

THE Clone Newsletter

DEDICATED TO FRUSTRATED DISK USERS



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***** NEW PRODUCTS *****
-----** FROM COMMODORE **-----

Recently at the CES Show in LAS VEGAS, Commodore announced the new 264 and 364 Computers. They will accept a new disk drive that will be much faster than the 1541 but will not be able to be used with your current C-64 computers. Also we found out that there is no SID chip in the new units (but this may change as everything that Commodore does is continually changing). Similarly, we understand that the sprite graphics will also not be available on these machines. There will be a split screen with text/hi-res graphics similar to APPLE (320 X 200 pixels). A MODEM port ??, serial port, ROM cartridge port (it looks different from the C-64 cartridge slot in current units) Cassette interface port, and two joystick ports were apparent on these computers. Best news is their SFS 481 disk drive that is much improved in the speed area. Both machines will still be able to use the standard 1541 drive however. There is a BASIC 3.5 with over 75 commands and finally a built in machine language monitor. One feature that we understand is included is a screen window capability. Price was said to be around the \$500 level but don't quote us. PS. The processor is a 7501 ???.

***** THE EXECUTIVE SX64 *****

By the time that you read this, the EXEC 64 Portable will be in your local stores. It contains the COMMODORE 64 combined with a crisp Color Monitor plus a 1541 Drive. The best part of the news is that we have tested THE CLONE MACHINE/UNGUARD on this machine and it works!!! This seems to be a great system to pack up and take with you wherever you go. Current retail is under \$1000. We are glad to see Commodore continuing with the 64 format.

► **\$100 REWARD** ◀

THATS RIGHT!!! We will pay from \$10.00 to \$100.00 for accepted articles, short stories, Commodore news, dealing with subjects of interest to the CLONE USER Community. Submit your typed, double spaced (if it's possible) manuscript to:

EDITOR: The Clone Newsletter
c/o MICRO-W
PO BOX 198
Butler, N.J. 07405

We are sorry but all submissions cannot be acknowledged or returned. Please include your phone number so that we can contact you if we are interested in using your article. See our other articles for additional ways that you can contribute to the CLONE NEWSLETTER.

===== SALES BEYOND BELIEF =====

Advertisements for the CLONE MACHINE (TCM) began to appear in NOVEMBER 1983 and immediately the telephones began to ring at MICRO-W DISTRIBUTING INC. and to date they haven't stopped!!

The many features of the CLONE MACHINE combined with its special introductory price, became an irresistible combination for the many owners of the Commodore 1541 Disk Drive. The enormous success of the Commodore 64 itself certainly helps by creating a large user base. As many of you already know, the hectic pace of orders and customer inquiries has meant more than the usual number of busy signals at Micro-Ware. We apologise for this inconvenience and we have currently installed more phone lines and hired more people to increase our capacity to meet this demand. Until we get up to speed, we ask you to use the mail as much as possible for questions or orders. Address all questions to CHUCK. Thank you.

Our thanks to the many TCM fans who have written to compliment us about the program and its features. We also pay serious attention to complaints, reports of any bugs, or anything else (positive or negative) that you may have to say about our products. We welcome criticism.

===== IMPRESSIONS OF THE 1541 DISK DRIVE =====

Being involved with Commodore software and hardware places us in a position to hear many stories about this disk drive. At the shows, on the telephone, by letter and in the many trade publications that we get, there are constant discussions. For the most part, the Commodore system is praised but there have been a number of weaknesses to be sure. The criticism of the 1541 seems to have fallen into the following several categories:

- Alignment problems -
- Inability to get fast service or correct repairs -
- Inadequate documentation or unclear documentation -
- Shortage of 1541 drives to purchase or for replacement -

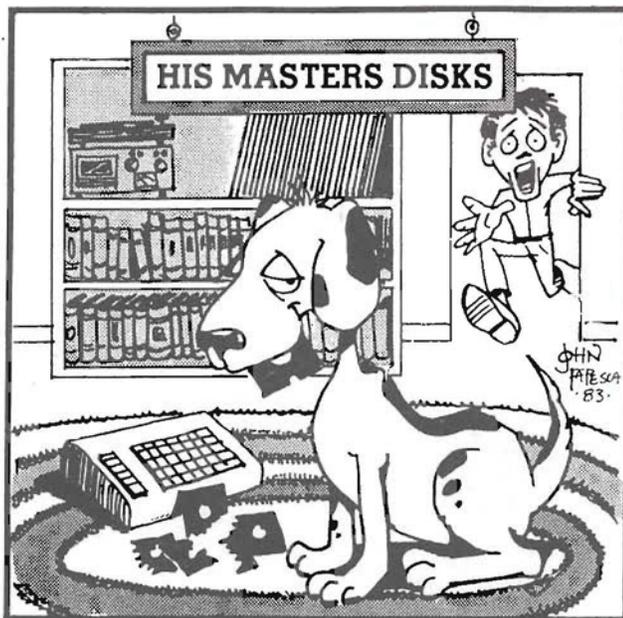
The first problem of alignment seems to stem from a minor hardware problem but it may be related to other things as well. Alignment problems are found frequently among users that use their drives heavily. After a few months of hard use, the head alignment cam moves ever so slightly so that the head doesn't position itself correctly. Before it goes out of spec completely, problems of loading and saving may be encountered. Finally you may be unable to read diskettes made on other drives, etc. One store that we talked to places some epoxy glue on the alignment cam after it has been correctly aligned. They claim that this fixes most all alignment problems once and for all. Commodore may also be doing something because dealers have been talking about some type of recall but until now we know nothing of this. The repair centers were under heavy pressure to repair disks and we have found that many were working at peak capacity to turn around these repairs. Shortage problems we have found seem to be diminishing. In our area of the country, 1541 drives were back in the stores for Christmas. Demand was heavy and one chain reported to us that they were selling hundreds of drives per week in many of their locations. We are still wondering if the new production drives will be better than the predecessors. Did Commodore simply change the color? Time will tell as field experience with the newer drives accumulates.

As to documentation, the newest 1541 has virtually the same User's manual as the original. One purchased by us late in December came with a "second edition" manual but it only seemed to have superficial changes. We are looking for a more involved book of information and if one doesn't surface soon, we may even write one.

Is the 1541 a winner or a loser? As with the Commodore 64 generally you get a lot for the money. Commodore seems to be making a special effort to improve the reliability of the drive and there are large numbers of 1541's already in the hands of users. We have a feeling that the 1541 is and will continue to be a real winner in the microcomputer market. Also we know that it should also work with the new 264 & 364 computers just announced by Commodore.

NEW PRODUCTS FROM MICRO-W DISTRIBUTING

You will soon be able to order our new disk diagnostic software for your Commodore 64 and 1541 disk drive. We feel that many of the users really want to know if their system is operating correctly. This software will sell for \$29.95 but we will offer it to all registered owners of the CLONE MACHINE for only \$24.00. We are also stocking the new BMC BX-80 Printers (only \$257 & they work like the EPSON MX-80) and have a graphics interface that will make this printer emulate the 1525. NOTE: The diagnostic software will be available 3/84 so please be patient.



"Should've made a back-up with the Clone Machine."

* FOR YOUR FRIENDS IN CANADA *

We also have a distributor in Canada. The name of the company is YAMATECH and they are located in MT.ROYAL Quebec. H3P 2T1 their phone number is 514/737-5434 and you can ask for JACK KINCLER to place a dealer order in Canada.

WE'LL BACK YOU UP!

ATTENTION COMMODORE 64 OWNERS

If you own a disk drive then you'll need "The Clone Machine". Take control of your 1541 drive.

NEW IMPROVED WITH UNGUARD.*

Package includes:

- 1.) Complete and thorough users manual
- 2.) Copy with one or two drives
- 3.) Investigate and back-up many "PROTECTED" disks
- 4.) Copy all file types including relative types
- 5.) Edit and view track/block in Hex or ASCII
- 6.) Display full contents of directory and print
- 7.) Change program names, add, delete files with single keystroke
- 8.) Easy disk initialization
- 9.) Supports up to four drives

*UNGUARD Now allows you to read, write and verify bad sectors and errors on your disk making it easy to back-up most protected software.



"Dad should've made a back-up with the Clone Machine."

\$49⁹⁵



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Inquiries Invited

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UNGUARD RELEASED IN DECEMBER TO EAGER USERS

With the runaway success of THE CLONE MACHINE (TCM) came a very impatient group of users waiting for the release of UNGUARD.

As most of you know, UNGUARD is the advanced capability of TCM to deal with error coded blocks used for copy protection. The combination of TCM and UNGUARD is uniquely powerful in its ability to allow you to make back up copies of almost all diskettes created for use on the Commodore 64 with the 1541 disk drive.

Since UNGUARD was announced for shipment in December, the offices of Microware have been deluged with calls and letters urging us to get UNGUARD out as quickly as possible. There seems to be a lot of disks out there waiting to be backed up!!!

It takes time to produce quality software, properly tested and ready for the public. However, even with its advanced capabilities never before offered for any Commodore 64 product, UNGUARD was released and shipped on time.

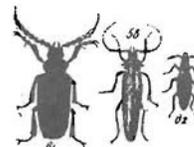
As you may know, each purchaser of TCM Version 1 (without UNGUARD) must send in his registration card (packed in the TCM box). Then, as a registered owner, you can get UNGUARD by sending ten dollars and your registration number to Microware. A letter explaining the procedure has gone out to all early TCM purchasers. If you did not get the letter or have any other questions about getting UNGUARD, contact Microware.

Starting in January 1984, all buyers of TCM will receive UNGUARD with their original shipment. They will pay the \$49.95 full price for the combined TCM/UNGUARD diskette.

When you receive UNGUARD, you will get a new, updated copy of THE CLONE MACHINE on the same diskette. The new TCM has been modified to enhance the first release and to work properly with UNGUARD. You will also receive full documentation of UNGUARD and an addendum to the TCM documentation.

BUGS

BUGS/FIXES



BUGS/FIXES will be a regular feature of THE CLONE NEWSLETTER. Here we will report to you bugs which have been found in THE CLONE MACHINE with UNGUARD and how you can get around the problems. THE CLONE MACHINE is a very high quality program and has few errors, but we will keep you up to date on any problems which do surface.

Readers are invited to submit information about any difficulties encountered. If verified to be a previously unreported bug, we will report it here with credit given to the person submitting it.

1. REL file copy. Early versions of CLONE4 do not copy REL files properly. The version shipped with UNGUARD has been corrected.
2. Blanks in file names. Early version of CLONE3 misbehaves when a file name contains a blank (eg, "MY FILE"). May not delete name from directory properly; may not create such a name properly. Temporary solutions: a) avoid blanks in file names if possible, and b) use TB/EDITOR (Option 2) to correct file names if blanks are replaced by shifted blank (look at name in hex to see what is going on). Later versions have been corrected.
3. 'Out of Memory' message. Under some circumstances you may get the message "OUT OF MEMORY" after loading a new program. This may occur during switch from one option of TCM to another or may occur after you end TCM and are trying a new program. Later versions corrected. Temporary solution: Reinitialize computer by turning power off then on. Reload from beginning.

SOLUTIONS

SOLUTIONS is regular feature of THE CLONE NEWSLETTER. Each issue we will publish a specific "Copy Plan" for one or more popular software diskettes. The Copy Plan is all you need to make successful back-up copies of the diskette using THE CLONE MACHINE with UNGUARD.

As you already know, THE CLONE MACHINE with UNGUARD (TCM) includes the tools you need to make your own Copy Plan for the diskettes you are interested in. SOLUTIONS will save you time with the Copy Plans we publish, but you can do any other diskettes you like using your own TCM software.

We would like to hear from you about your experiences, good or bad, using TCM to make back-ups. Send in Copy Plans you have developed for diskettes; if we publish it you will be given full credit!! We will give priority to more difficult or interesting cases.

As of this writing we found very few diskette intended for the Commodore 64 with 1541 disk drive which we could not copy using TCM. The software we use is the same as THE CLONE MACHINE with UNGUARD you have received. If you find such a diskette, let us know and we will publish the information in a future issue.

Here is a Copy Plan for the popular word processor EASYSCRIPT:

```
Init.  
Copy 1/1 - 17  
Copy 18/1 - 35  
Set errors.  
    1/0 E22  
    35/1 E22  
Copy 18/0
```



As you know (if you have studied the UNGUARD documentation), this means:

```
Initialize the copy diskette using Option 3 of UNGUARD.  
Copy from Track 1/Block 1 to the end of Track 17.  
Copy from Track 18/Block 1 to the end of Track 35.  
Use UNGUARD Option 5 to set the following error codes:
```

```
Error 22 at track 1/block 0.  
Error 22 at track 35/block 1.
```

```
Copy Track 18/block 0 using Option 4 of UNGUARD.
```

If you do not understand any of these steps, refer to the documentation for THE CLONE MACHINE and/or the separate UNGUARD instructions. Copy plans are explained in Chapter 4 of the UNGUARD documentation.

If you follow the above Copy Plan procedure, you can make your own back-up of EASYSCRIPT.

We know that the Copy Plan given will work for EASYSCRIPT. But there is more than one way to get from A to B. Can any reader find a shorter Copy Plan? For example, we know it is not necessary to copy every track as is given in this Plan. How many is the minimum? We will publish the shortest plan submitted (with full credit to the clever researcher) in a future issue.

Now here is our winner for "most complex copy protection": FORT APOCALYPSE. The diskette for this game is littered with error codes set in an unusually large number of places. Here is the Copy Plan:

```
Init.  
Copy 1/0 - 17  
Copy 18/1 - 24  
Set errors:  
  
Block 20 of Tracks 8 through 17 are coded with E23.  
22/14 E20  
23/16 E20  
24/18 E23  
Tracks 25 through 35 have every block coded with E21.  
Copy 18/0.
```

This marvelously complex copy protection can, with patience and care, be duplicated with UNGUARD. When the program is executed (LOAD"FORT",8,1) it does not seem to check more than one or two places for the necessary protection.

Can you find those places and give the readers a much shorter Copy Plan? The best solution will be published with author credit in a future issue.

Send in your solutions, simplifications, and new ideas to:

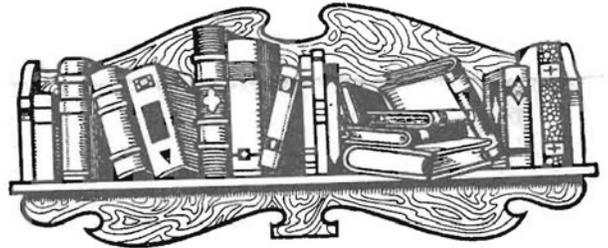
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But what about dongles?

The use of a dongle, a physical key to be inserted into a port, cannot be overcome by TCM. You can make copies of the diskette, but you still need the dongle to run the diskette. This is usually fine for your own backups, but if the dongle doesn't work or is lost, you need a better way.

At the moment, all we can suggest is that it is possible to analyze the program and determine where the dongle is being checked. You can then use the TB/EDITOR (Option 2 of TCM Main Menu) to patch in a program change which will make it work without the dongle/key. This is a tedious process and requires a knowledge of machine language, but can be done (we have done it here for several programs). We will publish reader's contributions on this subject with full credit to the author in future issues. So send in your triumphs.



TECHNICAL NOTEBOOK

How to Copy Protect Your Own Diskettes--Part 1

Did you know that you can use THE CLONE MACHINE with UNGUARD to copy protect your own diskettes? The same features which make it possible to create back-up copies of other diskettes can be used to make your own, original copy protected ones.

When you create your diskette (we'll call it software from now on but it could be data or any mixture of programs/data), you will need a plan for the physical layout of your diskette. That is, you have to plan where the software will reside on your diskette so you can put your copy protected areas elsewhere.

A simple approach to this, used by many professionals, is to put protected blocks on the first or last track (track 1 or track 35). Since the 1541 disk format always stores from the middle of the disk outward (track 18 is the directory), the disk will be almost full before you get to track 1 or track 35. So unless your software is quite large, you can almost certainly use track 1 or track 35.

As a simple example, say you decide to copy protect by coding track 35 with Error 21. You must then put into your program statements which read one or more blocks from track 35 to check if they are coded with error 21. If so, continue normally. If not, then abort the program (perhaps with an indelicate message about the behavior of the pirate).

Here is a cookbook approach:

1. Decide where your copy protection blocks will be.
2. Put statements into your program to test these blocks.
3. Use THE CLONE MACHINE to copy your program onto a new diskette. Save The original as your master copy.
4. Use UNGUARD to put the error codes you want onto the new diskette in the right place.
5. You now have a copy protected program. Test run it to make sure everything works as you expected.

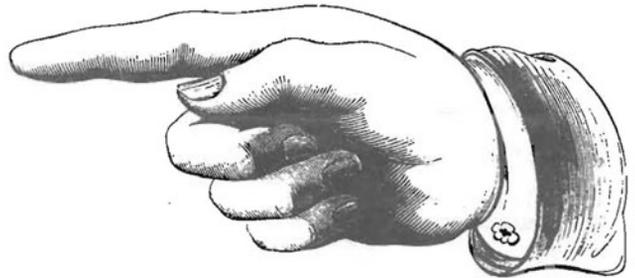
HOW TO DO IT IN BASIC

If your program is in BASIC, you will need statements to read a particular block from a particular track. The following subroutine will do that for you. This subroutine will RETURN if track 35, block 1 is coded with error 21. Change statement 8000 to conform to your track, block, and error code if you want it to be different. If the subroutine returns, everything was OK. If not OK, the subroutine executes the Commodore 64 power reset vector that completely resets the computer. Note that file numbers 2 and 15 are used by this subroutine and must be closed when this subroutine is called.

```

8000 T=35:B=1:E=21:REM PARAMETERS
8010 OPEN 15,8,15:OPEN 2,8,2,"#"
8020 PRINT#15,"U1:2,0";T;B
8030 INPUT#15,A$,B$,C$,D$
8040 CLOSE 2:CLOSE 15
8050 IF VAL(A$)<>E THEN SYS 64738
8060 RETURN

```



Execute this subroutine with:

```
nnnn GOSUB 8000
```

somewhere near the beginning of your program.

In our next issue we will continue to explore copy protection. More sophisticated examples will be given and some pointers on coding in machine language to check for errors will be provided.

We are sure that our readers have many valuable ideas to share on this topic and others of interest. Please submit your ideas, experiences, articles, etc. to:

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PO BOX 198
BUTLER, NJ 07405



We will give full credit by name for all ideas which are used in THE CLONE NEWSLETTER (with your permission if you wish). Longer articles, if published, can earn you up to \$100 (See Page 1).

LETTERS TO THE EDITOR

Since this is the first issue, the letters we have gotten are from users who wrote in on the registration card packed with THE CLONE MACHINE. For future issues, we invite readers to send in their comments, good or bad but hopefully constructive. We will publish a selection of interesting letters in each issue.

Dear Microware:

Users have a RIGHT to make backup copies of all their software. Please try to include any information which will allow us users to not be kept at the mercy of software companies, especially small business users with only ONE copy of a very important program.

Theodore J. Alexander II, S. Euclid Ohio

Dear Microware:

I like THE CLONE MACHINE. It is a very necessary item for a school to have. Thank you.

Alanson Hertzberg, Sacramento, California

Dear Microware:

Disappointed to date. Could not backup any Commodore software, any Spinnaker products, or "Mastertype" from Lightning Software Inc.

James Caldweell, Crownsville, MD

Ed. Note: UNGUARD will handle many of the protected disks. Order yours today if you don't have it yet. Only \$10 for registered owners of The Clone Machine.

Dear Microware:

Would like to have application guide to whatever software that TCM has been used on successfully.

Craig S. Shevlin, Stafford, VA

Ed. Note: Watch the Newsletter for this type of information.

Dear Microware:

Program seems to work fine. I would like to see UNGUARD on the Main Menu. Also, the last page of the manual makes you a hypocrite. Dont you think your customers should be able to back-up their (owned) disks?

Charles Tifft, Bismark, ND

Ed. Note: UNGUARD on the Main Menu is scheduled for a future enhancement. Also, UNGUARD can be backed up and some users have done it. But, we wont tell you how...yet!!!

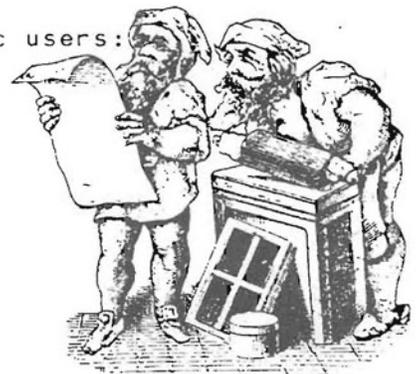
And lastly, typical of many, many responses from enthusiastic users:

Dear Microware:

Fantastic utilities!!

Paul Zynosky, Naugatuck, CT

Ed. Note: Thanks Paul, and thanks to all of our customers.



Disk Software for the Commodore 64™



JOT-A-WORD™

A computerized version of the old five letter word game. Simply pick a secret five letter word (one of the almost 5000 words contained on the disk) and then play against the Jot-A-Word Genie or simply play a solitaire version. Start by typing in a five letter word. The Genie responds by telling you how many letters your guess and the secret word have in common. Don't try to cheat, because the Genie is too smart and it will not accept non-words or continue a game that you have given it wrong scores. This is a simple but stimulating game for ages 9 to senior citizen. A real challenge to your intellect, reasoning powers, logic and deduction skills. It's simply hard to beat; as a fun and educational experience! Graphics and music add to the enjoyment.



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