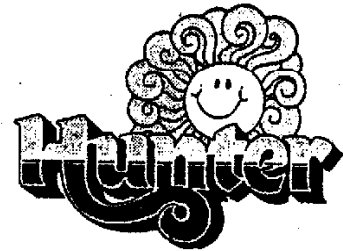
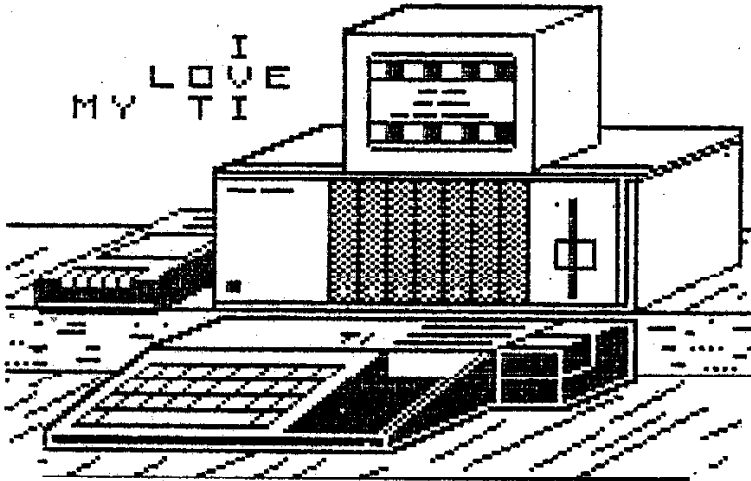
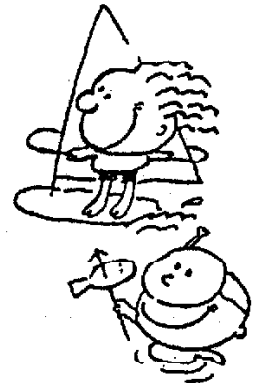
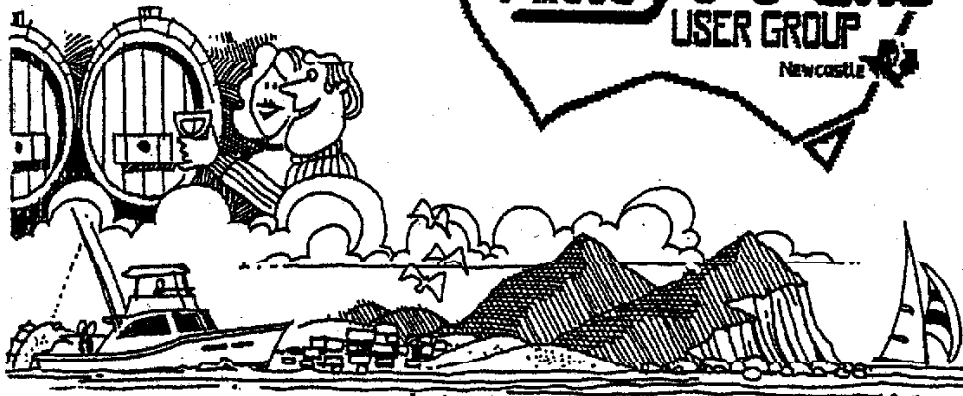
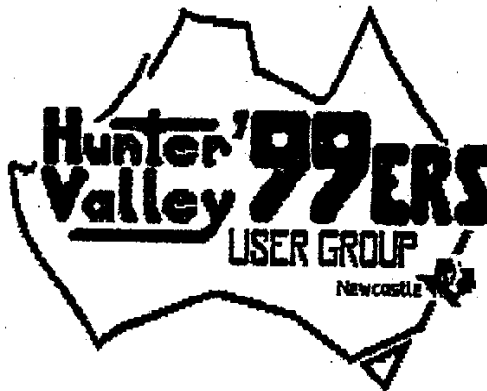


HUNTER VALLEY 99ERS USERS GROUP HOME COMPUTER NEWSLETTER



SEPTEMBER
1988



REGISTERED BY AUSTRALIA POST PUBLICATION NUMBER N866083
THE SECRETARY HUSBERS, 8 ARCOT CLOSE TARRO NSW 2382

YOUR COMMITTEE

all telephone numbers
are STD area code 049

PRESIDENT

Alan Lawrence
35 Bayview St.,
WARNERS BAY 2282
Ph. 486509

SECRETARY

Albert Anderson
6 Arcot Close,
TARRO 2322
Ph. 662602
Viatal 496626020

TREASURER

Peter Smith
8 Glebe St.,
EAST MAITLAND 2322
Ph. 336164
Viatal 493361640

SOFTWARE LIBRARIAN

John Paton
1 Parlen Close,
RUTHERFORD 2320
Ph. 326014
Viatal 493260140

PUBLICATIONS LIBRARIAN

Allen (Joe) Wright
77 Andrew Rd.,
VALENTINE 2280
Ph. 468120

EDITOR

Brian Woods
9 Thirlmere Pde.,
TARRO 2322
Ph. 662307
Viatal 496623070

PURCHASING CO-ORDINATOR

Alan Franks
822 Pacific Highway
MARKS POINT 2280
Ph. 459170

COMMITTEE MEMBERS

Noel Cavanagh
378 Morpeth Road
MORPETH 2321
Ph. 929744

Rodney Gainsford
56 Sedgewick Ave.
EDGEWORTH 2285
Ph. 583515

CONTRIBUTIONS

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

Any copy intended for publication may be typed, hand written, or submitted 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.

All articles printed in HV99 NEWS (unless notified otherwise) are considered to be Public Domain. Other user groups wishing to reproduce material from HV99 NEWS may feel free to do so as long as the source and author are recognised.

Articles for publication can be submitted to the Editor, ALL other club related correspondence should be addressed to The Secretary.

DISCLAIMER

The HV99 NEWS is the official newsletter of the HUNTER VALLEY NINETY NINE USER GROUP.

Whilst every effort is made to ensure the correctness and accuracy of the information contained therein, be it of general, technical, or programming nature, no responsibility can be accepted by HV99 NEWS as a result of applying such information.

The views expressed in the articles in this publication are the views of the author/s and are not necessarily the views of the Committee, Editor or members.

TEXAS INSTRUMENTS trademarks, names and logos are all copyright to TEXAS INSTRUMENTS.

HV99 is a non profit group of TI99/4A computer users, not affiliated in any way with TEXAS INSTRUMENTS.

PRESIDENT'S



with
Al Lawrence

August's start at our new spacious MONTHLY MEETING venue was a success which hopefully this venue will be more flexible & enable us to serve the HUNTER VALLEY 99'ers needs better - events were getting slightly confusing when we were all in one room.

NOTE

This is for the general Monthly meetings only, and all classes are at the usual Warners Bay venue.

A number of rooms will enable us to return to our earlier format with lots of groups engaging in their individual activities after the main demo. This we hope will mean that helping each other to learn more about our 99/4A will become easier and friendlier, and members will not feel that only experts are in the club and that everyone has disk drives.

We also hope to have completed soon volumes of all our HV 99'ers back issues bound in yearly lots for the benefit of the new members as a lot of the knowledge our old hands know has been printed over the years, and so not to bore the advanced readers by doing old re-visits we feel this is the fairest method. But YOU will have to BORROW and READ them so see Joe at the next meeting.

Read in YOUR COMPUTER July 89 some comments that just sounded like a familiar cry we TI'ers know all too well. Neglected waif, "bad times" with software shortage but lots of close comradeship among owners and the willingness to share ideas, give assistance which lack of support created. This in the AMIGA

column!! and now with it's coming of age and all the software available for it, the author is commenting that lots of people ask him to recommend a genealogy package for it and has put out a plea for someone to write one. So we are lucky that we have an excellent one by our own Joe Wright for the TI. Maybe they should buy a TI or get Joe Wright to make them a bi-cent. fairware gift?

HELP!! Does anyone out there have access to a Video converter from half speed NTSC tape to either VHS or BETA format? If not and there are any interested parties Tony McGovern can organise an evening to view a 5 hour NTSC Video Cassette he has received featuring a TI Multi User Group Conference organised by the Lima User Group and sent to us from them. See Jack Sughrue, Charles Good, Jim Peterson and place a face to many other famous names in the TI world. Shown also are some uses people put their 99's to and a demo from a blind programmer PLUS lots more so let TONY know that you WOULD like to see it soon. I have seen some of it and recommend that we all try to see it. THANK you LIMA.

Funnelweb 4.12 (FINIS EDITION)

YES - this now allows TONY to write more articles for HV 99'ers, BBS and have fun with the machine.

V 4.12 LINE HUNTER expanded and IMPROVED.

V 4.11 DM 1000 IMPROVED and shrunk.

V 4.10 CONFIG windowed and made simpler to use. Other mods in different areas with LINEHUNTER introduced to simplify program BUG hunting.

Just in - ARCHIVER 3.02 and it looks a WINNER - more later as no time to try it out.

Is Neil Quigg going to Big Blue? If so we hope he keeps in touch or better still build a LINKER interface board. THANK you NEIL for what you have contributed to all here and out there in black holes or where ever.

Just send rumours, requests, hints, tips and anything else you

would like to see in print, mods to your favourite programs, workshops or social events you would like to see to the HUNTER VALLEY 99'ers Editor.

CONGRATULATIONS

Congratulations to RON and TANYA KLEINSCHAFER on the recent birth of another little opal miner

MATHEW

recently. Mother & son are reported to be doing well - father still in shock!!

DONT MISS THIS

Make a note of this date on your engagements calendar:-

SUNDAY 6th NOVEMBER, 1988

On that day the HV99ers, with hopefully some families from the Sydney group, will hold a

B.A.S.H.

(that's Bicentenary Auto Sunday Hunt), organised by Tim & Jeannie Watkins.

The format is an 'observation' car rally, ending at a very popular spot in the Pokolbin area at which a bar queue and whatever else one does at Pokolbin being the order of the day.

DON'T MISS IT!

Bring the family along for a great day out. Further details will be published in next month's newsletter.

SECRETARYS REPORT



FROM ALBERT ANDERSON

Hello once again, this time for September '88. I hope that all of our friends in the northern hemisphere have had a nice break over the summer and it seems that things are on the roll again as the newsletters and 4A related material start to out-number the bills being delivered to 6 Arcot Close. I really love this because my neighbours regularly comment; "how come you get so many people writing to you? ... all we get is bills, bills, and more bills..." The answer is different all the time. Such things as, I do part time work for the CIA or I am the Australian contact for the Clint Eastwood fan club or I am the secretary of a group of computer users who when told 5 years ago that the machine they bought is no longer worth pursuing because it didn't have this or couldn't do that, said "crap", dug their heels in, discovered 'user power' and went on to prove that a computer, ANY computer is only what the user makes it. Needless to say the neighbours walk off shaking their heads and mumbling something to themselves wondering why they asked in the first place... oh well such is life, EHH !!!

Now where was I ?? yes at the office that's right. Well congratulations to all you HV99ers as membership renewal has exceeded my personal expectations. As at the time of writing we stand 84 strong as compared to our 105 of 1987. I must

thank you all on behalf of our group for the support you continue to give.

Locally, it seems that the software ad hoc night last month was such a great success that software librarian John Paton is putting on another one this month and I think it is on the 3rd Tuesday of the month at the Warners Bay High School venue but please check with John on this as I'm not totally sure on this. I believe that the main comment from everyone was "I didn't know that this was in the library..." what better reason to have these nights?? Apparently these additional nights have come about due to the limitations on time at the monthly meetings and some of our members have actually said that they would like to do this sort of thing... great stuff. See what happens when you don't sit back. Things can be done if we know about it can't they???

The Australian scene this month sees the tooping and froing of HV99 member and Melbourne user group co-ordinator Peter Gleed. Peter has just come back from a, shall we say "business" trip to the USA where he was able to face to face with a lot of our contacts in the States and spend a few \$\$\$ along the way. Peter visited groups both on the East coast and some groups around Los Angeles on the west coast. He had lots to tell me on the phone about the trip and we expect a full report on it either in this or the Melbourne groups newsletter next month. Knowing Peter he would leave a lasting impression with our friends in the States and hopefully a good one. Referring to this, I noticed in the August issue of the LA99'ers newsletter 'TPOICS' a short article from Peter entitled "from DOWN UNDER" and it makes a very nice point about our TI-99/4A 'family'. Its in the publications library as is a stack of other great stuff... thanks Peter.

From the TISHUG group in Sydney comes word from Russell Welham that they are trying to organise a visit with us here in the Valley. The original proposal of the long weekend in October has been scrapped due to school holidays and the long weekend so I have the weekend of the

5th/6th November to put forward as a possible time slot. This would tie in with a proposed car bash around the valley and picnic which Tim & Jenny Watkins have been working on for us and is planned for the 6th November. If a computer get-together was desired maybe Saturday 5th could be used to make a weekend of it. Anyway HV99'ers and TISHUGers and anyone else for that matter, give it some thought and get back to us. Whilst still with Sydney, a browse through there latest newsletter proved very interesting. This newsletter is getting better and better and I must congratulate you all on it, particularly the Wollongong production team who I can see work very hard on it. One item in it refers to a halt in Peter Schubert's IMEG-ramdisk project for the PE Box. This is a shame as Peters work has always been of very high standard and well priced (just ask Don Dorrington and his boys) however with the introduction of the Hard/Floppy Disk Controller from Myarc serious thought has to be given to the \$/byte aspect of data storage devices.

We have pleasure in announcing a RAMdisk release designed by one of our own members, Neil Quigg. It is to be known as the QUEST RD200 32k/RAMDISK. Briefly this is a PE-Box mounted board with 32K Memory Expansion built onto the the same board as a 512K RAMDISK. It uses the 32k static RAM chips, is battery backed and is capable of being extended to IMEG. HV99 is now taking orders for the PC board and 32K kit which will be fully socketed and tested prior to shipment to its owners. The only thing the end user will have to do is decide what they want in Ramdisk size and fit the IC's into the appropriate sockets as provided. Cost is approx \$140 for the 32k Kit and PC board and a \$60 deposit will be required. The initial run is expected to be 20 but the more orders placed the cheaper the end price. If you are interested in obtaining one of these RAMdisks please contact me here at HV99 for further information. A deposit of \$60 is required with your order, and projected delivery is early December.

Over the last couple of months HV99

have been advertising for second hand consoles and equipment and have had quite a bit in response. If you want a backup machine or just want one contact Al Franks on 049-459170 if your in the city or lake and Pete Smith on 336164 if you live up the valley.

From overseas things have been rather quiet due to the summer holidays however we have had news of several big TI Faires that seemed to be pretty spectacular.

News of the 6th Annual Chicago Faire which is to be held on the 12th November 1988 has come in along with an invite to attend. The agenda this year is in two parts to be held in different locations over two days and is crammed full of everything the 4A user could imagine. Only one thing wrong guys, you forgot to include the air tickets for me!!!

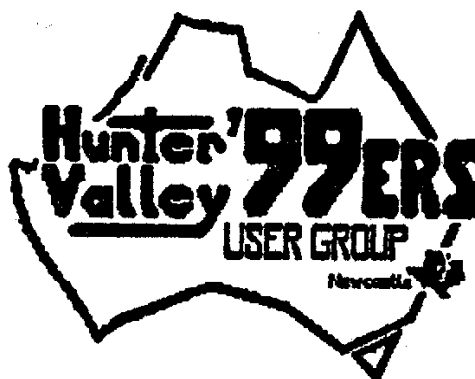
Just in from the States is the latest V3.02 ARCHIVER from Barry Boone and this looks to be a very nice piece of work combining both pack/squeeze operation and its reverse resulting in a huge time and disk space saving. Talking to Ron Kleinschafer about this program and Barry Boone, Ron told me that he has had some difficulty getting information on this program from Barry so he can adapt it for use with the 32K QED Module. The reason is simple and embarrassing.... from Australia, that's all of Australia, Barry has had ONE ONLY fairware contribution to this marvellous tool and yep, you guessed it, that was from Ron Kleinschafer. How does that feel boys and girls??? Me thinks we all had better do something about that EHH !!

Still on software, we have been reading some good reviews on our Joe Wright's success with his GENEALOGY program as it starts to circulate. Maybe this should go in the rumours column but maybe no one will see it here... rumour has it that Joe is planning a rewrite of this already great program in some strange language called fourth or fifth or something. I wonder if Richard Terry has anything to do with this??? good luck guys!!! By the way Joe, would you like to sell that Aussie hat you bought recently?? I love seeing his head grow when I

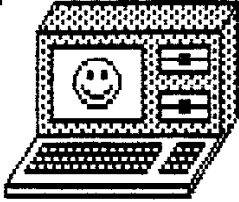
show him the reviews as they come in (hee hee hee).

To all those people that I owe return correspondence to, I haven't disappeared from the face of the earth and I hope to write soon. Once again my apologies. Well, can't think of anything else now and I've run out of notes so we'll see ya later folks

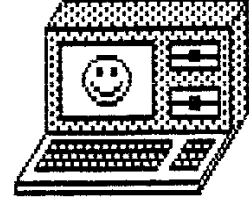
Albert Anderson
(4a4me)



IF YOU ARE INTERESTED IN ANY OR ALL OF
THE MATERIAL LISTED BELOW GET IN TOUCH
WITH ALAN FRANKS PHONE 459170 NOW!



FOR SALE



1 TI 99/4A CONSOLE + ALL ACCESSORIES THAT COME WITH IT
1 SET OF JOYSTICKS 1 CASSETTE PLAYER
2 BOOKS(No. 1 The TI 99/4A Home Computer Bumper Book of
Lists and Reviews. No. 2 Programs for the TI home computer.)
ALL MANUALS + MAGAZINES CASSETTE GAMES (NOT LISTED)
ALL IN OWN ORIGINAL BOX

CARTRIDGES

EXTENDED BASIC + BOOK (2 OF)
WEIGHT CONTROL & NUTRITION

PARSEC

ADVENTURE WITH PIRATE & THE COUNT
MUNCHMAN (2 OF)

ALPINER

INDOOR SOCCER

A-MAZE-ING

MUNCHMOBILE

CAR WARS (2 OF)

CHISHOLM TRAIL

HUNT THE WUMPUS

ALIGATOR MIX

THE ATTACK

MOON MINE

TI INVADERS (2 of)

MOONSWEEPER

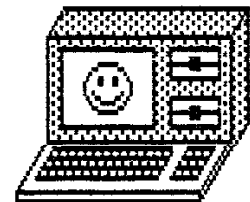
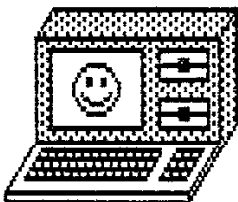
STARTREK

TOMBSTONE CITY

VIDEO GAMES 1

HANGMAN

MIND CHALLENGERS



IN THE NEWS



A POT POURRI OF LOCAL
AND INTERNATIONAL NEWS
COMPILED BY

Joe Wright

This month has been very quiet for me and on the news front in so far as the TI is concerned. But! there had been a loud debate in the general community about immigration, which leads me to the quote for this month:

Remember, when the judgement's weak,
The prejudice is strong.

Kane O'Hara-Midas.

SOUNDS LIKE BLACKBEARD

Reading in a current issue of PC Week a short article on pirating. The Government in Hong Kong (my second favorite City) is having a crackdown on Computer pirates. They intend to make things even tougher for pirates in the future. Last week Government Officers raided 10 shops as part of this crackdown. They confiscated pirated materials worth HK\$4,400,000. This comprised 35,000 pirated manuals and 8,000 pirated disks. These shops were in the Shamshuipo Golden Arcade. For those not familiar with Hong Kong, nothing is done by halves in that City.

64K MEMORY on the AT MULTIFUNCTION

Peter Schubert hardware builder

extraordinaire has announced further improvements to his multifunction card.

"With a simple upgrade the A.T. MFC can have an extra bank of 32k memory added. Switching from one bank of 32k to the other is simply a matter of writing to CRU address >111A. Changing the value of zero here to a one will change banks, and visa-versa to return. It is planned to add a CALL FORWARD to the MFC EPROM so the memory can also be switched from Basic or Exb. Hopefully some interesting uses will be found for this extra memory, and perhaps some modifications to existing programmes can take advantage of the extra space. For example how about an extra 32k of receive buffer when using your favourite Terminal programme at 1200 or 2400 baud? Or perhaps a HOT KEY that can be used anytime to activate CALL CATALOGUE function without disrupting the programme you are using? There are many possibilities for our talented programmers. The cost of the extra 32K fitted to your MFC is \$40.00.

MYARC HARD DISK CONTROLLERS.

Ben Takach of the Sydney based TISHUG has 4 of these controllers for sale according to his article in the August edition of TND. The price quoted is A\$370.90. If you are interested I would suggest that you ring Ben asap on 02-4894492.

GENEALOGY.

GENEALOGY RECORD KEEPER has been modified again. Code to print an index for the tree is now included. The index can be either in numerical or alphabetical order, you select. The detail report no longer has the surnames of children printed but their birth dates are now included on the print out. Other smaller alterations have been made, also some code changes which are transparent to the User have been made. I will now only be making alterations to the programme if requested to do so by users. Why?, WELL my real love is with FORTH and although I found writing G.R.K. a great learning exercise I still find programming in assembly painful. SO! I am now writing a companion to G.F.K. in FORTH. It will hold more

PC
R
A
T
P
C
H
T
i
N
O
C
S
G
G
C
R

data for each person recorded on the tree, also the number of entries on the tree will be expanded to 255. Data files on trees created on G.R.K. will be able to be transferred to the NEW G.R.K. Additional data needed by N.G.R.K. will then have to be typed in. I envisage that persons would use G.R.K. to create their tree and then transfer to N.G.R.K. You will guess and be correct that N.G.R.K. will be slower because of the large file created. So it will be quicker to create the core of the tree using G.R.K. then transfer to N.G.R.K. (Mind you, I have some cunning tricks up my sleeve to speed things up!!!). Some of the new data will be, christening date and place, educational information, sporting information, employment etc. I have started on this project and look forward to the challenge. I hope to have the initial programme usable around Christmas.

STARTER PACK 2.

The Group has just received from Steve Shaw, of TIMES fame, a software package called "STARTER PACK 2". I have never seen this before and a thumb through it leaves me most impressed with its presentation and content. The package contains a 100 page book and a cassette tape.

Some of the topics covered in the book are;

Creating your own characters.
Programme planning 1.
Colour.
Programme Planning 2.
Teach your 99 to read.
Reading Music.
Arrays.
and many more.

The cassette contains the following programmes;

CHARDEF, PATTERN, SOUNDS, ARRAYS, HANGMAN.

This package will be fully reviewed in the December bumper issue of the Newsletter.

Other titles in the series by COLLINS EDUCATIONAL from England are)

Starter Pack 1
Game Writers' Pack1
Game Writers' Pack2
Chess Learners' Pack
Record Keepers' Pack

Hope we can find out more about these from Steven.

PRINT WIZARD.

Gary Cox writing in the MID SOUTH TIDBITS reports;

Trio + Software
P.O. Box 115
Liscomb,
IA 50148
USA

is offering a programme called PRINT WIZARD which gives the user the ability to design and print cards, signs, letterheads and banners. The programme consists of a manual, three disks, one programme disk and two data disks. Which data disk used depends on the type printer owned. Included are borders, fonts and graphics, and a utility to convert artwork and fonts created with TI-ARTIST. The programme runs on TI99/4A and Geneve 9640 and sells for US\$25.00.

TURBO-PASC 99.

Also from Gary COX;

"L.L. Conner of L.L. Conner Enterprise said that Turbo-pasc 99 was schedule to ship in early July. The programme sells for US\$%(>)% and runs from E/A option 5 or TI-Writer option 3. It requires 32K and a drive, Conner said. L.L. Conner Enterprise is the sole North American distributor. For further information, or to order, contact;

L.L. Conner Enterprise,
1521 Feery St,
LaFayette,
IN 47904.
U.S.A.

FOUR NEW GAMES.

From TIDBITS and Gary Cox again;

"Donaldson Software has released four new games for the TI99/4A, according to Floyd Donaldson, company president. War of the Netherworlds is described as a two player tactical war game in space. Using Starfighters, Intelligence satellites and battlestars, the players must battles for the conquest of the 12 moons. The extended basic game sells for US\$15.95. Next is Professional Las Vegas style Blackjack and is written

in TI Basic selling for US\$9.95. Next is Sapphire Dress described as a quest for riches by scavenging emerald mines in the Australian outback. The manufactures recommends it for children 10 or older. Programmed in TI Basic it sells for US\$9.95. Finally is Dangerous Missions described as guerilla war game, circa 1942, far east Asia. As a guerilla soldier trapped in Malaya during the British withdrawal, the player selects weapons from his hidden cache to complete the missions assigned him by Gen. Douglas MacArthur. The game is programmed in TI basic and sells for US\$9.95. All programmes are on cassette only and do not require memory expansion. For further information or to order;

Donaldson Software
521 Lievre St.
Buckingham,
Quebec,
Canada J8L 2C2

XBASIC SPEEDER/PROTECTOR.

Again for TIDBITS August edition;
"A new programme, XBASIC Speer/Protector has been released by Nick Iacovelli. Iacovelli says the programme will speed up and hide contents of most XB programmes. The programme sells for US\$10.00. For further information or to order write to;

N. Iacovelli
1411 N. 36th,
Melrose Park,
IL 60160
U.S.A.

T.I. COMMUNITY LOSING A FRIEND.

The following is quoted from a letter written on 9th July 1988 by Guy-Stephen Romano of the Amion Helpline to the LIMA user group.

"Since things for the 4A have died off so thoroughly I am planning on dropping it in November at the same time that Texas Instruments ends their term of support for it. I will continue to have the library just in case someone may want something.

I have already donated all of the 4A machines but one to a school for

blind children along with full copies of everything in the library. I will retire the remaining machine to a closet. Copying the Funnelweb disk you sent was the first time in 7 months it has been tuned on. Apparently most users of TI99/4A are knowledgable enough about their machine that they no longer need free over the phone help. User group might consider asking for a library list of the Helpline's "Free Access Library" of public domain disks and ordering what they don't already have, Helpline's phone number is 415-753-5581"

TI-KEYS "HOT KEYS" WITH POTENTIAL!

Charles Good writing in BITS, BYTES and PIXELS, September edition uses the title "TI-KEYS A 'HOT KEYS' PROGRAMME WITH SIGNIFICANT HIDDEN POTENTIAL". I have taken sections from his review of this programme, I suggest that you get B, BE out of the library and have a read of his review.

"TI-KEYS is fairware and can be found in most user group libraries. The requested fee of US\$10 is less than the cost of EZ-KEYS and about the same as SOFT-KEYS.

When booted from a ramdisk and used in conjunction with FUNNELWEB, TI-KEYS adds some really useful capabilities to the 99/4A.

You boot TI-KEYS as LOAD or as CALL LOAD Form XBASIC. A set of predefined macros is loaded which is accessed by pressing CTRL and another key. These predefined macros are shown below, and are accessible from XBASIC command mode or within an XBASIC programme.

A-ACCEPT	S-SAVE *DSK
B-BEEP	T-TAB(
C-CALL	U-U
D-DELETE	V-VCHAR
E-END	W-CALL INIT
F-FOR	X-CALL LOAD(*DSK
G-GOSUB	Y-CALL LOAD(-
H-HCHAR	Z-CALL LINK("
I-IF	1-RUN
J-JOYST	2-NOT DEFINED
K-KEY(3- " "
L-LINPUT	4- " "
M-MERGE *DSK	5- " "
N-NEXT	6- " "
O-OPEN	7- " "
P-PRINT	8- " "
Q-Q	9- " "
R-RUN *DSK	0- " "

RANDOM BYTES

from
BOB CARMANY

You can redefine any of these keys from XBASIC command mode. Letter keys can be redefined as a macro up to 16 characters long and numbers keys up to 31 characters long. You can also save a disk file of your redefined keys and later load this key redefinition file into TI-KEYS after TI-KEYS has booted.

I mentioned earlier that special possibilities are available if you use TI-KEYS and FUNNELWEB together from a ramdisk. Here is what you can do all automatically just by selecting extended basic from the power up menu. When you boot TI-KEYS as LOAD from ramdisk, you can have TI-KEYS automatically boot FUNNELWEB. Many of the TI-KEYS macros are not over written by the loading of FWB and are available for use from the FWB XBASIC user list. This means that any XBASIC programme you boot from the FWB XBASIC user list can make use of TI-KEYS macros from within the programme. Also from the FWB XBASIC user list you can enter XBASIC command mode by pressing 3 (XB RETURN) and have the macros available NEAT!!.

TI-KEYS only effects the FWB XBASIC user list. All other parts of FWB, including the other user lists, work normally with the TI-KEYS/FWB combination as if TI-KEYS was never present.

User groups (not individuals) can obtain a copy of TI-KEYS from the LIMA User Group by sending a disk and paid return mailer to:

BOX 647,
Venedocia,
OH 45894
U.S.A.

(One final point! Charlie Good does mention that the address on the programme is no longer current for the author WES JOHNSTON. If news of his new address comes to hand I will mention it in a future IN THE NEWS.)

That is it from me this month, as Aunt Jack would say see ya round like a rissole.

Joe Wright

Life in the Outback is really tough. Consider, if you will, the plight of Ron Kleinschafer --miles from civilization with no ready source of TI gear. What does Ron do to correct this problem? He "rolls his own" --his own PE-Bx, his own EPROMmer, his own modem, etc., etc. I'll be the first to admit that this isn't for everyone --or is it?

We are on our own now --TI has long since left the computer market and the products coming out today are geared toward the (ugh!) IBM clones, etc. Now I don't suggest that everyone build there own system from scratch as Ron did but there are some things that even the most inexperienced of us can do.

A couple of months ago, I found a deal on the AVATEX 1200e modem in the pages of COMPUTER SHOPPER that was almost too good to be true -- the price was \$69.95 for a fully Hayes-compatible modem that would do everything but make coffee! The offer was so good, in fact, that two of us went together and bought one each. There was a catch, though. What you got was the modem --no cable! Well, that's OK because the TI is a strange beast anyway --- you need a cable with two female ends. With much apprehension, I decided to "roll my own". A quick call to AVATEX (on their toll-free number) connected me with a technical representative who was more than happy to help me out. What kind of computer did I have? A TI --- OK here are the pin connections! I think that I could have figured it out anyway because the pin-outs for the modem were in the manual that came with it and I already had the pin-outs for the RS232 standalone that I am using.

A quick trip to Radio Shack (Tandy) produced the cable ends and shields that I needed and a trip through the "junk box" produced 7 1/2' of 8 pair cable --enough for two cables. Luckily, the twisted pairs were

color-coded as well so it was a simple matter to connect both ends of the appropriate wire to the correct pin. Some 20 minutes of less than professional grade soldering produced the finished product. All of the pins were connected at least! Now, to check the job. An Ohmmeter tested the continuity between the pins (making sure that pin 1 was connected to pin 1 etc.). Everything checked out --now to hook it up for real. NO PROBLEM --it worked!!! So, instead of spending \$25, I spent about \$6 and some 20 minutes and had a cable!

The point of this whole digression is that you can do some of these simple projects yourself even if you are not as adept a hardware hacker as Ron Kleinschafer is. All you have to do is take your time, check the job thoroughly before you hook it up and you shouldn't have any problems. I think I'll make a disk drive cable next!

Now, for a couple of TI-Writer (F'WEB) tips. One thing that you can do with TI-Writer is merge two or more separate files into one. The manual takes about 6 pages to explain this simple and straight forward facility. To merge a text file with one already in memory, use (L)oad(F)ile. The format goes like this:

yyy DSKx.FILENAME

yyy is the point where the file is to be merged and DSKx.FILENAME is the disk and filename of the file to be merged. For example, to merge a file named TEXT at the beginning of the document in memory, the process goes like this:

LF <enter>

000 DSK2.TEXT <enter>

That loads TEXT starting at line # 000 which is the first line of the document. When loading text at the end of a document in memory, you don't even have to specify a line number--- you can use "E". So it becomes:

LF <enter>

E DSK2.TEXT <enter>

The same holds true when you are doing a partial print from the formatter. When it prompts for the pages to be printed, you can type in, for example, "2 - E". In this case, you you print page 2 until the end of the document. You must have a space on either side of the dash for it to work, though.

One more TI-Writer tip before I change the subject. When you use the formatting command ".CE", remember that the line to be centered will be centered between the margins that you have selected and not necessarily be in the middle of the page.

Here are a couple of more CALL LOADs for you to play around with:

CALL LOAD(-31860,8)

Automatic RUN DSK1.LOAD and restart of XB.

CALL LOAD(-31878,x)

Turns off sprites. x=# of sprite to be turned off --if x=0 then all are turned off.

CALL LOAD(-31877,x)

If x=32 then a sprite coincidence has occurred if x=64 then there are 5 sprites on a line. A good substitution for CALL COINC in XB.

I'm getting a "buffer full" for this month. . .

FOR SALE

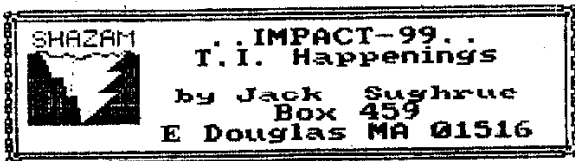
1 only Horizon 184K RAM Disk

\$200

phone Richard Terry
(049) 436861 or 292450

2 99/4A Consoles
+
XB+Munchman Modules

phone Kim 468153



A NEW USER GROUP?

Every time I read in some newsletter or other that our TI World Community is dead, I think of Mark Twain's comment when he read about his supposed demise: "I think the reports about my death have been greatly exaggerated."

So it is with our passed-away TI. I know I use it for word processing about 35 hours a week and for games and examination of new programs and doing practical stuff with utilities - in that order - for another 15 or 20, so I feel that the "death" announcements of my 4A may be a bit premature.

Most of my TI friends would say the same, particularly as there are two new TI magazines in our marketplace to go along with the wonderful MICROpendium. And there are new pieces of software coming out - it seems - almost daily from all over the world. [I have on my desk exactly 34 disks in a shoebox marked "To Look At!" They are disks filled with Public Domain and Fairware materials of all sorts. I have another entitled "Stuff for School" which has 13 disks. And another of commercial disks I've bought during the past two months with 11 packages of disks unopened. In short, I have too much new stuff to even get to LOOKING at it, at this point in my life.] And there is new hardware coming out everywhere: P-Boxes from Canada and Australia, Gramulator that does all Gramcracker did and much more, harddisks, computers on a card, very advanced keyboards, and more, more, more.

Does this sound like a dead computer?

And newly-formed user groups are making an appearance here and there, while some long-established groups are joining forces to make megagroups (for reduced costs [housing, newsletters, etc.] and greater buying and sharing power, among other things).

Among the newly-formed groups is one that I think the TI World Community should be aware of: The Oakland Computer Club which meets at Atwood-Tapley School in Oakland, Maine. What makes this club unique is that it is made up of all kids from kindergarten through grade 6. The club recently earned statewide recognition for the innovative ways computers were used in the school.

Eunice Spooner, an indefatigable volunteer at the school, a member of the school committee, and a former elementary school teacher, received the award this spring from the Technology in Main Schools Committee for her work with these youngsters in the school environment, particularly (according to a newspaper account of the event) because the club has "earned praise because of its

success in reaching children ... and doing so much for their self esteem."

What makes this award unusual is that it is for efforts done on the TI/99-4A.

What makes this more unusual and a remarkable story in its own right is that fact that Eunice Spooner is a quadriplegic.

This unusual woman broke her neck in a car accident in 1982 and, as she said to me on the phone, "had a choice of giving up or getting on with it." That she chose the latter is unquestioned.

In addition to founding and operating this new computer club of 30 members (more than many TI clubs in the New England area), she teaches 11 TI computer classes in the school each week with six students in each class across the whole elementary level, including special needs students.

When the 4As came down in price and many people gave up on them, Ms. Spooner saw a golden opportunity to use "these great computers with the students." She immediately began to put out an all-call for any consoles, TVs, tape recorders that could be gotten. The school now has three of its own consoles, but some of the 30 club members also share their personal computers with the school.

With Mrs. Spooner in the classrooms, the students under her charge learn BASIC programming and have written many of their own programs.

The Oakland Club, however, is strictly voluntary and meets every Monday night. Maurice Anderson, a teacher in Oakland, assists Mrs. Spooner, makes arrangements for field trips, and works with the more experienced youth. Mrs. Spooner works with the younger children. "It's interesting to see how many parents stay for these meetings and get caught up in the computer activities of their children," she says.

The club has begun to slowly create a library of their own written programs and modules of educational programs and games. These materials are demonstrated at the Monday meetings (with particular emphasis on student-written works) and may be checked out later and worked with or played at home.

"Right now the club is looking for more consoles. We'd love to find some that are no longer being used, as it would permit us, obviously, to do a lot more for more youngsters."

The club could also use any TI educational programs or materials of any kind for these children. Although their software consists mainly of tapes and modules, they do have one disk drive system, too, so all you readers who have extensive libraries or materials you have grown out of or haven't used in years might consider packing it up and mailing it to Eunice Spooner, Box 3720, Webb Road, Waterville, ME 04901. It would be a good investment in the future of a lot of kids.

These junior Tiers, themselves, are very interested in finding some other kids to correspond with. The group

would also love to see newsletters and basic-type programs from anyone.

Oh, one more thing regarding the remarkable Mrs. Spooner. She's a sysop on her own board. Credit system; upload first, Northeast BBS - 207 465 9065 - log on, TI programs, author uploads. Give her a call.

HELPFUL HINTS

Many readers send in lots of questions which I try to answer in the Helpful Hints section of this column.

One question which comes up again and again is "Do you know of a good cribbage game?" I don't know of any, other than Corey Cheng's wonderfully intelligent but INCREDIBLY SLOW Cribbage Game. It needs a good assembler (or compiler) to make this game worth it for most players. There must be a LARGE market for such a game, if the requests I get for such info are any inkling. (Programmers, are you listening?)

The next batch of questions recur so often I am going to deal with them all at once. I hope the companies and groups and people I left out will not be offended, but these are my honest answers.

RECOMMENDATIONS: I'm often asked what are the best sources for materials and service and information for our TI-99/4A. For me, the following are the very best:

MICROpendium is the MAGAZINE for TI owners. Except for newsletters, no other periodical is ENTIRELY devoted to our computer. The (usually) 48-page monthly magazine costs \$20 per year. MICROpendium, PO Box 1343, Round Rock TX 78680

ASGARD Software is one of the oldest SOFTWARE COMPANIES around and one of the best developers of innovative TI programs in the world. It supports TI owners with tapes, disks, books, and a new magazine. Free catalog and information: ASGARD Software, PO Box 10306, Rockville MD 20850

TIGERCUB Software is not just for programmers. Jim Peterson has some of the best single programs and collections of XB stuff for adults and kids. His TIPS and his NUTS 'n BOLTS for beginner or techie programmers is, simply, extraordinary. \$1 for catalog (returned with first order) to TIGERCUB Software, 156 Collingwood Ave., Columbus OH 43213

GENIAL TRAVELER puts out a DISKAZINE six times a year. These jam-packed disks have EVERYTHING (and Barry

Traver always throws in additional bonus disks).

Each disk contains about four month's supply of goodies. For what you get, \$36 a year is a steal. Ask for the entire first volume, if you don't yet have it. Two-year subscription only \$65. GENIAL TRAVELER, 835 Green Valley Drive, Philadelphia PA 19128

BITS, BYTES & PIXELS is the unique newsletter put out by the Lima, Ohio, 99ers. This USER GROUP is, in my mind, the very best you could ever join by mail. And it is only \$15 a year including subscription. In addition, they have one of the biggest (and free) disk and tape libraries in America. This group is exceptional.

SISTER PAT TAYLOR, 1050 Carmel Drive #456, Dubuque, Iowa 52001 is a novice Tler who is rapidly becoming an expert. She also is a prolific letter-writer. So, if you'd just like to write to another 99er freak, she's the one. Her friendliness and enthusiasm (for our 4A) are contagious.

GOOD SAMARITAN CORNER. In summary, a brand-new user group has just just been formed in Maine. Except for its leader, Eunice B. Spooner, and her helpers, all the members are kids. They could use some kids' stuff, educational stuff, any stuff. Preferably on tape, but any configuration to DSSD would be great. If you have anything you could help start this library, mail to Eunice B. Spooner, RFD #1, Box 3720, Webb Road, Waterville, Maine, 04901.

MY OWN SYSTEM contains a Myarc 512 Card (with RAM and spooler - and I LOVE it!), a Myarc Controller, a Hitachi color monitor, two full-height Tandem DSDD drives, two TI tape recorders, a Gemini 10X printer, XB, E/A, a 32K Supercart, a load interrupt switch, a speech synthesizer, and a very heavy duty 150 surge/spike outlet set. No Graackracker [Miller left TI before I could order one.] No Navarone widget [My pinky couldn't take the anti-touch typist device, so I sold it.] This is what I use every day. I also have a system at work with a 32 sidecar, Minimax for a wordpro, and tape recorders, so I can do all the wordprocessing I want at work and take it home to dump it through my FUNNELWEB. I also have a Geneve with a TI Controller and one Tandem DSDD full-height drive and the old TI monitor.

PLUS! is the only fairware stuff I have. Everything else I do is Public Domain and is in most user-group libraries and is not worth owning. But I thank all those people who have asked. And, yes, I am a teacher and a writer and, no, I do not own a pair of Mickey Mouse andirons.

ASSEMBLY SQUEEZING

PART 3

by

TONY McGOVERN

Blocks to be moved aren't always of known length. A data type found in the many languages is the string, a collection of characters together with a length indicator. The most familiar form is that in TI Basic where a length byte precedes the number of bytes indicated by the length, up to a maximum of 255. Other string conventions are also used in various computer languages, but let's look at this one for the moment.

Your assembly program has to move a string from one known address STR1 to another STR2. Two things are clear from the start. Firstly the number of bytes to be moved has to be read from the first string (if it were already known the a simple block move would do) and secondly byte move instructions must be used as the byte is the unit that makes up strings.

A straightforward pass at the code with this in mind is

```
LI R0,STR1
LI R1,STR1
MOVB *R0,R2
SRL R1,8
INC R0
LOOP MOVB *R0+,*R1+
DEC R2
JGT LOOP
```

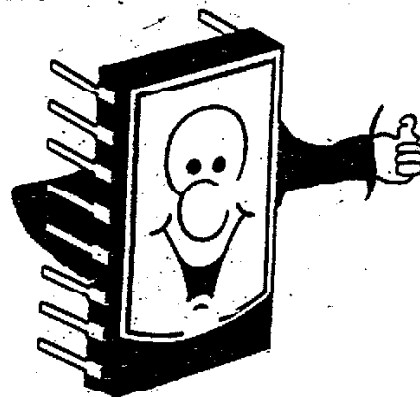
The length byte is read into a register, converted to a count word, and incremented to cover the length byte itself. This code takes 10 words and uses 3 registers. That's pretty expensive so let's make it shorter.

```
MOVB @STR1,R1
SRL R1,8
INC R1
LOOP MOVB @STR1-1(R1),@STR2-1(R1)
DEC R1
JGT LOOP
```

This uses the same indexed addressing in the loop as we did for the block move last time. It now takes 9 words and uses only 1 register. It is possible to shorten it by 1 word more by using a special property of the DEC instruction. DEC always sets the Carry status bit except when changing from zero to minus one (see the E/A Manual p100).

```
MOVB @STR1,R1
SRL R1,8
LOOP MOVB @STR1(R1),@STR2(R1)
DEC R1
JOC LOOP
```

The loop now executes one more time when R1 is zero, so the INC instruction is no longer necessary and the indexed addressing offset is also adjusted. So the job can be done with 8 words of code and one register.



FOR SALE

COMPLETE SYSTEM

Includes:

99/4A Console
~~99/4 Peripheral Expansion Box~~
~~TI R6202 Interface Card~~
~~TI Floppy Disk Controller~~
~~TI 9908 Floppy Disk Drive~~
~~32K Memory Expansion~~
Converted 10" B/W TV Monitor

Editor/Assembler
Extended BASIC
Video Chess
Personal Record Keeping

The lot for only

\$615

phone (049) 635917

GENEALOGY RECORDS AND THE COMPUTER

This review is taken from the Newsletter of the Canberra Users Group, & was written by Mrs. Beryl Thompson.

Having purchased the TI99/4A to use for Genealogical Research, it soon became clear that there were no programmes available which permitted the storage of records in the manner required. First efforts using PRK were too limited, in fact the kindest description of this programme could be summed up in one word, "useless". So the search began to find a better system, but at that stage, just over two years ago, there appeared to be nothing on the market which met the requirements. A then member of the "TICHUG" User Group, Don Gilchrist, came to our aid and wrote a basic filing programme which utilized the full page width, sorted the records into order, permitted additions, and even more important, allowed the correction of data in those records. Since then additions and improvements have been added to this programme and I can highly recommend it to anyone who is looking for a method of storing genealogical data, or just a good, reliable general filing system.

Below is the Menu of the "NEW-FILE" programme, showing the various functions.

MAIN MENU

-- NEWFILE --
Deege Productions
GPO. Box 1993
Canberra 2601
----- 1986 -----

>>> MAIN MENU <<<

M=MAKE---File
R=READ---File(+Fix)
A=ADD to file
D=DELETE-Rec's/Files
E=EDIT---File
P=PRINT--File
C=CATAL.--Disk
B=BREAK--File
J=JOIN---Files
S=SORT---File
W=WORD---Search
F=FINISH-Reboot

O=OUT CHOICE:(

When the programme loads, a one or four line group can be selected, each line allowing a full screen width of 80 characters, also at this point the current date is entered to use later on any printout required. This done, the enter key is pressed, the above screen then appears. An indicator flashes against the word "CHOICE" at the bottom of the menu, then the code for the function required is entered. M+MAKE is the initial programme required to open a file, so the letter "M" is typed in to permit filename to be entered. This is then the name used to recall this file for all other processes. Having named the file you are then asked to indicate if the date is to be used on the first line by entering either "Y" or "N". Our genealogical records are kept in chronological order, so this is important for our purposes, and is the item used to later "SORT" the records into order. However any of the lines can be used for this purpose, surname, place, event, etc, either alphabetical or numerical.

Once a file is opened all records can be read on the screen by entering "R" against the "CHOICE" indicator, and the reading can commence at any group number, depending on the size of each file this can save time if the records required are towards the end. The particular record can be held on the screen until the information required is read, restarted to check other entries on the same file, or by entering "O" returned to the main menu. To add to any files "A" is entered to bring up the appropriate screen, the entries are then added

in the normal manner. With Extended basic up to 500, four line files can be stored on each single density disc, if the Corcomp card, or similar Double Density capacity is available, this then doubles the data storage capacity. Similarly if one line files are used, the amount of records which can be kept on one disc again increases. A warning is given on the catalogue "C" facility, so a quick check of files will indicate when disk capacity is being reached. This does vary slightly depending on the information stored on each line of a record. While single files holding between 950 and 900 entries, (depending on the amount of information), can be stored on a single file when using DOUBLE DENSITY disks, smaller ones are easier to handle on the sorting and printing sections. Therefore I tend to split the files when the 500 entry stage is reached. This is a simple process when the break file function is used, the file NAME, START and FINISH record numbers are entered, these records are then automatically transferred to the new file. The process is then repeated to transfer the remaining records to their new file. The JOIN sequence which allows the joining of two smaller files, is equally simple to operate, however a minimum of two disc drives are required for both these functions.

The menu is self explanatory, there are functions which permit editing, cataloguing, full file print outs, these can be done using both sides of the paper, merely by indicating this is required when selecting the format for the printing sequence. This then prints every second page, when completed the paper is removed, reversed, the screen indicates when this is to be done, the printer restarted, and the reverse side is printed. It MUST BE STRESSED HERE THAT AT LEAST TWO DISK DRIVES ARE NEEDED TO PERMIT THIS FUNCTION, as the reverse side of each page is stored on and printed from this second drive, otherwise only single sided printouts are possible.

Though a full printout of the manual is included on the "NEW-FILE" disc, and fully explains each individual function on the MENU, it is well worth mentioning here the DELETE, EDIT and WORDSEARCH capabilities of

the programme. The DELETE programme permits up to 100 individual records to be removed for any file at one time, or to DELETE a complete file. In both cases a check is included, so the possibility of accidental deletion is prevented. The EDIT function is another facility the value of which cannot be over stressed. Not only does it allow easy access to correct typing errors, but it also makes the addition of information to existing records a simple process. When it is known that further information is to be added to existing records, it is suggested that the group numbering facility on the printout is used. Then it is a simple matter to recall immediately the group required on the EDIT programme, without having to do a search for the entry required.

This brings me to the WORDSEARCH programme, which is for genealogical research a terrific asset. It can search for up to three items at the one time, either in one record, or in separate records. For example it can "pick" all marriages from a particular file, or all entries for one town or village. Alternatively entries for up to three locations can be searched for, and printed either on the screen or sent to the printer, with one pass through the file. With the latter an alarm can be set, so there is no need to stay with the computer while the search is in progress. Another example, if an inquiry is received from another researcher, known details can be entered, say John Smith married in Sydney, but wives name and a definite date is not available, just an approximate year. The file covering that period can then be searched and all John Smith's, married in Sydney during that period are listed. Often additional details contained in a record will indicate which of those found is the person being sought. Perhaps a parent, brother or sister was a witness, or an unusual occupation provides the "clue" needed.

Files are written in internal format, which is necessary for some of the functions, however files can be converted to display format to reduce storage space, or to permit transfer via modem, to another computer. This is an added

advantage as more people are using the computer for genealogical research, and this method of information transfer is likely to increase.

In summarising "NEW-FILE" I have quite deliberately refrained from using computer terminology. The reason for this is that many people who would otherwise consider, and competently use a computer for record storage, are instantly alarmed by technical terms, which give the impression that using a computer would be too difficult for them to attempt, or even consider. Providing a good programme is available, which clear precise instructions, this is certainly not the case. The computer provides an excellent storage system and should be encouraged, rather than over complicated terminology causing the reverse to occur.

As with all records it is suggested that a "BACK-UP" copy be kept, and constantly updated as additions are made to existing records. A sudden power fluctuation can otherwise wipe out months of work. It is bad enough to lose an evenings work in this way, but to risk a complete file is even worse. My genealogical records are quite extensive and the printout produced have received very favourable comments both in AUSTRALIA and overseas. All were compiled using the "NEW-FILE" programme, and as a result I am happy to recommend it to other TI users. Anyone interested in obtaining a copy should contact "DEEGEE Productions" re. price and availability.

OUR SWEDISH CONNECTIONS

by
TONY McGOVERN

Over the last couple of years we have had increasingly closer contacts with the TI-99 community in Sweden, as represented by the large and active Programbiten User Group.

The group is active in almost all areas of TI-99 activity from console Basic to p-code Pascal, and hardware.

The HV99 group now has a complete set of their newsletter Nittinian (and if it isn't at first obvious what that means then reflect on TI's favorite number). This gives a comprehensive and professionally presented coverage of the whole range of TI-99 usage. There is only one little catch - it is all in Swedish - even the Funnelweb Farm XB tutorial series. So if anyone in the group can handle this then they can borrow them or receive them in the Group's mail circulation process. Of course if anyone admits to being able to read them they will be immediately conscripted into translation duty. Our Swedish friends have also been thoughtful enough to send over a Swedish-English dictionary, and armed with that, a grammar book from the library, and a very rusty reading knowledge of German I'm hoping to have a recent article translated for this mag in the near future. Producing a written translation is a much more serious business than reading something just well enough to get the sense of what it means.

The programs published in Nittinian are available on disk from the HV99 library. The library also has the disk of an assembly language game Perfect Push by Martin Floden. This game introduces itself with speech even if you don't have a speech synthesizer! It also comes with lots of source code. In a more serious vein there are several versions of Forth and a DSDD P-System disk which will run with the P-Code card and a Corcomp disk controller, eliminating the tiresome disk swapping necessary with the original SSSD system disks.

So even if the NSW government failed to have the submarines built in Newcastle, at least HV99 is keeping up good contacts with Sweden.

ROLL YOUR OWN, MATE

by
BOB CARMANY

No, this isn't going to be about wrapping papers, tobacco (or some other "weed") and such. Rather, this is going to be about "rolling your own program".

How often have you found a dynamite program that almost did what you wanted it to? Or maybe it would be just a "wee bit" better if it would dump to a printer or save to a disk. Well, that's what we are going to explore in this article.

Years ago, Jim Peterson created a little program called TIGERCUB ANAGRAMMER. You know one of those programs that helps you figure out how many 5-letter words you can make out of "HORSE" or some other word. I never gave the program much thought -- in fact I forgot that I even had it in my library until one of our Guilford 99ers asked if I could help him modify the program so it would dump the results to his printer (I suspect that he had entered one of those newspaper contests with king's ransom for a prize (or was that a Queensland Police commissioner's salary?). Anyway, I thought that I would share the fruits of my "hacking" with my friends "down under".

Just realize, this isn't going to be a course in slick programming. It might give you some ideas of how to modify a program to suit your own needs better.

Let's look at the program in it's original form:

```
100 CALL CLEAR::PRINT TAB(5);"TIGER  
CUB ANAGRAMMER":!!!BY JIM PETERSON
```

```
110 INPUT"TYPE A 3-,4-,5- OR 6-LETT  
ER WORD ":A*::W=LEN(A*):IF (W<3)+(  
W>6)THEN 110
```

```
120 PRINT::FORJ=1 TO W::B$(J)=SEG*(  
A$,J,1)::NEXT J::FOR J=2 TO W::IF B  
$(J)>B$(J-1)THEN 160
```

```
130 T*=B$(J)::FORL=J-1 TO 1 STEP -1  
::B$(L+1)=B$(L)
```

```
140 IF B$(L-1)>T* THEN 150::B$(L)=  
T*::GOTO 160
```

```
150 NEXT L
```

```
160 NEXT J
```

```
170 FOR A=1 TO W::FOR B=1 TO W::IF  
B=A THEN 340
```

```
180 FOR C=1 TO W::IF (C=A)+(C=B) TH  
EN 330
```

```
190 IF W=3 THEN 250
```

```
200 FOR D=1 TO W::IF (D=A)+(D=B)+(D  
=C) THEN 320
```

```
210 IF W=4 THEN 260
```

```
220 FOR E=1 TO W::IF (E=A)+(E=B)+(E  
=C)+(E=D) THEN 310
```

```
230 IF W=5 THEN 270
```

```
240 FOR F=1 TO W::IF (F=A)+(F=B)+(F  
=C)+(F=D)+(F=E) THEN 300 ELSE 280
```

```
250 W*=B$(A)&B$(B)&B$(C)::IF W*=<  
V* THEN 330 ELSE 290
```

```
260 W*=B$(A)&B$(B)&B$(C)&B$(D)::  
IF W*+<V* THEN 320 ELSE 290
```

```
270 W*=B$(A)&B$(B)&B$(C)&B$(D)&  
B$(E)::IF W*+<V* THEN 310 ELSE 290
```

```
280 W*=B$(A)&B$(B)&B$(C)&B$(D)&  
B$(E)&B$(F)::IF W*+<V* THEN 310
```

```
290 PRINT W* " " ;:G=G+1::V*=W*::  
ON W-2 GOTO 330,320,310,300
```

```
300 NEXT F
```

```
310 NEXT E
```

```
320 NEXT D
```

```
330 NEXT C
```

```
340 NEXT B
```

```
350 NEXT A
```

```
360 PRINT " ";G;"TOTAL COMBINATIONS  
"::G=0::V*="":GOTO 100
```

Extended BASIC has a marvellous way to effect these changes. Program segments can be saved using the MERGE option and later brought back into the program replacing or adding

lines as the case may be. The format to save a program segment in simple:

```
SAVE DSK1.FileName, MERGE
```

Now let's see what we can do with the program. Line 100 draws our attention first. Since we are in XB, let's take advantage of DISPLAY AT and make a cosmetic change. We are going to type in our own line numbers and all of this must be done in the immediate mode.

```
100 CALL CLEAR:: DISPLAY AT(3,5):"TIGERCUB ANAGRAMMER":!!BY JIM PETERSON
```

We are going to keep the program attribution because it is, after all, Mr. Peterson's program.

Now, we have to open a file for our printer and this must be done as soon as possible in the program. So we type in line number 105:

```
105 OPEN #1:"PIO"
```

Of course this could be modified to suit your particular printer's file parameters.

Some more cosmetic and other changes are needed in line 110. We are going to use DISPLAY AT, ACCEPT AT, and introduce two new variables into the program. The letter "X" will be used to keep track of whether the word combinations should be sent to the screen or to the printer. The variable CT (for count) will be used to tell the program if a printed copy has already been made. Line 110 becomes:

```
110 DISPLAY AT(8,1):"ENTER A 3 TO 6 LETTER WORD ":: ACCEPT AT(10,11)SIZE(6):A$::W=LEN(A$)::IF (W<3)+(W>6)THEN 110::X=0::CT=0::GOTO 120
```

Now we are going to enter a line that is only run when the user chooses to have a printed copy of the word combinations.

```
115 X=1
```

We are ready to modify the lines that do the actual printing. Remember that files can range from 0 to 255 with 0 being the screen. Hence our variable "X". The actual

printing is done in line 290 and that is the next line that we must modify.

```
290 PRINT #X:W$&" ";:G=G+1::V$=W$::ON W-2 GOTO 330,320,310,300
```

Next, we come down to line 360 and print the total number of letter combinations. We also added a delay and cleared the screen after the job was done.

```
360 PRINT::PRINT #X:" ";G;"TOTAL COMBINATIONS":G=0::V$="":FOR DELAY=1 TO 1000::NEXT DELAY::CALL CLEAR
```

When the user is offered the choice of a printout later in the program, the program will cycle back to the beginning and we don't want the same "A PRINTOUT Y/N N" message displayed over and over again. We eliminate this problem by keeping track of whether the combinations have been printed out with the variable CT. IF CT=1 then 390 takes care of this by causing the program to jump to the "end of program option. Thus line 370 becomes:

```
370 IF CT=1 THEN 390::DISPLAY AT(12,6):" A PRINTOUT? Y/N N":ACCEPT AT(12,23)SIZE(-1)VALIDATE("YN"):CHOICE $::CT=1
```

We have to tell the program what to do when the choice is made so we type in line 380.

```
380 IF CHOICES$="Y" THEN 115 ELSE 390
```

This line routes the program to line 115 (remember file #1 is your printer) if the user wants a printout otherwise the program continues to the next line.

Line 390 prompts the user for another word and then goes either to line 395 (if another word is chosen) or to line 400 to end the program if another word is not chosen.

```
390 DISPLAY AT(12,6)ERASE ALL:"ANOTHER WORD? Y/N N":ACCEPT AT(12,24)SIZE(-1)VALIDATE("YN"):WORDS$::IF WORDS$="Y" THEN 395 ELSE 400
```

Even if we go back to the beginning of the program, we have to close the open printer file to avoid an error message and that is what line 395 does before going back to line 105 to re-start the program.

395 CLOSE #1 :: GOTO 105

Remember, when we go back to line 105 to re-open the printer file, X and CT are set back to zero so all of the options are once again available (see line 110).

Line 400 is the end of program. It closes the open file and displays a message on the screen before the program ends.

```
400 CLOSE #1::DISPLAY AT(12,6)ERASE
ALL:"HAVE A NICE DAY!!!":FOR DELAY
=1 TO 1000::NEXT DELAY::END
```

Once you have typed your lines in and SAVED them with:

```
SAVE DSK1.FILENAME,MERGE
```

you are ready to add them to the original program. Clear memory with NEW and load the original program. In the immediate mode, type in:

```
MERGE "DSK1.FILENAME"
```

and both the new lines and the altered ones will be merged with the original program. Then, simply SAVE it back to disk.

Admittedly, this isn't the slickest bit of programming but it is a simple way to customize a program so that it will fit your own needs.

So, when you find that "almost perfect" program, change it to do what YOU want it to --- roll your own, mate!!

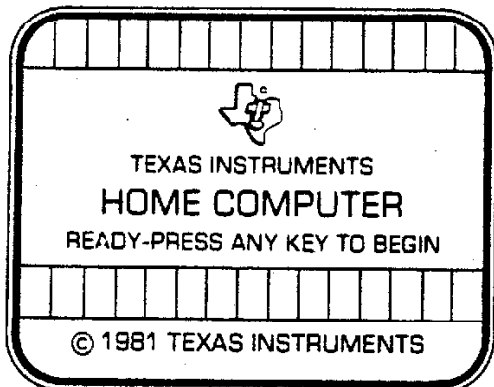
2 REVIEWS

from
TONY McGOVERN

Two items have come in recently which are well worth a look at. The first of these is DSKU, the fairware disk utility program from John Birdwell in Minnesota, US of A. The approach taken to fairware distribution with this program is that the program files are for free distribution, but the documentation is available only from John B. directly. Fairware support is highly appropriate for this program.

Many readers will already be familiar with earlier versions of DSKU and the one being reviewed here is Vn 4,12 (purely a coincidence that that is the current FWB edition number). A separate version, 4.12m of the program files is needed for Myarc disk controllers which default to 16 sectors per track in double density so that 19 sectors per track can be used directly. Myarc 80 track DSR ROMs work with the normal version. Presentation and legibility of menus is much improved over earlier versions. The principal and sorely missed omission from before is the option to set up a Myarc RAMdisk, in favor of some features which sound alright but are next to useless in practice such as "insert" in sector editing.

The program provides full disk manager facilities including Quad for Myarc controllers. I'm not all that fond of the term "quad" given that SD or DD are generally thought of in terms of linear density along tracks - it is still DD along the tracks but it is now 80-track. The idea of linear density seems more important than area density of information when it comes to writing low-level disk routines. A notable new feature is that in file copies a new name may be given for each file for it to be written to the target disk. A little care is needed with this facility or you end up writing your next instruction "C" or whatever over the copy filename. This is a minor quibble given how useful the facility is. Also now command "E" brings up the file



sector editor at the marked file. As a disk copier it sets no speed records, and special purpose copiers would be preferred.

The sector editing and string search set a standard by which other programs are to be judged. Both file oriented and sector number oriented searching and editing are supported. Carry through of default values from prior usage is much improved from earlier editions, though still not complete. My main complaint is about the way it works at the beginning and end sectors of file edits.

Some problems are still apparent. The return to Funnelweb now works in the Myarc version, and after some patching the non-Myarc version can be made to work on our Myarc system but still does not work on TI controllers for reasons that are not immediately apparent. I have no doubts this will be attended to in short order by the author. One thing we cannot understand here is why the Myarc version is so much longer than the standard version. William's direct access Myarc DD format routine (as incorporated in the FWB edition of DM-1000) takes just >1C0 bytes, and the extra facilities such as selectable interlace would not add much to that. A minor annoyance is that it does not respect the FWB mailbox and I'm sure 80 bytes could easily be scrunched from such a massive program to make room. We also miss use of <ctrl-C> as an alternative to the awkward <fctn-9> as in FWB and TI-Writer.

It handles high-CRU Horizon RAMdisks with aplomb, but in the Myarc version you will have to do a bit of research to set the highest drive # allowed so you can access all your Horizons. We have long since come to the view that the best approach is to allow any drive identifier to be entered, and to let the user accept the consequences of careless entry.

All in all DSKU is to be highly recommended as a useful, reliable, and full-featured disk manager. It just needs another revision cycle to smooth some remaining rough edges. We use it frequently for its special properties, though mostly we use the

version of DM-1000 revised for Vn 4.12 of Funnelweb as this is now fully reliable and, not surprisingly, is more compatible with FWB. The program we now use much less is the Myarc DM which appears to have some strange interactions with high-CRU Horizons.

The second item to come in is the TI WORKSHOP cartridge from Databiotics and created by Edgar Dohmann from the JSC group in Houston. This module contains just 2 chips, a PAL and a 64Kbyte ROM. Now 64K is a lot of code and we can't claim to have explored in any depth at all as yet. The supplier's policy towards user modifications and updates appears entirely reasonable, and there is every reason to believe there will be an active update and polishing effort. For instance instructions are given on how you can alter the EPROM to hold your choice of defaults.

The cartridge requires a 1991 title screen console or some way of getting around the 83 Vn2.2 hurdle as it is ROM only. It provides a full featured disk manager, memory manager, improved debugger based on Edgar's SBUG including of course the dis-assembler, Editor and Assembler, loaders with extra features, and cross reference analyser. The manual is extensive and adequate.

So what's the big picture? It makes a rather complete and easily used development system for the TI-99/4a. By its very nature it has strengths and limitations. A strength is that as a ROM based program access to all functions is about as instantaneous as it can be, faster even than RAMdisks. A weakness is that as a cartridge it pre-empts the use of any other cartridge. Overall the good news is the maturity of the TI software market where several ways of skinning the program development cat are now available. To confess my own biases, I still use FWB for almost all purposes, but there are a few features in TI Workshop that you just can't get any other way such as the single step / slow execute feature (less fancy but more usable than MG Explorer as it is in cartridge ROM out of the road of your program).

The Editor is essentially the E/A editor. This has a couple of good points, such as superior string search functions and ability to page through text while in command mode to see the line numbers you want to enter. In practice though I would not use this editor in preference to the programmer's editor in FWB unless in the TI-Workshop environment already. The Assembler is an enhanced version of a later model than that supplied with E/A and works faster as well. Perhaps it is based on developments for the 99/8. The Vn 1.2 in E/A is definitely not ROMable and does all sorts of things that I'm sure would be frowned on severely at TI these days. From the Myarc RAMdisk there is about a 20% speed improvement. Assembling DM-1000 took about 4 minutes instead of 5, which would be welcome in heavy work. The new assembler and the debugger are the real high points of the cartridge.

A curious feature of disk operation on our system with a Myarc RAMdisk and 2 high-CRU Horizons is that during loading of files the Horizon cards light up when only the Myarc at CRU-base >1000 is being accessed, presumably a result of the DSRLNK used.

The cross reference program did not seem to be functioning correctly. In the absence of a cheap supply of paper and printer ribbons I directed the output to a file also on the Myarc RAMdisk and gave it the DM-1000 source to chew on. The screen turned to vertical bars, which is not what the manual says, but things seemed to be going on. It appeared to finish in about the same time as it took to assemble and a blind exit and disk catalog showed the target file was there. Trouble is it was 173 sectors long, and only part can be loaded for inspection (TI-Writer can be used to load long files piece by piece) and many lines seemed garbled, with up to 13 digit "line numbers". I can only surmise that something had gone wrong somewhere and that this isn't what the designer intended.

The disk manager has an unusual feature that a DF/80 object file may be flagged by "L" to be loaded. So I did this on DEBUG to have a browse around and it worked fine. As with

Myarc's CALL LR it locked up after "Q" was used to exit DEBUG. There seems no obvious way to "View" or "Type" or whatever a DV/80 file to the screen, but "E" from the DM loads suitable files and invokes the Editor, and there is also a direct entry to the sector editor as in DSKU. A slightly disconcerting feature of the sector editor is that in ASCII mode the border characters appear.

As a ROM only cartridge it needs some RAM to work in. The choice made was to use lo-mem, and the program is thus oriented towards use of hi-mem as the user's arena, and so does not provide the Mini-mem functions provided by FWB's Low-loader or the RAG-Linker. The ROM includes a SAVE function which allows a direct specification of the address range.

Well, that's about as far as I can report on it now, and there are lots of things I haven't tried yet. There are some anomalies still in the program package that need sorting out, but that's what experience is for.

NEW 99ERS SOFTWARE PRICE LIST

Box of 10 disks\$10
 Postage for 1 box of disks ...\$2.00
 Postage for 1 disk\$0.80
 Disk postage container\$0.60
 To copy a disk PER MASTER\$1.00
 For a disk with software\$2.00

EXTRA CHARGES FOR SPECIALY MADE UP DISKS

Cassettes with software\$3.00

POSTAGE COSTS APPLY TO
ADDRESSES WITHIN AUSTRALIA

EMBEDDING ASSEMBLY INTO AN XB PROGRAM

This article was written by Col Christensen, and appeared in the August issue of BUG BYTES, the newsletter of the Brisbane Users Group.

We all know how slow the Extended Basic loader for object code is, so the benefits in speed of loading with the code embedded in an Extended Basic program carrier are tremendous. There's many a good Assembly program gathering dust because it is sooo sllloooowww in loading.

A discussion on the procedure could probably be covered in something like a dozen easy lessons. I would like to take, in this issue, the case of those who have produced some Assembly code of their own, in which instance, the discussion can be covered in just one easy lesson. It's all really easy, but what I mean to say is, that trying to explain the procedure to make it easy, is not as easy as anticipated. Now that that's as clear as a summer's day, we can go on.

First I shall set out the ten (holding up all the fingers of the left hand and three on the right) easy steps to embedding your own Assembly code into a Basic program then explain each of the steps individually.

- 1) DEFINE the start address of your code. Who doesn't?
- 2) Make sure the assembled code WILL run in the Extended Basic environment. Another normality.
- 3) Next assemble into relocatable code in compressed form. Not normal for Extended Basic code. Needed for 4 and 5.
- 4) Assess the size, in bytes, of the object code.

5) Find the address of the entry point.

6) Make the source code absolute so that the assembled code ends at >FFE0, and again assemble, this time as TAGGED OBJECT CODE, not compressed.

7) Go to Extended Basic.

8) In the command mode:-
CALL INIT :: CALL LOAD("DSK1.
filename")

9) In the command mode:-
CALL LOAD(-31952,a,b,a,b). More on the values for a and b later.

10) Type in the small 5 line program listed below.

11) Edit line 110 in the program.

12) Type SAVE DSK1.LOAD

All very simple, wasn't it? Well, almost! Last things first then. Here's the program that you need to type for step 10:-

```
100 CALL INIT
110 CALL LOAD(16376,67,67,32,32,32,
32,x,y)
120 CALL LOAD(8196,63,248)
130 CALL LINK("CC")
140 ! DO NOT RESEQUENCE
```

Now back to the beginning for the explanations!

Steps 1, 2 & 3 should require no explanation.

Step 4 - Use a sector editor, such as my favourite DISK-AID, and read the first sector of the assembled code. For example:-

```
Drvl ASSEMBLY Sze>2D0 Sec>22
Addr 0 1 2 3 4 5 6 7
      8 9 A B C D E F
00 011E C053 4255 4720 ...SBUG
08 4949 2041 0000 4204 II A..B.
```

Ignore the very first byte. Take the next two bytes, eg 1E & C0. These indicate the size of the file, >1EC0. Keep this value for later use.

Step 5 - Still with the sector editor, find the last sector or so

of the file. Look for the label you
DEFINED, eg XBENTR. -

Drvl ASSEMBLY Size>2D0 Sec>6F

Addr	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
40	2020	2020	2020	2020	2020											
48	2020	2020	2020	2020	2020											
50	3500	6E38	4245	4E54	5..XBENT											
58	5220	2020	2020	2020	2020	R										
60	2020	2020	2020	2020	2020											

Three bytes in front of the text,
"XBENTR", you should see a "5".
Between them both are two bytes
indicating the actual entry point
address relative to the start of the
code. In the above, the address is
>006E. Keep this value for later
use.

Step 6 - Place an absolute origin
directive at the beginning of your
source code. In the example, the
size of the assembled code as found
in step 4 is >1EC0 and it needs to
end at >FFE0. By calculation in
Hex, >FFE0 - >1EC0 = >E120. Insert
at the beginning of your source
code:-

AORG >E120

Assemble the source code with the
output as TAGGED OBJECT CODE.

Step 7 - No comment needed.

Step 8 - "filename" is the assembled
tagged object code with an absolute
origin.

Step 9 - The values for a & b when
placed in the CALL LOAD statement
ensure that the program lines typed
(or merged) in will be placed in
memory, just below the assembled
code loaded in step 8. We must
subtract 2 from the absolute origin
(>E120) previously found. So
subtracting 2 leaves >E11E. Convert
each byte to decimal. >E1 = $14 \times 16 + 1$
= 225, the value for a. The second
byte is the value for b. >1E =
 $1 \times 16 + 14 = 30$. We have the values
for a b so type:-

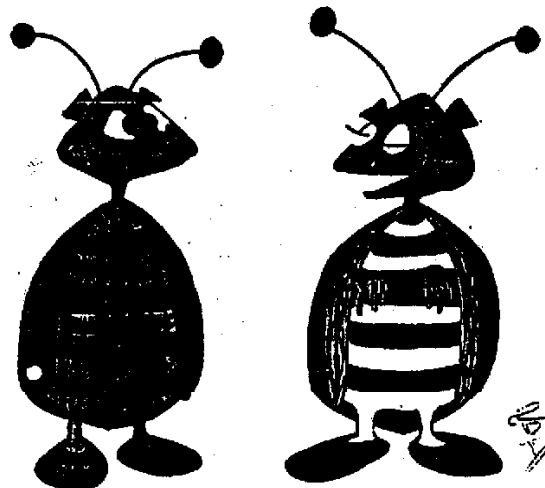
CALL LOAD(-31952,225,30,225,30)

for the example above. This sets
the Extended Basic memory space
pointers to just below the Assembly
code.

Step 10 - Typing in, or merging, the
sample program places it just below
the Assembly code. The bigger the
Extended Basic program, the further
down in memory it will extend.

Step 11 - Line 110 sets up the
REF/DEF table at >3FF8 to show a
dummy label for the entry point and
also its address in memory so that
CALL LINK can find it. The entry
offset address, >006E, found in step
5 must be added to the absolute load
address in step 4 above. >E120 +
>006E = >E18E, the actual entry
point. Use its two bytes for the
values of x & y. >E1 = $14 \times 16 + 1 =$
225. >8E = $8 \times 16 + 14 = 142$.

Step 12 - Saving the Extended Basic
program in the usual way results in
all the memory space from the bottom
of the XB program to almost the top
of memory being saved. You might
notice that the size of the XB
program you just saved to disk uses
many more sectors that the little
Extended Basic program carrier would
have used. Run the program now and
see the wonders of your efforts.



"I shouldn't worry, I've been in the same program
for years and they haven't found me."

THE INFORMATION PAGE

IN YOUR NEWSLETTER THIS MONTH

In the News - a round-up of TI happenings	A. Wright
Random Bytes	B. Carmany
Impact 99	J. Sughrue
Assembly Squeezing -Part 3	T. McGovern
Genealogy Records and the Computer	Canberra UG
Roll Your Own, Mate - modifying programs	B. Carmany
Review of DSKU V 4.12 and TI Workshop cartridge	T. McGovern
Embedding Assembly in Extended BASIC	Brisbane UG

PLUS MUCH MUCH MORE!!!!

COMING EVENTS

Next Committee Meeting: Tuesday 4th October, 1988
General Meeting: Tuesday 11th October, 1988
HV99ers BASH: Sunday 6th November, 1988

AGENDA FOR OCTOBER MEETING

Demonstration of the TI RS232 Card
Starter Pack 2 Software demo - ideal for learner programmers

CLASSES AVAILABLE FOR MEMBERS

XB Class Tuesday 20th September, 1988 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...\$25
Overseas Residents.....\$45 (airmail)

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