

# HUNTER VALLEY 99'ERS NEWS



TI 99/4A

## HOME COMPUTER NEWSLETTER

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INSTRUMENTS  
**Newcastle**  
& The Hunter Region

Home Computer  
USERS' GROUP

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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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## PRESIDENT'S



with  
Paul  
Mulvaney

With the end of year drawing near the thought of Christmas presents starts to intrude on the conscious part of our RAM. With this in mind I would like our User Group to give a present to the TI community of a disk full of original programs written by our members. So if you have a game or utility program that you have written please get it to a committee man before the next meeting night. This will allow us to distribute it at the end of the second week in December. So come on don't be shy, help to repay the other User Groups that send us programs that you use and enjoy.

Also keep in mind the Multi-Function Day on Saturday the 28th of November. For further information see the article further on in this newsletter. Tickets are also being sold for the raffle which will be drawn at the multi-function day. See Gary Jones for tickets. A list of prizes is published in a further article in this issue.

Thanks to everyone who turned up at the special interest afternoon and made it a success. The afternoon became a console modification afternoon with seven consoles having open heart surgery performed. The highlight was that they all emerged from the recovery ward in good health. I have detailed the alpha lock modification in this issue and will include the reset switch mod in next months issue, so 'stay tuned folks'.

I have just finished interviewing school leavers trying to obtain Apprenticeships with our Company and I have noticed that many young

people are using computers to prepare their resumes, including pictures and borders to enhance their chances of impressing prospective employers. I wonder if someone can produce a program that will provide a profile of headings and accept a persons information. If the program could be stored on tape it would allow everyone with a computer to prepare their own resume and then find someone with a printer to print it out. If anyone gets it finished in time we can include it on the distribution disk.

## SECRETARYS REPORT



FROM ALBERT ANDERSON

Well isn't it nice to be missed... surprisingly quite a few enquiries have come in noting that Alberts I/O column has been absent from the last two issues - my apologies for this and I would like to assure all that it was not due to lack of interest; lets say employer intervention at inconvenient times.

Anyway, Hi to everyone once again and we say welcome to some more new members from both around the corner and across the planet.

Ken Lynch of Edgeworth  
John Colditz from Sydney,  
Peter Bodey from Canberra,  
Marie Forsyth from Mount Hope (in western New South Wales, around Cobar I think!))  
Robert Monch from Lightning Ridge (also in north western N.S.W.)  
and especially to Ennio Medici from the Bevera area in ITALY.



We at HV99 extend to you all the hand of friendship and hope that you are able to become more familiar with your 4A and your fellow users through the resources of the HV99 4A Users Group.

With reference to our first Italian HV99er, Ennio Medici, he says in his letter that in Italy "there remains a few (but good!) faithful to the TI-99/4A Texasman without a user group...." their only contact with others is from, you guessed it MICROpendium magazine. Now thanks to Mp the Texasmen from Italy have a users group to belong to in Australia. Ennio has also joined up with other groups in the USA so he and his friends are now well on the way to being 'in touch' and we hope to hear from them in the future.

Whilst I'm on the subject of overseas contact with other 4A users, I can thoroughly recommend such a practice. My experience is that they are only too willing to SHARE their experiences with the 4A and they develop into what I would classify as friends you would like to meet. Remember the penfriends you used to write to when you were a kid??? Wasn't that great?? So in this issue is a list of HV99 members with the overseas and non local members highlighted. That's all I can do-- I'll leave the rest up to you EHH!!!

Right now, that's all the preachin' for this month done I would like to now thank our non local members for the letters of support and suggestions as part of their contribution to the running of the HV99 group. It is through these ideas that such things as the exchange newsletter mailout and the software mailout schemes come to fruition. It also demonstrates that you don't have to live in close proximity to a user group to be part of it as we here at 'head office' do get quite considerable INPUT from our distant users and this helps to substantiate the various theories on getting out what YOU put in. THANK YOU for your efforts..

On the local scene things have been happening a-plenty lately! At the October general meeting part of the meeting was taken over to hold a

TI-TRIVIA CHALLENGE!!! NOW I have this feeling that elsewhere in this newsletter there might be some comment (probably slanderous!!) with regard to it, so I'm going to get in first! The suggestor and convenor of the challenge just has to be congratulated. Great idea Pete Smith (of Hub of the Hunter fame) and superbly run. I have never seen so much involvement from such a gathering of 99ers during my entire association with this machine. This challenge really demonstrated that our so called sophisticated computer minds are really a peppering of 4A TRIVIA just waiting to get loose. In order not to overdo this column I will prepare a shakedown of the HV99 TRIVIA challenge in the December issue but I will say this... the rules were simple and explicit... they were administered very effectively by the referee Gary Jones (who I only know casually) and a team called the TI-Tortises which I formed a small part of.... AND WE KILLED EM!!!

To all the other groups around the world I would suggest that if you want to see if your monthly meeting attendance has gone to sleep or not, have a TRIVIA challenge night. You'll be surprised at the absolute CRUD that people know about this poor little machine. Such a thing might even be worth considering on the venue of these TI-Faires where representatives of various user groups could lock horns - who knows?? All I know of the HV99 challenge it was great fun on the night. Thanks to Pete and Gary and to all those that participated.

On the Saturday following the general meeting Tim & Jennie Watkins hosted yet another SIG get together. No special purpose was set down for this and the afternoon ended up being a quite interesting and successful 'hardware hack'. It was good to see some of our newer members come along to this as the bodies of about 6 consoles were prepared for surgery and with a little guidance from Pres Paul and myself a few more 99ers discovered that it's not so scary to get into the meat and bones of the old 4A. On setting out the main object was the GROM port clean up job but seeing how as we had them apart it was considered that a couple of mods

like the ALPHA LOCK BYPASS DIODE and the SYSTEM RESET SWITCH ' a la West Penn UG.' in the USA. was not beyond our capability. A couple of notes on this exercise :-

1. Next time you are going to do a clean up job on the grom port consider doing these mods as with the right instruction and a little care they are NOT difficult and the cost is negligible. Instructions for both jobs will be printed in the HV99 news in this & the Dec issue.

2. On the GROM port connector itself it was noted that most people were not aware that the felt wiper pad assembly can actually be removed by releasing the clips at each end of the connector. This facilitates easy cleaning of both the contact area and the felt pad.

3. With regard to Tim & Jennie's exercise it was Jennie that did the actual screwdriver and disassembly/assembly work - not because Tim was not capable but because SHE wanted too...good work!!

4. No patients died - all survived and now have a few extra goodies to help them live more purposeful lives.

Still on the local hardware scene, I have the PC boards for the 32k E/A Supercarts and a get together for their assembly is to be organised during this month. Would those local hardware assemblers that can assist please get in touch with Joe Wright or myself and the non locals that have ordered them and would like them assembled could you also contact us and let us know.

Onto the software department and this month sees the release of VERSION 4.0 of Tony & Will McGovern's FUNNELWEB to the club library. If you think the earlier versions were pretty smart then I suggest you BUY this one, read the docs, chuck it in your system, drool a bit and then get out your cheque book and send something in appreciation to the authors - I have only seen it in precis at the last meeting and to a user of the previous packages this one looks to be, well AMAZING would roughly describe it.

From other groups here in Australia we have from the TISHUG

group in Sydney some great news for 99ers who would like to fill up their expansion boxes with RAM DISKS. TISHUG, through Peter Schubert have followed on from the design work on their MINI EXPANSION SYSTEM (which has been reported on in earlier issues) and produced what they term as a "MULTI-FUNCTION BOARD". This board is designed for the PE-Box and contains the following :-

- A) Disk Controller with DSDD capability.
- B) 32k memory expansion.
- C) 2\* RS232 ports
- D) PIO Port E) plus room for future development.

This board, I am told will be available either complete or in 'separate function form' allowing for expansion as you grow type users. As yet I don't have a pricing schedule for the MULTI FUNCTION PE-Box BOARD. Congratulations to the people behind this concept as I would consider that you have a real goer here, particularly with all those Ram Disk hungry 4A users.

From the Melbourne groups' Peter Gleed comes an interesting article which looks into the 2nd hand equipment market for the 99/4A. The approach taken by Peter is very interesting and results so far have been very successful. One success in particular relates to a complete PE-Box based system that Peter obtained and passed onto HV99 as he was aware that HV99 were looking for a second system at reasonable cost - is \$300 reasonable?? I think so... Thank you very much for your efforts Peter. In a phone call to Peter to thank him, his reply was this.. "isn't that what USER GROUPS are for.. to help USERS???" Reply.. YEP!!

OK. Now let's head off overseas to the US. Firstly could I pass on to all our friends in the southern California area our heartfelt thoughts during the earthquakes in this area recently. Here in Australia it was reported that the epicentre of the major shift was around the Whittier area and this is where HV99 receive a couple of top class exchange newsletters from. So to the folks of Orange County, Brea and LA. we

hope you haven't been dished out too hard a blow from old mother nature. If the 99ers over there are like Ken Hamai they probably wouldn't even notice a little old earthquake unless it caused their system to lock-up anyway!!

To the US and Canadian people attending the CHICAGO FAIRE this month we hope that you all get the very best out of it. To the organisers and booth operators we wish you very best and hold you in awe... we can only be there in spirit so have a good time and don't forget us Aussies. One particular product that we would like to know about is the recently released GRAND RAM from Databiotics. There is genuine interest in this product over here however apart from the advertising and a disk on its specs etc. sent to us by an East coaster (Hi, Bob & thanks) we are in the dark on it.

Crossing over to Germany, word comes from Mike Heuser of Workshop Rheinland that they are about to embark on production of their own version of the GRAM CRACKER and are negotiating to have it distributed by RYTE DATA in Canada. Mike says that this device has many more features and possibilities to that of the MILLERS GRAPHICS device which has ceased production some time ago. By the way Mike has spent the last 10 weeks in hospital recovering from a car crash in which says he broke a few bones. Sounds to me like a few bones "weren't" broken. Good to hear from you Mike and all the best with you recovery.

On newsletters we here at HV99 are receiving exchanges from MOST of our overseas exchanges like clockwork, however in some cases we have continued to send but not receive. At the start of 1988, which for us is our February issue our exchange arrangements will by then have been reviewed. This reason for this is simple economics.. HV99 are a non-profit group and the officers must justify to the membership ALL expenditure. If our exchanges don't balance it makes it difficult for us. We have spent considerable time establishing these valuable overseas contacts and we DO NOT want to lose any of them.

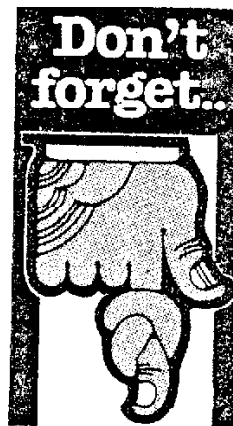
Well with that I think that I have caught up for the time being. To the people that were aware that I may have been moving camp to Northern NSW/Queensland due to a job transfer, well I'M NOT.... You'll just have to put up with me till the next elections...hee..hee.. hee !!!

Bye now and be good!!

Albert Anderson  
4a4me

**WANTED**

Alan Franks, our genial Software Librarian, wishes to purchase a TE II Module. If you have one laying about the house doing nothing, give him a call and he will put it to good use.



**WE NEED YOUR CONTRIBUTION**

To make the BUMPER CHRISTMAS ISSUE a success, YOUR contribution, no matter how small or on what subject (within reasonable bounds!!) is solicited.

Please get your contribution to the Editor by Tuesday, 1st December, to give him time to have the Newsletter printed and ready for distribution by the December meeting.

Remember, the success of this particular issue is in your hands.

**\* \* \* WRITE SOMETHING NOW \* \* \***

# BITS "N" PIECES

FROM  
CHAOS MANOR

**Problem:-** You just creamed a disk full of "whatever files" by equipment fault (bad cable connections etc). After loading your favorite Disk Patch Program you discover that sectors 0 and perhaps 1 are not readable but MOST other sectors are OK showing file names etc. How to recover that disk? After all you don't have a backup!!

**Solution:-** When reading the sectors with Disk Patch note down all available file names - you are in ASCII mode aren't you? Now slip a fresh initialized disk in the drive and read sector 0, put the corrupt disk in the drive and rewrite the sector (FCTN 8). Yes it will rewrite to sector 0 even though you get errors when trying to read it. Do the same for sector 1 if required. Now load DM1000 and using the RECOVER FILES option enter all available names that you have written down and the disk will be (hopefully) restored to a usable state again. After restoration check that all files are OK - if not buy another disk.

**Problem:-** Module giving you trouble? Contacts bad after many insertions? Cleaning doesn't help?

**Solution:-** Remove the Module PCB, heat up your favorite soldering iron, CLEAN the tip then wrap some solder wick (there are many brands such as Dick Wick etc) around the tip of the iron (if you burn yourself then you are a bit slow upstairs !!!). Heat the iron up then apply a LITTLE solder to the solder wick on the iron (I said a LITTLE bit of solder). Now place the wick tipped iron on the Module contact strips and "paint" them over. It will run quite smooth and bright but don't keep the heat on very long or the tracks may lift. When finished polish LIGHTLY with a Scotch Brite

scouring pad (don't use steel wool it could get in the "works" of the module). Although solder may not seem to be a suitable "plating" to use I have used it many times with no problems. If you wish you can practice on a scrap piece of strip board.

**Problem:-** Printer type barely visible? Ribbon run out of ink? A new one costs Mega/bucks and it seemed like you only just fitted a new one?

**Solution:-** Buy some PLUS Numbering machine ink (that is all that is printed on the box, the rest is Japanese hieroglyphics). It comes in a handy squeeze plastic bottle with approx 28cc contents, and is available from most large stationary suppliers. This ink is a graphite based, self lubricating product and costs about \$6, enough to recharge a printer ribbon about six times depending on the length of the ribbon. Get a smooth piece of plastic tubing about 25mm in diameter, secure it as best you can (I hold it in a vice, sideways) squirt a fair dab on the plastic tubing then holding the ribbon so that it slides through the ink when you turn the little knob that is usually on such things. It will soak up a fair amount of ink, just how much will have to be best judged by yourself but when the ribbon starts to "drag" heavily you will be getting close. Test for saturation by holding it onto a fresh part of the plastic tubing and if ink is deposited QUIT. Store the ribbon in a plastic bag for a few days turning it over now and then, this allows the ink to penetrate fully through the ribbon. It is suggested that when it is fitted then a LONG printing run be done as this will iron out any blobs and weak spots on the ribbon. When it is "run in" it will clean up half a box of paper before it needs recharging. Incidentally take it from one that knows, this particular ink is guaranteed to stay on your fingers for quite some time and only seems to be able to be worn off, so wear some gloves!

**Problem:-** Does the first line feeds of FUNNELWEB/TI-WRITER Formatter bug you? Wish you could start printing where you want and not where you think it will start?



**Solution:-** After the usual Formatting and Tab commands are set up include at the start of the next line .DP 1 then on the line before your text starts, type \*1\*. Before the formatter gets to this command the line feeds will be executed then it will stop, waiting for your response to the Prompt. Reset the paper in the printer to where you want it then just press ENTER and it will start printing straight away without any further line feeds. Try it! The formatter will print the .DP 1 but will not print the Prompt Command.

**Problem:-** Modem and/or software in doubt? Phone bill getting out of hand checking it out? Not sure whether it is You, Telecom or THEM?

**Solution:-** (S)end and (R)ecieve files to your cassette, you know, that dusty thing in the closet that you used to record Programs on!! Just hook the modems phone line to a suitable plug then (S)end a file to the MIC socket and (R)ecieve a file from the EAR socket, works well at 300 baud, I haven't checked it out at higher baud rates but maybe you would like to experiment!!

R.Kleinschafer.

## FUNNELWEB 4.0

FUNNELWEB Version 4.0 was given to the HV99ers Librarian recently by the authors, Tony & Will McGovern, and if you thought it was good before... 'you ain't seen nothin yet'. Thanks Tony & Will on a great update on a already fantastic piece of work.

If you want a copy see Alan Franks, our Software Librarian, at any monthly meeting, or send a cheque/money order/etc to him at:-  
822 Pacific Highway,  
MARKS POINT NSW 2260

The cost of this FAIRWARE item is:-

SSSD - 2 disks - \$5  
DSSD - 1 disk - \$4  
SSSD - 3 disks - \$7 (35 track drive version)

If the disks are to be mailed to you, please include \$2 for packing and postage within Australia by air mail.

# OOPS

In Bob Carmany's program FILE/READ that appeared in the July issue, one of those nasty bugs had arisen and has, in this issue, been firmly squashed!

The error was reported to Bob by another of our US members, Ellen Kramer, and additional changes were suggested by Tony McGovern.

First to correct the 'bug'. In line 100, the GOTO statement is wrong. It should read GOTO 110 instead of GOTO 100.

With that bug corrected on to the enhancements! TMCg suggested a 'safety hatch' to allow the user to exit the program before the entire file was presented, in other words to abort the reading of the balance of the file if it was found that it was not the required file. To solve the problem, two additions have been made.

In lines 430 & 490 the statement IF K=13 THEN 530 has been added. This transfers control of the program to the 'end of program segment' if the <ENTER> key is pressed. Any other key simply halts the scrolling as before (the BREAK key is still disabled). The instructions should be altered to reflect the changes made.

In line 570, replace the text that appears after "key" with "or ENTER to abort the:" "file presentation" will take care of that aspect of the program.

A full, updated listing appears on the opposite page.

Sorry for any inconvenience caused to any of our readers, but those bugs do have that nasty habit of creeping in to the best of programmers efforts.

Bob Carmany



# UNIVERSAL FILE READER

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```

100 @=0 :: [=1 :: ]=2 :: _=3 :: 250 DISPLAY AT(11,0):"3) INT : 340 DISPLAY AT(8,0)BEEP:"Pri : 540 DISPLAY AT(12,5)ERASE AL
:: \=4 :: GOTO 110 :: A$,CH : ERNAL ,VARIABLE":4) INTERNA : ntout of file? (Y/N) N" :: A : L:"PROGRAM TERMINATED" :: FO
OICE$,FILE$,P$,PRINT$,Z$ :: : L ,FIXED" :: DISPLAY AT(13,2 : CCEPT AT(8,25)VALIDATE("YyNn : R DE=C TO 500 :: NEXT DE ::
A,DE,F,K,L,S,Z :: CALL CLEAR : 0):"1" :: ACCEPT AT(13,20)VA : ")SIZE(-):P$ : CALL CLEAR :: END
:: CALL KEY :: CALL SCREEN : LIDATE("1234")SIZE(-):A :: : 350 IF P$="N" OR P$="n" THEN : 550 DISPLAY AT(1,0)ERASE ALL
:: !@P- : CALL ERASE : 450 : "To use this program, simpl
: 260 DISPLAY AT(8,0)BEEP:"Rec : 360 DISPLAY AT(8,0)BEEP:"Pri : y":"follow the input prompts
ord Length" :: DISPLAY AT(9, : nter devicename " :: DIS : " : "as they appear on the scr
6):"80" :: ACCEPT AT(9,6)VAL : PLAY AT(10,0):">P10" :: ACCE : een"
: IDATE(DIGIT)SIZE(-):L :: CA : PT AT(10,1)SIZE(-):PRINT$ : 560 DISPLAY AT(9,1):"The 'Re
LL ERASE : 370 DISPLAY AT(23,0):"Printe : cord Length' prompt":"is the
: 270 ON A GOTO 280,290,300,31 : F ">PRINT$ :: CALL ERASE : record length that":"appear
: 0 : 380 ON ERROR 610 :: OPEN #I : s at the end of the":"file d
: 280 ON ERROR 610 :: DISPLAY : PRINT$,OUTPUT,DISPLAY : description":"(ie. 0/V 80)"
: AT(20,0):"DISPLAY ,VARIABLE" : 390 IF EOF(0)THEN 510 : 570 DISPLAY AT(16,1):"You ma
: :: DISPLAY AT(20,19):L :: O : 400 ON F GOTO 410,420 : y stop the screen":"scrollin
: PEN #C:FILE$,INPUT ,DISPLAY : ,VARIABLE L :: GOTO 320 : 410 LINPUT #C:A$ :: GOTO 430 : g by pressing ANY":"key or <
N(5):: DISPLAY AT(1,8):"FILE : 290 ON ERROR 610 :: DISPLAY : AT(20,0):"DISPLAY ,FIXED" :: : 420 INPUT #C:A$ : ENTER) to abort the":"file p
READER":" VERSION 4.0 : 300 ON ERROR 610 :: DISPLAY : AT(20,0):"DISPLAY ,FIXED" :: : 430 CALL KEY(@,K,S):: IF K=1 : centation":
: " &RPT$("-",24):: DISPLAY : AT(20,0):"DISPLAY ,FIXED" :: : 3 THEN 530 :: IF S<>@ THEN 4 : 580 FOR DE=C TO 3000 :: NEXT
AT(14,0):" &RPT$("-",24) : DISPLAY AT(20,16):L :: OPEN : 30 ELSE PRINT A$ :: PRINT #J : DE
: 210 DISPLAY AT(10,0)BEEP:"IN : #C:FILE$,INPUT ,DISPLAY ,FI : :A$ : 590 CALL CLEAR :: DISPLAY AT
STRUCTIONS (Y/N)? N" :: ACCE : XED L :: GOTO 320 : 440 GOTO 390 : (1,8):"FILE READER":
PT AT(10,24)VALIDATE("YyNn") : 300 ON ERROR 610 :: DISPLAY : AT(20,0):"INTERNAL ,VARIABLE : 450 IF EOF(1)THEN 520 : VERSION 4.0": " &RPT$("-",24
SIZE(-):CHOICE$ :: DISPLAY : AT(20,0):"INTERNAL ,VARIABLE : 460 ON F GOTO 470,480 : ) :: DISPLAY AT(14,0):" &RPT
AT(10,0):RPT$(" ",24):: IF C : " :: DISPLAY AT(20,20):L :: : 470 LINPUT #C:A$ :: GOTO 490 : $("-",24):: RETURN
HOICE$="N" OR CHOICE$="n" TH : OPEN #C:FILE$,INPUT ,INTERNA : 480 INPUT #C:A$ : 600 !@P+
EN 220 ELSE GOSUB 550 : L,VARIABLE L :: GOTO 320 : 490 CALL KEY(@,K,S):: IF K=1 : 610 CALL CLEAR :: CALL SCREE
: 220 DISPLAY AT(8,0)BEEP:"Dev : 310 ON ERROR 610 :: DISPLAY : AT(20,0):"INTERNAL ,FIXED" :: : 3 THEN 530 :: IF S<>@ THEN 4 : N(7):: DISPLAY AT(12,0):"YOU
ice.FileName":>" :: ACCEPT : AT(20,0):"INTERNAL ,FIXED" :: : 90 ELSE PRINT A$ : HAVE JUST ENCOUNTERED A":"F
AT(9,1)SIZE(15):FILE$ :: IF : DISPLAY AT(20,17):L :: OPE : 500 GOTO 450 : ATAL I/O FILE ERROR.":"PLEAS
FILE$="" THEN 220 :: CALL ER : N #C:FILE$,INPUT ,INTERNAL,F : 510 CLOSE #J : E RE-ENTER YOUR FILE"
ASE : IXED L :: GOTO 320 : 520 CLOSE #I : 620 DISPLAY AT(15,0):"PARAM
: 230 DISPLAY AT(16,0):"Device : 320 DISPLAY AT(8,0):"Paramet : 525 FOR DE=] TO 2000 :: NEXT : TERS" :: FOR DE=1 TO 1000 ::
.FileName" :: DISPLAY AT(17, : er Flag ":"I For DISPLAY Fil : DE : NEXT DE :: RUN
0):">%FILE$ : es":"2 For INTERNAL Files" : 530 DISPLAY AT(12,0)ERASE AL :
: 240 DISPLAY AT(8,0)BEEP:"Fil : : DISPLAY AT(10,22):"1" :: A : L:"Read Another File? (Y/N) : 630 SUB ERASE :: DISPLAY AT(
e Descriptors (Choose 1)" :: CCEPT AT(10,22)VALIDATE("12 : N" :: ACCEPT AT(12,26)SIZE(- : 9,0):RPT$(" ",162)
: DISPLAY AT(9,0):"1) DISPLAY : )SIZE(-):Z :: CALL ERASE : 640 SUBEND
,VARIABLE":2) DISPLAY ,FIX : 330 F=Z : Z$="Y" OR Z$="y" THEN 200 EL :
ED" : SE 540

```

# IN THE NEWS

NEWS FROM AROUND THE WORLD

COMPILED BY

JOE WRIGHT

The crop of Newsletters that have arrived this month are not as "NEWSY" as usual. Some local info before getting into the overseas news.

## MODEMS.

A Melbourne Company-

ABE Computers P/L.  
24 Burwood Highway  
Burwood 3125  
Victoria.

has been running an advertisement for several months now in the APC. They are marketing a Modem Kit which looks interesting. It is direct connect, answer/originate. Baud rates available are 300/300, 1200/75, 75/1200. The kit sells for \$95.00. Built and tested it sells for \$155.00. Complete with phone the price is \$240.00. If anybody has purchased one I would be interested in hearing from them.

Other interesting news in the APC is that Lotus will drop copy protection from future versions of 1-2-3. They quote Lotus, "We've found that copy protection is one of those nuisances that people want to remove, but they don't want to purchase the upgrade just for that. That's why we've timed it to coincide with the new releases," the spokesman said.

APC reports that Users and industry analysts greeted Lotus's move with enthusiasm, although they pointed out that it was a long time coming.

APC also reviews 7 of the cheapest IBM compatible PC systems currently available in Australia. Makes interesting reading!!

## FUNNELWEB.

Tony McGovern gave a sneak look at Vers. 4 at the last meeting. He has several copies out for testing and release is not to far away.

From what I seen of it, Tony has once again made the programme ever more user friendly, and also enhanced the whole package in the process.

I often think back to a Club meeting about 12/18 months ago when Tony announced the definitive version of FUNLWRITER. Funnelweb today is barely recognisable when compared to that Version. I just hope Tony continues to get the recognition that he surely deserves for the contribution he has made to TI99/4A community.

## A CHIP OF THE OLD BLOCK.

Tony has told us about a project on which his son Wills is working. Unfortunately Wills was studying at the time of the last meeting and could not confuse us himself so Tony kindly obliged.

Wills has been working on an MS-DOS system for the TI. School exams have stopped further work for the time being. "The MS-DOS disk handling code itself is pretty polished now. The programme automatically senses whether a TI or MS-DOS disc is in the drive and catalogs appropriately."

More news on this after Wills gets to the next meeting.

## H.V. SUPER CART.

Some real progress has been made in this area. Currently 20 cartridges are to be made and at the time of writing all but two have been accounted for. The boards should be to hand by the time you read this, the GROMs have arrived from USA and the memory chips are also on hand. Hopefully at the next time of writing they will be up and running and more ordered if required. I have had Neil Quigg's prototype for several weeks to have a play with. The uses for such a module are only limited by your own imagination. One simple example is to get the character set used in the TI title screen and then use them in your own programme. Remember it gives an additional 4 blocks of memory which can be switched with the simplest routine. If you are into programming then this module is a must. We hope to have a lot of software out which uses the module during 1988.

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P.E. BOX MULTI FUNCTION CARD.  
As mentioned in the Sydney news digest last month, a new card for the PE Box has been developed by Peter Schubert. The card is to be demonstrated at the next monthly meeting of the Sydney Group. Features included on the card are:-  
AT disk control with additional CALL commands, 32K memory expansion, a PIO printer port, and two RS232 ports with Bauds rates 19,200, 1200/75, 50 Baud RTTY and "MIDI" speed interface. The report in this months NEWS DIGEST does not mention a price, more details will be published next month.

#### SUPER X-BASIC Vrs 120.

Micropendium report in a review by Harry Brashear that Triton Co. have released this version of Super X-Basic. The cartridge has 29 new Calls, three new commands, four radically new features and eight modifications. They also have included a ROM version of DRAW and PLOT. Priced at \$59.95 the reviewer gives this the thumbs up in no uncertain manner. An A rating for all features.

CALL LINKs for the DRAW and PLOT features are-

CALL LINK("GLEAR") clear graphics memory.

CALL LINK("MOVE",x,y) position pen within 256 column by 192 rows.

CALL LINK("DRAW",x,y) draws a line between present pen location to x,y.

CALL LINK("CIRCLE",x,y,z,) will give you a circle based on the centre being at x/y and radius z given.

CALL LINK("SQUARE",x,y,z,) draws a square with lower left corner at x/y and the height of z.

CALL LINK("LABEL", " ") places text at the pen position.

CALL LINK("SHOW") moves a drawing to VDP RAM and displays it on screen.

There are also four screen dump LINKs, one each for small and full page dumps for either Epson/Gemini or Prowriter protocols.

Finally EDIT gives you full, visible drawing ability using a joystick. In this mode, the keyboard is scanned for various keys to FILL, WRITE/ERASE, DRAW, CIRCLE, BOX etc.

You can leave with the "E" press and then go on with a programme.

The Super Ebasic package includes the TI Extended basic manual and another 24 page booklet that covers all the new commands and the DRAWNPLOT directions. To quote the reviewer "In my opinion this is the best thing to come for our machine since RAM disks. If you are a dedicated Tier like me, you can't do without this cartridge. It will make your life much easier and open up a whole new world of programming.

I want to make one thing clear. Super XBASIC is the SAME XBASIC that has always been there for us. As long as you stay out of the new commands, anybody can run any programme you make up. Given a little time, though, you are going to find more and more programs using the new commands because a lot of these are going to be sold in a short order. Thanks Triton, thanks MG. You guys sure know how to keep my interest in the TI."

TRITON PRODUCTS  
P.O. BOX 8123,  
SAN FRANCISCO  
CA 94128.  
U.S.A.

Requires: CONSOLE, 32K needed for some commands.

Other features are:

Three new editing features, MOVE, COPY, and DEL.

CALL CLOCK. This is a little interrupt clock which appears in the upper right corner of your screen. It isn't a true clock, it stops during access to disks. The review reports that apart from this it keeps good time.

To get the rest of the new features I would suggest that you read the review in September Micropendium.

#### PROTO-TYPING BOARD.

Also from Micropendium, A new proto-typing board for the PE Box has been announced by Scott Coleman and John Willforth.

Willforth says the board also incorporates a general purpose project carrier for the PEB.

The board can be used in the 99/4A,



99/8 or Geneve 9640 environments, the manufacturers say:

-- For the 99/4A, all the standard address, data and control are brought up through the recommended 74LS245, 74LS244 and either a 74LS125 or chip of the users choice, to be interfaced to the circuit. The board will support both solder tail and wire-wrap.

-- Because of the large potential for the use of the 6264 and 62256 Low Power static RAMs, the board has two dedicated etched areas to enable easy development with this chip.

-- Below the RAM area are three 16 pin chip locations for decoding and setting CRU addresses.

From 1 - 4 boards may be ordered at US\$35 each and from 4 - 9 at US\$30 each.

The boards may be ordered from:

COMPUTER BUG,  
5075 Clairton Blvd,  
Pittsburgh,  
PA 15236  
USA.

From THE MID SOUTH TID BITS OCTOBER 1987. Gary Cox reports:

TEXAMENTS  
53 Center Street,  
Patchque  
NY 11772  
USA.

has introduced three new Character Sets and Graphics Design support software packages. They are CSGD User Disk #5, CSGD User disk #6, and CSGD Cataloger. According to the manufacturer CSGD disk #5, a two disk set, contains 16 new and two revised fonts for use with CSGD Messages, Letterheads, Labels and Banners. There are also eight Documprint fonts for use with CSGD III Docuprint programme. Also included in User disk #5 are 28 monogram graphics, 24 assorted small graphics and 15 large pictures (used exclusively for CSGD). Price is US\$10.95 plus shipping and handling.

CSGD User disk #6, another two disk set, contains 16 new fonts and one revised font, 24 monogram graphics, 18 different small graphics and 13 large pictures. Price is US\$10.95 plus shipping and handling.

CSGD Cataloger allows the User to

print out CSGD small graphics and fonts to paper for easy reference, according to Steve Lanberti of Texaments. CSGD cataloger is designed to allow all CSGD graphics files and TI ARTIST graphics files to be cross referenced on data sheets. Price is US\$6.95 plus shipping and handling.

All CSGD fonts and graphics, including the new User Disks, may be used by programmes which are CSGD compatible the manufacturer says.

#### RECIPE WRITER 2.0

Asgard Software has released Recipe Writer 2.0. The upgraded programme has been rewritten in c99 and "completely changed" according to Chris Bobbit of Asgard. He says the new version features space for a full title, the oven temperature, 23 lines of ingredients and 23 lines of preparation instructions; a line for multiple keywords to describe the recipe; wildcard keywords search routine to allow the User to find all recipes with any given keyword even if it was misspelled; complete recipe editing utilities; complete print utilities; a conversion utility to convert the ingredient list by any factor to, like make a recipe for one into two.. Minimum requirements for the programme are a TI99/4A, 32K, XB or E/A and one Disk drive. Price is US\$19.95 including shipping and handling. Also available is the Electronic Chef series of companion disks for Recipe Writer 2.0. Titles currently available are Southwestern Foods, Appetizers and Soups. Scheduled volumes, are Meat Dishes, Chicken Dishes, Side Dishes and Desserts. All volumes, which require Recipe Writer 2.0 are US\$6.95 each including shipping and handling. For further information contact:

ASGARD SOFTWARE,  
P.O. Box 10306,  
Rockville,  
MD 20850  
USA

NOTE!!!! The above prices which include shipping and handling would only apply to internal US mail. Remember the reply paid coupons!!

#### SPAD III.

Not-Polyoptics has announced an upgrade to Spad III, its machine language flight simulator for the TI99/4A, scheduled for release last

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month. According to Michael V. Capobianco of Not-Polyoptics, Spad III Mk 2 is twice as fast as the previous version and more responsive. New features have also been added, he says. In addition to the six "out of the cockpit" views, a removed viewpoint, showing the plane from an observers standpoint, has been included.

"Better algorithms produce improved graphics and a more realistic flight performance," Capobianco says, "Keyboard/joystick interface has been augmented to allow new functions and greater flexibility. Finally, an optional Red Baron Fokker Tri-plane opponent provides even more exciting dogfights."

Spad III Mk 2 requires a TI99/4A with XB, 32K, and a disk drive. The programme will retail for US\$29.95, according to the manufacturer. Registered purchasers of Spad XIII can obtain the upgrade by sending US\$6.95 plus US\$1.00 shipping and handling to:

NOT-POLYOPTICS  
P.O. Box 4443,  
Woodbridge  
VA 22194.  
USA

FROM SDTI-SIG come the following news:

Two prominent TI'ers have come up with a new wrinkle for putting not only 32k inside our TI99/4A console, but are making it expandable to 64K total. They are John Clulow and Mike Ballman. Clulow wrote an article which was carried in the July, 1987 West Penn Newsletter in which he tells how to make the hardware mods. He also states Ballman is working on 64K of memory. The mod yields a programme execution speed increase of about 50%. But, John adds that with the full 64k on line: "This will open up a whole new area of software, including such possibilities as a real DOS which could be loaded into RAM from disk on power-up."

FIN.

That about wraps this column up for this month. If you have some special news for our Christmas Edition then please get it into the Editor early to ensure that you get printed. Until next month then!

## MULTI-FUNCTION DAY

Don't miss our big End of Year Bash to be held at the BOORAGUL PRIMARY SCHOOL on Saturday, 28th November commencing at 2.00pm.

Come along and bring all the family; a great time is guaranteed for all ages.

There will be a 'SWAP & SELL' session during the afternoon so bring anything that you wish to dispose of (wives and children may NOT be included in the stall). Other activities will include cricket, sitting in the sun, doing nothing, etc, etc, etc.

Pete Smith has offered (that's not entirely correct. He wasn't at the last Committee meeting, so he was 'volunteered') to host a rematch of the GREAT TRIVIA CONTEST that was recently held at a monthly meeting and was won, under VERY dubious circumstances, by the TI Tortoises. This is a real cut-throat affair, so come along and join in the ~~bloodbath~~ fun!!

Please bring your own meat for a bar b que to be held from about 5.00pm, and drinks for yourself. Juice, lollies chips etc will be provided by the Group for the kids.

During the afternoon the BUMPER RAFFLE will be drawn, and the list of prizes just keeps on growing. At last count the prizes were:-

- 1) A Speed King Joystick + adaptor valued at \$50
- 2) OSCAR - optical scanner + software
- 3) 50 disk capacity Disk Box
- 4) A bundle of Home Computer Magazines
- 5) 2 books of TI games to type in

Tickets in the raffle are 3 for \$1 and are available from Gary Jones, either at the meeting or by mail - see his address on the inside cover of the Newsletter.

# FREQUENCY SAMPLER

TRANSLATED TO MINI MEMORY

BY

KEVIN COX

```
MY BSS 32          *WORKSPACE
SC BSS 768        *SCREEN VALUE STORAGE LOCATION
FR LWPI MY
FQ CLR R12        *SET FOR CRU ADDRESSING
  LI R0, >4000    *SET FOR VDP WRITE AT >0000
  LI R5, >4F1E   *ASCII VALUE >4F(0) AND 1E(CURSOR)
  LI R8, 768     *24*32 SCREEN POSITIONS
  LI R6, >2020   *ASCII VALUE >20(SPACE)
SF LI R9, 16     *SET TO TAKE 16 SAMPLES
NF MOV R8, R10
  MOV R8, R4
  MOV R8, R7
OS DEC R10
  JEQ SH         *NO SOUND FOR 768 LOOPS?
  TB 27         *TEST FOR CASSETTE OUTPUT
  JNE OS        *ANY SOUND?
  MOV R8, R10   *RESET TO 768
NS DEC R10
  JEQ SH         *SOUND ON FOR 768 LOOPS?
  TB 27         *TEST FOR CASSETTE OUTPUT
  JEQ NS        *SOUND STILL OFF?
TS DEC R4        *COUNT FOR TIME SOUND ON
  JEQ SH         *SOUND ON FOR MAX 768 LOOPS?
  TB 27         *TEST FOR CASSETTE OUTPUT
  JNE TS        *SOUND ON?
XS DEC R7        *COUNT FOR TIME SOUND OFF
  JEQ SH         *SOUND OFF FOR MAX 768 LOOPS?
  TB 27         *TEST FOR CASSETTE OUTPUT
  JEQ XS        *SOUND STILL OFF
  MOVB R5, @SC(R4) *STORE "0" ASCII VALUE
  SWPB R5       *CHANGE TO CURSOR ASCII VALUE MSB
  S R7, R4      *CALCULATE TIME ON-TIME OFF
  ABS R4        *ABS TIME ON-TIME OFF
  MOVB R0, @SC(R4) *STORE "@" ASCII VALUE
  MOVB R5, @SC(R7) *STORE CURSOR ASCII VALUE
  SWPB R5       *CHANGE TO "0" ASCII VALUE IN MSB
FS DEC R9
  JNE NF        *16 SAMPLES YET?
SH SWPB R0
  MOVB R0, @>8C02
  SWPB R0       *DISPLAY 16 SAMPLES EACH OF:
  MOVB R0, @>8C02 *TIME SOUND OFF(CURSOR SYMBOL)
  LI R1, SC     * TIME SOUND ON (O)
  MOV R8, R10  * DIFFERENCE (@)
NX MOVB *R1+, @>8C00
  DEC R10
  JNE NX
  LI R1, SC
  LI R10, 384
ND MOV R6, *R1+
  DEC R10
  JNE ND
  TB 7          *TEST FOR FCNT KEY
  JEQ SF        *FCNT KEY PRESSED?
  BLWP @>0000   *QUIT
END            *TEST FOR UNRESOLVED REF.
```

```

AORG >701C
DATA >7FB2
DATA >7FE0
AORG >7FE0
TEXT 'SAMPLE' *PROGRAM NAME
DATA FQ *START OF PROGRAM
END

```

This program illustrates the way the TI99/4A uses the CRU to sample the output of the cassette recorder. When the program is run and the cassette recorder is on, characters will be displayed on the screen which change position with a change in the frequency of the recorder audio output, 16 frequency samples are taken at a time. The time the signal is on is displayed as a "O" on the screen. Character position varies with the frequency. The higher frequencies move the character further down the screen. The cursor symbol shows the time of the signal is off. The difference between time on and time off is indicated by the "" character.

## SATURDAY ACTIVITY DAY

- A REPORT -

On Saturday the 17th October the club held an activity afternoon catering for any special needs. This day, like past days, was well attended and well enjoyed by all that were there. As usual a wide cross section of TI punchers turned up. They included oldies, middlies and youngies. All had things to do.

The kids got straight into the games (surprise, surprise) and spent the afternoon munching, crunching and punching various ghosts, klingons and invaders. It was interesting to note that as the afternoon wore on, the sound effects seemed to get louder. The TI mob certainly had great theme songs but ALL AFTERNOON?? Anyway about 2.30pm the order of the day was "TURN IT DOWN!!!"

The bigger kids got into some modifications within the TI. One was to save having to keep on changing the ALPHA LOCK which always seems to be in the wrong mode. This modification is really good as there

is nothing more annoying than setting up and getting an error because the ALPHA LOCK is in the wrong mode. This modification disables the control. The second one was to incorporate a separate switch on the console which will enable you to reset the console without having to turn off the electrics. This saves a lot of wear and tear on the console. Both modifications are excellent and do not take a real lot of effort and can save you a lot of hair pulling. If a soldering iron is your bag have a look at these modifications (both of which are featured in the Nov & Dec issues of the mag).

The rest of the afternoon was taken up with social stuff (i.e. lots of talk). There was also an opportunity to have a look at some software. Afternoon tea was provided and this proved to be very nice (having a sweet tooth). As mentioned, there was some hardware modification made and some of us who are not very clever electronically had some help offered which was much appreciated. As a club we are very fortunate to have people who are willing to help us amateurs.

Although I am not electronically minded I did manage to pull my machine apart (see my article in last months issue on Lock Up) not like some people. I realise that the age of liberation has really arrived when we men were

working on our consoles, sweating it out when we turned as one man and were struck by the vision of someone who will remain nameless sitting with his hands on his head while his wife Jennie dismantled his console ready for modification. MENS LIBERATION? Good on ya Jennie (TIMS WIFE).

So the afternoon wore on, solder smoke filled the air along with the familiar sounds of Beep, crash etc we packed up once again and headed for home. Remember these afternoons are a great time to get involved, meet other members play games and generally have a good time so keep your eyes open for the next one. BE THERE OR BE SQUARE.

Lothar Nowak



## RELEASE THE ALPHA-LOCK BLUES

A MODIFICATION  
DESCRIBED BY  
PAUL MULVANEY

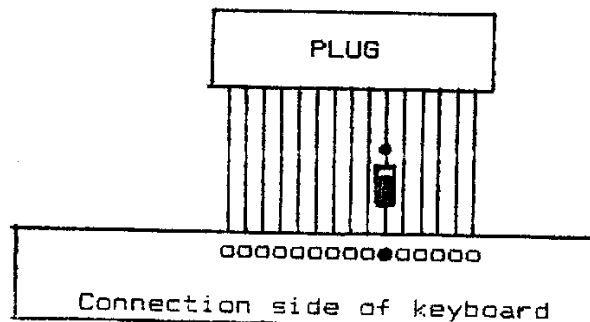
*This modification has appeared in a number of publications but I am led to believe that it may have originated from MICROPENDIUM by Mack McCormick.*

As a follow up to last months joystick adaptor here is a modification to remove the last joystick hassle:- The scourge of all games players - THE ALPHA LOCK.

For the same reasons that the diodes where needed in the adaptor, to prevent feedback, so a diode is required in the alpha lock circuit because it shares the same track as the UP direction on the joysticks.

The modification is very simple and only requires one diode. I recommend a 1N4004 for amateur solderers as it has a higher heat tolerance than a 1N4001.

- 1) Dismantle your console (see Lothar's article in last months newsletter) and unplug the processor from the keyboard.
- 2) Locate where the wires from the plug are soldered onto the keyboard and unsolder the sixth wire from the right.



- 3) Solder the diode into the hole that the wire came out from, make sure the band is pointing toward the plug. If the diode is inserted the wrong way you will only get lower



case letters.

4) Solder the wire onto the other side of the diode and hey presto no more alpha lock problems when the joysticks are used.

Take care with the wires going to the plug as they may break. If you find some keys not working after re-assembly then there is a broken connection. I had to resolder all the connections on the Groups console because it has been pulled apart so often.

## SOFTWARE REVIEW

OCTOBER  
DISK OF THE MONTH REVIEW

by  
DUNCAN PAWLEY

I apologise for the lateness of this review. It so happened that we moved house and then went on holidays for two weeks, and I discovered the disk waiting for me on return.

This disk contains a variety of programmes, some of which I found to be very good, some so-so, and some of which I couldn't get to work due to lack of instructions. The programmes are as follows:

**CHARACTERS.** Programme generates XB characters as per the CALL CHAR subprogram, and saves them in an I/F 80 file called "XCHARFILE". Timesaving for those who want to do this.

**COL/MAST.** A good game of Colour Mastermind. Includes speech. For one or two players. Guess the colours and positions of four "pegs" previously chosen.

**FINANCIAL.** A financial quiz, asking key questions about your management of household finances, and giving an assessment of your performance. Highlights important principles of money management, but probably won't tell you anything you don't know already.

**HARE-N-TOR.** To give children practice in long division in the form of a game. Useful.

**HEXPUZZLE.** A puzzle in the well known style of a square with 16 spaces (4x4) and 15 letters or numbers to be re-arranged. No instructions, and I was unable to work out how to get it to work. A puzzle to solve before you start to solve the puzzle!

**LABELPRINT.** An excellent, very user friendly, label printing program. Prints Disk labels with name of disk, # of sectors used and free, and names of up to 28 files on a 1x3.5 inch continuous feed type self stick label. (In condensed print). Also prints mailing labels, either one-off, or by creating or using a mailing list file. Worth getting the disk for this one alone.

**MAKE-MARK.** Prints a calendar for any month or whole year from 1600 to 2399. Good.

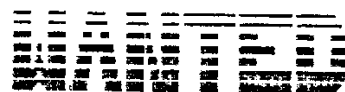
**PATSCRAM.** Another space-type game- destroy objects (enemy ships?) by colliding with them.

**POEM-MAKER.** Writes "poems" using random sequences of previously input phrases.

**STARCOUNT.** A game for 1 or 2 players, guess the number of stars. Really just guessing a random number, but "dressed up" a bit.

**SUPERFONT.** Evidently supposed to create fonts, but no instructions, and I was unable to get it to work.

**TYETETIMER.** Type-ette timer. A program to test typing speed and accuracy, typing in sentences as they appear on screen.



Some of our more technically minded members are interested in obtaining technical details of the original TI Stand Alone Disk Controller. If you can help us out can you please get in touch with our Secretary, Albert, who will pass them on to those concerned.

SHAZAM



**T.I. IMPACT-99..  
T.I. Happenings**

by Jack Sughrue  
Box 459  
E Douglas MA 01516

**IFFING TIW**

To what state have we arrived, jargonwise, when such a title as IFFING TIW has some meaning?

If you use T.I. WRITER or any of its improved versions (T.K. WRITER, B.A. WRITER, or - by far the most superior - FUNNELWEB), you may have become familiar with the Include File structure. This Include-Filing process (known as IFFing) allows some extraordinary things to happen to your word processor. It automatically brings up a file into your text that will let you access, simply, some very complex things.

Like what?

Well, say you'd like to have a term-paper style format (centered heading, right justification, wide margins, double spacing, along with an active transliteration key to underline, double strike, super/sub script and so on at will WITHIN YOUR DOCUMENT AND OPERATED FROM KEY PRESSES!), then IFFing will give it to you. Then lets say that part way through this term paper you need a large indentation and condensed type to offset that piece from the rest of the paper. And then go back to the original structure. IFFing does that by just adding a few characters before the offset piece and a few characters to return it, right in the text as you are typing.

Or say you have a series of sections to a long piece of writing: a novel perhaps. You have six chapter written, you want to load up the disk and print all six chapters saved under different filenames. With the flick of an IFFing switch you can print them ALL while you're off having dinner or taking your dog to the cheese factory. When you return your novel (to this stage) is printed out. That's IFFing.

First, you must build a file to be IFFed. Ninth easiest thing in the world. (We'll discuss the other eight in another column some time, but I will mention that breathing is Number One. So you can see the competition.)

```
> .FI;AD;LM 4;RM 75;IN +3  
> .TL 1:27,52  
> .TL 2:27,53  
> .TL 3:27,83,0  
> .TL 4:27,83,1  
> .TL 5:27,84  
> .TL 6:27,66,3  
> .TL 7:18  
> .TL 8:27,87,1  
> .TL 9:27,87,0  
> .TL 19:27,66,2  
> .TL 20:18  
> .CO 0:27,64  
> .TL 12:7
```

```
> .TL 21:27,45,1  
> .TL 22:27,45,0  
> .TL 15:27,71  
> .TL 16:27,72  
> .TL 17:27,69  
> .TL 18:27,70
```

Above, for example, is a code template I use in the FUNLPLUS! companion disk I wrote and edited for the Fairware market. As template codes go it is fairly simple. The first line Fills, ADjusts (for right justification), Left Margins (in 4), Right Margins (in 75), and INdents (3 in from ANY Left Margin I establish during my document). This, I would assume, would be a reasonable standard for most text. I could have added (and DID on other templates) double spacing, automatic page numbering, a pre-designed HEader, or many other things. The template above is primarily to activate the TL key. After this template is SAVED as a file (Do not type in the > sign. Begin each line with the period.), it is best to keep that tiny file on your main FUNNELWEB (or whatever) disk under a quick title. I refer to it as C3 because it is the third template I created. C2, for example, will automatically let me type out in condensed at 132 columns wide with all the TL keys intact. C4 will give me the term-paper structure I mentioned above. C1 is strict TL. My margins and indents will be my own problem. And so on.

Okay. Let's say you've typed in and SAVED that exact file under the filename C3 on your FUNNELWEB on DSK1.

Now, whenever you load your wordprocessor and the cursor awaits your initial command, type T (ENTER). Then put an L on 1, and I on 5, and an R on 38. This will set your screen margins within the width of the screen and will automatically create an indentation at the start of each paragraph. You'll be able to read everything ON your screen - no more windowing.

Next, press FCTN/0. This will rid the screen of line numbers and let you view your literary masterpiece unfettered.

Now your cursor is sitting in the upper left corner of your screen rarin' to go. Type the following without the parentheses (.IF DSK1.C3) and press ENTER.

Type whatever text you want, viewing it perfectly on your screen. Feel free to use the TL keys to underline, enlarge, condense, doublestrike, superscript, italicize, letter quality, elite, whatever, whenever you wish.

The code is sitting there to automatically FORMAT this text into the original FILL/ADjust etc. you wanted. And, even though the template is tiny, you have the most extraordinary other things built in.

The TL chart is mnemonic. I built it that way when I first began to use the TL key in 1981 to help myself

remember. It has been very easy, very faithful.

With that C3 sitting in DSK1., all you do to automatically call up any of this stuff is type the following: CTRL/U, SHIFT/n, CTRL/U. n is the letter that turns ON the desired printer code. The following ALPHABETICAL letter, using the same CTRL/U, SHIFT/n, CTRL/U will turn off the code.

An example would be if you wanted some words doublestruck for emphasis. You would type along regularly. Then when you came to the word or words you wanted doublestruck you would type CTRL/U, SHIFT/D, CTRL/U. Then type all the things you want in dark type. Then type CTRL/U, SHIFT/P, CTRL/U. That will shut it off, and you can go on typing to your heart's content. If O turns it on, P turns it off. Italics is turned ON by A, so B turns it off. Underlined is turned on by U, so V turns it off. If you wanted some words underlined and doublestruck and in italics with the above template, you would type CTRL/U, SHIFT/VOA, CTRL/U. To turn this batch off type CTRL/U, SHIFT/VPB, CTRL/U.

Neat, eh?

(At the end of this article is the complete anemonic code Quick Reference Chart for the FUNLPLUS! Template C3 shown above.)

(The TL key, by the way, can do MUCH, MUCH more than just activate printer codes in this way. But that will have to be another column.)

Now back to our text. You've type all you wanted (let's say a two-page letter) and you're ready to print. Type SF. Type DSK2.WHATEVER. After the file is SAVED to another disk, go back to the Command line (FCTN/9) and type Q (ENTER) and E (ENTER). If you are using FUNNELWEB you are back to the menu. Type 2 (FORMATTER). When the file comes up it'll say DSK2.WHATEVER. Turn on your printer. Press the keys all the way down and watch your printer PRINT out full-width, right-justified, fully-coded text!

But what if you wanted to print lots of files? There are lots of ways of doing this. Whatever is convenient for you.

I took the C3 template above and added the following for a special project:

```
>.HE Poetry Book:THE LINK by Jack Sughrue
>.FO Page X
>.IF DSK2.THE/LINK1
>.IF DSK2.THE/LINK2
>.IF DSK2.THE/LINK3
>.IF DSK2.THE/LINK4,
```

This printed out each file of my book after first going back to DSK1.C3 to see what was expected of the FORMATTER. But it would go to DSK2 to get each file itself.

```
I could even add
>.IF DSK3.THE/LINKS
>.IF DSK1.LAST/POEM
>.IF DSK.BOOK.CREDITS
```

if I wanted to, because the original IFFer will sort it all out for me. If one file is on DSK3 and another on DSK1 and another in ANY drive as long as the disk name is BOOK, it will find the file and PRINT it out.

Isn't that extraordinary?

With IFFing you can expand the horizons of your FUNNELWEB (or whatever TIW processor you're using) to exciting new dimensions. I have used the IFFing so much over the years, I have even created LF templates that make the LOADING even faster. I have a file called 2, for example, that automatically loads up the C2 code and the first few lines including condensed FORMAT codes which can't be replicated in this article. But you could actually create the following file and call it 3 (because it will draw up C3) in the automatic process:

```
>.IF DSK1.C3
>.CE 4
FUNLPLUS! v. 4.4
*****
by Jack Sughrue
*****
```

This automatically loads the IF and CEnters the next four lines which act as a quick heading for letters about Version 4.4. From there I can type the notes or comments or letters or article and SAVE it by its new name. When I print it out, it will call up C3 and PRINT out all my text within the C3 structure. This is great because you are automatically at the Command Mode when you enter FUNNELWEB. Just typing DSK1.3 loads up everything shown above AND the Tabs I had previously set. Thus, no more TABbing; no more typing the IF info, no more setting up the text structure. It's all in one number - 3. And all the FORMATTing code is in C3. Beautiful.

I don't know of another wordprocessor that allows such wonderful flexibility and speed.

Though this would be even greater with a Horizon RANDisk or with DSDD drives, all my system has is two SSSD drives, and it sure is easy and fun.

[One final note: Remember that on all the coding above you remove the > marks when you type in the FORMATTing files.]

CALL  
FOR  
HELP

Do you want a BACK UP COMPUTER, or some particular modules? Very soon another advertisement will appear in the Newcastle Morning Herald and the Maitland Mercury offering readers the chance to sell their no longer used computers etc to people who will give them a good home.

If you are in the market to purchase some item IF THEY ARE FORTHCOMING, please get in touch with Bob MacClure as soon as possible and register your requirements.

# HARDWARE FOR THE TI

*This article, by J. Peter Hoddie, came to the HU99ers via 'Bits, Bytes & Pixels', the Newsletter of the Lima 99/4a Users Group in the US. It was originally published in the August 87 issue of the Boston Computer Society TI User Group newsletter. Hoddie is the author of such software as Font Writer, Pre-Scan It! & My Word, the 80 column Geneve word processor.*

There seems to be a great deal of confusion of the capabilities of the various peripheral cards, hopefully this will clear some of that up (more likely it will just make things worse).

## DISK CONTROLLERS

There are 3 main controllers out there, made by TI, CorComp and Myarc. They all vary in their capabilities, so let me first list the different features a disk controller can have. All disk controllers can support double sided drives. This means that if you have drives that can store data on both sides of the diskette, any of these controllers is capable of using that feature. Many disk drives can support what is called 'double density'. This is a method for packing double the data onto a disk. Most disk drives these days are 40 track, which is standard, while some can support 80 track. 80 Track means that you can store twice the amount of data as on a 40 track disk. However 80 track drives usually require more expensive diskettes because the data is so compact on the surface of the disk. Disk drives vary in the time it takes them to access data. The slowest speed is about 20 milliseconds (ms). There are drives that are as fast as 3ms, although these are more expensive.

The TI DISK CONTROLLER can handle up to 3 double sided, single density, 40 track, 20ms step time drives. In other words, the TI disk

controller is the bottom of the line in all respects. RYTE DATA currently has available an EPROM set for the TI disk controller that will allow it to access 80 track drives, however I do not know enough about the product at this time to make any comment on it.

The CORCOMP DISK CONTROLLER can handle up to 4 double sided, double density, 40 track, 20ms to 6ms step time drives. This means that you can have one more drive than the TI controller, and each drive can hold double the data. The drives can also be accessed faster. The CorComp disk controller has some nice extra features including a good Disk Manager (it was the basis for DM1000), and a number of extra CALL's. The disk controller literally takes over the computer on power up, however, which causes some capability problems. This can be fixed by purchasing a new EPROM set from MG for about \$35.

The MYARC DISK CONTROLLER can handle up to 4 double sided, double density, 40 or 80 track, 20ms to 6 ms step time drives. This is essentially the same capability as the CorComp card. You can only use 80 tracks if you purchase a special EPROM from Myarc for about \$50 that supports 80 track drives. The Myarc disk controller comes with probably the best Disk Manager program for the 4A, and has a built in CALL DIRECTORY command to catalog disks from BASIC & Extended BASIC. Also, the Myarc disk controller is noticeably faster than the others because of the approach Myarc took in designing the card.

## RS232 CARDS

There is very little to say in this area. There are cards available from TI (very rare these days), CORCOMP & MYARC. They all have 2 RS232 ports (Ed. note: you need a 'Y' cable to use both serial ports with the TI card. I don't know if the other cards need such a cable) and 1 parallel (PIO) port. The CorComp will not work with the Myarc print spooler (more on that below), whereas the Myarc and TI will. The Myarc supports some extra software commands to allow for 19.2K baud (the others stop at 9600, real slow <grin>), inverted busy in software rather than hardware, and some other details. Myarc also has

an EPROM that will make the PIO port act like the thermal printer (TP) if you need something like that. However, really all these cards are pretty much the same. Most people prefer the TI card, and shun the CorComp. The Myarc is probably the best and most readily available these days.

#### MEMORY CARDS RAM DISKS

There are more memory cards out there than almost anything else. TI made a 32K memory card. That was it. Most RAM disks, but not all, replace this card. If you just want a 32K card, they are available from Myarc and CorComp and there is no difference worth discussing between these two cards. They both seem to work reliably. (Ed. note: used TI 32K cards can often be obtained cheaply these days as users upgrade to Myarc or CorComp big memory cards and no longer have use for their old TI card. watch the newsletters for ads). Foundation made a 128K memory card that replaced the 32K memory expansion and gave you an extra 96K of memory that could function as a RAM disk. Unfortunately their RAM disk software was terrible. Quality 99 software and others have since released new software that makes this card acceptable, however since it is out of production it can't be strongly recommended.

Myarc makes a memory card which replaces the 32K memory card, and comes with either 256K or 512K of memory. The memory beyond the first 32K can be divided between a RAM disk and a print spooler, although the print spooler will not work with the CorComp PIO port. For an additional \$50 or so, you can get MYARC Extended BASIC II, which is a much faster, more powerful, and slightly buggier version of Extended BASIC that will work with the Foundation card or the Myarc memory card. CorComp makes a 256K & 512K card, and these both function as RAM disks. I don't know much about these cards, except that they are reported to work quite well, so again I will make no comment.

The HORIZON RAM DISK comes either as a kit or assembled, and provides a very reliable 90K or 180K RAM disk. It can also be upgraded to 256K. It supports a very powerful operating system including replacing the TI title screen with a

custom menu of programs. The Horizon RAM Disk does not replace the 32K card and thus can be used along with a Myarc or Foundation RAM disk. (Ed note: if you are NOT using the CorComp disk controller it is possible to use as many Horizon RAM disk cards as your PE box will hold, assigning each card a separate drive number. As I understand, it is only possible to use one Horizon card with a CorComp controller. I have 3 180K cards in my PE box, giving me 540K of battery backed up memory storage instantly available every time I turn on the computer. I don't have to use floppys very often since my most used software is on RAM disks. Multiple Horizon cards will work even if you already have the maximum number of floppy drives your controller is designed to handle. With a TI card you can have 3 floppy drives named DSK1-3 and additional Horizon RAM disks named DSK4-7).

#### PRINT SPOOLERS

Your printer is much slower than your computer. Your computer could print a full TI-Writer document in a few seconds. Your printer couldn't. A Print Spooler is a device that accepts your document as fast as the computer can send it, and then the spooler sends it to the printer, while you can continue to use your computer for other things. The first print spooler was part of the CORCOMP TRIPLE TECH CARD. It has 64K of memory and ran independently of the computer. The MYARC print spooler is part of the Myarc 256K and 512K cards and can be anywhere from 1K to 400K. The Myarc print spooler is software driven, so that if your computer fails while the spooler is printing, your document probably won't be finished. Furthermore, some programs lock out the Myarc print spooler so that it can't print at all until you exit that program. However, for most uses the Myarc spooler is adequate.

There is another class of print spoolers, which are separate hardware devices that go outside your expansion box. These will work with any computer. They are usually 128K of memory, and run about \$90 or so. These work quite well, and if you don't want the added features of the Triple Tech Card (clock & speech synthesiser in the box) or the power

of the Myarc memory cards, these are a very economical solution.

### SPEECH IN THE BOX

There are two ways to get the speech synthesiser into your expansion box. You can either get the CORCOMP TRIPLE TECH CARD with its print spooler and clock, or get the RAVE 99 SPEECH CARD. Both cards require that you already have the speech synthesiser as they both just provide a connector for it. The Triple Tech Card will not work with the 9640. The RAVE card will, however it did not work well with all speech synthesisers, at last check. RAVE has been good about trying to resolve this problem, and since their card is only about a third the cost of the Triple Tech it does provide a reasonable alternative. (Ed. note: if you are handy with a soldering iron it is possible to put your speech synthesiser permanently inside your 4A console. Back issues of Northwest 99er News and other newsletters tell you how.)

### CLOCKS

There are several clock cards available, all radically different. The MBP (MPB??) Clock Card is one of the earliest, and works well. The CORCOMP TRIPLE TECH CLOCK is probably the most popular, although CorComp also makes a stand alone clock for those who don't want the entire Triple Tech card. John Clulow recently designed a memory card that you can build which includes a clock similar to the MBP. The problem with all these clocks is that there is almost no software that supports them. Bulletin Board programs can use them, but mostly you'll have to write your own software to handle these clocks. (Ed. note: "Checkbook Writer" by Mel Nomina has a provision for using the Triple Tech clock to automatically date check records. This public domain software can be obtained free from the Lima (Ohio) Area User Group by sending a disk and return postage to PO Box 647, Venedocia OH 45894 USA).

### IBM STYLE KEYBOARDS

There are two sources for IBM keyboard interfaces. The first is from RAVE 99, and they are quite well established now. They have support for special Multiplan and

TI-Writer modes to minimize key strokes, and installation is straightforward. The second source is ML Systems. They supply only a keyboard interface, you supply the keyboard. The RAVE folks will supply you with a keyboard, if you wish. The ML Systems supports keyboard macros, where one keystroke can send up to 12 key strokes to the computer. This is a powerful feature, however if you wish to customise the macros you must pay an additional \$20. There have been reports that the ML Systems interface is less reliable than the RAVE, however I suspect that this is due to the keyboard being used and not the interface. Because the ML Systems interface is considerably less expensive than the RAVE, it might be worth taking the chance. The one thing I can't stand about the ML Systems is that it uses the ESCape key to replace the FCTN key on the 4A, whereas the RAVE uses the ALTERNate key. The RAVE choice makes much more sense, using the ESCape key is horribly awkward. Look at an IBM keyboard sometime and you'll see what I mean.



# Beginners BASIC Class Notes

prepared by paul mulvaney

This month we looked at the ON-GOTO statement. This statement allows us to tell the computer to go to a specified section of the program depending on the value of a variable. The variable must be a numeric variable, it can be the result of a calculation, it can be a value incremented each time a part of the program is executed or it can be the result of an INPUT from the operator.

For this example we are going to look at two methods of getting a value from the operator. The first example is using the INPUT statement.

```
100 CALL CLEAR
200 INPUT "ENTER THE SECTION NUMBER ":N
210 ON N GOTO 400, 600, 800, 1000
400 PRINT "THIS IS SECTION ONE"
410 GOTO 200
600 PRINT "THIS IS SECTION TWO"
610 GOTO 200
800 PRINT "THIS IS SECTION THREE"
810 GOTO 200
1000 PRINT "THIS IS SECTION FOUR"
1010 GOTO 200
```

If we enter a value between 1 and 4 the appropriate section message will be displayed. If any other number is entered a BAD VALUE IN xxx message is displayed and the program will stop running. To overcome this we will have to test the value of N before the ON-GOTO line.

```
202 IF N<1 THEN 200
206 IF N>4 THEN 200
```

This will prevent the program from crashing if a wrong number is entered.

The second example allows us to enter information without disturbing the screen. It utilises the CALL KEY function, however we must alter the value to enable its use with ON-GOTO.

```
100 CALL CLEAR
105 C=2
110 CALL KEY(0,N,S)           N is assigned an ASCII value
120 IF S<1 THEN 110
130 IF (N<49)+(N>53) THEN 110  Tests for a key between 1 and 5
140 N=N-48                    Makes N a value between 1 and 5
150 ON N GOTO 200,400,300,700,500
200 X=X+2
210 CALL HCHAR(3,X,49)
220 GOTO 110
300 CALL COLOR(3,13,12)
310 GOTO 110
400 C=C+1
410 CALL SCREEN(C)
420 IF C=16 THEN 105 ELSE 110
500 CALL COLOR(3,16,5)
510 GOTO 110
700 G=G+3
710 CALL HCHAR(17,G,52)
720 GOTO 110
```

As you can see the line numbers in the ON-GOTO statement do not have to be consecutive.

# CARRY ON ADVENTURING

creating your adventure game

with

"bazza, the mad adventurer"

Before we tackle the next routine, make sure the location routine works with any changes made then tidy up by saving the original for future reference and using a copy to arrive at something near the following-

NB just remove the rems and add and delete where necessary then resequence.

Also I would recommend at this stage not to get too carried away with adding to the basic module as presented below, it can soon become too unwieldy, the object is to understand how the thing works!

```
100 R=1
110 RESTORE :: CALL CLEAR
120 FOR I=1 TO R :: READ N$,D$,R$ :: NEXT I
130 PRINT N$ :: PRINT :: PRINT D$
140 PRINT :: C$="" :: PRINT
150 INPUT "instructions? ":A$ :: PRINT
160 IF A$="n" THEN C$=SEG$(R$,1,2)
170 IF A$="e" THEN C$=SEG$(R$,3,2)
180 IF A$="s" THEN C$=SEG$(R$,5,2)
190 IF A$="w" THEN C$=SEG$(R$,7,2)
200 IF C$="" THEN 140 ELSE IF C$<>"--"
TTHEN 210 :: PRINT "can't go in there!"
:: GOTO 140
210 R=VAL(C$):: GOTO 110
220 DATA room1,your lounge room,--0205--
230 DATA room2,bedroom,--03--01
240 DATA room 3,this is a dark room,--04--02
250 DATA room 4,you are in a cave,-----03
260 DATA room 5,outside your house,010607--
270 DATA room 6,hardware store,-----05
280 DATA room 7,street parade,0508----
290 DATA room 8,inside the bank,-----07
```

Just as a final comment on this particular method, as DATA statements can take some time to read I would personally begin the story near the end of the statements if there were a great many rooms and a lot of text, this would bring the latter part of the game into the lower numbered rooms hence making the changes faster.

Objects are next and quite a few things need to be worked out, viz. how many, their names, their description, where to locate them, how to pick them up and put them down, and an inventory if wanted, with a further option to limit the amount one can carry.

We will begin with say 5 objects, and the use of the DIM statement, again these routines can be expanded, the technique remains the same, however, if not sure of yourself, keep the number low until mastery of all the routines. Although it may not appear so, I am trying to keep things uncomplicated.

Use can be made of the Data statement but I will try to lay it out in a form that hopefully is easy to follow....

Now just type along in lower case again.

```
99 dim ob(5),ob$(5),obd$(5)::gosub 410
```



The dim statement saves us room for one lot of 5 numbers, and 2 lots of 5 strings containing descriptions of our objects. A good procedure to follow when memory has to be watched. We use ob to place the objects in locations by making each of the 5 equal to a room no. or more specifically to "r" that we are in so that we can print the object description (viz. obd\$). This means that if ob is equal to r in the room we are in then the thing should appear. ob\$ is the object itself.

```
400 !to determine objects
410 OB(1)=1 :: OB$(1)="key" :: OBD$(1)=" your key is here"
420 OB(2)=2 :: OB$(2)=" wallet" :: OBD$(2)=" you also see your wallet"
430 OB(3)=5 :: OB$(3)=" rope" :: OBD$(3)=" there is part of a rope barrier"
440 OB(4)=6 :: OB$(4)=" torch" :: OBD$(4)=" a torch is here"
450 OB(5)=0 :: OB$(5)=" cash" :: OBD$(5)=" there is money here" :: RETURN
```

To print objects.

```
135 for i=1 to 5::if ob(i)=r then
print obd$(i)
136 next i::print
```

If we have both done it right you should now be able to move around and discover the actual items in the particular rooms nominated by ob. note that item 5 does not appear, this can be made to appear at will just by changing it's value. To get the idea just change any of the values of ob.

Comment- it is obvious that some thought needs to go into selection of descriptions of objects, because they can usually be dropped in another location. An obvious trap would be obd\$(2), if forgotten, then one could end up possibly dropping it in a pitch dark room ... this would look great after a description ending with "...and you can't see a thing!".

```
155 if a$="i"then 600
156 if a$="take"then 700
157 if a$="drop"then 800
```

We will now input the inventory, take and drop routines in their most basic state so it will be obvious how they work. Note however, that you will only be able to do just that and nothing more, for example taking or dropping when illegal is not covered yet and will result in an error!

```
599 !inventory routine
600 print"your inventory is:"::iv=0
610 for i=1 to 5
620 if ob(i)=-1 then print ob$(i)::iv=iv+1
630 next i
640 if iv=0 then print"you carry nothing!"
650 goto 150
```

```
699 !take routine
700 for i=1 to 5
710 if ob(i)=r then 730
720 next i
730 print"rightyoh!"::ob(i)=-1::goto 150
```

```
799 !drop routine
800 for i=1 to 5
810 if ob(i)=-1 then 830
```



```

820 next i
830 print "ok!";:ob(1)=r
840 goto 150

```

The reason I have done it this way is because of the fact that before more sophistication can be added we need to have a more complex input system which will enable us to specify both noun and verb input. When this is done later it is just a matter of building on our existing routines.

Now res the total and you will have what you can call module 2.

Initial logic in planning before-hand is essential and will save a great deal of frustration and useless retyping when one discovers that the direction taken has resulted in an irrational situation. In fact I would go so far as to state that the story should be "nutted out" before any programming is attempted. It is possible of course to attempt to write the story as programming evolves but I believe this is the long way around and usually ends up with an entirely different game, as one progresses this way one has to make changes that most times ripple through the whole logic of the story and method wanted by the programmer that it is not unusual to "paint yourself into a corner" and end up with a mess ! with subsequent loss of interest to finish, I don't think out little orphan likes this to happen, happy little vegemites is what is needed to keep the interest rolling along.

Basically, writing an adventure is taking a known plot and using the routines as tools to present it on the computer, once learnt, the routines remain the same for all adventures, just different words are typed in, there is nothing magical about it.

Sorry about the lecture folks! it came out of nowhere.  
Next time hopefully an input routine.

## forth screen

### for bob carmany's article opposite

0 ( LOWERCASE )	33 CLOAD	UMBW	BASE->HEX	0	VARIABLE	LOWERCASE		
1	0070	0038	4074	0040	4078	4444 , 4478 , (a&b)		
2	0000	0038	4440	4438	0004	0430	4444 , 4430 , (c&d)	
3	0000	0038	4470	4030	0018	2420	7020 , 2020 , (e&f)	
4	0000	0438	4438	0470	0040	4078	4444 , 4444 , (g&h)	
5	0010	0030	1010	1038	0008	0018	0808	4830 , (i&j)
6	0040	4048	5070	4844	0030	1010	1010	1038 , (k&l)
7	0000	0078	5454	5454	0000	0058	2424	2424 , (m&n)
8	0000	0038	4444	4438	0000	0078	4478	4040 , (o&p)
9	0000	0038	4454	4834	0000	0058	6440	4040 , (q&r)
10	0000	0030	4038	0478	0010	3810	1010	1408 , (s&t)
11	0000	0048	4848	4824	0000	0040	4428	2810 , (u&v)
12	0000	0044	5454	5428	0000	0040	2810	2844 , (w&x)
13	0000	0044	2418	1060	0000	0070	0810	2070 , (y&z)
14	LOWERCASE	009	DB	UMBW				
15	FORGET	LOWERCASE	R->BASE					

# random bytes with bob carmany

This month, I'm going to "stray" into Richard Terry's domain just a little. Over the two years or so that TI-Forth has been around, there have been a number of enhancements added to add various features to the rather paltry beginning that TI supplied us with. One of the most interesting is the addition of a lowercase character set with true descenders. There are several ways to do this but perhaps the most elegant and slickest that I have seen is one that I put together by bringing together bits and pieces from several sources. I have installed it on my TI-Forth disk and it works quite satisfactorily for me. The easy part of the whole procedure is that it only takes up one screen and a couple of modifications to two other screens to accomplish it.

The first thing that we need to do is find an unused screen on our TI-Forth disk (a copy, really). For our purposes, screen #89 will do nicely. I'm going to do this a little backwards by breaking down each line with an explanation and then giving you the Forth screen. The reason is to help Brian with the editing.

The only auxiliary screen that needs to be loaded before this procedure starts is #33 SYNONYMS and that is just for the VMBW word. We will take care of that in the first line of the screen with a conditional load of the VMBW word.

Line #0 does the following: CLOAD VMBW is the conditional load (aborted if VMBW is already loaded), BASE->R HEX changes the number base to hexadecimal, 0 VARIABLE LOWERCASE establishes the variable LOWERCASE into which the new character definitions will be stored.

Lines #1 through #13 are the hexadecimal character codes for the new character set.

Line #14 is the real "workhorse" of the screen. LOWERCASE B08 D0 VMBW

actually writes the character set into the VDP character table. It moves 208 bytes (>D0) into VDP starting at 2024 (>B08) which is the beginning of the lowercase character set.

Line #15 is a memory conservation line. Once the definitions have been compiled into the Pattern Descriptor Table in VDP, they are no longer needed. We can now re-use the memory that they once occupied. To accomplish this, we 'FORGET' our LOWERCASE variable and return to the decimal number base. A simple FORGET LOWERCASE R->BASE takes care of all that!

Now that we have typed the screen in (it follows), we can go about making it possible to choose the lowercase character set as a menu option. With the EDITOR all cranked up, we want to edit screen #3. Simply got to an unused line and enter the following:

```
: -LOWERCASE 89 LOAD ;
```

That tells TI-Forth that -LOWERCASE resides on screen #89 and will load it upon selection from the menu screen. Once the change is completed, FLUSH to disk.

Next, we have to edit the screen which displays the menu choices. Screen #20 is what we are looking for and the change is equally as simple. Just go to line #15 and add -LOWERCASE directly under -64SUPPORT on line #14. When you are through, FLUSH to disk and when you boot TI-Forth, you will have a lowercase character set selectable as a menu option.

The possibilities are almost endless. Just substitute your favorite character set (computer, italics, or whatever) in place of the lowercase definitions in lines #1 through #13 and you can have any character set that you want in residence in place of the TI lowercase character set. Remember, though, you might want to change LOWERCASE to whatever you are calling the new character set.

At any rate, I thought that you might enjoy some "strictly Forth" this month. Until next month, so long from the States. . .

# THE INFORMATION PAGE

## IN YOUR NEWSLETTER THIS MONTH

Bits and Pieces - various tips from Chaos Manor	R. Klienschafer
FUNNELWEB Version 4.0 Released	The Editor
Updated Universal File Reader Program	B. Carmany
In the News - a round-up of TI happenings	A. Wright
Frequency Sampler - a Mini Mem program	K. Cox
Release the Alpha Lock Blues - a hardware mod.	P. Mulvaney
Software Review	D. Pawley
IFing TI-Writer - an Impact 99 article	J. Sughrue
Hardware for the TI - what's available	Boston UG
Beginners BASIC	P. Mulvaney
Carry on Adventuring - build your own adventure	Bazza
Random Bytes - lower case char set in FORTH	B. Carmany

PLUS MUCH MUCH MORE!!!!

## COMING EVENTS

Next Committee Meeting: Tuesday 1st December

**DEADLINE FOR ARTICLES FOR CHRISTMAS ISSUE - 1ST DECEMBER**

Next General Meeting: Tuesday 8th December

## AGENDA FOR DECEMBER MEETING

Demo of Viatel

## CLASSES AVAILABLE FOR MEMBERS

BASIC group conducted by Paul Mulvaney at the Warners Bay High on Tuesday 17th & 24th November

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