

# HOME COMPUTER NEWSLETTER



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### CONTRIBUTIONS

Members and non members are invited to contribute articles for publication in HV99 NEWS.

Any copy intended for publication may be typed, hand written, or submited on tape/disc media as files suitable for use with TI Writer (ie. DIS/FIX 80 or DIS/VAR 80). A suitable Public Domain word processor program will be supplied if required by the club librarian.

Please include along with your article sufficient information to enable the file to be read by the Editor eg. File Name etc. The preferred format is 35 columns and page length 66 lines, right justified.

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## SECRETARYS REPORT



FROM ALBERT ANDERSON

Welcome once again to all of our followers. As this financial year closes it looks like the year ahead promises to be just as full. Winter is with us now and still club nights see 40 or so in attendance. And why not; the demo for last month for example was what a lot of people would have paid good money to be in on. It was an up-date tutorial on the McGoverns latest version  $\alpha f$ FUNNELWEB done by Tony himself. one word, excellent. One can only appreciate the work in this disk when the whereto's and whyfor's are given as only Tony or Will could. Thank you both for your continued up-grade and support with Funnelweb.

Membership renewals almost daily fill my letter box and I would like to thank those that have done so already. Members are reminded that renewal is due on the 30th June and early renewal is much appreciated by the paper shuffler - me!!

Members please now have a look at your mailing label either on the mag or on the envelope. Notice your membership number is now accompanied by your financial status! Yes, Current means you are currently financial; Renew Now!! is a subtle reminder to do just that and after JULY if you haven't renewed your membership your AUGUST issue will carry the message LAST ISSUE. This message is self explanatory and I'm not going to have to send out lany of these am I ????

Two new members are welcomed month; Ruth Westernhagen from the area, Nelson Bay and Munchenberg from Camden Park which I believe is a suburb of Adelaide, South Australia. All club services are available to you both (software, publications libraries etc.) and in Jeromes case you will automatically included in the be exchange newsletter 'chain' for our non-local members.

The non-computer night out was a beauty. The out of the way venue at Beresfield provided a top class Chinese style banquet for the 20 or so that came along and it goes to show that even computer addicts really can appreciate something else 'toy'...F0000D!!! their besides nights out together are These becoming more popular and I feel that a more regular interval between drinks will be the order in future.

MICROpendium wanters... continue from our members for copy of this outstanding 4A magazine. To date it has been difficult members to get this from publications library, solely because of its popularity. An offer has come from the TIsHUG group in Sydney to supply HV99 members that want there own copies of MICROpendium with them at approx \$3.00 per copy. Details on this are to be worked out shortly. This would be the most cost effective means of getting 'Mp' and I would like to thank the TISHUG for this offer for people membership to take advantage af their bulk buying capabilities. interested please contact publications librarian or myself on this.

Word has come from the west that the TIUP group is looking at changing the club's direction to include coverage of IBM and IBM compatibles. Congratulations are also extended to the new office bearers of the TIUP group which were installed at their AGM in May and best wishes in your new endeavours. A new name for the group might be a good one to work out!!!

WELCOME BACK to HV99 member John Picinnich who has just arrived home (Caboolture, QLD.) from a 3 month visit to the USA. I believe that John has spread the good word of

HV99 all around the many user groups that he visited and he now needs about 6 months off work while he goes through all the stuff and learns how to drive the new hardware he brought back with him! Thanks for that John.

From RYTE DATA in Canada, the long awaited news on double density of the TI. PE-Box disk controller was recieved. Word is that this new software provides for double the STORAGE capability of this controller by giving access to 80 TRACK format which means of course that you must have 80 TRACK drives to take advantage of this. detail is given in an article elsewhere in this issue but in a nutshell, double STORAGE is obtained by a change in track formatting and not by a density change.

Whilst I'm on overseas news, Mike Heuser from Workshop Rheinland has sent us some info on an EPROM burner and as soon as it is deciphered that info will be made available. Still on Germany, Peter Gleed from the Melbourne group is expected to fly over there (by aeropiane) on the 15th of this month. If you want any MECHATRONICS equipment brought back he is a very obliging gentleman and a phone call to Peter on Ø3-877479Ø and some 'redbacks' (greenbacks in the US) is probably all it will take.

Well, with a bit of luck I'll be back with this column next month. I'm off to buy a few votes - AGM this month. Bye now!!!

> Albert Anderson 4a4me

#### FOR SALE ODDITY

- \* Complete TI-99/4A System
- \* FREIGHT-TRAIN TYPE
- \* RS232, Disk controller
- \* 32K Memory etc.
- \* ALL STAND-ALONE
- (with software & books)
- \* A rare breed this one!

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## From the Editor-Assembler

AGM time again where does time 90?

T would like to thank all the members who, over the last months, have contributed something to the Newsletter. Without you this magazine would not be informative, entertaining and varied magazine that it is today. It is through this varied input that will continue to bring to our members all the <u>relevant</u> news regarding happenings in the world of the fl and compatibles.

As the number of TI's in use around the world dwindles, resulting in all User Groups becoming smaller, it becomes much more important that everyone in the TI family work just that little bit harder to ensure that everyone still determined to stick with their TI gets the maximum benefit from the vast amount of knowledge and expertise, both here and overseas, remaining in the TI community

We as a group can help by publishing in newsletter our original articles of interest to users around the world, so if у**о**ц have the expertise in some area YOU HAVE A DUTY to the TI community to ensure that this information shared.

If you are a member of the HV99ers, write something for this newsletter soon, and if you are a member of one of our sister groups elsewhere in the world, write for groups newsletter. I can assure you that it is quite rewarding experience.

In closing, again thanks for yovr contributions - keep up good work!!

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### RANDOM BYTES

#### TROM

#### BOB CARMANY

This month, I decided to take a "break" from programs and little such to take a look at what is available on the software market. All of the prices will be in dollars so plan your American purchases on that basis.

The first package that we are going to look at is one called PRESCAN\_IT! It is produced by Asgard Software and was authored by J. Peter Hoddie. Ιt really doesn't that can't otherwise be anything done "by hand" but it is just much more convenient to use.

The program will take an Extended BASIC program that was SAVEd in the format and scan it, then insert the correct code to turn off | For those of you who would like the It has the ability to (up to five  $\emptyset$ -4) and will Box 4578, access "External" XB words It is completely menu-driven but the their service. documentation is not the best most complete that I have seen. Now, for a little "editorial". Also, if the program that you are seems that the TI world is getting processing is very long, you will smaller and smaller lately! That have time to go out and have a goes for software producers as well couple Foster's ,4X, or whatever as TI-specific publications. I was before it finishes. though, it is probably worth the Miller stopped producing THE SMART \$10.00 price tag. It will save you PROGRAMMER. I was more disappointed the aggrevation of trying to figure when he announced that it was being exactly where the commands should go in the program Bytemaster and trying to cross-reference all of Bytemaster, the variables, etc.

Book" -- the TENEX mail order catalog the tradition is out. There is really nothing new PROGRAMMER! The first in it although the were and exciting prices on some hardware items has subscribers, thing, they have the STAR NP-10 31st, October issue on January retailers are asking for it. still have some of the "oldies" but contemplated subscribing

INFOCOM appears that the adventure games are getting V-E-R-Y difficult to find. ZORK I is still available but very little else is.

The GRAPHX COMPANION III and packages are recent releases from Asgard Software. They have more of the character fonts and some clip-art for the GRAPHX package. If you are into computer graphics, and use the GRAPHX package, it is well worth the \$9.95 price tag.

DISPLAYMASTER (Texaments \$14.95) and ARTCONVERT (Trio Software \$9.95) are a couple of packages to combine TI-Artist fonts and instances with TI-Writer (or FUNNELWEB) files to produce distinctive letterheads and other graphic representations. They are also available from TENEX.

There has also been reduction on the SUPERSPACE 11 from DataBioTics. cartridge The "giant" module --E/A GROM 32K of battery-backed RAM and the software to go with it can be had for \$69.95. That might be worth looking into.

and turn on the XB pre-scan command. | address, here is the address for rename TENEX: TENEX Computer Express, P.O. South Bend, Indiana from 46660-6578, USA. They will send you other files on the disk (like the a free catalog for the asking and I Myarc XBII or MECHATRONICS XBII+). have never had any problems with

All in all, a little disappointed when Craig pre-scan published by Richard Mitchell's Publications. Bytemaster, you recall, use print the SUPER 99 MONTHLY used to turned out to be \*THE SUPER 99 The latest issue of "The Everything BI-MONTHLY". Well, he has kept with THE SMART two issues time on (to get new doubt!). no Μу been reduced slightly. For one September issue arrived on October printer for \$189.95 which is about and the November issue on February under what most of the 28th -- and I am still waiting for They the December issue. If you ever

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or he SMART PROGRAMMER, my advice is DON'T!!! HOME COMPUTER MAGAZINE isn't dead, it just changed its name to:THE SMART PROGRAMMER!

Well, I'm going to cut this column a little short. Next time we will have a program that will read ANY file --even Multi-plan and give you the option of printing it on your printer. The program made use of PRESCAN\_IT! and runs from Extended BASIC. 'Til next time. . .

#### WHATS IN A CODE

This article was written by a member of the HV99ers, but for reasons of shyness wishes to remain anonymous. It is the same member who wrote the article on Factorials that appeared in the April issue of this Newsletter.

When I first started with my 9974A and worked my way through the Users Reference Guide (URG), the KEY subprogram was noted with only passing interest and I subsequently used CALL KEY in the more or less standard format:

10 CALL KEY(Ø,KEY,STATUS)
20 IF STATUS-Ø THEN 10

When I came across a variation 20 IF KEY=-1 THEN 10 I checked the URG only to find no mention of the return variable used in this manner. So a check of 10 CALL KEY(0,KEY,STATUS) 20 PRINT KEY;STATUS sure enough produced -1 for KEY when not key was pressed and the STATUS went from 0 to 1 and -1 as per the book.

I then decided to check out the other data on pages II-88 and 89 of URG. The Control and Function codes checked out as listed with a couple of exceptions. In Pascal scan (KEY unit 4) I get 13 from the ENTER key instead σf 141. And in scans  $\emptyset$ ,3,4,5 and 6 I couldn't confirm the code for FCTN=. FCTN 4 had to be confirmed after breakpoint. The ASCII character codes were as per the keys.

Without any other data to refer

to, I surmise that the Function and Control codes carry out internal operations when the relevant keys are activated such as indicated on overlay strips.

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Also, in addition to Control codes 1-31, 128-159 and 187 and Function codes 1-15 and 129-143 as listed in URG, other codes can be obtained by other key operations. These are Control codes 176-183 and Function codes 184-186 and 188-198. I guess these unlisted codes do not apply to computer operations.

A few other variations are also available by operating Control or Function as well as Shift keys. Mainly keys 2,3 and A-G are those involved. CLEAR (usually FCTN 4) can be obtained by FCTN SHIFT F, except on KEY unit 2. And in KEY unit 4 mode, CTRL, will produce Ø.

These codes are merely numbers, and apart from their resulting actions in conjunction with CTRL and FCTN keys, can be used in mathematical calculations.

Numbers 32-127 are covered by the ASCII list. Key operations to generate numbers Ø-31, 128-159 and 176-198 are given in the list at the end of this article. Keyboard keys are listed under KEY units and CTRL/FCTN eg 45C indicates KEY unit 4 or 5 and Control key.

Having checked out the codes I wondeed what would result with CHR\$(CODE) on non-ASCII numbers. On my 99/4A I got results on codes 128-131 and 160-167. 24-29, When used with HCHAR, the composition of 'characters' periodically changes as the program executes, particularly where RND or loops are involved.

Anyone need a backgroung for an Egyptian Adventure game? Try this for hieroglyphics!

10 CALL CLEAR
20 FOR Y=1 TO 24
30 FOR X=1 TO 32
40 RANDOMIZE
50 CH=INT(RND\*8)+160
60 CALL HCHAR(Y,X,CH)
70 NEXT X
80 NEXT Y
90 CALL SCREEN(8)
100 FOR D=1 TO 500
110 NEXT D
120 GOTO 10

and ernal then for a change try keys 9Ø CALL SCREEN(3) d on Whilst CALL KEY is simpler than INPUT for many applications, it does htrol not show characters on the screen, and that input errors are not easily 13 as detected. Although it's a simple be matter to display CALL KEY input ions. characters, it then negates and simplicity. However, deciding to 198. use Guidelines for Governmental not Committees as my inspiration, I managed to come up with an INPUT program to move it all away from the also bottom left hand corner and work or from CALL KEY. eys. hose To maintain familiarity, the ? N 4) and blinking cursor are retained. F. resultant HCHARS and loops KEY involved make implimentation SLOW Ø. and keys have to be held down until there is a response on the screen, ers, 50 lines 310 and 320 are included to ting stop repetition of characters. and in 10 CALL CLEAR ZØ GOTO 8Ø 30 FOR L=1 TO LEN(A\$) Ьγ 40 CH=ASC(SEG\$(A\$,L,1)) s to 50 CALL HCHAR(Y,X+L,CH) and 60 NEXT L the 7Ø RETURN keys 8Ø X=5 and 9Ø Y=3 unit 100 AS="TYPE YOUR NAME" 110 GOSUB 30 120 Y=5 s I 13Ø A= "THEN PRESS ENTER" hith 14Ø GOSUB 3Ø On 15Ø B\$="" des 16Ø X=8 hen 170 CALL KEY(Ø,R,S) n4 18Ø KX=A Шy 190 KY=7 **e**s, 200 CALL HCHAR (KY, KX, 63) are 21Ø CALL HCHAR(KY,KX+2,3Ø) 22Ø FOR D=1 TO 1ØØ 23Ø NEXT D an 240 CALL HCHAR(KY, KX+2, 32) his 25Ø IF R=-1 THEN 17Ø 260 IF R=13 THEN 340 27Ø Y=7 28Ø X=X+1 290 CALL HCHAR(Y,X,R) 300 B\$=B\$&CHR\$(R) 310 CALL KEY(0,R,S) 32Ø IF S<>Ø THEN 31Ø 33Ø GOTO 17Ø 34Ø X=5 35Ø Y=11 36Ø C\$="BYE" 37Ø A\$=C\$&B\$

38Ø CALL CLEAR 39Ø GOSUB 3Ø

42Ø GOTO 1Ø 4C 5F 5C 4F 45C 45F 128 176 Ø 7 129 1 Α 177 1 2 B BP 130 B BP 178 2 3 C 131 С 179 3 D 4 132 D 2 18Ø 4 5 E QU 133 Ε ฉบ 181 F 8 134 8 182 7 G 135 G 3 183 8 Н S 136 Н S 184 9 Ι 137 1 D 185 10 J Х 138 Ĵ Х 186 11 Κ Ε 139 Κ Ε 187 12 L 14Ø 6 L 188 Ø 13 M EN 141 M EN 189 14 N 142 190 В 15 Ø 143 0 191 16 Р 144 Ρ 192 J 17 Q 145 Q 193 к 18 R 146 R 194 17 8 147 5 195 М 2Ø Ţ 148 Т 196 N 21 U 149 Ш 197 Q 22 V 15Ø V 198 23 W 151 W 24 Х 152 Х 25 Υ 153 26 Z 154 27 155 28 156 29 = 157 3Ø 8 158 8 31 159 BP - CLEAR (breakpoint) QU = QUIT EN = ENTER

400 FOR D=1 TO 250

41Ø NEXT D

the

## HEIP

I am looking for one of our memebers who has fitted the internal (MATCHBOX) 32k to their console.

Our former Editor and กอผ member from the antipodes has asked me to have a look at his 32k which was causing his console to crash. have checked as much as I without putting it into a console.

ANY VOLUNTEERS?

Joe Wright.

## ASSEMBLY ZANGDAGE

## FOR THE LAYMAN

WITH ALLAN WRIGHT, HV99ERS

Hello once again! Before going on I would like to re-make a few points which I have mentioned in early articles. They concern my efforts in this NEWSLETTER.

First, NOT proficient I am a Assembly Language programmer. Like the majority of T.I. users I am just in the process of teaching myself, and find the E/A manual absolutely essential for this purpose. However other excellent material is available in the form of Tutorials on disk, the most notable of these being from a gentleman by the name of Mac McCormack. I think CHARACTER SETS. he is the same person who writes for MICROpendium. These tutorials are well worth reading. I also have other very good tutorials on Assembly by other people. If you That topic is suitably covered in would like to get some of these the please get in contact with me either reference manuals. at our meetings or via the post for "OUT of TOWNIES".

Back to my articles. I have started have stored somewhere in it all the to get a little bit of feedback character definitions for characters about them. This is very pleasing which it uses on screen. In the and I will answer in person to these, and also mention the points raised in the articles, good bad or otherwise. I need as much assistance as I can to be able to keep these articles coming, and to keep them on matters which are of use and interest to us all. It's easy to waffle on about nothing but not so easy to write meaningful, useful articles without some outside computer the definitions of critique .

#### NUMBER CHECK.

For those people who did type in the pressing any key you then make your attention that he is able to type accepts it as a valid number.

When number check looks at input it terminates the search at first space the character encountered. In this case only the first figure 1 is acceptable as the input number, the second 1 is ignored. It is like that because 1 space 1 is not a valid number, while of course ii would be acceptable.

The routine therefore does not set the not a number flag on the 1 space 1 input. Some more comments on whether this is satisfacory or not would be appreciated.

Last month I promised to get onto character cefinitions. This will not be on how to work out what a particular character definition is. Basic and Extended

Our computer along with all it's brother and sister computers has to T.I. an area on V.D.P. Ram is set aside for this purpose. Refer to the E/A Manual page 403. The memory map there shows us that the Pattern Descriptor table exists starting at memory location >0800 through to >1000. That is decimal 2048 through to 4096, the Pattern descriptor table occupies 2048 bytes of V.D.P. Ram. When you first turn on your larger characters which are used in the Title screen are loaded into this area in V.D.P. Ram. After number check routine from last month selection from the Menu. Whatever an additional comment. One person you have selected then loads its own who has done this has brought to my character set into this Character definition area of V.D.P. Ram. the following, and the routine When writing Assembly language programmes we have this ability to change character sets available to 115.

1 1

SC NE

AS Y and defi meme def i byte

To char sim by 6 obta Reme char and >8Ø8 tab

HAI

HEX

Cou cou num abo eve in end the cha che per

> mat EXA As. MOU it' int

com

in

the def sta the >0F

CUR

As you will remember from the Basic and E.Basic manuals each character definition requires 8 bytes of memory. Since 254 characters can be defined it can be seen why 2048 bytes make up this Table.

8 × 256 = 2048 bytes. = >800

find the start address of character in the definition table simply multiply the character number by 8 then add that figure to 2048 to obtain the start address. Remembering of course that that character Ø starts at 2048 or >800 and character 1 starts at 2016 or >808, and so forth. If the P.D. table is draw in table form using HEX numbers a pattern can be seen.

HAR	NO.(dec) Ø 1 2 3 4 5		START	ADDR.(HEX) >800 >808 >810 >016 >820 >828 >830
	-			-
3 3	Ø 1	CURSOR	>1E	>8FØ >8F8
_	2	SPACE	>2ø	>900
3	3	EXCLM	>21	>9Ø8

Counting by 8 in Hex is similar to counting by 5 in the decimal numbering system. As can be seen above the characters which have an even number in decimal always live in the P.D. table at an address ending in Ø. So when you calculate the start address of a particular CONT2 BLWP @KSCAN character this provides a quick check to see if you are in the ball park, ie if an even character number comes out as a start address ending in 8 then you had better check your maths.

#### EXAMPLE.

As an example, lets assume that you would like to change the cursor from it's existing non descript shape nice hollow square. First description has new to be defined and as a DATA placed statement in you code. That data is then writing to V.D.P. Ram address >erø.

CURP DATA >FF81,>8181,>8181,>81FF

SOME OTHER CODE IF NEEDED BUT NOT NEEDED FOR THIS SIMPLE EXAMPLE.

LI RØ,>Ø8FØ VDP ADDR CURSR LI R1,CURP CURS PAT ADDR LI R2,8 8 BYTES 2 RITE BLWP @VMBW CHANGE PAT.

That is not difficult at all. If you are going to play around with Assembly then I hope that this example has help to show the need to have a calculator (other than the T.I.) which can do HEX conversions and calcs.

LAST MONTH'S EXERCISE.

This is the SOURCE code for the press any key to continue routine.

```
* ANYKEY TO CONTINUE ROUTINE
* DATA SCRN ADDR FOR MESS
* DATA ADDRESS OF MESS
* DATA LENGTH OF MESS
* DATA FIRST KEY TEST
* DATA SECD KEY TEST
* REF
       VSBW, VMBW, KSCAN
* EQU STATUS EQU
                   >837C
                          STATUS
      BDSTAT EQU
                   >8374
                          K/BRD DEV
¥
      KEYVAL EQU
                   >8375
                          KEY VALUE
¥
      SBRWS EQU
                   >83ØØ
                          WORK SPAC
      SPACE BYTE >2Ø
¥
                          KEY MASK
                    EVEN
* BLWP @CONT1 AND 5 DATA ITEMS
CONT1
       DATA SBRWS, $+2
       MOV
            *R14+,RØ
                        SCRN ADD
       MOV
            *R14+,R1
                        ADDR TEXT
       MOV
            *R14+,R2
                        NUMB CHAR
       MOV
            *R14+,R3
                        1st CHAR
       MOV
            *R14+,R4
                        2nd CHAR
       BLWP @VMBW
                        RITE TEXT
       CLR
            @STATUS
                        CLR STAT
                        BRCH SCAN
       CB -
            @SPACE,@STATUS K/PRESS
       JNE
            CONT2
                        NO BACK SCAN
       CB
            R3, @KEYVAL 1st KEY?
       JEQ
            CONT3
                        YES GO OUT
       CB
            R4, @KEYVAL 2nd KEY?
                        YES GO OUT
       JEQ
            CONT3
       JMP
            CONT2
                        GO KSCAN
CONT3
      MOVB @KEYVAL, RØ SAVE KEY
       CLR
            @STATUS
       RTWP
```

A typical line of text for use with this routine would be;

"TRY AGAIN Y/N"

The routine then would be accessed as follows;

BLWP @CONT1 DATA >2E9,WORDS,>D,>4EØØ.>59ØØ

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ter am. age to The DATA is as follows;

>2E9 SCREEN ADDRESS FOR TEXT WORDS CPU ADDR FOR THE TEXT >D NUMBER OF BYTES TO WRITE >4F@@ CHARACTER CODE FOR N **>**コタダダ CHARACTER CODE FOR Y

The routine is accessed using BLWP, I have done this to allows data from filed then read to the screen. calling programme.

your application. that the key press value RØ before the terminates. Doing this allows the to 304. key press value to be used when required, for a test and branch in THANK YOU. calling programme returning from the routine. accomplished as follows;

CB @NO,@SBRWS JEQ SOMEWHERE

OR

CB @YES,@SBRWS JEG SOMEWHERE

NO and YES are labels for directives.

NO BYTE >4E YES BYTE >59

This routine has a multiplicity of the spare 4 hours I had and killed uses, one of the more common ones I it all in Dymocks technical books use is the carry the space bar shop in the heart of the City. Well character >20 in on both the second to end a long story not 5 minutes last and last data items. This then ago the POSTIE called. I though he allows me to use;

"PRESS SPACE BAR TO CONTINUE"

#### FINISH.

That will have to be it for this was dead in this Country!. month. The assignment for the Assembly group for this month is to write a routine that will read a FUNNELWEB from disk. file The requirements are;

- 1) Open a existing Funnelweb file on a disk
- 2) Read the files and display them one screen.
- 3) Halt the disk access when the screen is full.
- 4) Allow the disk access to continue when a specified key is pressed, eg space bar.

5) clear the screen and fill it with new data from the file. 4) Repeat this process unti1 completed file is read.

There has already been some discussion on whether single files are read and displayed immediately on screen or whether a buffer is the routine to be used later in the will be the main topic for next month along with the code for the disk access routine. Until then The codes for Y and N could be please have a go at writing this. I changed to any codes which suite would suggest reading MOLESWORTH The E You will note chapter 9 on page 79. Put that HV 99 is placed routine in them read the E/A manual routine FILE MANAGEMENT, pages 291 through

Assessment of the second

after Over the last couple of months I This is have been trying to obtain a copy of a book titled "EXPLORING FORTH" by Owen Bishop. This book, while it will never be classed a one of the master pieces on FORTH. It is does have some very useful routines and good English like descriptions of the routines and of FORTH itself. I wanted to have it in my library as a reference. I had been told that it | BYTE is out of print. I recently drove to Sydney ( most country people like to avoid the big smoke like the plague) and missed a sale by two days where 5 copies went at sale price. The compensation here was had left his usual stack of bills. No bills just a package from my mate Steve Taylor. You guessed it; he sent me a copy of EXPLORING FORTH. Thank you Steve. Who said Mateship

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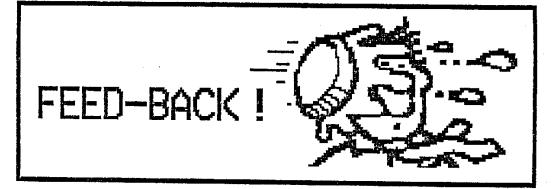
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The Editor, HV 99ers Newsletter.

Dear Brian,

Nice to open the May issue of the magazine and find a thank you for paying early subs. A handy hint for other clubs, etc. Thanks Albert.

### німт

If you are like me, when the kids complain that the TI joysticks aren't working properly, you pull apart and clean them (the joysticks, NOT the kids!). In the process you may accidentally remove the contact medium from the Fire Button. But wait, don't take the razor blade to the wrists, go to the kitchen cupboard and get aluminium food wrap - the cook shouldn't mind, you only need two pieces about i 1/2" by 1/2" wide (I'm too old to think metric). Glue these to the contact area of the Fire Button. When dry use a <u>VERY</u> program sharp knife (or that razor blade) and carefully trim to the fork shape! of the contacts - Voila (that's French for TI).

#### PROBLEM

A high flying friend of mine (airplanes not drugs) posed a problem for me.

Commercial pilots have to provide to Civil Aviation inspectors AT ANY their flying log, which must show the hours they have flown in the last 7 days, 31 days and 365 prior to the time inspection. The problem is that he would like a BASIC program that would handle a number of pilots and their flying hours, ie recognise a name INPUT and when located, then an HOURS INPUT on a daily basis. The mathematics are: Input up to 7 days, and total. On day 8 day 1 is removed, day 2 becomes day 1. On day 9 then the new day 1 is removed and so on. Input up to day 31, providing a progressive total. On day 32 then day 1 is removed, etc. etc. Input up to day 365, providing a progressive total. On day 366 then day 1 is removed, etc. etc.

This would have to be done with one daily hours input and provide a total for each at any time.

I attempted to write a program but soon became hopelessly out of my depth. Maybe there is someone this International, far flung group of ours who would enjoy this type of challenge, or indeed already have a that would fit mу requirements. Go for it! A11 submissions พi 1 1 he greatly appreciated, and would probably make an interesting article for magazine.

The program may even prove adaptable to other uses - TV viewing hours, TI using hours, the mind boggles!!

Geoff Daniels, c/- Toronto Ambulance Station, Thorne St., TORONTO NSW 2283

### DOUBLE DENSITY" FROM YOUR TI DISK CONTROLLER

As reported in the April issue of our Newsletter, Secretary Albert 5. Half height 80 track drives are had sent to Ryte Data for 2 EPROM chips that supposedly turned your TI Disk Controller CArd into Double/Quad Density. received the chips (after a couple of months wait), and included was an | 6. You will be able to use these 80those details.

#### BACKGROUND

The TI Disk Controller sectors is 720 per disk.

track drives all the way up to 80 controller on a direct level. tracks per side at double density. TI had designed a controller capable density (DS/DD) 40 track or (DS/Quad from:-Density) 77 track disk drives - to achieve a maximum of 630,784 bytes Ryte Data or 2464 sectors per disk! Obviously 210 Mountain Street TI did NOT release this new disk HALIBURTON ONTARIO controller.

With the pair of EPROMs in this package (from Ryte Data), which contain updated controller software, you can now support <u>80 track disk</u> drives and achieve 1440 sectors per disk. This EPROM set will <u>effectively</u> provide 'double density' operation by using a QUAD density drive.

#### RYTE DATA 80 TRACK EPROM SET

- The EPROM set is installed in the TI Disk Controller Card for the let our members have a copy for PE Box. existing PROMs.
- ALL other operations formats ie one 40 track drive and 1 bulk from Sydney. or 2 80 track drives.

- DM II from TI must be used to initialize the disks. Other disk programs will manager support the usual operations but initializing disks for 80 tracks.
- The data is written on twice as many tracks, therefore it is NOT compatible with other disk formats, ie Myarc or CorComp double density.

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- used to achieve the increase in storage capacity. These 80 track drives are listed as 96 tracks per Recently he inch (tpi) or as QUAD density.
- sheet containing details of the track drives with the Myarc disk chips. The following is a resume of controller with QUAD density option installed, the same with any 40 track drives you already have.
- 7. This EPROM set has been tested is with all these major software capable of supporting up to 3 double packages: TI Writer, MultiPlan, sided single density disk drives. Extended Basic, Editor Assembler, total number of available etc. This does not guarantee that it is fully compatible with ALL software available, particular Disk Manager II from TI was problems could possibly arise with designed to support anything from 35 software which accesses the disk

The bottom line is \$US45 for to supporting 4 double sided double the 2 EPROMs. They are available

> KOM 1SØ CANADA

# GROpendfum

The best commercial magazine available for we TI users is undoubtedly MICROpendium. We have been advised by the Sydney Users Group that they get this mighty mag in each month, and are prepared to You must remove the about \$3 per month. If you are interested in purchasing this mag each month get in touch with the remain Publications librarian, HV99ers, who identical. You can mix drives and will arrange to purchase them in Out of towners copies would be sent out with their HV99er Newsletter each month.

# MV22ers BASEG Group

CLASS NOTES BY PAUL MULVANEY

#### OOPS DEPARTMENT.

Last month's program in TI BASIC 2 contained a terrible error which would have prevented the program from being entered. Line 150 which did the conversion maths contained a numeric variable with the name CON. This is a RESERVED WORD for CONtinue. The variable should be CONV in both 150 and 160. The problem came during the transfer through TI-Writer (Blame it on the typist)

Before altering last month's program to make it more usable the group looked at ways of performing loops. The use of GOTO limited us by locking us into an infinite loop so we looked at a method of getting out of this loop.

Use of the IF-THEN statement allows us to move out of a loop under the specified condition. The IF compares two given expressions, which can be numeric or string but they both must be the same type. The allowable relational operators are 1 = equal to, 2 <> not equal to, 3 < less than, 4 > greater than, 5 <= less than or equal to, 6 >= greater than or equal to. If the comparison is false the program continues to the next line, if the comparison is true the computer is sent to the line number specified in the THEN part of the statement.

#### Problem.

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We want to print the numbers 1 to 24 on the screen, and hold them there.

#### Design.

If we use the IF-THEN test to end the program the first few numbers will move off the screen, so we will have to test for 23, step out of the loop print 24 and hold the program to prevent it moving off screen. The semicolon can be used as a 'pending print' to make the computer think there is more to be printed on the line.

#### Coding.

100 CALL CLEAR

11Ø B=B+1

12Ø PRINT B

13Ø IF B=23 THEN 14Ø

14Ø GOTO 11Ø

15Ø B=B+1

16Ø PRINT B;

17Ø GOTO 16Ø

Clears the screen.

Increments the value of the variable B.

Prints the current value of B on the screen.

Tests the value of B, if less then 23 control

moves to the next line, if equal to 23

control goes to line 150.

Creates the loop back to line 110.

Adds 1 to the value of B.

Prints 24 and prevents the last line from

moving up the screen.

Provides a holding loop.

Line 170 again creates an infinite loop, requiring the use of FCTN 4 to break out of it.

To overcome this problem we now look at the FOR-NEXT statement. The format is FOR variable=initial-value TO limit. This is the default form which adds +1 to the value each time through the loop. The variable must be a numeric variable and acts as a counter for the loop. The initial value specifies the starting value which is assigned to the variable. The program lines between the FOR and the next statements are performed. When the NEXT statement is reached the variable is incremented by +1 and the computer compares the variable with the limit. If the variable does not exceed the limit then it returns to the FOR statement and repeats the loop. If the variable exceeds the

ΤŁ limit then the computer leaves the loop and continues the program. is important to have identical numbers of FOR's and NEXT's because computer checks this before the program is RUN. To: convert the above program to use FOR-NEXT statements enter the following program.

Clears the screen.

100 CALL CLEAR 110 FOR LOOP=1 TO 23 120 PRINT LOOP

Increments the value of LOOP. Print 1 to 23 on the screen.

130 NEXT LOOP

14Ø PRINT LOOP;

Add 1 to LOOP and tests to see if it exceeds 23 (the limit)

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Prints 24 on screen, the semicolon prevents the screen from moving up a line.

15Ø FOR DELAY=1 TO 1000 160 NEXT DELAY

Holds the screen for a time period. The delay can be altered to suit the program.

Halts the program.

17Ø END

If you have a long program the variables can be shortened to L and D or another valid numeric name. I prefer to use meaningful variables as it

makes it easier to fault find or understand if I come back to a program after a significant break.

The FOR-TO statement has an optional STEP function which can be used to alter the increment. If even numbers were required use; FOR N=2 TO 46 STEP 2.

To count backwards use;

FOR LOOP=24 TO 1 STEP -2.

You are not limited to using whole numbers, decimals can be used;

FOR D=1 TO 10 STEP .1

The sign of the variable can change during the loop;

FOR S=1 TO -2 STEP -.5

FOR-NEXT loops may be nested within each other and unlike a lot of other computers it is allowable to step out of a loop without adverse effects on the program.

Go back to last months program to convert local money into other denominations. Because varying numbers of items may be converted we have enabled the number of loops to be input by the operator.

100 CALL CLEAR

110 CALL SCREEN(12)

12Ø INPUT "HOW MANY CONVERSIONS":T

Sets the number of loops.

13Ø PRINT

14Ø INPUT "ENTER CONVERSION RATE ": RATE

15Ø PRINT

160 INPUT "ENTER DENOMINATION ":DEN\$

17Ø PRINT

18Ø FOR L=1 TO T

Enter the currency name.

The number of loops depends on how many conversions (T)

19Ø INPUT "ENTER UNIT PRICE ":PRICE

200 PRINT

21Ø CONV=RATE\*PRICE

220 PRINT "A\$";PRICE;"=";CONV;DEN\$

23Ø PRINT ::

24Ø NEXT L

250 INPUT "ANY MORE? Y OR N ":M\$

260 IF Ms="Y" THEN 120 ELSE 270

270 PRINT "BYE"

28Ø END

programs.

Repeats the loop T times. Allows you to do more. Tests for more, if not end.

The best way to learn how to program is to try a lot of little routines to discover different uses of the instructions. After a while you will become proficient and soon be able to move on to bigger and better

REMEMBER You can't damage the computer with an incorrect program. (You have to resort to physical violence to do that).

## NEW HORIZONS

SOME HINTS AND TIPS ON RAM DISKS FROM ALLAN WRIGHT

Tony McGovern and Pete Smith were the first cabs off the rank. Now five other members have indulged themselves in a spell of buying and purchased 5 Horizon Ramdisk boards from the U.S. of A. I can report that ALL Disks are UP and running successfully.

To anybody who is contemplating getting a Ramdisk I have a couple of suggestions.

- 1) If you don't have a great deal of experience with welding a soldering iron then buy the board COMPLETE from Horizon.
- 2) If you are not in a position to buy your components in lots greater than for one board then any cost saving could be very marginal. If you take you own time into account, then there is no saving in doing your own construction.
- 3) DON'T go for any clone substitute boards, buy your board from HORIZON.
- I should qualify the above. The first point should be reasonably self explanatory. The job of assembling the Ramdisk IS NOT difficult. However if your eye sight is not up to scratch and the old digits shake a little then don't try. If you have decided to go ahead with your Ramdisk purchase and the above applies to you, then pure logic dictates that you purchase the complete board from HORIZON. With regard to the second point, if you are in a position such that you will have to buy your components on a one off basis then there are absolutely no savings for you, it could in fact turn out a little dearer than the completed board. For the last point Buy the board or completed Ramdisk from the people who put in the time and effort to make it available to us.

#### INSTRUCTIONS.

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The step by step instructions which came with the Ramdisk board are excellent. If they are read carefully and followed faithfully then the result is a no hitch self constructed Ramdisk. Being a true believer in MURPHY'S Law I took some voltage readings on my Ramdisk before puting it in the P.E. Box for the first time and before any I.C'S. were socketed.

#### A DRY RUN.

The following test will indicate any short circuits you may have created on the board if you weren't careful with your soldering, OR if you havn't kept a clean environment in which to work on your board. As usual I am now about to make the usual disclaimer. I or the H.V. 99'ers cannot accept any responsibility if your board is damaged when doing this test. I have done it on two boards successfully. The last occasion was while repairing a crashed Ramdisk for one of our members. This test located a minute sliver of conductive material across the right hand side of U22.

A 5 volt DC power supply is needed to power up the board. Two flying leads with alligator (crocodile in Aust) clips on the end for attaching the leads to the board. Lay the board on your CLEAN work bench with the component side facing up towards you. Orientate the board with the edge connectors pointing towards your body. NO batteries in the sockets and NO IC's in place.

Connect the negative side of the 5 volt power supply to the board end of R1, this is the resistor connected to the left hand end of the battery holders.

The positive side of the 5 volt power supply is now connected to the No.1 edge connector. To do this the under side of the board should be insulated with a small piece of plastic or such like. This will prevent the bottom jaw of the chip contacting any of the under side edge connectors. With the plastic in place clip the +5 volt clip to edge connector 1 ( right most on the upper side).

The GREEN L.E.D. should now be on. Using your multimeter test between the negative alligator clip and PIN 28 on any memory chip socket, the reading will be a little under 5 volts. Wind you power supply up until you get 5 volts, a little under will suffice.

The following table is a list of voltage readings which I recorded.

SOCKET No.	PIN no.	METER CONN TO 5V NEG. TESTING WITH POS LEAD. VOLTS (pos) 5 V	METER CONN TO 5V POS. TESTING WITH NEG LEAD. VOLTS (neg)
U1	8		5 V.
U2	1 Z 24	5 V.	S V.
u3/u <b>8</b>	22 26		5 V. 5 V.
	28	5 V.	<b>-</b>
U9	4 8 15 16	2.5 V 5 V. 5 V.	2.5 V. 5 V.
U1Ø	1 2 3 6	5 V. 5 V.	5 V. 5 V.
	7 8 9 14	3 V. 5 V.	5 V. 5 V.
Uii	14 22 26 28	2.5 V. 5 V.	5 V. 5 V. 2.5 V.
U12/U17	22 26 28	5 V.	5 V. 5 V.
U18	! 4 5 6	2.5 V. 5 V. 5 V. 5 V.	2.5 V.
	7 8 16	5 V.	5 V.
U19	8 16	5 V.	5 V.
บ2ø	5	5 V.	5 V.
	6 8 16	5 v.	5 V.
U21	1,2,10,19 20	s v.	5 V.
U22	19 19 20	5 V. 5 V.	5 V.

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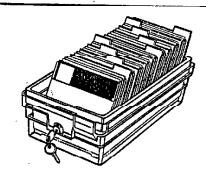
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All other socket pins should have NO volts on them at all if you have then I suggest that you have a good look around the back of your board for a short circuit.

MANY HAPPY LOADINGS

Allen WRIGHT. H.V. 99'ers.



## SOFTWARE LIBRARIANS NEWS

BY AL LAWRENCE

HI 99'ers.

ŀα

Long live the spirit of FREEDOM of choice. Most of us like the TI 99 or are too impoverished to move on to big BLUE or clones and "I" think that one of the White Elephants of the year will be the so called XT TURBO as even in Australia a clone with a real keyboard is almost the same price after freight and import duty is paid so why should we buy?

A more realistic way is the GENEVE and I know a few of us would like to go that way, if it ever gets off the ground. I hope it does soon, and in sufficient numbers to make it pay for all the development.

We are seeing still more and more TI hardware and software. It is nice to know that some people realise that not everyone changes Computers at the drop of a hat or every 2 Years as some of the Opinioned VIP Writers think.

Some of us, as in all circles, like the Classic or Vintage types that keep on improving with age, like a good Port except it gets less with use - pity about that.

The User Groups WILL last maybe not with such great numbers in them or in the the same format as at the present time, so long as we have ENTHUSIASTIC members who share ideas

and help each other. Even the small groups are capable of this. They do not need to produce a Newsletter to be a group. So remember that as in most things in life you get out what you put in and you also have to ask sometimes to get Interest on deposits. If you feel you are not getting what you are looking for then examine one of the following.

I think a lot of the people really enjoy the involvment and get a kick out of it, as well getting to see their name in print.

Perhaps a lot of the less rewarded (which way?) ones may be expecting returns on a product that no one needs or uses. I know that a lot of time and effort goes into more than Programing in User Groups. (Editors, Librarians, Classes, etc.) The just rewards of each and everyone is relative to the effort and NEED.

Individual and Club usage is very DIFFERENT and I know that in some instances they become intermingled and hard to seperate.

Rolling wheels are hard to stop. So as long as a need is there, we should see a continuing movement in a positive direction.

#### \*\* New Disks \*\*

MONTE CARLO by Bob Guellnitz.

Sacre Bleu! This game of Roulette is just what high flying gamblers need to save money. A Fr.25000 purse and limits on betting for 1-4 players ensures the game will last for a long time. A history of the game and instructions are included, also the option to save a game when the cook calls.

You may place up to 5 bets in a number of ways and each type has diferent limits, so fortunes can be made (and LOST) quickly as the wheel spins.

A game of chance with no skills or quick responses required.

CRYPTO by P.Scheidemantle.

This is a good secret coded type puzzle to test your knowledge of 300 famous sayings.

المعتقد المعتبر وأحاريه فيستند وبالمرازي والمار

You are presented with a menu on startup.

- 1 Start new game.
- 2 Continue same game.
- 3 Hint (one letter).
- 4 Give up (show answer).
- 5 Demo.
- 6 Instructions.
- 7 Special Options.
- Ø Exit Prog.

Special Options - Sub Menu.

- 1 Save Game.
- 2 Load Game.
- 3 Printer.
- 4 Reset Mode.
- 5 Return to Menu.

By substituing letters in encrypted messages shown you will arrive at the solution sometime, but it is not easy ane you may have to make use of the Hints which is Fct.7 when a Fct.7 symbol is shown.

This is a good one for Crossword addicts in the coming long Winter evenings.

These 2 Disks and lots more are now available from the library, and will be Demo'd at some future date.

FROM FUNNELWEB FARM.

Well there were no QUESTIONS from a very interested audience at the May meeting after Tony McGovrn gave a personal demo on how to customise your Funnelweb 3.4 Disk, so either everyone now knows how, as it was so clearly shown to all or everyone did some READING up.

Either way it was a much enjoyed demo and it cleared up a lot of the Questions that have been asked.

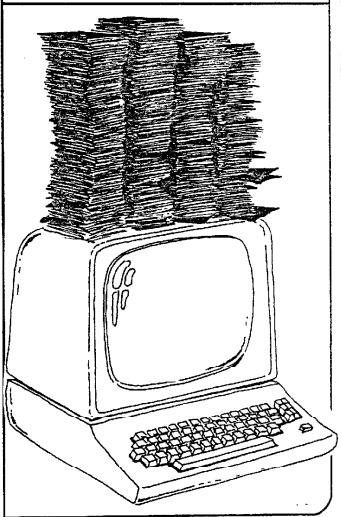
We had a preview of some of the new features such as in SD mode - now by pressing P you get a double column printout of the disk contents.

Also in QD or SD mode you may now mark files for loading into the Editor or Formatter.

Thank you Tony - This is now truly one of the most outstanding and USEFUL disks for the TI 99/4a. FULL INSTRUCTIONS on the Disk so get it and "READ 'EM".

All the Club Software is available on Demand. \$4.00 P/P each Disk.

E.O.F.



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## PART 3 OF A PROSRAM BY PAUL MULVANEY

This is the third and final instalment in a series. It is not a stand alone program, as the character redefinitions were done previously. Load the previous parts then type the code, the last line of the previous part will be overwritten.

The program puts a typical Direct-On-Line (DOL) Motor Starter circuit on screen. The motor contacts are operated by the energising of the contactor coil C1. The coil is energised through the Start button, the Stop button and the Overload. Once the coil is energised it holds itself in through the interlock C1. The coil is de-energised by opening the Stop button or tripping the Overload. If the Overload trips, the coil cannot be started until it is reset.

The concepts used in this program can be adapted for use in fields other than Electrical, eg Hydraulics and Pneumatics. I hope these programs may be of use to others. If anyone develops the idea further, I hope they share the information with the TI community.

#### 94Ø CALL CLEAR

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950 I 96Ø REM MOTOR CIRCUIT 97Ø ! · 98Ø CALL CLEAR :: RESTORE 13 79 990 DISPLAY AT(3,5): "D.O.L. MOTOR STARTER" 1000 FOR L=1 TO 3 :: READ R. C,K,T :: CALL VCHAR(R,C,K,T) :: NEXT L 1010 FOR L=1 TO 19 :: READ R ,C,K,T :: CALL HCHAR(R,C,K,T ):: NEXT L 1020 DISPLAY AT(8,4)SIZE(21) :"START STOP O/L C1" :: DISPLAY AT(15,5)SIZE(2):"C1" 1030 DISPLAY AT(20,4):"1 FOR START, 2 FOR STOP" :: DISPL AY AT(22,4): "3 TO TRIP OVERL OAD" 1040 DISPLAY AT(24,4):"4 TO RESET OVERLOAD" 1050 CALL KEY(0,N,S):: IF S= Ø THEN 1050 :: IF N(49 THEN 1050 :: N=N-48 :: IF N>4 THE N 1050 :: ON N GOTO 1090,114 0,1190,1050

1040 ! 1070 REM MOTOR START 1080 ! 1090 RESTORE 1390 :: FOR L=1
TO 16 :: READ R,C,K,T :: CA
LL HCHAR(R,C,K,T):: NEXT L :
CALL VCHAR(13,10,97,5)
1100 FOR L=1 TO 3 :: READ R,
C,K,T :: CALL HCHAR(R,C,K,T)
:: NEXT L :: GOTO 1050

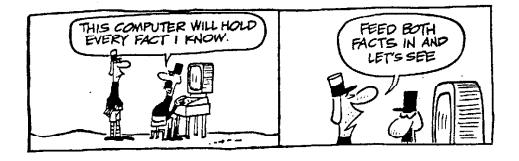
1120 REM MOTOR STOP 1130 ! 1140 RESTORE 1450 :: FOR L=1 TO 13 :: READ R,C,K,T :: CA LL HCHAR(R,C,K,T):: NEXT L : : CALL VCHAR(13,10,110,5) 1150 FOR L=1 TO 6 :: READ R, C,K,T :: CALL HCHAR(R,C,K,T) :: NEXT L :: GOTO 1050

1160 !
1170 REM OVERLOAD TRIP
1180 !
1190 RESTORE 1510 :: FOR L=1
TO 12 :: READ R,C,K,T :: CA
LL HCHAR(R,C,K,T):: NEXT L :
: CALL VCHAR(13,10,110,5)
1200 FOR L=1 TO 4 :: READ R,
C,K,T :: CALL HCHAR(R,C,K,T)
:: NEXT L

121Ø ! 122Ø REM OVERLOAD RESET 123Ø !

124Ø CALL KEY(Ø.N.S):: IF S= Ø THEN 124Ø :: N=N-48 :: IF N)4 THEN 124Ø 125Ø IF N<4 THEN 126Ø ELSE 1 270 126Ø DISPLAY AT (6,2) BEEP: "TH E OVERLOAD MUST BE RESET" :: GOTO 124Ø 127Ø FOR L=1 TO 4 :: READ R, C,K,T :: CALL HCHAR(R,C,K,T) :: NEXT L :: GOTO 1050 128Ø ! 1290 ! 1300 REM MOTOR CIRCUIT 131Ø ! 132Ø DATA 6,4,97,14,6,29,12Ø ,14,13,10,110,5,12,5,98,2,11 ,7,112,1,10,8,112,1,12,9,104 ,1,12,10,109,1 133Ø DATA 12,11,1Ø4,2 134Ø DATA 12,13,128,2,12,15, 104, 4, 12, 19, 128, 2, 12, 21, 104, 4,11,25,33,1,12,25,35,1,11,2 6,34,1,12,26,36,1 135Ø DATA 12,27,121,2,18,5,9 8,2,17,7,112,1,16,8,112,1,18 ,9,104,2 136Ø ! 1370 REM START 138Ø ! 139Ø DATA 10,8,32,1,11,7,32, 1,12,7,128,2,12,9,98,1,12,10 ,99,1,12,11,98,2,12,15,98,4, 12,21,98,4 1400 DATA 12,25,102,1,11,25, 100,1,11,26,101,1,12,26,103, 1,16,8,32,1,17,7,32,1,18,7,1 28,2,18,9,98,2

141Ø DATA 12,7,32,2,11,7,112 ,1,10,8,112,1 1420 ! 143Ø REM STOP 1440 ! 145Ø DATA 12,13,32,2,11,13,1 12,1,10,14,112,1,12,15,104,4 ,12,21,104,4,12,25,35,1,11,2 5,33,1,11,26,34,1 146Ø DATA 12,26,36,1,18,7,32 ,2,17,7,112,1,16,8,112,1,18, 9,104,2 147Ø DATA 12,9,1Ø4,1,12,1Ø,1 Ø9,1,12,11,1Ø4,2,1Ø,14,32,1, 11,13,32,1,12,13,128,2 1480 ! 149Ø REM OVERLOAD TRIP 1500 ! 151Ø DATA 12,19,32,2,11,19,1 12,1,10,20,112,1,12,21,104,4 ,12,25,35,1,11,25,33,1,11,26 ,34,1,12,26,36,1 152Ø DATA 18,7,32,2,17,7,112 ,1,16,8,112,1,18,9,104,2 153Ø DATA 12,9,1Ø4,1,12,1Ø,1 09,1,12,11,104,2,12,15,104,4 1540 ! 155Ø REM OVERLOAD RESET 1560 ! 1570 DATA 10,20,32,1,11,19,3 2,1,12,19,128,2,6,1,32,32



## A FORTH DATA BASE

PART 3 OF AN APPLICATION

BY KEITH BRUCE

```
SCR #48
                    \ DATABASE
         O.
                                                                                                               2Mar87
                 : ADDREC
                                     BEGIN SET_PROMPTS
27 O AT ." Add I
GET_KEY
0= IF 1
                                                                                                   Add Record"
                                                                                                                                                                      check if key already exists
                                                                                                                                                                \ if return entered leave routine
                                              ELSE
BUFR FINDKEY 0 >
IF 0 20 AT ." Key already exists"
PRESSZCONT
          6789
      1Ó
                                                                                                                                                                \ get field contents
\ allow reentry of any field
                                                                             SET_FIELDS
     11234
                                                         ENDIF 0
                                                ENDIF
                                      UNTIL ; -->
SCR
                作台字
                                           0
                  \ DATABASE
                                                                                                               2Mar87
                 : DELREC
                                      BEGIN SET_PROMPTS
24 0 AT ." DB16-
GET_KEY
0= IF 1
          56780
       10
      11234
                                      UNTIL ; -->
      15
                  #70
\ D
 SCR
          \circ
                           DATABASE
                                                                                                                2Mar87
                    : SCNREC
          1234
                                 SCNREC
SET_PROMPTS 24 0 AT
." Scan Record" 0 20 AT
." <enter> =stop. Any other key =next"
MAXREC 0 1+ 1 D0
I GET_DATRECNO \ get_data fi
FREAD_DROP \ read_record
TYPE_REC \ display rec
KEY_I3 = IF_LEAVE_ENDIF
          567.89
                                                                                                                                                                \ get data file record number
\ read record from file
\ display record on screen
                                  LOOP
      11
12
13
                          UPD_TITLE CLS 5 5 AT ." Update Database" ;
       14
                SCR
                                                                                                                2Mar87
           O
           1234
                                            UPD_TITLE

5 8 AT ." (A)dd new record"

5 10 AT ." (D)elete record"

5 12 AT ." (M)odify existing and the second and the secon
           5
                                                                                                                                              existing record"
records"
           石フのラ
                                                         10
                                            00F
00F
00F
00F
00F
                                                                                                          O ENDOF
O ENDOF
O ENDOF
ENDOASE
       12
13
14
15
                                   UNTIL ;
```

```
#72
\ DATABASE Zmare.
\ NO DB
CR CR
." Database has not been selected" CR
" Use option 1 of main menu" CR
SCRO1
        : UPDATEDB

UPD_TITLE FNAMEFLAG @
IF UPD_MENU
ELSE NO_DB
ENDIF ;
     Ś
                                                                           \ check if Database is open
\ display menu
\ if no DB open then arror message
  112
123
14
15
        1273
N DATABASE
: GWCH____
SCR
    Ġ
                                                     27Apr 87
                                                                           \ select printer PAB
\ zerp PAB and set for cutput
\ get printer name length
\ move printer name into PAS
\ open file
\ set I/O Op-code for write
\ set for character count = 1
\ redirect cutout to printer
                       PIRPAR
                       SET-PAB OUTPT
PTRNAME
MOV_PABNAME
OPN
                      S PAB-ADDR @ VSBW
1 PAB-ADDR @ 5 + VSBW
PAB-ADDR @ ALTOUT ! ;
     Ō
                                                                            \ redirect output to printer
  10123
       : UNSWCH
PTRPAB
O ALTOUT! CLSE ;
  14
  15 -->
SCR #74
       *74
\ DATABASE 27Apr87

© SCRN REPORT

SUFR DUP INDLEN TYPE CR

INDLEN + DUP 7 TYPE CR

9 + DUP 20 TYPE CR

20 + DUP 25 TYPE CR

5 + DUP

5 + DUP

CQ 32 = 0=

IF 40 TYPE
     0
                                                                            \ surname,first name
\ phone no
\ street address
     ちとア日
                                                                            \ suburb
                                                                              state
                                                                           \ comments
\ if comment not blank then print
                      IF 40 TYPE
ELSE DROP ENDIF
  10
  11234
        : IMDENT OR INDLEN 10 + SPACED ;
          CR ." 74 compiled"
        #75
\ DATABASE
: FRNTREC
SOR
    9
                                                    2Mar 87
                 PTRELAG & IF PTREAG

BUFR DUP INDLEM TYPE

INDLEM + DUP 9 TYPE

SPACE 9 + DUP 20 TYPE
                                                                                \ check if ptr or sern selected
\ surname.first name
\ phone no
\ street address
                       INDENT
                                                                                  position cursor under street
                      20 + DUP 25 TYPE SPACE
25 + DUP 5 TYPE
5 + DUP INDENT
C0 32 = 0=
IF 40 TYPE
                                                                                suburb
    Ġ
                                                                                \ state
                                                                                \ comments
  101123
                                                                                N if comment not blank than print
                 ELSE DROP ENDIF
CR 75 0 DO 46 EMIL LOOP
ELSE SCRN REPORT
ENDIF; -->
                                                                               > print record separator
> screen output selected
  14
```

TEXTURRE, SOFTWREE, and ELSEWHERE Happenings in the T.I. World Community by JACK SUGHRUE

Some of my user-group friends ask me often about the graphic designs and fonts I use in my letters and in this column. "How can you make that with your printer?" they usually ask.

The answer is simple and not so simple. The different fonts built into my Gemini 10X are fairly easy to get to. I made a template of my Transliteration Key and access it through my T.I.HRITER (in this case, the FUNLPLUS! version, though any form of TIW will work). This lets me do the following:

Underline when and where I like

Be in condensed Or enlarged

Or italics (Or other fonts and sizes)

Or letter quality. Which is what you're reading. This is normal printer type. Obviously this is preferable for most people.

You may even combine:

Underlined letter-quality italics, for example.

All this is done simply and automatically through Iffing the template which has the TL codes on them.

If persons are interested I could devote a column or two to this kind of thing, complete with all the codes and how to get to them automatically. Let me know.

But the fancy stuff like the header of this column is what most people would like to be able to do.

These kinds of things (pictures, fonts, designs, labels, letterheads, signs, banners) are all done with some very special programs. Compared to the costs of similar programs for other computers they are very inexpensive, but they are not free.

I'll be devoting the next few columns to explaining how the different packages work and showing examples. These packages are the ones I use: GRAPHX, TI ARTIST, FUNLPLUS!, BETTER BANNERS, FONTWRITER, and CSGD. I use the last (CHARACTER SETS AND GRAPHIC DESIGNS III) to make the IMPACT-99! logo.

Of the six graphics/text programs listed above which is the best? None is better than another. Each does something different from the others, but now - thanks to FONTWRITER - all the works done by any of them can be tied together. More on that when I take up FONTWRITER.

But first let's discuss Broderbund's PRINT SHOP, the most popular graphics program in the world. This program, which is out for most computers, is not available for the TI.

Everyone loves PRINT SHOP. It is so user-friendly a four-year-old could operate it beautifully the first time around. The program makes greeting cards, banners, signs, etc. with incredible error-free ease. And there are now hundreds (including a lot of PD files) of graphic designs and fonts for the program. The commercial disks for the whole works for the IBM or Apple is well over \$200, the basic program under \$30. People who HATE and FEAR computers L D V E to print with PRINT SHOP.

But you pay a price for convenience. I don't mean just money, though that is definitely a factor. The price you pay is sameness. A PRINT SHOP anything looks, well, printshoppy. There is not much flexibility. Granted, you can choose your graphics; you can even choose size, form of font, layout - all to a limited degree.

With the five commercial programs above (and my FUNLPLUS!) I am unlimited. I can create virtually any type of font or graphic that can fit on a printed page and lots that extend beyond. I can couple any of the above with my word-processor to create dazzling text/graphic printouts. a lot like the MacIntosh stuff. (CSGD III even lets you use TIWRITER versions to type in six new, large, unusual fonts in full or split columns WITH the graphics!) But there is a price. Ease. All this stuff requires reading, learning, experimenting, time. For people willing to put the time in and invest a few dollars (GRAPHX, FONTWRITER about \$25 each; TI-ARTIST, BETTER BANNERS about \$20 each; FUNLPLUS! CSGD about \$18; and various companion disks from \$7.95 [from Asgard] to \$18). Probably a basic structure for someone with an Epson-compatable printer who is just starting out with this exciting design world would be FONTWRITER, FUNLPLUS! (which also contains other Fairware and PD TI-ARTIST, and CSGD III. That \$68 investment would give you far greater flexibility than PRINT SHOP. It would also be a fairly reasonable task to set for yourself to learn how to use these pieces of software. Each has excellent documentation providing you take the trouble to do all the things along with the manual while you are learning. (Though, to be honest, I am always too anxious to get into my new "toy" when I get it to look at the manual. I should follow my own advice because I inevitably have to redo everything because 'I wouldn't take the trouble to read the documentation BEFORE using the programs.)

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If you've never designed your own letterheads or labels or drawn and printed any graphics with the incredible GRAPHX and/or TI-ARTIST then you are in for a real treat. Your computer is far more powerful than you have yet imagined. (Asgard even has an automatic slide-show for the GRAPHX pictures to amuse your friends and amaze your enemies.)

In short, the world is your oyster if your TI is working toward its potential.

We'll discover a lot about that potential in the next few columns.

3,2,1 IMPACT! until next time.

(Jack Sughrue, Box 459, E.Douglas, MA 01516)

## A TI-WRITER TIP

This article appeared in the October issue of the Jacksonville Users Group newsletter. The authors name was not specified.

The FIND STRING command in TI-WRITER has several features that are either ignored or simply not known by many people. For instance, when using FIND STRING (FS), if you simply enter /Debits/ it will find the next occurrence of the word Debits. However, if you enter 2 15 /Debits/ it will find the next occurrence of the word in columns 2 through 15. See page 85 of the TI-WRITER Manual.

Another little used fact is if you are in Word Wrap mode when using the REPLACE STRING (RS) function, your text will be reformatted automatically. This is not bad if you are working with paragraph type text, but can be disasterous to columnar type information. To solve this problem, simply get out of Word Wrap mode by hitting CTRL Ø before using RS. See page 87 of the TI-WRITER Manual.

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Hi! This month's disk is a real grab bag of musical goodies, both for those who want to enhance their own programmmes with lively, tuneful music, and the rest of us who are content to enjoy the fruits of others expertise.

The first 6 choices on the menu are a variety of useful musical programmes which I will let you explore for yourself; the 7th is a LINPUT good demo, both of graphic fonts and music. It takes 80 seconds to load LINPUT NAMS and runs for about 4 minutes. It's a good example of geting a fairly long result for only 210 lines of code.

CALLIOPE, a kind of steam driven organ makes you think of : merry-go-rounds and fairs. It does A typical application for LINPUT is a good job of imitating that as the input statement in instruments husky melody whilst processing applications. playing "Dog-gone Boogie Woogie" accepts the entire line of text (lasts about 105 secs).

4 IN A ROW is a computer version of the plastic kids game "Connect 4", where the object line, hor/vert/diag. Good graphics blanks, names number sets etc. and color.

THE LOST PATROL (shades of Commander | 100 CALL CLEAR Crock!!). Following the Marine 110 PRINT "ENTER A LINE OF TEXT Hymn, brief but concise instructions WITH": :" LEADING BLANKS": invite players to lead a patrol 120 INPUT AS South (left) through 4 screens of 130 PRINT: "NOW ENTER THE LINE different dangers. First, acid AGAIN": rain, 2nd, land mines (get a good 140 LINPUT NAMS run up), then piranhas (this ones 150 PRINT: "THE FIRST LINE USED easy, dive deep), then finally a gas | INPUT": A= (tricky!). easy...level 7 is murder!! Press LINPUT":NAM\$ (enter) to progress to next screen. 170 PRINT "TRY AGAIN? PRESS Y" A good game which you will enjoy 180 CALL KEY(0,K,S) playing.

Finally, there is ROMAN EMPEROR, a 210 END word type adventure game. Just which emperor they have in mind isn't siad; maybe it's Nero (so don't 'fiddle' with this one!!)

Anyway, I hope you enjoy this months offering,

Ron Pratt

## LINPUT

AN EXPLAINATION OF THE EXTENDED BASIC COMMAND

BY "THE ROOSTER"

Extended Basic adds many additional commands and statements to those provided by Console Basic. One of these is the string input statement;

LINPUT "YOUR NAME ?":NAMS LINPUT #12:NAMS

LIMPUT only accepts string inputs; no editing is performed on the input stream of data.

word LINPUT entered by the user. This includes leading and trailing blanks.

The following short programme is to stack demonstrates this feature. coloured pieces on various columns Type it in and try entering various in an effort to get 4 pieces to a input lines of text. eg. Leading

Level 1 is 160 PRINT : "THE SECOND LINE USED

190 IF S<1 THEN 180

200 IF K=89 THEN 100

## THE INFORMATION PAGE

#### IN YOUR NEWSLETTER THIS MONTH

Random Bytes
What's in a Code? - CALL KEY tips
Assembly Language - Character sets
Ryte Data "Double Density" chips BASIC for Beginners
New Horizons - hints and tips on Ram Disks
Electric Circuits Part III + a program concludes
FORTH Data Base - Part 3 of a program to type in
Impact 99 - a new column from a new member
A TI-Writer Tip on Find String
Software Review
Linput - an XB command explained

Carmany Member Α. Α. Wright The Editor Ρ. Mulvaney Wright Α. P. Mulvaney ĸ. Bruce J. Sughrue Jacksonville U. R. Pratt The Rooster

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PLUS MUCH MUCH MORE!!!!!

#### COMING EVENTS

Next Committee Meeting: Tuesday 7th July Next General Meeting: Tuesday 14th July

#### AGENDA FOR JULY MEETING

Fun - Games on the TI - new software demo

#### CLASSES AVAILABLE FOR MEMBERS

BASIC group conducted by Paul Mulvaney at the Warners Bay High on Tuesday 16th, 23 & 30 June

ASSEMBLY group conducted by Joe Wright. The next meeting will be held at Joe's on Tuesday, 16th June. Further meetings for the month will be arranged that night.

FORTH group conducted by Richard Terry each Wednesday night. Check with Richard each Wednesday re venue.

#### ANNUAL SUBSCRIPTIONS

Subscriptions to the Group cover the period 1 July to 30 June following year. Membership enquiries are welcome; please address all enquiries to the Secretary.

The annual subscription is:
Australian Residents...\$20
Overseas Residents....\$40 (airmail)
\$30 (surface)

Back issues of our Newsletter are available for \$1 plus postage

R#97

Current.

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