MultiStat Release Notes

MultiStat 1.7j – February 2022

- On some PCs, if the Gpib High Speed cable length is changed, the gpib driver locks. Gpib library modified to avoid using this function.

- Added Force4Alarm and ForceVAlarm ini file options to require adsditional safetly alarm settings.

MultiStat 1.7i – September 2021

- In the Charge Cycle experiment, if Discharge->Charge is used, the Chrg_T1 and Chrge_T2 values in the Cycle txt file are wrong. Corrected.

- In the Gstatic step, a termination on deltaV may occur early after many repeats in a loop. Corrected.

MultiStat 1.7h:

- No changes

MultiStat 1.7g:

- The options for the 1470E work identically to the 1470A, but have different part numbers. Modified the instrument setup screen to use the names 14703A (temperature) 14702A (temperature+voltage).

- When performing a single frequecy voltage impedance sweep using a 12xx FRA, the 14700 disconnected the rear fra input when ST command is sent. It now resets the fra input to correct the problem.

MultiStat 1.7f:

- Added new Solartron Boosters to Booster.ini file. Added RangeMin1470 parameter to booster.ini to specify the smallest 1470 range to be used with each booster. Avoids instability at lowest ranges.

- 1455 firmware does not work with a frequency of exactly 10 uHz. MultiStat will now automatically force a frequency of 10.01 uHz if 10 uHz is requested.

- Added setting for Generator Transition Mode in the 1455 FRA

MultiStat 1.7e:

- A hard limit of -3 to 10V (Red+Blue) or -10 to 3V (Black+Green) was imposed on the alarm limit values sent to the instrument. This could cause it to alarm if a scan goes to +3V with Black+Green cabling. Corrected

MultiStat 1.7d:

- Trap error message SetFocus is called when changing to the Setup tab.

- AutoCorrect 1470 data when 2 random bites are received after the terminator, with temperature measurement enabled.

- If 3 units share a single 12xx FRA, the 3rd unit will not wait in the shared queue and will act as if it has its own FRA. Corrected

- AutoCorrect 1470 data when 2 random bites are received after the terminator, with auxV measurement enabled.

- AutoCorrect 1470 data when 4 random bites are received after the terminator, with auxV measurement enabled, the bytes repeat AA BB AA BB.

- Add "Disable Temperature" function to prevent temperature from being measured, even when it is selected in Setup Cell.

- Improved the information displayed when "ShowDataErrors=1" is used to capture all instances of 1470 data errors.

MultiStat 1.7c:

- After clicking "Stop Experiment", a confirmation dialog is displayed. Clicking the Cancel (X) or <Esc> will now perform the "No" action.

- If the ocv of a cell is 0V, and CV is run with Initial=0 vs OC, Vertex#1=0 vs Ref, the segment will have zero time and will fail. Corrected

- The voltage safety limits may be limited to -3 to +3 when they should be -10 to +3. Corrected

MultiStat 1.7b:

- An extra method was added to avoid false positives when correcting corrupted data from the 1470. If corrupted data is the last bytes in a block, the new method can leak memory, causing MultiStat to fail. Corrected

- Change MinE and MinI limits for voltage and current setpoints to reflect the booster and cable polarity settings.

- Removed excess text from Arbitrary Scan/Hold Scan Voltage and Scan Current setup screens.

- Add correction for an extra 2 byte sequence 30 00 that follows a 80 00 30 00 data terminator at the end of a transmission.

- In Potentiodynamic, Potential Stair-Step, Galvanodynamic, Galvanic Stair-Step experiments, if "Term" and "Exit Loop" are selected, the termination values cannot be edited. Corrected

- In External Utility experiments, the Comments text is not saved. Corrected.

- Change termination limits for voltage and current to reflect the booster and cable polarity settings.

- MultiData Explorer: Prevent an excel page formatting error on certain computers.

MultiStat 1.7a:

- Modified Impedance Queue experiment so Current is always recorded as zero when the queue is at open circuit.

- If a short number of fast cycles are used with arbitrary scan/hold, the number of scans was not exact. Corrected.

- Improved recognition of corrupted data from the 1470.

- Added an option to allow HF Impedance compensation to use the same form as ZPlot. Added ZCorrectionMode .ini parameter. 0= old MultiStat mode, 1=old ZPlot mode. It defaults to mode 0 to be consistent with previous versions.

MultiStat 1.6g

- Send FP1 after impedance to fully disconnect the rear multiplexer after impedance measurements.

- Add Setup Pstat to the Run External step.

- Added "Run on first Channel", and "Run on last channel" to the Run External Step.

- MultiStat Explorer: When exporting to Excel, set columns to "General" format

- MultiStat Explorer: Allow Copy to Clipboard with multiple data subsets

Multistat 1.6f

- Display error message if an invalid archive (.mdat) file. Caused by selecting an existing data file that is in a format other than mdat.

- Add LoopCount parameter in MultiStat data files to help identify cycles in BView when Loop Repeat 1 is used.

- Improved the autocorrection of corrupted data from the 1470 instrument.

- If multiple 1470s are used with a single fra, noise from one fra can affect others measuring impedance. CH0;FM; FF1 now sent when impedance is finished to make sure the fra multiplexer is completely disconnected.

- Add support for Windows 10