Hard Disk System

Release Notes

digital™

First Edition

Preface

Manual Objectives

This manual contains installation instructions and release notes for the P/OS V3.1 update, contained on four diskettes. V3.1 contains updates for the following:

- P/OS V3.0
- PRO/DECnet V2.0
- PRO/Communications V3.0
- Command Language
- PRO/Tool Kit V3.0

Each update assumes that you have the version of the software listed above installed on your system. All but P/OS are optional applications.

Part 1 of this manual describes how to install the updates to P/OS, PRO/DECnet, Command Language, and PRO/Communications. It also contains release note information for V3.0 and V3.1 of P/OS and layered applications. Information in Part 1 supersedes both the hard-copy release notes and electronic release notes supplied with P/OS V3.0.

Part 2 of this manual describes how to install the update to PRO/Tool Kit. It also contains release note information for V3.1 of the PRO/Tool Kit. Information in Part 2 supplements the hard copy release notes in the *PRO/Tool Kit Installation Guide and Release Notes*. Continue to reference that document for installing the PRO/Tool Kit and for V3.0 release notes.

Audience

Users of P/OS V3.1, the PRO Tool Kit V3.1, and any Professional layered applications.

Structure of This Document

This document is in two parts. Part 1 contains installation instructions and release notes for P/OS V3.1, PRO/DECnet, and PRO/Communications. Part 2 contains installation instructions and release notes for V3.1 of the PRO/Tool Kit. The manual is divided into chapters as follows:

Part 1 - P/OS V3.1 Installation Guide and Release Notes

- Chapter 1 describes how to install the update to P/OS, PRO/DECnet and PRO/Communications.
- Chapter 2 contains release notes on setting up your P/OS system.
- Chapter 3 contains release notes on system components.
- Chapter 4 contains release notes on running applications.
- Chapter 5 contains release notes on the Command Language application.
- Chapter 6 contains release notes for the P/OS Server environment, and also describes the Cluster Status Display Utility.

Part 2 - PRO/Tool Kit V3.1 Installation Guide and Release Notes

- Chapter 7 describes how to install the update to the PRO/Tool Kit.
- Chapter 8 contains release notes on the PRO/Tool Kit.
- Chapter 9 contains corrections and changes to PRO/Tool Kit documentation.
- Chapter 10 describes how to install PRO/Tool Kit languages and lists corrections to language documentation.

Associated Documents

You should refer to the following documentation included with your P/OS V3.0 kit:

- *P/OS Server User's Guide*
- *Hard Disk System User's Guide*
- *Hard Disk System for Beginners*

The books for the Editors and DIGITAL Command Language are:

- *PROSE User's Guide*
- *PRO/EDT User's Guide*
- *Command Language User's Guide*

Refer to the following PRO/Tool Kit books:

- The *PRO/Tool Kit Installation Guide and Release Notes* explains how to install the PRO/Tool Kit and contains release notes.
- The *PRO/Tool Kit Command Language and Utilities Manual* provides information on the PRO/Tool Kit commands.

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FIGURE

Part 1

P/OS V3.1 Installation Guide and Release Notes

Chapter 1

Installing the P/OS V3.1 Update

BEFORE YOU INSTALL THE UPDATE

The steps you perform prior to installing the update are different, depending on whether you are installing an entirely new system or updating an existing P/OS V3.0 system. The next two sections describe what to do in either case.

Installing a New System

If you have not already installed V3.0 of P/OS, do so before you install this update. Use the instructions in the *Hard Disk System User's Guide* with this exception.

If you need to change the keyboard type, do *not* use the procedure described on page 18 of the *Hard Disk System User's Guide*. Instead, use the following instructions to change the keyboard after completing the installation.

1. Log in to the SYSTEM account.
2. At the Main Menu, press SETUP.
3. At the Setup Menu, press F12 to enter the System Setup Menu.
4. Move the cursor to the "Change KEYBOARD" option and press SELECT.
5. From the Change Keyboard Type Menu, select your system keyboard and press DO.

6. Press EXIT, then DO to save your system keyboard value.

You are now ready to install the update.

Updating an Existing System

If you have been running P/OS V3.0 on your Professional, you should do the following before you install the update:

- Back up any user data as described in the *Hard Disk System User Guide*.
- Delete any print queues that you have defined. In a Server system, delete any print queues that have been defined on workstations.

You are now ready to install the update.

INSTALLING THE P/OS UPDATE

Install the update as follows:

1. Turn the system off.
2. Place the diskette labeled V31UPDATE1 into diskette drive 1 (the top slot).
3. Turn the system on. The system runs through its usual self-tests.
4. Follow the directions displayed on the screen to perform the update. You will be prompted to insert other diskettes. At the end of the installation procedure, you receive verification that the update has been successfully installed.

ELECTRONIC RELEASE NOTES

The P/OS V3.1 update installation procedure automatically copies any electronic release notes to the following file on your hard disk: LB000:[1,2]RELEASE.DOC. Before using P/OS, please read that file.

INSTALLING THE PRO/DECNET UPDATE

You must have V2.0 of DECnet installed on your system before you install the update. If you are installing DECnet for the first time, use the instructions in the *PRO/DECnet User's Guide*. PRO/DECnet is required to use your Professional in a Server environment.

Once V2.0 of PRO/Decnet is on your system, install the update to PRO/Decnet as follows:

1. Log in to the SYSTEM account.
2. Insert the diskette labeled V31UPDATE3 into either diskette drive.
3. Choose "Environment services" from the Main Menu.
4. Press NEXT SCREEN to get the System Environment Services Menu.
5. Choose "Copy application into public library." A form appears asking you which components you want to copy.
6. Choose "Only system-wide components." A list of the applications on the diskette appears.
7. Choose "PRO/Decnet V2.0 Update A" from the list. You receive a message when the application has successfully installed.
8. Turn the system off, then on again.

INSTALLING THE PRO/COMMUNICATIONS UPDATE

You must have V3.0 of PRO/Communications installed on your system before you install the update. If you are installing PRO/Communications for the first time, use the instructions in the *PRO/Communications User's Guide* with this addition. Because PRO/Communications contains system components, the system manager or a privileged user should copy the entire application into the public library. Then individual users should install PRO/Communications from the library. Once PRO/Communications V3.0 is on your system, install the update as follows:

1. Log in to the SYSTEM account.

2. Insert the diskette labeled V31UPDATE3 into either diskette drive.

3. Choose "Environment services" from the Main Menu.

4. Press NEXT SCREEN to get the System Environment Services Menu.

5. Choose "Copy application into public library." A form appears asking you which components you want to copy.

6. Choose "Only system-wide components." A list of the applications on the diskette appears.

7. Choose "PRO/Communications V3.0 Update A" from the list. You receive a message when the application has been installed successfully.

8. Turn the system off, then on again.

Chapter 2

System Setup Release Notes

COLOR MONITOR SETUP

There are two types of setup in P/OS V3.0--user and system. The user setup overrides the system setup. In a Server environment, your user setup is invoked regardless of which workstation you log in to. This can cause a problem, if your user setup is color and you log in to a Professional with a monochrome monitor.

For example, if you customarily work on a system with a color monitor, you would select "Color" from the Terminal Setup Menu. If you then log in to a workstation with a monochrome monitor, your user setup is invoked. This could result in overdriving a monochrome monitor and possibly damaging it. You need to change your user setup to match the monitor available on the workstation you are using.

Similarly, if you change the monitor on your system from color to monochrome and do not change your user setup, you could damage the monitor.

PASSWORDS

You can set up your system so that you have a null password. This allows you to enter only a username when logging in. To set up a null password do the following:

1. Press ADDITIONAL OPTIONS at the Login Form (or at the Change Password Form that is displayed when you enter the SYSTEM/SYSTEM account for the first time).

2. Fill in the Username and Old Password fields only.

3. Press DO.

This causes the password to become "null."

Chapter 3

Release Notes for System Components

FILE PROTECTION

File protection for P/OS Version 3.0 can restrict access to files, depending on the group code of the User Identification Code (UIC) or the privileged/nonprivileged status of a user. Version 3.0 of P/OS differs from earlier versions as follows:

- The protection UIC of a user accessing the LB000: or LB001: device will have group 377.
- A user accessing files or directories on LB000: or LB001: can only access files with the same owner group. The owner group of the file must be 377.
- A privileged user at the Server and accessing the LB000: or LB001: device is granted all access to files with owner group 377.
- A privileged user at a workstation, accessing the LB000: or LB001: device is granted all access to files owned by that workstation.
- A nonprivileged user accessing a file owned by that user on the LB000: or LB001: device is only granted the right to change the file protection if the owner has write access. Traditionally, any owner of a file could change the file protection no matter what access rights that owner had.
- Attempts to access files or directories on LB000: or LB001: that do not have an owner of [377,n] results in a privilege violation.

See the *Hard Disk System User's Guide* for more information on protection.

TERMINAL SUBSYSTEM

There are two known cases when the PRINT SCREEN key can cause a bugcheck:

- While running any of the single application systems (PROBRU and PRONVR), pressing PRINT SCREEN sometimes causes a bugcheck.
- On all systems, pressing CTRL/PRINT SCREEN (toggle auto-print mode) while the terminal subsystem is in print controller mode causes a bugcheck.

MESSAGE BOARD

When you are at the Main Menu, a line at the bottom of the screen tells you that there are messages on the Message Board. However, because this reporting line is not always accurate, you should periodically check the message board, even if the reporting line says that the Message Board is empty. In some instances, entries are made but not reported.

PRINT SERVICES

Specifying a Default Print Queue

Before running any application (including PRO/Tool Kit) that can print files, specify a default print queue by choosing the "Set default print queue" option on the Print Control Services Menu.

Setting Up Printers

Choose the "Modify printer characteristics" option from the Print Control Services Menu to set up your printer. You can only set printer characteristics for the printer(s) connected to the stand-alone system or workstation you are using. You cannot, for

example, modify the characteristics of a printer connected to a Server from a workstation.

Setting Baud Rate

Be sure that you set the correct baud rate for the type of printer used and for the port to which the printer is connected.

Setting Page Length and Width

The sum of the top and bottom margins should not exceed the page length or the results will be unpredictable. Similarly, the sum of the right and left margins should not exceed the page width or the results will be unpredictable.

Print Header Page Option

If the "Print header page" option on the Modify Printer Characteristics Menu is set to YES, header pages print before each print job. Headers enable users to identify their printouts easily.

If you are a system manager and are adding a printer to a File Server or a stand-alone system with the intent of sharing the printer among multiple users, you may want to activate this feature.

Checking Print Job Status

To show the status of all print jobs for a particular queue, choose the "Release print request" option from the Print Control Services Menu.

If you find that a print job that you submitted is not on the print queue, display the print queue later. There may be a 30-second delay between the time when you submit a job to a print queue and when that job appears on the print queue.

If you turn your Professional off, with a print job(s) waiting for a local printer, printing will start automatically when you turn the system back on.

Listing Print Queues

To show all print queues, use the "Set default print queue" option from the Print Control Services Menu.

Port Characteristics

If you run an application that changes the characteristics of a port allocated to a print queue, the default port characteristics are restored when the print job is finished or when you reboot the system.

Exiting Modify Printer Characteristics Menu

If your default print queue has been deleted when you choose "Modify printer characteristics" from the Print Control Services Menu, you receive the following error message:

Error accessing setup file.
The directory you specified does not exist.
Press RESUME to continue.

When you press RESUME, the Select a Print Queue Menu appears. If you select a print queue from the list displayed and press EXIT, you return to the Print Control Services Menu. However if you press EXIT without selecting a print queue, you again receive the error message listed above. Pressing RESUME returns you to the Select a Print Queue Menu. This loop continues until you either select a print queue or press MAIN SCREEN.

Changing DECnet Node Names

If the node name of a stand-alone Professional or a Server is changed, then any queue names you have designated as user default

queues become invalid. The next time you attempt to access your default print queue, Printing Services returns an error message that those print queues are inaccessible.

DECNA PROBLEMS

DECNA Placement

If your system has a DECNA that does not appear to be functioning, check its placement in the card cage. Some revisions of the DECNA board must be placed behind any memory boards. DECNA boards are numbered 00042; memory boards are numbered 00034. Check the placement of the boards in your system and move your DECNA board behind any memory boards, if necessary. If the DECNA board still does not function properly, call your service representative.

NVR UTILITY

Naming Multiple Disks

When using the NVR utility diskette, you are asked whether you wish to boot from the Local Hard Disk or the Server. If you select the Local Hard Disk *and* there is more than one local disk (that is, a local disk in an expander box), you are prompted as follows:

```
Enter volume or device name of local hard disk:
```

A valid volume name would be in the form PRO$$PROVOLUME: and a valid device name would be in the form DW2: or DW3:.

DECTOUCH

If you have a DECtouch unit, you cannot use the driver supplied with the unit on V3.0 of P/OS. A new DECtouch driver is supplied with P/OS V3.0. You must load the driver by entering the following command using either DCL or the PRO/Tool Kit:

```
LOAD DT
```

Do not install any of the applications supplied with the DECtouch unit. They do not work with P/OS V3.0, and may cause fatal system errors if you attempt to use them.

Retain the diskette supplied with your DECtouch unit labeled "DECtouch Alignment." You need it to align your screen and configure the attachable input devices. To use this diskette, follow the procedures outlined in the *DECtouch User's Guide*:

Notes on external devices for the DECtouch:

- Version 3.0 of P/OS supports only one joystick, which you can attach to either parallel port. If you attach two joysticks, only the *top* parallel port functions. You can attach a quadrature mouse to the other parallel port.

- The driver can support a tablet and mouse connected to the DECtouch serial ports. Configure the ports by using the "DECtouch Alignment" diskette.

- Currently only tablets compatible with the GTCO DIGI-PAD 5 can be connected to the DECtouch serial ports. (See the *DECtouch User's Guide* for a description of the tablet and how to install it.)

- The configuration program references the USI Optomouse 2000 as the serial mouse. This mouse is no longer available or supported. In its place use the Microsoft serial mouse. When you configure the ports, continue to use the USI Optomouse 2000 setting. Order the Microsoft mouse in serial format and in the IBM PC (TM) configuration (25-pin female connector). Simply connect the mouse to the port.

INCREASING SECONDARY POOL SIZE AT NEXT BOOT

The system provides a fixed size of secondary pool. The size was determined by the requirements of system services for secondary pool, general system load conditions, and the size requirements of the GEN partition for user tasks.

If you get a 300/11 bugcheck, it may indicate that you do not have enough secondary pool for the applications you are running. Some of the things that take up secondary pool are:

- Structures associated with installed tasks, particularly prototype tasks
- Send-data packets
- Logical names

If your configuration needs a larger allocation of secondary pool, you can increase its size by creating an ASCII data file containing the size of the increment. The secondary pool size will increase by the increment the next time you boot the system.

To increase pool size, do the following:

1. Create a file for the Server, workstation, or stand-alone P/OS V3.0 system.

   The Server manager should create a file for the Server. Each workstation manager or user should create a file for his or her workstation or stand-alone P/OS V3.0 system, in the system-specific area for that workstation, the LB001: device. The format for this file is a standard text file created using an editor. The complete file specification for this file is:

   LB001:[ZZSYS]SECPOL.DAT

2. Enter the increase in size.

   Enter an octal number representing the number of additional blocks (64 bytes) of secondary pool. For example, 40.

3. Exit from the editor.

4. Reboot the system.

The system ignores the SECPOL.DAT file if it encounters an error at boot on opening the file, reading the first record, or converting the data to binary. In addition, should the total number of secondary pool blocks (system fixed allocation plus allocation extension from SECPOL.DAT) exceed half the size of the GEN partition, the system ignores the extension and secondary pool size defaults to its fixed value.

To decrease the secondary pool size to its fixed value, delete the SECPOL.DAT file. The secondary pool size reverts back to its original size at the next boot.

Chapter 4

Installing and Running Applications

Because of changes and enhancements to P/OS V3.0 to provide Server functionality and support for multiple hard disks, some applications require modifications in order to run correctly. In most cases, these modifications are made at installation time, and can be done easily using File Services or Command Language.

This chapter describes the modifications as follows:

- The General Application Workaround section describes general workarounds that you can use with any application.
- The Modifying DIGITAL Applications section describes specific modifications for DIGITAL applications.
- The Modifying Non-DIGITAL Applications section describes specific modifications for non-DIGITAL applications.
- The Using APPLFIX section describes APPLFIX, a command file you can use to modify applications for P/OS V3.0.

> **NOTE:** Because some of the workarounds described in this chapter are case sensitive, *enter all workarounds exactly as they appear in the text.*

Besides modifying the applications, support for multiple print queues requires that you define a default print queue (using Print Control Services) prior to running any application that uses print functions. This affects PRO/Tool Kit, Command Language, Synergy, and some applications that produce printed output.

GENERAL APPLICATION WORKAROUND

One of the more common application workarounds involves reassigning the LB000: device to DW001: by using an additional ASSIGN LOGICAL statement in the application's .INS command file. This workaround does not work properly if the physical device containing USER$HOME: (DW001:) is not the same as the physical device containing LB000: *and* the application is using components on the original LB000: device. These components are typically language run-time Object Time Systems (OTSs) and system resident libraries, such as the Core Graphics Library (CGL). They are always located in the [ZZSYS] directory.

Whenever the application activator sees an INSTALL [ZZSYS] in a .INS file, it tries to find the file in LB000:[ZZSYS]. The activator then saves the device-id and the file-id in a packet. As soon as the RUN line is encountered, the packet containing the device-id, unit number, and file-id is passed to the system to actually install them.

If the LB000: logical were reassigned in the meantime, the device-id would no longer be valid. (There is no problem when USER$HOME: and LB000: device are on the same physical device, since the device-id is still valid.)

The workaround in such cases is to copy the run-time libraries into the DW001:[ZZAPnnnnn] directory and modify the .INS file accordingly. Alternately, you can create a directory DW001:[OTS], copy all the libraries to that directory, and modify the .INS file. Please note that this workaround is needed *only* when the following three conditions are met:

- Reassigning the LB000: logical is required.
- USER$HOME: is not located on the boot device (local home or home on second disk).
- The application uses components such as PASRES.TSK, CGLFPU.TSK, PBFSML.TSK, or CET.TSK, which reside on the system's LB000: device in the [ZZSYS] directory.

The best solution, if possible, is to modify the application to access its various components with correct logical names as follows:

all user components	DW001:, BIGVOLUME:, or APPL$USER:

components unique to the application	APPL$NETWORK:
system, cluster, or shared components	LB000:

See the *Tool Kit User's Guide* for more details.

MODIFYING DIGITAL APPLICATIONS

This section describes modifications to DIGITAL applications.

PROSE PLUS V1.0

After installing PROSE PLUS V1.0, the system manager should do the following:

1. Copy all files in directories [ZZCET2] and [ZZSKETCH] to directories LB000:[ZZCET2] and LB000:[ZZSKETCH], respectively.

2. Using either Command Language or the PRO/Tool Kit, enter the following commands:

   SET/PROT:(GR:RWE) LB000:[ZZCET2].

   SET/PROT:(GR:RWE) LB000:[ZZSKETCH].

User-Defined Keys

PROSE PLUS V1.0 saves any user-defined key (UDK) definitions in LB000:[ZZCET2]PROSE.UDK. This is a public file, rather than the private file intended for user-defined keys. Consequently, two users cannot run PROSE PLUS simultaneously, since either user can modify the UDK definitions.

Naming Picture Files

To create a picture with PROSE PLUS V1.0, do the following:

1. Choose the "Pictures" option from the File/Edit Menu. Two options appear: "File Selection Menu" and "Name a File Form."

2. Press ADDTNL OPTIONS to view other options.

3. Choose "Use extended file name" from the options presented.

4. At the prompt, enter the file name, type, and version as follows:

   filename.type;version

   Do not attempt to enter a device or directory specification as this will result in an error.

An alternative to always using the extended file name option is to make a logical assignment using either DCL or P/OS File Services. Using DCL, make the following logical assignment:

ASSIGN BIGVOLUME: SY000:

This assignment modifies the volume portion of the default directory.

Using P/OS File Services, make the logical assignment as follows:

1. Choose "File services" from the Main Menu. The File Services Menu appears.

2. Select "Directories" on the "List" line.

3. Move the cursor to the "Include" line, enter BIGVOLUME: and press SELECT.

4. Move the cursor to the "Action" line and select "Set_Current."

5. Press DO.

NOTE: You *cannot* accomplish the same thing from Command Language by typing "Set Default

BIGVOLUME:" because Command Language resolves this logical, defeating the purpose of the logical assignment procedure.

PRO/SIGHT V1.0

To install PRO/SIGHT V1.0 on a P/OS V3.0 system, perform the installation as documented in the *PRO/Sight User's Guide*. Then copy the file DW001:[001002]SIMAIN.MSG into the directory LB000:[001002].

PRO/BASIC V1.3

Before Installing PRO/BASIC, insert the PRO/BASIC V1.3 distribution diskette into either drive. Using either Command Language or PRO/Tool Kit, enter the following command:

```
SET PROT PROBASICV13:[*]*.* (W:RWED,G:RWED,S:RWED,O:RWED)
```

PRO/BASIC can now be installed.

PRO/Applications Starter Kit V1.0

Use the PROSE application supplied with P/OS V3.0 *not* the PROSE application packaged with the Starter Kit.

PRO/Communications V3.0

The following problems exist with V3.0 of PRO/Communications:

- When using PRO/LAT to connect to an ULTRIX or TOPS 10/20 system, the Professional may hang if it receives a message with an odd byte count.
- When in VT52 emulation mode, reverse line feed does not work.

- When PRO/Communications is chosen from a menu immediately after power-up, you may receive an error message. This is because some of the application components are installed in the background. If you wait about 20 seconds before starting PRO/Communications, this problem does not occur.

- Occasionally the following two error messages appear together:

  FT system deallocation error
  The selected operation cannot be performed by the server.

  You can ignore these message, as they do not affect the performance of PRO/Communications.

DECnet V2.0

The following error may occur during the installation of an application containing a DECnet object:

PRO/DECnet application installation error

Error in network management call to define new object number
Network management error code is 34

If this occurs, do the following:

1. Choose "Environment services" from the Main Menu.

2. Choose "Remove application" from the User Environment Services Menu. A list of application groups appears.

3. Choose the group containing the application you attempted to install. A list of applications in that group displays.

4. Choose the application you want to remove. When the application is removed, you receive a message. If the application contains system components, you receive a message that the system manager must remove them. Do not proceed until the application is removed.

5. Choose "Management Utility for DECnet V2.0" from the menu on which it was installed.

6. Choose "Node Status Display."

7. Choose this system's node name.

8. Press EXIT to return to the Main Menu.

9. Use Environment Services to install the application.

MODIFYING NON-DIGITAL APPLICATIONS

Design Graphix/Executive V1.0

To install Design Graphix/Executive V1.0, you should follow the instructions in the manual with this exception. Instead of using the backup utility (formerly a part of Disk/Diskette Services on earlier versions of P/OS) to complete the installation, you must run the Backup/Restore Application (Archive). This application is on the diskette labeled "PROSE" in the P/OS V3.0 kit. You must install the Backup/Restore Application (Archive) before you can install Design Graphix/Executive V1.0.

PRO/VIDEOTEX V1.0

To run this application you must create and execute a command file that equates the directory DW1:[200,200] to DW1:[X,Y], where [X,Y] is the users User Identification Code (UIC). Please note that if you do an incremental backup and restore, you will have to execute this command file again.

Using Command Language or PRO/Tool Kit and your favorite editor, create a file VTX.CMD as follows:

```
.ENABLE SUBSTITUTION

.SETS DIRSPC <UIC>
.SETS FILSPC DIRSPC
.PARSE  FILSPC "[,]" LEFT GR OWN RIGHT
.TEST   GR
.SETN   GRLEN   <STRLEN>
.IF     GRLEN = 1 .SETS ZFILL "00"
```

```
.IF     GRLEN = 2 .SETS ZFILL "0"
.IF     GRLEN = 3 .SETS ZFILL ""
.SETS   GR      ZFILL+GR
.;
.TEST   OWN
.SETN   OWLEN   <STRLEN>
.IF     OWLEN = 1 .SETS ZFILL "00"
.IF     OWLEN = 2 .SETS ZFILL "0"
.IF     OWLEN = 3 .SETS ZFILL ""
.SETS   OWN     ZFILL+OWN
.SETS   FILSPC  GR+OWN+".DIR;1"
 COPY 'DIRSPC'*.*;* [200200]*.*;*
DELETE 'DIRSPC'*.*;*
MCR PIP [0,0]'FILSPC'/PR/WO:RWED
DEL/DIR 'DIRSPC'
MCR PIP [0,0]'FILSPC'/EN=[0,0]200200.DIR;1
.STOP
```

Once you have created this command file, type **@VTX**.

RDM 300

In order for the RDM 300 series to work correctly on P/OS V3.0, you must alter RDM.INS located on the first diskette, 1BINRX50. Add this line before the RUN line:

```
ASSIGN LOGICAL LB000:  "SY000:"
```

PRO 20/20

Using the PROSE Editor from the /TOOLS Command

To use the PROSE editor from PRO 20/20, you must copy the following files from LB000:[ZZSYS] to DW001:[ZZSYS]:

```
CET.TSK
PROSE.HLP
PROSE.MNU
PROSE.MSG
```

Using Print Services from the /PRINT Command

Because V3.0 of P/OS uses File Services to print a document, you must modify the .INS file to print a document from PRO 20/20. Modify the .INS file as described below:

1. Enter File Services and search for DW1:[ZZAP*]PROSUPER.TSK. Write down the directory name of the .INS file. (The format will be [ZZAPNNNNN]ZZAPNNNNN.INS.)

2. Add the following line to the .INS file after "INSTALL [ZZSYS]PASRES.TSK/LIBRARY":

   INSTALL [ZZSYS]NFUTL.TSK/TASK=C$PUTL

This causes the application to enter File Services when Print Services is selected from the /PRINT command. See the *Hard Disk User's Guide* for information on using File Services. The modified file is shown below:

```
Name '>>> PRO 20/20 <<<  Version 1.0'
FILE [ZZSYS]CBTLOG.TSK/KEEP
FILE [ZZSYS]FM.TSK/KEEP
FILE PROSUPER.TSK/DELETE
FILE S20IOS.TSK/DELETE
FILE DODIR.TSK/DELETE
FILE PROSE.TSK/DELETE
FILE PROSE2.TSK/DELETE
FILE S20TFIL.DAT/DELETE
FILE S20CONFIG.DAT/DELETE
FILE SCMD1.C20/DELETE
FILE SCMD2.C20/DELETE
FILE SCMD3.C20/DELETE
FILE SCMD4.C20/DELETE
FILE UCMDA.C20/DELETE
FILE UCMDB.C20/DELETE
FILE UCMDC.C20/DELETE
FILE AAPROD.SBF/DELETE
MOUNT 2020HELP
FILE S20HELP.HLP/DELETE
INSTALL [ZZSYS]CGLFPU.TSK/LIBRARY
INSTALL [ZZSYS]PASRES.TSK/LIBRARY
INSTALL [ZZSYS]NFUTL.TSK/TASK=C$PUTL
INSTALL PROSUPER.TSK/TASK
```

```
INSTALL S20IOS.TSK/TASK
INSTALL DODIR.TSK/TASK
ASSIGN LOGICAL WK000: "LB000:"
RUN SUPER
```

RS/1 V12.0

You must modify the following three .INS files.

```
RS1SETUP1:[ZZAP5]ZZAP5.INS
RS1SETUP1:[ZZAP6]ZZAP6.INS
RS1SETUP1:[ZZAP13]ZZAP13.INS
```

The modification to each file is the same. Insert the following two lines before the line containing a "RUN xxx" command, where xxx is either, SETUP, RS1, or RS1FIX:

```
ASSIGN LOGICAL LB: "DW001:"
ASSIGN LOGICAL LB0: "DW001:"
```

CT*OS V1.0

Install CT*OS following the instructions in the manual until diskette 1 is bonded.

Before running the CT*OS Manager, enter File Services and search for DW1:[ZZAP*]CTOS.TSK and DW1:[ZZAP*]CTMNGR.TSK. Write down the directory name of the two .INS files. (The format will be [ZZAPNNNNN]ZZAPNNNNN.INS.)

Using EDT or PROSE, modify each of the two .INS files by adding the following line before the *last* line of each file:

```
ASSIGN LOGICAL LB: "SYSDISK:"
```

(After you have edited both files, you should purge the old .INS file.)

You can then run CT*OS Manager according to the instructions in the manual.

Palette

Install Palette according to the instructions in the manual. Before running Palette for the first time, the system manager or a privileged user must copy the file SYSDISK:[ZZSYS]PALETTE.DAT to LB000:[ZZSYS]PALETTE.DAT. You can now run Palette. However, every time the Palette setup parameters are modified, the file must be recopied as described above.

MAPS/PRO Financial Modeling Application V1.0

MAPS/PRO cannot be installed on a Professional 380, unless you do the following:

1. Install the MAPS Install application from the application diskette. Do not install the MAPS Fast Install application.

2. Run the MAPS Install application to copy the first diskette. If you are doing this on a Professional 380, there will be an error while processing this diskette.

   Using File Services, Command Language, or PRO/Tool Kit, and the file listing on page 12 of the *MAPS/PRO Primer* as a guide, copy the remainder of the files from this diskette to their appropriate destination(s) as explained in steps 3 and 4. Proceed to step 3, if you do not have P/OS Fast Install (part of the PRO/Tool Kit). Proceed to step 4, if you have P/OS Fast Install.

3. If you do not have P/OS Fast Install, do the following:

   3a. Create a [MAPS] directory on a diskette. Copy the file MAPS.INS from the [MAPS] directory on DW1: to the diskette. Edit MAPS.INS and place the exclamation point character (!) at the beginning of each FILE statement line.

   3b. Choose the "Install application" option from the Environment Services Menu. Then choose the "From diskette" option from the submenu that appears.

   3c. Determine which directory has been created for the MAPS application. The directory name will be in the form DW1:[ZZAPnnnnn], where nnnnn is a five-digit number. Since this is the last application

installed, it will be the largest number of this form on DW1:. For example, if this were the fourth application you had installed, look for [ZZAP00004]. Verify this by displaying [ZZAP00004]ZZAP0004.INS; it should be the MAPS .INS file.

3d. Copy all the files from DW1:[MAPS] to DW1:[ZZAPnnnnn]. You can then delete these files from the [MAPS] directory to conserve disk space.

3e. Using the file listing on page 12 of the *MAPS/PRO Primer* as a guide, copy the files from the remaining diskettes to DW1:. However, instead of copying files to DW1:[MAPS], copy them to DW1:[ZZAPnnnnn].

3f. You are now ready to run MAPS/PRO.

3g. If you subsequently want to remove this application, you can either delete the necessary files manually or remove the exclamation points from [ZZAPnnnnn]ZZAPnnnnn.INS (which you placed there in step 3a).

4. If you have the P/OS Fast Install application, do the following:

4a. Using the information on page 12 of the *MAPS/PRO Primer* as a guide, copy the files from the rest of the diskettes to their proper destinations on DW1:.

4b. Run the P/OS Fast Install application to enter the MAPS application from the [MAPS] directory into your application menu structure.

4c. You are now ready to run MAPS/PRO.

USING APPLFIX

The system manager should use the APPLFIX operation to modify applications for P/OS Version 3.0 when you get an error such as, "File not found."

> **NOTE:** Using APPLFIX is not the most efficient way to modify applications to work on P/OS Version 3.0. We recommend that you use the specific fix for the application you want to use as described earlier in this chapter.

Prior to P/OS V3.0, P/OS supported only a single hard disk. However, P/OS V3.0 supports multiple disks (either physical or logical entities). Some applications which were accessing application component files using the device specification "LB000:" do not function correctly on V3.0. As a temporary "workaround," we have provided a command file that allows a system manager to copy files from the application diskette(s) to the system-wide device LB000:. The system manager must be logged in to a privileged system manager's account locally on the Server or on a P/OS V3.0 stand-alone system prior to invoking this command file. This procedure does not guarantee that the application will run properly.

The command file is located in LB000:[1,2]APPLFIX.CMD. To invoke the command file, enter either the Command Language or PRO/Tool Kit application and type the following:

```
@LB000:[1,2]APPLFIX
```

Further instructions are displayed by the command file.

The command file has two modes of operation--the default mode and the /FULL mode. In the default mode, any application component residing in the directories [ZZSYS], [001002], or [001005] is copied to the corresponding directory on the LB000: device. In the /FULL mode, all application components having an explicit directory specification are copied to the corresponding directory on the LB000: device.

We recommend that you first try the default mode. If that does not fix the problem, try using the /FULL mode.

Chapter 5

Command Language Update and Release Notes

Version 3.1 of P/OS contains an update for the Command Language application, also known as DIGITAL Command Language (DCL).

This chapter contains instructions for installing the update and modified instructions for installing the Command Language application. It also contains release notes and corrections to the *Command Language User's Guide*.

Before you install the update, you must have the Command Language application installed on your system. If you need to install Command Language, use the instructions in the next section, not the instructions in *Command Language User's Guide*.

INSTALLING THE COMMAND LANGUAGE APPLICATION

The Command Language application consists of three RX50 diskettes, with the following volume labels:

- COMMAND LANGUAGE Volume label "PRODCL"
- COMMAND LANGUAGE Volume label "PRODCL2"
- COMMAND LANGUAGE HELP Volume label "DCLHLP"

Because the application contains system components, the system manager must first install the Command Language application into the public library. Then you can install the application into your user account. The next two sections describe each of these procedures.

Copying Command Language into a Public Library

Only the system manager or a privileged user can perform this procedure. To copy all the components of the Command Language application into a public area on the system, the system manager must do the following:

1. Log in to the system manager's account.
2. From the Main Menu, choose the "Environment services" option.
3. Press NEXT SCREEN to display the System Environment Services Menu.
4. Insert the diskette labeled "PRODCL" into one of the diskette drives.
5. Choose the "Copy application into a public library" option.
6. When the submenu appears, select the "Entire application" option.
7. From the Application Selection Menu, choose Command Language as the application to be copied to the public library.
8. During the installation, you are prompted to insert the PRODCL2 diskette.
9. When the installation is complete, remove all diskettes and store them in a safe place.

Installing Command Language on a Menu

Any user can install the Command Language application once it has been copied to a public library by the system manager. To install the Command Language application on to a menu in your account, do the following:

1. Log in to your account.
2. From the Main Menu, choose the "Environment services" option.
3. From the User Environment Services Menu, choose the "Install application" option.
4. From the Application Source Menu, choose the "Library" option.
5. From the Application Library Menu, choose the Command Language application.

Installing Command Language On-Line Help

Installing the Command Language On-Line Help is optional. Only the system manager can install the On-Line Help, after he or she has installed the Command Language application.

To install Command Language On-Line Help, do the following:

1. Run the Command Language application from the menu on which it is installed.
2. Insert the diskette labeled "DCLHLP" in one of the diskette drives. This diskette comes with the P/OS operating system.
3. Type **@DCLHLP:[INSTALL]DCLHLPINS.**
4. When the installation is complete, a success message displays. Remove the diskette and store it in a safe place.

INSTALLING THE COMMAND LANGUAGE UPDATE

You cannot install the update unless V3.0 of Command Language is already installed on the system. The previous section describes how to install the application.

Install the update as follows:

1. Log in to the system manager's or a privileged account.
2. Choose the Command Language application from the menu on which it is installed.
3. Insert the diskette labeled "TKUPDATEV31" into one of the diskette drives.
4. Type the following command:

   @TKUPDATEV31:[UPDATE]UPDATCMDL

5. When the update installation is complete, a success message is displayed. Remove the update diskette and store it in a safe place.

If an error occurs during installation, an error message appears on your screen. Try to correct the problem indicated by the error message and repeat the update procedure. Use the *Command Language User's Guide* to help you interpret the message.

Once you have installed the update, you have two copies of some files. You can recover about 370 disk blocks by doing the following:

> **WARNING:** Use this procedure *only* if you do not have the PRO/Tool Kit installed and you do not intend to install the PRO/Tool Kit. If you have or plan to install the PRO/Tool Kit, follow the instructions in Chapter 7 for reclaiming disk space.

1. After performing the update, turn your Professional OFF and then ON.

2. Log in to the system manager's or a privileged account.

3. Choose the Command Language application from the menu on which it was installed.

4. Purge the files listed below by issuing the PURGE command.

```
LB:[ZZPRODCL]PRODCL.TSK
LB:[ZZPRODCL]LCT.TSK
LB:[1,2]LCT.MSG
```

WARNING: Do *not* purge the files until you have turned your Professional OFF then ON again. Otherwise, you will delete required files.

RUNNING THE COMMAND LANGUAGE APPLICATION

To run the Command Language application, simply choose it from the menu on which it was installed. When the DCL prompt ($) appears, you are at DCL command level; the Command Language application is installed and ready to run. Refer to the *Command Language User's Guide* for further information on the Command Language application.

REMOVING THE COMMAND LANGUAGE APPLICATION

You can remove the Command Language application from an individual account. If it is removed from all accounts, the Server manager can delete it from the public library.
In both cases, note that the system does not remove the Command Language On-Line Help files from the system. You can delete these files individually to reclaim space.

COMMAND LANGUAGE PROBLEMS CORRECTED WITH THIS UPDATE

This section describes Command Language problems that have been corrected with this update.

- Long command lines passed through the /COMMAND: qualifier in a RUN uninstalled_task command were truncated to 24 characters. This problem has been corrected.

- When using the RUN command to execute an installed task named ...NAM, DCL would incorrectly execute the task with a task name of NAM. DCL now renames the task to NAMTn, where "n" is the terminal number.

- Using the qualifier /ALL with the DEASSIGN command resulted in an error message. This problem has been corrected. You can now deassign all logicals from a specific logical name table.

  NOTE: You should not DEASSIGN logicals from the SYSTEM logical name table. Doing so causes the system to operate incorrectly, or to no longer function.

- When attempting to create a directory on a write-protected diskette, a numeric error code was displayed. This error message has been replaced with the following message:

  CREATE -- Device is write-protected

- The SET DEFAULT command displayed an error, if the device specified does not exist. This has been corrected.

- If a ^Z (end-of-file) is entered in response to a prompt, DCL aborts the current command and returns to prompt level or retrieves the next command from a command file.

- If an incomplete command is entered through an indirect command file, DCL prompts the terminal for any neccessary parameters. In previous versions, DCL would accept the next command line in the indirect command file as parameters necessary to make command complete.

PRO/DCL PROBLEMS AND LIMITATIONS

Use of the /EXCLUDE Qualifier

The file specification used as the argument with the /EXCLUDE qualifier on the file commands APPEND, COPY, DELETE, DIRECTORY, PURGE, RENAME, SET PROTECTION, TYPE, and UNLOCK must include a specific version number or the wildcard character (*). If you do not specify a specific version number or a wildcard, DCL ignores the /EXCLUDE qualifier and performs the specified operation on any file of that name. Although DCL displays a diagnostic message telling you to supply a version number or a wildcard, it still performs the operation on the files you wanted to exclude.

Correction to the SET TERMINAL Command

The terminal setup attribute /VT2xx should be:

```
/VT200series
```

If you use /VT2XX, the following error message appears:

```
Set terminal attribute required
```

Restriction to the SET and SHOW Commands

The SET and SHOW commands do not accept device logical names where a device is allowed.

SET PROTECTION Command

If multiple files are specified in a SET PROTECTION command, only the protection on the last file in the list is modified.

Correction to the ABORT Command

Please note the functionality difference between the Version 3.0 Command Language ABORT command and previous releases. To abort a task, you must specify ABORT/TASK taskname. The default function is to abort a command. For example, if you use the SPAWN command

to perform a directory listing to an output file ($SPAWN DIRECTORY/OUTPUT:DIR.LIS), and you want to abort the command type:

```
$ ABORT DIRECTORY
```

The following description for the ABORT command replaces the description in the *Command Language User's Guide*.

ABORT forces an orderly end to a running task or to the action of a specfic command. Nonprivileged users can abort any task running on their own terminal. Privileged users can abort any task.

Format

ABORT [/COMMAND] [/qualifier] commandname

ABORT/TASK [/qualifier] taskname

qualifier

Can be one of the following:

/COMMAND
/TASK
/TERMINAL:ttnnn:

commandname

Specifies the command whose effect you want to cancel. This parameter can be used only when the /TASK qualifier is not present. You must specify at least the first three characters of the command verb.

taskname

Specifies the name of the task you want to abort. This parameter requires the presence of the /TASK qualifier. If you use the /TASK qualifier and do not specify a task name, you will get the error message "Illegal task name."

Prompts

Taskname?

Qualifiers

/COMMAND

Specifies that you want to abort a command. This is the default qualifier and need not be specified.

/TASK

Specifies that you want to abort a task by name.

/TERMINAL:ttnnn:

Specifies that a task from some terminal other than your own be aborted. This is a privileged qualifier.

Example

```
$ DIRECTORY/OUTPUT:DIR.LIS
$ ABORT DIRECTORY
```

In this example, the user issued a DIRECTORY command in the background by using the SPAWN command. Rather than waiting for the command to complete, the user entered the ABORT command to terminate the command.

```
$ SPAWN DIRECTORY/OUTPUT:DIR.LIS
$ ABORT /TASK DIRT1
```

In this example, the user issued a DIRECTORY command in the background by using the SPAWN command. Rather than waiting for the command to complete, the user entered the ABORT command to terminate the task build by specifying the task name that the SPAWN DIRECTORY command executed.

REMOTE FILE SPECIFICATIONS

Page 24 of the *Command Language User's Guide* incorrectly states that the access control information can be specified in two ways: Format 1 (/userid/passwd/accnt::) and Format 2 ("userid passwd accnt"::). Only Format 2 is legal.

Chapter 6

Release Notes for the P/OS Server Environment

FILE SERVER SYSTEM MANAGER SUGGESTIONS

We strongly suggest that the Server manager increase the number of large data buffers increased on the file server from 20 to at least 40 to increase performance. Do this as follows:

1. Run the DECnet Management Utility application.

2. Choose the "Local Node Set-up" option from the Management Utility for DECnet Menu.

3. When the Local Node Set-up Menu appears, press ADDTNL OPTIONS.

4. Enter the new number of large data buffers on the form that appears.

PRINT QUEUES IN A SERVER SYSTEM

If you define a print queue on a stand-alone Professional and then boot from the Server as a workstation, you cannot modify or delete that print queue. You can use the queue, however.

ERROR MESSAGES FOR P/OS SERVER WORKSTATIONS

If the following numbers appear on your workstation screen, the Server is not running:

500
321

Notify the Server manager to reboot the Server. Each workstation should be rebooted also.

RECONFIGURING THE P/OS SERVER

If the Server manager needs to reconfigure the Server and/or any workstations, it should be done from the Server.

Changing Workstation Node Addresses

To change a workstation node address, run the Workstation Registration application and modify the node address for that workstation.

> **NOTE:** If you change a workstation node address in the PRO/DECnet configuration data base using the Management Utility for DECnet and do not change the workstation entry, you cannot use that system as a workstation.

Changing the Server Node Addresses

After changing the Server node address, you need to make sure each workstation knows the new Server node address. To accomplish this, do the following:

1. Run the Workstation Registration application.
2. For each registered workstation, choose "Modify a workstation."

3. Enter the node you want to modify and press DO.

4. When the information is presented, just press DO without modifying any of the data. This causes the new Server node address to be written back to the down-line load data base. You must do this for each workstation or the workstation will not boot.

USING NVR

If you select "Server" from the Change Boot Sequence Menu, then all local disks automatically become unbootable. When you select "Local hard disk" from the Change Boot Sequence Menu, all previously bootable disks are restored.

> **NOTE:** If you change a local bootable disk by selecting "Server" from the Change Bootable Sequence Menu, then that disk is not bootable until you restore it to a bootable state by selecting "Local Hard Disk" from the menu.

WORKSTATION AND USER ACCOUNT SCRIPTS

When a workstation is registered with a Server, the system reads script files to determine which subdirectories to create and which files should be copied into each workstation and user account areas.

> **NOTE:** The subdirectories are a way to separate directories for each workstation and for each user. These subdirectories are not regular directories.

If you want a particular file to be added to the script file, you can edit the script files. However, you should not delete any lines in an already existing script file.

The format of the script files is very simple. Every time you create a user account area or register a workstation, a top-level directory is created on the device chosen (usually LB000:).

Example:

```
LB000:[JOHNSON] is created for account name Johnson.
LB000:[ZZW377001] is created for the first workstation added.
LB000:[ZZW377002] is created for the second workstation added.
```

The script files are:

```
LB000:[ZZUSER]UFLIST.DAT  - User Account script file
LB000:[ZZWS]WSLIST.DAT  - Workstation script file
```

Script File Format

The format for each of the script files is the same. To create a subdirectory, enclose the name of the subdirectory in square brackets, for example:

```
[USERFILES]
```

To copy a file, list the source address of the file to be copied, including the device, directory, and file name as in the following example:

```
LB000:[ZZWS]RSX11.SYS
```

For each workstation, a directory LB000:[ZZW377001] is created with the format:

```
LB000:[ZZW377nnn]
```

where nnn is the number assigned to the workstation. Each workstation has a unique number.

Then the workstation script file LB000:[ZZWS]WSLIST.DAT is read. The following table shows the script file and an example of the workstation directories and files that are created after the script file is read by the system. All directories and files are on the LB000: device. In this example, the nnn number assigned to the workstation is 001.

Workstation Script File	Actual Workstation Directories and Files Created by Script File
[ZZWS]GRPLST.DAT	[ZZW377001]GRPLST.DAT
[ZZSYS]	[ZZW377001.ZZSYS]
[ZZUSER.ZZSYS]CLSETUP.DAT	[ZZW377001.ZZSYS]CLSETUP.DAT
[ZZDECNET]	[ZZW377001.ZZDECNET]
[ZZWS.ZZDECNET]NETLINE.DAT	[ZZW377001.ZZDECNET]NETLINE.DAT

NOTE: Files are copied to the subdirectory created previously.

The following is a list of files currently in the User Account Area and workstation script files:

User Account Area Script File - UFLIST.DAT

LB000:[ZZUSER.ZZSYS]USERMENU.SYS	Menu structure
LB000:[ZZUSER.ZZSYS]CLSETUP.DAT	Setup file
LB000:[ZZUSER.ZZSYS]COMSETUP.DAT	Line characteristics
LB000:[ZZUSER.ZZSYS]PRVSETUP.DAT	Printer setup file
LB000:[ZZUSER.ZZSYS]MSGBOARD.SYS	Messages
LB000:[ZZUSER.ZZSYS]LOGIN.INI	Login command file
LB000:[ZZUSER.ZZSYS]LOGOUT.INI	Logout command file
LB000:[ZZUSER.001002]FMSERR.MSG	FMS message file

Workstation Area Script File - WSLIST.DAT

LB000:[ZZWS]RSX11.SYS	Account file
LB000:[ZZWS]GRPLST.DAT	Group list file
LB000:[ZZUSER.ZZSYS]CLSETUP.DAT	Setup file
LB000:[ZZUSER.ZZSYS]COMSETUP.DAT	Line characteristics
LB000:[ZZWS.ZZSYS]SPSETUP.DAT	Printer hardware setup
LB000:[ZZWS.ZZDECNET]NETLINE.DAT	DECnet information

THE CLUSTER STATUS DISPLAY UTILITY

The Cluster Status Display (CSD) Utility is a tool for the Server manager to oversee the "cluster" of workstations connected to the Server, and the Server itself.

The CSD utility displays information about the status of a Server or workstation. The software is comprised of two programs: a data-gathering program named CSDEMO, and a display program named CSD. The CSD utility lets the Server manager remotely monitor the status of a given node.

The CSD utility can be found on the Workstation Registration application diskette. Copy the CSD utility into the Server's public library as you would any other shareable application.

To invoke the CSD utility from DCL, do the following:

1. Type:

   RUN LB000:[ZZCLUSTER]CSD

   The HOST: prompt appears.

2. Type the name of the node you wish to monitor, or press RETURN to display information about the local node.

3. Or, if CSD is installed, you can invoke CSD by typing the following at the DCL prompt:

   RUN CSD/COMMAND:"CSD NODE"

   where "node" is the name of the node you want to monitor.

If you get the error message "CSD -- Unable to connect to remote Server", it could be for one of the following reasons:

- The node being monitored does not have sufficient resources.
- The node being monitored is too busy to respond within a given amount of time.
- The node being monitored does not have CSDEMO installed as an application.

The following figure is an example of a CSD display.

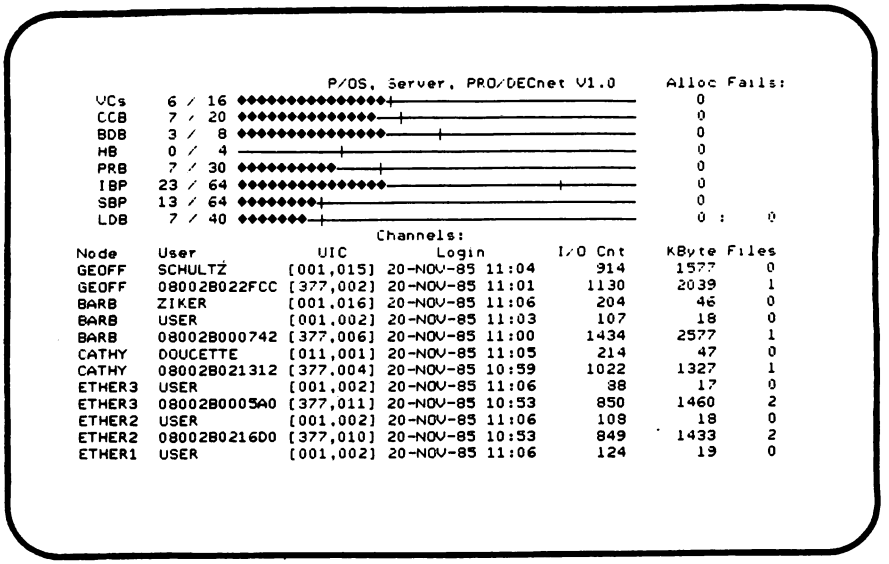

Figure 1:
CSD Display

CONTROLLING THE DISPLAY

The following keys provide control of the display:

Key	Function
H	Causes a help frame to be displayed.
S	Toggles the display of system channels.
+	Scrolls the channels up.
-	Scrolls the channels down.
<ESC>	Enters command mode. Here you can change the redisplay time for channel information by typing C=n, where n is the number of seconds. The default is 10.

The display is logically broken up into three areas, which are described below:

- Header
- Graph display
- Virtual circuit display

Header

The header displays the following information:

- The node name and address of the node being monitored
- The type of node (Server or workstation)
- The version of the P/OS Server software being executed

Graph Display

The graph portion of the display gives a numerical and visual representation of the resources being used. The graph display has the following sections:

- Name of resource
- Numerical count of resource usage
- Visual display
- Number of allocation failures

Name of Resource

The first section of the graph display, on the far left, is the name of the resource being used. The resources used have the following meaning:

Resource	Meaning
VC	Virtual Circuit. A Virtual Circuit is the logical link between a Server and a workstation that is maintained by the network. The count is the number of VCs active. The allocation failure count is the number of packets received out of sequence from all workstations that require retransmission.
CCB	Communication Control Block. A communications executive data structure used to pass requests and information for communications executive processes. Both DECnet and P/OS Server use CCBs.
BDB	Buffer Descriptor Block. A P/OS Server data structure describing a buffer that has been received or needs to be transmitted.
HB	Header Buffer. A P/OS Server data structure containing information to be appended to the start of a buffer to be transmitted.

PRB — Packet Recovery Block. A P/OS Server data structure used by the network to retransmit a packet that has been lost.

IBP — Intermediate Buffer Pool. Private secondary pool used by the Server to buffer I/O requests to or from a workstation. The value displayed is in units of 1024 bytes.

SBP — Static Buffer Pool. Private secondary pool used by the Server for long-term data structures. The value displayed is in 64-byte blocks.

LDB — Large Data Buffer. A communications executive data structure used to transmit and receive data. The LDB failure count displays two values. The first value is the number of receive LDB failures, and second value is the transmit LDB failures.

Numerical Count of Resource Usage

A numerical count of the resource usage is next to the resource name. The first number indicates the current resource usage. The next number is the total amount of the resource available for allocation. Thus, a display of 5/20 indicates that 5 of the 20 preallocated resources are in use. If a resource can be dynamically allocated, the total amount available may increase. Not all of the displayed fields are valid for a workstation, and are therefore displayed as zero.

Visual Display

The graph provides a visual display of resource usage. The bar represents the percentage of the resources in use, and the vertical marker at the end of each graph line is the maximum use of the resource.

Number of Allocation Failures

The number on the right side of each graph line is the count of allocation failures for that resource.

Virtual Circuit Display

The virtual circuit portion of the display shows who is actually using the Server.

Access to the Server occurs over CHANNELS. A channel is a logical link that is multiplexed over virtual circuits. User context is maintained on the Server by channels. Each line of the display shows one channel. A description of each field follows:

Field	Description
NODE	The name of the workstation that has a Virtual Circuit to the Server.
USER	The account name that was used to log in to the Server. For each workstation booted from the Server, a long hexadecimal user name is displayed. This is actually the DECNA hardware address. This channel provides access to the the workstation-specific area (LB001:) on the Server. The display of system channels can be disabled as described in the section Controlling the Display.
UIC	The file protection UIC that the Server maintains for each channel.
LOGIN	The date and time when the channel was created.
I/O CNT	The number of I/O requests issued over a channel.
KBYTE	The number of 1024 (1 K) bytes transferred.
FILES	The number of files open on the channel.

Part 2

PRO/Tool Kit V3.1 Installation Guide and Release Notes

Chapter 7

Installing the PRO/Tool Kit Update

BEFORE INSTALLING THE UPDATE

You cannot install the PRO/Tool Kit V3.1 update unless V3.0 of the PRO/Tool Kit is already installed on your system. Before you install the PRO/Tool Kit for the first time or update a V3.0 of PRO/Tool Kit, you should delete the Command Language application, if it is installed.

The PRO/Tool Kit contains a superset of the Command Language application that all users of the system can use in place of the Command Language application. If both applications are copied into the public library, multiple copies of components reside on the system thus wasting disk space. To conserve disk space, remove the Command Language application from user's menu systems and from the public library, if you plan to install the PRO/Tool Kit application.

INSTALLING THE PRO/TOOL KIT UPDATE

The PRO/Tool Kit Update V3.1 consists of a diskette labeled "TKUPDATEV31." To install the update on a P/OS V3.1 system, do the following:

1. Log in to the system manager's or a privileged account.

2. If PRO/Tool Kit V3.0 is not installed either in the public library or on the menu system, follow the instructions in the *PRO/Tool Kit Installation Guide and Release Notes* to install the application.

3. Choose the PRO/Tool Kit V3.0 application from the menu on which is it is installed.

4. Insert the diskette labeled "TKUPDATEV31" into one of the diskette drives.

5. Type the following command:

   @TKUPDATEV31:[UPDATE]UPDATE

6. When the installation is complete, a success message is displayed. Remove the update diskette and store it in a safe place.

If an error is encountered during the installation, an error message appears on your screen. Try to correct the problem indicated by the error message and repeat the update procedure. Use the *Command Language User's Guide* to help you interpret the message.

RECLAIMING DISK SPACE

Once you have applied the update, you can recover approximately 550 disk blocks by performing the following procedure:

> **WARNING:** If both the Command Language application and the PRO/Tool Kit are installed in the public library, you should not perform this procedure.

1. After performing the update, turn your Professional OFF and then ON.

2. Log in to the system manager's or a privileged account.

3. Choose the PRO/Tool Kit application from the menu on which it was installed.

4. Purge the files listed below by issuing the PURGE command.

```
LB:[ZZPRODCL]DCL.TSK -- PRO/DCL task
LB:[ZZPRODCL]LCT.TSK -- PRO/DCL service task
LB:[ZZPRODCL]RMD.TSK -- Resource Managment Utility
LB:[1,2]LCT.MSG      -- Message file for LCT.TSK
LB:[1,5]FDV.OLB      -- PRO/FMS-11 Form Driver
                        Library (non-debug version)
LB:[1,5]FDVDBG.OLB   -- PRO/FMS-11 Form Driver
                        Library (debug version)
```

WARNING: Do *not* purge the files until you have turned your Professional OFF then ON again. Otherwise, you will delete required files.

Chapter 8

Tool Kit Release Notes

This chapter contains release notes for Versions 3.0 and 3.1 of the PRO/Tool Kit.

ELECTRONIC RELEASE NOTES

The PRO/Tool Kit V3.1 update installation procedure automatically copies any electronic release notes to the following file on your hard disk: LB:[1,2]TOOLKITV3.DOC. Before using the PRO/Tool Kit, check that file for any last minute changes.

GRAPHIC FONTS AND THE VDM INTERPRETER

The diskettes labeled PROGRAPH2V3 and PROGRAPH3V3 contain additional GIDIS fonts and a ReGIS-to-GIDIS conversion application. If you are using the VDM interpreter (described in the *PRO/Document VDM Manual*), you should copy these fonts to the public library on the Server or on a stand-alone system. Copy *only* the system-wide components. After you copy the fonts, they do not appear in the list of library applications, but are available to GIDIS.

CORRECTIONS AND CHANGES TO PRO/FMS-11

The PRO/FMS-11 resident form driver (LB:[1,5]FDV.OLB and LB:[1,5]FDVDBG.OLB) provided with the PRO/Tool Kit V3.0 generated 20 undefined sysmbols when an application was linked against these libraries. This problem has been corrected.

HANDLING OF AST ROUTINES

The PRO/Tool Kit system library file (LB:[1,5]SYSLIB.OLB) contained problems in the handling of AST routines from the following high-level language executive calls (sometimes referred to as FORTRAN routines):

- SPAWN and SPAWNN
- SDRC and SDRCN
- VSRC and VSRCN
- CNCT and CNCTN

If your application uses these routines and includes an AST address in the parameter list, the AST routine may not be entered properly. Because of this problem, the system does *not* ignore the AST address in the xxxN version of the call.

The PRO/Tool Kit Update V3.1 corrects this problem. However, you should rebuild your application, if any of the above mentioned routines are used with an AST address. If your application used the xxxN call, you should rebuild your application regardless of whether or not an AST address was used.

CORRECTIONS TO PRO/DCL PROBLEMS

This section describes DCL-related problems that have been corrected by the V3.1 update.

- Long command lines passed through the /COMMAND: qualifier in a RUN uninstalled_task command were truncated to 24 characters. This problem has been corrected.
- When using the RUN command to execute an installed task named ...NAM, DCL would incorrectly execute the task with a task name of NAM. DCL now renames the task to NAMTn, where n is the terminal number.

- Using the qualifier /ALL with the DEASSIGN command resulted in an error message. This problem has been corrected. You may now deassign all logicals from a specific logical name table.

  WARNING: You should not DEASSIGN logicals from the SYSTEM logical name table. Doing so causes the system to operate incorrectly, or to no longer function.

- When attempting to create a directory on a write-protected diskette, a numeric error code was displayed. This error message has been replaced with the following message:

  CREATE -- Device is write-protected

- When using a language command, such as MACRO or Pascal, if a logical name was specified as an input file. DCL generated an incorrect output file name. This has been corrected.

- The SHOW MEMORY/TASK: command would crash the system with a 300/4 bugcheck, if the 26th logical unit of the task specified was assigned to a concealed logical name. This problem has been corrected.

- The SET DEFAULT command displayed an error, if the device specified did not exist. This has been corrected.

- If a ^Z (end-of-file) is entered in response to a prompt, DCL now aborts the current command and returns to prompt level or retrieves the next command from a command file.

- If an incomplete command is entered through an indirect command file, DCL now prompts the terminal for any neccessary parameters. In previous versions DCL would accept the next command line in the indirect command file as parameters necessary to make command complete.

PRO/DCL PROBLEMS AND RESTRICTIONS

SET PROTECTION Command

If multiple files are specified in a SET PROTECTION command, only the protection on the last file in the list is modified.

Use of the /EXCLUDE Qualifier

The file specification used as the argument with the /EXCLUDE qualifier on the file commands APPEND, COPY, DELETE, DIRECTORY, PURGE, RENAME, SET PROTECTION, TYPE, and UNLOCK must include a specific version number or the wildcard character (*). If you do not specify a specific version number or a wildcard, DCL ignores the /EXCLUDE qualifier and performs the specified operation on any file of that name. Although DCL displays a diagnostic message telling you to supply a version number or a wildcard, it still performs the operation on the files you wanted to exclude.

Misleading DCL Error Message

The error message "INSTALL -- Cannot install a common built with EXTSK task builder option" may sometimes appear when you are using the INSTALL command. The message can have has the following meanings:

- An attempt was made to install a common that was task built using the EXTSK task builder option. P/OS does not allow a common built with the EXTSK option to be installed in the system.
- The task image specified was not a task image file or the task image was not contiguous.

PASRES PROBLEM

If a task built with Pascal V1.2 is run on a P/OS V1.7 or later system, the task fails. The workaround is as follows:

1. Create a file called PASFIX.CMD containing the following lines:

```
;
; PASFIX.CMD
;
; This PAB command file removes some global symbols from
; PASRES.STB which can cause programs built with
; PRO/Pascal V1.2 to execute incorrectly on P/OS V1.7 and
; P/OS V3.0.  Particularly, the symbols $DDIV and $DMUL
; in PASRES will override those in SYSLIB, preventing the
; extraction of those symbols from SYSLIB.
;
;
,/-SP,LB:[1,5]PASRES=LB:[1,5]PASRES.STB
/
GBLXCL  = $DDIV
GBLXCL  = $DMUL
GBLXCL  = $DLN
GBLXCL  = $PXII
GBLXCL  = $PXRI
GBLXCL  = $PXRR
GBLXCL  = $PXDI
GBLXCL  = $PXDD
//
```

2. Type:

```
$ RUN $PAB
PAB>@PASFIX
```

   This replaces your PASRES.STB file with a new file which does not contain the offending symbol definitions.

3. Re-taskbuild the program

PRO/FED FORMS EDITOR (PROFED)

To run PROFED in terminal emulation, your Professional must be set to "VT200, 7-bit controls." Use the "General setup" option on the Setup Menu to choose this terminal type.

To run PROFED using a VT200 series terminal connected to your host system or your Professional, set the terminal to "VT200 mode,

7-bit controls." If you want to use the DEC Multinational Character Set, then you must also set the host to 8-bit mode.

On RSX systems, use the command:

```
SET /EBC=TI:
```

On VAX/VMS systems, use the command:

```
SET TERMINAL/EIGHT_BIT
```

FRAME DEVELOPMENT TOOL (FDT) RESTRICTIONS

When using the Frame Development Tool (FDT) on VT200 series terminals, you must set the terminal to VT100 mode.

Although the WINDOW command is documented in the *Tool Kit Reference Manual*, the Frame Development Tool (FDT) does not support it. If you attempt to use the WINDOW command, FDT displays an illegal command message.

APPLICATION INSTALL PROBLEMS

Using APPL$DST: in an EXECUTE Line

On V3.0 of P/OS, using APPL$DST: in an EXECUTE line causes an error during application installation. Normally the line would appear as follows:

```
EXECUTE APPL$DST:X.TSK/INS
```

The workaround is to modify this line to read:

```
EXECUTE APPL$DST:X.TSK /INS
(note the space before /INS)
```

While this problem has been corrected in V3.1, including the space before /INS ensures that the application installs correctly on both V3.0 and V3.1 of P/OS.

Installation Files with No INSTALL Lines

If an application installation file (.INS or .INB) contains a RUN line, but does not contain an INSTALL line, the application activator reports an error. To solve this problem, INSTALL the task that you want to run. Use the /NOREMOVE qualifier if the task is already installed.

APPLICATION DISKETTE BUILDER

The Application Diskette Builder (ADB) provided in Version 3.0 does not support the .INB installation command file format. The .INB file format is necessary for those applications that are designed to take advantage of Version 3.0-specific functions, such as shared application components. ADB only supports the older .INS installation command file format. Note that an application with a .INS command file will function correctly on both Version 2.0 and Version 3.0 systems.

Since P/OS Version 3.0 provides features that allow an application's components to be shared by all users and/or workstations, it is suggested that the application developer use the following guidelines to build an application that efficiently uses system disk space.

- Initialize the application diskette(s).
- Create an application directory on the application diskette.
- Copy the installation command file (.INB file) to the application diskette. The installation command filename must match the application directory name on the diskette.
- Copy the application components to the diskette(s) into those directories described as follows:

  /USER components

  If no directory is included in the FILE line for the component, place the component in the application directory on the appropriate application volume. If a directory is included in the FILE line, place the component in the specified directory on the application diskette(s).

/NETWORK components

Place the components that include the /NETWORK qualifier in the application directory on the appropriate volume.

/CLUSTER components

If no directory is included in the FILE line for the component, place the component in the application directory on the appropriate application volume. If a directory is included in the FILE line, place the component in the specified directory on the application diskette(s).

- Application Components File protection suggestions:

When an application component file is copied from the diskette to a hard disk, the file protection is modified to ensure SYSTEM and GROUP accessors have read and delete privileges. No other file protection characteristics are modified, but the owner UIC is set to correspond to that of the installer.

DIGITAL recommends that the following file protection be applied to all read only files on an application diskette:

(SYSTEM:R,OWNER:R,GROUP:R,WORLD:R)

Files that are designed to allow read and write access should have a minimum of SYSTEM:R and OWNER:RWE access rights.

MULTIPLE TERMINAL CONFIGURATION APPLICATION

The Multiple Terminal Configuration application provides the system manager with a mechanism to notify P/OS that additional terminals exist that require menu services. A maximum of three additional terminals can be added. They can be connected to the printer port or a QUAD SLU line. The terminal's communication baud rate can also be specified. The terminal must be VT200 series compatible and should be set to "VT200 mode, 8-bit controls." This application is located on the TOOLKIT diskette.

Several restrictions apply when a multiterminal environment is active on P/OS V3.0 systems.

- Additional memory may be required for adequate performance, depending on the applications executed.
- Additional memory may need to be allocated to the system's secondary pool. (See the section Increasing Secondary Pool Size in Chapter 3 of this manual.)
- Not all applications will function correctly in a multiterminal environment. Those that function correctly will minimally require modifications to their installation command files. (For more general application restrictions, press HELP after entering the multiterminal configuration application. For specific details concerning how to modify the PRO/Tool Kit application, see the next section.

PRO/TOOL KIT ON MULTIPLE TERMINALS

The PRO/Tool Kit application can be modified so that it is possible to execute the application simultaneously on multiple terminals. This is done by modifying the application installation file. As the PRO/Tool Kit is a public application, there is a template installation command file (.INB) in the library. You can modify this template .INB file in the library or modify the per-user copy of the .INB file that was copied during the "Install from library" process. If the .INB file in the library is modified, then all users who install the PRO/Tool Kit from the library can run the application concurrently on more than one terminal.

To modify the PRO/Tool Kit's installation command file in the library, do the following:

1. Enter the PRO/Tool Kit application.
2. Using your favorite editor, edit the application installation file APPL$NETWORK:ZZPUBAP.INB as explained in the section Editing the Application Installation File.
3. Edit the file startup command file APPL$NETWORK:START.CMD as explained in the section Editing the Startup Command File.

To modify the PRO/Tool Kit's application installation command file on a per-account basis, do the following:

1. Log in to the account for which you want to modify the PRO/Tool Kit.
2. Enter the PRO/Tool Kit application.
3. Using your favorite editor, edit the file DCLAPPL$DIR:ZZAPnnnnn.INB as explained in the section Editing the Application Installation File.
4. Edit the file DCLAPPL$DIR:START.CMD as explained in the section Editing the Startup Command File.

Editing the Application Installation File

Change all INSTALL lines to include the /NOREMOVE switch. For example, change the line that reads:

```
INSTALL [ZZPRODCL]PRODCL.TSK/TASK/CLUSTER
```

to read:

```
INSTALL [ZZPRODCL]PRODCL.TSK/TASK/NOREMOVE/CLUSTER
```

Note that you do not have to put the /NOREMOVE switch on lines that have the /LIBRARY qualifier instead of the /TASK switch.

If you are modifying a per-user installation command file, you may comment out any utilities that are not (or seldom) used. Doing so will save system resources. Remember that you can always run a utility (such as DMP) by using the command RUN $utl where utl is the utility name.

Editing the Startup Command File

Change all INSTALL commands to include the /NOREMOVE qualifier. For example, change the line that reads:

```
INSTALL LB:[ZZDECNET]NFT/TASK=...NFT
```

to read:

```
INSTALL LB:[ZZDECNET]NFT/TASK=...NFT/NOREMOVE
```

Add the /NOREMOVE qualifier to each line that includes a DCL INSTALL command.

DISABLING THE DCL EXIT COMMAND

You can disable the EXIT command by defining the logical name DCL$DISABLE$EXIT and equating it to the first character of the terminal name and unit number of the terminal. For example, to disable the EXIT command while running the PRO/Tool Kit on TT1: type:

```
DEFINE DCL$DISABLE$EXIT T1
```

If the EXIT command is entered, DCL will display the error "Illegal command."

If the PRO/Tool Kit application is running on multiple terminals simultaneously, you may disable DCL from exiting on each of the terminals. To do this create the logical name DCL$DISABLE$EXIT in the SYSTEM logical name table and equate it to the terminals that you want the EXIT command to be disabled on. The equivalence name is created in the form of Tn,Tn... .

For example, the following command line will disallow the EXIT command on any DCL application (either Command Language or the PRO/Tool Kit) executing on terminals TT1: and TT3: (SLU Port 0):

```
DEFINE/SYSTEM DCL$DISABLE$EXIT T1,T3
```

SINGLE APPLICATION SYSTEM

The Single Application System (SAS) provides a base for applications that must run without a hard disk subsystem. In general, these are applications that do not need the full P/OS Hard Disk System functionality, but do need device and/or executive support of P/OS V3.0.

The major component of a SAS is a bootable diskette containing the operating system components and an application script. This diskette can also contain the application, which may span multiple diskettes.

Single Application System Components

A single application system consists of one or more diskettes which contain the operating system, a script processor, the application script, and the application. Certain components are required, others are optional, depending on application use.

Required Components

The following components *must* reside on the bootable diskette in directory [ZZSYS].

1. **[ZZSYS]POS.SYS** is the P/OS system image. It can be found on the PRONVR diskette. This system image contains no support for DECnet.

2. **[ZZSYS]SASCOM.TSK** is the message file for the script processor. It can be found on the PRONVR diskette. The source for this file is SASCOM.MAC, and can be found on the Application Diskette Builder diskette, in directory TOOLKIT:[SAS]. Instructions for building SASCOM.TSK are contained in the source.

3. **[ZZSYS]STARTUP.TSK** is the script processor. It can be found on the PRONVR diskette.

4. **[ZZSYS]SAS.COM** is the application-specific script file.

Optional Components

1. **PROLOD.TSK** is the server task used for LOAD and UNLOAD commands. It can be found in LB:[ZZSYS].

2. **Device drivers** for DECTouch, the Communications port, and TMS can be found in LB:[ZZSYS] or on the PRODRIVERS diskette.

3. **YQAUTO.TSK** is the task that configures additional terminal driver Quad SLU units into the system. This will be done if YQAUTO.TSK is on the boot diskette in directory [ZZSYS].

4. **Language OTSs and message files** are needed if the application is written in a high-level language. They can be found in LB:[ZZSYS] and LB:[1,2].

5. **POSRES.TSK** is needed if the application uses help, menu, or message services. It can be found in LB:[ZZSYS].

6. **SUMFBI.TSK** is the server for initializing diskettes or hard disks. It can be found in LB:[ZZSYS].

7. **CREDEL.TSK** is the server for creating or deleting directories. It can be found in LB:[ZZSYS].

8. **SUMPBB.TSK** is the server for PROVOL calls. It can be found in LB:[ZZSYS].

9. **ALPH00.TSK** is the font common for GIDIS. It must be installed before GDSCOM.TSK. It can be found in LB:[ZZSYS].

10. **GDSCOM.TSK** is the graphics portion of the terminal subsystem. It must be installed if any graphics are to be used. When this common (or any common named $GIDIS) the script processor enables the graphics subsystem. GDSCOM.TSK can be found in LB:[ZZSYS].

11. **CGLFPU.TSK** is the CORE Graphics Library. It can be found in LB:[ZZSYS].

Script File Commands

All script file commands must be uppercase.

The following sections, which describe the application script commands, use these conventions:

Convention	Meaning
file_specification	A fully qualified file name (device, directory, and file name)
dd:	A device name
ddn:	A device name and unit number
logical_name	A logical name that is to be used by the application
equivalence_string	The string to be assigned to a logical name

INSTALL

The INSTALL command is used to install a task or common. The /FIXED qualifier specifies that the task or common is to be fixed in memory. The /READ_ONLY qualifier specifies that the common be installed for read only access.

Format:

```
INSTALL file_specification[/FIXED][/READ_ONLY]
```

LOAD

The LOAD command loads a device driver into memory. PROLOD.TSK must be installed from diskette before using the LOAD command. Both the driver's .TSK and .STB files must be in directory [ZZSYS] on the diskette in drive 1 when the LOAD command is issued.

Format:

```
LOAD dd:
```

The device drivers can be found in LB:[ZZSYS] or PRODRIVERS:[ZZSYS].

DTDRV.*	DECTouch driver
XKDRV.*	Communications Port driver
XTDRV.*	TMS driver

MOUNT

The MOUNT command requests the user to place a particular diskette in a specified drive.

Format:

```
MOUNT ddn:volume_label
```

UNLOAD

The UNLOAD command removes a previously loaded device driver from memory. PROLOD.TSK must be installed from diskette before using the UNLOAD command. Both the driver's .TSK and .STB files must be in directory [ZZSYS] on in the diskette in drive 1 when the UNLOAD command is issued.

Format:

```
UNLOAD dd:
```

ASSIGN

There are four forms of the ASSIGN command. They are mainly used if your application uses POSRES.

ASSIGN HELP

This command creates the logical APPL$HLP. This logical is used by the POSRES help routines.

Format:

ASSIGN HELP file_specification

ASSIGN LOGICAL

This command assigns an equivalence string to a logical name.

Format:

ASSIGN LOGICAL logical_name "equivalence_string"

ASSIGN MENU

This command creates the logical APPL$MENU. This logical is used by the POSRES menu routines.

Format:

ASSIGN MENU file_specification

ASSIGN MESSAGE

This command creates the logical APPL$MSG. This logical is used by the POSRES RDMSG routine.

Format:

ASSIGN MESSAGE file_specification

RUN

The RUN command starts the application. The script processor will not process any commands after the RUN line is encountered.

Format:

RUN task_name

Comments

Comment lines begin with either a "!" or ";" character as the first nonblank character on the line. Comments are not allowed on command lines.

Building a Single Application System (SAS) Diskette

This section describes the steps needed to build a SAS diskette.

1. Enter the Command Language or PRO/Toolkit application.
2. Initialize the diskette.
3. Copy the required components to [ZZSYS].
4. Issue the command:

   RUN $LCT/COMMAND="MMV PBB DZn:[ZZSYS]POS.SYS

   This makes the diskette bootable.
5. Copy any optional components to the diskette.
6. Copy the application components to the diskette.

Guidelines for Building Single Application Systems

All Applications

The following guidelines apply to all applications:

1. For compatibility, all device unit numbers, *except* in the MOUNT command, should be justified to three digits. For example, use

   INSTALL DZ001:[ZZSYS]PROLOD.TSK

   rather than

   INSTALL DZ1:[ZZSYS]PROLOD.TSK

The MOUNT command is incompatible with standard P/OS device name usage.

2. The logicals APPL$DIR and SY000:, and the default directory context are not set up by the application script processor. If the application requires these logicals, it should create them with the ASSIGN LOGICAL command. If the application requires a default directory context, it should set the default.

Multiple Diskette Applications

The following guidelines apply to multiple diskette applications.

1. It is the application script processor's responsibility to ensure that diskettes are not removed from the drives (unless requested by a MOUNT command) until the RUN command is encountered. If the application requires that the diskettes remain in place, it should open a file on each diskette.

2. When a diskette is removed, all tasks and commons installed from that diskette are removed, unless they were installed with the /FIXED qualifier. If a task with disk-resident overlays was installed from the diskette with the /FIXED qualifier, overlay loads will fail.

3. All device driver .TSK and .STB files must be on DZ1: when the LOAD or UNLOAD command is issued.

Memory Usage and Checkpoint File

It is the application developer's responsibility to determine if the memory usage of the application requires a checkpoint file, and to allocate the checkpoint file appropriately.

Sample Application Script File

The following script file shows an application that uses POSRES, graphics, and the Communications Port driver.

```
! Install Graphics Components
!
INSTALL DZ001:[ZZSYS]ALPH00.TSK/FIXED
INSTALL DZ001:[ZZSYS]GDSCOM.TSK/FIXED
INSTALL DZ001:[ZZSYS]CGLFPU.TSK/READ/FIXED
!
! Load Communications Port Driver
!
INSTALL DZ001:[ZZSYS]PROLOD.TSK
LOAD XK:
!
! This application uses POSRES.
!
INSTALL DZ001:[ZZSYS]POSRES.TSK/FIXED
!
! The application itself resides on a second diskette with the
! volume label "SASAPPL".  Since all components from the bootable
! diskette are now either fixed in memory or no longer needed,
! the next diskette will replace the bootable diskette in drive 1.
!
MOUNT DZ1:SASAPPL
!
! Install the application task
!
INSTALL DZ001:[APPLDIR]MYAPPL.TSK
!
! Assign the help, menu, and message logicals.
!
ASSIGN HELP DZ001:[APPLDIR]MYAPPL.HLP
ASSIGN MENU DZ001:[APPLDIR]MYAPPL.MNU
ASSIGN MESSAGE DZ001:[APPLDIR]MYAPPL.MSG
!
! Set up an application directory logical.
!
ASSIGN LOGICAL APPL$DIR "DZ001:[APPLDIR]"
!
! Set up an application specific logical.
!
ASSIGN LOGICAL USER$DIRECTORY "DZ001:[USERDIR]"
!
! Now run it
!
RUN MYAPPL
```

AIS-PL/I V3.0

This non-DIGITAL application requires the PRO/Tool Kit. You must modify the application before you can install and use it on V3.0 of P/OS. Do the following:

1. Replace the PLISTART.CMD file supplied with the kit with the following:

```
INS APPL$DIR:PLI
INS LB:[1,5]PLIRES
```

2. The system manager must copy the following files using PRO/Tool Kit:

```
COPY AISPLI:[AISPLI]*.OLB,PLIRES.* LB:[1,5]
COPY AISPLI:[AISPLI]*.MSG LB:[1,2]
COPY AISPLI:[AISPLI]PLI.TSK APPL$DIR:
COPY AISPLI:[AISPLI]PLI.CMD LB:[1,5]
```

3. The user must copy the following files using PRO/Tool Kit:

```
COPY AISPLI:[AISPLI]TRYOUT.* DW1:[USERFILES]
APPEND AISPLI:[AISPLI]PLISTART.CMD APPL$USER:START.CMD
APPEND AISPLI:[AISPLI]PLIEXIT.CMD APPL$USER:EXIT.CMD
```

Chapter 9

Corrections to Tool Kit Documentation

The following sections correct errors in the Tool Kit documents.

PRO/TOOL KIT INSTALLATION GUIDE AND RELEASE NOTES

The Font Editor descibed in the release notes is not provided with the PRO/Tool Kit.

PRO/TOOL KIT COMMAND LANGUAGE AND UTILITIES GUIDE

The LINK command allows the /FAST_MAP qualifier to be specified either as an argument to the /CODE: qualifier or as an output file qualifier. Use FAST_MAP only as an argument to the /CODE: qualifier to ensure that command files will operate properly on an RSX-11M/PLUS system.

> **NOTE:** V3.0 of the PRO/Tool Kit does not allow FAST_MAP as an argument to /CODE: qualifier.

PRO/FMS-11 DOCUMENTATION SUPPLEMENT

Using Memory-Resident Forms

If you want to use memory-resident forms with the Form Driver libraries, you must include a reference to the Form Driver data module for the particular library you are linking against, in addition to the object module that contains your forms.

For example, if you are using BASIC-PLUS-2, modify the .ODL file described in Section 3.2.2. Then modify the line that reads:

FDV: .FCTR LB:[1,5]HLLBP2-LB:[1,5]FDV/LB

to read

FDV: .FCTR LB:[1,5]HLLBP2-LB:[1,5]FDV/LB:FDVDAT-LB:[1,5]FDV/LB-FORMS

where FORMS is the object module created with the Forms utility containing your forms.

LOCATING "LOST" FILES

A privileged user can search a volume for "lost" files by using the VERIFY command procedure. Lost files are files that are not in any directory and cannot be referenced by filename. A list of the files is produced, and will be placed into the "lost file directory" [1,3] on the associated volume and directory.

To invoke the VERIFY command procedure type:

@VERIFY

If your system includes multiple volumes, you can search a particular volume for lost files by including the device name in the verify command line.

To invoke the VERIFY procedure to find lost files on a volume other than boot device type:

$ @VERIFY DDnnn:

where DDnnn: is the device name of the volume that you want to scan for lost files.

Nonprivileged users should not invoke the VERIFY command procedure, as privilege violations will prevent any lost files from being placed into the lost file directory.

IAS/RSX-11 ODT REFERENCE MANUAL SUPPLEMENT

Use the following instructions to redirect ODT output in place of the method described in Section 5.0 of the *IAS/RSX-11 ODT Reference Manual Supplement*.

To redirect ODT output to another terminal configured in the system, define a user level logical named CL000: and equate it to the terminal to that you want the output to be redirected. You must do this before executing the task built with ODT. For example, issuing the following DCL command will redirect ODT output to the printer port.

```
$ DEFINE CL000 TT002:/USER
```

POSITIONAL DEVICE INTERFACE PROGRAMMER'S MANUAL

Read Completion Mode

A description of the Read Completion Mode characteristic which can be set with the Set Characteristic (SETCHR) call is missing from the documentation. The description for this characteristic is provided below:

```
SETCHAR RMODE -- Set Read Mode Completion characteristic

Characteristic number:  136

Data Value:  1-Word Integer
```

The Set Read Mode Completion characteristic specifies which button events trigger a read completion. In the default state, a read event operation triggers completion on both down and up button states. Alternatively, you can set the read to complete only on a button down event.

Data Value	Read Mode
0	Both down and up button states complete the read operation. (Default)
1	Only the button down state completes the read operation.

Read Raw Data Call

The read raw data (REDDEV) call listed in the table on page 3-10 is not implemented.

Currently, the Positional Device Interface only supports the DECTouch driver.

Chapter 10

Tool Kit Languages--Installation and Documentation Corrections

INSTALLING PRO/TOOL KIT LANGUAGES ON P/OS V3.0

Because of changes and enhancements to P/OS V3.0 to provide P/OS Server functionality and support for multiple hard disks, some PRO/Tool Kit languages released prior to P/OS V3.0 require modification to their installation and startup procedures. In most cases, these modifications are made to correct references to the device DW001:.

The following PRO/Tool Kit languages install correctly on P/OS V3.0 and are not described here:

- PRO/Tool Kit DIBOL V1.7
- PRO/Tool Kit COBOL-81 V2.3

The following PRO/Tool Kit langauages need modifications to installation procedures to install correctly on P/OS V3.0

- PRO/Tool Kit FORTRAN-77 V5.0
- PRO/Tool Kit FORTRAN-77 DEBUG V1.0
- PRO/Tool Kit Pascal V1.2
- PRO/TOOKIT BASIC-PLUS-2 V2.2

Remaining sections in this chapter describe the following for each language requiring modification:

- Installation instructions
- Modifications to installation and/or startup command files
- Corrections to language documentation.

NOTE: Before modifying the distribution diskettes, you should copy the diskettes that need modification. Perform the modifications on the copied diskette, so that a backup diskette is available if you encounter an error.

PRO/TOOL KIT FORTRAN-77 V5.0

To install the PRO/Tool Kit FORTRAN-77 V5.0 language on a P/OS V3.0 or later system, perform the following:

1. Choose the PRO/Tool Kit from the menu on which it was installed.
2. Modify the file [INSTALL]INSTALL.CMD as shown in the next section. The file is on the diskette labeled BL-Y472A-BH PRO/Tool Kit F-77 V5.0.
3. While logged in to the system manager's or a privileged account, follow the instructions in Chapter 2 in the *PRO/Tool Kit FORTRAN-77 Installation Guide and Documentation Supplement* to install FORTRAN-77.

PRO/Tool Kit F-77 Installation Command File

Modified lines start with an asterisk (*). The modified INSTALL.CMD is shown below:

```
  .;     INSTALL.CMD: - PRO/Tool Kit FORTRAN-77
  .;     COPYRIGHT (C) - 1986 DIGITAL EQUIPMENT CORP.
  .;                     MAYNARD, MA. 01754
  .;
  .ENABLE SUBSTITUTION
  .ENABLE GLOBAL
  .TRANSLATE APPL$DIR
  SET DEF '<EXSTRI>'
  .TESTFILE       PF7.TSK
  .IF             <FILERR> = 1 .GOTO UPDATE
  .;
  .; Initial installation
  .;
  .TESTFILE       START.CMD
  .IF             <FILERR> <> 1 .GOTO COP
  .;
  .; If START.CMD already exists, append to it
  APPEND DZ1:[INSTALL]START.CMD START.CMD
  .TRANSLATE APPL$DIR
  APPEND DZ1:[INSTALL]EXIT.CMD EXIT.CMD
  .GOTO CON
  .COP:
  .;
  .; Else copy START.CMD to be START.CMD
  COPY DZ1:[INSTALL]START.CMD START.CMD
  COPY DZ1:[INSTALL]EXIT.CMD EXIT.CMD
  .CON:
  .UPDATE:
* .TESTFILE DW1:[0,0]PROF77IVP.DIR
  .IF             <FILERR> <> 1 CREATE/DIR DW1:[PROF77IVP]
  .TRANSLATE APPL$DIR
  SET DEF '<EXSTRI>'
  COPY DZ1:[PROF77]*.* *.*
  PURGE PF7.TSK
  SET DEF [001005]
  COPY DZ1:*.* *.*
  PURGE PROF77.*
* SET DEF DW1:[PROF77IVP]
  COPY DZ1:*.* *.*
  PURGE *.*
```

Corrections to Documentation

There are no changes to the documentation.

PRO/TOOL KIT FORTRAN-77 DEBUG V1.0

To install PRO/Tool Kit FORTRAN-77 DEBUG V1.0 on a P/OS V3.0 or later system perform the following.

1. Choose the PRO/Tool Kit from the menu on which it was installed.

2. Modify the file [INSTALL]INSTALL.CMD (found on on the diskette labeled BL-Z254A-BH PRO/Tool Kit F77/DEBUG V1 RX50) with the modifications listed in section Modifying the DEBUG Installation Command File.

3. Modify the file [INSTALL]DBGVER.CMD (found on the diskette labeled BL-Z254A-BH PRO/Tool Kit F77/DEBUG V1 RX50) with the modifications listed in section Modifying the DEBUG IVP Command File.

4. While logged in to the system manager's or a privileged account, follow the instructions listed in Chapter 1 of the *Professional Tool Kit FORTRAN-77 DEBUG Installation Guide and Documentation Supplement* to install FORTRAN-77 DEBUG V1.0.

Modifying the DEBUG Installation Command File

Modified lines start with an asterisk (*). The modified INSTALL.CMD is shown below:

```
;
;       F77 DEBUG / PROFESSIONAL INSTALLATION PROCEDURE
;
.;      INSTALL.CMD: - PRO/Tool Kit FORTRAN-77 DEBUG
.;      COPYRIGHT (C) - 1983 DIGITAL EQUIPMENT CORP.
.;      MAYNARD, MA. 01754
.;
.ENABLE SUBSTITUTION
.ENABLE GLOBAL
.SETS SAVDIR <DIRECT>
```

```
  .TESTFILE LB:[0,0]F77DBG.DIR
  .IF           <FILERR> <> 1 CREATE/DIR LB:[F77DBG]
  .TESTFILE LB:[0,0]001002.DIR
* .IF           <FILERR> <> 1 CREATE/DIR LB000:[001002]
  .TESTFILE LB:[0,0]001005.DIR
* .IF           <FILERR> <> 1 CREATE/DIR LB000:[001005]
  .TRANSLATE APPL$DIR
  SET DEF '<EXSTRI>'
  .;
  .; Initial installation
  .;
  .TESTFILE     START.CMD
  .IF           <FILERR> <> 1 .GOTO COP
  .;
  .; If START.CMD already exists, append to it
  ;
  APPEND DZ1:[INSTALL]START.CMD START.CMD
  APPEND DZ1:[INSTALL]EXIT.CMD EXIT.CMD
  .GOTO CON
  .COP:
  .;
  .; Else copy START.CMD to START.CMD
  ;
  COPY DZ1:[INSTALL]START.CMD START.CMD
  COPY DZ1:[INSTALL]EXIT.CMD EXIT.CMD
  .CON:
  ;
  ;             Create directory for IVP files and copy them
  ;
  SET DEF [F77DBG]
* COPY DZ1:*.* LB000:*.*
* PURGE LB000:MACTST.MAC,MACTST.CMD,MACTST.MST,DBGMAC.CMD
  ;
  ;             Copy debugger task
  ;
  .TRANSLATE APPL$DIR
  SET DEF '<EXSTRI>'
  COPY DZ1:[001005]F77DBG.TSK *.*
  PURGE F77DBG.TSK
  ;
  ;             Copy debugger kernel
  ;
  SET DEF [001005]
* COPY DZ1:F77DBG.OBJ LB000:*.*
* PURGE LB000:F77DBG.OBJ
```

```
  ;
  ;            Copy debugger help file
  ;
  SET DEF [001002]
  COPY DZ1:[001005]F77DBG.HLP LB000:*.*
  PURGE LB000:F77DBG.HLP
  ;
  ;            Run F77 DEBUG installation verification procedure
  ;
  @DZ1:[INSTALL]DBGVER
  ;
  ;            Delete installation verification files
  ;
* DEL LB000:[F77DBG]MACTST.*;*,DBGMAC.CMD;*
  ;
  SET DEF 'SAVDIR'
```

Modifying the DEBUG IVP Command File

Modified lines start with an asterisk (*). The modified DBGVER.CMD file is shown below:

```
  .;
  .;           Compile and link the DBGMAC program
  .;
* SET DEF LB000:[F77DBG]
  MAC MACTST/ENA:DEBUG
  LINK  @DBGMAC
  .IFINS MACTST  REM MACTST
  INS MACTST/TASK=MACTST
  .;
  .;           Install the appropriate debugger
  .;
  .IFINS F77DBG  REM F77DBG
  INS APPL$DIR:F77DBG/TASK=F77DBG
  ;
  ;      Starting execution of Installation Verification program...
  ;
  ;  When the DBG> prompt appears, type: @MACTST
  ;  When the DBG> prompt appears again, type: ctrl-Z
  ;
  RUN MACTST
  ;      Installation Verification program has been run...
  ;      Comparing output...
  .SETF SUCC
  .OPENR #0 MACTST.LOG
  .IF <FILERR> NE 1 .GOTO ERROR0
```

```
.OPENR #1 MACTST.MST
.IF <FILERR> NE 1 .GOTO ERROR1
.;
.COMPAR:
.READ #0 LOGREC
.IFT <EOF> .GOTO LAST
.IF <FILERR> NE 1 .GOTO ERROR0
.;
.READ #1 MSTREC
.IFT <EOF> .GOTO NOTEQL
.IF <FILERR> NE 1 .GOTO ERROR1
.;
.IF LOGREC EQ MSTREC .GOTO COMPAR
.GOTO NOTEQL
.;
.LAST:
.READ/END=EQUAL #1 MSTREC
.IFT <EOF> .GOTO EQUAL
.IF <FILERR> NE 1 .GOTO ERROR1
.;
.NOTEQL:
.;
.;            The installation verification failed
.;
;             F77 DEBUG Installation Verification Failed
.GOTO DONE
.;
.EQUAL:
.;
;             The installation verification was successful
;
;             F77 DEBUG Installation Verification Complete
.SETT SUCC
.GOTO DONE
.;
.ERROR0:
;             Error occurred opening file MACTST.LOG
.GOTO DONE
.;
.ERROR1:
;             Error occurred opening file MACTST.MST
.;
.DONE:
.CLOSE #0
.CLOSE #1
.;
.IFT SUCC .GOTO EXIT
```

```
;            ***** F77 DEBUG Installation aborted *****
;
.EXIT:
;
.;           End of F77 DEBUG installation verification
```

Corrections to Documentation

The following corrections apply to the *Professional Tool Kit FORTRAN-77 DEBUG Installation Guide and Documentation Supplement* in order to use FORTRAN-77 DEBUG V1.0 in a P/OS V3.0 or later system.

On page 1-3 change the line that reads

INSTALL [ZZSYS]F77DBG.TSK/TASK

to one of the following:

If you are using an .INS application installation file, change the line to

INSTALL [ZZPROCDCL]F77DBG.TSK/TASK

If you are using an .INB application installation file, change the line to

INSTALL [ZZPROCDCL]F77DBG.TSK/CLUSTER

PRO/TOOL KIT PASCAL V1.2

To install the PRO/Tool Kit Pascal V1.2 on a P/OS V3.0 or later system, perform the following:

1. Choose the PRO/Tool Kit from the menu on which it was installed.

2. Modify the file [INSTALL]INSTALL.CMD (on the diskette labeled BL-X907B-BH PRO/Tool Kit Pascal V1.2 1/2) with the modifications listed in section Modifying the Installation Command File.

3. Modify the file [ELEMENTED]ELEMENTED.CMD (on the diskette labeled BL-X908B-BH PRO/Tool Kit Pascal V1.2 2/2) by deleting the line that reads:

   ASG = LB:34:35:37

4. While logged in to the system manager's or a privileged account, install PRO/Tool Kit Pascal V1.2 according to the instructions in Chapter 3 of the *Professional Developer's Tool Kit Pascal Installation and Release Notes* .

5. After the installation completes, please refer to section POSRES Problem in Chapter 8 of this manual about re-linking the Pascal symbol file to remove references to $MUL and $DIV.

PRO/Tool Kit Pascal V1.2 Installation Command File

Modified lines start with an asterisk (*). The modified INSTALL.CMD file is shown below:

```
;
; Pascal Language Installation Procedure
;
.ENABLE QUIET
.; This command procedure should always reside in
.; DZ1:[INSTALL]INSTALL.CMD
.;
.; Determine if this is an installation or an update
.ENABLE SUBSTITUTION
.TRANSLATE APPL$DIR
.TESTFILE '<EXSTRI>'PASSTART.CMD
.IF <FILERR> <> 1 APPEND DZ1:[INSTALL]ST.CMD APPL$DIR:START.CMD
.TESTFILE '<EXSTRI>'PASSTART.CMD
.IF <FILERR> <> 1 APPEND DZ1:[INSTALL]EX.CMD APPL$DIR:EXIT.CMD
COPY DZ1:[INSTALL]PASSTART.CMD APPL$DIR/REPLACE
.;
.; Copy the Pacal compiler
COPY DZ1:[PROTKP]*.* APPL$DIR/REPLACE
.;
.; Look for the second disk
.REPT:
.TESTFILE DZ2:[0,0]PROTKP2.DIR
.IF <FILERR> = 1 .GOTO GOTIT
```

```
  .ASKS Q Please Mount "PROPascal2" IN DISKETTE2
  .GOTO REPT
  .GOTIT:
  .;
  .; Copy the library files
  COPY DZ2:[1,5]*.* LB:[1,5]/REPLACE
  COPY DZ2:[1,2]*.* LB:[1,2]/REPLACE
  .;
  .; Try the IVP
  .TRANSLATE APPL$DIR
  @'<EXSTRI>'PASSTART REM
  @'<EXSTRI>'PASSTART INS
  .TESTFILE DW1:[0,0]ELEMENTED.DIR
  .IF <FILERR> <> 1 CREATE/DIR DW1:[ELEMENTED]
* COPY DZ2:[ELEMENTED]*.* DW1:[ELEMENTED]/REPLACE
  SET DEF DW1:[ELEMENTED]
  .DISABLE QUIET
  ; Compiling the Installation Verification Program
  ;   This will take about 10 minutes
  PAS ELEMENTED
  ; Building the Installation Verification Program
  LINK @ELEMENTED
  .TESTPARTITION CGLFPU
  .SETS RESULT "'<EXSTRI>'"
  .PARSE RESULT ",,,," FIRST SECOND THIRD FOURTH FIFTH
* .IF SECOND = "" INSTALL LB:[ZZSYS]CGLFPU
  ; Executing the Installation Verification Program
  RUN ELEMENTED
  .IF SECOND = "" REMOVE/REGION CGLFPU
  ; Installation complete
```

Corrections to Documentation

There are no changes to the documentation.

PRO/TOOLKIT BASIC-PLUS-2 V2.2

To install PRO/Tool Kit BASIC-PLUS-2 V2.2 on P/OS V3.0 or later, perform the following:

1. Choose the PRO/Tool Kit from the menu on which it was installed.

2. Modify the installation command file [INSTALL]INSTALL.CMD (found on the diskette labeled BL-A136A-BH PRO/TK BP2 V2.2, volume label PROBP2) as described in section Modifying the Installation Command File.

3. Modify the startup command file [INSTALL]BP2STR.CMD (found on the diskette labeled BL-A136A-BH PRO/TK BP2 V2.2, volume label PROBP2) as described in section Modifying the Startup Command File.

4. While logged in to the system manager's or a privileged account, follow the instructions in Chapter 2 of the *PRO/Tool Kit Basic-Plus-2 Installation Guide and Supplement* to install BASIC-PLUS-2.

Modifying the Installation Command File

Modified lines start with an asterisk (*). The modified INSTALL.CMD file is shown below:

```
    .ENABLE QUIET
    .ENABLE SUBSTITUTION
    CLEAR
    .DISABLE QUIET
;   ****************************************************
;   *                                                  *
;   *    INSTALLATION FOR PRO/Tool Kit BASIC-PLUS-2    *
;   *                 VERSION 2.2                      *
;   *                                                  *
;   ****************************************************
;
; Please verify that:
;        1) the diskette labeled PROBP21 is in drive 1.
;        2) the diskette labeled PROBP22 is in drive 2.
;
; NOTE:
;        This procedure will delete all of the files in the
;        [PROBP2] directory on BIGVOLUME:.
;
;        This procedure will also purge [001002]BP2*.HLP,
;        [001002]BP2ERR.ERR, [001005]BP2*.*, and
;        [001005]PBFSML.* on BIGVOLUME.
;
;        Before continuing this installation, please move to
```

```
;         another directory any files you wish to save.
;
;
   .ASK QUEST Are you ready to continue with the installation

   .ENABLE QUIET
;
; Quit sending everything to the screen
;
;
; If not ready to continue -- then EXIT
;
   .IFF QUEST .EXIT
;
;
;
   CLEAR
   .DISABLE QUIET
;
;  ***************************************************
;  *                                                 *
;  * INSTALLATION FOR PRO/Tool Kit BASIC-PLUS-2      *
;  *                 VERSION 2.2                     *
;  *                                                 *
;  ***************************************************
;
;
;                   INSTALLATION IN PROGRESS .....
   .ENABLE QUIET
;
; Assume that this is the first installation and try to create
; the PROBP2 directory.
;
   .TESTFILE LB:[0,0]PROBP2.DIR
   .IF <FILERR> EQ 1 .GOTO NOCRE
*  CREATE/DIR LB:[PROBP2]
   .GOTO SAVDIR
;
; Delete old versions before we install new ones
;
.NOCRE:
*     DELETE LB:[PROBP2]*.*;*
.SAVDIR:
;
; Save name of old directory
;
   .SETS OLDDIR <DIRECT>
;
```

```
; Set default to the new directory
;
   SET DEFAULT LB:[PROBP2]
;
.V2:
;
; Verify that the user has placed PROBP22 into DRIVE 2
;
   .TESTFILE DZ2:[PROBP2]ELEMENTED.B2S
   .IF <FILERR> EQ 1 .GOTO GOOD
   CLEAR
   .DISABLE QUIET
;
; ATTENTION:
;   Please place the diskette labeled PROBP22 into DRIVE 2.
;
;   (If you have already placed the PROBP22 diskette in DRIVE 2,
;   it may be that you inserted it upside down. Place the
;   PROBP22 diskette correctly in drive 2.)
;
   .ENABLE QUIET
   .ASKS DUMMY *  Press <RETURN> to continue
   .GOTO V2
.GOOD:
   CLEAR
   .DISABLE QUIET
;  Now copying files from diskette PROBP22
   .ENABLE QUIET
;
; Copy the first part of the compiler task and the rest of
; the IVP files from DZ2:[PROBP2]
;
   COPY DZ2:[PROBP2]*.* *.*
;
.V3:
;
; Verify that the user has placed PROBP23 into DRIVE 2
;
   .TESTFILE DZ2:[PROBP2]BP2IC2.TSB
   .IF <FILERR> EQ 1 .GOTO GOOD3
   CLEAR
   .DISABLE QUIET
;
; ATTENTION:
;   Please place the diskette labeled PROBP23 into DRIVE 2.
;
;   (If you have already placed the PROBP23 diskette in DRIVE 2,
;    it may be that you inserted it upside down. Place the
```

```
;     PROBP23 diskette correctly in drive 2.)
;
   .ENABLE QUIET
   .ASKS DUMMY *  Press <RETURN> to continue
   .GOTO V3
.GOOD3:
   CLEAR
   .DISABLE QUIET
;  Now copying files from diskette PROBP23
   .ENABLE QUIET
;
; Copy the rest of the compiler task file from DZ2:[PROBP2]
;
   APPEND DZ2:[PROBP2]BP2IC2.TSB BP2IC2.TSA
   COPY/CONTIG BP2IC2.TSA BP2IC2.TSK
   DELETE BP2IC2.TSA;0
;
;  COPY COMPILER RESIDENT LIBRARIES
;
   COPY DZ2:[PROBP2]*.TSK *.*
;
; Verify that the compiler is not installed in the active
; task list. If not then :
;     1) append the installation data behind START.CMD
;     2) append the removal data behind END.CMD
;
   .IFINS ...BP2 .GOTO REMO
;
   ;
   APPEND DZ1:[INSTALL]BP2STR.CMD APPL$DIR:START.CMD
   APPEND DZ1:[INSTALL]BP2END.CMD APPL$DIR:EXIT.CMD
   .GOTO SKIP
;
;
.REMO:
;
;  Remove the PROBP2 compiler
;
   REMOVE ...BP2
   REMOVE B22SH1/REG
   REMOVE B22SHR/REG
;
.SKIP:
   CLEAR
   .DISABLE QUIET
;  Now copying files from diskette PROBP21
   .ENABLE QUIET
;
```

```
; Copy the resequencer and IVP files from DZ1:[PROBP2]
;
   COPY DZ1:[PROBP2]*.* *.*
;
; Set the default directory to P/OS system directory [001002]
;
*    SET DEFAULT LB:[001002]
;
; Copy the help and error files from DZ1:[001002]
;
   COPY DZ1:[001002]BP2.HLP *.*
   COPY DZ1:[001002]BP2RFA.HLP *.*
   COPY DZ1:[001002]BP2ERR.ERR *.*
;
; Purge the directory to get rid of old copies
;
   PURGE BP2.HLP
   PURGE BP2RFA.HLP
   PURGE BP2ERR.ERR
;
; Set the default directory to P/OS system directory [001005]
;
*    SET DEFAULT LB:[001005]
;
; Copy the odl and reslib files from DZ1:[001005]
;
   COPY DZ1:[001005]BP2*.* *.*
   COPY DZ1:[001005]PBFSML.* *.*
;
; Purge the directory to get rid of old copies
;
   PURGE BP2*.*
   PURGE PBFSML.*
   CLEAR
   .DISABLE QUIET

;  ****************************************************
;  *                                                  *
;  *    INSTALLATION FOR PRO/Tool Kit BASIC-PLUS-2    *
;  *                    VERSION 2.2                   *
;  *                                                  *
;  *               >>>> COMPLETED <<<<                *
;  *                                                  *
;  ****************************************************
;
;
;  All files have been copied from the kit media to the
;  Winchester drive on your PROFESSIONAL 350. The next
```

```
   ;  portion of the installation is verification of file
   ;  placement on BIGVOLUME:. Please note that this
   ;  verification is optional.
   ;
   ;
      .ENABLE QUIET
      .ASK QUEST Verify file placement

      .IFF QUEST .GOTO QUIT

   ;
   ; Open a file to store results
   ;
      .OPEN DW1:[USERFILES]RESULT.DAT
   ;
   ; Initialize the error counter to 0
   ;
      .SETN ERRNO 0

   ; Verify the compiler
      .ENABLE SUBSTITUTION
*     .SETS DEST "LB:[PROBP2]BP2IC2.TSK"
      .SETS SRC  "DZ2:[PROBP2]BP2IC2.TSA DZ3:[PROBP2]BP2IC2.TSB"
*     .TESTFILE   LB:[PROBP2]BP2IC2.TSK
      .IF <FILERR> NE 1 .GOSUB ERROUT


   ; Verify the compiler library B22SHR.TSK
      .ENABLE SUBSTITUTION
*     .SETS DEST "LB:[PROBP2]B22SHR.TSK"
      .SETS SRC  "DZ3:[PROBP2]B22SHR.TSK"
*     .TESTFILE   LB:[PROBP2]B22SHR.TSK
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the compiler library B22SH1.TSK
      .ENABLE SUBSTITUTION
*     .SETS DEST "LB:[PROBP2]B22SH1.TSK"
      .SETS SRC  "DZ3:[PROBP2]BP22SH1.TSK"
*     .TESTFILE   LB:[PROBP2]B22SH1.TSK
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the resequencer utility
*     .SETS DEST "LB:[PROBP2]PROB2RESQ.TSK"
      .SETS SRC  "DZ1:[PROBP2]PROB2RESQ.TSK"
*     .TESTFILE   LB:[PROBP2]PROB2RESQ.TSK
      .IF <FILERR> NE 1 .GOSUB ERROUT
```

```
   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]ELEMENTED.B2S"
      .SETS SRC  "DZ2:[PROBP2]ELEMENTED.B2S"
*     .TESTFILE   LB:[PROBP2]ELEMENTED.B2S
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]GEO.B2S"
      .SETS SRC  "DZ2:[PROBP2]GEO.B2S"
*     .TESTFILE   LB:[PROBP2]GEO.B2S
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]MAP.B2S"
      .SETS SRC  "DZ2:[PROBP2]MAP.B2S"
*     .TESTFILE   LB:[PROBP2]MAP.B2S
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]GEO.OBJ"
      .SETS SRC  "DZ2:[PROBP2]GEO.OBJ"
*     .TESTFILE   LB:[PROBP2]GEO.OBJ
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]MAP.OBJ"
      .SETS SRC  "DZ2:[PROBP2]MAP.OBJ"
*     .TESTFILE   LB:[PROBP2]MAP.OBJ
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]ELEMENTED.INS"
      .SETS SRC "DZ1:[PROBP2]ELEMENTED,INS"
*     .TESTFILE   LB:[PROBP2]ELEMENTED.INS
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]EDFPU.CMD"
      .SETS SRC  "DZ1:[PROBP2]EDFPU.CMD"
*     .TESTFILE   LB:[PROBP2]EDFPU.CMD
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]EDFPU.ODL"
      .SETS SRC  "DZ1:[PROBP2]EDFPU.ODL"
*     .TESTFILE   LB:[PROBP2]EDFPU.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT
```

```
   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]MAPFPU.CMD"
      .SETS SRC  "DZ1:[PROBP2]MAPFPU.CMD"
*     .TESTFILE   LB:[PROBP2]MAPFPU.CMD
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the IVP
*     .SETS DEST "LB:[PROBP2]MAPFPU.ODL"
      .SETS SRC  "DZ1:[PROBP2]MAPFPU.ODL"
*     .TESTFILE   LB:[PROBP2]MAPFPU.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the help file
*     .SETS DEST "LB:[001002]BP2.HLP"
      .SETS SRC  "DZ1:[001002]BP2.HLP"
*     .TESTFILE   LB:[001002]BP2.HLP
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the help RFA file
*     .SETS DEST "LB:[001002]BP2RFA.HLP"
      .SETS SRC  "DZ1:[001002]BP2RFA.HLP"
*     .TESTFILE   LB:[001002]BP2RFA.HLP
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the error file
*     .SETS DEST "LB:[001002]BP2ERR.ERR"
      .SETS SRC  "DZ1:[001002]BP2ERR.ERR"
*     .TESTFILE   LB:[001002]BP2ERR.ERR
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify the OTS library
*     .SETS DEST "LB:[001005]BP2OTS.OLB"
      .SETS SRC  "DZ1:[001005]BP2OTS.OLB"
*     .TESTFILE   LB:[001005]BP2OTS.OLB
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify PBFSML.TSK
*     .SETS DEST "LB:[001005]PBFSML.TSK"
      .SETS SRC  "DZ1:[001005]PBFSML.TSK"
*     .TESTFILE   LB:[001005]PBFSML.TSK
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify PBFSML.STB
*     .SETS DEST "LB:[001005]PBFSML.STB"
      .SETS SRC  "DZ1:[001005]PBFSML.STB"
*     .TESTFILE   LB:[001005]PBFSML.STB
      .IF <FILERR> NE 1 .GOSUB ERROUT
```

```
   ; Verify BP2IC0.ODL
*     .SETS DEST "LB:[001005]BP2IC0.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC0.ODL"
*     .TESTFILE   LB:[001005]BP2IC0.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC1.ODL
*     .SETS DEST "LB:[001005]BP2IC1.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC1.ODL"
*     .TESTFILE   LB:[001005]BP2IC1.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC2.ODL
*     .SETS DEST "LB:[001005]BP2IC2.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC2.ODL"
*     .TESTFILE   LB:[001005]BP2IC2.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC3.ODL
*     .SETS DEST "LB:[001005]BP2IC3.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC3.ODL"
*     .TESTFILE   LB:[001005]BP2IC3.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC4.ODL
*     .SETS DEST "LB:[001005]BP2IC4.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC4.ODL"
*     .TESTFILE   LB:[001005]BP2IC4.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC5.ODL
*     .SETS DEST "LB:[001005]BP2IC5.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC5.ODL"
*     .TESTFILE   LB:[001005]BP2IC5.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC6.ODL
*     .SETS DEST "LB:[001005]BP2IC6.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC6.ODL"
*     .TESTFILE   LB:[001005]BP2IC6.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT

   ; Verify BP2IC7.ODL
*     .SETS DEST "LB:[001005]BP2IC7.ODL"
      .SETS SRC  "DZ1:[001005]BP2IC7.ODL"
*     .TESTFILE   LB:[001005]BP2IC7.ODL
      .IF <FILERR> NE 1 .GOSUB ERROUT
```

```
   .CLOSE
   .IF ERRNO EQ 0 .GOTO SUCCES
   CLEAR
   .DISABLE QUIET
;
;  >>>>> ERROR <<<<<
;
;  The verification procedure detected errors during the
;  verification process. The file containing a list of
;  the errors is in DW1:[USERFILES]RESULT.DAT.
;
   .ENABLE QUIET
   .ASK QUEST Display the error file on the terminal
   .IFF QUEST .GOTO QUIT
   CLEAR
   TYPE DW1:[USERFILES]RESULT.DAT
   .ASKS DUMMY *  Press <RETURN> to continue
   .GOTO QUIT
.SUCCES:
   CLEAR
   .DISABLE QUIET
;
;  >>>>> SUCCESS <<<<<
;
;  No errors were detected by the verification procedure
;
   .ENABLE QUIET
   DELETE DW1:[USERFILES]RESULT.DAT
.QUIT:
;
; Clear the screen and display the completion message
;
   .ENABLE DISPLAY
   .IFNINS ...BP2 .GOTO DOINS
;
;  Remove old version
;
   REMOVE B22SHR/REG
   REMOVE B22SH1/REG
   REMOVE ...BP2
.DOINS:
;
```

```
   ; Install the tasks for the first time
   ;
*     INSTALL LB:[PROBP2]B22SHR.TSK
*     INSTALL LB:[PROBP2]B22SH1.TSK
*     INSTALL LB:[PROBP2]BP2IC2.TSK/TASK=...BP2
*     INSTALL LB:[ZZSYS]PBFSML
      CLEAR
      .DISABLE QUIET
   ;  ******************************************************
   ;  *                                                    *
   ;  *    PRO/Tool Kit  BASIC-PLUS-2 VERSION 2.2          *
   ;  *                                                    *
   ;  *    has been installed on your Professional.        *
   ;  *                                                    *
   ;  *    Please follow the instructions in the           *
   ;  *                                                    *
   ;  *    accompanying documentation to complete the      *
   ;  *                                                    *
   ;  *    verification process using the sample           *
   ;  *                                                    *
   ;  *    PRO/Tool Kit BASIC-PLUS-2 application.          *
   ;  *                                                    *
   ;  ******************************************************

      .ENABLE QUIET
      SET DEF 'OLDDIR'
      .EXIT
   ;
   ; Subroutine used to verify location of files on target media
   ;
   .ERROUT:
      .INC ERRNO
      .DATA FILE : 'DEST' NOT FOUND ON BIGVOLUME:
      .DATA KIT LOCATION : 'SRC'
      .RETURN
```

Modifying the Startup Command File (BP2STR.CMD)

Modified lines start with an asterisk (*). The modified BP2STR.CMD file is shown below:

```
   ;
```

```
  ;    Install resident libraries for PROBP2 compiler
  ;
       .DISABLE QUIET
*      INSTALL LB:[PROBP2]B22SHR
*      INSTALL LB:[PROBP2]B22SH1
       .ENABLE QUIET
  ;
  ;    Install the PROBP2 compiler - BP2 command
  ;
       .DISABLE QUIET
*      .IFNINS ...BP2 INSTALL LB:[PROBP2]BP2IC2.TSK/TASK=...BP2
       .ENABLE QUIET
  ;
  ;    Install the PROBP2 RESIDENT LIBRARY
  ;
       .DISABLE QUIET
*      .TESTPARTITION PBFSML
*      .SETS RESULT "'<EXSTRI>'"
*      .PARSE RESULT ",,,," FIRST SECOND THIRD FOURTH FIFTH
*      .IF SECOND = "" INSTALL LB:[ZZSYS]PBFSML
       .ENABLE QUIET
```

Documentation Corrections

The following are changes to the *PRO/Tool Kit Basic-Plus-2 Installation Guide and Supplement* in order to use PRO/Tool Kit BASIC-PLUS-2 V2.2 on P/OS V3.0 or later.

On page 3-2 change the line that reads:

$ SET DEFAULT [PROBP2]

to read:

$ SET DEFAULT LB000:[PROBP2]

and the line that reads:

$ RUN [PROBP2]BP2IC2

to:

$ RUN LB000:[PROBP2]BP2IC2

On page 3-4 change the lines:

```
$ COPY DW1:[PROBP2]ELEMENTED.INS *.*
$ COPY DW1:[PROBP2]ELEMENTED.TSK *.*
$ COPY DW1:[PROBP2]MAP.TSK *.*
```

to read:

```
$ COPY LB000:[PROBP2]ELEMENTED.INS *.*
$ COPY LB000:[PROBP2]ELEMENTED.TSK *.*
$ COPY LB000:[PROBP2]MAP.TSK *.*
```

Printed in the Netherlands
AA-EX85B-TH