

GRID-OS Release 3.1.5 Update

BEFORE USING THE GRID-OS SOFTWARE BINDER

The updated pages that follow reflect changes to the May 1984 edition of the GRID-OS Software binder for GRID-OS Release 3.1.5 . Insert these pages into the binder according to the instructions that appear at the top of each page. The instructions refer to Update-1, Update-2, Update-3, etc., which appear at the bottom of each page for identification.

Order Number: 29400-43

Insert Update-1 before page 1-3 of the "System Basics" chapter. The text is to precede the section entitled "Warm Start-Up" on page 1-2.

Required Start-Up Files

To start up your computer and use your GRiD applications you need the files listed in Table 1-1 under the "Programs" subject:

Table 1-1. Required Start-Up Files.

Title ¹	Kind	Purpose
CCOS	System	Controls the operations of application programs, input/output devices, and other service functions. Different versions of CCOS exist for different computer models; if you have problems during start-up or program execution, make sure the version of CCOS in "Programs" applies to the computer you are using. See Determining Correct Software Version in Appendix G for information on how to match your computer with the correct version of CCOS.
Common	Shared	Contains routines used by all GRiD application programs.
Executive	Run	Displays the File form and provides interchange services when transferring from one file to another using the Transfer command.
Emulator	Shared	This file is required for those computers using GRiD-OS that don't have an 80-bit 8087 arithmetic processor chip. The processor is an option on some computers. GRiD software requires either the processor or this file, to perform processor functions.
User	Profile	Performs preset functions during start-up, such as identifying a start-up file, and determining the current time and date, and the current choices in the GRiDManager - form (current modem, printer, screen font, etc.). GRiD supplies the User file on the system diskette with some items set to match your hardware configuration. You can change these items or add to them using the following GRiDManager commands: Set Time, Select Start-Up File, Cancel Start-Up File, Update - Form Choices and - (CODE-0). For details, see the "GRiDManager" chapter.

¹Title and Kind identify the file to GRiD-OS; their functions are discussed on pages 1-7 of the "System Basics" chapter of the Management Tools Reference manual.

Insert Update-2, Update-3 immediately before page 1-5 of the "System Basics" chapter. The text is to replace all text for the section entitled "Device" on page 1-4.

Device

Device is the name of a permanent storage device. GRiD-OS assigns a device name to each storage device attached to your computer at start-up. These names appear as choices for the Device item of the File form. Figure 1-1 shows an example of such a list. For a complete list of the device names that GRiD-OS assigns to your computer, see the corresponding reference source listed below:

Computer	Reference Source
Compass Computer	Appendix B, <u>Compass Owner's Guide</u>
GRiDCase Computer	Appendix B, <u>GRiDCase Owner's Guide</u>
IBM Personal Computer	Appendix G of this manual.

You can change a GRiD-assigned device name using the Change Volume Name command as described later in this addendum.

If you attach or turn on a GRiD Compass device after start-up, you must use the Update Storage Device Choices command, described later in this addendum. Confirming the command causes the new device to appear in the Device list of choices. You can then store files on the new Device and retrieve files from it.

NOTE: Since you must always turn off the power before connecting or disconnecting any GRiDCase device, all devices are activated during start-up.

When you are connected to GRiD Central or to a file server device, you can choose among additional storage devices. See the documentation supplied with the server device for information on the devices available.

Diskette Volume Names GRiD-OS assigns a name--Floppy Disk, External Floppy Disk, etc.--to each floppy disk drive. You, in addition, can assign a volume name to each removable diskette that you use in the diskette drive. You use the Initialize Media program, described later in this addendum, for this purpose. (You must run this program for each new diskette before you can use it.)

The volume name is an internal label which the computer uses to identify the diskette device when exchanging data. Labeling each device ensures that only the correct device is selected during an operation. For example, if you want to erase the files on a particular diskette, but have the wrong one inserted in the drive, the computer won't continue until you place the diskette with the correct volume name into the drive.

Both the volume name and the name of the floppy drive containing the diskette, appear as choices on the File form. The volume name is indented one character to the right of the device name, as shown in Figure 1-4.

Figure 1-4. Example of Volume Names as Choices in the File Form.

30-May-82	11:35 am
Floppy Disk Management Tools External Floppy Disk Transfer Diskette Dow Jones Data	
Device	Floppy Disk
Subject	
Title	
Kind	
Password	
Select a file and confirm or Press CODE-? for help	

You can change a volume name of a diskette by either using the Change a Volume Name command under GRIDManager or the Duplicate Media utility.

The volume names that appear initially represent the diskettes in the drives at start-up. You add volume names to the choices as follows:

► **To Add a Volume Name to the List of Device Choices**

1. Move the outline to the Device item of the File form.
2. Remove any previously inserted diskette from the floppy drive you wish to use.
3. Insert the new diskette whose name you wish to add.
4. Move the outline to the device name of the floppy drive--for example, to Floppy Disk--where the diskette resides.
5. Move the outline to any other File form item.

When you move the outline, the volume name of the new diskette is added to the rest of device name choices in the File form.

NOTE: When you have numerous floppy diskette volume names for diskettes you are no longer using, you can issue the Update Storage Device Choice command as described later in the addendum..

Insert Update-4 immediately before page 2-5 of the "GRiDManager" chapter. The text is to precede the section entitled "Duplicate Files--CODE-D" on page 2-4.

Change Volume Name--CODE-?

The Change Volume Name (CODE-?) command lets you change the volume name of diskettes and the names GRiD-OS assigns to non-removable storage devices, such as Bubble Memory and Hard Disk.

You create volume names using the Initialize Media and Duplicate Media programs (see Appendix F). If you use a diskette that has not been given a volume name, the computer gives it the name "Unnamed Diskette" and also lists the time and date the diskette was initialized. You can then use the Change Volume Name command to give it a volume name. For further information on volume names see the Diskette Volume Names section in the System Basics chapter.

CAUTION: Always give a different volume name to each floppy diskette so that the computer will recognize the correct diskette during an operation.

▶ To Change a Volume Name

1. Enter the Change Volume Name command by pressing CODE-?, selecting the Change Volume Name item, and confirming.

A menu appears containing the devices and current floppy diskette volume names.

2. Select the volume name you want to change and confirm.
3. GRiDManager then displays a form where you specify the new name.
4. Type in the new volume name in the space provided and confirm.

After you confirm, the new volume appears as a choice.

Insert Update-5 through Update-8 immediately before page 2-9 of the "GRiDManager" chapter. The text is to be incorporated within the section entitled "Options (System Characteristics)--CODE-0

Options--CODE-0

The following new options have been added to the GRiDManager Options form.

Error Message Source
Aspect Ratio
Current Modem
Current Serial

Error Message Source

Initial setting is Main Memory (RAM). Choices are Main memory (RAM), External file.

The Error Message Source item determines where GRiD-OS will look for the GRiD-supplied @SystemErrors file before displaying a message. If you specify External file, the system looks on a diskette or other permanent storage device. If you specify Main memory (RAM), it loads the @SystemErrors file into RAM and looks there. This choice is useful on systems having only diskette drives as storage devices. It eliminates swapping diskettes when an error occurs and the error message file isn't present on the currently inserted diskette.

NOTE: To save space in RAM you may want to set this item to External File. However, to receive error messages, be sure the @SystemErrors file is listed under "Programs" of any active device.

Aspect Ratio

Initial setting is Screen. Choices are Other (100-500), Screen, External Monitor.

The Aspect Ratio command lets you vary the aspect ratio, a measurement of the dots or "pixels" that make up the characters or images appearing on your display.

GRiDPlot and other programs that create graphics images use the aspect ratio in producing images on a screen, a monitor, or as printed output. Use this item when circles or other graphic images appear distorted. For example, a circle appearing in an oval, egg-shaped form indicates a need to change the Aspect Ratio setting.

The initial setting (Screen) provides the correct aspect ratio for the computer from which you are operating. It is set by GRiD-OS at start-up.

Set the Aspect Ratio item to External Monitor to correct misshapen images appearing on an external monitor.

Set the Aspect Ratio item to Other, to type in a value. The value you type in is the fractional value of the aspect ratio (supplied by the manufacturer) multiplied by 100, as illustrated below:

<u>Aspect Ratio</u>	<u>Computation</u>	<u>Value Typed In</u>
3:1	$3/1 \times 100$	300
3.25:1	$3.25/1 \times 100$	325
1.8:1	$1.8/1 \times 100$	180
1:1.4	$1/1.4 \times 100$	71

To determine the appropriate aspect ratio for a printer, consult the corresponding owner's manual or literature, or a representative of the manufacturer.

A Note To Graphic Experts GRiD-OS sets the following values internally for the aspect ratio:

- o When Aspect Ratio is set to Monitor, GRiD-OS sets a value of 2.5:1, which is the industry standard for monitors.
- o When Aspect Ratio is set to Screen on a GRiDCase, GRiD-OS sets a value of 1.4:1.
- o When Aspect Ratio is set to Screen on a GRiD Compass, GRiD-OS sets a value of 1:1.
- o When Aspect Ratio is set to Screen on an IBM PC or similar product, GRiD-OS sets a value of 2.5:1.

Current Modem

The Current Modem item identifies the modem you intend to use for telecommunications. The modem can be either the internal modem built into your computer or an external modem attached to its serial port. The Current Modem item corresponds to a "Programs" file with a Kind set to Modem. The file provides information to GRiD-OS about the modem.

The choices presently supplied by GRiD are: CompassGRiDInternal, HayesExternal, GRiDCaseHayesInternal, None. The choice you select depends on the computer and modem you are using. You must also select an appropriate choice for the Current Serial item as shown in Table 2-1.

Table 2-1. Current Modem and Current Serial Choices

Computer/ Modem	Current Modem Choice	Current Serial Choice
Compass/ Internal	CompassGRiDInternal	Not Applicable
Compass/ External Hayes Smartmodem	HayesExternal	Compass
GRiDCase/ Internal	GRiDCaseHayesInternal	GRiDCase
GRiDCase/ External Hayes Smartmodem	HayesExternal	GRiDCase
Any computer/ Dumb Modem	Not Applicable	GRiDCase or Compass

CAUTION: Each GRiD application program that has communications capabilities provides a form in which you specify a modem type of either external or internal. The name of the form differs with each application; for example, in GRiDTerm you specify the Modem Type item in the Access form; in GRiDManager, the Phonetlink Sign-on form.

The item for Modem Type in the form displayed by the application program depends on the computer/modem configuration you use, as shown in Table 2-1. Specify internal for all computers and modem types except when you have an external "dumb" modem; then, specify external.

NOTE: If you add a new file of type Modem to your list of programs after start-up, you must execute the Update Options Form Choices command for the file to appear as a choice in the Options form.

Current Serial

The Current Serial item identifies the computer model with which you are using your serial device, for example a serial printer, modem, or any other device attached to the serial port of the computer.

The item corresponds to a "Programs" file with a Kind set to Serial. The choices are: Compass, GRIDCase, or None.

NOTE: See Table 2-1 in the Current Modem section for the required Current Serial specifications when using an external or internal modem.

NOTE: If you add a new file of type Serial to your list of programs after start-up, you must execute the Update Options Form Choices command for the file to appear as a choice in the Options form.

Insert Update-9 immediately before page 2-15 of the "GRiDManager" chapter. New text for items in the Sign-On--CODE-? section.

Sign-On--CODE-?

This update reflects the following changes in the GRiDManager Sign-On form:

- o Additional settings for the Baud Rate item
- o A new item, Disconnect After

Baud Rate

Initial setting is 1200 bits per second. Choices are 300, 1200, 2400, 4800, 7200, 9600, 19200, External Clocking.

Baud Rate is the speed at which data is transmitted and received. Some host systems can accommodate more than one baud rate. See the literature provided by the host system to find out which baud rate to use. If that is unsuccessful, ask your system administrator or a person at the remote data center for the correct setting.

NOTE: The External Clocking setting is used for special synchronous modems and is not applicable in most cases.

Disconnect After

Initial setting is 3. Choices are (1-250) Minutes of Inactivity, Don't Disconnect.

The Disconnect After item indicates how long you stay connected to GRiD Server or GRiD Central when data hasn't been exchanged between the computer and device. If there is no data exchange in the time limit you set, the telecommunications connection is broken. When you try to access the device again, GRiDManager will attempt to reconnect you. Initially the item is set for 3 minutes, but you can erase this number and type in a number from 1 to 250.

If you set this item to Don't Disconnect, you will remain connected to GRiD Server or GRiD Central until you sign off.

*Insert Update-10 immediately before page 2-25 of the "GRiDManager" chapter.
Insert as new text immediately before section entitled "Usage--CODE-U on page
2-25.*

Update Options Form Choices--CODE-?

The Update Options Form command (CODE-?) adds as choices in the Options form the names of files added to "Programs" after start-up whose Kinds are the following:

Printer
Plotter
Serial
Modem
Font

The command also updates the Kind choices that appear in the File form. If a system function file or GRiD application file has been added to "Programs" after start-up and its Kind isn't in the current Kind list, GRiDManager adds it to the list. Conversely, when you remove the file, GRiDManager removes its Kind from the list.

Update Storage Device Choices--CODE-?

The Update Storage Device Choices command (CODE-?) performs the following functions

- o Erases the floppy diskette volume names which appear in the Device item's list of choices on the File form. This command is useful when you have numerous volume names for floppy diskettes that you are no longer using.
- o Activates any devices that are connected to the Compass computer (or turned on) after start-up. During start-up, the system recognizes any storage devices that are turned on and attached to your computer. Each time the File form appears, these devices appear in the Device item's list of choices at the top of the screen.

If you attach a Hard Disk, Floppy Disk, or Portable Floppy to your computer after start-up, you must issue this command before the system will recognize it as an active device, allowing access to its files through the File form.

Likewise, if you turn off one of the devices or detach it from your computer, you should issue this command so that the system removes it from the list of active devices.

NOTE: This command is used only to activate or deactivate storage devices connected to the Compass computer. Since GRiDCase computer users must always turn off the power before connecting or disconnecting any device, any devices are activated during start-up.

Insert Update-11 through Update-14 immediately before page AF-1 of the "Appendices" chapter. The text is to replace all text under the section entitled "Duplicate Media" on pages AF-1 and AF-2.

Duplicate Media The Duplicate Media utility performs the following functions:

- o Copies the contents of one diskette to another diskette on the same device. If you have a hard disk connected, you can make multiple copies of the source diskette without having to reread the source diskette each time.
- o Changes the volume name of devices. You can also change volume names using the Change Volume Name command under GRIDManager.

The steps you follow to duplicate a diskette are listed below.

► **To Duplicate a Diskette**

1. Fill in the File form, specifying Duplicate Media in the Programs subject, and confirm.

After confirming the File form, the Duplicate Media Commands menu (F-1) appears:

Figure F-1. Duplicate Media Commands Menu

```

Duplicate a diskette
Change a volume name
CODE-Q Quit Exit
CODE-ESC Cancel Exit
Commands: Select item and confirm
Version 3.1.5 of Duplicate Media
Copyright © 1982, 1983, 1984, 1985
GRID Systems Corporation

```

2. Confirm the item Duplicate a diskette.
3. You must now select the floppy diskette you want duplicated.

If there are currently floppy diskette volume names appearing in the Device list in the File form, a menu is displayed asking you to select one of these volume names.

Figure F-2. Floppy Diskette Choices

```

External Floppy Disk
Transfer Diskette
Dow Jones Data
Duplicate: Select source diskette and confirm

```

Confirm the source diskette choice and insert the diskette, if it is not already in the diskette drive.

NOTE: To duplicate a diskette whose volume name does not appear on the list, move the outline to the name of the diskette device which is to be used for duplicating. Then insert the diskette in the diskette drive and confirm.

If there are currently no floppy diskette volume names under the File form device list, and there is only one diskette drive, the program displays the following message

Duplicate: Insert source diskette and confirm.

4. After the source diskette is inserted, the program displays a form asking for the name of the destination diskette.

Figure F-3. Destination Diskette Form

Duplicate contents of			
Device	External Floppy Disk		
Name	Dow Jones Data		
Created	Sunday	3-Feb-85	1:53 pm

name
Volume name <u>Copy of Dow Jones Data (30-May-82)</u>
Enter name for destination diskette and confirm

The title "Copy of" followed by the volume name of the source diskette is given to the destination diskette. You can keep this title or erase it and type in your own.

5. Confirm the chosen diskette name. The following message appears:

Reading source diskette.

The above message is followed by this message:

Insert destination diskette and confirm.

You can insert an unformatted diskette, or a diskette formatted for GRiD-OS or any other system. Any existing files on the destination diskette will be erased.

6. Insert the diskette that is to contain the copy and confirm. The following message appears:

Writing destination diskette.

If the destination diskette is unformatted, or formatted for a different operating system, the program formats it, displaying the following message:

Formatting diskette.

NOTE: If you have a hard disk connected to your computer, the entire contents of the source diskette are copied to a temporary file on the hard disk. The program then reads from this temporary file when writing to the destination diskette. If you don't have a hard disk, you may have to insert the source and destination diskette several times to complete the duplication process as described in the succeeding steps.

When all the data has been copied, the following menu is displayed.

Figure F-4. Duplicate Menu

Duplicate contents of			
Device	External Floppy Disk		
Name	Dow Jones Data		
Created	Sunday	3-Feb-85	1:53 pm

Yes No

Do you want to make another copy? Yes No

Duplicate Fill in form and confirm

If you select No, the system displays the following message:

Please wait: Erasing temporary file.

The program then displays the Duplicate Media commands again. If you select Yes, the duplicating process begins again, and the program asks for the name of the next destination diskette.

7. If there is more data on the source diskette to be copied, the following message appears:

Insert source diskette.

nnn of nnn pages duplicated

In the above message, nnn is a number referring to the amount of data copied from the source diskette up to this point of the duplication procedure.

8. To continue the duplication process, insert the source diskette and confirm. The following message is displayed:

Reading Source Diskette

9. The program then displays the following message

Insert destination diskette

You may need to insert the source and destination diskette several times before the duplication process is complete.

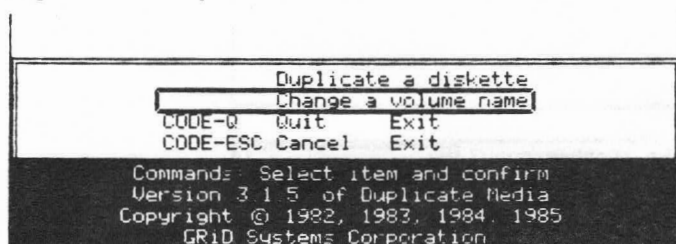
10. When all the data has been copied, the Duplicate Media commands menu is displayed.

The steps you follow to change a volume name are listed below.

► To Change a Volume Name

1. With the Duplicate Media commands menu (see Figure F-1) displayed on the screen, select and confirm the item Change a Volume Name.

Figure F-5. Duplicate Media Commands



A menu appears containing the current device volume names.

2. Select the volume name you want to change and confirm.
3. The program then displays a form where you specify the new name.
4. Type in the new volume name in the space provided and confirm.

After you confirm, the new volume name appears as a choice.

Insert Update-15 immediately before page AF-5 of the "Appendices" chapter. The text is to replace text for Items 4 and 5 on page AF-4.

4. The program then prompts you for a volume name for the diskette, hard disk, or other storage media to be initialized.

NOTE: If you try to initialize a non-removable storage device, such as a Hard Disk, a prompt asks you to use extreme caution appears. Once the hard disk is formatted, any data stored previously is lost and irrecoverable.

5. After specifying the volume name and confirming, the Initialize Confirmation form appears (Figure F-4). It serves as a warning that, if you choose to continue formatting, all files present on the medium are erased. If you elect No, the formatting process stops and you return to the initial menu; if you select Yes, the formatting process begins.

Single-Drive Operations with the GRiDCase

Use the following guidelines when the internal diskette drive is the only storage device available to your GRiDCase.

Several guidelines recommend the consolidation of several files on the same diskette. Although this is not a requirement--GRiD-OS prompts you to insert a diskette when a file is missing--it speeds up operations by lessening the number of diskette swaps required.

1. For ease of updating diskettes, keep all your applications on the same diskette.
2. If you wish to exit a file and then access a file on a different diskette, its easiest to use CODE-Q or CODE-ESC to exit; then insert the new diskette into the drive, specify the new file in the File form, and confirm. You can use the Exchange For Another File item in the Transfer menu to access a file on a different diskette, but it increases the number of diskette swaps required.
3. Set the Error Message Source in the GRiDManager Options form to Main Memory (RAM) so that error messages are displayed, even though the @SystemErrors file might be present on your diskette.
4. If you intend to use GRiDManager in maintaining application files, duplicate it onto the application diskette. You should use GRiDManager on the system diskette under the following conditions:
 - o When using CODE-O. A change in the GRiDManager options form often requires that the User~Profile file, stored in "Programs" on the system diskette, be created or updated.
 - o Before using Update Storage Device and Add or Remove a Device

NOTE: You may find it easiest to exit your file as shown in Step 2 before removing the application diskette and inserting the system diskette.

5. Make sure that the system diskette containing the User~Profile file is not write-protected. This file must be updated when you change the GRiDManager Options form; if the diskette is write-protected, your changes will not be recorded.
6. Make sure the appropriate Modem and Serial files reside on the same diskette as GRiDTerm, GRiD3101, GRiDV100, GRiDManager, or any other communications programs you use.
7. Remove a diskette only under the following conditions:
 - o When the system prompts you to remove the diskette.
 - o When you see the basic File form. This is the form that appears

immediately after start-up, or after you press and confirm CODE-Q or CODE-ESC.

CAUTION: Don't remove a diskette from a drive when it is busy, unless prompted to do so. A drive is considered busy as GRiD-OS reads or writes data to it. This is indicated by a red "busy" light and sounds emitting from the drive. Removal of diskettes when the drive is busy can damage the diskette and the drive, and result in the loss of data.

Font Files for Current Typeface (CODE-0)

GRiD provides a number of font files which let you alter the typeface of the characters appearing on your screen.

The three standard font files offered (TypeGRiD4x8, TypeGRiD5x8 and TypeGRiD6x8) produce typeface in three sizes. By selecting the font file which produces the smallest typeface, you can increase the number of characters, and therefore the amount of information that appears on your screen.

The Options form of each GRiD application has a Current Typeface item where you select the font file you want to use. The choices for the Current Typeface item correspond to titles of one or more files that reside in the "Programs" subject and whose Kind is set to Font. The initial setting is System-wide. The other choices are explained below.

NOTE: Since the screen dimensions differ for each model computer, the same typeface will display a different amount of characters on each machine.

- System-Wide** The System-wide setting for Typeface set in the GRiDManager Options form applies. Using GRiDManager's System-wide Typeface option changes the typeface for all the applications. You can then change the Options form for individual applications when they require a typeface different from your System-wide setting.
- Built-In** On Compass computers displays Type GRiD 6x8. On GRiDCase computers, displays TypeColonial 8x8. This setting provides the most efficient use of main memory (RAM). The other type fonts choices use approximately 2,000 additional characters of main memory.

TypeGRiD4x8¹ On Compass Computer Models 1100-1129, this setting displays 80 characters per line on your screen.

On Compass Computer Models 1131-1139, this setting displays 128 characters per line on your screen.

On GRiDCase Computer Models 1, 2 and 3, this setting displays 160 characters per line on your screen.

TypeGRiD5x8¹ On Compass Computer Models 1100-1129, this setting displays 64 characters per line on your screen.

On Compass Computer Models 1131-1139, this setting displays 102 characters per line on your screen.

On GRiDCase Computer Models 1, 2 and 3, this setting displays 128 characters per line on your screen.

TypeGRiD6x8¹ On Compass Computer Models 1100-1129, this setting displays 53 characters per line on your screen.

On Compass Computer Models 1131-1139, this setting displays 85 characters per line on your screen.

On GRiDCase Computer Models 1, 2 and 3, this setting displays 106 characters per line on your screen.

¹ The pair of numbers in the titles indicates the width and height of the dots (also known as pixels) that form each character. As the width of each character decreases, the number of characters that you see on the screen increases.

GRiD Systems also distributes a number of other font files, which, when included in the Subject "Programs," provide additional typeface choices.

Sample font files released with the GRiDMaster and GRiDPaint applications are shown in Figure 2-8.

Figure AG-1. Sample Type Fonts

TypeBlock9x12

TypeBlock12x16

TypeBlock24x32

TypeColonial9x15

TypeColonial10x12

TypeExpand12x8

TypeGRiD8x14

T^v P^o E^l M^o dE^r n^{1 5 x 2 0}

TypeTextbook9x15