



Release 5

Installation Guide



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Product Warranty Information

CTC Parker Automation provides top quality products through rigid testing and the highest quality control standards. However, should a problem occur with your hardware or with the software protection key, CTC's standard product warranty covers these items for 15 months from the date of shipment from CTC. Exceptions appear below:

- PowerStation backlight bulbs have a 90-day warranty. Push button lamps are not covered under warranty.
- Third-party products, such as PCMCIA cards, carry the manufacturer's specified warranty.
- For all displays, image retention (burn-in) is not covered by warranty.
- Software revisions that occur within 60 days after purchase are available under warranty upon request. Please review the Interact License Agreement for additional software warranty information.

Should you have any questions about your application or need technical assistance, please call CTC's Product Technical Support department at 513-248-1714 8:00am to 5:00pm EST. You may call this same number after hours for emergency assistance. See *CTC Parker Support Services* on page 4 of this manual for more information about CTC's support products and services.

CTC Parker Automation
50 W. TechneCenter Drive, Milford Ohio 45150

Phone: 513-831-2340
Technical Support: 513-248-1714

Table of Contents

Chapter 1 Manual Overview and Support Services	1
About This Manual	2
Included Documentation	2
Related Documentation	3
Typographical Conventions	3
CTC Parker Support Services.	4
Product Technical Support	4
Training.	5
Professional Consulting Services	5
Product Support Program.	5
Contacting CTC Parker.	6
Ordering Additional Software	6
Chapter 2 Introducing Interact	7
Overview of Interact	8
Operating Environments	8
Development Environment	8
Runtime Environment	9
Basic Interact Components.	10
Module Descriptions	11
Panel Toolkit Module (PTM)	11
Graphics Monitoring Module (GMM).	11
Alarm Management Module (AMM)	11
Recipe Module (RCM)	12
Machine Configuration Module (MCM).	12
Data Transfer Module (DTM)	12
Historical Trending Module (HTM)	12
Report Module (RPM).	12
User Program Module (UPM)	12

Table of Contents

Networking	13
DDE Server	13
Chapter 3 Installing the Software	15
Before You Begin	16
System Requirements	16
Development Environment	16
Runtime Environment	17
Installing Interact	18
Upgrading Existing Users	18
Installing Development Components	19
Uninstalling Development Components	25
Installing Runtime Components	26
Installing Additional Components	29
Starting Interact	30
Starting Interact Development	30
Starting Interact Runtime	31
Running Interact from a Network Server	33
Working with Interact Security Keys	34
Understanding Interact Security Keys	34
Using the Interact Key Utility	35
Upgrading Security Keys	38
Using Serial Drivers with Interact	40
Appendix A Frequently Asked Questions	41
General Interact Questions	41
Configuration Questions	41
Run Time Questions	42
Printing Questions	42
Index	43

Manual Overview and Support Services

The Interact Installation Guide is designed to help you get up and running with Interact. This manual takes you through the installation of Interact and describes Interact concepts.

The Interact development environment is designed to run under Windows® 95 or Windows NT® version 3.51 or later. To make this guide easier to use, all procedural steps assume the Windows 95/NT 4.x platform. Therefore, users of Windows NT 3.51 will have to make adjustments from time to time where necessary.

Chapter Contents

<i>About This Manual</i>	2
<i>Included Documentation</i>	2
<i>Related Documentation</i>	3
<i>Typographical Conventions</i>	3
<i>CTC Parker Support Services</i>	4
<i>Contacting CTC Parker</i>	6
<i>Ordering Additional Software</i>	6

About This Manual

You should read this manual from beginning to end. This manual is divided into the following chapters:

Chapter 2 - Introducing Interact: Presents an overview of Interact and describes the individual components of the software.

Chapter 3 - Installing the Software: Presents the minimum hardware requirements needed to run the Interact software. Describes installing the software and provides a description of Interact Security Keys.

Included Documentation

Interact is shipped with the following documentation:

Packing List: Lists all items shipped with the product. Use this to verify that you have received all the items you ordered.

Release Notes: Contains last minute information that did not make it into this manual prior to printing. These notes are also located in the README.TXT file. View this file using any text editor.

Online Help Files: Each module and device driver has its own help file that can be viewed online. These files contain detailed information on the module and how to perform all module operations. You do not need to have the module or driver installed to view its help file.

License Agreement: Explains the terms of the Interact License Agreement and serves as a certificate of authenticity. This document also lists the product warranty information provided by CTC Parker. Make sure you read and understand the information on this card before you install and operate Interact.

Product Support Program Flier: Explains the Interact Product Support Program (PSP). Members of the Interact PSP receive free upgrades, utilities, and other valuable tools that make it even easier to use and develop applications for Interact.

Related Documentation

In addition to the documentation shipped with Interact, you should read the following documentation.

PowerStation Documentation: If you are running Interact on a PowerStation you should read all the manuals shipped with that product.

Windows Documentation: This manual assumes you have a thorough knowledge of the Windows operating system when working with Interact. If this is not the case, then refer to the documentation shipped with your operating system for details on Windows.

Controller Documentation: You must understand your controller prior to creating Interact applications.

Typographical Conventions

In this manual we have applied bold-faced type to important terms. We also list screen prompts in bold face.

Text in the following format identifies Note, Important, and Warning information:

- Note** Describes alternative approaches or issues that you want to be aware of while using a particular function.
- Important** Contains information that needs particular attention while reading the text. Following information located in an important paragraph could save development time or lead to fewer problems.
- Warning** Provides information on safety issues. Equipment damage or personal injury could result from not reading or following a Warning message.

Advanced information is shown in a shaded box to further clarify information on tips, techniques, or advanced topics.

Buttons, property sheet titles, and keys located on the keyboard are shown in initial caps.

CTC Parker Support Services

Thank you for choosing CTC Parker! We recognize that every user and every application has different support needs, so we offer a variety of support services designed to meet these needs.

CTC Parker offers four types of support services:

- Product Technical Support
- Training
- Professional Consulting Services
- Product Support Program

Product Technical Support

The *Product Technical Support* department welcomes any question that might arise as you develop or run your applications. We offer complimentary support for any customer, whether you are an end user, original equipment manufacturer (OEM), system integrator, or distributor.

If you have a question about Interact, be sure to complete the following steps before contacting the Product Technical Support department:

1. Check the Readme file installed with the Interact software. This file provides general information about the release.
2. Read the Frequently Asked Questions appendix at the end of the Interact Getting Started manual, page 41.
3. Consult the Interact documentation and other printed materials included with Interact.
4. Check the online help. Interact has an extensive online help facility that covers all aspects of the product.

If you cannot find a solution, contact the Product Technical Support department for help. Support lines are open during normal business hours, Monday through Friday, 8:00am to 5:00pm EST. If you need emergency assistance after normal business hours, you can obtain support through the Technical Support Hotline at (513) 248-1714.

Training

The *Training* department provides service by offering regularly scheduled training classes on our complete line of hardware and software products. You can learn how to write custom interfaces, develop specialized applications, and implement your complete operator interface application. CTC Parker employs a full-time staff of training consultants who design and develop curriculums based on your needs and customer feedback. Classes can also be tailored to meet specific needs of your application. CTC Parker provides training either at our state-of-the-art training center or at your site.

Professional Consulting Services

CTC Parker offers consulting services through the *Professional Consulting Services (PCS)* group. The PCS group provides services to assist you in developing and installing your CTC Parker products. The PCS staff of engineers are experts on applying CTC Parker technologies. They can write custom interfaces, incorporate customized functions and features, write device drivers, convert and/or develop application screens, and help you implement your complete operator interface application.

Product Support Program

The *Product Support Program (PSP)* is designed to keep you up-to-date with the current version of Interact software. The PSP consists of a renewable, one-year membership that provides you with free upgrades, utilities, automatic notification of software updates, and other valuable tools for Interact. Single-user, site, and corporate licenses are available. The PSP is a easy, cost-effective way to automatically receive the most recent Interact software and the associated utilities.

Contacting CTC Parker

CTC Parker welcomes your thoughts and suggestions on our products and services. You can contact us by telephone, email, or fax. You can also visit us on the World Wide Web to learn the latest about CTC Parker hardware, software, and customer support services.

Service	Telephone	Fax	WWW or Email
General	(513)-831-2340	(513)-831-5042	http://www.ctcusa.com
Sales	Same as previous	Same as previous	sales@ctcusa.com
Product Technical Support	(513)-248-1714	Same as previous	support@ctcusa.com
Training	(513)-831-2340	Same as previous	training@ctcusa.com
Professional Consulting Services	Same as previous	Same as previous	pcs@ctcusa.com
Product Support Program	Same as previous	Same as previous	psp@ctcusa.com
Repair	Same as previous	Same as previous	N/A
BBS	(513)-831-6193 or (513)-831-6220	Same as previous	N/A

Ordering Additional Software

An Interact Software Order Form is included with your Interact product. To order additional Interact software, make a copy of the form, and fill out the requested information. Send the completed form and a purchase order to your distributor or the CTC Parker Sales Department for processing. If you do not have a copy of the Interact Software Order Form, please contact your distributor or the Sales Department.

Thank you for using CTC Parker products.

Introducing Interact

Thank you for purchasing Interact. Interact provides you with a reliable and efficient method of controlling your machines. This chapter provides an introduction to Interact and its components.

Interact is a modular software family that can give you all the functionality you need, from control panel replacement to historical trending and networking. Interact makes it easy to develop, maintain, and run your own applications. Pre-configured tools and screens as well as comprehensive online help files make it easy to develop the perfect application for your system.

Please take a few minutes to review this manual and all other documentation included with Interact before configuring an application.

Chapter Contents

<i>Overview of Interact</i>	8
<i>Operating Environments</i>	8
<i>Basic Interact Components</i>	10
<i>Module Descriptions</i>	11

Overview of Interact

Welcome to Interact. Interact is a family of modular software products that can be easily combined and configured to meet a full-range of display-based operator interface applications. Interact software can be used in systems such as:

- Machine Control Stations with display-based panel replacement, graphics, and alarming, which are alternatives to traditional hard-wired control panels
- Operator Interface Workstations with recipe management, historical trending, and data logging in conjunction with panel replacement functions
- SCADA or Supervisory Control Workstations with comprehensive reporting, networking, and the ability to send factory floor information to other computing environments like MIS

Operating Environments

Interact has two distinct operating environments: development and runtime. The development environment is a 32-bit application designed to run under Windows 95 or Windows NT, while the runtime environment runs under MS-DOS®. This means you can take advantage of both the ease-of-use of the Windows graphical user interface in the development environment and the high-speed efficiency, reliability, and cost-effectiveness of the DOS runtime environment. The DOS runtime environment allows Interact to run on any IBM-compatible PC, including CTC Parker's family of PowerStation workstations.

Development Environment

The development environment allows you to create your operator interface application. It provides an integrated development environment for creating control panel screens and configuring module and driver settings. Development modules and drivers are supplied as Windows Dynamic Link Libraries (DLLs) which you install using the Interact Setup program according to your application's needs.

Each module and driver requires specific configuration for the user application. For example, graphics must be drawn and alarm text must be entered and tied to an I/O trigger point. Whether you are drawing a push button or identifying which I/O point to be logged, all configuration information about the application is performed in the development environment.

Runtime Environment

The runtime environment simply uses the screens and information that were created in the development environment and communicates with the control equipment to monitor and turn I/O points on and off. The modules perform their specific tasks according to how they were configured in the development environment. For example, while Interact is running, the user could acknowledge an alarm, and a date and time stamp could be assigned and logged, if these functions were configured in the development environment.

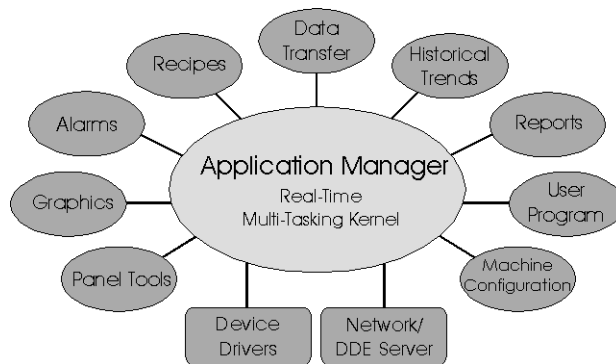
The runtime environment runs under MS-DOS. The runtime versions of the Application Manager, modules, and driver programs allow you to acquire data from controllers and view module and driver screens. During runtime, Interact runs in protected mode and uses extended memory, eliminating the limitations of DOS real mode.

Important The runtime environment is designed to run exclusively under MS-DOS. To test the functionality of your application, you can select the Run Interact command from the Run menu on the Application Manager menu bar, but for better performance and improved reliability, you should exit Windows entirely whenever you run an application in an actual production environment.

The runtime environment consists of two modes of operation: Program Mode and Run Mode. Programmable controllers typically provide a program mode for entering and editing ladder logic rungs and a run mode for executing these rungs. Similarly, Interact's Program Mode allows you to change driver configuration, Interact Settings, and Application Settings without having to return to the development environment. Run Mode lets you view operating module screens using data collected by the drivers.

Basic Interact Components

There are three basic components to the Interact software: the Application Manager, modules, and device drivers. The Interact architecture is illustrated below:



- **The Application Manager** represents the core of the Interact software. In the development environment, it provides a framework to manage the various aspects of the application, such as the modules and device drivers. In the runtime environment, the Application Manager is a real-time, multitasking kernel that controls the flow of data from the modules to the drivers. Its multitasking capability, which is required for high-performance operator interfaces, allows data to be processed simultaneously from various modules and device drivers. It represents the heart of Interact that keeps the data flowing freely.
- **The Application Modules**, also referred to as modules, are optional components. Modules provide specific operator interface functionality, such as graphics, alarming, recipe management, etc. Knowing that requirements vary from application to application, Interact's modular architecture allows you to purchase the products that support all the functionality needed for various applications. The user can also choose just the functions or modules needed for each specific application. Also, with this modular architecture, modules can be easily added in the future if the application requirements change.
- **The Device Drivers** are the communication components of the software. They handle the reading and writing of data to and from Interact and control devices, such as PLCs, drives, and motion controllers.

Interact currently supports over 45 different device drivers, which include all of the major PLC brands.

In addition, Interact supports customer-developed, device drivers with the Software Development Kit (SDK). This kit allows the user to develop interfaces so Interact can communicate to devices which are not supported by the standard product. Interfaces for bar code readers, vision systems and pagers have all been developed using the SDK.

Module Descriptions

Panel Toolkit Module (PTM)

Use PTM to construct a screen-based equivalent of traditional operator control panels. A library of over 30 panel tools modeled after standard hardwired devices is available. Various tools are listed below.

- Lighted Push Button
- Numeric Display
- Panel Meter
- Real-time Line Trend
- Bar Graph
- Multi-state Indicator
- Slide Potentiometer
- XY Plot
- PID Faceplate
- ASCII Message Entry

Graphics Monitoring Module (GMM)

Use GMM to add free-form, animated graphics to PTM panels using CAD-like, graphic tools. Animation actions can be based on either discrete or analog values and include changes in size, color, location, orientation, and visibility. The ability to import the most common graphic formats is also supported by GMM. These formats include BMP, JPG, TIF, AutoCAD DXF, WMF, and PCX.

Alarm Management Module (AMM)

Use AMM to define alarm conditions and specify corresponding reporting, logging, and corrective actions. Alarms can be grouped for enhanced, alarm control and prioritized using five, color-coded, priority levels.

Recipe Module (RCM)

Use RCM to download, upload, edit, and store recipes online. A log of recipe alternatives is automatically stored.

Machine Configuration Module (MCM)

Use MCM to download, upload, edit, and store groups and lists online. These groups and lists run your processes, providing the settings and functions to produce your product. This module also keeps an automatic log of all changes in lists and groups and all activity.

Data Transfer Module (DTM)

Use DTM to exchange data at high speed between different control equipment by passing information among multiple, Interact device drivers.

Historical Trending Module (HTM)

Use HTM to view logged data online in tabular or line trend format. You can also view data off-line via popular computer packages.

Report Module (RPM)

Use RPM to create free-form reports that can be reviewed online, printed, and downloaded to a network or disk. Report functions include value minimum/maximum tracking, event counting and timing, and row/column sum and average.

User Program Module (UPM)

Use UPM to easily add your own features to an Interact application with a user-written, terminate-and-stay-resident (TSR) program that shares data with Interact.

Networking

Interact provides a NetBIOS, high-speed LAN that allows real-time data to be shared among multiple, Interact stations. The NetBIOS interface is implemented using the NetBIOS driver. This driver works with all major networking topologies and provides remote monitoring and control functions, the ability to share log files, and a connection between distant remote stations via modem.

DDE Server

Use the DDE Server to connect Interact applications directly to Windows applications via a NetBIOS-compatible LAN. The DDE Server is used with Interact's NetBIOS, network driver and allows any DDE-enabled, Windows application to exchange data with any Interact workstation.

Installing the Software

Installing Interact is easy and can be done in a matter of minutes. You can install Interact on a local machine for a single-user or on a network server for multiple users.

This chapter describes the system requirements and installation procedures for Interact. Please familiarize yourself with this information before you attempt to install Interact.

Chapter Contents

<i>Before You Begin</i>	16
<i>System Requirements</i>	16
<i>Installing Interact</i>	18
<i>Starting Interact</i>	30
<i>Running Interact from a Network Server</i>	33
<i>Working with Interact Security Keys</i>	34
<i>Using Serial Drivers with Interact</i>	40

Before You Begin

Before you can use Interact, you must install the software on your computer or workstation.

- Refer to the packing list enclosed with your order to verify that you have received all the items you ordered.
- Review the Product Support Program (PSP) flier included with Interact. This flier outlines the program and its pricing. New customers automatically receive a free 60-day membership in the program.
- Make a backup copy of each Interact distribution disk. For details on how to make disk copies, refer to the documentation supplied with your operating system. Store the original distribution disks in a safe place, and use the backup copies for installation.
- Read the README.TXT file located on the distribution disk. This file contains important information that did not make it into this manual prior to printing. View this file using any text editor.

System Requirements

Interact system requirements vary depending on which environment you plan to install. Refer to the section below that corresponds to your environment.

Development Environment

The Interact development environment is a 32-bit Windows application designed to run in Windows 95 or Windows NT. To achieve acceptable performance, your hardware platform should meet the following **minimum** requirements:

- Windows 95 or Windows NT version 3.51 or higher
- 100% IBM-compatible computer
- 80486 33Mhz processor
- 8 Mbytes of RAM (Windows 95 users)
- 16 Mbytes of RAM (Windows NT users)

- One 3 ½” high-density disk drive
- 27 Mbytes of free hard disk space
- VGA video card and monitor
- Microsoft-compatible mouse or other pointer input device

Runtime Environment

The Interact runtime environment runs under MS-DOS. The Interact runtime environment runs in protected mode and uses extended memory, eliminating the limitations of DOS real mode. To achieve acceptable performance, your hardware platform should meet the following **minimum** requirements:

- MS-DOS version 3.1 or later
- 100% IBM compatible computer
- 80386 25Mhz processor
- 4 Mbytes of RAM
- One 3 ½” high-density disk drive
- 4 Mbytes of free disk space (hard disk, RAM disk, FLASH, etc.)
- VGA video card and monitor
- Microsoft-compatible mouse or other pointer input device

Installing Interact

Interact development and runtime can be installed on a local machine for a single user environment or on a network server for multiple user access. The installation procedures for installing Interact are described below.

The Windows development installation is described first followed by the DOS runtime installation. If you are installing Interact runtime, skip this section, and see *Installing Runtime Components* on page 26.

Upgrading Existing Users

The following is information specific to users of previous releases of Interact that wish to upgrade to Interact 5.x. Existing Interact applications will run under Interact 5.x, and no special conversion process is necessary. However, there are some issues you should keep in mind:

- Applications designed under previous releases of Interact are compatible with Interact 5.x. However, applications designed under Interact 5.x may not be compatible with previous releases of Interact.
- The Panel Alarm Module (PAM) is no longer supported in Interact 5.x. Existing applications which include PAM will automatically be converted to AMM. No alterations to the application or security key are necessary.
- In order to run Interact 5.x development, you must enable the Interact 5.x Development option on your security key. See *Working with Interact Security Keys* on page 34 for more information.

Installing Development Components

This section describes how to install the Interact development software. When you complete this procedure, the setup program also installs the Interact runtime software on your system.

Before installing Interact on a Windows NT system, please be aware of the following:

- You must be logged in as the administrator or as a user with administrator privileges; otherwise, you will be unable to complete the installation.
- You must have DOS installed with dual-boot capability; otherwise, you will be unable to test the functionality of applications that use device drivers other than the Interact DEMO driver.

To install the development software, follow these steps:

1. Exit any programs that may be running.
2. Insert the disk labeled **Disk #1** into your floppy disk drive.
3. Click on the **Start** button, and choose **Run**.
4. Type **a:\setup** (If necessary, substitute your drive letter for a:).
5. Press **Enter**.

The InstallShield Wizard displays for several seconds as the installation program prepares to prompt you through the install process. Next, the Welcome screen appears.

6. Click **Next** to leave the Welcome screen.

The Registration screen appears.

7. Enter your name and company name.
8. Click **Next** to leave the Registration screen.

The Choose Destination Location screen appears as shown below:



By default, Interact will be installed to the path **C:\Interact**. If you wish to install Interact in a different directory, click **Browse** to select the desired folder.

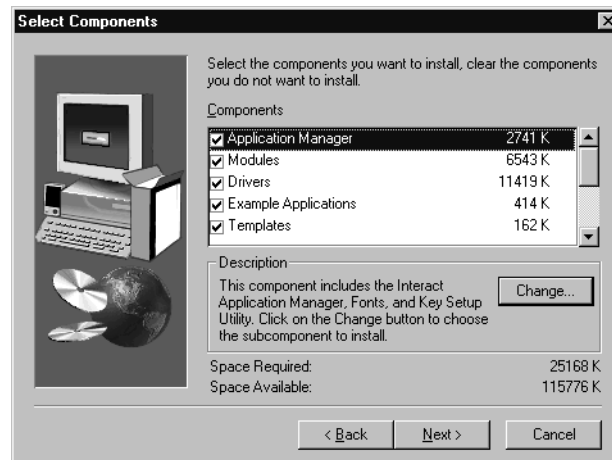
Important If you plan to install Interact 5.x in the same directory as your previous version of Interact, be sure to back up any important files stored in the Interact directory structure. These files include licensed drivers, applications, and custom fonts. During the installation, all existing Application Manager (AM) files, modules, drivers, and setup files will be removed.

Note Interact may be installed to any logical drive. The Interact software is network aware and can run off and log to any logical drive. See *Running Interact from a Network Server on page 33* for information on running Interact from a network drive.

9. Click **Next** to leave the Choose Destination Location screen.

Note You may see a window titled "Confirm Newly Selected Directory" appear after you click **Next** if you have not previously installed Interact into your system. The window reads, "This folder does not exist. Should Setup create it for you?" Click **Yes** and proceed to the next window.

The Select Components screen appears as shown below:



The Select Components screen allows you to customize the installation of the Interact software. All installation components are listed in the dialog box. Options with check marks next to them are selected to be installed. Options without check marks will not be installed.

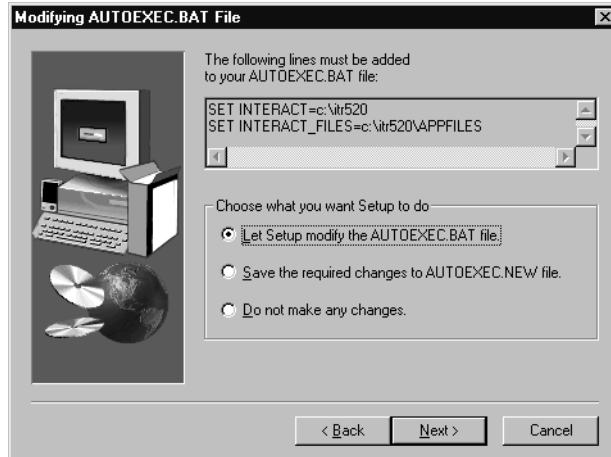
By default, all Interact modules and drivers will be installed. To customize installation (add or remove modules and drivers from the install list) do the following:

- a. Highlight the option in the components box you wish to customize (e.g. Drivers).
 - b. Click **Change**.
 - c. Scroll through the options listed, and select the options you wish to change.
 - d. Change an item by highlighting the selection and pressing the Space Bar or clicking the far left column.
10. Click **Next** after making any necessary changes.

The Select Program Folder screen appears. Your computer will install Interact into its own program folder and add that folder to the Programs menu. This menu is accessible by clicking on the Windows Start button. The default name for this folder is **CTC Interact**. The install utility will create this folder if it does not exist.

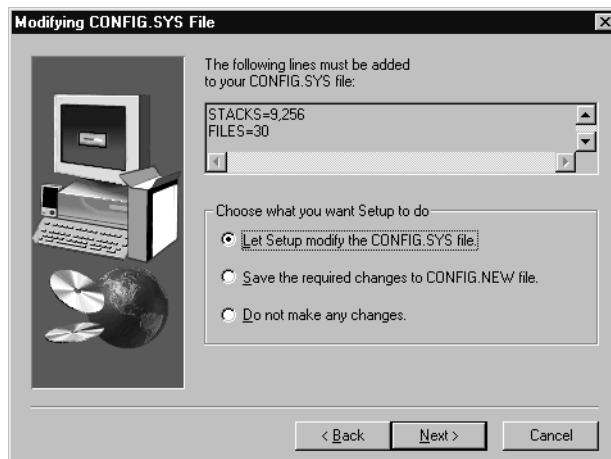
11. Click **Next** to leave the Select Program Folder screen.

The Modifying AUTOEXEC.BAT File screen appears as shown below:



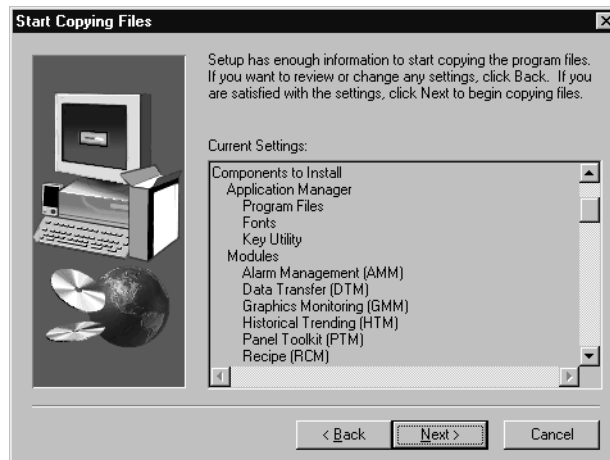
12. Click one of the three options; then click **Next**.

The Modifying CONFIG.SYS File screen appears as shown below:



13. Click on one of the three options; then click **Next**.

The Start Copying Files screen appears as shown below:



14. Review the Start Copying Files screen.
15. Click **Next** to leave the Start Copying Files screen.
16. Insert the remaining Interact installation disks as prompted.

Once the installation is complete, the Setup Complete screen appears.

17. Click **Finish** to finalize the installation.

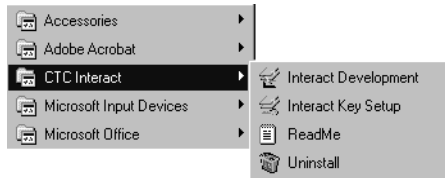
The Readme file displays if the box was selected on the Setup Complete screen. Next, you will be asked if you wish to restart the computer.

18. Click **OK** to restart the computer now, or click **NO** followed by **OK** to do so at a later time.

Interact installation is complete! See *Starting Interact Development* on page 30 to start Interact.

The CTC Interact Folder/Program Group

Once the Interact development installation is complete, you will have a CTC Interact folder (Windows 95/NT 4.x users) or a CTC Interact Program Group (Windows NT 3.51 users) installed on your system. The folder or Program Group includes the following icons: Interact Development, Interact Key Setup, Readme, and Uninstall.



- Interact Development - This icon is used to enter the Interact development environment. You can also enter the DOS runtime environment from within the Application Manager window.
- Interact Key Setup - This icon launches a utility for enabling and viewing options on the Interact security key. If you are a new user then your security key has been programmed at the factory with the modules you purchased. See *Working with Interact Security Keys* on page 34 for information on the Key Setup program.
- ReadMe - This icon displays a file that provides important information on using the Interact software, security keys, and contacting CTC Parker.
- Uninstall - This icon launches a program which may be used to remove the Interact software from your computer.

Uninstalling Development Components

The Uninstall program allows you to remove all Interact files from your development system.

To run the Uninstall program, follow these steps:

1. Click on the **Start** button, and choose **Programs**.
2. Select **CTC Interact**.
3. Select **Uninstall**.

You are asked to confirm the uninstall, and then the program begins to remove all Interact and Interact related files. Depending on other programs you have installed on your system, you may receive the following message:

The system indicates the following file is no longer being used by any programs.

If any programs are still using this file and it is removed, those programs may not function. Are you sure you want to remove the shared file?

The default setting for this option is **NO**. The uninstall program determines whether any other programs are still using the file. However, if you are unsure what programs may be using this file it is best to choose No at this option and not delete the file.

Installing Runtime Components

If your system will be used as a runtime-only system, meaning no application development will be performed on the unit, then you must install the Interact runtime software. The Interact runtime software is installed via the Interact Setup Utility (ISU).

Before installing Interact on a Windows NT system, please be aware of the following:

- You must be logged in as the administrator or as a user with administrator privileges; otherwise, you will be unable to complete the installation.
- You must have DOS installed with dual-boot capability; otherwise, you will be unable to test the functionality of applications that use device drivers other than the Interact DEMO driver.

To install the runtime software, follow these steps:

1. Insert the disk labeled **Disk #1** into your floppy disk drive.
2. Run the ISU by typing **a:\setup** at the MS-DOS prompt and pressing **Enter**. (If necessary, substitute your drive letter for a:)

The ISU Main Menu appears.

3. Select the **Install Interact** command from the Main Menu.

A menu will appear asking you to specify the Install Path. The default Install Path will be displayed as C:\Interact, unless you previously installed Interact in another location on your system. You may change the path or the drive letter; however, we recommend that you use \Interact as the default directory name whenever possible.

If you have a previous version of Interact installed on your system, you can substitute a different name to keep this installation separate from your new one. After you have completed the entire upgrade process and are satisfied with your new setup, you can remove the older release of Interact from your system.

4. Press **Enter** when you are satisfied with the install path.

Important This release of Interact can read and run all applications created with previous releases. However, each time an application file generated from a previous release is loaded and saved by the Application Manager, a module, or a driver while in Program Mode, Interact automatically converts it to a new format supporting the enhanced features of this release. Therefore, previous releases of Interact will NOT be able to read application files that have been converted to the new format.

Note Interact may be installed to any logical drive. The Interact software is network aware and can run off and log to any logical drive. *See Running Interact from a Network Server on page 33* for information on installing Interact on a network drive.

5. Select the **Make Selections** command from the Main Menu to choose the software you wish to install.

Within this menu, a check mark appears next to software components selected for installation.

6. Verify that the following software components are selected:

- Runtime
- Application Manager

Application Manager is the core piece of Interact and must be selected for all installations. The default modules that will be installed on your system are listed below:

- Panel Toolkit Module (PTM)
- Graphic Monitor Module (GMM)
- Alarm Management Module (AMM)

If you wish to install additional modules, you will have to manually select the modules you wish to install.

7. Manually select the device drivers that you wish to install. You may install more than one driver.

As you select the software for installation, you can use the View Interact Tree command to see what the directory structure will look like once the installation is complete.

8. When you are finished making the software selections, verify that all of the desired options appear on the screen before continuing with the next step.

9. Select the **Perform Install** command, and follow the prompts to copy the software to your computer.

The ISU will automatically copy itself into a directory called **SETUP** at your install path. You can run the ISU from there in the future for installing additional software and for programming your key.

10. Select **Main Menu**; then, select **Exit**.

You exit the ISU and return to the DOS command line.

11. Now, add changes to your **Config.sys** and **Autoexec.bat** files.

The ISU has created two files in the **SETUP** directory at your install path, **Config.tmp** and **Autoexec.tmp**. These files contain commands that can be added to your system's startup files to configure your computer for running Interact.

Config.tmp is a sample **Config.sys** file that contains commands that should be copied into your **Config.sys** file. If these commands are already in your **Config.sys** file, you should use values at least as large as those shown below:

```
STACKS=9,256
```

```
FILES=30
```

```
BUFFERS=30
```

Autoexec.tmp contains commands that set the environment variables for use by Interact. These should be included in your existing **Autoexec.bat** file to ensure that they are always set prior to using Interact.

```
set interact=c:\interact
```

```
set interact_files=c:\interact\appfiles
```

Note These examples are shown with default paths. Substitute your install path setting if necessary.

12. This completes Interact installation. After your startup files have been edited, **reboot your computer** so that the changes can take effect.

Installing Additional Components

Additional Interact modules, drivers, and example applications may be installed at any time by simply running the setup program.

Installing Development Components

To install development components, follow these steps:

1. Insert the disk labeled **Disk #1** into your floppy disk drive.
2. Click on the **Start** button, and choose **Run**.
3. Type **a:\setup** (If necessary, substitute your drive letter for a:).
4. Press **Enter**.

A Welcome screen appears. Follow the same steps as outlined under the section *Installing Development Components* on page 19.

5. When the **Select Components** screen appears, select the additional modules or drivers you desire.

Installing Runtime Components

To install runtime components, follow these steps:

1. From the DOS prompt, type **c:** (if necessary, substitute your drive letter for c:).
2. Press **Enter**.
3. Type **cd\Interact\setup** (if necessary, substitute your path for cd\Interact).
4. Press **Enter**.
5. Type **setup**.
6. Press **Enter**.

The Interact Setup Utility displays. Follow the same steps as outlined under the section *Installing Runtime Components* on page 26. When the Make Selection command is chosen, select the additional modules or drivers you desire.

Starting Interact

The procedure for starting Interact development and Interact runtime varies depending on the type of Interact installation you have. The procedures for starting Interact are described below.

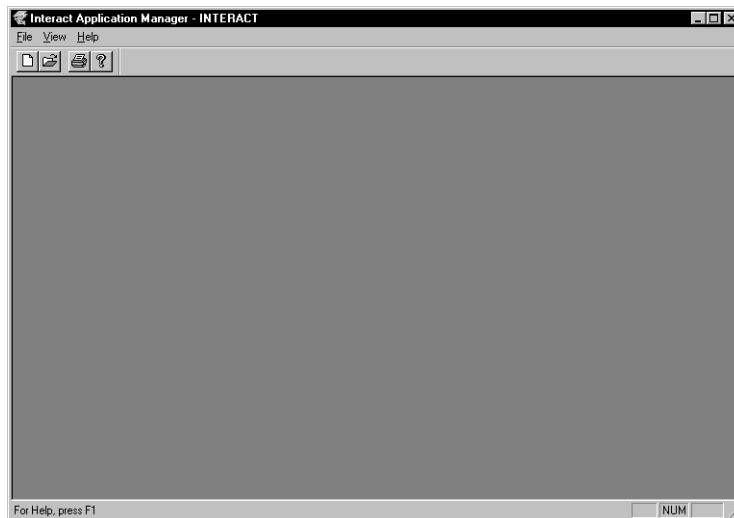
Starting Interact Development

To run Interact development, follow these steps:

Windows 95/NT 4.x Systems

1. Click on the **Start** button, and choose **Programs**.
2. Select **CTC Interact**.
3. Select **Interact Development**.

The Application Manager window appears as shown below:



Windows NT 3.51 Systems

1. From the **CTC Program Group**, click **Interact Development**.

The **Application Manager** window appears as shown above.

Starting Interact Runtime

To start Interact runtime from Interact development, follow these steps:

1. Click on the **Start** button, and choose **Programs**.
2. Select **CTC Interact**.
3. Select **Interact Development**.

The Application Manager window appears.

4. Select the **Open Application** command from the File menu, or click on the Open Application button on the Toolbar.

The Open Application dialog box appears. If the application you want to open belongs to a project, complete step 5; otherwise, skip to step 6.

5. Open the project folder that contains the application you want to open.
6. Select the name of the application you want to open.

The Application Browser for this application appears in the workspace.

7. Select the **Run Interact** command from the Run menu.

Interact opens an MS-DOS window and begins running the MS-DOS version of Application Manager. The screen that appears in the window depends on the options you select from the Startup Mode group on the General page of the Application Settings property sheet.

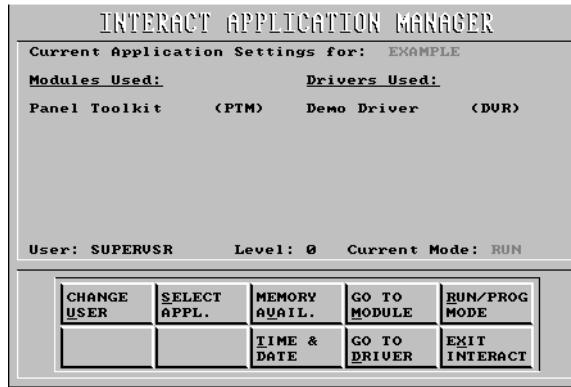
To start Interact runtime from MS-DOS, follow these steps:

Important Before starting Interact on a Windows NT system, you must have MS-DOS or Windows 95 installed with dual-boot capability, and you must reboot into MS-DOS mode prior to completing the steps below.

1. From the MS-DOS prompt, type **c:** (if necessary, substitute your drive letter for c:).
2. Press **Enter**.
3. Type **cd\Interact\am** (if necessary, substitute your path for \Interact).
4. Press **Enter**.
5. Type **am**.
6. Press **Enter**.

Starting Interact

The Application Manager runtime display appears or the application chosen as the Startup Application is displayed. The Application Manager runtime display is shown below.

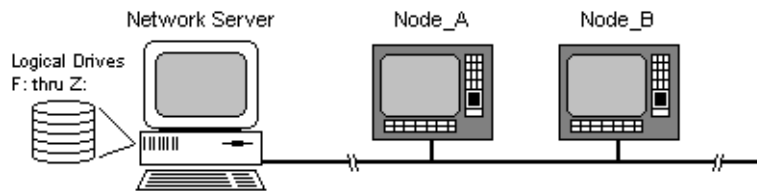


Running Interact from a Network Server

Interact software is network aware, meaning you can run it from any logical drive. This allows you to store Interact files and the Interact applications you create on one centralized server for both development and runtime. This may be done using the Interact runtime environment variables: **Interact** and **Interact_files**. These settings control the location of the Interact program files (Interact) and the application files (Interact_files).

Important Before you can run Interact from a logical drive, you must have MS-DOS client software installed and configured with the proper drive mapping using the environment variables listed above. This requires an in-depth knowledge of networking and access to proprietary files that CTC Parker is unable to provide. Consult your network supervisor or an experienced network technician for more information about configuring your local area network.

Centralizing of program and application software makes file management and software upgrades fast and simple because all Interact program and application files used throughout the facility are located in the same place. The picture below illustrates two Interact stations running off the same network server.



Node_A and Node_B might have environment variables as:

```
set interact=f:\interact
set interact_files=f:\interact\appfiles
```

These environment settings may be set to any logical path and may be stored in the workstation's autoexec.bat file or in a batch file entered at startup.

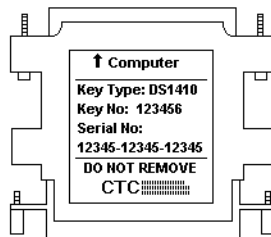
Working with Interact Security Keys

The Interact software is run with a security key. The following sections describe options for viewing and enabling key options. The first section *Understanding Interact Security Keys* provides information on installing and configuring keys. The second section, *Upgrading Security Keys*, is for users of Interact Release 3.1 or prior who are upgrading keys.

Note **Interact 4.x Users:** In order to run Interact 5.x in the development environment you must enable the Windows development option on your security key. This is described later in this section.

Understanding Interact Security Keys

Included with the Interact diskettes is a security key. The security key has a label on it which indicates the key type, key number, and the serial number as shown below:



Every Interact key has a unique 15-digit serial number. This serial number is used to provide assurance that unauthorized users cannot use your copy of the Interact software without violating the License Agreement. Since your key has a unique serial number, we can provide this protection by enabling only the software options you have purchased.

The key is designed to plug directly into the parallel (printer) port of your computer. A printer cable can be plugged into the other end of the key. Your printer will work normally as the presence of the key does not affect its operation.

Procedures for enabling your key is described in the section *Enabling Software Options* on page 36, and procedures for transferring key options is described in the section *Transferring Enabled Options Between Keys* on page 37.

Using the Interact Key Utility

The Interact Key Utility allows you to program your Security Key. You can enable additional software options or transfer enabled software options between keys.

Selecting Interact Key Setup from the Interact folder or from the Interact Program Group displays the Interact Key Utility screen shown below.



This screen displays a check mark next to the options (Interact modules, drivers, or Interact 5.x development) that are enabled within your key. A single check mark in the Runtime column means that option is enabled for runtime operation only. Check marks in the Configuration and Runtime columns indicate that the option is enabled for application development and runtime.

For most Interact users, the options you purchased are enabled at the factory prior to shipping you the product. You should have check marks shown for each option you ordered. If you do not have check marks next to the options you purchased, then you must enter the 8-digit “enable codes” printed on the Module Enable Code Certificate.

For each enable code on the form, select the Enable Option command from the menu, and enter the code as prompted. After the code has been validated by the Key Setup Utility, it will enable the option within the key and display check marks in the appropriate columns. See *Enabling Software Options* below for step-by-step procedures.

Enabling Software Options

When you order additional Interact software, you will receive a Module Enable Code Certificate listing enable codes for each software option purchased. These enable codes are used to activate the respective software options on the Interact key. The codes are generated for the key number and serial number printed on your key and are valid ONLY for that key.

To enable software options, follow these steps:

1. You must first install the software on your system. Install additional software by following the procedure listed in the section *Installing Additional Components* on page 29.
2. Make sure your key is attached to the parallel port of your computer.
3. Go to the **CTC Interact** folder or **Interact Program Group**.
4. Click the **Interact Key Setup** icon.
The Key Setup Main Menu is displayed.
5. Select the **Enable Option** command.
6. Enter an enable code to activate a software option.
7. Repeat steps 4 and 5 for each enable code.

As enable codes are entered, you will see a check mark appear on the display to the right of the software option that is enabled. If the enable code was for activating development, two check marks will appear, one in the Configuration column and one in the Runtime column.

If you did not receive a disk with your enable code, install the software from your original distribution disks.

8. Return to the **Key Setup Main Menu**.
9. Exit the **Interact Key Setup** by selecting the **Exit Menu** option.
You are returned to the Windows desktop.

Transferring Enabled Options Between Keys

Enabled software options may be transferred from one key to another. You must have two keys in order to transfer enabled options, and both keys must be attached to the computer at the same time. You can plug each key into a separate parallel port, or you can cascade the two keys together (see page 38) and plug them into a single parallel port.

The Key Setup Utility identifies one key as the source and the other as the destination. Enabled software options can only be transferred from the source key to the destination key. Enabled options that were originally activated with an enable code and subsequently transferred can be re-enabled only by transferring them back from another key.

To transfer options between keys, follow these steps:

1. Attach two keys to your computer (each in a parallel port, or cascaded).
2. Go to the **CTC Interact** folder or **Interact Program Group**.
3. Click the **Interact Key Setup** icon.
The Key Setup Main Menu is displayed.
4. Select the **Transfer Option** command from the Main Menu.
The Key Setup Utility automatically detects the two keys and displays the options enabled in each one.
5. Select the **Select Keys** command from the **Transfer Options** menu to identify which key is the source and which is the destination.
6. Click on the **Select Keys** command to alternate source and destination, if necessary.
7. Choose the **Select Option** command from the **Transfer Options** menu.
8. Select the option you want to transfer from the list of enabled options in the source key.
If necessary, specify whether to transfer Configuration Only, Runtime Only, or Development (both).
9. Select **Yes** to transfer the selected option.
10. Exit the **Interact Key Setup Utility** by selecting the **Exit Menu**.
You are returned to the Windows desktop.

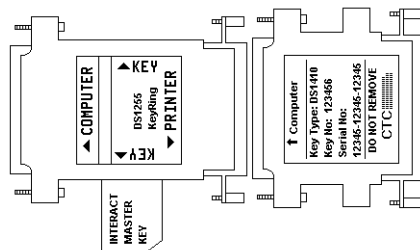
Upgrading Security Keys

Interact 3.x Users

The following instructions are for users who have Interact 3.1 or earlier and want to upgrade to release 5.x. In order to run the Interact 5.x it will be necessary for you to upgrade your old security key to a new one. Once this upgrade is complete, your new key will contain all of the enable codes currently on your existing key, and your existing key will no longer be functional.

To upgrade the security key to Interact 5.x, follow these steps:

1. Install Interact 5.x. *See Installing Interact* on page 18 for more information.
2. Cascade your new key with your existing key by plugging the Computer end of the new key into the Printer end of the existing key.



3. Now plug the Computer end of the existing key directly into your parallel port.

Important If you are upgrading, you should not have any check marks displayed for options in the new key at this point. If you have options already enabled, then you do not need to continue—your new key has already been configured.

4. Go to the **CTC Interact folder** or **Interact Program Group**.
5. Click the **Interact Key Setup** icon.

The Key Setup Main Menu is displayed. To upgrade, the enable codes must be transferred from your existing key to the new key.

6. Select the **Upgrade Key** command from the menu, and follow the instructions displayed to update your new key.

Important You must upgrade your old security key before you enable the Interact 5.x option on the new key (described below); otherwise, you will be unable to transfer the options from your old security to your new one.

7. After the upgrade is complete, select the **Enable Option** command to enable the Interact 5.x option on the new security key. Follow the procedures described under *Enabling Software Options* on page 36.
8. Select the **Exit Menu** command to leave the Interact Key Setup Utility.

Interact 4.x Users

The following instructions are for users who have Interact release 4.x installed, and are upgrading to release 5.x. Install Interact 5.x software prior to upgrading your key.

To upgrade the security key to Interact 5.x, follow these steps:

1. You must first install the software on your system. Install additional software by following the procedure listed in the section *Installing Interact* on page 18.
2. Make sure your security key is plugged into the computer.
3. Go to the **CTC Interact folder** or **Interact Program Group**.
4. Click the **Interact Key Setup** icon.

The Key Setup Main Menu is displayed.

5. Select the **Enable Option** command to ensure the enabled software matches your configuration. To enable software, follow the procedures listed under the section *Enabling Software Options* on page 36.
6. Select the **Exit Menu** command to leave the Interact Key Setup Utility.

Using Serial Drivers with Interact

This section provides special information on Interact serial drivers.

Two factors affect how quickly Interact serial drivers can respond to interrupts from the communication channels in Run Mode.

- While running Interact, the processor is continually changing between real mode and protected mode. The mode switching may take a relatively long time, during which interrupts from the serial ports cannot be serviced.
- Mouse interrupts can also prevent the communication channels from being serviced in a timely manner. This is especially true when the mouse is run in relative mode.

Note Interact spends much less time servicing a mouse set for absolute mode. This option is found on the General page of the Interact Settings property sheet.

To overcome these problems, Interact provides support for the 16550AF UART. This device provides a 16-byte FIFO (First-In First-Out) buffer for the communication channels.

Important We strongly recommend the use of a 16550AF (or equivalent) UART if you are running Interact. The UART buffers incoming characters until the processor can read them, virtually eliminating overrun errors.

At startup, Interact looks for a 16550AF UART. If it is detected, all Interact serial drivers automatically support FIFO operation. With no 16550AF UART installed, it may not be possible to run more than one Interact serial driver at a time using baud rates greater than 4800 baud, depending on the processor clock speed.

If you experience communication problems when using Interact, we suggest you do one of the following:

- install a 16550 UART (the recommended solution)
- run at a slower baud rate

Frequently Asked Questions

General Interact Questions

1. *Is my CTC hardware Y2K compliant?*

All information on Y2K compliance and necessary upgrades is available on our website.

2. *Does Interact come in any other language?*

At the moment, Interact is only in English, but we are working on our French version of Interact. Please stay in touch with your local distributor for more information.

Configuration Questions

3. *How do I get my application to run on boot-up on my PowerStation?*

You need to adjust settings in Interact development and on the PowerStation. To do this, follow these steps:

- a. In Interact Settings, select your application as the Startup Application.
- b. Under Application Settings, select the Inhibit AM Menu check box and make sure the startup module is PTM.
- c. On the PowerStation from the PowerStation Shell main menu, go to "Config Hardware", then "Power on Operation" and set it to RUN INTERACT.

4. *What internal variable can I use to read and write ASCII?*

The Link Variables are the only internal variables that will accept ASCII data. You must use the suffix ":A" on the link variable to allow the link variable to store ASCII data. For example:

```
LINK\STATE:A = "ON"
```

5. *How do I get my application from my development computer to my Powerstation?*

Use the Interact Project Manager program (IPM) shipped with every Powerstation. Please refer to your Interact Project Manager User Guide for more information.

Appendix A

6. *How do I display alarms in a Remote Message Display tool within Panel Toolkit Module (PTM)?*

When you configure the Remote Message Display tool, put the following Link variable in the Message Text Output field:

```
LINK\ALARMS:A
```

Run Time Questions

7. *Where can I get all of the latest drivers for Interact?*

You can download the latest drivers from our FTP site.

8. *I am getting question marks on my Interact tools in run mode after using the Tag Editor. Why?*

You probably did not sort your tag list. Tags in the Tag Editor must be in alphabetical order for Interact to read them properly. Please open up your Tag Editor, go to "Settings" and check the Auto Sort option. With Auto Sort selected, every time you edit your tag list, the list will be automatically sorted.

9. *I need more fonts for my Interact applicaiton. Are any more available?*

Yes, we have a utility called Fontpack. You can have this utility when you join our Product Support Program (PSP). Please contact your local distributor for more information about the PSP program.

Printing Questions

10. *If I want to print graphics from Interact run mode, what do I need?*

You need the correct printer driver in Interact to match your printer. A Printer Drivers Utility program is available. This utility is available to Product Support Program (PSP) members. Please contact your local distributor for more information about the PSP program.

11. *Will my Printer Drivers Utility for Interact version 4.X through Interact version 5.1 works with Interact version 5.2?*

No, it will not. Interact 5.2 has its own Printer Drivers Utility. This utility is available to Product Support Program (PSP) members. Please contact your local distributor for more information about the PSP program.

A

- about this manual 2
- alarm
 - runtime displays 42
- Alarm Management Module (AMM) 11
- Application Manager (AM) 9
- ASCII data 41
- ASCII message entry 11
- AutoCAD 11

B

- bar graph 11

C

- CTC Interact folder/program group 24
- customer support 4

D

- Data Transfer Module (DTM) 12
- DDE Server 13
- development environment 8, 16, 24, 34
- DLL 8

E

- environments
 - development 16, 24
 - operating 8
 - runtime 9, 17, 24

G

- graph, bar 11
- Graphics Monitoring Module (GMM) 11

H

- Historical Trending Module (HTM) 12

I

- installing
 - additional components 29
 - development components 29
- Interact 15, 18
 - runtime components 29
- Interact
 - architecture 10
 - development installation 19
 - fonts 42
 - key setup 24, 35
 - runtime installation 26
 - uninstall 25

L

- lighted push button 11
- line trend 11
- link variables 41

M

- Machine Configuration Module (MCM) 12
 - multi-state indicator 11

N

- NetBIOS 13
- networking 8, 13
- numeric display 11

O

- operating environments 8

P

- Panel Alarm Module (PAM) 18
- panel meter 11
- Panel Toolkit Module (PTM) 11
- PID faceplate 11
- Printer Drivers Utility 42
- Product Support Program 42

Index

R

- RAM 16, 17
- read/write ASCII 41
- Recipe Module (RCM) 12
- Report Module (RPM) 12
- runtime environment 9, 17, 24, 33

S

- serial drivers 40
- setup program 8, 24
- slide potentiometer 11
- Software Development Kit 11
- starting
 - Interact development 30
 - Interact runtime 31
- Startup application 41
- startup module 41
- system requirements 16

T

- Tag Editor 42
- terminate-and-stay-resident (TSR) 12

U

- uninstall Interact 24, 25
- User Program Module (UPM) 12

V

- VGA 17

W

- Windows Dynamic Link Libraries (DLLs) 8

X

- XY Plot 11

Y

- Y2K compliance 41