HARDCOPY

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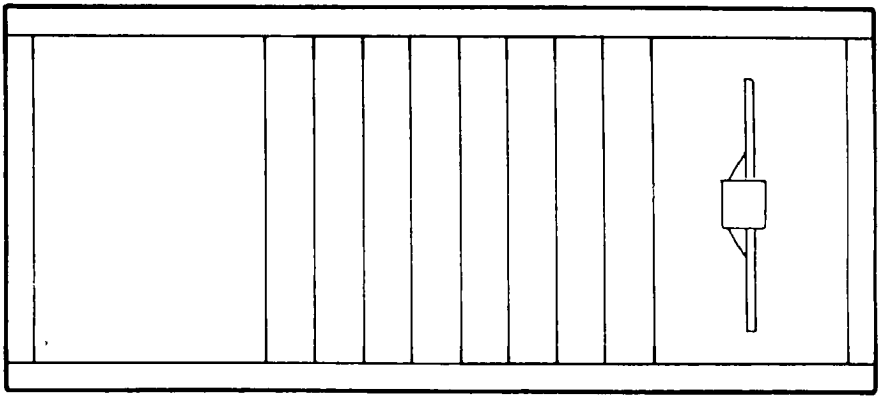
ISSUE NO. 4 - MARCH 1985



$ 0.50

A TI-RUNNERS PUBLICATION

"HARDCOPY"
is published monthly by the
TI—RUNNERS
Calgary, Alberta

The executive members are:
Ray Smulan / 1st VICE-PRESIDENT
Don Smythe / 2nd VICE-PRESIDENT
Tim Shilson / SECRETARY-TREASURER
Additional positions held are as follows:
PURCHASING DIRECTOR / Don Smythe
PROGRAM DIRECTOR / Greg Holt
PROGRAM DIRECTOR / Rob Peterson
LIBRARY DIRECTOR / Ray Smulan
LIBRARY / Phil & Steve Treadgold
EDITOR IN CHIEF / Bruce Travis

Single copy cost $0.50/issue for non-members. Subscription rates are included in the annual membership fee of $20.00/year (or $15.00 if under 16). Mailing privileges are an additional $5.00/year. Back issues are availableto all members free of charge and on a retroactive basis and to non-members at the single copy cost. Subject to availability.

Articles and contents are to serve the TI user group and are welcome from all sources. Advertising of products are not endorsed by this newsletter or by the group members. Accuracy of publication of programs cannot be guaranteed and will be corrected in future issues as required. Submissions must be submitted to: BRUCE TRAVIS, 5551-4th AVENUE N.E., CALGARY, ALBERTA, T2A 3X9 at least two weeks prior to the last meeting of the month which is the release date of that month's issue of HARDCOPY.

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EDITOR'S CORNER

Have you ever gotten into a conversation with another computer owner who does not own a T.I. Right off the bat you take the defensive because he feels that you have made a grave error in buying a computer that is no longer made. Not to mention that there is no more support out there for your orphan unit, at least according to him.

I have many times found myself in such a position and find it very difficult not to insult my friend's intelligence. To explain, that your T.I. was years ahead of it's time and that it was the result of a Research and Development company who designs chips for major corporations who then use these same chips in "their own" computers. As far as I'm concerned there are T.I.s out there that will be around a lot longer than the new units being cranked out on the second rate production lines.

In the years that T.I. was selling the 99/4A some 2.4 million units were made. That is a large base structure to support in anyone's business and since T.I. left this market there has been even more support in both software and hardware by third party companies. If you belong to a users group, then you know what I am talking about by what you have access to. Supply is better than when we were dealing with the stores and the prices speak for themselves. I feel that we have not seen the last of the T.I. or will not as long as there are intelligent computer owners such as the ones that T.I. has now. I'm pround to own such a fine piece of equipment and NOBODY is going to convince me otherwise.

Bruce H. Travis
EDITOR IN CHIEF

RESIGNATION

732 FORTALICE CRES. S.E.
CALGARY, ALBERTA
FEBRUARY 22, 1985

RAY SMULAN
3221 DOVER ROAD S.E.
CALGARY, ALBERTA

DEAR RAY,

This letter is to announce my RESIGNATION as President of the TI-RUNNERS. There are a number of reasons for my decision on this matter. The biggest being the lack of time for improving my own computer skills, another being my lacking ability to motivate both the executive and the members of the club. When we agreed to take these positions we knew that there would be a lot of work and now I am tired of hearing "I am too busy" or "Let someone else do it".

As First Vice-President you now become President for the remainder of the term. I have already informed Broadview of not using my phone number. If you wish them to keep referring TI-users please inform them and they will be happy to do so. We will have to get together to change names on the account and at the Crossroads Hotel.

I will still be involved with the group but to a far lesser degree; if you need my assistance please contact me and I will do what I can.

Good luck with you new position.

Sincerely,
GEORGE J. GAAB

FROM THE EXECUTIVE

March 6, 1985

Due to the recent resignation of George Gaab from the position of Club President, we the executive have been jolted back into reality.

Over the past year and a half we have been trying to please everyone, and have thus lost sight of our true objectives.

In retrospect we feel that our club as we originally formed it, created the most intense interest from potential as well as regular members.

These objectives were:

a) To have the opportunity to meet with people with similar interests, namely the 99/4A.

b) To help each other in developing our expertise..

c) To help each other achieve our personal objective for the 4A, and

d) To help each other develop our systems realistically. eg. priority based on the experience of others.

We have found that as our systems grew, so did our hunger for knowledge of areas in which we could use our systems. Some examples of this are:

financial packages (programs)
scientific programs
farming programs
personal programs
educational programs
Data Base Management programs
word proccessors
games, etc

In an effort to service these various interests, we feel that the best method will be the Special Interest Groups. (SIG's)

The basic format that we will utilize is to have a group leader for each area. These

SIG's will run as long as there is a need and interest for them. Some areas that will be set up on SIG will be; TI-Writer (word processor), DBM, Forth, Editor/Assembler. We will entertain all suggestions that are made for other areas of interest, providing that we get reliable leadership. Some SIG's that are already being set up are for Multi-Plan, Forth, Assembler, and Advanced Programming Techniques. These groups are headed up by Ken Dawes, Grant Bell, Ron Zakariasen, and Don Smythe respectively.

We would like to express here that the S.I.G. group leaders are not to be considered experts in these areas. They, like your executive are attempting to aid and assist you in your efforts to learn about our computers, and are willing to accept the responsibility of leadership, and information gathering and sharing.

With the forgoing implementation, we hope to be able to have something for everyone and still maintain club night for discussing programs and solutions, acquisitions of new material, and a general exchange of thoughts, and new products.

In closing we feel that most people, like ourselves, found that when we first got our systems we did not really know where we wanted to go with them. We sincerely hope that with the combination of club night and the S.I.G.'s we will be able to help you obtain your personal areas of direction.

Ray,Don & Tim

VISITORS

Welcome! We hope that you have enjoyed yourselves and will consider joining our group.

FEATURE ARTICLE

VENTURING FORTH
by Grant W. Bell

For those of you who were unable to see the short demonstration of Forth this last meeting, here is a short program you can enter which does show the speed of Forth. Before starting enter -TEXT -EDITOR <RETURN>.
SPACING IS IMPORTANT

```
SCR *(YOUR CHOICE)
  0 (BALL, REQUIRES -GRAPH,-GRAPH1)
  1 HEX GRAPHICS 0800 SSDT 00 MAGNIFY
  2 : COLOUR FFFF FFFF FFFF FFFF E8 CHAR
  3   01 SCREEN 0E 0E 1D COLOR 00 0300
  4   E8 VFILL ;
  5 : BALL 3C7E FFFF FFFF 7E3C F8 SPCHAR
  6   0F 0F 06 F8 00 SPRITE ;
  7 : DELAY 7FFF 00 DO LOOP ;
  8 : ROLL 08 08 00 SPRPUT DELAY 01EE 08
  9   00 SPRPUT DELAY 01EE 01B0 00
 10   SPRPUT DELAY 08 01B0 00 SPRPUT
 11   DELAY 08 08 00 SPRPUT ;
 12 : ROLLIT 05 00 DO ROLL LOOP ;
 13 : GO COLOUR BALL ROLLIT ; DECIMAL
 14 GO
 15
```

To run the program, LOAD -GRAPH, -GRAPH1, SCR* LOAD. Where SCR* is the decimal munber of the screen where the program resides. Of course I assume you know how to use the Editor, ETC. If I've lost you, read Chapter Three of the TI Forth Instruction Manual. If

you are still lost, we still have a few openings in our Forth Interest Group.

Once you have the program running, you should see a red ball going around the screen from corner to corner five times. Not interesting!! Now type TEXT which will place you back in the text mode, then ED@ which will bring your screen into view. All commands are followed be <RETURN>

Now change line 7 to read:

```
7 : DELAY OF 00 DO LOOP ;
```

Since the Forth System makes use of a dictionary, and the words in this program now reside in the dictionary, you should remove these words by telling the system to forget them. So type FORGET COLOUR <RETURN>. Note the spelling of COLOUR.

This time when you load your screen, watch it very carefully. Did you see the ball going around the screen?? Type GO <RETURN>. See it this time?

It is not my intention to replace the "TI Forth/Starting Forth" by Brodie, but rather to supplement and guide where possible. Keeping this in mind the table of character sets which follows should prove to be of some help. As you can see, Forth has 32 character sets, numbered 0 to 31. All characters may be redefined and each group may be assigned a foreground and a background colour. For further information, refer to Chapter Six of the TI manual. Pay particular attention to the fact that most things start with zero including screen line numbers and column numbers.

CHARACTER SETS

SET NUMBER	CHARACTER CODES
0	0-7
1	8-15
2	16-23

3	24-31
4	32-39
5	40-47
6	48-55
7	56-63
8	64-71
9	72-79
10	80-87
11	88-95
12	96-103
13	104-111
14	112-119
15	120-127
16	128-135
17	136-143
18	144-151
19	152-159
20	160-167
21	168-175
22	176-183
23	184-191
24	192-199
25	200-207
26	208-215
27	216-223
28	224-231
29	232-239
30	240-247
31	248-255

You can refer to you Editor/Assembler quick reference card for the characters.

For those into Assembler or Pascal, you will find that the above sets apply as well.

Those who are interested in learning Forth, you are encouraged to begin with Chapter One in Brodie's book. Try the examples and questions in the back of each chapter and voice your ideas or questions at our future meetings.

I hope that this has been informative and until next time, happy computing and put your best foot forth.

LIBRARY

DISK MANAGER

This is a must for those of you who are tired of changing modules ever time you want to initialize a disk, ETC. We have Disk Manager on diskette. This is a menu driven program that will do most of the functions of Disk Manager 2. Extended Basic and a loader program, such as "Easy Loader", are required. Both of these programs are now in the Library. For you Hackers, Disk Manager is protected for your enjoyment!

SOON TO BE RELEASED: A DISK CATALOGUE PROGRAM - EXTENDED BASIC IS REQUIRED.

MEMBER'S LIBRARY

Updates will be added as required. Please remember that if you have a correction or update to any program, repeat the old line that is to be corrected. This will ensure that the person modifying the program has the right line before her/she wipes it out with the new one. If you have a program in the Member's Library and would like to promote it under this column, then please submit the article to the Editor In Chief prior to the next issue of HARDCOPY.

PRODUCT CORNER

This month we are enclosing a product review of the MYARC WDS/100 10MB WINCHESTER by Mack McCormick.

I thought you might like to have a review of a hard disk system for the TI-99 since there have been some messages lately. It's absolutely super!!! You can purchase from MYARC in 5, 10 and 15MB models (everything is the same except for the hard disk itself). It comes with an 89 page manual and it's a breeze to install. Just plug the personality card in your PEB, plug the Winchester ribbon cable to

the card, and plug the Winchester in the wall. <All in 5 minutes>

The only real adjustment the user must make is learning the UNIX (Bell Labs) directory system. For those of you who are unfamiliar with this system, it allows for up to 17 levels of directories with up to 114 directories at each level and 127 files per directory. For example, this review is stored as: WDS1.TIWTR.REVIEW. For those of you who spend all you time doing assembly programming, as I do, here's another useful example: WDS1.ASM.O.SORT. I have set up the same file name "SORT" for my source code, object code and source listing. This really makes it easy to remember program names. Another great feature is the ability to store all of your prgrams which are call from DSK1 by cartidges such as TI-Writer, Editor/Assembler and Multiplan on the Winchester. Now when you need TI-Writer, instead of loading a floppy in Drive 1, you simply press 1 for edit and the editor loads automatically from the Winchester. It really saves time. The Winchester can do this because it searches it's DSK1 file before passing control to the floppy DSK1 file.

Winchester utilities are envoked from Extended Basic and are very straight forward. If you can use the TI Disk Manager, you can transition to the Winchester in about 5 minutes. The disk map, or directory, is great. It provides a complete list of all directories and files including a date stamp of when it was created and when it was last revised. Yes, the Winchester does have a clock, but it must be initialized on first power up. I plan to build the Witchata clock and will let you know how that works with the Winchester.

File/directory back up is a breeze other than it takes a lot of floppies to back up 10MB of data even using DS/DD.

Here's some technical data: 2 platters, 4

active data surfaces, 4 read/write heads, 306 tracks, 345 tracks/inch, 3600 RPM, track to track access is 3ms, data transfer rate is 5 MBits/sec. single bit error correction and double bit error detection. How fast is it? It's about twice as fast as my TEAC drives using CorComp DS/DD controller card. My disk drives loaded a 44 sector file in 12 seconds. TI-Writer editor loads in 2.5 seconds, E/A Edit is 1.5 seconds. Transition is a snap. All commands used with any programming language for disk utilities can be used. The only difference is to specify WDS1 and the pathname (which you design) for the file.

Special features: You may open up to 12 files simutaneously from Basic. You can perform direct I/O to CPU RAM (By-pass VDP RAM) using Assembler.

Hardware requirements: Disk drive, Extended Basic, 32K Memory Expansion and PEB.

Problems noted: No longer can you RUN "DSK1.LOAD" from Extended Basic without altering the Winchester directory to not boot the Winchester utilities from starting Extended Basic. (A small problem which I will seek advice on in the message section.) Other than that, it's absolutley super!! What does it cost? $895 reconditioned and $2199 new. If there is sufficient interest MYARC informed me they could reduce their "new" price significantly. The used price isn't bad conidering you pay $550 for two drives and a DS/DD controller card.

In summary, it's one of the best purchases I have made and I feel it's worth every penny. To obtain more information from the manufacturer call (201)766-1700 or write MYARC, P.O. Box 140, Basking Ridge, NJ 07920. I'll also be glad to try and answer further questions CIS 74206,1522. Mack McCormick

TI CALENDAR

Meetings are held every second week starting Jan. 9/85 from 7:00-9:30pm at the Crossroads Motor Hotel, 2120-16 Avenue N.E. unless advised otherwise.

INFORMATION CORNER

REDFORD COMPUTER SALES & SERVICE LTD. has closed their doors as of March 2, 1985 however TI-99/4A products will still be available at:

NOVA COMPUTERWARE
52 AIRPORT ROAD
EDMONTON, ALBERTA
T5G 0W7
(403) 452-0372

NOVA COMPUTERWARE is currently closed during the month of March but will be re-opening April 2, 1985. The "Redford Report" can still be used as a guideline for NOVA until we receive their cataloque.A discount structure is not currently available with NOVA at the present time however we will be pursuing that area after they re-open.

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