WaveView
Out-of-the-Box Software
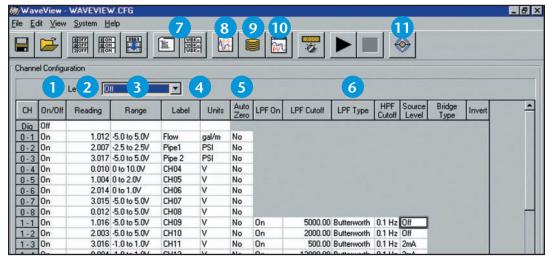
MEASUREMENT COMPUTING

WaveView

WaveView* is a Windows-based setup and acquisition application that allows you to configure, display, and save data to disk within minutes of taking the WaveBook *Out-of-the-Box*. WaveView provides a point-and-click interface that simplifies operation of the WaveBook by allowing setup of all hardware, including the field-installable WBK options, without programming or connecting icons.

Unlike the mere example programs that many suppliers provide with data acquisition hardware, WaveView is a full-featured acquisition and display engine that provides all the functionality needed for many data-logging and display applications. For more frequency-domain analysis applications, use DASYLab®.

WaveView's intuitive approach to hardware control simplifies system setup by automatically querying the WaveBook upon connection to your PC. As WBK options are added for signal conditioning or increased system channel count, WaveView's channel configuration spreadsheet automatically expands to accommodate the additional channels. Specific channel characteristics, such as gain, unipolar/bipolar, and channel labels, are automatically updated, and any additional functionality (such as low-pass filtering, filter cutoff, or excitation output), also automatically appear in the channel-configuration spreadsheet. WaveView is also designed for easy operation with display and analysis packages. WaveView provides data in formats compatible with a variety of sophisticated display and analysis packages, including MATLAB®.

Included WaveView is an Out-of-the-Box setup, acquisition, and real-time display program

Note: The WBK40 and WBK41 are not currently supported in WaveView. We recommend using DASYLab® when using these modules, which includes full support for the WBK40/41. The WBK40/41 are also supported in LabVIEW®, and DaqCOM. If it is necessary to use these modules in conjunction with a WaveView application, then it is necessary to launch a second, concurrent application to acquire data from the WBK40/41 into separate data files.

1 Designate an individual data channel as active or inactive by clicking on a select channel.

2 Reading column provides quick indication of sensor condition before acquisition begins.

3 Choose different ranges or gains for each channel, based on the particular WBK options installed. Bipolar and unipolar scales can also be selected for each channel.

4 Assign each channel a unique label, which will be automatically referenced throughout WaveView. Choose the desired engineering units in which to display acquired data, based on the installed WBK options. Parameters can also be entered to perform mX+b scaling on each reading before displaying it.

5 Use auto-zero to remove small offsets such as transducer drift or pre-load conditions prior to acquisition.

6 Enhanced features such as filter type, cutoff frequency, IEPE current source, and bridge configuration automatically appear when hardware is added to the WaveBook system. There are no switches to set and WaveView automatically updates itself for new configurations.

7 Click to review system configuration and acquisition parameters such as scan rate, pre- and post-trigger usage, and trigger criteria.

8 Scope Mode allows customizing and displaying of multiple traces; it supports cursors, re-scaling, and more.

9 Store data to disk in real-time; the auto re-arm function, with automatic file naming, supports back-to-back acquisition of over one million captures without user intervention.

10 Review acquired waveforms with a strip chart style display via PostView.

11 Strain gage setup to calibrate WBK16 strain gage channels.

* **Supported Operating Systems:** Windows 7/Vista/XP SP2, 32-bit or 64-bit

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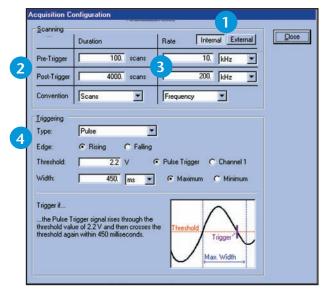## *Out-of-the-Box* Software

Scan and Trigger Configuration. The WaveBooks' powerful event-capture capability is made available through the simple, fill-in-the-blank style boxes in WaveView. In addition to single-channel, manual, and external TTL, advanced triggering for multichannel, digital pattern, and pulse trigger is also available. When using multichannel trigger all channels can be combined with boolean "AND" & "OR" operators to begin the acquisition at just the right time. In digital pattern mode, the WaveBook triggers on a user-defined bit pattern making it easy to associate analog data with digital sequences.

Unique to the WaveBook is the pulse trigger capability shown below. Typically available in systems many times its price, pulse trigger allows capturing that elusive event by defining the level of the signal and pulse width criteria. Now "runt" pulses or glitches buried in apparently good signals can be easily captured.

You can configure the WaveBook via WaveView's scan and trigger configuration screen

1 Allows selection of internal or external clock.

2 Lets you individually set acquisition duration for both pre- and post-trigger data.

3 Offers separate scan rates for both pre- and post-trigger data.

4 Select the trigger mode you need: immediate, manual, multichannel, digital pattern, or pulse.

Scope Mode. Unlike a traditional scope with only two to four channels, WaveView's Scope Mode allows any eight channels to be displayed. Furthermore, WaveView is not handicapped by the small memory limitations of DSOs. In fact, WaveView dynamically and transparently allocates a PC's RAM prior to beginning an acquisition. A simple point-and-click is all that's necessary to initiate multi-Msample acquisitions. In addition, because the data is already in the PC's RAM, a second point-and-click on the disk icon automatically saves this data to disk for import into PostView, a post-acquisition waveform review package, or into analysis packages, such as MATLAB®, DADiSP®, or Excel®.

Scope Mode allows you to display any eight of the WaveBooks' channels

1 Supports continuous or single-shot capture and display modes.

2 Provides zoom-in and zoom-out window control of the x-axis.

3 Displays user label and cursor data values.

4 Scroll through all data.

5 Provides auto-scale for quick maximization of the y-axis display.

6 Automatically scales axis in user-defined engineering units.

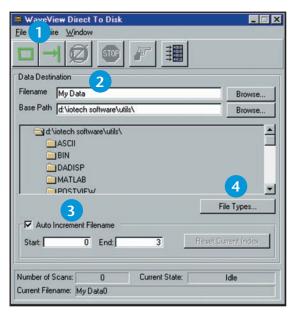**7** Enables cursor for on-screen measurements.

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Logger Mode. For applications where PC RAM is insufficient to record the entire test or where rapid back-to-back recordings need to be saved to disk, WaveView provides a Logger Mode. It complements WaveView's Scope Mode by allowing continuous* recording data directly to disk.

Logger Mode can auto-increment file names to provide the unattended capture of millions of back-to-back events, without user intervention. Acquired data can be stored in several data formats for direct import to packages such as Excel® or PostView.
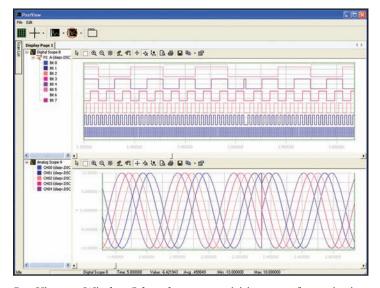
WaveView's Logger Mode can stream data direct to disk in a variety of formats

1 Allows the collection of single-shot or auto-increment file names for back-to-back acquisitions.

2 File name, path, and auto-increment index can be entered by simply filling in the blank.

3 Auto increment creates multiple data files, one per trigger.

4 Choose from an ever-growing list of data file formats for easy importing into other software packages such as DADiSP, DASYLab, MATLAB, Snap-Master, ASCII/Excel Universal File Format (UFF) 58A (ASCII), Universal File Format (UFF) 58B (Binary), and .WAV.

PostView

PostView is a time-domain post-acquisition data viewing package which is integrated and ready to use from within your View package when you install it. PostView provides easy to use basic time-domain data viewing for IOtech data acquisition *Out-of-the-Box* View packages.

PostView, a Windows®-based, post-acquisition waveform viewing application

WaveCal

The WaveBook is also shipped with WaveCal, an application that facilitates periodic calibration of the system. Although all WaveBook components are factory-calibrated to their rated accuracies prior to shipment, annual recalibration is recommended. WaveCal's simple on-screen instructions and direct access to the WaveBook's components, make recalibration fast and easy.

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* For acquisitions in excess of 100 million scans, use DASYLab® or other available software