C o p y C a r t + 2.0

MULTIMEDIA MANAGER

THE
CARTRIDGE COPY UTILITY
FOR THE ADAM (tm)

N O T I C E # #

L I M I T E D   W A R R A N T Y # #

W A R N I N G # #

N O T I C E S # #

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CopyCart+ 2.0

USER MANUAL

1. INTRODUCTION

This program is solely intended for the purchaser to make personal copies of ColecoVision compatible cartridges he/she has purchased. MISUSE of this program to illegally "pirate" copies of copyrighted material is an act of the user, and MMSG assumes NO responsibility for such actions. Furthermore, MMSG offers this program for sale "AS IS" and assumes no liability whatsoever in the event of damages of any kind as a result of the use of this program.

CopyCart+ has been designed to provide a simple, straightforward means of making media copies of ColecoVision compatible cartridges the user has purchased. However, failure to follow the directions described in this manual and the program prompts, could possibly result in the destruction of the distribution medium. In view of this fact, the user is advised to read this manual completely before using CopyCart+.

CAUTION: NEVER INSERT OR REMOVE A CARTRIDGE FROM THE CARTRIDGE SLOT WITH THE POWER ON, OR DAMAGE TO YOUR ADAM MAY RESULT.

2. PACKAGING

Although CopyCart+ contains no self-copy provision, we recognize that tape/disk media are sensitive to a variety of unforseen conditions that can easily destroy the program information. Therefore, we have provided the following safeguards:

- Because of the difference in tape/disk structures, the CopyCart+ main program will only execute if booted from the same media type (tape or disk) as the original. This restriction does not apply to the target media.

- Damaged media will be replaced by MMSG for a minimal charge.

3. LIMITATIONS

Some cartridges utilize software techniques that won't allow the program to run when loaded into your Adam's RAM. So if a cartridge copies without error but won't run, don't be alarmed. It's designed into the cartridge software and beyond our control.

CopyCart+ will copy only those cartridges designed for the ColecoVision. It will NOT copy cartridges designed to run in other systems or in expansion modules.

4. ABOUT THE CURSOR

CopyCart+ utilizes two types of keyboard-input modes as follows:

a.   LIVE KEYBOARD - This mode is used whenever a single key-stroke is all that is required from the operator. The program acts on the input as soon as the key is depressed. The cursor character will be a GRAPHIC BLOCK whenever this input mode is in effect.

b.   LINE INPUT - This mode is used anytime the operator is requested to input a MENU selection or filename, and requires that the input be completed by depressing the <RETURN> key. This mode also allows the input to be corrected by using the <LEFT ARROW> or <BACKSPACE> key. The cursor character will be an UNDERSCORE whenever this input mode is in effect.

5. PROGRAM LOADING

CopyCart+ 2.0 is written entirely in machine language and is provided on a self-booting tape or disk. The program can be loaded by placing the program medium in the first tape or disk drive and momentarily operating the COMPUTER RESET slide switch. The computer firmware will load and excute the CopyCart+ "loader." This "loader" will then load and verify the remainder of the program.

A title screen will be displayed while the program is being initialized. When this process has been completed, the main menu screen will be displayed. At this point, the tape or disk containing CopyCart+ should be removed from the drive and stored in a safe place.

NOTE: Data packs and disks are extremely sensitive to static charge and electromagnetic radiation generated by the computer and TV or monitor. NEVER lay program media close to any part of the computer or video-display device.

Depressing the <RETURN> key while the title screen is displayed will cause the program to advance to the CopyCart+ MAIN MENU.

6. MAIN MENU SCREEN

This screen is used to select any of the three major functions provided by CopyCart+. The MAIN MENU screen will be redisplayed after a selected function has been completed or aborted. Details of what each function does and how the various functions operate are covered below.

7. GENERAL INFORMATION

7.1   Drive Identification - CopyCart+ uses the following naming convention for identification of the tape and disk drives:

            "A" - First data-pack drive
            "B" - Second data-pack drive
            "C" - First disk drive
            "D" - Second disk drive

7.2   Critical errors - Fatal errors (e.g., Directory Write Error) will cause the current copy functions to be aborted. Exit from this type of error will be to the MAIN MENU.

7.3   Initialization Protected - The CopyCart+ disk or tape cannot be initialized via the BASIC "INIT" command or the BACKUP+ initialization feature. This protects the operator from accidently initializing the distribution media.

7.4   Quit Option - Anytime the "HIT <RETURN> TO CONTINUE" message is displayed, depressing the "Q" or "q" key will cause the current function to be aborted and the MAIN MENU to be displayed.

7.5   R, S, Q Options on Error - Anytime an error occurs during a copy function, a message will be displayed requesting the user to specify what possible action should be taken. These options are explained as follows:

            "R" - Retry the event that caused the error
            "Q" - Quit...abort function and return to MAIN MENU
            "S" - Skip...same effect as pressing "Q"

      Pressing <RETURN> at this point will default to "R".

7.6   Write-Protect - We strongly recommend that the distribution disk be protected with the WRITE-PROTECT TAB at all times.

7.7   Park Tape - CopyCart+ will "park" the target data pack at the directory block when a copy function has been completed. This will facilitate loading from the tape when next used.

7.8   Disk Formatting - CopyCart+ provides the capability to format disks.

7.9   Target Media Backup - Cartridge files stored on the target media can be copied or duplicated on other media with relative ease using BACKUP+, Disk Manager, etc.

7.10   When a CATALOG is displayed, there are 20 filenames displayed at one time. If more than 20 files are saved on the media, they may be seen by depressing "N". Once the end of the CATALOG is reached, depressing "N" again displays the first 20 files again. to leave the CATALOG and continue, simply depress <RETURN>.

8. DISPLAY MESSAGES

CopyCart+ has been designed to be "self-prompting" and easy to use. The prompt, status, and error messages are, hopefully, self-explanatory. However, for additional clarity, each message is defined as follows:

8.1 PROMPT/STATUS MESSAGES

"TARGET DRIVE (A,B,C,D)"
This prompt requests the operator to input the drive name containing the disk or tape onto which the cartridges are to be copied.

"NON-STANDARD DIRECTORY"
This message informas the operator that a directory can't be found. When using the COPY CARTRIDGE facility, this message indicates that NO files can be located, and a prompt is displayed to insert another TARGET disk or tape.

"NO CARTRIDGE FILES TO DISPLAY"
This message informs the operator that there are no programs saved on the target media.

"DELETING . . . filename"
This message is displayed if the file being copied already exists on the target media and is not LOCKED. It also indicates that the target file HAS been overwritten or deleted.

"WRITING CARTRIDGE TO TAPE"
"WRITING CARTRIDGE TO DISK"
The file "filename" is being written from the cartridge onto the target media.

"HIT <RETURN> TO CONTINUE"
This prompt indicates that the program has stopped and is waiting for the operator to take some action or read a previously displayed message. Hitting <RETURN> at this time will cause the program to advance to the next sequential step. If a "Q" is hit at this time, the program will exit to the MAIN MENU.

"INSERT TARGET IN DRIVE x"
This prompt requests the operator to insert into drive "x" the tape or disk to be copied (written).

"REPLACE TARGET TAPE/DISK"
This message requests the operator to insert another tape or disk into the target drive and is accompanied by other message(s) explaining the reason for replacing the media.

"filename LOCKED"
The file "filename" on the target drive is LOCKED and can't be written or deleted. The cartridge will not be copied.

"CARTRIDGE NOT COPIED"
When another status/error message is accompanied by this message, the cartridge has NOT been copied to the target media.

"COPY COMPLETE"
The cartridge-copy operation has been successfully completed.

"MAKE ANOTHER COPY (Y,N)"
Replying "Y" to any of the above prompts will cause the previous operation to be repeated. Using the previously selected target drive. Replying "N" will cause an exit to the MAIN MENU.

"FILE NOT FOUND"
The specified filename was not found on the target media. Check your spelling!

"POWER DOWN SYSTEM, INSERT CARTRIDGE, AND REBOOT COPYCART+"
This message is displayed when attempting to "COPY CARTRIDGE" without a cartridge being inserted into the system. It is intended to remind the operator to POWER DOWN THE SYSTEM BEFORE REMOVING AND/OR INSERTING A CARTRIDGE IN THE CARTRIDGE SLOT.

"NO FILES ON MEDIA"
The target media contains no cartridge files to display or run.

"LOADING . . . filenumber filename"
A cartridge file from the target media is being loaded for execution.

"FORMAT STARTED"
The disk media is being written with format code. All data, if any, will be lost.

"FORMAT COMPLETE"
The target media has been successfully formatted.

8.2 ERROR MESSAGES

**"BLOCK * *   READ ERROR * *
        DRIVE x"**
**"DIRECTORY * * READ ERROR * *
        DRIVE x"**
While CopyCart+ was attempting to read the directory of a block on DRIVE x, an error was generated. If the directory is not readable, the copy function was be aborted. If this error occurs frequently, try cleaning the drive's read/write head.

**"BLOCK * *   WRITE ERROR * *
        DRIVE x"**
**"DIRECTORY * * WRITE ERROR * *
        DRIVE x"**
While CopyCart+ was attempting to write the directory or a block on DRIVE x, a write error was generated. This is normally caused by damaged formatting or a dirty read/write head.

"* * TARGET MEDIA FULL * *"
This message is displayed when either the tape or disk being written to has no space left in the directory for additional entries, or there are no free blocks left for file data.

"* * DEFECTIVE MEDIA * *"
This message indicates that the tape or disk identified in an earlier message is unusable and must be replaced. The disk might need reformatting.

"* * COPY ABORTED * *"
The copy has been terminated prematurely with unpredictable results. A fatal error is normally the cause of this message.

"* * TARGET FORMAT ERROR * *"
An attempt was made to copy a cartridge to a media not created by the CopyCart+ "CREATE TARGET" menu item.

"* * INIT ERROR * *"
While CopyCart+ was attempting to "CREATE TARGET", an error occurred on the target media. The target media contains CopyCart+, BACKUP+, or damaged blocks.

"* * FORMAT ERROR * *"
The target disk media was not formatted.

"* * DEVICE NOT AVAILABLE * *"
Most likely the selected drive was not powered up when the ADAM was booted.

"* * DISK WRITE PROTECT * *"
The write protect tab was in place when a format was attempted.

9. CREATE TARGET MEDIA

"CREATE TARGET MEDIA" allows you to create a self-booting disk or tape that can be used to save and run cartridge programs. Some important characteristics of the target media created are:

- The target media will have a standard directory that can be displayed as a "catalog" in BASIC, BACKUP+, and CopyCart+.

- The volume name displayed by the catalog is "CopyCart".

- BASIC and BACKUP+ can initialize the target media, so be careful.

- The program required to boot and run cartridge files is written to the target media.

- The number of "BLOCKS LEFT" will be determined for the target media either from keyboard input or by default.

9.1 USING CREATE TARGET MEDIA

First, insert the cartridge to be copied into the cartridge slot, turn on the Adam, and boot CopyCart+. When "CREATE TARGET MEDIA" is selected, a prompt for the "TARGET DRIVE (A,B,C,D)" will be displayed. Select the drive that will be used for the creation of the target media. (Remember all data presently on the target media will be lost.)   Next, insert the target media into the selected drive. After verifying that the correct media is inserted, depress the <RETURN> key.

If the target media is a disk you will receive the prompt "FORMAT DISK (Y/N)". Type "Y" and the target disk will be formatted; "N" and format is skipped. Next you will be prompted "# DECIMAL BLOCKS ON DRIVE". Reply based on the following table:

160 = Standard ADAM disk drive
320 = Two head 40 track disk drive
720 = Two head 80 track disk drive

NOTE: CopyCart+ will accept values other than those specified above (up to 32767) in case you are using a non-standard drive format (e.g. 640k blocks).

A check is made at this time to see if you have inserted the CopyCart+ or BACKUP+ distribution media. If so, an "INIT ERROR" message will appear, prompting you to replace the media.

The status message "INIT STARTED" is now displayed. Upon successful creation of the media, the message "INIT COMPLETE" will be displayed, followed by the prompt, "CREATE ANOTHER DISK/TAPE (Y/N)". Reply "Y" to restart CREATE TARGET MEDIA using the same drive previously selected, or reply "N" to return to the MAIN MENU.

10. COPY A CARTRIDGE

"COPY A CARTRIDGE" provides a method of copying a cartridge to the target media. The program is copied in standard format as a "C"-entent file with the filename supplied at the "FILENAME" prompt. This standard directory allows you to copy/backup the target media.

CAUTION: NEVER INSERT OR REMOVE A CARTRIDGE FROM THE CARTRIDGE SLOT WITH THE SYSTEM POWER ON, OR DAMAGE TO YOUR ADAM MAY RESULT.

If you inadvertently insert or remove a cartridge with the power on, you may notice such unexpected events as activation of the printer, disruption of the screen display, or loss of keyboard control, and at the very least you will have to hit COMPUTER RESET and reboot CopyCart+.

Because multiple programs can be copied to the target media, the length of the cartridge program is automatically calculated by CopyCart+ to reduce the file space required on the target media for saving the program. If the cartridge length is 0 (no cartridge inserted), you will then be prompted to power down and insert a cartridge. This guards against a file being written to the target media containing useless data, and thus minimizes file-space usage.

10.1 USING COPY A CARTRIDGE

After selecting the target drive, you will be prompted to insert the target media and hit <RETURN>.

The target directory is checked for the proper format, and if so, a catalog is displayed, followed by a prompt to input the filename to be used for the cartridge copy. The catalog is displayed to aid in selecting the filename to be used. If the same filename already exists on the target media, it will be replaced (overwritten) with the new cartridge data. If the filename is not legal (contains too many characters, control characters, etc.), the operator will be reprompted for a filename.

A check is now made to determine if a cartridge is inserted in the slot. If not, a message is displayed to power down the system and insert a cartridge.

If a cartridge is inserted, the length of the program is calculated, and a check of the target directory is made to determine if room exists on the target media to store the cartridge program. If so, "WRITING . . .filename" will be displayed. When the copy has been made, "COPY COMPLETE" will be displayed, followed by the prompt "COPY ANOTHER TAPE/DISK". Reply "Y" to copy the cartridge to the previously defined target drive while allowing a new filename to be input. Reply "N" to return to the MAIN MENU.

11. DELETE A FILE

There are times when you will want to delete a file without having to create/initialize the media and losing all the files. This function allows you to selectively delete individual files and to recover the media space used by those files.

This function could be used to change a filename by deleting that file and copying it again, using the "COPY A CARTRIDGE" menu selection.

11.1 USING DELETE A FILE

When "DELETE A FILE" is selected, the target drive is checked to see if it contains a good target tape/disk. If not, you will be prompted to insert the target media. The catalog is then displayed, followed by the prompt "FILENAME TO DELETE". If the filename selected exists in the target directory, the message "DELETING filename" is displayed. If the filename selected does not exist, "FILE NOT FOUND" will be displayed.

After the file has been successfully deleted, you will be prompted to "DELETE ANOTHER FILE (Y/N)". Replying "Y" will prmpt for another filename to be deleted, using the previously defined target drive. Reply "N" to return to the MAIN MENU.

12. BOOTING THE TARGET MEDIA

The target media can be booted from any active storage device (disk/data drives 1 or 2). Once booted, a catalog of all "C"-type files stored on the media will be displayed, preceded by a program number 0 through 9.

You are then prompted for a program number. Locate the number to the left of the program to be run and, using a game controller, input that number. The status message "LOADING . . . # name" will then be displayed, indicating that the selected program is loading.

If the media contains more than 10 programs, additional programs can be displayed by pressing the "#" on the game controller.

To select another program, depress COMPUTER RESET, and the catalog will be displayed once again. Make the selection, and what do you know -- a new program and the system didn't have to be powered down to change the cartridge!