Control Assistant

Description

Control Assistant software provides powerful troubleshooting and maintenance tools for Woodward controls. Control Assistant provides the tools to perform advanced system diagnostics, adjustment management, and other functions.

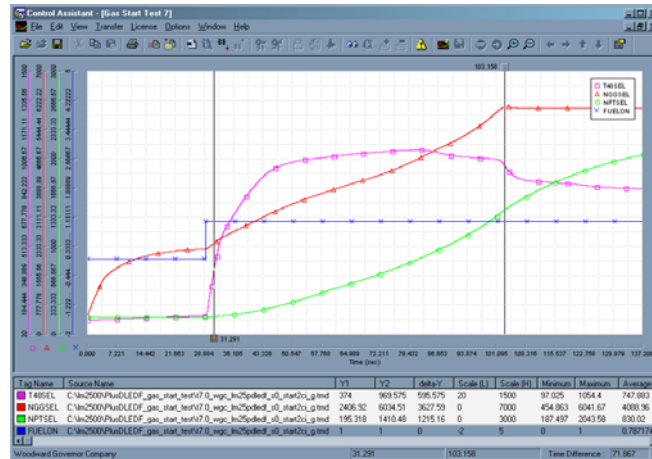Control Assistant is a suite of six powerful tools:

1. **Datalog Graph View**—
Provides a powerful graphical tool for viewing and analyzing dynamic control variable performance off-line. Millisecond time resolution, synchronized down to the software execution rates, gives exact clarity to dynamic control transients. Control Assistant's graphical features complement lower-resolution trends from a traditional HMI, letting you solve problems quickly and get back on-line sooner. Use in conjunction with NetSim™ (Woodward's simulation and modeling package) to analyze software timing during test and development to save time later.

- Graphing—Graphical viewing allows the plotting of variables versus time. Whether it is a control datalog, NetSim generated log, trend buffer file, or just a generic .CSV (Comma Delimited File), as well as other generic built-in data formats, any combination of variables may be viewed.
    - ✓ Create X-Y plots; for example, speed vs. pressure.
    - ✓ Apply calculations and filters to any variable or any combination of variables in the data set.
    - ✓ Over-plot two or more data files for comparison, including time offsets to align events.
    - ✓ Use crosshairs to analyze values and measure time deltas.
    - ✓ Basic statistical data provided on each variable.
    - ✓ Export data or data subsets to generic a .CSV format for other analysis, such as in a spreadsheet or injection into simulations for predicted analysis.
    - ✓ Quick access to plots by saving script files for ease in re-opening a data subset from the same or other log files.
    - ✓ Plot continuous datalogs or multiple files concurrently in time, stitching together the millisecond resolution data to a big picture over hours or more of operation.

- Data log Configuration—Add variables on the fly to the new MicroNet™ Plus datalog offline or directly by connection to the control and browsing the variable explorer

- Data Transfer—Backward compatibility support to include capturing a datalog transferred from the control through a serial or Ethernet connection.
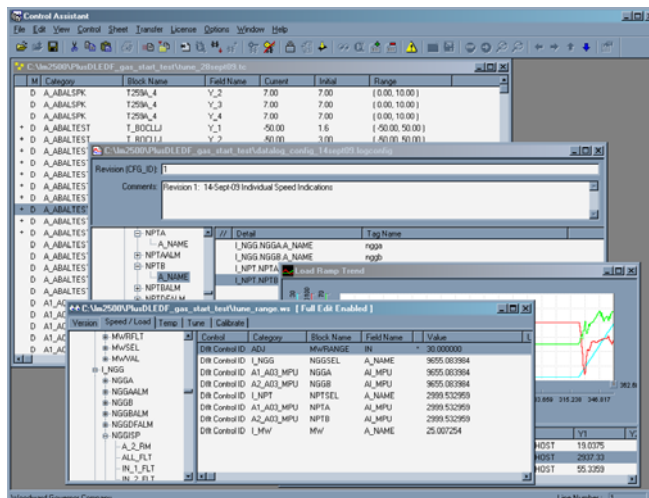
2. **Tunable Maintenance Utility**—Includes downloading, sorting, comparing vs. baseline, saving, and uploading new tunables to the control.
    - Quickly identify changes from default.
    - Download the tunable information from one control system and upload to another.
    - Download tunables from two control systems and compare the difference.
    - Back up current control settings for archiving, tracking, and comparing changes.
    - Powerful verification of new and different tunables during a software upgrade.
    - Copy to spreadsheet for further sorting or saving in a generic format.

- Advanced troubleshooting tool for Woodward controls

- Graphic display in millisecond time resolution

- Detailed analysis of dynamic control or any generic data set

- CSV export

- Capture, Sort, Compare, Save, and Upload tunable values

- Continuous datalog graphing

- Custom datalog variables

- Live custom trending and event triggering

- WinPanel - Watch Window Explorer debug and tuning

- Program loading

- OPC connectivity and OPC alarm and events monitoring

3. **Custom Trending**—Connect and browse the control variable explorer list to create custom trends for quick analysis of a specific problem that requires better resolution than an HMI but not as detailed as the datalog.
   - Create trends of any control variable that does not exist on the fixed HMI list.
   - Supports trigger-based events to permanently save trend buffers data and events to files.

4. **OPC**—Connectivity and OPC Alarm and Events Viewing and Monitoring.

5. **Debugging**—Connect and browse the control variable explorer list to adjust, tune, and monitor variables as well as check status and software revisions.
   - Integrates Watch Window functionality into this one package.
   - Save custom lists for quick recall that include multiple titled sub tabs for organization of groups by functionality or feature such as actuator stoke/calibration, speeds, or temperature.

6. **Software Downloading**—Backward compatibility support for compiled HEX software application downloads to send new or restore programs to the control.

Specifications

APPLICATION PROGRAM DOWNLOADING

Programs generated by Graphical Application Programming (GAP™) in hex format for Motorola 68040 and 68060 based NetCon™ and MicroNet CPUs can be downloaded to the control via serial or Ethernet connection. Woodward's Application Manager (AppManager) is used to download software to Pentium or Motorola 5200 CPU based controls. Woodward's SOS Servlink OPC Server may be used to download applications to controls which accept the ".SCP" program file format.

TUNABLE MAINTENANCE

Tunable lists can be received from, modified, and sent to the control. Backward compatibility and serial or Ethernet connections are supported.

GRAPHING AND PLOTTING

Backward compatibility to retrieve data from DATALOG blocks via serial or Ethernet connection and graphing of results are supported. Plots MicroNet Plus DATALOG_M blocks including the continuous mode logging option. The DATALOG or DATALOG_M blocks must be included in the GAP application. Woodward's Application Manager (AppManager) is used to automatically or manually retrieve the datalog files on Pentium or Motorola 5200 CPU based controls.

OPC SUPPORT

OPC Data Access 2.0 connections are supported. OPC Alarm and Events (AE) Connections are also supported through the Woodward Servlink OPC Server (SOS) to MicroNet Plus Motorola 5200 CPU controls. Active X plug-in available for AE. Control must be programmed to support the AE connection. Only simple alarm and events are supported.

SYSTEM REQUIREMENTS

The minimum PC system requirements are:
   Pentium® 200 MHz PC
   128 MB of RAM
   Windows® XP/Vista/7
   .NET 4.0 Framework
   Woodward's SOS Servlink OPC Server
Use of a system that does not meet these requirements will in most cases degrade the performance.

COMMUNICATIONS

Ethernet TCP and UDP are supported. Serial RS-232 also supported.

INSTALLING AND LICENSING CONTROL ASSISTANT

The software can be downloaded from **www.woodward.com/software**. Follow the instructions on-line for installation and licensing authorization. To purchase a license for full functionality, contact your Woodward vendor. Full functionality includes multiple WinPanel tabs, saving WinPanel configurations to files for quick recall, and graphing or live capturing trends beyond 100 data points.

WOODWARD

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