Check out the new BenchVue Data Acquisition (DAQ) application software

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The new BenchVue DAQ application software is packed with new features and is fully capable of replacing the old BenchLink Datalogger software. The BenchVue platform is designed to easily detect and connect to one or multiple DAQ systems or together with other types of instruments such as power supply, oscilloscope and more. It can detect instruments via multiple interfaces such as USB, LAN or GPIB. It has a very user-friendly point-and-click interface that speeds up your instrument configuration.
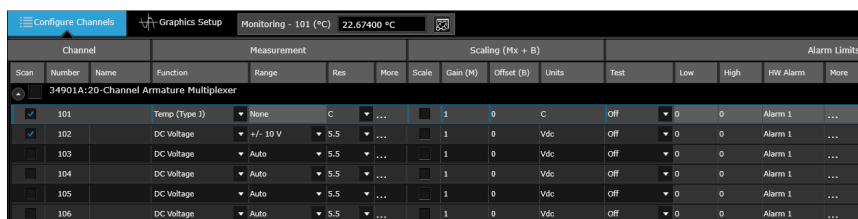

Figure 1. BenchVue's intuitive instrument configuration interface

It has a very simple data logging setup interface. With a couple of clicks, you are ready to start your data logging. Data can be stored in the DAQ system's memory or in a USB thumb drive (via the front panel of the DAQ) or in a PC directly via BenchVue.

If you have used BenchVue DAQ application software before, you should be familiar with its powerful data visualization tools, such as:

- Data Grids
- Strip charts
- Bar meters
- Histogram
- X-Y charts
- Switch controls
- D/A controls
- Digital Read/Write
- And many more.

Figure 2. BenchVue's data visualization tools (an example of strip chart, data grid, D/A current output and add screen image tool)

The biggest addition to this new BenchVue DAQ application software is the ability to use Test Flow!

What is BenchVue's Test Flow?

BenchVue's Test Flow is an application that enables simple test sequencing of instrument settings and measurements. It can combine multiple instruments together to create your own automated test. It supports Keysight's 34970A, 34972A, and the new generation data acquisition system, DAQ970A.

Figure 3. BenchVue on a laptop, DAQ970A DAQ system, and E36312A DC power supply

Figure 3 above shows BenchVue connecting a DAQ970A data acquisition system unit with a E36312A DC power supply via USB. Let's say we want to make a periodic measurement for voltage and current from the DC power supply and three different temperature points from the DAQ. See BenchVue interface in Figure 4. It connects the two instruments.
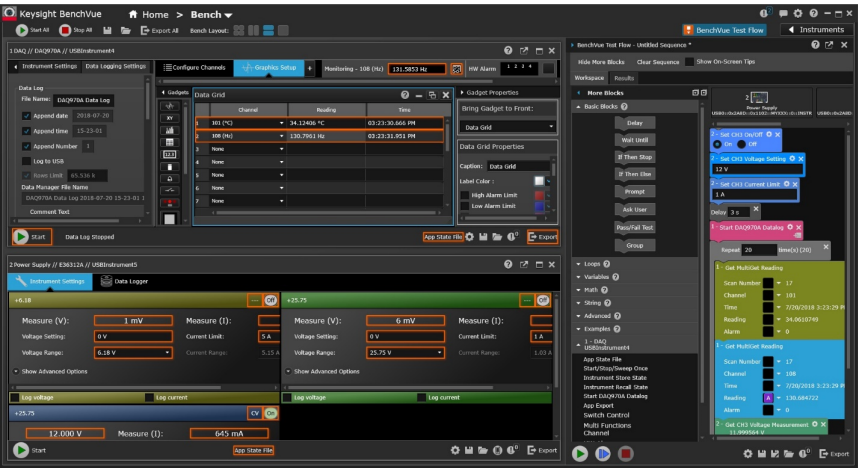

Figure 4. BenchVue display interface with configuration settings of the DC power supply and DAQ on the left screen and Test Flow workspace on the right screen.

Here is what Test Flow can do:

1. To automate your instrument configuration setup, you can drag and drop the instrument setting controls highlighted in the orange box into the Test Flow workspace.
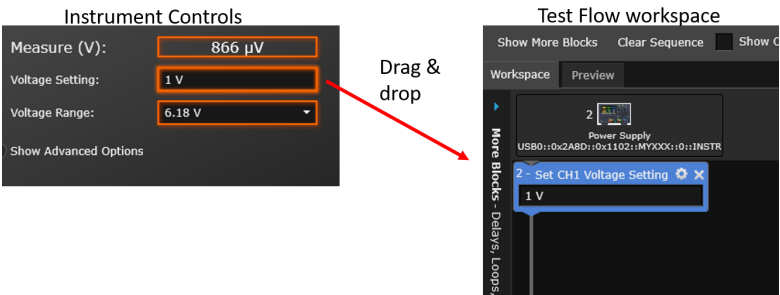

Figure 5. Drag and drop instrument controls

2. The easiest way is to configure your instrument completely, then save Instrument state into a file. Drag and drop the "app state file" into the Test Flow workspace.
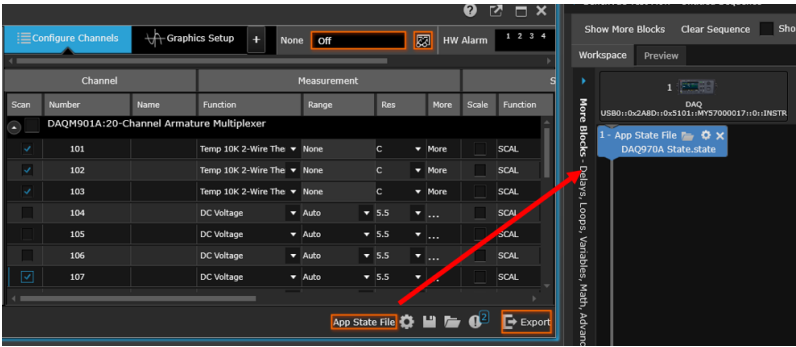

Figure 6. Drag and drop BenchVue app state file

3. You can make simple test automation by dragging basic decision tree and action graphical blocks into the Test Flow workspace to instruct the instrument what to perform. See basic instruction and looping blocks available for Test Flow below,
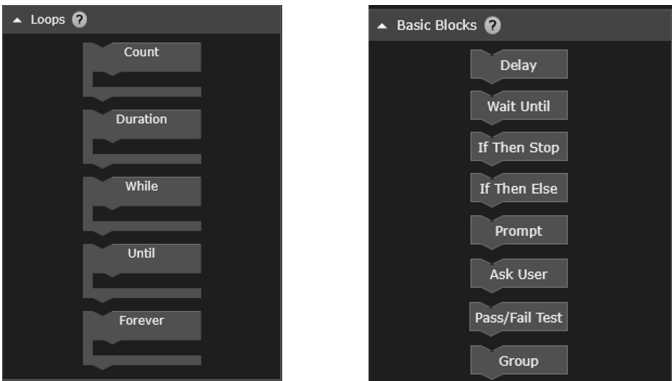

Figure 7. BenchVue Test Flow loops and basic blocks

4. There are other very useful graphic blocks such as setting variables, numerous math functions, manipulate string functions and specific instrument functions.
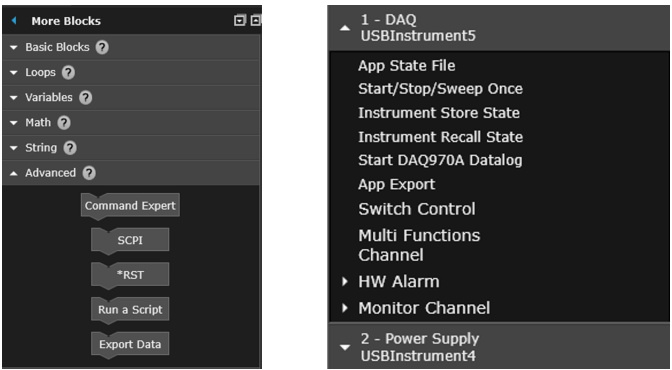

Figure 8. BenchVue DAQ instrument and advanced blocks

5. Here is an example test sequence that performs 20 scans of measuring temperature from the DAQ970A, and voltage and current from the E36312A DC power supply.
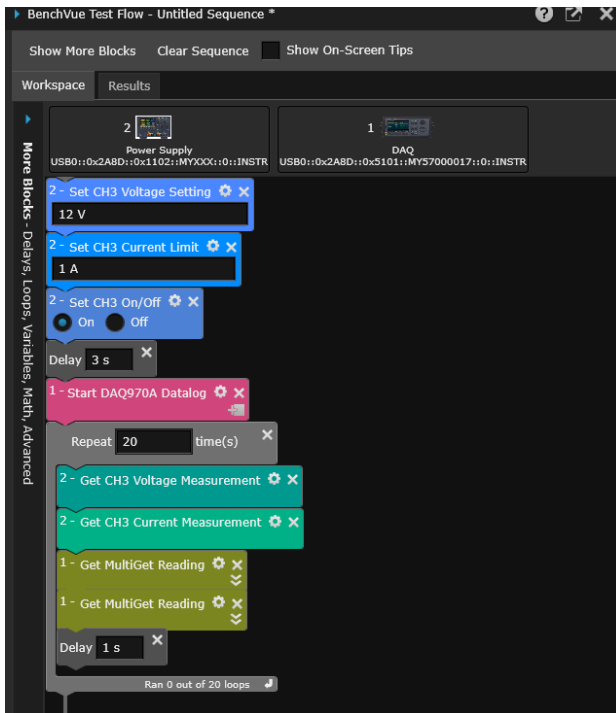

Figure 9. BenchVue Test Flow sequence

6. Results of the test sequence can be saved in Microsoft Excel, Microsoft Word, Matlab or .CSV file. You can then easily use these files to do your post-processing and analysis work.

7. You can also use advanced function blocks such as the Command Expert or SCPI to get deeper instrument controls and full automation capability while simplifying your workflow.

Conclusion

The new BenchVue DAQ application software complements the new generation DAQ970A very well. It completely replaces the Benchlink data logger software, automatically detects instruments in multiple types of interfaces (USB, LAN, GPIB), provides intuitive point-and-click instrument configuration interface, very modern and powerful data visualization tools, and best of all, works with Test Flow.

I hope this blog helps you understand the capabilities of BenchVue and Test Flow.

To learn more about the new generation DAQ970A data acquisition system, please go to www.keysight.com/find/daq970a (http://www.keysight.com/find/daq970a).

To learn more about BenchVue DAQ application software, please go to: www.keysight.com/find/benchvue (http://www.keysight.com/find/benchvue).

To learn more about selecting a DAQ for temperature profiling, please read our article on How to select a DAQ Data Logger for temperature profiling of battery charge and discharge (https://connectlp.keysight.com/DAQforDataLogging).