# HUNTER VALLEY >99'ERS NEWS



TI 99/4A

## HOME COMPUTER NEWSLETTER



### YOUR COMMITTEE

all telephone numbers are STD area code 049

PRESIDENT Alan Lawrence 35 Bayview St., WARNERS BAY 2282 Ph. 4865#9

VICE PRESIDENT
Allan (Joe) Wright
77 Andrews Rd.,
VALENTINE 2288
Ph. 468128

SECRETARY
Albert Anderson
6 Arcot Close,
TARRO 2322
Ph. 662692 Viatel 496626928

TREASURER
Peter Smith
8 Glebe St.,
EAST MAITLAND 2322
Ph. 336164 Viatel 493361648

SOFTWARE LIBRARIAN Graham Smith 4 Beasley Crescent RANKIN PARK 2287 Ph. 525824

EDITOR Brian Woods 7 Thirlmere Pde.. TARRO 2322 Ph. 662387 Viatel 496423878

PURCHASING CO-ORDINATOR Alan Franks 822 Pacific Highway, MARKS POINT 2286 Ph. 459178

COMMITTEE MEMBERS Noel Cavanagh 378 Morpeth Rd., MORPETH 2321 Ph. 333744

Rodney Gainsford 56 Sedgewick Ave., EDGEWORTH 2285 Ph. 583515

John Paton i Parlen Close, RUTHERFORD 2328 Ph. 326514 Viatel 493268148

### CONTRIBUTIONS

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

Any copy intended for publication may be typed, hand written, or submited on tape/disc media as files suitable for use with TI Writer (ie. DIS/FIX 88 or DIS/VAR 88). 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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Articles for publication can be submitted to the Editor, ALL other club related correspondence should be addressed to The Secretary.

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

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#### PRESIDENT'S



with

### Al Lawrence

Christmas time already! It loes not seem a year ago we were preparing for the Festive season. How quickly it comes around the older one gets, yet when you were young it used to take FOREVER!

First I would like to thank the committee and the members for their support during 1988 and wish them the compliments of the season and best wishes for the New Year - 1989 will be a VINTAGE year the grapevine reports!

The committee, my family and myself would like to wish our members and TI'ers all around the world a very Happy and Joyous Christmas, with a healthy and prosperous New Year!

#### STOP PRESS!!

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There are a few spare bare and one built up and socketed QUEST RD200 RAMdisk board still available from the initial order, so for our out of Towners who would require one in the PE Box for Xmas or New Year Ph 049 486509 and send \$132.00 full price (buy your own \$62256 -17req. at \$22 approx each and i \$6264 at \$8.40 and 3 batteries at \$3.40 ea.)

The the bare board ex everything is for \$50.00 plus P and P where required on above items.

Thank you Jenny and Tim Watkins for the wonderful B.A.S.H in the bush and I know everyone had a good time while the prizes complimented the BBQ or Chicken Luncheon. THANK YOU.

#### WARNING! DANGER! BEWARE!

MY-Word be on the lookout for an 80 column editor from Atrax R. seen at the Farm and soon enhancing various AVPC boards worldwide. This type is considered to be

non-venomous, user friendly, with breeding encouraged in the usual Fairware Environment.

DewelV on monitor this species is distinguished by the menu overlay at the top and the bottom rule now highlighted in RED (Ctrl 4 cycles 10 combinations of 3 colors) with the 80 col. ruler on the bottom containing a moving pointer slaving the cursor on the body. This appears smaller in outer appearance due to larger background - high on my TI wish list is the new DIJIT Systems Advanced Processor Card (AVPC) captures the full potential of the new breed - now stronger than ever! This proves that there is a life after death to resuscitate our 99/4A to a higher level. An 80 col. windowed Show Directory soon to follow. The usuai detailed instructions are included.

Come along and view the developed Funnelweb, AVPC and 512k QUEST RD200 show big Blue it is not wise to under estimate the power of any orphan. You may obtain an original from Tony or Will McGovern direct and from Graham Smith our friendly HV99'er librarian.

#### FAIRWARE.

We at the HV 99'ers have in the past collected and sent to various authors group donations as we know how costly it is to buy and send all amounts individually, and we will continue this policy to help support them in the future by collecting donations and forwarding them on in bulk.

NB. We only sell disks for cost of MEDIA plus nominal COPY FEE and the ONUS is on you the USER to forward any FAIRWARE, FREEWARE, SHAREWARE or by WHATEVER name it is distributed under, to the AUTHOR by any means. That is why we do not charge \$5.00 for a disk, as then the recipients do not think we pass the EXCESS to them by some mysterious channel.

December has a 'cheque in the mail' for ARCHIVER V 3.02 (see elsewhere in this issue for review by Tony & the disk is in the HV99'er club Library) to Barry Boone, a young high school genius in the US of A who has been supporting the TI community by saving all BBS users (and disk scrunchers) heaps of

dollars. Barry deserves support to help him study and perhaps encourage him to write more beaut programs for the TI.

So why not all AUSTRALIAN users acknowledged and help us help this you's great ASSET to stay with TI'ers and Wonderful hardware and Telecom misses out on to a more - or any other Fairware program to distribute to several if you make use of more than ONE!!! Just let us know the Authors and also how to divide it up, as well as any comments on the programs use to you.

The club XBasic Module is HELP. needed for classes and meetings. If you have it please return soonest. Thank You.

See you all in the New Year and we hope to be in the rooms in the new block at the High School.

### Segretarys REPORT

Hello and welcome to all our supporters for the last BI-CENTENNIAL YEAR ISSUE OF the HV99'ers Newsletter. 1988 has been a BIG year for Australia and also for the HV99 User Group and the TI99/4A in general.

I shall take this opportunity to sincerely thank a whole lot of people who have contributed to the well being of the HV99'ers during 1988. First I would like to thank each and every one of our very supportive members who in their own individual ways have helped us come together to form quite a neat unit. I would also like to thank our In closing, seeing how as I committee for their assistance with have done all the thank you's, I the running of the group. Thanks would like to wish all of you a safe also for the continued contact from and happy Christmas, New Year for the other Australian 4A user groups in Brisbane, Canberra, Melbourne, Adelaide, Perth and in particular the Sydney based TISHUG whose Sye now, and I can't help it... with HV99 throughout THANK YOU ALL this year has been noticeably

stronger. I must of course include in this thank you message a HUGE THANK YOU to our overseas exchange User Groups for their continued support throughout 1988 as without them the scene herw in Australia or small groups send your donation would be, well not real good, I'm to us to pass on? This will be sure. Whilst on overseas thank Whilst on overseas I must also include the return some of the \*\$\$'s that our development companies which continue to service the needs of the 4A worthy individual, so if you use it users... thanks a lot to these companies. I feel that a SPECIAL and have forgotten to send your THANK YOU should also go to the donation, send your money along to production team of our No 1 support the Secretary and make clear which Fairware you sent it for. Better this everything for the 4A still send one LARGE cheque for us compilation us users would be rather left in the dark... thanks guys and girls of Mp.

> Hopefully in that rather long THANK YOU I haven't left anyone out and hopefully we can expect the same sort of support from you all into 1989 and beyond. In mentioning next year there is one aspect of our group that I would like to pay more attention to, and that is in the hardware maintenance area which seems at present to be lacking. More and more of us are having difficulty with consoles, systems and peripherals etc. and in an effort to help this situation I will be trying to spend more time in this area. There is a trade-off however as my time with this HOBBY of mine is limited because of other incidentals such as work. trade-off is this and I will ask particularly our local people to consider it. If I am to spend more time on the technical applications of this computer SOMEONE ELSE is going to have to look at taking over my job as Secretary come next June. The job of secretary is probably one of the most interesting in the group as it is our contact point with the rest of the world and it is not difficult if kept up to date. Anyway, please give this thought for next year!!!

Albert Anderson (4a4me)

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to be used in PRESS."

"The program will accept a standard TI-Writer file - none of your documents have to be re-typed

"The program has many features than can be listed: block operations that include manipulation, multi-line headers and footers, footnotes, 'un-delete', a keyboard buffer so that you never lose characters while mail-merge, and much more."

The program comes complete with extensive manual in professional binder and a limited subscription to a user magazine, a limited PRESS Report.\*

This software is priced at \$US59.95 plus postage (probably airmail) and is available from:-Asgard Software PO Box 19396 Rockville, MD 20850

To my knowledge, at least 2 of our members has already sent for his copy, so maybe we will have this program demonstrated at the February meeting & more details available for publication in this newsletter.

#### STOP PRESS

These comments and observations by Charles Good appeared in the December Issue of Bits, Bytes & Pixels, the Newsletter of the Line (Ohio) US in the USA.

In the now well established tradition of new 99/4A products, the most widely anticipated, heavily advertised new product was not quite ready for release. I am, of course talking about Asgard Software's new word processor PRESS. at the Asgard table viewers were shown a nicely styled software/documentation case with nothing much inside. Delivery was promised before the end of the month. Asgard's general manager Bobbitt, Chris PRESS's author Charles -Earl and PRESS's.

Probably the biggest news this month is the release of an all new word processor called

#### **PRESS**

and sold through Asgard Software

October οŕ MICROpendium has a double page advertisement with details of this new software.

"PRESS is the result of over a man-year of development by Charles Earl (author of Telco), O'Neill, Chris Bobbitt & dozens of others..."

\*We also designed a program would advantage take of whatever hardware have, you including super-carts, RAM-disks, hard drives and 85 column displays, yet it will run perfectly well on a basic TI-99/4A with 32K & a single drive."

\*The program will allow you to set a page width of up to 256 columns, & define 1 or more newspaper-style 'columns' on the page, each with its own width..."

The program is entirely 'what you see is what you get'. In other words, you'll 500 right justification, centering, indentation, bold text, underline, italics and other functions on the screen, as it will appear on the page..."

complete 100,000 word spelling checker is integrated into the program..."

documentation writer Ruth O'Neal gave a partial demonstration in the and only portions of files are kep conference room. Considering that in memory. Thus the size of the product doesn't yet exist, these document file is limited only by people gave a fantastic available disk or RAMdisk space. PRESsentation. Based on what I saw, and based on Asgard's reputation of provision to warn you when the media delivering goods in a reasonable is about to be filled to capacity. time. I gave Asgard my \$59.95 check for an advance order. I was told PRESS will work in 80 columns that Asgard took in several hundred with the Geneve, and should also prepaid advance orders for PRESS. Work 80 columns with no problems Let's hope the gods get delivered as with the DIJIT AVPC card using the promised. The following bits of 99/4A. information, not covered in the pre-publication advertisements for PRESS; were gleaned from the formal newsletter has the following details PRESSentation in the conference room of a and from a personal conversation with Charles Earl:

Color highlighting ΩŤ text portions is available.

The 100000 word spell checker will be on 3 90K disks, and the rest ability to use lower case drive of the software on a fourth 98K names... disk.

The program includes the best features of WORD STAR and WORD PERFECT plus new stuff, and is designed to be easily learned by those familiar with TI-Writer. Many TIW keystrokes do the same thing in PRESS.

The page number, line number of page and column position of the cursor are displayed numerically.

A keyboard buffer (no more missed letters at word wrap) is part of the software.

User defined macros can be created.

Files are NOT saved in DV89 format. However utilities are included for easy conversion of PRESS text files to and from DV80 Thus PRESS can use and format. create TI-Writer files and can use "pure ASCII" files imported from other computer formats.

Graphics created with other software cannot easily be imported the into PRESS files. PRESS is not intended 45 desktop publishing software.

There is provision for a user dictionary.

Files are kept mostly on dis

NET The 99ers Sept/Oct

#### TI DISK CONTROLLER UPGRADE KIT

\*The TI disk controller can now be upgraded to access 4 floppy disk drives. This kit will also have the

This kit is targetted for the programmer, bulletin board operator or just anybody who needs more diskette space for data but cannot afford the expensive aftermarket controllers. You must have the ability to solder - instructions included. Please understand that THIS UPGRADE DOES NOT PROVIDE DOUBLE DENSITY! Faster head step times are available on request but your drives must be able to handle this option."

"The price is right too - just \$US19.95 will get you started."

Send your cheque to:-John Guion 11923 Quincy Lane Dallas Texas 75230

From the October issue Tidbits, the newsletter of the Mid South Users Group in the US; comes following snippet from Gary the Cox:-

"Horizon Computer & Bud Mills Services have released a card called

#### P-GRAM CARD

According to their description, iŧ will save and run modules compatable with the Gram Kracker or Cart-Save. The P-Gram kit is \$US15Ø disk kept of a y by pacet no media ty.

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ion, ies or 15ø - with clock kit \$US20 more. A fully assembled P-Gram is \$US180; add an additional \$US20 for a clock."

For more info contact: Bud Mills Services 166 Dartmouth Drive Toledo OH 43614 USA

The Central Ohio User Group in the US recently celebrated their 6th anniversary, and their November newsletter published some photographs of those in attendance. Among the photos was one of the true greats of the TI world - Jim Peterson. He is famous of course for his "Tips from Tigercub" columns which appear in newsletters around the world. The bit that surprised me (and Albert) was that HE LOOKS NOTHING LIKE THE WAY WE IMAGINED HIM TO LOOK!

We both thought he would be much older (sorry Jim) and look more like a 'typical' Maine University Professor. It's amazing the impression you get about people from their writing, and in my case, the wrong impression. Have a look at the newsletter in the Publications Library and see what you think!

From the October issue of the LA Users Group Newsletter, Mike Dodd writes:-

"Genial Computerware has just released MacFlix, th<del>.</del> newest creation by J Peter Hoddie. MacFlix, priced at \$US15, gives the 4A & the 9648 the ability to display MacPaint pictures. MacPaint pictures are available on numerous BBS's & all the commercial networks. I've played with the program some, and it's really nice. On a 9640 it will display pictures in the maximum! possible resolution (512 horizontal by 424 vertical). MacFlix will also convert pictures for use with TI-Artist or MY-Art. The address is:-

Genial Computerware PO Box 183 Grafton MA Ø1517 USA

While talking about Genial Computerware, Jom Arnold, writing in TI Focus, newsletter of the Ontario, Canada Group, speaks highly of

another program...

\*Another nice program from Genial Computerware i 🕿 GRAPHICS EXPANDER v2.0. This program allows you to expand or shrink fonts and small graphics. It also allows you to invert, mirror and rotate your fonts and graphics. One practical application would be to create text and pictures sideways on your page. You could also create cards by rotating one half of the picture. This program is compatible with TI Artist, CSGD and Font Writer II. \*

Price is \$US10 plus postage and is available from Genial Computerware, address above.

Gary Taylor in The PUG Peripheral from Pittsburgh writes that J Peter Hoddie has released another Fairware program...

"...he calls the JPH ASSEMBLER HACK and it is an Assembly Language programmers tool. It runs on the 9648 and the 4A with a Supercart. It is a new Assembler! It contains features to print out Assembler errors and the ability to pause the output before it scrolls away. Since I have never run the TI Assembler myself, I have to leave the opinion of its worth to those that have. He has released this program as Fairware... send him a self addressed, post paid disk mailer, and in his words 'If you are feeling generous, the \$18 Fairware payment and he will send it to you. "

You can write to him at:-12 Paul Revere Road LEXINGTON MA Ø2173 USA

Albert received a letter from a firm called Technical Application Product Engineering with details of a sale they are having of some TI gear . . . Mechatronic XBII Plus \$23.95 99/4A Intern book \$ 4.95 80 column Expansion System \$89.00 Power Supply 7.5V 800mA \$15.50 Epromer with software and power supply \$59.95 TI Mouse with software and power supply \$59.95

All prices are \$US. Add shipping and handling.

I quote from the TI Bits column by Jim Swedlow in the October issue of ROM:-

October 28, 1983

"This month marks the fifth anniversary of Black Friday, the day TI dumped the 4A into the unmapped territory of orphanhood."

Who would have believed it? Five years later and we are still getting better software every year. Consider this very incomplete list:

1983 Funnelweb TI-Writer Telco TE II DM1000 Disk Manager II TI Artist Video Graphics TI & PR Base Personal Record Keeping Jiffy Flier, Class Nothing & Certificate 99 Archiver Nothing

"Another indicator is TI of back Bulletin Board Systems (BBS). I recently saw a list of 165 BBS that Support the TI. Not bad!"

"There problems. are Membership User in Groups isi dropping. Some groups are in trouble. New members are harder to find. The migration from TI to other systems continues. Some who have given us first rate material are heard from less often."

"We are, however, stronger today than anyone expected. The sixth anniversary should see us still around and still a hale and hearty orphanage."

In closing I would like to thank all of the contributors to our Newsletter over the past i2 months. Your input has certainly made this magazine worth all the effort involved in the cutting, pasting and printing involved in keep our group up to date with happenings occurring in the TI world. To all our members and readers, a very merry Christmas and a Happy New Year, and remember, don't drink and drive, the life you save may be mine!

### RADDOM BYTES

with BOB CARMANY

I wonder what St. Nick (or Father Christmas, Santa Claus, or other "nom de plume") will bring on Christmas morning? Could there be another gadget for the ol' TI in that mountain of presents under the tree? And, how about some last minute "stocking stuffers"?

Anyway, here are some suggestions to start the new year of right! One of the nicest would be a subscription to MICROpendium. Certainly it is one of the best ongoing TI publications. The overseas rate is \$37 (US) and the address is P.O. Box 1343, Round Rock, TX 78680. Incidently, all but the first couple of back issues are still available.

TI-BASE from Asgard Software (\$24.95) is making a big impression throughout the TI marketplace as well. It was well received at the Brisbane TI Faire as well.

If you are into games and such, the PROSTICK II is still available from the manufacturer. At \$24.95, the price may seem a bit high but they do come with a 5-year warranty and the in-warranty service excellent. Order from Newport Controls, Route 2 Box 8, Dixon Lane, Bishop CA 93514. The model to order is #2002. It will come with an adapter that will allow you to use any Atari-type joystick as well.

For those with a bit more "coin of the realm", the AVATEX 1200e modem is an excellent buy with a baud rate of 0-300 and 1200 and full 35

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of em te il Hayes-compatability. The price is variable so do some shopping around before you buy.

Of course, there are printer interfaces, RS232's, printers, and other more substantially priced items. The only limitation is the size of one's pocketbook!

Now, for part two of my CMINDEX meanderings! My wife was working on a membership listing and needed the data ordered in descending order. knew that somewhere in the dark recesses of a disk box was a program that might do the job. I ran across program that I had re-named FW-SORT (I don't remember what original name was). Anyway, it is a utility originally written for TI-WRITER by John Clulow and Dave Romer that was designed to sort D/V 8Ø file. It loads from E/A option 5 (or F'WEB) quite micely. A CMINDEX data file loads easily!

The program is menu-driven and extremely easy to use. Choose LOAD DATA FILE and you are ready to sort. You are then offered two sort options: QUICK SORT and SHELL SORT. Choose the one that you prefer and a two-line display is shown with the first line of text and the column index it. below You are then prompted to define the primary and secondary field. This is done by the entering appropriate column numbers (and pressing (ENTER) after each). The program will then sort the data. When it is finished, you can save the re-ordered file to the appropriate storage device.

The program is very easy to use and the only limitation that I have been able to find is that you are limited to 300 lines of text (or 300 CMINDEX records) per sortable file. On the other hand, the sort routines are quick and accurate and it is very easy to use.

It is in the UG library along with a series of other F'WEB utilities that I have collected over the past couple of years. Enjoy!

Before I close this column, I would like to express my thanks to all the members of the HV99'er UG for making me feel so welcome with your letters and friendship. May the holidays be joyous for all and your New Year be

prosperous. And, as the final line in a well-know poem goes "Merry Christmas to all, and to all a good night!".

Merry Christmas and Happy New Year from my family and I to all the members of the HV99 User's Group!!!

### 

### AN ANAGRAM

This is a word puzzle that England's Gueen Victoria mused over and was said to have liked.

English, being the "easy" language that it is, has many words that are spelt alike but are sounded out differently. Now some ratbag one day decided to make up this game of mixing up the letters of a certain word and getting some poor sucker to beat his/her brains out trying to re-assemble the word into correct sequence of letters. this "game" has a name, or more correctly is assigned a "term" in the English language - it's ANAGRAM.

Anyway the puzzle goes like this... the word or group of letters that we are trying to "resequence" is ;-

#### TREALBAY

These 8 letters can form only ONE word in the English language as it stands at the moment. Given these 8 letters and doing the mathematics finds that there are over 48,000 permutations of this puzzle with only ONE correct answer.

You might see the correct word pop out at you straight away but I doubt it!!! See what you can come up with in a program to solve it maybe... give it a run through your 28 or so Spellchecker dictionaries. Good old Queen Victoria mused over it for some time so I might just do the same until the February issue... have fun

Albert Anderson - HV99 (4a4me)

### That Was the Year That Was!!

A MEMBERS LOOK AT THIS YEARS NEWSLETTER ARTICLES

BON KLEINSCHAFER

Throughout the past twelve months many and varied articles, reviews, opinions and other chit chat has appeared in this newsletter, most of it computer related but not all of it so orientated. Thankfully, that what makes **a** newsletter interesting - variety. It may be a little "one eyed" but here is a review of some of the snippets that has appeared from February to November this year.

Feb: Contains wealth of I information from Tony about F'WEB, and is an important adjunct to the files on the document F'WEB distribution disk. The article reprinted from the Bayou Byte newsletter (Care and Feeding of Disk Drives) has an error in that it states "If you don't have a Disk in your Drive, don't close the disk door or latch as this can cause the read heads to possibly chip!". This is totally incorrect as it would be more beneficial to keep them closed at all times to TRY to exclude dust and other foreign objects from getting in. Ever seen what trouble a large moth that is totally out of flying control does to a good disk when the errant moth's presence in the Drive is unknown? The read/write heads/s are held away from ANYTHING at all times until the controller loads THEM to the disk. Otherwise the article is very good. Other articles were very interesting such as Larry Reid's "What's New" and Rastis tries plucking the Rooster. but the piece de resistance would have to be the details of an exciting hardware development to excel all others, that is the LITTLE RIPPER STRIP HOLDER. Now that was sheer genius at work - it probably caused many hours of lost sleep developing the idea to fruition.

There is only one thing wrong, to us uninitiated into the intricasies of hardware. construction, the details of the project left some of us a little bewildered as to what to do where the plan says "FOLD UP ON DOTTED" LINE" but doesn't go on to say WHICH SIDE to fold up!

March: Could this be?? On opening the first page Secs report doesn't end with "4a4me". This raises "4a4me". This serious questions, one coming to mind is "does he have a PC in the closet??" Good report from Joe on GENEOLOGY, but if all the details as required where to become public I feel that most of us would be "on the run\* and NUMBER OF CHILDREN Ø/15 ?? I'm working on it Joe, I'm working on it! Very interesting hardware article from John about a real time clock, but this also requires further clarification, makes one wonder if it supports Metric time?? The article Graphics Compatability gives the users of these types of programs plenty of details about what they can expect from each program, but that diagram illustrating their interaction looks something like the structure of a FORTH programmers attempts to get something up and running (grin). And last but not least is Harry Brashear's reaction to Vegemite - how dare he!! Such condemnation of our CONCENTRATED POLLUTION is not to be tolerated.

April: There it is again, no 4a4me!! Great review of TELCO, just the shot to keep Telecom's profits up and extremely handy for users of modems: that do EVERYTHING except make the coffee. Indeed it makes life much easier as the users don't have to exert themselves and lean over to "flick a switch" YEAH! See the beaut printed out type greeting card from California?, lovely, but just what is a "OWNUNDERD"?? Very good article about the GED module, read it and learn! Another report from F'WEB Farm and like all the others is very informative and has to be read at least five times over to understand it, but as the man said "we shall overcome\*! If you haven't already checked out Brian's Disk Label Printer program, do so, super for labelling all those pirated disks.

May: Hello?? the PC must have broken down, 4a4me is back, about this time the Sec. starts pressure about

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it all wrong, it states "reading maketh a full man", maybe that was a misprint because I was always lead to believe that "drinking maketh man full". Maybe we could get some clarification on that! Richard's CHEQUE BOOK and CREDIT CARD programning hits the scene, all very well if you sn't lises have a bank balance that says + and if they haven't taken your credit to the card off you and put it through the P DN B as shredder! Also read Richard's article POLISHED on **DOCUMENT** Bc I PRESENTATION, all very well if you "on live in the big smoke so we tried 3/15 our own bush system, let me tell you I'm that REPO does terrible things to ting paper. a

membership renewals,

that?? Joe's IN THE NEWS column got

ever noticed

June: In the Secs report, lets see?? 2 3 4 etc. Huh Huh, the name Albert Anderson is just ONE letter short of yours truelys, who needs a shorter name?? CPU The modification as described by Neil 15 as handy as "all get out". Pity all consoles were not so endowed - it makes fast RAM use so much better, it is again! There looks like an English translation from Some ancient Sanskrit clay tablet, cop this

: EMPH-ON A\$ 69 EMIT : : EMPH-OFF A# 78 EMIT |

Good grief! - maybe its part of their pot smoking ritual? Now what really went on at the TI-Faire at Brisbane? On page three everything looks on the up and up BUT Peter starts his article with just a hint of the real action then promptly corrects himself, then carries on with the same possible untruths as that on page three, has there been collusion here?

July: First of a series by Tony on squeezing assembly code, I used these techniques on only 30 sectors of uncomented code and saved some 48 WORDS of mem over run of the mil? coding, efficient. Very IMPACT-99 from Jack just keeps on going with a wealth of news, bits and pieces, and information, must be of the most "looked for" articles in the newsletter, along with Bob's RANDOM BITES. Noticed in Joe's IN THE NEWS a snippet from the USA about FORTH now being available that loads into an SK Module. Thought about that idea myself and it would probably set up well in the

QED 32K Module but getting heaps of info on the language is akin to getting a very busy DOCTOR to check out an ingrown toenail!! (hint Doctor Terry)

August: New release of F'WEB has a new program on it for assembly programmers, named LINEHUNTER. would be one of the handiest for working with the language and would deservedly be in its own right Fairware program. Kevin's approach to using speech works fine, if you haven't tried it out yet give yourself a break from Car Wars give it a go. With a little bit of effort you can almost have conversation with the old TI (make sure nobody is watching you talk to it though). Wonder if Joe sold that power supply transformer? - maybe bought a new car with the surplus cash!

September: F'WEB (Vn 4.12)released and is the last?? edition of this superb package. From humble beginnings it has turned into a "shell" to provide the user almost unlimited control over the machine. Good article on Embedding Assembly into XB programs, many very good XB programs could be made "excellent" by the addition of small assembly routines being "call linked\* instead of using all XB. Neil's Ram disk design is finally released and should be a great boost to prospective owners. Can't wait to get hold of one and 9**-**t iŧ plugged into the old bucket of bolts. Waiting for the mechanical drives to assemble a 12K+ program Seens to take as long as a Crummidore does to load a program. Just noticed that the "in towners" have found another excuse (not that they really need one) for having a "wing ding at the winery".

October: Now Bob's articles are really getting down to the nitty gritty. Cop this-

Trichlorotriflouroethane It's enough to send shudders ones deoxyriboneucleicacid molecules. Living With (Part 1) from Tony now here's where I can help - all the equipment that is required is a pair of Japanese safety boots (thongs to those not in the know). These weapons will despatch almost any known crawling or flying insect and

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are especially usefull for downing QDLEN's, MLBOX's, QDPOS's etc right up to the common LDR11's. Who posed for the photo with the caption imposed above it, "Think About It", is it anyone we know?

November: Rodney is back at last, how his articles were deeply missed, now we can continue on where we left off trying to solve those mysteries that have been plaguing us for so long - well done Rodney! Bob's column just keeps on going. I am sure that he must QWERTY have impressed on his left hand finger/s that is unless he types standing on his head, in which case do a Replace String and substitute "right" for "left" in the above, just before the string "hand". Surely the most grevious concern is that once again the Sec's report has no "4a4me" at the end and look at it very closely, there is also mention of PC in the Could someone look into immediately 4.4 and suspicions are true let me know and I will despatch a hat full of ANFO plus accompanying stick of gelignite with fuse attached - that will rid the closet of such "unclean" habits!

R.K.



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a modified program from KEVIN COX

188 REM XXXXXXXXXXXXXXXXXX 115 REM \*FROM MICROPENDIUM\* 126 REM #VOL 2 NUM 8 PG 43# 136 REM \* 27-7-88 146 REM \* 150 REM \*MODIFIED BY K COX\* 160 REM \*\*\*\*\*\*\*\*\*\*\*\*\* 176 CALL CLEAR 188 CALL SCREEN(2):: CALL MA GNIFY(2) 198 T#="HUNTER" :: FOR X#1 T 0 6 :: CALL SPRITE(#X, ASC(SE G\$(T\$, X, 1)), 2, 28+4\*X, 58+16\*X ):: NEXT X 266 T##"VALLEY" :: FOR X=1 T 0 6 :: CALL SPRITE (#X+6, ASC ( SEG\$(T\$,X,1)),2,5Ø+4#X,3Ø+16 \*X):: NEXT X 210 T== "99er GROUP" :: FOR X =1 TO 15 :: CALL SPRITE(#X+1 2,A8C(SEG#(T#,X,1)),2,8Ø+4\*X ,15+16#X):: NEXT X 22Ø FOR COUNT=1 TO 2 :: FOR X=3 TO 16 :: FOR Y=1 TO 22 : : CALL COLOR(#Y,X):: NEXT Y :: NEXT X :: NEXT COUNT 23# RUNG="NOW HEAR THIS...TH IS ROUTINE WILL LET YOU CREA TE AN AMUSING SCREEN THAT WI LL. 24# RUNG=RUNGL CAPTURE THE ATTENTION OF ANYONE WHO SEES IT. THANKS TO THE ... " 256 RUNS=RUNS& MANNERS 99ER CLUB FOR UNCOVERING IT ... EN JOY... 269 GOSUB 289 27# FOR I=1 TO 1998 :: NEXT I :: 90T0 17# 28# FOR SET=1 TO 9 :: CALL C OLOR(SET, 16,6):: NEXT SET 298 RUN#=RPT#(" ",28)&RUN# : : FOR LT=1 TO LEN(RUN#)+1 :: DISPLAY AT (28, 1): SEG\$ (RUN\$, LT, 28):: CALL SOUND (150, 1000 ,22,-5,7):: NEXT LT 300 RETURN

### BWED OCA BWEOVEN

from
TONY McGOVERN

Last time I promised to look at the Archiver program from Barry Boone, which had arrived in too late for inclusion. Previous editions of this program had some clumsy aspects as it looked like it had just grown like topsy. Now it has been all thoroughly rethought and put together in a cohesive whole as Archiver III Version 3.02, and the result is very impressive indeed. There are only a couple of minor items in the user interface which could stand improvement, and those are only minor quibbles.

The program now sports a single menu making it much easier to use than previous versions. In addition to the archiving function a number of disk/file management functions are provided which make the program essentially self-contained in use. Catalog, copy, delete, un/protect, view file operations are supported. In addition it is possible to catalog archived files, to extract individual files from an archive, and to select which files from a disk are to be archived.

At this stage we should pause and look at what archiving is, and what it does for the computer user. There are two levels of archiving provided. The first merely serves to collect a bunch of files together so that they can be handled as a single large file instead of a whole mess of individual files. This can be particularly convenient when you want ta keep several such collections on the same disk, and filenames are repeated between the collections. LOAD is one such name commonly found to repeat. Before archiving came along you had to rename such overlapping filenames. Now, as long as you remember to de-archive onto separate disks, it no bother. This is the Un-compressed form of the archive.

It ends up taking less disk space because there is only a single file header sector, instead of one for each file. The data necessary to index the archive takes far less room so there is a net saving. This form of archive is packed or unpacked more quickly because no additional processing is done. It is little more than a file copying and cataloging exercise in reality

The compressed archive is more interesting. This makes use of the fact that much of the information in many disk files is redundant, and can be coded into a briefer form. As a very simple example a text file is made up of ASCII characters, each of which occupies one whole byte. 04 the possibilities allowed in a byte, only about 40% are used. This is entirely apart from the fact that the language itself contains a lot of redundancy from byte to byte. The typical program film contain certain hexadecimal words such as >945B or >0829 far more frequently than others. Once again these bytes are expressing language with recognisable form and structure. And if you have recognisable form and structure you can express it in a shorthand way. A form of coding used internally in TI-Writer to increase the apparent text capacity of the buffer is run length encoding where a repeated character is flagged by setting its leading bit, which is never set in normal ASCII characters, followed by a count of the repetitions. picture files use a roughly similar idea. The compressed archive uses a more complex algorithm to encode and decode the files, which I'm not going to try to explain here. Suffice to say it works and Barry Boone has brought it to the TI-99/4a.

The curious aspect  $\alpha$ 4 compression is that the less structure or meaning you can discern in a file, the less opportunity you have to develop a short description of it. Random noise is the hardest of all to encode. What is more the process of compression of redundant material will make the compressed result look more like random noise. The result of trying to compress files twice will most likely be to make them blow out in length again. The length savings,

are most noticeable on text files. The blow-out from unpacking a disk of compressed archives can be most disconcerting. The price paid for compactness is a slightly longer time for packing or unpacking, but unless you are using RAMdisks, it all tends to have a large component of disk access time anyway.

So what are the minor quibbles ? I'd like to see (ctrl-C) used as alternative escape key an to (fctn-9) as is done in TI-Writer and Funnelweb. It would also help program operation if filenames in the directory could be marked for other operations, say designating an archived filename which would then come up as the default for unpacking. A final quibble is that it destroys the Funnelweb work-file name, but it does have a built in option to return by reloading Funnelweb's UTIL1 (or FW or whatever else you want to call it).

The next item is a local one, Neil Guigg's RAMdisk design. We have had the prototype and part of the final version up and running as a RAMdisk using a modified version the Miami ROS, and a loader/tester/formatter that HO wrote for it. Enough about that as it will no doubt be extensively reported on elsewhere in this issue. Suffice to say that with PALs for decoding it is much neater physically and logically than the Horizon boards which original inspired it. There are no piggybacked chips in sight either.

What this does bring up is the subject of the disk operating system for the RAMdisk. The original version written for the Horizon RAMdisk has been largely supplanted in use by a tightened up and extended version from John Johnson and Mike Ballmann of the Miami UG in Florida. I believe there is a ROM. version but I haven't seen that. Unfortunately in working with it recently to adapt it for the new RAMdisk and the AVPC, I have come to conclusion that both the original and Miami versions contain a fundamental design problem. Funny thing about bugs, a tiny one can

and fixed. The reason is that it occurs only with Myarc disk controllers, and not TI or Corcomp, and not always then either. The symptoms are that under some Circumstances it is possible to have only one disk file open on the RAMdisk or even none. A simple little Basic program to open and use two files at the same time on a HRD that runs on a TI controller system will bomb out on a Myarc system. The typical symptom is that when it is told to open a file it comes back without having opened it but also without reporting any error. any attempt to access the file causes an error. Earlier I had found that sometimes I could not read or write DV/80 files assemble to and from a Horizon RAMdisk from the Editor. Curiously this had only started to happen in recent times, and even more curiously was not necessarily fixed by reloading the ROS. Curiouser still, using the reset button did not help, but powering down the console and starting again always worked.

Now we don't normally use the Horizons that way, just as a source of program files so it wasn't a real nuisance and I had tentatively put it down to either a bug in the Myarc disk manager or more likely some strange hardware interaction though neither explanation MAS satisfying. It turns out however that for once it isn't really Once it isn't really Myarc's fault. The problem is what I call the "cuckoo-ROS" syndrome. The RAMdisk system though emulates many functions of the physical disk i s controller separate and distinct device, and should keep its own counsel. Horizon and Miami ROSs however use aspects of the disk buffers set up by the regular disk controller. There is no intrinsic reason why a RAMdisk has to be bound by the CALL FILES limits of the physical disk controller, but these ROSs are so constrained by checking and/or setting VDP bytes that indicate a disk buffer is in use. The Myarc disk controller, unlike TI and Corcomp, doesn't use the VDP disk buffers at all for file access. All absolutely crash a program and yet a it does is at power-up set the major one can sneak around almost unnoticed. If it is a fundamental buffers and writes >37D7 into PAD bug, why then hasn't it been noticed location >8370, MAXMEM. After that

if you CALL FILES or its equivalent, it doesn't touch VDP again at all but merely bumps the value MAXMEM. TI system specifications insist on the use of the MAXMEM pointer as the essential link to the mapping of upper VDP memory. means that if for any reason such as formatting a disk or otherwise using area of UDP normally reserved for disk buffers corrupts this area, a return to CALL FILES(3) does not necessarily clear the flag bytes with Myarc controllers. This confuses Horizons which should have been minding their own business and staying in their own nest.

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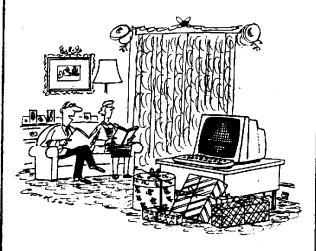
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I have done Debug experiments to test and verify this conclusion. The reason that console DOMES cycling worked to clear the problem while reset didn't is that console power-up routine clears only the lower part of VDP and i f controller doesn't do it as with Myarcs, then the disk buffer is not cleared. This matter came to a head with the DIJIT AVPC card which has VDP RAM sitting out in the PE box, where it is cleared by cycling console power. Why was it not noticed earlier ? Funnelweb is currently a trigger for this problem as it sets **Various** levels σf CALL FILES during operation, for instance allowing only one file to be open in the Editor and four the Assembler. in recently Funnelweb used synthetic CALL FILES routine of its own which explicitly cleared out the disk buffers, but now uses standard >16 disk buffer allocation routine in the disk DSR. For purposes I have redone FW/UTIL1 with an update of the old routine which solves the problem there, and it is available for anyone who needs The real solution however is for the Horizon and similar ROSs to . be to correct principles, rewritten maintaining their OWN internal information on file status. bringing this to public attention in the hope of inspiring someone out there to do the job. The Horizon and Miami Vn 7.3 ROS source codes are publicly available thanks to their authors, and repair is no doubt possible (unlike say for the bug in my Myarc disk controller DSR that returns Status incorrectly). wrote to Bud Mills and to Johnson after I had determined problem existed, but before I had

sorted out just what was causing it. As yet (end of Nov 88) replies are still due to come in so I don't know if the problem has already been faced and solved elsewhere yet. I'm afraid it is somewhat down my own list of priorities for the time I have available, so I'd love to hear from someone out there who has done the job.

Both Will and I came to the same conclusion not to use MENU the power-up default from the master HRD, and just to use FW instead. The only feature of MENU missed is the XB program loader, and we rarely use XB anyway. Otherwise FW is a far more powerful environment to have, and MENU can always always be called up if needed. To get back to the title screen all that is needed is to quit and use the feature thoughtfully built into the Miami ROS that bypasses the rest of power-up if either shift key is held down at power-up. just You have enough time to get to the shift key after quitting.





At least we wont have to put up with pine needles all over the carpet.

## BOFTWARE REVIEW

GEOFF. MATTHEW and TIMOTHY DANIELS

At the last club meeting there were a number of items that needed to be reviewed. I was one of the 'lucky volunteers'! to I WAS pecome acquainted with a light pen and the "Protector 2" module from Atarisoft. Being the smooth, suave gent that I am (modest too) I told my two boys, Matt and Tim of the project I had for them, and what was needed...

"The light pen is very hard to use, but would be better if it Was slower. It is a good design\* Timothy Daniels, 8 years.

I have to agree with Tim, the light pen was difficult to use - the speed of the squares to be read by the pen is too fast, and the sensitivity of the pen was too great. The speed is only a programming job and the sensitivity was overcome with some opaque cellotape, but heaven help you if you accidentally pointed it the best are TI-RUNNER, JUMPY and at a window or open doorway in daylight hours!

The disk contained simple addition, noughts and crosses (Tic|can get to screen 8 out of the 29 Tac Toe), simple music composition easy without losing a life and my and a facemaker-type program - all top score is 34.500, witnessed by Overall a great concept which | dad and my friend. could open up a whole new world for programmers just those two niggling, easy-to-fix faults.

#### PROTECTOR 2

Instructions weren't that easy to understand at first, but you get the idea after a while.

Module is quite impressive at first sight and is pretty easy to handle.

Loading - quick & quiet.

Graphics - excellent for a TI game.

Ease of play - I found the game quite hard.

Recommendation - I recommend this game to people with plenty of patience!

Matthew Daniels, 12 years.

I had to wait until the boys weren't there to have a go at this module, and again I agree with the comments made by Matt.

You are required to rescue a number of people from a flying 'thing' which sends down a ray, picks up your people, takes them to a volcano(??) and drops them in it - a bit Federal Parliament, especially the 'dropping them in it' (we're the people!!). You have to pick up all the people and take them to another city before you can pick them all up again and take them to a rescue area - one by one!! As Matt said it needs patience.

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LIZ LAWRENCE

I like most TI games but 3 of FLOORAWAY.

My favourite is Jumpy because he is CUTE and the music catchy.

But if I want to try the challenge of different screens without going past all the boring ones! I found have secret combination of key press to let me do this. Sometime I may tell you my trick but not now.

#### Liz Lawrence (liyrs.)

C'non what's kids, your favourite game? Why not write and let us know, and maybe even include some tips - I'm going to work on Liz and see if she will reveal her secret in the Februa" / newsletter.

### Adventurers° Corner

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WITH "THE ADVENTURER"

### rodney gainsford

This article is in response number of requests for maps and tips on which Adventure to start on. We. are exploring possibility os starting an Adventure that will meet monthly, fortnightly or weekly, depending on the demand. If you are interested in this please see me at the monthly meeting or phone 583515 and ask for Rod.

Anyway, for the beginning I would suggest that you Adventurer obtain the Scott Adams Adventure start with either and then Adventureland or Pirates Adventure, these are fairly easy starters but contain Some of the features of adventures. They were part of a 12 part series which are very good, although they may be slightly outdated are still well worth look at, as they are relatively inexpensive and represent good value for money. the maps are well set out and although they are small compared to SOME adventures, they are not so easy as make them pushovers for player, even an experienced one. They are good adventures for the more experienced player as well because they will help to develop and home skills which make a good adventure player.

I have chosen not to include any hints this issue, chiefly because of the possibility of the Adventure group being formed, so I will include only maps of Infocom's 'Deadline' this month.

As any seasoned adventurer will know, Infocom is the Primus of the



Adventuring Industry and are venturing into the field of Graphic Games, Adventure which I do not agree with, but if the quality is kept up then I may even change my view. This has proven to be the downfall of companies before, as Adventure International, who were on top of the heap after the Scott Adams series. After a few popular, meagre efforts, started graphic adventure games. took over their Interactive Fiction Adventure Simulations and have ruled in that area, with Sierra taking the highlights. graphical So -Infocom moving to graphic adventures will either enhance the game or deplete it - lets hope the former is the case.

Any inquiries regarding adventures can be sent to me via the Secretary of the club, and don't forget the adventure meeting so be announced in the February newsletter.



### \*IMPACT/99\* BY JACK SUGHRUE

#### TI-BASE: PART Two

LAST TIME IN IMPACT I WAXED ENTHUSIASTIC OVER DENNIS FAHERTY'S TI-BASE. IN THE FEW DAYS SINCE I WROTE PART I OF THIS REVIEW I HAVE GROWN EVEN MORE FOND OF THIS FANTASTIC DATABASE.

YOU CAN THROW OUT ALL YOUR DIHERS, JUST AS YOU DID YOUR OLD TI WRITER AND DISK MANAGER CARTRIDGES AFTER FUNNELWEB CAME DUT.

TI-BASE IS PERFECT FOR BUSINESS, SCHOOL, HOME, AND PLAYTIME. THIS CAN HANDLE ANYTHING YOU WANT A DATABASE FOR AND LOTS OF THINGS YOU DIDN'T KNOW YOU WANTED ONE FOR BEFORE SEEING THIS CREATIVE PACKAGE.

BUT BEFORE I LIST A PILE OF ITS OPERATIONAL PROPERTIES, IT MIGHT BE BETTER TO START (AS I HAD TO) WITH THE SIMPLE THINGS. LAST MONTH I SAID I WANTED TO CREATE A PERSONAL LIBRARY CATALOG OF WORKS BY COMEDY AUTHOR P.G. WOBEHOUSE. IT COULD JUST AS EASILY BE A VIDEO LIBRARY OR RECIPES OR A CHECKBOOK OR MAILING ADDRESSES OR WHATEVER. IT DOES ALL THESE SIMPLE TASKS MORE EASILY THAN ANY OTHER DATABASE I HAVE USED FOR THE TI. ITS INPUT HAS NO RESTRICTIONS, NOR DOES ITS DUTPUT, AS YOU WILL SEE.

THE WODEHOUSE COLLECTION I HAVE INCLUDES PAPERBACK BOOKS, HARDBOUNDS, MULTI-BOOK ANTHOLOGIES, SHORT STORIES, TAPES, VIDEOS. I HAVE A NUMERICALLY-ASSIGNED BIBLIOGRAPHY. I ALSO HAVE SHEETS OF PAPER WITH THE VARIOUS TITLES UNDER WHICH THE SAME BOOKS WERE PRINTED. AND I HAVE A LOT OF ODD PIECES OF INFORMATION ABOUT MANY OF THE PRINTED MATERIALS FROM DIFFERENT SOURCES, INCLUDING SOME LIBRARY RESEARCH. AND, OF COURSE, I HAVE MANY OF THE BOOKS.

SO I FIRST HAB TO DECIDE HOW I WANTED THIS INFORMATION COLLECTED AND NOW I WANTED IT TO APPEAR IN FINAL SCREEN DISPLAY AND HARD COPY FORMS.

I HAVE OVER 200 SEPARATE ITEMS, BUT FOR OUR PURPOSES I'LL USE THE FIRST FEM. ALL BOOKS.

AT FIRST GLANCE I REALIZED THAT THE PRE-COMPUTER OPERATION IS SIMILAR TO MANY DATABASES. I HAVE TO CONSTRUCT A FIELD (TITLE, ORIGINAL PUBLICATION DATE, ASSIGNED NUMBER FOR CROSS-REFERENCING (LIKE K235 FOR MOZART'S MORKS) AND SO ON!

I'M ALLONED 17 DIFFERENT FIELDS ON EACH RECORD PAGE. MORE THAN I'LL EVEN USE, I'M ALLONED UP TO 255 CHARACTERS FOR EACH FIELD. AGAIN, MORE THAN I'LL USE. AND I'M ALLONED OVER 8,000 RECORDS PER DATABASE. DEFINITELY MORE THAN I'LL EVEN USE. AND I CAN CREATE AN INFINITE NUMBER OF BASES.

SO, I PUT MY TI-BASE IN DRIVE I (THOUGH I CAN ASSIGN IT TO ANY DRIVE OR RAM) AND MY INITIALIZED BLANK DISK FOR CREATION OF THE DATABASE IN DRIVE 2 (THOUGH I COULD INITIALIZE IT FROM INSIDE THE PROGRAM ITSELF WHILE I'M USING IT). I LOAD TIB AUTOMATICALLY BY CHOOSING EXTENDED BASIC.

TIB TAKES ABOUT 97 SECONDS TO FULLY LOAD. THEN YOU ARE ASKED FOR THE DATE IN THIS FORM: 09/18/88. THIS INFO GOES ONTO YOUR DISK AND BATABASE, SO BE SURE THE WRITE-PROTECT TABS ARE NOT ON EITHER DISK. AND BE SURE YOU MADE BACKUPS (AS RECOMMENDED BY FAMERTY) AND KEEP YOUR ORIGINALS SAFE.

NEXT YOU'LL BE PRESENTED WITH A STATUS REPORT WITH THESE DEFAULTS:

DATDISK=DSK2.

PRGDISK=DSK1.

PRINTER=PIO.

LINE=80

PAGE=56

HEADING=ON

TALK=ON

SPACES-1

RECNUM=ON

LSPACE=256

DATE=09/08/88

I STUCK MITH THE DATA AND PROGRAM DRIVES AND WITH THE PRINTER. I CHANGEB LINE TO 134 BECAUSE I WANTED A CONDENSED PRINTOUT. I KEPT THE PAGE LENGTH OF 56 LINES. I SHUT OFF THE HEADING BECAUSE I PLANNED TO PRINT OUT LOTS OF DIFFERENT HARDCOPIES AND DIDN'T NEED THE HEADING. I RETAINED TALK WHICH DISPLAYS THE COMMANDS AS THEY ARE BEING EXECUTED. AND THE SPACES BETWEEN COLUMNS AT I AND THE 256 CHARACTER LSPACE FOR THE VARIABLES I WAS ABOUT TO CREATE. I SHUT OFF THE RECORD NUMBERS BECAUSE MY ASSIGNED NUMBERS (WHICH START AT I INSTEAD OF 0) WOULD GIVE ME A CLEANER, MORE RELEVANT PRINTOUT, AS WELL AS SCREEN DISPLAY. THERE IS NO CURSOR HERE. JUST A BOT IN THE LOWER LEFT CORNER. THAT MEANS TI-BASE IS READY FOR YOUR COMMAND. I HAB TO MAKE THOSE CHANGES ABOVE, SO I JUST TYPED SET LINE=134 (ENTER) AND SET HEADING=OFF (ENTER) AND SET RECOUNT=OFF (ENTER). I THEN TYPED AT THE DOT DISPLAY STATUS JUST TO SEE THAT EVERYTHING GOT

IN OKAY. IT DID. SIMPLE.

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NOW 1 TYPED CLEAR TO CLEAR THE SCREEN (AND ENTER, OF COURSE, AFTER EACH COMMAND).

BUT I DON'T LIKE THE SCREEN COLORS OF WHITE ON DARK-BLUE. SO AT THE DOT I TYPE COLOR BLACK DARK-YELLOW. VOILA! A NICE CRISP BLACK-ON-YELLOW SCREEN, THOUGH I COULD HAVE CHOSEN ANY COMBINATION I WANTED.

HAVE YOU MOTICED THAT AT THE COMMAND DOT I SIMPLY TYPE IN A MORD OF THO THAT DIRECTLY AND INSTANTLY PERFORMS THE OPERATION? AT LAST, I AM READY TO CREATE A STRUCTURE FOR MY P.G. WODEHOUSE DATABASE.

AT THE DOT I TYPE CREATE DSK2.WODEHOUS (8-LETTER DB TITLE). THIS SETS UP THE BASE AUTOMATICALLY FOR MY PERSONALIZED STRUCTURE.

UP ON THE SCREEN COMES A \$1 FOLLOWED BY A LONG SLASH AND A COUPLE SHORT ONES. I TYPE NUMBER IN THE LONG SLASH AND ENTER. THE CURSOR JUMPS TO THE FIRST SHORT DASH. I TYPE N OVER THE DEFAULT C BECAUSE THIS IS TO BE A NUMBER INSTEAD OF CHARACTER. WHEN I GET TO THE NEXT SMALL DASH I TYPE 3 BECAUSE MY NUMERATION WILL NEVER REACH INTO THE THOUSANDS, SO A THREE-PLACE DIGIT IS SUFFICIENT FOR MY NEEDS. AN EXTRA BOX APPEARS. THIS IS FOR DECIMALS. I TYPE 0 BECAUSE I'M ONLY GOING TO DEAL WITH WHOLE NUMBERS. (VIEW I EVENTUALLY DO MY CHECKBOOK DATABASE SOMEDAY, I WILL USE THIS.) WHEN I PRESS ENTER HERE. THE CURSOR JUMPS DOWN ONE LINE AND A \$2 AND SIMILAR SLASHES APPEAR.

THE TOP LINE NOW READS LIKE THIS: 1 NUMBER (THIS IS THE FIELD FOR THE BIOGRAPHICALLY ASSIGNED NUMBERS) N 3 0. THE NEXT LINE WILL BE TYPED IN AS THIS: 2 ORIG\_DATE N 4 0 FOR THE ORIGINAL PUBLICATION DATE AND A NUMBER WHICH WILL TAKE UP FOUR SPACES.

THE MEXT SIX FIELDS (ALL CHARACTERS) ARE DONE AS FOLLOWS:

3 TITLE C 26

4 H\_P\_T\_S\_0 €

5 JY\_BL\_OTHR C 2

6 FIRST?YNM C I

7 OWN?YN C I

8 COMMENTS C 255

I ASSIGNED TITLE 26 CHARACTERS BECAUSE THAT IS THE MOST CHARACTERS ANY NOVEL OR PLAY TITLE HAS; #4 MERELY TELLS ME IN ONE CHARACTER IF THE MATERIAL IS HAROBOUND, PAPERBACK, TAPE, STORY, OR OTHER; #5 LETS ME KNOW IN TWO CHARACTERS IF THE ITEM IS ABOUT JEEVES, BLANDINGS, OR OTHER; #6 ASKS IF THIS IS A FIRST EDITION. THE H IS FOR MAYBE (TO CHECK LATER). #7 MANTS TO KNOW IF I OWN IT; AND #8 LETS ME INPUT COMMENTS UP TO 255 CHARACTERS LONG. THAT WAY I CAN LIST ALTERNATE TITLES, DESCRIPTIONS, CHARACTERS, PLOT, WHATEVER.

SO MY VERY PERSONAL 8-FIELD RECORD STRUCTURE IS FINISHED IN ABOUT A MINUTE. BEFORE WE LEAVE THIS, THOUSH, I CHECK IT OUT. THE CURSOR CAN BE RUN ALL OVER THE SCREEN FOR ANY CHANGES EASILY. NOW I EXECUTE (FCTN/8) TO CONTINUE THE PROCESS OF CREATING MY DATABASE. AT THIS POINT I WAS ASKED IF I WANTED TO IMPUT DATA. I DID, SO I PRESSED Y. (AT THIS POINT I COULD HAVE CREATED SOME MORE TEMPLATES, AS TI-BASE NAMOLES 5 DATABASES SIMULTAMEOUSLY BY PROVIDING SLOTS FOR EACH BASE.)

My NEXT STEP (AS RECORD #1 APPEARS ON THE SCREEN) IS TO SIMPLY FILL IN THE BLANKS I CREATED. HERE IS WHAT I TYPE FOR THE FIRST RECORD:

1 001 (FOR BIR #)

2 1902 (DRIS PUB DATE)

3 POTHUNTERS, THE (TITLE)

4 P (PAPERBACK)

5 OT (OTHER THAN JEEVE OR BLAND)

6 W (NOT FIRST EBITION)

7 Y (I own this book)

8 FIRST BOOK OF PSW. "TURN OF THE CENTURY" ENGLISH PUBLIC SCHOOL TALES. MOSTLY BOXING. ST. AUSTIN'S BOARDING HOUSE. IN SINGLE-BOOK COLLECTION WITH A PREFECT'S UNCLE & TALES OF ST. AUSTIN'S (#2 & 3).

I CHECK IT DUT, MAKE ANY CHANGES, AND PRESS ENTER. IT AUTOMATICALLY RECORDS ON DSK2, MY 'WODEHOUS' DATA DISK.

THIS TI-BASE IS FAST, SIMPLE, AND DIRECT. MY SECOND RECORD TEMPLATE IS MAITING FOR ME TO JUST FILL IN THE BLANKS. I CONTINUE ON AND ON UNTIL ABOUT TWO GOZEN RECORDS ARE ESTABLISHED. THEN I QUIT FOR DINNER BY TYPING CLOSE ALL. THE PROGRAM TAKES CARE OF ALL MY DATABASE RECORDS. THEN I TYPE QUIT.

STUFFED WITH ROAST TURKEY, I RETURN TO MY TI, LOAD UP TI-BASE AND TYPE AGAIN THE DATE.

ONCE THE COMMAND BOY APPEARS I TYPE USE DSK2. MODEHOUS. BANG! IT'S READY FOR ME. I TYPE DISPLAY STRUCTURE JUST TO SEE MY TEMPLATE. STILL THERE. PERFECT. I TYPE EDIT 5 JUST TO SEE IF IT'LL PURL UP MY FIFTH RECORD PAGE. IT DOES. INSTANTLY. I RUN MY CURSOR AROUND JUST PLAYING WITH THE EDITING FUNCTIONS. THE PROGRAM COMES WITH A KEY STRIP AND MOST FUNCTIONS (SUCH AS INSERT [FCTN/2]) JUST TOGGLE ON AND OFF. IN THE EDIT MODE I PAGE FORWARD AND BACK WITH THE 5 & 6 KEYS. HEAT AND EASY. AND INSTANTANEOUS.

BUT I'M READY TO ADD MORE. I JUST TYPE APPEND AND THE MEXT BLANK RECORD (#25) COMES UP. I JUST 60 ON FILLING UP RECORD AFTER RECORD AS EFFORTLESSLY AS BUTTERING HOT CORN MUFFINS. THIS IS FUN.

ALL THE TIME I'M DOING THIS STUFF I KEEP THINKING OF MORE AND MORE USES FOR TI-BASE.

AFTER A WHILE I STOP (AFTER 83 RECORDS) TO TRY DUT SOME OTHER FEATURES.

FIRST, I WANT TO GET SOME SCREEN DISPLAYS.

I TYPE SORT ON TITLE. ZIP!!! MY 83 RECORDS ARE NOW SORTED ALPHABETICALLY BY TITLE. TO PROVE IT I NEXT TYPE DISPLAY ALL TITLE NUMBER. YOU GUESSED IT. THIS GIVES ME TWO COLUMNS: THE TITLES ALPHABETICALLY WITH ITS BIBLIO NUMBER IN A NEAT COLUMN JUST TO THE RIGHT IN THE 27TH SCREEN COLUMN. SO I TYPE DISPLAY 10 AND GET THE FIRST 10 RECORDS DISPLAYED ALPHABETICALLY WITH ALL 8 FIELDS. THEM I TYPE SORT ON NUMBER. ZIP!!!

I TYPE DISPLAY ALL TITLE NUMBER ORIG\_DATE OWN?YN (I MUST TYPE MY ORIGINAL TEMPLATE NAMES.) NOW I GET FOUR NICE

COLUMNS ALL IN NUMERICAL ORDER.

I PLAY, THUS, FOR ABOUT A HALF HOUR TRYING ALL KINDS OF CONFIGURATIONS.

HOW DO YOU SUPPOSE ONE GDES ABOUT SETTING A HARDCOPY? RIGHT! I TYPE PRINT WITH ALL THE SAME COMBOS AS DISPLAY. WITH THE IDENTICAL RESULTS ON PAPER. THE PRINTER IS ON AND STARTS RIGHT UP PRINTING EXACTLY WHAT I ASKED FOR IN NUMERIC ORDER: PRINT ALL NUMBER TITLE ORIG\_DATE OWN?YN. I HAD ALREADY SET MY NX-1000 FOR COMDENSED. A BEAUTIFUL FOUR-COLUMN READOUT IS IN MY HANG. I TYPE SORT ON FITLE: THEN PRINT ALL TITLE COMMENTS AND GET A QUICK, ALPHABETICAL COLUMN OF TITLES FOLLOWED BY MY COMPLETE COMMENTS.

I GUESS I DON'T HAVE TO GO ON WITH THIS, BUT IF I WANT TO BELETE I TYPE DELETE (AND WHAT I WANT DELETED) AND LATER

I CAN RECALL IT (BY TYPING RECALL AND THE ITEM).

I CANNOT IMAGINE WHAT COULD BE EASIER. THIS IS WONDERFUL! AND I HAVEN'T EVEN TRIED THE TUTDRIAL DISK YET, NOR HAVE I EVEN BEGUN TO EXPLORE EVEN A SMALL PART OF WHAT THIS DATABASE BOES. THIS IS GOING TO TAKE ME MONTHS. I DON'T CARE. I CAN USE IT INSTANTLY FOR 99% OF ALL MY DATABASE NEEDS WITHOUT EVEN LOOKING AT THE MANUAL ANY MORE. IT'S THAT EASY. BUT I STILL WANT TO DISCOVER THE SECRETS OF TI-BASE STILL HIDDEN FROM ME.

HOWEVER, MOST II USERS (IF YOU'RE LIKE ME), WILL NEED JUST THE STUFF I DEALT WITH DURING THESE FIRST FEW HOURS WITH THIS NEW SOFTMARE. FOR THOSE PEOPLE WHO NEED A PROFESSIONAL DATABASE OF THE HIGHEST ORDER, THEY ARE IN LUCK. IT'S

HERE, ALSO.

I'VE NEVER UNCOMPTIONALLY RECOMMENDED ANY COMMERCIAL SOFTWARE IN THE 7 YEARS I'VE BEEN REVIEWING STUFF FOR THE II. BUT I DO NOW WITH TI-BASE. THE PRICE OF \$24.95 IS RIBICULOUSLY LOW FOR SUCH SOFTWARE AND IS OFFERED EVEN LOWER TO USER GROUPS ORDERING IN ANY SIZE BULK. IT COMES WITH TWO DISKS, A 40-PAGE MANUAL (WHICH I WISH WERE DIGGER AND IN BLACK AND WHITE INSTEAD OF BLUE AND GREY AND HAD SOME STEP-BY-STEP TUTORIAL-TYPE INSTRUCTIONS), AND A FUNCTION KEY STRIP. SEMB YOUR ORDER (MITH \$1.50 Sah) TO TEXAMENTS, 55 CENTER STREET, PATCHOGUE, NY 11772 OR CREDIT CHARGE AT 516-475-3480.

I THINK WE'RE GOING TO BE SEEING LOTS OF COMPANION BISKS, TEMPLATES, AND TEXTMARE FOR TI-BASE FROM USERS

WORLD-WIDE.

EXCUSE ME. I THINK I'LL GET STARTED ON A FEW MORE TEMPLATES.

[JACK SUGHRUE, BOX 459, E.DOUGLAS, MA 01516]

Y 001 POTHUNTERS, THE Y 002 PREFECT'S UNCLE, A Y 003 TALES OF ST. AUSTIN'S Y 004 GOLD BAT, THE N 005 WILLIAM TELL TOLD AGAIN Y 006 HEAD OF KAY'S, THE Y 007 LOVE AMONG THE CHICKENS Y 008 WHITE FEATHER, THE Y 009 NOT GEORGE WASHINGTON N 010 GLOBE BY THE WAY BOOK, TH Y OIT SWOOP!, THE N 012 MIKE Y 013 GENTLEMAN OF LEISURE, A Y 014 PSMITH IN THE CITY Y 015 PSMITH JOURNALIST N 016 PRINCE AND BETTY, THE N 017 LITTLE NUGGET, THE N 018 MAN UPSTAIRS, Y 019 SOMETHING FRESH N 020 UNEASY MONEY Y 021 PICCADILLY JIM

3712

### CASSETTE TIPS AND HINTS

by AL LAWRENCE

Some tips and hints on cassette recorders, loading, saving programs. Most have appeared in newsletters and in the TI Manual - some are well known and some are not. Some I have spoken of and some appeared in the Library column of early HV99'ers.

Getting started.

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TI gave a list of suitable cassette recorders but not all are available here in Australia, General Electric and Realistic work well and the Pink Elly have special Computer Tape Recorders with Auto Volume Level and Counter but no Tone control.

With duel power supplies always use the A/C supply. Batteries run down as drive motors are power hungry and even small fluctuations in voltages are serious, so you will get ERROR messages.

- 1. Most important is for regular maintenance and to clean the heads after aprox 5hrs playing time with alcohol on a cotton bud till it comes away clean. Heavy users need to de-magnetize at least every 35 hrs. Almost all cassette recorders have 2 heads, one for record and playback and one for erase. Do BOTH of them. Head alignment can vary between the Cassettes and to thick ears makes not much difference in Music but it is very touchy on computers.
- 2. Good quality tapes are not the most expensive ones, but do not use El Cheepo's. I used Cóø for master back ups and C3ø for every day use, C1ø or C15 for the most popular of games, as siblings are impat: nt to load up and FIRE away. The latter tapes have sp.:e for 2 or 3 Programs each side. C9ø tapes are too thin and prone to distortion so NEVER use them.

- 3. Volume Control: best results are obtained if set between 7 and 1g.
- 4. Tone Control: best results are obtained if set at 10 ie maximum.
- 5. Microphone jack: enables your Cassette to receive the information from your computer.
- 6. Earphone jack: enables Cassette to send information to your computer.
- 7. Remote jack: enables computer to control your cassette recorder's drive motor thus the cassette recorder will run and stop just by pressing the (ENTER) key on the console. If it does not, a simple reversing jack can made for about \$2 see me for details.
- 8. Digital tape counter is a very important feature, as it enables you to quickly locate the position of your program. Especially useful when you want to store more than one program on the same side of the tape. Start new programs with zero as the last digit (30,100,170).
- 9. Next the the TI interface cable which is used to connect cassette to your computer. Some had twin cables which was useful for saving Data to CS2 or making a 2nd copy of your program by manual control of CS2 a very useful feature for making a backup on the master tape.
- 18. The nine-pin plug at one end goes into the jack on the right rear of the computer.
- 11. Locate the set of three plugs at the other end of the cable. The wires that lead to these plugs are color coded: red, white and black they go to CS1, while the set of two color coded red, black go to CS2.
- 12. Locate the jacks labeled: mic ~ ear (or external speaker) and rem on your cassette recorder.
- 13. Insert the plug with the red wire into the recorder's microphone jack (labeled mic).
- 14. Insert the plug with the white wire into the recorder's earphone jack (labeled ear or ext.)
- 15. Insert the plug with the black

wire into the recorder's remote jack (labeled rem). Note this is the smallest jack.

Putting a dab of white and red paint on the cassette plug holes, colour coding makes it easy to identify.

To load a program in basic :

- 1. Type: GLD CS1
- 2. Then: Press (ENTER)
- 3. Follow the directions as they appear on your monitor or to screen
  - \* REWIND CASSETTE TAPE CS1
  - \* THEN PRESS ENTER
  - \* PRESS CASSETTE PLAY CS1
  - \* THEN PRESS ENTER
    - computer displays message
  - \* READING
    - computer displays message
  - \* DATA OK
  - \* PRESS CASSETTE STOP CS1
  - \* THEN PRESS ENTER
- 4. Wait for the flashing cursor to reappear in the lower left-hand corner of your monitor or tv screen
- Type: RUN
- Then: PRESS ENTER

TIP..Loading XBasic programs can be speeded up as it is only necessary to type in the following RUN"CS1"

To save a program :

- Type: SAVE CS1 1.
- 2. Then: PRESS ENTER
- 3. Follow the directions as they appear on your monitor or TV screen
  - \* REWIND CASSETTE TAPE CS1
  - \* THEN PRESS ENTER
  - \* PRESS CASSETTE RECORD CS1
  - \* THEN PRESS ENTER
    - computer displays message
  - \* RECORDING
  - \* PRESS CASSETTE STOP CS1
  - \* THEN PRESS ENTER
- Your program is now saved but 4. get into the habit of checking all your programs to be sure that they were saved without error.
- 5. Continue to follow directions as they appear on your monitor or TV screen.

computer displays message

- \* CHECK TAPE (Y OR N)?
- Type: Y
- \* THEN: PRESS ENTER
- \* REWIND CASSETTE TAPE CS1
- \* THEN PRESS ENTER
- \* PRESS CASSETTE PLAY CS1
- \* THEN PRESS ENTER
- computer displays message
- \* CHECKING
- computer displays message
- \* DATA OK

- \* PRESS CASSETTE STOP CS1 \* THEN PRESS ENTER

Your program is now saved safely and Without error. And that is it. BUT...

You can't remember which cassette you put it on!

OR... you can remember ... But not whether you put it on side A or B. OR... you can remember whether you put it on side A or B ... BUT what was the counter reading beginning

the program?

OR... you can remember what the counter reading was at the beginning of the program... BUT was it written in basic or extended basic. need TEII... or was it E/A. MINI-MEMORY?

Print up a label from one of the many programs in the library and stick it on the cassette case. used one by Joe Wright in the early days which gave minimum sufficient information.

- 1. Cassette TITLE and number.
- 2. Cassette side and program names
- 3. Language used
- 4. Counter reading and peripherals needed
- 5. Program description

Keep them all together in a carry case or cassette box which holds 42 and do store them well AWAY from all magnetic sources.

Understanding cassette error codes and messages can be confusing and trying to find a list of the error and messages codes that deal specifically with the cassette recorder is like finding GOLD!

Basically, cassette error codes and messages occur during one of two different types of commands. "LOADING" (OLD CS1) and the "SAVING" (SAVE CS1).

The error codes and messages that can occur during the "LOADING" (OLD CS1).

When the computer finishes loading the data, it tells you whether or not it read the data properly. If the data were read correctly, you would see the following message appear on your monitor or TV screen:

- \* DATA OK
- \* PRESS CASSETTE STOP CS1
- \* THEN PRESS ENTER

If you get the message,

\* WARNING.

CHECK PROGRAM IN MEMORY.

\* I/G ERROR 5Ø.

It means the device name lower case letters -csi.

not successfully read your program into memory, an error occurs and the computer prints one of the following error messages:

- 1 \* ERROR NO DATA FOUND or
- 2 \* ERROR DETECTED IN DATA
  - \* PRESS R TO READ CS1
  - \* PRESS C TO CHECK \* PRESS È TO EXIT

choice to use one of the following three options:

NOTE... the single letter response (R - C - E) that you type in at this time must be in UPPER-CASE characters!

1... Press R to repeat the reading procedure. Now before repeating this check to make sure that you have put the cassette tape in correctly and that it is not a DATA tape.

If message was 1-NO DATA FOUND it means the Volume was LOW.

If message was 2-ERROR DETECTED it means Volume HIGH or TONE incorrect.

Adjust, then follow the directions as they appear on your monitor or TV screen.

- 2... Press C to check the data you have read into memory. Now is the to adjust your cassette recorder's volume control and tone setting. ( peak to peak signal to computer should be 1 volt ) again if message same as 1 or 2 above adjust then follow the directions as they appear on your monitor or TV screen.
- 3... Press E to exit from the loading procedure. at this time another error message is displayed, indicating that the computer did not properly read your program memory:
  - \* WARNING:

CHECK PROGRAM IN MEMORY

\* I/O ERROR 56

If I/O ERROR 56 appears don't panic! generally speaking, it means one or other of these.

"ERROR - NO DATA FOUND" the computer did not the recognize

"OLD CS1" routine, on the other hand - when the error message .

"ERROR DETECTED IN DATA"- the computer recognized only part of the data that the recorder was sending to the computer.

As above recheck your cassette's volume control and tone setting, then your cable. Make sure that both ends of that cable are firmly attached to the computer and to the cassette recorder. Also make sure the color-coded wires leading to the cassette recorder are connected correctly, as it will not operate properly if they are reversed!

My Realistic CTR-38 has a speaker monitor (SP.MON) switch, handy as it enables one turn off the noise on loading or maving without getting up to adjust the volume on monitor or TV screen.

If after SAVING and on CHECKING you get the message.

#### \* I/O ERROR 66

Check all of above points, but most probable cause, the HEAD is DIRTY or MAGNETIZED.

Have you ever typed "OLD CS1" when it should have been "SAVE CS1"? and to carry on wipes out program you spent hours typing in and had not SAVED every 10 or 20 lines as we all do(?) in case we do something stupid!!

To seasoned Hitchikers the familiar words don't PANIC still works. Do a SHIFT 4 and follow instruction

> \* PRESS CASSETTE STOP CS1 THEN PRESS ENTER

after which you get the message:

\* WARNING

CHECK PROGRAM IN MEMORY

\* I/O ERROR 54 or Ø3

depending on when incorrect action takes place and sanity returns once more as your precious program is Safe.

Our Librarian Graham Smith will be very happy to make up on Cassette any programs you require. For those with the 32k in the console special Loaders and TOP assembly games are now available.

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### the DIJIT AVPC CARD

by Tony Magovern

There is a most interesting new development on the TI-99/44 scene in the form of the Advanced Video Processor Card from DIJIT Systems in San Diego. This uses the same V9938 video processor that is used in the Myarc Geneve. Right now I'm typing this on a full 80 column display using an experimental version of the Funnelweb Editor designed explicitly to work with the AVPC card. display device is a Commodore 18848 RGS monitor. I hesitate to use the term high resolution to describe this device as it has CRT color dot pitch barely adequate for the AVPC or the Amiga either, but I was able go out to the nearest K-Mart and buy one, so Will could have his Amiga back. To get better would involve a trip to Sydney, or far more money for a Multi-sync. The 1984 has the advantage that it also accepts a composite video input so you can use it as a display monitor for a VCR as Since the monitor is a great part of the expense in getting better video resolution, no matter which way you go, this is important. Unless you want to revert to monochrome and just do text editing with a V9938 system of any origin, a RGB monitor is essential.

So what is the AVPC card and what does it do for you. Physically it is a card for the PE box, and just plugs in like any other card. You make direct connection from a 6-pin DIN connector on the rear of the card to the RGB monitor. I made a short 6-pin DIN to DB-25 adapter cable which I then plug with the Amiga cable that comes with the monitor. This has a DB-23 but this causes no problems. The sound still comes from the console connection and you will probably need to make another cable for that also. No other connections are needed. To make the system work you have to

modify the console used with the AVPC. The process is easy and well explained in the instructions that come with the card. If you have ever cleaned the GROM port connector, then you have already experienced the hard bits, and no soldering is required. modifications have two purposes. Firstly the existing VDP i e partially disabled, left ticking over for clocking the GROMs. console also contains circuitry which prevents VDP accesses from appearing on the external bus to the PE box. Cutting a trace here lets the card in the PE box in on the act. Do that, clean the GROM port connector while it i s reassemble the console, hook up the PE box and monitor, and fire it all up. If your experience is like ours it will work first time. That is good engineering! In use all you will notice is the occasional flash from the screen when the corrects bad signals to the UDP chip from Basic, usually under conditions.

The AVPC **US#5** the Yamaha/ASCII V9938 chip as used in the Geneve. This started out life as a development of the video chips in the 99/4a, but when TI lost interest in home computers development passed to Japan where it became the basis for MSX-II, something that hasn't appeared out here. Yamaha designed it to be compatible with the 9918 also used MSX-I, in provided programmers respect the reserved video register bits as specified in the 9918 or E/A manual. Most third party software writers have, but unfortunately TI Lubbock were major offenders. Just isn't clear. why Maybe just sloppiness, or maybe bloodymindedness in TI's internal company politics. These problems were built into the infamous GROMs. which has meant that DIJIT has had to be extremely ingenious in working around the traps left by TI. The last and most insidious problem they found was conflicts with RS232 interrupts in interrupt driven terminal emulator programs. Due, it turned out, to a bug built into the TI R9232 card (and copied by Corcomp and Myarc without correction), for which the only solution is a new EPROM which DIJIT will provide for your particular make of card. Imagine the problem they faced,

occasional lockup occurring only with their own new hardware with all three independently sourced RS232 cards. Even sympathetic feelings hurt.

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These problems are all handled transparently. A further class of problems cones with the bank switching of VDP RAM when the last of the normal VDP RAM is accessed in the new VDP modes. The TI system specs allowed for a way around this, but third party software writers have not always respected it. Funnelweb has been compatible for some time, but some other programs may need updating. Various Horizon RAMdisk ROSs are offenders but are easily fixed. I'm using my own fix on one right now and DIJIT will have their own. The card comes, with a modified version Of Barry Boone's fine Archiver program, and a program of Barry's that shows My-Art pictures from the Also there are SOMe primitive adaptations of TI-Writer to 80 columns. In future a fully adapted 80 column version of the Funnelweb Editor will be available the one I'm using right now or its future developments, and we have given DIJIT explicit permission to distribute this with their card. I'm already finding it hard to look at the 40 column editor again, and the AVPC machine has become our prime working computer. It already has the Myarc 512K RAMdisk installed and soon will have all the goodies, as it is working so smoothly.

The AVPC design also looks to Unlike the Geneve it future. supports the full 192K of VRAM (in fairness this isn't so important on the Geneve which has more CPU RAM). but I can see AVPC programs coming that will not be Geneve compatible for that reason. The V9938 supports mouse and light pen and the physical interface is clearly defined. I have found this one of the more irritating features of the Geneve sales effort - the naked attempt to force users to buy Myarc's product by issuing dire warnings about possible damage, while with-holding detailed technical information. The AVPC also has built in an expansion connector, intended for a video digitiser sub-card. This I have no details on so I can't comment.

The card I have here is an

evaluation model, but it is very neatly laid out with no obvious afterthoughts. I would agree with the designers when they say that the long gestation period has led to a product that is mature at release. I think it is so good that I'll buy one for the second system. Another V9938 based 80 column device has been in existence for some while, from Mechatronics in Germany. It is not clear whether it is still available, and I have never actually laid eyes on that or any other Mechatronics product. From reports I have had, and judging from a description in Micropendium some time back, it is a Very much clumsier device mechanically, electrically and to the programmer. Some correspondents whose judgment I respect had looked at it and decided against it, but have snapped up the DIJIT card.

A question to be asked is how it stacks up against buying a Geneve. From my point of view it allows 86 column operation and access to the power of the V9938 in a familiar system. William came back from his Amiga for long enough to create a whole new set of V9938 interface routines, a video library reminiscent of many of the video functions on the Amiga. I would love to have the extra horsepower of a TMS-9995, but this may well do me until the time comes to move onto something altogether new and more powerful. Will is of course a confirmed Amiga fan but I'm not fully convinced there, finding it difficult to warm to a machine for which software producers seem to think it necessary to have an exclamation mark in the name of every second software title. I just have a feeling that it would be a mistake to buy a new computer that does not have a large linear CPU address space (and that makes any MS-DOS machine out of bounds), The Geneve may be fun for the small circle of developers who have ready access to Myarc for detailed information, but I feel little inclination to work as a complete outsider on a machine with a small user base from a producer notorious for secrecy, no matter how elegant I find its CPU instruction set. There would be far more return for effort on the Amiga. The longevity of the TI-99 as a orphan system is already remarkable, and an AVPC looks a good

way to keep it alive for several years more, until both it and the 50em 4-function like calculators in the march of computer progress.

Our policy here is to develop software for the system we have. We always try to make the Funnelweb system as widely usable as possible and have also tried to accommodate other significant hardware we know of, when we have enough information to do so. There is no substitute the actual hardware though. GRAM devices are one area we have never pursued, as we were left with no inclination to buy one from the Speedking joysticks and adaptor. best known supplier, and otherwise have just had higher priorities. The new 80 column editor is the first major development in the Funnelweb package tied to a specific piece of hardware, and is An. implicit comment on just how important we think the AVPC is.



### JOE WRIGHT

It's good to see our jovial Vice President, Joe Wright, back on after a recent spell hospital. It's hard to keep a good man down - Joe still managed to write an article for this month's newsletter. That's what I call real dedication to the cause!

From the Committee and members, hope you come up to full strength soon and that all of your problems are behind you.



### FOR SALE

T199/4A Computer including power supply and modulator

Expansion System complete with;

- 1) Interface card,
- 2) 32k memory expansion,
- 3) RS232 card,
- 4) Disk controller card,
- 5) 2 Double-sided disk drives,
- 6) Single-sided disk drive

#### Modules;

Extended Basic Editor/assembler with manuals TI LOGO II with manuals Video Chess TI Invaders Addition and Subtraction 2 Amazeing Disk Manager 2 32k RAM module Music Maker

#### Books!

Programmers Reference Guide -Regena Computer Programs for the Home - C D Sternberg Getting Started with the T199/4A - S Shaw Terrific Games - Renko/Edwards BASIC Tricks - A Wyatt Entertainment Games - Ton/Ton Art and Graphics - T A Thompson Fun and Games - S M Muncy The TI Playground - F D'Ignazio and copies of many more.

#### Software:

Many disks σf programs including, Graphx Picasso Publisher TI Base Text to Speech

copious quantities of support ducumentation, and some extra hardware.

Contact Alan Franks NOW if you are interested.

## BITS and Pieces

compiled by JOE WRIGHT

I have been digging back through old newsletters again this month and found some more interesting BITS and PIECES for you.

This first piece is taken from the Houston User Group N/letter of July 1984. It is a piece of basic programme from an article by Curtis Garcia. The article discusses the use of rational operators. The section of code is to detect an arrow key press and either increment or decrement one of two variables X,Y. Y has the limit 1 to 24 for row position and X has the limit 3 to 36 for column position. The first section of code shows what could be called the more usual way this could be coded.

#### PROGRAMME 1

419 GOTO 500

wer

205 CALL KEY(6,KEY,STATUS) 218 IF STATUS-8 THEN 288 22Ø IF KEY=68 THEN 26Ø 238 IF KEY=69 THEN 388 248 IF KEY=83 THEN 348 258 IF KEY=88 THEN 388 ELSE 288 268 Y=Y+1 276 IF YK31 THEN 586 284 Y=34 295 GOTO 555 300 X=X-1 318 IF X>8 THEN 588 32Ø X=1 339 GOTO 599 34Ø Y=Y-1 35# IF Y>2 THEN 5## 36Ø Y=3 376 GOTO 566 38Ø X=X+1 398 IF X<25 THEN 388 4ØØ X=24

The main body of the remainder of the programme starts at line 500.

This next section of code replaces the above, the use of rational operators decreases the amount of memory need to perform the same function.

#### PROGRAMME 2

288 CALL KEY(8, KEY, STATUS)
218 IF (KEY<>68) \* (KEY<>69) \* (KEY<>83) \* (KEY<>88) THEN 288
228 Y=Y+(KEY=68) \* (Y<38) - (KEY=83) \* (Y>3)
238 X=X+(KEY=88) \* (X<24) - (KEY=69) \* (X>1)
248 GOTO 588

Before looking at the above code more closely enter the following short basic programme and test the IF-THEN operation.

#### PROGRAMME 3

286 INPUT A
216 IF A THEN 366
226 PRINT "DID NOT PASS"
236 END
366 PRINT "DID PASS"
316 END

What did you find out? That only ZERO will cause the programme flow not to pass to line 300. Any other number, either positive or negative, passes control to line 300. Therefore to make an IF-THEN not pass control to the line number specified after the THEN, a ZERO must the result of what occurs between the IF and THEN.

Returning to programme 2 line 218. The format of the test used is (KEY(>X). In the first case where (KEY(>68) is used, the test is to see if KEY is LESS THAN or GREATER THAN 68. If it is then the result is -1 (true). If any key other than the 4 keys being tested for is pressed or no key is pressed line 218 will be as follows:

218 IF (-1)\*(-1)\*(-1)\*(-1) THEN 288

which results in

#### 218 IF 1 THEN 200

This results in control passing back to line 200 to CALL KEY. This loop continues until one of the keys being tested for is pressed. Lets assume 'D' is pressed. Now KEY=68 since the ASCII code for D=68. The

test (KEY(>68) is no longer true so line 210 now reads:

218 IF (8)\*(-1)\*(-1)\*(-1) THEN 288

which results in

21Ø IF Ø THEN 2ØØ

This time control will not pass to line 200 and continues to line 220. Lets assume 'Y' has a value of 12 at this point. We can now look at line 220:

(KEY=68) IS TRUE=-1 (Y<3Ø) IS TRUE=-1 (KEY=83) NOT TRUE=Ø (Y>3) IS TRUE=-1

line 220 can be written

22Ø Y=12+(-1)\*(-1)-(Ø)\*(-1)

and then rationalised to

225 Y=12+1-5

22Ø Y=13

So Y has been increased in value by 1 by pressing the right arrow key D.

Finally a look at line 236 just to prove that X did not alter as well. Assume x=12 also.

(KEY=88) NOT TRUE=8 (X(24) IS TRUE=-1 (KEY=69) NOT TRUE=8 (X)1) IS TRUE=-1

line 236 can be written

23Ø X=12+(Ø) #(-1)-(Ø) #-1)

238 X=12+6-8

23Ø X=12

So in this case X remains the same value because of the two KEY tests being ZERO.

Programme flow can now continue to line 500 to pick up the main body of the programme. Ideally this section of code for detecting a KEY PRESS would be included in you programme as a SUB-ROUTINE. Each time a KEY PRESS was required it would be accessed by GO SUB or in extended basic it could be given a SUB programme name and be accessed by CALL.

If you want some further reading or rational expressions and logic expressions a good starting point is the TI Extended Basic Book, pages 41,42,43 44.

#### GAMES SCORES

Having listed some scores for games which I found in an old Newsletter from Houston in this column last month. I have been deafened by the silence of scores being rung in. The day after the due date for article to the Editor I received a letter from Geoff Phillips from Henley Beach in South Australia. He has submitted three scores for this column. I also have a new score for BARRAGE by my son who decided to "have a bash" a few nights ago and came up with a good score also.

GAMES LEVEL NAME SCORE

\*\*\*\*\* \*\*\*\* \*\*\*\*\*

BARRAGE 17 Chris Wright 621450

PARSEC 16 Simon Phillips 735000

TOMB/CITY nov Judy Barrett 415888

TOMB/CITY mas Judy Barrett 293850

JUMPY Liz Lawrence 34500

So there is a challenge for somebody, I might add that I had a bit of a try at INVADERS over the last week and could not get over 38,888 no matter how hard I pressed the fire button or tugged the joystick.

#### ANOTHER HINT

This hint is from Ed York of the CIN-DAY Users Group. The hint has travelled a long long way. Although from CIN-DAY I have taken it from the TI-TIMES N/letter from the U.K.!

"Have you ever wanted to round off numbers and did not know how to do it in a programme? Well it is easy once you know the secret. Here's how! The following example will illustrate the process:

188 CALL CLEAR 118 A=123.4567891 128 PRINT A 138 A-INT(AS+8.5)/188 148 PRINT A

When this programme is run you should get the following results:

g on 091C t is 1905

anes. ttor last the in.

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RE \*\* 56 88

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ff

do

By . 123.4567891 123.46

If you want to round off to three places then use 1000 instead of 100 and for four places 10000 use instead of 100. Try it!

A SHORT ONE

This small article was taken from an old TI TIMES newsletter also. a column BRUSSELS SPOUTS.

" T # YOU expansion or Mini Memory here is a small piece of code which will allow you to test the speed of benchmarks or parts of programmes.

100 CALL INIT 118 CALL LOAD (~31879, Ø) 200 CALL PEEK (-31879, A) 21Ø PRINT A/6Ø 22Ø ! A IS IN SECONDS

How does it work? -31879 is one of a number of registers in the TI that DSDD Disk Controller bd compl increase by 1 at each Video! Interrupt (6Øth of second). Loading Ø and them PEEKING to see how many 60ths have passed therefore have an accurate timer. The only catch is that it counts up to 256 them goes back to zero so it is only effective up to 4.2 seconds. (I think there will be a 16 bit counter somewhere. Does anybody know where?). You could use this to test how long say 20 of each Ex.B operation takes to learn which are fast and which are slow. (Test empty loop first for differences). You could also embed this temporarily in a programme to see whether a small change makes that part any quicker.

it for this month, best wishes for Christmas and the new year to all!

Joe Wright



### SYDNEY MINI PE BOX PRICE LIST

have EX B and memory The following is a list of the prices for hardware available from Peter Schubert of the Sydney Users Group.

> Mini-PE motherboard (with either PIO or RS232 port) **\$**9Ø

> Extra options on Motherboard: R8232 \$56 PIO \$5Ø 32K Memory Expansion \$40 RS232/2 9second port) **\$32 \$18Ø** MINIRAM+ ramdisk bd with 128K \$180 Extra memory on MINIRAM+ by quate RealTime Clock fitted to MINIRAM \$30 Diecast Box (painted and fitted) \$35

As an example of price structure: Disk controller/RS232/32K/PIO/box costs \$395.

For those who prefer to fit the boards into their own box, fitting instructions are included.

Mail Orders to:-

P. Schubert PO Box 28 KINGS CROSS NSW 2911 AUSTRALIA



### TI 99-4A STARTER PACK

NOEL CAVANAGH

This pack, printed by Collins in the UK, and written by P. McBride, introduces the user to ideas and programming hints for BASIC programming.

The series extends the user from the beginnings in the BASIC programming expr sion "HOW DO YOU PUT A VALUE manual - you know the blue covered book you looked at when you first! opened your TI package. - through more complex programming problems.

The book covers:-Programme planning Planning sub-routines Characters Colour Music Arrays Controlled inputs Strings Graphics Maths plus much more

The cassette supplied is used as a graphic display of the routines; examples are given for the user to try and see exactly how the programs described work, step by step.

Chapter 14 'Why Won't It Work?' briefly covers the reasoning behind program errors and how to locate them.

This pack would be a very good introduction to BASIC programming and will be a useful tool for any member wishing to learn to write programs - I'm sure our BASIC class will most certainly be making good use of the material. I feel that the addition of this package to our Technical & Information Library will be an asset to the Club.

This package will also be available YEAR from the December meeting for borrowing by members, so if you are all interested in BASIC programming, make sure you have a look at this handy tutorial package.

### PRE- LOVED EQUIPMENT AVAILABLE FOR SALE

Have you ever heard ON THAT?" - well I think it applies adequately to second hand computer software.

While we can no longer go to our local supermarket to expand our system, just about anything still be obtained on the second hand market at a fraction of what the equivalent costs. for other computers. The club, as most of our local members know, runs adverts in the local papers and systems are purchased and divided up amongst the members who require certain bits to expand their own system. member local or out of town wants to take advantage of this they only have to let me know what they require and I will do my best to obtain it for them.

At the moment there is a large quantity of modules including Mini Memory, Editor/Assembler, Ex Basic, Slymoids, Blasto, Early Learning Fun, Munchman, Reading On, Attack, a set of TI joy sticks, & an unlimited number of Car Wars modules available plus a number of consoles. We have had a large turnover of pre-loved hardware & software lately which helps to keep people interested in the TI computer and this is what a user group is all about. So if your interest has been waning lately maybe you need to lash out and add something second hand to your system.

ALL THE BEST FOR XMAS AND NEW

Alan Franks

### STICK THAT IN YOUR ANALOG COMPUTER

CHRISTMAS PUZZLE TO PONDER submitted by a member

Recently, on a hot, summer is coming day, I felt the need to take there ... " some anti-dehydration precautions. As the standard therapy is far more effective in company, I went around keeps a comprehensive range of anti-dehydration measures, I decided to take some of the new 345ml ampoules of Power's so that we could dehydration. test its efficacy.

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As we settled ourselves on Phred's patio and initiated testing procedures, a bloke across the street, who was washing his car, called out that he'd be over to join us soon - a wise precaution after such strenuous activity.

"I knew Bill would be over when he spotted us" said Phred.

before" I replied. "I remember Bill next door neighbour has a someone/or-other from over there... Holden.\* Bill Brown, I think.

"That's right" said Phred. seemed remarkably revived. "You met Bill Drown - he lives in he was overdue for a new car." And, the corner house - not the blue one turning to me, "He used to have an with no fence - the other corner, old Kingswood like that one of The bloke washing his car is Bill Smithy's parked outside his place. Grey. "

that Phred's house is the only one by now." in the block on his side of the street, and the 7 houses in the Bernard over his side fence block on the other side of the to have a look at Jack Green's new street are Phred's only neighbours. Trailer sailer' and got conned into I have met a few of them at Phred's charity functions at which the aim replied. is to accumulate quantities of aluminium containers - empty to aluminium containers - empty to "Jack's 626 is still parked facilitate handling - for donation over there" said Phred "They must to worthy causes.

"Two Bills across the road as well", was my comment. "At your they get back Jonesey'll be heading last do I met Joe White and Joe over here before the car stops. Try Black. As I recall, one was a keen him on this new brew - tell him golfer, but I can't remember which you've run out of his XXXX." golfer, but I can't remember which

"That's Joe Black" said Phred. "They live next door to each other. As well as a golfer, there's a variety of hobbies and interests among my 'neighbours'. There's a 10 Pin bowler, a footy player, even a beer coaster collector, and - as a 4WD Toyota came along the street and pulled into one of the driveways -"there's the punter back from the TAB. And you can see the CB aerial on that low set concrete block next to the white house in the middle

Before he could continue, Bill Grey came up the steps and Phred to Phred's place. Even though Phred introduced us. It was obvious from Bill's raspy "G'day" that his throat had begun to dry out - one of the first signs of the onset

> "Here this'll do you a on 'power' of good" said Phred as he quickly slipped an uncapped Power's to Bill, who immediately applied some to the lining of his throat.

> > "I needed that" said Bill. "Even though it's not my usual brew, it's not bad...I'll try another one."

"Cleaning the car to trade it "I can't recall meeting him in?" queried Phred "-now that your

"No way" said Bill, who now

"Where's Jonesey?" asked Phred. I must explain at this point "I thought he would have spotted us

going for a trial run in it", Bill

have taken his wife's Celica."

"Don't worry" said Bill "- when

Deciding to contribute to the conversation I made some comment about how people seemed to have their own preferences when it came to brewed beverages.

"It's like that around here" agreed Bill. "We have a Fosters fancier..."

"Lives in the green weatherboard place" chimed in Phred, "next to the footy player" (with a wink at me).

"And one bloke who sticks to Swan Special Light" continued Bill.

"The beer coaster collector" - Phred again - "who lives next to that place with the brown vinyl siding."

"We also have a wine buff among us" said Bill.

Turning to me, Phred asked "Which house do you reckon he lives in?"

As I had the dehydration well in check by this, I decided that a drop or two of inspiration was called for as I pondered this question.

"Well - it's either the white house, or the one with the Magna in the driveway."

"Neither," Phred came back "it's the one this side of the Magna."

My intake of inspiration was obviously insufficient, so I decided to rectify the situation - a wise decision - as Bill continued "There's also a bloke with a taste for Toohey's."

"Who lives next door to the 18 Pin bowler" - Phred on cue again - "And knowing, well you do now, that next door to the cream house VB is the preference, can you work out where the testotaller lives?"

The inspiration was working now and I came straight back with the answer, surprising Phred. But he hadn't finished with me yet.

"So, let's see how sharp you really are. At one place across the

street, they don't own a vehicle. Who do you think that is?"

At this stage my kidneys were attempting to dehydrate me again and I succumbed to the pressure.

This gave me a chance to think about Phred's last query - when it dawned on me that I could see vehicles at 6 of the 7 houses, but there was no vehicle at the house three doors along from the brick veneer place.

"That's a curly question" I said on my return. "I think I'll have to go home and try a spot of data processing on my computer to come up with the answer to that one." And so, using this as my excuse, I departed.

At home I decided to jot down the various snippets of information that I had garnered at Phred's place with the idea of posing the queries 'Who is the testotaller?' and 'Who does not have a vehicle?' to people who had not had the benefit of a ringside view. There was enough information to work out the answers. But nobody was interested. Even when I threw into the conversation (for the light-hearted touch) mention of an interesting cryptic crossword clue I had come across. The clue was ABCDEFGPQRSTUVWXYZ. And the answer is dehydrated. Maybe I don't put it across very well. Ah Well - maybe next year things will get better.

Can you solve the problem posed above? The correct answer will appear in the February issue of the Newsletter

### SOCIAL EVENING

If any members are interested in a social night to be organized in February, please contact Noel Cavanagh and let him know. Any suggestions for a location for this night out are requested to talk to Noel as well. The final venue and the date etc will be published in the February newsletter. Make a special effort and come along to the night out - they are great fun!!

### ROUNDUP FROM OTHER SOURCES

collected by RON KLEINSCHAFER

#### DISCOVERY!

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A discovery of great significance has been made about all the bits and pieces that make up your trusty TI. Indeed even your Video or TV and wizardry, other such electronic research. much sleepless nights, and at great cost the manufacturers secrets have been broken!! It can now be revealed that all those seemingly incredulously complicated components in your equipment that do those formidable tasks are simply fancy containers of varying sizes that are filled with smoke! This discovery was made while observing a fault and the conclusion became immediatly obvious. When the smoke escapes they no longer work!

#### UPGRADE YOUR JARGON!

Just notice your rise in esteem by your friends if you begin to use the following terminology:-

CYBERPHILE: One who loves computers. CYBERPHOBE: One who hates computers. who CYBERPHILLIAC: One does I t<sub>i</sub> unspeakable things to computers. that is currently believed cyberphobes who constantly have acquaintance with requiar cyberphiles eventually turn to the latter's ways, but if the machine relationship with the becomes too close it can easily slip into cyberphilia. This happens regularly at 2AM after a Disk crash.

#### CRACKDOWN ON PIRATES!

recent newspaper report on government crackdowns on piracy of software and hardware can have some serious legal implications οf especially on the cloning computers, one question that is sure to be raised is

(a) What is a fake computer? and another that surely comes to mind is (b) Is Commodore worried? Watch your newspaper for further developments.

LESSON IN MATHEMATICS!
OHMS LAW:
R=E/I
KIRCHOFF'S LAW:
I't=I'1+I'2+....I'n
COLE'S LAW:
SAlad=CutCABj/BEfBeRGr

#### NEW CRIME WAVE!

It has been noticed that a new form of mischief that is sure to outdo graffiti is emerging in the very midst of our social fabric. The device under threat is the humble photocopier. It seems that the copier is now being used in a novel way by exhibitionists!! The crime involves sitting on the copy machine and the copies so produced reported to Þe endlessly fascinating!! The real fascination for the people responsible for apprehending these culprits is in trying to identify the criminal from the evidence left behind. defeat this problem is to redesign the copiers so that the material to be copied must pass between a roller and the scan head, a very narrow space, effectivly removing any indecent practices.

#### LAWS OF NATURE:

One of the Laws that is first learnt either by stint of accident or acquired by wisdom of the years is MURPHY'S LAW, which states (as you all know) that if anything can go wrong it will, but little is known of other laws just as important in our daily lives, some of these being:

Mrs MURPHY'S LAW: "Murphy was always the optimist"

SATTINGERS LAW: "It works better if you plug it in."

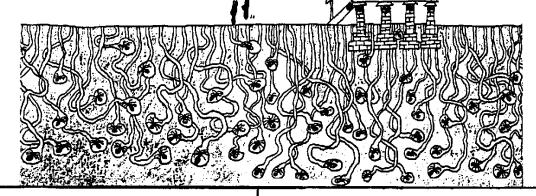
HARVARD LAW: "Under rigorously controlled conditions the device will do what it B.... well pleases."

PUDDLERS LAW: "What begins well ends badly", and the corollary: "What begins badly ends badly."

SMITHS LAW: "The person who smiles when things go badly has thought of someone else to blame it on."



### FUNNELWEB FARM PRESENTS



# LIVING WITH SPIDERS

PART 3

'by

Tony Mogovern

The previous instalments have been on "dual-mode" programs which have to run with or without FWB. Now we'll look at a few aspects of writing programs to work only with FWB.

The first thing is access to routines. If the FWB E/A utilities are loaded then a normal BLWP call to GPLLNK works as usual. The various XML address possibilities should be respected, particularly the >FØ XML at >8300 which is used by the TI-Writer and Mini-mem modules, or from console GROMs. If the E/A utilities are not loaded a briefer than normal form of GPLLNK may be used. The following routine is used to call the beeps and bloops in DPatch.

#### \* FWB system equates

SETGRM EQU >FF28 MODFL EQU >FF5A

#### \* GPLLNK BLWP vector

GPLLNK DATA GPWS, GPLK

GPLK EQU #

MOV RHODFL, RØ LI R1, GPLRT

MOV R1, #R# MOV #R14+, @>83EC

LWPI GPLWS

B @>0060 Go to GPL

GPLRT LWPI GPWS

MOV @SETGRM,R1

BL #R1

RTWP

Here the XML vector has already been determined by the FWB entry code and its target address stored at MODFL (>FF5A). If the E/A GROM is present MODFL will contain the value >2002 for XML >21 as example. The re-entry address is GPLRT is written into the XML address, without bothering to existing contents. Ιf you do use >8300 you had better SAVE restore it though. The GPLLNK data item is written to R6 of the GPL workspace, and then transfer made to GPL. When the linkable GPL routine has finished it returns to GPLRT. SETGRM (>FF28) contains a pointer to a BL routine in FWB which resets all the GPL items. This routine uses One subtlety is that the only RØ. GPL stack pointer at >8373 is reset to >80 by the SETGRM routine. The FWB cartridge loader from UL sets it necessary but it can't hurt. problems apparent in some programs. If the DSR is not found. This There is no reason why it has to be particular program uses a data VSBR a BLWP routine and the code could be to fetch the PAB error byte into RØ recast in other forms. FWB contains from fixed address in VDP. A normal a similar routine to handle cassette VSBR would allow a more flexible loading, but it is in-line code and routine. not externally accessible.

externally accessible DSRLNK with steps over the word following the BL BLWP vector at >FFD4. This routine call. Normally this would be a JMP takes no following data item, and to an error handler. returns with the status (equals) bit set if not found and it is otherwise up to you to dig out any error from the PAB or GPL status byte. This means that it is basically set up for file type access only. As an example here are the load and resave routines from the CF/CG configuration program,

FILSVE EQU \$

MOVB @SAVEOP.R1

JMP FILOPS

FILOAD EQU \$ MOVE GLOADOP, R1

\* Load-save routine

FILOPS EQU \$

LI RØ.PAB

BLWP GVSBW

RØ, PAB+9 LI

MOV RØ,@>6356

SB @GPLST, @GPLST

BLWP @DSRLNK

JEG FAILS

BLWP QVSBRD

DATA PAB+1

SRL RØ,13 JNE FAILS

MOVB GGPLST, RE

COC @MASK, R.S

JEQ FAILS

INCT R11

FAILS RT

MASK DATA >2000

LOADOP BYTE 5

SAVEOP BYTE &

for save or load operations. It is uses routines available in QD which assumed that the PAB and VDP buffers in turn were written to match are already set up as needed. I'm TI-Writer routines used by SD. You never quite sure if the clearing the could do things differently if you GPL status byte i 🕿

The )7E to help with key-unit exit after the DSRLNK call is taken If no error is indicated here after the first 3 bits have been isolated, the GPL status byte FWB does however contain an is then checked. The failure exit call. Normally this would be a JMP

> Suppose your program needs to do a sector access via a DSRLNK. You could of course use the E/A utility routine which takes a following data item. Just to be different we'll work through the sector reading routine used in QD. The E/A routine is not available so the FWB DSRLNK has to be modified to suit. This is done by temporarily rewriting an internal item from >8 to >A on entry and restoring it on exit. The routine also illustrates the FWB method of coping with high-CRU Horizon RAMdisks. The problem here is that the sector read/write routine has of necessity the same name >10 in all disk DSRs and if the drive number doesn't match an error is returned. This means that a normal DSRLNK won't get past the usual disk controller at CRU >1166 (the Myarc RAMdisk at CRU >1000 handles this transparently for normal disk controller accesses). Some programmers solve this problem by using a DSRLNK which starts its CRU search at >1200 which finally loops around to check >1000 and >1105. Atrax Robustus doesn't care for this method as it puts a permanent slug on normal access, and insisted on doing it another way which will become apparent.

In the code to follow, extracted from the QD source, only sector reads are performed and any non-null data byte will do for READ. The style of coding reflects a situation where registers are in short supply and length is critical. The drive number is at DR#, the VDP sector buffer address at PBF, and Alternate entry points allow the sector number in R7. The code strictly chose. The offset values >56, >50, and >7A refer to particular address routine is INCTed. offsets into the FWB DSRLNK routine. equivalent to a DA These will be maintained at their! present values, even though I am to restore the value at every continually resisting temptation to possible exit from the routine. shave some bytes out of the DSRLNK.

DSRLNK EQU >FFD4

FAC EQU >834A SCNAME EQU >8356

BYTE >Ø2, >Ø1, >1Ø

BØF BYTE >ØF B1F BYTE >ØF CTRLC BYTE >83 EVEN

SECRD EQU .

MOV R11,R1Ø MOV @DSRLNK+2,R11

INCT @>ZA(R11)

SECRN R9 PAB LI

MOV R9, @SCNAME

LI R8,PN BL **QVSTRW** 

LI R11,FAC+2

MOVB @DR#, #R11+

MOVB GREAD, #R11+

MOV @PBF, #R11+ MOV R7, #R11

BLWP @DSRLNK

JEQ MOSERR

MOVB #R11,R12 JEQ DSREX

DSERT MOV @DSRLNK+2,R11

@>5C(R11),@>56(R11) A

CB @>56(R11),@91F

JL SECRN

DSERR EQU

ĦL **e**vstru

DATA ERMSG

DATA >2E6

HOLD BL RKSCAN

CB R12, @CTRLC

JEQ HLD19

CB R12, @BØF

JNE HOLD

HLDIØ LI RIØ, EXIT

DSREX MOV @DSRLNK+2,R11

DECT @>7A(R11)

MOVB @BØF,@>56(R11)

\*R1Ø

On entry the return is saved in Rig, and Ril used as a working register thereafter. The DSRLNK is then fetched from the BLWP vector and the word offset >7A into the used until a whole directory worth

This makes it equivalent to a DATA >A call to an E/A DSRLNK. We must then be careful VSTRW is a BL routine that writes a string with leading length byte from CPU to VDP. While at it we load the PAB pointer at >8356. The next few lines load the FAC area with all the necessary data for a sector read call and leave R11 pointing at >835ø where errors are returned. If the DSRLNK search finally fails, or has found the drive number but can't read the disk, the JER sends it to the exit error routine.

The DSR sector routine error byte is then checked. If this is null the sector read has been successful and a normal exit is taken. If it is not null then the sector routine has been executed but the drive number wasn't found at that CRU base and the special error handler at DSERT is entered. This resets Ril to the start of the DSRLNK code and adds the normal increment of CRU base search at offset >5C to the start address for the CRU search. The sector read routine is then re-entered and the whole process started again, but this time from the next CRU slot, so that the last error isn't repeated. Before this repeat is done the CRU base is checked to see if it has reached the end of the line. If so the normal error exit is taken. The virtue of this method is that is the error path that cops the penalties and not your Myarc RAMdisk at >1000 CRU base. I have also heard that it works better with multiple Horizons with ROM DSRs.

The error exit writes up an error message using an in-line data entry point to the VSTRW routine and then waits for either (fctn-9) or <ctrl-C> to be pressed. The final return address is re-written in RIØ as needed. All exits pass through DSREX where the CRU base search start is re-initialized and the DSR type reset for normal file access. In some applications it might be preferable not to reset the CRU starting base immediately but this leads to messier code overall. A good example is right here in in this very disk directory application where the same CRU base could be

of file header sectors had been read. In fact this is done in the Editor's SD which uses generally similar code but it really only affects high-CRU Horizons.

Similar problems exist for volume name access to files where is also a DSR routine name common to all disk type DSRs. AS I yet the FWB main program code does not contain the special error handling routines as in FWB sector access code as there appears to have been no specific demand volume-name access to high-CŔU Horizon type RAMdisks. Most (the TI-Workshop cartridge i S an. exception) file-loader DSRLNKs don't: support it either. Incidentally you the other type of observe enhanced DSRLNK in action if you have high-CRU Horizons installed. Watch the lights when DSKU lor TI-Workshop or Ottawa issue DM-1000) is accessing low CRU devices, say a Myarc RAMdisk. or regular disk controller. The high CRU Horizon lights will be flashing, but not with similar access by a FWB system program. In this same vein if you catalog a high-CRU Horizon with QD the regular - sk controller light will flash with 3D but not with SD after the first sector has been read.

### HARDWARE WORKSHOP NIGHT

Due to popular demand a TI Console Workshop has been arranged for

TUESDAY 10th JANUARY 1989 at Warners Bay High.

The evening commences at about 7.80pm and includes such topics as how to do your own trouble shooting, how to repair the fault, all with advice and tuition from our resident TI hardware experts.

Hopefully Ron Kleinschafer will also be there showing his Eprommer, so if you are after a specialized chip come and get advice straight from the horse's mouth (so to speak).

If you are interested in attending, you MUST contact Alan Franks phone 459170 by Friday 6th January to reserve your spot.





### THE INFORMATION PAGE

#### IN YOUR NEWSLETTER THIS MONTH

In the News - a round-up of TI happenings Random Bytes An Anagram That Was the Year That Was - newsletter roundup Attention Grabber - a program News and Reviews Hardware and Software Review My Favourite Games Adventurers Corner Impact 99 Cassette Tips and Hints The DIJIT AVPC Card Bits n Pieces TI 99/4A Starter Pack Review Stick That In Your Analog Computer!! Roundup From Other Sources Living with Spiders - part 3

Carmany В. Anderson A. R. Kleinschafer ĸ. Cox T. McGovern The Daniels family L. Lawrence R. Gainsford J. Sughrue A. Lawrence T. McGovern J. Wright N. Cavanagh A. Member R. Kleinschafer T. McGovern

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#### PLUS MUCH MUCH MORE!!!!!

#### COMING EVENTS

Next Committee Meeting: Tuesday 7th February, 1989 General Meeting: Tuesday 14th February, 1989 \*\* ALL MEETINGS AT WARNERS BAY HIGH SCHOOL \*\*

AGEREA FOR FEBRUARY MEETING
Hopefully PRESS Word Processor Demonstration

CLASSES AVAILABLE FOR MEMBERS
CONSOLE REPAIR WORKSHOP Tuesday 18th JANUARY 7.88pm Warners Bay High

All other classes will resume February. See Feb N/letter for details

#### ANNUAL SUBSCRIPTIONS

Subscriptions to the Group cover the period 1 July to 35 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

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Mr.R. CARMANY 1504 Larson St. GREENSBORO NC.27407 U.S.A.