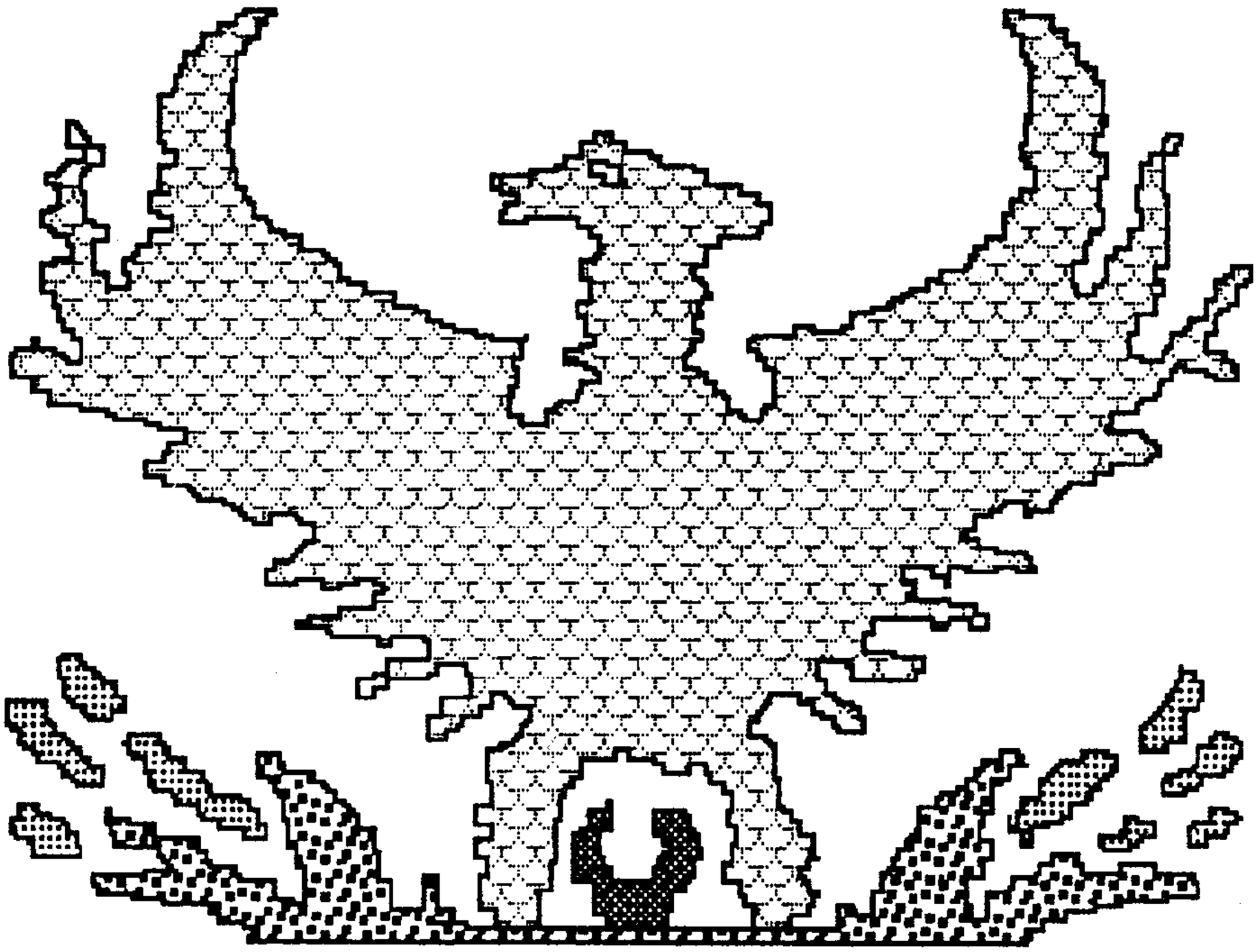
DISKODEX



2.01

By OPA Oasis Pensive Abacutors

A complete disk catalog indexer/data-base
Fully supports *DISK UTILITIES* comment system

OPA Oasis Pensive Abacutors **Toronto, Ontario, Canada**

PHOENIX 2001 DISKODEX

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Program designed by Gary Bowser and Cecil Chin
Manual written by OPA Oasis Pensive Abacutors

TABLE OF CONTENTS

INTRODUCTION

Overview 3
Hardware Applicability 3
Delivery medium 3

GETTING STARTED

Before you begin 3
Loading procedure 3
Notes on loading *DISKODEX* 3

SYSTEM STARTUP

Creating a new *DATA DISK* 4
Loading of an old *DATA DISK* 4
Useful information about your *DATA DISKS* 4

1... CATALOG A DISK DRIVE

Cataloging a diskette 4
Adding or Updating a disk on the *DATA DISK* 4

2... DISPLAY ALL DISKNAMES

Information about display options 5
Cataloging a diskette from the *DATA DISK* 5
Deleting a diskette from the *DATA DISK* 5

3... PRINT & SEARCH CATALOG

How to do a wildcard search 5
Different search options 5
Screen or other outputs 5

4... DISPLAY STATUS 6

5... SYSTEM SETUP 6

FORMAT OF YOUR *DATA DISK* FILES 6

DISCLAIMER 7

INFORMATION ABOUT *OPA Oasis Pensive Abacutors* 7

INTRODUCTION

OVERVIEW

The *PHOENIX 2001 DISKODEX* program by *OPA* is designed to make up master catalogs of all your disks, and allow you to print, update, delete, sort, display catalogs of all or some of your files/disks.

This program uses every gram of "TI-99/4A" power on a normal expanded system with 32k and disk drives. This being so, we have been able to design a complete program which can run at super speeds in updating and sorting your catalogs while storing a lot more information on your files than current disk cataloger programs on the market.

DISKODEX has the feature of storing the file comments and date of the disk that the shareware program *DISK UTILITIES* by John Birdwell uses, which allows for a much better listing of your files if you first comment your disks using *DSKU*.

The *DISKODEX* program is the second of many programs in the *PHOENIX 2001* series of programs by *OPA* which have been designed to have enough power and usefulness to help the TI live pass year 2001.

HARDWARE APPLICABILITY

DISKODEX is designed to operate on the TI-99/4A home computer or the MYARC GENEVE 9640 family computer. It requires at least 32k of expansion memory and at least one floppy disk drive.

DISKODEX has been tested using the TI/MYARC/CORCOMP controllers and many RAM-DISK combinations. There is no reason why this system will not also work with other systems that use standard DSR calls and DSR subroutines.

Printers are used only in the text mode, so, there should be no compatibility problems. The attributes defining how the printer is connected in your system, are defined in the *SYSTEM SETUP* and may be modified to your needs.

Loading may be accomplished with the Editor/Assembler, TI-Writer or Extended BASIC modules.

DELIVERY MEDIUM

The *DISKODEX* system is delivered on one single-sided/single-density diskette. And since it is not copy protected you can copy it to a ramdisk, hard drive, or a larger formatted diskette. It may be loaded as described in the *GETTING STARTED* section of this document.

GETTING STARTED

BEFORE YOU BEGIN

We recommend that the first thing you do with *DISKODEX* is to make a copy and preserve the original in a safe place. We also recommend that you make backups of your *DATA DISKS* before updating or adding disks to a *DATA DISK*.

Any copier, such as disk manager or equivalent, may be used for this purpose.

LOADING PROCEDURE

DISKODEX may be loaded using the Editor/Assembler, TI-Writer, or Extended BASIC modules. The procedures are as follows:

Editor/Assembler

1: Select Editor/Assembler from main menu
2: Place *DISKODEX* disk into disk drive (1-4)
3: Select option 5, "RUN PROGRAM FILE"
4: Enter "DSKn.DISKODEX" as the file name.
"n" is drive # (1-4)

TI-Writer

1: Select TI-Writer from main menu
2: Place *DISKODEX* disk into disk drive (1-4)
3: Select option 3, "UTILITIES"
4: Enter "DSKn.DISKODEX" as the file name.
"n" is drive # (1-4)

Extended BASIC

1: Place *DISKODEX* disk in drive #1
2: Select Extended BASIC from the main menu
(*DISKODEX* should then auto load from disk drive #1.)

NOTES ON LOADING DISKODEX

Any other memory image type loader system, should also be able to load *DISKODEX* without problems. Also, the *DISKODEX* files can load from any drive or ramdisk with the exception of the Extended BASIC "LOAD" program which is fixed to "DSK1.DISKODEX" format, but this can be edited and resaved using Extended BASIC. The Extended BASIC loaders may have problems on some MYARC GENEVE 9640 systems, so we suggest you use the Editor/Assembler procedure in loading *DISKODEX* on a MYARC GENEVE 9640 system to insure full operation.

SYSTEM STARTUP

After loading *DISKODEX* and pressing any key to go past the *DISKODEX* title screen a menu will appear asking you to "Insert old data disk or a blank disk", then "Input drive number". **BACK** FCTN-9 will exit you to the TI Main Title Screen.

CREATING A NEW DATA DISK

Insert a blank initialized diskette, and type in the drive # that contains the new disk. The system then creates two files, CATLOG_DSK to store the disknames, and CATLOG_PGM to store the filenames, and other needed data. After the files are created *DISKODEX* exits to the *MAIN MENU*.

The new *DATA DISK* will be setup for a maximum of 256 diskettes, if the disk has 720 or more formatted sectors, otherwise it will be set for a maximum of only 128 diskettes. We suggest you format your *DATA DISK* to the maximum your system and drives can handle. That way you can be sure you will have the best data space for your system setup.

LOADING OF AN OLD DATA DISK

When you insert a disk containing the *DISKODEX* files CATLOG_DSK and CATLOG_PGM, and type the drive # that contains the *DISKODEX DATA DISK*, the system will load some needed info from the *DATA DISK* before going to the *DISKODEX MAIN MENU*.

USEFUL INFORMATION ABOUT YOUR DATA DISKS

When using a single drive system, the system will tell you when it needs the current *DATA DISK* inserted back in the drive, with the message "INSERT DATA DISK in #_ : Press any key". This message can also occur on multi-drive systems, if for some reason the *DATA DISK* was removed from the drive. Also due to the way the *DATA DISK* is detected by *DISKODEX* the diskname should be different than any of your other disks.

If your system includes a ramdisk with a larger size than your drives, you can use it as your *DATA DISK*. Then, when finished with *DISKODEX*, use Barry Boone's ARChiver v3.02 (or later), to compress the two *DISKODEX* files onto a floppy of smaller size. When your *DATA DISK* is needed again for updates, just decompress it back to your ramdisk using the ARChiver. Using ARChiver this way you can in fact have a larger *DATA DISK* than any of your drives.

Since a *DATA DISK* can only hold a maximum of 256 diskettes, we recommend that if you have more than 256 disks you divide and organize your files/disks into categories and have one *DATA DISK* for each category like "GAMES", "UTILITIES", "PERSONAL", etc. We think this would be the best way to organize a very large library of diskettes.

CATALOG A DISK DRIVE

CATALOGING A DISKETTE

After selecting option 1 on *DISKODEX's MAIN MENU*, the system will ask for the drive # to be cataloged. After reading the diskette, it will display the catalog and a command line with the following options:

REDO	- Pressing (FCTN-8) will re-catalog a disk in the same drive.
BACK	- Pressing (FCTN-9) will take you back to the "Input drive #" prompt, allowing you to catalog a different drive. Pressing **BACK** once more will exit to the *MAIN MENU*.
Next	- Pressing **"N"** will go to the next screen page.
Back	- Pressing **"B"** goes back one screen page.
Comnt	- Pressing **"C"** toggles the display of *DSKU* comments on and off. The option only changes the display, not the **SAVE** or **PRINT** of a catalog.
Print	- Pressing **"P"** will print out the catalog after asking for a "Device Name". Entering a blank line will abort the print option.
Save	- Pressing **"S"** saves the catalog to the *DATA DISK*.

ADDING OR UPDATING A DISK ON THE DATA DISK

After pressing "S" from the catalog display, the system will first check to see if the cataloged diskname is on the *DATA DISK*. If not, it will add the diskette to the *DATA DISK*.

If *DISKODEX* finds that diskname is already on the *DATA DISK*, it will then ask if you want to update it. If yes, the new catalog will replace the old one on the *DATA DISK*.

If you don't want to update the *DATA DISK*, *DISKODEX* will then allow you to rename the cataloged diskette. When entering the new diskname the system will sound a HONK noise, if the new name is also on the *DATA DISK*. After entering a new name *DISKODEX* will first try to rename the diskette cataloged, if it can't find it or it's write protected, *DISKODEX* will abort the save.

It should be noted that the SAVE option can take some time to complete the job, and if the drives crash with I/O ERROR due to a bad sector, etc. or, if you remove the disk for any reason, DATA LOSS WILL OCCUR. The *DISKODEX* program should be exited before trying to use that *DATA DISK* again. We always recommend that you make a backup of your *DATA DISK* before updating it in case of power or equipment failure during an update of your *DATA DISK*.

DISPLAY ALL DISKNAMES

INFORMATION ABOUT DISPLAY OPTIONS

After selecting option 2 on *DISKODEX's MAIN MENU*, the system will display a sorted list of all disknames on the *DATA DISK*. For each diskname the display also includes the total formatted sectors, used sectors, free sectors, number of files, and *DSKU DATE* if any. The command line has the following options:

BACK	- Pressing (FCTN-9) exits back to the main menu.
Next	- Pressing "N" will go to the next screen page.
Back	- Pressing "B" goes back one screen page.
E	- Pressing "E" moves the marker up one line.
X	- Pressing "X" moves the marker down one line.
Print	- Pressing "P" will print out the list of disknames after asking for a "Device Name". Entering a blank line will abort the print option.
Catalog	- Pressing "C" will catalog the marked diskette.
Del	- Pressing "D" will delete the marked diskette.

CATALOGING A DISKETTE FROM THE DATA DISK

After selecting the diskette to be cataloged (by moving the **marker** using the E and X keys), press "C" to catalog the marked diskette from the *DATA DISK*. *DISKODEX* will then read in the catalog of the diskette and display it in the same way as the **CATALOG A DISK DRIVE** option except that the **SAVE** option in turned off and the **REDO** key exits back to the list of disknames. **BACK** will exit to the *MAIN MENU*. All other options on the catalog screen work the same.

DELETING A DISKETTE FROM THE DATA DISK

After selecting the diskette to be deleted (by moving the **marker** using the E and X keys), press "D" to delete the marked diskette from the *DATA DISK*. *DISKODEX* will ask if you are sure before deleting the diskette.

It should be noted that the **DELETE** option can take some time to complete the job, and if the drives crash with **I/O ERROR** due to a bad sector, etc. or, if you remove the disk for any reason, **DATA LOSS WILL OCCUR**. The *DISKODEX* program should be exited before trying to use that *DATA DISK* again. We always recommend that you make a backup of your *DATA DISK* before updating it in case of power or equipment failure during an update of your *DATA DISK*.

PRINT & SEARCH CATALOG

After selecting option 3 on *DISKODEX's MAIN MENU*, the system will start a series of prompts before finally outputting the sorted catalog of the files & disks you wanted.

HOW TO DO A WILDCARD SEARCH

Wildcard characters are variables representing one or more file/disk name characters. The two valid *DISKODEX* wildcard characters are, the inverse asterisk "*" (FCTN-6), and the inverse question mark "?" (FCTN-7). The asterisk represents multiple characters in a name, and can only be used once in a name but in three different ways. See examples below:

Prefix search:	ABC*	All names which start with ABC, with any number of characters after ABC.
Suffix search:	*-DOC	All names which end in -DOC, but with one or more characters in front of -DOC.
Both Prefix & Suffix search:	A*-DOC	All names which start with A, and end in -DOC but with any number of characters in between.

The question mark wildcard represents only one character in a name, and its use is position-dependent. More than one question mark may be used in a file/disk specification if you wish to allow for multiple variable characters. The question mark may also be used with the asterisk wildcard. For example, the file/disk specification, ????FEB might refer to files such as ACCTFEB, PERSFEB, and FILEFEB.

DIFFERENT SEARCH OPTIONS

The first prompt is for a *FILE SEARCH STRING*. This option allows you either to have all files listed by entering a blank line, or to list only certain filenames by using the wildcard characters mentioned above. If no wildcard characters are used, *DISKODEX* will only list the ones which match exactly. The second prompt is for a *DISK SEARCH STRING*. This option is similar to the above file search option, but used to call up which diskettes you want in the final sorted catalog. The last prompt in the search setup is for the file types. Here you can turn on which file types to include in the sorted catalog. With this option, for example, you could get a listing of only the DISPLAY/VARIABLE and/or PROGRAM files. You can have any mix of different file types you wish.

SCREEN OR OTHER OUTPUTS

After going through the search prompts, *DISKODEX* will now ask for the type of output you want. "S" is for screen display only, with the **SPACE BAR** controlling the scrolling of the screen. If OTHER is selected, the system will ask for the "Device Name", which can be any known device like a printer or diskette. A third prompt only appears if the device name does **NOT** start with **DSK**. It asks if you want *FORMFEED BEFORE EACH NEW LETTER*. This option allows you to have the B's, C's and D's, etc. start on a new page.

DISPLAY STATUS

After selecting option 4 from *DISKODEX's MAIN MENU*, the system will read information from the *DATA DISK*, and displays the status of the *DATA DISK*. The list can be printed out by pressing "P" and then entering a device name, or a blank line to abort the print option. BACK (FCTN-9) will take you back to the *MAIN MENU*. The *DISKODEX* status screen gives the following info:

Name of Status:	What the DATA means
Disks allowed	Max. number of disks which can be stored.
Disks in memory	Number of disks stored on this *DATA DISK*
Disk slots free	Max. number of disks which can be added.
Files allowed	Max. number of files which can be stored.
Files on disk	Number of files stored on this *DATA DISK*
File slots free	Max. number of files which can be added.
Total sectors	Total number of sectors on all your diskettes.
Total used	Number of sectors used on all your diskettes.
Total free	Number of sectors free on all your diskettes.
Average files	Average number of files on one of your disks.
Average sectors	Average number of sectors on one of your disks
Average used	Average number of used on one of your disks.
Average free	Average number of free on one of your disks.

SYSTEM SETUP

After selecting option 5 from *DISKODEX's MAIN MENU*, the system displays the current *DATA DISK* settings, and the following command options to help in changing them:

- **BACK** - Pressing (FCTN-9) exits back to *MAIN MENU*.
- **Fore** - Pressing "F" advances the foreground color by one.
- **Back** - Pressing "B" advances the background color by one.
- **Save** - Allows you to save the Fore/Back ground colors and the printer settings for your printer to the *DATA DISK* in use.
- **Change** - Allows you to change the current *DATA DISK* in use. BACK (FCTN-9) will abort the *SYSTEM STARTUP* and take you back to the *MAIN MENU*, with the current *DATA DISK* still in use.

Pressing "P" at the menu will allow you to set the maximum lines per page, printer setup, and printer device name. The printer setup operates in **HEXADECIMAL** and allows up to 17 characters for your own personalized printout. For example, on an NX1000 printer, you could set it for superscript in NLQ mode, and 6/72" line feeds, which would give you a maximum of 132 lines per page. This setup would be entered as follows: **1B6B011B78011B53001B4106**. In decimal this means 27,107,1;27,120,1;27,83,0; 27,65,6. In ASCII it would be written as ESC "k1", ESC "x1", ESC "S0", ESC "A" <6>. See your own printer manual for more information.

FORMAT OF *DATA DISK* FILES

The following information is for programmers who want to interface to, or use the *DATA DISK* files. All *DISKODEX DATA DISK*'s have two files on them, one called **CATLOG_DSK** to store the disknames, and the other called **CATLOG_PGM** to store the filenames. Important information and printer setup are stored in record 0 of the **CATLOG_PGM** file. The **CATLOG_DSK** file type is in PROGRAM format and its size is 6400 bytes for 256 diskettes, or 3200 bytes for 128 diskettes. The **CATLOG_PGM** file type is an INTERNAL, RELATIVE, FIXED 50 format and its size varies depending on the number of file records stored. Here is a layout of the records in the two *DISKODEX* files:

(Note: All values are in decimal format)

CATLOG_DSK: 25 bytes per disk with 10.24 records per sector.

- 00 - 09 = Name of diskette.
- 10 - 11 = Total number of formatted sectors.
- 12 - 13 = Record number of first file stored in "_PGM".
- 14 - 15 = Total number of free sectors.
- 16 ——> **BITs**
- MSBit > 0 = **ON** if the disk was protected at time of **SAVE**.
- > 1-7 = Total number of files on this diskette.
- 17 - 24 = Date of diskette from *DSKU*.

CATLOG_PGM: 50 bytes per filename with 5 records per sector. Filenames start at record 1. Record 0 is for setup.

Record 0 :

- 00 - 01 = Total number of disks stored in **CATLOG_DSK**.
- 02 - 03 = Total number of files stored in **CATLOG_PGM**.
- 04 ——> **BITs**
- MSBit > 0-3 = Foreground color from 0 to 15.
- > 4-7 = Background color from 0 to 15.
- 05 = Length of Printer Device Name.
- 06 - 30 = Printer Device Name. (Max. length is 25 bytes)
- 31 = Maximum lines per page on printouts.
- 32 = Length of Printer setup.
- 33 - 49 = Printer setup. (Max. length is 17 bytes)

Record x : (Any record number higher than 0)

- 00 - 09 = Name of file.
- 10 - 11 = Size of this file in sectors.
- 12 —— (For future use, currently Diskette Number)
- 13 ——> **BITs** (On=1) / (Off=0)
- MSBit > 0 = VARIABLE length / FIXED length
- > 1-3 = (Reserved) / (Reserved)
- > 4 = Write Protected / Not Write Protected
- > 5 = (Reserved) / (Reserved)
- > 6 = INTERNAL (Binary) / DISPLAY (ASCII)
- > 7 = PROGRAM file / DATA file
- 14 = Logical Record Length if a DATA file, or End of File Offset if a PROGRAM file.
- 15 - 49 = *DSKU* comment. (Maximum of 35 bytes)

DISCLAIMER

OPA Oasis Pensive Abacutors, the sole manufacturer and distributer of this program, hereafter referred to as the "product", does not guarantee that this product will be free from error, perform as stated in this manual or elsewhere, or meet the needs or expectations of the user.

OPA Oasis Pensive Abacutors is not liable for the use or misuse of this product or any damage that may result in the normal use of this program, improper or proper use of this product, or information contained within this manual - not limited to the proscribed or actual function of the program. The warranty covers the part of the product consisting of the diskette for a period not to exceed 90 days from the date of purchase, provided that the diskette is not damaged from improper use, accident, intentional actions, or any condition not arising from the quality of the original material or workmanship. OPA Oasis Pensive Abacutors reserves the right to refuse to service any returned materials that do not meet this qualification.

OPA Oasis Pensive Abacutors will service free of charge any product returned within 90 days that meets the conditions described above. After 90 days and up until the life of the product (or company), products which meet the above conditions may be replaced for the cost of return postage to the user.

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INFORMATION ABOUT OPA OASIS PENSIVE ABACUTORS

We are a small company based in Ontario designing software and hardware for the TI-99/4A and MYARC GENEVE 9640. We are also into a couple of other computers, but mainly anything which has something to do with 9900 based chips. If you have any questions or comments concerning this and other programs from OPA please feel free to write or phone us. Thank you.

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