

# FASTDUPE 512

(BACKUP LIGHTNING 512K)

The fastest disk backup program for the Color Computer 3  
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## Introduction

Backup Lightning 512k is THE fastest way to backup and duplicate any type of diskette on the CoCo 3. ColorVenture designed and Chris Babcock wrote this program to be so fast that nothing else can compare. In fact, Backup Lightning 512k can format and copy a double-sided 40-track disk in less time than it takes an IBM PC to just format one!

The secret? First, read the master disk entirely into memory. This way, when you are making multiple copies, you never have to go back and re-read it, and you can use ALL your drives to make the copies! Or, if you only have one drive, this program copies a whole diskette, single- or double-sided in just one pass, so it can save aggravating disk swaps. Next, it uses special Lightning Read, Write, and Format routines that we developed to add increased speed not attainable under RSDOS or OS-9. And it formats and copies in one operation, so you don't have to pre-format your disks.

But in addition to power, Backup Lightning 512k is incredibly flexible. You can copy single- or double-sided disks of 35 or 40 tracks, or single sided 80-track disks. It will read and write both RSDOS and OS-9 disks. It will use all of your drives to make the copies, or only some of them. And, Backup Lightning lets you use faster "track step rates" to allow your drives to work at maximum speed.

All this in an amazingly easy-to-use program. You can even save your common setups to disk to let you get started making copies quickly.

There is no faster way to duplicate disks on the CoCo 3!

## Loading Backup Lightning

Place the Backup Lightning disk in the drive and type LOADM"BACKUP" <enter>.

Backup Lightning will load and start automatically. The first thing it does is to check the disk for the default configuration file, BACKUP.CF1. If it finds the file, it will go to the main menu. If not, it will go to the configuration menu.

## About the Display Screen

For easy operation, Backup Lightning's screen is divided into four areas. The top area displays the program name, version number, and copyright message.

Below that is the configuration listing. This tells you at all times how Backup Lightning is configured: the number of tracks and sides it is set to read and write, the track step rate, which drives should be used as target drives (to write out the data), and the configuration number in use (or NONE if the config was not loaded from disk).

Following that is the menu/status area. This is where you can select options and where the current program status will be displayed during disk operation.

At the bottom of the screen is the message area. This area always has directions telling you what to do, so look here if you get confused as to what you are supposed to be doing. When an important message comes up, such as to switch disks, this area will flash colors to get your attention.

## The Main Menu

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At any point during the program (except during disk access), you may hit <BREAK> to go back to the main menu. From here you have the options of Duplicating a Disk, Changing the Configuration, or Quitting. Press the first letter of what you wish to do, or use the arrow keys to move the highlight bar up and down and press Enter.

## Changing the Configuration

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Upon entering this area, you will be asked if you would like to use a custom configuration. You may save up to 5 custom configurations which you can load at a touch. If you answer Yes, it will scan the disk, and display the number of each configuration, followed by its options: number of sides and tracks, step rate, and the drives selected as target drives. Use the arrow keys to move the black cursor over the number of the configuration you would like to use and press Enter.

If you answer No, or if there are no configurations on the disk, Backup Lightning will ask a series of questions, starting with the number of tracks (35, 40, or 80), the number of sides (note that 80 track disks can only use 1 side so this question is skipped), the track step rate, and whether you wish to use each particular drive as a target drive. This last option lets you use only some of your drives. For instance, drive 0 and 1 are 40 track and drive 2 is 35 track, if you are doing a 40 track copy, you would want to answer Yes to drives 0 and 1, but no to drives 2 and 3.

The track step rate is the speed at which your drive can move its head. The faster the better - most new drives can handle the 6ms step rate. All drives can handle the slow 30ms step rate, and most all drives can take 20ms. If you try a faster speed (lower number) and hear your head just vibrating in place, or get many errors, raise the speed. Be sure to set a speed that is useable by all your drives. If you have one drive that can handle 6ms, but one that can only do 20ms, set the speed to 20ms if you plan to use both drives to make copies. Also, note that all Tandy disks use 35 tracks. If you try to read them as 40 tracks you may get errors. Set the number of tracks to 35 if this happens.

After answering the questions, Backup Lightning will ask you for the number of this config. Press N if you do not wish to save this configuration (for use this session only), or a number from 1 to 5 if you wish to save it. Note that configuration number 1 is automatically loaded when the program is loaded, so you will probably want to put your most commonly used configuration as number 1.

If you make a mistake at any point while answering the configuration questions, hitting <Clear> will allow you to re-answer the questions. <Break> will abort back to the main menu.

## Duplicating a Disk

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Be sure that the configuration listed in the configuration area is the one you wish to use before selecting this option. If it isn't just hit <BREAK> to get back to the main menu, and select Change Configuration.

After selecting Duplicate Disk, you will be asked for the number of the drive that the source disk (the disk you wish to copy) is in. Be sure to place the disk in a drive first, then hit the number of the drive it is in.

The disk will be read into memory. Then, a message will appear for you to remove that disk, and insert blank disks into all the drives you have selected with a YES in the configuration. If you wish to quit making copies, hit the <BREAK> key at this point to return to the main menu. Otherwise, insert the new disks and hit <ENTER>.

During a read or write, the <BREAK> key will not work. This is to give the program better speed. If you wish to abort making a copy in the middle of a cycle, simply open the disk drive door on the next drive to cause an error and get Backup Lightning's attention. The only time this will NOT work is if you open the door in the middle of a format. The program must complete a format before it will pay attention to anything.

While Backup Lightning is reading or writing, a status display appears in the menu area. This shows the number of good copies completed, the current operation being performed, the current track and side, and the status of the copy. If an error is encountered, you are given several options, depending upon the nature of the error. Select one from the menu.

If you retry the operation after an error, and it is successful, the copy status will return to GOOD. Otherwise, if you skip the sector with the error, or go to the next drive, the copy status will show BAD, and the copy will not be counted in the number of copies complete.

Once Backup Lightning has made copies on all the disks in your drives, it will ask you to remove those disks, put in new ones, and press <Enter>. Do this if you wish to continue making copies. If you have made enough copies, hit <Break> at this point to return to the main menu.

#### Notes

- \* Backup Lightning will not copy copy-protected diskettes.
- \* Sectors are written out of order to achieve speed. You will notice this if you get many errors.
- \* Be sure your Backup Lightning disk is not write-protected, and that you have at least 1 free granule before trying to save a custom configuration.
- \* Do not run Backup Lightning with a RAMDISK or Print Spooler in memory.
- \* The dealer who sold you Backup Lightning is responsible for customer service. Please write to him, not to ColorVenture, if you have a problem.

#### Disclaimer

ColorVenture licenses Backup Lightning 512k on an "as-is" basis, with no warranties express or implied. ColorVenture will not be liable if any disks containing valuable data are damaged as a result of the use or misuse of this program. It is a good idea to put a write-protect tab over the original disk you are duplicating.