

THE CLEVELAND AREA 99/4A USERS GROUPS
NEWSLETTER

MAY, 1984

NORTHCOAST

SOLON

NORTH ROYALTON

GOLDEN CRESCENT

EXECUTIVE NOTES -- SOLON

It was with great regret that I announced my resignation as President of the Solon Users Group for health reasons at this last meeting. I would like to thank everyone for their support and participation in making our Users Group a great one. Continue that support and give Susan, Frank and Mike the help and participation they need for continued growth of the group. I will still be a contributing member on a limited basis. Thanks again to everyone.

Thanks to Walt Ryder for his fine presentation on using the Personal Recordkeeping Cartridge. Walt has a wealth of knowledge about the TI that I know he is always willing to share.

At our next meeting, we will have some demonstrations of some of the newer cartridge software for all ages.

Advance notice: At our June meeting, we will have a representative from 3M Corporation. The presentation includes a slide presentation on disk manufacture with a question--answer session.

Jon Lucas

NEXT MEETING
Saturday, May 12, 1984
Solon Public Library
10:30 New Users
11:30 General Membership Meeting

EXECUTIVE NOTES -- NORTH ROYALTON

The North Royalton Users Group had a very interesting meeting on April 21 with 31 members and guests in attendance. We now have 28 paid members with the number growing steadily.

Our Library is growing steadily also, and our members are now able to enjoy borrowing the programs available. We are looking for volunteers on our Library Committee to copy the many new programs we have received from the Solon Users' Group so they can also be made available for distribution. Please contact Barbara or Otto Hagele if you can help at 234-3282. We thank Barbara, the two Otto's, and all the others who have worked so hard behind the scenes setting up our Library.

Our Users' Group held election of officers in April. They are as follows:

President:	Bernard Gallagher	351-1265
Vice President:	Mark McCauley	888-1119
Secretary:	Jan Fedor	524-6192
Treasurer:	Joe Lorenz	842-3476

We wish them a happy and successful year in office.

At our last meeting we had a very interesting presentation on modems, the various types, their uses and a demonstration by Tom Thalner of Edu-Comp. Anyone interested in purchasing a modem will now be better able to make a correct decision. We also had an educational presentation on the use of strings in programming by our Educational Committee. A big THANKS to Tom Thalner and our Educational Committee for a very informative meeting.

A big THANKS also to Terry Presenza who has volunteered to be on the Newsletter Committee. If anyone wishes to have anything included in the Newsletter, call her at 234-5096. Welcome, Terry!

If anyone else is interested in assisting in any capacity on any committee, we will be glad to have you. The more participation we have the more beneficial our Users' Group will be to you and all the members. All your many talents can be used to make a really GREAT organization we can all be proud of.

NEXT MEETING

Saturday, May 26, 1984
North Royalton Public Library
10:00 AM
SEE YOU ALL THERE!!

NOTE: The May meeting only will be the 4th Saturday of the month instead of the usual 3rd. In the future, meetings will be on the 3rd Saturday.

EXECUTIVE NOTES -- NORTHCOAST

It's hard to believe that six months have passed since we have had our first meeting. A lot has happened in this short period. We have now grown to 80 members and there are still a lot of TI owners who do not know about our different groups. Let's make a strong effort over the next month to inform as many people as possible where to get the most information about their investment. Now that school is almost out, our children will have more time to learn about the computer and be ready for the next school year.

Many thanks to Miriam Huebscher-Alberts for her presentation at the April meeting on TELECOMMUNICATIONS. It was very informative and well presented. Also thanks to Dan Davenport for his presentation on cleaning the cassette record and erase heads and to Robert Van Etten on disk head cleaning.

At our next meeting we should have some results from the "SPECIAL INTEREST GROUP SURVEY". We are also going to try to break up into 2 or 3 groups at the next meeting, based on your areas of interest. More information will be available at the meeting. Joe Corbett had to be out of town at the last meeting and, therefore, plans to give his presentation of TI FORTH at the next meeting. We will also have a presentation by Walt Ryder of the Solon Group on the Personal Recordkeeping Module, with emphasis on using Math Transformations. It should be an informative session.

A limited quantity of blank diskettes will be available for purchase at the next meeting. We were able to make a bulk purchase with the other groups and will have Wabash SS-SD diskettes with a 6 year warranty. They will be available for about \$15. for package of 10 including labels and envelopes. Please contact me before the next meeting to get your name on the list. Also, we have 3 copies of the Best of 99'er, Volume 1 available at the meeting for \$18. (regular \$19.95).

Also available will be Steve Davis' book, Programs For The-TI Home Computer for \$7.50, (regular \$14.95). We also purchased a quantity of Widgets that will be available for \$28., regularly \$39.95.

Because May 26 falls on Memorial Weekend, we have decided to postpone our next meeting until June 2. We were unable to get the room in the afternoon, so we scheduled the meeting for 7:00 pm. Be sure to be there, because we will be deciding on future classes on TI WRITER and MULTIPLAN.

NEXT MEETING:

Saturday, June 2, 1984
7:00 pm, General Meeting
EUCLIDIAN ROOM -- EUCLID SQUARE MALL.

Jim Cline, President

261-2463

EXECUTIVE NOTES -- GOLDEN CRESCENT

The April meeting of the Golden Crescent Users Group met on Saturday April 28th at the Amherst Fire Station.

Training for new computer users was given by Dale Schieferstein. This will be a regular event each month, 1/2 hour before the regular meeting. All new users and interested parties are invited to attend. We hope to make your computer experience more interesting and enjoyable.

A very interesting and informative demonstration was presented by Tom Thalner on the CORCOMP RS232, the Volksmodem and the AXIOM expansion interface called the Parallax II which will allow you to connect any parallel printer to your II. See Tom for a good price on this unit. Tom has supported us by an ad in our newsletter. We also wish to thank Tom & Judy for bring out some interesting software. Chuck Mareno presented a demo on the PRK module featuring Math Transformations.

We would also like to give our thanks to Bill Bader who donated 60 programs for our Library. When we sort them out we will pass them on to our associated clubs. Thanks a bunch Bill!

Any members who have original programs they would like to share with our members. Please bring them to the meeting.

IMPORTANT NOTE: Our MAY meeting has been cancelled by members attending due to the fact it fell on the Memorial Weekend and we could not get our meeting place on another date during the month.

Our next meeting will be on JUNE 23rd, at 2 PM at the Amherst Fire Station. At that time, Betty Case of the 3M Company will present a program on Diskettes. Make this a **must-see**. We would like full attendance at this one.

Any members with drives can contact Chuck Mareno at 324-4388 after 6 PM if they would like to purchase disks at a price of \$14.50 for 10. We will be making up another order soon. These disks are guaranteed for six years. So call if you are interested.

We would very much like to hear from members who may be interested in developing Demonstrations for future meetings and working up software Reviews for the Newsletter and other items of interest to the Membership. This is **your** group and we would like as many members as possible to join in the fun.

You can call Chuck Mareno in Elyria at 324-4388 or Dale Schieferstein at 988-5150 in Amherst/Lorain Area.

Anyone wishing to assist in any manner, please call, we need your help!!

Chuck Mareno, President

OUR RESEARCH STAFF HAS BEEN ABLE TO UNCOVER A LIST OF NEW OPCODES THAT DISTINGUISH THE 6813 AS A BREAKTHROUGH IN COMPUTER TECHNOLOGY.

THE LIST IS PRESENTED HERE FOR YOUR INFORMATION.

ABBA - PLAY SWEDISH ROCK
ADGB - ADD GARBAGE
BAD - BARK AT DOG
BEL - BRANCH ON BURNED OUT LIGHT
BAH - BRANCH AND HANG
BFEI - BEG FOR EXPANSION
INTERFACE
BLI - BRANCH AND LOOP INFINITE
BPB - BRANCH ON PROGRAM BUG
BPO - BRANCH IF POWER OFF
BPM - BEGIN PIRATE MODE
BRN - BURN UP SAM CHIP
CFP - CALL FOR PROGRAMMER
CLD - TRY TO COOL DOWN SAM
CHIP
CMS - CATCH MOUSE
CNP - CALL NATIONAL PARTS
CPB - CREATE PROGRAM BUG
CPM - CORRECT PROGRAM MANUAL
CRN - CONVERT TO ROMAN
NUMERALS
CSD - CREATE STATIC DISCHARGE
DAO - DIVIDE AND OVERFLOW
DEVD - START NEW WAVE (SINE)
EIP - ERASE IF PIRATED
ERS - ERASE READ-ONLY STORAGE
ETOY - EMULATE ZX-81
HFA - HIRE FROM ATARI
HCF - HALT AND CATCH FIRE
HFC - HIDE FROM CHILDREN
HFP - HIDE FROM PINTO
HIC - HELP INTEL CHIP
IAD - ILLOGICAL AND
IBM - INTERRUPT BAD MNEMONICS
IOR - ILLOGICAL OR
JOF - JUMP ON FLOOR
JOM - JUMP ON MOTOROLA

JOT - JUMP OFF TABLE
JTZ - JUMP TO ZAXXON PROGRAM
KAL - FLY OVER RUSSIA
MDH - MULTIPLY AND DROP BITS
MWK - MULTIPLY WORK
NOPE - REFUSE TO DO ANYTHING
OCD - OPEN COMMODORE-DOOR
PAS - PRINT AND SMEAR
PIP - PULVERIZE INTERFACE
PERIPHERAL
PSD - PERFORM SAFETY DANCE
RBT - READ AND BREAK TAPE
REST - RELAX FOR 12 CYCLES
RPM - READ PROGRAMMER'S MIND
RRT - RECORD AND RIP TAPE
RTR - REFUSE TO RUN
RTM - RETURN TO MOTOROLA
RTT - RETURN TO TANDY
RSD - READ AND SCRAMBLE DATA
RWD - REWIND DISK
SINK - SINK INTO I.C. SOCKET
SRZ - SUBTRACT AND RESET TO ZERO
SSD - SEEK AND SCRATCH DISK
STD - STOP TURNING DISK
STI - SELL T. I. STOCK
TLK - START SPEECH SYNTHESIS
TPR - TEAR PAPER
TRS - TRASH ('TRISS') PROGRAM
WED - WRITE AND ERASE DATA
WID - WRITE INVALID DATA
WOJ - WEAR OUT JOYSTICK
XERA - GOTO ZOO
XIO - EXECUTE INVALID OR CODE
XOR - EXECUTE OPERATOR
XPR - EXECUTE PROGRAMMER

BESIDES HAVING THE ABOVE USER FRIENDLY OPCODES THE 6813 WILL ALSO HAVE 161 EASY TO REMEMBER ADDRESSING MODES!

P.S. THERE IS NO WORD FROM TANDY AS TO WHEN WE MIGHT EXPECT THESE IMPROVEMENTS (THEY ARE STILL TRYING TO FIGURE OUT WHAT A 6809 IS!). PERHAPS IN THE NEXT COMPUTER CATALOGUE.

PHOENIX GROUNDED?

A recent shake up at the management level at CORCOMP has delayed the release of the Phoenix — 99/64. The company had originally planned to release the new machine this spring. According to company spokesmen, the computer has been sent back to "R and D" with release to be later this year.

\$10 REWARD

All of you programmers with some tips and tricks up your sleeves, can earn yourself a \$10 reward from the Home Computer Compendium. The HCC is interested in publishing information that will be of interest to BASIC and XBASIC programmers. Ideas that help users overcome hardware problems and limitations are also welcome. Send your items to the COMPENDIUM, BOX 1343, ROUND ROCK, TX 78680. Include your name, phone number and address with each submission.

DISNEY -- SIERRA ON LINE

Walt Disney and Sierra On Line are cooperatively developing three software cartridges for the 99/4A with more to possibly follow. The three are expected to be marketed sometime by mid-year. According to Terry Bochanty, Disney marketing manager, the games involve three subject areas: astronomy, chemistry and language arts.

The astronomy cartridge, designed for kids 8-11, uses Peter Pan. The chemistry software for ages 11 and older features Professor Ludwig Von Drake. Pinocchio is featured in the language arts cartridge designed for children 6 years and older.

The cartridges will be marketed through a catalog that will be mailed to all TI owners.

CORCOMP UPDATE

From various sources, we have been able to come up with some details concerning CORCOMP's expansion system.

The PEB will be half the height of the present TI Box and will allow for the installation of 2 half-height drives or 1 full size drive. The "brains" of the system will be a motherboard that will incorporate the following features: 32K RAM expansion, a double sided-double density disk controller that will support a total of 4 drives, a built in RS232 interface with both serial and parallel output, and a power supply that will support 2 half height drives and the system. The PEB will be connected to the computer by means of a smaller round flex cable (not a big hose like we now have). The disk manager program will be supplied on disk rather than cartridge. Availability should be late spring. Check with various TI dealers for pricing and additional info.

CORCOMP is also working on a stand alone RS232 and a disk controller for the present TI PEB. The controller would have the same features as the controller supplied with the CORCOMP PEB. The firm presently markets an RS232 card and a 32K card for use with the present TI PEB.

For all your TI needs -



EDU-COMP

North Ridgeville, Ohio 44039

1-216-327-6579

TI Hardware & Software

Cor Comp Hardware

Printers & Modems

TOTAL CATALOG
APRIL ADDITIONS

FILENAME	DISKNAME	SIZE	TYPE	FILENAME	DISKNAME	SIZE	TYPE
ANT/WARS/5	CLEVELAND2	20	PROGRAM 14	④ IUG/5431	NEW/PROG	24	PROGRAM 3
BACH/MINI	NEW/PROG	53	INT/VAR 13	⑤ IUG/5449	NEW/PROG	10	PROGRAM 3
BAKERY/X	CLEVELAND2	43	PROGRAM 15	⑥ IUG/5462	NEW/PROG	15	PROGRAM 3
BALLOON/X	CLEVELAND2	43	PROGRAM 15	⑦ IUG/5466	NEW/PROG	31	PROGRAM 3
BOXING/5	CLEVELAND1	17	PROGRAM 12	⑧ IUG/5486	NEW/PROG	41	PROGRAM 3
BULLSEYE	CLEVELAND4	34	PROGRAM 14	JAILBIRD	CLEVELAND2	14	PROGRAM 14
BUM/BOOGIE	CLEVELAND3	45	PROGRAM 13	KRZYKOROX	NEW/PROG	40	PROGRAM 15
CATALOG	NEW/PROG	4	PROGRAM 6	MARTY/MART	CLEVELAND2	48	PROGRAM 10
CIVILWAR	CLEVELAND1	44	PROGRAM 12	MATH-DUNG	CLEVELAND3	34	PROGRAM 10
CLOSESIMON	NEW/PROG	45	PROGRAM 14	MAZZO	CLEVELAND3	30	PROGRAM 2
CONCENT/X	CLEVELAND3	38	PROGRAM 15	MELTDOWN/X	NEW/PROG	42	PROGRAM 15
CONSTELLAT	NEW/PROG	27	PROGRAM 10	MESSAGE/ND	CLEVELAND2	40	PROGRAM 3
COOKIEFILE	CLEVELAND4	29	PROGRAM 3	MONSTR/ADV	CLEVELAND3	24	PROGRAM 14
DECISIONSP	CLEVELAND3	12	PROGRAM 6	NAME-BONE	CLEVELAND3	53	PROGRAM 10
DODGEM2	CLEVELAND1	28	PROGRAM 12	NEVERONSUN	CLEVELAND1	23	PROGRAM 13
DOUBLELIST	CLEVELAND1	10	PROGRAM 6	NEWYORK	CLEVELAND3	20	PROGRAM 2
DRYWELL	CLEVELAND1	25	PROGRAM 12	NOMAD	CLEVELAND1	40	PROGRAM 14
ELIZA/X	NEW/PROG	27	PROGRAM 15	* OZ/X	NEW/PROG	88	INT/VAR 15
EVENWINS	CLEVELAND3	25	PROGRAM 14	* OZDATA1	NEW/PROG	5	INT/FILE
ADDLETUNE	NEW/PROG	46	PROGRAM 13	* OZDATA2	NEW/PROG	8	INT/FILE
INDEX	NEW/PROG	35	PROGRAM 6	* OZFILE1	NEW/PROG	8	PROGRAM
GARFIELD	CLEVELAND2	22	PROGRAM 10	* OZFILE2	NEW/PROG	11	PROGRAM
GRUMPLIN/X	CLEVELAND2	27	PROGRAM 15	PENTE	CLEVELAND2	30	PROGRAM 14
HARRIEDHWF	CLEVELAND1	53	PROGRAM 14	PINEPANTHR	CLEVELAND3	23	PROGRAM 10
HEX	CLEVELAND3	14	PROGRAM 6	* RAINBOW	NEW/PROG	16	PROGRAM
HFRACTION①	CLEVELAND1	51	PROGRAM 10	SE/TOURIST	NEW/PROG	21	PROGRAM 11
HOME-MORT	CLEVELAND2	7	PROGRAM 3	TARDICARD	CLEVELAND1	13	PROGRAM 11
HOMSEC/DL	CLEVELAND3	36	PROGRAM 3	TAXDEDUORF	CLEVELAND2	12	PROGRAM
INDIAN	CLEVELAND1	26	PROGRAM 14	TEX-THELLU	NEW/PROG	30	PROGRAM 11
INTPROJECT	CLEVELAND2	8	PROGRAM 3	⑨ TI-BOGGLE	CLEVELAND2	20	PROGRAM 14
IUG/5409②	NEW/PROG	43	PROGRAM 3	TICTACTOET	CLEVELAND4	51	PROGRAM 14
IUG/5411③	NEW/PROG	17	PROGRAM 3	WALKINWOOD	CLEVELAND1	13	PROGRAM 11
				WORDSEARCH	CLEVELAND2	20	PROGRAM 14
				YESTERDAY	CLEVELAND4	50	PROGRAM 11

69 FILENAMES

* ALL ONE PROGRAM

- ① HOME/FRACT
- ② STK/RELI P
- ③ STK/TREND
- ④ STK/TRANS
- ⑤ INVEST?

- ⑥ FIN/PLAN
- ⑦ TREND/ANAL
- ⑧ STK/COMM
- ⑨ BOGGLE/TS

TRENCHWRT (DISK 2) IS NOW TRENCH/WR (DISK 12) (IT IS BASIC)!

DIAGNOSE YOUR TI-99/4A!!

Here's a short but effective little program for a rapid 'fault' diagnosis on the TI-99/4A. Simply type-in the program in Basic, run it and obey the instructions for a quick analysis of the primary systems of your TI-99/4A. You may get some interesting results!

COURTESY MSP99 NEWSLETTER:

```
10 RANDOMIZE
20 CALL CLEAR
40 PRINT "THIS IS A"
50 PRINT "COMPUTER DIAGNOSIS"
60 PRINT
70 PRINT "PRESS (ENTER) AFTER"
80 PRINT "EACH REPLY."
90 PRINT
100 PRINT "WHAT IS YOUR CODE NAME?"
110 INPUT N#
120 IF N#="" THEN 100
130 CALL CLEAR
140 PRINT "ALRIGHT, 'N#:'."
150 PRINT "YOUR CODE NAME IS ACCEPTED."
160 PRINT "NOW, TYPE A FOUR DIGIT CODE"
170 PRINT "NUMBER, THEN PRESS (ENTER)."
```

```
490 PRINT "PRESS (ENTER) FOR HELP"
500 CALL KEY(O,KEY,STATUS)
510 IF KEY<>"I" THEN 500
520 CALL CLEAR
530 PRINT N#:". DIAGNOSTICS SHOW"
540 PRINT "THAT YOUR COMPUTER HAS A"
550 FOR X=1 TO 27
560 READ P
570 PRINT CHR$(P):
580 FOR D=1 TO 200
590 NEXT D
600 NEXT X
610 PRINT
620 PRINT "PLEASE WAIT 15 SECONDS FOR A"
630 PRINT "COMPLETE DIAGNOSIS."
640 FOR D=1 TO 700
650 NEXT D
660 CALL CLEAR
670 FOR T=15 TO 1 STEP -1
680 PRINT "TIME:":T
690 FOR D=1 TO 200
700 NEXT D
710 CALL CLEAR
720 NEXT T
730 CALL CLEAR
740 CALL SCREEN(0)
750 REM "BE SURE YOUR ALPHA LOCK KEY IS DEPRESSED!"
760 A#="FFFFFFFFFFFFFF"
770 CALL CHAR(128,A#)
780 READ A,B,R
790 IF A=-1 THEN 820
800 CALL MCHAR(A,B,128,R)
810 GOTO 780
820 READ A,B,R
830 IF A=-1 THEN 860
840 CALL MCHAR(A,B,128,R)
850 GOTO 820
860 GOTO 860
870 DATA 80,49,86,69,82,69,72,73,78,84,69,82,78,65,76
880 DATA 32,77,65,76,78,85,78,67,84,73,75,78,2,3,5,7
890 DATA 9,5,2,15,5,2,21,5,6,3,5,4,9,5,6,15,5,8,16,1
900 DATA 9,17,1,10,18,1,11,19,1,11,21,5,11,27,4,14,3
910 DATA 5,16,9,5,14,15,5,16,27,4,18,3,4,18,27,4,23,9
920 DATA 5,23,15,5,23,21,5,23,27,4,-1,-1,-1,2,9,16,2
930 DATA 7,18,2,9,10,2,13,9,2,15,18,2,19,5,2,23,16,2
940 DATA 27,10,14,3,18,14,9,18,16,13,16,14,15,18,14
950 DATA 19,10,14,21,18,14,27,5,16,20,5,-1,-1,-1
```


ASK THE CLEVE WIZ

QUESTION: What is the difference between compiled and interpreted computer languages?

ANSWER: The only language that computers "understand" is machine language, which is a collection of binary numbers made up of ones and zeros. All computer languages have to be translated in machine code. If you write a program in a compiled language (Pascal), the entire program must be translated before it can be run. If you run it a second time, however, the program does not need to be translated again — it will execute immediately.

Programs written in interpreted language (BASIC) are translated line by line as they run, every time they are run. A program written in a compiled language will run considerably faster than a program written in an interpreted language since it is not delayed by line-by-line translation. However, interpreted languages are generally easier for beginners to use. Presently, the only compiled languages for the 99/4A are PASCAL and FORTH. Readers should refer to the November, 1982 issue of 99'er Magazine for the article, "Chatting With Your Micro: Languages for the Home Computer".

BEGINNER'S TIPS

The following tips are from Tigercub Software. They offer low cost software in TI BASIC. The cost of their catalog is \$1, refunded on the first order. Address: Tigercub Software, 156 Collingwood Ave., Columbus, Ohio 43213.

If your white text on a black screen looks blurry, try grey on black. If your colored graphics on a black screen look pale, try this:

```
100 CALL CLEAR
110 CALL COLOR(1,2,2)
120 CALL SCREEN(16)
130 CALL VCHAR(1,31,1,96)
```

Now put on your colored graphics and see the difference. The same trick will give

you a professional looking bordered screen for your text.

```
100 CALL CLEAR
110 CALL SCREEN(5)
120 CALL VCHAR(1,31,1,96)
130 FOR SET=1 TO 12
140 CALL COLOR(SET,2,16)
150 NEXT SET
```

Now put your text on the screen, with a blank in the first and 28th space of each line. This border will be erased by CALL CLEAR, so clear the screen with CALL VCHAR(1,3,32,672).

NOTICE: TI FORTH

For those people who are interested in TI FORTH, and plan on obtaining a copy of this fascinating and capable programming language — you'll need a manual. The Group Libraries contain copies of the manuals which you must obtain and copy (approximately 100 double sided pages). For those of you who are in this boat, but don't have the time or access to get it done for free, Mike Hanna has located someone who will copy the manual for about \$10. If interested, contact Mike at 884-7176, or if unable to reach him, call Sue Weiser at 248-5530.

NOTICE: CORNER WARS UPDATE

In last month's newsletter, we published a listing of a program called CORNER WARS. It appears that there is a second page to the listing. There are a couple of unclear numbers, and I have tried to fix them. They are all hand corrected down the right hand side of the page. If anyone finds that my "corrections" need correcting, please let me know and I will print the updated corrections!

```

510 CALL HCHAR(14,18,58)
520 CALL HCHAR(12,4,96,12):: CALL HCHAR(13,4,97,12)
530 CALL HCHAR(12,18,104,12):: CALL HCHAR(13,18,103,12)
540 CALL VCHAR(8,16,112,8):: CALL VCHAR(9,17,113,8)
550 CALL VCHAR(14,16,120,10):: CALL VCHAR(14,17,121,10)
560 COL=11 :: X=4
570 CALL SFRITE(#1,128,13,89,121,#4,40,15,20,121,SP,0,#3,92,15,89,20,0,SP)
580 CALL SFRITE(#2,88,15,180,121,-SP,0,#5,44,15,89,230,0,-SP)
590 CALL SFRITE(#6,128,13,1,150,#7,128,13,15,150,#8,128,13,30,150,#9,128,13,45,50)
600 DISPLAY AT(1,1):"SCORE=" :: DISPLAY AT(1,22):"LASERS" :: DISPLAY AT(2,22):"EFT"
610 CALL JOYST(1,J1,J2):: CALL KEY(1,K,5)
620 CALL COINC(ALL,C):: IF C=-1 THEN 840
625 IF K=18 THEN 690
630 IF J2=4 THEN CALL PATTERN(#1,128):: COL=11 :: X=4 :: GOTO 670
640 IF J2=-4 THEN CALL PATTERN(#1,132):: COL=12 :: X=2 :: GOTO 670
650 IF J1=-4 THEN CALL PATTERN(#1,136):: COL=9 :: X=3 :: GOTO 670
660 IF J1=4 THEN CALL PATTERN(#1,140):: COL=10 :: X=5 :: GOTO 670
670 REM HIT ROUTINE
680 GOTO 610
690 FOR J=2000 TO 1000 STEP -200 :: CALL SOUND(-50,1,1):: NEXT J
700 CALL COLOR(COL,16,1):: CALL COLOR(COL,1,1)
710 ON X-1 GOTO 720,730,740,750
720 CALL PATTERN(#2,116):: CALL DE :: CALL PATTERN(#2,88):: CALL LOCATE(#2,21):: GOTO 760
730 CALL PATTERN(#3,116):: CALL DE :: CALL PATTERN(#3,92):: CALL LOCATE(#3,89,1):: GOTO 760
740 CALL PATTERN(#4,116):: CALL DE :: CALL PATTERN(#4,40):: CALL LOCATE(#4,10,1):: GOTO 760
750 CALL PATTERN(#5,116):: CALL DE :: CALL PATTERN(#5,44):: CALL LOCATE(#5,60):: GOTO 760
760 CALL SOUND(150,-7,1)
770 IF SCORE<100 THEN SCORE=SCORE+10 ELSE IF SCORE>=100 THEN SCORE=SCORE+15
780 DISPLAY AT(1,7)SIZE(16):SCORE
790 IF SCORE=100 THEN 940
800 CALL MOTION(#3,0,5)
810 A=INT(RND*8)+1
820 IF A=6 AND SCORE>100 THEN CALL MOTION(#3,0,25)
830 GOTO 610
840 CALL PATTERN(#1,116):: CALL COLOR(#1,7):: CALL D :: CALL LOCATE(#2,180,121,3,89,10,#4,20,121,#5,89,230)
850 CALL PATTERN(#1,128):: CALL COLOR(#1,13):: HIT=HIT-1 :: CALL DELSPRITE(#1)
860 IF HIT<6 THEN 880
870 X=4 :: COL=11 :: GOTO 610
880 CALL CLEAR :: CALL DELSPRITE(ALL):: CALL CHARSET
890 FOR I=1 TO 8 :: CALL COLOR(I,17,1):: NEXT I
900 DISPLAY AT(5,3):"PLAY AGAIN (Y)YES OR (N)NO": "YOUR SCORE WAS":SCORE
910 CALL KEY(10,K,5):: IF K=ASC("Y")THEN 160 ELSE IF K=ASC("N")THEN 930
920 GOTO 910
930 CALL CLEAR :: END
940 CALL MOTION(#3,0,5,#4,4,0,#2,-5,0)
950 GOTO 810
960 SUB DE
970 FOR J=1 TO 10 :: NEXT J
980 SUBEND
990 SUB D
1000 FOR I=1000 TO 9000 STEP 500 :: CALL SOUND(-50,1,1/1000):: NEXT I
1010 CALL SOUND(100,-7,1)
1020 SUBEND

```

CORNER WAR

PAGE 2

COMPUTER INSURANCE

Some of the information in this article is courtesy of Mike Matula, Johnson Space Center Users Group

Many Homeowners insurance policies do not cover your personal computer hardware and software, (especially the minute it has any business usage -- you know, the kind that makes the computer a tax advantage?) Each computer owner should contact his insurance agent to verify if his policy does or does not cover your computer, and what exactly is covered. If you are not covered or not satisfied, you will find that your agent can most likely give you coverage on a rider to your existing policy or write a separate policy to provide coverage. In either case, you will most likely find the premiums quite expensive. There is another solution to this problem. A company that has been formed exclusively to provide computer coverage is "Safeware" and the premiums seem quite reasonable. Not only that, but their coverage is based on a limit you set yourself. It protects against fire, theft, accident, damage in transit, earthquake and power surges. It protects all hardware, all purchased software and all media regardless of use. Coverage is for actual cash replacement value at the time any loss or damage occurs with a \$50 deductible. Minimum coverage costs \$35 per year for \$2000 coverage. (I understand that they have even covered software that was destroyed on by a cat.) For further information, contact "SAFEWARE" at 1-800-848-3469.

SOLUTION TO PROBLEMS WITH STATIC

There have surfaced recently a couple of solutions to the problem of static around your computer system. A very common place this can be detected is on your monitor screen -- it holds on the dust. There are sprays and wipes available at moderate cost through computer supply places -- but there are a couple of other possibilities which cost less. In descending order of cost: 'I was told by one supplier that the static spray is very useful -- you can even use it on your clothes. THEREFORE --

Scotch 3M makes a spray called STATIC GUARD which works quite well. Spray it on a rag and wipe your equipment down. Another solution is DOWNY Fabric Softener put in a spray bottle. This is most likely the least expensive and easiest solution to come by.

UNWANTED GRAPHICS

Courtesy of The 99/4A Program Exchange:

On occasion, users may notice unwanted graphics when operating an Extended BASIC program. The unwanted graphics appear as characters defined in previously used programs, or as the characters predefined by the computer. If you notice this problem, first type FNCT CLEAR, then type the following: >FOR X=96 TO 143 :: CALL CHAR(X,"") :: NEXT X :: RUN (ENTER)

TOUCH TONE FREQUENCIES

Courtesy of the A9CUG of Atlanta:

Your computer can generate sounds that will dial your phone. It has to be a dual tone since a single tone is not always accepted properly as being the right tone. Use these in a program to get the sounds then hold your phone near the speaker to see if it works.

- 1 - CALL SOUND(100,1209,0,697,0)
- 2 - CALL SOUND(100,1336,0,697,0)
- 3 - CALL SOUND(100,1447,0,697,0)
- 4 - CALL SOUND(100,1209,0,770,0)
- 5 - CALL SOUND(100,1336,0,770,0)
- 6 - CALL SOUND(100,1447,0,770,0)
- 7 - CALL SOUND(100,1209,0,852,0)
- 8 - CALL SOUND(100,1336,0,852,0)
- 9 - CALL SOUND(100,1447,0,852,0)
- 0 - CALL SOUND(100,1336,0,941,0)

DISK LIBRARY ADDITIONS!

Here we GROW again! Although it seems like quite a job to keep up with it, it is continually exciting to see additions to our Disk Master Library. This last month we added more than 60 programs to the disk library, most of them obtained in an exchange with the Atlanta Users Group. Now I am working on processing another more than 100 programs donated by new members to the Northcoast 99'ers. I hope that there will be future additions from the North Royalton and Golden Crescent as I'm sure that they also have programs that the rest of us can enjoy, just as the 4 groups have been enjoying our resources as developed so far. WE ALL BENEFIT!!

And some of these additions are particularly exciting and useful. One especially useful program we obtained from Atlanta is a DOUBLELISTer. With this program, you can list 2 disk catalogs side by side in hard copy so that you don't waste the right half of the paper. I have already used this in disk work for the library.



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COURTESY - JUG (JOHNSON'S SOA,
 CENTER USERS GROUP)

Lower case CHARACTERS

by Edgar Dohmann

The listing below will allow you to redefine the standard lower case character set for the TI 99/4A to display them as real lower case characters. If you include the listing exactly as it appears below, you need only to add a GOSUB 5010 in your program to redefine character patterns 97 through 122.

```

5000 REM RE-DEFINE LOWER
5001 REM CASE CHARACTERS
5010 DATA 00000038043C443C
5020 DATA 0040407844444478
5030 DATA 0000003C4040403C
5040 DATA 0004043C44444443C
5050 DATA 000000384478403C
5060 DATA 0018242020702020
5070 DATA 0000304838082810
5080 DATA 0040404078444444
5090 DATA 0010001010101010
5100 DATA 0004000404042418
5110 DATA 0040485060504848
5120 DATA 0010101010101010
5130 DATA 0000002854444444
5140 DATA 0000007844444444
5150 DATA 00000038444444438
5160 DATA 0000704870404040
5170 DATA 00001C241C040404
5180 DATA 0000005864404040
5190 DATA 0000003C40380478
5200 DATA 0000207020202418
5210 DATA 0000004444444438
5220 DATA 00000044444442810
5230 DATA 0000004444546C44
5240 DATA 0000004428102844
5250 DATA 0000442418102040
5260 DATA 0000007C0810207C
5300 RESTORE 5010
5310 FOR I=97 TO 122
5311 READ A$
5312 CALL CHAR(I,A$)
5313 NEXT I
5320 RETURN
    
```



UPDATE: LOCAL BULLETIN BOARDS

For those of us who enjoy communicating via our computers with others, an inexpensive way (once you have a modem), is local bulletin boards. A list of some was published in our October, 1983 newsletter.

This is an updated list of local BBS's. Some of the phone numbers are different, and I assume are more accurate at this time.

APPLEHOLICS	267-8227
BULLET-80	729-2769
CLEVE ATARI CLUB	271-9273
CLEVE CP/M CLUB ₁	941-2488
COLOR-80	331-5712
COMMUNITREE	942-8952
DATA-TERM BBS ₄	562-3263

FORUM-80	943-2388
GENIUS' MODEM	845-3179
J.P.'S BBS	779-1321
MAD APPLE II	581-2646
MATCHMAKER	932-9845
N.E.O.C.U.G. ²	942-3569(MENTOR)
NORTHCOAST NETWORK	439-5543
NORTHCOAST XENIX	281-8006
TAP ³	228-7335
VIC BBS ⁴	892-8435

#membership fee

18 pm - 8 am M-F, 24 hrs S-S
 26 pm - 9 am S-M, 24 hrs SAT
 38 pm - 8 am M-F
 4 Noon - 3 am M-THURS

ALL OTHERS OPERATE 24 HOURS.

TIBBS(tm) SYSTEMS

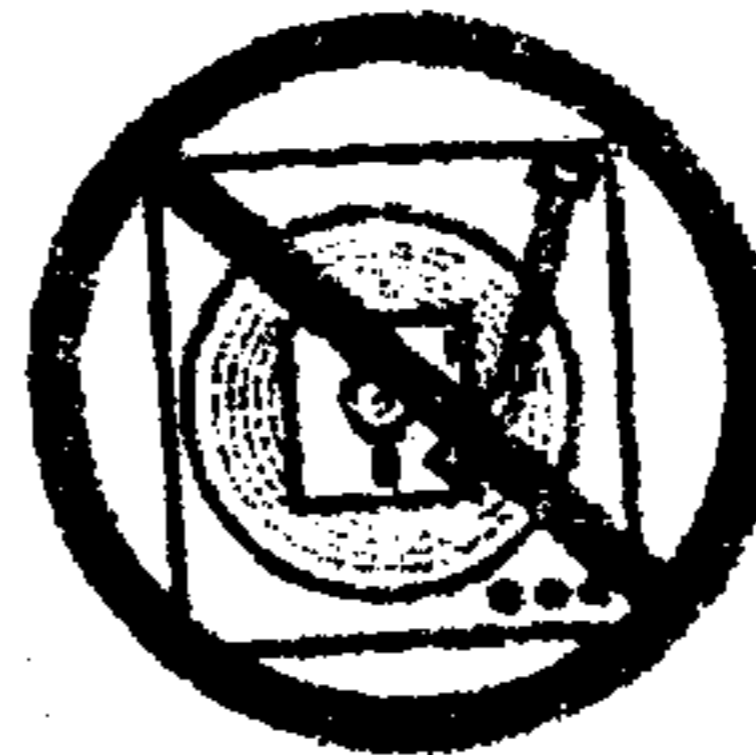
Courtesy of Johnson Space Center Users Group Newsletter

Houston, TX	(713)497-3009	24 hours
Brick, NJ	(210)929-8161	24 hours
Washington	(301)434-0117	24 hours
West Palm	(305)793-8050	24 hours
Atlanta #2	(404)928-4278	24 hours
St. Pete #1	(813)525-7998	24 hours
St. Pete #2	(813)526-1265	24 hours
Pittsburgh	(412)854-5575	9pm-9am
Long Island	(516)783-7296	24 hours
Fontana CA	(714)350-8583	24 hours
Buffalo NY	(716)837-6635	24 hours
Portland ME	(207)797-5690	24 hours
Wichita KS	(316)681-3167	24 hours
Appleton WI	(414)739-5380	24 hours
Albany NY	(518)765-4993	24 hours
Gainesville FL	T.B.A.	
Denver CO	T.B.A.	
Detroit MI	T.B.A.	
N. Tonwanda	T.B.A.	
Va. Beach	T.B.A.	
Knoxville	T.B.A.	

ADVANCE NOTICE: SOLON

Our June meeting will be a little different than usual. We have a representative of Scotch 3M coming to talk about disks and disk drives. If you have one OR if you are considering purchasing one OR if you are wondering about them -- this is a good opportunity to learn and ask questions. We also need a general count of the number of people with disk drives (and whether single or double) who will be attending since there will be samples given out.

This will be our regular June meeting -- the second Saturday of June -- usual location (Solon Library).



OTHER TI BASED SYSTEMS:

Chicago	(312)848-3669	24 hours
San Jose	(408)926-8767	24 hours
Freemont	(415)794-8050	24 hours

ASSEMBLY LINE

The following is a list of Assembler books available for the 99/4A as compiled by John Colson of the Rocky Mountain 99'ers.

Introduction to Assembly Language for the TI Home Computer by Ralph Molesworth
Price-\$16.95

Source: Steve Davis Publishing
Box 190831
Dallas, Tx 75219

Software Development by Texas Instruments

TI Home Computer Assembly Language Primer
by John T. Dow Price-\$20.00

Source: John T. Dow
6560 Rosemoor St.
Pittsburgh, PA 15217

Fundamentals of TI 99/4A Assembly Language
by M.S. Morley

Source: Tab Books
Box 80
Blue Ridge Summit, PA 17214

These books may be available through local bookstores, mail order houses, or from the sources indicated.

GOOD NEWS — BAD NEWS

For the past few months, things have been topsy-turvy in terms of manufacturers continuing to support the 99/4A. Some companies are dropping support, others changing positions and new manufacturers have appeared.

FUNWARE, one of the few makers of cartridge software for the 99/4A is phasing out all of its remaining TI cartridges and will no longer produce TI software. FUNWARE made DEMON DRIVER and FUNHOUSE to name a couple.

On the plus side, INFOCOM, which originally withdrew its support for the 99/4A has had a change of heart and will produce the Zork series for the TI. We are all aware of ATARISOFT's support for the TI with the most recent releases being MOON PATROL and JUNGLE HUNT.

From a hardware standpoint, some new companies have appeared on the scene. Developments from CORCOMP will be highlighted in another article. TEX-MICRO of Titusville, FL is producing a peripheral expansion system for the 99/4A. Markel Electronics of Southern California will be producing a stand alone RS232 with plans for a PEB. On the downside, DORYT Industries is clearing its inventories of the PARAPRINT 18A stand alone parallel printer interface. The company will continue to produce its stand alone 32K memory expansion.

PRINTER FOLLOW UP

In the March newsletter, we discussed the use of printers without the expansion system or RS232 interface. So what happens! Up pops a printer system that can be used without the RS232 but still allows the use of the expansion system. They are the AXIOM DIRECT-CONNECT printers. The printer plug has a "T" connector which allows the printer and other peripherals to be connected via the expansion port. The AXIOM employs a Centronics parallel to parallel interface which has been designed to answer RS232 commands in your software. Things are changing quickly month by month. Thanks to the HUGGERS of INDIANA for this info.

GO FORTH

For those programmers who have developed an interest in FORTH, you might entertain the idea of membership in the FORTH INTEREST GROUP (FIG). Annual membership is \$15. You would receive 6 issues of their newsletter and gain access to one of their local chapters. Their address:

FORTH Interest Group
Box 1105
San Carlos, CA 94070

CP/M : OPENING A NEW DOOR

Imagine firing up your computer and being able to immediately do any of the following :

- Enter/change/combine/rename ASCII text files via a builtin line editor
- Obtain a directory of any diskette, in any disk drive
- Inquire if a particular file (or group of files) are on a diskette
- Inquire on a diskette's status, such as # of files, used & unused memory ...
- Load and run a program
- Load a language (e.g. BASIC, CBASIC, COBOL, R/M COBOL, PASCAL, IDOL, IBOL, ...)
- DeBug a program
- View a file that resides on a diskette
- Dump data to a printer, as it's being viewed
- Run a file that will perform several system commands, and optionally utilize a data file that will pass on specific info.
- Inquire on the status of your operating system, such as file attributes & sizes, device assignments, ...
- Increase your programming area to max. RAM
- Segregate file-access by USER #
- File-lock, to prevent erasure/changes
- Access a mammoth library of software

Sounds almost too good to be true, huh? Well, believe it or not this is now a capability of your very own home computer. To my knowledge (which is sometimes subject to debate if I've any at all !), the CP/M is the ONLY home computer under at least \$500 that is advertising this capability. What this means for home-hackers like us is that we can gain access to the HUGE software base that has existed for the CP/M machines for at least 10 years. To sweeten the deal, one will find a majority of this software to be of quite excellent quality, mostly run compiled for speed and primarily for business applications. However, because of the availability of CBASIC (et al), one can program using very BASIC-like commands and then have this source file compiled to execute at assembler speed! ... GOOD STUFF, huh ???!!

To give you a brief overview of this type of operating system, let me start by attempting to define CP/M itself.

Control Program for Microprocessors is an operating system which allows one to gain real-time access to a computer's hardware, without having to use/write assembly language routines to really get at the insides of our computer ...

By having a CP/M card in our P.C. box & turning on our computer system, we will find that our "A" drive will start immediately; this is because our 'computer-in-a-card' has enough instructions at power up (resident monitor/bootstrap loader) to search the first couple tracks of this "system disk" to actually load the control program ... yes, this is 'overhead' that occupies RAM, but you'll find that this is very minimal, or 256 bytes ! Once loaded, the CCP portion of the system (Console Command Processor) is ready to interpret one's keyboard commands.

If your command will involve using an attached device (peripheral), then the CCP will need to get some assistance from a second module of the system, called the BIOS (Basic Input/Output System), whose speciality is being able to 'talk' the special language required by each peripheral. In essence, it is an interpreter that sends & receives data/status info between the device & CCP's debugger.

When info on a disk is to be manipulated, then the CCP will call on the third (& final) module of CP/M, the BDOS. This Basic Disk Operating System's speciality is performing such disk managing functions as locating blocks of data, verifying data and allocating/releasing storage areas.

The section of RAM where programs are loaded usually starts at address 0100 Hex, just after the 3 CP/M modules (unless the computer comes with ROM programs for the low RAM, in which case we now start after them, around address 4300 H). This area is known as the TPA, or Transient Program Area ... yes, this means that this block of RAM can be RELOCATABLE, at the programmer's wish !

That pretty much covers the 'game plan' for CP/M; now, how about a few commands to whet your appetite?

CP/M commands are in 2 categories : built-in (resident), and transient. The first group are always accessible, for they reside in the RAM at all times. The second group are copied in from the system diskette, when called upon.

RESIDENT COMMANDS	TRANSIENT COMMANDS
TYPE	SYSGEN
DIR	PIP
REN	ED
ERA	LOAD
SAVE	ASM
	DUMP
	DOT
	SUBMIT
	MOVCPH
	STAT

I'm going to leave you hanging as to their purposes, for now ... that should prove quite an article in itself !!!

Let me add that a whole set of control characters are available, also ... like function keys provide, but utilizing the CTRL key & a second key, instead.

You will also find that naming of files is different, also. (e.g. DOCUMENT1.TXT) You have a filename, a separator(period) and a type of filename extension (used for categorizing files). Some types of files absolutely require a unique extension, while other files (such as text files) can usually go without one.

CONTINUED ON MAIL PAGE

03/85

CLEVELAND AREA 99/4A USERS GROUPS
 P.O. BOX 391101
 SOLON, OH 44139



CPM (CONTINUED)

CP/M can be configured to direct data to or from one device to or from another. This is done via assigning a PHYSICAL device name to a LOGICAL device name.

LOGICAL DEVICE NAMES

CON: (CONSOLE)
 RDR: (PTAPE/CARDRDR)
 PUN: (PTAPE/CARDPUN)
 LST: (LISTING DEV.)

PHYSICAL DEVICE NAMES

TTY: (TELETYPE-LIKE)
 CRT: (CONSOLE, TERM..)
 PTR: (PTAPE/CARD READER)
 PTP: (PTAPE/CARD PUNCHER)
 LPT: (USUALLY LINE PRINTER)
 UC1: (USER DEFINED CONSOLE)
 UR1: (" " READER)
 UR2: (2ND " ")
 UP1: (USER DEFINED PUNCHER)
 UP2: (2ND " ")
 UL1: (USER DEFINED LISTDEV)

If you have found this interesting, then my time was well spent If you want further information on this subject, then feel free to write to me. I will do my best to answer you all ... and a self-addressed envelope would be MUCH appreciated !! Perhaps with enough interest shown, I can do a follow-up article(s).. It all depends on YOU & your interest. Anyway, thanks for reading my words. You can reach me at :

Phillip E. Newton
 23951 Lakeshore Blvd.
 Suite 711 B
 Euclid, OH 44123

I guess this will serve it's initial purpose, which was to give you a brief overview of the CPM system that can now be run on your home computer.