



HOME COMPUTER NEWSLETTER



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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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THE NEW FOSTER PARENTS AT THE HUNTER UALLEY 99ERS ORPHANAGE



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SECRETARYS REPORT



FROM ALBERT ANDERSON

Well, well, well, July 1987 and still going strong! As this may suggest, things do look on the up as our membership renewal for 87/88 is well into the 60's and the renewal date. June 30 has only just passed. A huge thank you to all our renewal members as the paperwork associated with this has been much easier due to your efforts in this regard. To those that as yet have not done so could you please attend to your renewal ASAP. Have a look at the mailing label on the mag to check the status of your membership.

It may be surprising but the HV99ers still attract NEW memberships and this i 5 much appreciated by us all. To these new HV99ers is extended a warm welcome as well as the customary invite to participate in the activities, both computing and social, of the group. Our non-local members are asked to contribute also by keeping in touch through the newsletter and by letting us know what they want from being part of this user group and on the other side of the coin, what they can offer - both are important to all us 4A users.

With that, I would like to thank new local members Jody Caunt, Don Dorrington and Max McVie, from Tamworth area Neville Pratt and daughter in law, Merryanne and some Adelaide people in Frederick Cubitt

and Les Moore who were coerced by our South Australian membership spokesman Geoff Shipton to join the fold. Welcome to you all...

Still on this subject, thanks once again go to MICROpendium for their inclusion of HV99 in the compilation of TI~99/4A User Groups in their latest issue. We have already had a membership enquiry from Daniele Marini of Cormano in Italy as a result of this and another contact has been established.

On the sadder side of things. in Australia have been advised of the winding up of one of the very first groups established here in Australia. That group being the TASTI, Tasmanian TI user group. The final edition αf the TASTI newsletter is well worth extracting from the publication library and reading. Ιt is virtually biography of the TASTI group from birth to agonising death as seen by the prime motivator of the group, It describes the Rex Shephard. creation and existence ۵f the computer user group and typical makes one aware of the consequences of an apathetic membership - death by apathy...yuk!!! Fortunately I am happy to say that the HV99ers do not fall into this catagory. I would like to, on behalf of all HV99ers, thank Rex Shephard and his family for their continuing efforts against all odds, to maintain the TASTI group as the input from that small band of TIers was and is appreciated by those that remain to make use of it. The remaining 35 disks of the TASTI software library were most generously passed on to the HV99 library. They contain a lut of software that was distributed in the early days of the 4A and gratefully received and will be put to good use I'm sure.

THANK YOU ALL - TASTI (1982-1987)

Back to the local scene and last month the group was lucky enough to have John Paine of the TIsHUG group visit with us and demonstrate briefly the TISHUG developed DSDD disk controller/mini expansion system. This not only looks good but performs beautifully. \$18Ø.ØØ for the controller and approx \$3ØØ.ØØ for the whole system(RS232, 32k etc). This unit is now available from the TISHUG shop through Cyril Bohlsen

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02-6395847 or from Peter Schubert at P.O.Box 28, Kings Cross, NSW. As a few members showed interest in this unit at the demo, HV99 will be in touch with TIsHUG If you are more detail. interested in getting onto a disk system then this is a pretty cost effective way of doing it. coupled with the dual SSSD drive enclosures offerred by Les Tomlinson of Berowra (02-4562588) at \$60.00 can put you on a disk based system for \$240.00....that's darn good if you to compare prices I'm not a salesman by any means and this info is only given for your benefit, but what I am trying to say here is that if you intend to continue with your TI then a disk based system at such a small price will open the door to a huge array of disk based software that will really open your mind to the capability of this machine.

Whilst I'm on the sales side of things word comes from the TIBUG group of Brisbane QLD. that they are placing orders for the Geneve 9640 Computer and expected cost is \$AUS750 standard \$AUS795 enhanced. The order is to placed at the end of July so those that may have the inclination to go Geneve then I would suggest that you contact the Brisbane group via Gary Christensen through postal address PO.Box 57 ASPLEY. QLD. 4Ø34 or phone Ø7-2841841.

Please also be aware that HV99 receive many top class newsletters from the States and Canada and our new publications librarian. Joe Wright is only too happy to share the wealth of knowledge and news of the latest gadgetry that they contain.

OK then, that just about wraps up the July goings-on so until August, bye for now...

Albert Anderson

WANTED

VIATEL contacts for all Australian 4A User Groups

Contact the Secretary - HV99 or Viatel 496626020

OUR NEW LIFE MEMBER

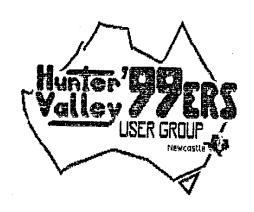
ALLEN WRIGHT

At the Annual General Meeting in June, the Hunter Valley 99'ers were delighted to bestow Life Membership on our Founding President, ALLEN 'JOE' WRIGHT.

Joe, along with a couple of other still active members were instrumental in forming a fledgling Users Group in the Hunter Valley, so that people living in this area had access to local expertise, programs etc. At that first meeting, held at Joes home, the HV99'ers Users Group was formed.

With Joe's guidance as President our Group has flourished and grown to the extent that it is now one of the more active Groups in Australia, conducting BASIC, Assembly & FORTH Learners groups, have a comprehensive Publications & Software Library and produce a monthly Newsletter.

Thanks Joe for all you have done for us at HV99ers and for the whole of the TI 99/4A User community.



DISK DRIUE SERUICING

bч

Ron Kleinshafer

BACKGROUND

If anyone who has purchased the second hand double sided drives from MAGNETIC DATA STORAGE Pty Ltd the drives are noisy, mainly when the heads are stepping, are well advised to carry out the service as below.

The heads in the drive are driven by what is known as a "steel | Secretary mentioned the Dots-Perfect band" by the stepping motor and the Upgrade kit that allowed increased noise emanates from this band when capabilities from the MX-80 printer the head is being stepped towards track Ø. The head carrier info has come from our original gets slightly tight on its carrier informant, Frank Phillips from West rails and when the stepping motor Germany: tries to "push" the head carrier back the carrier does not slide flexing up then "flicking" the head Impact printer did have graphics back to the next position. If this capabilities. condition continues damage may result to the band.

SERVICING

(All references will be looking at the front of the drive, with the logic board to the top). Remove the drive, unplug all wires to the logic board, there are three at the rear top, the power supply plug under the L/H rear of the board, one on the L/H front and two plugs under the R/H front. R/H front. Undo the two screws holding the board and sliding it slightly to the rear, lift off.

Covering the heads and rails is a snap on shield, carefully pry it The rails are two round precision rods fixed from front to rear under the shield, they carry the plactic/fibre head carrier. The rail that causes the trouble is on R/H side, using some light the machine oil SPARINGLY, lubricate the rail. Carefully slide the heads up and down to spread out the oil, and leave it parked at the rear, wipe up any excess. Just reverse the above to reassemble.

If your drive was noisy you will be amazed how quiet they are, all you can hear is the disk motor spinning the floppy, and a VERY SLIGHT noise from the stepping motor.

If you carry out this service then the usual Disclaimer applies. If you wreck something *** ROUGH ***.

R. Kleinshafer.

DOTS-PERFECT UPDATE

Ιn his May column, back (the TI 99 Impact printer). Further

First of all to correct a freely, resulting in the steel band misunderstanding - the original TI

- 1) It gives you the IBM Special Graphics Characters.
- 2) Enables Near Letter Quality printing.
- 3) Up to 160 additional fonts currently available.

DOUBLE DENSITY CAPABILITY

In an effort to clear up some potential misunderstandings regarding disk drives that may arise among our new-to-drives members, please bear in mind the following point-

Just because you have a drive capable of Double Density does NOT necessary mean you can use that capability. Double Density (and for that matter Double Sided) are a feature of the Disk Controller and not the Drive alone. The standard TI Disk Controller Card IS NOT capable of DD. This capability is only available if you use the Cor-Comp, Myarc etc Disk Controller.

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RANDOM BYTES

By Bob Carmany

With a software package as high in INTERNAL-type almost an act of sacrilege a configurable software package like here is the program: FUNNELWEB, is to create a customized software package that suits your 100 @=0 :: [=1 :: 1=2 :: _=3 :: \=4 needs and is comfortable to work : : GOTO 100 :: A\$, CHOICE\$, FILE\$, P\$ with.

Here is a change to Will and Tony's :: !@Pthat you might find of value. After using the "SD" or <FCTN-7> option to 110 ! ****************** catalog a disk, if you press <=>, the program will tell you whether 120 ! * UNIVERSAL the programs on the catalog are E/A or Extended BASIC. I much prefer 130 ! * FILE READER * the more traditional "XB" instead of the "BX" that Tony used for Extended 140 ! * BASIC. Using John Birdwell's disk utility, you can step through the 150 ! * BOB CARMANY * disk in ASCII and use FindString to find each occurance of the string 160 ! * VERSION 3.0 * "BX" -- there will be three in all. They appear in the files EE, QD, and 170 ! * the renamed file RELOAD (UTIL1) on issued disk. the change them to "XB" if you wish to conform with the more traditional 190 ON BREAK NEXT designation for Extended BASIC files.

I should point out, however, to make " sure that you make these changes on 4):: DISPLAY AT(14,[): " * RPT\$("-", a BACK-UP copy of the program in [24] Then, case you make a mistake. thoroughly test the program to make 210 DISPLAY AT(10,\)BEEP: "INSTRUCTI sure that you have correct bytes before you re-copy the LIDATE("YyNn")SIZE(-[):CHOICE\$:: D disk as your "working copy". There | ISPLAY AT(10, \): RPT\$(" ", 24):: IF C is a lesson to be learned here --- HOICE=="N" OR CHOICE= ="n" THEN 220 NEVER EDIT YOUR ONLY COPY OF A ELSE GOSUB 550 PROGRAM --- ALWAYS DO YOUR SURGERY ON A BACK-UP!!

Incidently, by the time you read 5):FILE\$:: CALL ERASE this column, you should have a copy of John Birdwell's program for the 230 DISPLAY AT(16,[): Device.Filena club library. I have sent it along me* :: DISPLAY AT(17,[):">"&FILE\$ with this latest batch of articles. Just remember, it isn't free -- it 240 DISPLAY AT(8,[)BEEP: "File Descr is "fairware"!

ХB program is an FILE/READ that was "inspired" by one that appeared in the February issue 250 DISPLAY AT(11,1): "3) INTERNAL ,

of MICROpendium. It eliminates some of the limitations of the original and loads much faster! Keep in mind that, although it will display ANY file you can think of, some files do themselves to lend not displayed on the screen or being Specifically printed out. and DISPLAY files quality as FUNNELWEB, it becomes files of greater than 128 bytes per to record will not show you much when mention making any changes to the they are printed out or listed on package. However, the whole idea of the screen. Without further delay,

> ,PRINT\$,Z\$:: A,DE,F,K,L,S,Z :: CAL L CLEAR :: CALL KEY :: CALL SCREEN

BY

XB

Go ahead and 18ø ! ***********

200 CALL CLEAR :: CALL SCREEN(16):: DISPLAY AT(1,8): "FILE READER": VERSION 3.0": " "&RPT\$("-",2

edited the ONS (Y/N)? N" :: ACCEPT AT(10,24)VA

22Ø DISPLAY AT(8,[)BEEP: "Device.Fil lename":">" :: ACCEPT AT(9,1)SIZE(1

iptors (Choose 1)" :: DISPLAY AT(9, [):"1) DISPLAY , VARIABLE": "2) DISPL called AY ,FIXED"

VARIABLE": "4) INTERNAL ,FIXED" :: D ISPLAY AT(13,20): "1" :: ACCEPT AT(1 0,20) VALIDATE("1234") SIZE ([):A :: CALL ERASE

26Ø DISPLAY AT(8,[)BEEP: "Record Length" :: DISPLAY AT(9,6): "80" :: ACC EPT AT(9,6) VALIDATE(DIGIT)SIZE(_):L:: CALL ERASE

27Ø ON A GOTO 28Ø,29Ø,3ØØ,31Ø

28Ø ON ERROR 61Ø :: DISPLAY AT(2Ø, C): "DISPLAY, VARIABLE" :: DISPLAY AT (2Ø,19):L :: OPEN #[:FILE\$,INPUT, D ISPLAY, VARIABLE L :: GOTO 32Ø

290 ON ERROR 610 :: DISPLAY AT(20,[
): "DISPLAY ,FIXED" :: DISPLAY AT(20,16):L :: OPEN # [:FILE*,INPUT ,DISPLAY ,FIXED L :: GOTO 320

300 ON ERROR 610 :: DISPLAY AT(20, [
):"INTERNAL , VARIABLE" :: DISPLAY A
T(20,20):L :: OPEN #[:FILE\$, INPUT ,
INTERNAL , VARIABLE L :: GOTO 320

31Ø ON ERROR 61Ø :: DISPLAY AT(2Ø,[
):"INTERNAL ,FIXED" :: DISPLAY AT(2
Ø,17):L :: OPEN #[:FILE\$,INPUT ,INT
ERNAL ,FIXED L :: GOTO 32Ø

32Ø DISPLAY AT(8,[): "Parameter Flag ":"1 For DISPLAY Files": "2 For INTE RNAL Files" :: DISPLAY AT(10,22): "1 " :: ACCEPT AT(10,22) VALIDATE("12") SIZE([):Z :: CALL ERASE

33Ø F=Z

34Ø DISPLAY AT(8,[)BEEP: "Printout of file? (Y/N) N"" :: ACCEPT AT(8,25 VALIDATE("YyNn")SIZE(-[):P\$

35Ø IF P\$="N" OR P\$="n" THEN 45Ø

36Ø DISPLAY AT(8,[)BEEP: "Printer de vicename : ": DISPLAY AT(10,16): ">PIO" :: ACCEPT AT(10,17)SIZE(+_): PRINT\$

37Ø DISPLAY AT(23,[):"Printer >"&PR RINT\$:: CALL ERASE

38Ø ON ERROR 61Ø :: OPEN #1:PRINT\$, OUTPUT ,DISPLAY

39Ø IF EOF([)THEN 51Ø

400 ON F GOTO 410,420

41Ø LINPUT #[:A# :: GOTO 43Ø

42Ø INPUT #[:A\$

43Ø CALL KEY(@,K,S):: IF S<>@ THEN 43Ø ELSE PRINT A\$:: PRINT #]:A\$

44Ø GOTO 39Ø

45Ø IF EOF([)THEN 52Ø

46Ø ON F GOTO 47Ø,48Ø

47Ø LINPUT #[:A\$:: GOTO 49Ø

48Ø INPUT #[:A\$

49Ø CALL KEY(@,K,S):: IF S<>@ THEN 49Ø ELSE PRINT A#

500 GOTO 450

51Ø CLOSE #]

52Ø CLOSE #0

53Ø DISPLAY AT(12,[)ERASE ALL: "Read Another File? (Y/N) N" :: ACCEPT AT (12,26)SIZE(-[)VALIDATE("YyNn");Z\$:: IF Z\$="Y" OR Z\$="y" THEN 200 E 540

54Ø DISPLAY AT(12,5)ERASE ALL: "PROG RAM TERMINATED" :: FOR DE=[TO 1000 :: NEXT DE :: END

55Ø DISPLAY AT(],[)ERASE ALL: "To us e this program, simply": "follow the input prompts": "as they appear on the screen"

56Ø DISPLAY AT(9,[):"The 'Record Le ngth' prompt":"is the record length that":"appears at the end of the":"file description":"(ie. D/V 8Ø)"

57Ø DISPLAY AT(16,[):"You may stop the screen":"scrolling by pressing ANY":"key while the file is being" :"read and presented"

58Ø FOR DE=[TO 3ØØØ :: NEXT DE

59Ø CALL CLEAR :: DISPLAY AT(1,8):"
FILE READER":"
" "&RPT\$("- ",24):: DISPLAY AT(14,[
):" "&RPT\$("-",24):: RETURN

600 !@P+

510 CALL CLEAR :: CALL SCREEN(7):: DISPLAY AT(12,[):"YOU HAVE JUST ENC OUNTERED A ":"FATAL I/O FILE ERROR. ":"PLEASE RE-ENTER YOUR FILE"

62Ø DISPLAY AT(15,[):"PARAMETERS" : ; FOR DE=1 TO 1000 :: NEXT DE :: RU N

63 T#

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63Ø SUB ERASE :: DISPLAY AT(8,[):RP T\$(" ",162)

64Ø SUBEND

The length of the printer parameter in line 360 can be changed to allow you to enter the name of your printer. Simply change the value in SIZE(-_) to SIZE(-27).

Well, this is stretching out much longer than I had anticipated so let me close this column until next time . .

BEATING ABOUT THE BUSH

BЫ RON KLEINSHAFER

encounter with After my last friendly, bewliiskered Editor a our baleful glare was all that was required to cause me to do a CALL INIT::CALL LOAD ("EDITORS DESK") to prevent him from issuing an INPUT ERROR here goes.

Unlike my fellow HV97ers who live at lower latitudes in the State and I am computing takes second place to be made for THE TOY (wives words, not mine, I think she heard somewhere else. EHH! Mr A.Axxxxx??) or withdrawal symptoms may set in.

conducting her Computer Awareness courses around here and my spys tell me that they were very well received and a lot of interest was generated, duck up to Lightning Ridge" or "zip|in various memory locations soon"

around to Burke" or somewhere else, as they say up here "its only up the road a bit", usually that bit can be anything from one to quite some several hundreds of miles, besides that she has to work with 8 Bit machines, hard "Yakka" Ehh ? Good work Bev!!

On the home front the "Black Hole" has not manifested itself of late, maybe they are seasonal? (now that WOULD be something new for science) Anyway I suspect that it may make its presence known one way or the other and create further CHAOS. One thing that has amazed me is the sudden flood of information after requesting, getting and appreciating all the "chain mail" newsletters, thanks fella's, you probably know what I mean when I say that now I am getting from my wife her best, hands on the hips VLMBS, which is an external REF for Very Loud Multiple Byte Speech routine, aways with the same TEXT of 'you always have your nose stuck in a book.'

I have been busy with a number projects, one being to learn Assembly, S..L..O..W..L..Y getting there, but determination will win out. I have finally decoded some documentation and articles from our friends in GERMANY, I used a local GPL Interpreter, that's short for German Programming Language to turn it Interpreter, into English, readable and some interesting things have surfaced.

the articles is a One οf than I, winter in this "neck of the Program and Instructions for saving is not for hibernating, the modules to Disk and running them daytime temperatures are more like from there. It is fairly limited afraid that insomuch that only modules can be to saved that do not not have a GROM other chores (shudder), but time has controlling a ROM to access "pages", for example SLYMOIDS, but all the simpler modules can be saved to disk. Not much good you say? not interested in simple games? Well I thoroughly recommend programs for intending Assembly Word has it that, that other learners. If nothing eise you soon "Bushie" Bev Warren has been learn all about memory allocations and HEX arithmatic, the program makes extensive use of Debugger and prowling about in memory, moving blocks, altering workspace pointers, not an easy task when she has to program counters and changing values

HEN

Read T AT : Z\$

PROG 1000

o us the on t

d Le ngth e":"

) #

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8):" ø": 14,[

():: ENC ROR.

ks" : : RU teaches you a lot about M/L. As an exercise try saving a game module called Zero Zap which starts at GROM address > 6000 and backs up to >0000 to make use of the Cassette Save utility, I didn't have any success but I sure learned a lot trying.

One use of the program is VERY handy for another article they sent over and that is an "IDEA" for an Eprom Burner, I say idea because the Hardware and Software required some alteration, given credit the Author did state that the PCB layout had tested and this was, besides being wrong, found to be overly complicated, to add to that circuit diagram was also After correcting the incorrect. circuit a unit was made up and is up running, just shortly after completing the unit I received from Mike Heuser in Germany a corrected circuit diagram and PCB layout. I hope to present the unit as an article in the very near future as soon as my occcupational work load decreases.

0n the credit side the originators of the idea came up with a very cunning way of setting the device to a specific CRU hardware base address without using a DSR or any fancy PLA IC's. It uses an IC called a 4 bit magnitude comparitor and the CRU hardware base is set at >1900 so that any other device you have attached or the in Expansion Box that uses this base address would have to be removed, >1900 was originally set aside for the TI Eprommer.

The unit is extremely versatile and fast. It can Verify or Check for Erasure a 64k Eprom faster than you can press a stopwatch button and utilises any Eprom from 2716's up to 27128's and it is not only TI related. If you have some "poor" relative that has an 8 BIT computer, some "rich" relative with a microprossesor controlled all singing all dancing "dodit" and they wanted to make a copy of an Eprom, no problems!! On top of that when finished you can, by using the above Module Save Program, save ANY EPROM code to disk so that another copy can be burnt any time.

On the debit side is that the software requires that files to be

"burnt" are in Program format. assembled a file that is AORG'd at either >4000 or >6000 and then try to use E/A SAVE Program to get 1 t from DIS/FIX 80 to PROGRAM format, or load it into Memory? Well this is where you find out more about your own foibles and forces you to learn more about E/A, but the alteration can be done!! that may keep you guessing!!, It would be interesting to get some feedback from interested persons on different ways to do it, how about it 99'ers ??? For the best idea I will donate CAR WARS on Disk!! (HA HA). Incidentally when I am Assembling a Program I cannot get the LIST option using a CorComp RS232/PIO. has anyone else had this trouble or is it just my system??

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The unit is very cheap to build, using new components (apart from the PCB) it would cost about \$60 to build, by using some "junk" box components that I had it cost me \$18 for the IC's and now that it has been "proven" I will fit a ZIF socket for the Eproms and that will take the cost to approx \$38, cheap HUH!!.

What good is it for you ask?? Well given time to learn how to write stand alone M/L routines for things such as VMBW. DSRLNK. KSCAN etc, or better still perhaps some kind soul has a disk full of such routines - any offers?? But a dicky DSR? Want to do a masterpiece on an existing DSR? Maybe a good place to would be start to make an APPLICATION MODULE for running the Eprom Burner itself. Is that the statement of a nut you say? Well also from Germany is another article by a seemingly prolific hardware hacker by the name of Heiner Martin, who has designed a PCB and circuitry required for making up Application Modules that can run GPL programs from Eproms using the Console GPL Interpreter in true T1 format. With 5 Eproms the whole GROM Address range of >6000 to >FFFF can be utilised, the first 8k Block can be in Assembly but the rest can only be written in GPL. moment all the documentation is with my local GPL's, as mentioned above, for "polishing up" and will be forwarded to our Secretary, Albert Anderson, as soon as possible, for anyone that may be interested. only drawback at this stage is that

PCB is designed to fit the present TI Module cases and because "tight", of this the layout is very requiring plated through holes on the PCB, this would make manufacture af such boards at home impossible would have to and be commercially. I will probably make up a larger board to "fiddle" with. can't leave things alone!!, always creating further CHAOS for myself.

After my recent pleasant trip to Newcastle I had the misfortune to lose my dog. Perhaps the HV99ers could help by watching out for him, here is a brief description:

3 legs, blind in the left eye, scar on the throat, bullet wound behind right ear, left ear missing, mange breaking out, tail broken in two places, recently castrated.

Answers to the name of "LUCKY".

R.Kleinschafer.

GROPING AROUND

ph

brian rutherford

Why groping around? you may ask. Well Leo Brodie has "Starting Forth", Richard Terry is "Struggling Forth", and me - I'm still groping around with it.

I recently became the owner of one of those cheap secondhand double sided disk drives, replacing the old single sided one that had given up the ghost (it would read a disk but refused to write to the last 22% sectors).

So with the (secondhand) new double sided drive, and the little "The Forth programme from Smart Programmer" that formats a disk for Forth, clears all the screens puts the error messages on screens four and five, I endeavoured to set up a double sided disk for Forth. No more limited to 90 screens thinks I, as I change DISK_HI and DISK_SIZE

to 18Ø on screen 3 of my Forth working disk. I load the programme type the word to run the programme, put the disk in and sit back with a contented smile on my face. Bong! disk error? comes flashing on to the screen, ah crook disk thinks I. Try another... same result. What's wrong that programme always worked before, check DISK_HI and DISK_SIZE that must be it, but no they right, then after much GROPING and hair tearing I find that the Forth word FORMAT-DISK only formats a disk up single sided. More groping, much more searching through books and magazines until I found a saviour in the form of Phillip Marsden with a Forth article and programme the in number eight edition of the "TI*MES" magazine. The vital Diece of information is decimal 33616 (not 42 Rodney) and if you store 2 in this memory address you can format the disk up double sided. Type in 2 33616 ! Ø FORMAT-DISK and Forth will merrily format your disk double sided in one pass. For double density you will have to do your own 'groping around'.

HELF Information Wanted

I have heard the term 'Pre-scan' mentioned several times in reference to TI Extended Basic. Could someone write an article for the newsletter explaining the term and how it is used.

Thanks, Perplexed.

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ASSEMBLY ZANGUASE

FOR THE LAYMAN

WITH ALLAN WRIGHT, HV99ERS

Well, well another Club year has just past - out with the old, in programmes." with the new. Last year was an excellent year for our group, this year I hope will be even better. If interest for the furtherance of the Group as a Group can be taken as a yard stick, then any measurement you might care to take looks good for the Group. For me personally the only tinge of despondency I have about last year is that one of our more active and respected members now finds himself in the position of no longer being able to contribute to the Newsletter, I see no joy in this at all.

Onto a more positive note. T.I.S.H.U.G. at last seem to be emerging from the cocoon in which it has been suffocating for some time. The evidence is the BUZZ of activity coming from Sydney. For this I give three LOUD and HEARTY cheers. on Ya Sydney!

Is this an Assembly Language article? Why! of course.

Some more good news for me Was a letter from Kevin Cox of the Banana Coast Users Group. First he has brought to my attention an error in the listing in the March article. Line 53 read CI RØ,R4. Should have been CI RØ,4. Thanks Kevin. He has! passed on some information about Mini-Memory. I have included it with his consent.

"I also have made modifications to the default start on the Assembly line by line program. By changing the contents at address >722E from 7DØØ to 21ØØ plus relocating the symbols table:

- 1) At >7790 change >7006 to >2006
- 2) At >77E6 change >7CD8 to >2CD8
- 3) At >782C change >7CD4 to >2CD4
- 4) At >77CC change >7CDØ to >2CDØ

This gives you nearly 8K of accessed. Assembly plus nearly 4K in

Mini-Memory enough

Thanks Kevin, the next step now is to convince Kevin to write a few articles for our Newsletter! How about it mate?

FILE MANAGEMENT

Last month I mentioned exercise that I had set for the Assembly group. Well, nobody has come forward with an offering as yet. So for now I will just give some general hints and comments on some of the methods I use to write to and from disk. Mind you I don't claim to be the Guru on this but at least my routines do work.

If you have not as yet found time to read chapter 9 of Molesworth then I would suggest that you mark this spot and do so now. Type in the routine included in that chapter, you won't find a better introduction to file handling on the T.I. than there.

Back you? The disk controller (whether the CORCOMP or MYARC) has on it This ROM contains the ROM. routines which are used to access the disk. The Assembly language programmer accesses the DSR by use of DSRLNK utility. When DSRLNK is used Data must be given for linkage, >8 for linkage to a DSR and >10 for linkage to a sub programme. In Molesworth's example DATA >8 is used, this links controller DSR.

use DSRLNK a PERIPHERAL Tο ACCESS BLOCK must be set up in V.D.P. RAM. The first step in this process is to do as Molesworth has done and first create your PAB in CPU RAM as data. The PAB is constructed of >A bytes plus the filename of the device to be Using Molesworth's the example again a typical PAB would be as follows.

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>0012,BUFADR,>5000,>0000,>000A 'DSK1.FILE1'

BYTE Ø

This byte determines the operation to be performed.

>ØØ OPEN >Ø1 CLOSE >Ø2 READ 203 WRITE

These go up to >09 but not for us just yet, we don't need them just now.

BYTE 1

This byte describes the file type to be accessed.

For relative files.

>Ø1 UPDATE, DISPLAY >Ø3 OUTPUT, DISPLAY >Ø5 INPUT, DISPLAY >Ø9 UPDATE, INTERNAL OUTPUT, INTERNAL >ØB INPUT, INTERNAL >ØD

For Sequential files.

>Ø2 OUTPUT, FIXED, DISPLAY >Ø4 INPUT, FIXED, DISPLAY >Ø6 APPEND, FIXED, DISPLAY >OIA OUTPUT, FIXED, INTERNAL >ØC INPUT, FIXED, INTERNAL)ØE APPEND, FIXED, INTERNAL >12 OUTPUT, VAR, DISPLAY >14 INPUT, VAR, DISPLAY >16 APPEND, VAR, DISPLAY OUTPUT, VAR, >1A INTERNAL >1C INPUT, UAR, INTERNAL >1E APPEND, VAR, INTERNAL

The above example is >12, therefore this PAB is for an output! variable display type file.

BYTE 2 & 3

Buffer address in V.D.P. RAM. this is the buffer into which data is placed either from the disk or This can be either the actual value or a label which has been EQU to the address.

BYTE 4

This byte contains the record length in bytes to be transfered to or from the disk. This case it is! >50 or decimal 80.

BYTE 5

bytes to be written or returns the number of bytes read for a read operation. For fixed length records Bytes 4 5 should be set to the

value when writing and will be equal for read.

BYTES 6 & 7

This is one word which contains record number for relative files. The most significant bit is ignored so the highest record number allowed is 32,767.

BYTE 8

This is used with cassette file handling and contains the screen offset for the Cassette instructions to be printed on screen.

BYTES 9

This byte indicates the length of the file descriptor which begins in bytes >A. In the above case the length is >A.

FILENAME

The filename of the device accessed is part of the P.A.B. All the requirements for a filename which you learnt in Basic or Ex. Basic apply to this filename. is only capitals, no period etc.

So the above PAR is to open an input DIS/VAR 8Ø file.

WHERE TO PUT IT!

The next step is to place the PAB in the correct location. referring to the E/A manual page the memory map for U.D.P. RAM with E/A is shown. >800/>1000 is the PATTERN GENERATOR TABLE, The lower end of this area is used for PABs. The area >1000/3/3707 is shown as free memory space. This area is where I put my buffers which the DSR requires.

In the file handling example in Molesworth and the E/A manual the into to prior to being passed to the PAB is placed at >F80 in VDP RAM and the buffer is at >1000 in VDP RAM.

> The PAB is placed in position by the utility VMBW.

USING IT

To use the PAB the next step is to place into memory location >8356 the address of the byte which contains the filename lenath. In this case that is >F89. Having done This byte defines the number of that the file can now be opened by

> BLWP @DSLLNK DATA 8 JEQ ERR

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opens the file. At this This STATUS REGISTER point the can be tested to see if the EQUAL bit has If is has an error has been set. The code occurred.

> JEQ ERR

performs this task. A this point lets assume that no error occurred.

The file is now open the next step is to read a file from the disk. To do this the first byte in the PAB must be changed from >00 to >02. This is done using the utility VSBW to place >02 at address >F80. Having done this the pointer to the filename length must be placed into >8356 again.

A file can now be read by accessing the DSR:

> **@DSRLNK** BLWP DATA 8 JEQ ERR

This takes a file from the disk and places it in the Buffer at >1000 in VDP RAM. Again Status should be checked for a file error. Note that END OF FILE is reported as an error (code 5) and if encountered the DSR will close the file for you. If no error was detected the data read from the disk would be moved from the buffer to CPU RAM and processed astrequired. The next file can then berread from the disk-

> BLWP @DSRLNK DATA 8 JEQ ERR

If and EOF is reported the open file is closed by the DSR. Whereas if the E.O.F. is not reached. The programmer for example may only want to: read only a few of many record from a file. The programmer has to close the file.

This is accomplished by placing using VSBW. The DSR is then again accessed and with the code for close! is then closed.

CHANGING IT

which must stressed here is that once the PAB| reported and the options which has been set up and the file open be offered to the user to get the

cannot the file parameters altered. However prior to opening a file the PAB including the device name can be freely changed just as any other contiguous or individual piece of memory. The most common example of this would be where the programmer allows the user to enter the filename.

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To programme to allow the user a filename input to fundamentals must be taken into account. Usually a default device DSK1. is placed on name eg. screen. The cursor is placed over the 1. The user is then allowed to enter the drive number and filename. The programme must only allow acceptance of a valid drive number, followed by a period. Then only allow acceptance of a maximum of 10 characters which are permitted in a filename. If all these are meet then the filename can be placed in the PAB. Using VMBW. This will be at address >F8A. Or PAB + >A. complete this task the length of the device name and filename should be added and the result placed in byte 9 of the PAB. For a DISK access the maximum device length will be >F OR A minimum of 6.

From this point on the access is similar that that described above.

WRITE TO DISK

The proceedure described above is used to write to a disk except that the code >Ø3 is placed in the first byte of the PAB and byte 1 would contain >14 instead of >12. Before DSRLNK is called the data to be read to the disk must assembled and placed in the buffer in VDP RAM. When reading to disk EOF will not be encountered. file will need to be closed by the programmer.

FINISH

That is about it for month, I hope that next month I will >Ø1 into the first byte of the PAB be able to include the source code. from the exercise I set last month. The code to do this will be quite in the ZERO byte of the PAB the file long and I will have to trade off some written pages to keep the whole article within a reasonable length. However I do want to diskuss the be handling of errors which are

programme back on the rails running again. (not that it stops) Otherwise the programme could just go around and around into and out of error, until the user does the else fails" and turns the machine off, possibly with the loss of hard typed data. If that happens then the programme is hardly FRIENDLY". Until next month.

JOE WRIGHT.

SOFTWARE LIBRARIANS REPORT

must start by saying one doesn't know what's involved in something until one is involved, and bit of praise he received at our General Meeting in June for the question. Annual and effort he put into library. However, as running our its going to take a bit of time to get to know what and where in the everything is, I hope you can bear having to worry about the counting with me till then.

complete catalog of all and a file system, so hopefully I typist. will be able to find any file or disk instantly, "fingers crossed".

what I PE box a lot Paines mini members will what they have always felt like doing with their tape recorders (Ron Klienschafers black hole might come has to be in handy!)

thing I would[will only other like to mention is disks and tapes Formatter. meetings as well as If anyone wants to select print! meetings. anything for themselves or look at puts the command on what the library has to offer just with the item to be centred. give me a ring.

Alan Franks.

TIPS AND THOUGHTS ON

CENTERING

originally This article in the March/April 1986 appeared issue of the MSP Newsletter, and was written by Tom Fairbairn.

Recently, a question was raised higher-level Formatter commands that are used by TI-WRITER. appears that there is interest in this area that it may be worthwhile to talk more specifically about several of these commands...

the more specific questions addressed is the use the centering command, .CE, and the effect it has on the line being centred. As an infrequent user of this particular command, I had to do I can honestly say Al deserved every some experimenting to satisfy my own curiosity in addition to answering

> .CE command The permits for user to place headings, for example, centre of a line without of characters and finding the centre of the page. This is one of present I am working on a nicer actions that a word processor the disks can do to reduce the work

The first rule I learned with all of the Formatter commands is to have seen of John READ THE MANUAL. The commands work more differently on every WP system, shortly be able to do each one has its quirks.

With TI-WRITER, the .CE command on the line ABOVE one(s) to be centred. Information on the same line with the command nat be printed using the It took me a while to can now be purchased at basic group figure out why the information I monthly thought I was centering never would The WP system I use at work the figured TI-WRITER would do the same thing. When you assume something, causing it usually ends up well-known problem.

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places the centering command it between margins that are in use when still the document is PRINTED. These are result of this quirk, lines that not necessary the same ones you used should have been filled only to when you were typing the document in column 75 filled on out to column 80 to your file.

There are really three sets of margins you are concerned with when you are printing a document. If you command to send a right margin set forget any of them, centering may not work as you think it should.

first of these is the margins you've set on the tab/margin the margin sets, ruler, which you adjust using the command "T" using the Editor. you want the appearance of I+ the document to be the same on the screen as in the final printout, you should set up the right and left margins on the tab ruler to match the margins you intend to print; I do this as a matter of with. since my ruler documents course, include margin settings on the tab rulers that are read in with the I have found that this document. in usually results the fewest unpleasant surprises when I go to print a file.

The second set of margins you! must set are the Formatter margins. If you don't have the PRINTER The commands used to do this are .LM margins set up to correspond with and .RM, and they should be included the rest of the system, centering in every document you print under can be upset along with everything avoid a few more else. Formatter to strange happenings. These are the settings that the .CE command examines to centre information as it .CE command with headers or footers. is printing. during the actual print IF THE .FI with this system. the printer to which you are sending USE THE DOCUMENT MARGINS. margins) should normally be set at MUST be on left most physical print position of only allow one line. the paper: the system then spaces over to leave the margin.

The third and last set of desired position. margins are those that are set into later. the printer itself. On the Gemini 10X, for example, I had some real

fills to .FI command centres PRINTER'S right margin for reasons I do not understand. As a instead, which completely destroyed my formats when hyphenating at the ends of lines. Once I realised what was happening, I used the to the printer, and that took care of the problem.

> There is still a disparity in though. computer, the margins start at Ø, so for 75 positions the right margin is set at 74. On the printer, the left margin is column i, so the right margin is set to 75 for a full line of print. Also, you MUST leave printer's left margin at 1. TI-WRITER Formatter prints the left margins by using forced spaces. If you set a left margin the on printer, the Formatter will space over from that new margin and upset your carefully designed page.

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. Now the gilch in this whole bit is that when you centre, the .CE command uses the FORMATTER margins no matter how the printer is set up-

I do not recommend using the They are also used I can guarantee it will never work One problem is COMMAND IS NOT IN USE, depending on that the headers and footers DO NOT the information. More about this they are based on the absolute left later. To leave margins of one inch side of the document (margin column on the left and right of an 8 1/2 0). The other problem involved is inch page, these (and the tab ruler the fact that the centering command a line above the 10 and 74. You then install the information to be centred, and the paper in the printer such that the .HE and .FO commands in TI-WRITER If you must the printer is right at the edge of centre your headers or footers, you must count spaces over from the left margin and use space characters to move the header or footer to the More about this

You should also not attempt to problems when it came to fill and use the .CE command within the adjust early on. As it turned out, information that is part of a merge file to be read into your form document under Mail Merge. Again, there is no provision for this in the design of the system.

However, you can centre merge data if you wish. If the fields to be merged are of equal length for each document, put the merge marks in the form document such that the If the centering is established. fields to be merged are of unequal length, place the .CE command on the line above the merge mark(s). This will centre the line containing the merge mark, including the merge date becomes a part of that line. You can centre several consecutive lines by adding the line count parameter to the centering command.

and footers Headers a are case when it comes scecial to centering. The .HE and .FO commands document margin not see the settings in the Editor or Formatter, in the headers and footers you need to count characters positions the physical column Ø of the document at all times. The hitch entry itself here is the command footer or line; within the header characters are NOT command counted when you are entering the centering spaces as the command makes itself invisible in the printout.

But the problem in this type of command is that the Editor will compensate for the fact that part of the line you are entering is occupied by the command, and the limit that is imposed by the right it would seem as margin setting. though you could really never get a line of header printed complete within the margins, since you lose three character spaces to the command and have to use absolute column Ø as the starting point. This would seem to imply that the maximum length of the header has to be short by a character count that is the sum of the left margin plus three characters.

This can Ьe compensated. however, using two techniques. First, if the left margin is three columns or more, you can 'outdent' the start of the line by moving the cursor to the left margin. then pressing the CTRL Y (left margin release), then spacing to the left

side using the FCTN S (cursor) left) This will pick up at least key. of the 'missing' character some spaces. The second technique involves the Editor 'T' command once Use the T to set the Editor again. margins to Ø and 79 during the time you are entering the header footer . Once they are entered, use the T command again to set the margins back to their normal values for the document. This act allows you to create a header/footer that runs the full width of the document. Be very careful οf your character counting, though, so that you do not exceed your normal lengths as set by the margins.

Actually, you can change the Tab ruler as often as you like when you are entering a document. This gives you the flexibility αf indenting notes from both margins, for example; or setting in the left margin of tabulated data or outline formats. The only hitch to this is, BE SURE TO USE THE .NF command to the Formatter, or else it will everything it can and the filling action will totally destroy careful work of formatting, except the headers/footers. I've had this happen to me too! Many times I have gone through a document and inserted the mandatory space symbol (caret, SHIFT 6) so that filling the would destroy nat the tables and other formatted areas αf document.

Ι think that using header and footer commands and the centering are probably the most hazy and TI-WRITER inconsistent αf the formatter commands. They seem to be the ones that give the greatest Using amount οf grief. the tab/margin ruler is another little understood capability of the system as well; the experience I have had with the big commercial WP system has sure been a major help in figuring out how to use these capabilities in TI-WRITER activities.

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HUNTER VALLEY 99'ERS USERS LIBRARY SOFTWARE GUIDE

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Of the Month

Well now that you have nothing to do G098 (D) how about doing next month's D.O.M This is a colourful Personal Check just for a change, as I forgot to organize it last Week. So here I am on a Busman's holiday. THANKS to our new Librarian.

There are some top Utilities and 2 games on this disk, lots of detailed Note on listing the first Rem says instructions to read and an updated *BUGS present which may make it version of the Check Writer on HV99 May D.O.M from Lima.

-READ-ME-

What more is there to say?

4C-DSK/LST (D)

on paper usage by listing an 80 col printout. From TIUP by & PIXELS and Hunter Valley 99'ers. B.Elsner.

BACKGAMMON (T/D)

board game by R. RUE from Oregon WINDOW Calculator to help in the + with some instructions but

BERLIN4 (T/D)

from Channel 99 the Hamilton U.G. older version. by D.Gill. Instr are included and are a Y/N option at startup. This DIM, DIM-HELP (D) is a Maze/Pacman like version and This alone is the grandaddy of the well as little 99'ers. Speech and Media. Keys or Joysticks make this an interesting game.

GØ97 (D)

This and the next program are from the Free Access Library.

A good program that keeps track of the Serial numbers of all the items about the house, as well as all your Credit Cards.

On the first menu you are asked Serial or Credit and a file is than opened on the disk in drive 1. I think there a few similar programs around but if you need to collect

numbers this is a nice one for you.

Book and Accounting Program to total, balance and analyze your Track all those pieces of budgets. paper you write in weak moments. An easy menu shows the way to do so.

Unstable ??? and I must say that the error checking left a lot to be desired. Could be improved on but may be useful to someone who does not trust their friendly Bank!

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LOAD, RECONCILE and CBW4/41DOC (D) This is a useful Utility for all "LOAD" is Checkbook Writer V4.41 and Greenies who like to save cutting with its companion program RECONCILE down trees to make Paper. It saves are the PD programs published and the reviewed in the May issue of the contents of 4 Disks side by side on Lima Ohio U.G newsletter BITS BYTES It has been updated and includes the Documents. This will do all the above as well as write them for you. Another version of this popular new feature I found very useful is a a / * tricks.

knowledge of the game is a big help. LOAD and RECONCILE should be placed You can play the Computer or alon the same disk. As the latter is friend and I found that the 99/4A is used to check the monthly statement a worthy opponent in that as usual I and mark the ones that have been did not win any of the games played. cashed. Instruction programs on each can be read at any time, and it compatible with the Horizon i s This is one of 4 Versions of BERLIN Ramdisk. Well worth updating the

becomes time consuming for adults as disk and well worth the price of the

DIM has nothing to do with intelligence of the user it is the "Disk acronym for Information Manager and it is in the Public Domain.

"Not another one I thought?", just as I was getting handy with the latest DM1000 after having given

away DMIII DM as being it and TI's as Monks about useful as Nunnery. This one has some features unique to it that are not disk. found on other disk editors. doubles as a disk sector editor as have well as a disk manager. option 5 of the E/A module or Funnelweb with E/A module of XB module).

Gram Kracker.

There is an option list of all the usual This is the CTRL key and one otherlof a single file only. key to carry out a command. The FCTN key is only used with the arrow NB.It will dump any type keys to move the Cursor around.

When used as a disk manager, disks can be formatted in any combination of sides and density, and if no name is specified then it is initialised The disk is also any. automatically verified and a graphic picture of a disk is erased from the screen sector by sector as it does so. One can rename disks, delete or copy files singly or the entire disk file by file. (Unfortunately files are limited to a max of 45 Sectors which may restrict its usefulness] somewhat). There are no prompts when to insert the master and backup printer dump. disks if you have only a single drive.

A nice feature is the ability to to store on the disk extra information file in a 3 or 4 sector special program image file named *CATALOG automatically when on each use (CTRL O(utput), CTRL S(ave). display this directory press ENTER 3 times after inserting the disk to be cataloged. The three fields of extra information ie. 1 INFO 2 USE 3 DATE

One of the best features as far as a Librarian or anyone who does a lot disk to tape transfers is ability of DIM to dump a whole disk or any number of selected files tape in one operation.

Press CTRL A(11) and a small "c" appears next to all files. Deselect files not required (remembering 45 sectors max) and when ready press CTRL R(ecord), press ENTER and away

9085 recording the files in a alphabetically till finished. great usually about 15 mins for Ιt does not allow checking It the recording but if you normally no problems and use good DIM loads quality tape it works 100%.

(instead You can also dump E/A 5 program image files to tape. These files can then be loaded from cassette and it will not load from Funnelweb the consoles fitted with the 32K, & XB Module or a moved E/A file in a E/A Module is required. Press Opt5 for RUN PROGRAM FILE. When asked FILE NAME type "CS1.X" and follow instructions for tage this key's required to guide you through|will allow the loading of multiple all the operations on each screen. files. Typing CS1 allows the loading

> Of file including those not compatible with tape and these are impossible to get back off the tape into the computer so take care.

> As an editor it is as good as currently in use and displays ASCII and HEX at same time. The display in two 128 bytes screens and switching between the first and of the selected second 128 bytes Ø and 8.Entire sector using CTRL sector can be dumped to the printer with no split and HEX and ASCII displayed by pressing CTRL O(utput) which is handy having an

> is a great disk and sadly only a few of the programs are of use to those with Cassette only.

> > EOF Al Lawrence.



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THE HV99ERS BASIC GROUP CLASS NOTES

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paul muluaney

So far our programming has been limited to printing words and numbers on the bottom row of the screen and scrolling them to the required position with PRINT statements. If we wont to place some text on screen above text that is already in position we cannot use the PRINT statement so we need to look at the CALL HCHAR and CALL VCHAR subprograms.

The CALL HCHAR subprogram allows us to specify exactly where we wont a character to appear and how many characters we wont to be repeated in a horizontal direction. The CALL VCHAR subprogram performs the same positioning function but repeats in a vertical direction.

Before we look at how these subprograms work lets have a look at the code that that has been assigned to the characters that we are using. All the letters, numbers and punctuation marks that we use have been given a code number called an ASCII code. ASCII stand for American Standard Code for Information Interchange and is one of the few things that is standard on all computers. For an example of the ASCII codes look at the Appendix III-1 in the Users Reference Guide or in the Basic Reference Card or almost any computer manual. The list shows the code number and the character associated with that number. There are other numbers in the code but do not form part of this exercise. The importance of the code numbers becomes apparent when we look at the HCHAR and VCHAR operation, they use the code numbers not the actual characters.

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The format is CALL HCHAR(R,C,A,N) where R is a row number (1-24), C is a column number (1-32), A is the ASCII code number of the character you wont to display and N is the number of repetitions (\emptyset -32767). N is optional and defaults to 1 if not stated. Although the number of repetitions allowed is 32767 it only takes 768 repetitions to fill the screen (24).

The worksheet supplied in a previous issue will make it easier to plan the placement of the characters.

The format is identical for CALL VCHAR(R,C,A,N).

As an exercise we will put the letter A in the middle of the screen. 100 CALL CLEAR

11Ø CALL HCHAR(12,16,65)

When this is run a capital A is placed mid screen because 65 is the ASCII code for A. To put a lower case a replace the 65 with 97.

To see how the repetitions work add the following lines to the program. 120 CALL HCHAR(12,17,43,767)

13Ø GOTO 13Ø

When this is run the A is placed mid screen then the plus sign is repeated to the right, when the edge of the screen is reached the computer goes to the next line and continues down to the bottom. If there are more repetitions to go when the bottom is reached the computer will go to the top of the screen and continue. Note that the A will still be on screen because we specified one less than a full screen. To demonstrate CALL VCHAR we will clear the screen.

13Ø FOR DELAY=1 TO 9ØØ

14Ø NEXT DELAY

15Ø CALL VCHAR(1,1,32,768)

This will put a space in every screen position starting in the top left corner.

To put the alphabet across the screen try this program;

100 CALL CLEAR

11Ø C=3

12Ø FOR A=65 TO 9Ø

13Ø C=C+1

14Ø CALL HCHAR(13,C,A)

15Ø NEXT A

The C+1 increments the column number while the FOR-NEXT loop steps through the upper case alphabet. Try altering the loop to 97 TO 122 to get lower case or 33 TO 64 to get punctuation and numbers.

16Ø FOR L=34 TO 57

17Ø R=R+1

18Ø CALL VCHAR(R,R,L)

19Ø NEXT L

200 GOTO 200

Now is a good time to see if the first two and the last two columns are visible. If a column is not visible remember not to use it in a program.

So far we have been using the default character colours of a black foreground character with a transparent background which allows the screen colour to show through. We can alter the colour of the character and the background by using the CALL COLOR subprogram. Note the American spelling of COLOR, it wont work if spelt our way. To make the subprogram more versatile the ASCII codes are broken up into sets of eight to allow a number of different colours if required. The format is CALL COLOR(S,F,B). S is the set number, F is the foreground colour number and B is the background number. The colours and their numbers are given in the Reference Guide on page II-73. To see the effect add this to the previous program.

70 FOR K=1 TO 12

8Ø CALL COLOR(K, 16, 2)

9Ø NEXT K

This will change the entire standard ASCII sets to white characters on a black background. Note the useable area of the screen also turns black because the space character (ASCII 32) is also changed. Try altering L in 70 to 4 TO 7 and note the effect. Try different combinations of colours.

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READERS CORNER

If you have a look at the inside cover of this Newsletter you will see the result's of the Annual General Meeting - a new Committee of which I have found myself a member.

Nothing wrong with that you say! Well, alright, I might agree. But a closer look will also tell you that I am now the Publications Librarian. So for better or worse I have decided to write a monthly column telling you what has come into the Library in the previous month, & time permitting, over the next few months,a review of what books we have already. Armed with this information I hope that you will avail yourself of the Library. This applies to our out of Townies as well as our locals.

If you are looking for a particular book, pamphlet, Newsletter or such please feel free to contact me, I will do my best to obtain it for you.

This Month.

the July edition of T.I.S.H.U.G. has brought is a well presented, balanced and the organisers. Well done Alby. useful Monthly News Digest.

What is in it?

to be their order of significance-

1) This Months brings news of the availability of the Mini expansion versions of the Newsletters etc? system developed by T.I.S.H.U.G members, for approx. side of your console. It contains, U.S.A. similar 1-RS232 port, 32k expansion memory, operating in Aussie. Any thouand a DS/DD disk controller capable on this from Uncle Sam country? of controlling 4 disk drives. can ьe purchased through T.I.S.H.U.G. If you are interested either contact T.I.S.H.U.G. direct month. or our Secretary. The size? about twice the size of the speech synthesizer, maybe a little larger.

An accompanying article by Paine describes the additional commands made available by the Disk Controller.

- 2) A good article on using the Save utility of the Editor Assembler package.
- 3) Ross Mudie is into his twelfth article on Linking XB/Assembly.
- 4) Four programmes are listed for typing in.
- 5) Also is the Communicators for the MID-NIGHT modem set. Ever noticed how owning a Modem converts normal same people into some strange some strange nocturnal creatures.

Micropendium.

I am interested in organising a Group purchase of Micropendium. you are interested please give me your name. I would like to have a rough idea of the numbers involved before approaching Micropendium. As a point of interest Micropendium is published by a company based in Round Rock Texas. Lake Macquarie City Council has just established A Sister City relationship with Round The only offering at this stage is Rock. Our Secretary, ever alert, the fact that the News Digest. This Group and it's H.V.99'ers. have their home base in News Digest have recently passed the Lake Macquarie City at Warners through what I would describe as a Bay and that we already have contact metamorphosis, the result of which in Round Rock to the attention of

The Great Mail Out.

I would be interested in hearing These are mentioned in what I find from our out of Townies who have received the chain mail. Are the contents useful? More of the same? Would you like to see only edited

\$300.00 you We have had a suggestion that we get a small box which plugs into the consider starting a chain in the to those naw operating in Aussie. Any thoughts

> Well that's about all for now, more news and maybe even some gossip next

> > WAISHI JOE

TEXTURRE, SOFTWARE, and ELSEWHERE Happenings in the Tata World Community by JACK SUBHRUE

DESKTOP PUBLISHING

Did you ever really dream some day that you'd be able to make professional-looking labels and letterheads with your TI? Not just the stuff you get when you discover how to access your printer's italics or enlarged or condensed. But real professionalism. Think back a year or two. What were the chances of something like this column header being done on our machine? Seemed like nil then.

But not any more.

<u>CS6D_III</u> is a wonderful edition to your text/graphic library. It is unquestionably graded "A" by this reviewer. It is the next excellent step in desktop publishing.

Character Set and Graphic Designs III is ingenious and (for the fl) easy to use. Dave Rose, the program designer, is one of those geniuses like Tony McGovern. Chris Bobbit, Barry Traver, Peter Hoddie, Craig Miller. Rodger Merritt. Mack McCormack who have risen to our TI needs. He has given us an extraordinary creation.

CSGD III comes with an overwhelming amount of good documentation (which includes superb keystrips for relative ease of use), loads automatically in X8. A menu offers 0)CONFIGURATION 1) PRINT LTTR,LBL,MSSG 2)DOCUPRINT 3)EXIT. My complaint here is that 0) should be 3 and EXIT 4). I look at the second line of ANY menu and press 2. [That's the way most menus are set up and that's the way I do it. I must have inadvertently pressed 2 instead of 1 at least 40 times in the past month. (I am a slow learner.) Also, once you configure your system, you probably won't change it often enough to warrant that being your first menu choice.]

The next menu is okay. It starts with 1). You can load LABEL or LETTERHAD or MESSAGE or RETURN TO MENU.

If you choose LETTERHEAD, for example, you have a pile of decisions to make in this design. You can decide if you want your pattern at the top only, bottom only, or top and bottom. You can choose to have graphics to the left and right (either, neither, both). If you choose both sides, the graphics may be different. They may also be completely different - along with new fonts - for the bottom. These are unique features which I really like.

The graphics take a bit of explaining. There are graphics in CS6D I and II and on some user disks. (I use #2 here for samples.) Even though User Disk #2 has over 100 graphics and fonts the larger graphics can only be used if you own CS6DI. However, with CS6DIII (the latest) and User Disk 2 there are still have well over 100 usable fonts and small graphics to draw from. II ARTIST allows conversions of everything but CS6D, but FONTWRITER converts CS5D files to II ARTIST files for printouts and changes, so customizing is possible with multiple software items. (And II ARTIST converts GRAPHX graphics into II ARTIST graphics. So there has become a roundabout standard pulled together in FONTWRITER and II ARTIST. We'll discuss these further when reviewing FONTWRITER.)

Back to CSGDIII and the LETTERHEAD. Have a bunch of formatted blank data disks handy when working with any of these graphic/text programs.

First, you must give Command 1 (which you can't get out of if you make a mistake - thus slow reloading) when beginning a new design. Next, you'll be asked to give a filename to this LETTERHEAD (as you will SAVE it later for permanent use). Next, Graphics / 1 (yes), 0 (no); then Top and Bottom, Top only, Bottom only; then Dashed Line to separate head from body.

Now you'll go back and choose the left graphic (and decide if you want it reversed and/or its negative: these choices are excellent if you're looking for a certain kind of balance) and then the right.

The large character set comes next (such as the IMPACT-99 above). You are given the opportunity here to enter normal or condensed width and the amount of spacing you'd like between characters. Your message (clearly marked as to total number of characters permitted for the chosen font) can then be typed and changed and typed until satisfied.

The smaller font for the next three lines go through the same formatting procedure. When satisfied with each item you give the okay. When all items are complete, put a blank disk in your designated drive (designated in the original Configuration section) and SAVE.

You cannot reload and change this file. You may only print it out at this point. It does this well.

Complaint #2: I wish the letterhead would print out without running a #%##%% formfeed automatically. This is really annoying. If you want to load up TIW and write a letter, the sheet must be rewound after shutting off the printer. An option would be nice at this point.

I may as well do Complaint #3 while I'm at the cantankerous part of this essay. I wish an escape to the previous

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input could be devised. It's terrible to go through all the long paths to your goal only to find out you don't have lowercase letters or punctuation and you can't change anything. When you print out and discover you really needed dot spaces between the letters on the second and third lines, you must begin all over. Or if you pressed 1 (start new) instead of 8 (print) at the outset, there's no way to make a change without reloading the entire shebang.

Maybe the docs (which have all the graphics printed out) could also give limits to the fonts, telling whether punctuation is available or lower case or dots (for readability). But an escape would be the very nicest change.

CSSD is one of those programs that get better the more you use it. Once you get comfortable with it, you can really get creative with messages and labels and even (thanks to two-column and upside-down printing) unusual greeting cards. There's even a program that will let you use files created on TI WRITER (or the various improved versions) in any of six interesting and larger fonts. Even in two columns, if you wish.

This III is a neat program. So were I and II, though not nearly as friendly or profound.

In addition to having some very practical applications (labels and letterheads and special notes - all done professional), the program has a lot of fun built into it. The ice-covered font, for example, or the funt written on movie film. And any graphic program that would include a fat lightning bolt with "SHAZAM" above it has to be doing a lot right.

The manual is WAR AND PEACE size. If you are at all familiar with graphics programs for the II, go immediately to the QUICK START very condensed manual. That's only four pages. Start right in. Letterheads (top only) might be the best way to start. After you've made two or three you'll really get the hang of it.

The rest is fun.

Excellent program.

I'd recommend the USER DISK #2 package also. There are another 22 interesting fonts and 86 graphics you can use (and 28 you can't unless you buy #1) to really extend your professional and recreational computer activities.

JACK SUSHAUE Box 459 E. Douglas MA 01516



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AFTER A LAQUADABBANG WINTER!



COOKIES



THE MINI-SEMES THEY SAM COULD NOT BE COME: Combining Chemistry, Math, Art, and Good Tasta The Math Class Proves They Have Good Taste!

FURLPLUS

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THE DRIENTAL GAME OF PICKUP STICKS

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by Bryan Rice (72067,1005), TWIN TI'ERS UG

MYARC, INC. of Basking Ridge, NJ, has recently introduced a new computer system based on an ill-fated TI-99/8 and accelerated TI-99/4A. According to some, the TI-99/8 was to have been almost completely incompatible with the TI-99/4A and its PAB format. So when Myarc decided to develop the computer, they had to perform a major functional and physical modification to the basic structural design of the TI-99/8. As a result, a powerful and technologically advanced computer named the "Myarc Model 9640" evolved.

The system is expected to be released in the second quarter of 1987 and sell in the area of \$495. It comes complete with either a standard or professional IBM AT-style detachable keyboard with separate cursor keys and numeric key-pad and a package of six software programs including one for download cartridges to disk. As there is no cartridge port on this model, all software must be floppy based which is an easy task for the TI-99/4A.

Initially, the computer comes on a PEB card. You simply remove the flexcable interface and replace it with the "9640." It is populated with 512K of CPU memory (expandable to a full 2 megs), 128K (out of 192K) of VDP memory, and 32K (out of 256K) of ROM. The connections provided on the card include: a Microsoft-compatible mouse port, a TI-compatible joystick port, and a RGB/Composite/RF-Modulator compatible video port. The RF-Modulator will ONLY work on a Black & White television set NOT color.

The internal ROM includes 24K of low-level operating system routines and 8K of GPL interpreter. All the mouse support routines are contained on both the ROM and the 9938 AVDP chip from Yamaha and Microsoft. When the machine powers up, 16K of RAM is used for various internal tasks and you are left with about 496K of space for your programs. And remember that all the routines, screen, and graphics tables are kept in the 128K of VDP memory, so you really have quite a lot of memory to work with. If you choose to expand the RAM of the system, it will have to be done externally using 3 off-board RAM expansion banks. The current Myarc memory cards such as their 128K and 512K cards will work as memory expansion.

The machine is built around the TMS9995 microproccessor which is a more advanced version of the TMS9900 chip inside the TI-99/4A; however. it is 4-6 times faster and comparable in speed to the Motorola 68000and Intel 80286. The TMS9995 will be running at a full 12 MHz and a 16 MHz version may be offered in the near future. With 16-bit parallel memory, the TMS9995 uses 32K (expandable to 64K) of high-speed static RAM to double memory transfer rates as compared to the TMS9900 which was a 16-bit processor running on an 8-bit bus. The machine is capable of emulating a TI-99/4A by merely changing a bit on a gate array which, when set, looks nearly identical to the TI-99/4A. This will allow you to use almost 99% of your old software said Myarc. The only problems that they have found are the programs that use a non-standard method to scan the keyboard. The reason for the problem is that the TI-99/4A has 48 keys and the new machine has 93 so a different KSCAN routine, obviously, had to be used. Most of these programs use their own KSCAN routine and thus do not work. Also, there will not be any immediate support for speech because there will not be an available port to use.

Myarc is developing something similar to Corcomp's Triple-Tech card but with a few added surprises. And for those of you with P-Code, the system cannot support any of the TI-99/4A P-Code cards in the P.E. Box, but Myarc will provided nearly full software support.

Anyone with the P.E. Box will easily be able to use the new computer. Those without the Peripheral Expansion Box will definitely not be left-out though. A version of the new system will be developed within a new style expansion box and a lower profile.

The communication chip is the same TMS99Ø1 that is used in the TI-99/4A running at the same speed. On the other hand, one of the most advanced graphics chips ever produced is also used in the machine. It is probably the most exciting and vigorating part of the entire System. Finally, a high-resolution TI-99/4A with 8Ø-column capabilities and the most powerful graphics catalyst, bar NONE! Myarc is using a 9938 AVDP, a chip TI and Microsoft developed jointly and then, unfortunately, abandoned. Luckily, the processor is now being produced by the Japanese. It's fully compatible with 9918A inside the TI-99/4A but supports a few extra modes and features. Where the 9918A has 8 control registers for graphics characteristics, the 9938 has 32 which provides an incredible amount of flexibility and power.

The 9938 has two text modes. The first is identical to the text mode of the 9918A, except that you can choose the foreground and background colors from a set of 512 instead of just 16. Text mode two is an $80^{\circ} \times 24$ or an $80^{\circ} \times 26$ (for a status line at the bottom like an IBM) format with 6 imes 8 characters and a choice of two colors from the Multicolor mode is still there as is graphics mode one. same 512. Graphics mode two allows definition of 768 different patterns and a choice of 16 colors from the 512. Graphics mode three is the same as mode two except that instead of being able to have only four sprites on a horizontal line at a time you now can have up to ten. Graphics mode four is similar to the TI-99/4A's with a 256 \times 212 non-interlaced screen resolution. Graphics mode five can support up to 512 x 424 using interlacing but this mode must be displayed on an RGB or Composite monitor. Graphics mode six has 512 x 212 resolution and each individual pixel can be defined as one of 16 different colors; although, this mode requires a full 64K of VDP memory for storing the screen. And graphics mode seven has the same resolution but uses a full byte of memory to define the color for each pixel which means that each pixel can be one of 256 colors! This mode also requires additional VDP memory and Myarc has made provisions for up to 196K of VDP RAM to be put on the card. Also, one of the control bits on the 9938 allows for what Lou Phillips calls "animation tricks." This means that it can do screen ewapping which essentially provides for automatic animation controlled by the 9938 chip.

The machine supports the old PAB (Peripheral Access Blocks) format in the TI-99/4A mode so that, in theory, all the peripherals manufactured to TI specifications will work. Most of Corcomp's equipment works except for the Triple-Tech card's speech capability. Also, most of the third party equipment such as the Horizon RAM-Disk work. A new PAB format is also used and nearly identical to that developed for the TI-99/8 but will reside in CPU memory for greater speed. It allows for logical record lengths of up to 4096 characters instead of the 255 on the TI-99/4A and has a full byte reserved for error codes, which means there can be 256 error codes instead of 8 as in the old PAR format. Including support for both the new and old PAB formats is one of the major changes from TI's 99/8.

Phillips said that the first two peripherals that would be released would be a card with a retrofitted hard/floppy disk controller that will do away with the Western Digital support card and allow you to connect a 20 meg. hard drive for under \$500. Phillips has also

said that 3.5 inch drives are going to be a standard capability if And next, a card to allow speech, extended new controller. sound and MIDI control, and a few other exciting implementations. those two cards are complete, Phillips says that the next thing he plans to work on is a card that will provide IBM compatibility. commented that the reason for choosing the keyboard that they are using was so that it could be made into a PC compatible computer easily. basic structure of Myarc's IBM compatability will follow two paths. The first is for people who don't want the new computer but want compatibility. Lou describe a system of two PEB cards and an IBM AT-style keyboard. One card will contain the 80286 processor, 640K of DRAM, BIOS ROMS, and VDP. The other will contain the basic I/O ports The second structure will be a plug-in card designed and functions. use with the console version of the new computer. This version will contain two internal expansions slots with one used by the IBM plug-in card. This card will only house the 80286 processor and the BIOS ROMS. The reason being the new computer already holds all DRAM necessary and also all the I/O ports needed. To get IBM compatibility, all you'll have to do is switch from the TMS9995 to the (possibly the NEC V3Ø a 12 MHz replica of the 80286) and Intel 80286 your in IBM country.

The computer comes with a very enhanced version of Extended BASIC in the same format as it is currently produced (floppy based). Phillips said that XB II is very similar to GW Basic from Microsoft and between 2 and 4 times faster than IBM AT BASICA. somewhere additions to XB II that come with the new computer include full mouse advanced event-driven control keys (which means that you can set your program to automatically branch to a certain line number when a given key is pressed), and support for the new PAB formal. Phillips has promised to release a reference manual for the machine similar to one released by IBM for the PC. In other words, the machine will have an open architecture and no hidden secrets like TI kept with GPL. should help enormously in getting new software written and hardware built for the machine by third party companies which can fully the incredible power of Myarc's new system. As promised, Phillips has brought the computer to market and claims that Myarc has plenty of capital to allow them to continue with extensive support for the users. Also, when asked about other languages, Phillips said that Pascal would probably not be next but that C would be. His reasoning is that C is really in vogue now and it would make new software development easier; however, Pecan Software has agreed to supply all of the UCSD language library to Myarc for an extremely low cost.

Lou Phillips and the rest of the Myarc "team" are very dedicated to their cause and I suspect the new computer will furnish many prospective buyers with an unprecedented amount of power and support. Already, many software packages are being explored and created for the new machine including everything from business and management software to basic utilities and games. I think we have a very viable source of "LIFE" for the TI-99/4A and Myarc, our "foster parent", is consistently improving our pride and joy.

This information is provided for the benefit of all users and distribution is encouraged as long as my name, the UG address, and this short paragraph remains with the file. Please forward any questions or comments to the address below. All of the information contained within this document is subject to change without prior notice.

Twin-Tier's Users Group ATTN: Rose Sass R.D.#1 Rock Stream, NY 14878

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THE INFORMATION PAGE

IN YOUR NEWSLETTER THIS MONTH

Disk Drive Servicing
Random Bytes
Beating About the Bush
Groping Around - Forth Tip
Assembly Language - File Management
Double Density Capability
TI-Writer - Tips on Centering
Software Review
BASIC for Beginners
Readers Corner - reviews on Newsletters received
Impact 99
The Geneve

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The Editor
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P. Mulvaney
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J. Sughrue

B. Rice via CompuServ

PLUS MUCH MUCH MORE!!!!!

COMING EVENTS

*Next Committee Meeting: Tuesday 4th August Next General Meeting: Tuesday 11th August

AGENDA FOR AUGUST MEETING

Speech Demo by Bob Carmany from the US!!

CLASSES AVAILABLE FOR MEMBERS

BASIC group conducted by Paul Mulvaney at the Warners Bay High on Tuesday 21st & 28th July

ASSEMBLY group conducted by Joe Wright. The next meeting will be held on Tuesday, 21st July. Contact Joe for the venue.

FORTH group conducted by Richard Terry will meet on Wednesday 22nd July at Warners Bay.

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

C#97 Current

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