

Copy Master II

Documents from the Box

DISC COPIERS VERSUS COPY CARDS

By John Lang

SOFTWARE PROTECTION

Since the early days of computers, software publishers have attempted to protect their software against unauthorized duplication. Most of the protection schemes for Apple software are based on the inability of standard DOS to load programs written in non-standard DOS, such as those using odd phases of the disk, having unusual timing or different data marks. Unfortunately software protection causes more problems than it solves. While discouraging software piracy it also makes it difficult to make legitimate software copies for archival purposes. Furthermore, protected software is unlistable and unmodifiable which denies the user from learning how the program works as well as preventing him from making custom modifications.

DISK COPIERS

The first attempts at defeating software protection resulted in Disk Copiers, i.e. disk copy programs capable of deciphering the non-standard DOS and copying protected disks virtually bit by bit and track by track. The original protection schemes were fairly simple, but as the copy programs grew more sophisticated, the software publishers came up with newer and more intricate encryption techniques in order to stay ahead of the game.

Disk Copiers existed on the market for some time; among the most popular are Locksmith, Nibbles Away, Back It Up and Copy II. But the difficulty with all disk copy programs is the need to discover an often complex set of parameters unique to each piece of protected software in order to produce a successful copy. These parameters are usually not easy to find, so the program sellers as well as certain computer magazines occasionally publish new parameters for the popular programs. However the software publishers often vary their protection method which renders the parameter list obsolete in short time. Even with correct parameters the user is left with the messy task of applying these to produce a copy. If successful, the actual data transfer process moving bits from the original to a blank disk could take up to 15 minutes. Disk copies produced in this manner are normally a replica of the original: they are protected and unlistable. Purchaser of a disk copy system is likely to spend a couple of hours to use it and a considerable amount of time discovering individual parameters for each new program.

COPY CARDS

An alternate type of Software Backup System (SBS) came in a form of a hardware device - a Copy Card. The idea behind the Copy Card is rather simple: once the protected software is loaded into Apple memory, "photographing" the memory will produce an exact image without a concern about disk formatting, parameter setting, odd or even phases of the disk. In fact it does not matter at all how the program got to the memory.

Since protected software, once loaded, is in complete control of the machine, the Copy Card must somehow gain this control in order to make a copy. Most commonly this is done with some sort of Interrupt and the actual copying is performed by a copy software (or firmware) usually supplied with the Copy Card. Once the control of the Apple is transferred to this copy software it will result in writing the content of Apple memory onto a DOS initialized disk. A disk containing such a copy will now be unprotected and loadable with standard DOS commands. The program itself will be listable and customizable. It all seems relatively straight forward and in fact it is, especially when making a 48k copy. In order to understand the differences between the 48k and 64k/128k copy systems let us first look closer at the 48 copy card.

48K COPY CARDS

As noted earlier the copy card must also use some sort of copy software. Since this software must be inaccessible to the program to be copied it cannot reside in the main memory. Therefore, finding the room to store it becomes a major dilemma for the designer. If only a 48k copy is to be made the obvious solution is the 16k (language) card. The program to be copied is loaded into the main 48k memory thereafter and at a suitable moment the copy board will transfer a control of the machine to the copying program in the 16k card with a single push of the button. No experience required and no complex parameters to know!

Copy boards for 48k have been marketed for more than 2 years now and originally selling at an inflated price \$130 to \$150 while containing as little as 4 general purpose IC's. Today these obsolete 48k copy systems can be purchased for as little as \$60 although some of the original boards are still priced at over \$100. When purchasing such a system one should be aware that pulling of chips and installation of jumper cables inside the computer may be required. Furthermore the 48k Copy Cards are not suitable for Apple IIe. Caution: 48k copy systems are not always compatible with all 16k cards!

64K & 128K COPY CARDS

Obviously the 64k and 128k copy systems cannot use the 16k card to store their software. These therefore have some (4k to 8k) memory directly on the Copy Card where such copy program can be store. Push of a button then transfers control of the machine to this software. Copy programs are stored on the card either in RAM or ROM (firmware) or in a combination of both. Protected software loaded after the card has been initialized "knows nothing" about this "hidden code". So once the button is pushed it will be at the mercy of the copy card. Cards having software in ROM make it impossible for the user to change or update the copy programs. Furthermore, economical reasons normally limit the size of the ROM to storage of copy programs alone while the optional utility software like Step & Trace are on another ROM that must be purchased separately. Some Chip pulling to switch from Copy to Step & Trace mode in these cards is inevitable. On other hand Copy Cards using RAM offer greater flexibility not only in accommodating updated copy programs but also by providing an extra general purpose storage space (up to 8k) when the Copy or the utility software are not in use. As one might expect there is an additional requirement on the part of the user to load the copy software from utility diskette into the card. Systems having both RAM and ROM do not necessarily offer the advantages associated with RAM or ROM only systems. With the cost of auxiliary memory card continuously declining the Apple IIe owners are most likely to consider acquiring a 128k system.

COPY CARDS DEFEAT ADVANCED PROTECTION SCHEMES

As one might expect, the software companies continuously fight against the seemingly unlimited potential of the Copy Cards. Although a copy of the memory content can always be made with a Copy Card certain software tricks can make copying somewhat more complicated than just pushing the button. Such is the case for example with programs that are not entirely memory resident. Originally these were large programs that could not be entirely loaded without leaving the user little or no memory to store data. Therefore only the part of the program which is currently in use is inside the machine while the rest is kept on the disk. Adventure type games are a good example of such programs. However other games are unlikely to use this method for protection because of the long time required to access the disk. It is clear

that programs that are not entirely memory resident can be copied only in segments. However, these segments can be later moved onto the same disk.

There are also programs that constantly verify a presence of the original disk in the drive. This sort of copy protection scheme can be often defeated with a trick. The copy made with a Copy Card will not initially run because the program will not "see" the familiar disk in the drive. But some Copy Cards offer so called Step & Trace utility software that enables the user to find the subroutine that performs the disk verification. Since the copied program is modifiable one can insert the statement RTS (ReTurn from a Subroutine) near the beginning of this subroutine. This will cause the computer to jump out of this subroutine without ever getting to the "disk verification" part of it.

COPY CARDS COPY CP/M

The vast majority of CP/M programs are unprotected. However some Copy Cards can be often used to make a copy whenever copying under CP/M fails. The difficulty in reproducing CP/M lies in the incompatibility of the 6502 and the Z80 operating system. Such obstacle can be removed with some Copy Cards if the copy is made while the 6502 processor is operating (under CP/M) as it is for example during disk access.

FINAL COMMENTS

The two tables that follow should help the reader to decide which Software Backup System would best suit his needs. The Table 1 compares the performances and capabilities of Disk Copiers and Copy Cards. The Table 2 compares the options available in purchasing a Copy Card. Only the top 7 systems are listed.

NOTES

This article was written to explain the different options that one has in selecting a Software Backup System. Although the author is associated with the Applied Technology Laboratories and the story told represents a personal view, great effort was made to remain factual, informative and impartial. All references made are based on the best informa-

tion available to the author. The tables were created from information obtained from manufacturers advertisements, their promotional literature and direct inquiries.

TRADEMARKS

Apple II, Apple II+ and Apple IIe are trademarks of Apple Computer, Inc.
Locksmith and Nibbles Away are trademarks of Omega Software, Inc. and Computer Applications respectively.
Wildcard, Wildcard II and Wildcard+ are trademarks of East Side Software Co.
CP/M is a trademark of Digital Research, Inc.

Table 1: Comparing Disk Copy Programs to Copy Cards

FEATURE	DISK COPIERS	COPY CARDS
Need for parameter setting	YES	NO
Copy is unprotected	NO	YES
Copy is standard DOS loadable	NO	YES
Copy is listable	NO	YES
Copy is modifiable	NO	YES
Single step & trace through programs	NO	YES
Can copy non-memory-resident software	YES	not always
Save program at any stage of execution	NO	YES
Time to learn how to use the system	about 4 hrs.	5 to 20 min.
Time to learn how to make a particular copy	5 min. to 1 hr.	NONE
Time required for data transfer to blank disk	up to 15 min.	less than 1 min.
Disk formatting/encryption important	YES	NO
Price range	\$40 to \$100	\$60 to \$170

Table 2: Comparing Performances of the Top 7 Copy Cards

FEATURE	COPY CARD PERFORMANCE						
	COPY MASTER II	Replay II	Snapshot II	Snapshot IIe	Wildcard	Wildcard II	Wildcard Plus
MANUFACTURER	Applied Tech. Laboratories	Micro-Analyst	Dark Star Systems		East Side Software		
Maximum Size of Copyable Program	128k	64k	48k	128k	48k (some 64k)	128k	128k
Suggested Retail Price (US\$)	99.95	130.00	119.95	139.95	109.95	139.95	169.95
The Copy Runs Without the Copy Card Installed	YES	YES	NO	YES	NO	?	YES
Step & Trace Utility Program Included	YES	need to replace ROM (add \$20)	YES	YES	NO	NO	YES
Copying Software Storage Media	RAM (4k)	ROM	16k card	RAM (8k)	ROM	ROM	ROM & RAM
Time Required to Make a 64k Copy	20 sec.	15 sec.	—	20 sec.	120 sec.	25 sec.	10 sec.
Copying Process Changes Memory	NO	NO	?	NO	?	NO	NO
Franklin Ace and Apple Looklike Compatibility	YES	YES	YES	YES	needs conversion kit	YES	YES
Copies CP/M Programs	YES	NO	NO	YES	NO	NO	NO
Cables to Hook Chips to Pull	NO	YES (utility ROM)	YES	NO	NO	NO	NO

APPLIED TECHNOLOGY LABORATORIES

introduce

Screen Dump for COPY MASTER II

Now you can dump the Apple text or graphics screen to your printer with a single push of the COPY MASTER II trigger switch !

WHAT ARE SCREEN DUMPS:

Screen Dump for COPY MASTER II is a program that uses the ability of COPY MASTER II card to gain a control of Apple computer and sends the content of the screen to the printer to give you a hard copy.

Originally, such task could be only accomplished with partial success using the "intelligent" printer interface cards like Grappler that failed to work on protected software. Yet it is the protected games that have some of the most spectacular graphics! Recently, special Screen Print cards (Finger-Print, Textprint, etc.) that already have the capability to operate with protected software appeared on the market.

However, now COPY MASTER II added the Screen Dump capability to its powerful Copying function and became a true 2 in 1 system. So why buy a hundred dollar Copy Card and spend additional \$150 for a Screen Print card when COPY MASTER II has combined both the copy and screen dump functions in one card at a low, low price!

SCREEN DUMPS HAVE MANY USES INCLUDING:

- * Print copies of on-screen instructions such as Help Screen for business and utility software
- * Print graphics from your favorite games as well as YOUR high scores to prove your ability to friends
- * Print graphics for detail examination and study

SYSTEM REQUIREMENTS:

Screen Dump is software compatible with the following printers

Epson: MX-70 (in non-emphasized mode),
MX-80 (with GRAFTRAX ROMs),
MX-100, FX-80, FX-100, RX-80 & RX-100
Star Micronics: GEMINI 10, 15, 10X & 15X
Panasonic: KX-1090 & KX-1091

Apple: Dot Matrix Printer & Imagewriter
Okidata: 82A, 83A (with OKIGRAPH ROMs), 92 & 93
NEC: PC-8023A-C
C. Itoh: Prowriter

and interface cards

Grappler (original)
Grappler +
Apple Parallel Interface Card
Tymac Parallel Interface Card
Microbuffer II Parallel Card

Epson APL Parallel Interface Card
Wizard BPO Parallel Interface Card
PKASO Parallel Interface Card
Apple Super Serial Card
Microtek Dumpling-GX Parallel Card
Microtek Dumpling-64 Parallel Card

Prometheus Versacard Parallel Interface
Mountain Computer CPS Parallel Interface
Station Master Parallel Interface Card
Spies Super-MX or "NICEPRINT" Card
Okidata "Plug 'n' Play" Parallel Card

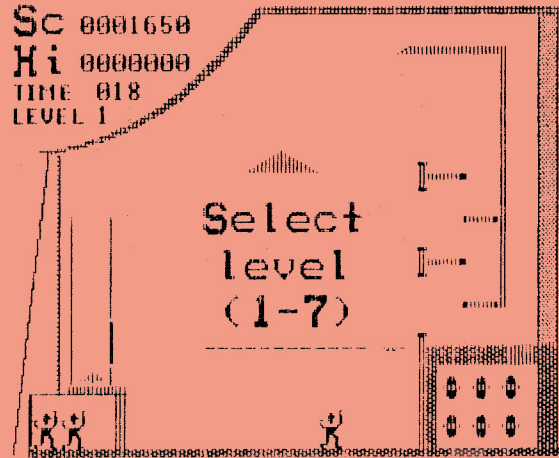
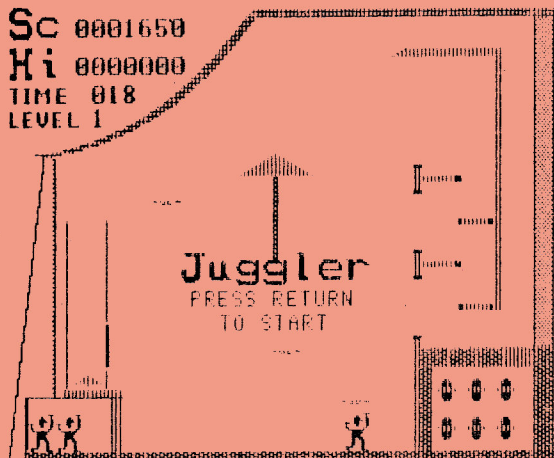
TEXT SCREEN DUMP :

- * Prints 40 or 80 column text screen (either page 1 or 2) on any printer/interface card combination (letter quality, dot matrix, etc.) that uses standard Apple slot protocol (i.e. "PR #")

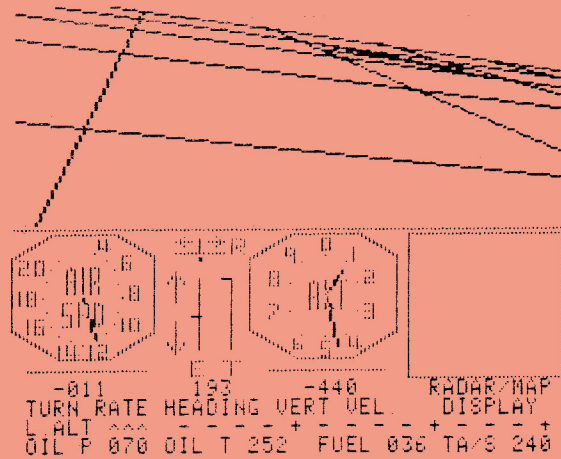
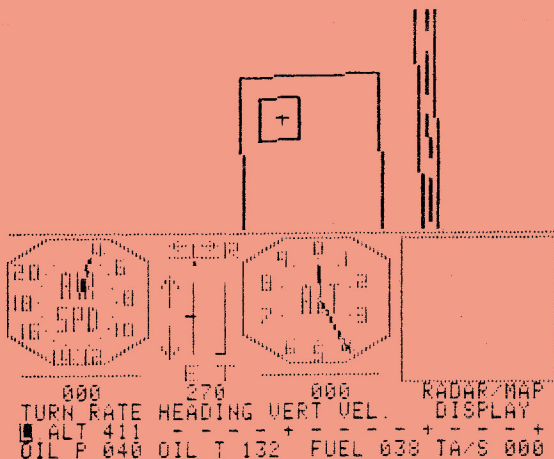
GRAPHICS SCREEN DUMP :

- * Prints 40 column text, graphics, or mixed text/graphics screen (either page 1 or 2) on a dot matrix printer
- * Text may be printed with any DOS TOOLKIT compatible font
- * Inverse and flashing characters are printed as inverse
- * Graphics and text may be optionally printed in bold (emphasised) and/or inverse (white on black)
- * In mixed dump, the text is exactly aligned with graphics (unlike output from some "intelligent" printer interface cards)

Example of Graphics Dump
(from Juggler)



Example of Mixed Dump
(from Flight Simulator)



TRADEMARKS: GRAPPLER is a trademark of Orange Micro, Finger-Print is a trademark of Precision Software, Juggler is a trademark of Innovative Design Software, Flight Simulator is a trademark of Sublogic Communications Corporation

*Why buy an outdated copy system that will
drive you Wild when you can get*

COPY MASTER II

**It is the only copy system that is easy enough to be used
by a novice and yet with software options to satisfy even
the most sophisticated programmer.**

NOW TWO SYSTEMS IN ONE:

- **Back-up 64K & 128K protected software**
- **Print text and graphics screens of protected (watch out Grappler!) as well as unprotected software**

-
- ★ **COPY MASTER II** makes back-up copies of all memory resident software, at the press of a button.* The copy produced is unprotected and can be loaded back into memory with standard DOS commands.
 - ★ Previously hidden code becomes accessible and subject to change or study.
 - ★ Freeze games and then restart them days later. Or save the winning display on disk.
 - ★ Single-step and trace through any program.
 - ★ The **COPY MASTER II** set comes complete with plug-in, slot-independent board, software and manual. **Unlike some copy boards, there is no extra utility software or expensive EPROM to buy.** There are no chips to pull or cables to install.

- ★ Minimum System Requirements: Apple II Plus, or an Apple IIe, 1 disk drive and DOS 3.3.
- ★ 64K copy is made in less than 20 seconds, 128K in less than 30 seconds.
- ★ Special utility program allows the copies to run without a copy board.
- ★ The Print Screen option produced a hard copy of text, graphics or mixed display for all software (protected or not) at the push of a button. (Available for most popular printers.)
- ★ All hardware is made with the finest components. There are no shortcuts taken: 19 chip board.
- ★ Written 90 days warranty on parts and labor.

COPY MASTER II is the most advanced copy system available.

64K copy system: \$99.95 128K copy system: \$119.95
For Print Screen option add \$15

Send check or money order for the full amount plus \$5 shipping and handling (Calif. residents please add 6% (L.A. County 6½%) Calif. Sales Tax) to:

APPLIED TECHNOLOGY LABORATORIES
11926 Santa Monica Boulevard
Los Angeles, California 90025
(213) 477-6815

(Please specify computer and printer type when ordering)

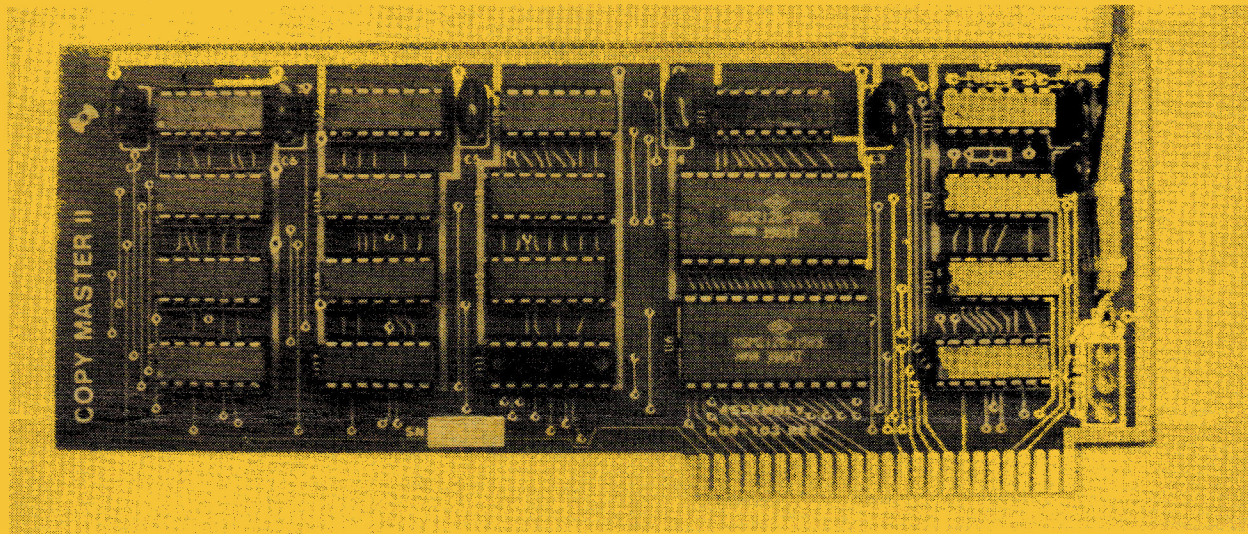
Important Notice: COPY MASTER II has many uses. However, **THE COPYING ABILITIES OF COPY MASTER II SHOULD BE USED SOLELY FOR ARCHIVAL PURPOSES.** Any other copying use may be illegal.

TRADEMARKS: Apple II, Apple II Plus and Apple IIe are trademarks of Apple Computer, Inc. Locksmith and Nibbles Away are trademarks of Omega Microware, Inc. and Computer applications respectively. Grappler is a trademark of Orange Micro.

(*)Memory resident software is the software which once loaded can operate without the original disk constantly present in the drive.

APPLIED TECHNOLOGY LABORATORIES

"We bring science down to business."



15 REASONS WHY THE COPY MASTER II SYSTEM IS THE RIGHT CHOICE FOR YOU

1. Simple operation: Load a utility disk, select the Copy option, load the program to be copied, insert a blank disk in your disk drive and push a button. The copy is produced in less than 30 seconds. To produce the next copy just provide another blank disk and press the button. (Some other systems require repeated booting of the utility disk even to make one copy.)
2. All copies are bootable immediately after the copying process.
3. Copies can run without the COPY MASTER II board in your machine. You will like this feature if you cannot devote one slot permanently to COPY MASTER. (Some other systems require a presence of the Copy Card in your Apple to load and run 64k and larger copies.)
4. CP/M programs are also copyable with COPY MASTER II.
5. COPY MASTER handles even new systems like ProDOS.
6. Utility software allows you to Step & Trace at selectable speed through protected programs. This software is included free in the package. (Some other systems require a purchase of separate ROM to do this.)
7. COPY MASTER II is not a kit but a fully functional ready to plug-in peripheral.
8. The 4k on-board RAM is at your disposal when the utility software is not in use. It may be used as a printer buffer or a general purpose data/variables storage. (Most other cards use a ROM.)
9. Compatibility with other standard hardware: When inactive the COPY MASTER II card is transparent to other software and peripherals. Once installed the card never has to be removed.
10. Same card works on II+ and IIe.
11. The COPY MASTER II system includes a complete manual that will help you to utilize the card beyond copying. It explains how to get the most out of the utility software such as Step & Trace for debugging and shows how to use the 4k on-board RAM for other applications.
12. Print Screen option is now available.
13. Applied Technology Laboratories does not cut corners but prices.
14. COPY MASTER II is not an imitation but THE COPY CARD. (After all would you call the Space Shuttle an imitation of Sputnik?)
15. WARRANTY: COPY MASTER II is covered by a written 90 days warranty on all parts and labor.

You may pay a higher price for other systems but will you really get anything more in value?

APPLIED TECHNOLOGY LABORATORIES

11926 SANTA MONICA BLVD • LOS ANGELES • CA 90025 • (213) 477-6815

PRICE LIST

WINTER 1985

PRODUCT	VERSION	STOCK NO.	PRICE EACH
COPY MASTER II-64k System for up to 64k copies on Apple II+ & IIe	Basic System	4064	\$99.95
	System with Text and Graphics Screen Dumps	4064-D	\$114.95
COPY MASTER II-128k System for up to 64k copies on Apple II+ and 64k to 128k copies on Apple IIe	Basic System	4128	\$119.95
	System with Text and Graphics Screen Dumps	4128-D	\$134.95
Separately purchased Software for upgrade of existing COPY MASTER II Systems	128k for Basic System	4008	\$24.95
	Text and Graphics Screen Dumps	4011	\$29.95
AMPERFINESSE utility program for Apple II+ & IIe	Published by Avantgarde Creations	9001	\$79.95
AUDIOVISION color graphics entertainment program	for Apple II+ & IIe	7101	\$29.95
EASY-AD retail store advertising program	for Apple II+ & IIe	7201	\$99.95
VINYL FOLDER for 5¼" diskettes	Black suede-like vinyl, 2 clear pockets outside (front & back) for label and 2 inside for disks	8001	\$2.99

- NOTES:**
1. The same COPY MASTER II cards runs on all Apple II machines and compatibles but the supporting software is different for 64k and 128k systems. You may upgrade your CM II-64k System by purchasing the 128k software separately in the future. In the same way one can upgrade the Basic Systems with separate purchase of Screen Dump software.
 2. Discount schedule for quantity buyers: 1 - 4 units net price, 5 - 9 units -7%, 10 or more units -15%.
 3. Above prices apply to individual purchasers. Prospective dealers that qualify to become ATL authorized retailers are subject to wholesale pricing schedule. Please, contact us for details.

ORDER FORM

SOLD TO:	SHIP TO (if different from buyer):

COMPUTER TYPE: _____ PRINTER TYPE: _____

QUANTITY	DESCRIPTION	STOCK #	UNIT PRICE	AMOUNT

FORM OF PAYMENT:

- Personal Check
- Company Check
- Money Order
- Other _____

SUBTOTAL

Tax *

\$5.00 Shipping & Handling

\$5.00 C.O.D. Charge

Export Surcharge **

TOTAL \$

- *) 6% California residents only; 6½% Los Angeles County residents only.
- ***) Exports to countries other than Canada are subject to 10% export surcharge.

TERMS OF SALE

METHOD OF PAYMENT: We accept checks, money orders, letters of credit and bank transfers. Cash is also acceptable but we cannot be responsible for cash sent through the mail. Orders paid for by personal checks will not be shipped until the check clears.

PRICES: All prices are F.O.B. Los Angeles, California and are subject to change without notice. Contact us for current prices.

CALIFORNIA SALES TAX: All orders to be delivered within California must include 6% Sales Tax. For Los Angeles County this tax has been increased to 6½%. Exemptions are allowed only if a completed and signed resale card is submitted with the order.

EXPORT ORDERS: Prices for our products are intended for shipment within U.S.A. and to Canada. There is a 10% surcharge on orders exported to other countries than Canada.

RETURNS: All returns are subject to 20% restocking charge and are accepted only if accompanied by a Return Merchandise Authorization number. To request RMA call (213) 477-6815 within 5 days of receipt of the merchandise. Goods returned to us without (authentic) RMA number and/or not prepaid will be refused by our Shipping & Receiving Department. Returned merchandise must be in new, resellable condition and in the original packaging. ATL will not be responsible for the shipping and handling charges incurred. All software sales are final.

CLAIMS: Inspect all shipments immediately upon receipt. Obvious damage to the cartons should be noted on the delivery receipt before signing. Concealed damage or loss should be reported to the carrier at once and an inspection requested. All claims for shortage must be made within (5) five days after receipt of shipment. Save damaged or rifflid cartons until the claim is settled.

REPAIR PROCEDURE: Should the merchandise need a repair, call or write to us for RMA number. Then ship the merchandise with the RMA number marked on the outside of the package. Include a copy of your invoice, daytime phone number and a complete description of the problem. Allow two or three weeks for the repair.

LIMITED WARRANTY: Our products are warranted for a period of ninety (90) days from the date of shipment to be free from material or workmanship defects. Should our product fail to perform satisfactorily, call us for RMA number. Then return the product prepaid to us and it will be either repaired or replaced free of charge (provided the unit is received during warranty period). This warranty is limited to replacement of defective parts and no responsibility is assumed for damage to other equipment. This warranty is made in lieu of all other warranties expressed, implied or inferred.

NEW PRODUCT SHOWCASE

EXPLORE A NEW DIMENSION !

CREATE YOUR OWN VIDEOS !

SEE THE MUSIC YOU PLAY !



the "VISUAL MUSIC"

AUDIOVISION is software that will turn your favorite music into dazzling display of color shapes in motion. It will let you to perceive music as never before: through visual images.

AUDIOVISION provides great entertainment for the young and the adults whether used at parties or just for relaxation.

AUDIOVISION : How does it work ?

AUDIOVISION is software that through visual images adds a new dimension to music. With the computer connected to an audio source such as stereo speaker, the program samples the musical input and decomposes it into fundamental sounds. These sounds are then associated with colors and motions on the monitor screen. It is the patterns which are smoothly changing with the rhythm of the music that create the perception of added dimension to the sound.

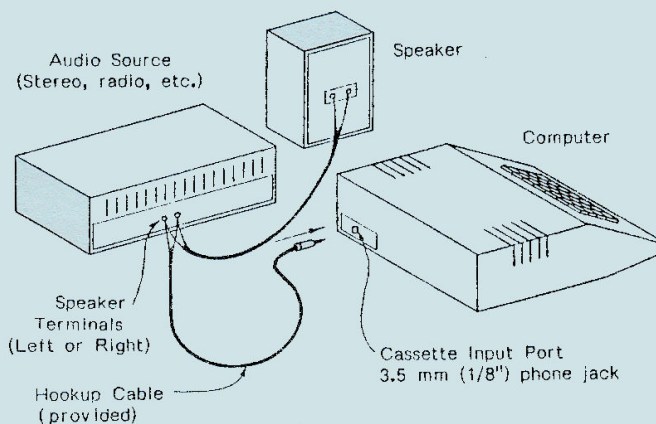
AUDIOVISION operates in several modes: Demo, Preset, Programming and the Color Organ. In the Demo-mode the program needs no audio input at all. Instead, all colors, patterns and motions are created by audio simulation subroutines inside the program. This mode is useful whenever the video display is needed but actual audio input is not available.

The Preset mode is the most popular. Just plug the audio input into the computer cassette port and watch the computer matching the patterns to the sound. If you think that you can create better corresponding patterns go over to the Programming mode. Here you can actually design your own abstract video by choosing a sequence of patterns, their motions and color changes. It seems complicated but it is actually very easy; just pick patterns, motions and color changes form a menu and assemble them any way you like. You will be amazed how soon you can get quite good at this.

The Color Organ mode allows you to use the computer keyboard like that of a musical instrument. But unlike the ordinary piano or an organ where you create sounds corresponding to musical notes, here you can create visual images to correspond to the music you hear. Entertain yourself or your friends!

Connecting audio Input to your computer :

Use the Hookup Cable provided for connecting the computer to an audio source. The pug fits all standard computer audio input receptacles. Connect the other end of the cable to speaker terminals of a suitable audio source such as a stereo unit, tape player, radio, etc. In case of a stereo either the left or the right speaker can be used. If the Hookup Cable provided is not sufficiently long it may be extended with an ordinary speaker wire.





NEWS LETTER



WINTER 1985

We receive many inquiries about the differences between the COPY MASTER II and the Wildcard II. So for your convenience we made a quick comparison chart.

FUNCTION OR FEATURE	COPY MASTER II	WILDCARD II
Modification needed for the 16k card in Apple II+	NO	YES
Time to copy 64k 128k	16 sec 35 sec	25 sec 50 sec
Step & Trace utility program for debugging	YES	NO
Need to set Read/Write enable on RAM card to make a copy on II+	NO	YES
Graphics Dump Option	YES	NO
Copies are made in standard DOS format	YES (3.3)	NO (need to convert)
Can run 64k DOS files on 64k Apple II+ & IIe System	YES	NO
Alters Apple's memory to store variables	NO	YES (some copies will not run)

As you see the COPY MASTER II is a winner.
So why buy an obsolete system?