps):	dt (Sec):	10
<input type="checkbox"/> dI/dt >	dt (Amps):	dt (Sec):	10
Power			
<input type="checkbox"/> P <	P (Watts):	0	
<input type="checkbox"/> P >	P (Watts):	5	
Charge			
<input type="checkbox"/> Q <	Charge(Ah):	0	
<input checked="" type="checkbox"/> Q >	Charge(Ah):	3	
Energy			
<input type="checkbox"/> Wh <	Energy(Wh):	0	
<input type="checkbox"/> Wh >	Energy(Wh):	2	

Default:

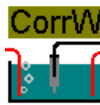
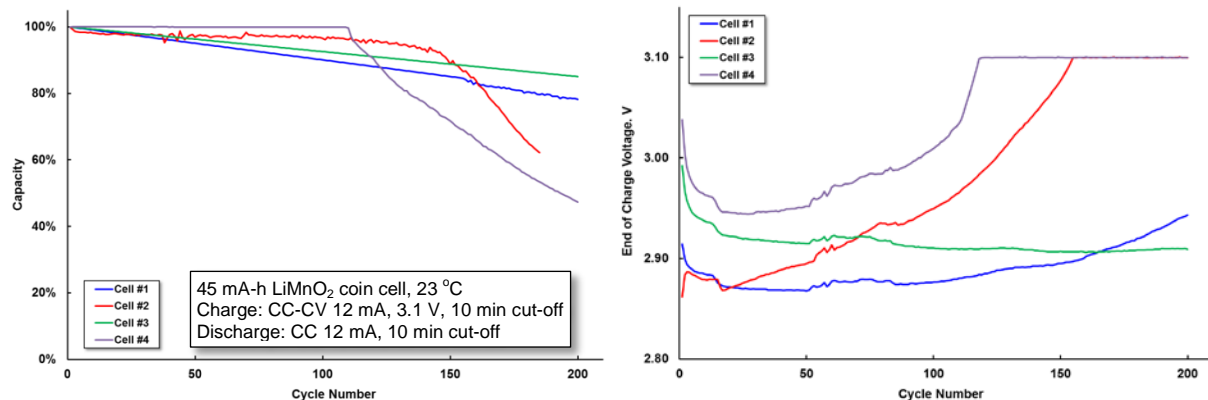
<input type="checkbox"/> Use Alarm I >	I (Amps):	1
<input type="checkbox"/> Use Alarm I <	I (Amps):	-1
<input type="checkbox"/> Use Alarm E >	E (Volts):	10
<input type="checkbox"/> Use Alarm E <	E (Volts):	-2





BCycle Data Analysis Software

BCycle Analysis software is used to process active or archived data. Available data parameters include time-based or cycle-based values – V , I , V_{final} , I_{final} , V_{max} , V_{min} , I_{max} , I_{min} ; Absolute and Change in Capacity, Energy, Power, Efficiency and Resistance.



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