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OVER 100,000 SOLD!

COPY II ST™

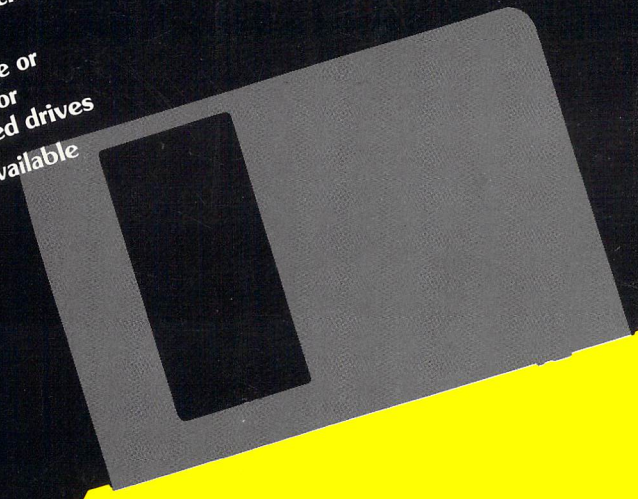
PROTECT YOUR SOFTWARE INVESTMENT...

For Atari 520/1040 ST

- Backup most protected software! (for archival purposes only)
- Fast sector copy for reliable backup of data disks
- Supports one or two single- or double-sided drives
- Uses all available memory

Central Point Software's bestselling copy program

Gold Medal Winner! Over 100,000 copies sold



Central Point Software, Inc., publisher of these bestselling disk copy programs:
COPY II PLUS for Apple II Series
COPY II MAC for Apple Macintosh
COPY II 64/128 for Commodore 64 & 128
COPY II PC for IBM PC and compatibles
COPY II ST for Atari 520 & 1040 ST

SYSTEM REQUIREMENTS

Atari 520 or 1040 ST
One or two disk drives

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Chapter One: Introduction

This manual describes Copy II ST, a disk backup application for the Atari ST computers. Copy II ST can make backup copies of your valuable software that has been 'copy-protected', as well as copying standard unprotected ST software.

About This Manual

This manual assumes that you are familiar with the basic concepts of the ST, including such things as windows,menus, selecting with the mouse, etc. If you need to know more about these things, you will need to refer to your ST owner's manual.

This introduction describes what Copy II ST does, what it is for, and what features it includes.

Chapter Two explains how to do basic disk copying with Copy II ST. You should be able to back up most protected programs simply using the information in Chapter Two.

Chapter Three talks about the other copy capabilities and options you can select. For those who have one or more 720K (double-sided) drives, this chapter also explains the differences in copying with 720K drives.

Chapter Four provides helpful notes and ideas for working with those disks which are more difficult to copy.

Why Copy II ST?

Even though an Atari ST diskette is rather rugged, the information that is stored on the diskette is actually quite fragile. A disk can be permanently damaged by accidentally spilling coffee or soda pop on it, leaving it out in a warm place for too long, running over it with a truck, etc. And even if a disk is in

physically good condition, some or all of the information stored on the disk can be lost forever if you pass the disk too close to a magnet or motor. If you confuse one disk with another, it's also possible to insert the wrong disk at the wrong time and mistakenly **select** to destroy your valuable information.

For all of these reasons, it's an excellent idea to keep backups of your application and data disks at all times. That way, if something ever happens to one of your disks, all is not lost. You can simply begin using the backup that has been safely stored away. Under the copyright law, you are entitled to make backups of the software you own for your own use. You are not allowed to give or sell copies of copyrighted software to others.

Some software companies, to prevent illegal duplication, 'copy-protect' the information on their disks. Though the techniques used in copy protection are all quite complicated, the end result is that the protected disk cannot be copied using normal copy methods. This discourages illegal copies from being made, but it also keep customers from being able to make legal, useful archival backups.

Copy II ST is designed for copying these protected disks. It basically transfers all of the information from one floppy disk onto another, so that the duplicate disk is a 'carbon-copy' of the original. If the original is copy-protected, the duplicate will be too.

The Copy II ST application program is provided to help you make backups of your copy-protected disks for your own use. It may not be used for illegal copying.

The Copy II ST disk is not copy-protected in any way. You can make a backup of this disk using the GEM Desktop, Copy II ST itself, or any other standard ST copy program. (Unlike some bit copy manufacturers, we believe your right to make archival backups extends to our product as much as any other product.) We encourage you to make a backup copy and put your original Copy II ST disk in a safe place.

Features of Copy II ST

Using Copy II ST can be as simple as opening the Copy II ST application, clicking on the Start button, and inserting the original and duplicate disks. In most cases this is all you need to do to make a working backup of your software.

Several other options are provided. You can copy an entire disk, or select a range of tracks to copy only a portion of the disk. If you have a second disk drive, you would normally copy from one drive to another, or you can select to use just one drive if you like. Copy II ST also makes use of whatever memory is available in your computer to speed up copying.

Copy II ST provides two copy options. The Bit Copy option is useful for making backups of protected software because it makes very few assumptions about the format of the disk it's copying.

The Sector Copy option will copy some protected disks, but is mainly intended for backing up standard ST disks. Sector Copy is faster than Bit Copy in duplicating a disk.

In a few cases, Bit Copy and Sector Copy can be used together to make a more reliable copy than either option can alone. All of this is explained in better detail in Chapter Three and Chapter Four.

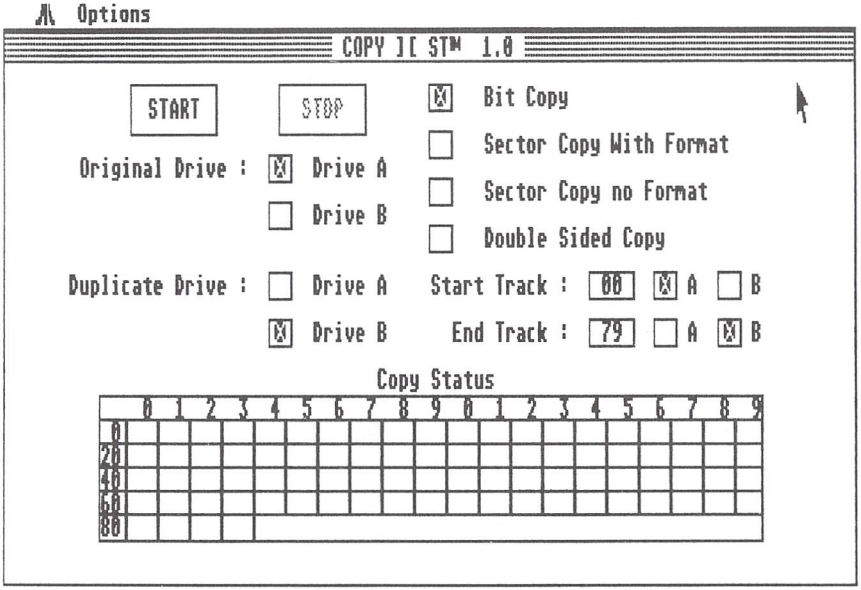
Copy II ST cannot copy onto hard disks. Hard drives store and retrieve information in a different way than floppy drives. Disk copying from floppies to hard disks simply doesn't work. If you want to copy individual application and data files onto a hard disk, you can often use the file-copying capabilities of the GEM Desktop. If, however, the programs you want to move to hard disk are copy-protected, you might want to ask the manufacturer of the software if a hard disk version is available.

Chapter Two: Using Copy II ST

To start using Copy II ST, first start up your Atari ST in the usual way to bring up the GEM Desktop. (Note: The Atari display must be in medium or high resolution mode when using Copy II ST. If necessary, use Set Preferences from the Desktop's Options menu to select either medium or high resolution graphics before continuing.)

Now insert the Copy II ST disk into the drive, then open the corresponding disk icon by either clicking on the icon and selecting Open from the File menu, or simply double-clicking the icon. A window for the Copy II ST disk will appear. One of the icons in the window shows the name "COPYIIST.PRG". Open this icon. The disk will whir as the Copy II ST application is loaded into the computer.

Copy II ST will then display a screen similar to the following:



The first thing to notice is the menu bar at the top of the screen. If you choose the 'Atari' menu, you can see that all of the usual ST desk accessories are available. You'll also see one other option, called About Copy II ST. This option is simply a copyright message for Copy II ST.

By choosing the Options menu, you'll find that the only option available here is Quit. Select Quit from the Options menu whenever you want to quit out of the Copy II ST application and return to the GEM Desktop.

Making a Backup

Copy II ST works by 'reading' some of the information from the original disk it's copying, then 'writing' that information onto the duplicate disk. It alternates this reading and writing process until the entire disk is copied. How much it reads and writes at any one time depends on how much memory you have in your computer.

Before you back up a disk with Copy II ST, we suggest you first make sure that the disk is 'write-protected' (which is not the same as 'copy-protected'). To write-protect a disk, slide the small tab in the corner toward the edge of the disk, uncovering the hole.

Write-protecting a disk guarantees that the computer cannot write or change any information on the disk. Suppose that while using Copy II ST, you accidentally inserted the original disk at the wrong time or into the wrong drive. Even if this happens, the information on your original disk can't be hurt because the disk is write-protected. (You can later move the write-protect tab back to the unprotected position any time you wish to record information on the disk.)

Start Copy

In the top of the Copy II ST window, you'll see two buttons, labeled Start and Stop. The Start button starts the copying, and the Stop button stops it. (The Stop button is 'dimmed' right now because there isn't any copying to stop.) The copying doesn't begin until you click on the Start button. You can click all the other areas without hurting anything.

Copy II ST is already set up for you to begin copying most disks. When you want to copy a disk, click on the Start button with the mouse. What happens next depends on whether you have one or two drives.

Copying (one drive)

If you have one drive, a message will appear in a Dialog Box in the middle of the screen: "Insert the write-protected original disk in Drive A." Eject any disk that is currently in drive A. Make sure the disk you want to back up is write-protected, insert it into drive A, then click on the "OK" button. The drive will whir as Copy II ST reads some of the information from the original disk.

Copy II ST will then print a new message: "Insert the duplicate disk in drive A." Eject the original disk and insert a blank disk or a disk you don't mind erasing into the drive. (This disk should not be write-protected, so that Copy II ST can write new information onto it.) Click on the "OK" button. The drive will whir again as the information is written onto the disk.

This original-disk/duplicate-disk cycle will continue a few more times until the entire disk is copied. Copy II ST will then stop and be ready for the next disk copy.

Copying (two drives)

If you have two drives, a message will appear in a Dialog Box in the middle of the screen: "Insert the write-protected original disk in Drive A and the duplicate disk in drive B."

Eject any disks that are currently in the drives. Make sure the disk you want to back up is write-protected, and insert it into drive A. Insert a blank disk or a disk you don't mind erasing into drive B. (This disk should not be write-protected, so that Copy II ST can write new information onto it.) Now click on the "OK" button.

The two drives will then whir as Copy II ST alternately reads information from the original disk and writes it to the duplicate disk. When the entire disk is copied, Copy II ST will then stop and be ready for the next disk copy.

Stop Copy

If you want to stop the copying before it's finished, click and hold on the Stop button. Copy II ST may continue for a couple of seconds more if it's busy reading or writing, then it will stop.

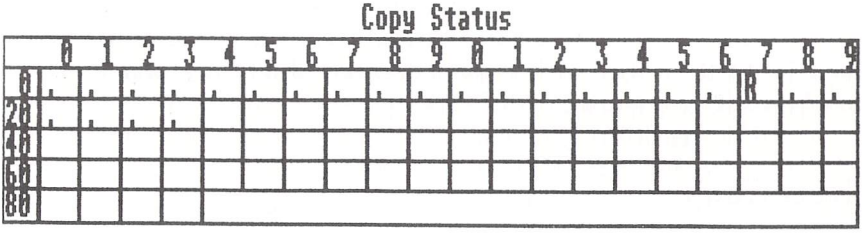
When copying is finished, you can either make another copy, or Quit out of Copy II ST in order to try the copy you just made.

Copy Status

The information stored on a normal ST disk is divided into 80 circular tracks, numbered track 0 to track 79. (A few copy-protected disks use additional tracks, numbered 80 to 83.) Information about all the tracks copied so far is kept in the Copy Status box. The Copy Status box has positions for all 80 tracks: 4 rows with 20 tracks per row (then a few more positions for the additional tracks).

The Copy Status box keeps you informed of what Copy II ST is currently doing. As Copy II ST reads a track, the letter "R" appears in the corresponding position of the Copy Status box. As it writes a track, the letter "W" appears. Then for every track which is copied successfully, a dot is left behind in each position. If there was an error copying a track, a letter is left behind instead. The letter indicates what kind of error occurred. An "R" means a Read error, a "W" means a Write error.

For example, if tracks 0 through 23 have been copied so far and there was a read error on track 17, the Copy Status box would look like this:



(Note for 720K drive users: On 720K disks, each of the 80 tracks is further divided into two sides, which we call side A and side B. If you're copying a 720K disk, you'll see TWO dots or letters appear for each track, one for each side of the track.)

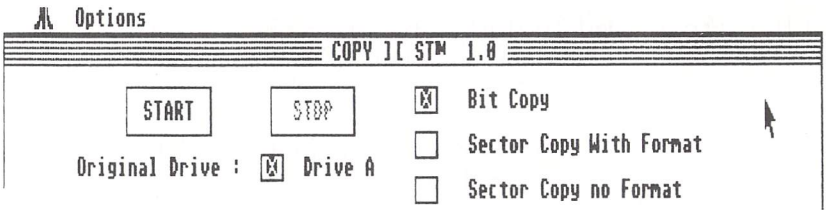
If you do get errors during a copy, there are some recommended ways of handling them. These are discussed in Chapter Four.

Chapter Three: Other Backup Options

This chapter describes the other options available in Copy II ST and what they're used for. (The notes in Chapter Four talk about when to use them in backing up a disk.) Additional options become available if you have one or two 720K (double-sided) drives. These extra options are discussed at the end of this chapter.

Bit Copy and Sector Copy

As mentioned in the Introduction, there are actually two methods available for copying a disk with Copy II ST, called Bit Copy and Sector Copy. You can see these options in the upper right part of the screen.



When Copy II ST is first started, the Bit Copy method is already selected. You can switch to the Sector Copy method by clicking on either Sector Copy with Format or Sector Copy no Format. Clicking on Bit Copy will switch back to the Bit Copy method. Whenever you click on the Start button, Copy II ST will use the method you've selected.

Sector Copy matches the way the Atari ST usually reads and writes to the disk in everyday use. Because it 'assumes' that what

it's copying is in a normal ST format (with no funny copy-protection), it can make a special effort to be sure that everything on the disk is exactly as it should be. This makes for very reliable copies. It cannot back up disks that differ too far from the normal ST disk format. Sector Copy can also copy a disk faster than Bit Copy.

Since Sector Copy can write only onto formatted disks, you can select Sector Copy with Format or Sector Copy no Format. If you're sure that the duplicate disk you want to copy onto is already formatted, selecting "no Format" will speed up the copy process a little. Otherwise you should select Sector Copy with Format, so that Copy II ST will format the duplicate disk track-by-track as it copies.

Bit Copy is designed for copying nearly all copy-protected disks. Because of the widely varying protection schemes possible, Bit Copy makes very few assumptions about the information it's copying. It simply 1) reads the information from the original disk, 2) makes enough sense of it so that it can write it correctly, then 3) writes it to the duplicate disk. Bit Copy can copy many more disks than Sector Copy.

Bit Copy formats the duplicate disk as it copies, so the disk does not have to be formatted ahead of time.

Original Drive and Duplicate Drive

Below the Start and Stop buttons are options for "Original Drive:" and "Duplicate Drive:". The original drive is the drive in which you will put the original disk you're making a copy of. The duplicate drive is where your copy will be made.

For both Original Drive and Duplicate Drive, you'll see two choices, labeled A and B. If you have two drives, initially A will be selected for Original Drive, and B will be selected for Duplicate Drive. This means Copy II ST will copy from drive A

to drive B. If you want to change this, just click on the options you want for original and duplicate drives.

If you have one drive, then A will be selected for both Original and Duplicate Drives. Since only drive A is available, Copy II ST will use it for both original and duplicate disks. Clicking on the drive B option has no effect.

Start Track and End Track

The next two options are Start Track and End Track. As mentioned earlier, the information stored on Atari ST disks is recorded in 80 (or up to 84) circular 'tracks', numbered 0 through 79 (or 0 through 83). With a Start Track of 0 and an End Track of 79, Copy II ST will copy the usual 80 tracks of the disk. You can also copy a range of tracks if you want, though you usually won't need to do this. (There are a few exceptions, which are explained in Chapter Four.)

To change either Start Track or End Track values, use the mouse to point the arrow at one of the digits you want to change, then press the left mouse button. Every mouse click on a digit will increase the digit by 1. (After it's reached the limit, the digit will reset to 0.)

Copy II ST will not let you set the track number greater than 83. If you want to set a track number from 80 to 83, **first** set the 1's digit between 0 and 3, **then** set the 10's digit to an 8.

If the Start Track is greater than the End Track, no copying will take place until the Start Track is adjusted to less than or equal to the End Track. If you want to copy a single track, simply set both Start Track and End Track to that track number.

720K Drive Options

If you have either one or two 720K (double-sided) drives, Copy II ST can make backups of 720K disks.

A distinction must be made here between 720K **drives** and 720K **disks**. A 720K drive is capable of reading, writing, and formatting both 720K disks and 360K disks. A 360K drive can work only with 360K disks. (Currently, most copy-protected application programs sold are on 360K disks, so that they can work in both 360K and 720K drives.) Since Copy II ST makes a 'carbon-copy' of a disk (including its size), the duplicate will always be the same size as the original.

Copy II ST includes a checkbox for you to select whether or not to make a double-sided copy. If you have 360K drives, you should not select this option. If you have only one 720K drive, to make a double-sided copy, you'll need to use the one 720K drive for both Original and Duplicate.

You should always check the Double-Sided Copy box to match the size of the original disk you're copying. If you do a Double-Sided Copy of a 360K (single-sided) disk, Copy II ST will take twice as long, copying twice as much as it needs to. Similarly, you should never need to do a 360K copy of a 720K disk. The resulting duplicate disk would be missing much of the information it needs to work correctly.

If you need to recopy just a portion of a 720K disk, notice that the Start Track and End Track options include selections labeled A and B. As mentioned earlier, on 720K disks, each of the 80 circular tracks is further divided into two sides, which we call side A and side B. When doing a 720K copy, Copy II ST must back up both sides of each track. Copying a 720K disk involves copying with a Start Track of 0-A and an End Track of 79-B. To copy just a portion of a 720K disk, you can select which track and side to use for Start Track and End Track.

Note: A common misconception about 720K disks is the idea that you can disk-copy two 360K disks onto one 720K disk, one onto the top and one onto the bottom of the disk. The Atari ST drives don't work this way. For each physical disk, only one disk icon can appear on the GEM Desktop. The Atari ST can't recognize "two-disks-in-one". It's better to think of double-sided disks simply as disks that can hold twice as much information, and not be concerned with when the top and when the bottom of the disk is being accessed.

Chapter Four: Notes in Backing Up Disks

When backing up a protected disk, the copy may run normally even if an error occurred while copying. Conversely, it's possible for a backup to fail even if there were no apparent errors during copying. This is because of the complicated protection methods used on some disks. **The best test in every case is to simply try running the program to see if it works.**

Possible Errors

When the Sector Copy method is selected, an "R" (Read) error on every track means the original disk is probably blank. If you get this error on only one or two tracks, then a portion of the disk may be copy-protected, or there may simply be a problem on that part of the disk. A "W" (Write) error means the duplicate disk probably isn't formatted correctly on every track. Try Sector Copy with Format. If that still doesn't work, then there is possibly some kind of problem with the duplicate disk. You should try a different disk.

When the Bit Copy method is selected, a Read error means that Copy II ST is having difficulty making sense of this track. Copy II ST will do its best to correctly write the track onto the duplicate disk anyway.

Using Sector Copy with Bit Copy

Most ST application programs on the market today use a strange copy-protection format on only a few tracks of the disk. The rest of the disk is usually in a standard Atari ST format. Then when you start up the application, it begins by checking those strange tracks to make certain they haven't been changed at all.

What this means is that you can often use the Sector Copy method to make a fast, reliable copy of most of the tracks on a

disk. If you copy a protected disk with Sector Copy and get Read errors on only one or two tracks, first try the backup. If that doesn't work, then go back and use Bit Copy to recopy just the bad tracks back onto the same duplicate disk. The backup may now work, and the copying was faster since Sector Copy was used for most of the disk.

Extra Tracks

Standard Atari ST formatted disks store information on tracks 0 to 79. A few copy-protected programs also place information on tracks 80 to 83. The idea behind this copy-protection is that since standard copy programs will not copy these extra tracks, the copy will fail.

But these extra tracks are not included on standard ST disks for a good reason: Because some disk drives cannot access the extra tracks, this type of protection scheme may even prevent the original disk from working in some machines.

Since this protection scheme is currently in use by some software manufacturers anyway, Copy II ST provides a way to back these disks up. If you need to copy a disk with this protection scheme, first be sure you have drives that can access the extra tracks. (If the original disk that uses this protection runs from both of your drives, then the drives can access these tracks.) Change the End Track value from 79 to 83, then do the copy.

A Checklist

A few commercial software products use particularly nasty protection schemes which a straightforward Bit Copy may not duplicate correctly. Here is a checklist of things to try in backing up these disks.

First try copying the disk using Bit Copy.

If that copy doesn't work, try Sector Copying the disk. Then if there are errors on any tracks, recopy just those tracks onto the same duplicate disk using Bit Copy. (The Start Track and End Track options let you select a single track or a range of tracks to copy.)

Try also copying tracks 80 to 83.

If these suggestions don't work for you, you might want to drop us a note to let us know about it, so we'll know which products are in demand. Describe what you tried and what happened when you tested the backup. Also, if one method for backing up a disk worked particularly well for you, you might want to let us know about that too. Include 1) the name and version number of the program you were copying, 2) the publisher's name, and 3) what copy method you used. Address your letter to:

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9700 SW Capitol Hwy., #100
Portland, OR 97219

Have fun and good luck!

NOTES

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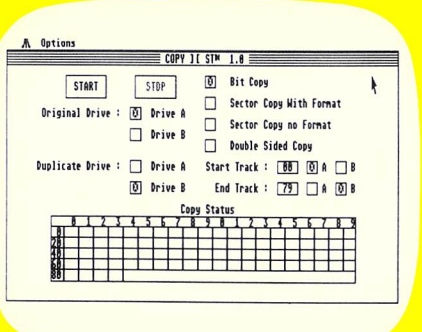

Hardware requirements:
Atari 520/1040 ST,
one or two single-
or double-sided drives.

Sample screen:
the COPY II ST™ menu

- **Protect your software investment!**
  Make backup copies of most protected and unprotected computer programs. Central Point's state-of-the-art technology handles even the most sophisticated protection schemes! You'll have a backup handy should misfortune befall your original disk.
- **Fast sector copy for reliable backup of data disks.**
- **Supports one or two single- or double-sided drives.**
- **Uses all available memory.**
- **Everything you wanted to know, but were(n't) afraid to ask...**
  Whether you're a novice or an experienced computer buff, you'll find your COPY II ST™ manual easy to read, easy to follow and, most of all, easy to understand.

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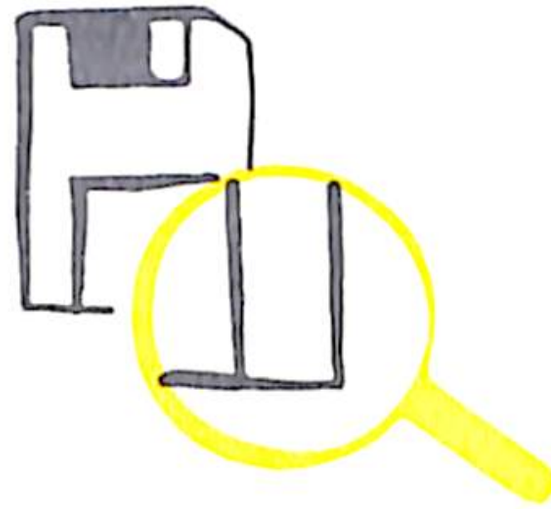
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