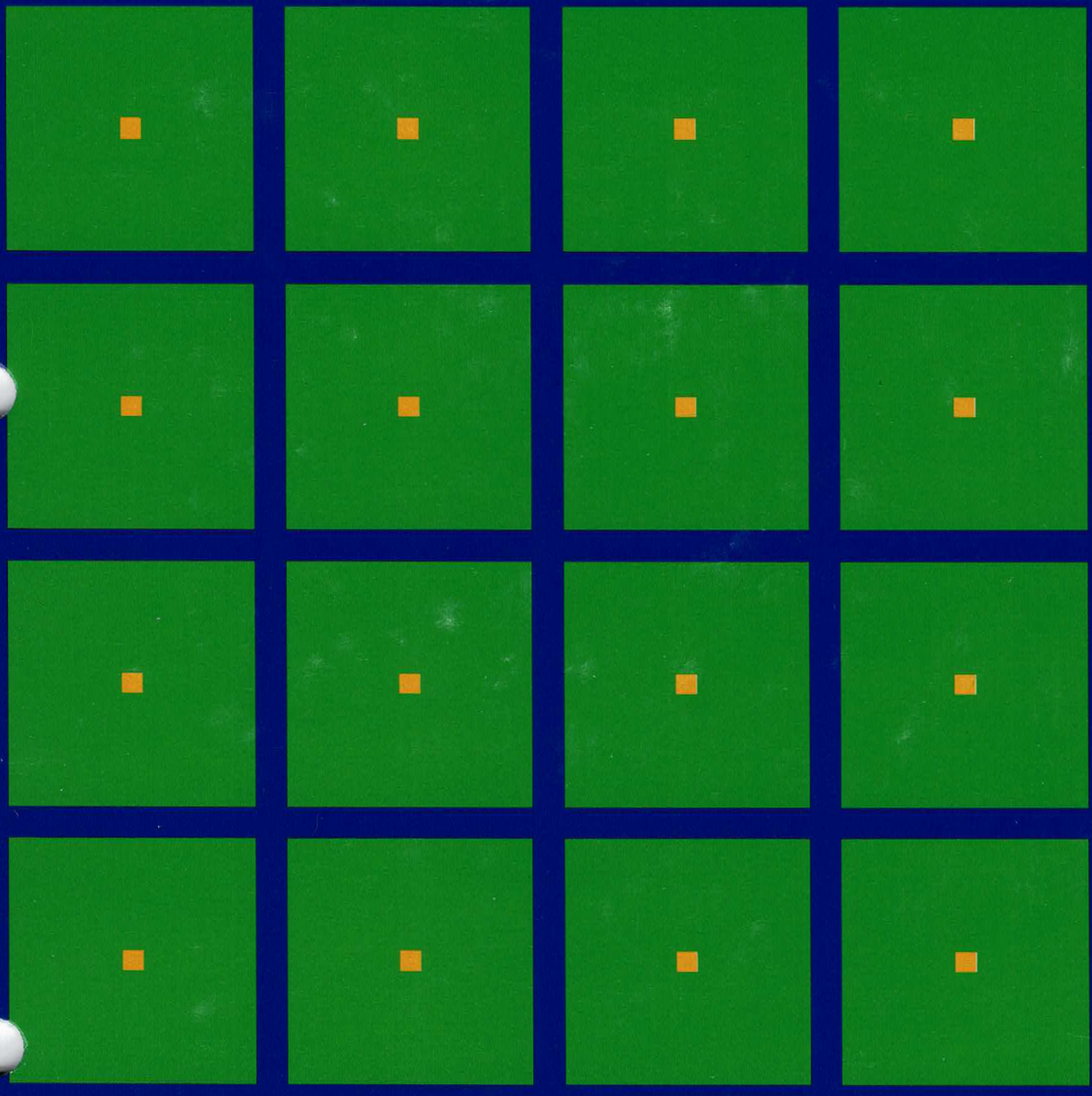
GRiD

GRiD-OS/MS-DOS Utility Programs User's Guide



GRiD-OS/MS-DOS Utility Programs User's Guide

April 1986

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Manual Name: GRiD-OS/MS-DOS Utility Programs User's Guide
Order Number: 21210-43
Issue date: April 1986

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About This Book

This guide provides the following information:

- How to use GRiDTransfer to transfer 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 system for IBM® PC compatibles.

- How to use MediaPartition to install 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 IBM PC compatibles that have a hard disk. MediaPartition also allows you to delete partitions, change the active partition, and display partition information.

- 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, MS-DOS, and their related applications and files 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.

Before Using This Guide If you are already a user of GRiD-OS, this guide provides you with 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 Software* 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 that created or is to receive 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, useful for partitioning hard disks into sections for different operating systems.

Read Chapter 3 for a step-by-step guide to installing GRiD-OS and MS-DOS on a hard disk.

Other Books You May Need

You may need to refer to the *GRiDCase MS-DOS Reference* or the *GRiD Compass MS-DOS Reference* for supplemental information on the following:

- MS-DOS directories and file naming conventions, which you may need when specifying MS-DOS destination or source files with GRiDTransfer.
- The FDISK, FORMAT, and COPY utility programs, which you use in installing MS-DOS as described in Chapter 3.

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 third.

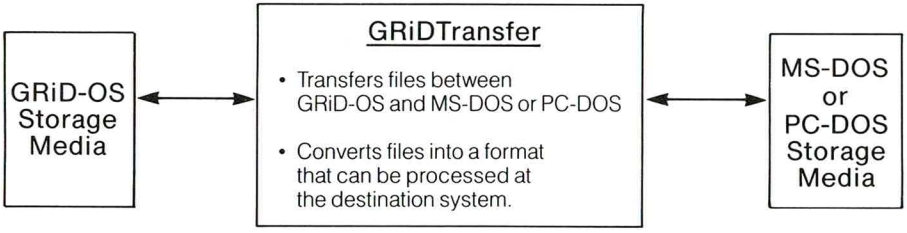
Confirm

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 or PC-DOS (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*



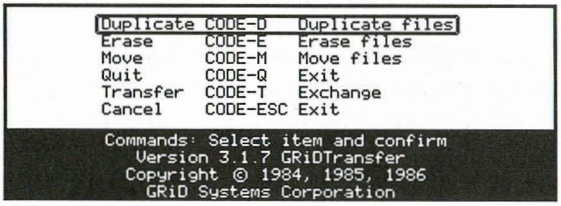
As shown in Figure 1-1, the *source files* (the files that contain the data to be transferred) and the *destination files* (the files that contain the data after the transfer) can reside on any storage device attached to your computer. If you use a hard disk with separate MS-DOS and GRiD-OS partitions (see Chapter 3), you can transfer files between the partitions.

GRiDTransfer provides the following additional functions:

- You can erase both GRiD-OS and MS-DOS files as you work within GRiDTransfer.
- 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 and confirm. Once you confirm, the GRiDTransfer commands menu (Figure 1-2) appears.

Figure 1-2. *The GRiDTransfer Commands Menu*



The items in the GRiDTransfer Commands menu are described in alphabetical order in the following sections. The last section in this chapter describes the MS-DOS File form used in several GRiDTransfer functions.

Duplicate—CODE-D and Move—CODE-M

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

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

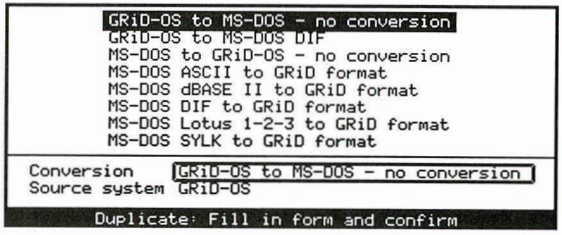
The functions of the Duplicate (CODE-D) and the Move (CODE-M) commands are identical, except the Move command erases the source file after the transfer. The Duplicate command leaves the source file intact.

To Duplicate or Move a File

1. Start GRiDTransfer by selecting it in the File form 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*



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

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

   Table 1-2 shows some examples of files you might want to transfer from MS-DOS to GRiD-OS 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*

Source	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, or other cell-based files	GRiD-OS to MS-DOS DIF[1]

[1]After transfer, you must convert the MS-DOS destination file into a format suitable for processing by the MS-DOS application. See the GRiD-OS to MS-DOS DIF section later in this chapter for details.

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

Source	Applicable conversion item
dBASE II™ files	MS-DOS dBASE II to GRiD format
Lotus 1-2-3™ (v. 1A) files	MS-DOS Lotus 1-2-3 to GRiD format[1]
Multiplan™ and other Microsoft application files	MS-DOS SYLK to GRiD format[1]
Other graph, database, worksheet, or cell-based files	MS-DOS DIF to GRiD format[1]
Program object code	MS-DOS to GRiD-OS - no conversion
Text files (documents, source code, etc.) created by WordStar™, the MS-DOS Line editor or other text editors	MS-DOS ASCII to GRiD format

[1]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 this conversion item later in this chapter before using it.

4. Specify the source file. 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 Software* manual.

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

   After filling in the source File form, confirm.

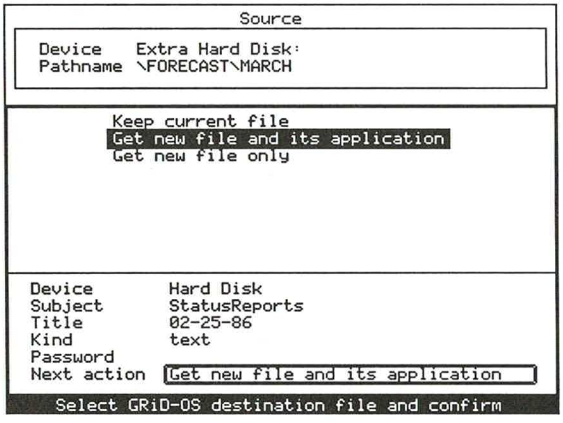
5. The following menu appears if your source device is a floppy disk (or other removable device).

If you are transferring files between diskettes, using a single diskette drive, select the Single Diskette Operation item and confirm. The computer will prompt you to alternately insert the source and destination diskettes. If you are using more than one disk device, select Not a Single Diskette Operation and confirm.

CAUTION: During a single drive duplicate or move operation, the computer prompts you to alternately insert the source and destination diskettes and confirm. You must be sure to insert the correct disk each time, since the computer has no way of knowing which disk you actually inserted. If you insert the incorrect diskette, you could lose data.

6. Specify the destination file in the next form that appears. After filling in the form, confirm. Below is an example of the standard File form when the destination file is in GRiD format.

Figure 1-4. *Specifying a GRiD-OS Destination File*

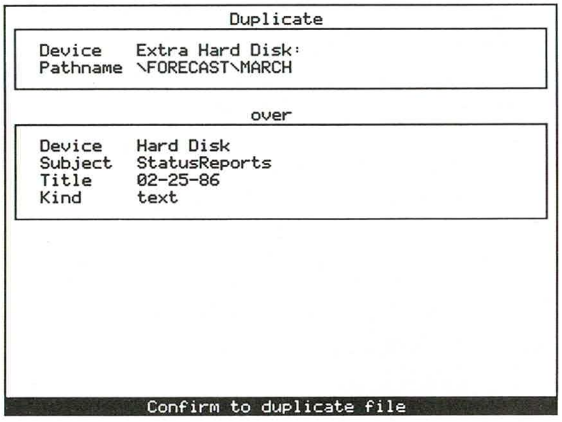


Note the Next Action item in the form. By selecting Get File and Its Application as the Next Action choice, you can transfer to the destination GRiD-OS file immediately after completing the transfer.

7. A verification form (Figure 1-5) appears showing both the source and destination File forms. 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 Verification Form*



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

If no identical destination file exists, the word *to* appears between the source and destination forms. The file is transferred 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 can access it.

NOTE: Only user-entered cell and text data is transferred. Properties information entered by GRiD applications, such as cell width, alignment, and format, 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 transfers a GRiD-OS source file to an MS-DOS destination file and converts it to the Data Interchange Format (DIF). Use this item to transfer and convert cell-based files (database, worksheet, and graph) to MS-DOS. After the transfer, you must convert the DIF file into a format suitable for processing by the applicable MS-DOS application.

DIF is 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™ products offer such utility programs.

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.

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 use with GRiDWrite.

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

- 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. GRiD applications, unable to interpret an eighth-bit setting of 1, might produce inaccurate results when processing the data.
- 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.

  NOTE: GRiDTransfer doesn't remove WordStar formatting symbols or other formatting commands 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 above 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 transferred to a 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 (v. 1A) 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:

- 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 GRiD graph, database, or text files as desired.
- The Lotus 1-2-3 (v. 1A) 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 (v. 1A).

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.)
6. Select Cell-Formulas printing format. (From the /Print Options menu, press OC.)
7. Return to the /Print menu. (From the /Print Options menu, press Q.)
8. Print the Cell-Formulas format file. (From the /Print menu, press G.)
9. 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:

- Standard Alignment: Right
- Standard Column Width: 9
- 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. Also, 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 (SYLK) file format 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 is a standard file format that lets Multiplan, 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 automatically 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, a File form appears. You then specify the file you want to erase. For information on filling in the MS-DOS File form, see the MS-DOS File Form section later in this chapter. After you confirm, the file is erased. Press ESC to return to the Commands menu, or issue another command.

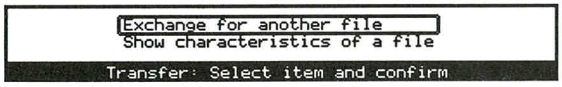
The Erase command is useful for creating space on full storage devices. If you receive the Device Full message while duplicating or moving a file, use Erase to delete unnecessary files on the device. You can use the Show Characteristics of a File item in the Transfer menu (described later in this chapter)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

- The Exchange for Another File item in the Transfer menu.
- The Next Action item in the File form for a GRiD-OS destination file. You exit to the specified 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 following sections.

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 in either 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 source system and confirming, a File form appears; specify the name of the file and then confirm. For information on filling in the MS-DOS File form, see the MS-DOS File Form section below.

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

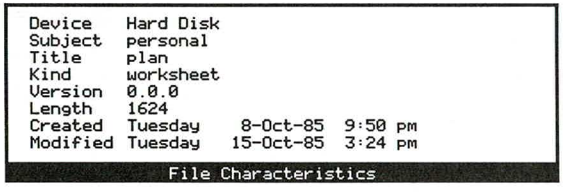
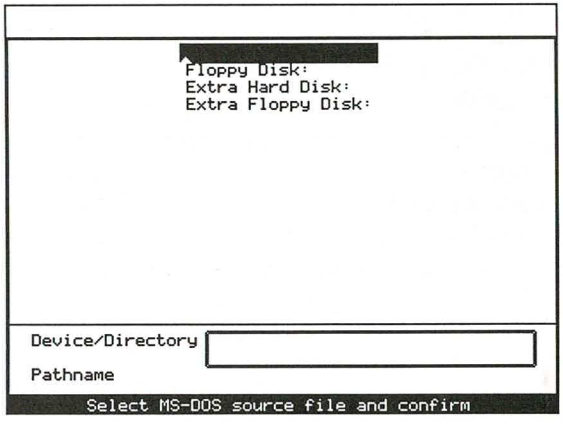


Figure 1-8. *File Characteristics Report for MS-DOS Files*

MS-DOS File Form

This section describes the MS-DOS File form you need to fill in while using the Duplicate, Move, and Transfer commands. An example of the MS-DOS File form is shown in Figure 1-9.

Figure 1-9. *The MS-DOS File Form.*



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

Device/Directory

This item specifies the storage device and directory where the file resides. You can do one of the following:

- Use the arrow key to select one of the choices that appear in the top portion of the screen. These represent the storage devices currently attached to your computer.

- 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 (\) on a GRiDCase,™ press Fn-\.

  To form the backslash character on a Compass™ computer (\), press CODE-SHIFT-' (apostrophe).

  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 appears 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:

- Use the arrow key to select one of the file names or directory names that appear in the top portion of the screen.
- Type in an MS-DOS pathname, file name, or directory name.

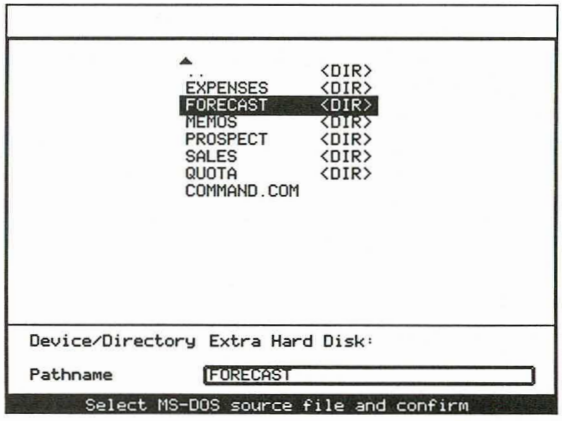
NOTE: In specifying an MS-DOS destination file, you can create a new file simply by entering any legal file name (up to eight characters long) in the Pathname item. However, you can't create a new directory using this method. If you specify a directory name, the directory must already exist.

If you specify an MS-DOS file name or pathname and confirm, GRiDTransfer prompts you to follow the next step in the duplicate or move process.

If you specify a directory name and confirm, GRiDTransfer displays the new directory's list of file names and/or directory names. Next, select a file name (or directory name) from the list and confirm. Continue selecting and confirming until you select the appropriate source or destination file.

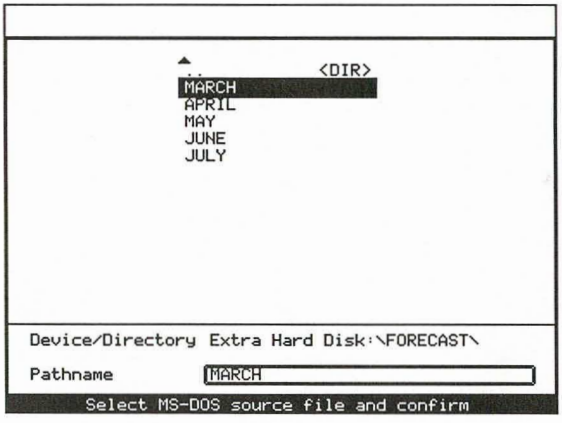
For example, suppose you select for the source file the FORECAST directory choice shown in Figure 1-10 and then confirm.

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



The next screen display (Figure 1-11) shows the file names in the FORECAST directory selected in Figure 1-10. Note that in the MS-DOS File form, the directory (FORECAST) has been moved up to the Device/Directory item.

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



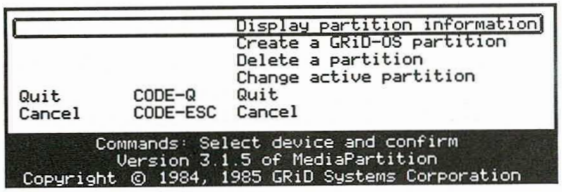
You can now select a source file (MARCH in Figure 1-11) from the list of files in the directory.

Chapter 2: The MediaPartition Utility

This chapter describes the MediaPartition utility program. MediaPartition allows you to install GRiD-OS to run from the same hard disk as MS-DOS (or another IBM PC compatible operating system). You can also delete a partition, change the active partition, and display partition information. (The FDISK utility program, which operates under MS-DOS, performs similar functions.)

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

Figure 2-1. *MediaPartition Commands Menu.*



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

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.

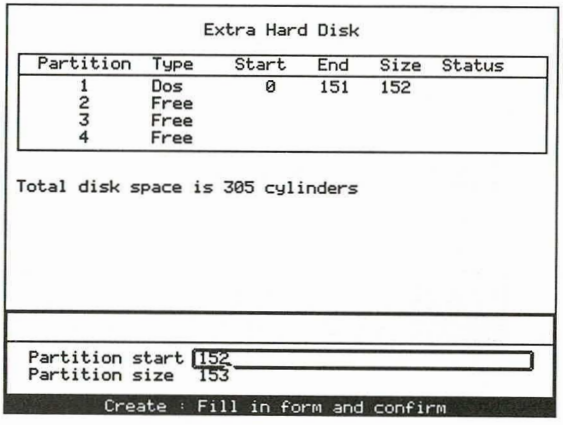
The hard disk becomes the start-up device when you turn on the power switch and hold down the H key on the keyboard.

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:

- If you designate an active partition, the computer loads the system in that partition when you start up from the hard disk.
- 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.

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 Partition form (Figure 2-2) appears. The top of the screen displays how the hard disk is currently allocated (note that Partition 1 is already allocated to MS-DOS in this example).

Figure 2-2. *The Create Partition Form*



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

After you fill in the Create Partition form, the partition is created and assigned the next sequential free partition number. The Partition number assigned appears as part of the device name in the list of device choices for the File form. For example, if GRiD-OS is the second partition on your hard disk, it appears in your Device list as Hard Disk Partition 2. (On Compass computers the device is referred to as Hard Disk Volume 2.)

The items in the Create Partition form are explained below.

Partition Start

Initial setting is the first cylinder number of the largest block of free contiguous space available on your hard disk. Either press RETURN, or specify another cylinder number within the range of free cylinders on the hard disk, and then press RETURN. If you specify a new starting cylinder, then you must also change the default partition size.

Partition Size

Initial setting is the number of contiguous cylinders containing the largest block of free space on the hard disk. Either confirm or specify the number of cylinders you wish to allocate to the new partition, and then confirm.

Consider the following when specifying partition size:

- The Model 2201 GRiDCase Hard Disk System has 305 cylinders holding 34,816 characters each (34K). The Model 2101 Disk Storage System has 306 cylinders holding 34K each. If you're partitioning a different hard disk system, refer to the owner's manual for information on the amount of disk space available.
- 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 the time-consuming process of backing up and restoring all files.
- If you intend to allocate a partition to MS-DOS or another operating system, does adequate space remain on the disk?

Delete a Partition

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

CAUTION: All files in the delected partition will be destroyed. Be sure to back up any files that you need before deleting the partition.

Display Partition Information

The Display Partition Information item displays a table (Figure 2-3) describing the partition structure of the hard disk you are using.

Figure 2-3. *Partition Information*

Extra Hard Disk

Partition	Type	Start	End	Size	Status
1	DOS	0	151	152	
2	GRiD-OS	152	304	153	Active
3	Free				
4	Free				

Total disk space is 305 cylinders

The items in the table are explained below.

- Partition: A number, from 1 to 4, that identifies the partition.
- 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, if space is available.
  - —The word *Unknown*, indicating an operating system in the partition that MediaPartition can't identify.
- Start: The cylinder number representing the start of the partition's data storage area.
- End: The cylinder number representing the end of the partition's data storage area.
- Size: The number of cylinders in the partition. Each cylinder of a GRiD hard disk contains 34K of characters.
- Status: The status of the partition when you start-up (boot) 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 above for more information.

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

Chapter 3: 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 GRiD computers. 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.

This chapter covers the following topics:

- Preparing for installation
- Creating the MS-DOS partition
- Formatting the MS-DOS partition and copying MS-DOS
- Creating the GRiD-OS partition
- 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 and assess your partition needs.

CAUTION: Duplicate any files on the hard disk to diskettes or other external storage devices. The installation procedure described in this section destroys all existing files on the hard disk; they cannot be recovered from the hard disk after partitioning.

System Requirements

You will need a start-up GRiD-OS diskette (or other active device) with the programs MediaPartition and Initialize Media.

You will also need a start-up MS-DOS diskette (or other active device) with the programs FDISK and FORMAT.

Partition Considerations

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

- 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.

- 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. Hard disk space is expressed in terms of *cylinders*, and begins with cylinder 0.

  The Model 2201 GRiDCase Hard Disk System has 305 cylinders holding 34,816 characters each (34K). The Model 2101 Disk Storage System has 306 cylinders holding 34K each. If you're partitioning a different hard disk system, refer to the 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 that you want to save.
2. Using the FDISK utility or equivalent, delete the partition currently allocated to MS-DOS.
3. Using the FDISK utility or equivalent, create a new 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

Proceed as follows to start up (boot) MS-DOS and create the MS-DOS partition.

To Create an MS-DOS Partition

1. Start up (boot) MS-DOS on your computer.
2. Initiate the FDISK utility program by typing in FDISK as shown below and then pressing RETURN. (The FDISK utility program allocates MS-DOS partitions. For more details on the FDISK program, refer to your MS-DOS documentation.)

   A>FDISK

3. The Hard Disk Set Up Options menu appears already set to the Create DOS Partition option. Press RETURN to continue.
4. A warning message appears. Press RETURN to continue.
5. You are next asked if you wish to use the entire hard disk for MS-DOS. Enter N (for No) and press RETURN.
6. You are then asked to enter the size of the MS-DOS partition. Enter the size in cylinders (for example, 152 cylinders to allocate half of a GRiD 2201 hard disk to MS-DOS) and press RETURN.

   Consider the following when specifying partition size:

   - Do you have adequate space in the partition to handle all future MS-DOS needs? Once your drive is partitioned, it cannot be repartitioned without the time-consuming process of backing up all files.
   - If you intend to allocate a partition to GRiD-OS or another operating system, does adequate space remain on the disk?
7. 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.

   CAUTION: Once you press RETURN, all files on the hard disk are destroyed during partitioning 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.
8. Press ESC to return to the Hard Disk Set Up Options menu.
9. When the menu appears, press ESC again to exit FDISK. Your system will reboot when you press any key.

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

Formatting the MS-DOS Partition and Copying MS-DOS

Proceed as follows to use the MS-DOS partition on your hard disk.

To Format the MS-DOS Partition

1. Enter the command:

   A>FORMAT C:/S

   (or FORMAT C:/S/V to add a volume label)

   NOTE: MS-DOS normally assigns the letter C to a hard disk, although this letter varies according to the number of external storage devices attached to your computer. Refer to your *Using MS-DOS* manual for details on device letter assignments.
2. Follow the instructions displayed on your screen to begin the formatting process.
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 the 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 (drive A).
2. Type in the following command:

   A>COPY A:*.* C:

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

   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 application and data files.

   MS-DOS installation on your hard disk is now complete. The following sections describe how to create the GRiD-OS partition.

Creating the GRiD-OS Partition

Proceed as follows to create a GRiD-OS partition.

To Create a GRiD-OS Partition

1. Start up (boot) GRiD-OS.
2. Select MediaPartition from the File form and confirm.
3. Select the Create a GRiD-OS Partition option and confirm. Follow the instructions given in Chapter 2 in the section Create a GRiD-OS Partition.
4. After MediaPartition creates the GRiD-OS partition it displays a message indicating that it is finished. Press any key to return to the MediaPartition Commands menu.
5. 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. Follow the instructions given in Chapter 2 in the section Change Active Partition.
6. To exit the MediaPartition utility, press CODE-ESC and then confirm.

NOTE: The new 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 GRiD-OS system files into it.

Formatting the GRiD-OS Partition and Copying GRiD-OS

Proceed as follows to use the GRiD-OS partition on your hard disk.

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

1. Select the Initialize Media utility from the File form and confirm.

   Initialize the hard disk by selecting the appropriate options in the menu. If you need detailed information on Initialize Media, see the Appendix in the *GRiD Software* manual.

   When initialization is complete, exit Initialize Media.

2. Copy GRiD-OS (CCOS, Common, and Executive), the Management Tools, and any other software supplied to you by GRiD System into the "Programs" Subject on the hard disk. Use the Duplicate Files—CODE-D command, described in the GRiDManager chapter of the *GRiD Software* manual.

GRiD-OS installation on your hard disk is now complete. Your computer can now process programs and files under both GRiD-OS and MS-DOS.

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April 1986

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