

UCSD p-SystemTM Introduction



Texas Instruments Professional Computer

UCSD p-System Introduction
Part No. 2232396-0001
Original Issue: 15 April 1983

**Copyright © 1983 by
Texas Instruments Incorporated
All Rights Reserved.**

UCSD, UCSD Pascal, and UCSD p-System are all trademarks of the Regents of the University of California. Use thereof in conjunction with any goods or services is authorized by specific license only, and any unauthorized use is contrary to the laws of the State of California.

Contents

1	Introduction	1-1
	UCSD p-System Overview	1-3
	Purpose of This Booklet	1-3
	About Your p-System	1-4
2	Getting Started with the Run-Time System	2-1
	Introduction	2-3
	Equipment and Software Required	2-3
	Equipment Setup and Operation	2-3
	Getting Acquainted with the UCSD p-System	2-5
3	Using the Development System	3-1
	Introduction	3-3
	Development System Documentation	3-3
	Making Backup Copies of the PDEV Diskette	3-3



Introduction

UCSD p-System Overview	1-3
Purpose of This Booklet	1-3
About Your p-System	1-4
Run-Time System	1-4
Development System	1-4
Documentation Supplied with Your UCSD p-System	1-5
Software Supplied with Your UCSD p-System	1-7



UCSD p-SYSTEM OVERVIEW

Your UCSD p-System™* is a versatile computer operating system that is quickly gaining acceptance by many microcomputer users. A major advantage of the p-System is its portability. It can be installed on many kinds of computers by making a few changes to what is called the basic input/output system (BIOS), which controls monitor, keyboard, diskette, and printer routines. Once the p-System BIOS is prepared by an equipment manufacturer, the p-System is ready to run, allowing you to use a host of *off-the-shelf* p-System applications programs.

The p-System supports several high-level programming languages including Pascal and BASIC. If you have an application package that is written in one of these languages, the p-System may be a good choice. Because the p-System is optimized for the UCSD Pascal™* programming language, that is, UCSD Pascal can be compiled and executed more efficiently on the p-System, many Pascal programmers and users prefer to use the p-System.

PURPOSE OF THIS BOOKLET

The UCSD p-System is a sophisticated operating system that can be used to create, compile, link, print, assemble, and run programs. The standard p-System editor and filer can be used to create, format, revise, print, and save text and data files as well as programs. Because the p-System can do so much, it is accompanied by a large set of documentation. This booklet was prepared to help you get started with the p-System, and help you use the documentation effectively. It describes two available configurations of the p-System: the *Run-Time* and the *Development* Systems; it lists accompanying documentation and software and provides a set of basic procedures for making copies of your master diskettes and using the p-System to run an application program.

* UCSD p-System and UCSD Pascal are trademarks of the Regents of the University of California.

ABOUT YOUR p-SYSTEM

The Run-Time System and the Development System are each briefly described in the following two paragraphs.

Run-Time System

The Run-Time System includes the software required to install and operate computer applications programs, such as accounting, word processing, and electronic work sheet programs. With the Run-Time System you get the UCSD p-System editor and filer. The editor is considered by many users to be an excellent word processor. The filer lets you do such things as duplicating diskettes and copying files. The manuals and diskette-based programs and files are listed in the following tables.

Development System

If you are a computer programmer, you probably bought the Development System. With this system, computer programs can be written in either a high-level programming language, such as Pascal, or in assembly language. High-level languages can be compiled into p-Code, or assembled using the p-System's assembler. The p-System linker lets you combine p-Code and assembly language programs into an integrated program that takes advantage of the power of both high-level and assembly language routines.

If you purchased the Development System, you have all of the manuals and software listed in the following two tables.

Documentation Supplied with Your UCSD p-System

The first table contains a list of the manuals supplied with the Run-Time and Development Systems and a description of each. If you wish to order these manuals, you should include the part number in your ordering information.

UCSD p-System Documentation

Run-Time System	Development System	Manual Title and Description
X	X	<i>UCSD p-System Introduction</i> (Part Number 2232396-0001) — Provides an overview of UCSD p-System Run-Time and Development Systems and includes procedures for making diskette copies and running applications software.
X	X	<i>Personal Computing with UCSD p-System</i> (Part Number 2232418-0001) — This manual is an introduction to the use of the UCSD p-System. Written for the beginning user, it provides an overview of p-System commands, including use of the editor, filer, and compiler. If you have either the Run-Time or Development System, this is a good place to start learning about the editor, filer, and common utilities. If you are an advanced programmer, do not let the words <i>beginning user</i> keep you from using this manual. It has valuable information for you, too.

UCSD p-System Documentation (Continued)

Run-Time System	Development System	Manual Title and Description
X	X	<i>UCSD p-System Operating System Reference Manual</i> (Part number 2232395-0001) — This manual is similar to the <i>Personal Computing</i> manual in content, since it contains information about system, filer, and editor commands. However, this manual has more detailed information and is not written as a p-System tutorial as is the <i>Personal Computing</i> manual.
	X	<i>UCSD Pascal</i> (Part number 2232401-0001) — This manual contains a description of the Pascal programming language. It defines Pascal commands and conventions and presents numerous examples. This book is not intended as a text for beginning Pascal programmers, as it is not a tutorial manual.
	X	<i>UCSD p-System Program Development</i> (Part number 2232399-0001) — This manual is provided for the programmer. It contains information about common programming tools such as screen ops, run-time applications, error messages, and command input/output. Also included is file management, program development, and program organization information. Descriptions of the Turtlegraphics package, extended memory, and utilities are also presented.

UCSD p-System Documentation (Continued)

Run-Time System	Development System	Manual Title and Description
	X	<i>UCSD p-System Assembler</i> (Part number 2232402-0001) — This manual is provided for the programmer. It describes the UCSD p-System 8086/88/87 Assembler and the instruction set of the 8086/88 central processing units and the 8087 floating point processor. The p-System Assembler can be used to create assembly language programs that can be run under the UCSD p-System environment as well as with other operating systems compatible with your Texas Instruments Professional Computer.
	X	<i>UCSD p-System Internal Architecture</i> (Part Number 2232400-0001) — Here is another manual for programmers and advanced users of the system. It describes the internal design of the UCSD p-System, the basic input/output system, and the way the system is structured to run UCSD Pascal programs.

Software Supplied with Your UCSD p-System

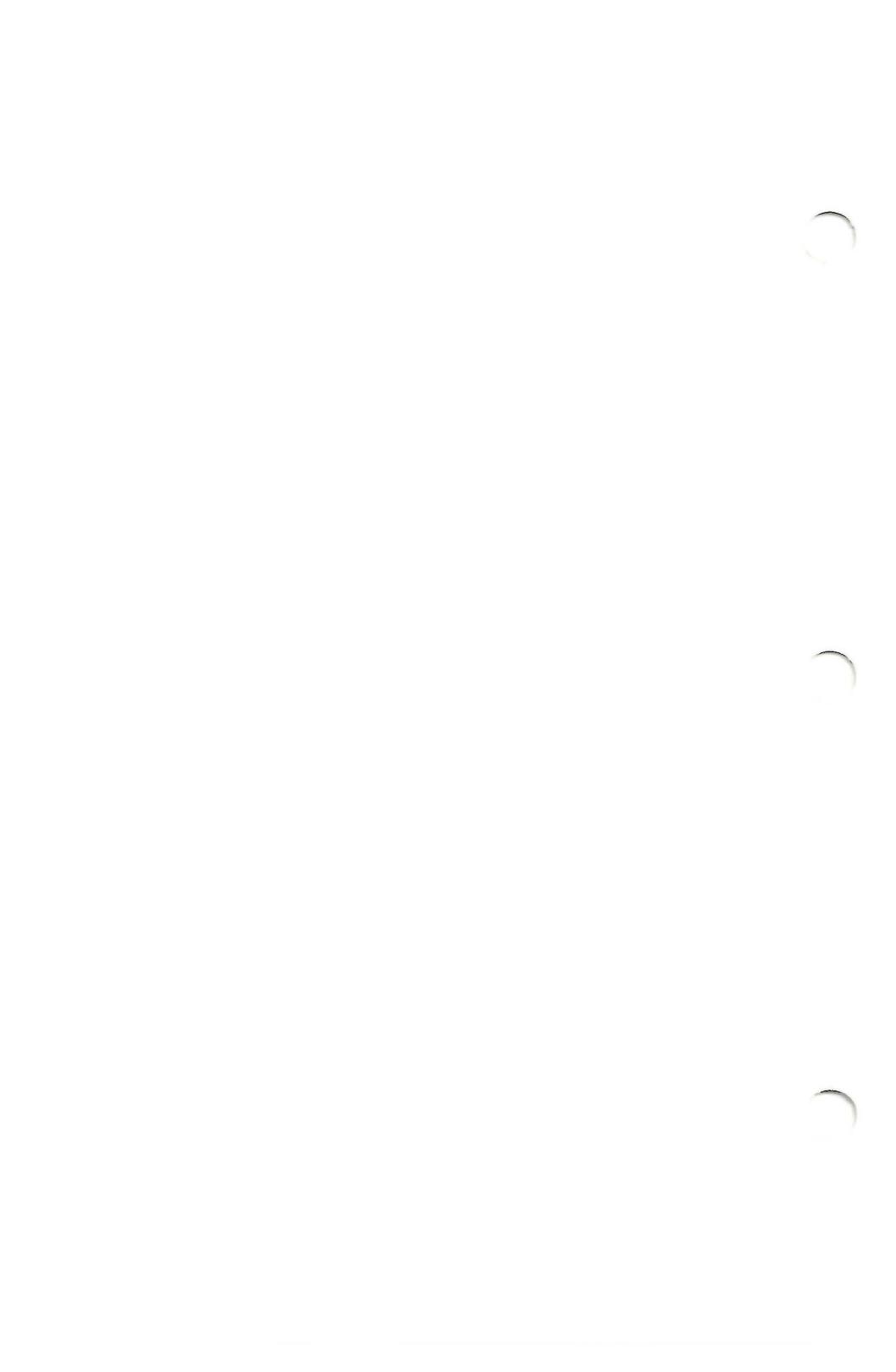
The following table lists the diskettes and the corresponding p-System files and programs supplied on each. If you have the Run-Time System, you will have a PSYS diskette. If you have the Development System, you will have the PDEV diskette.

UCSD p-System Software

PSYS File Name	PDEV File Name
SYSTEM.PASCAL	COMMANDIO.CODE
SYSTEM.MISCINFO	SCREENOPS.CODE
SYSTEM.FILER	BINDER.CODE
SYSTEM.EDITOR	WILD.CODE
SYSTEM.LIBRARY	FILE.INFO.CODE
SYSTEM.INTERP	SYS.INFO.CODE
SYSTEM.SYNTAX	ERRORHANDL.CODE
SYSTEM.FONT	KERNEL.CODE
SPOOLER.CODE	SPOOLOPS.CODE
COMPRESS.CODE	DIR.INFO.CODE
SETUP.CODE	SYSTEM.LINKER
PATCH.CODE	SYSTEM.ASSMBLER
LIBRARY.CODE	SYSTEM.COMPILER
COPYDUPDIR.CODE	8086.OPCODES
MARKDUPDIR.CODE	8086.ERRORS
RECOVER.CODE	8087.FOPS
FORMAT.CODE	XREF.CODE
DECODE.CODE	
SETTIME.CODE	
CONFIG.RAM.CODE	
CONFIG.REM.CODE	
CONFIG.PTR.CODE	
CONFIG.PTR.TEXT	
REALCONV.CODE	
ABSWRITE.CODE	
BOOT.CODE	
DISKSIZE.CODE	
PRINT.CODE	

Getting Started with the Run-Time System

Introduction	2-3
Equipment and Software Required	2-3
Equipment Setup and Operation	2-3
Equipment Setup	2-4
Turning On Your Professional Computer	2-4
Getting Acquainted with the UCSD p-System	2-5
Checking System Volume Numbers and Names	2-6
Listing a Diskette File Directory	2-8
Making a Working (Backup) Copy	2-9
Making a Backup on Computers with Diskette	
Drives Only	2-9
Installing the p-System on Computers with	
Winchester Disks	2-17
Running a Program	2-23
When You Are Finished	2-24



INTRODUCTION

This chapter describes the equipment and software required to use the Run-Time System, how to connect the equipment and turn it on, and how to run an application program.

EQUIPMENT AND SOFTWARE REQUIRED

To use the UCSD p-System Run-Time package on your Texas Instruments Professional Computer, you will need the following equipment, software, and manuals.

- Texas Instruments Professional Computer
- UCSD p-System PSYS Diskette, Part Number 2223136-0001
- *Texas Instruments Professional Computer Operating Instructions*, Part Number 2223072-0001

EQUIPMENT SETUP AND OPERATION

The following procedures provide system set-up and turn-on information, describe how to make working copies of your master diskettes, and tell you how to run an applications program. Set-up, turn-on, directory listing, and flexible diskette formatting and copying procedures are common to both flexible-diskette and Winchester-disk systems.

If you have a Winchester disk system, use the Winchester installation procedure contained in the last paragraph of this chapter.

Equipment Setup

Set up your computer equipment by following the procedures contained in Chapter 2 of your *Texas Instruments Professional Computer Operating Instructions* manual. Once the equipment is connected and operating properly, you can use your UCSD p-System by performing the procedures in the following paragraph.

Turning On Your Professional Computer

The following procedure applies to a one- or two-diskette Texas Instruments Professional Computer or one equipped with one flexible diskette and a Winchester disk. Turn on your computer system as follows:

1. Insert the diskette labeled PSYS in the left-hand diskette drive, label up, and close the diskette drive door.
2. Pull your monitor power switch to the ON position. If you have a printer, turn it on, and set the computer power switch, located at the right-rear, to ON.
3. If you have a Winchester installed, immediately after the cursor flashes across the top row of the display unit, press the escape key (labeled **ESC**). This will ensure that your Texas Instruments Professional Computer will load from the diskette. This step is important; if at this point the system does not load from the diskette, repeat this process beginning with step 2.

NOTE

You will hear the diskette drive click and see the red read/write light come on. This activity indicates that the UCSD p-System is being loaded into the memory of your computer. Once the activity ceases, the following information is displayed on your display unit.

```
Command: E(edit, R(run, F(ile, C(omp, L(ink, X(ecute,  
A(ssem, D(ebug,? [IV.12 B4h] _  
  
Welcome PSYS, to  
  
U.C.S.D p-System IV.12  
  
Current date is ??-Jan-83
```

GETTING ACQUAINTED WITH THE UCSD P-SYSTEM

Now that system power is on and the main command line is displayed, you are ready to start using the p-System. The following procedures describe how to check system volume numbers and names, list a disk directory, format a new diskette, transfer files from one diskette to another, and run a program.

Checking System Volume Numbers and Names

This procedure explains how to check system volume numbers and names. Volume numbers are assigned to each peripheral device, such as a diskette drive. For example, volume #4 is the left-hand drive and #5 is the right-hand drive. Names are also assigned. In the case of diskette drives, user-assigned names are given, and may be displayed using the system filer (Filer) on the main command line, and the filer's Vols command. To check your system's volume numbers and names, follow the steps outlined below.

1. With the main command line displayed, press **F** and notice the following display.

```
Filer: G(et, S(ave, W(hat, N(ew, L(dir, R(em, C(hng,  
T(rans, D(ate,? [D.7] _
```

-
2. Notice that a question mark is displayed after the D(ate prompt on the filer command line. Pressing the question mark (?) causes another filer command line to appear. Press the question mark key and notice that the filer has two additional command lines, which include the V(ols and Q(uit commands.
 3. Press **V** and a display similar to the following appears.

```
Filer: G(et, S(ave, W(hat, N(ew, L(dir, R(em, C(hng,
T(rans, D(ate,? [D.7]
Vols on-line:
  1  CONSOLE:
  2  SYSTEM:
  4 # PSYS:   [640]
  6  PRINTER:
Root vol is - PSYS:
Prefix is   - PSYS:
```

4. Return to the main command line by pressing **Q** for Q(uit.

Listing a Diskette File Directory

Before making a working copy, you will want to check the directory of your diskette to see what programs and files are present. To do this, you will use the system filer.

1. Press **F** to enter the filer.
2. Press **L** and respond to the prompt by typing **#4** and pressing the **RETURN** key.

NOTE

The left-hand diskette drive is volume #4, and the right-hand diskette drive is volume #5. If you have a Winchester disk installed instead of a second diskette drive, this drive is volume #5. When listing file directories, formatting, or transferring files, you can use either the volume number (#4 or #5) or the diskette name followed by a colon, such as *PSYS:*. If you have additional diskette drives or a Winchester disk system, use the appropriate volume numbers for these devices.

3. Review the directory listing. Note the file **FORMAT.CODE**. This is a format program that is run to prepare a new disk for use with p-System programs and files. Press the **space bar** if the length of the file listing exceeds the display unit capacity to see additional file listings.
4. Return to the main prompt line by pressing **Q**.

Making a Working (Backup) Copy

These procedures describe how to create a working copy of the PSYS diskette. If your computer includes a Winchester disk, use the procedure entitled Installing the p-System on Computers with Winchester Disks. It describes how to build a working p-System on the Winchester. If your computer includes one or two flexible diskettes but no Winchesters, use the following procedures. They describe how to make backup copies of the PSYS so that the original can be saved.

CAUTION

Never use the original diskette(s) except to prepare a working backup copy. Once a copy has been made, store the original in a suitable place.

Refer to the appropriate section which contains instructions tailored to your computer.

Making a Backup on Computers with Diskette Drives Only

Use this procedure to prepare backups if your system has one or two diskette drives.

1. Press **X** to enter the execution mode of the p-System.
2. Type **FORMAT** and press the **RETURN** key to execute the format program; notice the following display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits
```

3. Type **5** for a two-drive system or **4** for a one-drive system, press the **RETURN** key, and notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits  
Place disk in unit 5 and press return...
```

4. Insert a new diskette, label up, in the right-hand drive if you have a two-drive system, or in the left-hand drive if you have a one-drive system, and press the **RETURN** key. Notice the last line of the display.

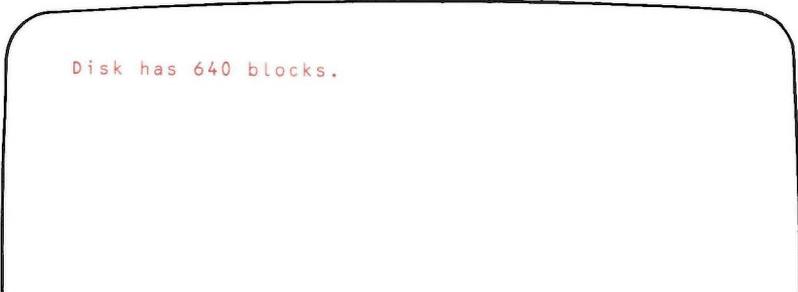
```
Enter unit of disk to be formatted (4,5,9,10)?
          unit 0 exits
Place disk in unit 5 and press return...

New vol name?
```

5. Enter **BPSYS** as the new volume name and press the **RETURN** key. Notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?
          unit 0 exits
Place disk in unit 5 and press return...
```

6. Press **Y**. The utility will begin formatting the diskette.
7. The utility will format the diskette and display the following message to indicate that the format process has completed:



Disk has 640 blocks.

8. On a one-drive system, place the PSYS disk in the drive. Examine the newly initialized diskette for bad spots.
 - a. Press **F** for the filer, then **X** to begin the execution of the Examine program.
 - b. Notice the following display:



Examine blocks on what vol?

- c. Type **#5** for a two-drive system. On a one-drive system, place the newly initialized diskette in the drive and type **#4**. Notice the last line of the display.

```
Examine blocks on what vol? #5
Block-range?
```

- d. Type **0-640**, where 640 is the number of blocks on the disk as reported by the Format program. Examine then indicates that the directory may be endangered if bad blocks exist. Notice the last line of the display:

```
File(s) endangered:
Directory          0          6
Fix them?
```

- e. Press **Y**. Examine then marks bad blocks on the disk so they will not be used, and it indicates blocks that may be ok. This means the block is probably safe for data storage. When Examine is finished, the filer prompt line is displayed.
9. Remove the newly formatted diskette, label it PSYS, and go on to step 10.

NOTE

In the following steps, the filer transfer utility is used to make working copies of your PSYS diskette. If you have a single-drive system, you will start the transfer utility and then insert your formatted diskette. The system will prompt you to change diskettes as required. With a two-drive system, your master diskette will be in the left-hand drive (volume #4) and the backup diskette in the right-hand drive (volume #5).

10. Press **T** for T(ransfer. Notice the following display.



```
Transfer what file?
```

11. Type **#4** and press the **RETURN** key. Notice the last display line.

```
Transfer what file? #4  
To where?
```

12. Type #5 if you have a two-drive system, or #4 if you have a single-drive system, and press the **RETURN** key. Notice the last line of the display.

```
Transfer what file? #4  
To where? #5  
Transfer 640 blocks ? (Y/N)
```

13. If you have a two-drive system, insert your newly formatted PSYS diskette in the right-hand drive. If you have a single-drive system, place it in the left-hand drive.
14. Press **Y** and press the **RETURN** key; notice the last line of the display.

```
Transfer what file? #4
To where? #5
Transfer 640 blocks ? (Y/N) Y
Destroy BPSYS: ?
```

15. Press **Y** and observe the transfer process. Single-drive users are prompted to change diskettes as needed. Upon completion of the transfer, notice the following display.

```
Transfer what file? #4
To where? #5
Transfer 640 blocks ? (Y/N) Y
Destroy BPSYS: ? Y
PSYS:                --> BPSYS:
```

This completes the diskette backup procedure. You should store your master diskettes in a safe place and use your working copies.

Installing the p-System on Computers with Winchester Disks

Follow the steps in this procedure if you have a computer with one diskette drive and one or more Winchester disks.

1. Press **X** to enter the execution mode of the p-System.
2. Type **FORMAT** and press the **RETURN** key to execute the format program; notice the following display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits
```

3. Press **5** and then the **RETURN** key, and notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits  
Place disk in unit 5 and press return...
```

-
4. Since the Winchester disk is already installed, you simply press the **RETURN** key. Notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits  
Place disk in unit 5 and press return...  
New vol name?
```

5. Type **WIN** as the new volume name and press the **RETURN** key. Notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits  
Place disk in unit 5 and press return...  
New vol name?  
WIN: correct?
```

6. Press **Y**. Notice the last line of the display.

```
Enter unit of disk to be formatted (4,5,9,10)?  
unit 0 exits  
Place disk in unit 5 and press return...
```

```
New vol name?  
WIN: correct?
```

```
0 - Texas Instruments Model 525/62  
1 - Texas Instruments Model 525/61  
2 - Texas Instruments Model 525/122  
3 - Seagate Technology Model ST-506  
4 - Seagate Technology Model ST-412  
5 - Seagate Technology Model ST-406  
6 - Seagate Technology Model ST-419
```

```
Enter Winchester type: 0
```

7. At this point, the format utility asks you to identify the type of Winchester installed in the Texas Instruments Professional Computer. The type of Winchester can be determined from the documentation received with the Winchester prior to installation.
8. The utility will format the Winchester and display the following message to indicate that the format process has completed:

```
Disk has 10404 blocks.
```

-
9. Examine the newly initialized Winchester for bad spots.
 - a. Press **F** for the filer, then **X** to begin the execution of the Examine program.
 - b. Notice the following display:

```
Examine blocks on what vol?
```

- c. Type **#5**. Notice the last line of the display.

```
Examine blocks on what vol? #5  
Block-range?
```

-
- d. Enter **0-10404**, where 10404 is the number of blocks on the disk as reported by the Format program. Examine then indicates that the directory may be endangered if bad blocks exist. Notice the last line of the display:

```
File(s) endangered:
Directory          0          6
Fix them?
```

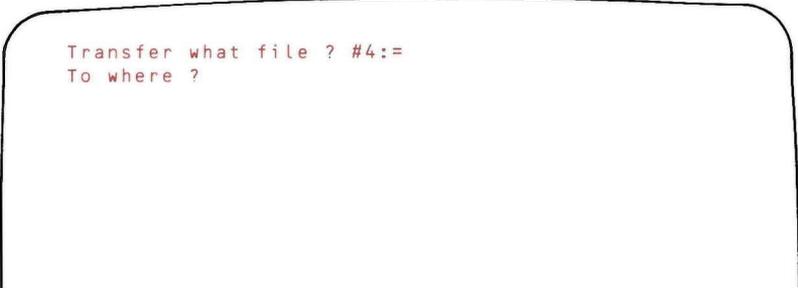
- e. Press **Y**. Examine then marks bad blocks on the disk so they will not be used, and it indicates blocks that *may be ok*. This means the block is probably safe for data storage. When Examine is finished, the filer prompt line is displayed.

This process will take approximately 25 minutes.

10. With the master PSYS diskette in the diskette drive, type **T** for T(ransfer. Notice the following display.

```
Transfer what file ?
```

-
11. Type **#4:=** and press the **RETURN** key. Notice the last display line.



```
Transfer what file ? #4:=  
To where ?
```

12. Type **#5:\$** and press the **RETURN** key.
13. Observe the transfer process. Upon completion of the transfer, the filer prompt line will return to the display.
14. Quit the filer by pressing **Q**.
15. Boot the p-System from the Winchester disk. This is accomplished by pressing **H**. Do not press the **ESC** key as before while the boot process is in progress.
16. If you have the PDEV diskette, go to page 3-5 to complete the transfer.

Running a Program

The procedure for running a standard applications program is similar to running the format program. The program must be present on the system and appear in the file directory as #VOL:PROGNAME.CODE, where #VOL: is either the volume number (#4 or #5) or name, and PROGNAME is any legitimate file name. If you have a two-drive system, the program may be present on either drive once the p-System has been initialized. To run a program, perform the following procedure.

1. Insert the p-System diskette in the left-hand diskette drive and turn on system power. If you have a Winchester disk and have installed the p-System on it, you do not need to use a diskette.
2. Once the main command line is displayed, insert the diskette containing the program to be run.
3. Type **X**, for X(ecute, and enter the volume name or number and program name in the form:

VOL:PROGNAME <RETURN>

4. Notice that the program executes.

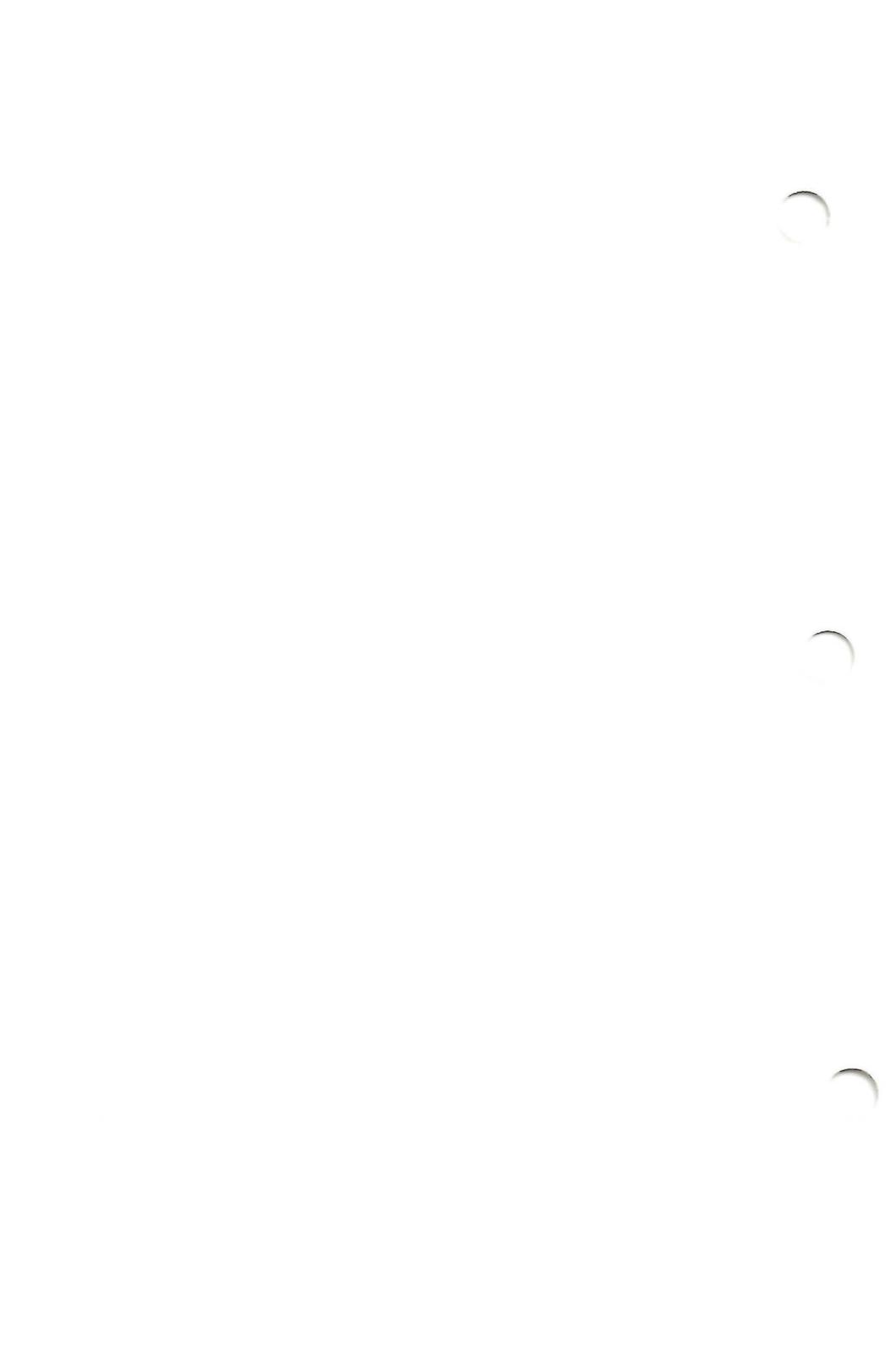
When You Are Finished

Most application programs return to the system command prompt line automatically when they finish. Pressing the **space bar** clears the display after a program finishes. However when you have finished running a program, you can also return to the system command line as follows:

1. Press and hold down the **CTRL** key, type **C**, and then release both keys.
2. Notice that the current operation terminates, the display clears, and the system command line reappears.
3. If you are finished, remove your diskettes and turn off the computer and printer power switches.

Using the Development System

Introduction	3-3
Development System Documentation	3-3
Making Backup Copies of the PDEV	
Diskette	3-3
Making a Backup on Computers with Diskette Drives Only	3-3
Installing PDEV on Computers with Winchester Disks	3-11



INTRODUCTION

Procedures for turning on the system, formatting and copying diskettes, and running programs are the same for the Development System as they are for the Run-Time System. However, one additional diskette, called PDEV (TI part number 2223136-0002), is supplied with the Development System. Therefore, a working copy of the PDEV diskette should be made at the same time a working copy is made of the UTIL diskette.

DEVELOPMENT SYSTEM DOCUMENTATION

If you purchased the Development System, you are probably a programmer or advanced user. You should use the documentation provided with the Development System, which is listed in Chapter 1 of this book.

MAKING BACKUP COPIES OF THE PDEV DISKETTE

Making a Backup on Computers with Diskette Drives Only

Use this procedure to prepare backups if your system has one or two diskette drives.

1. Press **X** to enter the execution mode of the p-System.
2. Type **FORMAT** and press the **RETURN** key to execute the format program; notice the following display.

```
Enter unit of disk to be initialized (4,5,9,10)?  
unit 0 exits
```

3. Type **5** for a two-drive system or **4** for a one-drive system, press the **RETURN** key, and notice the last line of the display.

```
Enter unit of disk to be initialized (4,5,9,10)?  
unit 0 exits  
Place disk in unit and press return...
```

4. Insert a new diskette, label up, in the right-hand drive if you have a two-drive system, or in the left-hand drive if you have a one-drive system, and press the **RETURN** key. Notice the last line of the display.

```
Enter unit of disk to be initialized (4,5,9,10)?
                                unit 0 exits
Place disk in unit and press return...
New volume name?
```

5. Type **BPDEV** as the new volume name and press the **RETURN** key. Notice the last line of the display.

```
Enter unit of disk to be initialized (4,5,9,10)?
                                unit 0 exits
Place disk in unit and press return...
New volume name?
BPDEV: correct?
```

6. Press **Y**. The utility will begin formatting the diskette.
7. The utility will format the diskette and display the following message to indicate that the format process has completed:

Disk has 640 blocks.

8. On a one-drive system, place the PSYS disk in the drive. Examine the newly initialized diskette for bad spots.
 - a. Press **F** for the filer, then **X** to begin the execution of the Examine program.
 - b. Notice the following display:

Examine blocks on what vol?

- c. Type **#5** for a two-drive system. On a one-drive system, place the newly initialized diskette in the drive and type **#4**. Notice the last line of the display.

```
Examine blocks on what vol? #5
Block-range?
```

- d. Type **0-640**, where 640 is the number of blocks on the disk as reported by the Format program. Examine then indicates that the directory may be endangered if bad blocks exist. Notice the last line of the display:

```
File(s) endangered:
Directory 0 6
Fix them?
```

- e. Press **Y**. Examine then marks bad blocks on the disk so they will not be used, and it indicates blocks that *may be ok*. This means the block is probably safe for data storage. When Examine is finished, the filer prompt line is displayed.
9. Remove the newly formatted diskette, label it PDEV, and set it aside for later use.

NOTE

In the following steps, the filer transfer utility is used to make working copies of your PDEV diskette. If you have a single-drive system, you will start the transfer utility and then insert your formatted diskette. The system will prompt you to change diskettes as required. With a two-drive system, your master diskette will be in the left-hand drive (volume #4) and the backup diskette in the right-hand drive (volume #5).

10. Insert the master PSYS diskette in the left-hand diskette drive and press **F**, for the filer, and **T**, for T(ransfer. Notice the following display.



Transfer what file?

11. Remove the master PSYS diskette and insert the master PDEV diskette in the left-hand diskette drive. Type **#4:** and press the **RETURN** key. Notice the last display line.

```
Transfer what file? #4:  
To where?
```

12. Type **#5**: if you have a two-drive system, or **#4**: if you have a single-drive system and press the **RETURN** key. Notice the last line of the display.

```
Transfer what file? #4:  
To where? #5:  
Transfer 640 blocks? (Y/N)
```

13. If you have a two-drive system, insert your newly formatted PDEV diskette in the right-hand drive. If you have a single-drive system, place it in the left-hand drive.
14. Press **Y** and then the **RETURN** key; notice the last line of the display.

```
Transfer what file? #4:  
To where? #5:  
Transfer 640 blocks? (Y/N) Y  
Destroy BPDEV:?
```

15. Type **Y** and observe the transfer process. Single-drive users are prompted to change diskettes as needed. Upon completion of the transfer, notice the following display.

```
Transfer what file ? #4:  
To where ? #5:  
Transfer 640 blocks? (Y/N) Y  
Destroy BPDEV:?  
PSYS:                               --> #5:
```

This completes the diskette backup procedure. You should store your master diskettes in a safe place and use your working copies as needed.

Installing PDEV on Computers with Winchester Disks

This is to be performed only after the PSYS diskette has been installed on the Winchester disk.

1. With the master PDEV diskette in the diskette drive, press **F** to begin execution of the filer. Then press **T**, for T(ransfer. Notice the following display.

```
Transfer what file ?
```

2. Type **#4:=** and press the **RETURN** key. Notice the last display line.

```
Transfer what file ? #4:=  
To where ?
```

-
3. Type `#5:$` and press the **RETURN** key.
 4. Observe the transfer process. Upon completion of the transfer, the filer prompt line will return to the display.
 5. Quit the filer by pressing **Q**.

THREE-MONTH LIMITED WARRANTY TEXAS INSTRUMENTS PROFESSIONAL COMPUTER SOFTWARE MEDIA

TEXAS INSTRUMENTS INCORPORATED EXTENDS THIS CONSUMER WARRANTY ONLY TO THE ORIGINAL CONSUMER/PURCHASER.

WARRANTY DURATION

The media is warranted for a period of three (3) months from the date of original purchase by the consumer.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

WARRANTY COVERAGE

This limited warranty covers the cassette or diskette (media) on which the computer program is furnished. It does not extend to the program contained on the media or the accompanying book materials (collectively the Program). The media is warranted against defects in material or workmanship. **THIS WARRANTY IS VOID IF THE MEDIA HAS BEEN DAMAGED BY ACCIDENT, UNREASONABLE USE, NEGLIGENCE, IMPROPER SERVICE, OR OTHER CAUSES NOT ARISING OUT OF DEFECTS IN MATERIALS OR WORKMANSHIP.**

PERFORMANCE BY TI UNDER WARRANTY

During the above three-month warranty period, defective media will be replaced when it is returned postage prepaid to a Texas Instruments Service Facility listed below or an authorized Texas Instruments Professional Computer Dealer with a copy of the purchase receipt. The replacement media will be warranted for three months from date of replacement. Other than the postage requirement (where allowed by state law), no charge will be made for the replacement. TI strongly recommends that you insure the media for value prior to mailing.

WARRANTY AND CONSEQUENTIAL DAMAGES DISCLAIMERS

ANY IMPLIED WARRANTIES ARISING OUT OF THIS SALE INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE ABOVE THREE-MONTH PERIOD. TEXAS INSTRUMENTS SHALL NOT BE LIABLE FOR SPECIAL, COLLATERAL, INCIDENTAL, OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE CONSUMER OR ANY OTHER USER ARISING OUT OF THE PURCHASE OR USE OF THE MEDIA. THESE EXCLUDED DAMAGES INCLUDE, BUT ARE NOT LIMITED BY, COST OF REMOVAL OR REINSTALLATION, OUTSIDE COMPUTER TIME, LABOR COSTS, LOSS OF GOODWILL, LOSS OF PROFITS, LOSS OF SAVINGS, OR LOSS OF USE OR INTERRUPTION OF BUSINESS.

LEGAL REMEDIES

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

TEXAS INSTRUMENTS CONSUMER SERVICE FACILITIES

U.S. Residents:

Texas Instruments
Service Facility
P.O. Box 1444, MS 7758
Houston, Texas 77001

Canadian Residents:

Geophysical Service Inc.
41 Shelley Road
Richmond Hill, Ontario
Canada L4C 5G4

Consumers in California and Oregon may contact the following Texas Instruments offices for additional assistance or information.

Texas Instruments
Consumer Service
831 South Douglas St.
Suite 119
El Segundo, California 90245
(213) 973-2591

Texas Instruments
Consumer Service
6700 S.W. 105th
Kristin Square, Suite 110
Beaverton, Oregon 97005
(503) 643-6758

IMPORTANT NOTICE OF DISCLAIMER REGARDING THE PROGRAM

The following should be read and understood before using the software media and Program.

TI does not warrant that the Program will be free from error or will meet the specific requirements of the purchaser/user. The purchaser/user assumes complete responsibility for any decision made or actions taken based on information obtained using the Program. Any statements made concerning the utility of the Program are not to be construed as expressed or implied warranties.

TEXAS INSTRUMENTS MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, REGARDING THE PROGRAM AND MAKES ALL PROGRAMS AVAILABLE SOLELY ON AN "AS IS" BASIS.

IN NO EVENT SHALL TEXAS INSTRUMENTS BE LIABLE FOR SPECIAL, COLLATERAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES IN CONNECTION WITH OR ARISING OUT OF THE PURCHASE OR USE OF THE PROGRAM. THESE EXCLUDED DAMAGES INCLUDE, BUT ARE NOT LIMITED BY, COST OF REMOVAL OR REINSTALLATION, OUTSIDE COMPUTER TIME, LABOR COSTS, LOSS OF GOODWILL, LOSS OF PROFITS, LOSS OF SAVINGS, OR LOSS OF USE OR INTERRUPTION OF BUSINESS. THE SOLE AND EXCLUSIVE LIABILITY OF TEXAS INSTRUMENTS, REGARDLESS OF THE FORM OF ACTION, SHALL NOT EXCEED THE PURCHASE PRICE OF THE PROGRAM. TEXAS INSTRUMENTS SHALL NOT BE LIABLE FOR ANY CLAIM OF ANY KIND WHATSOEVER BY ANY OTHER PARTY AGAINST THE PURCHASER/USER OF THE PROGRAM.

COPYRIGHT

All Programs are copyrighted. The purchaser/user may not make unauthorized copies of the Programs for any reason. The right to make copies is subject to applicable copyright law or a Program License Agreement contained in the software package. All authorized copies must include reproduction of the copyright notice and of any proprietary rights notice.

TEXAS INSTRUMENTS PROFESSIONAL COMPUTER
UCSD p-System Introduction
Part No. 2232396-0001

Original Issue: 15 April 1983

Your Name: _____

Company: _____

Telephone: _____

Department: _____

Address: _____

City/State/Zip Code: _____

Your comments and suggestions assist us in improving our products. If your comments concern problems with this manual, please list the page number.

Comments:

This form is not intended for use as an order blank.

FOLD



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 6189 HOUSTON, TX

POSTAGE WILL BE PAID BY ADDRESSEE

**Texas Instruments Incorporated
Attn: Marketing M/S 7896
P.O. Box 1444
Houston, TX 77001**



FOLD

TEXAS INSTRUMENTS PROFESSIONAL COMPUTER
UCSD p-System Introduction
Part No. 2232396-0001

Original Issue: 15 April 1983

Your Name: _____

Company: _____

Telephone: _____

Department: _____

Address: _____

City/State/Zip Code: _____

Your comments and suggestions assist us in improving our products. If your comments concern problems with this manual, please list the page number.

Comments:

This form is not intended for use as an order blank.

FOLD



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 6189 HOUSTON, TX

POSTAGE WILL BE PAID BY ADDRESSEE

Texas Instruments Incorporated
Attn: Marketing M/S 7896
P.O. Box 1444
Houston, TX 77001



FOLD

TEXAS INSTRUMENTS PROFESSIONAL COMPUTER
UCSD p-System Introduction
Part No. 2232396-0001

Original Issue: 15 April 1983

Your Name: _____

Company: _____

Telephone: _____

Department: _____

Address: _____

City/State/Zip Code: _____

Your comments and suggestions assist us in improving our products. If your comments concern problems with this manual, please list the page number.

Comments:

This form is not intended for use as an order blank.

FOLD



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 6189 HOUSTON, TX

POSTAGE WILL BE PAID BY ADDRESSEE

**Texas Instruments Incorporated
Attn: Marketing M/S 7896
P.O. Box 1444
Houston, TX 77001**



FOLD



**Texas Instruments reserves the right to change
its product and service offerings at any time
without notice.**

**TEXAS
INSTRUMENTS**

Part No. 2232396-0001

Printed in U.S.A.
