POWERSTATION

Interact Project Manager
User Guide

CTC COMPUTER
TECHNOLOGY
CORPORATION

POWER*STATION*

Interact Project Manager
User Guide

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Product Warranty Information

Computer Technology Corporation 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 *Customer Support Services* on page 7 of this manual for more information about CTC's support products and services.

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Getting Started

Welcome to the Interact Project Manager (IPM). IPM is a software program that enables you to create, modify, and transfer Interact projects between your computer and CTC PowerStations. A project contains one or more applications that you create using Interact application development software.

This manual will show you how to fully utilize IPM as the bridge between your development and runtime systems. You should read this manual after you have read the PowerStation User Guide and installed Interact. Please take a few moments to review this manual and all other documentation included with the PowerStation.

Chapter Contents

Documentation Components

The PowerStation documentation set contains all the information you need to configure, install, and use the PowerStation as well as information about the PowerStation Shell Utility program and IPM. The PowerStation documentation set is described below.

PowerStation Template - This document is a full-size template of the PowerStation you can use to prepare the location where you want to install the unit.

Release Notes - This document provides important information about the PowerStation that may or may not appear elsewhere in the PowerStation documentation. Be sure to read the release notes before operating the unit.

PowerStation User Guide - This document provides detailed information about the PowerStation and describes how to configure, install, and use the unit. It also contains information about the PowerStation Shell Utility. Please read this manual in its entirety prior to operating the unit.

Interact Project Manager User Guide - This document is the document you are reading. It describes how to install and use IPM to download Interact projects from a PC to the PowerStation.

Program Disks - CTC includes the source disks for the software that was installed on your unit by CTC.

Documentation Standards

As you read this manual, you will notice that the following documentation standards have been followed.

1. Important terms are shown in **bold**.

2. Text to be entered from the keyboard is shown in `Courier` font.

3. Buttons, menu titles, and keyboard keys are shown in Initial Caps.

4. Indented paragraphs denote one of the following:

   • **Note** - Describes alternative approaches or issues you should be aware of while using a particular function.

- **Important** - Contains information that needs particular attention while reading the text. Follow this information to save development time and/or minimize problems.
- **Warning** - Contains information on safety issues. Follow this information to prevent equipment damage or personal injury.

Important Concepts

IPM is designed to be installed on your development system. Your development system can be a PowerStation or any other PC where you develop Interact applications. This section provides an overview of the steps that are discussed in detail throughout the remainder of this manual.

Terminology

This section defines some important terms that you will encounter throughout this manual.

application - a collection of Interact screens and module and driver configurations that you create for operator interaction or to perform a specific workstation task such as monitoring a machine or process.

project - a collection of system files, Interact files, and applications that are grouped together under a single name. IPM allows you to create projects and download their respective files to a remote workstation. Only one project at a time may reside on the remote workstation.

remote workstation - any PowerStation or PC that is used to run Interact. A remote workstation may be either a development system or a runtime system.

development system - a remote workstation that is configured with Interact software necessary to develop, edit, and run Interact applications.

runtime system or **runtime-only system** - a remote workstation that is only configured with the Interact software necessary to run Interact applications. You must develop your applications on a computer or another remote workstation and download them to a runtime system.

> **Note**   The configuration programs for Interact require more storage space than runtime programs. For this reason, you may prefer to develop applications on a computer and download them to a runtime system.

Overview of Interact Project Manager

This section provides an overview of the essential steps required to use IPM. New and experienced users alike will find this section helpful. New users can use this section to familiarize themselves with IPM, while novice users can use this section as a review.

Installing the Software

Before you can install IPM on your development system, you must have previously installed Interact. Refer to the Interact Getting Started manual for more information about installing Interact.

Once you have installed Interact, you are ready to install and configure IPM. The IPM installation program automatically creates a subdirectory in your Interact program directory. Detailed information about installing IPM is described beginning on page 10 of this manual.

Configuring the Software

After you install IPM, you are ready to configure the program to match your system. This step includes entering the Interact Path and the Project Path as well as selecting the remote workstation type, the video mode, and the Super User mode. Most of these options you will only need to set once. Each of these options is described in detail beginning on page 19 of this manual.

> **Note**   You must enter the Interact Path and the Project Path prior to down-loading a project for the first time.

Creating a Project

Before you can download an application from your development system to your runtime system, you must assign it to a project. A project groups together all the files that will run on a remote workstation under a single name. The project includes the system files, Interact files, and applications. See *Creating a Project* on page 24 for more information.

Downloading a Project

After you create a project and assign one or more applications to it, you are ready to download the project. You use any standard IBM PC null modem cable to connect the two machines together. Prior to initiating the down-

load, you must configure both systems' communication protocols. See *Downloading a Project* on page 28 for more information.

Overview of Interact Projects

A project groups together all the files necessary to run an application on a remote workstation. The project includes the system files, Interact files, and applications. You can create multiple projects on your development system to maintain various configurations of the remote workstation tasks, but only one project at a time can reside on the remote workstation. Each project contains a specific set of files for running Interact applications such as:

- Programs (Application Manager, Modules and Drivers, fonts, etc.)

- Application and configuration files

- Startup files (autoexec.bat, config.sys, driver.sys, etc.)

Projects are completely self-contained, allowing you to copy and modify them as needed. You can quickly and easily add applications to a project using Interact, or you can copy them from other projects or from the \INTERACT\APPFILES subdirectory.

Project Directory Structure

Projects are kept in a subdirectory named Projects under the PS directory. The diagram below illustrates the various pieces that make up a project:
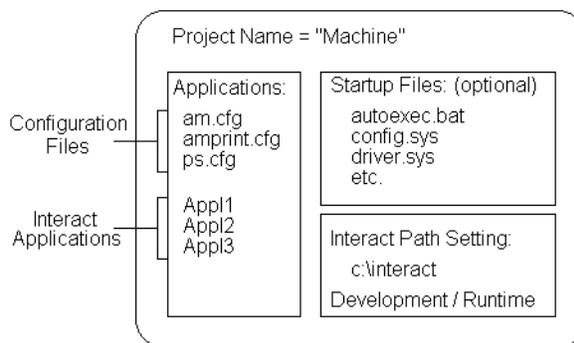
The directory structure of projects is illustrated below. This example assumes that the IPM has been installed under the Interact directory in the PS subdirectory and that only two projects have been created:

```
\INTERACT
    \AM
    \FONTS
    \MODULES
    \DRIVERS
    \APPFILES
    \SETUP
    \PS
        IPM.EXE
        IPM.TXT
        IPM.HLP
        :
        \PROJECTS
            \PROJECT_NAME_1
                \STARTUP
                    AUTOEXEC.BAT ┐
                    CONFIG.SYS   ├── Optional user files
                    DRIVER.SYS   ┘
                \APPFILES
                    *.CFG
                    \APPL1
                    \APPL2
                    :
            \PROJECT_NAME_2
                \STARTUP
                \APPFILES
                    *.CFG
                    \APPL1
                    \APPL2
                    :
```

Configuration Options

One configuration option associated with each project is the Interact Paths setting. This tells the IPM where to retrieve the Interact program files when sending a project to a remote workstation. One advantage of this path setting is that it provides the ability to have projects configured to run with various releases of Interact.

Another configuration option allows you to specify whether a project will be used on a DOS Development system or a Runtime Only system. This setting determines which Interact program files are sent to the remote workstation.

Startup Files

A remote workstation may require its own set of "startup files", such as the autoexec.bat or config.sys files, for loading system drivers or terminate-stay-resident programs (TSRs) into memory prior to running Interact. System drivers usually have a ".sys" extension and are loaded by a command placed in the config.sys file. TSRs are typically loaded by a command in the autoexec.bat file.

You can create your own startup files and copy these along with any needed programs, such as drivers or TSRs, into a project's \STARTUP directory. These files will be sent to the remote workstation during a project download.

Customer Support Services

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

Telephone: 513-831-2340

Fax: 513-831-5042

E-mail: sales@ctcusa.com or support@ctcusa.com

World Wide Web: http://www.ctcusa.com

CTC recognizes that every customer and every application has different support needs so CTC offers a variety of support services designed to meet these needs. CTC offers three types of customer support services: Product Technical Support, Technical Support Products, and the 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 the PowerStation, be sure to complete the following steps:

1. Check the release notes shipped with the unit. These notes provide important information about the PowerStation.

2. Consult the PowerStation documentation and other printed materials included with the PowerStation.

3. Review Chapter 4 of this manual, *Troubleshooting Interact Project Manager.*

If you cannot find a solution using one of the above sources, contact 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.

Technical Support Products

Our Technical Support Products department provides service in two areas: training and consulting. CTC offers training on all our products either at CTC in our state-of-the-art training center or at your site. You can learn how to write custom interfaces, develop specialized applications, and implement your complete operator interface application. You can contact the Training Coordinator by phone at 1-800-233-3329 or by email at training@ctcusa.com.

CTC offers consulting services through our Professional Consulting Services (PCS) group. Our PCS group can build your application from the ground up by writing custom communications drivers or designing special modules to perform functions unique to your application. Our team of specialists is flexible so they can create a project development schedule that meets your needs. You can contact the PCS Coordinator by phone at 1-800-233-3329 or by email at pcs@ctcusa.com.

Product Support Program

Our Product Support Program (PSP) consists of a renewable, one-year membership that provides you with free upgrades, utilities, tips and tricks, and other valuable tools for Interact. You can contact the PSP Coordinator by phone at 1-800-233-3329 or by email at psp@ctcusa.com.

Using Interact Project Manager

This chapter lists the necessary equipment and procedures required to install IPM on your computer and begin using it for the first time. When you finish this chapter, you will be able to begin creating projects and applications that can be transferred to a remote workstation.

Chapter Contents

Equipment Requirements

Before you begin installing IPM, gather the following items, and verify that your system meets the minimum system requirements listed below:

• IPM installation disk

• Interact installation disks

• A download cable (see the PowerStation's User Guide for cable wiring diagrams)

• A computer with the following system specifications:

❏ Processor: 80286 @ 10 MHz
❏ MS-DOS® version: 3.1 (MS-DOS version 5.0 or higher needed to use the Super User mode)
❏ Free disk space: 500 Kbytes (this approximation is for IPM files only)
❏ Minimum conventional memory of 520 Kbytes.
❏ Mouse Driver Version 8.2 or higher for all Microsoft mice. If you use a mouse other than a Microsoft mouse, its driver must be compatible with version 8.2 or higher.

Installing IPM

This section describes the steps necessary to install IPM on your computer. It also includes information about using projects that were created using the PowerStation Setup Utility (PSU) with IPM.

Installing the Software

When you install IPM, the install program places the IPM files in the \INTERACT\PS directory on your computer. If this directory does not exist, the install program creates it for you. Follow these steps to install IPM:

1. Turn on your computer.

2. Ensure that Interact is installed. If it has not been installed, install it now. Refer to the Interact Getting Started manual for more information about installing Interact.

3. Set the Interact environment variable at the MS-DOS prompt by typing:

   ```
   SET INTERACT=C:\[INTERACT DIR]
   [INTERACT DIR] = The directory name of where Interact
   is installed.
   ```

4. Insert the Interact Project Manager Disk into the floppy drive.

5. Change to the drive containing the IPM disk by typing the drive letter.

6. Type `IPMINST`, and press the Enter key. The message "Installation complete." appears when the installation is complete.

Maintaining PSU Projects

Older models of the PowerStation used a utility called the Project Setup Utility (PSU) to configure the unit and enable various PowerStation features. PSU projects can be maintained and used separately, or they can be maintained using the IPM.

To maintain the PSU projects separately, complete these steps:

1. Install IPM to a different directory than where PSU is installed.

2. Run IPM, and select the Projects Path option from the Settings Menu.

3. Enter a path other than the PSU's project path.

To maintain the PSU Projects but use the same projects in IPM, complete these steps:

1. Install IPM to a different directory than where PSU is installed.

2. Use the MS-DOS XCOPY command to copy the PSU\PS\PROJECTS directory to IPM\PS\PROJECTS.

3. Run IPM, and select the Projects Path option from the Settings Menu.

4. Enter `IPM\PS\PROJECTS` as the project path.

Running IPM for the First Time

This section describes the steps you need to complete before running IPM for the first time. Depending on the type of operating system you are using, you can run IPM at the MS-DOS prompt, or you can run IPM in an MS-DOS window under Microsoft® Windows®. If you are using Interact 5.1 or later, you can launch IPM from the Interact development environment. The remainder of this section describes the various ways to run IPM.

> **Note** Before you run IPM, CTC recommends that you shut down any network drivers that are running in the background. Network drivers may cause errors when you use Super User mode.

Running IPM from an MS-DOS Prompt

If you have installed IPM on a computer without Microsoft Windows or if you would like to run IPM in MS-DOS mode or in an MS-DOS window, you can run IPM from the MS-DOS prompt. This is accomplished by changing to the directory that contains the IPM executable file and running it. Follow these steps to run IPM:

1. At the MS-DOS prompt, change to the directory where IPM is installed.

2. Type IPM or IPM-BW if you have a monochrome monitor.

Running IPM Under Windows 3.x

When you install IPM, the IPM installation program installs two files you can use to create a Windows program group in Microsoft Windows 3.x. The program group contains an icon you can use to launch IPM from Windows without entering MS-DOS mode.

Creating an IPM program group

The first step to launching IPM from Windows 3.x is to create an IPM program group. Follow these steps to create a program group:

1. Start Windows. When the Program Manager window appears, select the New command from the File menu. The New Program Object dialog box appears.

2. Select the Program Group option, and then choose the OK button. The Program Group Properties dialog box appears.

3. Enter a description for the group that you want to appear in the title bar of the group window and below the group icon, and then choose the OK button.

> **Note** Program Manager creates a .GRP file for the group, so you can leave the Group File box blank.
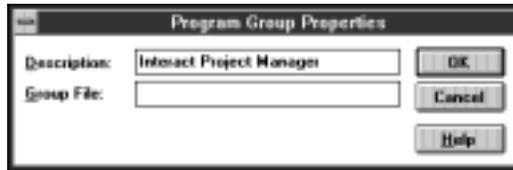
Creating an IPM program item

After you create a Windows program group for IPM, you must create a program item that you will use to launch IPM. Follow these steps to create a program item:

1. Open the IPM program group window that you created in the previous section.

2. Select the New command from the File menu. The New Program Object dialog box appears.

3. Select the Program Item option, and then choose the OK button. The Program Item Properties dialog box appears.
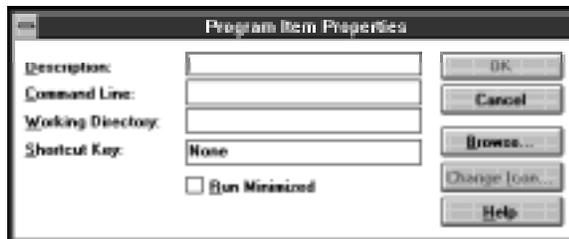
4. Enter a description for the item that you want to appear below the item icon.

5. Select the Browse button. The Browse dialog box appears.

6. Browse to the location where you installed IPM, and select IPM.PIF. Program Manager inserts the complete file information for IPM.PIF into the Command Line box.
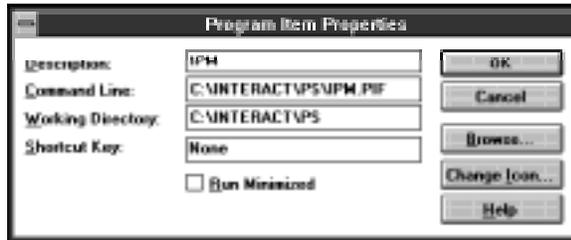
7. Select the Change Icon button. The Change Icon dialog box appears.

8. Select the Browse button. The Browse dialog box appears.

9. Browse to the location where you installed IPM, and select IPM.ICO. Program Manager inserts the IPM icon into the program group window that you created in the previous section.

10. Try to launch IPM by selecting the IPM icon you just created.

Important   If you installed IPM in any other directory besides C:\INTERACT\PS, you will need to edit IPM.PIF to match the location on your system. Refer to your Windows documentation for more information about editing PIF files.

Running IPM Under Windows 95/NT

The easiest way to run IPM under Windows 95/NT is to create a shortcut to IPM on your desktop. You can also launch IPM from within Interact if you have Interact 5.1 or later.

Creating an IPM shortcut

If you want to create a shortcut to IPM to place on your desktop, complete the following steps:

1. Start Windows.

2. Start Explorer, and open the folder where you installed IPM.
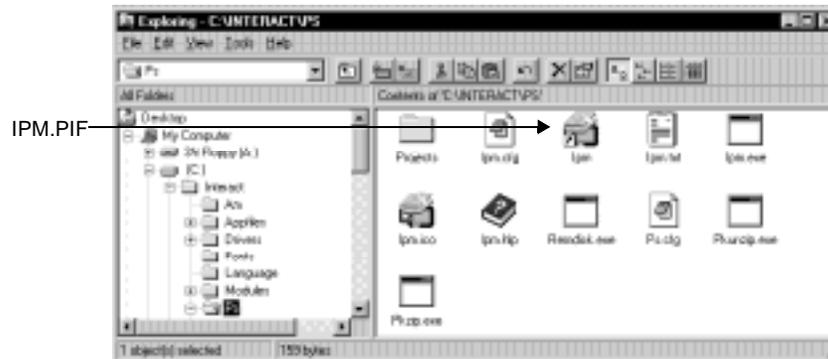
3. Highlight the file name, 'IPM.PIF'.

    Note Depending on how you have configured your system, the .PIF extension may be hidden. However, you can identify this file by its file type, 'Shortcut to MS-DOS Program'.

4. Select the Copy command from the Edit menu to place a copy of IPM.PIF onto the clipboard.

5. Select the Paste command from the Edit menu to paste a copy of IPM.PIF into this folder.
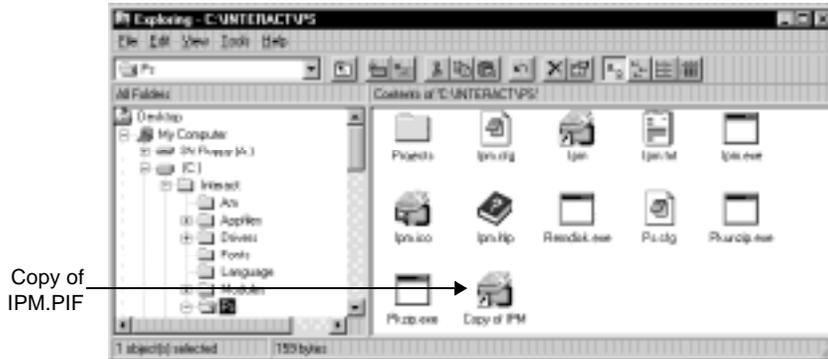
Copy of IPM.PIF

6. Highlight the copy of IPM.PIF that you just created, and drag it onto the desktop.

IPM shortcut

7. Try to launch IPM by selecting the IPM shortcut you just created.

Important If you installed IPM in any other directory besides C:\INTERACT\PS, you will need to edit the properties for this icon to match the location on your system. Refer to your Windows documentation for more information about editing shortcuts.

Launching IPM from Interact

If you have Interact 5.1 or later, you can launch IPM from within the Interact development environment. Follow these steps to launch IPM from Interact. These steps assume that you are already running Interact.

1. Select the Application Manager icon from the Application Browser window. If you have been working in another module, this step gives focus to Application Manager and displays the appropriate menus.

2. Select the Run IPM command from the Run menu. Interact opens an MS-DOS window and begins running IPM.
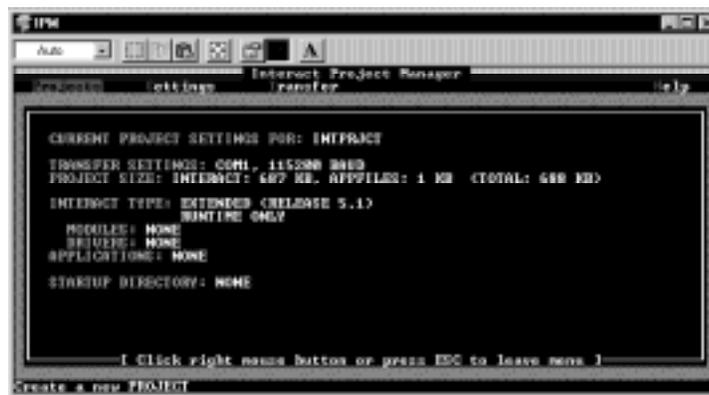
Important If you installed IPM in any other directory besides C:\INTERACT\PS, you will need to edit IPM.PIF to specify the correct location of IPM before you can launch IPM from within Interact. Refer to your Windows documentation for information about editing program PIF files.

Note Whenever you launch IPM from Interact, the DOS and Interact menus and the Super User command are unavailable.

Navigating IPM

Once you have IPM running, you need to know how to navigate within it. IPM is a menu-based MS-DOS program that can be navigated by using a keyboard or a mouse.

Working with IPM menus

You can select menus and menu options by several methods:

- Use the mouse to move the cursor over a selection, and click the left mouse button.

- Press the arrow keys to move the cursor over a selection, and press the Enter key.

- Press the accelerator key associated with the option. An accelerator key is the one letter of a function that is highlighted. Pressing the high-lighted key selects the function.

  Note If you selected the Black White Video mode on the Settings menu, accelerator keys are no longer visible.

- Use your finger to press the desired selection on a touch screen panel.

Editing text

You can use the following keys to enter and edit text for certain options:

- Left Arrow- move the cursor left

- Right Arrow - move the cursor right

- Backspace - delete the character to the left of the cursor

- Delete - delete the character under the cursor

- Insert - toggle insert mode (small cursor = insert mode off)

- Home - move the cursor to the beginning of a string

- End - move the cursor to the end of a string

When you are finished typing in the text, terminate your entry by pressing the Enter key or clicking the left mouse button.

Using a mouse

You may use a two- or three-button mouse with IPM. However, the middle button of a three-button mouse is inactive. You can use the left mouse button to select options and the right mouse button to exit a menu or escape from a menu field. Throughout this guide, whenever you are told to press Esc, you can also click the right mouse button.

Important   If your computer has a serial mouse, make sure your COM Port selection is a different COM Port than your mouse connection. The COM Port selection is located on the Transfer Menu under the Transfer Settings selection.

Also, if you are using a Microsoft mouse, you must use Microsoft Mouse Driver version 8.2 or higher. If you are using a mouse other than Microsoft, its driver must be compatible with version 8.2 or higher.

Configuring IPM

Now that you have run IPM at least once and you are familiar with how to navigate within the software, you are ready to configure IPM. The options discussed in this section only need to be configured the first time you use IPM or whenever you change your system configuration or hardware.

Setting the DOS Interact Path

Use the DOS Interact Path command on the Settings menu to enter an MS-DOS path that identifies where your Interact program and Application files are located. When you download a project, IPM uses this setting to transfer the version of Interact that is referenced by this setting. The IPM defaults to the Interact environment variable that is set when IPM is first executed.

Interact Paths are stored in a configuration file for each project. This enables you to have multiple projects that run with different releases of Interact. For example, if you try to open a project that was created with Interact 3.0, IPM uses the Interact Path used to create the project.

If you want create a project that uses a new version of Interact, reset the Interact Path to where the new Interact version is installed. This path will be saved with the project and can be verified by the information displayed on the Screen Display Area next to the words "Interact Type".

Selecting the Video Mode

Use this command to toggle between Black White and Color video modes. The default video mode is Color. This option is helpful in the event you are using a monochrome monitor. Use the Black White Video mode to distinguish between menu selections and highlighting on the screen.

Important If you are using a monochrome monitor, type `IPM-BW` at the MS-DOS prompt before entering `IPM` for the first time. This will set the Black White Video mode to on. After IPM is opened, set this option to Black White. This setting will be saved in IPM.CFG, and you will only need to type `IPM` to enter the Interact Project Manager.

Selecting the Super User Mode

Use this command to toggle Super User mode on or off. Super User mode is used in conjunction with the Visit DOS command on the DOS menu. If you have MS-DOS version 5.0 or higher, Super User mode allows you to remap a remote workstation drive to appear as a logical drive on your local computer. See *Using Super User Mode* on page 21 for more information about the Super User command.

Important Currently, the IPM Super User option does not function under Windows 95 or Windows NT. To use the Super User mode with either of these operating systems, reboot the computer in MS-DOS mode, and run IPM directly from the MS-DOS prompt.

Note Whenever you launch IPM from Interact, the DOS and Interact menus and the Super User command are unavailable.

Performing MS-DOS Operations from IPM

IPM includes two menus that allow you to perform MS-DOS operations while you are running IPM. The first two commands appear on the DOS menu; the last command appears on the Interact menu. These commands are discussed in the sections that follow.

> **Note** Whenever you launch IPM from Interact, the DOS and Interact menus and the Super User command are unavailable.

Run DOS Command

Use this command to display a text window where you can enter MS-DOS commands such as DIR, TREE, COPY, etc. This command is useful for copying files into your \STARTUP directory without leaving IPM.

Visit DOS

Use this command to temporarily leave the IPM and go to an MS-DOS prompt which enables you to take full advantage of MS-DOS features such as copying files, making directories, etc. When you are finished using MS-DOS, type `Exit` to return to the IPM screen.

> **Note** Be careful not to run the IPM again while visiting DOS. Doing so will unnecessarily use up system memory. Always type `Exit` to end the DOS session and return to IPM.

Using Super User Mode

The Super User mode of IPM allows you to remap a remote workstation drive to appear as a logical drive on your local computer. This allows you to access the remote workstation drive from your computer. You can use MS-DOS commands to view directories, copy, delete or rename files, etc.

To use Super User mode, the following conditions must be true:

• The Super User option on the Settings menu must be set to ON

• The LASTDRIVE statement must be included in your CONFIG.SYS file. Refer to your MS-DOS manual for more information on how to use this statement

• You must launch IPM from the MS-DOS prompt in MS-DOS mode

- The remote system must have the shell displayed along with a download cable connected between the local and remote system

If all of the above conditions are true, a popup menu of the available remote workstation drives will appear when you select the Visit DOS command. You can select the drive on the remote workstation you want to use, or you can select the [No Remote Drive] option to visit DOS without accessing a remote drive.

If you select a drive letter, an MS-DOS command prompt appears followed by a message that tells you the logical drive letter on your local system you can use to access the remote drive. This assignment is made using the next available drive letter on your local system.

Run DOS Interact

Use this command to run DOS Interact. This command only operates in an MS-DOS Window or when you have rebooted your computer into MS-DOS mode. When you exit Interact, you return to the IPM screen.

Important   If you access Interact from the MS-DOS prompt, any applications you develop or modify will be saved to where you have the Interact environment variable set. You must use IPM to manually copy these applications into your project.

If you access Interact by selecting the Run Interact option in IPM, then any applications you develop or modify will be saved under the \APPFILES directory of the project you currently have opened in IPM. See *Project Directory Structure* on page 5 for more information.

If you have Interact 5.0 or later, you can use this command to make changes to Interact settings, application settings and driver settings without returning to the Windows development environment.

If you have Interact version 4.1 or earlier, you can use this command to create, edit, or delete applications within the currently opened project. For example, if you accidentally copied an application into your project, you could use this command to delete it.

Working with Projects

Now that you are familiar with the basics of IPM, you are ready to learn about IPM projects. A project is a collection of system files, Interact files, and applications that are grouped together under a single name. IPM allows you to create projects and download their respective files to a remote workstation.

In this chapter you will learn how to create and manage projects using IPM. You will also learn how to download projects to a remote workstation as well as how to backup projects.

Chapter Contents

Creating a Project

The first step to downloading an application to a remote workstation is to assign it to a project. If you need to create a project or if you want to assign the application to a new project, use the New Project command on the Settings menu. Follow these steps to create a new project:

1. Select the New Project command from the Projects menu. The Create Project dialog box appears.

2. Enter a name for the project that is up to eight characters long. Use standard MS-DOS naming conventions.

3. Press the Enter key to accept the project name and close the Create Project dialog box.

4. Copy one or more applications into the project. See *Copying an Application* on page 27 for more information.

Opening a Project

If you have already created a project that you want to open, use the Open Project command on the Projects menu. Follow these steps to open a project:

1. Select the Open Project command from the Projects menu. The Select Project dialog box appears.

2. Click on the name of the project you want to open from the list of available projects.

Important   The IPM performs all functions on the currently opened project. Make sure the project you have opened is the one you want to work with. A project must be opened before you can download it to a remote workstation.

Copying a Project

If you have a project that you want to copy, use the Copy Project command on the Projects menu. For example, if you have two workstations that need to run similar applications but have different Interact parameters, you can copy the original project to a new project. Then modify the Interact Settings in the new project. This will eliminate the need to create a new project for each workstation. Follow these steps to copy a project:

1. Select the Copy Project command from the Projects menu. The Copy Project From dialog box appears.

2. Click on the name of the project you want to copy from the list of available projects. The Copy Project To dialog box appears.

3. Enter a name for the project that is up to eight characters long. Use standard MS-DOS naming conventions.

4. Press the Enter key to accept the project name and close the Copy Project To dialog box.

Renaming a Project

If you have a project that you want to rename, use the Rename Project command on the Projects menu. For example if you have modified a project and you want to restore a backup project with the same name, you can use the Rename Project command to assign a new name to the modified version before you restore the backup version. Follow these steps to rename a project:

1. Select the Rename Project command from the Projects menu. The Rename Project dialog box appears.

2. Click on the name of the project you want to Rename from the list of available projects. The Rename Project To dialog box appears.

3. Enter a name for the project that is up to eight characters long. Use standard MS-DOS naming conventions.

4. Press the Enter key to accept the project name, and close the Rename Project To dialog box.

Deleting a Project

If you have a project that you want to delete, use the Delete Project command on the Projects menu. Follow these steps to delete a project:

Important   Once you delete a project, you cannot undelete it. However, you can restore the project if you used the Make Backup command on the Transfer menu to create a backup of the project prior to deleting it. See *Backing Up a Project* on page 33 for more information.

1. Select the Delete Project command from the Projects menu. The Delete Project dialog box appears.

2. Click on the name of the project you want to delete from the list of available projects. A message window appears asking you to confirm that you want to delete this project.

3. Select Yes to delete this project or No to cancel the delete operation.

Viewing the Project Tree

If you need to view all of the components of a project (application files, startup files, modules, drivers, configuration files, etc.) use the View Project Tree command on the Projects menu. IPM displays the directory structure of the project as well as the names of the files that appear in those directories. The INTPRJCT Project Tree appears below:

Copying an Application

When you finish creating a project, you must copy one or more applications into that project. You can copy applications either from the \INTERACT\APPFILES directory structure or from the \PROJECTS \APPFILES directory structure. Use the Copy Application command on the Projects menu to copy applications.

Important   When you copy an application for the first time, IPM copies the current Interact Settings such as Startup Application, language settings, printer settings, etc. If you need to change the Interact Settings, open the copy of the application that resides in the \PROJECTS\APPFILES directory structure, not the original application; otherwise, the changes you make will not be reflected on the remote workstation when you download the application.

The Copy Application command is particularly useful if you have two workstations that need to run similar applications but have different Interact parameters. You can copy the original application to a new project; then, modify the Interact Settings in the new project. This will eliminate the need to create a new application for each workstation. Follow these steps to copy an application:

1. Select the Copy Application command from the Projects menu. The Copy Application From Project dialog box appears.

2. Click on [APPFILES] to display a list of applications located in the \INTERACT\APPFILES directory structure or where you have the Interact Files Path set.

    Or

    Click on the name of the project that contains the application you want to copy.

3. Click on the name of the application you want to copy to the current project. You can copy only one application at a time.

Downloading a Project

After you create or open a project, you can prepare IPM to download the project to a remote workstation. This section describes how to prepare IPM for downloading and how to download a project.

Setting the Projects Path

Use the Projects Path command on the Settings menu to specify the location of your projects. This path is set to INTERACT\PS\PROJECTS by default. If you installed Interact in another directory, substitute your directory name for INTERACT.

> **Note** If you are installing IPM on a computer that already has the Power-Station Shell installed, set the Project Path to that existing directory. If you are installing IPM on a computer without the PowerStation Shell directory, then set the path to the following:
>
> ```
> [Drive Letter]:\INTERACT\PS\PROJECTS
> ```

> **Important** If you intend to use IPM with projects that were created with the Project Setup Utility (PSU), CTC recommends that you copy the PSU project before you open it in IPM. Once you open a project in IPM that was created with PSU, you can no longer use PSU to send that project to a PowerStation. IPM is not 100% backward compatible with PSU.

Selecting the Remote Workstation Type

The Settings menu includes two commands for selecting the remote workstation type. These commands are the DOS Development command and the Runtime Only command. A checkmark next to the command name indicates which command is active.

The workstation type you select is stored in a configuration file to ensure that the correct setting is used when a project is opened. The workstation type remains in effect until you change it.

DOS Development

Select this workstation type if the system you are downloading to is a development system. You can use a development system to develop and

edit Interact applications as well as run them. See *Launching IPM from Interact* on page 17 for more information.

> **Note** CTC recommends that you use a computer as your development system to avoid using disk space on your workstation for development system files.

Runtime Only

Select this workstation type if the system you are downloading to is only used for running Interact applications. You must develop Interact applications on a computer (or another workstation) which has development software, combine them into a project, and download the project to the runtime workstation.

> **Important** You must select Runtime Only if the system you are downloading to is either a Model P1 or P2 PowerStation. These PowerStations may only be used for running Interact applications.

Selecting the Transfer Settings

Before you can download a project to a remote workstation, you must specify the serial port and the baud rate you want to use for communicating with the remote workstation. Use the Transfer Settings command on the Settings menu to configure these settings. Follow these steps to select the transfer settings:

1. Select the Transfer Settings command from the Settings menu. A pop-up window appears that displays the available COM ports on your system.

2. Select the COM port that you want to use for communicating with the remote workstation. As soon as you select a COM port, another popup window appears that displays the available baud rates.
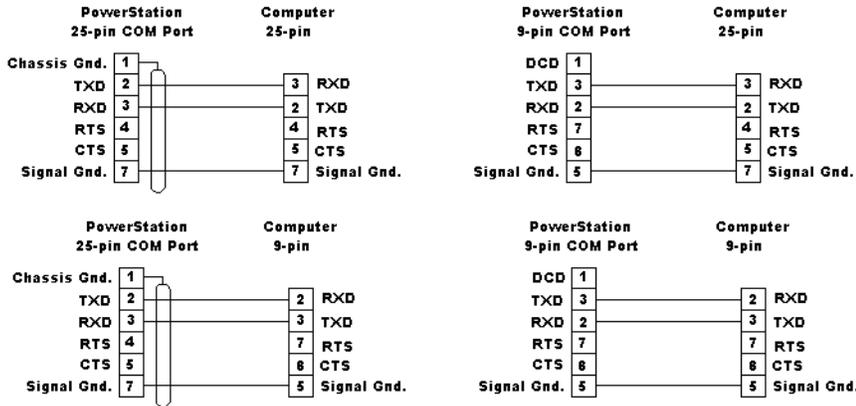
> **Note** If you are using a serial mouse, be sure to select a COM port other than the one being used by the mouse.

3. Select the desired baud rate. Select 115200 for the fastest transfer rates.

> **Note** This setting is recognized by the remote workstation, so you do not have to set it at the remote workstation.

Connecting the Download Cable

The last step prior to downloading a project to a remote workstation is to connect a download cable to the two systems. You can use any standard IBM PC null modem cable, you can construct your own cable, or you can purchase a cable from CTC. If you decide to construct your own cable, refer to the following diagram for the cable pinouts.

```
     PowerStation          Computer              PowerStation          Computer
    25-pin COM Port         25-pin              9-pin COM Port          25-pin

Chassis Gnd. [1]                                     DCD [1]
       TXD [2]              [3] RXD                  TXD [3]            [3] RXD
       RXD [3]              [2] TXD                  RXD [2]            [2] TXD
       RTS [4]              [4] RTS                  RTS [7]            [4] RTS
       CTS [5]              [5] CTS                  CTS [8]            [5] CTS
Signal Gnd. [7]             [7] Signal Gnd.   Signal Gnd. [5]          [7] Signal Gnd.


     PowerStation          Computer              PowerStation          Computer
    25-pin COM Port         9-pin               9-pin COM Port          9-pin

Chassis Gnd. [1]                                     DCD [1]
       TXD [2]              [2] RXD                  TXD [3]            [2] RXD
       RXD [3]              [3] TXD                  RXD [2]            [3] TXD
       RTS [4]              [7] RTS                  RTS [7]            [7] RTS
       CTS [5]              [8] CTS                  CTS [8]            [8] CTS
Signal Gnd. [7]             [5] Signal Gnd.   Signal Gnd. [5]          [5] Signal Gnd.
```

Follow these steps to connect the download cable to the systems.

1. Turn off power to both systems.

2. Connect the serial download cable to the appropriate serial ports of the local system and the remote system.

3. Turn on both systems, and verify that they boot properly.

Downloading a Project to a Remote Workstation

Once you have prepared IPM for downloading and you have connected a download cable between your local system and the remote workstation, you are ready to download a project. Follow these steps to download a project to a remote workstation:

1. Return to the PowerStation Shell Main Menu on the remote workstation.

2. Select the Open Project command from the Projects menu on your local system. The Select Project dialog box appears.

3. Select the name of the project you want to download to the remote workstation.

4. Select the Send Project command from the Transfer menu on your local system. A message window appears informing you that downloading a project will overwrite the existing project on the remote workstation and will force the remote workstation to reboot.

5. Select Yes to continue. A status message appears at the bottom of the local system indicating the file name and the percentage transferred.

    The File Transfer Mode window appears on the remote workstation and displays the file name and the percentage received. When the transfer is complete, IPM reboots the remote workstation.

    Note If you set the remote workstation type to DOS Development, IPM downloads the Interact configuration and runtime files to the remote workstation. If you set the remote workstation type to Runtime Only, IPM only downloads the Interact runtime files. See *Selecting the Remote Workstation Type* on page 28 for more information.

Downloading an Application

If you need to update an application on a remote workstation, you can download a new application to the remote workstation without downloading the entire project.

Important A project with the same name must exist on both the local system and the remote workstation before you can download an application to the remote workstation.

Use the Send Application command on the Transfer menu to download an application from your local system to the remote workstation. Follow these steps to download an application.

1. Return to the PowerStation Shell Main Menu on the remote workstation.

2. Select the Open Project command from the Projects menu on your local system. The Select Project dialog box appears.

3. Select the name of the project that contains the application(s) you want to download to the remote workstation.

4. Select the Send Application command from the Transfer menu on your local system. The Send Application dialog box appears. The File Transfer Mode window appears on the remote workstation.

5. Select the application you want to download, or select ALL APPLS to download all applications for this project. A message window appears that lists the size of the selected application(s).

6. Select Yes to continue. A status message appears at the bottom of the local system indicating the file name and the percentage transferred.

    The File Transfer Mode window appears on the remote workstation and displays the file name and the percentage received. When the transfer is complete, IPM reboots the remote workstation.

Receiving an Application

If you need to copy an application from a remote workstation to your local system, you can use the Receive Application command on the Transfer menu. Follow these steps to receive an application:

Important Receiving an application from a remote workstation will overwrite an application with the same name on your local system.

1. Return to the PowerStation Shell Main Menu on the remote workstation.

2. Select the Open Project command from the Projects menu on your local system. The Select Project dialog box appears.

3. Select the name of the project that contains the application(s) you want to receive from the remote workstation.

4. Select the Receive Application command from the Transfer menu on your local system. The Receive Application dialog box appears. The File Transfer Mode window appears on the remote workstation.

5. Select the application you want to receive, or select ALL APPLS to receive all applications for this project. IPM immediately begins transferring the application(s). A status message appears at the bottom of the local system indicating the file name and the percentage received.

    The File Transfer Mode window appears on the remote workstation and displays the file name and the percentage received. When the transfer is complete, IPM reboots the remote workstation.

Backing Up a Project

When you create or modify a project, you should also backup the project to prevent possible data loss resulting from equipment failure. If you experience equipment failure, or if you install a new workstation, you can restore the backed up files to speed the process of bringing the new workstation online.

You should also keep a copy of the IPM installation disk with your backup disks in the event you need to reinstall the backup onto an older workstation that uses the Project Setup Utility (PSU).

Backups Created with PSU or IPM 101 or Earlier

If you have old PSU backups or backups created with IPM version 101 or earlier, the Backup To: path you specify must be different than the IPM projects path. Old IPM/PSU backups and backups created using IPM 102 or later cannot exist in the same directory. If you attempt to use the same directory, IPM will generate an error asking for a new path. See *Setting the Archive Path* on page 33 for more information.

If you have an old PSU backup or a backup created with IPM version 101 or earlier that you want to use with Px PowerStations, restore the backup to the computer before sending the project to the PowerStation. This step is necessary to convert the old PSU backup from Interact version 3.0 to the current version of Interact.

Setting the Archive Path

The first step to backing up your projects is to select an Archive Path. Use the Archive Path command to enter an Archive Path:

1. Select the Archive Path command from the Settings menu. The Archive Path Settings dialog box appears.

2. Select the Backup To option, and enter the location where you want to store the projects you have backed up.

3. Select the Restore To option, and enter the location where you want to restore the projects you have backed up.

> **Note** If you have old PSU backups or backups created with IPM version 101 or earlier, the Backup To: path you specify must be different than the IPM projects path. Old IPM/PSU backups and backups created using IPM 102 or later cannot exist in the same directory. If you attempt to use the same directory, IPM will generate an error asking for a new path.

You can backup to any type of drive including a floppy disk drive. The backup directory structure is as follows:

```
\[backup path]
   \[project1]
      control.001
      project1.zip
      $itr$.zip
   \[project2]
      control.001
      project2.zip
      $itr$.zip
```

If the project will not fit on a single disk, it will follow the multiple disk structure below:

```
Disk #1:\[backup path]
   \[project1]
      control.001
      project1.zip
      $itr$.zip
Disk #2:\[backup path]
   \[project1]
      control.002
      $itr$.zip
```

Creating a Backup

Once you have specified the Archive Path, you can begin backing up your projects. Follow these steps to create a backup.

1. Select the Open Project command from the Projects menu. The Select Project dialog box appears.

2. Select the name of the project you want to backup.

3. Select the Make Backup command from the Transfer menu. A list box appears for you to select the location of the project you want to backup.

4. Select one of the following options from the list box:
   - Backup Project from the Local PC
   - Backup Project from the Remote Workstation

   If you select *Backup Project from the Local PC* in step 4, the Backup Path Settings dialog box appears. By default, IPM displays the directory you specified in the Archive Path dialog box. See *Setting the Archive Path* on page 33 for more information. You can either enter a new path or accept the current path. IPM displays a warning if a backup already exists at the specified path.

   If you select *Backup Project from the Remote Workstation* in step 4, IPM immediately begins to create a backup in the directory you specified in the Archive Path dialog box. If a backup of a project already exists at the current path, IPM will overwrite it with the project from the remote workstation. See *Setting the Archive Path* on page 33 for more information.

Sending a Backup

If you want to send a backup project to a remote workstation, you can use the Send Backup command on the Transfer menu. Follow these steps to send a backup to a remote workstation:

1. Select the Send Backup command on the Transfer menu. The Send Backup From dialog box appears.

2. Enter the location that contains the backup you want to send.

3. Press the Enter key to confirm the location of the backup. A message window appears that asks you to confirm that you want to send the backup from the location you entered in step 2.

4. Select Yes to confirm the location of the backup and begin the file transfer. The Select Project to be Sent dialog box appears.

5. Select the name of the project that you want to send. A message window appears informing you that sending a backup will overwrite the existing project on the remote workstation and force the remote workstation to reboot.

6. Select Yes to continue. A status message appears at the bottom of the local system indicating the file name and the percentage transferred.

    The File Transfer Mode window appears on the remote workstation and displays the file name and the percentage received. When the transfer is complete, IPM reboots the remote workstation.

Restoring a Backup

If you want to restore a backup project to your local system, you can use the Restore Backup command on the Transfer menu. Follow these steps to restore a backup to your local system:

1. Select the Restore Backup command on the Transfer menu. The Restore Project From dialog box appears.

2. Enter the location that contains the backup you want to restore.

3. Press the Enter key to confirm the location of the backup. A message window appears that asks you to confirm that you want to restore the backup from the location you entered in step 2.

4. Select Yes to confirm the location of the backup and begin to restore the file. The Select Project to be Restored dialog box appears.

5. Select the name of the project that you want to restore. A message window appears asking you if you want to restore Interact.

6. Select Yes to restore Interact, or select No to only restore the project. If you select Yes, continue with step 7. If you select No, a message window appears if a project already exists at the location you specified. Skip to step 8.

7. Enter the location where you want to restore Interact, and press the Enter key. A message window appears if a project already exists at the location you specified.

8. Select Yes to overwrite the existing project, or select No to specify another project name. If you select Yes, IPM immediately begins to restore the project. A status message appears at the bottom of the screen indicating the file name and the percentage restored. If you select No, the Restore Project To dialog box appears. Continue with step 9.

9. Enter a name for the project, and press the Enter key. IPM immediately begins to restore the project. A status message appears at the bottom of the screen indicating the file name and the percentage restored.

Troubleshooting Interact Project Manager

Occasionally you may experience problems using IPM. This chapter provides some example problems and error messages you may encounter and some possible solutions.

If you encounter a problem, please consult this chapter to see if you can correct the problem yourself. If you encounter a problem that is not documented in this chapter, contact your CTC equipment supplier or CTC technical support using one of the methods listed on page 7.

Chapter Contents

Insufficient Memory

This error is usually encountered either when you are creating backups or you are attempting to execute MS-DOS commands using the Run DOS command on the DOS menu. IPM requires approximately 510 Kbytes of conventional memory to run properly. If your computer has drivers (such as network drivers) loaded in conventional memory, IPM will experience this error. Remove these drivers or move them into upper memory to provide more conventional memory.

Insufficient Disk Space

This error occurs whenever the remote workstation does not have enough physical memory storage space for the project. Perform the following steps until the error is resolved or you reach the end of the list:

1. Check the Interact Type on the Screen Display Area to identify whether the project is designated a DOS Development or a Runtime Only system.

    If it is a DOS Development system, consider changing the project to a Runtime Only system which requires less space on the remote workstation. CTC recommends that you use a computer as your development system to avoid using disk space on your workstation for development system files.

2. If the user has created any additional directories other than the Interact directory, delete any unnecessary files located in these directories to free additional disk space for the new project.

The Cursor Disappears

If you are using a serial mouse, make sure that the COM port you selected using the Transfer Settings command on the Transfer menu is different than the COM port used by the mouse.

Communication Time Out

This error may be caused by one of four things:

- The serial download cable connected to the computer's COM port does not match the COM port setting you entered using the Transfer Settings command on the Transfer menu.

- The serial download cable is damaged.

- The computer's COM port does not support the baud rate you entered using the Transfer Settings command on the Transfer menu.

- It may occur momentarily when initializing the communication link and reestablishing communications between your local system and the remote workstation. This time out occurs when the PowerStation is deleting its current project.

Unknown Remote

This error may be caused by one of three things:

- The remote workstation's COM port is not enabled within the Shell program.

- The COM port you entered using the Transfer Settings command on the Transfer menu is set incorrectly.

- The baud rate you entered using the Transfer Settings command on the Transfer menu is set incorrectly. For example, if the baud rate is 115K, then try a lower baud rate.

Super User Mode Errors

You may encounter these errors when you attempt to use the Visit DOS command on the DOS menu. See *Using Super User Mode* on page 21 for more information about Super User mode.

The remote workstation displays <00> during Super User mode.

This error code may display if you inadvertently started IPM twice. The first time you entered Super User mode, IPM may have been executed again at the MS-DOS Prompt. If this error occurs, reboot your computer, and press the Esc key on the remote workstation.

Super User mode will not display a directory or copy to a remote workstation drive.

The LAST DRIVE command is not present in your CONFIG.SYS file. This command MUST be present to enable your computer to access the remote workstation's drives. Refer to your MS-DOS operating manual for more information about using the LAST DRIVE command.

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