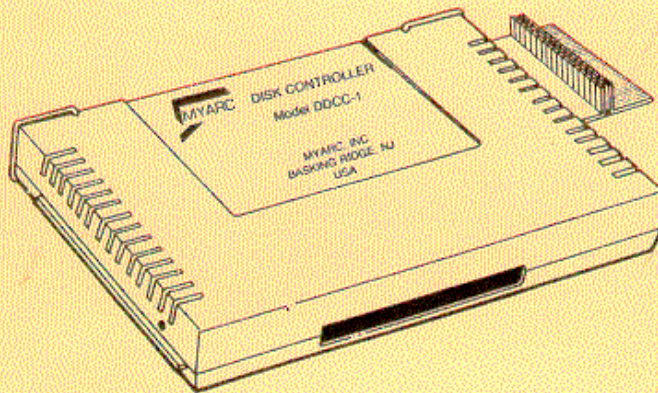




# DISK MANAGEMENT SYSTEM LEVEL III



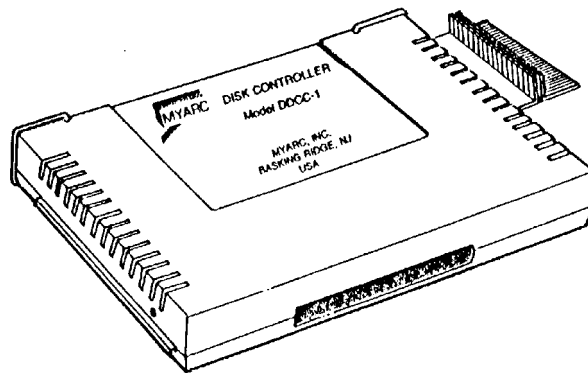
MYARC, INC.  
Basking Ridge, NJ

[text of front cover]

# **DISK MANAGEMENT SYSTEM LEVEL III**

MYARC, INC.  
Basking Ridge, NJ

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## **1. Introduction**

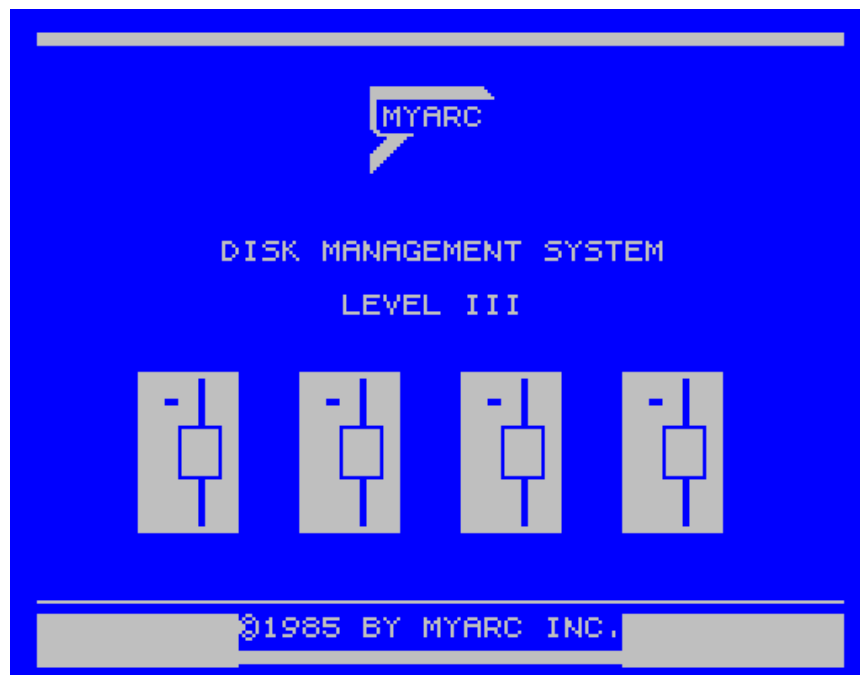
This manual covers the operating system provided in the Myarc Disk Manager Supreme Level III. It is designed to be an extension of the Myarc Disk Controller operating manual. This new disk-based management system is an incredible upgrade from the Texas Instruments original equipment Disk Manager. Some of the many features include single stroke file handling, screen control of colors, Editor/Assembler load and run screen, complete control of formatting in three modes, including TI standard double-density (320K), TI standard single-density, and non-standard (360K), plus many more. We know you will agree that the Myarc Disk Controller and Disk Management System are the highest quality and most versatile disk control peripherals offered by the industry.

Please read this entire manual before using the Disk Manager package! With the powerful commands available, the user could lose valuable data if not familiar with the operation of this software package.

## 2. Operation

Power your system up according to the procedures outlined in the Texas Instruments operating guide. Next, insert the Myarc Disk Manager in the drive of your choice. Select TI Basic. Type in CALL ILR and press **ENTER**. Now type in CALL LR("DSK.DM.DM") or CALL LR("DSKx.DM") and press **ENTER**. Substitute your drive number for the character "x" if using the second example. If you have the Myarc 128K or 512K Ramdisk it may be loaded at incredible speeds. Operation with the Ramdisk will be discussed in the section title Ramdisk Operation.

After the Disk Manager has loaded you will see the Myarc title screen. Pressing any key or waiting a few moments will produce a main menu field at the bottom of your manager screen.



### 3. Main Menu

These commands are activated by single keystroke. The command available on this menu are: Edit, Setup, Catalog, Xecute, Utility, and Goodbye.



### 3.1. Main Menu — Edit

If the **E** key is depressed and you already have a diskette cataloged, you will see another menu field appear at the bottom of the screen. If no drive is cataloged, then you will be asked which drive to catalog. When information from a cataloged drive is available, you will see a new menu at the bottom of the screen.

```
DSK1.PC99          Format 9   DSSD
 31 Files          Used= 659  Free=  61

C  Filename      Size  Type / Length  P
-  -
128KOS           3  PROGRAM   511
128KOSN          3  PROGRAM   512
ARC33_1         33  PROGRAM  8066
ASSM1           33  PROGRAM  8192
ASSM2           20  PROGRAM  4614
BSCSUP          15  DIS/FIX   80
DEBUG           32  DIS/FIX   80
DM               4  DIS/FIX   80
DM1             57  PROGRAM 14122
DM2             22  PROGRAM  5174
EDIT1           25  PROGRAM  5894
FILETOPROG      27  DIS/FIX   80
MINIMEM_D       17  DIS/FIX   64
MMLoad_M        6  PROGRAM 1223
MMLoad_O        4  DIS/FIX   80
MMSave_M       7  PROGRAM 1350

See  Move  Delete  Protect  Volume
Copy Exit  Rename Unprotect Backup
```

The commands available are: See, Move, Delete, Protect, Volume, Copy, Exit, Rename, Unprotect, and Backup.

Unlike the TI Disk Manager, all file utilities, and disk name changes are handled on one easy to use screen. Let's first explain the general function of each menu selection, and how the commands are carried out with the Disk Manager program.

All file commands are entered in a field on the left side of the screen under the character **C**. These are described below.

### 3.1.1. Edit Menu — See

This command is a very useful tool to the serious user. By pressing the **S** key you will be able to input and scroll any display file across the screen. To stop the scrolling press the **SPACE BAR**. To continue, press the **SPACE BAR** again. Example: You have several versions of the same source code on your diskette and you want to view the contents to see which file is the latest version. Select the filename you wish and bingo! It scrolls across your screen for your inspection. Any display or fixed 80 file may be viewed by the user.

### 3.1.2. Edit Menu — Move

This command is much like the Copy command except that Move will copy the file from your main disk to a copy disk, then it deletes the file from the main disk. This powerful command is a time saver when you are cleaning up your diskettes (house cleaning). This command should be used with CAUTION, since your original will be DELETED.

As with the Delete command, the Move command may not be executed if the file is write-protected. The file protection has to be modified in order to execute the Move command.

### 3.1.3. Edit Menu — Delete

If you wish to Delete a file, the **D** command would be entered in the command field. To safeguard your valuable files, the Delete command cannot be executed when the file is write protected. In order to enter the Delete command, you will first have to modify the file protection with the Unprotect command. This is accomplished by entering **U** in the command field.

### 3.1.4. Edit Menu — Protect

If you wish to modify file Protection, you would enter the **P** command. If the **P** command is entered, you will see the action taken in the right column. This eliminates having to scroll the cursor back and forth across the screen.

### 3.1.5. Edit Menu — Volume

This command allows the user to change the disk name without going to another menu or screen. When the **V** key is pressed you will see a flashing cursor in the disk name field. Type in the new disk name then press **ENTER**. You are then returned to the Edit file commands. Like the file rename, pressing **FCTN BACK** will restore the original disk name until you press the **ENTER** key.

### 3.1.6. Edit Menu — Copy

If you wish to Copy a file from your cataloged drive to another diskette, you would enter the command **C** in the left field.

### 3.1.7. Edit Menu — Exit

This command returns you to the main menu field. From this field you can Xecute all of the file commands just entered. By pressing the **X** key you will be prompted to press **ENTER**. This last prompt will give you a chance to verify that the user really wants to Xecute the commands.

### 3.1.8. Edit Menu — Rename

This command is activated by pressing the **R** key. It will allow you to edit and change the file name. When the **R** key is pressed, the long solid block will open a field with a blinking cursor over the file you wish to edit or change. You are now free to give your file any LEGAL file name. Periods or spaces are not allowed in file names, and the file name may not contain over 10 characters.

#### Example:

MYPROG-10!

would be legal in the TI operating system. A non-acceptable name would be:

MY.PRO 10!

While in the Rename field, pressing the **FCTN BACK** key will restore the original file name. If however you press the **ENTER** key to execute the name change, then the file name will remain as it was typed in.

### 3.1.9. Edit Menu — Backup

This command is the same as the backup disk command used with the TI Disk Manager. When the **B** key is pressed, all fields will be filled with the **C** command.

### **3.2. Main Menu — Catalog**

Depressing the character **C** then a drive number will produce a catalog listing of the diskette in the drive called for. (Diskette **MUST** be in drive to produce listing.)

If the diskette has a large number of files, you may view the next page by depressing the **CTRL** key with the up and down arrow keys. You may also scroll through the files pressing the function key with the up or down arrow keys. The user may home the cursor block to the top of the screen display by pressing the **CTRL** key and the up or down arrow keys at the same time. To catalog a new diskette, again depress the **C** key and respond to the prompt with a drive number. Note you must be in the Edit mode to scroll files.

### **3.3. Main Menu — Catalog to printer**

You may print a Catalog listing to the printer by depressing the **FCTN** key and the **P** key at the same time. You **MUST** have the print device name for your printer defined in the setup section. You may abort this command by pressing **FCTN CLEAR**.

### 3.4. Main Menu — Utility

Selecting the **U** command will take you to the utility menu.



The menu items are: Tests, Clone, Load/Run, Format, Exit and Ramdisk.

### 3.4.1. Utility Menu — Tests

Selecting this will allow the user to perform any of three disk function tests.

```
DSK2.PC99      Format 18   DSDD
 17 Files      Used=  769   Free=  671

Do you want to Loop Test? N
Do you want to Log Errors? N

PRESS 1 FOR Nondestructive Quick Test
      2 FOR Destructive Quick Test
      3 FOR Comprehensive Disk Test
```

---

#### 3.4.1.1. TestsMenu — Non-destructive quick test

This test is a read-only test and will not destroy data on the diskette. You will be prompted with regards to logging. If you elect to log errors you will need an RS232 and compatible printer.

#### 3.4.1.2. Tests Menu — Destructive quick test

This test must be selected with caution as it will DESTROY all data on the diskette you are testing! The destructive disk test will read and write to the diskette and will also ask if you wish to log errors. As in the operation above, you will need an RS232 and compatible printer to select the log option.

#### 3.4.1.3. Tests Menu — Comprehensive disk test

This is the most complex test to select. It will require about 20 minutes to complete all five tests executed. The time to complete will vary according to drive type, drive speed, and number of sides. Like quick destructive, the comprehensive test will DESTROY all data on the diskette being tested!

Before executing any of the above tests, pressing **FCN BACK** will allow the user to escape to the Utility menu screen.

### 3.4.2. Utility Menu — Clone

This powerful command allows the user to produce an exact duplicate clone of the main disk. This command should NOT be confused with File Copy, or Backup Diskette! This is a sector by sector copy program and any files on the copy disk will be DESTROYED when this command is executed. This command should only be executed when a high-speed clone (twin, exact duplicate, etc) is desired.

When the **C** key is pressed from the Utility menu, the operator will be moved to a new screen. This screen will display Main Drive and your default setting as defined in the setup section. The operator should choose the drive number that the original disk will be in. The next prompt will ask the user where the copy disk will be. Once this prompt is answered the clone utility starts. When finished you will be returned to the utility menu. Once again, exercise care when using the utility as valuable data may be lost.

### 3.4.3. Utility Menu — Load/Run

This command will allow the user to load and run assembly language programs without having to use the Editor/Assembler. When this command is selected the user will be prompted for a file name. An example would be DSK1.FILENAME, where FILENAME is the name of your file to be loaded.

After the file name is entered you will be prompted for a program name. An example would be START. If no program name is to be called, then press **ENTER**. You will then be warned, that to continue will clear the Disk Manager from memory. You may exit with **FCTN BACK** until you execute the final Load/Run command.

### 3.4.4. Utility Menu — Exit

This command will allow you to exit the Ramdisk screen.

### 3.4.5. Utility Menu — Format

This utility is where all disk formatting will be handled. This command is selected by pressing the **F** key. You will then be prompted for the new disk name. Any legal name up to 10 characters may be used. It is recommended that upper case letters be used. This is because the TI Disk Manager will not display lower case letters. Should you decide to share disks with other users, it will insure their machines will be able to read the disk name.

Next you will be asked the number of tracks. This field will default at 40, since 40 is the common number of tracks on all TI systems. If you are sure that your unit has a lower number of tracks, then you should enter that number at this time. If you are in doubt, accept the default value of 40.

You will then be asked if your drive is double or single sided. The default will be posted from the setup screen discussed earlier. When this prompt is answered, you will be prompted for type of format. Number 1 is for 16 sector and number 2 is for 18 sector. The 16 sector format is HIGHLY recommended by Texas Instruments and Western Digital Corporation. The 16 sector format has been chosen by Texas Instruments, therefore it is also recommended by Myarc Inc.

You may press the **1** key or the **ENTER** key to select 16 sector (320K) formatting.

The next prompt is for interlace step. This field is ALWAYS set to the proper number as it corresponds to sector format. Unless you have specific reason to change this field, ALWAYS accept the default prompt.

As with the other screens, you may press the **FCTN BACK** key to return to the Utility menu. Interlace is a very powerful command! When your diskette formats, the interlace is established. In lab tests for example, the 16 sector format is lightning fast on the new 6ms drives when set at 3. A good rule of thumb for experimenting with your drives would be to lower the interlace number one step at a time and format in the various modes. When you lower one step too far, you should notice a definite slowdown in the verification process as it increments at the bottom of the screen.

### **3.4.6. Utility Menu — Ramdisk**

If you have the Myarc 128K or the 512K Ramdisk card you may select the **R** command. This command will allow the user to format the Ramdisk as well as emulate it to one of five drive numbers. You may also name the Ramdisk from this screen. Refer to the Ramdisk manual for format parameters.

When the **R** command is selected from the Utility screen, the user will be moved to a new screen. You **MUST** have the Myarc 128K or the 512K Ramdisk in order to use this screen! The commands on this screen are: Change, Drive, 128K-OS and Exit.

```
384 K available to RAMDISK/SPOOLER

WARNING: Changing the RAMDISK PARTITION
will DESTROY any data presently on it.

      Ramdisk Partition : 384  K

      Ramdisk Set At 384 Kilobytes
      Spooler Set At 0   Kilobytes
      128K-OS is ON

Now Emulating Drive Number : 4

-----
Change   Drive   128K-OS   Exit
```

When the Myarc Disk Manager is loaded, the system is scanned to see if the Ramdisk is present in the operating system. If your Ramdisk is already set up, you will see your defaults on the screen and no changes will be executed on power-up. If not, the system will set the Ramdisk for you using defaults assigned by the program. You may select your own defaults and save them by returning to the Setup screen and choosing the Save option.

#### **3.4.6.1. Ramdisk menu — Change**

CAUTION should be used in selecting this command. When you select change, ALL of the data stored in the Ramdisk will be lost! When you select the amount of Ramdisk to be set, the Print Spooler will also be set by the program. FCTN BACK will abort from this selection.

#### **3.4.6.2. Ramdisk Menu — Drive**

This command may be used as often as you wish without erasing the program or data stored. You may choose to emulate your Ramdisk as drive 1, 2, 3, 4, or 5. You may also have no emulation by selecting 0. If you do not emulate a drive number the Ramdisk may be accessed by the name RD. You may save your Ramdisk defaults by executing the Save command from the Setup screen.

### 3.5. Main Menu — Setup

By pressing the **S** key you will enter the setup screen. A new menu will appear at the bottom of the setup screen.

```
DISK MANAGER DEFAULT CONFIGURATION

Main Drive = #1      Copy Drive = #3

Drive #1 = (S)-Sided / (S)-Density
Drive #2 = (S)-Sided / (S)-Density
Drive #3 = (S)-Sided / (S)-Density
Drive #4 = (S)-Sided / (S)-Density

Output Device:
PIO.LF
-----
Color - Foreground = 15 Background = 6
-----
Change Foreground color Exit
Save   Background color
```

The commands are: Change, Foreground color, Exit, Save and Background color.

#### 3.5.1. Setup Menu — Change

This command allows the user to set the system defaults to the drive and print device in use.

#### 3.5.2. Setup Menu — Foreground, Background

These commands will allow the operator to change the foreground and background colors to any combination he or she desires. By pressing the **B** key, the background color changes and the new color number is displayed by the background default. By pressing the **F** key the same action is taken for the foreground color.

### **3.5.3. Setup Menu — Exit**

This command will return the user to the main title screen. Note: if you had a diskette cataloged before selecting Setup, the user may press the **CTRL** key with an up or down arrow key to restore the file information in buffer.

### **3.5.4. Setup Menu — Save**

This command saves the new default information to the diskette. You **MUST** have the write-protect tab off to use the Save command.

## **4. Myarc WDS100 Hard Drive Operation**

When used with the Myarc WDS100 system, you may place the disk manager on the HD and call it through normal pathname access. The Winchester system does not use GPL access so the setup defaults may not be saved to the HD system. Be sure to have your Setup finished before installing the disk manager on the HD system. In some early WDS100 systems, the file copy command will not transfer the large program file. If you have one of these versions, an updated file copy disk may be purchased by contacting the address in the Myarc WDS100 manual.

## **5. Operation with TI-Forth**

Two programs, FORTH and FORTHSAVE are provided for use in running TI-Forth from the Load/Run screen. First make a backup copy of your Forth program disk. Then copy FORTH and FORTHSAVE over the existing programs.

## **6. Saving Interlace and Ramdisk Files**

After you have your Ramdisk configured and your best interlace performance, you may return to the Setup screen and execute the Save option. This will save your default values to disk along with your system defaults. In order to change the interlace, you will need to select the Utility menu. Select Format and answer the questions including the interlace prompt. When the interlace prompt is answered, use the BACK command and start over. You will need to set the interlace for all three formats in order to save them to disk. This step should only have to be performed one time.

## 7. Addendum 03/20/85

The disk controller card you have purchased is a greatly enhanced version. The following is a detail of the operating system changes in Myarc's Level III Disk Controller. If your system is equipped with the new high-speed drives with 6ms track times, be sure to refer to page 46 of the operating manual. By setting the DIP switches on these units to the 6ms position, you can take full advantage of the incredible speed of this Level III Controller.

### 7.1. New System Commands

#### 7.1.1. CALL ILR

This command emulates the CALL INIT command available with the Editor/Assembler operating system. This routine may be used from the command level, or from a running Basic program. Care must be exercised when using this command. When executed, all programs and data will be cleared from the expanded memory.

Example as executed from Basic:

```
100 CALL CLEAR
110 CALL ILR
120 END
```

#### 7.1.2. CALL LR("DSK1.OBJECTFILE")

This command emulates the CALL LOAD command used in the Editor/Assembler system.

Example as run from Basic:

```
100 CALL ILR
110 CALL LR("DSK1.OBJECTFILE")
```

#### 7.1.3. CALL LLR("START")

This command is the same as the CALL LINK command used with the Editor/Assembler.

Example:

```
100 CALL ILR
110 CALL LR("DSK1.OBJECTFILE")
120 CALL LLR("START")
130 END
```

#### 7.1.4. CALL DIR(x)

This command allows the user to catalog any of four disk drives. This command may be executed from command level without overwriting the program in memory. Just substitute the "x" with the drive of your choice and watch it work.

Example:

```
CALL DIR(1)
```

would catalog disk drive number 1.

```
100 CALL DIR(1)  
110 GOTO 110
```

## Statement of File Origin

This file was created for users of PC99, a TI-99/4A emulator running on an IBM PC.

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Version 20011231