

505 Simulator

505 Simulator™ is the only software of its kind available for Simatic® 505™ and CTI 2500 Series PLCs. Use this exciting new software to program, run, and test 505 ladder logic, special functions, PID loops, Analog alarms, and simulated I/O without the use of a PLC.

Use *505 Simulator* to test and debug: Ladder logic, SF, PID loops, Analog alarms, and I/O.

505 Simulator seamlessly integrates with *PLC WorkShop*™ for Siemens 505 making it convenient to use. Testing and debugging 505 programs without such a tool would typically take days. With the simulator, these tests can be accomplished in

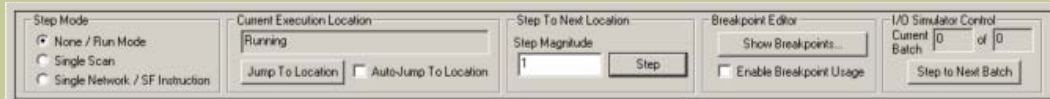
minutes—without the need for expensive hardware.

The simulator may be used in conjunction with data acquisition software such as *ControlShop*™. For example, connect *FTTrender* to the simulator for a graphical display of expected trends.

When a program is online with *505 Simulator*, the simulator responds in a similar manner to the type of PLC that is being simulated. Programs may be loaded, saved, edited, and executed while online with the simulator. In addition, *505 Simulator* allows the specific simulator state that has been created to be saved.

505 Simulator allows you to perform the following tasks, which are not possible when testing on a PLC:

- Step Debugging – Step through a program network-by-network or instruction-by-instruction.
- Controlled I/O Simulation – Set up I/O exactly the way you want with predictable results every time.
- Regression Testing – Ensure that changes to your program do not cause previously working functions to fail.

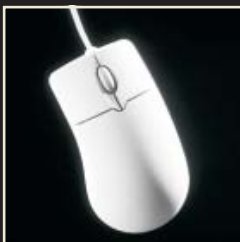


Step Debugging

The simulator's step modes provide the ability to execute each scan continuously, stop execution between every scan, or stop execution between every RLL network and every SF program / subroutine instruction. This level of step debugging, which is not available when testing using a 505 PLC, allows you to see the results of each network instruction's execution.

FastTrak
SoftWorks, Inc.

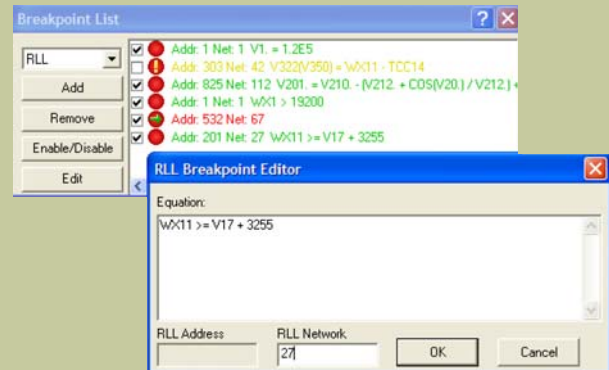
To obtain a demo, place an order, or receive additional information, go to www.fast-soft.com, or contact Sales at sales@fast-soft.com or 262.238.8088. If you do not currently own *PLC WorkShop for Siemens 505*, it may be purchased in conjunction with *505 Simulator* at a special bundled price.



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Breakpoints

The use of breakpoints allows the program's execution to be halted at specified locations. Breakpoints may be set at any RLL network or address or any SF program / subroutine number and line number. Conditional breakpoints allow a mathematical expression to test a condition. If the condition result is true, the program will be stopped at the specified location. Breakpoint status is conveniently indicated not only through color-coding, but also through use of unique icons.



I/O Simulation

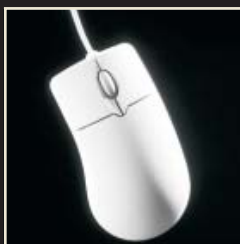
As opposed to actual I/O setup—which requires time-consuming and complicated wiring of physical devices—505 Simulator's I/O simulation capability allows a sequence of values to be created and written to the simulator's memory. This sequence may be set up to reproduce the same I/O values that are received by the PLC from the equipment to which it is physically attached. Expected output values can be generated through the I/O Simulator as well. Differences between expected values and actual values are recorded in a log file. The I/O sequence may be saved and loaded into the simulator at any time, which is helpful for regression testing. When a process component is changed, the test sequence can be rerun to ensure that the change did not adversely affect anything that was not intended to change.

The screenshot shows the 'I/O Simulator' window for a 'TANK FILLER LINE' simulation. It features a control panel at the top and two data tables below. The first table lists input addresses (X1-X8) and their corresponding tags, current values, and statuses. The second table lists output addresses (Y9-Y16) and their corresponding tags, current values, and statuses.

Row	Input Address	Tag	Description	Current Value	Status	Batch Value
1	X1			OFF D1	Success	ON D1
2	X2			ON D1	Success	OFF D1
3	X3			OFF D1	Success	OFF D1
4	X4			OFF D1	Success	ON D1
5	X5			OFF D1	Success	OFF D1
6	X6			ON D1	Success	OFF D1
7	X7			OFF D1	Success	ON D1
8	X8			ON D1	Success	OFF D1

Row	Output Address	Tag	Description	Current Value	Status	Batch Value
1	Y9			ON D1	Success	OFF D1
2	Y10			OFF D1	Success	ON D1
3	Y11			OFF D1	Success	OFF D1
4	Y12			ON D1	Success	OFF D1
5	Y13			OFF D1	Success	OFF D1
6	Y14			OFF D1	Success	ON D1
7	Y15			ON D1	Success	OFF D1
8	Y16			OFF D1	Success	ON D1

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SPECIFICATIONS

Product Upgrades

Regular product upgrades may be obtained by convenient download from www.fast-soft.com. Notifications via email are sent for all major feature releases.

Customer Service

When you contact us for support, you will receive immediate and accurate solutions to your questions resulting in less downtime. You will have access to the engineers who design our software packages.

Site Licenses

Keyless site licenses are available, which eliminate tracking and losing keys.

Annual Maintenance Agreement

Maintenance for *505 Simulator*—which includes unlimited technical support and product upgrades—is automatically included, at no additional cost to you, as part of your *WorkShop* annual maintenance agreement.

505 WorkShop Integration

505 Simulator works with *PLC WorkShop* for Siemens 505 v4.00 or higher.

Windows Compatibility

Designed and tested under Windows® 98, NT, 2000, and XP.

PLC Support

Designed to simulate logic from any Siemens Simatic 505 / TI and CTI 2500 Series PLC with preset configuration for all Simatic 545 and 555 PLCs, 1101 – 1106 and CTI 2500 PLCs, C100, C200, C300, and C400.

When you order 505 Simulator you will receive:

- Software CD
- *505 Simulator* Manual
- Unlimited product upgrades and customer support as part of your *WorkShop* license

Additional Features

- The simulator's compact interface provides an easy-to-use, convenient view.
- The choice of timing mode—real time or simulated time—allows you to configure how fast time advances.
- *505 Simulator* supports its own file format, allowing simulator state and settings that have been created—such as PLC type, timing mode, I/O recipes, and breakpoints—to be saved.
- The Startup Restore feature automatically saves the simulator file when the application is closed and loads it upon subsequent startup.
- *505 Simulator* offers controls to easily display the specific code where a break has occurred.

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