
Hercules

2

Software Guide

InColor Card
Model GB222

Owner's Manual

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How This Manual Is Organized

Your Hercules® InColor Card Owner's Software Manual is divided into two sections: "Programs and Fonts," and "Hercules InColor Card Installation Instructions." **Section 1** contains five chapters covering Programs and Fonts:

The "Introduction" chapter provides general information on the "Programs and Fonts" and installation instructions for the diskette.

The "InColor Toolbox" chapter is a set of "tools"—programs that help you get the most from your InColor Card. **The "Programs and Fonts" diskette contains the file READ.ME, take time to read it. This will give you the latest information about your InColor Card and Software developments.**

The "Exploring RamFont Mode" chapter briefly discusses fonts and font files and the basic steps to create unique fonts. Unless you are a programmer or wish to create your own fonts, you need not read this chapter to use the InColor Card.

The "Font Manager Reference" chapter contains specific information pertaining to the use of the RamFont mode.

Chapter Five—"Programmer's Tools" contains two directories of files, TUTOR and SOURCE, which are intended to aid the programmer in writing specific values for InColor Card registers and controlling the InColor Card.

Section 2 introduces the "Hercules InColor Card Drivers Installation Instructions" and provides procedures for installing the Hercules InColor Card diskette containing special drivers for several popular programs.

Please read the appropriate installation procedures before installing the diskette.

You should refer to the Hercules InColor Card Owner's Manual Part I—Hardware for installation instructions and technical reference.

Also you may have a Software addendum in your package for the latest information.



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Section One

Programs and Fonts

Introduction

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1

Introduction

Programs and Fonts Disk

Your Hercules InColor Card provides a number of features not available from any other high-resolution color card. By using the software contained on the "Programs and Fonts" disk, you can access many of these features; among them:

- Select your display palette of 16 colors from a total of 64 colors.
- Load special fonts into video memory for display in RamFont mode.
- Create your own customized fonts.
- Simulate the actions of the InColor Card.

This manual describes the files contained on the "Programs and Fonts" disk, and how to use them to best advantage. You won't have to read this manual from cover to cover. When you have a question about a function of the InColor card, you can turn to the section that covers that topic specifically.

What's On the Disk

There are a number of files on the "Programs and Fonts" disk, divided among the main directory and three subdirectories.

- The **Main Directory** includes a test program, the configuration utility, graphics printing and screen blanking utilities, and a program for changing the palette used by the InColor Card. Also included are several sample palettes for loading with the palette program; palette files have the extension PAL.
- The **RAMFONT** directory contains files of fonts that can be used with the InColor Card, along with programs to load and edit the fonts. Font files all have the extension FNT (e.g., `SANSERIF.FNT`).
- The **TUTOR** directory (intended for programmers) contains a program to simulate the effects of various register manipulations and plotting modes on the InColor Card. Included are several lists of instructions to load into the simulator.
- The **SOURCE** directory (also intended for programmers) contains the assembly language source code for performing a number of procedures, along with the Turbo Pascal code for the InColor Simulator Program.

Introduction

Copying the Disk

Before proceeding to use the “Programs and Fonts” disk, be sure you have made a working copy. After you’ve copied the disk, put the original away and use the copy as your working disk.

On a Dual-Floppy System

1. Insert a DOS diskette with a copy of DISKCOPY.COM in drive A.
 2. Insert a blank disk in drive B.
 3. At the A> prompt, type:
A> DISKCOPY A : B : [ENTER]
 4. A message will be displayed indicating that a SOURCE disk should be placed in drive A: and a target disk in drive B:. Remove the DOS diskette from drive A: and insert the “Programs and Fonts” diskette; hit the enter key when you have done so.
 5. The files and directories on the original disk will be copied.
 6. Label your copy “Hercules InColor Card Programs and Fonts,” and file the original disk away safely.
 7. Use the new copy for any operations described in this manual.
-

Note To Hercules Graphics Card Owners

Note: If you have a Hercules Graphics Card Plus, you may have other versions of some of the files on the “Programs and Fonts” disk. Please be sure to use only these latest versions, as they are designed specifically for use with the InColor Card. Be sure to mark your working copy of the “Programs and Fonts” disk clearly for use with the InColor Card. If you have a hard disk, you can name the directory you save these files in on your hard disk specifically for the InColor card (e.g., use the DOS command MKDIR INCOLOR).

Introduction

On a Hard-Disk System

1. Insert the original disk included with your InColor Card in drive A.

2. If you want the files in a separate directory, make a new directory on your hard disk using the **MKDIR** command; then change to that directory using the **CD** command. See your DOS manual for details on these two commands.

3. Change to drive A by typing:

```
C> A: [ENTER]
```

4. At the A> prompt, type:

```
A> COPY *.* C: [ENTER]
```

5. To copy the contents of the subdirectories on the Programs and Fonts disk, change to drive A: by typing:

```
C>A: [ENTER]
```

6. Change to the RAMFONT directory by typing:

```
A> CD\RAMFONT [ENTER]
```

7. Copy the contents of the RAMFONT subdirectory to your current subdirectory on drive C: by typing:

```
A> *.* C: [ENTER]
```

8. In this same way, you can also copy the contents of the TUTOR, and the SOURCE subdirectories on the diskette. Change to the directory (\TUTOR or \SOURCE) on the Programs and Fonts disk, and copy the contents of that directory to your hard disk with the above command. If you want to put the files into separate subdirectories on your hard disk, specify those destination directories in the copy command.

Changing Directories

To get to the files included in the directories, use the DOS change directory command:

```
A> CD \ (directory name) [ENTER]
```

To return to the main directory, use the command:

```
A> CD \ [ENTER]
```

Chapter 1 – InColor Utilities

The main directory of the “Programs and Fonts” disk includes a set of utilities—programs that help you get the most from your InColor card. This chapter covers each of these programs and how to use them.

The Latest Information in READ.ME

The file **READ.ME** contains supplementary information on installing and using the InColor Card. Take time to read it. To do so, you can either:

- Retrieve it as a document into your word processor.

or

- At the DOS prompt, type:

TYPE READ.ME [ENTER]

to list the file on screen. Use CTRL-NUM LOCK (press the CTRL and NUM LOCK keys together) to stop scrolling at any point. Press any key to continue.

Testing Your InColor Card

TEST.COM is the InColor Card diagnostics program. It puts the card through tests that assure its display modes are working properly. Run this test program when you first install your InColor Card or if you encounter any difficulties in using it later.

To run the test, be sure your working copy of the “Programs and Fonts” disk is in the logged drive, then type:

TEST [ENTER]

Test lets you check that the characters and attributes in Text and RamFont modes are stable and fully formed, and also tests proper operations of the graphics mode, to see that both graphics pages are stable and free of errors.

InColor Utilities

Display Modes and HGC

The program **HGC.COM** lets you set the configuration of the InColor Card. It also enables a special software device called the Mode Record that allows software to keep track of the InColor Card's display mode.

There are three configuration settings:

DIAG (Text mode)

In this mode, the InColor Card appears as an IBM monochrome display card when you run the IBM Diagnostics Program (hence the name "DIAG").

Note that the IBM Diagnostics Program tests only the monochrome text mode.

HALF

In this configuration, the InColor Card can be put in graphics mode, with access to the first page of graphics display memory (which is numbered page 0). If you have the CGA-compatible Hercules Color Card installed, you must set the configuration to HALF when using CGA-compatible graphics.

FULL

Allows the InColor Card to operate in graphics mode with the access to both pages (page 0 and page 1) of graphics display memory. This is the normal operating configuration, required by many programs, such as Lotus® 1-2-3™, version 1A. Any Hercules-compatible graphics software may be run in FULL graphics configuration. The Hercules Color Card is the only other graphics card that may be physically present in your system when you are in FULL.

Many programs that require this configuration set it automatically when they are loaded. In other cases, you may need to set it specifically, using the HGC command.

InColor Utilities

To Set the Display Configuration

Most software automatically selects the appropriate configuration on its own. If you think that you've encountered a situation where this is not happening, you can set the switch yourself, before starting the software.

(Please note that setting the software switch to FULL or HALF does not, by itself, put the board in the graphics mode. It simply enables the board to be put in graphics mode when the appropriate graphics software is run.)

To change the configuration, make sure you have your copy of the "Programs and Fonts" disk in the currently logged drive. Then, from the DOS prompt, type one of the following:

HGC FULL [ENTER]	for FULL configuration
HGC HALF [ENTER]	for HALF configuration
HGC DIAG [ENTER]	for DIAG configuration

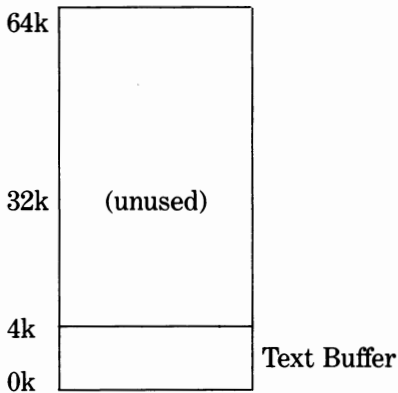
Microsoft® Word, Lotus Symphony,™ Lotus 1-2-3, Release 2, and other programs set the software switch for you when you load them. Version 1A of Lotus 1-2-3 doesn't, so you have to set it yourself (to FULL).

If you have any doubt about whether the program sets the switch as necessary, you can set it yourself, using one of the HGC commands above. Setting it explicitly in this manner cannot possibly cause any problems, even if the software also sets the software switch.

What the Software Switch Does

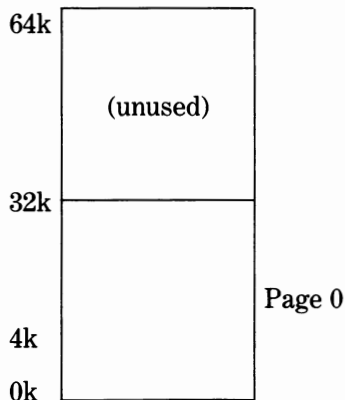
The InColor Card contains a 64k-byte block of RAM, known as display memory. Depending on the mode of operation, this memory is divided up in one of three ways.

InColor Utilities



DIAG (Text) Configuration Display Memory

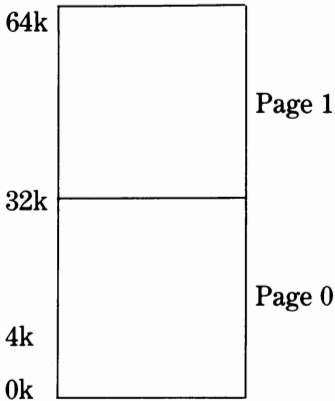
In **DIAG** configuration, just the first 4k bytes of memory is used as a text buffer.



HALF Configuration Display Memory

In **HALF** configuration, the first 32k bytes of memory is used, configured as a single page.

InColor Utilities



FULL Configuration Display Memory

In **FULL** configuration, the entire memory is used, and divided up into two “pages.”

The Mode Record

The Mode Record is a special component of the HGC program that lets software keep track of the current display configuration. This is useful when running more than one program at the same time.

To make sure that the Mode Record is enabled when you start your computer, you should include the HGC command in your AUTOEXEC.BAT file. (Autoexec files are discussed at the end of this chapter.)

You don’t have to specify a configuration for the Mode Record to load; just the command HGC by itself is sufficient.

Technical users interested in the specifics of the Mode Record should examine the RECORD.ASM source listing included in the SOURCE director of the “Programs and Fonts” disk.

InColor Utilities

Resetting the InColor Card

You can reset the InColor Card to its start-up condition at any time. First, make sure that the HGC.COM program is in the currently logged drive, or in your DOS search path; then type:

HGC [ENTER]

This command returns the InColor Card its power-up (monochrome) state.

Note that a “warm boot”, using CTRL-ALT-DELETE, does not reset the InColor Card. To assure that the InColor Card is reset during a warm boot, make sure to include the HGC command in your AUTOEXEC.BAT file.

SETCOLOR.COM

Two programs are included with the Hercules InColor Card to allow you to select colors. The program **SETCOLOR.COM** (located on the InColor Card driver diskette) is easier to use than **PALETTE.COM**, in that it does not require a knowledge of attribute mapping. SETCOLOR contains thorough on-line help. Try the SETCOLOR program before undertaking PALETTE.COM unless you are familiar with how attribute codes work and the way in which they will translate to color on the Hercules InColor Card.

Setting Display Colors

The **PALETTE.COM** program on the “Programs and Fonts” disk gives you control over the colors available from your Hercules InColor Card. Using Palette, you can select any 16 colors (from the 64 possibilities) for use with the InColor Card. Palettes can be saved in files on disk, then loaded to use with many programs, including standard text mode programs.

Programs that are specifically written for the Hercules InColor Card will contain palette information that will most likely overwrite what you can set with the palette program.

InColor Utilities

Starting Palette

To start the Palette program, make sure your working copy of the "Programs and Fonts" disk is in the currently logged drive, then type:

PALETTE [ENTER]

(Note that there are ways of using the Palette program without actually entering the Palette editing screen. These are discussed at the end of this section, under the topic "Palette Switches.")

The Palette Screen

The palette editing screen is divided into two columns. The left side of the screen shows the colors in the currently selected palette; this is the work area. The right side of the screen lists commands that you can use when selecting colors and working with palette files.

The Work Area

There are 16 color positions in the work area, stacked in a column and numbered from 0 to 15. Depending on the software you are using, different color positions may be used for different types of emphasis. However, the following notes are generally true of software written with monochrome text attributes:

- **Position 0** can generally be considered the background color; this is true for most text, graphics, and RamFont applications.
- **Position 7** is usually the standard character color (in text and 4k RamFont modes).
- **Position 15** is usually the high-intensity character color (again, in text and 4K RamFont modes). It is also the foreground value of Graphics mode.

InColor Utilities

The Palette Menu

The menu on the right-hand side of the screen gives you a list of commands to use in Palette program.

<ALT-D>	Exit, set default palette
<ALT-R>	Exit, reset incolor card (power-up values, palette off)
<ALT-S>	Exit, keep selected palette
<R>	Read palette file
<W>	Write palette file
<up/down arrow keys>	Move color pointer
<Tab>	Move pointer to 0 or 7
+	Increment color value
-	Decrement color value
<A>	Set sample text attribute
<N>	Input a numeric color value

To Set a Color

1. Use the up/down arrow keys to move the position pointers (><) to the color position you wish to alter.
2. Use the + and - keys to cycle through the available colors. Notice that the color number (to the right of the color bar) increases when you press + and decreases when you press -.
3. Use the TAB key to move between positions 0 and 7 in the palette. Position 0 changes the background color for the whole palette screen (and in many applications). Position 7 changes the color of text displayed on the palette screen (and in many applications).
4. If you want to change a position to a specific color by number, move to the position, then type:

N (color number) [ENTER]

The color number is a decimal value between 0 and 63. The new color replaces the old immediately.

InColor Utilities

Testing Attributes

You can test various attribute values on the sample text displayed at the bottom of the palette screen. This is particularly useful for programmers who wish to test custom palettes for use with their display drivers.

To test an attribute value, type "A", then enter the decimal value for the attribute byte (0–255).

Saving Your Palette

Once you have picked the colors you want in your palette, you can save it for later use. Type:

W (filename.ext) [ENTER]

This saves your selected palette in the named file.

Loading a Palette

To retrieve any palette previously saved on disk, type:

R (filename.ext) [ENTER]

This retrieves the palette and displays it on the palette screen.

Note that the "Programs and Fonts" disk includes several sample palettes (files with the extension PAL). You can load any of these to check some typical settings.

Leaving Palette

You can leave the Palette program in one of three ways:

- To leave the program selecting a default palette, type **ALT-D**.
- To leave the program and reset the InColor Card to its default power-up (monochrome) status, type **ALT-R**.
- To leave the program and keep the changes you've just made to the palette, type **ALT-S**.

Note that none of these exits automatically saves the palette you've been working on. You must save first, then exit.

InColor Utilities

Steps to Creating Custom Palettes

The palette settings for any program can be adjusted by trial and error, using the following steps:

1. Create a palette with distinct colors for each of the 16 positions. Write down the color (e.g., Dark Red, Blue) associated with each position.
2. Save your new palette (using the "W" command in the Palette program), then exit the program using the ALT-S option.
3. Enter the program and notice the colors displayed at various places on screen (borders, highlighted text, etc.). Find the color on your list and write a description of the display position next to it.
4. Return to the palette program, load your palette (using the "R" command), then change the value for each position to a color more to your liking.
5. Repeat the process until you have the colors for the program just as you like them.
6. After you have created a custom palette for your program, you can write a batch file to load the palette each time you start the program, using the Palette switches described in the next section.

Palette Switches

You can use the Palette program to control some aspects of the InColor Card, without entering the Palette editing screen. This is done by using a Palette "Switch."

To use a "switch" to perform a specific function type **PALETTE**, followed by the command sequence that you want to invoke.

Palette Help

To bring up a help screen of the Palette switches, type **PALETTE/H** [ENTER] or **PALETTE/?** [ENTER].

InColor Utilities

Loading a Palette

To load a palette file from the DOS prompt, type **PALETTE (filename.ext [ENTER])**. Note that this switch does not include the slash character. The filename is the name you gave to a palette file when you created it; the standard extension is PAL.

Reset the InColor Card

To reset the InColor Card to its power-up (monochrome) status, type **PALETTE/R [ENTER]**.

Set the Cursor Color

To select a color for the cursor with the palette enabled, type **PALETTE/C# [ENTER]**.

The # is a hexadecimal (base 16) number between 0 and 15 (Fh), indicating the position of the cursor color in the currently selected palette. Note that positions 0-9 are indicated by the standard numerals, positions 10 through 15 are indicated by the letters A-F.

Set the Cursor Color (Palette Disabled)

To select a color for the cursor with the palette disabled, type **PALETTE/D# [ENTER]**.

is a hexadecimal (base 16) number between 0 and 15 (Fh), indicating an absolute color value. Note that values 0-9 are indicated by the standard numerals, 10 through 15 are indicated by the letters A-F.

Set the Underline Color Attribute

To select the color of the Underline attribute from the palette, type **PALETTE/U# [ENTER]**.

is a hexadecimal (base 16) number between 0 and 15 (Fh), indicating the position of the cursor color in the currently selected palette. Note that values 0-9 are indicated by the standard numerals, 10 through 15 are indicated by the letters A-F.

Note that underlining is available only if the normal attribute set has been selected by the exception register (see the next topic for details).

InColor Utilities

Set the Exception Register

To set the exception register, type **PALETTE/X# [ENTER]**.

In this switch, # is a hexadecimal (base 16) number between 0 and 255 (FFh), indicating the exception register setting. The exception register is used mainly by programmers; for more information on registers, see the Chapter 5 of the Hardware Manual).

Note for Microsoft Word users: In order to use a 48K RamFont mode program such as Microsoft Word 3.1 with both colors and monochrome attributes (i.e., underlining, bold, etc.), you will need to set the exception register directly. The command:

PALETTE/X30 [ENTER]

will produce the desired effect.

Printing Graphics

The **HPRINT.COM** program on the "Programs and Fonts" disk enables you to print graphics with IBM Graphics Printers or Epson dot matrix printers (MX with Grafrax, RX, or FX). Other printers have modes that are compatible with the Epson graphics printers, and are also suitable to use with HPRINT.

HPRINT produces a printout that compensates for the differing aspect ratios of the screen and the printed page (e.g., a circle on your screen is printed as a circle, rather than an ellipse). HPRINT should be used in place of the **GRAPHICS.COM** program on your DOS disk.

Note that HPRINT prints only monochrome (two color) images, and is designed for use with Hercules Graphics Card compatible software running on the InColor Card. The result of using HPRINT with full-color software on the InColor Card is unpredictable.

HPRINT is a graphics mode printer utility. It is appropriate to use with graphics mode applications only. HPRINT will not produce useful results if invoked from RamFont mode.

InColor Utilities

Using HPRINT

1. With your working copy of the “Programs and Fonts” disk in the logged drive, type:

HPRINT [ENTER]

Once HPRINT is loaded, it will be available to print the contents of text or graphics screens.

2. To begin printing, hold down the **shift** key and at the same time, press the **PrtSc** key. Then release both keys and press one of the following:

Press	To print
0	Page 0
1	Page 1
Space Bar	Text screen

Determining Which Page to Print

In most cases, you'll want to print a specific page of graphics, based on the graphics page used by your software.

If you don't know which page your graphics program uses, try printing page 1 first. If you don't see the proper output, hit the **ESCAPE** key. When the printer stops, reset the paper and try again, this time specifying page one by typing **Shift-PrtScr** followed by 1.

Blanking the Screen

The **SAVE.COM** program is a utility that blanks the screen after five minutes without any keyboard activity. When Save blanks the screen, any keystroke restores the display.

If you use a program that requires extensive use of another input device, such as a mouse, you may want to disable Save. Otherwise, the screen is likely to go blank during the course of your work.

InColor Utilities

The SAVE program is similar to programs included with the Hercules Graphics Card and the Hercules Graphics Card Plus to help protect monochrome monitors from “burn-in.” That is, from being permanently etched with an image that had remained on the screen for a very long time. However, the phosphor in RGB monitors such as those used with the InColor Card is not subject to the same “burn.” The SAVE program is supplied with the InColor Card because many users prefer to use it for aesthetic reason.

Loading Save

To load the Save program, make sure your copy of the “Programs and Fonts” disk is in the currently logged drive and directory, then type:

SAVE [ENTER]

or:

SAVE ON [ENTER]

Save becomes resident in your computer’s memory, counting down after each keystroke and blanking the screen when five minutes passes without any activity.

Note: When Save blanks the screen, any pixels that are illuminated in the topmost line will remain on. If the screen is in graphics mode, the top line will appear as a series of dashes. This is Save’s normal mode of operation, and does not indicate any problem with your system.

Restoring the Display

When Save has blanked the screen, simply press the Shift key (or any other key) to restore the screen display. Note that the key you press will have its regular effect on your work; pressing the Shift key avoids any unexpected results.

Unloading Save

You may want to disable Save for one of several reasons. If you are using a mouse or other alternative input device, the screen will blank regularly even if you are working. Certain programs may be incompatible with Save; the screen blanks, but cannot be restored with a keypress. What’s more, Save should not be used with any RamFont mode other than a standard 80 column, 25-line display.

InColor Utilities

To disable Save for any of these reasons, simply type:

SAVE OFF [ENTER]

If you have installed other “terminate and stay resident” programs (e.g., Sidekick, Prokey, etc.) you may not be able to disable Save.

Other Screen Blanking Programs

There are numerous other screen blanking programs available from various sources. Some are fully compatible with the InColor Card; **others may do serious damage to your monitor.**

The screen save functions in several programs, including SuperKey, Keyworks, FANSI-CONSOLE, and Cruise Control, have been written to be compatible with the Hercules graphics mode.

Unless the documentation for a screen blanking program specifically states that it is compatible with Hercules graphics mode, **do not attempt to use it with the InColor Card.**

Creating an Autoexec File

You may wish to use some of the software described in this chapter each time you start your computer. For example, you might want to turn on the Save feature, load the Mode Record program, then select a specific palette and a cursor color.

You could do so by typing these commands each time you’ve turned on your computer. However, there is an easier way—using batch files. A file containing a list of commands with the name AUTOEXEC.BAT will execute automatically each time you start up your computer. This file can be included on your boot disk if you have two floppy drives, or on the root directory of your hard disk.

A typical AUTOEXEC.BAT file might include the date and time prompt, the InColor utilities you wish to load, and any other programs you load each time you start your computer. For example:

```
DATE  
TIME  
HGC  
SAVE ON  
PALETTE THIRD.PAL
```

This file prompts for the date and time, loads the Mode Record and Save, then loads the palette file “THIRD.PAL.”

InColor Utilities

Creating an Autoexec File

You can create an Autoexec file with any ASCII text editor (e.g., Wordstar in non-document mode, Sidekick). For more details, see your DOS manual under the topic "Batch Files."

To create an AUTOEXEC.BAT file from DOS, make sure your boot disk is in the logged drive or you are in the root directory of your hard disk, then type:

```
COPY CON:AUTOEXEC.BAT [ENTER]  
DATE [ENTER]  
TIME [ENTER]  
HGC [ENTER]  
SAVE ON [ENTER]  
F6 [ENTER]
```

Pressing F6 puts a ^Z character on screen, indicating the end of the file. The commands that you have typed are copied to disk in the AUTOEXEC.BAT file after you hit enter.

Be sure that all of the files which are called by your AUTOEXEC.BAT file are present in your root directory or are accessible through your DOS search path.

This AUTOEXEC.BAT file is an example only. If you decide to create one or alter an existing AUTOEXEC.BAT file, the list of commands that you include will probably differ.

Chapter 2 – Exploring RamFont Mode

This chapter briefly discusses fonts and font files, then guides you through the basic steps of creating your own fonts with the Font Manager program.

Chapter 4 offers a complete reference for using The Font Manager.

The RAMFONT Directory

On the “Programs and Fonts” disk, a number of files are used specifically for working with RamFonts. These are contained in the RAMFONT directory and include:

The RamFont editor, **FONTMAN.COM.**, lets you view font files, make changes to them and save them. You can also create files of entirely new fonts.

The 4k RamFont loader, **RAMFONT.COM**, is used to retrieve a font file into video display memory for use with standard text-mode programs. (Programs that use 48k RamFont mode must load the fonts themselves.)

The files with the extension **.FNT** are all sample 4k fonts.

The **RAMFONT.COM** font loader program is easy to use. It allows you to initialize the InColor Card to 4k RamFont mode, utilizing any of the sample fonts provided. The 4k RamFont mode is transparent to a standard text mode program. Any one of the sample font files could be used rather than the normal ROM based character set in any text mode program.

1. To load a sample font, using **RAMFONT.COM**, simply type:

RAMFONT “filename.ext” [ENTER]

2. For example, to view the **BIGSERIF.FNT**, be sure that the **RAMFONT** program and the **BIGSERIF.FNT** file are in the current directory, and type

RAMFONT BIGSERIF.FNT [ENTER]

Or, if the font file is not in the default directory, you can specify a path to the file.

3. Now try listing a directory, or loading any standard text mode application. You’ll notice that the new font is used rather than the normal text characters.

Exploring RamFont Mode

4. An easy way to leave RAMFONT mode is to issue the RAMFONT command without specifying a font file:

RAMFONT [ENTER]

Creating Your Own Fonts

You can design your own fonts with the Hercules Font Manager program (FONTMAN.COM). This program lets you modify existing type faces or create completely new faces. You can even create non-alpha-numeric characters that you can use for drawing on the screen. You can save your new fonts on disk, then call them up later to use them or to make other changes to them. The Font Manager is useful for designers, program developers, and others who want to control the appearance of the screen.

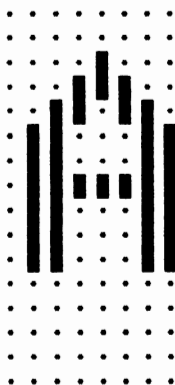
The following discussion and example briefly run through some of the Font Manager's capabilities. A complete list of Font Manager commands is included at the end of this chapter.

How Characters are Formed

Understanding how the Font Manager works begins with an understanding of how characters are made up on the screen.

Characters displayed on your screen are made up of a matrix of dots, also known as pixels. The characters are displayed on screen by the graphics card instructing the display tube to "turn on" specific pixels to form recognizable characters.

For example, in the "standard" screen font, the capital "A" looks like this:



Exploring RamFont Mode

The matrix on which this and other standard characters are based is 8 pixels wide by 16 pixels high (in both the text and 4k RamFont modes).

When you design your own type styles, using the Font Manager program, you simply draw a pattern of pixels to form each letter in the alphabet.

Exploring The Font Manager

To begin editing fonts, make sure the "Programs and Fonts" disk is in your currently logged drive, and that you are in the RAMFONT directory.

Then, at the DOS prompt, type:

FONTMAN [ENTER]

This brings up the following screen:

```
The Hercules Font Manager
© Copyright Hercules Computer Technology 1986
Version HFM-112
—
```

A number of commands can be used in the Font Manager. In the next section, you'll learn about those you'll use most frequently—the commands for loading a font file, for editing fonts, and for saving your edits in a new font file.

A complete list of commands available in the Font Manager is included in the next chapter, the Font Manager Reference.

Loading a Font

Before you begin editing, try loading one of the sample fonts files, STANDARD.FNT, by typing:

-L STANDARD.FNT [ENTER]

Type **RAM [ENTER]** to change to 4k RamFont mode so you can readily see the changes you make.



Exploring RamFont Mode

Editing Fonts

To enter the character editing screen, type E (for edit). You'll see this screen:

Editing Options:

Edit preceding character:

Edit next character:

Clear the current character:

Select or deselect autosave:

Select bit at the cursor:

Deselect bit at the cursor:

Display ASCII Set:

End the Edit session:

Autosave = On.

Changes saved automatically.

Address Code = T1:00H

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

This is the character editing screen.

- On the left is a list of keys and their functions.
- On the right is a grid of dots; this is the workspace where you edit the characters. The dimensions of this workspace are 8×16.
- Above this character editing workspace is an indicator that says **Address Code: T1:00H**.

T1 stands for the type font number (in this case, number 1) of 12 possible fonts.

00H stands for the character number in hexadecimal (base 16) numbers. There are 256 characters per type font.

Address codes are used frequently in the Font Manager to describe a particular character to work on. They are discussed in detail at the beginning of the Font Manager Reference at the end of this chapter.

Exploring RamFont Mode

3. Move around the workspace, using the arrow keys.
4. Position the cursor anywhere in the character editing workspace and press [F5]. A box appears in the position, indicating that the dot in this position in the character will be displayed.
5. Use the "+" key to advance through the character set. Notice that the character Address Code (above the editing matrix) changes as you move.
6. Use the "-" to return to the first character in the set.
7. Press [F10] and you can see the result of your work. Notice that the commands at the left side of the screen disappear and a block of characters appear. These represent the 256 ASCII characters. Notice that the first character, the one in the upper left of the block, contains a single dot—the one you just entered.
8. Move the editing cursor to the dot you previously placed in the matrix. Press [F6] and your dot disappears from the editing workspace of the screen. You have removed the dot from the character, leaving a blank. Since the first character in the standard ASCII set is a blank, leave this as it is for now and move on.

Note the message at the bottom of the editing screen:

Autosave = On.
Changes saved automatically

This means that character changes are saved in your computer's memory as you step through the character set (using the "+" and "-" keys). However, if you leave the Font Manager without saving them to disk, or if you load another font file, the changes will be lost.

To save character changes to a disk file, you must do so specifically, using the Write or Move commands; these are discussed in the Font Manager Reference at the end of this chapter.

9. Press ESC to leave the editing screen.

Exploring RamFont Mode

Editing a Specific Character

You can begin editing at any character in the currently loaded font file. To do so, you need to enter the address of the character when you give the edit command.

1. Type:

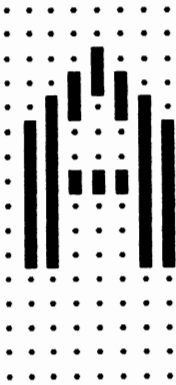
E t1:41h [ENTER]

2. The editing screen appears again. This time, however, the capital “A” character appears in the editing block.

Address Code = T1:41H

- | | |
|------------------------------|--------------|
| Edit preceding character: | Minus (-). |
| Edit next character: | Plus (+). |
| Clear the current character: | F1 key. |
| Select or deselect autosave: | F2 key. |
| Select bit at the cursor: | F5 key. |
| Deselect bit at the cursor: | F6 key. |
| Display ASCII Set: | F10 key. |
| End the Edit session: | Esc key. |

Autosave = On.
Changes saved automatically.



3. Use the “+” key to move forward through the list of characters; use the “-” key to move back.
4. Use the arrow keys to move around through the character matrix.
5. Use **F5** to add a pixel at any position in the character matrix; use **F6** to delete a pixel at any position in the matrix.
6. Press the **ESC** key to leave the editing screen. Type **ROM** to return to the text mode; then type “**Q**” to quit the Font Manager.

Exploring RamFont Mode

Designing Your Own Fonts

Note that when you're trying to develop new sets of characters for use in text applications, it's usually a good idea to start with a font set that's most like the one you'd like to end up with and edit that to produce the file you want. To do so:

1. Enter the Font Manager.
2. Load the font file, using the Load or Move command (discussed in detail in the next chapter, "Font Manager Reference").
3. Enter the font editing screen and make your changes.
4. Press ESC to exit the font editing screen.
5. Save your new characters under a new file name. To do so, you can use either the Write or Move command (discussed in detail in the next chapter, "Font Manager Reference").

Font Ranges and Addresses

In many of the commands discussed in this chapter, you will need to refer to specific types by their **address** or **range**.

Type and Character Addresses

FontMan divides RamFont character files into twelve types, of 256 characters each. Types are numbered t1 to t12. Each type contains 256 discrete characters numbered 0 through 255; they can be referred to by decimal (base 10) numbers, hexadecimal (base 16) numbers or ASCII character preceded by a single quote. The following character address codes are all equivalent:

Decimal	T1:65
Hexadecimal	T1:411h
ASCII Character	T1:'A

Exploring RamFont Mode

Ranges

A range of characters within a font file is specified by a pair of character address codes; if the type number is the same for both, it need not be repeated. Here are some examples:

Range of 1 character t1:41h 41h

(the same position
both begins and
ends the range)

Range within 1 type t1:41h 7Ah
(hexadecimal)

Range of 2 types t1:00 t2:255
(decimal)

Starting Font Manager

To start, at the DOS prompt, type:

FONTMAN [ENTER]

Leaving Font Manager

To leave the Font Manager, from the main screen, type **Q**.

Main Screen Commands

Loading and Saving Fonts

Disk input and output is handled by the Load, Write and Move commands. A font file created with the Write command is 48k bytes long. A file created with the Move command can be any length up to 48k bytes; this command lets you save one or more characters to an existing file. Use the Name command if you are Loading and Writing the same file repeatedly.

Load a File

Loads the characters from a disk file into the RamFont memory starting at T1:00.

L (filename.ext)

L

Exploring RamFont Mode

If you have used the Name command previously, you can use L with no file name; the Named file is loaded.

Write a Font File

Writes the entire 48k bytes of the RamFont memory to a disk file.

W (filename.ext)

W

If you have used the NAME command previously, you can use W with no file name to write the entire 48k font memory to the named file.

Name a Default File

Use the Name command to select the font file you want to use with the Load or Write command.

N (filename.ext)

Move Fonts To or From a File

The Move command lets you move specific ranges of fonts between RamFont memory and disk files. Move command is useful for creating font files smaller than 48k (by contrast, the Write command always creates a 48k file).

M (range) (filename.ext) (address)

Writes one or more characters from RamFont memory to a font file; if the file doesn't exist, Move creates it.

M (filename.ext) (range) (address)

Writes one or more characters from a font file to RamFont memory.

Editing Fonts

The Edit Command

You can enter the editing screen in one of two ways:

E

Begins editing with the first character in RamFont memory (address T1:00).

E (address)

Begins editing with the character at the specified address.

Exploring RamFont Mode

Using the Editor

The following command keys work in the Font Manager character editing screen:

To:	Use:
Move around the character matrix	Arrow keys
Edit preceding character	Minus (-)
Edit next character	Plus (+)
Clear the current character:	F1
Select or deselect autosave:	F2
Select bit at the cursor:	F5 key
Deselect bit at the cursor:	F6 key
Display ASCII Set:	F10 key
End the Edit session:	Esc key

Character Commands

Compare Characters

The Compare commands finds pairs of characters in two ranges that don't match.

Form:

C (range) (address)

Example:

C T5:'A 'G T6:'A

This example compares the characters A through G in type 5 to the comparable characters in type 6. The Font Manager might respond with:

T5:42h<>T6:42h

This indicates that character 42 (hexadecimal) doesn't match in the two types; thus, the "B" character in the two types is not the same.

Exploring RamFont Mode

Dumping Characters to the Screen

The Dump command displays four consecutive characters on the screen at once.

Forms

D (address)

D- (address)

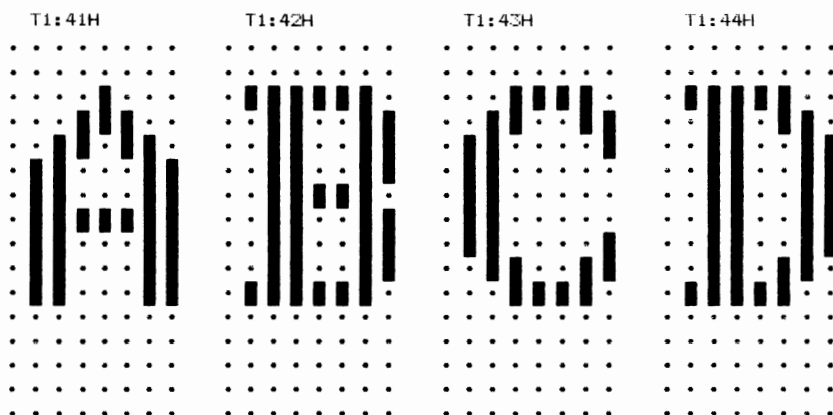
D

D-

If you give an address with the Dump command, the screen displays four consecutive characters, beginning at the address.

If you give no address, the Dump begins with the last character you've worked with or displayed.

If you use the D- command, characters are displayed in descending order.



Fill

This command Fills the characters in the range with the values in a list of 16 byte values, each representing one of the 16 rows of pixels in the character matrix. A value in the list of 0 illuminates no pixels in a row, a value of 255 in the list illuminates all pixels in the row. Values in between have various effects.

Exploring RamFont Mode

Form:

F (range) (list)

Example:

```
F t1:00 255 00 00 00 00 00 00 00 255 00 00 00 00 00 00 00
```

This command fills all characters in type 1 with a single horizontal bar in row 8.

Graphics

This command switches to graphics mode to allow you to view the font you are editing as it will appear on the screen. (The RAM command, and the F10 key will also let you view the RamFont character data in type 1 in RamFont mode.) The G command displays the characters on graphics page zero. The characters you intend to view must be stored in one of the types 5–12. This is because types 1–4 occupy the same block of memory as graphics page 0. When the G command is invoked, any characters that are stored in types 1–4 will be destroyed.

Form:

G (range)

Use the Move command to transfer any character data below type 5 either to disk or to higher font memory. For example, to use the G command to view the character set held in type 1, give these commands:

```
M T1:00 255 t5:00
```

```
G T5:00 255
```

Having viewed your font, hit [ENTER] to leave graphics mode and return to the prompt.

Move Characters

The MOVE command moves characters from one range to another in memory, or from memory to disk file, or from disk file to memory.

To move the uppercase characters from a font stored in type one of the RamFont storage area to the corresponding location in a file called MYFONT, enter:

```
M t1:41h 5Ah MYFONT T1:41h
```

Exploring RamFont Mode

If the specified file does not exist, the file will be created, and the portion of the file between the beginning and the offset address specified will be filled with zeros.

To Move a range of character data from a type 3 of a font file called MYFONT, to type 5 in RamFont storage, type:

M MYFONT T3:00 255 T5:00

Search for a Character

The Search command lets you find specific data in a range of characters.

Form:

S (range) (list)

The list is a series of 16 byte values, each representing one of the 16 rows of pixels that form the characters. The values can be expressed in either decimal or hexadecimal notation. The program responds with a series of character for those characters matching the search list.

For example:

S t1:00 255 00 00 00 00 00 00 00 255 00 00 00 00 00 00 00

This command searches for all characters containing a horizontal bar in row 8.

Shift Characters in the Matrices

You can move characters up or down in their matrices with the Shift command.

Form:

SH (range) (shift-count)

The shift-count specifies the number of rows to shift up or down. It can be a positive or negative number between 0 and 15; the number **must** be preceded by a sign (+ or -).

Any data shifted up or down beyond the limits of the matrix is lost and cannot be recovered. Whenever you give the Shift command, the Font Manager asks for confirmation, since it is possible to shift data out of existence.

Exploring RamFont Mode

Symbol Commands

Edit Symbol

The EDSYM command changes the ASCII characters that represent selected and deselected bits on the character matrix in the editing screen.

Form:
EDSYM

Create a Symbol (Equal)

The Equal command (=) assigns a name to an address code, character code, type code or command. This command can be used, for example, to give a name to a type font set in the file you are editing.

Form:
Symbol = Value

Here are some examples:

Command	What it does:
GREEK = T3	Gives the name "Greek" to all characters in type font 3.
ALPHA = T1:4h	Names the "A" character in type font 1.

Load a Symbol File

To load a symbol file, symbols are created with the equate and/or the EDSYM command. Type the command and you are prompted for the file to load.

Form:
LDSYM

Save Symbols in a File

Save the symbols you've created in the current Font Manager session (or loaded with the Load command).

Exploring RamFont Mode

Form:

SAVSYM

Type the command and you are prompted for the name of the file to save.

Logical Commands

The logical commands each have one or more **inputs** and a single **output**, which is the result of the logical combining of the inputs.

Forms

There are three forms of most of the logical commands:

(command) (range) (address)

This form combines the character(s) in the range in RamFont memory with those in a parallel range in memory starting at the address; the output goes to the characters starting at the address.

(command) (range) (filename.ext)

Combines the characters in the range in memory with those in the same range in the disk file; the output goes to the range in the file.

(command) (filename.ext) (range)

Combines the characters in the file with those in the same range in memory; the result is output to the range in memory.

AND

AND combines two characters by including pixels that appear in both. Thus if "E" and "F" are AND'ed, the result is "F."

There are three forms of the AND:

AND (range) (address)

AND (range) (filename.ext)

AND (filename.ext) (range)

Exploring RamFont Mode

OR

OR combines two characters by including all pixels in either. If "E" and "F" are OR'd, the result is "E."

The three forms of the OR are:

OR (range) (address)

OR (range) (filename.ext)

OR (filename.ext) (range)

XOR

The Exclusive Or (XOR) combines two characters by illuminating any pixels included in one or the other of the characters, but not in both. Thus if "E" and "F" are XOR'd, the result is "._."

XOR has three forms:

XOR (range) (address)

XOR (range) (filename.ext)

XOR (filename.ext) (range)

NOT

The NOT command inverts the data for the characters in a specified range. This is the equivalent of putting the characters in "reverse video." (Of course, reverse video and all other standard attributes are also available when text is displayed in RamFont mode.)

NOT has three forms (these differ from the forms for the other logical commands):

NOT (range)

Inverts the characters in the specified range in memory.

NOT (range) (filename.ext)

Inverts the characters in the specified range on a disk file.

NOT (filename.ext) (range)

Loads the characters from a range in a disk file to the same range in Ram Font memory. The characters in memory are inverted; those on the disk remain as they were.

Exploring RamFont Mode

Changing Modes

You can use two commands to change modes while using the Font Manager.

RamFont Mode

Use the RAM command to set the 4k RamFont mode.

Form:

RAM

ROM Text Mode

Use the ROM command to reset the InColor Card to display the standard text mode characters.

Form:

ROM

Chapter 3 – Programmer's Tools

The “Programs and Fonts” disk contains two directories of files intended specifically for use by the programmer.

The directory **TUTOR**, includes a Simulator program and associated files that demonstrate the effects created by writing particular values to specific InColor Card registers.

The directory **SOURCE** includes several files of source code illustrating methods of controlling the InColor Card.

The Simulator Program and Associated Files

The tutorial program **LEARN222.COM** demonstrates techniques for displaying graphics with the InColor Card. The file **LEARN.FNT** is a file of character data used by the simulator. The files ***.LST** contain sample display lists that can be loaded into and run by the simulator.

The Hercules InColor Card Simulator program is designed to help programmers become familiar with the many techniques available for programming the Hercules InColor Card. The Simulator gives you direct access to and control over all the color control registers of the InColor Card. (For a complete discussion of these registers, see Chapter 5 of the Hardware Manual.) It also lets you use three CPU instructions (OR, AND, and XOR) to write points, lines, or byte masks to the screen.

Using the Simulator, you can see the effects of any combination of register settings and instructions. This is a useful way to quickly confirm (or challenge) your understanding of the details of InColor Card graphics operations.

The Simulator operates entirely in graphics mode. It is written in Turbo Pascal, and source code is included in the **SOURCE** directory for the benefit of users who want to study, modify or improve the program.

Using the Tutorial Program

To load the program, make sure your working copy of the “Programs and Fonts” disk is in the currently logged drive, then type:

LEARN222 [ENTER]

After loading the program, the screen displays the simulator window.

Programmer's Tools

On the left is a Status Panel, listing binary values for all of the InColor Card's registers:

- Palette
- Freeze
- Display
- Don't Care
- MaskPolarity
- Background
- Foreground
- Write Mode
- Latch Protect

All of these register components can be modified by typing appropriate commands. A detailed description of each of these registers is found in Chapter 5 of the Hardware Manual.

At the bottom of the screen is the "Action" line, where commands appear as you type them. Below this line is the "Status" line, which displays messages from the Simulator program.

The drawing area occupies the remainder of the screen. This is where you'll see the effects of the drawing commands. It is 575 pixels wide by 270 pixels high; any drawing commands you give will need to be confined to coordinates within the range, 0,0 to 574,269.

Giving Commands

The Simulator allows you to set plot modes, then use various drawing commands and register settings to see their effects.

You can type in commands directly to the Tutorial, or you can load a list of commands saved as an ASCII text file (this option is discussed in the next section). You may find it useful to run some of the sample command lists included in the TUTOR directory, then read through their text files to see how they work.

A note about numerical entries:

Note that drawing command coordinates and the settings used with the PALETTE command can be entered only as decimal values. All other values may be entered as decimal or hexadecimal values.

Here is a complete list of commands you can use, either directly from the keyboard, or in a command list.

Programmer's Tools

Plot Modes

These are CPU instructions to be used when writing data to the screen. They determine the placement style.

OR	Sets the plot mode to OR
AND	Sets the plot mode to AND
XOR	Sets the plot mode to XOR

Drawing Commands

These commands let you plot images on the drawing area. Remember to use coordinates in the range 0,0 to 573,269 when drawing an image.

FILL	Fills all planes with high bits
ERASE	Fills all planes with high bits (Note that "frozen" planes will not be affected by FILL or ERASE)
PLOT x,y	Plots a dot at location x,y
LINE x,y,x1,y1	Draws a line from x,y to x1,y1
DRAW x,y	Draws a line from the current position (last coordinates specified) to x,y
MASK value	Constructs a mask (byte value) to be written to the screen by subsequent PUT command
PUT x,y	Writes the current mask value to the byte of memory that includes the coordinates x,y (Note: The same mask can be used for many successive puts. It is not necessary to re-enter the Mask value unless you want to change it.)

Register Control

ENABLE	Enables the palette
DISABLE	Disables the palette
FREEZE value	Selects planes to write protect (value 0 to 15)
DISPLAY value	Selects planes to display (value 0 to 15)
DON'T CARE value	Selects planes which will not contribute to the BBM (value 0 to 15)
SET	Mask polarity set if equal to background

Programmer's Tools

CLEAR	Mask polarity clear if equal to background
BACK value	Sets background color value (value 0 to 15)
FORE value	Sets foreground color value (value 0 to 15)
WRITE value	Sets write mode (value 0 to 3)
LATCH value	Selects pixels in the source latch to be protected from modification (value 0 to 255)
PALETTE index, color	Loads a color (value 0 to 63) into the palette at index position (value 0 to 15)—enter decimals only
RESET	Resets all registers to their start-up values; does not reset the palette
RESTORE	Restores the palette to the program's initial settings
BBM x,y	Displays the value that the CPU gets when reading the byte in video memory that holds the specified coordinate (Remember that BBM is simply a name for what the CPU "sees", it is not itself a location.)

Display Lists

A display list is a series of commands to be executed by the Simulator program, stored in an ASCII file. A display list may be created with any text editor that can create "pure" ASCII files.

In a display list, each command is listed on a separate line, with a carriage return after each.

A display list can also be created automatically by giving the Simulator a list of commands, then using the "List" command to create the file.

The List Command

When you type commands in the Simulator's interactive mode, all of your commands are saved in memory. To use the command, type:

LIST [ENTER]

The Simulator prompts you for a file name, then saves the sequence of commands you have just entered.

You can then edit your list with a text editor, or load it back into the Simulator and replay it.

Programmer's Tools

The Read Command

To load a display list in the Simulator, type:

READ [ENTER]

The Simulator prompts you for the file name you wish to use; type the entire name (including the LST extension). The file loads automatically and begins to run.

Display List Commands

There are several commands that you can include in a display list.

Pausing Execution

In the display list, type

PAUSE [ENTER]

to halt execution of the list when it is run. Pause displays the message "Strike a key to continue processing list." Execution continues when you press any key.

Comments

Add a comment to a display list with the command

*** (comment) [ENTER]**

Each comment line must be preceded by an asterisk. Comments are included in display lists to help someone reading through the text of the list.

A comment line can include up to 40 characters of text.

Echoing Commands

To highlight operations when the display list is running, use the echo command. A comment preceded by the "!" symbol appears on the command line while the Simulator is running the display list.

! (comment) [ENTER]

Each time the echo command appears in a display list, execution is stopped and the comment appears on screen until the user presses a key.

The maximum length of the comment string is 40 characters.

Programmer's Tools

Source Code Files

The directory **SOURCE** contains several source code files that demonstrate various techniques for use with the InColor Card. These include:

RAMFONT.ASM—Source code for RamFont loader.

RECORD.ASM—The specifics of the Mode Record (described briefly in Chapter 2).

GB222.ASM—Illustrates a variety of graphics mode programming techniques for the InColor card.

LEARN222.PAS, LOWLEVEL.INC, INPUT.INC—Turbo Pascal source code for the InColor Card simulator program.



Section Two

Installing Hercules InColor Card Drivers

Introduction

InColor Card Drivers

2

Introduction

With this Hercules® InColor™ Card is a diskette that includes special drivers for eight popular programs:

- Lotus® 1-2-3® Rel. 2 and 2.1
- Lotus Symphony™ Ver. 1.1 and 1.2
- Microsoft® Windows
- Microsoft® Word Ver. 3.0 (only)
- AutoDesk® AutoCAD®
- Ashton-Tate® Framework II™
- Javelin® Ver. 1.1
- BPS 35MM Express™ Ver. 4.0

The Hercules InColor Card allows high resolution (720 × 348) Hercules graphics in full color—up to 16 colors from a palette of 64. With its exclusive Hercules RamFont mode, it also allows a dramatic increase in the scrolling speed of most of these programs. It also allows other special features—like the ability to “window in” a full-color graph in 1-2-3.

Programs that run in standard IBM text mode, Hercules monochrome graphics mode, or Hercules RamFont mode do not need special drivers installed. They can run on the Hercules InColor Card in either black and white or user-selected colors.

Some of the drivers included on this diskette are **InColor Drivers**, which allow programs to run in full color. Depending on the program, InColor drivers may allow for 720 × 348 graphics mode, RamFont mode, text mode, or all three.

Other drivers included on this diskette are **Monochrome Drivers**. They may also allow for any or all of the three different modes, but will not provide full color capabilities.

Whether a driver is an InColor Driver or a Monochrome Driver, it may be a **Unified Driver**. Unified Drivers configure a program so that it will run on the Hercules InColor Card OR the Hercules Graphics Card Plus without re-installation. Each will be clearly indicated.

Chapter 4—InColor Card Drivers

Except for the Microsoft Word v3.0 driver, the instructions provided here are appropriate for the current versions of the applications as of April 1987. It is possible that future releases of these applications will include InColor support from their original vendors. The inclusion of a driver for the current release of a particular application does not represent a commitment from Hercules to support future releases.

Notes

1. None of these drivers is copy-protected. We urge you to use DOS diskcopy to make a back-up copy of the Hercules InColor Driver Diskette before you attempt any installation.
2. When applicable, we have included instructions for installation on both hard-drive and floppy-drive systems. The floppy-drive instructions are written assuming that you have both an A and a B drive. If you have only one floppy drive, as you know, your computer will designate it as both drive A and drive B. Simply put the "A" diskette in, and follow our instructions exactly as written. You will be prompted to change disks when necessary.
3. There may be drivers included on the Hercules InColor Driver Diskette that are not described in this manual. For updated information, put your Hercules InColor Driver Diskette in drive A and type:

A>README

Use [Ctrl] [Num Lock] to stop the scrolling, and any key to start it again.

Lotus 1-2-3 Release 2 or 2.01

These are Unified Drivers. The Graphics drivers allow full-screen graphs in 720 × 348 resolution and full color. The RamFont drivers allow pop-up graphs in full color, and the extra advantages of faster scrolling and more characters on the screen.

InColor Card Drivers

1-2-3/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Release 2 or 2.01 of Lotus 1-2-3.

2. You will need these diskettes:

- DOS for booting your system
- Hercules InColor Driver Diskette
- 1-2-3 Utility Diskette
- 1-2-3 Install Library Diskette
- 1-2-3 System Diskette
- 2 blank, formatted diskettes

3. You should already have performed the "First-Time Installation Procedures," following the instructions in the 1-2-3 "Getting Started" manual. If you have been using the program, you have already done this.

4. Prepare the drivers for installation. To do this, place the Hercules InColor Driver diskette in drive A and a blank, formatted disk in drive B. Type:

A>copy a:\123*.* b: [ENTER]

You are now ready to perform the installation procedures.

To Install

1. To start the Install program, place the 1-2-3 Utility disk in drive A, and type:

A>install [ENTER]

Follow the instructions on the screen until you see the Main Menu.

2. When you see the Main Menu, select "Advanced Options."

3. When you see the Advanced Options menu, select "Add New Drivers to Library."

4. When you are directed to insert the diskette with the new drivers, take the System disk out of drive A and replace it with the 1-2-3 driver disk **that you created**.

InColor Card Drivers

5. **Do not follow the prompt** to replace the driver disk with the Utility disk. Simply press [ENTER]. This is because the Utility disk won't have enough room to hold the new drivers.

6. Follow the prompts and you will return to the Advanced Options menu. Select "Modify Current Driver Set."

7. Highlight "Text Display" and press [ENTER].

Choose one of the following:

Choose **Hercules InColor (80 × 25)**—**Separate** if you want a standard-size font (80 columns by 25 rows) and you want to display a graph on a full screen.

Choose **Hercules RamFont Combined**—(90 × 25) if you want a large font (90 columns by 25 rows) and you want to display a graph in a window.

Choose **Hercules RamFont Combined**—(90 × 38) if you want a small font (90 columns by 38 rows) and you want to display a graph in a window.

Choose **Hercules RamFont (90 × 38)**—**Separate** if you want a small font (90 × 38 rows) and you want to display a graph on a full screen.

8. Highlight "Graph Display" and press [ENTER]. **Select the driver which corresponds to the one you selected for text display.** For example, if you chose "Hercules RamFont (90 × 38)—Combined" for text display, choose the same thing for graph display. Select "Return to Menu."

9. From the Advanced Options menu, choose "Save Changes."

10. When prompted to, give your driver set a name. (For example, you might call it "GB222", the model number of the Hercules InColor Card.) Type it in the place indicated, and press [ENTER]. (Of course, you may choose to accept the default driver set name, "123." If so, just press [ENTER].)

11. Follow the instructions on the screen. When you get the message that there is not enough room for the drivers on the System diskette, insert a blank, formatted diskette. You will use this diskette every time you start 1-2-3.

12. Follow the instructions to return to the main menu, and then to exit the Install program.

InColor Card Drivers

13. When you start Lotus 1-2-3, and you want to use the Hercules InColor Card drivers, place the 1-2-3 System Disk in Drive A, and the disk with the driver set you just named in Drive B, and type:

A>123 b:GB222 [ENTER]

(If you did not call your driver set "GB222," substitute the name you gave it. If you accepted the default driver set name, "123," you do not need to specify the driver name when starting the program.)

Notes

1. In the course of following these instructions, you created two new diskettes. The first one contains all three possible driver pairs for 1-2-3. You will not need that diskette again, except possibly as a back-up copy. The second one contains just the driver pair you selected and named. Keep that diskette with your 1-2-3 diskettes, and use it every time you start the program.
2. The Hercules InColor Card drivers may not be used with the tutorial program, "A View of 1-2-3."
3. You may create multiple driver sets as long as you give each driver set a unique name. In addition to the four drivers supplied here, 1-2-3 Rel. 2 includes two different driver options for the Hercules Graphics Card. So there are a total of six different ways to use 1-2-3 Rel. 2 with the Hercules InColor Card.

1-2-3/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Release 2 or 2.01 of Lotus 1-2-3.
2. You should already have created a subdirectory, copied 1-2-3 to the hard disk, and performed the "First-Time Installation Procedures," following the instructions in the 1-2-3 "Getting Started" manual. If you have been using the program, you have already done this.

InColor Card Drivers

3. Copy the drivers onto your hard disk. To do this, first go to the subdirectory where you've already copied 1-2-3. For example, if you called that subdirectory "1-2-3," you should type:

```
C>cd\123 [ENTER]
```

Then place the Hercules InColor Driver diskette in drive A and type:

```
C>copy a:\123\*. * [ENTER]
```

You are now ready to perform the installation procedures.

To Install

1. To start the Install program, type:

```
C>install [ENTER]
```

Follow the instructions on the screen until you get to the Main Menu.

2. When you see the Main Menu, select "Advanced Options."

3. When you see the Advanced Options menu, select "Add New Drivers to Library." Follow the instructions on the screen.

4. When you return to the Advanced Options menu, select "Modify Current Driver Set."

5. Highlight "Text Display" and press [ENTER].

Choose **Hercules InColor (80 × 25)—Separate** if you want a standard size font (80 columns by 25 rows) and you want to display a graph on a full screen.

Choose **Hercules RamFont Combined—(90 × 25)** if you want a large font (90 columns by 25 rows) and you want to display a graph in a window.

Choose **Hercules RamFont Combined—(90 × 38)** if you want a small font (90 columns by 38 rows) and you want to display a graph in a window.

Choose **Hercules RamFont (90 × 38)—Separate** if you want a small font (90 columns by 38 rows) and you want to display a graph on a full screen.

6. Highlight "Graph Display" and press "Enter." **Select the driver which corresponds to the one you selected for text display.** For example, if you chose "Hercules RamFont (90 × 38)—Combined" for text display, choose the same thing for graph display. Select "Return to Menu."

InColor Card Drivers

7. From the Advanced Options menu, choose "Save Changes."
8. When prompted to, give your driver set a name. (For example, you might call it "GB222," the model number of the Hercules InColor Card.) Type it in the place indicated, and press [ENTER]. (Of course, you may choose to accept the default driver set name, "123." If so, just press [ENTER].)
9. Follow the instructions to exit the install program.
10. When you start Lotus 1-2-3, and you want to use these drivers, place the 1-2-3 System disk in drive A and type:

C>123 GB222 [ENTER]

(If you did not call your driver set "GB222," substitute the name you gave it. If you accepted the default driver set name, "123," you do not need to specify the driver name when starting the program.)

Note

The Hercules InColor Card drivers may not be used with the tutorial program, "A View of 1-2-3."

Lotus Symphony Version 1.1 or 1.2

These are Unified InColor RamFont Mode Drivers. They allow the program to run in 8 colors with faster scrolling and more characters on the screen.

Symphony/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Version 1.1 or 1.2 of Symphony.

2. You will need these diskettes:

- DOS for booting your system**
- Hercules InColor Driver Diskette**
- Symphony Program Diskette**
- Symphony Install & Utility Diskette**
- Symphony Master Library Diskette**
- 1 blank, formatted diskette**

InColor Card Drivers

3. You should already have performed the “First-Time Installation Procedures,” following the instructions in the Symphony “Getting Started” manual. If you have been using the program, you have already done this.

4. Prepare the drivers for installation. To do this, place the Hercules Driver diskette in drive A and a blank, formatted disk in drive B. Type:

```
A>copy a:\symphony\*.* b: [ENTER]
```

You are now ready to perform the installation procedure.

To Install

1. Put the Install/Utility disk in drive A, and type:

```
A>install [ENTER]
```

Follow the instructions on the screen until you see the Main Menu. (After you insert the Master Library Diskette, you will be given a chance to work with an alternate driver set. Do not choose this option. Instead, insert the Symphony Program diskette and proceed to the main menu.)

2. From the Main Menu, choose “Advanced Options.”

3. From the Advanced Options menu, choose “Add New Drivers to Library.”

4. When you are prompted to insert the diskette with the new drivers, insert **the one you just created**, which includes only the drivers for Symphony, in drive A.

5. Follow the instructions on the screen, and you will return to the Advanced Options menu.

6. From the Advanced Options menu, choose “Modify Current Driver Set.”

7. Highlight “Text Display” and press [ENTER].

Choose **Hercules RamFont (90 × 25)—Combined** if you want a large font (90 columns by 25 rows) and graphics windows up to 720 × 348.

Choose **Hercules RamFont (90 × 35)—Combined** if you want a small font (90 columns by 35 rows) and graphics windows up to 720 × 310.

8. Highlight “Graph Display” and press [ENTER]. **Choose the driver which corresponds to the one you selected for text display.** For example, if you choose “Hercules RamFont (90 × 35)—Combined” for text display, choose the same one for graph display.

InColor Card Drivers

9. From the Advanced Options menu, choose "Save Changes."
10. When prompted to, give your driver set a name. (For example, you might call it "GB222", the model number of the Hercules InColor Card.) Type it in the place indicated, and press [ENTER]. (You may choose to accept the default driver set name, "Lotus." If so, just press [ENTER].)
11. Follow the instructions on the screen to return to the Main Menu, and then to exit the Install program.
12. When you start Symphony, and you want to use the Hercules InColor Card drivers, place the Symphony System disk in Drive A, and type:

A>symphony GB222 [ENTER]

(If you did not call your driver set "GB222," substitute the name you gave it. If you accepted the default driver set name, "Lotus," you do not need to specify the driver name when starting the program.)

Symphony/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with a hard disk drive, with a Hercules InColor Card (GB222) installed, and that you are using Version 1.1 or 1.2 of Symphony.
2. You should already have created a subdirectory, copied Symphony to the hard disk, and performed the "First-Time Installation Procedures," following the instructions in the Symphony "Getting Started" manual. If you have been using the program, you have already done this.
3. Copy the drivers onto your hard disk. To do this, first make sure you are in the symphony subdirectory. For example, if you called that subdirectory "SYMPH," you would type:

C>cd\symph [ENTER]

Then place your Hercules driver diskette in drive A, and type:

C>copy a:\symphony*.* [ENTER]

You are now ready to perform the installation procedures.

InColor Card Drivers

To Install

1. To start the Install program, type:

C>install [ENTER]

Follow the instructions on the screen until you see the Main Menu.

2. From the Main Menu, choose "Advanced Options."
3. From the Advanced Options menu, select "Add New Drivers to Library." Follow the instructions on the screen.
4. When you return to the Advanced Options menu, select "Modify Current Driver Set."
5. Highlight "Text Display" and press [ENTER].

Choose **Hercules RamFont (90 × 25)—Combined** if you want a large font (90 columns by 25 rows).

Choose **Hercules RamFont (90 × 35)—Combined** if you want a smaller font (90 columns by 35 rows).

6. Highlight "Graph Display" and press [ENTER]. **Choose the driver which corresponds to the one you selected for text display.** For example, if you selected "Hercules RamFont (90 × 35)—Combined" for text display, choose the same thing for graph display.
7. From the Advanced Options menu, choose "Save Changes."
8. When prompted to, give your driver set a name. (For example, you might call it "GB222," the model number of the Hercules InColor Card.) Type it in the place indicated, and press [ENTER]. (You may choose to accept the default driver name, "Lotus." If so, just press [ENTER].)
9. Follow the instructions to return to the Main Menu, and then to exit the Install program.
10. When you want to start Symphony and use this Hercules driver set, type the program name followed by the name of the driver. For example, if you called the driver "GB222," you should type:

C>symphony GB222 [ENTER]

(If you accepted the default driver name, "Lotus," you do not need to specify the driver name when you start the program.)

InColor Card Drivers

Microsoft Windows

This is an InColor Graphics Driver. It allows the display of 8 user-selected colors in 720×348 graphics mode.

Windows/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed.

2. You will need these diskettes:

DOS for booting your system

Hercules InColor Driver Diskette

Windows Setup Disk

Windows Build Disk

Windows Utilities Disk

Windows Fonts Disk

Windows Program Disk

Windows Desktop Applications Disk

Several blank, formatted diskettes

3. Using the DOS DISKCOPY program, make a back-up copy of the Microsoft Windows Setup Disk. You are doing this because you will need to delete a file in order to make room for the InColor Card driver.

You are now ready to perform the installation procedures.

To Install

1. Put the copy of the Setup disk **that you just made** into drive A.

Type:

A>del cga.driv [ENTER]

2. Copy the InColor Windows Driver onto your setup disk. To do this, put the InColor Driver diskette in drive B. Type:

A>copy b:\windows\hercules.drva: [ENTER]

3. To start the setup program, type:

A>setup [ENTER]

InColor Card Drivers

4. Follow the setup program prompts until you are asked to select a graphics adapter. Choose #1, "Hercules Graphics Card with Monochrome Display."

To Set Color

Before running Windows on the InColor Card for the first time, perform the following steps to add color information to the Windows startup file:

1. Copy ADDCOLOR.COM from the \WINDOWS directory of the Hercules InColor Card Driver Diskette to your copy of the Windows System diskette that you just created in the Setup procedure. With the Windows System diskette in drive A and the InColor Driver Diskette in drive B, type:

A>copy b:\windows\addcolor.com a: [ENTER]

2. With the Windows System Diskette still in drive A, type:

A>ADDCOLOR [ENTER]

Now the WIN.INI file will have color information added to it. (If you have already performed this procedure, you will get an error message.)

If you do not perform the above procedure before running Windows, the program will start in black and white. You can select colors for Windows yourself, or change the default colors, by doing the following from within Windows itself.

A) From the MS-DOS Executive Screen, choose CONTROL.EXE.

B) From the Option Menu, select "Preferences." Select "Screen Colors."

C) Follow the directions in the Microsoft Windows User's Guide to set color. Colors you choose will be saved, so you do not have to go through this process every time you run the program.

Windows/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed.

InColor Card Drivers

3. Make a back-up copy of the Windows Setup Disk. To do this, make sure the DISKCOPY.COM program is accessible on drive C. Then put the Setup disk in drive A and a blank diskette in drive B. Type:

C>diskcopy a: b: [ENTER]

4. Put the backup copy of the Setup disk in drive A, and type:

C>a: [ENTER]

A>del cga.driv [ENTER]

5. Copy the InColor driver onto your backup Setup disk. To do this, put your Hercules Driver Diskette in drive B and type:

A>copy b:\windows\hercules.driv a:

You are now ready to perform the installation procedures.

To Install

1. Type:

A>setup [ENTER]

2. Follow the setup program prompts until you are asked to select a graphics adapter. Choose #1, "Hercules Graphics Card with Monochrome Display."

To Set Color

Before running Windows on the InColor Card for the first time, perform the following steps to add color information to the Windows startup file:

1. Copy ADDCOLOR.COM from the \WINDOWS directory of the InColor Card Driver Diskette to the Windows directory of your hard disk. With the InColor Card Driver Diskette in drive A, and making sure that you are in the Windows directory of your hard disk, type:

C>copy a:\windows\addcolor.com c: [ENTER]

2. You do not need the InColor Driver Diskette anymore, so you can store it safely away. While still in the Windows directory, type:

C>ADDCOLOR [ENTER]

Now the WIN.INI file will have color information added to it. (If you have already performed this procedure, you will get an error message.)

InColor Card Drivers

If you do not perform the above procedure before running Windows, the program will start in black and white. You can select colors for Windows yourself, or change the default colors, by doing the following from within Windows:

- A) From the Main Menu, choose CONTROL.EXE.
- B) From the Option Menu, select "Preferences." Select "Screen Colors."
- C) Follow the directions in the Microsoft Windows Users Guide to set color. Colors you choose will be saved, so you do not have to go through this process every time you run the program.

Microsoft Word 3.0

This is a Unified RamFont Driver. It allows the program to run much more quickly than it does in its normal graphics mode, in either black and white or user-selected colors. This driver is intended *only* for use with Word 3.0. Do not attempt to use it with Word 3.1. Word 3.1 already includes RamFont support without the use of additional drivers.

Word/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Microsoft Word 3.0.
2. You will need these diskettes:
 - DOS for booting your system
 - Hercules InColor Driver Diskette
 - Word Program Diskette
 - 1 blank, formatted diskette
3. You should already have performed the Setup procedures for a floppy disk system, following the instructions in the "Using Microsoft Word" manual.
4. Prepare the driver for installation. To do this, place the Hercules InColor Driver diskette in drive A and a blank, formatted disk in drive B. Type:

A>copy a:\word*.* b: [ENTER]

You are now ready to perform the installation procedure.

InColor Card Drivers

To Install

1. Place the **disk that you just created** in drive A, and the Word program disk in drive B. Type:

A>copy a:*. * b: [ENTER]

2. Start Word as you normally do.

Note

If you install this driver, you will not be able to use a mouse.

*Microsoft Word 3.1 includes RamFont support without the use of additional drivers and also includes mouse functionality.

Word/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Microsoft Word 3.0. This driver is *only* appropriate for use with version 3.0. Do not attempt to install this driver if you are using Word 3.1.
2. You should already have created a subdirectory, copied Word to the hard disk, and performed the SETUP procedure for a hard-drive system, following the instructions in the "Using Microsoft Word" manual.

To Install

1. Go to the subdirectory into which you have copied Microsoft Word. If you called the subdirectory "WORD," type:

C>cd \word [ENTER]

(If you did not call this subdirectory "Word," substitute the name you used.)

2. Copy your Hercules driver into the same subdirectory. To do this, place the Hercules Driver diskette in drive A. Type:

C>copy a:\word*. * [ENTER]

3. Start Word as you normally do.

InColor Card Drivers

Note

If you install this driver, you will not be able to use a mouse.

*Microsoft Word 3.1 includes RamFont support without the use of additional drivers and also includes mouse functionality.

AutoDesk AutoCAD

This is a Unified InColor Graphics Driver. On the Hercules InColor Card, it allows the Display of 16 colors in 720 × 348 graphics mode.

AutoCAD/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with a hard disk drive, with a Hercules InColor Card (GB222) installed.
2. You should already have created a subdirectory, copied AutoCAD to the hard disk, and performed the installation procedures, following the instructions in the AutoCAD manual. If you have been using the program, you have already done this.
3. Copy the drivers onto your hard disk. To do this, first make sure you are in the AutoCAD subdirectory. For example, if you called that subdirectory "ACAD," you would type:

C>cd \acad [ENTER]

Then place your Hercules driver diskette in drive A, and type:

C>copy a:\autocad \.* [ENTER]

You are now ready to perform the installation procedures.

To Install

1. To start AutoCAD, type:

C>acad [ENTER]

Follow the instructions on the screen until you see the Main Menu.

2. From the Main Menu, choose #5, "Configure AutoCAD." You will see a screen titled "Current AutoCAD Configuration."

3a. If you have already used the program on your system, press [ENTER] to go to the Configuration menu. To the question "Do you want to select a different video display?" answer "Y."

InColor Card Drivers

- 3b. If you have never used AutoCAD on your system, answer the prompts until you go to the Video Display menu.
 4. From the Video Display menu, choose "1," "ADI display v2.0."
 5. When you are asked to select a device number, select "1." When you are asked to select a Hexadecimal interrupt code, select "7a."
 6. Answer the prompts until you are returned to the Configuration menu.
 7. From the Configuration menu, choose #0, "Exit to Main Menu." When you are asked if you wish to save configuration changes, answer "Y." Exit AutoCAD.
 8. To run AutoCAD with this driver, enter "DSHERC" from the DOS prompt before you enter the program.
-

Framework II, by Ashton-Tate

These are Unified InColor Drivers. The RamFont driver allows faster scrolling and on-screen display of italics and boldface in the word processor. The Graphics driver allows full 720×348 graphics in 16 colors.

Framework/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Framework II.
 2. You will need these diskettes:
 - DOS for booting your system
 - Hercules InColor Driver Diskette
 - Framework Setup Disk
 - Framework System 2 Disk
 3. You should already have performed the basic Setup procedures for a floppy disk system, following the instructions in the "Getting Started: Framework II" manual.
-

InColor Card Drivers

4. Copy the drivers onto the Framework Setup disk. To do this, put the Hercules InColor Driver diskette in drive A and the Framework Setup diskette in drive B, and type:

```
a>copy a:\frame\*.* b: [ENTER]
```

You are now ready to perform the installation procedures.

To Install

1. Put the Framework Setup Disk in drive A, and the Framework System 2 disk in drive B. Type:

```
A>setup [ENTER]
```

2. When you get to the "Welcome to Framework II's Setup Program" screen, choose [2] for "all other uses of setup program."

3. Follow the directions on the screen until you get to the Main Menu. Then choose [2] for "Configuration."

4. From the "Change Configuration" menu, type [1] for "primary hardware."

5. From the "Primary Hardware" menu, type [1] for "screen driver."

6. From the screen that's headed "All Supported Screen Drivers," type [7] for "I want to enter my own driver filename."

7. You will be prompted for the filename of the driver you want to select. You have two choices. If you want a display format of 29 lines by 90 columns, type:

```
gb222_29.sc [ENTER]
```

If you want a display format of 43 lines by 90 columns, type:

```
gb222_43.sc [ENTER]
```

8. When you see the section headed by "What To Do Next," type [M] to return to the main menu.

9. From the main menu, type [7] for "Save all new settings." Follow the instructions on the screen to save the settings and exit the setup program.

10. Start Framework II as you normally do.

InColor Card Drivers

Notes

1. With either of these drivers installed, press F9 ZOOM on a graph frame to display the graph in the 720 × 348 Hercules graphics mode.
2. The InColor Card is not fully re-set after running Framework. If you finish using Framework and wish to run another program, insert the Hercules Programs/Fonts diskette and type:

A>HGC [ENTER]

Framework/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Framework II.
2. You should already have created a subdirectory, copied Framework II to the hard disk, and performed the basic setup procedure for a hard drive system, following the instructions in the "Getting Started: Framework II" manual.
3. Copy the Hercules drivers onto your Framework Setup Diskette. To do this, put the Hercules InColor Driver diskette in drive A and the Setup disk in drive B, and type:

A>copy a:\frame*. * b: [ENTER]

(If you have only one floppy drive, start with the Hercules disk in it and type the command exactly as given. You will be prompted to exchange disks.)

You are now ready to perform the installation procedures.

To Install

1. To begin installation, type:

C>setup [ENTER]

2. From the "Welcome to Framework II's Setup Program" screen, choose [2] for "All other uses of setup program."
3. From the screen that asks about the location of the file FWSETUP, choose [2]. (Since you have already performed the basic setup, it will be in your current directory.)
4. When you are returned to the Main Menu, choose [2] for "Configuration."

InColor Card Drivers

5. From the "Change Configuration" menu, type [1] for "primary hardware."
6. From the "Primary Hardware" menu, type [1] for "screen driver."
7. From the screen that's headed "All Supported Screen Drivers," type [7] for "I want to enter my own driver filename."
8. You will be prompted for the filename of the driver you want to select. You have two choices. If you want a display format of 29 lines by 90 columns, type:

gb222_29.sc [ENTER]

If you want a display format of 43 lines by 90 columns, type:

gb222_43.sc [ENTER]

9. When you see a section headed "What To Do Next," type [M] to return to the Main Menu.
10. From the Main Menu, type [7] for "Save all new settings." Follow the instructions on the screen to save the settings and exit the setup program.
11. Start Framework II as you normally do.

Notes

1. With either of these drivers installed, press F9 ZOOM on a graph frame to display the graph in the 720 × 348 Hercules graphics mode.
2. The InColor Card is not fully re-set after running Framework. If you finish using Framework and wish to run another program, insert the Hercules Programs/Fonts diskette and type:

A>HGC [ENTER]

To speed up this process, we suggest that you copy the HGC.COM program into the same subdirectory as Framework on your hard disk.

Javelin Release 1.1

This is an InColor Graphics Driver. It allows full color in 720 × 348 Hercules Graphics Mode.

InColor Card Drivers

Javelin/Floppy Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Release 1.1 of Javelin.

2. You will need these diskettes:

DOS for booting your system
Hercules InColor Driver Diskette
Javelin Startup Diskette
Javelin Program Diskette

3. You should already have performed the first-time configuration following the JCONFIG program and the instructions in your Javelin manual. When asked what kind of Hercules adapter you have, you should choose "Hercules Graphics Adapter and monochrome screen."

You are now ready to perform the installation procedures.

To Install

1. Insert the Hercules InColor Driver Diskette in drive A and the Javelin Program diskette in drive B. Type:

A>del b:HERCMONO.DRV [ENTER]

2. Add the new driver to the Javelin Program diskette. To do this, type:

A>copy a:HERCINCO.DRV b: [ENTER]

3. Take the Javelin Program diskette out of drive B and replace it with the Javelin Startup diskette. You will copy three files onto the Startup diskette. To do this, type:

A>copy a:\javelin*.* [ENTER]

4. Insert the Program diskette in drive A and the Startup diskette in drive B. Type:

A>b: [ENTER]

5. Next, you need to run the batch file which runs three programs. The first will turn your cursor to blue, so that it will be visible on Javelin's white backgrounds. The second program is Javelin itself. The third will turn your cursor back to white when you are finished with Javelin. To do this, type:

B>JAVINCO [ENTER]

InColor Card Drivers

6. To enable Javelin to use the HERCINCO driver that was copied to the Program diskette, type `/DC`.
7. Use the down arrow to place the cursor on the Screen { } entry.
8. Type `"HERCINCO [ENTER]"`.
9. Now type `[END]` and `[ENTER]`. This will save your configuration so that you will not have to specify the driver you want each time you run Javelin.
10. To exit Javelin, type `"QY"`.

Javelin/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with floppy disk drives, with a Hercules InColor Card (GB222) installed, and that you are using Release 1.1 of Javelin.
2. You should already have performed the first-time installation following the instructions in your Javelin manual. When asked what kind of Hercules adapter you have, you should choose "Hercules Graphics Adapter and monochrome screen."
3. Make sure you are in the Javelin subdirectory. To do this, type:
`C>\JAV [ENTER]`
4. Place the Hercules InColor Driver Diskette in drive A.
You are now ready to perform the installation procedures.

To Install

1. Delete the monochrome driver file from your Javelin subdirectory. To do this, type:
`C>del hercmono.drv [ENTER]`
2. You need to copy four files from the Hercules InColor Driver Diskette to the Javelin subdirectory. To do this, type:
`C>copy a:\javelin\*.* [ENTER]`

InColor Card Drivers

3. Next, you need to run the batch file which runs three programs. The first will turn your cursor to blue, so that it will be visible on Javelin's white backgrounds. The second program is Javelin itself. The third will turn your cursor back to white when you are finished with Javelin. To do this, type:

C>JAVINCO [ENTER]

4. To enable Javelin to use the HERCINCO driver that was copied to the Program diskette, type "/DC".

5. Use the down arrow to place the cursor on the Screen {} entry.

6. Type "HERCINCO [ENTER]".

7. Now type [END] and [ENTER]. This will save your configuration so that you will not have to specify the driver you want each time you run Javelin.

8. To exit Javelin, type "/QY".

Business & Professional Software 35MM Express

This is an InColor Graphics driver. It allows 720×348 graphics in full color.

35MM Express/Hard Drive System

Before You Begin

1. These instructions assume that you are working on an IBM or compatible system with a hard disk drive, with a Hercules InColor Card (GB222) installed.

2. You should already have created a subdirectory, copied 35MM Express to the hard disk, and performed the first-time installation procedures described in your 35MM Express manual.

You are now ready to perform the installation procedures.

To Install

1. Make sure you are in the proper subdirectory. If you called it "35MM," type:

C>cd\35mm [ENTER]

InColor Card Drivers

2. Put the Hercules InColor Driver Diskette in drive A.
3. Copy the InColor driver to your hard disk. To do this, type:

```
C>copy a:\35MM\*.* c:\35MM [ENTER]
```

A General Note on the InColor Card

If you are used to using a warm boot (Ctrl-Alt-Del) to exit a program, or as a shortcut for solving a problem, you may run into trouble when you are using the InColor Card. A warm boot will not re-set the Hercules InColor Card.

To return to standard text mode in this situation, you should use the reset function of the HGC.COM program. Just type "HGC [ENTER]" to fully reset the InColor Card. We suggest that HGC.COM be installed in the root directory of your hard disk or on your boot diskette so it will be available for this purpose.

OR putting the command "HGC" in your autoexec.bat file and the HGC.COM program in your root directory will ensure that your Hercules InColor Card is always reset upon re-boot.

Notes



Notes

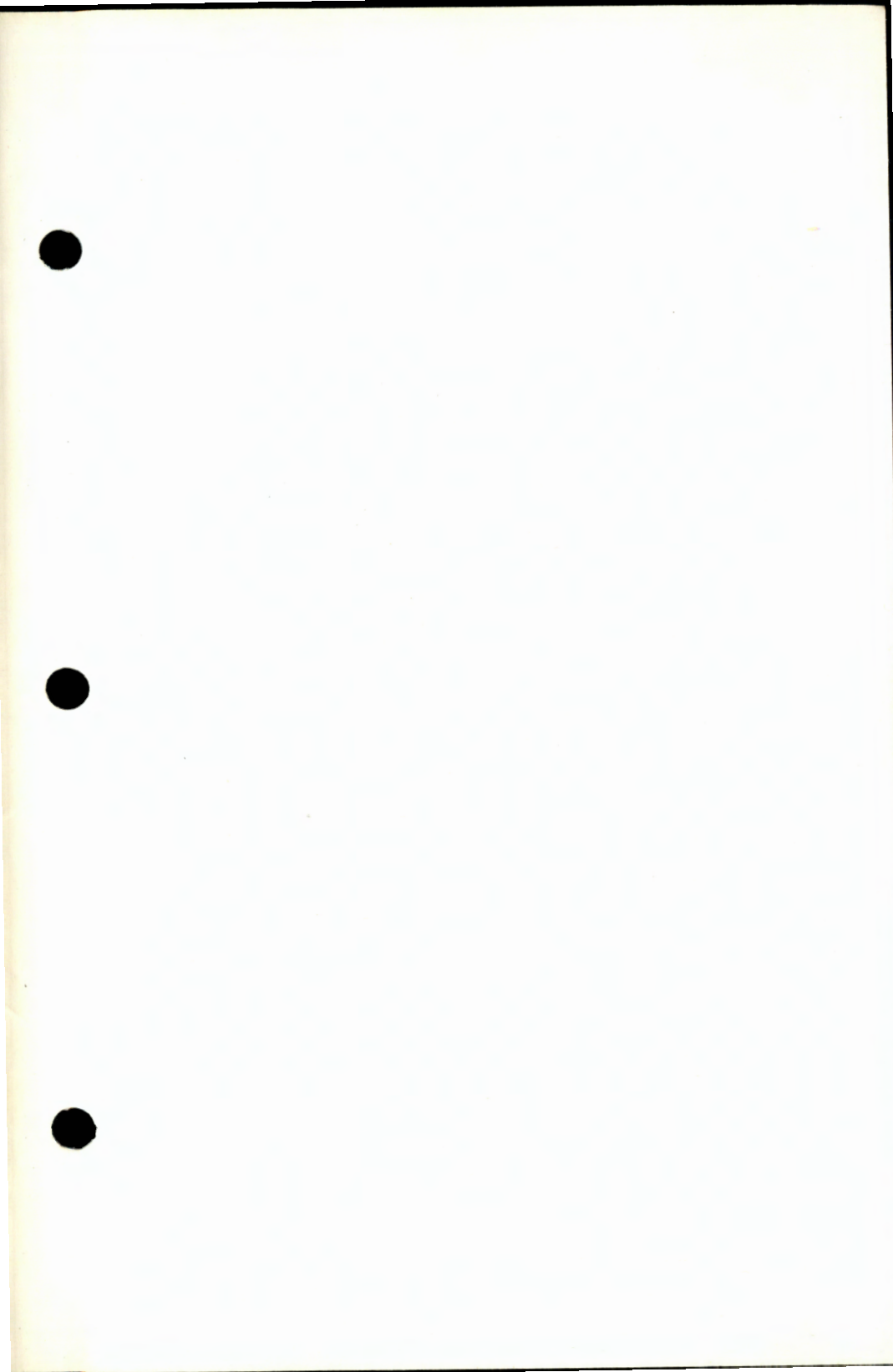


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