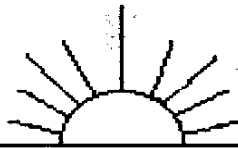


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Vol. 7 No. 4 April 1989

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NEW HORIZONS



NEWS LETTER

NORTHWEST OHIO COMPUTER CLUB FOR THE TEXAS INSTRUMENTS 99/4A

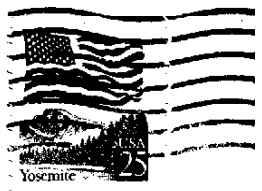
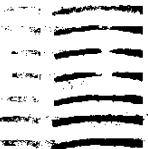
AND THE NYARC GENEVE 9640 PERSONAL AND HOME COMPUTER

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THIS MONTHS MEETING APR. 15, 1989 SATURDAY AT UNITY CHURCH 12:30 PM.

Behind Wendy's off Secor Road on Executive Dr.

TI-CON 88S.....	1-419-385-7484
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From

NEW HORIZONS COMPUTER CLUB
%First Church Unity
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Toledo, OH 43606
Attn. Earl W. Hoffsis

Dallas TI Home Computer GP
c/o Louis Guion
PO Box 29863
Dallas, TX 75299



PRESIDENT'S CORNER

NEW
HORIZON

by Mark Maisonneuve

Welcome to this month's issue of our news-letter. Our attendance at the meetings has been dropping off at a large rate. For those who are no longer attending would you do me a favor and let me know why (have the meetings become useless or boring to you?). Another BBS is now available to us the number is 419-893-4204 the hours for this board have not yet been set but for now it is on line most of the time. It is not run by pros. so any suggestions are welcome.

This month we have a club disk that will give all (esp. those without a ramdisk) a taste of having one.

Come to the meeting this month there are many things to settle not only do we need to plan our June get together but much more serious business to settle! The Lima show will be on May 20 anyone interested on going we and would be interested in meeting some place and going as a group let us know.

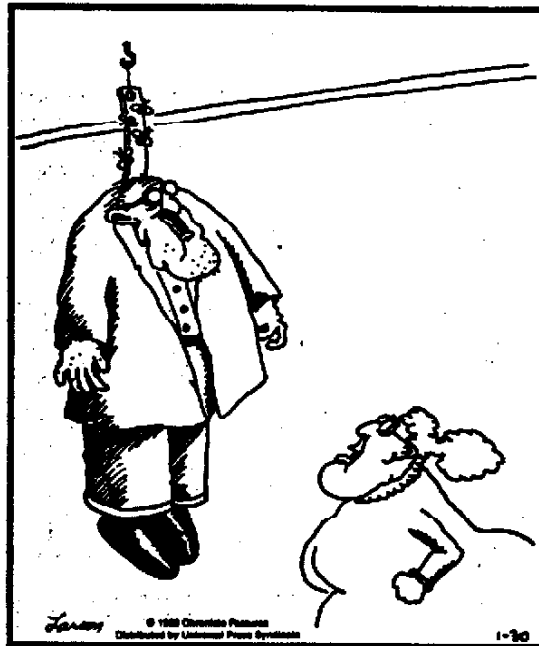
MICROpendium is sold at each meeting. Oh ya, the name of the BBS is "Communiq'ue". Hope to see all at the meeting.

MARK H. MAISONNEUVE



THE FAR SIDE

By GARY LARSON



"Sol ... You've been buzzing around the living room again!"

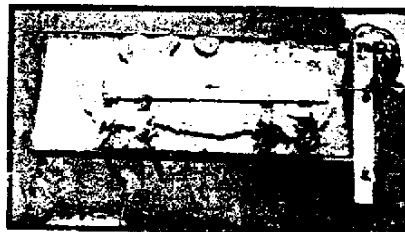
Jack S. Kilby, Inventor, Integrated Circuit. The impact of the integrated circuit has been far reaching. Invented 30 years ago, the electronic chip has made possible even more innovation.

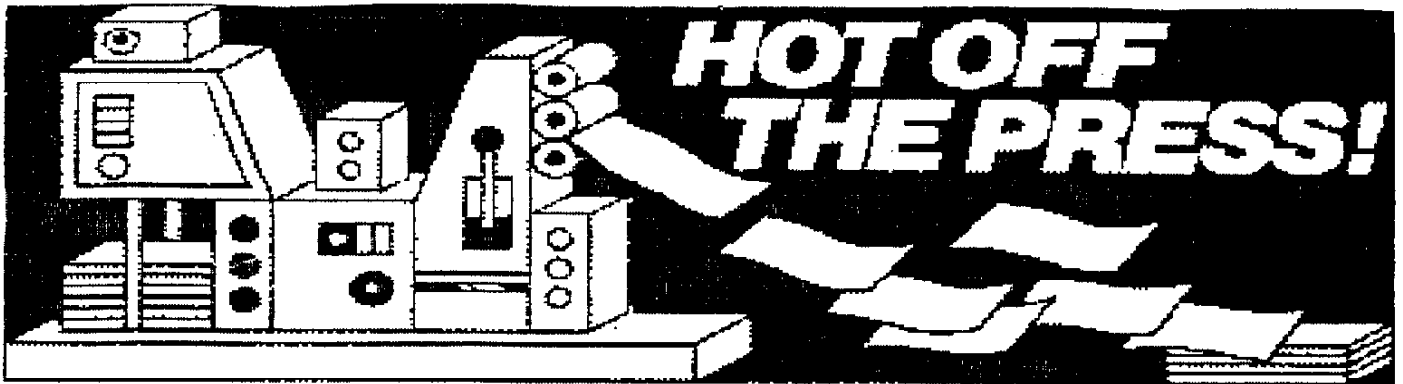
One of the men responsible, Jack Kilby, also holds more than 50 patents and numerous honors, including the National Medal of Science and a place in the National Inventors' Hall of Fame.

In 1958, Kilby demonstrated the first integrated circuit. He then guided the development of early applications: the first computer incorporating the circuits and the 1967 invention of the hand-held calculator. Today, retired from Texas Instruments, Kilby continues as an industry consultant.



Though originally a rough device—a 1/16-inch sliver of germanium with a few transistors and other components glued to a glass slide—today's advanced chips contain almost 700,000 transistors and operate at 33 million floating-point operations per second. Jack Kilby pioneered the technology.





The meeting of the New Horizon Computer Club was called to order at 1:45 p.m. on March 11, 1989, by our President, Mark Maisonneuve.

Since the minutes were printed in the newsletter, they were accepted as printed.

Earl Hoffsis gave the treasurer's report. At the February meeting we had a balance of \$1133.11. After all expenses were paid, and income received, our balance February 15, 1989 was \$932.97. Report accepted.

The Micropendium subscription will be ordered this coming month for the Science Technology Department of the Toledo-Lucas County Public Library.

Bill Tiep moved and Steve Verock seconded that our meeting be held the second Saturday of each month. Motion passed. Earl will check the church's calendar to see if the second Saturday of each month is free for the rest of the year. Our next month, April, meeting will still be held on the 15th; new dates to be confirmed next month.

Jo Symington asked for members to do demos for the coming months. In May Marilyn Schafstall will demonstrate the TI-writer; in May Earl Hoffsis will demonstrate the Multiplan.

The list of members was available at the meeting for all in attendance.

There is a young man starting a newsletter about bulletin boards and clubs in the area. We have the opportunity to input an ad for our New Horizon TI club. Earl will give more detailed information at the April meeting.

Today there were 3 prizes for the attendance drawing: Steve Verock won a club disk, Andy Andrews won a disk holder for 50 disks, and Margaret Dixon won the genealogy disk which was demo'd today.

Demonstrations today were the Genealogy program by Ellen Thomson, and a Load Program and a Music Program by Charles Strobbe.

The business meeting adjourned at 1:10 p.m., and was followed by the demonstrations.

Respectfully submitted,

Marilyn Schafstall, Secretary



Good day and and hello, hope you all had a very nice Easter vacation. One note to all the other clubs we have newsletter exchange with please send all newsletters to the following address: N.W. OHIO 99'ERS GROUP, FIRST CHURCH UNITY, 3535 EXECUTIVE PARKWAY, TOLEDO OH. 43606, ATTN. EARL W HOFFSIS. It seems Burr is having a hard time putting our newsletter library together. Because everytime he thinks he has a certain month done along comes another newsletter that needs to be put in one of his books. So please use the above address from now on.

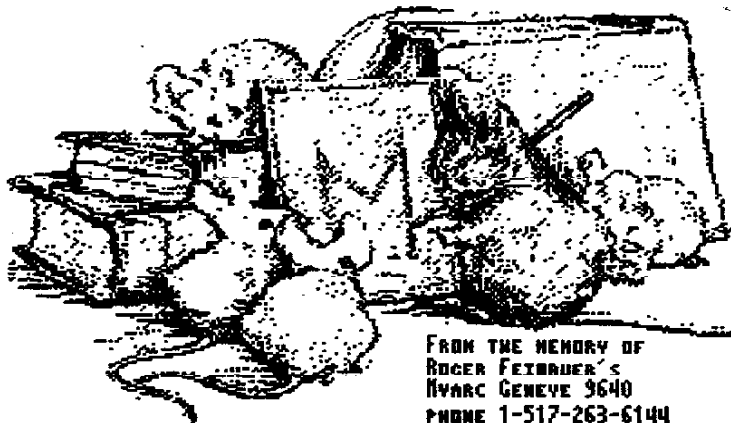
I was going to mention this last month but forgot. At the time we have only one SIG (ie., SPECIAL INTEREST GROUP); At this we have been dragging our feet that is our VCR database. I hope some of you have tryed your hand at writting something ??? Anyway at Unity we have the ability to if you want? Have more then one SIG going at the same time. As our meeting room can be partitioned into small work areas, if we want to. From what I heard at the last meeting there was some interest in TI-WRITER and MULTIPLAN, and with the sudden inclusion of TI-BASE.... and possibly in a short time PRESS the up and comming word processor. But, as usual this is entirely up to you, the Group. I just though I would make mention of some of

the options and leave it up to the Members.

I've been Editor know for almost two years, and I need your help in the way of articles, or in some type of questions about something on your computer. Have you written some programs you use, and wouldn't mind sharing with us? Did you find out how to make something work with the setup you have that may be of interest to some of us? What I need is anything from the members, to fill these pages. Is there any artist out there that would like to have their work grace the pages of the newsletter? Come on let me hear from you.

Is there anyone interested in anything about the new G-ram devices that are out PGRAM, GRAM-KRACKER, and etc. If so, let me know, I have a few articles written, and could get more if there is an interest. Man why do I fill like I'm pulling for straws.

Do any of you read PC-MAGAZINE? On page 71 of April 11, 1989 issue an article CALLED DVORAK'S HALL OF INFAMY By John C. Dvorak. It deals with products that flop. Such as software and hardware. In his catagory called THE ORDER OF THE TIN FIREPLUG. "To make it into the top tier of flops, a product had to be overhyped; declared a superproduct that would change the world." Of software he mentions IBMS Top View, Borderlands Lighting, UCSD Pascal, and Epsos Valdocs. In the hardware area he mentions Apple Lisa, IBM PCjr, DEC rainbow, and the TI99/4A. To be fair the article delt with the way different Companies handled their product, I just wanted to make sure you understood this. To bad TI didn't.



FROM THE MEMORY OF
ROGER FEINBERG'S
MYARC GENEVE 9640
PHONE 1-517-263-6144

This month there are many new items from word on the possibility of Mdos 1.14 being the last free dos from Myarc to a new program written in Mdos called Picture Transfer. So, let's get started with Mdos first. I called Myarc last week because I was having problems with the graphics command with Mdos 1.14. They told me that only graphics programs written to a certain spec. would work with one of the graphics files. The Graphics command no longer requires the Graphics, only the printer type (i.e. EPSON, GP550, OKIDATA, and PROWRITER) FILES which are found on the GPL v1.04 disk.

```
old command A>GRAPHICS
[printer] [/R]
```

```
new command A>[printer file
name] [/R]
```

The only problem with this is that programs like GIF2 don't support this above mentioned format. Which makes you wonder as the author of Mdos also wrote GIF2. What good is it if you have Graphics on the the screen and can't dump them to a printer. I know on the PC's that I use at work you can dump graphics from a running program. So, what's the problem? It should be able to look out to the Vidio memory, and send it out as code that the printer can fashion that can be interpred by the printer so it can print a picture. Which it can't so Myarc what will???

Mdos 1.14 which may be the last free version of Mdos as according to a person from Myarc has all of the documented functions of the manual. The next version 1.15 which has the probability of being on a Prom (I hate the word) and at the time they said it will cost about \$125.00. Myself I don't like this idea as once it's put on a prom very few people will pay for any futher updates, and may make most people stay at this version. As to get this prom put on you have to send in the computer card and have Myarc install it. If it was on disk the owner could install it. Also, look at Ti-Extended Basic until some sort of Gram divice cam along it didn't change at all. If Myarc is so afraid of it getting copied set it up with one of the software protect Proms they talk about. This way when a person buys an update all they have to do is send in their old disk, Myarc copies the new version on this and puts on their code so there prom can read the disk. It may be even cheaper in the long run this way.

MY-Word v.1.22 looks like the last version to be released all bugs fixed and one additional command. Though I did have a little problem in word wrap mode with the insert. As the function keys seem to swap with the control keys. The new command you may now set a pathname from which to load MY-Word, by entering SP at the command line. By setting a pathname you my load the program from any divice you wish without going through a divice search (i.e. drive one, drive two, ect.) Note: MWG, MWS and the)CONTROL files must be unprotected.

Two last Notes on Mdos 1.14 Myarc in there great wisdom has changed their hard drive assign WDS1 has been replaced with hdS1.

```
A>ASSIGN E=hdS1: (E maybe any
letter you wish)
A:E:
E>
```

The AUTOEXEC file may be any name you wish and can be called from any file (i.e. batch and/or autoexec) desired. Additionally, it may be called from the keyboard, in all cases the file must be preceded with the "%" when called . I find this usefull as with TIMODE in my boot AUTOEXEC I can only have a 90k. ram disk. So, I have another autoexec named AUTO which doesn't have timode on it and I set the ramdisk to 180k. Also, as a bonus I find when I use the copy command dos can now copy more files in a single pass.

Now for a new Mdos program called Picture Transfer from Genial Computerware and written by Paul Charlton. Picture Transfer is just as the name suggests, that is for tranfering one graphics format to another. At this time it can convert GIF, GRAPHX, RLE, TI-ARTIST, and MY-ART formats to either MY-art or GIF formats from Mdos. My only wish is that it could also save in Rle format . This would allow me to go the other way for some of my Gpl software such as Font Writer II and the like, maybe later they may do this. Well Picture Tranfer allows making slide shows with the use of what the manual calls Script files.

Script files must be DIS/VAR 80 type files, you know TI-WRITER type files. If you use MY-Word use the PE or program edit mode. If you are using the 80 column Fnl/Web use the EA editor. The script file is nothing more then a batch file for use with the program.

There is also a feature to allow you to show off the the Geneve to others . This will let you SIMULTANEOUSLY DISPLAY 4

TI99/4A graphic screens on the Geneve at one time. That is, TI-Artist, RLE, or GraphX format type pictures.

One last item Picture Transfer can also clip sections from different pictures to make new pictures. Even sections from different formatted pictures.

When I first got my copy there was a card to send in to register your copy of Picture Transfer . What, the heck I sent them the money wasn't I already registered well; I guess not. When I tryed to use the direct access to Mdos commands and save files, it would say this feature not on the unregistered copy. I don't understand why they would want to delay my use of these features or are they done or what. I sent in my card and will let you know what happens. Just a thought if you could load scripts for music and speech you could have a talking book, this is a wish more then anything. Roger.

The other day I downloaded a set of programs from Marks new BBS. One of the files was a music program that run out of the Editor Assembler. I lryed to load the program only to find that the program was for the Super Cart. I thought about it for a while, then it accured to me if at the GPL Menu, I pressed the function 1 and 2 keys it would unprotect CRU address 6000 and 7000 the same memory as the Super Cart. Doing this ther loading the Editor / Assembler I found that I had the power of a Super Cart on the Geneve not bad, hey.



WHY TIBASE??

by PAUL SNEIDER

"WHY WOULD I USE THE "TIBASE" DATABASE PROGRAM?"

1. A GROCERY LIST
2. A COLLECTION OR HOBBY- STAMP, BASEBALL CARDS, COIN, ETC.
3. A RECIPE FILE
4. A MAILING LIST WITH ADDITIONAL DATA
5. INDIVIDUAL OR TEAM STATISTICS- BOWLING, BASEBALL, BASKETBALL, SOFTBALL, BRIDGE, ETC
6. CATALOGS- VCR TAPES, SOFTWARE DISKS, MUSIC RECORDS
7. MAGAZINE ARTICLE CATALOGS

"YA, BUT HOW WOULD I USE THESE DATABASES?"

GROCERY LIST:

If you shop at two or three grocery stores, you could save yourself time and money. Setup a database file with fields that identify:

- A. Each item that you would purchase,
- B. Which aisle that item is in for each store
- C. The price for the item for each store.
- D. One field for "flagging" or identifying this item to be purchased.

I shop at two stores, one I prefer to use regularly but it isn't open on Sunday, when sometimes my schedule only allows time for shopping. So, I can go thru the file one item at a time to identify which items are needed, then sort the file according to that stores aisle numbers, then printout only the items needed in ascending order of aisles. Makes shopping very easy. If you like to shop two or three stores to get the best prices, your database file can select the best prices and printout lists according to aisle numbers for each store.

COLLECTIONS, CATALOGS, ETC

Say you have a large collection of coins, or stamps, or baseball cards, or whatever- your database could store information on these items and have them located when

needed. Setup a file like this:

- A. Item name- Mickey Mantle
- B. Year of issue
- C. Team
- D. Playing position- Pitcher, left field, etc
- E. Card condition- Excellent, good, poor, etc
- F. Misc. description
- G. Price paid
- H. Current value
- I. Card number

Now, you have one thousand and fifty cards like this and you want to find all the New York Yankees cards for players from 1950 thru 1955 and only in "good" condition and printout the list. "TIBASE" can do it.

Or you know that inflation has caused your card values to increase fifteen percent. "TIBASE" can update each and every "current value" very easily.

STATISTICS-

OK, You coach a softball team, and want to keep records and statistics on each player. Setup a file like this:

- A. Player name
- B. Player number
- C. Times at bat
- D. Number of hits
- E. Batting average

Every week you would update "Times at bat" and "Number of hits" then let "TIBASE" calculate the individuals "Batting average" and then the whole teams' batting average. A lot more statistics could be calculated but this is the basics of "TIBASE" capabilities. This example could also work for bowling, baseball, bridge, etc.

RECIPE FILE-

Now you setup a file with a lot of recipes with ingredients and instructions. You decide one day that for dinner you want to have a casserole. You want it to feed six people, use hamburger, and take only thirty minutes or less to prepare. (Of course, you already have this data in your file). "TIBASE" could locate all the "Hamburger" recipes that are "Casseroles" and that take less than thirty minutes to prepare

and, then, calculate the appropriate amounts of ingredients.

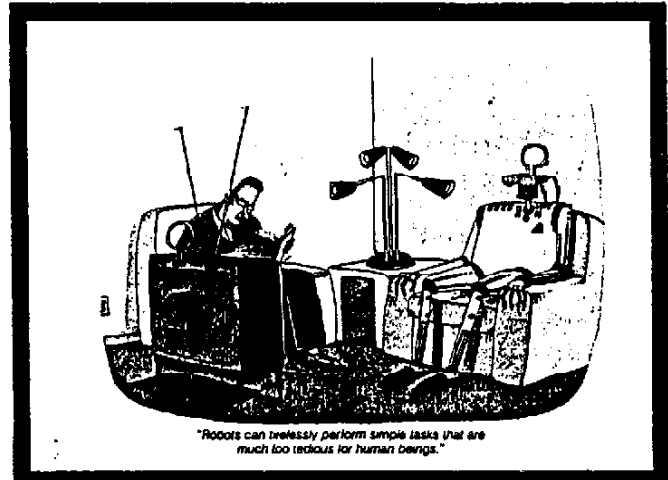
MAILING LIST

A lot of computer users can benefit from a mailing list program, but one that is setup using a database is even better! Try this:

- A. First Name and initial,
- B. Last Name,
- C. Street Number,
- D. Street Name,
- E. City,
- F. State
- G. Zip
- H. Phone Number
- I. Spouses Name
- J. Childrens Names
- K. Hobbies
- L. Birthday
- M. Misc.

The possibilities are endless. You could sort by "Zip" code and print only those in certain Zip code areas. OR sort by "Last Name" and print only those whose name is "Smith". OR print only those whose name is "Smith" who also live in Zip code 43611. OR print only those whose name is "Jones" in Zip code 43606 with children and has a computer as a hobby. OR sort by "Street Name" and print all those who live on "Main" street. OR print all who live on "Main" street with children and whose wife is named "Judy". OR ETC, ETC, ETC.

NOW, CAN YOU USE "TIBASE"???



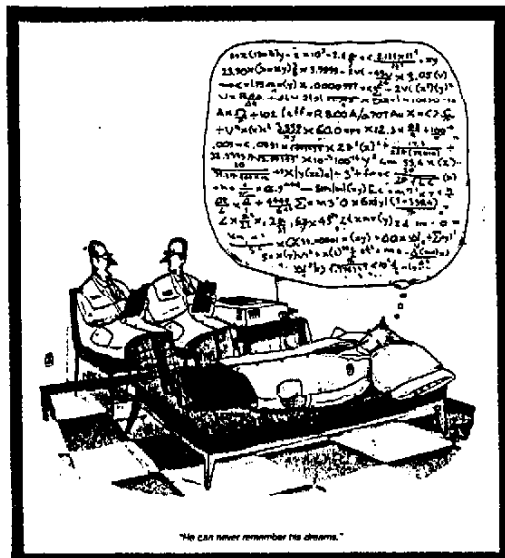
1 REM THIS PROGRAM SHOWS HOW TO WRITE TO A PROGRAM LINE WHILE THE PROGRAM IS RUNNING
2 REM THIS IS A GOOD REASON TO KNOW WHERE THE LINE NUMBER TABLE IS.

```
80 ON ERROR 85 :: GOTO 90
85 RUN "DSK1.I254XB"
90 CALL CLEAR :: CALL CHARGE
T :: CALL INIT :: CALL SCREE
N(8):: FOR SET=1 TO 12 :: CA
LL COLOR(SET,16,2):: NEXT SE
T :: CALL COLOR(0,16,2)
100 DISPLAY AT(3,4)ERASE ALL
BEEP:"INTERNAL VARIABLE 254
": " AND XB FILE RUNNER
"
```

```
110 DISPLAY AT(22,2):"FILENA
ME>DSK1. <"
115 DISPLAY AT(10,1):"PROGRA
M BY KEN MARSHALL JR.,"
PO BOX 193": "
HILLIARD, OHIO": "
43026"
```

```
120 ACCEPT AT(22,14)SIZE(-12
):A# :: CALL CHARSET :: CALL
CLEAR :: DISPLAY AT(12,1):"
LOADING .....": "
```

```
>>> DSK";A#;" >>>"
130 CALL INIT :: CALL PEEK(-
31952,I,J):: CALL PEEK(I*256
+J-65534,I,J):: K=I*256+J-65
534 :: D#="DSK"&A# :: CALL L
OAD(K,LEN(D#))
140 FOR L=1 TO LEN(D#):: CAL
L LOAD(K+L,ASC(SEG$(D#,L,1)
):: NEXT L :: CALL LOAD(K+L,
0)
150 RUN "DSK1."
```



ATDT 1-419-893-4204
CONNECT

PBBS v1.30 Copyright 06/06

A to Abort

** ** * ** * ** *
** ** * ** * ** *
***** ** * ** *
***** ** * ** *
** ** * ** * ** *
** ** * ** * ** *

Welcome to

*** Communiqu'e BBS ***

(a pbbs system)

-----+
| 300/1200/2400 BPS 80,N,1 |
-----+

Available ?? hours, except when the
SysOp needs the system!

SysOp...MARK
CO-SysOp...DAVID
Advisor...WHEN..FOUND..?....

*** THE MAIN MENU #1 ***

- [C] Chat with SysOp
- [D] File Transfer section
- [E] Enter a message
- [F] Feedback to SysOp
- [G] Goodbye (logoff)
- [H] Help on menu prompts
- [I] Information
- [L] List of callers
- [M] Message base
- [N] Newsletter
- [O] Other BBS systems
- [P] Password Change
- [Q] Quickread (new/no pause)
- [R] Read messages (new/pause)
- [S] Set Screen width
- [T] Toggle clear screen character
- [U] User list
- [X] eXpert mode toggle
- [Y] Your status
- [!] Bye-bye! (any menu)

Choice?> M

** Downloads & Uploads **

Which drive?

- [A]abort
- [1]DRIVE_1

[2]OURBBSFILE
[3]BOARDTHREE
Choice? > 1

*** DRIVE_1 ***

* TRANSFERS *

- [A]bort to MAIN
 - [C]atalog
 - [D]ownload
 - [L]ist files
 - [S]elect another drive
 - [U]pload
- Choice?> C

Jeffs Tiny BB

(508) 754-0271

3/12/24

-N-1

+-----+
!TI99/4A !
Sysop: ##### +-----+
!#####!==!
Jeff Atz ##### !#####! !
* +-----+-----

**** 20 MB HARD DSK COMING DUN! ****

no... TI catageory... I hate NOISE!
CaI just wanted to letcha know that I am
a felow sysop with a TI running PBBS.
My board is currently called "Jeff's
Tiny BBS", and is at this number: (508)
754-0271. 3/12/24, 8-N-1, and is
available 24 hrs unless I am using the
system. I am getting a 20 meg hard
drive within a month, also!

That's all...

later...

Jeff

```

100 CALL CHAR(48,"0038444C54
644438")
110 ON WARNING NEXT :: ON BR
EAK NEXT :: CALL CLEAR :: CA
LL WHO :: DISPLAY AT(22,2):"
DRIVE NO.>0-9<>= also ENTER
" :: ACCEPT AT(23,17)SIZE(-1
)VALIDATE("0123456789"):D$
120 IF D$="0" THEN CALL AGAI
N ELSE 130
130 INPUT "FILENAME=":FILE$
140 CALL CLEAR :: ON ERROR 2
10 :: OPEN #1:"DSK"&D$&". "&F
ILE$,INPUT ,VARIABLE 80 :: R
=1
150 IF EOF(1)=1 THEN GOTO 20
0 :: ELSE LINPUT #1:M$ :: DI
SPLAY AT(R,1):M$ :: R=R+3 ::
GOSUB 160 :: GOTO 150
160 IF R<23 THEN RETURN
170 DISPLAY AT(24,8):"Press
any key"
180 CALL KEY(0,K,S):: IF S=0
THEN DISPLAY AT(24,8):" " :
: GOTO 170
190 CALL CLEAR :: R=1 :: RET
URN
200 DISPLAY AT(24,9):"PRESS
ENTER" :: ACCEPT AT(24,20):Z
Z$ :: CALL CLEAR :: CALL AGA
IN
210 CALL CLEAR :: DISPLAY AT
(15,7):"FILE NOT FOUND": : "
*CHECK DIRECTORY!*": : "
or file wrong type": : "
*PRESS 0 FOR OPTIONS*" :: FO
R I=1 TO 1600 :: NEXT I :: R
UN
220 SUB WHO
230 DISPLAY AT(12,6):"By Rog
er Feinauer": : " Marc
h 1,1989" :: DISPLAY AT(8,12
):"README": : " SIMPLE DIS/V
AR 80 READER" :: DISPLAY AT(
19,4):"(PRESS 0 for OPTIONS)
" :: SUBEND
240 SUB AGAIN
250 CALL CLEAR :: DISPLAY AT
(10,6):"1> RUN AGAIN?": : "
2> END PROGRAM": : " 3
> QUICK DIR"
260 DISPLAY AT(23,4):"SELECT
A NUMBER" :: CALL KEY(5,N,S
):: N=N-48 :: IF N<1 OR N>3
THEN 260 :: ON N GOTO 270,29
0,280
270 RUN :: CLOSE #1 :: SUBEX
IT
280 CALL DIR :: SUBEXIT
290 CALL CLEAR :: END :: SUB
END

```

```

300 SUB DIR
310 CALL CLEAR :: Q1=0
320 DIM TYPE$(5)
330 TYPE$(1)="DIS/FIX"
340 TYPE$(2)="DIS/VAR"
350 TYPE$(3)="INT/FIX"
360 TYPE$(4)="INT/VAR"
370 TYPE$(5)="PROGRAM"
380 INPUT "MASTER DISK (1-9)
?":I
390 I=INT(I)
400 IF (I<1)+(I>9)=-1 THEN 3
00
410 ON ERROR 562 :: OPEN #1:
"DSK"&STR$(I)&".",INPUT ,REL
ATIVE,INTERNAL
420 INPUT #1:A$,J,J,K
430 DISPLAY "DSK":STR$(I):"
- DISKNAME= ":A$:"AVAILABLE
=":K;" USED= ":J-K
440 DISPLAY : "FILENAME SIZ
E TYPE P": "-----
----- --";
450 Q1=Q1+1 :: IF Q1=18 THEN
CALL PAU(Q1)ELSE 451
451 IF Q1=40 THEN CALL PAU(Q
1)ELSE 452
452 IF Q1=62 THEN CALL PAU(Q
1)ELSE 453
453 IF Q1=84 THEN CALL PAU(Q
1)ELSE 454
454 IF Q1=106 THEN CALL PAU(
Q1)ELSE 455
455 IF Q1=124 THEN CALL PAU(
Q1)ELSE 460
460 Q1=Q1 :: INPUT #1:A$,I,J
,K
470 IF LEN(A$)=0 THEN 550
480 DISPLAY :A$;TAB(12);J;TA
B(17);TYPE$(ABS(I));
490 IF ABS(I)=5 THEN 520
500 B$=" "&STR$(K)
510 DISPLAY SEG$(B$,LEN(B$)-
2,3);
520 IF I>0 THEN 450
530 DISPLAY TAB(28);"Y";
540 GOTO 450
550 CLOSE #1
560 INPUT " <PRESS ENTER
>":A$ :: CALL CLEAR :: RUN
562 CALL CLEAR :: DISPLAY AT
(10,2):"SORRY NO DISK IN DRI
VE #"&STR$(I): : " or DR
IVE NOT ON !" :: FOR H1=1 TO
1200 :: NEXT H1 :: RUN :: S
UBEND
570 SUB PAU(Q1)
580 PRINT : :
590 DISPLAY AT(23,2):"PRESS

```

CONTINUED FROM PAGE 10

```

>1 TO END": " PRESS >2 TO CON
TINUE" :: CALL KEY(5,N1,S)::
N1=N1-48
600 IF N1<1 OR N1>2 THEN 590
:: ON N1 GOTO 610,620
610 IF N1=1 THEN RUN :: SUBE
XIT
620 Q1=Q1 :: IF N1=2 THEN CA
LL CLEAR :: SUBEXIT
630 SUBEND

```



This program can help you with many facites of math . Type in the program and run. Use Extend ed Basic. if you are using a disk system change line 1192 to RUN"DSKn.program" Where "n" is the drive number and "program place the name of the PROGRAM YOU WISH TO RUN.

```

1000 REM MATH AIDES
1002 CALL SCREEN(16)
1004 CALL CLEAR
1006 ON BREAK NEXT
1008 ON WARNING NEXT
1010 CALL SPRITE(#1,77,2,48,
16)
1012 CALL SPRITE(#2,65,2,48,
16)
1014 CALL SPRITE(#3,84,2,48,
32)
1016 CALL SPRITE(#4,72,2,48,
48)
1018 CALL MAGNIFY(2)
1020 CALL MOTION(#1,0,20,#2,
0,20,#3,0,20,#4,0,20)
1022 CALL POSITION(#1,X,Y)::
IF Y>75 THEN CALL MOTION(#1
,0,0,#2,0,0,#3,0,0,#4,0,0)EL
SE 1022
1024 CALL SPRITE(#5,65,2,80,
256)
1026 CALL SPRITE(#6,73,2,80,
240)
1028 CALL SPRITE(#7,68,2,80,
224)
1030 CALL SPRITE(#8,83,2,80,
208)
1032 CALL MOTION(#5,0,-20,#6
,0,-20,#7,0,-20,#8,0,-20)
1034 CALL POSITION(#8,X,Y)::
IF Y<124 THEN CALL MOTION(#
5,0,0,#6,0,0,#7,0,0,#8,0,0)E

```

```

LSE 1034
1036 FOR D=1 TO 100 :: NEXT
D
1038 CALL PATTERN(#5,83,#6,6
8,#7,73,#8,65)
1040 FOR C=3 TO 14
1042 CALL COLOR(#1,C,#2,C,#3
,C,#4,C,#5,C,#6,C,#7,C,#8,C)
1044 FOR D=1 TO 50 :: NEXT D
1046 NEXT C
1048 FOR D=1 TO 150 :: NEXT
D
1050 CALL DELSPRITE(ALL)
1052 ! ** MENU **
1054 CALL SCREEN(8)
1056 DISPLAY AT(1,10)ERASE A
LL:"MATH AIDES"
1058 DISPLAY AT(5,1):"1)QUAD
RATIC EQUATION          2)TRIA
NGLE AREA                3)AVER
AGES                      4)STOP
"
1060 DISPLAY AT(9,1):"5)RUN
ANOTHER PROGRAM"
1062 DISPLAY AT(15,10)BEEP:"
YOUR CHOICE?"
1064 CALL KEY(0,K,S):: IF S=
0 THEN 1064
1066 IF K>53 OR K<49 THEN 10
62 :: CH=VAL(CHR*(K))
1068 ON CH GOTO 1070,1118,11
48,1182,1188
1070 ! QUADRATIC EQUATION
1072 CALL SCREEN(4)
1074 DISPLAY AT(1,10)ERASE A
LL:"AX^2+BX+C"
1076 DISPLAY AT(3,1):"ENTER
A,B,C" :: DISPLAY AT(5,1):"A
:" :: DISPLAY AT(7,1):"B:" :
: DISPLAY AT(9,1):"C:"
1078 ACCEPT AT(5,3)SIZE(10)B
EEP:A :: ACCEPT AT(7,3)SIZE(
10)BEEP:B :: ACCEPT AT(9,3)S
IZE(10)BEEP:C
1080 Y=B^2-4*A*C
1082 IF Y<0 THEN 1100
1084 ! ** REAL ROOTS **
1086 X1=(-B+SQR(Y))/(2*A)
1088 X2=(-B-SQR(Y))/(2*A)
1090 DISPLAY AT(1,10):"REAL
ROOTS"
1092 DISPLAY AT(12,1):"ROOT
1 =" :: DISPLAY AT(14,1):"RO
OT 2 =" :: DISPLAY AT(12,9):
X1 :: DISPLAY AT(14,9):X2
1094 DISPLAY AT(22,1):"PRESS
REDO TO CHANGE VALUES PRESS
BACK TO RETURN TO MENU"
1096 CALL KEY(5,K,S):: IF S=

```

CONTINUED ON PAGE 12

CONTINUED FROM PAGE 11

```

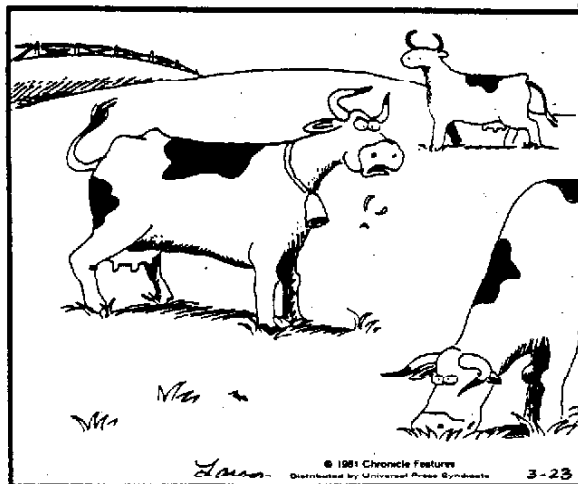
0 THEN 1096
1098 IF K=6 THEN 1070 :: IF
K=15 THEN 1052 ELSE 1096
1100 ! ** COMPLEX ROOTS **
1102 R=-B/(2*A):: J=SQR(ABS(
Y))/(2*A)
1104 DISPLAY AT(1,8):"COMPLE
X ROOTS"
1106 DISPLAY AT(12,1):"ROOT
1 = +J" :: DISPLAY AT(
14,1):"ROOT 2 = -J"
1108 DISPLAY AT(12,10):USING
"##.####":R
1110 DISPLAY AT(14,10):USING
"##.####":R
1112 DISPLAY AT(12,17):"+J"
:: DISPLAY AT(14,17):"-J"
1114 DISPLAY AT(12,19):USING
"##.####":J :: DISPLAY AT(1
4,19):USING "##.####":J
1116 GOTO 1094
1118 ! ** TRIANGLE **
1120 CALL SCREEN(4)
1122 DISPLAY AT(1,9)ERASE AL
L:"TRIANGLE AREA"
1124 DISPLAY AT(5,1):"ENTER
EACH SIDE" :: DISPLAY AT(7,1
):"A:" :: DISPLAY AT(9,1):"B
:" :: DISPLAY AT(11,1):"C:"
1126 ACCEPT AT(7,3)BEEP:A ::
ACCEPT AT(9,3)BEEP:B :: ACC
EPT AT(11,3)BEEP:C :: IF A=0
OR B=0 OR C=0 THEN 1126
1128 S=(A+B+C)/2 :: AREA=SQR
(S*(S-A)*(S-B)*(S-C)):: DISP
LAY AT(17,1):"TRIANGLE IS:"
1130 DISPLAY AT(15,1):"AREA
IS:" :: DISPLAY AT(15,9):USI
NG "####.##":AREA
1132 IF A=B AND B=C THEN 113
8
1134 IF A=B OR A=C OR B=C TH
EN 1140
1136 DISPLAY AT(17,14):"SCAL
ENE" :: GOTO 1142
1138 DISPLAY AT(17,14):"EQUI
LATERAL" :: GOTO 1142
1140 DISPLAY AT(17,14):"ISOS
CELES"
1142 DISPLAY AT(22,1):"PRESS
REDO TO CHANGE VALUES PRESS
BACK TO RETURN TO MENU"
1144 CALL KEY(5,K,S):: IF S=
0 THEN 1144
1146 IF K=6 THEN 1118 :: IF
K=15 THEN 1052 ELSE 1144
1148 ! ** AVERAGES **

```

```

1150 CALL SCREEN(4)
1152 T=0
1154 DISPLAY AT(1,10)ERASE A
LL:"AVERAGES"
1156 DISPLAY AT(2,1):"HOW MA
NY NUMBERS(15 MAX):"
1158 ACCEPT AT(2,26)VALIDATE
(DIGIT)SIZE(2)BEEP:A
1160 IF A>15 THEN 1156
1162 DISPLAY AT(3,1):"ENTER
NUMBERS"
1164 FOR Z=4 TO 3+A
1166 ACCEPT AT(Z,20)BEEP:N
1168 T=T+N
1170 NEXT Z
1172 DISPLAY AT(20,5):"AVERA
GE IS:"
1174 AV=T/A :: DISPLAY AT(20
,16):USING "#####.##":AV
1176 DISPLAY AT(22,1):"PRESS
REDO TO CHANGE VALUES PRESS
BACK TO RETURN TO MENU"
1178 CALL KEY(0,K,S):: IF S=
0 THEN 1178
1180 IF K=6 THEN 1148 :: IF
K=15 THEN 1052 ELSE 1178
1182 ! ** END **
1184 CALL CLEAR
1186 END
1188 ! RUN ANOTHER PROG.
1190 DISPLAY AT(10,1)ERASE A
LL:"PROGRAM WILL BE LOADED F
ROM CASSETTE UNIT CS1"
1192 RUN "CS1"

```



"Hey, wait a minute! This is grass! We've been eating grass!"

