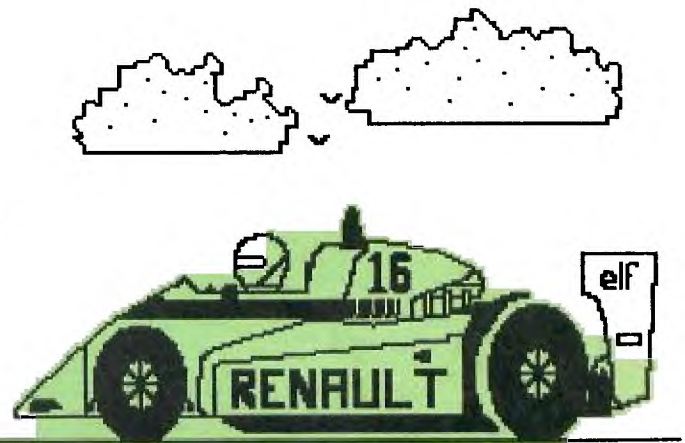
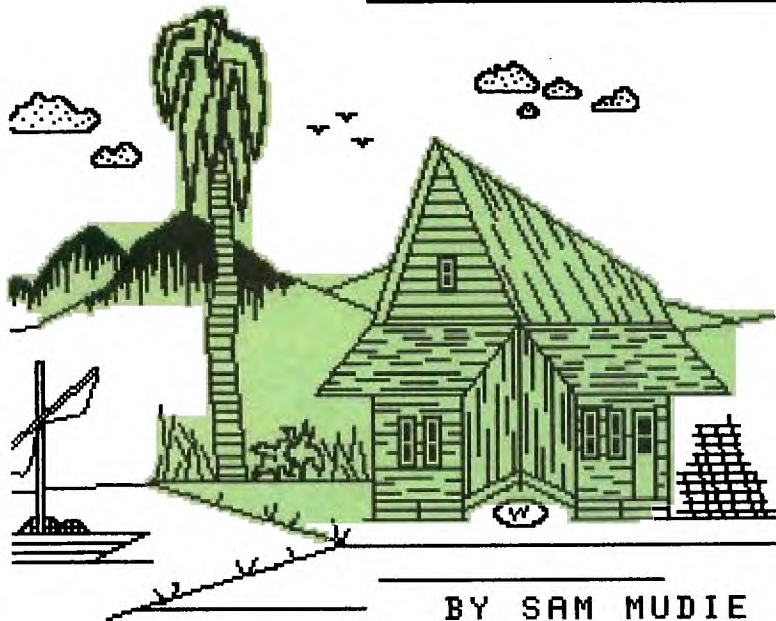
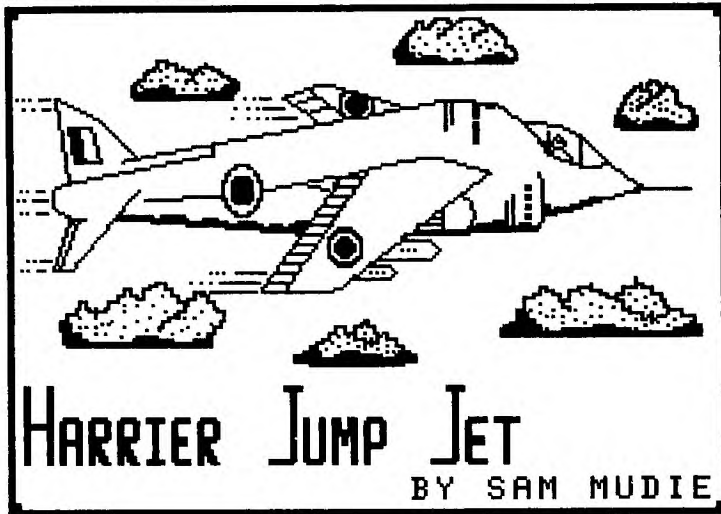


# SYDNEY

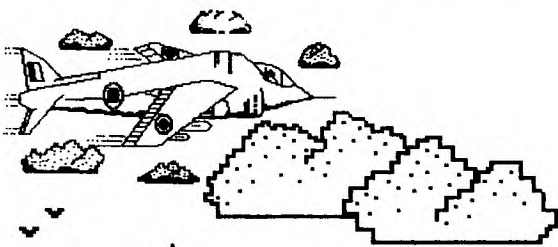
**TSUG**  
PO BOX 149  
PENNANT HILLS  
2120, N.S.W.  
R - \* D BY AUSTRALIA POST  
P - \* \* \* \* \* 24 No. N9H5933

# DIGEST NEWS

1985  
JUNE

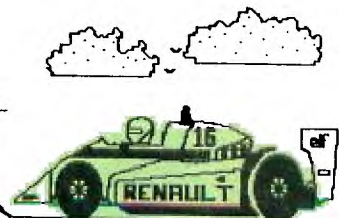
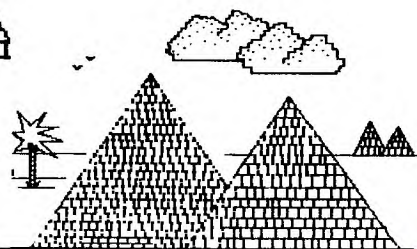
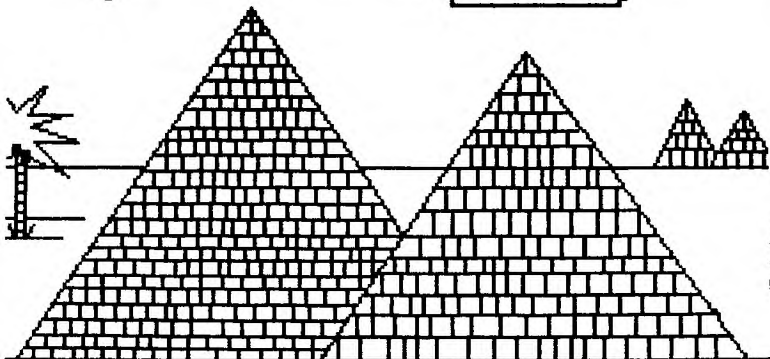


**RENAULT RE-20 TURBO**  
BY SAM MUDIE



Our first entry, in the GRAPHX CONTEST. These drawing were created by the very powerful Sydney based painting program called "GRAPHX". Calling all members! Now is the time to get those entries in to: T.I.S.H.U.G. GRAPHX CONTEST, P.O.Box 595, MARRICKVILLE, NSW, Aust. 2204.

\*\*\* READ INSIDE FOR MORE DETAILS \*\*\*



BY SAM MUDIE

BY SAM MUDIE

**RENAULT RE-20 TURBO**  
BY SAM MUDIE

# Sydney News Digest



The Texas Instruments Home-computer User's Group, known as TISHUG is a non profit, self supportive group of Texas Instruments computer owners and users. Information regarding membership and payment of dues should be directed to the Secretary, address below.

## DISCLAIMER

The Sydney News Digest (SND) is the official newsletter of TISHUG, and whilst every effort is made to ensure the correctness and accuracy of information contained therein, be it of a general, technical, or programming, nature, no responsibility can be accepted by TISHUG as a result of the applying of such information.

## THE NEWS DIGEST

The SND is published eleven times per year (no January edition), by voluntry staff, from material provided by group members, other user-groups and other related sources.

Contributions and all correspondence (other than membership) should be addressed to the EDITOR, LIBRARIAN, ADVERTISING, etc., and submitted at the group meetings or posted to the appropriate person at the general address, below.

Copy for publication may be typed, hand printed, or be on tape or diskette media as files suitable for use with TI-WRITER (ie, DIS/FIX 80 or DIS/VAR 80). Please include sufficient information to enable the files to be read - filename, etc. Persons wishing to contribute on a regular basis should contact the editor who will make available a suitable public domain word processor program. The copy deadline for an issue is the first Saturday of the month (ie, meeting date) prior to the month of publication.

Any material, written or electronic, submitted to SND or Library Service is to be considered TISHUG property and to be used at the committee's discretion.

## SOFTWARE LIBRARY SERVICE

TISHUG operates a Public Domain Software Library, containing programs written by TISHUG members and from other user groups as well as miscellaneous public domain sources. These programs are made available to members in two ways:-

- 1> by monthly issue - a selection of programs is made available at general meetings for a production/media cost fee. (See TISHUG SHOP column elsewhere for details of releases).
- 2> as a reward for members contribution to the activities of TISHUG by
  - (a) submission of an original program (own work) members receive three programs of their choice, and,
  - (b) submission to SND, or other activity as the committee may otherwise determine, programs of the contributor's choice will be made available.

As the Library is maintained on a voluntry basis, no individual requests for software (other than for the above reasons) can be honoured at the present time.

## COURTESY TO YOUR FELLOW TISHUGERS

When you strike a programming problem, require information, or just want to chat (modem or otherwise) please look at the clock before you pick up the phone! And always ask if it is a convenient time for your call.

## YOUR COMMITTEE

CLUB CO-ORDINATOR:	
Peter Varga	023897025
HON. SECRETARY:	
John Robinson	028480956
TREASURER:	
Terry Phillips	027976313
LIBRARIAN:	
Terry Phillips	027976313
ASTNT LIBRARIAN:	
FRED MORRIS	(02)8713873
FOUNDER/EDITOR:	
Shane Andersen	
PUBLIC RELATIONS:	
Cris Ryan	028480480
ADVERTISING:	
GREG HOPE	(02)6464865
PROGRAMMERS CRISIS LINE:	
Graeme Holliss	02992229
MUSIC CO-ORD:	
Russel Welham	043924000
EDUCATION CO-ORD:	
Peter Lynden	026357841

MEETINGS: At present, will continue to be held at the St. John's Church Hall, Victoria St, Darlinghurst on the first SATURDAY afternoon of each month, except if that week-end is a public holiday, then it moves to the following week-end. The Monthly get-together starts at 2pm and goes through to 4pm.

SEE YOU THERE 'CAUSE WE CARE

MON-WED: 10AM-4PM... OTHER DAYS: 10AM-9PM

programme  
Crisis Line  
992229

## IMPORTANT TISHUG ADDRESSES:-

General address  
(for all letters  
except membership)

TISHUG,  
PO BOX 595,  
MARRICKVILLE,  
NSW, AUSTRALIA, 2204.

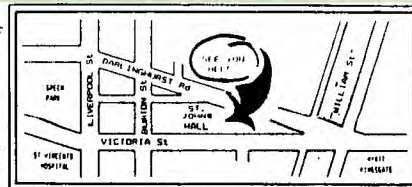
Membership address

The SECRETARY,  
TISHUG,  
PO BOX 149,  
PENNANT HILLS,  
NSW, AUSTRALIA, 2120.

Monthly Meetings  
first Saturday  
of the month

(2 pm)

St. John's Hall,  
Victoria Street,  
DARLINGHURST.



## The Communicators



CONVERSION OF TEXT FORMAT BASIC/XBASIC FILES FROM  
TEXPAC BULLETIN BOARD.

by Ross Mudie of TISHUG.

On the TEXPAC bulletin board often small basic or extended basic programs are printed in text file format which would normally require retyping before the program could be used. If the file containing the program is stored on disk it may then be edited using the Editor/Assembler editor or TI Writer, then saved back to disk. The file is then processed through a translator program which converts the text file detail of the basic or X/B program into a X/B MERGE file with all program lines set up as remarks statements using the exclamation mark (!). Then by using the X/B editor it is a very simple job to remove the exclamation marks making a valid basic or X/B program.

In the message system of the TEXPAC bulletin board it is not possible to use commas or quotation marks, however when a basic or extended basic program is given in one of these files the commas are usually replaced with a backslash(\) and the quotes (") are replaced with an apostrophe ('). If the file is in 80 column format (using the <80P> mode) then it is very convenient to use the replace string feature of E/A or TI Writer to change all the \ to , and all the ' to ".

Firstly, download the file using your TI TERMINAL EMULATOR II with <CTRL> WRAP enabled and save the file to disk.

Next replace all the \ with , and ' with " .

For the benefit of those unfamiliar with this the following procedures apply:

(a) EDITOR ASSEMBLER.

When in the edit mode press function 9 (ESCAPE) once then press R for Replace. The function then requires to be told how many times to do the replacement, just give it an estimated number greater than the required number of times, followed by the replace old and new strings. Did I hear you say EH? ... here is the example:

R <ENTER> ... Editor prompt is:  
REPLACE<V,><CNT><COL,COL>/OLD/NEW/?  
You TYPE 100/\,/ then press <ENTER>  
and wait a few seconds for the editor to do the job for you 100 times.

If 100 is not the number required substitute the number needed. If the number you enter is too big then no problem, if too small then you won't go to the end of the file so just do it again.

Do the same again for the apostrophe e.g. R <ENTER> then 100/'/'/ <ENTER>

(b) TI WRITER.

When in edit mode press <FCTN> 9 once then RS <ENTER> for Replace String. TI Writer editor prompt will be:  
REPLACE enter/old string/new string/?  
You type /\,/ then press <ENTER>  
and TI Writer will now search for and display the first occurrence of the "old" string which is the backslash and the prompt will be:  
REPLACE STRING(Yes,No,All,Stop)?

Press A for All and wait for TI Writer to complete the task. Do the same again for the apostrophe,  
e.g. RS <ENTER> then '/'/'/ <ENTER>.

Edit out any other extraneous items in the file then save the file to disk in DISplay VARIable 80 format.

It should be noted that any "program" line longer than 80 characters will be truncated (cut short) from the right at the 80 character point by the Translator.

Next go to Extended Basic and load/run the TRANSLATOR program which appears at the end of this article. In response to the prompts enter the name of the file which you have just previously saved and the name for the new file which will be created as an extended basic program MERGE file.

On completion of the merge file type NEW <ENTER> then when the cursor returns type MERGE DSKx.mergefilename (substitute the appropriate number of disk drive for the x and the actual name previously used for the mergefilename.)

LIST the program to find the first line number then start at the first line and work through the whole program deleting the first ! after each line number using <FNCT> 1 to delete each ! and <FNCT> X to step down a line at a time.

SAVE your handiwork to disk and run the program.

To work back the other way you can convert a basic or X/B program to a text file by using LIST "DSKx.filename". This allows you to make mass changes of the same thing many times throughout a program using the replace string feature of your text editor, then convert to basic or X/B format as detailed above.

```
100 ! SAVE DSK1.TRANSLATOR
110 ! ORIGINAL PROGRAM BY JOHN HAMILTON
120 ! CENTRAL IOWA USA
130 ! MODIFIED BY FREDERICK HAWKINS
140 ! LEHIGH 99'ER
150 ! THIS VERSION BY ED YORL
160 ! CIN-DAY USER GROUP
170 ! PUBLISHED IN TISHUG SND, SYDNEY AUSTRALIA JAN-FEB
ISSUE 1985.
```

180 ! REMARKS by Ross Mudie 6th March 1985.

190 ! This Translates, from a program in a DISPLAY VARIABLE 80 format to a BASIC or XBASIC format, placing a ! after each line number which

200 ! must be removed by editing once the program is in BASIC or X/BASIC format.

210 ! To use (1) RUN TRANSLATOR (2) Enter Source file name (3) Enter object file name (4) When program finishes with "PROCESS COMPLETED!"

220 ! Type NEW then press ENTER (5) Type MERGE DSK1 your object file name (6) List the program (7) Edit all lines to remove the ! after each

230 ! line number (8) Save the program....R.M. 6/3/85

```
340 DISPLAY AT(6,10)ERASE ALL:"TRANSLATOR": : : "FILE
NAME TO BE CONVERTED?": "DSK1." : : ACCEPT
AT(12,6)SIZE(10):A$
350 DISPLAY AT(14,1):"MERGE FILE NAME?": : "DSK1." : :
ACCEPT AT(16,6)SIZE(10):B$ : : OPEN #1:"DSK1."&A$ : :
OPEN #2:"DSK1."&B$,VARIABLE 163
360 LINPUT #1:C$ : : A=POS(C$," ",1): : ON ERROR 400 : :
B=VAL(SEG$(C$,1,A))
370 ON ERROR 390 : : C=INT(B/256): : A$=CHR$(B)
380 PRINT #2:CHR$(C);A$;CHR$(131);SEG$(C$,A+1,80);
CHR$(0): : GOTO 360
390 PRINT #2:CHR$(255);CHR$(255): : CLOSE #2 : : DISPLAY
AT(22,6):"PROCESS COMPLETED!": : END
400 ON ERROR 390 : : RETURN 360
```

MULTI-MODEM CARD FOR PE BOX #####!

GOOD NEWS FOLKS--- Another new device has been created by Peter Schubert (member of TI.S.H.U.G. (Aust). Its the MULTI-MODEM CARD for your Peripheral Expansion Box. We saw a demonstration of the prototype at the recent Club 4th BIRTHDAY GET-TO-GETHER. The features include:

- 1 300 ORIGINATE
  - 2 300 ANSWER
  - 3 1200/75
  - 4 75/1200 VIATEL CONFIGURATION AND IT WORKS BEAUTIFULLY
- THE MULTI-MODEM CARD IS NOW GOING INTO PRODUCTION AND WILL SELL FOR \$260 IT WILL ALSO HAVE CAPABILITY TO..\*AUTO ANSWER,\*AUTO DIAL,\*TELECOM CERTIFY?

PETER WILL ALSO OFFER TO THOSE OF YOU WHO HAVE THE 300 CARD,A CASH-BACK/EXCHANGE DEAL ON YOUR OLD MODEM.

This will give many, a chance to get closer to the world of Modem Communication, and in particular, access the new VIDEOTEX 'VIATEL' SYSTEM.

The V I A T E L story continues this month, with a look at three areas of interest...

sending GREETINGS & TELEX and ELECTRONIC BANKING.

A report by Shane Andersen

Over the next few months, both Robert Crago and I will be telling you about some of the interesting features of the new Teletex system call VIATEL, which you can access with your TI-99/4(A) computer. As previously mentioned, to use this unique service, you need a multi-speed modem which provides you with 75/1200 baud seed access.

First, a few hints about Viatel...To dial up VIATEL, you simply phone 01955 anywhere in Australia as a local call. You will be asked to type in your 10 character Password, then a 4 digit Usernumber. Once this is done, you can then go to what ever area you like by simply typing an asterisk, the department number, followed by a hash symble...like this: \*199# and then press the <RETURN> or <ENTER> key. At 1200 baud, you will be shown your selected screen in a matter of only a couple of seconds.

Here is a listing of some of my most used areas...

HOW TO USE VIATEL . . . . .	*199#
MAILBOX DIRECTORY (listing of who's on)	*1035#
SEND MAIL . . . . .	*1010#
CABLESHOP (Electronic Shopping) . . . . .	*3455#
TELEBANK (Electronic Banking) . . . . .	*555#
AGE (Games of Logic,Adventures,Horoscopes)	*414#
PLAYIT (More games,puzzles,conundrums).	*5001#
SKYTEX (Air fares,Travel & Accommodation)	*741#
VIAMED (Doctors,Health advice). . . . .	*876#
ADLIB (Films). . . . .	*70705#
MICROTEX 666 (Games,Magazines,Club News)	*666#
SEND GREETINGS. . . . .	*1033#

That is just a few of the many areas you can access. Now lets take a look at three of these...

(1) Sending GREETING CARDS and Telex: VIATEL has designed a number of very interesting card DESIGNES which are displayed on your screen. You can choose BIRTHDAY GREETINGS, CONGRATULATIONS, BON VOYAGE etc, which have been designed for you to simply type in your message. When the person that you are sending this greeting to comes on line, instantly they are confronted with a dramatic picture and your message. Its fun, I sent one to a T.I.S.H.U.G member who I know will be coming on-line shortly to welcome him aboard. The cost is 5c per card/screen, and is simply charged to your VIATEL bill. Now to sending a TELEX...

There are times when you see an advert for a computer product in a magazine, which you require further information. Many of those adverts carry a TELEX number at the bottom of the add. Now you can send them a Telex for speedy replies anywhere in Australia. Each successful Telex delivered costs you \$1.75 and will be shown as a separate change on your Viatel bill. You will be shown the following menu of your screen...

KEY 1	- VIATEL INDEX
11	- TO SEND TELEX
13	- INSTRUCTIONS/REFERENCE GUIDE
14	- OPENING TIMES
15	- ADVICE, HINTS & TIPS
17	- TELEX PROBLEMS, COMPLAINTS.

To send a TELEX, go to \*1033# the same area for sending Greetings.

Now lets take a quick look at TELEBANK:

Press \*555# and a whole new world of Banking is at your fingertips, and you can \*PAY BILLS(including Telephone, Electricity, Gas & Water rates)... \*TRANSFER FUNDS between accounts... \*PERSONAL LOANS (access information

on lending services)... \*AIRFARES (make booking enquiries, and find out flights, fares, packages)... \*TERM DEPOSITS (Check investment rates)... \*RETIREMENT & MIGRANT information... \*ACCOUNT STATEMENTS (Instantly view statements and request copies to be sent to you)... Plus, you can also check foreign exchange rates and monitor money markets (great for school projects) and many others. Soon you'll also be able to do your shopping, book holidays, and apply for a loan.

To gain access to this section, just call into your local Commonwealth Bank, and ask them for a TELEBANK application form and further details. Other banks are starting to see just how important it is for them to provide similar services through VIATEL, like...WESTPAC \*333# ...ANZ \*899# ...BANQUE NATIONAL de PARIS \*331# ...NATIONAL AUSTRALIA BANK \*880# ...STATE BANK of NSW \*40211# and SATISFAC CREDIT UNION \*789001#

Because VIATEL is very new, information is being added to the system every day. By pressing \*123# you'll be kept abreast of all the new developments as they happen.

Next month, we hope to have some more news of how to get the best from VIATEL with your TI. Cheers for now. SHANE



Your telephone. And your television.

All you add is a small remote-control keyboard.

Or your own slightly modified personal computer.

And space-age banking comes to your home or office.

It's called Telebank.

With it, you can do your banking 24 hours a day.

7 days of every week and 365 days of every year.



Last months Software Tape, 1985/5 didn't sell all that well at the meeting and this is probably the reason why the bonus prize has not been claimed as yet. 100 copies of the tape were made and the lucky tape is in there somewhere. The prize on that tape is, by the way, a \$20 open order at the club shop. There will also be a lucky tape among those made for Tape 1985/6. Remember if you have the prize winning tape contact the Librarian to claim your prize.

Tape 1985/6 is something that I like a lot. It contains 9 Extended Basic musical programs, all with graphics, written by that great programmer Sam Moore. Titles are Album-Leaf, Venetian Boat Song, Dog-Gone Boogie Woogie, With Love in my Heart, Organ Player, Ode to Puppy Town, Rockies' Robot Boogie, Venus Night Race Rhapsody and Western Boogie. As a bonus on the disk version there is a very useful Load program.

Now to other items available from the Shop.

Console Writers are still available at a cost of \$44.

Boxes of disks at \$25. As a bonus any member buying 2 or more boxes of disks will receive as a bonus at no extra cost the equivalent number of library storage cases.

Disk file boxes (90 capacity) at \$44 each.

Learning Assembly Language book at \$30 each.

Commercial software - see last SND for review and prices. Thanks for the orders that have been filtering through!

Those interest in getting into the FORTH language can now obtain a copy of the documentation and disk for \$30.

Disk software, BEAXS and Channel 99 disk, at \$5 each. A couple of callers have rung to express their delight with the Channel 99 disk. The programs on it are probably the best \$5 investment available for the TI.

Always available are the TI Writer and Multiplan enhancements, Super De-Bugger and TI Forth Source Codes. The enhancements and De-Bugger are \$5 each while the Source Codes are \$10.

I have had to throw out a few returned tapes lately because either the tabs have been punched out or the tape has been heavily marked with a marking pen. If you do by chance get a faulty tape would you please not do this to it.

Now for some overseas news and bits and pieces from my mail bag.

I have received a copy of the first issue of a new magazine entitled Mini-Mag 99. It will be available for members to peruse at the June meeting and if enough interest is shown I will attempt to contact the publisher to order a bulk lot.

From Chris Bobbitt in Maryland USA, whom I exchange programs with, comes the following praise of Shane's handywork, otherwise known as our Sydney News Digest - "THANKS FOR THE NEWSLETTERS. Your newsletter makes my own group newsletter, which was recently rated the best in the US look like so much trash. The quality and quantity of material in your newsletter makes it easily the best of any computer user group newsletter. Even the 15000 member Boston Computer Society's newsletter is less well done. How much would an overseas subscription be?"

Shane my friend, take a bow. Without your efforts our SND would probably qualify for the trash category.

Chris also advises that we are not alone in having a few problems with the Corcomp Cards. His card will only read from his 2nd drive no matter what he does he can't write to that drive. Corcomp don't seem able to assist him! He also tells me that 4 TI-99/4A compatibles are slated for introduction within the next 6 months. The Myarc model sounds the most interesting with 128K standard, built in XB and Turbo Pascal, fully compatible yet about 6 times faster. He will give me more info as it comes to hand. Chris was also kind enough to send me a copy of a program he markets "Floppy Copy" It does an excellent job and the disk is so heavily protected it has defied my attempts so far to back it up. I hope to demonstrate it along with a number of other copy type programs at a future meeting.

Now to finish off a couple of programs for you to type in. These are also courtesy of Chris. The first one is called Battle of the Sea-Lords and is an updated version of a game that appeared in one of the early editions of the old 99'er Magazine. This version however allows 2 to play via modem. The second program is called The Magic Puzzle and is a computer version of the old childhood toy. Both need extended basic. I hope you like them.

## CURSOR ROUTINES

The following comes courtesy of STICC - Saskatoon (Canada) TI Computer Club. 32K and Extended Basic are needed to try out these interesting cursor routines.

```
10 CALL CLEAR :: CALL INIT
20 CALL LOAD(8196,63,248)
30 CALL LOAD(16376,67,85,82,83,79,82,48,8)
40 CALL LOAD(12288,255,129,129,129,129,129,255)
50 CALL LOAD(12296,2,0,3,240,2,1,48,0,2,2,0,8,4,32,32,36,4,91)
60 CALL LINK("CURSOR") :: END
```

Until a QUIT or BYE is given this program should still remain defined. If you wish other patterns, use different values in line 40 after 12288. Pattern is based from hex in pattern identifier table and converted to decimal.

Try this one :::::::::::

```
CALL LOAD(12288,0,0,0,0,0,0,0,0,0,0,252) or this one :::::::::::
```

```
CALL LOAD(12288,48,48,63,255,254,124,24,12)
```

Experiment and see what you can come up with.



"I'm afraid you'll just have to wait until it's your turn to play with the pencil..."

\*\*\*\*\*  
**"MUNCHMOBILE"** Module review by Keir Wells (KEIRLALOR).  
 \*\*\*\*\*

It seems that almost every member of our club that I have spoken to, has in their module library some sort of shoot-em-up game. Whether it is Buck Rogers, Moonsweeper or the ever faithful Parsec. Let me introduce you then, to a game on the more passive side. Munchmobile.

Munchmobile is a game that is novel in its approach to the much worn car and obstacles concept. I will attempt to mention all aspects of this game. After selecting Munchmobile from the main menu you are faced with a rather strange looking screen with a large demonic looking face which consistently winks at you. It is in fact the top view of an expanded Munchmobile. If you care to see a demonstration game, then refrain from pressing a key and after a short wait you will be shown a game with the computer in control of the car. It is a good idea if you have not seen the game before to let this demonstration bring itself to an end while you note the various hazards that await you. Pressing FCTN 7 will give you a brief explanation of the game, a point which is sorely lacking in so many other modules.

There are two levels of play, Professional and Amateur. Once you have selected your level of play you are presented with three options of Munchmobile speed, Slow, Normal and Fast.

Munchmobile's sole aim in life is to reach out to the side of the road and pick up snacks that he can happily munch on. There are six different kinds of items that will appear on either side of the road for your Munchmobile to pick up and devour, apples, cherries, juice, fish (whilst crossing the bridges), bags of money and last but definitely not least gasoline (read petrol).

To pick up a snack for your hungry little muncher you must carefully watch the eyes at the front of the car and when they are looking in the right direction (left and right only), press the fire button on the joystick to extend the Munchmobiles arm. Beware though, if you hit an obstacle with your arm, garbage bin or bush, the arm will instantly return to the side of the car and throb with pain, refusing, and rightly so, to pick up any more snacks until the throbbing has ceased. If you successfully manage to extend the arm the correct length and place the hand over the snack, release the fire button to stop any further extending of the arm and then press it again to bring it back to your Munchmobile. To gain the points you must retract the arm until it disappears and then you are ready to go again.

You will see your score displayed on the right of the screen along with a High Score and graphic representations of snacks and items that you have retrieved on your way. At the bottom of the board is displayed the amount of remaining Munchmobiles and

above this you will see how much fuel there is remaining in your current Munchmobile. Your fuel tank is replenished every time you manage to pick up a can of gas (petrol).

After picking up a snack, points can be earned by depositing rubbish into the bins placed on the side of the road. This is done in the same way as picking up a snack.

At times during the game you will be required to cross bridges with oncoming traffic, not always on the right side of the road, and intersections with traffic again that remains ignorant of give way laws. With all these hazards, it is sometimes difficult to remember to remain wholly on the road and avoid losing one of your ever hungry little autos. But the end does eventually arrive when Home Sweet Home in the form of a cozy little garage appears at the top of the screen and all that remains is to guide your Munchmobile safely into his own little home.

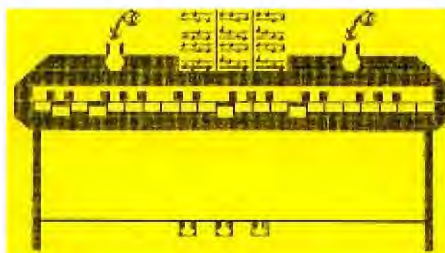
Once you have parked your Munchmobile in the garage and you begin congratulating yourself on a job well done, take care, a more difficult road is selected for you to drive on, with more hazards and increasing difficulty in picking up a snack. This vicious circle continues until all you Munchmobiles have gone to the big Tollway in the Sky.

The game is overall quite amusing and can be quite deceptively difficult as you go up in levels. My one main criticism though is with the music. It is repetitious throughout the whole game, but if it bothers you to the point of distraction, then there is always the volume control.

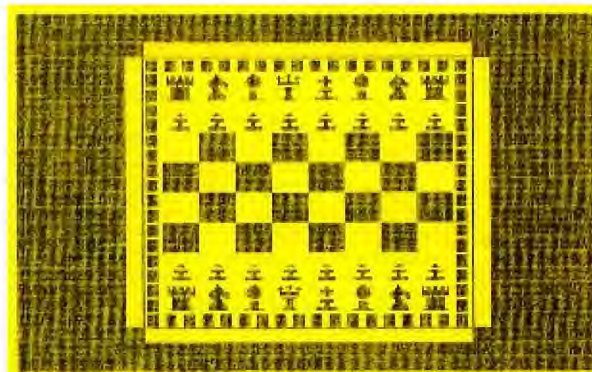
Graphics are quite good and overall I found the game to be quite amusing and a pleasant change from lazer blasting aliens.

\*\*\* DFX-PRINT \*\*\*  
 BIT IMAGE SCREEN PRINT VER 1.2  
 COPYRIGHT 1984\*DATA FLEX SOFTWARE  
 TITLE: DEMO

VARIATIONS ON A THEME  
 BY LUDWIG VAN BEETHOVEN



PROGRAM BY SAM MOORE JR



## REGIONAL NEWS

A report of meetings and times of our Regional Home Groups around Sydney and New South Wales.

### LIVERPOOL REGION REPORT

The April meeting was held on 19/04/85 at Steve Carrs of Campbelltown. Although only a small band of twelve members braved the cold to attend, the informal evening proved interesting as it provided a night whereby members had an opportunity to take the floor and talk about their current activities. Some points of interest included:-

A member who is a radio announcer at a local community radio station proposes to put to air a computer radio program to talk about various popular computers, including the II, and programming hints, and hopes to experiment with downloading software over the radiowaves.

Another member is working on developing a 32K expansion board using low cost ram chips.

One is in the process of marketing his excellent program "AUTO GRAPHICS" which writes subprograms for text, graphics and music and will shortly be available on the market. This program has been demonstrated to our group and is highly recommended.

Another member with artistic talent is developing graphics programs involving cartoon captions which could be used in education programs. And yet another member demonstrated his personal record keeping program. This is a beauty so watch out for it in the club competition.

### FORTHCOMING EVENTS:-

Friday 14 June 7.30  
at Hans Zecevic,  
33 Malinya Cr.  
Moorebank (6008716).

Theme: Creating, reading / writing to files AND communications with the VIATEL system.

Friday 12 July 7.30  
at Vince Cerreto,  
St. Clair (6705304).

Theme: How to use the Editor/Assembler module

Friday 9 August 7.30

at Stan Puckle,  
15 Richmond Cr,  
Campbelltown  
(046-256157)

Theme to be advised

### SHORT REPORT ON THE APRIL MEETING OF THE CENTRAL COAST REGIONAL GROUP.

SEVEN MEMBERS ATTENDED THE MEETING HELD AT BUDGEWOI N.S.W. THIS MEETING CARRIED ON FROM THE LAST MEETING WITH A DEMO ON HOW TO DEBUG A PROGRAM USING PROGRAMS THAT HAD BEEN BROUGHT IN BECAUSE THAT WERE FAULTY.

ONE FAULT IN AN ADVENTURE PROGRAM THAT A MEMBER HAD WRITTEN WITH THE AID OF A BOOK, WAS YOU WENT TO THE WRONG ROOMS, ANSWER, WHEN THE DATA WAS READ IN THE PROGRAM WAS LOOKING FOR 7 BITS OF INFORMATION IN EACH LINE BUT THE DATA LINE CONTAINED 8 BITS OF DATA THEREFORE THE PROGRAM GOT OUT OF STEP AND READ THE WRONG DATA. SOME NEW PROGRAMS WERE DEMONSTRATED AND AFTERNOON TEA WAS ENJOYED BY ALL. THANKS GOOD EBEL FOR SUPPLYING THE TEA.

RUSSELL WELHAM  
(SHORT SWEET I HOPE)

\*\*\*\*\*  
\* on all you Regional \*  
\* Groups lets's hear your news \*  
\* and send in your meeting \*  
\* dates for publication \*  
\*\*\*\*\*

### \*\* CLASSIFIED ADS \*\*

TO SELL: Muliplan \$100.00 one  
WANTED: Transformer for T199/4A  
CONTACT:-  
Terry Hogue,  
c/- Woorabinda School Camp,  
PO Box 418,  
Moe, Vic. 3825.

WANTED: Mini-Memory module  
CONTACT:-  
PH (02) 5252036  
after 3pm  
ASK FOR Brett McKimm.

## TECHO TIME



WITH ROBERT

SORRY ABOUT THE ABSENCE OF TECHO TIME LAST MONTH, BUT IT IS HARD TO FIND SOMETHING OF INTEREST EVERY MONTH WITHOUT HELP FROM CLUB MEMBERS. SO HOW ABOUT SOME ARTICLES FROM SOME OF YOU

I HAVE CHECKED THE WIRING OF THE PLASTIC MODULATOR ( WHICH IS THE ONLY MODULATOR THAT CAN BE MODIFIED FOR VHF/UHF OPERATION ) AND HAVE COMPILED THE FOLLOWING DETAILS.

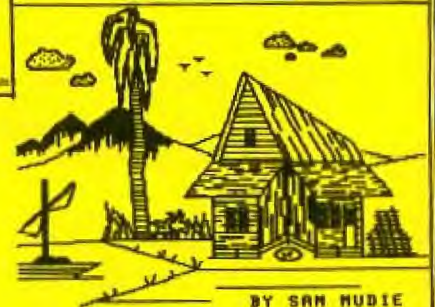
PIN	FUNCT.	COLOUR	CODE
1	+12V	RED	
2	V	BLUE	
3	R-Y	WHITE	
4	B-Y	GREY	
5	AUDIO	YELLOW	
6	GND	BLACK	

TECHNICAL MANUALS ARE AVAILALE FOR \$15 AT CLUB MEETINGS OR FROM THE CLUB LIBRARIAN (PLEASE ADD \$3.50 POSTAGE & HANDLING).

IF ANYONE HAS A TECHNICAL PROBLEM OR WISHES TO CONTRIBUTE TECHNICAL ARTICLES THEN CONTACT ME (ROBERT) ON 602-4168 BETWEEN 5.00-8.30 PM PLEASE STICK TO THESE TIMES) OR SEND A LETTER TO

TECHO TIME  
P. O. BOX 595  
MARRACKVILLE 2204

ANYONE WISHING TO OBTAIN INFORMATION, PLEASE SEND A SELF-ADDRESSED ENVELOPE (WITH SUFFICIENT POSTAGE STAMPS) TO THE ABOVE ADDRESS.



BY SAM MUDIE

Over the past 4-5 months, we have been promoting the special "GRAPHX COMPETITION". Now is the time to get your entries in. On the front cover of this SND, you can see what the GRAPHX program is capable of producing so lets hear from you. We need at got at least 3 entries to continue the contest...so, lets hear from you.

Younger Set member SAM MUDIE has done a fine job, and now we ask you to follow in his footsteps.

We have extended the competition until the 1st July.

Send your entries to P.O.Box 595, Marrickville, NSW. 2204. Australia.

## Jenny's YOUNGER SET under 18's page

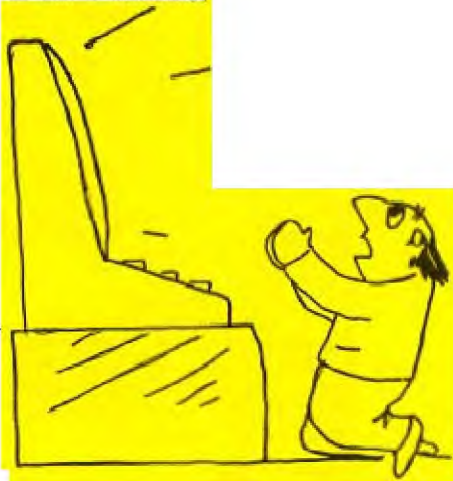
HERE IS THE NEXT LETTER...Dear Jenny, My name is Stewart Kelly and I am 12 years old. Whenever I get my SND, I read your Younger Set first. Here are some of my high scores: PARSEC 675,400...BUCK ROGERS 149,326 HOPPER 41,675 and MUNCHMAN 51,824. My mum has signed to verify my scores. Yours faithfull, Stewart Kelly of Seven Hills. Here are my entries in the Cartoon competition.

hi gang! Well, here is part 2 of the Big CARTOON COMPTITION...with more entries received. I will announce the winning entry at the end of my section, so laugh along, and lets get right into it. I hope that you all enjoyed your recent school vacation!

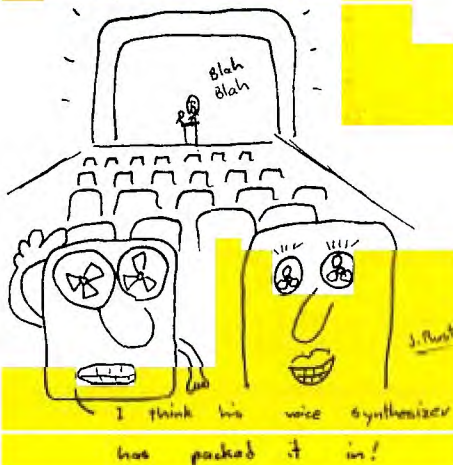
Here's the first one for this month, from Ben Salan, who writes...Hi, its ben again.Here is a utility to guard your secret program. I hope that you like it. In line 110 you put your password while you are entering it you press the CTRL button. The password will be invisible. Then when you are entering the password while the program is running, you must press the CTRL buton other wise the computer will not take your password.

```
100 CALL SCREEN(2)
110 P$=" "
120 INPUT K$
130 IF K$<>P$ THEN GOTO 140 ELSE 150
140 GOTO 110
150 CALL CLEAR
160 CALL SCREEN(2)
170 GOTO 160
```

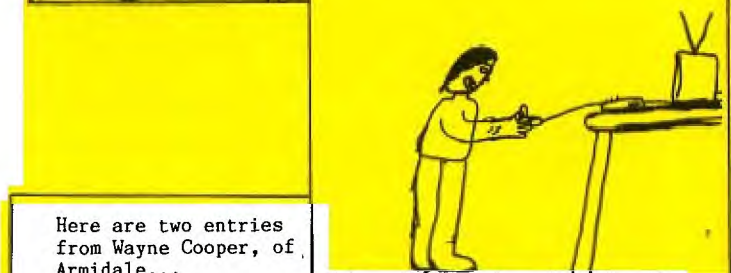
HERE IS BEN'S CARTOON..



Please, please Don't lock up now. I'll do anything you say.



THANK YOU STEWART, GLAD TO HEAR THAT YOU READ THIS PAGE, AND ITS GREAT TO SEE YOUR ENTRIES...KEEP THEM COMING. I WILL PLACE YOUR SCORES IN THE HALL OF FAME, AND NEAR THE END OF THE YEAR, I'LL PRODUCE A LISTING OF ALL THE PEOPLE AND THEIR HIGHEST SCORES RECEIVED.



Here are two entries from Wayne Cooper, of Armidale...

RIGHT NOW THEY'RE LEARNING ABOUT FRACTIONS



Now! 376,294,976<sup>th</sup> SCREEN AND STILL 10 MEN LEFT





Now for page 2 of Jenny's Younger Set, with more entries in the Cartoon Competition by our own under 18's. Here is an interesting one by Dwight Smith of Port Macquarie...

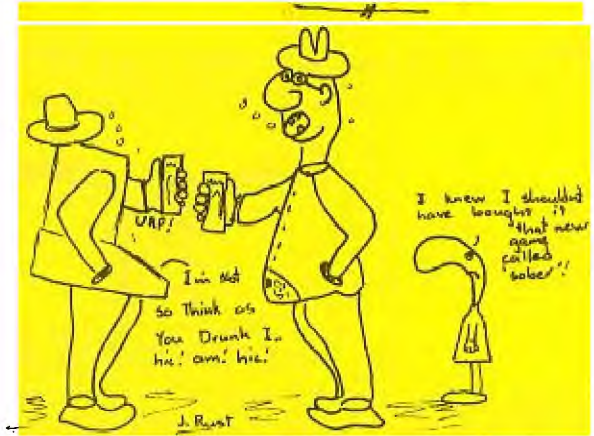
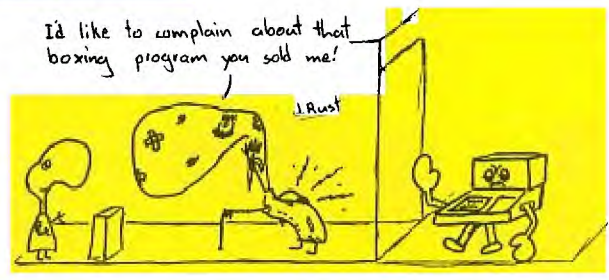


Here is a nice long letter, and competition entries from Joshua Rust of Willawarrin, Kempey. He almost didn't get this letter through in time, because he sent it to the membership address instead of the JENNY'S YOUNGERSET, P.O.Box 595, MARRICKVILLE. N.S.W 2204... Dear Jenny, Enclosed are my entries in your competition for POLE POSITION. I only joined T.I.S.H.U.G a few months ago and am not yet familiar with what goes on. I have only the computer (99/4a), tape recorder, joysticks and Extended Basic, which I got for Christmas. I recently bought 'Car Wars' and 'Munch Man', and I have a few games on cassette like the 'Khe Sahn', 'Towers' and 'Aztec Challenge' etc. I am interested in knowing just exactly what a Peripheral Expansion Box is and what can be done with it. Software is scarce up here, except for the occasional game in a magazine. Very few people up here have got a TI Computer that I know of, and the man at the local Tandy Electronics store thinks that they are an outdated pile of junk! (I don't think he knows what he's talking about!)

I am hoping to get a modem soon so I can talk to other TI owners on the BBS. Here are a few scores for the hall of Fame...CAR WARS:19983 & MUNCHMAN:128330.

DEAR JOSHUA, WELCOME TO OUR YOUNGER SET PAGES, JOSHUA. IT WAS GREAT TO HEAR FROM YOU. I have asked Shane if he can do anything to help members like yourself who live way out in the country areas of Australia. He mentioned that he planned to produce a complete price-list of all the things you can get for your TI, and how to get them. Check out this magazine for those details. To answer some of your questions...The guy from Tandy's is only trying to get you down, so that you will buy a Tandy computer. Even though the TI stopped production about a year ago, there is still plenty of good programs around. And the club Librarian has over 1,500 in the club library which you can obtain on monthly cassettes at only \$3 each plus \$1 postage. Read the TI SHOP column for more details. A Peripheral Expansion Box is a device which enables you to add more memory, printers and Disk drives to your TI. It will cost a tidy packet, but when you compare the price of a Tandy or Apple computer with all of those features supplied, you still save money with your TI. Lets hear more from you.

For our other members who may live out in the country areas, or even live near Joshua, why not write him a letter and exchange programs with each other. His address is Lot 761 Armidale Road, Willawarrin, Kempey. NSW 2440.



STILL MORE

More Younger Set



Here's one from Fabrizio Tettoni of Heckenberg.

And now for the final entrant in this latest competition...I had just recently recieved a couple more, but they were too late for the magazine, and way past the closing date. So, who is the winner? Read on...but first, here is a cartoon and letter by Darren Watkins of Blacktown, who writes... Dear Jenny, It has been a while since I have wrote. Since I last wrote I haven't done much programming so I haven't got a program to give you. But I do have a top score to give yu. This top score is on 'Dragon Mix'-203. I hope to write to you more regularly. I hope to see you running more competitions so us people on low income can get som good computer software. Regerring to the computer competition on at the moment, I have sent with this lette, 5 entries. My Mum will confirm the score on Dragon Mix. Happy Computing, DARREN WATKINS.

Thanks Darren, well, here we go with your entries...



WE ASSUME THAT ALL ENTRIES ARE ORIGINAL WORKS OF THE ENTRANT, BUT CAN ASSUME NO RESPONSIBILITY FOR SUCH. The cartoons sent to me in this competition are of such a high standard, and I found it very hard to make the final decision. There must however be only one FIRST PRIZE WINNER, and that being from JOHN CORNISH of GULGONG, NSW. I will also be sending an encouragment award to JOSHUA RUST of Kempey N.S.W. John will receive the ATARI SOFTWARE cartridge for the TI entitled "POLE POSITION", and I'll be sending a tape of assorted programs to Joshua. Congratulations fellows, and to all those who took the time to send in their entries. Next month, I plan to conduct another great competition, to keep reading the YOUNGER SET page for details...and lets hear from you with your High Scores, Programs & routines, and letters. Its always great so hear from you.

Remember this one from last month? THE WINNER.

AND ALL I WANTED TO LEARN WAS HOW TO TURN IT ON!!

Happy Computing  
Jenny





LIFT OUT &  
WIN  
\$50.00  
WITH THIS  
SURVEY!

We have just entered our 4th year of existence...and we need your help to continue our work on your behalf, which will keep this group vital & vibrant. We ask that you detach this Survey from your SND, fill it in and get it back to us by return mail. All surveys received by the end of JULY '85 will be in the running to win a \$50 cheque from T.I.S.H.U.G. So there are two reasons why you should get this survey back to us at...

T.I.S.H.U.G. SURVEY  
P.O. Box 595,  
Marrickville,  
N.S.W. Aust. 2204

PLEASE FILL IN AS ACCURATELY AS POSSIBLE...

\*\*\*\*\*  
DEMOGRAPHIC DETAILS  
\*\*\*\*\*

NAME: \_\_\_\_\_ AGE: \_\_\_\_\_  
OCCUPATION: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_ POSTCODE: \_\_\_\_\_  
TELEPHONE: ( ) \_\_\_\_\_

How long have you owned a TI 99/4 or TI 99/4A ? \_\_\_\_\_  
How long have you been a member of TI SHUG ? \_\_\_\_\_

\*\*\*\*\*  
HARDWARE (Please cross [X] the hardware you own.)  
\*\*\*\*\*

- TI-99/4  TI-99/4A  T.V.  MONITOR  
 SPEECH SYNTHESIZER  EXPANSION BOX  32K CARD  
 DISK CONTROLLER  DISK DRIVE(S)  RS232 CARD  
 PASCAL CARD  MODEM CARD  STAND-ALONE MEMORY  
 STAND ALONE DISK CONTROLLER  STAND-ALONE DSK-DRIVE  
 STAND ALONE RS232 INTERFACE  CASSETTE RECORDER  
 JOYSTICKS  PRINTER (Brand/Model) \_\_\_\_\_  
 MODEM or ACOUSTIC COUPLER (Brand/Model) \_\_\_\_\_  
OTHER HARDWARE (Please specify) \_\_\_\_\_

Would you send overseas to buy hardware ?  
(eg 128K Card) :  YES  NO

Would you purchase hardware, if available,  
through TI SHUG ?  YES  NO

\*\*\*\*\*  
SOFTWARE (Please cross [X] the software you own.)  
\*\*\*\*\*

- EXTENDED BASIC  EDITOR/ASSEMBLER  MINI MEMORY  
 FORTH  LOGO  MULTI-PLAN  TI-WRITER  PLATO  
How many games modules (eg PARSEC) do you own ? \_\_\_\_\_  
How many educational modules (eg MATHS FUN) ? \_\_\_\_\_  
How many applications modules (eg STATISTICS)? \_\_\_\_\_  
How many 3rd party modules (eg ATARI, NAVARONE)? \_\_\_\_\_  
Do you regularly purchase club software ?  YES  NO  
In general, how do you rate the club software ?

BAD  POOR  FAIR  GOOD  EXCELLENT

Would you send overseas to buy 3rd party software ?  
 YES  NO

Would you buy 3rd party software, if available, from us?  
 YES  NO

\*\*\*\*\*  
CLUB SHOP (Please cross [X] your response)  
\*\*\*\*\*

What would you like the club shop to stock ?  
 HARDWARE  SOFTWARE  BOOKS  ACCESSORIES

Do you think the prices charged are reasonable ?  
 YES  NO

In general, are you satisfied with the club shop ?  
 YES  NO

If no, please explain why : \_\_\_\_\_

Would you be willing to help run the club shop ?  
 YES  NO

\*\*\*\*\*  
CLUB PROGRAM LIBRARY (Please cross [X] your response)  
\*\*\*\*\*

Are you satisfied with the present method of software  
distribution ?  YES  NO

If no, please explain why : \_\_\_\_\_

Would you be willing to help run the club library ?  
 YES  NO

\*\*\*\*\*  
MONTHLY MEETINGS (Please cross [X] your response)  
\*\*\*\*\*

Do you regularly attend the monthly meetings ?  
 YES  NO

In general, how do you rate the meetings ?  
 BORING  DULL  FAIR  GOOD  INTERESTING

What would you like to see more of at the  
monthly meetings ?

- GUEST SPEAKERS  NEW PRODUCTS  "HOW TO" LECTURES  
 TECHNICAL INFORMATION  OTHER (Please specify): \_\_\_\_\_

Would you be willing to speak / demonstrate at the  
monthly meetings ?  YES  NO



\*\*\*\*\*

MAGAZINE (Please cross [X] your response)

\*\*\*\*\*

How do you rate the club magazine ? BAD POOR

FAIR GOOD EXCELLENT

Are you satisfied with the club magazine ? YES NO

If no, please explain why : \_\_\_\_\_

What changes, if any, do you think should be made in the magazine ?

REGULAR COLUMNS (EG BASIC, EXTENDED BASIC, LOGO, ETC)

MORE PROGRAMS MORE SOFTWARE/HARDWARE REVIEWS

MINUTES OF COMMITTEE MEETINGS OTHER : \_\_\_\_\_

Would you be willing to write for the magazine ?

YES NO

\*\*\*\*\*

SPECIAL INTEREST GROUPS (Please cross [X] your response)

\*\*\*\*\*

Would you like to see the formation of special interest groups (SIG) to concentrate on specific features of the 99/4A ? (eg Extended Basic, Assembly Language, Forth, etc)

YES NO

If yes, please state your specific interest (eg forth):

Would you be willing to assist in the formation

and running of a SIG ? YES NO

Would you be willing to hold SIG meetings in your home?

YES NO

Would you be willing to speak or demonstrate at SIG

meetings ? YES NO

Would you be willing to write SIG reports for the club

magazine ? YES NO

Would you be willing to help write a SIG magazine ?

YES NO

\*\*\*\*\*

REGIONAL HOME GROUPS (Please cross [X] your response)

\*\*\*\*\*

Do you attend a RHG? YES NO. If no, please indicate why...

None in my Region. Prevented to attend due to

Work Commitments Transport problems.

OTHER: \_\_\_\_\_

If Yes, how do you rate your RHG: BORING FAIR

GOOD EXCELLENT.

Are you able to Co-Ordinate a RHG in your home?

YES NO or at some one elses home: YES NO

Are you able to assist in the running of a RHG:

YES NO.

Would you be willing to write RHG reports for the club magazine? YES NO or help write the reports:

YES NO.

Would you be willing to Speak or Demonstrate at a RHG:

YES NO

\*\*\*\*\*

BULLETIN BOARD SERVICE (please cross [X] your response)

\*\*\*\*\*

Do you use the club BBS? YES NO. If yes, How often Once a month Once a week Couple of times a week Most days.

What do you think of the BBS: POOR FAIR GOOD

EXCELLENT.

What would you like to see on the BBS: \_\_\_\_\_

If you do not have a modem or acoustic coupler, do you think you will possibly purchase on in the near future,

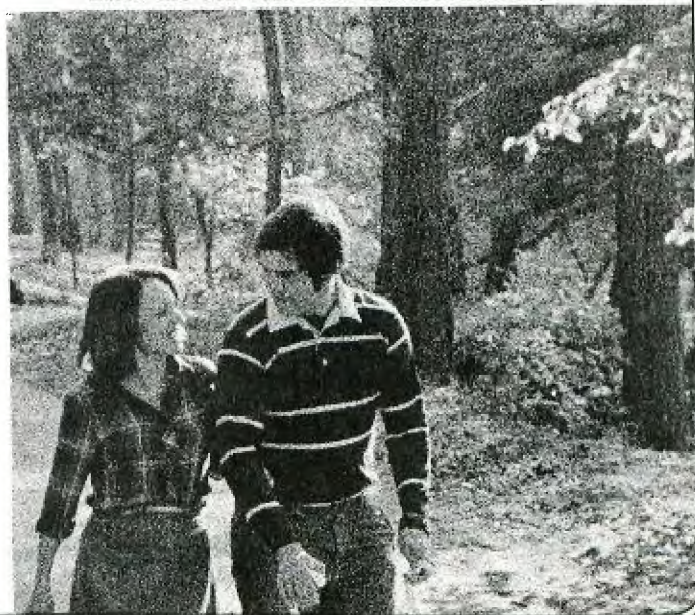
YES NO.

\*\*\*\*\*

COMMENT (In the space remaining please comment on any aspect of the club which you feel needs attention.)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THANK YOU FOR YOUR TIME AND COOPERATION.

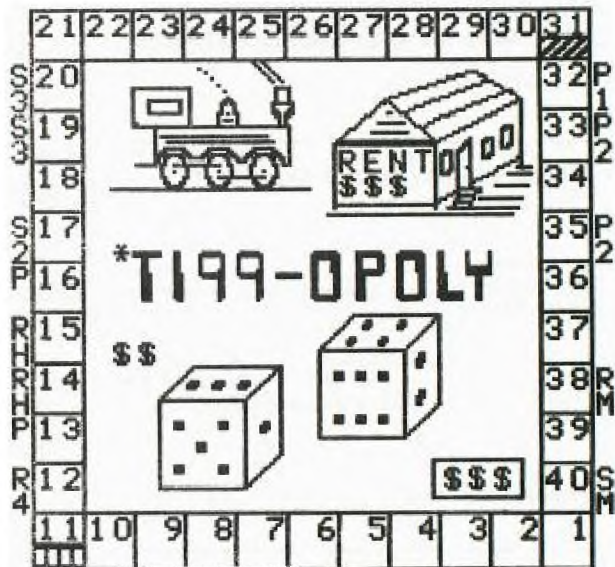
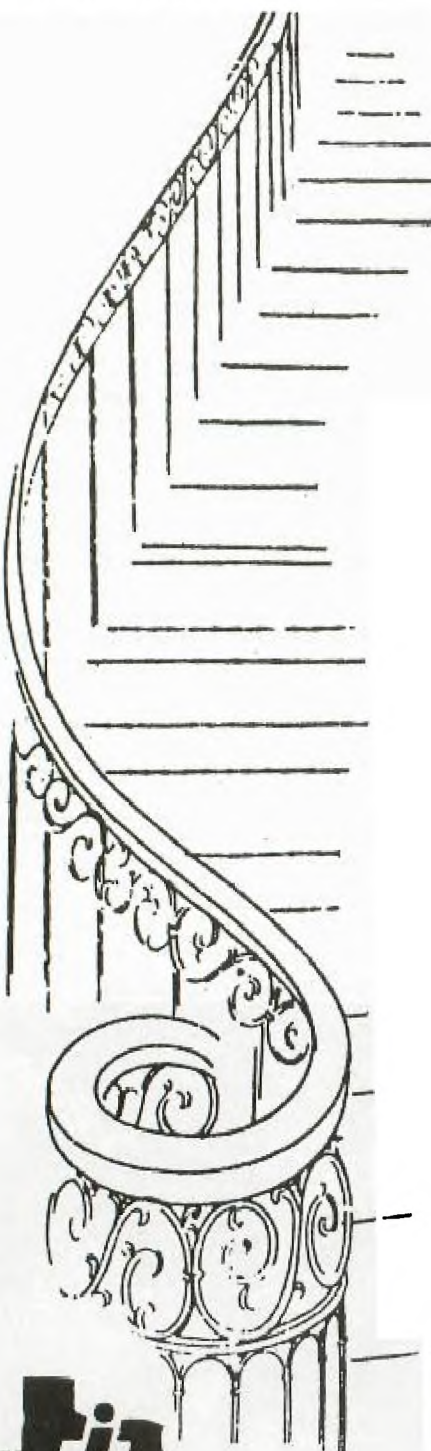


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PTY LIMITED

upstairs for all your  
 TI computer needs



TI99-OPOLY, based on the very popular Monopoly Board game. \$25.95. This one will keep the entire family frantic. You'll require Extended Basic, Disk system, and 32k of memory.

**W.A.S.H. IT'S HERE!**

- \*BUCKROGERS
- SLYMOIDS
- HOPPER
- \*MOONMINE
- \*M.A.S.H
- \*STAR TREK
- JAMBREAKER II
- \*RETURN TO PIRATES ISLE
- SNEGGIT
- MUNCHMOBLE
- MOONSWEEPER
- FATHOM
- SUPER DEMAN ATTACK



This is your last chance to enter the T.I.S.H.U.G GRAPHX Contest, and we sell 'GRAPHX'. So join in the fun, and get those entries in.

**A comprehensive range of Texas Instruments**

**Education, Games, and Personal Business**

**cartridges + many 3rd party cassettes.**

**We also have TI-99/4(A) Peripherals and**

**hardware like Modems, Monitors & Printers.**

**We specialise in cables for your hardware needs**



**Come up and see us some Time! **



### SCREEN DUMP

by Don Cook

Character pattern bytes are stored in memory on a row by row basis. The first byte is the pattern for the top row of a character. A dot matrix printer takes information, in the graphics mode, on a column basis, with the first byte as the left column of the character.

The PRPATT subprogram takes the character patterns stored in VDP RAM and converts them to patterns suitable for the low resolution graphics mode of a dot matrix printer. The PLINE subroutine creates two 128 character strings based on the 32 ASCII codes on a line. The line number to be printed is input from BASIC. These two strings can then be transmitted to the printer to print the screen line (including redefined character patterns).

```

DEF PRPATT,PLINE
SIRASG EQU >2010      Subroutine to pass string to basic
NUMREF EQU >200C     Subroutine to get number from basic
FAC EQU >834A        Stack location for number
PRINIP BSS >400      Store printer patterns here
LENSTR DATA 128     String length
LINSTR BSS 256       Store printer codes for 1 line here
CHAR BSS 8           Temporary character pattern storage
PCHAR BSS 7          Rotated character pattern storage
SAVRIN DATA >0000   Return location storage
MYWS BSS 31          Workspace
PRPATT MOV R11,@SAVRIN Store return location
        LWPI MYWS      New workspace
        LI R3,PRINIP   Printer character pattern
        MOV R3,R6
        AI R6,>400      Last character pattern
        LI R0,>0004     VDP RAM character patterns at >400
        MOVB R0,@8C02  VDP RAM address LSB
        SWPB R0
        MOVB R0,@8C02  VDP RAM address MSB
ECHAR CLR R4
GETPAT MOVB @8800,@CHAR(R2) Read pattern from VDP RAM
        INC R1          Next pattern byte
        CI R2,1        Last byte of pattern?
        JNE GETPAT
        CLR R4
COLS CLR R4
        CLR R10
TRANSP MOVB @CHAR(R4),R10 Get character pattern
        SRC R10,15     Put bit 0 at far right
        MOVB R10,@CHAR(R4) Store shifted pattern
        INC R4         Next character pattern line
        CI R4,6        Last character pattern line ?
        JNE TRANSP
        SWPB R10       Print pattern to MSB
        MOVB R10,@CHAR(R5) Store print pattern
        INC R1         # of columns of pattern
        CI R5,1        Last pattern column?
        JNE COLS
        LI R2,4        4 words per character pattern
        LI R1,PCHAR    Printer character patterns
STIRROT MOV #R1+,*R3+ Store Printer character pattern
        DEC R2
        JNE STIRROT
        C R3,R6        Last character pattern?
        JLT ECHAR
RETURN MOV @SAVRIN,R11 Get return address
        CLR @837C      Clear status
        LWPI >83EC     Restore CPL workspace
        RT
PLINE MOV R11,@SAVRIN Store return address
        LWPI MYWS      New workspace
        CLR R0         No array
        ILI R1,1       First argument from basic LINK
        BLWP @NUMREF   Get screen line number from BASIC
        MOV @FAC,R6    Get EXP and MSD (refer to III-13
                        in USER'S REFERENCE GUIDE)
        ELIMINATE EXP
        ANDI R8,>00FF  Eliminate EXP
        DEC R6         Adjust line number assem. language
        SLA R8,2       Multiply by 32 (32 characters/line)
        SWPB R6       Swap to send LSB first
    
```

```

        MOVB R8,@8C02  LSB of screen table location
        SWPB R8        Swap to send MSB
        MOVB R8,@8C02  MSB of screen table location
        LI R5,32       32 characters per line
        LI R1,LINSTR   Storage location for pattern string
GETASC MOVB @8800,R4   Read ASCII code from screen table
        SRL R4,8       Shift for word operation
        AI R4,-32      -96 for BASIC offset & -32 for code
        SLA R4,1       Multiply by 8 (8 bytes/pattern)
        LI R3,8        8 bytes per pattern
NXPAT MOVB @PRINIP(R4),*R1+ Get printer pattern
        INC R4         Next pattern byte location
        DEC R3
        JNE NXPAT     Last pattern byte?
        DEC R5
        JNE GETASC   Last character on screen line?
        CLR R0        Not an array
        LI R1,2       Second argument in LINK
        LI R2,LENSTR+1 String length byte location
        BLWP @STRASG  String for left half line to BASIC
        INC R1        Next argument in LINK
        MOV R2,R3
        AI R2,128     Right half of line
        MOVB #R3,*R2  Store string length byte
        BLWP @STRASG  String for right half to BASIC
        JMP RETURN    Return to BASIC
        ENO
    
```

### CLOCK

by D. L. Fitchhorn

Assemble the program under the name clock.

To load the program use the following three lines.

The clock will run as long as you stay in the basic environment.

```

CALL INIT
CALL LOAD("DSK1.CLOCK")
CALL LINK("START")
To stop the clock use CALL
LINK("STOP")
    
```

#### TITLE 'CLOCK'

```

*-----*
* INTERRUPT DRIVEN CLOCK *
* BY: D.L.FITGHORN *
* 305 NAVAJO *
* KELLER, TX 76248 *
*-----*
* SOURCE PHILADELPHIA TIBBS *
* 215 927 6432 *
*-----*
    
```

```

DEF START,STOP
INTRPT EQU >83CA
TIMOUT EQU >83D8
VDPWD EQU >8C00
VDPWA EQU >8C02
COUNT EQU 1
STNMIL EQU 3
HOURS EQU 4
    
```

```

MINUTS EQU 5
MYREG BSS >20
SECONDS EQU 6
COUNTR EQU MYREG+4
WRB DATA >4000 *WRITE BIT
STN DATA 11 *STANDARD TIME
SCRN DATA >0011 *INITIAL SCREEN LOC
RESET DATA 59 *# OF 60THS TO COUNT
HD DATA >0001,>0203,>0405,>0607 *
DATA >0809,>1011,>1213,>1415 *
DATA >1617,>1819,>2021,>2223 *
DATA >2425,>2627,>2829,>3031 * TABLE TO ALLOW
DATA >3233,>3435,>3637,>3839 *QUICK HEX CONVERSIONS
DATA >4041,>4243,>4445,>4647 * >00 - >3B TO
DATA >4849,>5051,>5253,>5455 * DECIMAL 0 - 59
DATA >5657,>5859
AORG >2800
START MOV @RESET,@COUNTR *INITIALIZE COUNTER
        MOV @SCRN,@MYREG *INITIAL SCREEN LOCATION
        MOV @STN,@MYREG+6 *SET STANDARD TIME
        CLR @MYREG+8 *HOURS
        CLR @MYREG+10 *MINUTES
        CLR @MYREG+12 *SECONDS
        LI R0,CLOCK
    
```

## PARALLEL PRINTER by Tom Arnold

```

MOV  R0,@DIRPT      *TELL INTERRUPT WHERE TO GO
RT
STOP CLR @DIRPT     *TURN INTERRUPT OFF
RT
CLOCK LIM1 0        *ENSURE NO INTERRUPTS
LWPI MYREG          *POINT TO MY REGISTERS
DEC  COUNT         *DECREMENT COUNT OF 60THS
JNE  IEXIT
MOV  @RESET,COUNT  *RESET COUNTER
INC  SECONDS       *UPDATE SECONDS
CI   SECONDS,60    *AT MAX???
JNE  ALLDN
CLR  SECONDS       *YES
INC  MINUTS        *UPDATE MINUTES
CI   MINUTS,60    *AT MAX???
JNE  ALLDN
CLR  MINUTS        *YES
INC  HOURS         *UPDATE HOURS
C    HOURS,STIMEL *AT MAX???
JNE  ALLDN
CLR  HOURS         *YES 00:00:00 MILITARY
CI   STIMEL,24    *SHOULD THIS BE STANDARD??
JEQ  ALLDN
INC  HOURS         *YES 01:00:00 STANDARD
ALLDN SWPB R0       *PUT TIME ON SCREEN
MOV  R0,@VDPWA     *LOAD VIP ADDRESS
SWPB R0
SOC  @WRB,R0       *SET WRITE BIT
MOV  @HD(R4),R1    *HOURS IN DECIMAL
SRL  R1,4          *POSITION FOR LEFT DIGIT
AI   R1,>9000      *MAKE HEX CHAR (BASIC)
MOV  R1,@VDPW
SLA  R1,4          *POSITION FOR RIGHT DIGIT
ANDI R1,>0F00     *IBID AS ABOVE
AI   R1,>9000
MOV  R1,@VDPW     * H
LI   R1,>9A00     * ;
MOV  R1,@VDPW
MOV  @HD(R5),R1    * MINUTES IN DECIMAL
SRL  R1,4
AI   R1,>9000
MOV  R1,@VDPW     * M
SLA  R1,4
ANDI R1,>0F00
AI   R1,>9000
MOV  R1,@VDPW     * ;
LI   R1,>9A00
MOV  R1,@VDPW
MOV  @HD(R6),R1    * SECONDS IN DECIMAL
SRL  R1,4
AI   R1,>9000
MOV  R1,@VDPW     * S
SLA  R1,4
ANDI R1,>0F00
AI   R1,>9000
MOV  R1,@VDPW     * S
SETO @TIMOUT      *RESET SCREEN TIMEOUT
LWPI >83ED        *RESTORE CALLING REGISTERS
RT               *AND RETURN
END

```

## PARALLEL PRINTER SUBROUTINES by Don Cook

The following program illustrates the way the CRU is used to send information to a parallel printer using the TI RS232 card or AXIOM interface. Data is sent directly from memory to the printer without using the DSRINK subroutine.

```

DEF  DISK
REF  VMBW,VMBR
MYS  BSS 32
STORE BSS >1000
DATA3 DATA >0333,>0444,>0555,>0666,>0777
DISK  LWPI MYS

```

To change to AXIOM parallel printer, change line below to BL @PRINT2

```

BL  @PRINT1      Turn on printer control
BLWP @PRINT      Print 4 hex values at >0000
DATA >0000,>0404 Location 0, 4 digits/4 values
BL  @CRLF        Carriage return/line feed
BLWP @PRINT      Print ASCII values at >3F30
DATA >3F30,>0040 Location 3F30, ASCII/64 values
BL  @CRLF        Carriage return/line feed
BLWP @PRINT      Print 16 ! values
DATA >2100,>FF10 Byte >21, print byte/16 times
BLWP @PRINT      Print 5, 3 digit data values
DATA DATA3,>0305 Location DATA3, 3 digits/5 values
BL  @CRLF        Carriage return/line feed
ANDI R12,>FF00   Reset CRU address
SBZ  0           Turn off printer control

```

```

10 GOSUB 3000
20 GOSUB 3100
30 INPUT N,M
40 GOSUB 3130
50 GOTO 30
60 END
3000 REM Printer string codefor CR,LF &
low resolution graphics with
3010 REM 256 bytes to follow
3020 C$=CHR$(13)&CHR$(10)&CHR$(27)&"K"&C
HR$(0)&CHR$(1)
3030 CALL INIT
3040 CALL LOAD("DBK1.PRINTPAT")
3050 REM Change line below to suit RS232
type printer
3060 OPEN #1:"RS232.CR.BA=4800.PA=N.DA=B
"
3070 REM Set printer line feed to 8/72 o
f an inch
3080 PRINT #1:CHR$(27)&"A"&CHR$(8)
3090 RETURN
3100 REM Store character patterns in a f
orm suitable for the printer
3110 CALL LINK("PRPAT")
3120 RETURN
3130 REM Print out screen lines in the l
ow resolution graphics mode
3140 FOR X=N TO M
3150 CALL LINK("PLINE",X,L$,R$)
3160 PRINT #1:C$;L$;R$
3170 NEXT X
3180 RETURN

```

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\*\* SEA LORDS continued \*\*

```

1230 DISPLAY AT(18,2):"PRESS
IF YOU"
1240 DISPLAY AT(20,2):" 1
SHOOT FIRST"
1250 DISPLAY AT(21,2):" 2
SHOOT SECOND"
1260 CALL KEY(0,K,S)
1270 IF K=49 THEN FLAG=1 ::
GOTO 1300
1280 IF K<>50 THEN 1260
1290 FLAG=2
1300 CALL TAP :: CALL CLS
1310 PRINT #1:"ATV0"
1320 CALL DEL(2)
1330 PRINT #1:"ATDR" :: DISP
LAY AT(19,2):"PLEASE CONNECT
YOUR MODEM"
1340 DISPLAY AT(21,5):"THEN
PRESS ENTER"
1350 CLOSE #1
1360 CALL KEY(0,K,S)
1370 IF K<>13 THEN 1360
1380 CALL TAP :: CALL CLS
1390 HIT=3 :: EOG=0
1400 REM [MAIN GAMING]
1410 ON FLAG GOTO 1430,1420
1420 OPEN #1:RS2$,UPDATE,VAR
IABLE 32 :: GOTO 1670
1430 CALL CLS
1440 DISPLAY AT(18,2):"PREPA
RE TO FIRE" :: CALL DEL(2)
1450 DISPLAY AT(20,2)BEEP:"E
NTER ROW _ COL _"
1460 CALL KEY(0,K,S)
1470 IF K<65 OR K>74 THEN 14
60
1480 CALL TAP
1490 TR=K-64
1500 CALL HCHAR(20,14,K)
1510 CALL KEY(0,K,S)
1520 IF K=8 THEN 1450
1530 IF K<48 OR K>57 THEN 15
10
1540 CALL TAP
1550 IF K=4E THEN TC=10 ELSE
TC=K-4E
1560 CALL HCHAR(20,22,K)
1570 CALL KEY(0,K,S)
1580 IF K=8 THEN 1450
1590 IF K<>13 THEN 1570
1600 CALL TAP
1610 DISPLAY AT(22,2):"CFIRI
NGJ"
1620 SHOT$=STR$(TR-1)&STR$(T
C-1)&STR$(HIT)&STR$(EOG)
1630 OPEN #1:RS2$,UPDATE,VAR
IABLE 32
1640 PRINT #1:CHR$(127):SHOT
$
1650 IF EOG=1 THEN 2250
1660 REM [CALCULATE SHOTS]
1670 INPUT #1:RET$
1680 IF LEN(RET$)<4 THEN 174
0
1690 ER=0
1700 FOR J=LEN(RET$)-3 TO LE
N(RET$)
1710 IF ASC(SEG$(RET$,J,1))>
48 OR ASC(SEG$(RET$,J,1))>57
THEN ER=1
1720 NEXT J
1730 IF ER=0 THEN CLOSE #1 ::
GOTO 1760
1740 PRINT #1:CHR$(127):"000
2"
1750 GOTO 1670
1760 RR=VAL(SEG$(RET$,LEN(RE
T$)-3,1))+1
1770 RC=VAL(SEG$(RET$,LEN(RE
T$)-2,1))+1
1780 HT=VAL(SEG$(RET$,LEN(RE
T$)-1,1))
1790 EDG=VAL(SEG$(RET$,LEN(R
ET$),1))

```

```

1800 P1$=CHR$(RR+64)
1810 IF RC=10 THEN P2$="0" E
LSE P2$=STR$(RC)
1820 IF EOG=2 THEN 1640
1830 IF HT=1 THEN 1920
1840 IF HT=2 THEN 1970
1850 IF HT=3 THEN 2020
1860 IF HT=9 THEN 1900
1870 CALL HCHAR(TR+2,TC+19,1
04):: GOSUB 3030 :: GOSUB 29
80 :: GOSUB 3030
1880 DISPLAY AT(22,2):"ENEMY
";SHP$(HT-3):" SUNK!!!"
1890 GOTO 2020
1900 DISPLAY AT(22,2)BEEP:"Y
OU ALREADY SHOT HERE ??"
1910 GOTO 2020
1920 CALL HCHAR(TR+2,TC+19,1
12)
1930 GOSUB 2980
1940 DISPLAY AT(22,2):"YOUR
SHOT MISSED..."
1950 CALL DEL(5)
1960 GOTO 2020
1970 CALL HCHAR(TR+2,TC+19,1
04)
1980 GOSUB 3030
1990 DISPLAY AT(22,2):"YOU H
IT AN ENEMY SHIP..."
2000 CALL DEL(5)
2010 REM [CALCULATE INCOMING
]
2020 IF EOG=1 THEN 2370
2030 IF LOC(RR,RC)>0 AND LOC
(RR,RC)<6 THEN 2140
2040 IF LOC(RR,RC)<>6 THEN 2
090
2050 HIT=9
2060 GOSUB 2930
2070 DISPLAY AT(24,2)BEEP:"E
NEMY SHOT WENT WILD..."
2080 GOTO 2200
2090 GOSUB 2930
2100 CALL HCHAR(RR+2,RC+3,11
2)
2110 GOSUB 2980 :: HIT=1
2120 DISPLAY AT(24,2):"ENEMY
SHOT MISSED ";P1$:"-";P2$
2130 GOTO 2200
2140 GOSUB 2930
2150 CALL HCHAR(RR+2,RC+3,10
4)
2160 GOSUB 3030 :: HIT=2 ::
SHIPS=SHIPS-1
2170 SP(LOC(RR,RC))=SP(LOC(R
R,RC))-1
2180 IF SP(LOC(RR,RC))=0 THE
N HIT=LOC(RR,RC)+3
2190 DISPLAY AT(24,2):"ENEMY
SHOT HAS HIT ";P1$:"-";P2$
2200 CALL DEL(10)
2210 LOC(RR,RC)=6
2220 IF SHIPS=0 THEN EOG=1 ::
GOTO 1620
2230 GOTO 1430
2240 REM [END OF GAME]
2250 CALL CLS
2260 DISPLAY AT(19,2):"YOUR
FLEET HAS BEEN SUNK"
2270 FOR I=1 TO 3
2280 FOR J=1 TO 30
2290 CALL SOUND(-50,440-J*10
,2,1100-J*10,2)
2300 NEXT J
2310 NEXT I
2320 CALL SOUND(-500,110,2,1
40,2)
2330 CLOSE #1
2340 CALL DEL(10)
2350 DISPLAY AT(21,2):"THIS
GAME IS OVER"
2360 GOTO 2440
2370 CALL DEL(10):: CALL CLS
:: DISPLAY AT(19,2):"THE EN
EMY HAS BEEN SUNK"

```

```

2380 FOR I=1 TO 3
2390 FOR J=1 TO 30
2400 CALL SOUND(-50,220+J*10
,2,220+J*10*1,2)
2410 NEXT J
2420 NEXT I
2430 DISPLAY AT(21,2):"THIS
GAME IS OVER"
2440 DISPLAY AT(23,2):"PLEAS
E DISCONNECT NOW"
2450 CALL DEL(500)
2460 CALL CLEAR
2470 END
2480 REM [DATA FILES]
2490 DATA OBJECT: the object
of this game is to locate a
nd to destroy the enemy flee
t, before it destroys you...
2500 DATA GETTING STARTED: f
irst you, must plot your ship
s on, your home grid [leftly
ou, are in command of 5 ships
.
2510 DATA each ship must be
plotted, on either a horizont
al or, vertical line. diagona
l
2520 DATA plots are not used
. ships, may touch one anothe
r but, they must never overla
p, once both players have
2530 DATA placed their ships
they, then determine who wil
l, shoot first. then players,
may connect their modems...
2540 DATA GAME PLAY: game pl
ay is, simple. taking alterna
ting, turns players fire at t
he, opposing fleet. your shot
s
2550 DATA will be shown on t
he enemy, grid [right]. inco
ming, shots will be displayed
on, your home grid. the game
2560 DATA ends when one of t
he fleets, is destroyed... NOT
E: any incoming shots, that go
wild are actually, shots tak
en on a grid that
2570 DATA has already been h
it...
2580 REM [SUB-ROUTINES]
2590 REM [SHIP PLACEMENT]
2600 CALL CLS
2610 DISPLAY AT(18,2):"SHIP
PLACEMENT"
2620 DISPLAY AT(20,2):M$:TAB
(14):"USES";N:"PLACES"
2630 FOR I=1 TO N
2640 DISPLAY AT(22,2)BEEP:"E
NTER ROW _ COL _"
2650 CALL KEY(0,K,S)
2660 IF K<65 OR K>74 THEN 26
50
2670 CALL TAP
2680 CALL HCHAR(22,14,K)
2690 MR(I)=K-64
2700 CALL KEY(0,K,S)
2710 IF K=8 THEN 2640
2720 IF K<48 OR K>57 THEN 27
00
2730 CALL TAP
2740 DISPLAY AT(22,20):CHR$(
K)
2750 IF K=48 THEN MC(I)=10 E
LSE MC(I)=K-48
2760 CALL KEY(0,K,S)
2770 IF K=8 THEN 2700
2780 IF K<>13 THEN 2760
2790 CALL TAP
2800 CALL HCHAR(2+MR(I),3+MC
(I),97)
2810 NEXT I
2820 DISPLAY AT(24,2):"=> PR
ESS PRCD OR REDD <="

```

## PROGRAMMING HINTS

By JOHN LUCK

### EXAMPLE #1 :

This listing is a space shoot-out for Extended Basic. You move the crosshairs around the screen with the joystick until you have it on the E.T, push the fire button and ZAPP, no more E.T. It also uses the subroutine for the exploding spacecraft from last months SND to give an example of how it can be used. It also features a couple of interesting sounds effects.

### EXAMPLE #2 :

This listing works in Basic or Extended Basic. It is a planetscape with a horizon on which there is a city skyline. In the foreground there is a geometrical pattern with some cubes and pyramids. In the sky there are three planets of different size and colours. The idea is to build your program on this background. For example, E.T Attack, also listed, would look great on this background. Maybe you could do even better with your own space game.

While we are on the subject of routines and programming, I wish to take this opportunity to extend a very special Greeting and thanks to Graeme Hollis on the programmers Crisis line, who has given me and other members a great deal of assistance with problem areas in programming.

```

100 REM*****
110 REM*
120 REM*   E.T. ATTACK
130 REM*
140 REM*   EXTENDED BASIC
150 REM*   AND JOYSTICKS
160 REM*   REQUIRED
170 REM*
180 REM*BY JOHN LUCK*TISHUG*
190 REM*
200 REM* for S.N.D 26/4/85
210 REM*
220 REM*****
230 CALL CLEAR
240 CALL CHAR(42,"FFFFFFFF
FFFFF"):: CALL COLOR(2,13,1)
250 CALL CLEAR :: CALL SCREE
N(15)
260 PRINT "      *****
***
270 PRINT "      *
*
280 PRINT "      *
*
290 PRINT "      ****
*
300 PRINT "      *
*
310 PRINT "      *
*
320 PRINT "      *****
*
330 FOR F=1 TO 9
340 PRINT
350 NEXT F
360 DISPLAY AT(17,12):"ATTAC
K"
370 DISPLAY AT(20,9):"By Joh
n Luck"
380 DISPLAY AT(22,12):"TISHU
G"
390 FOR SND=30 TO 0 STEP -1
400 CALL SOUND(-100,440,SND,
262,SND,131,SND)
410 NEXT SND
420 DISPLAY AT(24,1):"Press
Any Key"
430 CALL KEY(0,K,S)
440 IF S=0 THEN 430
450 IF S=1 THEN 460
460 CALL CLEAR
470 PRINT "YOU HAVE 5 E.T's
TO DESTROY"
480 PRINT
490 PRINT "AND 50 PHOTON TOR
PEDGES"
500 FOR F=1 TO 6
510 PRINT
520 NEXT F
530 PRINT "Don't Forget To R
elease"
540 PRINT "ALPHA LOCK"
550 FOR D=1 TO 1000 : NEXT
D
560 CALL CLEAR
570 CALL CHAR(96,"182442D5AF
B17E00")
580 CALL CHAR(97,"0800000000
000000")

```

```

590 CALL CHAR(98,"000066181B
660000")
600 CALL CHAR(99,"102040D00C
000000")
610 CALL CHAR(100,"080402050
0000000")
620 CALL CHAR(101,"00000000A
0807000")
630 CALL CHAR(102,"000000000
B010E00")
640 CALL CHAR(103,"000000000
10A0408")
650 CALL CHAR(104,"00000000A
0402010")
660 CALL CHAR(105,"102050800
0000000")
670 CALL CHAR(106,"00000000E
0405020")
680 CALL CHAR(107,"007080D0C
0000000")
690 CALL CHAR(108,"0C0A020A0
0000000")
700 CALL CHAR(109,"30405030C
0000000")
710 CALL CHAR(110,"000E01050
0000000")
720 CALL CHAR(111,"000000000
20A020C")
730 CALL CHAR(112,"080C0209C
0000000")
740 CALL CHAR(113,"000000000
B020408")
750 CALL CHAR(114,"00000000E
0403010")
760 CALL CHAR(115,"182446A18
1662418")
770 FOR SCR=1 TO 14
780 CALL COLOR(SCR,14,2)
790 NEXT SCR
800 FOR S=10 TO 28
810 RANDOMIZE :: ST=INT(RND*
190)+1 :: SA=INT(RND*250)+1
820 CALL SPRITE(#S,97,8,ST,S
A)
830 NEXT S
840 CALL CLEAR :: SHP=0 :: S
HP=0
850 CALL SPRITE(#1,96,5,96,1
24)
860 SHP=SHP+1
870 DISPLAY AT(1,1):"SHIPS:"
;SHP
880 IF SHP=6 THEN 1330
890 CALL SPRITE(#7,56,16,192
,124)
900 CALL SPRITE(#2,115,4,50,
124)
910 CALL JOYST(1,X,Y)
920 DISPLAY AT(3,1):"SHOTS:"
;SHD
930 IF SHD=50 THEN 1330
940 CALL MOTION(#2,-Y*3,X*3)
950 CALL POSITION(#7,R,C)
960 CALL POSITION(#2,RT,CT)
970 RANDOMIZE :: KL=INT(RND*
30)-16 :: PL=INT(RND*30)-16

```

### \*\* Listing of SEA LORD BATTLE continued \*\*

```

2830 CALL SOUND(165,1400,2)
2840 CALL KEY(0,K,S)
2850 IF K<>6 THEN 2900
2860 FOR I=1 TO N
2870 CALL HCHAR(2+MR(I),3+MC
(I),96)
2880 NEXT I
2890 GOTO 2600
2900 IF K<>12 THEN 2840
2910 CALL CLS :: RETURN
2920 REM [INCOMING SOUND]
2930 FOR I=2 TO 50
2940 CALL SOUND(-300,1200-I*
10,INT(50/I))
2950 NEXT I
2960 RETURN
2970 REM [MISSED SOUND]
2980 FOR I=1 TO 5
2990 CALL SOUND(-10,1500+I*1
00,1)
3000 NEXT I
3010 RETURN
3020 REM [HIT SHIP SOUND]
3030 FOR I=1 TO 10
3040 CALL SOUND(-10,110,1)
3050 CALL SOUND(-10,140,2)
3060 NEXT I
3070 RETURN
3080 REM [SUB-PROGRAMS]
3090 SUB CLS
3100 CALL HCHAR(17,1,32,256)
3110 SUBEND
3120 SUB DEL(D)
3130 FOR J=1 TO D*100
3140 NEXT J
3150 SUBEND
3160 SUB TAP
3170 CALL SOUND(-1,880,8)
3180 SUBEND
3190 SUB PAGE(X,Y)
3200 DISPLAY AT(1,1)ERASE AL
L:"* BATTLE OF THE SEA LORDS
*"
3210 FOR L=X TO Y+V
3220 READ MSG#
3230 DISPLAY AT(L,2):MSG#
3240 NEXT L
3250 DISPLAY AT(22,2)BEEP:"p
ress enter to continue"
3260 CALL KEY(0,K,S)
3270 IF K<>13 THEN 3260
3280 SUBEND

```

\*\* ET-ATTACK continued \*\*

```

980 CALL MOTION(#1,KL,PL)
990 CALL KEY(1,K,S):: IF S=0
    THEN 910
1000 IF K=18 THEN 1010 ELSE
990
1010 CALL SPRITE(#8,98,10,R,
C)
1020 SHO=SHO+1
1030 RV=(RT-R)*0.55
1040 CV=(CT-C)*0.55
1050 CALL MOTION(#8,RV,CV)
1060 FOR SND=30 TO 10 STEP -
5
1070 CALL SOUND(-100,1760,80
N,1568,SND,1397,SND)
1080 NEXT SND
1090 CALL COINC(#1,#8,10,AS)
:: IF AS=-1 THEN 1120 ELSE 1
100
1100 CALL DELSPRITE(#8)
1110 GOTO 910
1120 CALL DELSPRITE(#8):: CA
LL MOTION(#1,0,0,#2,0,0):: C
ALL POSITION(#1,A,B)
1130 CALL SPRITE(#3,99,11,A,
B)
1140 CALL SPRITE(#4,100,11,A
,B)
1150 CALL SPRITE(#5,101,11,A
,B)
1160 CALL SPRITE(#6,102,11,A
,B)
1170 CALL DELSPRITE(#1)
1180 RANDOMIZE
1190 CALL SOUND(700,-7,0)
1200 FOR Q=3 TO 6
1210 Z=INT(RND*15)-7
1220 S=INT(RND*15)-7
1230 CALL MOTION(#Q,Z,S)
1240 NEXT Q
1250 FOR D=1 TO 150 :: NEXT
D :: CALL PATTERN(#4,103,#6,
106,#5,109,#3,112):: FOR D=1
TO 150 :: NEXT D
1260 CALL PATTERN(#4,104,#6,
107,#5,110,#3,113):: FOR D=1
TO 150 :: NEXT D :: CALL PA
TTERN(#4,105,#6,108,#5,111,#
3,114):: FOR D=1 TO 150
1270 NEXT D
1280 CALL PATTERN(#4,100,#6,
102,#5,101,#3,99):: FOR D=1
TO 150 :: NEXT D
1290 FOR Q=3 TO 6
1300 CALL DELSPRITE(#Q)
1310 NEXT Q
1320 GOTO 850
1330 CALL CLEAR :: CALL MOTI
ON(#1,0,0,#8,0,0,#8,0,0):: D
ISPLAY AT(12,5):"PLAY AGAIN
YES OR NO"
1340 FOR X=110 TO 9000 STEP
500
1350 CALL SOUND(-50,X,X/1000
)
1360 NEXT X
1370 CALL KEY(0,K,S)
1380 IF S=0 THEN 1370
1390 IF K=121 THEN 840
1400 IF K=110 THEN 1410 ELSE
1380
1410 CALL CLEAR
1420 DISPLAY AT(12,9):"OK GO
OD BYE"
1430 FOR D=1 TO 500 :: NEXT
D
1440 CALL DELSPRITE(ALL):: C
ALL CLEAR :: END

```

\*\*\*\*\*

```

100 REM*****
110 REM*
120 REM* PLANETSCAPE *
130 REM*
140 REM*BY JOHN LUCK*TI SHUG*
150 REM*
160 REM*FOR BASIC-EX BASIC *
170 REM*
180 REM*****
190 CALL CLEAR
200 CALL CHAR(95,"025CF42232
1A0C08")
210 CALL CHAR(96,"FFFFFFFF
FFFFFF")
220 CALL CHAR(97,"0000000000
2E3AFF")
230 CALL CHAR(98,"0000000000
606DFF")
240 CALL CHAR(99,"0000000000
0074FF")
250 CALL CHAR(104,"010204081
0204080")
260 CALL CHAR(105,"B04020100
B040201")
270 CALL CHAR(106,"000000FF0
0000000")
280 CALL CHAR(107,"010101FF0
1010101")
290 CALL CHAR(108,"010101010
1010101")
300 CALL CHAR(109,"10385C9E5
C381000")
310 CALL CHAR(110,"102B446C5
C5C3810")
320 CALL CHAR(111,"1F2347FFB
FBEBFCB")
330 CALL CHAR(112,"010000000
0000000")
340 CALL CHAR(120,"0103071F1
F3F7F7F")
350 CALL CHAR(121,"C0F0FBFC3
CBFFFFFF")
360 CALL CHAR(122,"FFFBF17B7
F3F0F01")
370 CALL CHAR(123,"FFFEFEFCF
CFBFC00")
380 CALL CHAR(128,"00F07BFCF
C7E3F7F")
390 CALL CHAR(129,"FFFE7EFCF
C387000")
400 CALL CHAR(136,"FFFFFFFF
FFFFFF")
410 CALL CHAR(137,"F0FCFCFEF
FFFFFF")
420 CALL CHAR(138,"FFFEFCEFE
EFCFCF0")
430 CALL CHAR(139,"B0B0C0B0E
0C0C080")
440 CALL CHAR(140,"C0F0F0FBF
EFEFEFF")
450 CALL CHAR(141,"FFFEFCFBF
BF0F080")
460 CALL SCREEN(2)
470 CALL COLOR(8,2,7)
480 CALL COLOR(9,11,1)
490 CALL COLOR(10,2,11)
500 CALL COLOR(11,8,2)
510 CALL COLOR(12,4,2)
520 CALL COLOR(13,6,2)
530 CALL COLOR(14,7,2)
540 FOR R=20 TO 24
550 CALL HCHAR(R,1,96,32)
560 NEXT R
570 CALL HCHAR(21,1,106,32)
580 T=6
590 FOR R=20 TO 24
600 T=T-1
610 CALL HCHAR(R,T,104,1)
620 NEXT R
630 T=13
640 FOR R=20 TO 24
650 T=T-1
660 CALL HCHAR(R,T,104,1)

```

```

670 NEXT R
680 T=20
690 FOR R=20 TO 24
700 T=T+1
710 CALL HCHAR(R,T,105,1)
720 NEXT R
730 T=27
740 FOR R=20 TO 24
750 T=T+1
760 CALL HCHAR(R,T,105,1)
770 NEXT R
780 CALL VCHAR(20,16,108,5)
790 CALL HCHAR(21,16,107,1)
800 CALL HCHAR(19,1,99,4)
810 CALL HCHAR(19,5,97,3)
820 CALL HCHAR(19,9,99,2)
830 CALL HCHAR(19,12,98,3)
840 CALL HCHAR(19,15,97,5)
850 CALL HCHAR(19,20,99,6)
860 CALL HCHAR(19,26,98,2)
870 CALL HCHAR(19,28,97,1)
880 CALL HCHAR(19,29,99,4)
890 FOR R=1 TO 25
900 RANDOMIZE
910 SR=INT(RND*18)+1
920 SC=INT(RND*32)+1
930 CALL HCHAR(SR,SC,112,1)
940 NEXT R
950 CALL HCHAR(7,19,120,1)
960 CALL HCHAR(7,20,121,1)
970 CALL HCHAR(8,19,122,1)
980 CALL HCHAR(8,20,123,1)
990 CALL HCHAR(15,13,128,1)
1000 CALL HCHAR(16,13,129,1)
1010 CALL VCHAR(22,27,109,2)
1020 CALL HCHAR(23,6,110,2)
1030 CALL HCHAR(22,18,111,1)
1040 CALL HCHAR(1,1,136,2)
1050 CALL HCHAR(2,1,136,3)
1060 CALL HCHAR(3,1,136,4)
1070 CALL HCHAR(4,1,136,4)
1080 CALL HCHAR(5,1,136,5)
1090 CALL HCHAR(6,1,136,5)
1100 CALL HCHAR(7,1,136,5)
1110 CALL HCHAR(8,1,136,4)
1120 CALL HCHAR(9,1,136,4)
1130 CALL HCHAR(10,1,136,3)
1140 CALL HCHAR(11,1,136,2)
1150 CALL HCHAR(4,5,137,1)
1160 CALL HCHAR(8,5,138,1)
1170 CALL HCHAR(5,6,139,1)
1180 CALL HCHAR(6,6,139,1)
1190 CALL HCHAR(7,6,139,1)
1200 CALL HCHAR(1,3,140,1)
1210 CALL HCHAR(2,4,140,1)
1220 CALL HCHAR(3,5,140,1)
1230 CALL HCHAR(11,3,141,1)
1240 CALL HCHAR(10,4,141,1)
1250 CALL HCHAR(9,5,141,1)
1260 CALL HCHAR(3,2,95,1)
1270 CALL HCHAR(6,3,95,2)
1280 CALL HCHAR(7,5,95,1)
1290 CALL HCHAR(10,3,95,1)
1300 GOTO 1300

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