
-The Front Ranger-



The Newsletter of the Front Range 99er Computer Club

Vol. 6 No. 7

P.O. BOX 9572, COLORADO SPRINGS, CO 80932

Apr, 1989

PRESIDENT.....CLIFF SWANK.....473-1101
VICE PRESIDENT.....BRYCE WILCOX.....495-4590
SECRETARY.....BONNIE SNYDER.....578-1583
TREASURER.....BRYAN MINNIGERODE..531-9509
EDITOR.....CLIFF SWANK.....473-1101
SARGEANT-AT-ARMS.....WARREN WIEKHORST...596-7724
LIBRARIAN.(program).....KEVIN KAPUS.....576-3199
LIBRARIAN.(lending).....GENE FLEMING.....635-8162
GRAPHICS SIG.....BONNIE SNYDER.....578-1583..BY APPOINTMENT
TELECOMMUNICATIONS SIG..KEVIN KAPUS.....576-3199..MEETS THE SECOND THURSDAY
T.I.FORTH.....NATHAN RAKOFF.....598-1098..BY APPOINTMENT
NEW MEMBER ORIENTATION..BONNIE SNYDER.....578-1583..BY APPOINTMENT
VILLA-TI (HUB) BULLETIN BOARD.....574-2567..CALL OFTEN

NEXT MEETING

DATE.....THURSDAY, APRIL 21, 1989

TIME.....6:30 PM

PLACE.....RUSTIC HILLS MALL (COMMUNITY ROOM)

PALMER PARK and ACADEMY BLVD.

PROGRAM.....Rick Houghland will demo Animator II. Our newest member, Chris Townsend will show us the latest Ray Kazmer creation, Maze of Grog, this game starts out with an animated Woodstock scene. Great program. Bruce Almeida will have a short program to conclude the meeting. See ya all there!

EDITOR'S NOTES

Bryce is still having Geneve hardware problems so Erik Olson edited most of this newsletter. Thanks for pitching in. We hope you all enjoy it.

Any letter or comment to the Editor should be sent to: Front Range 99er Club
P.O. BOX 9572 COLORADO SPRINGS CO 80932

THE PRESIDENT'S CORNER by CLIFF SWANK

Last month's demo by Erik Olson stirred some interest in the graphics special interest group. Bonnie Snyder has turned over the chairperson position to anyone that would like it. The demos by Erikon his Geneve were impressive and there is a lot of excellent graphics software available for our TI. All interested members should contact Bryce Wilcox or Erik Olson.

Speaking of special interest groups, it looks as though all of them have died except the telecommunication sig. Kevin Kapus still has a monthly meeting at his house. The agenda includes a visit to GENIE to see what is going on in the TI community and to check out the new programs that are available for downloading. Call Kevin if you would be interested in joining the group.

The club will be purchasing some commercial software in the next month or two for two reasons. We need some new software for monthly program demos and secondly, we need some prizes for the anual October drawing that we have. Any member can make suggestions to the officers of programs they would like for the club to purchase for those reasons. The officers will vote on which ones to buy at their officers' council meeting. All members are invited to attend any of the council meetings. Most of the club business is handled at those meetings so that we do not take up time at the general monthly meetings. The date and time of the meeting is generally the Tuesday following the Thursday on which the general meetings are held. It starts at 7:00 PM and is held at CoCo's Resturant on North Academy Blvd. If there are conflicts with the date or time, a message is posted on VILLA to state the time, place, and date. All members are welcome to attend.

Asgard Software is sponsoring a contest for the development of a new TI compatible computer! They are accepting contributions from any interested party or user group. The prize for the best design of a new computer using the TMS9995 microprocessor that is compatible with te TI 99/4a is \$1,000 plus royalties. Details are available from Asgard at the following address : PO BOX 10306, Rockville, MD 20850. All of you hardware designers and hackers should have fun with that.

TREASURER'S REPORT

For the Period Jan 1 thru Mar 31, 1989

CASH ON HAND,BEGIN	\$2,803.72
Cash Receipts	325.39
CASH AVAILABLE	3,129.11
Cash Disbursed	(490.44)
CASH ON HAND,END	\$2,638.67

Submitted: J.H.B.Minnigerode, Treasurer

Front Range 99'er Computer Club

March 16, 1989

General Meeting

Minutes

The meeting was called to order by President Cliff Swank at 6:47 PM. The drawing for the disk of the month was held, and member Gene Fleming was the lucky winner. Congratulations, Gene!

Cliff introduced Chris Townsend to the membership. She is our newest member. Cliff then proceeded to discuss with those in attendance the subject of the new board being produced by Eric Zeno of the Pittsburgh UG. It can be installed inside the console and contain a parallel printer port, speech, and several cartridge chips, including Extended Basic. Cliff asked if there was any interest in a group order, as he is interested in trying this. Rick Houghland and Ed Roso also expressed an interest in ordering the board.

Bruce Almeida presented a letter to Cliff (with a copy to the secretary, as well). Bruce spoke to the contents of the letter, addressing the fact that he had uploaded some files for the newsletter to Villa. He had spent a great deal of time putting the files together, and then discovered that they had not been printed in this month's newsletter. Editor Bryce Wilcox stated that he had had some difficulties trying to download ASCII files, and had tried to download those files, but had not been successful. Unfortunately, he had lost Bruce's phone number and was unable to inform him of the problem. It was suggested that the next time Bryce has a similar problem, he would be well advised to leave a message on Villa, so that other means might be open to him. Villa SysOp, Joe Nuvolini, also noted that the files were probably deleted by now, as he cleans the board off weekly, and if there is an indication that the files were accessed by the person for whom they were intended, he deletes them.

Joe Nuvolini also announced to the membership that a (relatively) new radio program on BRN (the Business Radio Network) carried locally by KCRE out of Monument, CO features discussions on computers. The program is called "Computing Success" and is hosted by local media personality and computer expert, Thom Foulks. It can be heard every Sunday from 2:00 PM to 4:00 PM (MDT).

Cliff noted that the new word processing program for the TI, Press, is still not ready to be shipped. He ordered his copy several months ago.

Our main program featured Erik Olson demonstrating graphics on his Geneve computer. Bruce Almeida followed up with a demo of a character definition program which creates sprites.

Next month, Rick Houghland will demo Animate II and Warren Wieckhorst will demo Geneology. Bruce Almeida also indicated that he would be willing to continue demo'ing utilities, and in addition, would like to demo the MBX voice activated system for the TI at a future meeting.

The meeting was informally adjourned at 8:45 PM.

Respectfully Submitted,

Bonnie L. Snyder Secretary FR99CC

Edited by Erik Olson, sysop of Rivendell
(472-8745)

These messages were taken from the TI-Echo (area 23) on my Opus board. (Opus runs on an AT.) I don't know of anyone in our group that uses the TI-Echo, and since there were some rather choice goodies available through it recently, I decided to print them for the newsletter. Not until recently has the echo been flowing regularly, but now we're getting quite a few messages each week. TI-Echo messages are seen by many Opus boards throughout the U.S.-- a great way to inexpensively promote inter-group communication in our community.

Note: All the messages say "(On 128/40)" after the sender's name. This only means the message's last source was the Springs board 128/40-- it originated from the board named at the end of the message.

Please pay special attention to the first message, concerning Barry Boone.

#114
Date: Sun 02 Apr 89 21:35:26
From: Cy Leonard (on 128/40)
To: Frank Hargrove
Subj: BARRY BOONE

If I can answer for Barry (he calls my BBS regularly) you may not be aware of it, but has just had an operation. It was a tumor on his neck and fortunately they caught it before it was too serious. He is now trying to raise the \$5000.00 it cost, so anyone who hasn't paid for Archiver...now is the time!!!

--- ConfMail V4.00 * Origin: Cy's Swap Shop
(813) 725-4568 - Via TI-RALEIGH (7:48/2022)
--(SEEN-BY: 1--

#121
Date: Mon, 03 Apr 89 16:39:58
From: Gary Taylor (on 128/40)
To: Larry Sanders
Subj: Re: RE:word Proc.

Larry, The latest word on Press is that there are problems with memory allocation. The swapping in and out of all the modules that are required to do all the functions promised requires more breaking up of the code than originally thought. The earlier demos, the one in Chicago, showed a word processor that does many of the things that were advertized. The author has been working on it and it appears that the demo in Chicago may have been

premature. NO KIDDING? Those in the know tell me that it may be making its debut at the Harrisburg, PA fair. That's in OCTOBER!!! Better if it is released at LIMA on May 20 or even OTTAWA on April 29. =gmt=

--- * Origin: NorthStar Pitt - Pittsburgh, PA
(412-881-1749) (Opus 1:129/81) --(SEEN-BY: 1--

#110
Date: Fri 31 Mar 89 20:03:14
From: Larry Sanders (on 128/40)
To: Larry Hughes
Subj: RE:word Proc.

Larry Hughes I have never saw a demonstration of the PRESS thow I have read all I can find about it. I ordered it back in Dec. and as you know still am toled it's on back order. I was shocked to see that it would do all the stuff that it listed but am egerly whating it's releace. I was not aware that one person was working part time on it thow. That would be a big bite for one man to chew! I cerently us TI-WRITER and soon will have the spell checker so I am willing to whate till PRESS is released (if ever) I just hope TRITON the co. I orderd from will tell me that it will never be released if that is the case. Do you have any feedback to this?

--- Opus-CBCS 1.10.vi * Origin: Galaxy
Computer HST Opera 2 (918) 836-6336 (I.N.)
(1:170/409.0) --(SEEN-BY: 1--

#111
Date: Thu 30 Mar 89 20:30:46
From: Tony Dalfonso (on 128/40)
To: Larry Hughes
Subj: Re: RE:word Proc.

Hi Larry, what terminal program are you using? Telco? If it is Telco, you see what this author can do. I believe that Mr Earl is a very talented programmer and deserves some time to release this program. As for the functions that Press promises for the 99/4A, why is it not possible? Before I got my PE box, I couldn't dream what new power and capability the TI had. And I believe that with Mr Earl's talents and the power that lies hidden within the expanded TI, I think it is possible. You yourself said that a word processor takes 8 years to write, why not give him some more time. I am also annoyed that it is taking along time but I believe that it may be worth the wait...

--- * Origin: TIBM Wizard (The TI:IBM
connection in Toronto) (Opus 1:250/518) --(SEEN-BY:
1--

I like to write my own programs. For those of you that do also or those of you that would like to but are lost when it comes to the making of sprites, this program is just what you need. I use it all the time and let me tell you it's about the best thing since pen and paper. I one time sat with grid paper and pencil in hand and used up more erasers trying to get the sprite that I liked. Now in just a few minutes I have all my sprites made and all I have to do is sit down and write the program to make them do something. I think that this program will be very useful to a lot of you. And if you don't do a lot of programming you never know when you are going to need a sprite or two. TRY IT! YOU'LL LIKE IT!

BRUCE ALMEIDA

SPRITE EDITOR FOR TI

by Larry Long Compute Magazine September 1983 Vol.5, no 9
typed in by Bruce Almeida

Here's a way to get maximum use of the TI-99/4A and a program that generates listings for your sprite creations.

A very powerful yet often unused feature of the TI-99/4A is its ability to display and control sprites. With the 99/4A and the extended BASIC Module, it is possible to generate 28 sprites for display and independent simultaneous movement. Program 1 should convince any doubters that this can be done. Although a lot of colored letters floating around the screen are a bit pointless, if we can modify and control the sprites, we will have a most useful feature.

Sprites can be designed by drawing on a piece of graph paper and then converting the on/off pixels to a hexadecimal number. If the two largest sizes of sprites are used, the hex number describing the shape of the sprite would be 64 characters long. A solution is a sprite editor that will allow us to draw the pattern we want on the screen and then have the computer create the program we need to make that sprite pattern. Program 2 will do exactly that, and more. It will allow us to edit the sprite pattern. Then, when we press the I key, it will display a complete listing that would, if copied on paper then entered into the computer, provide a sprite and the necessary routine to control its movement.

YOUR OPTIONS:

When you run the program, the first display screen will be a design grid with a box-shaped cursor. The area under the cursor will initially be white (signifying an "off" pixel). Press 1 to change the color beneath the cursor to black (representing an "on" pixel) or to move the cursor about the grid with the arrow keys. To turn off a particular pixel, press 0 and the background color will be returned to white. When you have completed your design, press the P key to see it displayed as a sprite.

At this point, you are given several options. You can magnify your newly constructed sprite (M key), change its color (C key), change its background color (B key), or set it in motion (E, S, D, X keys). If you are not pleased with the sprite's shape, you can modify it by striking the T key or (if the change required are

quite drastic) simply press the A key to start with a fresh grid. On the other hand, if you are satisfied with your sprite and its color and directional parameters, press the L key to create the BASIC statements needed to achieved these effects.

END OF DOCS

THIS IS THE PROGRAM THAT I DEMOED AT THE MARCH MEETING. HERE IS THE DOCS FOR THAT PROGRAM. I WILL BRING THE PROGRAM TO THE APRIL MEETING AND GIVE IT TO THE LIBRARIAN.

Continued from Page 22

2	7.72
3	7.76
4	7.90
5	8.04
6	8.12
7	8.23
8	8.34
9	8.46
10	8.56
11	8.62
12	8.71
13	8.83
14	8.94
15	9.02

As you can see, variables up to three characters in length ran in about the same time. Once the length was longer, however, each additional character in the variable name increased the run time by about one tenth of a second for 1000 executions or .1 millisecond for one.

I also ran this one:

```
10 C=0 :: FOR I=1 TO 1000 ::
  A=0 :: NEXT I
```

The average run time was 7.06 seconds. There is a cost when substituting variables for numbers. TANSTAAFL (there ain't no such thing as a free lunch)!!

DID YOU KNOW?

You can have more than one item for a VALIDATE. For example,

```
10 ACCEPT AT(5,1)VALIDATE(DIGIT,"Q")
  BEEP:F$
```

Will accept the ten digits and the letter Q. It does.

FOUR-A/TALK

Random ramblings
about things II.

by Bill Gaskill

April 1989

MYARC'S HARD DISK SYSTEM

Because I am a died-in-the-wool 99/4A loyalist (though my wife has another name for it) I took the plunge in September 1988 and purchased the Myarc Hard and Floppy Disk Controller (HFDC) card. I also purchased a Seagate ST125-1 20 megabyte hard drive and power supply from Myarc to go with it. Total price was \$735. A lot of bucks for a 99/4A computer peripheral you say? Yes, but read on before you pass judgement.

If you are like me you want your computer to be productive right out of the box. None of this having to be an electronics engineer to assemble it first, for me. I want components that say NO ASSEMBLY REQUIRED. I am simply not a hardware hacker and I am more than willing to pay a few extra dollars for the convenience and time and frustration savings realized in buying "ready-to-run" components.

When I decided to investigate the HFDC I called Myarc at their Georgia office and talked to Jack Riley. I expressed my concerns about "turn-key" components to him and was assured that Myarc could provide me with a system that required a minimal amount of assembly. Thus convinced, I placed the order and anxiously awaited its arrival. About three weeks later I called back and inquired about the status of the order. I talked to Jack again and he informed me that I would receive the power supply from Myarc-Georgia and the controller card and hard disk from Myarc-New Jersey within the next 4-5 days. I didn't listen close enough to what he said. If I had, I might have asked how a "turn-key" system could be delivered from two different locations, especially when the power supply would come from one place and the hard disk that goes in the power supply would come from another shipping point.

True to Jack's prediction, the hard disk and controller card arrived four days later, the power supply a day after that. When I opened the box containing the power supply I discovered that it was an off-white, steel cased enclosure measuring

about 6 inches wide by 18 inches deep and 4 inches high. A handsome piece of equipment that made a nice looking addition to my workstation. When I looked for the instructions on what to do with it there were none. None meaning NOT ONE! A slight trickling of panic seeped into my thoughts. I then opened the box containing the controller card and found a 3-ring binder with about 80 pages of some of the most confusing documentation I have ever read. But not one word of it told me what to do with the power supply nor how it was to be hooked up to the hard drive. So much for "turn-key" systems.

Well I rolled up my sleeves, dug in, and figured out a couple of things without too much hassle. First, there are two power connectors inside the power supply box (white plastic connectors on the end of red wires) and you can use either one, since the unit is built to handle two hard drives. Second, the cover plate I got that fills the blank space for the second hard disk I didn't buy, can be installed without a degree in mechanical engineering. The electrical cord for the power supply only plugs in one way so I couldn't very well do too much damage there. On to the hard disk.

The Seagate ST125-1 that I ordered from Myarc was represented as a 28 millisecond access time hard disk in my conversation with Jack Riley. I find that difficult to believe since Computer Shopper ads put the ST125 at 40 milliseconds. The ST125 sells for around \$269. A 28 millisecond Seagate goes for just under \$500. You can draw your own conclusions. Anyway, the drive is a 3.5 inch masterpiece that bolts easily to the base of the power supply. The back of it has two edge connectors for two ribbon cables that I could not find in any of the boxes that were delivered to my house. So I set the entire unit aside and moved on to the controller card.

In an act totally out of character for me, I read the manual before proceeding with the installation of my HFDC. When I was sure that I got all that my tiny brain could get out of the documentation I called Myarc-Georgia for help. I just couldn't make enough sense out of what was being said to risk damaging my \$735 investment. It turned out that the phone call was about the first really correct thing that I had done (Jack Riley to the rescue). I immediately asked about the missing cables and was told to unfold the two panels in the HFDC box that kept the 3-ring binder and card from moving around. Low and behold, two ribbon cables, one 20 pin and one 34 pin. Boy did I feel stupid. From that point on, I decided to invest in the cost

of whatever number of telephone calls it took to get Jack to walk me through the set up of the whole system. That was the second correct thing I did.

The installation went fairly smooth once I had a guiding voice on the phone to keep me from making any mistakes. In fact, the entire set up is rather painless once you go through it about two times, which I did. I don't know what went wrong the first time, but things got so scrambled on the hard disk that nothing would work right. Jack Riley offered the opinion that the cause was not turning everything on and off simultaneously with a master switch. I'm not totally convinced of that though since I have been able to turn the hard disk on last and off first and have had no problems. But I suggest that you stay with what the manufacturer tells you to do, so that your warranty isn't jeopardized.

There are some things about the set up, particularly the formatting of the hard disk, that I don't think I could ever have figured out on my own. When the FORMAT command is accessed from the Myarc Disk Manager 5 you must respond to a series of questions like volume name, sectors per track, number of heads, cylinders, write pre-compensation, interlace and the like. It all sounded pretty foreign to me. But with my guide on the other end of the telephone line I tackled the job as any brave soldier would who was facing the enemy's ground troops from behind an M60 tank. No problem!

In looking back, I again realize the correctness of making the telephone call to Myarc. Because the MDMS disk manager program has gone through several updates and the documentation has not been brought totally up to date with the program, the manual tells you things that are no longer correct or that are incomplete or are in some way different than what you are staring at on your monitor. Had I not had the benefit of Jack Riley's immediate tutledge over the phone I would probably still be wondering how to get the HFDC and hard drive working. I must fault Myarc for that. There is no excuse for not providing the most correct and up to date information in the manual. The documentation appears to be about two years old as far as I can tell and it gives such erroneous information as "the cables (connecting the hard disk to the HFDC) can only be put on one way. Wrong! The red strip on the edge of both of my cables had to be at the bottom when installed on the HFDC and facing to the right when attached to the power supply. Physically, they can be installed on the edge connectors either way, but only one way is correct. The manual really needs a going over to bring it up to speed with the current requirements of the set

up process.

Back to the formatting. John Kolean wrote two nice articles in the September '88 issue of MICROpendium on the HFDC and its use with a hard drive. Some of the information helped me but not enough of it to get the system up and running. Here is what I did with my hard drive formatting. Maybe it will help you.

VOLUME NAME: 1 (The Volume Name is just like the disk name that you give a floppy disk. WDS1. already appears on the screen. You merely type in a name after the WDS1. to name the ROOT directory of the hard drive. If you name it the number 1 (the actual number 1) you will be able to read and write to your hard drive from programs that will not support pathing, which is most of the programs I own. I guess few software authors ever believed that we would ever get out of the DSK arena. Too bad. More on this later.

SECTORS PER TRACK: 32
HEADS: 4
CYLINDERS: 615
RESERVED DIR/FILE SECTORS: 2048
WRITE PRECOMPENSATION: 0 (erase the default then enter zero).
REDUCED WRITE CURRENT: 0 (erase the default and enter zero).
SECTOR VERIFICATION RETRIES: 8
INTERLACE: 2
STEP RATE: 0

These settings may not be valid for your drive if you have a different hard disk or an earlier or later version of MDMS. My copy of MDMS is V1.25. I noticed that in the MICROpendium articles mentioned above John Kolean has V1.23 and the prompts he lists in the article are different than the ones that appear on my FORMAT screen. Versions 1.26, 1.27 and V1.28 are pretty much the same as 1.25, especially as far as what you are prompted for when formatting the hard drive. When I last talked to Jack Riley (March 13th) V1.29 had just or was about to be released.

When you have completed entering the above values type in the word FORMAT to format the hard disk. While the process of formatting is taking place MDMS will display a bunch of information on the screen to give you something to stare at while it takes the six minutes or so to get the job done. If you begin noticing more than 1 or 2 BAD SECTORS appearing during the format you might have a problem with some kind of electronic garbage hindering the process. This happened to me so I tried reformatting again as John Kolean suggested

in his article, but the problem only worsened. The formatting really slowed down and it seemed as if every sixth sector or so showed up as being bad. I KNEW that couldn't be right so I finally powered down the entire system and let it sit for about 10 minutes to clear it of any garbage and to let it cool down. That seemed to work as I was able to reformat the disk successfully on the next attempt, with no bad sectors.

Once the hard disk is formatted you can leave it as it is or you can create subdirectories on it. Either way, the system is usable once the formatting is complete. With my system I chose to build subdirectories to take advantage of the DSK1 emulation available with the hard drive. I also put a copy of MDMS on my disk for lightening quick access. The configuration listed below has worked flawlessly thus far. If you can't get yours to work feel free to try mine if you like. I give no guarantees though, as I know only enough about this piece of hardware at this point to be truly dangerous.

Subdirectories:

WDI. (the root directory)

DSK.TMP. (this is a nested subdirectory of the DSK subdirectory. It contains the files from my Multiplan disk: MPBASE, MPCHAR, MPDATA, MPHLP, MPINTR, OVERLAY).

DSK1. (this subdirectory contains the MDN, MDMS and MDNIB files from the Myarc Disk Manager).

UTIL. (UTIL has the MDN, MDN-BACKUP, MDN-DELETE, MDN5, MDN6, MDN7 MDN8, MDN9, MDN-CBACKUP and MDNIB files in it).

The process of making the subdirectories and copying the files to the various areas is fare for another article, but I will say that using the MDMS program was and is a most enjoyable experience. It is truly a neat piece of software that is pretty easy to understand as it is. Not much is needed in the way of docs. Wonder who wrote it?

I still have a long way to go before I completely understand the workings and capabilities of my new piece of hardware, but I am absolutely thrilled to have it as an addition to my workstation. I now have what I will boldly claim to be the largest 99/4A data base in existence, 6515 records (2448 sectors) in a single file. I certainly could never

have done that on any other storage media available for the TI.

THIS MONTH IN 4A HISTORY:

1983:

-On April 25, 1983 Texas Instruments began offering a free Peripheral Expansion Box to anyone purchasing any three of the following: an RS232 card, a disk controller card, a disk drive, a 32K memory expansion card, a p-Code card, TI-Writer or Multiplan.

-Navarone Industries introduced the "Select-a-Cart" module expander, more commonly known as the Widget and finally named the Cartridge Expander.

-Model Masters of Fullerton, California, now doing business as DataBiotics, introduced JOYPRINT, a low-cost but ill-fated RS232 printer hookup that operated out of the joystick port.

-Tom Wynne, a Seattle area 99er who created the NOLIST utility for XB programmers and then gave it away in Barry Traver's Genial Traveler, made it into the 99er Hall of Fame with a score of 1,009,600 points in Tombstone City.

1984:

-Compute!'s First Book of TI Games made it debut in Compute! Magazine.

-Mikel Laboratories released their RS232 standalone unit for the 99/4A and at the same time announced plans to build a peripheral expansion box for our computer.

-Joseph Nocera's now classic "Death of a Computer" article on the demise of the 99/4A appeared in the Texas Monthly magazine.

-Texas Instruments still had 14% of the home computer market, despite the bailout five months earlier. Commodore had 37%.

1985:

-INTELPRO released a French version of their COMPANION word processor.

1986:

Unisource Electronics of Lubbock, Texas, a

major TI-99/4A retailer and mail order house since March of 1983, goes out of business.

-PILOT 99 author Thomas Weithofer dies at age 22.

-Amerisoft, a Georgia based supplier of TI products, and a supporter from the early days of the 4A, leaves the TI market.

1987:

-Monty Schmidt, author of the Techie DOS program, releases Command DOS for the 99/4A.

-The Anion Helpline, run by former International Users Group librarian Dr. Guy Steffen-Romano, receives an award from the Front Range 99ers of Colorado Springs, Colorado, for continued support of the TI community.

1988:

-Bob Lawson 1344 Boston Ave. Bayshore, New York 11706, announces that the Forti Music Card, formerly offered by the now defunct Unisource Electronics, is still available through him.

TRIVIA:

Did you know that...

-LA99ers User Group member forever George F. Steffen wrote the 99/4A version of Beanstalk Adventure and that he also wrote so of the assembly software for Craig Miller's Gram Kracker conversion utilities?

-Funware, the Richardson, Texas company started by an ex-TI employee that produced Ambulance, Henhouse, Rabbit Trail etcetera, also planned to introduce another cartridge game called Galactic Barrier, but never did?

-Moonbean Software of Northampton, Massachusetts, long-time supporter of the 4A community with a stable of game programs, used to be called HI-FI Exchange?

-TI community personalities Cheryl Whitelaw, Steven Shaw and Tom Wynne all made it into the 99er Hall of Fame with their game scores in Munchman (178,950), Pinball (10,028,010) and Tombstone City (1,009,600) respectively?

-The Turbo Pasc 99 project marketed by LIL. Conner Enterprise, was originally undertaken by Barry Boone under the support of Steve Lamberti of Texaments? Wonder what happened? Texaments even advertised it in MICROpendium a couple years back. Must have taken too long to convert it all over from the German language that it was originally written in.

-Lou Phillips (who?) was once a VP at the Chase Manhattan Bank in New York?

-Windows99 from CSI Design Group in St. Louis, Mo. was written by Ken Dibble (who?)?

Next month: an in-depth look at Barry Traver's Genial Traveler Diskazine and what you are missing if you are not a subscriber, more 4A history and of course... more trivia!

Until then....

I got some phone calls about the program that I showed at the Feb. meeting. Some asked for the docs and the program. Well here is the docs and I will bring the program to the meeting in April and give it to the club librarian. Bruce Almeida

ARE YOUR HEATING DOLLARS GOING OUT THE WINDOW?

Learn Cost-Efficient Insulation with This Program

A READER WRITTEN PROGRAM BY BERT GUSTAVSON :FAMILY COMPUTING VOL1
NUM1 CONVERTED FOR PC BY BRUCE AND DEBBIE ALMEIDA

Winters in Rochester, New York, can be formidable. In a normal winter, the temperature can stay below freezing from mid-December until early March, with a few days of thaw to provide brief respite from the cold. Winds often whip the snow into drifts, and slippery roads and poor visibility due to the swirling snow make driving hazardous.

In the winter of 1976-77 when my fuel prices began skyrocketing, I started upgrading the heating efficiency of my house. I began by adding insulation in the ceiling, building enclosed vestibules for the front and back entrances of the house, and insulating around the water heater and all hot-water pipes from the heater to the faucets.

Then I put my TI-99/4A to work to determine where my heating dollars were going. The accompanying program, which I wrote in TI BASIC, will tell you which parts of the house are allowing the greatest amount of heat to escape and how much money you can save by the investments in insulation, caulking, weatherstripping, etc., that you are considering. By comparing the figures with the cost of improvements, you can determine which potential investments would be most cost effective.

Of course, this information is valuable whether you have yet to do any weatherizing or have already begun and are considering further steps. (If you do choose to do insulation yourself, be sure you learn proper installation techniques or you will not get the result you want.)

As is true with most calculations performed on a home computer, you could accomplish the same thing with a calculator, with an abacus, or with plain old-fashioned arithmetic using a pencil and paper. The advantage of writing a computer program to do the work is that you can change the numbers and quickly get answers for a variety of situations: How much will I gain by changing to double-glazed windows? To triple-glazed? What about adding six inches of insulation in the attic? Twelve inches? Eighteen?

Before you run the program-in fact, before you start to add insulation or do any other weatherization-you should know what your present conditions are. The first thing you should do is to find out how much insulation you now have. In the case of an unfinished attic that's fairly easy: Just go into the attic with a ruler and measure the depth of the insulation. The R-value of fiberglass insulation is roughly R-3 per inch of insulation. (R-value is a

measure of the resistance of a material to the flow of heat.) Fiberglass insulation is available in standard thicknesses of 3 1/2 inches (R-11) and 6 inches (R-22). R-values of loose-fill cellulose insulation (made of ground-up newspapers treated with a fire-retardant chemical) are slightly higher per inch of thickness.

Determining the R-value of insulation in the walls of an existing house is a bit tougher. You can probe into the wall cavity next to an electrical outlet to find out whether there is any insulation there: **TURN OFF THE ELECTRICITY BEFORE ATTEMPTING TO PROBE INTO THE WALL CAVITY.** In an older house— one with the old standard of 2-by-4 wall studs— the chances are the walls have R-11 insulation. Your local utility company, heating oil supplier, or building materials dealer can help you determine the R-values of your home.

You can keep a better check on your heat use if you keep accurate records of your heating bills and fuel consumption. If you heat with natural gas, your monthly bill will show the amount of fuel used (usually in hundreds of cubic feet). Electric bills will show consumption in kilowatt hours (kwh). Oil bills show the number of gallons delivered.

Before running the heat-loss calculation program, you also will need to know the areas of the various elements of your house. In a simple house, the area of the ceiling is just the width of the house multiplied by the length. The area of the walls is the perimeter of the house multiplied by the height of the walls from floor to ceiling. Measure windows and doors from casing to casing on the sides and from top to sill. Multiply these two figures to get the area of each window and door. Add all the areas together to get the total window and door area. The volume of a heated space is the floor area times the ceiling height. Descriptions in the program will help you decide the air-infiltration factor, that is, the airtightness of your house. Older, drafty houses can have a complete change of air (an air exchange) every five minutes, while the new, superinsulated houses might have one exchange per hour.

When answering the glazing questions, if not all the windows have the same glazing, use an average figure. For example, if only half of your windows had storm windows over them (and if all your windows were approximately the same size), you would give your present glazing as 1.5. You can count a typical solid wood door with a few single panes of glass as double glazing.

Now put in the figures for your own house. Try running the program several times using various proposed improvements to see how quickly you can recover their cost in reduced fuel bills. Once you've made the improvements that are most beneficial for you, you can snuggle up to the fire, safe in the knowledge that your heating cost aren't going out the window.

END OF DOCS

#120

Date: Mon 03 Apr 89 07:48:18
From: Gary Taylor (on 128/40)
To: Tim Geisweit
Subj: WIZ-TIB

Tim, Glad to get a response from you. The Central PA User group is a TI only group that supports the TI and the 9640. The president is Dave Ratcliffe. They sponsor a TI Faire evry year in the fall at the Carlisle fair grounds and also support a BBS called the Wiz TIB. Their number is 717-657-4992. (BBS) What do you want to use your TI's for? =gat=

--- * Origin: NorthStar Pitt - Pittsburgh, PA
(412-881-1749) (Opus 1:129/81) --[SEEN-BY:]--

#121

Date: Mon 03 Apr 89 16:39:58
From: Gary Taylor (on 128/40)
To: Larry Sanders
Subj: Re: RE:word Proc.

Larry; The latest word on Press is that there are problems with memory allocation. The swapping in and out of all the modules that are required to do all the functions promised requires more breaking up of the code than originally thought. The earlier demos, the one in Chicago, showed a word processor that does many of the things that were advertized. The author has been working on it and it appears that the demo in Chicago may have been premature. NO KIDDING? Those in the know tell me that it may be making its debut at the Harrisburg, PA fair. That's in OCTOBER!!! Better if it is released at LIMA on May 20 or even OTTAWA on April 29. =gat=

--- * Origin: NorthStar Pitt - Pittsburgh, PA
(412-881-1749) (Opus 1:129/81) --[SEEN-BY:]--

#127

Date: Mon 03 Apr 89 20:39:46
From: Larry Sanders (on 128/40)
To: All
Subj: Wanted

I am looking for a set of 1/2 heights dubbel sided disk drives 40 track. If you are selling leave me a reply or call (918)836-0816 after 12:00 noon before 12:00 midnight.

<<<<<<<<[Larry Sanders]>>>>>>>>

--- Opus-C8CS 1.10.v * Origin: Galaxy Computer
HST Opera 1(918) 835-8933 (I.N.) (1:178/407.0)

#135

Date: Wed 05 Apr 89 10:59:00
From: MACK JONES (on 128/40)
To: All
Subj: Help

I am looking for the name of a game program that I must have zapped. It has a yellow ball that resembles a Pacman that climbs a maze of ladders. You are given a number of seconds to arrive at the cube that is flashing and if you make it in time, the ball jumps up and down on the cube killing the monster inside the cube. There is a hammer that you may use to select any cube you choose to hammer the monster cube. I have looked through about 200 of my disks to no avail. I have forgotten the name so even that would help. I think it is about 2 years old, maybe more. My grandson is giving me a fit to find it. Any help will sure be appreciated. By the way, it is not Digdug, Junkman, or Midnight Mason. Thanks. <M>

--- Qtach2 v1.01 * Origin: Alert Data GNX
QTACH2 BBS (151/5) (1:151/5) --[SEEN-BY:]--

#70

Date: Fri 24 Mar 89 07:59:56
From: Gary Taylor (on 128/40)
To: Mike Phillips
Subj: FORTI Card

Mike, We have a member here who has a FORTI card. One of the originals I think. It plays great music. If you get Micropendium, there is an fellow named TONY LEWIS who did a review of the Coleman/Willforth Proto board in the February issue, that is making a kit available for the Forti card. He would be the best source of software for it, I believe. I do not have his address or Phone # with me now. Let me know if you need this info and I will dig it out, otherwise I will assume that you have a copy of Micropendium and you have its name and # already. =gat=

--- * Origin: NorthStar Pitt - Pittsburgh, PA
(412-881-1749) (Opus 1:129/81) --[SEEN-BY:]--

#95

Date: Tue 28 Mar 89 18:52:06
From: Rory Binkerd (on 128/40)
To: All
Subj: Asgard Contest

Downloaded from the GENie network.

Excerpts from "Editorial", Asgard News, Volume 1, Number 4

*Note: May be reprinted provided credit is given and addresses for information retained.

Asgard Publishing feels the Geneve hasn't been as successful as we all hoped. Through problems with Myarc's management, and the way they've handled the distribution of the machine, sales of the machine have reportedly nearly stopped. Because of design decisions made 3-4 years ago, we have a machine that in no way represents the best that the technology embodied in the TI-99/4A can deliver.

There are many knowledgeable engineers and hobbyists running around now in the TI world who have designed some amazing things. Perhaps some of the more capable ones could design a 99/4A compatible (a la the Horizon RAM-disk), as a sort of "build-it-yourself-kit-project" (non-technical people could get someone skilled to put it together for them). I envision a machine based on a 99000 series processor (TI compared it favorably in speed to the 68000 in the Macintosh, Amiga and Atari ST), and the 34010 (which is currently a graphics processor of choice in the "regular" computer world, and distantly related to the 9900 family of processor). It should have a native-mode operating system that is available in original source code to anyone who wants it, as well as a 99/4A emulation. A decent emulation would be as much as 10 times the speed of a 99/4A. It should have 1Mb of RAM, utilize some sort of logical bank-switching method, and address up to 16Mb (the theoretical limit of the memory management chip TI did for the 99000). Finally, the parts should cost less than \$500 (so it could be put together with monitor for under \$1500 - steep, but with capabilities comparable to a IBM PS/2 that costs twice as much).

I'm prepared to put my money where my mouth is - I will not only pay to have the best design submitted prototyped, Asgard Software will also give the person or persons a prize of \$1000.00 in cold cash. Compuserve's TI Forum, GENie TI Roundtable and Delphi's TI Information Network are also sponsoring this contest with over \$1000 in connect time to the winner. If we are able to

arrange production and there is a market, the sponsors will give the winners another \$1000.00, and a royalty to boot. This is for the hardware only. After the hardware is designed we will have a contest for the software.

Payment of the prize will be made to the best design submitted that (a) meets most if not all of the design criteria, (b) functions, and (c) is closest to the target cost in parts. The entry will be judged by a soon-to-be-announced independent panel of Electrical Engineers, Computer Scientists and knowledgeable users. If you are interested, please drop us a postcard and we'll send a list of what the computer should be able to do. Stay tuned for further developments!

If you are interested in information about this project, write to The Next Generation, c/o Asgard Publishing, P.O. Box 10697, Rockville, MD 20850.

Asgard News is a quarterly newsmagazine available for owners of the TI-99/4A, the Myarc Geneve 9640 and compatibles. It is available for \$9.00 for 4 issues, and can be obtained by sending a check, money order, or credit card number (and expiration date) to Asgard Publishing, P.O. Box 10697, Rockville, MD 20850. Credit card orders are 10% extra. Canadian subscriptions are available for \$12.00, and Airmail subscriptions elsewhere for \$16.00. Group rates are available.

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--- asged 1.99S ZTC * Origin: Dakota InfoNet
CO-OP Home of TI-ECHO (605 336 3578) (1:14/640)
--[SEEN-BY:]--

#37 (LOCAL) (RCVD)
Date: Sat 11 Mar 89 13:08:38
From: Jesse Slicer
To: Erik Olson
REPLY TO #28
Subj: TI Net

Hey bud, what's up? Anxiously awaiting source code so I can get my board nice and fast. later.

Rest of users everywhere:
A BBS Ad.

Call The Manhattan Project BBS
(913) 764-6451
10pm to 7am Central Time
300/1200 Baud .. 7E1
Many online conversations,
Gameroom, Casino, and 20

megs of online space.

Running on TI-Net v3.95 on a TI-99/4A with 28meg hard drive, 512K ramdisk, 2 360K drives, and a Hayes 1200 baud modem. Call on in and wake yourself at home.

Serious TI conversations and fun.

P.S. from now:

Now available on our board and GENie: the latest TI Comparison Shopper. Check it out! The Slice

--- * Origin: Rivendell: The Wayfarer's Haven
(719)-472-0745 Opus 128/17 (Opus 1:128/17)
--[SEEN-BY: 1--

#63

Date: Thu 23 Mar 89 09:44:16
From: Ray Dyer (on 128/40)
To: All
Subj: Increase your clock speed by about 15%

Again, to all tec minded persons, or those who only know how to solder.. Get a 14.318 Mhz crystal, a DPST switch, and any type of wire. Remove the current 12 Mhz crystal. Put each crystal across each pole of the switch. Take 2 other wires, and connect them across the common on the switch. What you've done is allowing you to toggle between the crystals. Take the 2 wires and solder them into the holes left by the old crystal. Now, you can change the speed, while the program is running! Note, with modules, sometimes this can cause the computer to reset. Also, with Sprites, the sprites will hied up to the top of the screen, on fast speed. Experiment!

Placing the switch. I put mine at the back, through the vent holes, above the power cable. You might want to try putting it on the side, if you removed the power supply.

To come: Installing a Load Switch RESET.

--- OverDrive b.15 * Origin: TIBM Wizard (The TI;IBM Connection in Toronto) (250/518) --[SEEN-BY: 1--

[ED: There have also been several messages about adding extra crystals to the Geneve. Reports have its clock speed up to 16 mhz. Keep in mind the 4A divided the clock speed again by four internally.]

#64

Date: Thu 23 Mar 89 09:57:06
From: Ray Dyer (on 128/40)
To: All
Subj: Load Switch RESET

Ever wanted to prawl around memory? Or dump a module? Well, we all know that the module reset's the computer. This can be avoided by a cartridge expander, or by this trick.

Just simply take a wire from pin 5 of the 9904, and through a 100 ohm resistor, and a pushbutton, to ground. That's all! When you push the button, this places the CPU to a 0000 program counter, meaning it cannot erase an interesting program during that time. And you can insert or remove modules without the automatic power-up, allowing anything to happen.

This tip is from RYTE Data, ver 1.9, Feb 1986, and is from Guy Gournay, the developer of Maxima.

Coming soon:

A simple video filter for the fuzzy characters.

--- OverDrive b.15 * Origin: TIBM Wizard (The TI;IBM Connection in Toronto) (250/518) --[SEEN-BY: 1--

#65

Date: Thu 23 Mar 89 10:24:02
From: Ray Dyer (on 128/40)
To: All
Subj: Video filters.

Ever upgraded to a composite monitor, and have bleed-through with some colour combinations (Ghosts)? Well, there are two ways of doing this, again from RYTE Data.

You need a .005 microfarad CERAMIC disc type capacitor. A male RCA phono connector, and a Y connector. Also, some tubing to insulate one side of the capacitor. Now, attach the capacitor to the RCA plug with the insulated lead to the centre and the other to the sleeve. Now, if you want, you can fill the area with epoxy to add mechanical strength. With the Y connector, plug it into the video input on the monitor, and the video cable to one end of the connector. Try it out, and then, with the system on, attach the RCA plug. See the difference? This article came from Marv Shuldsman, New Jersey.

As for the other solution, you can replace the VDP load resistor. TI used a 560 ohm resistor, instead of the recommended 390 ohm, which will give about 40% better resolution. Bob Lawson, writer, recommended to change the resistor to a 330 ohm because the 390, in 1/4 watt is hard to find.

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Just change the 560 ohm resistor, located beside the 9918, and above the vdp memory, to either a 330 or 390, depending on availability in your area. You'll wonder where the WHITE SHADOWS WENT!

Coming up:
Toshiba drives, and colourful disks...

--- OverDrive b.15 * Origin: TIBM Wizard (The
TI;IBM Connection in Toronto) (250/518) --[SEEN-BY:
]--

#66

Date: Thu 23 Mar 89 10:35:20

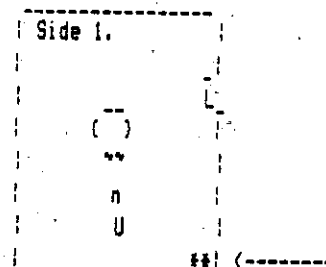
From: Ray Dyer (on 128/40)

To: All

Subj: Toshiba drives.

The Toshiba drive uses electronic sensors throughout the drive. This includes the disk sensor. When a colourful disk, with a translucent jacket is inserted, the drive might report an error.

Take a write protect tab and place it on the disk, in the bottom, right corner, with the write notch in the right. It should cover from the edge to 0.21 in into the surface of the disk. Hope this will help!



--- OverDrive b.15 * Origin: TIBM Wizard (The
TI;IBM Connection in Toronto) (250/518)

--[SEEN-BY:]--

#67

Date: Thu 23 Mar 89 10:44:16

From: Ray Dyer (on 128/40)

To: All

Subj: Monitor TV's

Ok, had enough of RF modulators? Well, again to those tech people out there. The pinout for the Video connector looks like this when facing it:

1 3
4 5
2

Well, pin 1 is for power to the RF Modulator

2: Video ground

3: Audio output

4: Video output

5: Audio (system) Ground.

Just tap on to the audio and video signals and run these to your TV, and enjoy! (If it's a big screen TV, lucky you!)

--- OverDrive b.15 * Origin: TIBM Wizard (The
TI;IBM Connection in Toronto) (250/518) --[SEEN-BY:
]--

HOW TO BUY NEW FLOPPY DISK DRIVES

-2-

1. Check for quality the main mechanical parts of the drive. They should be located on a solid die cast piece of metal. In other words solid metal structure throughout as the base of the drive that holds the motors, solenoids and other movable parts. Avoid any drive put together with metal plates.
2. New drives should be sold to you in antistatic plastic wrap (usually tinted looking) and may have a fitted styrofoam container, will always be half height, never full height, at least two sided, at least capable of 360k double sided double density. 720k 80 track drives are now getting rare due to the newer 1.2meg. drives. 1.2 meg. drives can be useable at 720k. (more on that later) New 3.5" drives are 720k or 1.44 meg. They should follow the rule of die cast body as above also. Newer 3.5" drives will have a thickness much less than a half height 360k drive. Only the new Myarc HFDC has promise of possible drivers to support 1.44meg 3.5" or 1.2meg. 5.25" use. Certain CorComp controllers have floppy disk controller chips that can handle the 1.44 meg data rate, but the device drivers who knows. No older Myarc disk controller will be fully capable of the 1.44 meg. data rate because of the FDC chips they use. The above also pretty much applies to the use of 1.2 meg 5.25" drives. The 5.25" 1.2meg and 3.5" 1.44 meg. drives can be used for 720k storage with the eeprom driver support of the two Myarc controllers; however, if disk rotation speed cannot be jumped through lack of information on the drive options, you would be forced to live with odd ball 720k format disks only readable by someone else with 720k capability and 3.5" 1.44 meg. or 5.25" 1.2meg. drives.
4. Newest drives always have a directly driven disk rotation motor. This means you will not see any belt driven disk rotation.
5. Warrantee's: ask what the manufacture warrentee is. The warrentee should be at least one year from date of purchase. Also, check to see what the seller's guarentee is on the drive. Typically the seller's guarentee is full replacement for 30 to 90 days, in addition to the one year manufactures warrentee. The warrantee will give you plenty of time to verify that you do not have a lemon drive.
6. Get the seller's business card with address and phone. Get a receipt in which you and the seller have a copy which must contain the serial number of drives bought and date as well as the cost. If the seller's address is on the reciet clearly that will substitute the business card. These requirements are necessary for the manufacture's warrentee and so you can later find the seller or manufacture for information. It is not always possible that the seller has info on the drive, but it will not hurt to ask for data manuals, or schematics.
7. For quality look for heads mounted on assemblies that are mounted to move solidly not jerkily such as on two rails instead of one. For low mechanical noise or low clattering (increased reliability and longer life) look for solid movement of the head assembly by a stepper motor through two following examples: stepper motor that drives a screw shaft or two straps that wind on or off the stepper motor shaft and on or off of the head assembly as the heads move in either direction. Heads take the biggest beating in floppies and more often involved in alignment of a drive. An example of the stepper motor that drives a screw shaft is the 3.5" 720k Chinnon and Fujitsu. An example of the strap that winds on or off the stepper motor shaft and on or off the head assembly is the Mitsumi 360k 5.25" drives.
8. 3.5" drives can be hooked up bare without the 5.25" bracket with 34 pin socket IDC (insertion displacement connector) connected to the square pins on the 3.5" drive. If this is done then the odd ball but findable 4 pin 3.5" drive power connector must be used. These are odd ball because they are not the same

as the 5.25" drive power connectors. These connectors do not have a polarity tabs and can make difficult getting the proper polarity or orientation of the connector to plug in. Go for the works get the 5.25" bracket and the card edge-3 adapter board that includes standard 5.25" power connector. These adapters have a jumper for use on PC XT or AT clones, be sure to select XT.

9. Unless you have help from a Guru or user who has successfully installed and used the same drives, then get info from the seller or manufacture on drive selects, other Jumper options or features, and resistor packs. On some new drives the resistor pack is permanently soldered to a high density logic board with a jumper to disable or enable the use of the resistor pack for installation as lesser drive or drives on the chain. If such a drive is the last drive in a chain whose other resistor packs can be removed, there is no problem.

10. Buy or at least shop for any drive or power connectors or power supplies or cases as you may or may not need depending on what you already have.

11. The least expensive power supplies, drive connectors, cables, etc. are sold by vendors selling chips and electronic parts, not by the dealers of floppy drives. The chip parts dealer will have alot of the necessary parts for homebuilt linear supplies at the lowest total cost of parts. A general list for a linear supply is a transformer, AC line cord and plug, switch, filter capacitor rated above 2200uF (micro farads), bridge rectifier or diodes, linear regulators both 5 and 12 volt.

12. Power requirements: some 3.5" drives require less than 1 amp for 5 and 12 volts. Some 3.5" drives are very low power and some require only a 5 volt supply. 3.5" drives require the least power. New 5.25" half height drives never require more than 1 amp on 5 and 12 volt lines and can be as low 1/2 amp. on the 5 and 12 volt line. Add the amperage required for each drive for each 5 and 12 volt line to check your power supply needs for your drives. Drives can be powered separately because the 34 pin cable will carry the common logic signal ground between all drives on the the train and the computer. If building a linear supply be sure the transformer, bridge rectifier or diodes and linear regulator exceed your amperage needs. The transformer should be at least 12.6 VAC RMS and 6.3 VAC RMS (transformers are commonly rated with RMS voltage at their secondaries).

Written by Richard Roseen

This information was kept as general as possible so as to guide the 4A buyer. How to buy used floppy drives could never be this informative. Anyone wishing to document their experiences with a specific drive or drives is invited to do so by attaching this general article. An archived document.

My preferences are Mitsumi drives 3.5" and 5.25" any density. These drives are the most quiet drives you WILL ever hear. They have a jumper block to enable disable the resistor pack though have not verified the identity of the jumper as of yet. Another preference are the NEC 1036 3.5" 720k drives. They are small, quiet and durably solid, and like any other 3.5" drive lightweight and low power. Also, recommend Chinon 3.5" 720k drives. These are much the same as the NEC drives except for screw shaft stepper motor and extremely low power and 5 volt only operation make it better. These drives may be the lowest power in the industry.

You have just read page 18 of The Front Ranger

TIPS FROM THE TIGERCUB

#50

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TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus, OH 43213

Distributed by Tigercub Software to TI-99/4A Users Groups for promotional purposes and in exchange for their newsletters. May be reprinted by non-profit users groups, with credit to Tigercub Software.

Over 120 original programs in Basic and Extended Basic, available on cassette or disk, NOW REDUCED TO JUST \$1.00 EACH!, plus \$1.50 per order for cassette or disk and PP&M. Minimum order of \$10.00. Cassette programs will not be available after my present stock of blanks is exhausted. The Handy Dandy series, and Color Programming Tutor, are no longer available on cassette.

Descriptive catalogs, while they last, \$1.00 which is deductible from your first order.

Tigercub Full Disk Collections, reduced to \$5 postpaid. Each of these contains either 5 or 6 of my regular catalog programs, and the remaining disk space has been filled with some of the best public domain programs of the same category. I am NOT selling public domain programs - they are a free bonus!

TIGERCUB'S BEST, PROGRAMMING TUTOR, PROGRAMMER'S UTILITIES, BRAIN GAMES, BRAIN TEASERS, BRAIN BUSTERS!, MANEUVERING GAMES, ACTION GAMES, REFLEX AND CONCENTRATION, TWO-PLAYER GAMES, KID GAMES, MORE GAMES, WORD GAMES, ELEMENTARY MATH, MIDDLE/HIGH SCHOOL MATH, VOCAB-

ULARY AND READING, MUSICAL EDUCATION, KALEIDOSCOPES AND DISPLAYS

NUTS & BOLTS DISKS

These are full disks of 100 or more utility subprograms in MERGE format, which you can merge into your own programs and use, almost like having another hundred CALLs available in Extended Basic. Each is accompanied by printed documentation giving an example of the use of each. NUTS & BOLTS (No. 1) has 100 subprograms, a tutorial on using them, and 5 pp. documentation. NUTS & BOLTS No. 2 has 108 subprograms, 10 pp. of documentation. NUTS & BOLTS #3 has 140 subprograms and 11 pp. of documentation. NOW JUST \$15 EACH, POSTPAID.

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These are full disks which contain the programs and routines from the Tips from the Tigercub newsletters, in ready-to-run program format, plus text files of tips and instructions.

TIPS (Vol. 1) contains 50 original programs and files from Tips newsletters No. 1 through No. 14. TIPS VOL. 2 contains over 60 programs and files from Nos. 15 thru 24. TIPS VOL. 3 has another 62 from Nos. 25 through 32. TIPS VOL. 4 has 48 more from issues No. 33 through 41. NOW JUST \$10 EACH, POSTPAID.

* NOW READY *
* TIPS FROM TIGERCUB VOL.5 *
* Another 49 programs and *
* files from issues No. 42 *
* through 50. Also \$10 ppd *

TIGERCUB CARE DISKS #1, #2, #3 and #4. Full disks of text files (printer required). No. 1 contains the Tips news letters #42 thru #45, etc. Nos. 2 and 3 have articles mostly on Extended Basic

programming. No. 4 contains Tips newsletters Nos. 46-52. These were prepared for user group newsletter editors but are available to anyone else for \$5 each postpaid.

This educational program is a much expanded version of a routine I published before.

```
100 DIM M$(100)
110 GOTO 150
120 S,K,A$(1),J,M$(1),Y$,Z$,2,
X,ING$,A,AN$
130 CALL CLEAR :: CALL COLOR
:: CALL SCREEN :: CALL CHAR
:: CALL KEY :: CALL ING ::
CALL HCHAR
140 !@P-
150 CALL CLEAR :: FOR S=0 TO
12 :: CALL COLOR(S,2,8):: N
EXT S :: CALL SCREEN(5):: DI
SPLAY AT(3,1):"LEARNING TO "
"ING" IT V.1.1"
160 CALL CHAR(64,"3C4299A1A1
99423C"): DISPLAY AT(5,1):"
@ Tigercub Software 1987 for
free distribution - no price
or copying fee to be charged
"
170 CALL KEY(3,K,S)
180 A$(1)="No, if the word d
oes not end in B, D, G, M, N
, P, R or T you always just
add ING"
190 A$(2)="No, if the last le
tter is not E and the next-t
o-last letter is not a v
owel, just add ING"
200 A$(3)="No, if the word h
as two vowels just befor
e the last letter, just add
ING"
210 A$(4)="No, if a word end
s in B, D, G, M, N, P, R or
T with one vowel (but not tw
o vowels!) just before it, y
ou must double the last
letter and add ING"
220 A$(5)="No, if the word e
nds in IE, change the IE to
Y and add ING"
230 A$(6)="No, BE is an exce
ption to the rules,"
240 A$(7)="Some dictionaries
give EYING but EYEING is be
tter"
250 A$(8)="No, if a word end
s in E- (ex-cept BE and words
```

ending in IE,OE,UE AND YE) you must drop the E and add ING"

260 A\$(9)="No, if the word e nds in EE, or OE or UE, just add ING"

270 A\$(10)="No, QUIP, QUIT a nd QUIZ are exceptions to th e rule. Double the last letter and add ING."

280 FOR J=1 TO 100 :: READ M \$(J):: NEXT J

290 FOR J=1 TO 100 :: Y\$=Y\$& CHR\$(J):: NEXT J :: Z\$=Y\$

300 DISPLAY AT(3,1):"";"": "" : " Type the word with the correct ING suffix"

310 RANDOMIZE :: Z=INT(RND*L EN(Z\$)+1):: X=ASC(SEG\$(Z\$,Z, 1)):: Z\$=SEG\$(Z\$,1,Z-1)&SEG\$(Z\$,Z+1,255):: IF LEN(Z\$)=0 THEN Z\$=Y\$

320 CALL ING(M\$(X),ING\$,A) 330 DISPLAY AT(12,1):M\$(X):: ACCEPT AT(12,15):AN\$

340 CALL HCHAR(15,1,32,280): : DISPLAY AT(10,1):"" :: IF AN\$=ING\$ THEN DISPLAY AT(10, 10):"CORRECT!" :: GOTO 310 350 DISPLAY AT(15,1):A\$(A):" " : "The word is ";ING\$:: GOT O 310

360 !@P+ 370 DATA LODGE,BUY,HOPE,QUIP ,TITHE,WISH,CUT,DRIVE,SEE,EY E,GO,CRY,TRY,AGREE,QUIT 380 !@P-

390 DATA BOIL,COOL,HURT,BUTT ,CAGE,BE,ROVE,PITY,SAVE,COOL ,RULE,MEASURE,TUNE,RAVE 400 DATA RUN,BEG,STOP,THINK, ERR,BORE,TEAR,BAR,CARE,BARE, BEAR,LET,QUIZ,HOOT,HEAT,COME 410 DATA DREAM,TAKE,FRY,CADD Y,FLEE,HOE,SEW,TRIP,HOPE,RIG ,DRAG,SUE,KNEE,BOO,BABY,NURS E,CRUISE

420 DATA LIE,TIE,DIE,BELIE,V IE,DODGE,LIVE,DRIVE,LOVE,LEA VE,HUM,HOP,BEG,BEGIN,BOMB,BO B

430 DATA ADD,AID,BAT,BOAT,PR AY,LAY,QUOTE,SNORE,STARE,HIR E,FIRE,LINE,CRY,SAY

440 DATA BOOGIE,RAGE,RATTLE, GRATE,LEAVE,STRIVE,DRAW,WRIT E

450 !@P+ 460 SUB ING(M\$,ING\$,A):: E\$= SEG\$(M\$,LEN(M\$),1):: F\$=SEG\$

```

(M$,LEN(M$)-1,1):: A$="ING"
:: C$="BOEGHNPRT" :: V$="AEI
OU"
470 GOTO 500
480 C$,E$,ING$,M$,A$,A,V$,F$,
490 !EP-
500 IF LEN(M$)=4 AND SEG$(M$,
1,3)="QUI" THEN ING$=M$E$E$
A$ :: A=10 :: SUBEXIT
510 IF POS(C$,E$,1)=0 THEN I
NG$=M$A$ :: A=1 :: SUBEXIT
520 IF E$="E" THEN 550
530 IF POS(V$,F$,1)=0 THEN I
NG$=M$A$ :: A=2 :: SUBEXIT
540 IF POS(V$,SEG$(M$,LEN(M$
)-2,1,1)<>0 THEN ING$=M$A$
:: A=3 :: SUBEXIT ELSE ING$
=M$E$E$A$ :: A=4 :: SUBEXIT
550 IF F$="I" THEN ING$=SEG$
(M$,1,LEN(M$)-2)&"YING" :: A
=5 :: SUBEXIT ELSE IF F$="E"
OR F$="O" OR F$="U" THEN IN
G$=M$A$ :: A=9 :: SUBEXIT
560 IF M$="BE" THEN ING$="BE
ING" :: A=6 :: SUBEXIT
570 IF M$="EYE" THEN ING$="E
YEING" :: A=7 :: SUBEXIT
580 ING$=SEG$(M$,1,LEN(M$)-1
)&A$ :: A=8
590 !EP+
600 SUBEND

```

I still have a sort of an old-fashioned idea that the computer can be a useful educational tool -

```

100 CALL CLEAR :: FOR SET=0
TO 12 :: CALL COLOR(SET,2,8)
:: NEXT SET :: CALL SCREEN(5)
:: DISPLAY AT(3,6):"NOUN TO
ADJECTIVE" :: CALL KEY(3,K,
S)
110 CALL CHAR(64,"3C4299A1A1
99423C"):: DISPLAY AT(5,1):"
© Tigercub Software":: !EP-
For free distribution - No
ice or copying fee to be ch
arged."
120 DISPLAY AT(12,1):" One m
oment...loading memory"
130 DATA ROGUE,ROGUISH,HOB,H
OGGISH,PIG,PIGGISH,SWINE,SWI
NISH,THIEF,THIEVISH,KNAVE,KN
AVISH,BRUTE,BRUTISH or BRUTA
L
140 !EP-
150 DATA FAME,FAMOUS,TUMULT,
TUMULTUOUS,RIOT,RIOTOUS,SCAN
DAL,SCANDALOUS,MOUNTAIN,NOUN

```

```

TAINOUS,ODOR,ODOROUS or ODOR
IFEROUS
160 DATA CAVERN,CAVERNOUS,VI
LLAIN,VILLAINOUS,DANGER,DANG
EROUS,PERIL,PERILOUS,ADVANTA
GE,ADVANTAGEOUS
170 DATA BARB,BARBED,FORK,FO
RKED,BORDER,BORDERED,WHEEL,W
HEELED,HUNGER,HUNGRY,ANGER,A
NGRY
180 DATA PARLIAMENT,PARLIAME
NTARY,PLANET,PLANETARY,LEGIS
LATURE,LEGISLATIVE,PARISH,PA
ROCHIAL
190 DATA CONGRESS,CONGRESSIO
NAL,ELEPHANT,ELEPHANTINE,FAN
TASY,FANTASTIC,BULL,BULLISH
200 DATA GIRL,GIRLISH,BOY,BO
YISH,BABY,BABYISH,AMATEUR,AM
ATEURISH,FEVER,FEVERISH,DEVI
L,DEVILISH,FOOL,FOOLISH
210 DATA OAF,OAFISH,SHEEP,SH
EEPISH,CHILD,CHILDISH or CHI
LDLIKE,VIRTUE,VIRTUOUS,PRIDE
,PROUD or PRIDEFUL
220 DATA HATE,HATEFUL,DOUBT,
DOUBTFUL,THOUGHT,THOUGHTFUL,
SHAME,SHAMEFUL,FEAR,FEARFUL,
SORROW,SORROWFUL
230 DATA WISH,WISHFUL,PEACE,
PEACEFUL,EVENT,EVENTFUL,TRU
TH,TRUTHFUL,SKILL,SKILLFUL,MA
N,MANLY
240 DATA WOMAN,WOMANLY,FATHE
R,FATHERLY,MOTHER,MOTHERLY,B
ROTHER,BROTHERLY,SISTER,SIST
ERLY
250 DATA NIGHT,NIGHTLY,HOUR,
HOURLY,MONTH,MONTHLY,ORDER,O
RDERLY,SERIES,SERIAL
260 DATA TIME,TINELY,GRAVEL,
GRAVELLY,FRIEND,FRIENDLY,WOOL,
WOOLLY,YEAR,YEARLY,SOUTH,S
OUTHERN or SOUTHERLY
270 DATA NORTH,NORTHERN or N
ORTHERLY,WEST,WESTERN or WES
TERLY,EAST,EASTERN or EASTER
LY
280 DATA CHARITY,CHARITABLE,
TERROR,TERRIFIED or TERRIBLE
,HORROR,HORRIFIED or HORRIBL
E or HORRIFIC
290 DATA RAG,RAGGED,MILITARY
,MILITARISTIC,ART,ARTISTIC,C
AT,CATTY,DOG,DOGGY,FOG,FOGGY
,SUN,SUNNY
300 DATA BAG,BAGGY,LEG,LEGGY
,BOG,BOGGY,STUB,STUBBY,FUN,F
UNNY,FUR,FURRY,GUM,GUMMY,AVA
RICE,AVARICIOUS

```

```

310 DATA CLOUD,CLOUDY,RAIN,R
AINY,FLOWER,FLOWERY or FLORA
L,GREED,GREEDY,THIRST,THIRST
Y,AIR,AIRY,BUSH,BUSHY,FISH,F
ISHY
320 DATA SOUP,SOUPY,BLOOD,BL
OODY,FOAM,FOAMY,BEAD,BEADY,S
WAMP,SWAMPY,SILVER,SILVERY,C
OPPER,COPPERY,DUST,DUSTY
330 DATA DIRT,DIRTY,GUILT,GU
ILTY,SALT,SALTY,GRAIN,GRAINY
,OIL,OILY,TRICK,TRICKY,HILL,
HILLY,ROCK,ROCKY
340 DATA SAND,SANDY,SOAP,SOA
PY,SUDS,SUDSY,SILK,SILKY,WOOL,
WOODY,MODESTY,MODEST,PIETY
,PIOUS,DAY,DAILY
350 DATA TREE,TREELIKE,TOY,T
OYLIKE,FINGER,FINGERLIKE,SWAN,
SWANLIKE,WAR,WARLIKE,DISH,
DISHLIKE,PLATE,PLATELIKE
360 DATA SPOON,SPOONLIKE,BIR
D,BIRDLIKE,SNAKE,SNAKY,WIRE,
WIRY,BONE,BONY,SMOKE,SMOKY,F
LAKE,FLAKY
370 DATA NOISE,NOISY,BRINE,B
RINY,TASTE,TASTY,STONE,STONY
,WAVE,WAVY,GORE,GORY,PASTE,P
ASTY,BUBBLE,BUBBLY
380 DATA LABOR,LABORIOUS,ORN
AMENT,ORNAMENTAL,GOVERNMENT,
GOVERNMENTAL,CONTINENT,CONTI
NENTAL,MUSIC,MUSICAL
390 DATA MAGIC,MAGICAL,TOPIC
,TOPICAL,SENSATION,SENSATION
AL,LOGIC,LOGICAL,ALARM,ALARM
ING,ARTERY,ARTERIAL
400 DATA GOLD,GOLDEN,EARTH,E
ARTHEN,GLAMOUR,GLAMOURIZED,D
EPUTY,DEPUTIZED,ENERGY,ENERG
IZED,PART,PARTIAL,FIRE,FIERY
410 DATA ANGEL,ANGELIC,CHERU
B,CHERUBIC,BURDEN,BURDENSOME
,TROUBLE,TROUBLESOME,BEAST,B
ESTIAL
420 DATA HISTORY,HISTORICAL,
GEOGRAPHY,GEOGRAPHICAL,BOTAN
Y,BOTANICAL,BIOLOGY,BIOLOGIC
AL,LITURGY,LITURGICAL
430 !EP+
440 DIM A$(175),B$(175):: FO
R J=1 TO 174 :: READ A$(J),B
$(J):: Z$=Z$&CHR$(J):: NEXT
J :: Y$=Z$ :: RANDOMIZE
450 DISPLAY AT(7,1):""Type
the adjective form of -":"
460 X=INT(RND*LEN(Y$)+1):: Y
=ASC(SEG$(Y$,X,1)):: Y$=SEG$
(Y$,1,X-1)&SEG$(Y$,X+1,255):
:: IF LEN(Y$)=0 THEN Y$=Z$

```

```

470 DISPLAY AT(12,1):A$(Y)::
ACCEPT AT(12,14):Q$ :: IF P
OS(B$(Y),Q$,1)=0 THEN 490
480 DISPLAY AT(18,1):"" ::
: FOR D=1 TO 100 :: NEXT D ::
: DISPLAY AT(18,1):" That is
the word in my memory b
anks.":: "" :: GOTO 460
490 DISPLAY AT(18,1):" The a
djective in my memory banks
is "B$(Y):: GOTO 460

```

When one program is run from from another by RUN OSK... the screen is not cleared, sprites are not deleted, and screen color, character definitions and sprite magnification are not returned to the default values. This can cause some strange results, which can be prevented by CALLING CLEARALL just before the RUN.

```

1000 SUB CLEARALL :: CALL CL
EAR :: CALL DELSPRITE(ALL)::
CALL SCREEN(8):: CALL CHARS
ET :: CALL MAGNIFY(1)
1001 FOR CH=65 TO 90 :: CALL
CHARPAT(CH,CH$):: CALL CHAR
(CH+32,"00"&SEG$(CH$,1,12)&S
EG$(CH$,15,2)):: NEXT CH
1002 CALL CHAR(96,"000201008
",123,"0018202040202018",124
,"00101010001010100030080804
08083000000205408")
1003 FOR CH=127 TO 143 :: CA
LL CHAR(CH,"0"):: NEXT CH ::
SUBEND

```

The routine in line 1001 can be used, by deleting the +32 if necessary, to modify some of the character sets on my Nuts & Bolts disks.

From an idea in a program by Ed Machonis, here is an improvement to my 28-Colum Converter published in Tips #18. After line 160, insert 165 DISPLAY AT(20,1):"Tab setting? 1" :: ACCEPT AT(20,14)SIZE(1-2)BEEP:T And change line 290 to:- 290 PRINT #2:TAB(T);L\$:: S=S+28 :: GOTO 410

MEMORY FULL! - Jim P.

```

X  X  BBBB  # 15
X  X  B  B
X    BBBB  By
X  X  B  B  Jim
X  X  BBBB  Swedlow
```

These article originally appeared in the User Group of Orange County, California ROM

RE-MAPPING THE KEYBOARD

You normally see CALL KEY(0,K,S). There are five other values for the first variable, the key unit. They remap your keyboard:

- 0 Keeps the keyboard in the same mode as the last time a CALL KEY was executed. If this is the key unit on the first CALL KEY in a program, you stay in 4A mode.
- 1 Splits the keyboard into two 2 smaller boards. Good for games.
- 3 Remaps the keyboard as a 99/4 (no A). CONTROL and lower case are inactive.
- 4 Pascal mode.
- 5 Remaps to the 99/4A mode with lower case and CONTROL active.

When you use 3, regardless of the position of SHIFT and ALPHA LOCK, all alphas return as upper case. The problem is that this condition continues until you do a CALL KEY with a different key unit. Try this:

```

10 CALL KEY(3,A,B) ::
   PRINT : : "Key Unit is 3"
20 INPUT A$ :: PRINT A$
30 CALL KEY(5,A,B) ::
   PRINT : : "Key Unit is 5"
40 INPUT A$ :: PRINT A$ ::
   GOTO 10
```

With ALPHA LOCK up, try inputting lower case letters and see what happens.

A key unit of 3 is very useful to make sure that only upper case alphas are caught by the CALL KEY. If you want lower case later in an INPUT or ACCEPT, however, you must remap the keyboard with another CALL KEY.

USER FRIENDLY/USER PROOF

When programming, you want your program to help the user. You also want to keep the user from crashing your program. Remember, the user will do most any fool thing. One area of vulnerability is inputting information thru INPUT and ACCEPT statements.

Lets say you want an integer between 1 and 9. Here are a number of ways you can input that number.

INPUT F can cause two problems. First, any number will be accepted. Second, if your user inputs anything but a number, you get: "WARNING: INPUT ERROR IN nnn TRY AGAIN".

This destroys your screen, scares your user and looks bad too.

ON WARNING can help. If you add ON WARNING NEXT the warning message will be suppressed but any number will be accepted. This coding is probably the best that can be done with INPUT F:

```

10 ON WARNING NEXT
20 INPUT F :: IF F<1 OR F>9 OR
   F<>INT(F) THEN 20
```

Bad values of F (0, 3.1, etc) will still cause the input prompt to be repeated and mess up your screen but you will get a good value in the end.

ACCEPT AT has a number of features that will help. With SIZE and VALIDATE you can avoid some problems:

```

10 ACCEPT AT(5,10)SIZE(1).
```

VALIDATE(DIGIT)BEEP:F

Your user can still goof you up two ways. Zero is acceptable input and inputting a nul will do strange things. SIZE(1) means no bigger than one character but it can be smaller!

ACCEPT F\$ will help solve some more problems. Strings will be accepted. This coding is about as user proof as you can get:

```
10 DISPLAY AT(5,1):"1" 20 ACCEPT AT(5,1)SIZE(-1) VALIDATE(DIGIT)BEEP:F$::
  IF F$="" THEN 20 ELSE
  F=MAX(VAL(F$),1)
```

By making the SIZE value negative, whatever is on the screen at (5,1) will be the default value if ENTER is pressed.

About the only way I have found to mess this up is to have a non-numeric sitting at (5,1). VALIDATE works ONLY on which key is pressed, it assumes that you know what is on the screen!

MEMORY SAVERS

This is the third and last article on how our TI's store stuff in memory. We have looked at the line number table (October, 1985) and encoding line contents (December, 1985). This month we will draw some conclusions.

A variable name takes only its length in memory. <A> takes one byte while <MASTER@DEVICE> takes 13 bytes and <A\$> takes two bytes.

A number, however, takes the number of characters plus two bytes. For example, the number 2.13 would take six bytes of memory and the number 1 would take three bytes.

Strings also take the number of characters in the string plus two. "He won" takes eight bytes.

Some suggestions:

- Use the shortest possible variable and sub-program names.
- If you use a given number often, assign it to a variable and use that instead.

Figure this way: A=2.13 takes eight bytes (one for A, one for = and six for 2.13). Each time you use A instead of 2.13 you save five bytes. Therefore, after two substitutions you are conserving memory.

- Look for places where you can replace numerics with variables. This line:

```
10 C=0 :: INPUT A(0) :: PRINT A(0)
```

Would take four less bytes if done this way:

```
10 C=0 :: INPUT A(C) :: PRINT A(C)
```

Be sure, however, that you only do this when the variable must be the number you intent it to be!!!!

SPEED

Longer variable names slow program execution. I ran this program with progressively longer variable names substituted for <C>:

```
10 C=0 :: FOR I=1 TO 1000 :: A=C :: NEXT I
```

I ran each three times and averaged the results. Here is what I found:

LENGTH OF SUB- STITUTE FOR <C>	AVERAGE RUN TIME (seconds)
1	7.74

This article is concluded on page 6.

The Front Ranger Page 23
PROGRAM REVIEWS

by Rick Houghland

Hi! I am back again, but, this is only a one time review for April. I will be reviewing two disks of the month containing 99-ANIMATOR and MEMORY TEST UTILITY.

99-ANIMATOR is simplified animation, a step above moving sprites but below "changing object" animation. The program has 21 useable frames for animation and 15 special frames called mats, for drawing creations. You can use a combination of mats and frames to build an animation masterpiece. Additionally, the program has an editor that you can use to perfect your animation sequence.

The 99-ANIMATOR can be loaded in several ways, such as, Mini-Memory, E/A, XBbasic and Ti-Writer. The first thing to do is printout the *README, EASELDOC 1-5 and the DRAW/HELP files to help you through the program. There are a couple of bugs, but the programmer has provided information to prevent you from losing data and to keep your computer from crashing.

The program screen has a status line at the top and a message line at the bottom. Like many "on-screen" graphics programs, there are several modes in which you may work and several functions within these modes. The neatist features are the stop, slowdown and speed up options. You have the option to use a joystick(trackball) or the keyboard arrows to move the cursor around the screen. Finally, there is an output to printer capability, to print your animation screens (frames). Overall, the program is a giant step toward sophisticated animation, but does have some definite limitations. Also, the capability to integrate the animation into other program files is not there yet. (If there is enough time, I will demo the program at the club meeting.)

The MEMORY TEST UTILITY is a very detailed memory tester. It will test memory postitions on the 32K card, the console scratch pad and the Mini-Memory module. The program does require the Mini-Memory module.

DISC *

111

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FILENAMES

ANIMATOR/1*
MEMTST*

ANIMATOR/2*

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