

DM2K - Disk manager 2000

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by

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1. INTRODUCTION

Diskmanager 2000 is a program manager to use with hard-disk drives (HFDC/SCSI/IDE). It is possible to access files in a directory structure by entering a full path name instead by drive number as used by programs written in the pre-directory age. There was no intention to write a program to replace the fabulous Diskmager 1000 program, but the need for a program like this for the TI99/4a, and more or less for the Myarc 9640 is high.

2. FEATURES

With Diskmanager 2000 it is possible to:

- Protect and unprotect files
- Rename files and/or directories
- Copy files and/or directories
- Move files and/or directories
- Delete files and/or directories
- View a file as text or hexadecimal (program files only in hex) in 40 or 80 characters per line.
- Create a subdirectory
- Print the contents of a subdirectory
- Execute a program
- Format a floppy disk

It is not possible to:

- Protect subdirectories
- Create subdirectories on floppy disks

3. DISKMANAGER 2000 SCREEN LAYOUT

The Diskmanager 2000 screen shows the following information:

- the name of the device and/or subdirectory of which the filenames are read (SRC)
- the name of the device and/or subdirectory to which files are copied or moved (DST)
- the volume name of the device (Vol)
- the total size in sectors of the device (Size)
- the number of free sectors on the device (Free)
- the number of used sectors on the device (Used)
- the number of files in a directory (Files)
- the number of sub-directories in a directory (Dirs)
- the number of used sectors in a directory (Used)

- the number of selected files and/or subdirectories in the directory showed (Selct) on which te file command will be executed
- the total number of sectors the selected files are using up in the directory showed (Tsect)
- a maximum of 12 filenames with their sector size, file-type, protection status
- the command currently being executed (if any)
- an immediately command to execute (if any)
- an error message (if any occured)
- the first sector number reading or writing of a block of 8Kb while copy-ing

```

+-----+
SRC: WDS1.C99C.
DST: DSK2.

Vol : HH1050      Size: 163840
Free: 115608     Used: 48232
+-----+
C Name          Size Type           P  32W
+-----+-----+
..              0 UprDir           Files
+ ASSM1         36 Program    8192     9
+ ASSM2         23 Program    4614     Dirs
  BTEST         61 Program   14332     2
  BTEST2        47 Program   10842     Used
+ C99O          36 Program    8192     301
+ C99P          36 Program    8002
>+ PROGRAM1     16 Program    2830     Selct
+ TEST          23 Dis/Var     80         8
+ TEST_O       21 Dis/Fix    80        Tsect
+ CLIB         2 SubDir           193
+-----+
Copy: WDS1.C99C.PROGRAM1
To: DSK2.PROGRAM1
+-----+

```

4 WORKING WITH DISKMANAGER 2000

To be able to work with Diskmanager 2000 place the Editor/Assembler module in the TI99/4A console or start the GPL-interpreter on your Myarc. Choose option 5 Run program file and enter DSK1.DM2K

When Diskmanager 2000 is loaded, your computer screen will show the help screen. This screen can be called any time by pressing the 'H' key. Press enter to go to the Diskmanager 2000 main screen.

Before the filenames on a device can be read a source devicename and/or subdirectory name must be entered (i.e. DSK1. or SCS7.SUB01). It's not necessary to end the names with a period, Diskmanager 2000 will append this for you. You can use the cursor keys fctn-S and fctn-D to move the cursor through the line. Pressing fctn-3 will erase the whole line. Press enter to read the filenames of the just entered device and/or subdirectory.

4.1 BROWSING

After the filenames are read, you'll be able to manage them. Use the arrow keys fctn-E and fctn- X to browse through your files. Use ctrl-E and ctrl-X to browse page by page. Ctrl-H will take you back to the top of the subdirectory.

4.2 ENTERING SUBDIRECTORIES

If the cursor character '>' is in front of a subdirectory name (the type is SubDir) simply press ENTER to go to that subdirectory and read the filenames in it. The device name and subdirectory level on top of the screen is expanded automatically.

To return to the upper directory (name is .. and type is UprDir) press enter when the cursor character is pointing at the upper dirtectory name. Use ctrl-H to move the cursor to the top of current directory.

Press fctn-0 (also F10 on the Myarc) the enter a complete new device name and/or subdirectory name as described above. Pressing fctn-9 at this stage will abort this function. Pressing ctrl-s will swap the source with the destination device and subdirectory name.

4.3 DIRECT COMMANDS

The direct commands are:

- Type a file on screen
- Rename a file
- Print a catalog on a printer
- Create a subdirectory
- Starting a program
- Formatting a floppy disk

and will be executed immediately.

4.3.1 TYPE A FILE

To view the contents of file move the cursor to the filename to view and press 'T' for an ASCII representation in 40 characters per line or ctrl-T in 80 characters per line (not for program files). To view the file in a hexadecimal representation press 'B' for 40 characters per line or ctrl-B for 80 characters per line.

Use ctrl-E and Ctrl-X to browse through the file. While viewing an ASCII representation you can use fctn-7 (tab) to view records which are longer than 40 or 80 characters. Pressing Q while take you back to the main screen.

4.3.2 RENAME A FILE OR SUBDIRECTORY

To rename file or subdirectory move the cursor to the filename or subdirectory name to change and press 'R'. At the bottom of the main screen the following line will appear:

```
Rename NAME_____ to NAME_____
```

Use the cursor keys fctn-S and fctn-D to move the cursor through the name. Use fctn-3 (also F3 on the Myarc) to remove the complete name to enter a new name. The maximum length of a filename or subdirectory name is 10 characters. Pressing ENTER will rename the file or subdirectory. Press fctn-9 (also F9 on the Myarc) the return to the main screen without renaming the file or subdirectory.

4.3.3 PRINT A CATALOG

To print a catalog of the subdirectory actually shown in the main screen press ctrl-P. At the bottom of the main screen the following line with a default device name will appear:

```
Print: PIO.
```

Use the cursor keys fctn-S and fctn-D to move the cursor through the devicename. Use fctn-3 (also F3 on the Myarc) to remove the complete devicename to enter a new devicename. Pressing ENTER will start the print function. Press fctn-9

(also F9 on the Myarc) the return to the main screen without printing a catalog. See appendix B for changing the default printer name and/or settings.

4.3.4 CREATE A SUBDIRECTORY

To create a subdirectory press fctn-8 (also F8 on the Myarc). At the bottom of the main screen the following line will appear:

```
Makedir _____
```

Enter a subdirectory name. Use the cursor keys fctn-S and fctn-D to move the cursor through the devicename. Use fctn-3 (also F3 on the Myarc) to remove the complete subdirectory to enter a new name. The maximum length of a subdirectory name is 10 characters. Pressing ENTER will create the subdirectory. Press fctn-9 (also F9 on the Myarc) the return to the main screen without creating a subdirectory.

4.3.5 START A PROGRAM

To start a program (TI99 version only) position the cursor in front of a executable program and press X. At the bottom of the main screen the following line will appear if the file type is PROGRAM or DIS/FIX80:

```
Execute PROGRAMNAME? ([y],n)
```

Pressing ENTER or Y at this stage, Diskmanager 2000 will attempt to load and start the program. If an error occurs the following line will be displayed at the bottom of the screen:

```
Error X
```

Where X will be between 0 and 7 or 13. See appendix B for an explanation of the error codes. In the case of an error Diskmanager 2000 returns to the title screen.

4.3.6 FORMATTING A FLOPPY DISK

Press ctrl-F to format a floppy-disk (TI99 version only). The following information will be displayed on the screen:

```
Format disk      (1-9, A-Z)
Tracks per side 40 (Y/N)
Double sided     (Y/N)
Density         (S/D/H)
Volume label    DISKNAME__
```

First enter the drive number of the floppy disk to format. Next press 'Y' to format the floppy disk for 40 tracks, or 'N' for 80 tracks (the diskdrive must be able to handle 80

tracks).

Press 'Y' to format the floppy disk double sides and 'N' for single sided.

The data density depends on the disk controller you uses. Enter 'S' for single density (ie TI-disk controller), 'D' for double density or 'H' for high density (ie Myarc-disk controller). Also enter a volume label for the disk to format.

The following line will appear:

```
Format DSKx      (Y/N)
```

Press 'Y' to start formatting or 'N' to return to the main screen.

If you start the formatting routine, the next line will appear:

```
Formatting...
```

After formatting the floppy disk will be checked:

```
Formatting...Done
Verifying   <xxxx>
```

If a problem occurs with one of the sectors, this sector will be marked as bad:

```
Bad sectors <xxxx>
```

in which <xxxx> means the total number of unusable sectors.

While entering the information to format a floppy disk or during checking the formatted floppy disk it is always possible to press fctn-9 (also F9 on the Myarc) to return to the main screen.

After formatting a floppy disk, the results will be displayed on screen:

```
SRC: DSK1.
```

```
Vol : FLOPPYNAME      Size: 1440
Free: 1440             Used: 0
```

```
Format another disk (Y/N)
```

Press 'Y' to format another disk or 'N' to return to the main screen.

4.4 FILE AND DIRECTORY COMMANDS

File and directory commands will be executed on all selected files and directories.

Move the cursor in front of the name of the file by using the cursor keys fctn-E, fctn-X, ctrl-E or ctrl-X and mark the file or directory by pressing fctn-2 (or F2 or insert on the Myarc). A '+' sign will be displayed before the file or directory name. By pressing fctn-2 again the file or subdirectory will be de-selected.

Next press fctn-6 (or F6 on the Myarc). At the bottom of the main screen the following line will appear:

```
Press: Unpr Prot Copy Move Delete: :
```

- Press 'U' to remove the protection of all selected files and all the files in the selected directories.
- Press 'P' to protect all selected files and all the files in the selected directories.
- Press 'C' to copy all selected files and directories.
- Press 'M' to move all selected files and directories.
- Press 'D' to delete all selected files and directories.

Any other key will return you to the main screen of Diskmanager 2000. Pressing fctn-9 (or F9 on the Myarc) will abort execution of the chosen command.

If a file seems write protected while attempting to overwrite this file, the following message will appear at the bottom of the screen:

```
Copy: DSK1.FILENAAM  
Protected! Overwrite (y, [n], a)
```

Press 'Y' to overwrite the file. Press 'N' to keep the original file. Press 'A' to overwrite all write protected files.

If a file seems write protected while attempting to delete this file, the following message will appear at the bottom of the screen:

```
Del : DSK1.FILENAAM  
Protected! Delete (y, [n], a)
```

Press 'Y' to delete the file. Press 'N' to keep the original file. Press 'A' to delete all write protected files.

APPENDIX A - FUNCTION KEYS

The following function keys are used by Diskmanager 2000

A	All: Select all files and subdirectories
N	None: Deselect all files and subdirectories
R	Rename file or subdirectory
T / ctrl-T	Type the contents of a file on screen in ASCII in 40 or 80 characters per line.
B / ctrl-B	Type the contents of a file on screen in a Hexadecimal form in 40 or 80 characters per line.
ctrl-P	Print the contents of a subdirectory
ctrl-F	Format a floppy disk (TI99 version only)
X	Execute a program (TI99 version only)
Q	Exit program
fctn-3 / F3	Erase line
fctn-6 / F6	Execute file commands
fctn-7 / F7	Tab while viewing files
fctn-8 / F8	Create subdirectory
fctn-9 / F9	Escape
fctn 0 / F10	Input a pathname
fctn-E	Filename up
fctn-X	Filename down
ctrl-E	Page up
ctrl-X	Page down
cltr-L	Begining of line (or Home on the Myarc)
ctrl-J	End of line (or End on the Myarc)
ctrl-C	Copy Src path to Dst path while entering Dst
ctrl-S	Swap Src path with Dst path while entering Dst
ENTER	Accept line, name, go into subdirecotry, go back to the upper-directory

APPENDIX B - CONFIGURATION

A few variables can be manipulated to change the operation of Dm2k to your desires:

- Autorepeat delay, this is the time to wait before the autorepeat function will start after holding the same key on the keyboard.
- Autorepeat speed, to define the rate at which the same key will be generated.
- Printer name, to change the default printer name and/or properties.

These variables are located at the beginning of the file Dm2k and can be changed with any sector editor:

Offset	Value	TI	Description
>0000	FFFF		Loader flag
>0002	1FFA		Module size
>0004	A000		Module start address
>0006	02E0	83E0	LWPI >83E0 instruction
>000A	020B	0024	LI 11,>0024 instruction
>000E	0460	A056	B @START instruction
>0012	0250		Autorepeat delay
>0014	0050		Autorepeat speed
>0016	PIO.		Printer name (max 30 characters)

Offset	Value	Myarc	Description
>0000	5047		Loader flag
>0002	1FFA		Module size
>0004	0400		Module start address
>0006	0460	043A	B @START instruction
>000A	0250		Autorepeat delay
>000C	0050		Autorepeat speed
>000E	PIO.		Printer name (max 30 characters)

APPENDIX B - ERROR MESSAGES

An error message consists of 3 parts:

- An error number
- The function for which the error occurred
- The reason for the error (explanation of the error number)

The following functions can result in an error:

- Opendir - Open a directory
- Readdir - Read a directory
- Delete - Delete a file or subdirectory
- Load - Load a program file
- Save - Save a program file
- Opensrc - Open a source file for reading
- Readsrc - Reading a source file
- Opendst - Open a destination file for writing
- Writedst - Writing to a destination file
- Protect - Write protect a file
- Unprotect - Make a file accessible for both reading and writing
- Rename - Renaming a file or subdirectory
- Mkdir - Create a subdirectory
- Execute - Execute a program
- CBstor - Saving a subdirectory name in a circular buffer

The following errors can occur:

0 - Device name

A devicename like "DSK1" or "WDS1.SUBDIR" was entered that doesn't exist, or an attempt was made to start a non autostart DIS/FIX80 program.

1 - Write protected

An attempt was made to delete, rename or write over a file that is write protected.

2 - Bad open attribute

An attempt was made to open a file without the proper attributes. This error should not occur in DM2k.

3 - Illegal operation

I.e. an operation not supported by the peripheral or a conflict with the open attribute. This error should not occur in DM2k.

4 - Out of buffers

Too many files are open. DM2K is built with a 'C' library which can handle a maximum of 4 open files. This error should not occur in DM2k.

5 - Read past eof

An attempt was made to read past the end of a file. This error should not occur in DM2k.

6 - Device error

Covers all hard device errors such as parity and bad medium errors.

7 - File error

Program or data file mismatch, non existing file opened in INPUT mode etc.

8 - File to big

The file is to big for DM2K to handle. The file doesn't fit in DM2k's internal buffers.

9 - Name to long

The directory can not be created because the total length of the path name will be more than 34 characters.

13 - Unresolved reference

A label was not found in the REF/DEF table after loading a DIS/FIX80 file.

14 - Circulair buffer full

While executing the choosen command all names of directories and subdirectories are stored in a cirulair buffer for later processing. If this buffer is full, no more names can be stored and further executing of the command is canceled. This can occur if a directory is selected with many branches to other subdirectories.