



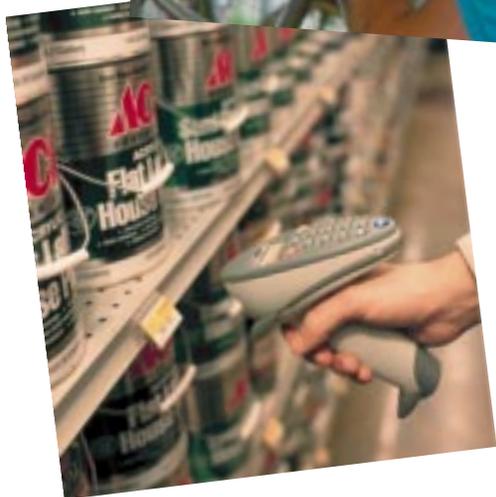
MCL-Collection

Fast and Easy Applications Development

MCL™ Collection is an integrated set of software tools from Symbol Technologies, Inc. that enables nonprogrammers to create and deploy single or multiple data collection applications easily and quickly.

Designed for use by both Symbol's channel partners and end users, these software tools let you develop and implement applications for Symbol's P460 Memory Scanner, or for Symbol's character-based terminals in both batch and Spectrum24® wireless environments.

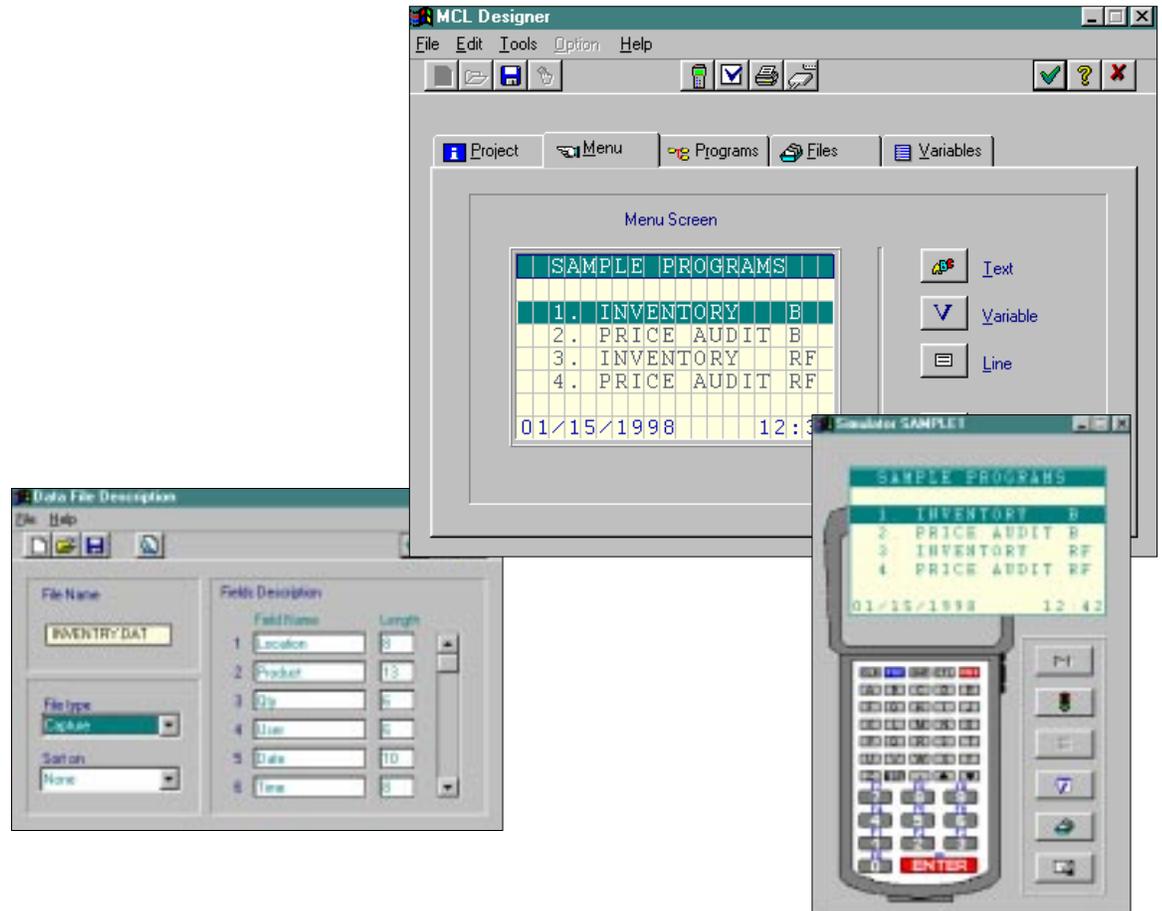
Employing MCL-Collection's rapid application development tools allow you to custom-create data collection applications in record time – and put them to work quickly in areas critical to your business success. MCL's ability to provide you with either wired or wireless communications capabilities means that you can develop and implement transaction-oriented applications across your enterprise that directly address your current and future business needs.



The MCL-Collection Includes:

- ▶ *MCL-Designer* – Used to create specific applications simply and easily. Employing unsurpassed, user-friendly programming characteristics in an intuitive graphical user interface environment, its powerful built-in features allow you to create complex applications using full simulation so you can emulate the application before downloading it to Symbol's P460 Memory Scanner, or Symbol's character-based batch and Spectrum24 wireless terminals.
- ▶ *MCL-NetS24* – A Windows®-based wireless communications server for Symbol's character-based Spectrum24 terminals running applications created using MCL-Designer. MCL-NetS24 allows the easy exchange of programs, files and/or data records between the host and the wireless terminals.
- ▶ *MCL-Link* – A robust, Windows-based batch communications server for Symbol's P460 Memory Scanner and Symbol's character-based terminals running batch applications created using MCL-Designer. MCL-Link enables you to exchange programs, files and/or data records between the host and batch terminals or scanners.
- ▶ *MCL-Code Interpreters* – Mandatory runtime programs. An MCL-Code Interpreter must reside on a device before an MCL-Designer created application can run on it.

MCL-Designer



MCL-Designer is a Windows NT®/95 development tool for front-end data collection. Designed to rapidly generate applications for use with Symbol's P460 Memory Scanner, and Symbol's character-based batch and Spectrum24 wireless terminals, MCL-Designer makes it possible to develop complex applications with limited programming knowledge.

Using a familiar and intuitive graphical user interface (GUI), MCL-Designer cuts development

time through the use of convenient dialogue boxes, drag-and-drop, cut-and-paste, radio buttons, screen viewer and simulator capabilities. This means that there is a near-zero learning curve for your application developers. As a result, you can use MCL-Designer to quickly generate MCL-Code – an easy-to-use script language optimized for transaction-driven bar code scanning data collection operations.

And, by providing simulators to see how your application runs or looks on a terminal or scanner,

MCL-Designer accelerates application development time. In fact, development can even proceed without access to related hardware components. Once the application has been developed, an interpreter running on the terminal or scanner executes the MCL-Code.

Although initially developed exclusively for batch applications, MCL-Designer's capabilities have been expanded to include Spectrum24 wireless extensions. This means Spectrum24 hand-

held users may send transactions as they occur or batch collect transactions on the wireless terminal and transmit the accumulated records at a later time. This is especially useful in operational environments that do not have full radio coverage over the entire functional work area. When a user is out of range of the wireless network, transactions can be saved on the hand-held. The wireless device then periodically attempts to re-establish communications with the wireless network and will automatically upload the transaction data whenever possible.

Organize Work Efficiently
MCL-Designer helps you organize your work environment. You can conveniently organize multiple,

unique data files and multiple standalone or interdependent applications all within one project. Also, a convenient screen sorter lets you readily see and review an application's process flow.

For your added benefit, a report generator lets you quickly and easily create functional specifications including project, program and data files information. Your functional specification can therefore always be kept current to reflect your application design.

Develop Robust Applications
MCL-Designer provides advanced debugging functions, a global view of variables, simulators and a project verifier to accelerate application development and promote the creation of robust applications. And because MCL-Designer generates MCL-Code source in a full ASCII text file, no compiler or linker is required.

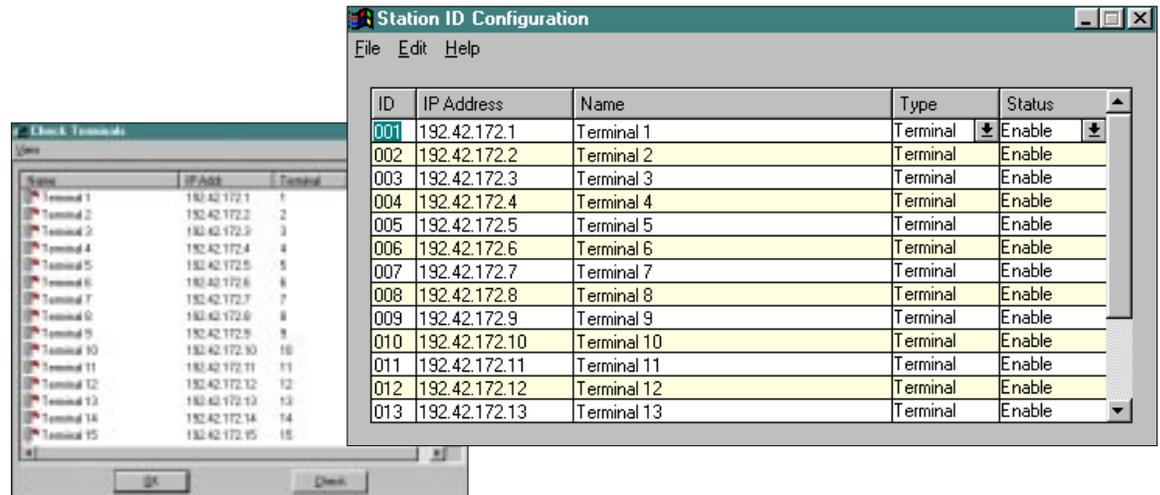
Predefined processes such as a "process in," like receiving a packet or reading a record, or a "process out," like writing or send-

ing a transaction record, may be attached to each application screen. In addition to this powerful set of process commands, code add-on support is available for customized functions. Further confidence in the robustness of an application can be gained by reusing proven modules from previously created MCL-Designer applications—you don't have to waste time reinventing a task or program that already works so well!

For organizations that rely on efficient execution of bar code scanning, transaction-driven applications, MCL-Designer provides a complete work environment to develop P460 Memory Scanner applications, and to develop batch and Spectrum24 applications for download to Symbol's character-based terminals for execution.



MCL-NetS24



MCL-NetS24 is a Windows NT®/95 communications server designed to work with Symbol's character-based Spectrum24 terminals running applications created using MCL-Designer.

MCL-NetS24 gives your network administrator control over a variety of vital activities across your wireless network. It provides your organization with a flexible communications environment to interface with the transaction-driven data collection applications that drive your business.

Using MCL-NetS24, your Spectrum24 devices have the ability to upload or download data packets, files or programs anywhere within the wireless network range. Users can also easily append, copy, rename or delete files on the server from a remote location. In addition, MCL-NetS24 provides time and date synchronization of wireless devices as well as a variety of interfaces to host applications through a Dynamic Link Library (DLL), files, pipes or queues.

To enhance the management of your wireless network, MCL-NetS24 enables your administrator to trace network activity, check wireless terminals and Access Point status on the Ethernet and Spectrum24 networks, as well as manage both data paths and network devices.

With the ease-of-use built into MCL-NetS24, it takes your administrator minimal time to configure, review status, isolate and fix problems on the network.

Simplify Network Administration

MCL-NetS24 provides network administrators with a wide range of services for the wireless network, from handling operational data to maintaining the network.

Operational data may be easily saved on networked systems or drives by making declarations in MCL-NetS24 to set up the paths and destinations of data records and files.

For network support and to help keep track of devices on the network, MCL-NetS24 enables the administrator to easily construct a Station ID configuration list that includes Access Points, Hosts and wireless devices, as well as assign IP addresses to network devices. Using the master list of all wireless devices connected to the MCL-NetS24 communications server, the network administrator can quickly enable or disable any device on the network.

What's more, Spectrum24 activity may be traced for devices identified in the Station ID configuration list and this trace data can be viewed on a screen or written to a file for review.

Run Host Applications

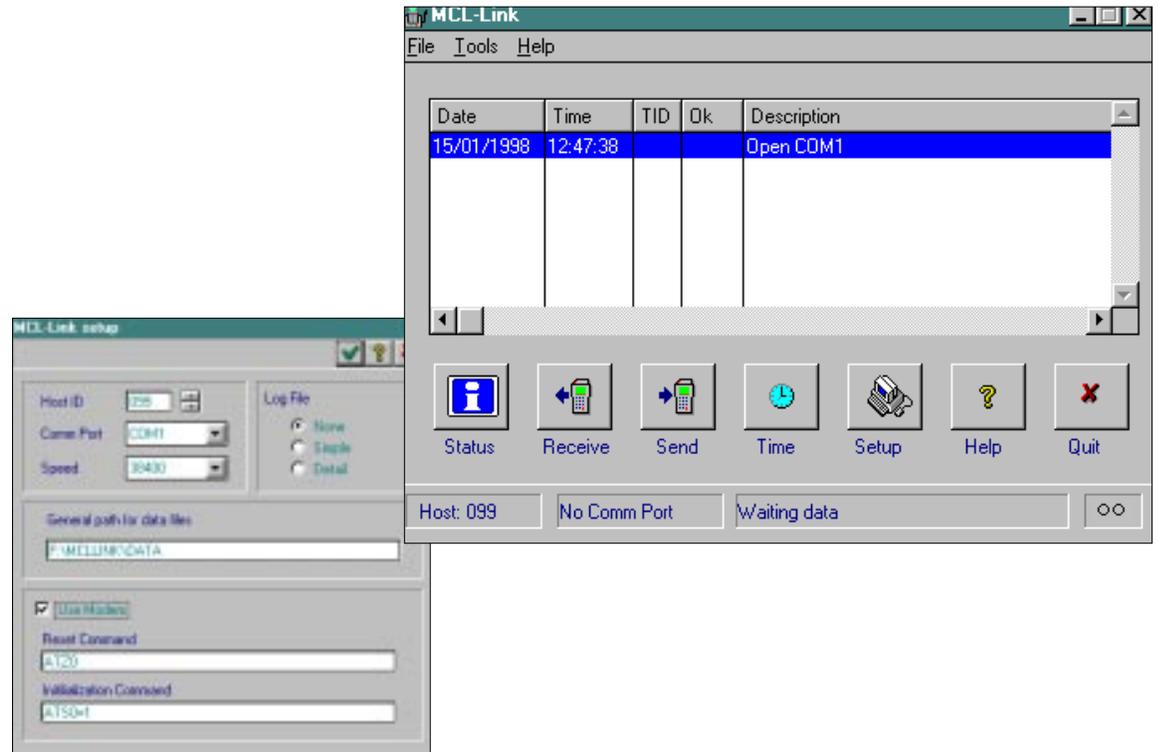
MCL-NetS24 provides a DLL interface to host applications in order to facilitate a client/server relationship between the wireless devices and a host application.

In addition to receiving operational terminal transaction data from MCL-NetS24 and sending



transaction-related data to a specific terminal via MCL-NetS24, the DLL aids network administration. The DLL enables you to check if MCL-NetS24 is running; it also lets you start or stop MCL-NetS24 on your Windows NT/95 environment.

MCL-Link



MCL-Link is a Windows 3.11/NT/95 batch communications server designed to support Symbol's P460 Memory Scanner and Symbol's character-based terminals running batch applications created using MCL-Designer. MCL-Link is the software tool that ensures access to and delivery of both programs and data essential to the smooth operation of an enterprise that relies on batch data collection.

MCL-Link communicates with your terminals and scanners either through a simple RS-232 direct connection or, for remote access, using a modem. Communications can be initiated by either the server or the batch device by running MCL-Link in either a server or slave mode.

MCL-Link provides the ability to handle all the complex tasks needed in a batch communications environment. Users can easily and quickly upload or download files and programs either to or from a batch device. In addition, MCL-Link enables users to time-synchronize a device, as well as request device status, directories or file status. It's also easy to perform such file operations as lookup, save data, append, copy and rename, as well as execute programs on the device.

MCL-Link's powerful instruction set gives you the ability to create complex communications scripts with virtually no need for human intervention—on either the device or the server. This is due to MCL-Link's ability to perform actions based upon instructions it

receives from the device (through the serial line or modem) or from a program running on the server.

A Powerful Communications Tool

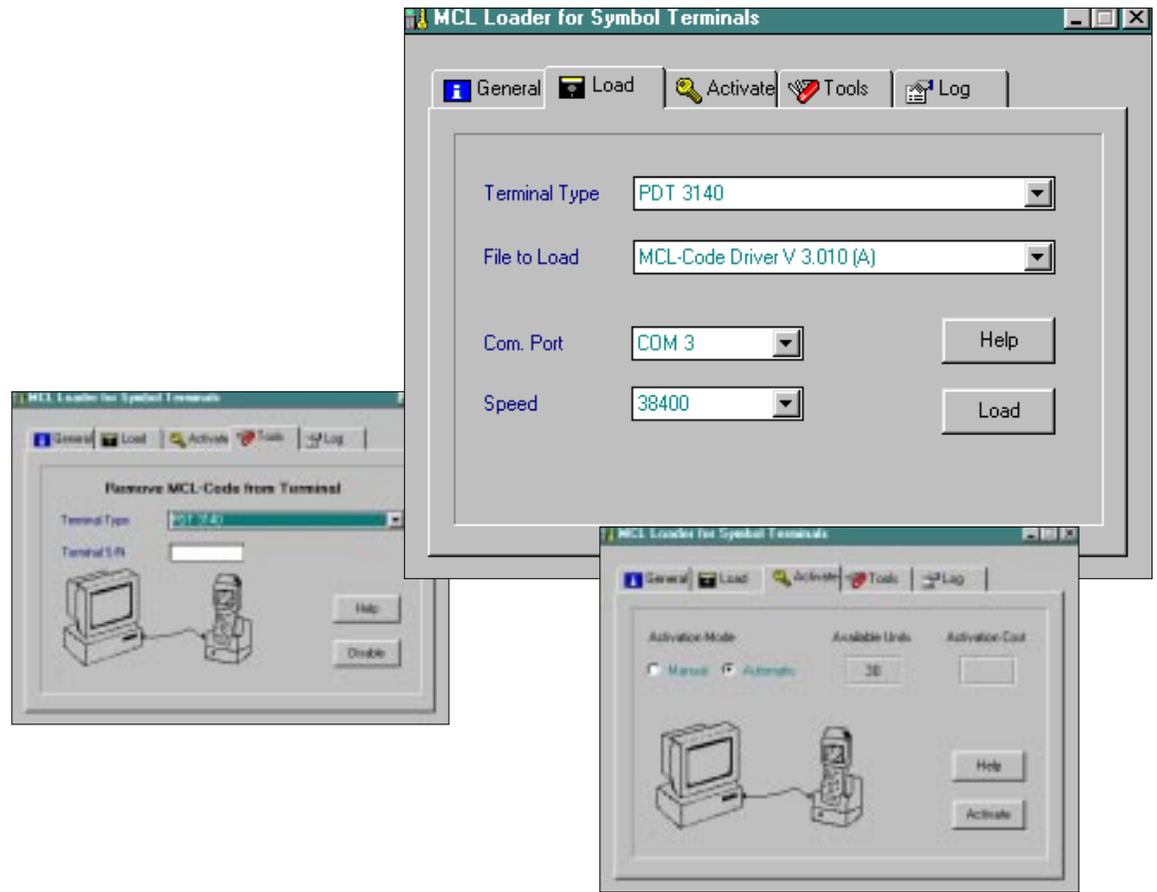
The MCL-Link instruction set makes it fast and easy to develop powerful and complex communications scripts for use anywhere in your enterprise. This gives you a flexible batch communications environment that provides easy software configuration control and reliable data collection.

These powerful communications scripts make file and program transfers easy, file manipulations simple, and file and program control effortless and accurate. In turn, powerful scripts aid the collection of accurate transaction data.

Since essentially no human intervention is required on either the batch device or the server, MCL-Link quickly and easily speeds batch communications, software updates, time synchronization and more to virtually eliminate human time and error in handling batch terminals and scanners.



MCL-Code Interpreter



The MCL-Code Interpreter is a runtime program/license which must be present before an application created by MCL-Designer may be downloaded and run on a Symbol terminal or scanner.

For your convenience, an MCL-Code Interpreter is included with every Symbol P460 Memory Scanner.

However, to realize maximum flexibility, you load and activate the MCL-Code Interpreters on Symbol's character-based terminals yourself.

A Utility to Help You

MCL-Collection includes a utility, MCL-Loader for Windows 3.11, NT or 95, that allows you to load, activate, and remove MCL-Code Interpreters from your organization's hand-held terminals. MCL-Loader maintains a count for you of the number of licenses purchased and the number of licenses available; it also keeps a database log of all activations and removals. You can even review where your licenses are being used to manage their distribution to your organization's maximum benefit.

Added Control of Licensing

Once loaded, your MCL-Code Interpreter can be activated either automatically or manually on your Symbol character-based terminals.

For terminals connected to the system running it, MCL-Loader will activate the interpreter automatically when the terminal's serial number is entered into MCL-Loader.

If a terminal is not connected to the system running MCL-Loader, a manual procedure allows you to activate an MCL-Code Interpreter anyway.

After each activation, automatic or manual, MCL-Loader will indicate the number of licenses still available.

Having the ability to manually activate MCL-Code Interpreters provides increased flexibility when you need to roll-out your MCL software solutions in a multisite enterprise. It means you may ship terminals to various locations and then activate them over the phone through personnel in a central administration or support center.

Flexibility Whenever and Wherever You Need It

You can also remove the MCL-Code Interpreter from terminals no longer in use. The recovered licenses are then available to load and activate an MCL-Code Interpreter on another terminal.

Using MCL-Loader helps your network administrator manage the distribution of runtime licenses. With the ability to create and maintain a database of activation numbers, the network administrator can easily and effectively keep a log of activations and removals that include the date, terminal serial number, personal identification number (PIN), license number and activation number.

In short, MCL-Loader will help your network administrator more effectively manage your MCL-Collection's resources.

The Symbol Difference

At Symbol, we know your business depends on technologies that are sensitive to your enterprise requirements. MCL Collection's integrated set of software tools are designed to optimize your transaction-driven bar code scanning data collection operations—and provide your operations manager with tools critical to your continued business success.



Minimum System Requirements

	MCL-Designer	MCL-NetS24	MCL-Link
Processor:	80486/75MHz	80486/75MHz	80486/75MHz
Operating System/RAM:	Windows NT v3.51/32 MB RAM or Windows 95/16 MB RAM	Windows NT v3.51/32 MB RAM or Windows 95/16 MB RAM	Windows NT v3.51/32 MB RAM or Windows 95/16 MB RAM or Windows v3.11/16 MB RAM
Available Hard Disk Space:	20 MB	10 MB	5 MB
Display:	SVGA	SVGA	SVGA
Network Support:	None	Ethernet & TCP/IP	None
Wireless LAN:	None	Spectrum24*	None

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