Kracker Jax

Presents

The MAVERICK V3

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Attention: The Maverick is a very full featured utility. Full understanding of it's many attributes can only be accomplished by **READING THESE INSTRUCTIONS!**. We are more than happy to give customer support on this utility to Registered Owners. **PLEASE**, before calling, RE-READ the instructions and check the trouble shooting section.
Thank You

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IN THE BEGINNING

Remember back a few short years ago, when we all thought that "Pong" was the hottest game ever produced for home use? The cartridge game machines appeared on the scene and the personal computer market was here and here to stay. Not long after, "IT" arrived. "IT" was capable of not only playing games with its user, but also allowed its user to develop his own programming. "IT" was the Commodore 64, and before long it became the personal pet of millions of people wishing to join in the age of personal computers. Commercially produced applications such as spreadsheets and word processors started to show up in rudimentary form, and software copy protection was soon to follow.

Software protection has come a long way since the inception of the Commodore computer. Ever since the first commercial software was written for the Commodore, programmers have been dreaming up newer and more potent protection schemes. The purpose of copy protection was to prevent the software authors from becoming victims of piracy. Although most well thought out protection schemes seemed to slow the pirates down a bit, the protected software was eventually broken, and fell into their hands like another stamp in a collection. The result was that most of the software pirates still didn't purchase the software that they finally acquired anyway. The honest consumer DID purchase his software, especially those programs that he decided were a valuable addition to his library. It is this individual that has been the real victim of the **software protection wars**. If he wanted a backup of his fragile treasured program disk, he had to send extra money to the manufacturer of that product and wait for what seemed like forever to receive his backup. The only alternative was to resort to a myriad of copiers, hoping one of them would do the job at hand. As it turned out, it seemed that the more valuable the program was to the consumer, the harder it was to backup.

For a time, it was a leap frog game between the archival programmers and the protection programmers. A new protection scheme was developed, and all the archival programmers would scramble to be the first to develop a new patch in their copier capable of dealing with that particular protection scheme. This leap frog game went on for a couple of years before the inevitable happened. The protection programmers evolved to the stage that they were able to write protection that just couldn't be duplicated, at least with disk drives available to the end user, even with the most sophisticated nybblers. All purpose, do it all copiers were dead in the water.

What to do? If the archival programmers couldn't write copiers to sense and copy a particular protection scheme then only one solution remained. Break the protection check code. It was early in this stage that Kracker Jax was born. Kracker Jax allowed the user to simply make a fast copy of the protected program and then run a custom parameter over that copy to produce not only a copy of that program, but a copy devoid of protection in most cases. The revolution had begun. Parameters proved to be the most effective way to copy a protected program. Protection schemes that no nybbler could touch could easily be archived by the press of a key. This went on for a couple of years, and again the inevitable happened. Parameter-proof protection. How, you ask? Read on.

Today's protection is made up of three classes of difficulty. 1. A few programs are still released using archaic protection that most modern nybblers can duplicate. Why bother protecting?! 2. Many are still archivable using either a nybbler or fast copier in conjunction with a parameter. 3. Finally, more and more programs are showing up with data written in formats that protects every byte of data on the disk. If the data can't be written out, then a parameter is useless. The Bull's Eye was our first effort at this third level of copy protection. Soon after, the Shotgun II was developed to automate the principals set forth in The Bull's Eye. These two programs have set the standard which imitators have been trying unsuccessfully to duplicate. The revolution started by Kracker Jax has paved the way for the Maverick, the next step in an evolutionary process.

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The Maverick is our final archival programming effort in the Commodore 64 market. You're probably thinking to yourself, "then why did I buy this thing"? Well, for one thing, it already copies most protected programs on the market today, many of which can't be touched by any other copier, be it software or hardware based. Another reason is the fact that we are producing upgrades to the Maverick that include refinements, new utility modules, and parameters. We even support optional hardware such as The RAMBOard which, when combined with special parameters, will copy programs that are impossible to archive with software alone. Although the Maverick is our final C-64 copy system, we will continue to guide its evolution to keep it operating at the very edge of possibility. We will be around for years to come, and supporting you is our highest priority.

AND ON, TO THE FUTURE

THANK YOU for your purchase. By purchasing the Maverick, you are supporting ur efforts to support you, which has always been our highest priority. Although the Maverick will be our final effort in the Commodore 64 archival software market, we will continue to maintain the highest possible level of customer support. Instead of releasing a series of single purpose archival programs and / or utilities, we plan to put all of our C-64, 1541, 1571 programming efforts into upgrades of the Maverick.

Let's begin by saying that the Maverick itself is **not protected.** It is capable of archiving itself with its own single or dual fast data copiers. Because of the direct disk access, very **few files** will be found on the master disk, and **no files** will be found in the directory of the parameter disks. This format has two purposes. First, it helps us to protect our work from other copier producing companies who may feel that if we allow full view of our parameters we have released our work to the public domain. Some unscrupulous companies feel that they have the right to sell our work as their own. Talk about piracy! This is the worst form. The other and more important reason for direct disk access is the extremely fast loading time. Files that take minutes to load in standard format now take mere seconds. We have found our advanced fast loader system to be extremely reliable on disk drives in good condition. We have tested it with the 1541, 1541 C, 1541 II, 1571, and the Commodore SX portable computer and have gotten good results.

Ownership of the Maverick entitles the owner to one of two levels of support. Both levels **REQUIRE** you to **FILL OUT THE MAVERICK REGISTRATION CARD,** which is the 3 X 5 postcard, and send it to Software Support International. Whoever's name is on the registration card when we receive it is the **PERMANENT REGISTERED OWNER** of that copy of the Maverick. He is entitled to participate in whichever level of support he desires. The program may be sold to another individual, but the registration **may not** be transferred. Again, **SEND US THE Maverick REGISTRATION CARD** as soon as possible to avoid loss. We will notify you by mail as soon as we receive it, confirming your registration.

Level one support is available **ONLY** to **REGISTERED OWNERS.** Level one users will be entitled to buy upgrades to the Maverick (available about every four months) and parameter upgrades (released about every two months). These upgrades are available to **REGISTERED OWNERS** at the reduced price of $9.95 per upgrade disk. The reduced price is only available through Software Support International. Parameter disks **will not be sold** to non-registered individuals. Upgrades will be made available to non-registered owners at the normal retail price of the Maverick. Level one users are encouraged to exercise their right to call the customer support line if they experience a problem or have questions. We do have a knowledgeable staff on hand that can be of service in most cases. If you've **purchased** the Maverick and are a **Registered Owner**, you're supporting us - and we'll be happy to support you!

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Level two support is granted to the **REGISTERED OWNER** that wishes to be put on a subscription basis. Those customers who wish level two support **must** fill in and send us the yellow Maverick subscription ord form, which you'll find in your Maverick package. We accept subscriptions from those **REGISTERED OWNERS** who will allow us to bill their credit card (sorry but we only take Mastercard, Visa, and Discover) at the time of shipping or who authorize us to send the upgrade to them C.O.D. As usual, credit cards will not be billed until the actual day of shipping, **Period!** Please be advised that we can only accept these two methods of subscription payment. Prepays are not allowed. Also, we can only ship C.O.D. to U.S.A., 50 states. Level two owners are assured that they will be the first to receive upgrades, which are shipped automatically. To cancel a subscription, the user need only call or write to us requesting cancellation, which will place them back into level one status.

SYSTEM REQUIREMENTS

The Maverick will operate properly with either the Commodore 64, Commodore SX, or the Commodore 128/128D in 64 mode. It requires the use of one or two disk drives. You may use a 1541, 1541 C, 1541 II, or 1571 in any combination or separately. The Maverick V3 Quick File Copier also supports the 1581 disk drive, single or dual.

Worldwide Commodore users will be happy to know that The Maverick V3 is completely PAL compatible. All modules have undergone extensive testing and passed with flying colors. Please understand that disk protection varies from country to country and that parameters that are developed for American software may or may not work on software of the same title in another country.

PACKAGE CONTENTS

The package containing your initial purchase of the Maverick should contain the following items. 1> A Maverick owner's manual. 2> The yellow master Maverick diskette. 3> Two black Maverick parameter diskettes. One contains Module 1 on the front. The other contains Modules 2 through 4 on the front and Module 5 on the reverse. 4> The yellow subscription order form. 5> The Maverick REGISTRATION (post)CARD. Take time right now to fill out the REGISTRATION CARD, and send it in before you lose it. **THIS IS OF THE UTMOST IMPORTANCE!** All owner support services are tied into the registration card. Sending the card in immediately is your key to the ownership rights you deserve.

UPGRADES

As discussed previously, **Registered** Maverick (and previous Renegade, c rs have the right to upgrade (at a discounted price) to the latest Maverick version. If you have received this package as an upgrade, you'll find a number of changes in the Maverick. We highly suggest that you **re-read this manual** to acquaint yourself with the refinements and additions we've added to your new Maverick.

A few of the major changes made to the yellow Master diskette will be found in the Fast Data Copier, GEOS Tool Kit, Upgrades & Goodies and the Quick File Copier.

If you've also upgraded to parameter module #5, please note that you have actually received modules number two through five. Please disregard all old parameter modules in your possession (except #1) as we have been correcting any problems reported by our users and implementing them on the latest release. Also, please note that we have moved **ALL** our GEOS parameters over to the diskette that contains modules two through 4.

As you browse through our latest parameter listings, you will see that we have added extensive RAMBOard support. Any parameters that are tagged as "require 8K RAM" will require a hardware addition to your disk drive. We offer that hardware in the form of a small board that fits into your disk drive. The 1541 RAMBOard usually requires NO soldering, and in most cases, can be installed by a novice. If you don't have this inexpensive piece of hardware, we strongly recommend it.

GETTING STARTED

To get started, place the Maverick master diskette into disk drive device #8, face up, close the door, and type the following command: LOAD "*",8,1 . Press RETURN and the drive should begin loading the program. Commodore 128 owners need only place the Maverick disk into the drive face up and turn the power on. The Maverick will autoboot to the C-64 mode. In a short time, the Maverick title screen will appear, and moments later, the Maverick menu will dissolve on. The first thing you will notice are the two pointers on either side of the first menu selection. They can be repositioned by pressing the cursor keys. The pointers will follow the direction of the currently pressed cursor key. Any menu selection can be chosen by simply positioning the pointers around it and then pressing RETURN.

The Maverick is composed of ten different modules. Each module is designed to return to the main menu after the selected job is completed. Some modules are comprised of several utilities and some are single utility based. Some selections, such as the Parameter Menu, require the use of a sub-system Maverick disk.

The Maverick has been designed to meet the exacting needs of the experienced user as well as the ease of use demanded by the beginning computerist. If you are a beginner, and some of the utilities seem to be of no use to you, or you just don't understand why we even bothered to place them in the Maverick, don't be too concerned. Many of the utilities are oriented towards the advanced user. As you progress in your computer literacy, you'll find more and more uses for them. We have tried to ensure that the Maverick will be both easy to operate and highly effective, even for the beginner. We are always open to your input on improvements. Now that we've booted the main menu, we suggest that you learn to use the utilities by actually working with them.

FAST DATA COPIERS

Fast data copiers are used primarily to make fast, reliable backups of unprotected software. Fast data backups of protected software will not work correctly because data copiers are not capable of reproducing the protection onto the backup. We suggest that for unprotected software, you use these data copiers rather than copiers designed to duplicate protected disks. Because of the all out speed built into the Dual Fast Data Copier, you'll find that it will reproduce certain checksum errors. If there are no errors on the original disk, the Dual Fast Data Copier will not produce any.

We strongly suggest that you use the Single Fast Data Copier for the following conditions: 1> If you need to repair an unprotected disk that has, for example, a 23 error on it. 2> If you have a protected disk that is known to have standard errors on it, and you want to "clean it up" for breaking purposes, either manually or by parameter. The Single Fast Data Copier has a FULL verify feature built in and is designed to report as well as correct errors found while copying. If it encounters errors while reading the source disk, it will attempt to correct those errors while writing the data onto the copy disk.

From the opening menu, position the pointers on either side of the Fast Data Copier option. Make sure that the Maverick master disk is in the disk drive (device #8) face up and press RETURN to load the utility. You will be prompted to input an S if you wish to load the Single Drive Fast Copier or a D for the Dual Drive Fast Copier. Let's assume that you have two disk drives, and begin with the dual drive option.

Dual Drive Fast Data Copier:

At the (S)ingle or (D)ual prompt, make sure the Maverick master disk is in the disk drive and press D. The drive will start up and the utility should load to the Dual Fast Data Copier menu screen. When the main menu appears, you will be presented with a list of options. When working with two drives, the first thing you may need to do is configure the options to match your system.

If you have two drives that you are capable of changing device numbers on, or have permanently changed the numbers, set one drive to device #8 and the other to device #9. If you have two drives, both of which are device #8, we have a soft-wire option that will allow you to set different device numbers in each drive by a software method.

To **Soft-Wire** your drives, use the Cursor U/D key to move the highlight bar to the "Soft-Wire Drives" option. Press RETURN and you'll be asked to turn off both drives. After turning them both off, turn on the destination drive (the backup disk goes here) and hit the space bar. Next, you will be prompted to turn on the source drive (the original disk goes here) and press space bar again. At this point, if you do not get an error message, your drives are set up correctly. If you do get an error message, turn both drives off and then on again and try the soft-wire procedure once more. Once soft-wired, you shouldn't have to reset the drives again unless you turn the drives off or power down your computer.

Once back to the main menu, please note the Source and Destination drive options. You may set these as necessary by placing the flashing disk at either option and pressing RETURN to change to the desired configuration. That done, let's make a backup of your Maverick disk itself. Take the Maverick out of the disk drive and **be sure you have a write protect tab on it!** Any original disk should be write protected before attempting a backup. This reduces the risk of damage to your valuable original software. Place the Maverick disk in the source drive and a put blank disk in the destination drive. There is no need to ever format a blank disk in order to fast copy onto it with any of our whole disk copiers. Our copiers format as they go. Now position the highlight bar on the Copy Disk option and press RETURN. You will be prompted to insert disks (check them) and press RETURN. When ready, press RETURN and the drives will take off. After about a minute, a new prompt will appear telling you that the copy is complete and again asking you to press RETURN to continue. The Dual Data Copier menu will reappear.

You may check the directory of either the original or the copy disk by pressing F1 or F3 respectively. If you wish to boot your copy of the Maverick, place it in the source drive and press F8. The copy should boot to the main menu once again. Copies of other software may be tested only by powering the system off and on again.

One last item you should know about the Dual Data Copier is that the copy process may be aborted by hitting RESTORE. Because the drives are, at this time, independent from the computer, you must turn each drive off and then on again. We suggest reading a valid directory in each drive to re-initialize the drives before attempting another copy.

Single Drive Fast Data Copier:

With the Maverick main menu on the screen, and the Maverick master disk in the disk drive (device #8) select the Fast Data Copier option. When prompted, select S for (S)ingle Fast Data Copier. The disk drive will become active and the Single Fast Data Copier menu will appear on the screen. Use the cursor U/D key to move the cursor bar to the desired option and press RETURN to select that option. Let's go through the menu options one by one.

Copy Disk : Use this command to begin the copy process, after all other menu options have been properly set.

Source : This is the device number of the source drive (original). It defaults to device #8 but may be toggled to 9, 10, or 11.

Destination : This is the device number of the destination drive (backup). It defaults to 8 but may be toggled to 9, 10 or 11.

Soft-wire : This is the same as described above in the Dual Drive section.

F1/F3 : Displays a directory of the disk in the Source/Dest. drives.

F4 : C-128 USERS ONLY! Video RAM (64K) Toggle ON/OFF. Those users that have a C-128D or have installed expanded video RAM into their standard C-128 may take advantage of that additional memory by using this feature. Only two passes will be required to copy a full disk. Do not use this feature unless you are certain that you do in fact have the added RAM. Please note that in order to utilize this feature, C-128 owners **MUST** use the autoboot feature when booting the Maverick.

For those of you that wish to install the required 64K RAM, we suggest the 64K Video RAM Upgrade available from Software Support International. This unit is easily installed and requires **NO** soldering or expertise. Contact Tech Support for more details.

F6 : RAM Expansion Toggle ON/OFF. The Single Data Copier **will not** test for a RAM Expansion unit in your cartridge port. When toggled ON, you must make sure that the RAM Expander (1764 or 1750 only) is in proper working order and plugged in correctly. You may use the REU test program located in the Upgrades & Goodies Module to test the integrity of your unit.

The Fast Data Copier with REU toggled ON will react in a similar manner as when toggled OFF except, one pass copying will be possible. Also, you will be prompted at the end of the copy to make another copy or return to the menu. If another copy is desired, follow on screen prompts.

F8 : Reboot the Main Menu. Make sure the Maverick Master disk is in the drive (device #8) face up.

Even though we call this a Single Drive Fast Data Copier, you may use either one or two drives. To use the two drive option, set the source and destination device numbers to match the setup of your drives. When copying begins, one drive will read and then stop while the other one writes. Just follow the on screen prompts to complete the backup. For those of you with one disk drive, set the source and destination numbers at the current device number. For example, 8 to 8 or 9 to 9. Starting with the original disk, begin swapping with the copy disk following the on screen prompts until the backup process is complete. Disk errors encountered while copying will be reported as a diamond in the tracks copied display.

GCR NYBBLE COPIERS

Since the first Commodore programmer devised the first copy protection scheme, archival programmers have strived to achieve the impossible: create a copier that could copy **any** protection scheme. The Maverick GCR Nybble Copier is our attempt at creating the impossible. Although there are several protection schemes that defeat this copier, there are many more that it can backup.

When trying to backup protected software, the nybbler is your greatest single weapon. We feel that our GCR Nybbler is the most sophisticated copier on today's market. Not only can it reproduce all standard DOS errors (used in archaic protection), but it also handles a myriad of other tough protection schemes, one of them being Rapid-Lok. With our GCR Nybbler, you can even copy both sides of a true 1571 formatted disk; no disk flip is required. More on this later.

From the opening menu, position the pointers around the GCR Nybble Copier option and press RETURN. The Maverick master disk must be face up in the disk drive (device #8). You will be prompted for (S)ingle or (D)ual Nybbler. Let's begin with the dual drive version.

Dual Drive GCR Nybble Copier:

At the (S)ingle or (D)ual prompt, make sure the Maverick disk is face up in the disk drive and press D. The drive will start up and the program should load to the Dual Nybbler menu. Most of the menu options may be accessed by using the Cursor U/D key to position the highlight bar over the desired function and pressing RETURN to activate or change that function. Starting at the top of the menu, the options are:

1. **Copy Disk:** This option is selected after all other copy parameters have been set up. It requires an original software disk in the source drive and a blank disk (unformatted is fine) in the destination drive.

2. **Starting Track:** You may change the beginning track to copy at will. The default track is 1, but any track up to 80 may be selected. Note that you may touch the RETURN key to increment one track at a time, or hold it down to fast-forward.

3. **Ending Track:** You may change the ending track to copy at will. The default end track is 35, but any track up to 80 may be selected. We suggest track 38 for most protected software. Note that you may touch the RETURN key to increment one track at a time, or hold it down to fast-forward.

Let's take the time to explain why we would allow you to access up to eighty tracks of data when the Commodore has only 35 to 40 tracks available for use. We have reserved **tracks 1 - 40 for 1541** mode formatted disks; side one only. For those of you with the 1571 drive, we have used tracks 41 to 80 to copy the reverse side of a TRUE 1571 disk format. To copy both sides of the 1571 format disk in one pass, **input 1 as the starting track and 75 - 80 as the end track.** Both sides will be copied without having to flip the disk over. This feature is NOT available to 1541 users as the 1541 has only one write head and the 1571 has two, both of which are formatting in the same direction, making the reverse side format unreadable by a 1541 drive.

4. Auto Density: This feature defaults to off, but may be toggled on whenever you suspect whole track density changes. Only a few known programs use whole track density changes as their entire protection scheme. Superkit 1541 used density changes throughout the entire disk. Our auto density detects the bit-rate and automatically adjusts the copier for each track. Another protection scheme that uses density changes is one version of V-Max! protection. This protection demands that you copy tracks 1 through 40 (to be safe) and use a specially prepared parameter to finish the job.

5. Source Drive: (Original diskette) This feature defaults to 8 but may be toggled to 9.

6. Dest. Drive: (Backup diskette) This selection defaults to 9 but may be toggled to 8

7. Soft-Wire : For those of you with two disk drives, both of which are hard wired as device #8, you may use this option to change one of them to device #9 temporarily. Please refer to the Dual Drive Fast Data Copier section for instructions on the Soft-Wire option.

F1/F3: Use these FUNCTION keys to read the source and destination disk directories.

F2: Exit to BASIC. The drive will initialize to the disk currently in the drive.

F8: Reboot the Maverick main menu. Be sure the Maverick master disk is in drive 8, face up.

RESTORE: You may reset to the original nybbler screen by pressing RESTORE. To abort the copying process after the drives are both working, you must physically turn the drives off and on again.

Single Drive GCR Nybble Copier:

Load the Maverick main menu and select the GCR Nybble Copier. At the (S)ingle or (D)ual prompt, make sure the Maverick is face up in the disk drive and press S. The drive will start up and the program should load to the Single Nybbler menu. Most of the menu options may be accessed by using the cursor U/D key to position the highlight bar over the desired function and pressing RETURN to activate or change that function.

You'll find that the Single Drive GCR Nybble Copier is essentially the same as the Dual version except that only one drive is required to backup your protected software. Instead of allowing two drives to transfer data back and forth between them, the one drive version requires you to swap the source and destination disks about four times each to produce a whole disk copy.

The Maverick's Single Drive copier has our extremely powerful Rapid-Lok copiers built right in. This allows you to copy some of the most protected disks on the market. If the two drive Nybble Copier fails, try the single drive version with NO MODIFICATIONS to the settings. If the copy process starts, and then prompts you to re-insert the Maverick master side 2, you can be assured that you're dealing with Rapid-Lok protection. In most cases, the Maverick Single Nybbler is smart enough to examine and duplicate a Rapid-Lok protected program. We have identified a new version of Rapid-Lok that will require a custom copier or parameter. When that version of Rapid-Lok is detected, you will be prompted to check the parameter listings. We expect to see the first of this series on Maverick Parameter Module #6. Please note that duplicating a Rapid-Lok protected

piece of software is very dependent on CORRECT drive alignment and PROPER speed settings. If you are unable to duplicate a particular piece of Rapid-Lok protected software, we suggest using a friend's equipment to make your backup. We find that the 1571 drive is more likely to be successful than the 1541 because of the speed accuracy built into that drive.

SECTOR MAP EDITOR

When our programmers find need of a specialized utility, and none exists, they have no choice but to write it. We needed a utility that would examine a disk for standard DOS errors, display true sector usage, allow editing of any sector, and print the results. And as if this weren't enough, it had to be FAST. The result was the Sector Map Editor. Although we've dressed it up for you, it is functionally the same as the version we've been using in our everyday work. We hope you enjoy it as much as we do!

From the Maverick main menu, select the Sector Map Editor. Be sure the Maverick master disk is in the drive face up and press RETURN. The drive should start up and, in a short time, the Sector Map Editor main menu should appear. Use the cursor keys to position the cursor bar over the desired option and press RETURN. Starting at the top of the screen, the menu options are:

Scan Diskette: After setting all other options, begin full scan of the diskette currently in the disk drive. See **Scan Options** below.

Edit Diskette: After setting all other options, use this feature to quick edit a sector or range of sectors. See **Edit Options** below.

Start Track #: Set the beginning track to scan or edit. You may input 1 to 40.

End Track #: Set the ending track to scan or edit. You may input 1 to 40.

Device #: Set to the device number of the drive which contains the disk you wish to scan.

F1: Use this Function key to view the directory of the disk in drive.

F8: Reboot the Maverick main menu. Be sure the Maverick master disk is in the drive face up.

Scan Options:

When the Scan Diskette option is selected, scanning will begin on those tracks selected in the main menu. If you wish to **pause** the scan process, hold down **RUN/STOP**. To **resume scanning**, just press the **space bar**. To **stop** the scan and reset the drives, press **RESTORE**. The sector counter is along the left side of the screen and the track counter is along the bottom. After the scan is complete, track and sector highlighters, as well as a flashing cursor, will appear.

The map on your screen at this point represents a BAM map of truly used sectors. If data is present in a sector, a + will be displayed in that position. If a number appears in the map, it represents a DOS error. If a 2 is displayed, then a 22 error is at that position. If a 9 is present, then a 29 error is at that location, and so on.

Other active keys in this mode are the **F1 key to print from any printer capable of emulating a Commodore 801, 1526 printer.** Use the cursor U/D and R/L keys to position the flashing cursor over any sector you would like to examine further. To **read the sector for examination or modification, hit Space Bar.** The sector will be read and a **HEX/ASCII memory map will be displayed.** You may use the Cursor U/D and R/L keys to position the cursor to the first byte you want to modify. Make any desired changes in Hex. To view the same sector in disassemble mode, hit the **M for Mode** key and the disassembly will appear. You may make

changes by hitting the **Space Bar** and typing in your changes in mnemonics. Be sure to use proper spacing. Hit RETURN after each change. A bad instruction will exit the edit mode. After all changes are complete, use the **W key to rewrite** the sector. Use the **J key to Jump to the next file link**, if any. Use the **Left Arrow** key (ESC) **to exit to the previous screen**. You may select a new sector or return to the main menu by hitting **RESTORE**.

Edit Options:

The Edit Diskette feature is identical to the Scan Diskette option, except that no error or sector usage scan is performed or displayed. Use this option when you want to quickly examine a sector on any diskette.

MAVERICK GCR EDITOR

The GCR Editor is the most powerful tool you'll ever use to examine a disk. It will allow you to view raw data the way it was originally written to the disk. Our GCR Editor has every feature we could think of to examine and manipulate headers and data. A thorough knowledge of the makeup of Commodore format is necessary to have full use of this utility. For complete information on this subject, we suggest "Inside Commodore DOS", written by Richard Immers. This manual contains a wealth of information on the makeup of the Commodore format and the Disk Operating System (DOS). With this manual and our GCR Editor, you can achieve a new level of understanding.

In the following instructions, we will give you all the command features available to you with the Maverick GCR Editor. Only use and study can make you proficient. Enjoy!

What is GCR?:

When you load and save files from the C-64 to disk, they are not written bit for bit straight to the diskette. The Commodore 1541/71 disk drive cannot write more than three "0" bits in a row to a disk, so writing a hex byte like #$06 poses a problem! Commodore developers created the GCR coding scheme to read and write data to and from the drive. It converts each four bits of hex code into 5 bits of GCR code. For every four bytes of hex data, there are five GCR bytes. Lastly, this data is written at a standard rate, depending on its placement on the diskette. Standard Bit Rates are as follows: Tracks 1-17 = $60, Tracks 18-24 = $40, Tracks 25-30 = $20, Tracks 31-35 = $00.

Commodore DOS protection is, for the most part, simply the placement of NON-STANDARD data on the diskette. This can be created by using single bytes in non-standard locations, abnormal drive speeds, or rewriting the format (single sectors, tracks, or the entire disk). By using your GCR Editor, you can obtain exact format information. You even have the power to duplicate many protection schemes on non-working backups. Let's go through the commands available to you in this powerful utility. From the main start-up menu, choose option 3 and press RETURN.

First Screen (Header Selection):

Track Selection: Track values are entered in decimal. Values from 1-40.5 are accepted.

Bit Rate Selection: Press RETURN for default value, otherwise enter one of four bit rates ($00,$20,$40,$60).

After Scan of Track: The number of headers equals the number of syncs on a track. Left column = GCR of first 8 bytes. The right column = converted GCR bytes. The message bar just above the list of headers gives you information about the current header the cursor is on. Left hand will say: Sector: XX if the current

header is part of a standard formatted track. It will give you the sector number in decimal so you can use the GCR Editor like a sector editor. The right hand will either say DATA or HEADER, depending upon whether the cursor is on the data block header (starts with a $52) or the actual data block itself (starts with a $55).

Commands (First Screen):

Shifted H: Help screens.

T: Enter a new track.

R: Enter a new bit rate for the current track.

F1: Directory of disk in drive.

F3: Prompt to reboot main menu.

Cursor U/D: Scroll through headers.

Space Bar: Read current selected header and go to edit (2nd) screen.

P: Print list of headers to printer (Standard Commodore printers).

+ or -: Go back or forwards one track and read.

C: Create a Track : You may access this feature after reading a track.
Options Include:
1. Fill track with no-sync: wipes out entire track with $55s.
2. Fill track with full-sync: fills entire track with $FFs.
3. Create Notepad header: Wipes out an entire track with $55s, and then creates a one header/one sync track using Notepad code.

Second Screen (Header Edit Screen):

Header Info: Appears at the top of the screen. Sync is the actual length of the sync mark of this header. Length is the length in bytes of the header. Note: if the header has more than $0500 bytes, the buffer for editing will only go up to byte $04FF, since the disk drive cannot read long blocks unless you have expanded memory.

Header and Data Tables: Rows of ten GCR bytes appear on the left. The converted eight hex bytes appear on the right. Remember, five GCR bytes equal 4 Hex bytes.

Commands (Second Screen):

R: Reread the header data.

W: Write altered data back to disk.

Z: Find zero GCR bytes and mark them.

P: Print out data to printer.
SPACE BAR: Enter edit mode.(See more info below.)

+ or -: Increment or decrement sync length by one.

CURSOR U/D/R/L: Move cursor around data table.

< : Delete one byte from cursor spot.

> : Insert one byte ($00) at cursor spot.

DEL: Delete bytes (from end of table)

S: Switch column editing from left to right.

A: Toggle Hex display Hex and ASCII (right hand of screen).

D: Enter disassemble mode.(See more info below.)

C: Repairs checksum of header or data block. Use before W command to prevent checksum error.

SHIFTED R: Lets you re-read current header at a different clock rate than the entire track was read at.

SHIFTED H: Help screens.

LEFT ARROW: Return to first screen.

Edit Mode: Hit SPACE BAR to enter, border will change color. Type in hex bytes, or ASCII, whichever is appropriate. DEL key will backup cursor. Hit RETURN to exit edit mode. Note: On the display screen, double dots ".." mark bytes that aren't used. If you try to hit SPACE BAR to enter the edit mode on one of these bytes, it won't work (except, on the first ".." to the right of the last data byte displayed). Hitting SPACE BAR here allows you to append to the current data, the length of the header will change appropriately.

Disassembly Mode: Hit D to enter Disassembly mode. The disassembled code will appear in the GCR column on the left. Type in assembly text and hit RETURN to enter. Hit CURSOR U/D to escape Assembly mode.

SPACE BAR: Enter disassembly mode.

CURSOR U/D: Scroll back and forth through the disassembly.

RETURN: Exit disassembly mode.

P: Send disassembled code to printer.

Notepad Feature: At times when using the GCR Editor, you may want to save a header, look at another one, and later retrieve the original header without re-reading it. Our GCR Editor features a scratch pad (called the Notepad) that lets you save one header in memory. You can also edit the notepad header.

T: Toggles editing mode from current header to notepad. The border will change colors and the message "NOTEPAD" will appear in the top left corner. You can't use any disk commands like R,W,& Z in Notepad mode. Hit T to return to normal header program.

SHIFTED S: Save header to disk as a Notepad file. Save either Notepad or selected header.

SHIFTED L: Load saved header from disk.

UP ARROW: Saves current header to Notepad.

CONTROL I: Only works in the non-Notepad mode in GCR editing. Inserts NOTEPAD header code at cursor position. Use to retrieve Notepad.

CONTROL A: Appends notepad header to disk at cursor spot. If you have a long data block with extra room at the end, and you wish to add an extra sync to disk, move the cursor to the end of block, have the desired new header saved to the Notepad, and hit CONTROL A. The GCR Editor will automatically re- scan the track.

GCR Editor Hints, Tricks & Tips:

Use caution when using the **W** command repeatedly. The GCR Editor writes each header back to the disk as perfectly as possible (ie: correct length, correct sync). If you make a header longer than it was before and write it back to the disk, it may destroy the header that follows it.

The same goes for the CONTROL A append command. Changing sync lengths and writing the header back to the disk is also dangerous. Use caution.

After you use the **W** command, you should verify that it wrote correctly by using the **R** command to re-read it.

Use the **C** checksum command after editing a data block before you write it back to disk. This repairs the data block checksum. Otherwise, normal Commodore DOS will get a 23 read error when it tries to read the block.

Well, there you have it. The most powerful, easiest to use GCR Editor on the market today. If you feel confused or overwhelmed, don't be put off. A little study and practice will have you feeling right at home.

GEOS TOOL KIT

One of the hottest utility packages to hit the Commodore market in recent times is GEOS. We at Kracker Jax are sensitive to our users need to make backups of their software, especially their productivity software. The GEOS lineup is no exception. In this Tool Kit, you'll find the utilities necessary to make backups of almost all your Berkeley products. Also included in this module is our GEOS based **Sector Editor that is programmed to run under GEOS Desktop V1.3 or higher**, and our GEOS file copier that should make life a lot easier for all dedicated GEOS fans.

We are especially proud to present our latest GEOS utility. Our 1581 * GEO Boot will allow those of you with the 1581 Disk Drive to port **ALL**, and we mean **ALL** of your Geos applications, and GEOS itself to the 3 1/2" diskette. We are planning to expand the GEOS Tool Kit in future upgrades of the Maverick. As always, registered owners are invited to give us their suggestions.

GEOS PARAMETER MENU

To be on the safe side, **use our Single Drive Fast Data Copier** (one or two drives) to produce non-working backups of your **INSTALLED** GEOS software. Then, from the Maverick main menu, select the Geos Tool Kit. You will be prompted to insert the Maverick master disk side two, and press Space Bar. After a short loading period, the GEOS Tool Kit menu will appear. Using the Cursor U/D keys, move the highlight bar to the Parameter menu and press RETURN. After another short load, you will be prompted to insert your **LATEST Parameter Module Number Two through Four** in the drive and press RETURN. (Please note that ALL our upgrade work in the GEOS parameters will always be added to the listing on Parameter Module Number Two through Four.) In a short time, the Parameter menu will appear on your screen. You may use the cursor U/D key to slow scroll, and the cursor R/L key to page through the parameter listings. Place the cursor bar over the desired parameter representing the application, or file within the application you're trying to back up, and press RETURN. The parameter will load and prompt you for your backup. Place the backup in the drive and press RETURN again. The parameter will attempt to sense which version of protection has been used on your particular software (there are many versions of some pieces), and will automatically defeat that protection, if known, and will indicate success or failure. When the parameter has run its course (some take longer than others), the main menu will reappear. You may try your backup now, or run another parameter — it's your choice.

If you get a "parameter successful" message or "version unknown" prompt and have tried several times on a particular piece of software, and the parameter still doesn't de-protect, contact us, and we will attempt to build a custom parameter for you. Please be aware that Berkeley released a version of GEOS 64 that is labeled as a v1.2 that is, in reality, a SYSTEMS DISK. Any SYSTEMS DISK that has a v1.2 label is, for our purposes, a GEOS 64 v1.3.

GEOS 64, be it v1.3 or v2.0 contains dual protection. In order to produce a fully functional backup of GEOS 64 (not GEOS 128), you must use the appropriate GEOS 64 parameter, as well as the Desktop parameter on your backup. Also, because the Desktop file is a protected file, be sure you run the Desktop parameter over any and all work disks containing the Desktop file. This will eliminate the so called "Trojan Horse".

In order to unprotect the following titles, you must have a backup of the original that is unaltered. This means that the **original disk can be installed**, but not validated, or have any of it's files rearranged. **Geoprogrammer 64, Geos 64, GEOS 64 v2, Geos 128, GEOS 128 v2.**

Parameter Printout:

By popular demand, Maverick includes a printout feature in the GEOS Parameter menu. After reading any Maverick parameter disk, you may dump the parameter listing to any printer capable of emulating the Commodore 801 or 1525 printer. Simply read the appropriate module, and press the **Commodore and P** keys together. You will then be asked for the correct printer device number (**number four is most commonly used**), and if you desire linefeeds. **We suggest you answer NO to this unless you know your printer demands them.** If the printout does not feed up properly, you should answer YES on the next attempt.

After the initial setup questions have been answered, the printout will begin. **You may press A to abort or P to pause.**

GEOS SECTOR EDITOR

No archival utility package worth its salt would be without a Sector Editor. We thought it would be fun to program one in GEOS format. We at Kracker Jax are lucky enough to have one of the top GEOS programmers in the country on staff. Bob Mills, of **Geosbusters** fame, has done it again! A full featured Sector Editor that works under GEOS Desktop!

To use our Sector Editor, you will need a basic knowledge of GEOS. If you have ever used any of the GEOS applications, you will find our Sector Editor quite easy to boot and use.

Place your GEOS v1.3 (or higher) diskette in the drive and boot it. When the desktop appears, insert the Maverick master disk Side 2 (or our GEOS Sector Editor may be copied to your work disk) in the desired drive, and open the Maverick disk. When the Sector Editor icon appears, double click it. The Sector Editor should boot up and appear on your monitor. Please note that your preferences, previously set up in your desktop, will be carried through to the Sector Editor. We suggest that you at least have the correct printer file (this must be on the work disk along with the Sector Editor), and input device (we highly recommend a mouse), set up as the defaults.

We cannot, in the scope of this manual, instruct you in the layout of the Commodore format. If you need information concerning this subject, see your local Commodore User's Group. They usually have an expert on hand to get you through the rough spots. From the Sector Editor screen, the options are:

Diskette/Left Arrow: Write the sector currently displayed on the screen to the location indicated by the NOW Sector settings.

Diskette/Right Arrow: Read the sector currently indicated by the NOW Sector settings.

T: Select from 0 through F to set the desired Track, and click T to set that track to the NOW Track. So, to set track 18 (Hex 12) click 1 then 2 then T. That track will be displayed in the Track Now indicator.

S: Select from 0 through F to set the desired Sector and click S to set that sector to the NOW Sector. So, to set sector 10 (Hex 0A) click A (no 0 necessary) then S. That sector will be displayed in the Sector Now indicator.

Chain Loop: You may chain forward through any file by clicking this option. Also any two byte address you wish to click on from the screen buffer may be jumped to. Just click on the first of the two bytes, and when the first byte becomes highlighted, click on the chain loop icon. The sector indicated will be read into the screen buffer.

Chain +: All standard program files have what we call chain links. These are the pointers that indicate the next sector in that file. To automatically chain forward through the file, click the Chain + icon on.

Chain -: After a chain forward through the file links, you may backtrack through the links previously read.

Large +: Read next Track forward in numerical sequence.

Large -: Read next track backwards in numerical sequence.

Small +: Read next sector forward in numerical sequence. When the last sector has been read, this feature will wrap back to sector 0 in the same track.

Small -: Read next sector backwards in numerical sequence. Sector 0 denotes the end stop on this feature.

Right Arrow/P: Print sector information and data in Hex and ASCII. The correct printer driver must be installed on a GEOS work disk along with this Sector Editor. (Consult your GEOS User's manual).

NOW: Current track and sector displayed on screen.

Previous: Previous track and sector read in, using chain +. 00 indicates no previous sector was read.

Next: Next track and sector to be read in (file chain links).

Arrow/Dual Drives: Toggle A drive to B drive and vice versa. (Icon not displayed if two drives aren't present.)

Position: Displays the position in Decimal and Hex of the current byte clicked on, if any.

Changing bytes in the sector map is simple. Just click on the first byte to change and input your changes in HEX. If you click on in the ASCII display, you may input your bytes as ASCII characters. Notice that the HEX bytes are automatically updated.

Have fun with this Sector Editor, but never experiment with your ORIGINAL software diskettes. Make a backup with any of our whole disk copiers and then no irreversible damage can be done.

GEOS FILE COPIER

From the first time we used GEOS, we knew that a file copier needed to be created. The normal copy procedure allowed in GEOS is slow and tedious. Only one file at a time can be transferred, and then you are limited to which files you can transfer from one disk to another. With the advent of GEOS 64/128 V2, file copying has been improved but still not optimum. The process is cumbersome and slow. Also your file selections are still limited.

Our new GEOS File Copier has the advantage of a larger storage buffer as well as not limiting your selection of files, other than system boot files. Please be aware that even if you use one our parameters to de-protect a GEOS boot disk, you still cannot file copy the disk to another disk and still have a working copy. The reason for this is, the kernel file must reside on the backup disk in the exact position as it did on the original disk. They use track and sector loading procedures rather than file oriented loading.

Place your GEOS v1.3 (or higher) diskette in the drive and boot it. For those of you with GEOS 128, boot up in 40 column mode. When the desktop appears, insert the Maverick master disk Side 2 in the desired drive, and open the Maverick disk, or our GEOS File Copier may be copied to your work disk and opened from there. When the File Copier icon appears, double click it. The File Copier should boot up and appear on your monitor. Please note that your preferences, previously set up in your desktop, will be carried through to the File Copier.

When the GEOS File Copier main screen appears, at the top of the screen, the following information is displayed.

Current Disk : The directory name of the disk in the source drive.

Total Files : Displays the number of files selected to be copied.

Total Blocks : Displays the total number of blocks of the selected files.

Source : Displays **A** or **B**, and drive type.

Target : Displays **A** or **B**, and drive type.

Please take time to familiarize yourself with the available options.

GEOS : Click on and a window will appear.

Exit to Desktop : You'll be prompted to insert your GEOS v1.3 or higher disk in the drive if necessary.

Use Desk Accessory : If desk accessory files are on the disk in the source drive, they will be listed in this window. You may boot them by pointing at them and single clicking.

File : Click on and a window will appear.
Load Source Directory : Click this option to load the directory of the disk in the source drive.

Copy Files : After all other options have been setup, click this option to begin copy process. See **Copy Files** section below.

Disk : Click on and a dialogue box will appear. You will be allowed to swap the source and target drives. You must have pre-configured GEOS from the desktop before entering the GEOS File Copier. Please note that our GEOS File Copier will utilize any combination of drives that your version of GEOS will allow. At the time we released this utility, GEOS was not supporting partitions on the 1581 disk drive.

Page : If the menu screen has been completely filled with file entries, you may click this option to view the next page of entries, if any exist.

File Selection : Select files by pointing and clicking. You may also select a block of files by holding the button down while moving the pointer. You are limited to a maximum of 128 files per disk, but there is no limit to the number of blocks selected.

Copy Files : After all other options have been set up, you may begin the copying process by clicking the **Files** option and then clicking the **Copy Files** option. You'll be prompted with **Are You Sure?** Answer **OK** or **CANCEL**. If you answer **CANCEL**, you will be returned to the main file copier screen. If you opt for **OK**, you will be prompted to by a dialogue box to insert Source and Target disks (if two drives are used). Again, answer the **OK** or **CANCEL** prompts. If you opt for cancel, you will be returned to desktop. If you continue, the copy process will begin. Follow on screen prompts until you get a copy complete message. At this point a dialogue box will appear and prompt you to either re-boot the GEOS File Copier or cancel to desktop. It's your choice.

1581 GEO * BOOT

Dedicated GEOS users have demanded and received many upgrade features since the original GEOS was released. GEOS v2.0 represents Berkeley's finest effort. One of the latest additions is limited support of the 1581 Disk Drive. It allows the user to utilize the 1581 as a data drive only. This support is OK, but our users have indicated that they wanted full support. They wanted to boot their GEOS directly from the 1581 and take full advantage of the speed that drive can deliver. As stated previously, we are sensitive to the needs of our customers, and as a result, have written the 1581 * Geo Boot. We want to thank Bob Mills for his many hours of investigation that paved the way for this great utility.

From the Maverick main menu, position the pointers around the GEOS TOOL KIT and press **RETURN**. Follow on screen prompts, and when the new menu appears, select the proper version **1581 Geo * Boot 64** or **1581 Geo * Boot 128** and again press **RETURN**. (Please note that the 128 version will prompt you to be sure your 40 column key is in the UP position ,and then do a system reset. **This means press the reset button, not power off.**) When the utility appears, use the Cursor U/D key and **RETURN** to select the following options:

Install GEOS 2.0: Before using this option, you must install, configure and thoroughly test your GEOS v2 disks. When satisfied that all is well, set up your source (1541/71) and target (1581) drives. See below. Begin the conversion process by selecting this option. Press **RETURN** and you'll be prompted to insert your **ORIGINAL** Geos v2 Disk 1, Side A, in the Source drive and any blank 3 1/2" disk in the Target drive. We recommend that you place a write protect tab on your GEOS v2 disk. Warning: Any data presently on the 3 1/2" disk will be erased. Check that it is not an important work disk. At this point press the Spacebar to continue.

First, the target disk will be formatted, and then the conversion process will begin. If the computer resets back to BASIC during the process, you are not using an **ORIGINAL** GEOS v2. Please use your Original, as a copy will not work. In approximately 3 minutes, the Installation Complete prompt will appear. You will find three files on your target disk (one on the 128 version). These are the converted files that will now run properly on the 1581 drive. The first file on the 64 version is your boot file and may be booted by the following command: **LOAD "*" ,(device #),1.** C-128 owners may boot their version by using the RESET/AUTOBOOT, or **BOOT "GEOS128 2.0",U(Device#).**

In order for your converted GEOS to run properly, you must use GEOS or our GEOS file copier to transfer the following files to your 3 1/2" disk:

Copy Files:
This option is selected after all other menu options are properly set. See Copy Files section below.

Source Drive:
Use this option to change the source (original) drive device number from 8 to 9,10, or 11. Your source drive must be either hard or soft-wired to match the change. Your drive type, if any, will also be identified in this option.

Subdirectory of Source (1581):
Defaults to **OFF** unless a 1581 disk drive is detected as the source drive. This option allows you to read into partitions, if any exist on your 3.5" diskette. With the disk containing the partitions in the source drive, and the Highlight Bar over the Subdirectory option, hit RETURN. Partitions will be displayed, if any, between the arrow pointers. Notice that the current directory name as well as the previous directory name is displayed at the top of the screen. If you wish to read into a partition, position the arrow pointers, using the Cursor U/D key, on either side of the partition name and press RETURN. Again, partitions, if any, will be listed on the screen. Repeating this process will allow you to read into any level of subdirectory or partition you wish. If you have gone past a desired partition, use the Clear key to return to the Root Directory and begin the read process again. To copy files from the current partition (listed at the top of the screen), hit the Back Arrow key to return to the menu. The source drive will remain in the current partition unless you access the source subdirectory option again.

Dest. Drive:
Use this option to change the destination (copy) drive device number from 8 to 9, 10, or 11. Your destination drive must be either hard or soft-wired to match the change. Your drive type, if any, will be identified in this option.

Subdirectory of Destination (1581):
See above Subdirectory option. This option will only appear if a 1581 disk drive has been selected as the destination drive. Please note that you may save files from one partition to another partition on the same disk with proper setup.

Save Skew (1541/71):
The order in which your Commodore disk drive saves each sector of data to the diskette is called the interleave or Skew. The normal skew rate of the 1541 drive is 10. This means that DOS begins on, say, sector 0 of a 21 sector track (sectors 0 - 20) and writes sector 0 then adds ten, writes sector 10, adds ten, writes sector twenty, adds ten again to make thirty and subtracts the maximum number of sectors allowed in that track from the total. In this case it would be 20 + 10 = 30 minus 21 = 9, add ten more, and so on. The skew is directly related to the speed at which the drive is able to send disk data to the computer.

Normal 1541 DOS (Disk Operating System) prefers a skew of ten for the shortest possible loading time. However, there are fast loader hardware and software systems available that will shorten loading time considerably. Many fast loaders work at optimum speed when the skew rate is smaller than normal. For instance, the 1571 drive in 128 mode prefers a skew of 6, although any file save done in the 64 mode will normally save out at a skew of ten - not optimum. When copying files you want to use on your 1571 drive (in C-128 mode), why not set the skew rate to 6? This will decrease load time considerably. Some other commercial fast loaders and their optimum skew rates are; Fastload Cartridge [10], Mach 5 [10], Super Snapshot with the 1541 [5 to 10], and with the 1571 [5], Warp Speed [6], Quick Load [9 to 10], Chip Level Design's Burst ROM [5], and Pro DOS an incredible [1 to 5]! You may want to experiment with your favorite fast load utility.

Format Dest:

This option will allow you to initialize or New a diskette. You may use a brand new disk or a previously used one. Remember, whatever is on that disk is going to be erased PERMANENTLY. The drive previously set up as the destination drive (default is 9) will be the formatting drive. With your disk to be Newed in the destination drive, select the format option. You will then be asked to input the desired disk name (up to 16 characters) followed by a comma and any two character ID, letters or numbers. Press RETURN and you will be prompted to double check the disk. Do so; when satisfied all is well, hit the Y key for Yes. Formatting will take about 30 seconds and will automatically return you to the File copier menu when finished. If you get a 00,OK,00,00 message, then all went well and the destination disk has been prepared properly. Please note that if the destination drive is a 1571 drive, you will be asked whether you want a 1541 or 1571 format. If you select the 1571 format, both sides of the diskette will be formatted without having to flip the diskette over. Follow on screen prompts.

Softwire Drives:

See the Softwire Drives section in the Dual Drive Fast Data Copier section.

F1/F3:

Use these Function keys to read the Source and Destination Disk Directories.

F4 :

C-128 USERS ONLY! Video RAM (64K) Toggle ON/OFF. Those users that have a C-128D or have installed expanded video RAM into their standard C-128 may take advantage of that additional memory by using this feature. Fewer passes will be required to copy a full disk. Do not use this feature unless you are certain that you do in fact have the added RAM. Please note that in order to utilize this feature, C-128 owners **MUST** use the autoboot feature when booting the Maverick.

For those of you that wish to install the required 64K RAM, we suggest the 64K Video RAM Upgrade available from Software Support International. This unit is easily installed and requires **NO** soldering or expertise. Contact Tech Support for more details.

F6 :

RAM Expansion Toggle ON/OFF. The Quick File Copier **will not** test for a RAM Expansion unit in your cartridge port. When toggled ON, you must make sure that the RAM Expander (1764 or 1750 only) is in proper working order and plugged in correctly. You may use the REU test program located in the Upgrades & Goodies Module to test the integrity of your unit.

The Quick File Copier with REU toggled ON will react in a similar manner as when toggled OFF except, one or two pass copying will be possible.

F5:

Hit this function key to send a disk command to either the source or destination drive. This feature defaults to the Source drive. Use the # key and RETURN to toggle to the destination drive. You will be presented with a S> or D>. This is your key to the built in DOS Wedge. You may send any valid disk command through this wedge. The S> and D> is the substitute for the OPEN 15,8,15," portion of a disk command. Thus to scratch a file, simply type in S>S0:Correct Filename . All other disk commands work in the same manner. See your disk drive manual for the list of available commands.

F7:

Exit to Basic. We have added this option for especially for those of you with 1581 drives. You may use the partition open commands to read as deep into the levels you wish, and then exit to BASIC. The last partition opened will still be accessible through normal DOS Commands.

RESTORE:

The RESTORE key will return the file copier to the file copier main menu from any file copier sub screen. If a disk drive is active, you may have to turn it off and on again to reset it. Please note that stopping a copy during disk access may ruin the data on the destination disk. Also, before shutting the drives down, open the drive doors to prevent possible damage to the source diskette.

Copy Files:

After all other copy parameters have been set and your destination disk is properly prepared, place a write protect tab on your original diskette and select the Copy Files option. The directory of the source disk will be read and will appear on the screen. Using the cursor U/D key, scroll through the list of directory files. Your options are:

Space Bar: Select the file indicated by the pointers. The pointers will automatically move down one file after selection.

A: Toggle All: You may automatically set all files to be copied by pressing **A**. Note that all files are highlighted. The Space Bar will now act as an un-highlighter.

C: Copy Files: Don't press **C** until you are done selecting all files for copying and both the source and destination disks are in their proper drives. The source drive will be read and the data will be transferred to the destination drive. If, as the destination BAM is being written out, the copier detects a duplicate file name being placed on the disk, you will be prompted for a new name for that file. Input up to sixteen characters. Please note that the marker lines on the left side of the File read-write screen represent about 10 sectors each. This is to be used as a rough indicator only. Don't disturb the disk drives until the main file copier menu reappears.

D: Delete Files: After selecting files, you may delete or scratch them from the directory by pressing **D**. You will be asked if you are sure -- **Yes** or **No**. If you choose **Yes**, you will be asked if you would like to confirm each file before it is deleted. We suggest you respond **Yes** as a **No** response allows no turning back. Again, be careful with this option as the files can only be recovered by a skillful "disk surgeon".

F8: Reboot main Menu. Place the Maverick master disk in the drive and hit F8. The main menu will reboot.

Single Drive Quick File Copier:

Our single drive file copier operates exactly the same as the dual drive version. To use the Quick File Copier with one drive, just leave the source and destination device numbers set at the default settings of 8, or set both of them to whatever device number you are using. You will be prompted to insert the source and then the destination disks numerous times. Just continue the disk swaps until the copy is completed and the main file copier menu reappears.

PARAMETER MENU

Copy protection has come a long way from the days when a do it all nybbler could either copy all protection on the market, or be programed to do so. Today's copy protection demands, in most cases, what we call a parameter. "What is a parameter?" you ask. Copy protection is generally made up of two special routines working together. The actual physical protection placed on the diskette by the duplicator, and the routine written by the programmer to check that physical protection. In order to copy a protected program, and still have a WORKING copy, we must either duplicate the physical protection or rewrite the protection check

routine to allow the program to pass protection checks whether or not the physical protection is on the backup.

Duplicating the protection requires examination of the physical protection with tools such as our GCR Editor, and then creating a special program that re-programs the 1541 disk drive to write that protection out. Of course, we could possibly build that protection write capability into our nybbler, but after a while the number of different checks and write routines would be prohibitive, and would cause our nybbler to slow down to a crawl.

Another answer is to de-program the protection check routine. This is actually the most effective method. We examine the original protection checks written by the software programmer, and disable them by creating a special program designed to re-write the original code by writing what we call a "patch" to a backup of the original. We MUST assume that the software program you own is EXACTLY like ours. If your program is different in any way, we will write our "patch" to the wrong spot on your backup, and the parameter will fail. Luckily, this is not the norm. In most cases, the results are a backup that is referred to as "Broken". That is, devoid of the need of copy protection. Once the copy protection on a backup has been defeated or "Broken", any whole disk copier will archive that backup.

When a program has been written out in a non-standard format from beginning to end, more than a parameter is required. We must then write a special copier to duplicate THAT particular disk. This results in what we will refer to as a custom copier. A custom copier is created to reproduce a specific piece of software and will probably have no other purpose in life. Please be aware that we have examined protection schemes that WILL require a hardware addition to your 1541. Because the 1541 is limited to 2K of user programmable RAM, some protection schemes cannot be duplicated using stock equipment. If we add a bit of additional memory, all that changes. We can now read and write out whole tracks of data, defeating almost any protection scheme. Our 1541 RAMBOard was created to fill this need. This inexpensive optional hardware is presently supported by the Maverick Parameter modules.

From the Maverick main menu, position the pointers at Parameter Menu. Make sure the Maverick is in the disk drive face up and press RETURN. The disk drive should start up, and in a short time you will be prompted to insert a Maverick Parameter disk in the drive and press RETURN again. The drive will start again and load a listing of the available parameters. The Maverick Parameter Menu should now be on your screen. The Parameter module number is displayed in the upper left hand corner of your screen. Use the cursor U/D key to slow scroll through the list of titles. To fast page through the titles, use the cursor R/L key. You'll find that the list is alphabetized to aid in quickly finding a specific title. To get to the first title in any alphabetical or numerical listing such as the first title starting with an "S", just press "S" and that title will appear at the top of the screen. You may then scroll down to the desired title. If no title exists using an S as its first letter, the border will flash and the screen will not change. To activate a particular title, just place the cursor bar over it and press RETURN. Be sure the Parameter disk is in the drive with the correct side up.

Our parameters are set up in ten basic structures. The steps involved in each of the ten are slightly different. Each parameter has its own "Tag" displayed on the lower left quadrant of the parameter menu. Each "Tag" informs you of the parameter type, and how to back up that particular title. Please understand that unless otherwise instructed, a parameter should only be applied to Side one of your backup. If additional sides need to be backed up, use the same copier that was used on side one, and NO parameter.

Use Single or Dual Nybbler (then Parameter): Backup your title with either our Single or Dual Nybbler, then return to the Parameter Menu and select that title from our listings. When prompted, insert your backup and press RETURN. When done, test your backup.

Use Single or Dual Data Copier (then Parameter): Backup your title with either our Single or Dual Fast Data Copier, then return to the Parameter Menu and select that title from our listings. When prompted, insert your backup and press RETURN. When done, test your backup.

Duplicates Protection, Use Single or Dual Data Copier: Backup your title with either our Single or Dual Fast Data Copier, then return to the Parameter Menu and select that title from our listings. When prompted, insert your backup and press RETURN. When done, test your backup.

Custom Copier-1541 drives only (no previous backup needed): Select the title from the Parameter menu and you will be prompted to swap between the source and destination disks numerous times. When done, test your backup.

Use Single Data Copier Only (Then Parameter): Use the Single Drive Fast Copier (one or two drives are OK) whenever a copy needs to be "cleaned" of all physical protection. After your backup is complete, return to the Parameter Menu and select that title from our listings. When prompted, insert your backup and press RETURN. When done, test your backup.

Custom Copier (1541/71 Drives, no previous backup needed): Select the title from the Parameter menu and you will be prompted to swap between the source and destination disks numerous times. When done, test your backup.

Use Single Nybbler Only: The ability to copy certain protection schemes will be built into our Single Drive Nybbler. Simply copy your ORIGINAL program diskette with our Single Drive Nybbler, then test your backup.

Dupes Protection, Use Single or Dual Nybbler: Back up your title with either our Single or Dual Drive Nybbler, then return to the Parameter Menu and select that title from our listings. When prompted, insert your backup and press RETURN. When done, test your backup.

Single Nybbler Density On: Back up your original disk with our Single Drive Nybbler, setting the Density Detection option to **ON**. Copy all sides in this manner, setting the ending track option to **40**. When the backup is completed, return to the parameter menu and select the appropriate title from our listings. Follow on screen prompts to produce a working backup.

8K RAM Needed: Unfortunately, certain protection schemes have progressed to the point where they **DEMAND** the use of hardware as well as software to produce backups. Parameters tagged with this label will require that you have an additional 8K of RAM in your disk drive.

Our parameters should work properly with **ANY** 8K of RAM installed in your drive. This can be our RAMBOard, Rapidos Pro from Chip Level Designs, or even your own homemade board. For those of you who have not yet purchased the RAMBOard, let us assure you that it is quite easy to install in most cases. A few simple household tools and a half an hour of time spent should have you up and running. Those of you who wish to use two drives to operate these parameters **MUST** have **BOTH** drives fitted with 8K RAM.

Please note that certain parameters **may** require that you set the drive speed to unstandard settings. We unfortunately cannot get around this inconvenience, but have developed a speed control device that will make it much easier to adjust these settings (see below). If a speed change is necessary, make your backup, and then reset the speed back to normal settings. See the Drive Speed Setting section below.

After selecting a parameter tagged with 8K RAM Needed, a standard menu will appear. You may use the Cursor U/D key to highlight the desired option, and press RETURN to select that option. The menu options are:

Copy Disk Side: Begin backup procedure on selected side. Requires that your **ORIGINAL** disk be swapped with the backup disk. Follow on screen prompts. Please note that with verify **ON**, copy time for 8K RAM Needed titles can be a bit longer than you may expect. This is due to extensive Read/Write verify routines built into those parameters. Also, you'll be prompted if the copier is unsuccessful when attempting to write a track. We suggest you try another target diskette in this case. We know you'll be pleased with the results.

Source Dev No : Set to the device number of the drive which will be used as the **Read** drive. Set to 8,9,10, or 11. F2 defines the location of the added RAM in that drive.

Target Dev No: Set to the device number of the drive which will be used as the **Write** drive. Set to 8,9,10, or 11. F4 defines the location of the added RAM in that drive.

Speed Check: Use this option to determine if the parameter selected needs a drive speed change. Before selecting this option, place the blank disk you intend to use as the target disk (write protect notch uncovered) into the target drive and press RETURN. You'll be presented with two vertical bars and an arrow pointer in the center of the screen. The green highlighted area in the left bar represents the **ideal standard** drive speed range. The red highlighted area in the right bar represents the **required speed** range for that particular parameter. The arrow pointer will indicate the current drive speed setting. If the arrow pointer is not within the red highlight, then see **Drive Speed Setting** Option below.

Softwire Drive: See the softwire drive option in the Fast Data Copier instructions in this manual.

F1/F3: Directory of disk in source and target drive respectively.

F2/F4: Set the memory location (in Hex) of your 8K RAM device. This option defaults to $8000 to accommodate RAMBOard. Those of you that have Rapidos Pro installed and wish to access the 8K RAM should **disable** Rapidos Pro before booting Maverick. The proper RAM location for Rapidos Pro is $4000. For RAM location in other boards, contact the manufacturer for proper RAM location. We assume they will be more than happy to provide that customer service.

F5: Select desired side of program to be copied. Multiple sided programs must be selected properly.

F6: You may toggle the Read/Write verify **ON** or **OFF** with this option. We suggest that you use the OFF mode unless you have failures. Then try turning verify ON and re-try.

F8: Reboot Maverick main menu. Be sure the Maverick Master disk side one is in the drive.

Drive Speed Setting:

Whenever an 8K RAM parameter is called, we will advise you of the optimum drive speed range required to back up that title. This information can be obtained by using the **Check Target Speed** option located on the menu screen for each individual parameter. Any title requiring a speed other than the **ideal standard** will demand an adjustment before the copy can be successfully made. Also, if a target disk is not within acceptable speed range because of excessive drag or slippage, a speed adjustment may be necessary. Your drive must be returned to **ideal range** after each copy attempt.

Making a copy of a disk requiring a speed change is not difficult, but can be a nuisance. We have developed a speed control device that sells for $24.95 plus $3.50 shipping and handling, and require **NO SOLDERING**. This will make the speed setting a breeze and require minimum effort once it is installed. For more info, call us on the Tech line, or see the Software Support Catalog.

From the menu, select the Target Speed option to check the diskette you wish to use as your backup disk. This will help insure that the disk is usable for an 8K RAM parameter which can be sensitive to diskette **drag** and **quality**. We can check that the "drag" of the backup disk is within the tolerances allowed by that parameter. If the pointer is excessively out of the **RED HIGHLIGHT**, either check another disk or if necessary, adjust your drive speed to the proper range. Use a small jeweler's screwdriver to adjust your speed while watching the arrow pointer (see below). **Important:** Be sure the target disk to be used is in the drive while the speed modifications are made.

Please note that there are two basic drive types as far as we are concerned. These are those drives with the spring latch holding in the disk, and the type with the toggle latch. Both are set in exactly the same way, but the speed potentiometer is found in different locations. Also note that we have located and identified a 1541 II model that has **NO** potentiometer. We have no solution to that particular drive problem.

Toggle Door Model:

Turn your disk drive over and use a small phillips screwdriver to remove the four screws securing the drive cover. When done, lift the plastic cover from your drive and put aside. Next, if you still have the metal RF Shield in place, remove the two screws that secure it and lift it off also. Towards the front of the drive, locate the brown PC board. That board contains the potentiometer to control the drive speed. It is generally blue and yellow with a cross slot on top. You may use a small jeweler's screwdriver to turn the slot in very small increments while running our speed check program. Be patient, and set the speed correctly, as the speed is critical to the backup procedure. Remember, after the backup has been made, return the drive back to **STANDARD** setting.

Spring Door Model:

Turn your disk drive over and use a small phillips screwdriver to remove the four screws securing the drive cover. When done, lift the plastic cover from your drive and put aside. Next, remove the six screws that hold the drive chassis to the bottom half of the plastic case. Carefully lift the entire drive assembly from the plastic case and prop it on it's side taking care not to drop it. On the underside of the drive chassis towards the front, locate the small round hole. Inside this hole, you should find a small slot. This is the potentiometer used to control the drive speed. You may use a small jeweler's screwdriver to turn the slot in very small increments while running our speed check program. Be patient, and set the speed correctly, as the speed is critical to the backup procedure. Remember, after the backup has been made, return the drive back to **STANDARD** setting.

Other Main Parameter Menu Features:

F1 : Display the directory of the diskette currently in the drive.

F2 : Exit to BASIC. This option will reset the computer back to the stock start up screen. Occasionally, you may need to turn the drive off and on again. or initialize the drive in order to load the disk currently in the drive.

F8 : Reboot the Maverick main menu. Insert the Maverick Master Side One in the Disk Drive and press F8.

Parameter Printout:

By popular demand, the Maverick includes a printout feature in the Parameter menu. After reading any Maverick parameter module, you may dump the parameter listing to any printer capable of emulating the Commodore 801 or 1525 printer. Simply read the appropriate module, and press the Commodore and P keys together. You will then be asked for the correct printer device number (number four is most commonly used), and if you desire linefeeds. We suggest you answer NO to this unless you know your printer demands them. If the printout does not feed up properly, you should answer YES on the next attempt.

After the initial setup questions have been answered, the printout will begin. You may press A to Abort or P to Pause. After pausing a printout, you may press C to Continue.

We have built a few other features into our Parameter Module that are not so obvious until you've had a chance to use it for a while. Use the RESTORE key to return to the main Parameter menu, and RUN-STOP/RESTORE to return to the Insert Parameter Disk Screen. Any new Maverick Parameter disk may be read this way. Also, we have built in "parameter version detection". On most of our new parameter listings, we can sense a program version different from the one we worked on. Built in prompts will inform you of incorrect versions. We will be updating this feature whenever possible. Also built into our Parameter executer is the ability to check numerous known versions of protection and auto select and execute the correct version. This will be used more and more, although you won't be aware of it. Remember, we do accept suggestions. If you have a need for an added feature that you feel other people would enjoy also, please let us know!

V2 DIRECTORY EDITOR V2

A Directory Editor is a tool that allows you to rearrange directory files on most any non-protected diskette. Our Directory Editor allows hand sorting, alphabetizing, separations, renaming functions, and locking and unlocking files. Once you become familiar with its operation, we know it will become one of your favorite utilities.

From the Maverick main menu, select the Directory Editor by surrounding that option with the pointers. Be sure the Maverick is in the disk drive face up, and press RETURN. In a short time the Directory Editor main menu will appear. From the top of the screen, your options are:

Read Directory: Use this option to read the directory of whichever diskette is in the drive defined by the Device # option. Once a directory has been read in, it is held in the Edit buffer until a new directory has been read. This means you may edit the same directory numerous times without having to re-read it.

Edit Directory: Once the directory has been read, use this option to rearrange it to suit your needs. See **Edit Directory** option below.

Device No.: Set this option to the device number of the drive containing the diskette you wish to work on. This option defaults to 8 but may be set to 9, 10, or 11.

F1: Directory of disk in the drive defined by the drive # option.

F8: Reboot the Maverick. Place the Maverick in the drive face up and choose this option. The Maverick main menu will reappear.

Edit Directory:

Once a directory has been read into the edit buffer, you may begin work on it by choosing this option. Place the cursor bar over the Edit Directory option and press RETURN. You will find the directory of your work disk in the INPUT buffer on the left hand side of the screen. The options available are:

Edit Changes: Press E to Edit the following items. They are accessed in the following order. After each change or decline to change, press the cursor U/D key to toggle the next item to change.

Current Disk: You may type in a new disk name up to 16 characters long.

ID: You may type in up to 5 characters to form a new diskette ID number. We allow only standard numbers or letters, as some of the other characters may corrupt the look of the directory.

File Type: This option allows you to change the type of file. Please be aware that you cannot really change a relative file to a program file just by renaming the file type. These changes are only cosmetic and may even prevent some files from loading correctly. Experiment on a work disk if you are unsure. Use the cursor R/L key to toggle the file types available.

File Name: The filename defined by the pointing arrow in the center of the screen may be altered by typing in up to 16 characters.

Status: You may lock or unlock a file by toggling this feature with the cursor R/L key. Please note that a locked file is one that cannot be scratched through normal drive commands. It is said to have a **software write protect** on it. However, locked files will still be lost if you format that diskette.

To escape from the **Edit** mode just hit the **Back Arrow** (ESC) key at any time. You will be returned to buffer edit mode.

Buffer Edit Mode: The window on the lower left side of the screen is your input buffer (directory reads in) and the window on the lower right of your screen is the output buffer (directory writes out). You may use the cursor U/D key to scroll up and down through the listings on the side pointed to by the arrow. To turn the arrow to the opposite buffer, use the cursor R/L key. With the arrow pointed to the side you wish to work on (both sides can be edited), the available options in this, the ACTIVE buffer, are:

Space Bar: Select the title pointed to by the arrow. Pressing the Spacebar causes one title to be highlighted then moves DOWN one position. You may select one listing, a block of listings, or multiple blocks of listings to be moved to the opposite buffer.

A : Toggle **A**ll listings in the active buffer to highlighted on or off.

S : Sort all titles in the active buffer that are currently highlighted. You will be prompted with "are sure". Answer Yes or No. The sorted block will be placed in the same position it was previously in, except that it will be sorted according to numerical and alphabetical order.

M : Move highlighted listings from one buffer to the other. You may use the arrow pointer to select the position to insert the highlighted block(s). Simply position the arrow to the position just below where you want the block(s) inserted, and press **M** to **M**ove it. If the arrow is not positioned to the opposite buffer when the **M** command is used, the block(s) will move, by default, to the bottom of the stack of the inactive buffer.

D: You may insert a **Dividing** line to separate any or all listings. Simply position the pointer just below the spot you wish to insert the dotted line and hit **D.** This divider will be cosmetic only, and will not take up any real diskette space other than in the directory.

W: Use **W** to re**W**rite the finished directory back to the work diskette. You will be prompted with "Are you sure". When satisfied all is well, prompt **Y**es and the new directory will be written out. Please note that ALL listings **MUST** be moved to the output buffer in order to re**W**rite the new directory. If not, you will be prompted as such, and be returned to the Edit mode.

RESTORE: Use this key to return to the main menu. Your work will not be ruined, as you need only select the **Edit Directory** option again to resume where you left off.

If, before reading a new directory, you feel that your work needs to be altered on the previous disk, even after it has been written out, you may return to make additional changes by using the **Edit Directory** function. You will be returned to the work screen in the same condition you left it. Just make your new changes and re**W**rite the directory again.

6502 M/L MONITOR

From the main menu use the Cursor Keys to point to the 6502 M/L Monitor option. Press RETURN to load the utility. When the monitor menu screen comes up, use the cursor U/D keys to choose an option. Press RETURN to execute that option.

Our M/L Monitor is completely relocatable in memory. Hitting the RETURN key while the "Monitor=$X000" is highlighted will increment the monitor to the desired Hex address.

F1 : Directory of disk in drive.
F8 : Prompt to re-boot the Maverick main menu.
OPTION 1 : Execute chosen monitor. (See Monitor Commands).
OPTION 2 : Save chosen monitor to a work disk.
Saves autoboot file under name : "MONX000" . Just LOAD "MONX000",8,1 to autoboot other save files. The op-codes listings will be saved as "OPS". The monitor will be saved as "X0" .
OPTION 3 : Edit the op-code file (OPS) on any WORK DISK.
CURSOR U/D : Slow scroll through list.
CURSOR R/L : Fast scroll through list.
RESTORE : Reset to previous menu.
SPACE : Allows you to change the mnemonic.
A : Steps through the addressing modes (changes them).
HOME : Returns cursor to beginning ($00 byte).
S : Re-saves changed opcode file to a WORK DISK.

6502 M/L Commands:

R : Displays status of A,X,Y registers and Stack pointer
G : XXXX - Executes code starting at $XXXX
X : Returns user to Basic
M : FFFF LLLL - Displays in hex, memory between 2 two addresses. If a second address isn't specified, scrolls forever. RUN/STOP halts.
@ : Sends disk command. Alone returns drive status. @$ for directory of disk.
SPACE : during directory pauses.
RUN/STOP : abort directory listing.
L : Load file from disk. L "FILENAME",device#,address(optional). For example- L "FILE",08,C000 (IF an address is given, it WILL load to that address.)
V : Verify file in memory. V "FILENAME",device,address(optional). Same as Load command but Verify instead. A "?" stands for verify error.
S : Save File - S "FILENAME",device,FFFF,LLLL+1
Example : S "FILENAME",08,C000,D001
F : FFFF LLLL XX - Fills memory from $FFFF to $LLLL with $XX byte.
D : FFFF LLLL ($LLLL Optional) - Disassembles memory. Use CURSOR U/D to scroll through listing. Editing is possible using mnemonic changes.
P : Send code to printer - PD FFFF LLLL sends disassembly listing. PM FFFF LLLL sends HEX Memory listing. (Commodore 1525 compatibles only)
A : XXXX mnemonic commands - Assemble code beginning at $XXXX (Be sure to use proper spacing between characters.)
H : FFFF LLLL PATTERN - Hunts from $FFFF to $LLLL for up to an eight byte pattern. Use quotes on either side of an ASCII pattern. ASCII and Hex may be mixed.
T : FFFF LLLL XXXX - Transfers memory from $FFFF through $LLLL to $XXXX. TC : Use same syntax as T command. Will transfer computer memory to drive.
TD : Use same syntax as T command. Will transfer drive memory to the computer.
TF : Same syntax as T command. Fast command version of TC. Warning: $XXXX can't be between $0001 and $0147.
O : This is the letter O not a zero. O followed by an 8,9,A,B (device number) will put you in the drive-mon mode for the specified drive. The above commands are the same for the drive-mon except the P feature is inactive. For printer listings of drive memory, send the code to the computer, then the printer. O and RETURN sends you back to the computer memory. A "]" lets you know you're in drive memory, while a "." denotes computer memory. To assemble/disassemble beneath ROMS and the VIC CHIP, change location $0002 as if it were $0001. $0001 can't be changed through the monitor.

$0002: $37 = All ROMS in.
$36 = Bank out BASIC.($A000-$BFFF)
$35 = Bank out Kernal & BASIC.
$30 = Bank in RAM under $D000.
$31 = Bank in character ROM under $D000.

UPGRADES & GOODIES

As the name suggests, the Upgrades & Goodies module contains our latest utility efforts. We hope you enjoy them.

DATA SCANNER

We created the Fast Data Scanner to help us find bytes on a diskette that we have found in memory after examination of a program. The uses are endless. We have even used it to aid in the recovery of a short New, breaking software protection, and searching for repeating patterns. This utility is one our favorites, and we know that you'll love it too.

From the Maverick main menu, select the Upgrades and Goodies option. Be sure the Maverick master disk is in the drive face up and press RETURN. A sub-menu will appear, and give you a list of available utilities. From this menu, choose the Data Scanner. The drive should start up and, in a short time, the Data Scanner main menu should appear. Use the cursor U/D key to position the cursor bar over the desired option and press RETURN to activate that feature. Starting at the top of the screen, the menu options are:

Scan Diskette : After setting all other options, begin full scan of the diskette currently in the disk drive. See **Scan Diskette Option** below.

Enter Scan Data : Use this option to enter data you wish to scan the disk for. At the prompt, you may enter the bytes you are trying to locate in any of three forms. HEX, Decimal, or ASCII will be acceptable. You are limited to two lines of input. An incorrect input will not be accepted.

Enter HEX data as : $8D,$53,$22 (Notice the "$" and the "," placements.)
Enter Decimal Data as : 200,255,36 (Notice the "," placements.)
Enter ASCII data as : "welcome to" (Notice the quotes around the string.)
Enter Combinations of all three such as :"welcome to",$8D,$53,$22,200,255,36

When all data has been entered. hit RETURN and the main Data Scan Menu will reappear. The data information you typed in will be retained for future reference within the Enter Scan Data screen.

Start Track # : Set the beginning track to scan. You may input 1 to 40.

End Track # : Set the ending track to scan. You may input 1 to 40.

Device # : Set to the device number of the drive which contains the disk you wish to scan.

F1 : Use this Function key to view directory of disk in drive.

F8 : Reboot the Maverick main menu. Be sure the Maverick master disk is in the drive face up.

Scan Diskette :

When the Scan Diskette option is selected, scanning will begin on those tracks selected in the main menu. If you wish to pause the scan process, hold down RUN/STOP. To resume scanning, press the space bar. To stop the scan and reset the drives, press RESTORE. The sector counter is along the left side of the screen and the track counter is along the bottom. After the scan is complete, track and sector highlighters, as well as a flashing cursor, will appear.

The map on your screen at this point represents a map of your diskette. If an asterisk appears in the map, it represents a match of the data scanned for in that sector.

Other active keys in this mode are the F1 key, used to print from any printer capable of emulating a Commodore printer. Use the cursor U/D and R/L keys to position the flashing cursor over any sector you would like to examine further. To read the sector for examination or modification purposes, hit **Space Bar**. Pressing the **L** key once will toggle you into the data match **Locations** screen. Press **L** again to return to the previous screen. The sector will be read, and a HEX/ASCII memory map will be displayed. You may use the cursor U/D and R/L keys to position the cursor to the first byte to modify. Make any desired changes in HEX. To view the same sector in disassemble mode, hit the **M** for **Mode** key and the disassembly will appear. You may make changes by hitting the **Space Bar** and typing in your changes in mnemonics. Be sure to use proper spacing. Hit RETURN

after each change. A bad instruction will exit the edit mode. After all changes are complete, use the **W** key to re-Write the sector. Use the **J** key to Jump to the next file link, if any. Use the Left Arrow key (ESC) to exit to the previous screen. You may select a new sector or return to the main menu by hitting **RESTORE.**

DIRECTORY RECOVERY

Have you ever tried to load an important work disk and found that the disk wouldn't load because the drive started working and then went into a tizzy, first internally banging and then flashing the red LED at you? Have you ever done a short new on a disk and then found that you formatted the most important data disk in your library? If you've owned, and used your Commodore for very long, the answer has to be YES!

Our Directory Recovery program was designed to allow the average Commodore user to repair his own diskettes if the unthinkable happens. This program does automatically, the work that used to take an experienced user hours upon hours of painstaking work. The first time you HAVE to use it, you'll really appreciate having it at your disposal.

From the Maverick main menu, position the pointers around the Upgrades & Goodies option and press **RETURN.** When the new menu appears, use the Cursor U/D keys to select the Directory Recovery option and again press **RETURN.** When the Directory Recovery menu comes up, the following options will be available:

Create New Directory:

IMPORTANT: Before using this utility, please make a backup copy of the damaged diskette using our **Single Drive Fast Copier.** Use this backup in the repair process, NOT your original.

Place the **un-write protected** backup of your damaged diskette in your drive, device #8, and use this option to begin the directory recovery. Press **RETURN** and the process will begin. Please understand that this utility will not work at blazing speed. It will scan and recover EVERY file or file segment that is possible to recover. The more sectors that have been used on your disk, the longer the process. We suggest that you leave the computer to do it's work, as it may take as long as an hour or more.

When the repair process is complete, you will be prompted with **Press Any Key to Return to Menu.** If any recoverable **program** or **sequential** files are on the disk, they will be written to the directory as File 1, File 2, File 3, and so on. Other file types are beyond the scope of this utility. Be aware that long forgotten and scratched files may show up. It is now up to you to go through the files and weed out the unneeded ones and rename the good ones.

Toggle File Types:

After you have run the Directory Recovery program, you will notice that all files recovered were set as program (PRG) files. If any were originally sequential (SEQ) files, you will have to set the file type by using this option. Place the repaired disk in the drive (un-write protected), highlight this option and press **RETURN.** After the directory listing loads, it will be displayed on the screen. The following options are available:

Cursor U/D: Move highlight bar to desired File.

Space Bar: Toggle File on by highlighting (Seq) or off unhighlighted (PRG).

Return: Write new directory to the disk.

Q: Quit to main menu.
F1/F3: Directory of disk currently in the disk drive.

F2: Exit to BASIC. The drive will initialize to the disk currently in the drive.

F8: Reboot Maverick main menu. Place the Maverick master disk in the drive face up and hit Space Bar.

SECTOR EDITOR

We have created this utility for those of you who have the desire to examine the data on your diskettes in their track and sector / data block format. We have included the ability to modify sectors and print Hex/Disassemble listings. We feel that you'll find our Sector Editor to be quite easy to use and that it allows a full range of commands.

We cannot, in the scope of these instructions, teach you the 1541/71 DOS format. For that information, we refer you to Inside Commodore DOS, the bible of the 1541 DOS experts. It is the best manual of its kind on the market.

As always, be careful with this utility as irreversible damage can be done to the data on your work disk. For your protection, we suggest **always** working with a backup of the disk presently under examination and modification.

From the Maverick Main Menu, select the Upgrades & Goodies option and press **RETURN**. When that menu appears, select the Sector Editor option and again press **RETURN**. When the Sector Editor Main Menu appears, you will have the following options:

EDIT DISKETTE:

Position the Highlight Bar over the **EDIT DISKETTE** option and press **RETURN**. The Editor screen will appear and prompt you with the flashing cursor for the Track you wish to read (in Decimal). Although it will default to track 18, the directory track, you may input tracks 1 through 35 for a 1541 format or tracks 1 through 70 (1 - 35 front, 36 - 70 reverse) for a 1571 format, and press **RETURN**. Next, the cursor will move to the Sector input. Although it defaults to 00, you may enter any legal sector in the track chosen, and press **RETURN**.

At this point, the desired sector will be read in and displayed on the screen. You have many command keys available to you.

[ ] - **Change Byte:** Use The **Space Bar** to change value of the byte indicated by the flashing cursor. You may input in decimal or use the **Down Cursor** key to toggle to Hex input. Make your change and press **RETURN** to lock it in.

[+] - **Scan Forward:** Use this key to scan forward one sector at a time. Notice that at the last sector in the track, it will wrap to the next track, sector 00.

[N] - **Next Track:** Use this key to scan forward one track at a time. Notice that at track 35 (70 on a 1571 format), it will wrap to track 01.

[J] - **Jump To Link:** This command has two different operating modes. In track 18, the directory track, you may use it to jump to the first link of any valid program file. Simply place the flashing cursor over the track link and press J. You will be taken to that track and sector.
When you are in any other track, pressing J will take you to the next file link, if any, indicated by the first two positions in the sector.

[T] - **New Track:** Hit **T** to return the flashing cursor to the Track input window. Input tracks 01 through 35 (70 on a 1571 format. After the track has been selected, you may input a new sector or press **RETURN** to default to the current setting.

[W] - **Write Sector:** When all modifications have been made to the current sector, hit **W** to reWrite that sector to the disk. You will be prompted with "Are You Sure?". Remove a write protect if necessary and answer **Yes** or **No**.

[B] - **Block Allocate:** Use this option anytime you wish to allocate the current sector. The BAM will be properly updated.

[D] - **Disassemble:** Hit **D** to enter the Disassemble Mode. The current sector under examination will be displayed at the bottom of the screen in disassembly code. Please note that the top of the screen still contains the sector map and may be used for position reference. All sectors read into the disassemble buffer are set at $5900. This is only a reference and not an indication of that sector's true address if it were found in memory.

Space Bar: Pressing the **Space Bar** will move the cursor into the operand field of the current line and allow you to modify the opcode and/or operand.

RETURN: After modification, press **RETURN**. If the change made to the line was a valid opcode/operand combination, the new code will be locked in, and the cursor will move to the beginning of the next opcode field. If the change made was not a valid opcode/operand combination, the original data is not changed and the cursor returns to the beginning of the line.

W: To **Write** the modified block to the disk, press **W**.

Left Arrow: Pressing the **Left Arrow** key (not the Left Cursor key) will escape to the previous screen.

P: Press **P** to dump the current buffer to any printer capable of emulating the Commodore 801/1525 printer.

[?] - **Help Screens:** Press **?** to access the built in ASCII Code Set conversion tables. You'll find each symbol defined in hex, decimal, and its ASCII representation in that order. Press **Space Bar** to view screen two, and press again to exit back where you left off.

[A] - **ASCII Mode:** Use the **A** key to input text directly from the keyboard to the data display screen starting at the flashing cursor. Only alphanumeric input is allowed. You may use the **Control/T** keys to move the cursor while in this mode. When all changes are made, hit **RETURN** to escape. If your changes are unacceptable, re-read the sector by hitting **S** and **RETURN** to bring up the sector again.

[-] - **Scan Back:** Use this key to scan backwards one sector at a time. Notice that at sector 00 it will wrap to the previous track, last sector.

[M] - **Previous Track:** Use this key to scan backwards one track at a time. Notice that at track 01 it will wrap to track 35 (70 on a 1571 format).

[K] - **Previous Link:** Use this option to reverse read the links that were just read by the **Jump** command.

[S] - **New Sector:** Hit **S** to return the flashing cursor to the Sector input window. Input any legal sector for the current track.

[H] - **Hex Mode:** Hit **H** to enter the Hex Mode. The current sector under examination will be displayed at the bottom of the screen in memory map format (Hex map on the left, ASCII map on the right). Please note that the top of the screen still contains the sector map and may be used for position reference. All sectors read into the Hex buffer are set at $5900. This is only a reference and not an indication of that sector's true address if it were found in memory.

Cursor Keys: In this mode, the **Cursor Keys** move the cursor as normal.

W: Press **W** to **Write** the current block to disk.

Left Arrow: Pressing the **Left Arrow** key (not the Left Cursor key) will escape to the previous screen.

P: Press **P** to dump the current buffer to any printer capable of emulating the Commodore 801/1525 printer.

Home: From the main edit screen, use the **Home** key to return the flashing cursor to position 00.

RETURN: From the main edit screen, use the **RETURN** key to position the flashing cursor to the next line down, first position. When on the bottom line, the flashing cursor will wrap to the top line.

Cursor U/D and R/L: Use these keys to move the flashing cursor on any command screen. They work as normal.

[F] - **Block Free:** Use this option anytime you wish to de-allocate the current sector. The BAM will be properly updated.

[<-] - **Main Menu:** Use the **Back Arrow** key to escape from any command screen to the previous screen.

RESTORE: Return to Track & Sector Editor Main Menu.

The other Main Menu commands are:

NEW DRIVE:

With this option, you can select one drive out of a possible of four disk drives. Device numbers available are 8, 9, 10 and 11. This option always defaults to a 1541 format **unless** a 1571 disk is present in the drive **AND** you cycle this option until it re-reads the 1571 format in the current drive. At that point, the drive type will be recognized as a 1571.

REBOOT MAIN MENU:

When you select this command, you will be prompted to insert the Maverick Master Disk (SIde one) in the drive. Press the **Space Bar** and, the program will reboot.

DISK COMMAND:

See the Quick File Copier section elsewhere in this manual. The instructions for this option are identical.

F1/F3:

Pressing **F1/F3** will display a listing of the directory of the diskette in the current drive. Pressing the **Space Bar** while the directory is scrolling will

stop the scroll. Pressing the **Space Bar** again will continue the listing. Use the **RUN/STOP** key to abort the listing.

RELATIVE FILE COPIER

Relative Files are used in Commodore Software whenever fast database file access is needed. Because relative file structure is very different from that of program or sequential files, the copying of these files is best handled by DOS. For this reason, and the fact that we can support **ANY** Commodore drive produced by Commodore, we have done all file management through DOS. This copier **is not** as fast as we would like to see but it is super-compatable.

From the Maverick Main Menu, select the Upgrades & Goodies option and press **RETURN**. When that menu appears, select the Relative File Copier option and again press **RETURN**. When the Relative File Copier Menu appears, you will have the following options:

Source Device : Supports device numbers 8 through 15.
Source Drive : Supports dual drives such as the MSD. Defaults to 0 for single drives.

Destination Device : Supports device numbers 8 through 15. Before executing two drive copy, **be sure** that the drives are properly set up and that the correct disks are in the drives.
Destination Drive : Supports dual drives such as the MSD. Defaults to 0 for single drives.

Filename : You must know the file name in advance. Input **exact** filename only. **No Wildcards.**

REU QUICK TEST

This utility has been provided to test the integrity of your 1764, 1750, or 1750 Clone. We suggest that you use it before using the Quick File Copier or the Single Drive Fast Data Copier. You shouldn't need it again unless problems occur in the future and you want to rule out a defective Ram Expansion Unit.

Before using this utility, be sure that your REU in properly seated in the cartridge port. Boot the Maverick and from the main menu, select the Upgrades & Goodies option and press **RETURN**. When that menu appears, select the REU Quick Test option and again press **RETURN**.

The REU Quick Test will begin as soon as it appears on the screen. After a **very** short time the test will be complete.

1764 Units : An abnormal condition is indicated if an **X** appears in any of the chips in Bank One. Because 1764 Units have NO RAM Chips in Bank Two, an **X** in each chip location in Bank Two is **normal.**

1750 or 1750 Clones : An abnormal condition is indicated if an **X** appears in any of the chips in Bank One or Bank Two.

F7 : Use this option to execute the test again. **Warning : Do not re-seat the REU in the cartridge port while the computer is ON.**

F8 : Reboot Maverick main menu. Place the Maverick master Disk side one into the drive device #8.

TROUBLESHOOTING

If you are experiencing problems with the Maverick, we suggest that the **first** thing you do is attempt to isolate the problem. This is best done by unplugging all, **and we mean ALL** unneeded peripherals from your system. Extra disk drives, interfaces, printers, modems and joysticks should be unplugged from the computer! Unplugging them from their electrical power source may not be good enough. Again, **unplug them from the computer and/or serial port.** Try duplicating the problem again, and if the Maverick works now, try plugging in the peripherals one at a time, testing in between additions. Continue until the problem is isolated. The following troubleshooting guide will assume that you have attempted to isolate the problem as described above.

Main Menu:

Problem: The Maverick won't load on my equipment.
Solution: a> Be sure the Maverick **Master** Disk is in the drive, device number 8, and type in < **LOAD "*" ,8,1** > and press RETURN.
b> See the System Requirements section in the beginning of this manual. If you are running on after-market drives or non-standard equipment, our program may not be compatible.
c> If you are running standard equipment, you may want to try loading the Maverick on a friend's setup. If it loads fine, your disk drive(s) may need servicing. If your disk drive has not been serviced for quite a while, you may want to have it checked by a competent repair person.
d> If the Maverick won't load on any setup, you may have a defective disk. See Limited Warranty section at the end of this manual.

Single Fast Data Copier:

Problem: Write errors are reported on the **destination** disk.
Solution: a> The destination disk may be defective. Re-copy using a different destination disk.
b> If that doesn't help, you may need to have your disk drive checked for speed and/or alignment.

Dual Fast Data Copier:

Problem: Copy is not reliable. Original seems to run fine.
Solution: Try the Single Drive Fast Copier first. If that doesn't work, you may be dealing with a protected diskette. Use the Single or Dual Nybbler.

Single GCR Nybbler:

Problem: The Maverick was copying a Rapid-Lok protected program and locked up in the second phase (Rapid-Lok mode).
Solution: Two drives on while copying Rapid-Lok will cause problems. Turn the unneeded drive off.

Single or Dual GCR Nybbler:

Problem: Copy won't run. It starts to boot and then "crashes".
Solution: The original is probably copy protected and requires a parameter. See the parameter listing. If you don't find the desired title, you may want to contact the technical support team at Software Support for advise.

Sector Map Editor:

Problem: The printouts are incorrect or garbled.
Solution: Use a printer/interface that truly emulates the Commodore 801, 1525 printers.

Problem: The utility aborts after a only few tracks have been read.
Solution: This utility cannot support more than 4 devices plugged into the system at once. Unplug excess drives, modems or printers from the incoming ports.

Maverick GCR Editor:

Problem: The disk drive runs continually after some functions.
Solution: This is normal, as we leave the drive on during certain tasks. This insures that the speed is proper when data is written back to the diskette.

Problem: The printouts are incorrect or garbled.
Solution: Use a printer/interface that truly emulates the Commodore 801, 1525 printers.

Parameter Menu:

Problem: You followed all the instructions and ran the correct parameter over the backup, which gave a "parameter successful" message, but the backup still fails.
Solution: Most of our newer parameters have built in version sensors to detect the protection used. These sensors will give proper Fail-Succeed messages. Many of our older parameters on module #1 do not have these sensors. If you experience this problem, you may have an unknown version. Call the tech support team at Software Support.

Problem: You have experienced a failure on an 8K RAM Needed parameter.
Solution: 1) You MUST have 8K added RAM in EACH drive used in the copy process.
2) The Speed of the drive must be checked on that title and MUST match the target disk used.
3) If above items check out OK, and two copy attempts fail, use a different diskette as the target disk and turn the verify ON. Our routines are SOLID but diskette quality is a critical factor.
4) If using two drives to make a backup, try one only instead. We have seen instances where both drives individually could copy a title, but the two drives working together couldn't.
5) Assuming all the above has failed, we suggest a drive cleaning and if necessary, alignment by a qualified technician.

Problem: A custom copier demanding a 1541 Drive Only was executed and a non working backup resulted.
Solution: Unfortunately, only standard 1541 drives will reproduce these particular titles. 1541 II drives will not function properly for this purpose.

Data Scanner:

Problem: The printouts are incorrect or garbled.
Solution: Use a printer/interface that truly emulates the Commodore 801, 1525 printers.

Problem: The utility aborts after a only few tracks have been read.
Solution: This utility cannot support more than 4 devices plugged into the system at once. Unplug excess drives, modems or printers from the incoming ports.

1581 Geo * Boot:

Problem: When using a PAL system, the process goes to completion but the 1581 copy won't boot properly.

Solution: Before booting the Maverick, remove all fastload utilities from your system. This means ALL, including those installed in the drive or computer.

CONCLUSION

Let's talk straight with each other. If you've purchased this program, you're a valued customer. If you haven't, you're a thief. This program was created specifically to allow legitimate purchasers of software to exercise their right to create an archival backup of that software. It was not created to be a tool to allow thieves to build up their illicit libraries.

We're not going to dictate ethics to you. You know what's right and what's wrong. But we will point out a simple fact. Talent, in any field of endeavor, is rare. If the few gifted programmers out there cannot support themselves by sharing their talent with us, we all lose. Please keep this in mind, and use this tool as it was intended. The Maverick was designed to allow you to enforce your rights -- not to deprive others of their fair due.-- We've given you the power. But please remember that with power comes responsibility.

LIMITED WARRANTY

If at any time within 90 days of purchase, the Maverick, or any of its subsystem diskettes become defective, you may call 1(800) 356-1179 ((206) 695-1393 outside of the 48 states) for a Replacement Authorization Number. This RA# must appear on the outside of the package containing the diskette being returned. We will replace your defective original diskette with one bearing the exact same version number. We will expect YOU TO BE A REGISTERED OWNER OF THE MAVERICK. NO EXCEPTIONS. Replacements will be given at no charge, upon receipt of your defective diskette, postage paid.

THE MAVERICK
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