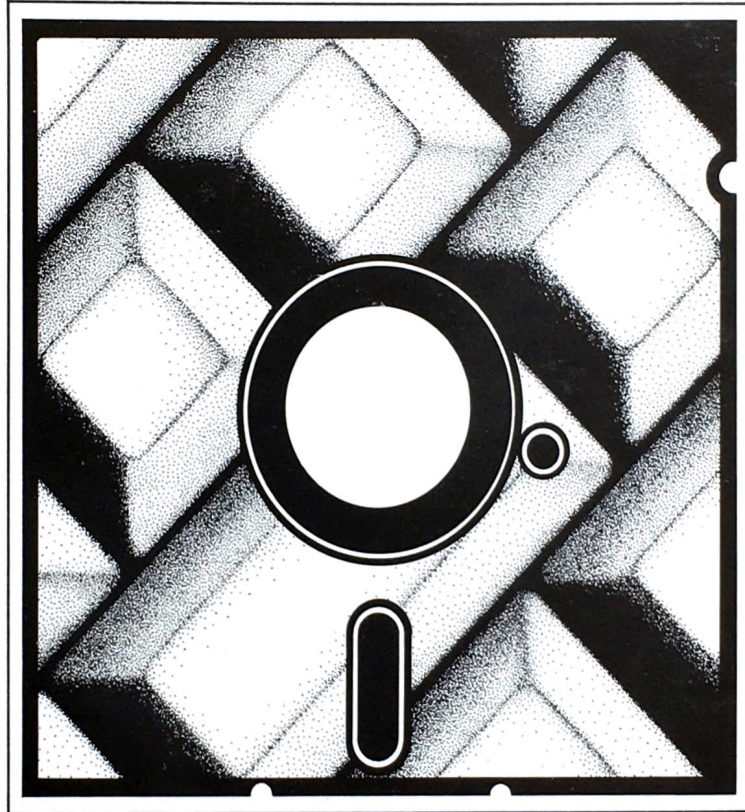


# **DISK UTILITY PACKAGE**

## **Version 1.0**

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EXIDY CP/M DISK UTILITY PACKAGE

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## I. DSKCNVRT DISK UTILITY - Version 1.0

### 1. INTRODUCTION

DSKCNVRT is a program used to copy and convert the data from a non-Exidy Format hard diskette to another hard diskette in the Exidy Format.

DSKCNVRT performs the conversion program by copying the data tracks of a non-Exidy format diskette from drive A to drive B in Exidy Format. The DSKCNVRT program runs under the CP/M Operating System from Exidy Incorporated, using two quad density and double density hard sectored Micropolis Drives Mod I or II, with associated hardware (i.e., Sorcerer, S100 unit, hard disk controller).

Before beginning the DSKCNVRT program the destination diskette MUST BE FORMATTED. If the destination diskette is not formatted and the DSKCNVRT program is begun, the video screen will respond with a "WRITE ERROR" message. To format your diskette refer to the FORMAT DISK UTILITY program in Section II of this manual.

No data will be written to tracks 0 and 1, the system tracks, during the DSKCNVRT operation. If you wish to place a CP/M system on the disk, perform one of the following operations:

- (1) Prior to performing the DSKCNVRT operation, copy an existing usable CP/M diskette to the new diskette, using the Exidy COPYDISK program (See Section III of this manual. The COPYDISK program will also format your diskette.); or
- (2) After the DSKCNVRT program has been completed, perform a SYSGEN operation to place the CP/M system on tracks 0-1 of the diskette. (Refer to the CP/M manual for instructions.)

NOTE: CP/M is a trademark of Digital Research.

### 2. CONVERTING

To convert a diskette, follow these steps (underlined information is entered by the user):

- (1) Insert a CP/M system diskette containing the DSKCNVRT program in drive A (drive 0, usually the upper drive.)
- (2) Boot CP/M (refer to the disk system user's guide).
- (3) Enter the DSKCNVRT command after the CP/M prompt A>, as follows:

A>DSKCNVRT<Return>

- (4) When the question "READY???" appears, follow the instructions on the video screen by removing the CP/M diskette from drive A, placing the source (non-Exidy format) diskette in drive A (0), and the destination (Exidy format) pre-formatted diskette in drive B (1).
- (5) When the diskettes are properly placed, type Y (for yes) to begin the conversion program, or N (for no) if it is necessary to terminate the operation.

Neither the Y nor the N response requires a carriage return. Also, only Y or N is accepted as a correct reply. If any other key is struck by mistake, operation will not continue until a Y or an N is entered.

CAUTION: Once Y is entered, all data on the destination diskette is irretrievably lost. Always make certain the destination copy diskette is inserted only in drive B.

The DSKCNVRT operation takes approximately eight minutes to complete. If the operation is successful, the message DSKCNVRT SUCCESSFULLY COMPLETED will appear on the screen. Another conversion may be made by answering Y (for yes) to the question MORE? and then proceeding with step 4 of the above procedure. If another conversion is not needed, enter N (for no).

If N is entered the screen will respond with the message:

PLACE SYSTEM DISKETTE IN DRV A

If you have already copied the CP/M program on the destination diskette and you wish to check the correctness of the conversion, remove the destination diskette from drive B and place it in drive A. Otherwise insert a CP/M system Exidy format diskette into drive A, and boot the CP/M.

3. EXAMPLE RUN

A>>DSKCNVRT

\*\* DSKCNVRT, ver 1 \*\*

SOURCE: DRV A, IN NON-EXIDY FORMAT

DESTINATION: DRV B, IN EXIDY FORMAT

READY??? Y

DSKCNVRT SUCCESSFULLY COMPLETED

MORE? N

PLACE SYSTEM DISKETTE IN DRV A

READY FOR WARM RESTART? Y

A>

4. ERROR MESSAGES

If an error occurs, a message is displayed describing the error. The DSKCNVRT will try to recover from an error before displaying an error message. This process takes about a minute. If an error occurs and a message is displayed the DSKCNVRT program will continue to run. This feature allows a recoverable conversion, even though one or more sectors may be damaged.

## II. FORMAT DISK UTILITY - Version 1.0

### 1. INTRODUCTION

FORMAT is a program which initializes diskettes. The FORMAT program is run using the CP/M Operating System from Exidy Incorporated, and Micropolis 16 hard sector MOD I and MOD II disk drives.

A diskette taken directly out of a box for the first time is not in a form which is usable by CP/M. First, one of the following two operations must be performed on the diskette:

- (1) Copy an existing usable CP/M diskette to the new diskette using the Exidy COPYDISK program (see the COPYDISK section of this manual for details).
- (2) FORMAT the diskette using the Exidy FORMAT program.

Note: CP/M is a trademark of Digital Research.

Formatting a diskette places special hardware and software information on each sector of the diskette. This allows CP/M system and the disk controller to read and write data on the diskette. It also fills each sector data area with a special character code (hexadecimal E5 or 0E5H) which is the IBM 3740 and CP/M convention for an "empty sector," i.e. one with no data. The CP/M directory of this diskette will indicate that no files are present.

All 16 sectors of each of the tracks are initialized in this way. Thus, if the diskette is later to be used as a CP/M system diskette and "booted," a SYSGEN operation must be done to place the CP/M system on tracks 0-1 of the diskette. See the CP/M documentation for details.



## 2. FORMATTING

To format a diskette, follow these steps (the underlined information is entered by the user):

- (1) Insert a CP/M system diskette containing the FORMAT Program in drive A (drive 0, usually the upper drive).
- (2) Boot CP/M (refer to the disk system user's guide).
- (3) Enter the FORMAT command after the CP/M prompt A>, as follows:  

A> FORMAT<Return>
- (4) Decide on which drive the formatting is to occur. If A, remove the CP/M system diskette.
- (5) In response to the question, FORMAT DRIVE A, B, C, or D?, enter the drive number you selected. It is not necessary to press the carriage return. Only A, B, C, or D is accepted, and operation will not continue until one of those letters is entered.
- (6) Place the diskette to be formatted (blank or non-blank) in the selected drive according to the instructions. Make certain the diskette does not have a write protect tab on.
- (7) Indicate all is ready by responding Y (for yes) to the question ARE YOU READY? If an N (for no) is entered, the FORMAT operation will be terminated. Neither response requires a carriage return, and only Y or N is accepted. If any other key is hit by mistake, operation will not continue until a Y or an N is entered.

Caution: Once Y is entered, all data on the diskette being formatted is irretrievably lost. Make certain the receiving diskette is inserted in the correct drive at all times.

While the FORMAT operation proceeds, a status report is given as each of the tracks is completed, as follows:

```
{FORMATTING}
                                DRIVE:dd TRACK:tt
{VERIFYING}
```

First, FORMATTING occurs to the selected drive (dd: 00=A, 01=B, 02=C, 03=D) for each track (tt). 0E5H data bytes and header information are written to each sector. Then, VERIFYING occurs and all the information is checked to see if it was written properly, again to the selected drive (dd) for each track (tt).

If the operation is successful, the message SUCCESSFUL FORMAT is displayed on the screen. Another FORMAT may be done by answering Y to the question, WANT TO TRY ANOTHER? (Y/N). This begins at step (4) of the above procedure.

If another FORMAT is not needed, or if an N response is entered to the ARE YOU READY? prompt, then a CP/M system diskette should be inserted into drive A (0), and any key may be pressed to reboot CP/M, according to instructions on the video screen.

### 3. EXAMPLE RUN

```
A> FORMAT<Return>
```

```
EXIDY MICROPOLIS DISK FORMAT PROGRAM VERSION 1.0
(C) COPYRIGHT EXIDY INC. 1979
```

```
FORMAT DRIVE A, B, C, OR D? B (Place diskette in B)
ARE YOU READY? (Y/N) Y
```

```
{FORMATTING}
                                DRIVE: dd TRACK:tt
{VERIFYING}
```

```
SUCCESSFUL FORMAT
```

Note: tt changes from 00 to the maximum track number.

WANT TO TRY ANOTHER? (Y/N) N

INSERT CP/M SYSTEM DISKETTE INTO DRIVE A (0)  
HIT ANY KEY WHEN READY ...<any key>

#### 4. ERROR MESSAGES

If an error occurs, a message is displayed describing the error, the operation is terminated, and another FORMAT may be done if desired.

READ ERROR	---	Error occurred during verify process while reading data on the formatted diskette. Try the FORMAT once again. If the error persists, a hardware problem exists in the drive or on the diskette in the drive.
WRITE ERROR	---	Error occurred during FORMAT writing. See "READ ERROR" above for procedure to follow.
HOME ERROR	---	Error occurred while "homing" the head. Probable drive problem.
INCORRECT CP/M VERSION	---	FORMAT only runs on Exidy CP/M versions 1.42/3 and any later version.
A DISK ERROR HAS OCCURRED ON DRIVE d ERROR CODE cc	---	This message is displayed for all errors to show the affected drive (d) and the CP/M hardware error code (cc). See the Exidy CP/M User's Guide for details on this code.
WRITE TO WRITE PROTECTED DISKETTE	---	Remove write-protect sticker tab before using the diskette in the drive (make certain the correct diskette is inserted).

### III. COPYDISK DISK UTILITY - Version 1.0

#### 1. INTRODUCTION

COPYDISK is a program for copying the entire contents of one diskette onto another. The resulting backup or archival copy is useful to have when dealing with important data. It is recommended that important diskettes such as CP/M masters be backed up on a regular basis.

Copying is accomplished on a byte by byte, sector by sector, track by track basis. The COPYDISK program runs under the CP/M Operating System from Exidy Incorporated, using a Micropolis MOD I and MOD II disk drive such as the Exidy Display Disk Unit (16 hard sectors). All 16 sectors of all the tracks are copied with this program, including the CP/M system on tracks 0 and 1.

Note: The reader should be familiar with the terms of the Digital Research Software License regarding copies of CP/M.

Note: CP/M is a trademark of Digital Research.

#### 2. COPYING

To copy a diskette, follow these 5 steps (underlined information is entered by the user):

(1) Insert a CP/M system diskette containing the COPYDISK program in drive A (this is usually the upper drive 0).

(2) Boot CP/M (refer to the disk system user's guide).

(3) Enter the COPYDISK command after the CP/M prompt "A>":

A> COPYDISK<Return>

(4) Follow the instructions on the video screen by placing the master diskette in drive A (0) and the future copy diskette in drive B (1).

(5) When this question appears on the video screen:

ARE YOU READY? (Y/N)

reply Y (for yes) to begin the copy, or

reply N (for no) if it is necessary to terminate the operation.

Neither the Y nor the N response requires a carriage return. Also, only Y or N is accepted as a correct reply. If any other key is struck by mistake, operation will not continue until a Y or an N is entered.

Caution: Once Y is entered, all data on the future copy diskette is irretrievably lost. Always make certain the future copy diskette is inserted only in drive B.

While the copy operation proceeds, a status report is given as each of the tracks is completed, as follows:

```
{ READING   }  
{ WRITING   }   DRIVE:dd   TRACK:tt  
{ VERIFYING }
```

This status message indicates which operation (READING, WRITING, OR VERIFYING) is in progress, which drive is involved (dd:00=A, 01=B), and which track is being accessed (tt:00 to the maximum track number).

These three operations are performed: reading the master diskette (drive A), writing that data to the copy diskette (drive B), and then rereading the written copy for verification.

If the operation is successful, the message SUCCESSFUL COPY will appear on the screen. Another copy may be made by answering Y (for yes) to the question WANT TO TRY ANOTHER?, and then proceeding with step 4 of the above procedure. If another copy is not needed, enter N (for no).

Insert a CP/M system diskette into drive A (use the copy you just made if you want to check its correctness) and hit any key to reboot CP/M.

### 3. EXAMPLE RUN

A> COPYDISK<Return>

EXIDY MICROPOLIS DISK COPY PROGRAM VERSION 1.0  
(C) COPYRIGHT EXIDY INC. 1979

·INSERT SOURCE DISKETTE INTO DRIVE A (0)  
INSERT DESTINATION DISKETTE INTO DRIVE B (1)

ARE YOU READY? (Y/N) Y

```
{ READING   }  
{ WRITING   }    DRIVE:dd  TRACK:tt  
{ VERIFYING }
```

SUCCESSFUL COPY

WANT TO TRY ANOTHER? (Y/N) N

An N response results in this directive:

INSERT CP/M SYSTEM DISKETTE INTO DRIVE A (0)  
HIT ANY KEY WHEN READY...<any key>

### 4. ERROR MESSAGES

If an error occurs, a message is displayed describing the error, the operation is terminated, and another copy may be made if desired.

READ ERROR --- Error occurred while reading data on the master diskette. Try the copy once again. If the error persists, a hardware problem exists in the drive or on the diskette in drive A.

WRITE ERROR --- Error occurred during writing on drive B. See "READ ERROR" for procedure to follow.

VERIFY READ ERROR --- Error occurred while reading the copied data on drive B. See "READ ERROR" above.

HOME ERROR --- Error occurred while "homing" the heads. Probable drive problem with A or with B.

INCORRECT CP/M VERSIONS --- COPYDISK only runs on Exidy CP/M version 1.42/3 and any later version.

A DISK ERROR HAS OCCURRED ON DRIVE d ERROR CODE cc --- This message is displayed for all errors to show the affected drive (d) and the CP/M hardware error code (cc). See the Exidy CP/M User's Guide for details on this code.

WRITE TO WRITE PROTECTED DISKETTE --- Remove write-protect sticker tab before using the diskette in drive B (make certain the correct diskette is inserted).

