

**GRID-OS/MS-DOS UTILITY PROGRAMS USER'S GUIDE**

**June 1984**

**Order Number 21210**

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## About This Book

This guide provides the following information:

- o How to transfer, using the GRiDTransfer utility program, files between GRiD-OS and MS-DOS™ in formats acceptable to the target MS-DOS or GRiD-OS application.

GRiDTransfer allows the transfer of files not only between GRiD-OS and MS-DOS, but also between GRiD-OS and PC-DOS, and between GRiD-OS and any other operating systems for IBM PC compatibles.

- o How to install both GRiD-OS and MS-DOS on the same hard disk and optionally start up (boot) either system as desired. After installation, GRiD-OS and MS-DOS, and their related applications and files, can each reside in a separate section of the hard disk called a partition; you can then, on the same computer, process files under either system at will.

You use MediaPartition when installing GRiD-OS to run from the same hard disk as MS-DOS. You can also use MediaPartition to install GRiD-OS with PC-DOS on an IBM PC with a hard disk, or with the operating system of other PC compatibles that have a hard disk.

**Before Using This Guide** If you are already a user of GRiD-OS, this guide provides you all the information you need to use GRiDTransfer and MediaPartition, and to install MS-DOS and GRiD-OS on the same hard disk.

If you are a new GRiD User, however, you should first familiarize yourself with the GRiD software, keyboard, menus, forms, file creation procedures, and file handling commands as described in the Getting Started tutorial and the GRiD Management Tools Reference manual.

The prerequisite knowledge for transferring files varies with the types of files being transferred. You must at least be familiar with the functions of the MS-DOS application -- for example, LOTUS 1-2-3™ -- that is to be the source or destination of the transferred data.

**How Do I Begin?** Read Chapter 1 for information on GRiDTransfer and how to transfer files between GRiD-OS and MS-DOS.

Read Chapter 2 for a description of the MediaPartition utility program and a step-by-step guide for installing GRiD-OS and MS-DOS on a hard disk.

**Other Books You May Need** You may need to refer to the GRiD Compass MS-DOS User's Guide for supplemental information on the following:

- o The FDISK, FORMAT, and COPY utility programs, which you use in installing MS-DOS as described in Chapter 2.
- o MS-DOS file naming conventions and directories, which you may need when specifying MS-DOS destination or source files with GRiDTransfer.

**Typographical Considerations** This guide follows certain typographical conventions concerning keycaps and use of the keyboard. You should be aware of these conventions as you read.

#### **Keycaps**

Keycap labels are in upper case, just as they appear on your keyboard. Thus, when you see the symbol CODE, you should press the key labeled CODE rather than typing the word "CODE" letter by letter.

#### **Multi-Key Operations**

Throughout this manual, you are instructed to perform operations like "press CODE-RETURN." When you see a hyphen between two keycap names, press the keys in the order in which they appear and hold them down together. Thus, when you see "press CODE-RETURN," press down the CODE key and, while holding it down, press the key labeled RETURN. If you see three keycap names linked with hyphens, hold down the first two while pressing the the third.

#### **Confirm**

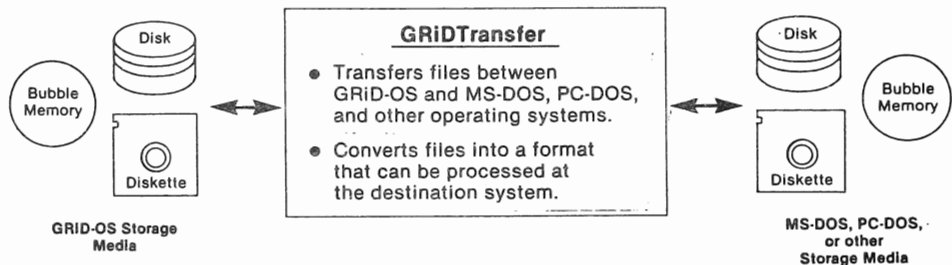
You are instructed both in this manual and in prompts that appear on your computer screen to "confirm" that you filled out a form correctly or that you are ready to go on to the next step of the task at hand. The proper response to a "confirm" request is to press CODE-RETURN.



## Chapter 1: Transferring Files with GRiDTransfer

GRiDTransfer, operating under GRiD-OS, allows the transfer of files between GRiD-OS and MS-DOS, GRiD-OS and PC-DOS, or GRiD-OS and any other operating systems for IBM PC compatibles (Figure 1-1). Throughout this chapter, the term MS-DOS also refers to PC-DOS and other compatible operating systems.

Figure 1-1. Principal Functions of GRiDTransfer



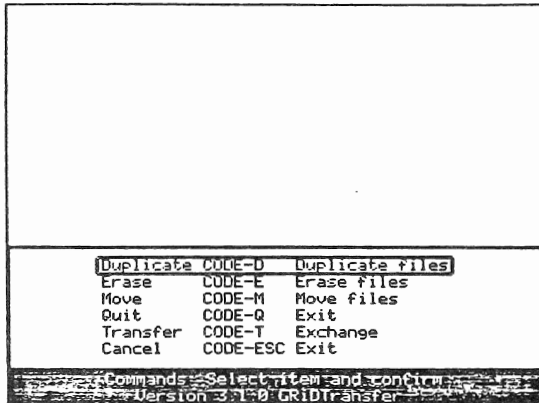
As shown in Figure 1-1, the source files (the files that contain the data to be transferred) and the destination files (the files that contain the data after the transfer) can reside on any storage device attached to your computer. If you use a hard disk with separate MS-DOS and GRiD-OS partitions (see Chapter 2), you can transfer files between the partitions.

GRiDTransfer provides the following additional functions:

- o You can erase both GRiD-OS and MS-DOS files as you work within GRiDTransfer.
- o You can display catalog information (such as the file size, creation date, last modification date, etc.) on any GRiD-OS or MS-DOS file that resides on a storage device connected to your computer.

To use GRiDTransfer, select it in a File form from "Programs" and confirm. Once you confirm, the GRiDTransfer commands menu (Figure 1-2) appears.

Figure 1-2. The GRiDTransfer Commands Menu



The following section describes the items in the GRiDTransfer Commands menu.

**Duplicate--CODE-D and Move--CODE-M** The Duplicate (CODE-D) and Move (CODE-M) commands perform the following functions:

- o They transfer data from a GRiD-OS source file to an MS-DOS destination file and vice versa.
- o They convert the data from the source file depending on which item to select from the Duplicate or Move form.

The functions for the Duplicate command (CODE-D) and the Move command (CODE-M) are identical, except the Move command erases the source file after the transfer, whereas the Duplicate command leaves the source file intact.

The following is a step-by-step procedure to follow in moving or duplicating a file.

To Duplicate or Move a File

1. Enter GRiDTransfer by selecting it from "Programs" and confirming. You can proceed when the Commands menu (Figure 1-2) appears.
2. Press CODE-D (or CODE-M); the Duplicate form (or Move form) appears.

The Duplicate form shown in Figure 1-3 shows the conversion items available. (The Move form contains identical conversion items.)

Figure 1-3. The Duplicate Form

<b>GRiD-OS to MS-DOS - no conversion</b> GRiD-OS to MS-DOS DIF MS-DOS to GRiD-OS - no conversion MS-DOS ASCII to GRiD format MS-DOS dBASE II to GRiD format MS-DOS DIF to GRiD format MS-DOS Lotus 1-2-3 to GRiD format MS-DOS SYLK to GRiD format	
Conversion	<b>GRiD-OS to MS-DOS - no conversion</b>
Source system	GRiD-OS
<b>Duplicate: Fill in form and confirm</b>	

3. Select the appropriate conversion item (see Tables 1 and 2) and the system (GRiD-OS or MS-DOS) where the source file resides.

Table 1-1 (below) shows some examples of files you might want to transfer from GRiD-OS to MS-DOS and the appropriate conversion items you would select.

**CAUTION:** See the detailed description of the Duplicate and Move conversion items later in this chapter before trying to transfer your file.

Table 1-1. GRiD-OS to MS-DOS Transfer Guidelines.

You want to transfer:	Applicable conversion item:
Text files (documents, BASIC programs and other source code).	GRiD-OS to MS-DOS - no conversion
Program object code.	GRiD-OS to MS-DOS - no conversion
Graph, database, worksheet, and other cell-based files.	GRiD-OS to MS-DOS DIF <sup>1</sup>
<sup>1</sup> You must convert the MS-DOS destination file requires before the MS-DOS application can process it. See the GRiD-OS to MS-DOS DIF section later in this chapter for details.	

Table 1-2 (below) shows some examples of files you might want to transfer from MS-DOS to GRiD-OS and the appropriate conversion items you would select.

Table 1-2. MS-DOS to GRiD-OS Transfer Guidelines.

You want to transfer:	Applicable conversion item:
dBASE II <sup>TM</sup> files.	MS-DOS dBASE II to GRiD format
Lotus 1-2-3 <sup>TM</sup> files.	MS-DOS Lotus 1-2-3 to GRiD format
Multiplan <sup>TM</sup> and other Microsoft files.	MS-DOS SYLK to GRiD format <sup>1</sup>
Other graph, database, worksheet, and cell-based files.	MS-DOS DIF to GRiD format <sup>1</sup>
Program object code.	MS-DOS to GRiD-OS - no conversion
Text files (documents, source code, the like) created by WordStar <sup>TM</sup> , the MS-DOS Line editor and other text editors.	MS-DOS ASCII to GRiD format
<sup>1</sup> You must convert the MS-DOS source file to SYLK or DIF before you can transfer it to GRiD-OS. See the detailed description of the conversion item later in this chapter before using it.	

4. After selecting the Conversion item and Source system, confirm.
5. When transferring data from GRiD-OS, the standard File form appears. If you aren't familiar with this form, refer to the Getting Started tutorial or the "System Basics" chapter in the GRiD Management Tools Reference manual.

When transferring a file from MS-DOS, the MS-DOS File form, whose layout differs from the standard File form, appears. See the MS-DOS File Form section later in this chapter for an example of this form and information on filling it out.

After filling in the form, confirm.

6. Now, a file form appears in which you specify the destination file. After filling in the form, confirm. Below is an example of the standard File form when the destination file is in GRiD-OS.

Figure 1-4. Standard GRiD-OS File Form

Source	
Device	Hard Disk:
Pathname	\EXPENSES\NORTH
Keep current file <del>Get new file and its application</del> Get new file only	
Device	Hard Disk Volume 2
Subject	Expenses
Title	North
Kind	Text
Password	
Next action	<u>Get new file and its application</u>
<del>Select GRiD-OS destination file and confirm</del>	

Note the Next Action item in the form. By selecting Get File and Its Application as the Next Action choice, you transfer to the destination GRiD-OS file immediately after completing the transfer.

7. A form (Figure 1-5) next appears showing one filled-in File form each for the source and destination files. You can either confirm to transfer the data, or press ESC to return to the Commands menu.

If a file with the same name as the destination file already exists, the word over appears between the source and destination File forms as shown in Figure 1-5.

Figure 1-5. The Duplicate Form Before Overwriting a File

Convert	
Device	Hard Disk:
Pathname	~EXPENSES\NORTH

over	
Device	Hard Disk Volume 2
Subject	Expenses
Title	North
Kind	Text

~~Confirm to start MS-DOS ASCII-to-Grid conversion~~

Pressing ESC at this point returns you to the Commands menu; you thus avoid overwriting the old file.

If no identical destination file exists, the word to appears between the source and destination forms. You can thus transfer the file without overwriting an existing file.

The conversion items in the Duplicate and Move forms are explained in detail in the sections that follow.

#### **GRID-OS to MS-DOS -- No Conversion**

This item transfers data from a GRID-OS source file to an MS-DOS destination file. GRIDTransfer doesn't modify the data from the source file; however, it alters the format of the file so that MS-DOS applications such as WordStar, Microsoft, and COBOL can access it.

**NOTE:** Only user-entered cell and text data is transferred. Properties information entered by GRID applications -- cell width, alignment, and the like -- isn't retained. If you transfer the same file back to GRID-OS, you must reset the Options, Properties, and other forms as applicable.

#### **GRID-OS to MS-DOS DIF**

This item converts and transfers a GRID-OS source file to an MS-DOS destination file in the Data Interchange Format (DIF). Use this item to convert and transfer cell-based files (database, worksheet, and graph) to MS-DOS. After transfer, you must convert the DIF file into a format suitable for processing by the applicable MS-DOS application.

DIF provides a standard file format that lets unrelated MS-DOS programs share data. A number of software publishers offer conversion utility programs with their products; these programs create a DIF file from an existing format and vice versa. Lotus 1-2-3 and VisiCalc<sup>TM</sup> products offer such utility programs.

**NOTE:** VisiCalc products don't run on the GRiD Compass at the date this publication was printed.

You are responsible for converting the destination file from DIF to a format that can be processed by the MS-DOS application. If you don't have a DIF conversion program, you may want to contact the DIF Clearinghouse for information on existing conversion programs or on detailed DIF specifications so that you can write your own; the address is:

DIF Clearinghouse  
P. O. Box 527  
Cambridge, MA 02139

#### **MS-DOS to GRiD-OS -- No Conversion**

This item transfers data from an MS-DOS source file to a GRiD-OS destination file. GRiDTransfer doesn't modify the data from the source file; however, it alters the format of the file so that GRiD-OS applications such as GRiDWrite can access it.

**NOTE:** You can later convert the unconverted data in the destination file to GRiD Format using any one of the MS-DOS to GRiD Format items described in the following sections. In the Duplicate or Move form, specify GRiD-OS (instead of MS-DOS) as the source system and the GRiD-OS file with the unconverted data as the source file.

#### **MS-DOS ASCII to GRiD Format**

This item converts an MS-DOS ASCII file into a format that can be processed by GRiD applications. Use this item to convert WordStar files and other text files that you want to with use with GRiDWrite.

In converting the MS-DOS ASCII file, GRiDTransfer does the following:

- o Sets the eighth bit of each byte to 0. Certain MS-DOS applications (such as WordStar) set the eighth bit to 1 for their own internal processing. A GRiD application, unable to interpret an eighth-bit setting of 1, might produce inaccurate results when processing the byte.
- o Transfers only meaningful data to GRiD-OS. Certain MS-DOS applications place an end-of-file marker (CTRL-Z) at the end of a file, even though the file length specified in the file directory may extend beyond the marker. GRiDTransfer doesn't copy any data beyond the end-of-file marker if it encounters one.

**NOTE:** GRiDTransfer doesn't remove WordStar formatting symbols or other formatting commands interspersed in the MS-DOS source file.

#### **MS-DOS dBASE II to GRiD Format**

This item converts a dBASE II database file to a database file suitable for processing by GRiDFile. The destination file retains the original field lengths and the column names.

In filling out the MS-DOS source File form, you can recognize a dBASE II database file by the characters .DBF at the end of the file name.

**NOTE:** Make sure the Kind of the GRiD-OS destination file is set to Database; otherwise the column names are lost.

#### **MS-DOS DIF to GRiD Format**

This item converts and transfers an MS-DOS source file in the Data Interchange Format (DIF) to a GRiD-OS destination file suitable for processing by a GRiD application. Use this item to convert and transfer MS-DOS cell-based files -- for example, to convert MS-DOS spreadsheets into a format suitable for producing graphs under GRiDPlot.

Before the transfer, you must convert the MS-DOS file to DIF. See the GRiD-OS to MS-DOS DIF description earlier in this chapter for more information on DIF.

After you select MS-DOS DIF to GRiD Format, you are prompted to specify Rows or Columns. The data in the DIF file is stored in either rows or in columns; select the option that matches the method used by the MS-DOS application that created the source DIF file.

If you aren't sure how the MS-DOS source file is stored, transfer it once using each option. Then look at the destination worksheet, database, or graph file; the rows and columns in the file transferred with the correct choice appear as they did in the MS-DOS source file; the rows and columns in the other file are transposed.

**NOTE:** Formulas (cell definitions) are not retained when files are converted to DIF; therefore, they aren't retained in the GRiDPlan worksheet specified as the destination file.

#### **MS-DOS Lotus 1-2-3 to GRiD Format**

This item converts and transfers a Lotus 1-2-3 worksheet cell-formulas print file to a GRiDPlan worksheet file. All data and formulas (cell definitions) are transferred. When you retrieve the file using GRiDPlan, press CODE-RETURN immediately; this calculates the values in those cells that have definitions (formulas).

**NOTE:** The following rules apply to the source and destination files:

- o The Kind item of the GRiD-OS destination file must be set to Worksheet if you want to retain cell definitions (formulas). You can then write the file to graph, database, or text files as desired.
- o The Lotus 1-2-3 source file must be a Cell-Formulas print file; you can identify a print file by the characters .PRN following the file name. GRiDTransfer cannot convert 1-2-3 worksheet data files (identified by the characters .WKS following the file name).

The following procedure explains how to create the necessary print file under Lotus 1-2-3.

To Create a Lotus 1-2-3 Cell-Formulas Print File

1. Start 1-2-3 (from the Lotus Access System menu, press 1).
2. Retrieve the worksheet that you want to transfer (press /FR and specify the worksheet file's name).
3. Go to the /Print menu for printing to a file (press /PF and specify the print file's name).
4. Select the cell range to be printed to the file (from the /Print menu, press R and specify range).
5. Go to the /Print Options menu (from the /Print menu, press O).
7. Select Cell-Formulas printing format (from the /Print Options menu, press OC).
8. Return to the /Print menu (from the /Print Options menu, press Q).
9. Print the Cell-Formulas format file (from the /Print menu, press G).
10. The file name specified in step 3 will have the extension .PRN and is now ready for conversion by GRiDTransfer.

**NOTE:** GRiDTransfer sets the options in the GRiDPlan worksheet specified as the destination file as follows:

- o Standard Alignment: Right
- o Standard Column Width: 9
- o Standard Format: \$

Character strings that spill over into adjacent cells in the source 1-2-3 worksheet are transferred to one cell in the GRiDPlan

worksheet file. Moreover, the data from 1-2-3 worksheet cells wider than 9 characters may not appear within the 9-character width of the destination cell. Therefore, you may have to change the Column Width setting in the Properties form (CODE-P) in order to view all the data contained in some cells of the GRiDPlan worksheet specified as the destination file.

#### **MS-DOS SYLK to GRiD Format**

This item converts and transfers a Multiplan file in the Symbolic Link file format (SYLK) to a GRiDPlan worksheet file. All data and formulas (cell definitions) are transferred.

**NOTE:** Before transferring the source MS-DOS file, you must convert it to the SYLK format. SYLK provides a standard file format that lets Multiplan and Word, and other Microsoft applications share data. Microsoft provides conversion utility programs with their products; you can use these programs to create the SYLK-formatted file required for transfer.

For information on the SYLK format, see the Microsoft Multiplan Electronic Worksheet user manual.

**Erase--CODE-E** Erase (CODE-E) lets you delete both GRiD-OS and MS-DOS files from any storage device attached to your computer. It provides the only means of erasing an MS-DOS file as you work in the GRiD-OS operating environment (other than after execution of the Move command (CODE-M), when the source file is erased).

After you press CODE-E, you are prompted to specify GRiD-OS or MS-DOS, indicating the operating system where the file to be erased resides.

After specifying the source system and confirming, the File form appears. You then specify in the form information about the file you want to erase. After you confirm, the file is erased. You can then return to the Commands menu by pressing ESC.

The Erase command is useful in creating space on crowded storage devices. If you receive the Device Full message while duplicating or moving a file, use Erase to delete unnecessary files on the device. You can use the Show Characteristics of a File item in the Transfer menu (described later in this chapter) to help determine which files to erase.

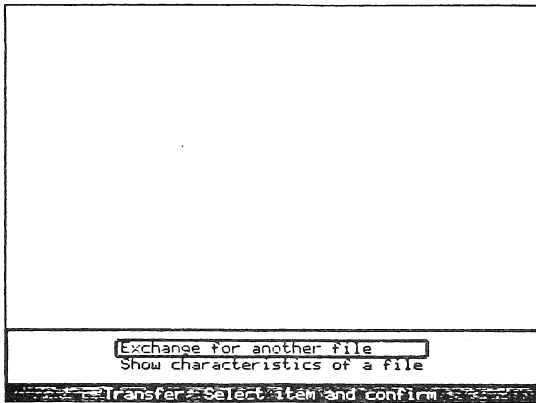
**Quit--CODE-Q and Cancel--CODE-ESC** The Quit command (CODE-Q) and the Cancel command (CODE-ESC) cause you to exit GRiDTransfer and return to the File form. You can also exit using one of the following:

- o The Exchange for Another File item in the Transfer menu.
- o The Next Action item in the File form for a GRiD-OS destination

file. You exit to the file after the execution of a Duplicate (CODE-D) or Move (CODE-M) command.

**Transfer--CODE-T** The Transfer command (CODE-T) causes the Transfer menu (Figure 1-6) to appear.

Figure 1-6. The Transfer Menu



The items in the menu are discussed in the sections that follow.

#### **Exchange for Another File**

The Exchange for Another File item lets you exit GRiDTransfer and transfer to any destination file within the GRiD-OS operating environment.

#### **Show Characteristics of a File**

The Show Characteristics of a File item displays a report in the format shown either in Figure 1-7 (for GRiD-OS files) or in Figure 1-8 (for MS-DOS files). The Length, Created and Modified items in the form are particularly helpful in determining which files to erase from a device in order to make room for others. The creation and modification date lets you identify old or outdated files; the Length item indicates the amount of space that will be available after the erasure.

After you select and confirm Show Characteristics of a File, GRiDTransfer prompts you to specify on which system -- GRiD-OS or MS-DOS -- the file resides. After specifying the system and confirming, a File form appears; specify in the form the name of the file and then confirm.

Figure 1-7. File Characteristics Report for GRiD-OS Files

Device	Hard Disk Volume 2
Subject	letters
Title	CheckBook
Kind	Worksheet
Version	0.0.0
Length	4385
Created	Thursday 23-Feb-84 9:44 am
Modified	Wednesday 18-Apr-84 9:00 am
File Characteristics	

Figure 1-8. File Characteristics Report for MS-DOS Files

Device	Hard Disk:
Directory	\EXPENSES\
Filename	NORTH
Extension	
Attributes	
Length	3552
Modified	Thursday 3-May-84 4:03 pm
File characteristics	

**MS-DOS File Form** Figure 1-9 shows an example of a File form you fill in when specifying an MS-DOS destination or source file in a transfer operation.

Figure 1-9. The MS-DOS File Form

Hard Disk:  
Floppy Disk:

Device/Directory

Pathname

Select MS-DOS source file and confirm

The sections that follow describe the items in the form and how you fill them in.

#### **Device/Directory**

This item specifies a storage device for the file. You can do one of the following:

- o Using the arrow key, select one of the choices that appear in the top portion of the screen. These represent the storage devices currently attached to your computer.
- o Type in one of the device names shown on the screen, a colon (:), the backslash (\), and then one or more MS-DOS directory names; separate each directory name with a backslash.

Using this second method provides a short-cut for those MS-DOS users who maintain several levels of directories in managing their files.

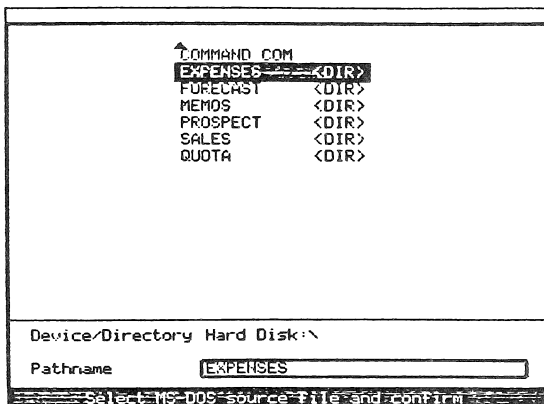
To form the backslash character (\), press, CODE-SHIFT-'.

After specifying the Device/Directory item, press RETURN; the outline moves to the Pathname item.

#### **Pathname**

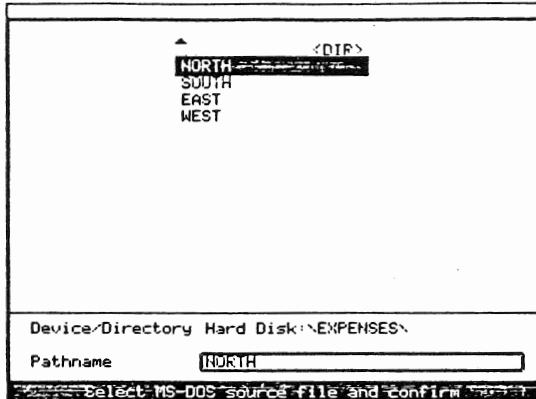
When the outline surrounds the pathname item, a list of choices appear at the top of the screen. The choices are file names and/or directory names available on the device or within the device/directory combination specified in the Device/Directory item. You can do one of the following:

Figure 1-10. Result of Selecting a Directory Entry in the MS-DOS File Form



The source file can now be selected from the list of files in Figure 1-9.

Figure 1-11. Result of Selecting a Directory Entry in the MS-DOS File Form



You can now select a source file (NORTH in Figure 1-1) from the list of files in the directory.



## Chapter 2: Installing GRiD-OS and MS-DOS

This chapter provides the information you need to install two operating systems on the same hard disk. The procedures described here show you how to install both GRiD-OS and MS-DOS for the GRiD Compass. However, you can also install GRiD-OS with PC-DOS on an IBM PC with a hard disk, or with the operating system of other PC compatibles that have a hard disk.

The chapter covers the following topics:

- o A step-by-step guide to installing MS-DOS and GRiD-OS.
- o The MediaPartition Utility program and the functions it provides in creating and maintaining GRiD-OS partitions.

**Installing GRiD-OS and MS-DOS on a Hard Disk** This section gives step-by-step procedures for you to follow when installing GRiD-OS and MS-DOS; the following topics are covered:

- o Preparing for installation
- o Creating the MS-DOS partition
- o Formatting the MS-DOS partition and copying MS-DOS
- o Creating the GRiD-OS partition
- o Formatting the GRiD-OS partition and copying GRiD-OS

### **Preparing for Installation**

Before actually beginning the installation process, you must make sure you have the necessary files in "Programs" and assess your partition needs.

**CAUTION:** Duplicate any files on the hard disk to a diskette, GRiD Central, or other external storage device. The installation procedure described in this section destroys all existing files on the hard disk; they cannot be recovered after partitioning except from some other storage device where you back them up.

**System Requirements** Ensure that the following GRiD-OS (Version 3.1.0 or higher) files are available in "Programs," either on diskette or in bubble memory:

- o CCOS
- o Common
- o Executive
- o InitializeMedia
- o MediaPartition

You also need the MS-DOS installation diskette with the system software and the FDISK, FORMAT, and COPY utility programs.

**Partition Considerations** A partition is the portion of the hard-disk where GRiD-OS, MS-DOS, or other compatible operating system resides. You must perform the following before starting the installation process:

- o Determine the number of partitions you require. You can have one MS-DOS partition and up to three additional partitions. These partitions can contain GRiD-OS or any other operating system that is compatible with your computer and other hardware.
- o Estimate the amount of space you need for each partition. During the installation process, you are prompted to enter the space you need for your GRiD-OS files and your MS-DOS files. You express disk space in terms of cylinders. Each cylinder is identified by a number (0 through 306 on the GRiD 2101 Hard Disk System) and a size (32,680 characters per cylinder on the GRiD 2101).

If you're installing on a hard-disk system other than the GRiD 2101, see the associated owner's manual for information on the amount of disk space available.

**Special Instructions for MS-DOS Users** If your entire hard disk is already allocated to MS-DOS, PC-DOS, or some other operating system, create additional space for GRiD-OS as described in the next procedure.

#### To Create Additional Space for GRiD-OS

1. Using the MS-DOS Copy command or equivalent, back up onto a diskette or other storage media all files on the hard disk you want to save.
2. Using the FDISK utility or equivalent, delete the partition currently allocated to MS-DOS.
3. Reallocate a MS-DOS partition on the hard disk and restore your files using the procedures given in the sections that

follow.

### Creating the MS-DOS Partition

Once you've made all the necessary pre-installation preparations, you're ready to start up (boot) MS-DOS and create the MS-DOS partition. Follow the next procedure for this process.

#### To Create an MS-DOS Partition

1. Start up (boot) MS-DOS as follows: insert into the floppy disk drive the diskette containing MS-DOS. Turn your computer off (if it isn't already off), and, while pressing the "F" key, turn it back on. Pressing the "F" key causes the computer to load MS-DOS from the floppy disk drive.
2. Enter the date after the following message appears:

Enter new date:

Either press RETURN, or enter the correct date and press RETURN. The format for the date is m-d-y, where m is a number from 1 to 12 indicating the month, d is a number from 1 to 30 indicating the current date, and y is a four-digit number indicating the year. The result of entering the date March 25th, 1985, is shown below.

Enter new date: 3-25-1986

3. Enter the correct time after the following message appears:

Enter new time:

Either press RETURN, or enter the correct time and press RETURN. The format for the time is hh:mm:ss, where hh is the hour, mm is the minute, and ss is the second. Enter the hour in 24-hour format; that is, add 12 to the hours between 12:00 noon and midnight; enter either 00 or 24 for midnight. The result of entering 10:30 a.m. and 10:30 p.m respectively is shown below.

Enter new time: 10:30

Enter new time: 22:30

4. MS-DOS prompts you for the next action with the standard prompt:

A>

(A indicates the floppy disk drive). Initiate the FDISK utility program by typing in FDISK as shown below and then press RETURN. (The FDISK utility program allocates MS-DOS partitions.)

A>FDISK

5. The Hard Disk Set Up Options menu appears already set to Option 2: Create DOS partition. Press RETURN.
6. A warning message appears. Press RETURN to continue.  
**CAUTION:** Once you press RETURN, all files on the hard disk are destroyed and cannot be recovered. If you wish to retain any files currently on the hard disk, exit FDISK and copy them to a diskette or other storage device before continuing; then start over at step 1.
7. You are next asked if you wish to use the entire hard disk for MS-DOS. Enter "N" (for No) and press RETURN.
8. You are then asked to enter the size of the partition. Enter the size (for example, 150 cylinders to allocate half a GRiD 2101 hard disk to MS-DOS) and press RETURN.
9. You are then asked to enter a number that designates the starting cylinder in the partition. Press RETURN to start with cylinder 0, or enter a cylinder number and press RETURN.
10. Press ESC to return to the Hard Disk Set Up Options menu.
11. When the menu appears, enter 1, then press RETURN.
12. The following message appears:

Press any key to reboot.

Press and hold the "F" key to boot from the MS-DOS diskette in the floppy disk drive.

13. The booting (start-up) process now takes place. Follow steps 2 and 3 as the respective date and time prompts appear on the screen.

You are now ready to format the MS-DOS partition on the hard disk, and then copy the files that make up MS-DOS from the diskette into the partition.

### Formatting the MS-DOS Partition and Copying MS-DOS

Follow the procedures described below to use the MS-DOS partition on your hard disk.

To Format the MS-DOS Partition

1. Enter the command:

```
A>FORMAT C:/S
```

2. The screen prompts you:

```
Press any key to begin formatting drive C:
```

```
Press any key, and the message "# of # sectors formatted"
appears on the screen, giving you a running count of each
sector on the disk as it is formatted.
```

3. After several minutes the message "System Transferred" appears. This indicates that the formatting process is complete and that MS-DOS has been transferred to the hard disk. You can now boot from the hard disk.

You can now copy the MS-DOS utility programs and other files onto hard disk as described in the next procedure.

To Copy the MS-DOS Files to the Hard Disk Drive

1. Ensure that the diskette containing MS-DOS is in the floppy disk drive.
2. Type in the following command next to the standard prompt as follows:

```
A> COPY A:*. * C:
```

```
Press RETURN. The command specifies that all files
(designated by the *. * characters) on the floppy disk
(the A character) are to be copied on to the hard disk
(the C character).
```

```
MS-DOS displays the file names on the screen as they are
copied.
```

3. After copying the MS-DOS diskette, copy any other files that reside on separate diskettes and that you may want in your MS-DOS partition, such as back-up files.

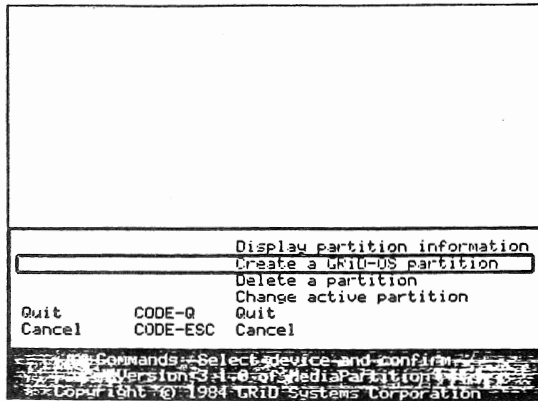
Upon completion of the above step, MS-DOS installation is complete; you can now create the GRiD-OS partition.

### Creating the GRiD-OS Partition

Use the following procedure when allocating a GRiD-OS partition.

#### To Create a GRiD-OS Partition

1. Start up (boot) GRiD-OS from either bubble memory or diskette. The File form appears.
2. Insert the diskette containing MediaPartition, if it isn't already in bubble memory.
3. Select MediaPartition from "Programs" and confirm.
4. The Commands menu appears. Select Create a GRiD-OS Partition (as shown below) and confirm.



5. A second form appears in which you specify the size of the partition and a cylinder number designating the start of the partition. If you specified 150 cylinders for the size of the MS-DOS partition and that the partition was to begin at cylinder 0, the following form appears:

Hard Disk					
Partition	Type	Start	End	Size	Status
1	DOS	0	149	150	
2	Free				
3	Free				
4	Free				

Total disk space is 306 cylinders

---

Partition start 150  
 Partition size 156

Create: Fill in form and confirm

**NOTE:** To understand more fully the steps that follow, you may want to read the section Creating the GRiD-OS partition later in this chapter.

The Partition Number that applies to the partition you are creating is the number to the left of the first "Free" item in the Type column. In the figure above, the partition number assigned is 2. Subsequently, all device choices for File forms refer to this partition as Hard Disk Volume 2.

Either confirm to accept the start and size values as they appear, or change them and then confirm.

6. When a message indicates the partition is created, press any key; the MediaPartition Commands menu appears.
7. Determine which operating system you want in control after starting up (booting) from the hard disk. (To boot from the hard disk, press the "H" key as you turn on the power switch of your computer.)

To set the controlling or active partition, select the Change Active Partition item from the Commands menu and confirm.

8. The following form appears:

Hard Disk					
Partition	Type	Start	End	Size	Status
1	DOS	0	149	150	
2	GRiD-OS	150	305	156	
3	Free				
4	Free				

Total disk space is 306 cylinders

Partition #1
Partition #2
Partition #3
Partition #4
None

Activate Select partition and confirm

If you specify 1, MS-DOS becomes the active operating system after start-up; if you specify 2, GRiD-OS becomes the operating system; if you specify None, you are asked at start-up to specify a partition number.

9. To exit the MediaPartition utility, press CODE-ESC and then confirm.

**NOTE:** The hard-disk partition doesn't appear in the list of Device choices for the File form until you Run the Initialize Media utility, as described in the next section.

You are now ready to format the GRiD-OS partition on the hard disk, and then copy the files that make up GRiD-OS.

#### Formatting the GRiD-OS Partition and Copying GRiD-OS

To Format the GRiD-OS Partition and Copy GRiD-OS

1. If Initialize Media isn't in bubble memory, insert the diskette containing GRiD-OS into the floppy disk drive.
2. Select the Initialize Media utility from "Programs" and confirm.

Initialize the hard disk by selecting the appropriate options in the menu. If you need detailed information on Initialize Media, see Appendix F in the GRiD Management Tools Reference manual. Follow the example in the manual, but ignore step 1 and specify Hard Disk, instead of Floppy Disk in step 2.

When initialization is complete, confirm to exit.

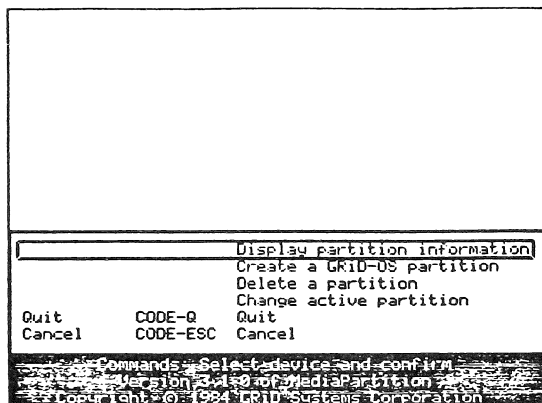
3. Copy GRiD-OS, the management tools, and any other software supplied to you by GRiD System into "Programs" on the hard disk. Use the Duplicate Files -- CODE-D command, described in the "GRiDManager" chapter of the GRiD Management Tools Reference manual.

Installation is now complete. Your computer can now process programs and files under both GRiD-OS and MS-DOS.

**MediaPartition Utility Program** This section describes the MediaPartition Utility program and shows how to use it to create and maintain GRiD-OS partitions. (The FDISK utility program, which operates under MS-DOS, performs the same function under MS-DOS.)

When you select MediaPartition and confirm, the MediaPartition Commands menu (Figure 2-1) appears.

Figure 2-1. MediaPartition Commands Menu



The items in the menu are explained in the sections that follow.

### Display Partition Information

The Display Partition Information item displays a table (Figure 2-2) describing the structure of the hard disk you are using.

Figure 2-2. Partition Information

Hard Disk					
Partition	Type	Start	End	Size	Status
1	DOS	0	149	150	Active
2	GRiD-OS	150	305	156	
3	Free				
4	Free				

Total disk space is 306 cylinders

Display completed

The items in the table are explained below.

- o Partition: A number, from 1 to 4, that identifies the partition.
- o Type: The type can be one of the following:
  - The name of the operating system currently in the partition
  - The word Free, indicating that you can allocate space and assign a system to the partition or
  - The word Unknown, indicating an operating system in the partition that MediaPartition can't identify.
- o Start: The cylinder number representing the start of the partition's data storage area.
- o End: The cylinder number representing the farthest extent of the partition's data storage area.
- o Size: The number of cylinders in the partition. Each cylinder of a GRiD 2101 hard disk contains approximately 32,680 characters; each GRiD 2101 hard disk contains 306 cylinders.
- o Status: The status of the partition when start-up (boot) is from the hard disk. The computer automatically loads the operating system from the partition whose status is set to Active. See the description of the Change Active Partition command later in this chapter for more information.

### Create a GRiD-OS Partition

The Create a GRiD-OS Partition item lets you allocate space to a GRiD-OS partition. When you select this item and confirm, the Create form (Figure 2-3) appears on your screen. The top of the screen displays how the hard disk is currently allocated (note that Partition 1 is already allocated to MS-DOS).

Figure 2-3. The Create Form

Hard Disk					
Partition	Type	Start	End	Size	Status
1	DOS	0	149	150	
2	Free				
3	Free				
4	Free				

Total disk space is 386 cylinders

---

Partition start

Partition size

Create

You can designate Partition 1, 2, 3, or 4 as the new GRiD-OS partition if Free appears in the Type column opposite the partition number. You must allocate the partitions sequentially. That is, you must allocate Partition 1 before allocating Partition 2, Partitions 1 and 2 before Partition 3, etc.

In Figure 2-3, Partition 2 is the next sequential partition available.

**CAUTION:** Any files in the area allocated to the new partition are lost after the partitioning process. Therefore, back up these files onto a diskette or other external storage device before creating the new partition.

After you fill in the form (described below), the partition is assigned. The Partition number you select for the GRiD-OS partition subsequently appears as a volume number in the list of device choices for a File form. Each time you move the outline to Device in the form, the device choices appear corresponding to the storage devices attached to your computer. For example, the device choices might appear as follows:

- Bubble Memory
- Hard Disk Volume n
- Floppy Disk

The n in the hard-disk choice corresponds to the partition

number. Thus, after allocating Partition 2 to GRiD-OS, the device choice for hard disk would appear as follows:

Bubble Memory  
Hard Disk Volume 2  
Floppy Disk

At the bottom of the screen, you specify the Partition Start and Partition Size items in terms of cylinders. The GRiD 2101 hard disk is divided into units of 306 cylinders; each cylinder contains approximately 32,680 characters.

**Partition Start** Initial setting is the first cylinder number where free space begins. To use this value, either confirm or specify any other cylinder number within the range of cylinders on the hard disk and confirm.

**Partition Size** Initial setting is the number of contiguous cylinders containing the largest block of free space on the hard disk. To use the initial value, confirm, or specify the number of cylinders you wish to allocate to the new partition.

Consider the following when specifying a partition size:

- o Do you have adequate space in the partition to handle all future GRiD-OS needs? Once your drive is partitioned, it cannot be repartitioned without backing up all files.
- o If you intend to allocate a partition to MS-DOS or other operating system, does adequate space remain on the disk?

#### **Delete a Partition**

The Delete a Partition item removes a partition with the number (1, 2, 3, or 4) that you specify; you can now create a new partition with the same number.

**CAUTION:** Be sure to back up any files you need in the partition before deleting the partition.

#### **Change Active Partition**

The Change Active Partition item lets you instruct the computer to automatically load a specific operating system when the hard disk is the start-up device. You designate the partition containing the desired operating system as the "active" partition.

The hard disk becomes the start-up device when you turn on the power switch and hold down the "H" key on the GRiD keyboard.

When you select Change Active Partition and then confirm, the

screen shows which partition, if any, has active status. You can then designate one partition, or none as active with the following results:

- o If you designate an active partition, the computer loads the system in that partition when you start up from the hard disk.
- o If you don't designate an active partition, the computer asks you during start-up to specify a partition number; it then loads into main memory (RAM) the operating system from the partition you specify.

**Quit -- CODE-Q and Cancel -- CODE-ESC**

The Quit command (CODE-Q) and the Cancel command (CODE-ESC) cause you to exit MediaPartition and return to the File form.



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