

# FAST HACK'EM V6.00

**FOR THE COMMODORE C-128  
COMPUTER SYSTEM**

**Designed & Coded  
by**

**Mike J. Henry**

---

This software product and documentation is  
copyrighted (C) 1985-1988  
by

**Basement Boys Software**

---

## CUSTOMER LICENSING AGREEMENT

Basment Boys Software hereby grants you upon receipt of this product, a non-exclusive license to use the enclosed software subject to the following terms and restrictions:

You may make backup copies of this software product as long as they are intended for your personal use only, and in conjunction with your personal computer system(s).

You may not copy or otherwise reproduce this product in whole or part except as expressly permitted in this agreement.

You may use this software product to make backup copies of your personal software library as long as they will be for your personal use only. Archival copies of your personal copyrighted software must remain only in your personal possession.

A violation of this agreement is a violation of the Federal Copyright Law and is punishable by fine and/or imprisonment.

This software product and documentation is  
copyrighted (C) 1985-1988 by  
**Basment Boys Software.**

# Table of Contents

---

<b>INTRODUCTION</b>	<b>4</b>
BACKUP UTILITIES . . . . .	4
SYSTEM REQUIREMENTS . . . . .	4
<b>BEGINNERS GUIDE</b>	<b>5</b>
BOOTING THE DISK . . . . .	5
<b>THE MODULES</b>	<b>6</b>
MODULES FOR A SINGLE 1571 . . . . .	6
FAST COPY . . . . .	6
(DIRECTORY, COPY, BOOT, F7) COPY . . . . .	6
F1 WRITE VERIFY . . . . .	6
FILE COPIER . . . . .	7
(DIRECTORY, BOOT) . . . . .	7
COPY FILES . . . . .	7
SCRATCH FILES . . . . .	8
FORMAT . . . . .	8
@ DISK COMMAND . . . . .	9
RENUMBER DRIVE . . . . .	8
F1 SOURCE DRIVE . . . . .	9
F2 DEVICE # . . . . .	9
F3 DESTINATION DRIVE . . . . .	9
F4 DEVICE # . . . . .	9
F7/F8 SECTOR SKEW . . . . .	9
MODULES FOR TWO 1571'S . . . . .	9
FAST COPY . . . . .	9
(DIRECTORY, COPY, BOOT, F7) COPY . . . . .	10
FIX 2ND DRIVE NUMBER . . . . .	10
F1 SOURCE/DESTINATION . . . . .	10

FILE COPIER . . . . .	10
<b>NIBBLER . . . . .</b>	<b>10</b>
(D)IRECTORY, (C)OPY, (B)OOT . . . . .	.11
(F)IX 2ND DRIVE NUMBER . . . . .	.11
(F1) SOURCE/DESTINATION . . . . .	.11
(F3/F4) STARTING TRACK . . . . .	.11
(F5/F6) ENDING TRACK . . . . .	.11
SHFT H)EADER GAP . . . . .	.11
SHFT T)AIL GAP . . . . .	.11
<b>MODULES FOR A 1581 DRIVE . . . . .</b>	<b>12</b>
FILE COPIER . . . . .	12
DRIVE MONITOR . . . . .	12

---

**FREQUENTLY USED COMMANDS** **14**

(D)IRECTORY . . . . .	14
(C)OPY . . . . .	14
(B)OOT ORIGINAL . . . . .	14
(F7) COPY (TOP/BOTTOM/BOTH) . . . . .	14

---

**SPECIAL TIPS & NOTES** **16**

OTHER DEVICES ON THE SERIAL BUS . . . . .	16
QUICK MODULE RESTART . . . . .	16

---

**FUTURE SOFTWARE UPDATES** **17**

DESCRIPTION . . . . .	17
ORDERING A MAJOR UPDATE . . . . .	17
ORDERING A PARAMETER DISK . . . . .	17

---

# INTRODUCTION

---

---

## BACKUP UTILITIES

---

Congratulations on purchasing the finest disk duplication system available for the Commodore 128 home computer. Many thousands of hours of research have been spent in designing the software used in this package in order to achieve a product that would equal or surpass the speed and ability to duplicate nearly any disk, protected or not, of a \$10,000 hardware disk duplication system.

By utilizing the standard Commodore hardware to it's fullest extent, we have designed Fast Hackem.

---

## SYSTEM REQUIREMENTS

---

In order to use this software product you must have the following equipment:

A Commodore 128 or 128-D computer, and

A composite\RGB monitor or TV set.

This software product is compatible and has been fully tested with the following serial disk drives:

Commodore 1541, Commodore 1571 (old or new ROM), and the Commodore 1581 3.5" drive.

# BEGINNERS GUIDE

## BOOTING THE DISK

With the Fast Hack'em disk in the drive, reset the system using the reset button on the side of the computer. Fast Hack'em will automatically load.

You may also boot Fast Hack'em by inserting the disk into the drive and type:

```
BOOT
```

or, type:

```
LOAD "?*", 8, 1
```

The main menu should appear in a few seconds. If not, press the reset button on the side of the computer.



We strongly recommend making a backup copy of this software product and keep the original in a safe place. Use either the single or two drive 1571 fast copier for this.

# THE MODULES

---

Module selections must be made from the main menu with the Fast Hack'em disk in the drive (device 8).

---

## MODULES FOR A SINGLE 1571

---

### FAST COPY

---

This module copies the entire top or bottom side of a standard diskette in about a minute. Full write verify may also be enabled. Works in both 40 and 80 column modes.

To load, select item "A" from the menu.

#### (D)IRECTORY, (C)OPY, (B)OOT, (F7) COPY

---

See under "Frequently Used Commands".

Any read/write errors will be displayed on the screen at the end of each pass. Copying each side of a diskette takes two passes.

#### (F1) WRITE VERIFY

---

If verify mode is turned on, after writing the data on the destination disk, the data will be read back into the computer and checked against the data that was written out. This will verify that the backup copy is the same as the original. Using verify mode will add about twenty seconds to the copy time.



You may use this module to copy diskettes that were designed for use only on the C-64 by setting the COPY side status to TOP only. This will allow you to take advantage of the speed and buffer size of the 128 using a single drive to copy these diskettes.

---

**FILE COPIER**

---

Copy or scratch individual or multiple files on diskettes, copy files fast to and from different types of drives, fast format diskettes, or send disk commands to a drive. Only works in 80 column mode.

To load, select item "E" from the menu.

---

**(D)IRECTORY, (B)OOT**

---

Shift-D displays the directory of the disk in the destination drive. See under "Frequently Used Commands".

---

**(C)OPY FILES**

---

Copy files from the source drive to the destination drive. Make sure the source diskette is ready before using this command. Upon execution of this command, the directory will be read into the computer and then displayed in a scrolling window on the screen.

Use the following commands to select the files you would like to copy:

**Cursor Controls-** The cursor **UP, DOWN, LEFT, RIGHT, HOME,** and **shift-HOME** keys are all supported.

**[SPACE]-** Toggle the filename under the cursor. A left arrow will appear next to the filename showing that the file has been selected. Hit **[SPACE]** again to de-select the file.

**(T)oggle-** Toggle all the filenames in memory.

**[RETURN]-** Begin copying the files.

**(R)eturn-** Exit to the File Copier's main menu.

### **(S)CRATCH FILES**

---

Scratch files from the disk in the source drive. Select the files you want to scratch using the same commands as for copying files. After you are done selecting the files you would like scratched, hit [RETURN] to begin removing them.

Shift-S performs the scratch function on the disk in the destination drive.

### **(F)ORMAT**

---

Fast formats the diskette in the destination drive. At the screen prompts, enter the filename, up to sixteen characters, and then the 2 character ID code. Insert the disk you would like formatted into the destination drive and hit [RETURN]. The disk will be completely erased, formatted, the BAM written, and the directory initialized. Fast format routines for the 1541, 1571, and 1581 drives have been incorporated into the copier. Drive 0 and 1 SLOW type drives will be issued a normal format command (ie. N0:DISK NAME,ID).

### **(@) DISK COMMAND**

---

Send any valid disk command to the source drive (ie. R0:NEWNAME=0:OLDNAME, V0, etc.).

Shift-@ will send the disk command to the destination drive.

### **(R)ENUMBER DRIVE**

---

Allows software renumbering of a drive. At the prompts, enter the device number of the drive you would like renumbered and then enter the number you would like to change it to. Device numbers must be between eight and fifteen.

**(F1) SOURCE DRIVE**

---

Select the type of disk drive you are using as the source drive. Fast read routines have been incorporated into the copier for the 1541, 1571, and 1581 drives. Drive 0 and 1 SLOW are for drives other than the ones listed above. By selecting SLOW, the copier will revert to using the 128's normal serial read routines.

**(F2) DEVICE #**

---

Select the device number of the source drive (8 to 15).

**(F3) DESTINATION DRIVE**

---

Select the type of disk drive you are using as the destination drive. Fast write routines have been incorporated into the copier for the 1541, 1571, and 1581 drives. Drive 0 and 1 SLOW are for drives other than the ones listed above. By selecting SLOW, the copier will revert to using the 128's normal serial write routines.

**(F4) DEVICE #**

---

Select the device number of the destination drive (8 to 15).

**(F7)/(F8) SECTOR SKEW**

---

This is the number of sectors spaced between each file block when the file is written out. The default setting is ten for a 1541, five for a 1571, one for a 1581, and drive 0 and 1 SLOW are not adjustable.

---

**MODULES FOR TWO 1571'S**

---

**FAST COPY**

---

Copy the entire top or bottom side of a standard diskette in about 30 seconds. Works in both 40 and 80 column

modes.

To load, select item "B" from the menu.

Before you can copy any diskettes, you must first define the source and destination drive numbers (use the Fix 2nd Drive command).

### **(D)IRECTORY, (C)OPY, (B)OOT, (F7) COPY**

Shift-D displays the directory of the disk in the destination drive. See under "Frequently Used Commands".

### **(F)IX 2ND DRIVE NUMBER**

This command allows you to software re-number a drive to device 9 for use as a destination drive. Just follow the screen prompts.

### **(F1) SOURCE/DESTINATION**

This command toggles the source and destination drives.

## **FILE COPIER**

Copy or scratch individual or multiple files on diskettes, copy files fast to and from different types of drives, fast format diskettes, or send disk commands to a drive. Only works in 80 column mode.

To load, select item "C" from the menu.

The default source and destination drives are setup for two 1571's. Refer to the single drive version for an explanation of the commands.

## **NIBBLER**

Backup each side of a protected diskette with standard read errors (20,21,22,23,27,29), renumbered tracks, extra or duplicate half tracks, or non-standard data blocks in under one minute. This module currently only

works in 40 column mode.

To load, select item "F" from the menu.

Before you can copy any diskettes, you must first define the source and destination drive numbers (use the Fix 2nd Drive command).

### **(D)IRECTORY, (C)OPY, (B)OOT**

See under "Frequently Used Commands".

### **(F)IX 2ND DRIVE NUMBER**

This command allows you to software renumber a disk drive for use as a destination drive. Just follow the screen prompts.

### **(F1) SOURCE/DESTINATION**

Toggle the source and destination drives.

### **(F3/F4) STARTING TRACK**

Select the starting track from 1 to 70.

### **(F5/F6) ENDING TRACK**

Select the ending track from 1 to 70.

### **SHFT H)EADER GAP**

This gap sets the number of bytes written between the end of a sectors' header and the start of the data block.

### **SHFT T)AIL GAP**

This gap sets the number of bytes written between the end of a sectors' data block and the following sectors' header.

---

## MODULES FOR A 1581 DRIVE

---

### FILE COPIER

---

Copy or scratch individual or multiple files on diskettes, copy files fast to and from different types of drives, fast format diskettes, or send disk commands to a drive. Only works in 80 column mode.

To load, select item "D" from the menu.

The default source and destination drives are setup for a 1581 drive. Refer to the 1571 single drive version for an explanation of the commands.

### DRIVE MONITOR

---

This is a machine language monitor that works in the 128 mode and can modify code in the computer or a disk drive (device 8 or 9). It resides in memory at \$6000-\$7300 and works best in 80 column 2 mhz mode. It works fine in 40 column mode, just not as fast.

A brief summary of the commands available is outlined below:

**O**- operation mode. O8 or O9 = drive, O = computer.

**R**- display computer's registers.

**M**- display memory (ie. M 0000 FFFF)

**D**- disassemble memory (ie. D 6000)

**A**- assemble code (ie. A 1C00 LDA #\$41)

**L**- load file (ie. L "FILENAME",08)

**S**- save file (ie. S "FILENAME",08,1C00,2000)

**T**- transfer memory (ie. T 1C00 2000 4000)

**TC**- transfer to drive (ie. TC 1C00 2000 0300)

**TD**- transfer to computer (ie. TD 0300 07FF 1C00)

**H**- hunt bytes in memory (ie. H 1C00 2000 41 42 43)

**G**- begin execution (ie. G 1C00)

**;-** modify registers

**:-** modify memory

**,-** modify disassembled memory

**X**- Exit to BASIC.

The prompt character "." denotes that the monitor is currently operating in the computer while the prompt character "]" denotes current operation in the disk drive. All numerical data must be entered in hex. Upon each entry into Drivemon (via cold start or BRK), zero page is saved. Displaying or modifying zero page with the "M" and ":" commands operates in the zero page buffer and any zero page values that have been modified will be set when a "G" or "X" command is invoked.

---

# FREQUENTLY USED COMMANDS

---

These are commands that are used in most of the modules. To see exactly which modules these commands are used in, look in the sections of this manual under each specific module.

---

## (D)IRECTORY

---

Displays directory of the diskette in a drive. While the directory is being displayed, you may hit the [SPACE] bar to pause the listing and then hit it again to continue it, or hit RUN/STOP to stop the listing.

---

## (C)OPY

---

Copy a diskette. When prompted to insert the source or destination diskette, put it in the drive and press [RETURN]. The program automatically formats the destination diskette as it copies, so you don't need to use a preformatted diskette.

---

## (B)OOT ORIGINAL

---

Allows you to return to the Fast Hack'em main menu so you may select and load another module. You will be prompted with "Are You Sure?". Put the Fast Hack'em disk in the drive (device 8) and hit "Y".

---

## (F7) COPY (TOP/BOTTOM/BOTH)

---

Selects which side(s) of the disk to copy. If you select to copy the bottom side or both sides of the disk and the disk you will be backing up is only top sided, a read error will occur if a directory or copy command is attempted

because the backside of the diskette will not contain valid data.

---

# SPECIAL TIPS & NOTES

---

---

## OTHER DEVICES ON THE SERIAL BUS

---

You may have other devices connected to the serial bus (ie. printer, other drives, etc.) but only up to three if you will be using an MSD drive.

---

## QUICK MODULE RESTART

---

While using any module, you may hit [RUN/STOP]-[RESTORE] to restart it. However, if you do this while a disk is being copied, you must reset the drives or wait for the copy to complete before continuing.

»» When using the single drive modules, you must reset the disk drive in order to continue.

---

# FUTURE SOFTWARE UPDATES

---

---

## DESCRIPTION

---

Major updates of the C128 and C64 versions will be released periodically. These updates include all the parameters to date, speed and performance improvements in existing software, additional software utilities, documentation improvements, and public request. Parameter updates contain all the latest parameters created since the last major update.

---

### ORDERING A MAJOR UPDATE

---

Major disk updates of the C128 version are \$15.00. The C64 version is also available to you for \$12.00. You may order both versions at once for \$20.00 (versions are on separate diskettes).

---

### ORDERING A PARAMETER DISK

---

The latest parameters are available on a diskette for \$6.00. This diskette contains all the latest parameters created to date since the last major update.

## 90-DAY LIMITED WARRANTY

Basement Boys Software warrants to the original purchaser of this computer software product that the recording medium on which the software programs are recorded will be free from defects in materials and workmanship for ninety days from the date of purchase. If this software is discovered to be defective within the warranty period, return it to Basement Boys Software/Customer Service Dept. for replacement free of charge, provided that the returned media has not been subject to misuse, damage, excessive wear or tampering.

If the software proves to be defective after the initial warranty period, ship the software prepaid to us and enclose a check or money order for \$5.00 as a replacement fee.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. ANY APPLICABLE IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS, ARE LIMITED TO A PERIOD OF NINETY DAYS FROM THE DATE OF PURCHASE. BASEMENT BOYS SOFTWARE SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESSED OR IMPLIED WARRANTIES ON THIS PRODUCT.

Some states do not allow limitations on how long an implied warranty last or the exclusion or limitation of incidental or consequential damages, so the limitations or exclusions set forth may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Defective media should be returned to:

**Basement Boys Software  
Customer Service Dept.  
P.O. Box 30901  
Portland, OR 97230-0901**

Please include a brief statement describing the defect.

**Copyright (C) 1985-1988 Basement Boys Software**

