



# BUGBYTES

February/March 1998

## Editor's Note

Dennis Remmer  
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Evenin' all... Happy New Year!

**The next meeting is at Val & Rex Jones' (5 Russell Close, Wynnum West) on Wednesday, 28th January. Hope to see you there.**

This issue there's a couple of new product developments, an interesting discussion from the TI mailing list, a couple of technical tips, an excellent trivia article on rare and unreleased TI software, and a couple of wierd humourous articles for your enjoyment.

Best Regards...

## PC99 Developments

Mike Wright, CADD Electronics  
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When the next version of PC99 is released (at some future unspecified date) it will include a "PC99 card". Current cards in the development system include: the TI and Myarc disk controllers, the p-Code card, RS232 card; and the TI 32K, Myarc 512K, and AMS (up to 1Mb) cards.

What makes the "PC99 card" different is that it never existed as a real piece of hardware. As delivered, the PC99 "card" will include a clock. The way it works is as follows:

The "card" is assigned CRU address >1B00. When a TI application (an assembly language program, or a Basic program with an OPEN #1:"CLOCK"), accesses the card, the PC99 software will request from the PC the current time and date. This will be encoded into a set of "registers" on the "card", which the 9900 code in the DSR can see. The 9900 code will return to the caller the current time and date. The return format selected matches that of the CorComp Triple-Tech.

It was decided not to allow a TI application to set the time on the "card", since this would have involved changing the PC time and date.

The long-term aim of the "card" is to allow third-party developers to write custom DSRs for the "card" to extend the capability of the product. An immediate option that comes to mind is the use of the PC mouse in a TI application. We also think it is possible to have the "card" exec other PC programs. An example could be a DSR that execs a utility that might compare two TI-Writer files on a disk and show you the differences between them; or perhaps spell checks a TI-Writer file.

The "card" code was operational last week in the current development version and seems to work correctly. It will go through a test cycle, and needs to be documented. It should make a useful addi-

tion to the next release of PC99. We will show this feature at Fest-West.

## Questions from the Net

David A Scriver / Mike Wright  
d.scriver@ukonline.co.uk / mjmw@xyvision.com

[Ed: This was recently an interesting to&fro from the TI mailing list on the Internet]

Greetings all,

I have been sitting here with a number of questions bouncing around inside my skull and decided that this is the best place to try and get some answers. The first few concern GPL. I have enough written material to get the basic jist of what GPL is. However, I have almost nothing on how us mere mortals can actually use it for anything. For example, do you need a special assembler to create a GPL program? Must a GPL program reside only in the GROM/GRAM area? Is it possible to execute a plain old assembly program from GROM/GRAM? If not what must be done to "convert" it? I have the TI Intern, but I

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find it somewhat cryptic. Now on to my second question concerning cassette based file storage. I am curious about just how data is stored to tape. I recorded a small sample of a TI data tape and recorded it with my PC into a .WAV file in the hopes that I could analyze and decipher what was there. No joy. I tried zooming in on the wav form in hopes to see some sort of regular repeating patterns, but found none. What is the correlation between the wave form and say an ASCII character that has been saved to tape? The only things I think I know about it are that the data is modulated much like a modem and that the baud rate is somewhere around 4800bps???

Can anyone help clear up some of these mysteries?

*TI released on December 3, 1979 the "Texas Instruments Graphics Programming Language User's Guide". It may be possible to pick this up at a swap meet or get a friend to make a copy (~100 pages or so). CaDD Electronics can provide a .pdf file of the manual in terms of our licensing agreement with TI. There are quite a few errors in the original manual that have been fixed in the CaDD version. This will at least get you started on things like addressing modes, and the instruction set. There are also some useful sections on the layout of the 4A memory-wise.*

*As far as I know, GPL code can only be executed from a GROM. The GPL interpreter in the console ROMs knows how to locate GPL programs because of the GROM header (documented in the above manual, and elsewhere, such as MG Explorer manual). GPL code can execute 9900 code by using an XMLLNK or directly through the ROM XML table. You need a GPL assembler to assemble GPL code. Monty Schmidt (and Ryte Data) had one many years ago. I also believe R.A. Green offers one. Recently I posted a message concerning Thierry Nouspikel who has one too, but it is in Switzerland (and he is in the USA). I think there are also two versions available that were written in Germany.*

*The problem with the 4A is what do you do with the GPL code? Only TI was able to manufacture a GROM. It was patented or copyrighted, and they did not license the manufacture to anyone else. Third*

*party manufacturers did get around this by using a standard ROM, with some logic around it that simulated the auto-incrementing and wraparound features of the GROM. (We know about these, because they have to be emulated in PC99). However, in the PC99 world, since a GROM is just a file, you \_can\_ write GPL code and see what it does. [In fact, under PC99 you can make use of the REVIEW MODULE LIBRARY feature in the console, and have up to 16 banks of GROM code available to the console and, of course, a TI Basic (or XB) program. For example, If you have XB in slot 1, and PRK in slot 2, and TE II in slot 3, then from TI XB you can:*

*100 OPEN #1:"SPEECH", OUTPUT*

*110 CALL SPRITE(parameters)*

*120 CALL D(parameters)*

*SPEECH lives in the TE II module, SPRITE in the XB module, and D in the PRK module. The Review Module Library mechanism will search up to 16 banks of GROM to try to resolve a CALL. If this hardware had ever been reliable, there could have been a Colossal Cartridge with probably everything anyone could ever have wanted in it (16 banks x 5 GROMs x 6K/GROM)].*

*With regard to the cassette tape format, PC99 does not emulate the cassette interface fully. But, it does let you do a cassette write to a DOS file. You can then dump the file on the PC and examine the format of the byte stream. There are about 50 nulls, and then the data is written in Basic token format, and then written again! This was how TI tried to guarantee the data. The read routine reads the stuff into memory, and then continues reading and comparing the same data again. When all matches, you have a good load.*

Thanks for the response. You did answer some of my questions. I have a copy of the GPL manual that I managed to download from the premierweb FTP site. It was on the TI-CD. However, without a compiler/assembler the manual is informational at best. I was hoping to find out if it were possible to actually write code in GPL. With the space allocated for a GPL program, it would enable programmers to write much larger and therefore

more interesting software packages for the /4A, albeit at the cost of a little speed. There are quite a few people out there with Gramcracker and P-Gram cards that would be able to use just such software. I have read about Monty Schmidt's assembler, but I have never actually seen it. I have also seen various modified cart dumps out there such as the combined XB-E/A. How was this done? Was it just done with a sector editor or was the code disassembled/re-assembled somehow? I myself have been able to load multiple carts by modifying the headers in cartridge dumps. What I haven't been able to do is understand the addressing scheme. i.e. if a cart was meant to load into GROM 7 and you try and modify its header to load into GROM 6, things tend to get weird sometimes. In a fantasy world I would like to see something like a C compiler that would allow the programmer to write in a high level language and then have the compiler create a GPL executable program that could then be loaded using a GRAM device or with an emulator. It would also be nice to be able to convert assembly language programs to GPL so that they too could be loaded and run as modules. I have a program called OS-99 (I haven't used it much lately so I don't recall who wrote it) that loads into GROM 7. If you are familiar with this program could you tell me what facilities the author used to create it?

My reasons for asking about the cassette info were that I have a number of old cassettes with programs that I entered years ago. I am an emulator bound TI citizen and no longer have a TI system. What I wanted to do was be able to analyze the wave form put out by an audio tape player connected to a sound blaster card. If I knew the correlation of the wave forms vs the actual data contained within it I might be able to write a program on the PC that would convert the audio info from the tape player into eye-readable text. I think I've seen a list of all the basic tokens somewhere, I seem to remember it was in one of Jim Peterson's articles somewhere. Armed with that it wouldn't be too difficult then to convert the tokens back into TI-basic. These text files could then be retyped and saved to disk using the emulator. Might be more work than it's worth though! ;-o Of course this wouldn't work with assembly programs such as the line-by-line assembler or the



mini-writer made for the mini-memory module, but could be of some use to someone I would imagine. Anyway, I'm dreaming again, and really should come back to earth one of these days and just wait till I have access to an old console with a cassette interface! ;-)

Thanks again for the info and good luck on your next release of PC99.

BTW, as I understand it, TI wrote all but one of the TI carts on a mini which I assume had a GPL assembler on it. What did they use to write the one they created on the /4A? (I believe the cart was Hopper???)

## Transfer Files to the TI

*Michael Zapf*

*Ed: In the last issue there was a huge listing of files available for download from the Internet for your TI. This article gives you help in getting them to your TI.*

There is currently no way of transferring files from an FTP server to the TI directly. Therefore your files will be on a non-TI system being connected to the Internet.

People that are interested in the files will find themselves in one of the following situations: (PC stands for any IBM compatible, MacIntosh or the like; TI represents the TI-99/4A and the Geneve.)

- 1. PC user at home with Internet access
- 2. PC or workstation user at work or school/university with Internet access
- 2.1. with DOS diskette drive
- 2.2. with terminal modem access
- 2.3. with TCP/IP modem access
- 2.4. without disk drive or modem access
- 3. PC or workstation user with e-mail access only

These situations may be treated as follows:

1. This is the easiest configuration. Download the files to your PC; then you only need to connect your TI with your PC by a null modem cable. After that, start a terminal program on both sides (e.g. TELCO) and use XModem to transfer the files. On the TI, they will be converted to the correct file type (e.g. DIS/VAR 80) by XModem.

2. This should be the most common situation.

2.1. Here you can copy the files to a DOS-formatted diskette, take them with you at home to your PC, and transfer them as described under "1."

2.2. You can establish a terminal (ASCII) connection to your site using a modem on your TI. By using a suitable protocol (XModem, YModem, ZModem), you can transfer the files directly to your TI. (This can also be done with a PC in between; continue with step "1.")

2.3. You need to have a TCP/IP implementation on your PC at home. Use FTP to transfer the files from the remote site to your PC, then continue with "1.". There is currently no way of transferring the files directly to the TI since there is no TCP/IP implementation for the TI (yet).

2.4. In this case you have no chance but printing the file and re-enter it on your TI (if the file is printable).

3. In this case you even have no chance to get files from an FTP server. Certainly you won't be able to bring those files to your TI. (Unfortunately, there are some users that face exactly this situation.) Think about getting a "real" Internet connection (or use the connection of a friend?)

## Cassette Tape Format

*Thierry Nospikel*

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Well, I was asked this information by Email recently and, since I typed it anyway, I figured it may be of interest to post it in there. Not to mention the fact that somebody may spot a mistake (I fig-

ured this out from console ROM disassembling)...

CASSETTE TAPE FORMAT (use non proportional font to display/print)

Name	# bytes	Content	
File sync	300	>00	
Data mark		>FF	
Size	2	# of records	
Rec sync	8	>00	)
Data mark	1	>FF	)
)Rec			
Data	64	data bytes	) 1
Checksum	1	sum of the 64 data bytes	)
Repeat rec 1			
Rec 2			
Repeat rec 2		etc.	

Bits are encoded by output level CHANGES. With a 3 MHz console, clock ticks toggle output every 725.3 microseconds. To encode a 1 invert the output in the middle of this time period.

This results of frequencies of 2757 Hz for a stretch of ones and 1379 Hz for zeros (if my calculations are correct) which is well within the audio range, thus suitable for a tape player.

0	_1	_0_	1_	Bits to encode
_	_	_	_	Output (low/high)
c	c	c	c	Clock intervals

NB: Upon writing, the timing is ensured by loading >0011 into the clock register of the TMS9901 chip. The resulting delay is  $17 / (3\text{MHz} / 64) = 363.6 \text{ usec}$ . Upon reading, the stretches of zeros are used to time the tape recorder and this value is fed into the TMS9901 for further reading.

## New GPL Package

*Thierry Nospikel*

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Hello 99ers,

I just completed an assembly package that comprises:

- a macro GPL assembler
- a universal loader (handles GPL, 9900, loads in modules/rambo banks...)



- an improved memory image (program) file loader
- a memory image file saver to go with the above
- a handfull of utilities to go with the universal loader
- manuals for all these, in S.W. Fline's english (1)

I'm planning to include them in a new version of the Editor/Assembler module, that remains to be written. In the mean time, I would like to have several volunteers testing this package with TI's E/A module. This way I can correct the main bugs and introduce possible improvements before I release the final product. Ideally, I'd like to have both GPL novices and expert programmers.

This is, of course, absolutely free of charges (2). All you have to do is:

- E-mail to me your name and address so that I can send you the softs (sorry I have no way to send them via the net).
- Test these programs and feed me with your impression, suggestions, bug reports, etc.

The following hardware is needed/suggested:

- PE box with 32K memory expansion
- Disk drive (SS/SD is enough)
- GRAM device (see note below), although part of the package doesn't need it
- RAMBO device (such as Horizon Ramdisk) is advisable but not absoluteley required: you just loose the ability to use RAMBO-specific features.

Note: the current version is meant for use with either of 2 GRAM devices: the german 128K-Gram Karte or the P-Gram+ card. However I don't own the latter, so I cannot guaranty everything will work all right. In fact that's one more reason why I need guinea-pigs :-). Some programs can handle both, but some exist in two

versions, so please specify which device you own.

Below are more detailed informations on the various programs included in this package.

Thank you for your attention,

*1) S.W. Fline= Somebody Whose First Language Is Not English*

*2) In case there are really too many volunteers (which I sort of doubt), I may decide to limit the number of beta copies to about a dozen.*

#### GPL macro assembler

- Based on the Wieand syntax, with many improvements (shortcuts, aliases, "loose" syntax, etc).
- Can produce absolute or relocatable code.
- REF/DEF allowed.
- Automatic generation of GRAM header lists for use by the loader.
- Can make use of the 16 GRAM bases (>9800 to >983C).
- Detailed error message (no "syntax error", all-purpose messages).
- Regular and local labels, promoting "good" programming habits.
- Easy macro language: regular GPL enclosed between a MAC and a ENDM instructions.
- About 100 pre-defined labels for frequently used addresses or routines can be included in the symbol table with a single instruction (PAD).
- Instruction OPC defines aliases for any opcode/instruction: useful for compatibility with other GPL assemblers.
- Extra "opcodes" for use with the FMT sub-interpreter, including opcodes to deal with screen in text mode (40 columns).
- Conditional assembly: allows for intelligent macros that assemble dif-

ferently according to the parameters passed.

- 9900 embedding utility: includes a 9900 assembly DF80 file (tagged object code) within GPL. This way assembly routines can be downloaded to cpu mem.
- Sophisticated list file features, with tabs setting, filtered symbol tables production, direct control of the printer, etc.
- Shrink option: disables listing, but allows for more labels.
- Possibility to save macro/labels/aliases on FastFiles (tm) in order to load hem in a few seconds during subsequent assembly.
- Comprehensive manual, including syntax of each opcode/instruction, more detailed instructions for some tricky opcodes (such as COIN or I/O), informations on the built-in XML or GROM routines and much more.
- Etc.

#### Universal loader

- Can handle DV80 files produced by the GPL assembler (or Wieand's one) and 9900 files produced by TI's assembler. GPL can be loaded in the whole 64K range of all the 16 bases. Assembly language can be loaded in regular memory, in GRAMdevice's module banks or in RAMBO banks.
- Automatically assigns program segments to an available bank: this saves you with the burden of bank switching.
- Links REF/DEFs labels between GPL and assembly programs.
- Automatically generates a GRAM header at address >6000, base >9800.
- Contains improved (but still compatible) versions of the standard utilities, such as KSCAN, GPLLNK, etc. As well as new utilities, such as DSR-RPT (repeat dsr call), VIBW (VDP identical bytes write) or routines dealing with program segments.



## MILD Memory Image LoaDer

Uses "program" files to load:

- Assembly programs in cpu memory (standard TI's convention)
- GPL programs in current base (GK convention)
- GPL programs in an alternate base, or in Basic GROM domain (new convention)
- Assembly programs in up to 16 module banks (extended GK convention)
- Assembly programs in Horizon Ramdisk's RAMBO banks (new convention)
- Title screen, including sprites and sounds (new feature!)

As you probably understood, MILD properly handles files produced with most SAVE utilities, but its extra features can only be exploited in association with MISS (see below).

MILD resides in low memory expansion (>500 bytes), but can relocate itself if that very area is needed for loading. It can even overwrite itself if you really need ALL the 32K memory expansion.

## MISS Memory Image Super Saver

This comes in two versions:

- A DF80 file to use with your assembly programs.

For instance you would use:

```
BLWP @SAVEC  
DATA FILE
```

...to save cpu memory (with proper values in R0 to R3 and FILE pointing to filename).

- A menu driven version for easily saving any memory area, either by specifying addresses or by referring to labels.

## Other programs

These are DF80 files to be used with the universal loader:

- Symbol table editor
- Symbol table viewer (shrunken version of the above)
- Segment table viewer
- Utility table editor
- Screen dumper for use with the above programs, or your own softs
- Symbol table shifters (to low or high memory)
- Standard / Extra utilities available on separate files.

Coincidence table generator (X-Basic program).

## TI Trivia

*Bill Gaskell*

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*Ed: Reproduced with permission from Bill's brilliant historical reference TI website at: <http://www.gj.net/~lucky7/> Check it out for TI timelines, detailed listings and notes on released and unreleased TI software, hardware and events.*

Here is some trivia relating to the production of Solid State Command Modules for the TI-99/4A Home Computer

**ACTIVISION:** A company formed by ex-Atari engineers Alan Miller, David Crane, Bob Whitehead and Larry Kaplan in 1979. Although a 3rd Quarter 1983 newsbyte in 99er Magazine stated that Activision was expected to begin producing video game cartridges for the 99/4A, they never did. Aside from this "rumor", Activision's only other involvement in 99/4A history was their purchase of Triton Products Company in 1989. Triton, you may remember, was the Fullfillment House that Texas Instruments chose in March 1984 to liquidate all remaining stock of TI-99/4A software.

**ASTROBLITZ:** A VIC-20 and Commodore 64 game produced by Creative Software that was supposed to be ported to the 99/4A by Funware, but never was as far as I can tell. As captain of a fast-

moving rocket plane in this fast-action, multi-colored, arcade style game, your mission is to make the planet safely by destroying all dangerous objects on its surface and in its atmosphere. Score as many points as possible by shooting down Alien Saucers, Radar Dishes, Spinners, and Seekers and by destroying Gun Towers. Free ships are awarded every 10,000 points.

**BLACKHOLE:** A Tom Griner authored space game that was produced by Creative Software for the VIC-20, which was also supposed to be ported to the 99/4A by Funware, but never was as far as I can tell. The game did ultimately surface for the 99/4A in September 1987, written by Steve Lampke and Ed Lee, but it was released by Bill Moseid's DataBiotics company, not Funware. In the game, irresistible gravitational force is drawing your ship, as well as a variety of space debris, into a raging black hole. Your mission is to survive, manipulating your ship to avoid being drawn into the Black Hole or being hit by any of the debris around your ship.

**CANNONBALL BLITZ:** Although I've never seen any official word that Sierra On-Line intended to produce a 99/4A version of this VIC-20 favorite, a version does exist, because I own a copy of it on disk. The VIC-20 version was available in cartridge format, so I am going to assume that an officially released 99/4A version would have been in cartridge format also. The 99/4A version at least was written in 1982 by a J. Lando, which is a name I am not at all familiar with. The theme is identical to Donkey Kong, except that in Cannonball Blitz you as Paul Revere must climb to the British outpost at the top of the hill and capture their flag. The "hill" in this case is the same Donkey Kong-like switchback ramps that move the character from right to left, then left to right during the ascent. Of course, Paul Revere must look out of cannonballs coming down the hill from the British outpost.

**CHOPLIFTER:** Despite the fact that Broderbund Software licensed this Dan Gorlin authored game to TI for the production of a 99/4A version, it was Creative Software who introduced it for the VIC-20 (the VIC version written by Tom Griner) in May 1983. Creative Software is the Sunnyvale, CA. company who



would buy out former TI employee Michael Brouthers and his Funware company in the Fall of 1983. Brouthers and Funware had grand plans for porting numerous games already written for other computers, to the TMS9900 chip, so it would have been logical for Creative Software to produce the 99/4A version. As it turned out, nobody produced a version for the 99/4A at all. However, it may have been TI's decision to drop the project, not Broderbund's. I have no information that indicates which firm made the decision. However, the November 1983 issue of Compute! magazine page 314 tells of TI's agreement with Broderbund to produce the game in cartridge form, as does the September 1983 issue of Enthusiast 99 on page 49. The PHM 3159 product number comes from Bruce Tomlin's TI Cartridge List compiled 12/95. I have no TI publication which verifies that number being assigned to the Choplifter cartridge.

**COMPUTER WAR:** This program was announced as being available for the TI-99/4A in a product review by Dan Gutman which appears in the February 1984 issue of Compute! magazine on page 134. Despite this announcement, Thorn EMI, the British Entertainment giant, and owner of the code for Computer War, never produced the cartridge. Curiously, they reported in the July 4, 1983 issue of InfoWorld that they had "cracked TI's GROM", so it seems that they were capable of producing a cartridge. For reasons I have not yet discovered, the decision was made not to put it out however, despite the completed TMS9900 code for the project. Tenex Computer Express finally released the Computer War game as one of three Thorn EMI games (Submarine Commander and River Rescue being the other two) on a "Lost Hits" disk during the Summer of 1986. They followed that release with a cartridge version of Computer War a few months later. Today, Joy Electronics in Texas is the only source of new Computer War game cartridges that I know of, since they bought out the Tenex inventory.

Computer War was used for the program name, despite the game being based upon the War Games movie, because Coleco owned the rights to the name War Games. Yet Coleco never produced a

War Games cartridge for their Adam computer.

**CRISIS MOUNTAIN:** This program was announced by Funware president Michael Brouthers at the June 1983 Consumer Electronics Show and was one of list of titles he declared would be produced for and would run on the 99/4A, despite TI's efforts to discourage unlicensed third-party cartridge development. Brouthers boldly demonstrated his company's defiance to TI's new proprietary GROM by plugging a Funware cartridge into the new beige console and it worked.

Many of the titles Brouthers announced were not actually in existence at the time of his statement, but were planned ports of games already written for other computers. Crisis Mountain was one such-planned port. There is no evidence that I can find which proves one way or the other that a 99/4A version exists or doesn't exist. My guess is that it does not and I base this upon the fact that Funware was bought out by Creative Software in August or September of 1983, and then the TI-99/4A was canceled by Texas Instruments. Thus if the program wasn't almost a complete product by the June 1983 announcement, the project was probably dropped.

The Crisis Mountain program was written by Ron Aldrich and David Schroeder for the Apple II computer and was also released in an Atari version by its distributor, Synergistic Software of Renton, WA. The scenario of the game is that a group of terrorists had been hiding out in the caverns of a dormant volcano in the Pacific Northwest. The volcano erupted unexpectedly, forcing the terrorists to abandon their hideout. As they fled, they left behind their loot and supplies, and several nuclear bombs. To save the West Coast from impending disaster you must venture into Crisis Mountain, dig up and defuse the bombs while avoiding numerous hazards.

**CROSSFIRE:** This Sierra On-Line game is similar in theme to TI's Tombstone City. In Crossfire though the Aliens have landed and they are closing in. Only three ships are left to protect the city from the invaders and you have a limited supply of ammunition. You must keep moving within the grid to avoid getting

hit by the Aliens and then shoot back to destroy them so that you can save the city. A TI-99 version of this game does exist, but probably not in cartridge form. It was one of those planned for release that never made it time to beath the October 28th announcement by TI dropping the Home Computer.

**DAVID'S MIDNIGHT MAGIC:** This David Snider authored game was another that Broderbund Software announced for the TI-99/4A, only to drop the project when TI announced the demise of the Home Computer, or it may have been TI's decision to drop the project. I have no information that indicates which firm made the decision. However, the November 1983 issue of Compute! magazine page 314 tells of TI's agreement with Broderbund to produce the game in cartridge form, as does the September 1983 issue of Enthusiast 99 on page 49.

**DECIMAL DELI 2:** An unreleased Scott, Foresman and Company education cartridge programmed by Thomas Hartsig. It contained practice and training on Place Value, Comparing and Ordering, Counting Places, Multiplying Decimals, Zeros In The Product and Applying Decimals. The code for the cartridge exists as a Gram file and can be obtained from the Lima, OH 99ers.

**IMAGIC:** Former Atari marketing VP William Grubb formed Imagic in September 1981. He made the decision to strike out on his own after witnessing the quick financial success of Activision, a company formed by ex-Atari engineers Alan Miller, David Crane, Bob Whitehead and Larry Kaplan in 1979. Imagic's first product, Demon Attack, was released in March 1982, written by 24 year old Rob Fulop (also an ex-Atari employee). By June 1982 Demon Attack had generated \$15 million in sales, and Imagic was on its way. Unlike Activision, which produced video game cartridges only for the Atari VCS when the company was first formed, Imagic started off by producing video game cartridges for the Atari VCS, plus Mattel's Intellivision. Before the 99/4A disappeared from the shelves of computer retailers in 1983-84, Imagic would also produce four video game cartridges for the 99/4A; Fathom, Microsurgeon, Moonsweeper and Super Demon Attack.



**MICROSURGEON:** Programmed by Rick Levine for Imagic. Speech Synthesizer voice by Mary Joyce. The manual for Microsurgeon was developed and written by Dennis Lamb in conjunction with staff members of Texas Instruments Instructional Communications.

**MINER 2049er:** This Bill Hogue authored game appeared on Apple, Atari and other computers before being ported to the 99/4A by Tigervision. It was available only in I/O port type cartridge because of the size of the program.

**PICNIC PARANOIA:** This Russ Segal authored game first appeared for the Atari line in October 1983. It was distributed by Synapse Software of Richmond, CA. and retailed for \$34.95. Programmers at Atarisoft ported the code to the TI-99/4A under license from Synapse.

**PIPES:** Pipes was one of several games announced for the 99/4A that was to be ported from existing code originally written for another computer. The program was owned by Creative Software who already had a Commodore VIC-20 version on the market. An advertisement for the program on a VIC can be seen in the April 1983 issue of *Compute!* magazine on page 21. A Funware ad that includes the Pipes for a 99/4A can be seen in the November 1983 issue of *Enthusiast 99* magazine on pages 4-5. Although I have never seen a copy of Pipes, it may have actually been produced for the 99/4A, though perhaps in very small quantities. I point to an interview that IUG president Charles LaFara had with Creative Software president Paul Zuzelo in July 1983, part of which is excerpted below.

Zuzelo, "...we prefer to produce what we call concept home educational products, which means that rather than a specific subject, we try to teach a concept which a student may not even be taught in school, such as shapes and volumes. We currently have two of these type products in distribution for the Commodore VIC-20. In fact, one of our concept educational products, Pipes, recently won an award for use with the VIC-20."

LaFara then asked, "Is Pipes a viable product for the 99/4A sometime in the future?" Zuzelo responded with, "Yes, it

will be. The Funware subsidiary will also be gearing up to do additional home educational conceptual software."

**RIVER RESCUE:** Code for this Thorn EMI game exists on disk, but it was never released as a cartridge. An advertisement for the Atari version of the program can be found in the January 1983 issue of *Compute!* magazine on page 129.

**SHAMUS:** This detective-based puzzle solving and exploration game first appeared in February 1983, written for the Atari by William Mataga. It was distributed by Synapse Software of Richmond, CA. and sold for \$34.95 in disk or cassette versions.

**STORY MACHINE:** First appeared in March 1983, written for Apple, Atari and Commodore machines.

**SUBMARINE COMMANDER:** Code for this Thorn EMI game exists on disk, but it was never released as a cartridge. An advertisement for the Atari version of the program can be found in the January 1983 issue of *Compute!* magazine on page 129.

**TRASHMAN:** This is another of the Michael Brouters announced cartridges that, in this case, was to have been ported from the VIC-20 version. In fact, it was Creative Software, who would later buy out Funware, who released Trashman for the VIC-20 in May 1983. In principle, the game is very similar to Pac-Man. You are at the controls of a garbage truck riding around town (a maze), collecting trash (eating dots), and emptying trash cans (energizers).

**UNISOURCE ENCYCLOPEDIA/CATALOG:** Unisource Electronics was a store front operation owned by Craig Reitan, situated in the University Square Shopping Center on University Avenue at South Loop 289 in Lubbock, Texas. The company is best known in the TI-99 community for its mail order support of the TI-99/4A through sales generated by the Encyclopedia/Catalog they produced several editions of until they shut their doors in 1986. The catalog contained listings of some of the most unique and most rare cartridges ever produced for the 99/4A. In some cases, it is the only source I have ever found for the

existence of cartridges such as Arcturus, Searchmaster and Space Chase.

**WHIZ KID:** Program was never ported to the 99/4A as far as I can tell. It was available on the Atari Home Computer line (not the 2600) and the VIC-20. Funware announced that they were going to port the program to the 99/4A, but apparently never did.

According to a very brief description found in the 99er Directory supplement to 99er Magazine's September 1983 issue, on page 4 of the 99er Directory, the program teaches math and spelling in a game format. It lists Romox as the manufacturer. The Romox ECPC catalog tells that the object of Whiz Kid is to form the words or mathematical equations which appear below the playfield by combining the letter cubes on the playfield. You move the cubes by manipulating Whiz Kid and his hockey stick so that he pushes the cubes into position.

**WINNIE THE POOH (IN THE HUNDRED ACRE WOOD):** One of five Walt Disney titles scheduled to be produced for the 99/4A. The program theme is that during the night a blustery wind has blown through the Hundred Acre Wood, picking up balloons, coats and toys belonging to Pooh, Tigger, Piglet and Christopher Robin and hidden them somewhere in the woods. The player's task (the program is aimed at children 7 and older) is to find the lost objects and return them to their owner.

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## Hollywood Humour

*Source unknown*

### *THINGS YOU WOULD NEVER KNOW WITHOUT THE MOVIES*

- During all police investigations it will be necessary to visit a strip club at least once.
- All telephone numbers in America begin with the digits 555.
- Most dogs are immortal.
- If being chased through town, you can usually take cover in a passing



St. Patrick's Day parade - at any time of the year.

- All beds have special L-shaped cover sheets which reach up to the Armpit level on a woman but only to waist level on the man lying beside her.
- All grocery shopping bags contain at least one stick of French Bread.
- It's easy for anyone to land a plane providing there is someone in the control tower to talk you down.
- Once applied, lipstick will never rub off - even while scuba diving.
- The ventilation system of any building is the perfect hiding place. No-one will ever think of looking for you in there and you can travel to any other part of the building you want without difficulty.
- If you need to reload your gun, you will always have more ammunition even if you haven't been carrying any before now.
- You're very likely to survive any battle in any war unless you make the mistake of showing someone a picture of your sweetheart back home.
- Should you wish to pass yourself off as a German officer, it will not be necessary to speak the language. A German accent will do.
- If your town is threatened by an imminent natural disaster or killer beast, the mayor's first concern will be the tourist trade or his forthcoming art exhibition.
- The Eiffel Tower can be seen from any window in Paris.
- A man will show no pain while taking the most ferocious beating but will wince when a woman tries to clean his wounds.
- If a large pane of glass is visible, someone will be thrown through it before long.
- When paying for a taxi, don't look at your wallet as you take out a bill - just

grab one at random and hand it over. It will always be the exact fare.

- Interbreeding is genetically possible with any creature from elsewhere in the universe.
- Kitchens don't have light switches. When entering a kitchen at night, you should open the fridge door and use that light instead.
- If staying in a haunted house, women should investigate any strange noises in their most revealing underwear.
- Word processors never display a cursor on screen but will always say: Enter Password Now.
- Mothers routinely cook eggs, bacon and waffles for their family every morning even though their husband and children never have time to eat it.
- Cars that crash will almost always burst into flames.
- The Chief of Police will always suspend his star detective - or give him 48 hours to finish the job.
- A single match will be sufficient to light up a room the size of RFK Stadium.
- Medieval peasants had perfect teeth.
- Although in the 20th century it is possible to fire weapons at an object out of our visual range, people of the 23rd century will have lost this technology.
- Any person waking from a nightmare will sit bolt upright and pant.
- It is not necessary to say hello or goodbye when beginning or ending phone conversations.
- Even when driving down a perfectly straight road it is necessary to turn the steering wheel vigorously from left to right every few moments.
- All bombs are fitted with electronic timing devices with large red readouts so you know exactly when they're going to go off.

- It is always possible to park directly outside the building you are visiting.
- A detective can only solve a case once he has been suspended from duty.
- If you decide to start dancing in the street, everyone you bump into will know all the steps.
- Most laptop computers are powerful enough to override the communication systems of any invading alien civilization.
- It does not matter if you are heavily outnumbered in a fight involving martial arts - your enemies will wait patiently to attack you one by one by dancing around in a threatening manner until you have knocked out their predecessors.
- When a person is knocked unconscious by a blow to the head, they will never suffer a concussion or brain damage.
- No-one involved in a car chase, hijacking, explosion, volcanic eruption or alien invasion will ever go into shock.
- Police Departments give their officers personality tests to make sure they are deliberately assigned a partner who is their total opposite.
- When they are alone, all foreigners prefer to speak English to each other.
- You can always find a chainsaw when you need one.
- Any lock can be picked by a credit card or a paper clip in seconds unless it's the door to a burning building with a child trapped inside.
- An electric fence, powerful enough to kill a dinosaur will cause no lasting damage to an eight year old child.
- Television news bulletins usually contain a story that affects you personally at that precise moment.





## Not the Full Quid!

Source unknown

- A few fries short of a Happy Meal.
- Not traveling with a full sea-bag.
- Not rowing with both oars in the water.
- One brick shy of a full load.
- Behind the door when the brains were passed out.
- About three chickens short of a henhouse.
- Not playing with a full deck.
- His elevator doesn't go to the top floor.
- The lights are on, but nobody's home.
- Sharp as a pound of wet leather.
- Two sandwiches short of a picnic.
- His phone doesn't quite reach his desk.
- One can (or a few beers) short of a six-pack.
- One ship short of a fleet.
- One phone short of an exchange.
- He's got a one-way ticket on the Disorient Express.
- His mind is like a steel trap--full of mice.
- A few straws shy of a bale.
- He's got all his marbles, they're just not round.
- Dumb as a mud fence.
- Philosophy major.
- A few bits short of a byte.
- Not firing on all cylinders.
- Several bats short of a belfry.
- Suffering from Clue Deficit Disorder.
- Doesn't have both chop sticks in the chow mein.
- Up the river in a cement canoe.
- He's collecting cards for Craig.
- His elevator goes to the top floor, but the doors won't open.
- A few peroghis short of a banquet.
- If you gave her a penny for her thoughts you'd have change coming.
- He's not the sharpest tool in the shed.
- He's got a few too many birds on his antenna.
- His code doesn't parse.
- A few 'roos loose in the top paddock.
- Monosynaptic.
- Doesn't have two neurons to rub together.
- His turbolift doesn't go to the bridge.
- Operating full power on half a watt.
- As thick as two short planks laid end to end.
- As much use as a chocolate teapot.
- Half a bubble off plumb.
- Someone needs to hit him with a clue-by-four.
- Missing aces and face cards.
- Wouldn't know if a train was up him until the passengers got out.
- He didn't exactly invent gunpowder.
- Too stupid to pick his nose without causing brain damage.
- One chop short of a barbie.
- He thought they said trains, and he wasn't going anywhere.
- When they said, "ears," he thought they said, "beers," And he said, "give me two cold ones."
- When they said, "nose," he thought they said, "rose," And he said, "give me a big red one."
- Not maneuvering on all thrusters.
- A few delegates short of a convention.
- A few clowns short of a circus.
- An experiment in Artificial Stupidity.
- A few peas short of a casserole.
- Doesn't have all his cornflakes in one box.
- The wheel's spinning, but the hamster's dead.
- A few feathers short of a whole duck.
- All foam, no beer.
- The cheese slid off his cracker.
- Body by Fisher, brains by Mattel.
- Has an IQ of 2, but it takes 3 to grunt.
- Warning: Objects in mirror are dumber than they appear.
- Couldn't pour water out of a boot with instructions on the heel.
- He fell out of the Stupid tree and hit every branch on the way down.
- An intellect rivaled only by garden tools.
- As smart as bait.
- Chimney's clogged.
- Doesn't have all his dogs on one leash.
- Forgot to pay his brain bill.
- Her sewing machine's out of thread.
- His antenna doesn't pick up all the channels.
- His belt doesn't go through all the loops.
- If he had another brain, it would be lonely.
- Missing a few buttons on his remote control.
- No grain in the silo.
- Proof that evolution \*can\* go in reverse.
- Receiver is off the hook.
- Skylight leaks a little.
- Slinky's kinked.
- Too much yardage between the goal posts.
- The engine's running, but there's no one behind the wheel.

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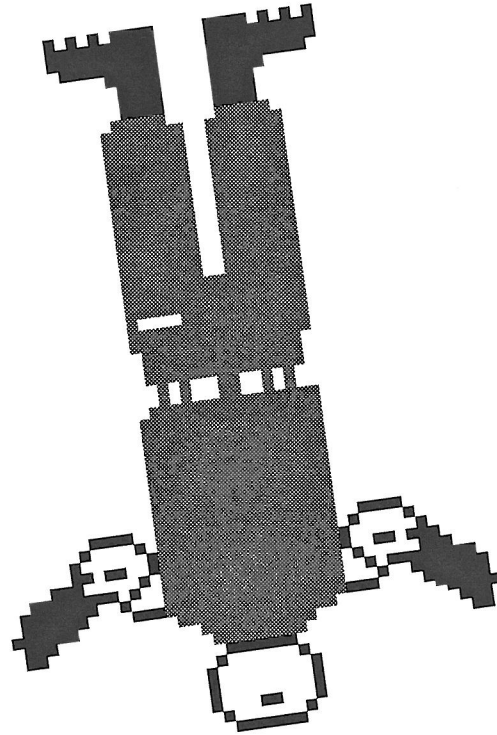
Most original articles by members of TIBUG in this newsletter are on available on disk and are available to other User Groups on request.

Submissions of articles, reviews, comments and letters from members is encouraged, however the Editor asks that those submitting keep the following in mind:

Submissions should be about the TI Community in particular, computers in general, or of sufficient general interest. The preferred media is computer file, preferably in ASCII (Text) or Microsoft-Word compatible format, submitted on MacIntosh or IBM-compatible floppy disk or via Electronic Mail to the Editor. Handwritten submissions are acceptable but please remember that they have to be retyped. Other submissions, such as typed, printed or photocopied are welcome but must of reproducible quality.

Submissions are best sent directly to the Editor:

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