WHAT'S NEW
IN
PC-ControLAB™ 3

- **Selectable display size** – The display size can be made larger or smaller, depending upon your monitor display resolution. Select **View | Display Size | Bigger** or **Smaller**.
- **Engineering units** displayed for process variables. These are determined by the process model configuration program, Builder.
- **Application names**, such as "Temperature", "Flow", etc. can be assigned to controllers from Builder.
- **Initial values** for process, controller output and load variables assigned in Builder.
- **Two new control strategies**, Dual Feedback (same as Feedback, but with two controllers) and Feedforward-Multiply. (The Feedforward control strategy in PC-ControLAB 2 has been renamed "Feedforward-Add.")
- **Redesigned Ratio control strategy** now more closely resembles a commercial ratio controller.
- **Redesigned tuning dialog box** now contains tabbed panels for advanced control tuning, set up, etc.
- **Scheduled tuning**, with up to 5 zones and a multiplying factor applied to the nominal tuning for each zone. May be applied to gain, integral and derivative tuning parameters.
- **Inspect block outputs** (**Process | Inspect Block Outputs**) dialog box has been redesigned to provide for easier debugging of newly defined process models. Shows all inputs to a block and the destination blocks for its output. Permits block-to-block navigation in either direction.
- **Reverse Output** control option (along with fail open/fail closed option for Valve Actuator block configuration) mimics the way many DCS handle fail open valves. Useful for demonstrating correct choice for direct or reverse acting.
- **Discrete inputs and outputs** can set on-off conditions in a process model or emulate alarm conditions.
- **Up to 4 process variables**, plus controller output and load variables, can be monitored for every control strategy.
- **Completely rewritten and expanded HELP screen**, plus **Tutorial**, eliminates the need for a hard copy User's Manual.
- **Laboratory Exercises** accessible On Line or from CD, eliminating the need for paper copy of Lab Exercises.

WHAT'S NEW
IN
BUILDER 3

- **Increased size** from 48 to 120 function blocks. Permits configuration of larger process models.
- **Block "Find"** and **Connections "Highlight"** provide for easier tracing and troubleshooting of process model configurations.
- **Steady state output values computed**, based upon initial input values from control strategy. This assures that the process model will start in PC-ControLAB in a steady state condition.
- **New function blocks**: Variable Dead Time, Variable Lag, logic blocks (AND, OR, NOR, etc.), plus DI and DO blocks for communicating discrete signals to and from PC-ControLAB.
- **Completely rewritten and expanded HELP screen**, plus **Tutorial**, eliminates the need for a hard copy User's Manual.

WHAT'S NEW
IN
MPC-ControLAB
Added April 24, 2004

PC-ControLAB (the CD) now includes an additional program, MPC-ControLAB. This is a **Model Predictive Control** (MPC) demonstration program with similar operational features as PC-ControLAB (the program), but with a user interface adapted to demonstrate the behavior of MPC, and to permit the user to make an in-depth exploration of its calculation and control procedures.

There is no programmatic connection between PC-ControLAB and MPC-ControLAB, although Builder can configure process models for either program.

Documentation for MPC-ControLAB, available through the HELP screen, includes:

A user's guide
A technical overview
One laboratory exercise, plus answer key.

It is recommended that a user be familiar with PC-ControLAB operation before using MPC-ControLAB.