BEST OF COCO-TIME 85

(UTILITIES)

INCLUDES

40K Extended Basic
Alpha Directory
Basic Search
Banner Creator
Disk Encryption (Basic)
EZ Disk Master
Function Keys
Graphics Zoom
LIST / DIR Pause

Large DMP Dump
Mailing List
Program Packer (Basic)
Ram Disk (30K)
Super INPUT/LINE INPUT
Tape Encryption (Basic)
Tape Index System
Tape-to-Tape Copy
CoCo Disk Zapper

This cassette/disk contains the following programs:

FULL NAME	FILENAME	Min. REQUIREMENTS	TYPE
40K Color Basic	40KBASIC	64K Cassette	ML
Alpha Directory	ALPHADIR	16K Disk System	BASIC
Basic Search	BSEARCH	16K ECB System	ML
Banner Creator	BANNER	16K ECB System	BASIC
Disk Encryption	DCRYPT	16K Disk System	BASIC
EZ Disk Master	EZDISK	16K Disk System	BASIC
Function Keys	FUNCTION	16K ECB System	ML
Graphics Zoom	GZOOM	16K ECB System	BASIC
LIST / DIR Pause	LISTPAUS	16K ECB System	ML
Large DMP Dump	LDUMP	16K ECB System	BASIC
Mailing List	MAILLIST	32K Disk System	BASIC
Program Packer (Basic)	PACKER	16K ECB System	ML
Ram Disk (30K)	RAMDISK	64K Cassette	ML
Super INPUT / LINEINPUT	SINPUT	16K ECB System	ML
Tape Encryption	TAPECRPT	16K Cassette	BASIC
Tape Index System	TAPEINDX	16K Cassette	BASIC
Tape-to-Tape Copy	TAPETAPE	16K Cassette	ML
CoCo Disk Zapper	ZAPPER	16K Disk System	BASIC

Use the following procedure to load Basic Programs. The instructions for the ML programs are given in their individual description. 16K Users should type PCLEAR 1 before loading BANNER.

CASSETTE USERS: Insert cassette in cassette recorder, rewind cassette and set the volume to 5 or more. Use CLOAD "filename" and when the program loads, type: RUN

DISK USERS: Insert disk in disk drive. Use RUN "filename" to load program.

Once the program is loaded follow the instructions for the respective program given in the description below.

DESCRIPTION

40K BASIC: This utility will give 64K Cassette Users 8K MORE MEMORY !! Simply CLOADM"40KBASIC" and EXEC 3584. The normal 'EXTENDED BASIC ....' should appear. To do PCLEAR 0, simply type: POKE 25,6:POKE 26,1:POKE 1536,0:NEW.   Type PRINT MEM and presto! You have 40K of memory to use. Note: This program will NOT work with the Disk Controller Plugged in. The High Speed Poke will not work in the 40K Mode.

ALPHADIR: This utility will allow Disk Users to alphabetize their disk directory. This keeps your disks in order and allows easy access to programs.

BASIC SEARCH: This is an extremely useful utility which allows you to search for any string of letters in your Basic Program, for example EXEC 44539. It will list the numbers of all the statements which have the

the string. To load this program, use the following procedure. Note: Disk Users should substitute LOADM for CLOADM.

X= PEEK(39)*256+PEEK(40)-200:PRINT X

Make a note of the number which the computer displays on the screen and use it in place of xx in the following commands:

CLEAR 200,xx: CLOADM "BSEARCH",xx-3584

Whenever you want to search for a string in your Basic Program, simple: EXEC xx. Enter the appropriate string. The computer will display the appropriate line #'s. Note: You can pause by pressing SHIFT - @.

BANNER: This program will allow you to create 7" letters/numbers on your printer. When the computer prompts with different baud rates, enter the baud rate of your printer. The next option allows you to select the printing character. If you want the letters/numbers to be printed with a specific character (such as 'A'), enter option (1) and then the ASCII code of that character. Enter option (2) if you want Letter A to be made up of A's, Letter B made up of B's and so on. The next option allows you to define the print density. If you printer does NOT have a DIP switch to control New Line (NL) and CR (Carriage Return) modes, enter (1). If your printer allows the DIP switch, simply set the switch to CR and enter (2) or (3). 2 or 3 determines how many times the computer will STRIKE each line. 2 will be dense, 3 will be more dense. Finally, enter the message to be printed and turnon your printer. HINT: If you want a lighter Banner, enter option 2 from the - CHARACTER TYPE - menu. If you want a darker Banner and your Printer allows Block Graphics, enter option 1 from the - CHARACTER TYPE - menu and enter the ASCII code as 239.

DISK ENCRYPTION: This program will allow password protection for your Basic Programs on disk. First, enter option 1 from the menu (ENCRYPT PROGRAM). Enter the appropriate password (max 20 letters) and make a note of the password. Then simply load your Basic Program and type: EXEC 474. Now, SAVE this encrypted program to disk. Follow the same procedure if you have more than one Basic Program to encrypt.

To load, decrypt and RUN your encrypted Basic Program, first RUN "DISKCRPT". Enter option 2. Enter the password. Note: When you enter the password, a series of 'X' will appear. The computer will recognize your password but will display 'X' for each letter for the password. At the 'FILENAME' prompt, enter the filename of your encrypted Basic Program. Your program will load decrypt and RUN.

EZDISKER: This is an excellent utility for disk users. It allows you to Copy, Rename, or Kill a file, find ML Start, End and EXEC addresses, Display file info and execute Basic or ML programs, all this with a SINGLE keystroke. Here are the commands you can use:

KEY	FUNCTION
Up and Down Arrow	Move up and down in DIR
R	Rename a file.
C	Copy a file.
K	Kill a file.
M	ML Start, End and EXEC address.
I	Give info in file.
<ENTER>	Load and execute a program.
<CLEAR>	Restart program.

FUNCTION KEYS: This extremely powerful utility allows you to define keys 0 to 9 with 250 characters each. To load this utility, use the following procedure. Disk Users: substitute LOADM for CLOADM:

X = PEEK(39)*256+PEEK(40) - 2800:PRINT X

Make a note of the number which the computer displays on the screen and use it in place of xx in the following commands

CLEAR 200, xx : CLOADM"FUNCTION",xx: EXEC

To define a key, press the RIGHT ARROW and the key (0-9). To access a key definition, simply press CLEAR followed by the appropriate key between 0 and 9. This utility can be especially useful for defining keys with often-used phrases like DIR and PRINT #-2.

GRAPHICS ZOOM: This program will allow you to magnify (4X) and edit any portion of your graphics screen. Make sure the Graphics Screen is in memory before you RUN this program. Option 1 allows you to define the portion you wish to magnify and edit. Use the 4 arrow keys to "zoom in" on any portion. Use CLEAR to exit this option. Option 2 is used to view your screen. Option 3 is used to edit the "zoomed in" portion. Use arrow keys to move cursor and <SPACEBAR> to set/reset pixels. Use CLEAR to return to menu for all options.

LARGE SCREEN DUMP (for DMP Printers): This program will dump your PMODE 3 / 4 screen to your DMP Printer. It will printout a sideways and a DOUBLE SIZED image of your graphics screen. Note: Before RUNning this program, make sure the graphics screen is in memory and the appropriate printer baud rate is set.

LIST / DIR PAUSE: This is an EXTREMELY USEFUL utility! It will allow you to LIST and DIR one screen at at time. Use the following procedure to load the program (Disk Users should substitute LOADM for CLOADM):

X=PEEK(39)*256+PEEK(40)-250:PRINT X

Make a note of the number which the computer prints on the screen and use it in place of xx in the following commands:

CLEAR 200, xx: CLOADM "LISTPAUS",xx: EXEC

To activate/deactive * PAUSE *, simply hit the SHIFT-CLEAR key, followed by BREAK. When you LIST or DIR, the computer will display a black cursor and wait. Press any key to continue LIST or DIR. NOTE: You can also use your JOYSTICK fire button instead of a key to change screens!

MAILING LIST: This utility will allow disk users to create a mailing list. When you first RUN the program, BREAK it, enter a pre-initialized disk and type: RUN 390. This will initialize a data file DISKMAIL/BAS on your disk to store names and addresses. Next, if you want Automatic Zip Code Sorting, EDIT line 100 and change ZP=0 to ZP=1.

Add Names: Use this option to enter names. Enter the full name, street address, city, state and zipcode. Note: If you have a 2 line street address, type in the two lines with a '%' between them.

Delete or Change Record: These are used to delete a record or change the address of a person.

Print Labels: Use this option to print the list to Screen or Printer. Use <SPACEBAR> to pause and press any key to resume after pause. Note: If you are outputting to printer, make sure the appropriate baud rate is set.

PACKER: This program will remove spaces and REM statement text from your Basic Program. Use CLOADM"PACKER" to load proram from cassette or LOADM"PACKER",2048 to load from disk. If you have the cassette version and the disk controller is plugged in, use CLOADM"PACKER",2048.

Once the program is loaded, simply load your Basic Program and type: EXEC 1536 for cassette or EXEC 3584 if your disk controller is plugged in. This will automatically remove spaces and REM statement text from your program. NOTE: Please be patient! Long Basic Programs may take a while to compress. Also, this procedure will not work if you load your Basic Program at PCLEAR 0. Once you load PACKER, you may compress as many programs as you like.

RAM DISK (FOR 64K Cassette Only): This is an EXTREMELY useful utility. It creates an IN-MEMORY disk drive which is capable of storing 30,000 bytes. You can SAVE and LOAD Basic and ML Programs, Delete them, view the list of programs on "disk" and save the complete disk to cassette. To initialize RAMDISK, use:

CLEAR 200,&H7D00: CLOADM"RAMDISK": EXEC &H7D00

Here is a list of commands and their functions

COMMAND	FUNCTION
EXEC &H7D19	Displays filenames of "disk" programs (B = Basic, M = ML)
EXEC &H7D6B "filename"	Saves a Basic Program which is in memory to "disk"
EXEC &H7DD3 "filename"	Loads a Basic Program from "disk"

```
EXEC &H7E42 "filename",
    ST, EN, EX                  Saves a ML Program to disk with
                                Starting Address ST, Ending
                                Address EN and EXEC address EX.
EXEC &H7EE8 "filename"          Loads a ML Program from "disk"
EXEC &H7F16 "filename"          Deletes a file from "disk".
```

When you have filled the "disk" with all the desired programs, use the following procedure to save the "disk" to cassette for later use:

```
EXEC &H7FA2
A = (PEEK(&H9D)*256+PEEK(&H9E)) - 31232
B = PEEK(&H9D) *256+PEEK(&H9E)
    (Set your recorder to recording mode at this point)
CSAVEM"filename",1536,A,B
```

Rewind cassette and use SKIPF"filename" to verify that the "disk" has been saved to cassette.

To load "disk" from Cassette: First initialize RAMDISK. Then use CLOADM"filename" to load "disk" from cassette. When the "disk" loads, type:

```
POKE (PEEK(25)*256+PEEK(26))-1,0:EXEC &H7FC0:EXEC &H7D19
```

Presto! You have all the programs in your disk.

SUPER INPUT/LINE INPUT: You'll LOVE this one!! This utility will modify the input routine and give you many features such as the ones listed below:

```
KEY                     FUNCTION
------------------------------------------------------------

ARROW KEYS              Moves Cursor Left, Right, Up and Down
<CLEAR>                 Toggles Insert / Normal Mode
<SHIFT><UP ARROW>       Deletes Character under cursor.
```

Let us take a practical application of this routine. Suppose you were inputting an address as:

MICROCOMM SOFTWEAR / PO BOX 14/ FAIRPORT, NY 14450

In Normal Basic you would have to hit <SHIFT><BACKSPACE> and type the line again to correct the errors. But, using this utility, you just move the cursor to 'MM' of 'MICROCOM' and delete the character; move the cursor to 'EAR' and change it to 'ARE'; move the cursor over the '1' of '14', enter the insert mode and type 2 and move the cursor to '14450' and continue inputting the rest of the data. Thats how easy it is!! Besides using it in INPUT / LINEINPUT statements, you can also use this utility when typing in any Basic Program Line !

Use the following procedure to load the program (Disk Users should substitute LOADM for CLOADM):

```
X=PEEK(39)*256+PEEK(40)-512:PRINT X
```

Make a note of the number which the computer displays on the screen and use it in place of xx in the following commands:

```
CLEAR 200, xx: CLOADM"SINPUT",xx-3584: EXEC xx: POKE &H182,126
```
The orange cursor indicates normal mode and the "half" black cursor indicates insert mode.

TAPE ENCRYPTION: This program will allow password protection for your Basic Programs on cassette. First, enter option 1 from the menu (ENCRYPT PROGRAM). Enter the appropriate password (max 20 letters) and make a note of the password. Then simply load your Basic Program and type: EXEC 243. Now, CSAVE this encrypted program to cassette. Follow the same procedure if you have more than one Basic Program to encrypt. Note: This procedure will not work with Basic Programs that load at PCLEAR 0.

To load, decrypt and RUN your encrypted Basic Program, first, CLOAD "TAPECRPT". Enter option 2. At the 'FILENAME' prompt, enter the filename of your encrypted Basic Program. Then, enter the password. Note: When you enter the password, a series of 'X' will appear. The computer will recognize your password but will display 'X' for each letter for the password. Your program will load, decrypt and RUN.

TAPE INDEX SYSTEM: This program will allow you to maintain a directory of your programs on cassette (maximum 50 programs). Insert the tape you wish to read and enter option 1 from menu. This will read each file on cassette and pause between each file. When all your filenames on that cassette have been read, press any key when the computer is PAUSING and enter 'Y' to the 'ARE YOU SURE' prompt. Insert a blank cassette, enter option 2 and enter the filename. This will create a BASIC PROGRAM which you can CLOAD and place in the beginning of your cassettes for easier reference of your programs on that cassette.

TAPE-TO-TAPE COPY: This utility will help you make tape backups of non-protected programs. It will copy 95% of your Basic or ML programs from one tape to the other. Cassette users should use CLOADM"TAPETAPE",1536 to load program. If you have the disk controller plugged in, use CLOADM"TAPETAPE",3584 or LOADM"TAPETAPE",3584.

If you want to copy the entire tape, type: POKE &HFD,0 or type POKE &HFD,1 if you want to copy specific file(s). Cassette users use EXEC 1536 to execute program and disk users EXEC 3584. The program will read the files on your cassette and display them as 'FILENAME: xxxxxxx' as it goes along. When it finds the correct file, it will prompt you to insert DESTINATION and SOURCE cassettes into the cassette recorder.

DISK ZAPPER

DISK ZAPPER is an extremely useful disk utility which allows you to change the data on a disk and recover most of the data in case of a crashed disk.

NOTE: The best thing to do when using a Disk system is to have suitable BACKUPS. In case you do not have a BACKUP and your disk crashes, follow the procedure given below. Please remember that this program will not recover 100% of your data.

DISK STRUCTURE

A disk is divided into 35 tracks (numbered from 0 to 34) and each track is divided into 18 sectors (numbered from 1 to 18). Each sector is capable of holding 256 bytes of data. All the programs which you store on the disk are stored in these sectors. Track 17 keeps track of all the filenames of all the programs on a disk, and which tracks/sectors they are stored on. For more info on how programs are stored on Track 17, consult your disk manual.

To find out the sectors which are bad, first enter the VERIFY option from the menu. It will display the bad tracks/sectors and what type of error is present. Make a note of these bad tracks/sectors and the type of error. When the complete disk is verified, enter the 'LOOK AT SECTOR' option and look at these bad tracks/sectors. Usually, in case of CRC errors, you will observe that some garbage appears on the screen. Sometimes you will notice that there is some useful information (such as part of your text from your Basic Program) with this garbage. Press <ENTER> a few times. This will re-read the sector. Sometimes you will notice that while re-reading the sector, more useful info and less garbage appears on the screen. At this point exit from this part by pressing <CLEAR>. Enter 'Z' from the main menu. Press SHIFT-CLEAR. Enter the track/sector which you are currently editing for the TRACK, SECTOR option. This will write the track/sector back onto the disk. Note: CRC Errors are the errors that can be corrected easily. Some others such as 'DRIVE NOT READY' or 'SEEK ERROR' do not read any useful info. The best thing to do with these errors is to re-write the bad track/sector that has these errors back to the disk. This works 95% of the time. However, the part of the program that was in that bad sector is lost, but you can load in the rest.

When you have zapped all the bad track/sectors, LOAD the program if it is BASIC and EDIT it to fill in the incorrect lines. Save the corrected program to disk. In case of DATA FILES, load them in a word-processor, correct the garbage that is there and save them under a different filename.

LOOK AT SECTOR: Press 'L' to access this option. Enter the track and sector number when the programs asks you to. The program will display the sector on the top half of the screen. From there, the following keys will access the following functions:

KEY	FUNCTION
UP ARROW	Decrements track.
DOWN ARROW	Increments track.
LEFT ARROW	Decrements sector.
RIGHT ARROW	Increments sector.
<ENTER>	Re-reads the sector into memory.
<CLEAR>	Returns to main menu.

QUIT COCODISKZAP: Press 'Q' to access this option. This option will exit this program.

TRANSLATE: Press 'T' to access this option. It will allow you to toggle between TRANSLATE ON / OFF. If translate is ON and you are looking at a sector, some of the data which was on the sector will be TRANSLATed into its "proper" ASCII code. Most of the time, TRANSLATE ON will allow you to read sectors easily. Try toggling between ON and OFF and read a sector (say track 17, sector 3). Notice the difference between the data displayed on the screen.

VERIFY DISK: Press 'V' to access this option. This option will allow you to verify your disk.

ZAP SECTOR: This option will take the sector currently in memory and display it on top and the ASCII values for each of the characters in the sector on the bottom. It displays 8-bytes at a time. The cursor on the top half of the screen coincides with the flashing 'up arrow' on the ASCII codes so that you know what you are editing. Here is a list of commands which you can access from this mode:

KEY	FUNCTION
UP ARROW	MOVES CURSOR UP
DOWN ARROW	MOVES CURSOR DOWN
RIGHT ARROW	MOVES CURSOR RIGHT ONE BYTE
LEFT ARROW	MOVES CURSOR LEFT ONE BYTE
SHIFT-RIGHT ARROW	MOVES CURSOR RIGHT 8-BYTES
SHIFT-LEFT ARROW	MOVES CURSOR LEFT 8-BYTES
SHIFT-UP ARROW	EXITS TO MAIN MENU
SHIFT-DOWN ARROW	TOGGLES BETWEEN ASCII ON and OFF

Note: IF ASCII is ON, you can "type" directly on the sector. If ASCII is OFF, you must "type" on the sector by giving 2 letter ASCII codes in hexadecimal.

When you are done editing sector, press SHIFT-CLEAR. Then enter the track/sector you wish to save this changes to (it will usually be the same one which you are editing). The changes will be saved to disk.

NOTE: In case any of the sectors (between 2 and 11) on Track 17 have been crashed, the directory won't display properly when you type DIR. Unless you have a fairly good knowledge of Track 17, it will be extremely hard for you to re-construct that 'bad track/sector.