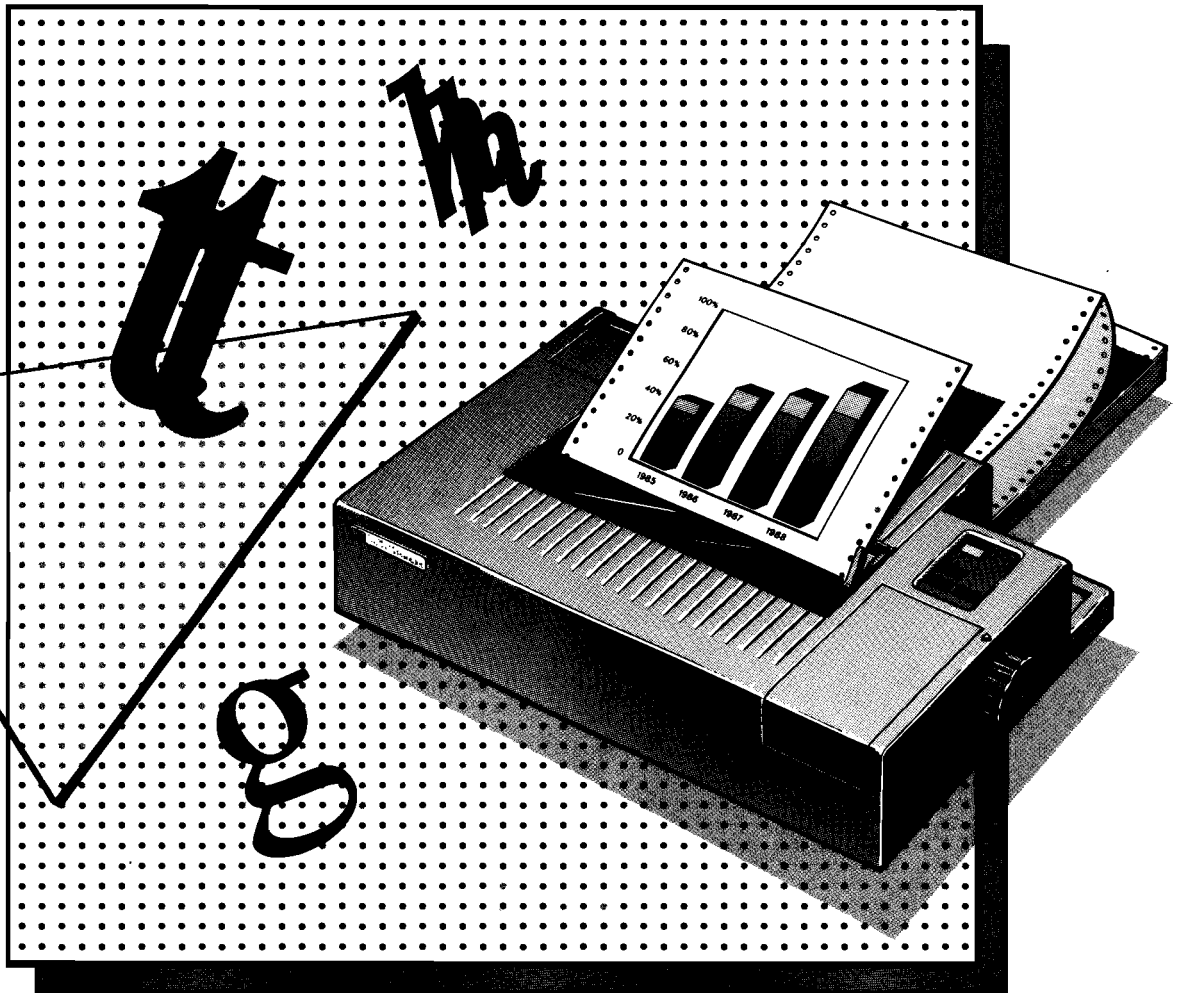


HEWLETT-PACKARD

HP PaintJet PrintScreen Utility User's Reference



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Starting the Utility

What Does this Utility Do?

The PaintJet PrintScreen Utility allows you to easily “freeze” your current computer screen display and print the text or graphics data contents on your PaintJet Color Graphics Printer. With this utility, all that is required is to hold down your **SHIFT** key and press the **PrtSc** key.

NOTE: The PaintJet PrintScreen Utility replaces the function of the DOS **GRAPHICS** command. The **GRAPHICS** command does not work on the PaintJet Color Graphics Printer. If the **GRAPHICS** command is executed after the PaintJet PrintScreen Utility is loaded, it will disable the utility. ■

This utility does not replace the PaintJet driver in any application, but rather supplements the driver as an easy method to print a half-page draft, in color or black/white, of your current screen display.

Draft quality means that your screen colors may be printed using different colors, or possibly in black/white. Your screen image may also be printed using a different aspect ratio or font; i.e., circles may be printed as ellipses and specialized bold or underlined text on your screen may be printed as normal text. In some cases, it may not be possible for the utility to automatically interpret your screen data to produce the best possible output. For these cases, the utility provides a “Help” feature that allows you to select the monitor configuration mode which produces the best output. Refer to the “Change Options During Five Second Delay” section for specific instructions.

The utility provides a set of default printing options that you can change using any of the following methods:

Method 1. Change Options with **PJSCREEN** Command

Method 2. Change Options Using Menus

Method 3. Change Options During Five Second Delay

The PJSCREEN command is used initially to load the utility into the computer's memory. It can be used with parameters to change the printing options directly, or it can be executed without parameters to display the option menus. The command and menus are provided for use when you have access to your DOS operating system and prior to running any application program. The five second delay feature allows you to change your printer options without leaving your currently running application.

What Systems Can Use This Utility?

The PaintJet PrintScreen Utility is supported on the Hewlett-Packard Vectra and the IBM PC, XT, and AT computers with DOS Version 2.1 or higher. Other computers are not supported, but it is probable that the utility will work on any computer that is a true compatible with one of the supported computers.

The utility supports the following video adapter cards and monitors. Refer to Chapter 2 for information on specific applications which have been tested with the utility.

Video Adapter Card	Monitor
HP Multimode	HP Multimode Display
HP EGA	Enhanced Graphics Display
HP Monochrome+	Monochrome Display or Color Graphics Display
IBM EGA	Enhanced Graphics Display
IBM Monochrome	Monochrome Display
IBM CGA	Color Graphics Display
Hercules Monochrome	Monochrome Display

Preparing Your Work Disc

For your own protection, you should use one of the following procedures to make a copy of your original PaintJet PrintScreen Utility disc. Label the backup disc and store the original utility disc in a safe place. Use the backup disc as your work disc.

NOTE: The PaintJet PrintScreen Utility consists of only one file, and you do not need to copy it into a separate subdirectory on your work disc. ■

Single Floppy Disc System

Place your original utility disc in drive A. To tell DOS to copy the file on your original utility disc to a blank formatted disc, type the following and press **ENTER** (or **RETURN**).

```
COPY A:*. * A:
```

NOTE: Your computer will prompt you to replace your original utility disc with the blank formatted disc. Refer to your DOS manual if you need additional information. ■

Dual Floppy Disc System

Place your original utility disc in drive A and a blank formatted disc in drive B. To tell DOS to copy the file on drive A to drive B, type the following and press **ENTER** (or **RETURN**).

```
COPY A:*. * B:
```

Hard Disc System

Place your original utility disc in drive A. Then, assuming your hard disc is drive C, type the following and press **ENTER** (or **RETURN**) after each line.

```
C:                To log onto drive C  
CD\              To change to the root directory  
COPY A:*. *     To copy the utility file into the root  
                directory of drive C
```

Redirect Printer Output

Printer output is normally sent to LPT1. If your printer is not configured as LPT1, redirect LPT1 to your printer's DOS logical device. To configure and redirect your printer, refer to your DOS User's Reference Manual.

Starting the PaintJet PrintScreen Utility

The PaintJet PrintScreen Utility is a memory resident program that you only need to load once during a session. Resident means that it stays in your computer's main memory (RAM). This allows it to be used with other applications and to be called at any time by holding down the **SHIFT** key while you press the **PrtSc** key. The utility will stay resident until you turn the power off or reset the computer (**Ctrl-Alt-Del**).

To load the utility, you first must enter the directory where the program is located. For a floppy disc system, you place your utility work disc in drive A and type "A:" to log onto drive A. For a hard disc system you type "C:", assuming your hard disc is drive C. Then you type the following command and press **ENTER** (or **RETURN**).

PJSCREEN

The main menu is displayed on the screen and the utility is now *resident* in your computer's memory. The main menu default settings for your printer options are as follows:

PaintJet PrintScreen Version: A.01.02	
Copyright (C) Hewlett-Packard Company, 1987	
MAIN MENU	
Option	Current State
Utility Status:	On
Print Position:	Portrait, Top
Page Advance:	Clean Page
Monitor Configuration:	A = Automatic
Color:	Enabled
Background:	Reversed

- < ↓ ↑ > Use cursor keys to highlight an option;
- < ↵ > Press ENTER to select an option;
- < ESC > Press ESCAPE to exit menu;
- < I > Press I for additional information

The simple instructions shown below the menu tell you how to select an option that you may wish to change, how to obtain additional information, and how to exit the menu. Exiting the menu clears the screen, but the utility is still available for use. You can display the main menu from the DOS prompt at anytime by typing the **PJSCREEN** command.

When you select an option on the main menu, a secondary menu is displayed. The secondary menu gives a brief description of the option and lists the setting choices. Pressing **ENTER** (or **RETURN**) selects the highlighted setting and returns you to the main menu. The new option setting is displayed in the main menu.

When you type the letter **I** to request additional information, a screen is displayed that summarizes how to change your printer options using the five second delay feature.

Print Text or Graphics from the Screen



Now that the utility is loaded and you have selected your printer options, you are ready to run the application from which you would like to print. Make sure you do not reset your PC (**Ctrl-Alt-Del**), or turn off your PC, before you run the application, because this will remove the utility from your computer's memory.

NOTE: Make sure your PaintJet is connected to your computer and is ready for printing. Refer to your PaintJet Color Graphics Printer User's Guide if you need help to set up your PaintJet. ■

To print a screen, hold down the **SHIFT** key and press the **PrtSc** key. The utility waits five seconds before printing. This five second delay allows you to quickly change options to provide the best printed output, if necessary. Press **ENTER** (or **RETURN**) to override the delay and print immediately. The utility prints the text or graphics according to the current configuration of the options.

NOTE: Press the **ESC** (escape) key on your computer if you wish to stop your PaintJet before your screen image is completely printed. The **ESC** key stops the utility from sending screen data to your PaintJet. Printing will stop when the data that has already been sent is finished printing. ■

Change Options with PJSCREEN Command

You may use the utility with many different applications. Some applications require different printing features. The utility allows you to change the options from **DOS** or from a batch file.

This section describes how to change each of the current printer option settings. These changes remain in effect until you restart your computer, change the option setting with a **PJSCREEN** command, or you change the setting during the five second delay.

The PJSCREEN Command

You use the PJSCREEN command to change the option settings. The PJSCREEN command and its parameters can be typed in upper or lower case letters. This is the syntax for the PJSCREEN command:

```
[<path>] PJSCREEN [/Uon|/Uoff] [/Pt|/Pm|/Pb|/Pl] [/Ac|/As]  
[ /Ma|/M0..16] [/Ce|/Cd] [/Rr|/Rn] [/L]
```

< >	Words enclosed by angle brackets represent data you must enter.
[]	Words enclosed in square brackets are optional. For example, [<path>] means that the path, which you must supply, is optional in the command.
/	A front slash precedes each optional parameter.
	The vertical bar is read "or."
path	The DOS path to the utility.
/Uon /Uoff	Utility status: On or Off
/Pt /Pm /Pb /Pl	Portrait Top, Middle, Bottom, or Landscape page position.
/Ac /As	Advance to Clean page or stay on Same page.
/Ma /M0..16	Automatic or user determined monitor configuration mode.
/Ce /Cd	Color Enabled or Disabled
/Rr /Rn	Background Reversed or Normal
/L	List current PrintScreen settings.

If you would like to change several options, you may type some or all the changes in a single command. For example, this command changes most of the option settings and lists the new settings on your screen:

```
PJSCREEN /PM /AS /M7 /CD /RN /L
```

Display Main Menu

To display the utility main menu, type the following command and press ENTER (or RETURN):

```
PJSCREEN
```

/U Option: Change PrintScreen Status

The /U option enables or disables the PrintScreen Utility. The default setting is ON. The utility remains resident in memory even when it is turned off using the /UOFF command. It can be turned on again by using the /UON command.

- If you do not need the utility for your application, type the following command and press ENTER (or RETURN) to turn off the utility.

```
PJSCREEN /UOFF
```

- Type the following command and press ENTER (or RETURN) to turn on the utility.

```
PJSCREEN /UON
```

/P Option: Change Print Position

The print position determines how alphanumeric text or graphics is positioned on the printed page. Selecting a portrait orientation causes both alphanumeric text and graphics to be printed across the width of the paper. Selecting the landscape orientation allows only graphics to be printed across the length of the paper. Text will still be printed in the portrait orientation. Any text which appears on the landscape output is in fact a graphic representation of text. The default setting is portrait, top. The options are portrait top, portrait middle, portrait bottom, and landscape.

To change the print position, enter the PJSCREEN command with a slash (/) followed by the desired setting. For example, to change the setting to landscape (PL), type the following command and press ENTER (or RETURN):

```
PJSCREEN /PL
```

/A Option: Change Page Advance Setting

The page advance option can be set to Clean page or Same page. The default setting is Clean page, which causes the printer to advance the paper to a clean page after each screen is printed.

To Print two screens on the same page, you must select Same page printing and portrait top position for your first screen printout. For your second screen printout, you must set "top of form" on your PaintJet, or select portrait bottom, to avoid printing over the first half of the page. You should also select Clean page to cause the paper to advance after your second screen is printed.

- To select same page printing, type the following command and press ENTER (or RETURN):

```
PJSCREEN /AS
```

- To advance paper to a clean page after printing a screen, type the following command and press ENTER (or RETURN):

```
PJSCREEN /AC
```

/M Option: Change Monitor Mode

The video adapter in your computer uses several different operation modes for displaying text and graphics on your monitor. In most cases, the default "automatic" setting of the utility can determine which operation mode the video adapter is using for the current monitor display. However, if the utility cannot determine the correct mode to provide the correct printed output, you will need to specify the correct monitor mode by number. You can specify Automatic mode or monitor modes 0 to 16 with the /M option, but it is best to specify the monitor mode during the five second delay.

- If you have an EGA, CGA, Hercules, HP Multimode, or HP Monochrome Plus video adapter, use the Help feature to determine the correct monitor mode. Refer to the "Change Monitor Configuration During Five Second Delay" section for information on how to use the Help feature.
- If you have a Monochrome video adapter, it will always use monitor mode 7. To select mode 7, type the following command and press ENTER (or RETURN):

```
PJSCREEN /M7
```

/C Option: Change Color Mode

You can select color or black/white output. The default setting is color.

- To change to black/white output, type the following command and press ENTER (or RETURN):

```
PJSCREEN /CD
```

- To change to color output, type the following command and press ENTER (or RETURN):

```
PJSCREEN /CE
```

If you select the /CE option, make sure your monitor supports color.

/R Option: Reverse Background and Foreground Colors

The /R option reverses the background and foreground color from the screen to the printer. This option only affects graphics output.

For example, if your monitor displays white lines on a black screen, the Reversed default allows you to print black lines on a white page. With the option set to Normal you print what you see: a black page with white lines.

- If you want to Reverse the printing, type the following command and press ENTER (or RETURN):

```
PJSCREEN /RR
```

- If you want to print the screen as you see it, type the following command and press ENTER (or RETURN):

```
PJSCREEN /RN
```

/L Option: List Configuration

To see the current settings of the options, type the following command and press ENTER (or RETURN):

```
PJSCREEN /L
```

Your screen lists the current settings of the options.

Change Options During Five Second Delay

The utility waits five seconds before printing. The five second delay feature allows you to control the printed output without leaving your current application. You can access the "Help" feature and/or make the following changes during the five second delay.

- Change monitor configuration mode.
- Change printer options such as print position, page advance, color output, and background to foreground reversal.

- Press **ENTER** (or **RETURN**) to skip the delay and print immediately.

NOTE: If you are using the utility with the Microsoft Windows application, you cannot change options during the five second delay. ■

Press the appropriate key or keys to change the options during the delay period. The options you change are saved, and remain in effect until you restart your system or reset the option. The table on the next page has a complete list of the options that can be changed during the five second delay.

Change Monitor Configuration During Five Second Delay

The utility uses the monitor configuration option to interpret the data on your screen to provide the best printed output. The default monitor configuration is for automatic determination of the monitor mode. However, some applications configure the system so the utility cannot determine what the correct monitor mode should be. (Refer to chapter 2 for an explanation of some problems that you may encounter.) If your printed output is not correct using the automatic monitor configuration, you can use the following procedure to select the correct monitor mode.

NOTE: The correct monitor mode number for the applications that have been tested are given in chapter 2. If your application is listed, you can skip steps 1 and 2 and use step 3 to select the monitor mode number given for your application. ■

1. Hold down the **SHIFT** key and press the **PrtSc** key.
2. Press the **H** key during the five second delay. The help mode will attempt to print your screen image on a separate page for each of the monitor modes that are supported by your video adapter. This process can take up to 10 minutes, depending on the screen image and your video adapter card. Note the mode number that is given at the top of the page where your screen image is printed as nearly correct as the utility can achieve.
3. Repeat step 1 above. During the five second delay, hold down the **Alt** key and type the mode number you obtained in step 2 (or from the table of tested applications given in chapter 2). Use the alphanumeric keyboard to type **A** (automatic) or **Z** (zero) and the **NUMERIC KEYPAD** to type mode numbers 1 through 16.

For example, select monitor mode 16 during the five second delay:

Hold down the **Alt** key; then, press the **1** and **6** keys on the numeric keypad. Release the **Alt** key. The monitor mode remains set at 16 until you reset the monitor mode or until you restart your system.

Change Options During Five Second Delay

Press Key (s)	To Change Setting **
T* M B L	PORTRAIT, TOP page position PORTRAIT, MIDDLE page position PORTRAIT, BOTTOM page position LANDSCAPE page position
C* S	Advance to CLEAN PAGE after printing Print another screen on SAME PAGE
E* D	Color printing ENABLED Color printing DISABLED
R* N	REVERSE background and foreground colors Selects NORMAL printing
H	Help Mode. Refer to "Change Monitor Configuration During Five Second Delay"
Alt A or Alt n	Hold down Alt key and press A for automatic mode configuration Hold down Alt key and press 1..16 on numeric keypad to select a specific monitor mode
Z	Selects monitor mode 0
ENTER (RETURN)	Start printing immediately

- * Indicates default option setting
- ** Refer to the section "Change Options with PJSCREEN Command" for an explanation of these settings. Settings L, R, and N are for graphics only; E is for color monitors only.

Linking Screens For Consecutive Output

The following procedure can be used whenever you want to link screens together to form consecutive printed output on one or more pages. This procedure does not work in the landscape printer orientation.

1. To print the first screen, hold down the **SHIFT** key and press the **PrtSc** key. During the five second delay, press the **T** and **S** keys. These settings print the first screen at the top of the page and do not allow the printer to advance to a clean page.
2. To print the second screen, hold down the **SHIFT** key and press the **PrtSc** key. During the five second delay, press the **B** and **C** keys. These settings print the second screen at the bottom of the page and advances the paper to a clean page.
3. Repeat steps 1 and 2 for each page of your consecutive printed output.

NOTE: If you have an odd number of screens, you should press the **T** and **C** keys to print your last screen. These keys will reset default printing: portrait top position on a clean page. ■

Application Notes

Using an AUTOEXEC.BAT File

Starting the PaintJet PrintScreen Utility simply requires that you execute the `PJSCREEN` command from the DOS prompt. But if you are using an `AUTOEXEC.BAT` file to start your system, you might as well include the utility in it. One advantage for doing this is that you will not have to remember to type the `PJSCREEN` command each time you turn on, or reboot, your computer. Another advantage is that you can change the default settings of the utility to match the requirements of your particular application.

To create or edit your `AUTOEXEC.BAT` file, refer to your computer DOS user's guide or reference manual. If you create a new `AUTOEXEC.BAT` file, simply add one of the following lines into the file.

```
PJSCREEN  
or  
PJSCREEN /UON
```



The first choice above loads the utility and brings up the menu. The second choice includes a parameter which causes a useful side effect. That is, the utility is loaded as before, but the menu is not displayed. The second choice is ideal when the last command in the file starts your application, because it eliminates the need for the user to exit the utility menu before the `AUTOEXEC.BAT` file can continue processing.

If you are editing an existing `AUTOEXEC.BAT` file, you must add the `PJSCREEN` command of your choice after all other commands that load a memory resident program. It must, however, be added just before the line that starts your application.

For example, the `PJSCREEN` command would be added between *spool* and *word processor* in the following sample `AUTOEXEC.BAT` file.

```
echo off
verify on
mode lpt1
spool
pjscreen /uon
word processor
```

NOTE: You can include any of the PJSCREEN command options in your AUTOEXEC.BAT file. However, it may be best to use the five second delay feature whenever you need to change the monitor mode option. ■

Save the AUTOEXEC.BAT file you have created or edited. Now, the utility will be automatically loaded at the right time when you turn on, or reboot, your computer.

Problems You May Encounter

The PaintJet PrintScreen Utility interprets the screen display in accordance with the configuration data that is recorded in the system BIOS routines. However, some applications disobey the rules by setting the mode on the video adapter card directly. When the BIOS routines are not used to set the configuration of the video adapter card, the utility will probably interpret the screen image in the wrong monitor mode. As a result, your printed output will reflect one or more of the problems listed below. Refer to “Change Monitor Configuration During Five Second Delay” in chapter 1.

The output is garbage.

The output colors do not match the screen.

The output is a different proportion than the screen image.

The most likely reasons for not obtaining some printed output are as follows:

Some applications disable the entire keyboard or redefine the function of the PrtSc key. The utility cannot be used with these applications.

The DOS GRAPHICS command has been executed. You can correct this condition by resetting your computer and installing the utility without executing the GRAPHICS command.

The system is rebooted and the utility is not installed from your AUTOEXEC.BAT file. In this case you can install the utility as described in chapter 1.

Memory Requirements

The PaintJet PrintScreen Utility is a memory resident program and occupies approximately 25 Kb of memory. If an application requires more memory than is available after you load your utility, the application will not run. If you are not sure how much free memory your application needs to run, just try it.

Tested Applications

The test results given in the following table were obtained after the applications were configured to run with the indicated video adapter cards. Note that many of the applications treat the HP Multimode card as though it is a CGA card. The definition for the codes used in the matrix of the table are as follows:

A = Automatic mode selects the correct monitor mode

D = Acts the same as the Lotus release it runs with.

G = Indicates the following mode number is for the graphics screens in your application.

N = Application does not support the indicated card

T = Indicates the following mode number is for the text screens in your application.

X = Application treats HP Multimode card as though it is a CGA card. Refer to CGA column for the correct monitor mode.

— = Utility does not work with application/card combination.

1 = Application bypasses color settings; output is black/white

2 = Application bypasses color settings; output colors do not match

3 = Application does not allow five second delay options

4 = Reverse or Normal gives unexpected background on output

5 = Application locks-out keyboard for lesson screens

NOTE: Remember that the monitor mode you select remains in effect until you change it or end the session. It is good practice to reset the mode selection to Automatic mode when you no longer need a specific mode. ■

Monitor Mode Configuration Data For Tested Applications

Application\Card	CGA	EGA	Hercules	HP Multimode
AutoCAD Ver. 2.5	G6	A,4	G5	A
CADKEY Ver. 2.02	A	A	A	A
Chart-Master Ver. 6.1	A	A	A	A
Diagraph Ver. 3.3	—	—	—	—
Executive MemoMaker Ver. A.02.00	A	A	A	X
Framework II Ver. 1.0	A	A	A	X
Freelance Ver. 1.0	A	A	A	A
Gallery Ver. A.01.00D or A.01.01C	G4	A	A	G14
Graphwriter Ver. 4.3	G4	G4	G5	X
Harvard Presentation Graphics Ver. A.01	A,2	A	A	A
Inset Ver. 1.1B	—	—	—	—
Lotus 1A	A	A,4	G5	X
Lotus 2.00	A	A,4	G5	X
Lotus 2.01	A	A	G5	A
Lotus Hal 1	A	D	G5	A
MS Chart Ver. 2.00	A,1	—	G5	A
MS Windows Ver. 1.03	A,3	A,3,4	3,G5	A,3
MS Word Ver. 3.10	A,1,5	A,1,5	G5 T7	A,5
MultiMate Advantage Ver. 3.50	T3	T3	A	A

Monitor Mode Configuration Data For Tested Applications (Continued)

Application\Card	CGA	EGA	Hercules	HP Multimode
MultiPlan Ver. 3.0	A	A	A	A
PFS: Professional Plan Copyright 1987	A	A	A	A
SideKick Ver. 1.56B	A	A	A	A
SuperCalc3 Ver. 1.00	A	A	A	A
Symphony Ver. 1.1	A	A	G5	X
VersaCAD Ver. 5.0 Rev. 2	A	A,2	A	X
WordPerfect Ver. 4.1	A	A,2	A	A,2
WordStar Ver. 3.31	A	A	A	A
WordStar 2000 Rel. 2	A	A	N	X

