



Quickstep™ 3 for Windows

32-bit Programming Environment

Rapidly moving your project from an idea to a highly integrated, world-class control system is the goal of Quickstep for Windows. Using Quickstep, your machine design team can program, debug, and tune the performance of your automated equipment in less time than ever before. Quickstep combines a clear language structure, a simple programming interface, and powerful diagnostic tools to allow you to respond quickly to new automation demands. The point and click simplicity of the Quickstep editor reduces training requirements, while state language programming makes your programs understandable to all members of your design and operating teams. Quickstep is the best and easiest solution for automated equipment programming, providing you with all of the following:

- **Accelerated and intuitive program development**
Quickstep provides a language structure that emulates the way the designer thinks about a machine. The flow-diagram structure of the Quickstep state language ensures you that the time elapsed from Quickstep programming to trouble-free operation is substantially reduced.
- **Efficient and easy-to-use programming interface**
Quickstep allows you to create a program with a series of point-and-click selections of instructions or instruction parameters – no error-prone typing or tedious menus. Since Quickstep enters the instructions, syntax errors are virtually eliminated.
- **Powerful real-time diagnostics and monitoring**
Debugging is simplified with easily understood status displays and high-level error explanations, plus you can adjust many values while your machine runs, greatly reducing the time required to perfect your program. The dynamic display of internal resources as well as the ability to dynamically tune a machine's performance make Quickstep a highly capable diagnostic and monitoring tool.



- Combines clear language structure, simple programming environment and powerful diagnostic tools in a point-and-click interface
- Easy to understand language enables users to learn and develop programs quickly and to share programs with other team members
- 32-bit application; runs on XP, Vista, Windows 7

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A program structure that works

Clear state language programming

The Quickstep state language emulates the way a designer views a machine and designs an automation program. Quickstep programs are composed of steps, similar to the blocks of a flow diagram. Each step is given a meaningful name, and has the ability to change output states, monitor inputs, make decisions and perform other automation functions. Quickstep programs are composed of sequences of these steps.

```
[2] Index_Table
;;; The indexer drive is enabled and the index table is indexed cv.
Index_Drive_Enabled
profile indexer servo at position maxspeed=Max accel=accw
turn indexer cv One_Station steps
monitor Indexer_Stopped goto Run_Stations
```

One of the biggest advantages of Quickstep is that the code is created the same way an engineer thinks and a machine is designed to run. Each step has: 1) an intuitive name 2) space for comments 3) any outputs that change during that step and 4) the code instructions for that step. The resulting program is easy to understand, easy for others to understand, and easy to debug or expand.

A programming interface that is efficient and easy-to-use

Program entry made easy

The Quickstep Editor automatically builds each new instruction for you. A simple click on the instruction menu, and the full instruction is displayed in the editing window. Placeholders are provided for each instruction parameter, and a customized menu of choices is presented for each one. Using this approach, programming effort is minimized and syntax errors virtually eliminated. Plus, the Quickstep Editor provides many convenient editing tools, including a symbolic name browser, data table editor, and extensive online help.

A programming tool that diagnoses problems and monitors operation in real-time

Dynamic monitoring

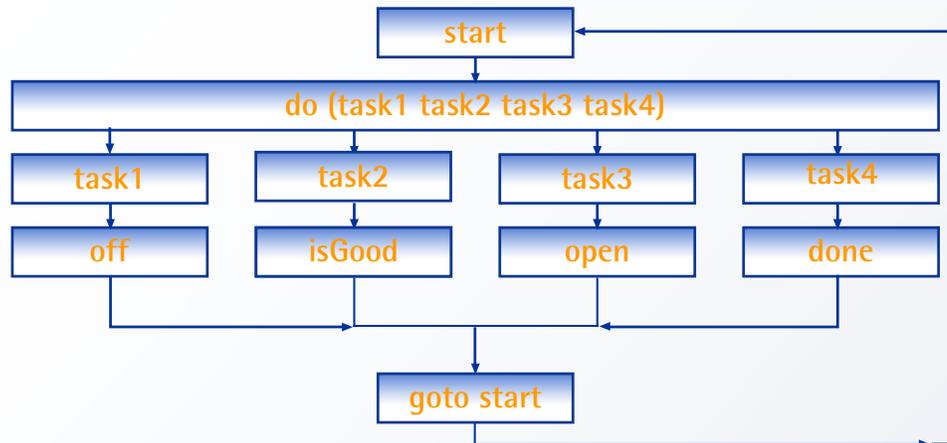
When your computer is connected to a CTC controller, Quickstep's Monitor Utility allows you to dynamically monitor any of the following resources:

- Program status
- Controller configuration
- Numeric registers
- Flags
- Servo status
- Digital inputs or outputs
- Analog inputs or outputs

Custom monitoring screens may also be tailored to show just the resources you need for critical tuning or operating functions. The Monitor Utility also provides DDE connectivity for more sophisticated analysis when used with programs such as Microsoft Excel, or for communicating with operator interface software.

Register Name	Value	Index
Max	32000	1
accw	240	2
One_Station	5	3
part_Count	15223	4
parts_good	15119	5
parts_bad	4	6
reg 7	0	7
reg 8	0	8

Troubleshooting and diagnostics — *The Monitor Utility is an invaluable tool in troubleshooting a machine, establishing working parameters for new installations, as well as helping to test field wiring. You can "force" (key in) new values into the numeric registers controlling critical time delays, motor speeds and positions, and analog settings while the machine is in operation. These dynamic, real-time adjustments allow you to see the effect of changes immediately. You save time, whether it's perfecting a program or tuning a machine for increased productivity levels.*



Simplifies complex tasks —When programming complex machines, you can use multitasking to split up your program into a number of independent tasks. In the diagram above, 4 tasks are executed concurrently. The limit is 84, each operating completely asynchronously, as though a separate controller were executing each program. Tasks may intercommunicate using any of the controller's shared resources: numeric registers, flags, etc. This modular approach to development helps clarify your programs and simplifies debugging and maintenance.

Quickstep 3.0 Specifications

System Requirements

- Windows XP, Vista, Windows 7
- 2000 or 5000 series CTC controller

Capabilities

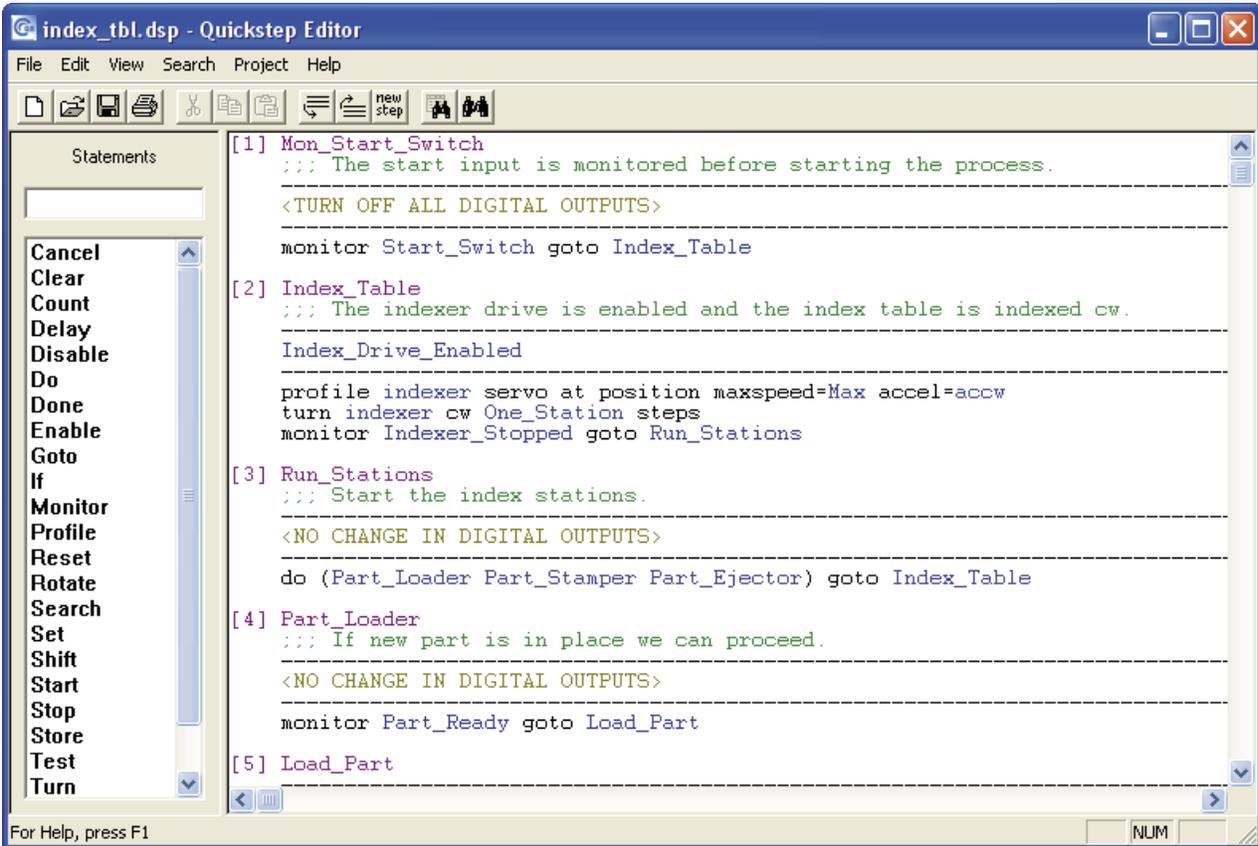
- Provision for entering, compiling and downloading programs for 2000 series and 5000 series CTC controllers
- Abbreviated instruction entry with prompting and Help files
- Dynamic entry checking, disallowing syntax errors
- Automatic error checking, providing explicit warnings on structural program errors
- Data Table entry screen with spreadsheet-like X-Y cursors and automatic ASCII conversion for message entry
- Menu-based file listing and retrieval
- Real-time controller monitoring, including:
 - Status monitoring, with hierarchical task display and run-time error messages
 - Numeric register monitoring and value forcing
 - Flag monitoring and override capability
 - Digital I/O monitoring and output override capability
 - Analog I/O monitoring and output value forcing
 - Servo display, including instantaneous position, error and input status
- Communications to CTC controllers via:
 - Serial/USB
 - Ethernet: TCP/IP, UDP, CTNET

Supplied with Quickstep

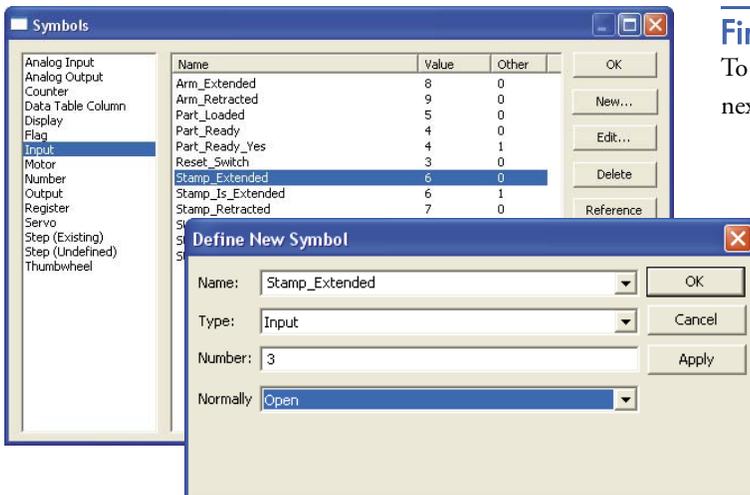
- Quickstep for Windows Programming environment on CD or flash drive
- Quickstep User Guide and Quickstep Language and Programming Guide
- Model 2880B 9-pin RS-232 Cable Adapter
- Model 2881 Programming Cable (5' standard)

Instructions Supported

Cancel other tasks	Rotate flags
Clear flag	Search and zero motor
Count down	Search and zero servo
Count up	Set flag
Delay	Shift flags
Disable counter	Start counter
Do (multitasking)	Stop (controller)
Done	Stop motor
Enable counter	Stop servo
Goto	Store (data movement & math)
If	Test and set flag
Monitor	Turn motor
Profile motor	Turn servo
Profile servo	Zero motor
Reset counter	Zero servo



The Quickstep Editor has extensive point-and-click program building and auto prompts that accelerate development and help eliminate errors. A powerful set of more than 20 statement commands give Quickstep the flexibility to satisfy the most complex and demanding automation applications.



Customizing your program — The Symbol Browser enables you to create a symbolic name for every controller resource you use in your Quickstep program. These include inputs, outputs, registers, flags, analogs, servos and others. This simplifies writing your program, as well as debugging, maintaining, and communicating it to others.

Find out more

To learn more about how Quickstep can be the solution for your next automation project, contact us using the information below:



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