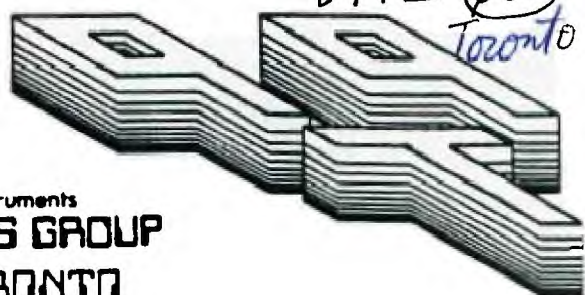


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Toronto

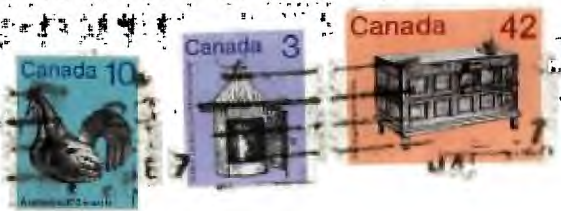
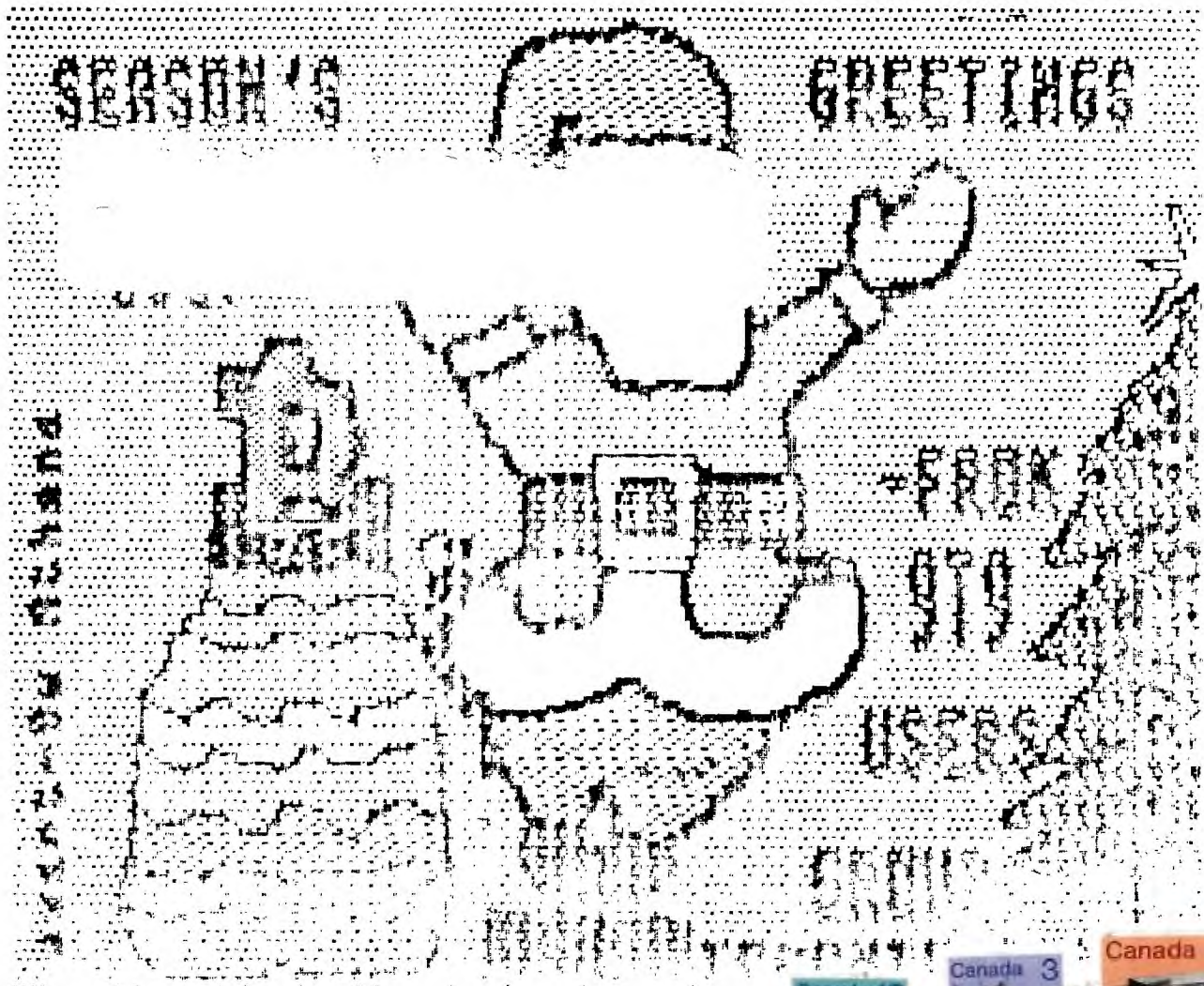


Texas Instruments  
**USERS GROUP**  
**TORONTO**

**NEWSLETTER 919**

**DECEMBER 1987 ISSUE**

**FOR THE TI-99/4A COMPUTER**  
and compatibles



from:  
9T9 Users Group  
109-2356 Gerrard St. E.  
Toronto, Ont., M4E-2E2  
CANADA

to: Edmonton 99'er Users Soc  
P. O. Box 11983  
Edmonton, AL T5J 3L1



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**FULL MEMBERSHIP:** \$30.00 / year  
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REMEMBER TO RENEW YOUR MEMBERSHIP !

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**NEWSLETTER ARTICLES**

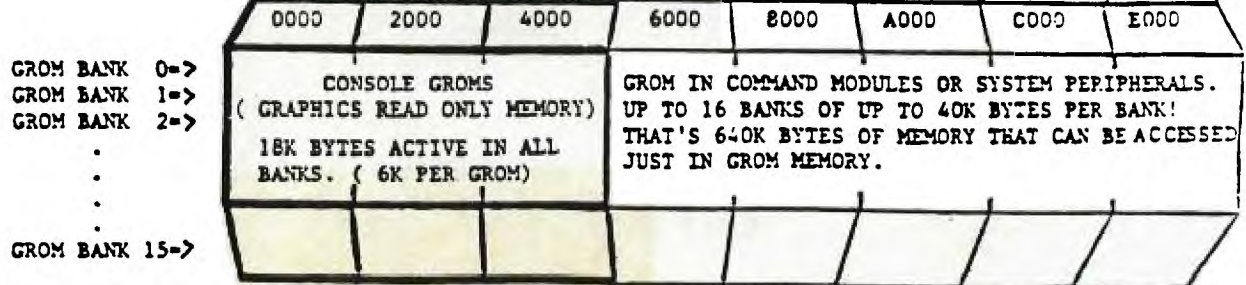
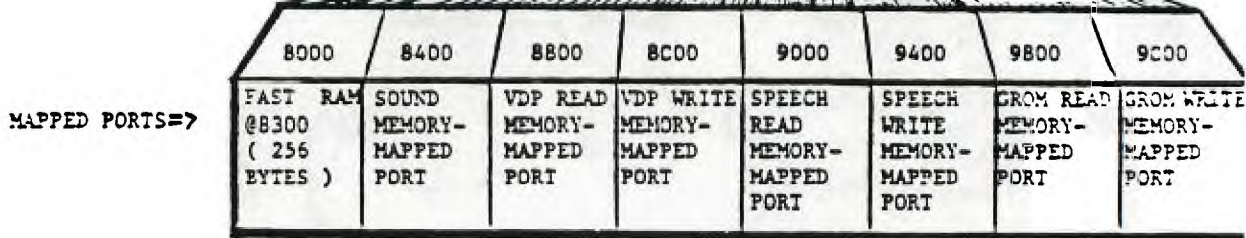
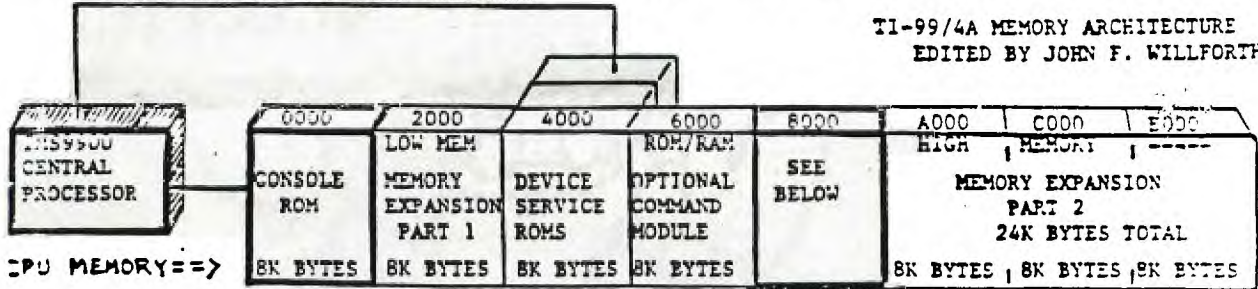
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**CRU BEING USED FOR BANK SWITCHING**

**T1-99/4A MEMORY ARCHITECTURE**  
 EDITED BY JOHN F. WILLFORTH



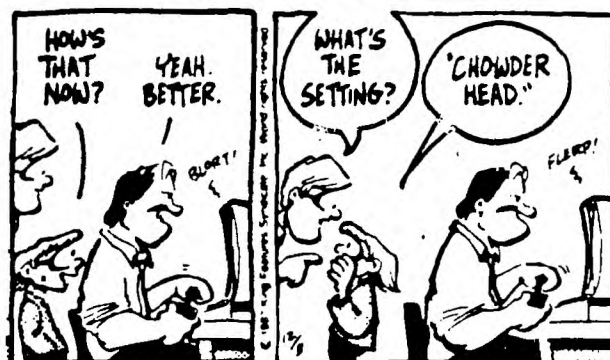
NOTE: THE HEAVY LINES INDICATE FEATURES INCLUDED WITHIN THE CONSOLE. I HOPE THAT THIS MAP WILL BE OF SOME USE IN CLEARING UP THE MEMORY SCHEME THAT WAS DEVELOPED BY T1 TO MAKE MAXIMUM USE OF THE "GROM", AND THE ADDRESSING LIMITATIONS OF THE CPU (32K WORDS). FROM THIS DIAGRAM YOU CAN SEE, HOWEVER, THAT THE T1-99/4A HAS HAD THE POTENTIAL SINCE IT'S INCEPTION, TO BE A GREAT COMPUTING MACHINE.



REMEMBER! RENEW YOU MEMBERSHIP  
AND NOT MISS A MEETING OR AN  
ISSUE OF NEWSLETTER 9T9 !!!!!



"Next year we get a computer."



THE 9T9 USERS SUPPORTS  
THE "TI TOWER BBS", WHICH CAN  
BE REACHED 24HRS, 300/1200 BPS  
AT (416)-921-2731

TId Bits #14

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Last minute apologies to Steve Findlay, whose **HARDCOPY** was submitted in time, but due to an error on my part, was wiped-off my data disk, along with Gary's library listings. I was able to download Gary's file but Steve's was missing on the BBS. I will see that it makes the next issue.

I was just informed that Bob Boone has accepted an invitation to attend our January meeting. He will bring a number of TI software/hardware items Geneve's, Hrizon Ramdisks, etc. So come to the January meeting with wallets/purses inhand. We should pretty-well be caught-up from our Christmas bills by then. For more details, contact Gary.

As another year draws to a close, and the deadline for this newsletter draws near we can look back and marvel at all the advances in hardware and software for us orphans. A compatible computer finally arrived and promises to promote and expand the world of the 9900 series CPU. New RAM disks, (with greater memory capacity), 80 column cards, utility cards, printers, keyboard cards, light controllers, mice, digitizers, and more! Not to forget software.

Turbo Pascal, Fortran, C, New FORTH's, Compiled Basic, New enhanced Extended Basics, Pilot, great graphic and desktop publishing utilities and more! Where will it all end? Hopefully never!



On the horizon, we have hard-disk controllers for both the 4A and the 9640, a true MIDI, and who knows what other dreams are, at this very moment, becoming a reality in someones basement, or at some R D lab. Looking back at all the new items for 1987, one can't but feel like a child on Christmas Eve anxiously awaiting the arrival of Santa, to see what items from his "wish list" will be found in the stocking on the fireplace. The world of the TI is still alive and kicking!

Like our community, our club has held its own and maintained about the same size, perhaps growing a bit, despite losses to the ranks, for various reasons. We can look forward to another good year, with expanded newsletter, new meeting place, an ever-expanding library, our club-sponsored BBS, a SIG on the Science Centre BBS, and improved meetings/tutorials.

Remember to renew your membership, contact Pete or another member of the executive, in order to either run or vote in the election. Nominations can be made upto the day of the election, which will be on Saturday, January 30, 1988. A formal slate of candidates will be made, as per our constitution, by the Nominating Committee, who are:

Juris Laufers, chairman, 653-6444

Allan Lappin, 466-5324

Jiri Svoboda, 762-5783

I've listed their phone numbers, to save you the trouble of finding them in our July/August summer issue of the newsletter.

Both Randy and Cecil plan on having a special SIG to build Horizon RAM disks. Contact either of the two, if you are interested in either building or upgrading a RAM disk for your own.

Our current disk of the month features a Christmas music-cum-graphics disk, which by the way runs fine on the Geneve, Connect 4, Monopoly, and Archiver 2.3. It will be shown at Decembers meeting.

We hope Boyd Brown will be able to give his tutorial on PRK.

Formal nominations for the 1988 Executive will take place.

I had a garbage-on-the-screen problem on my Geneve, which I mentioned in TID Bits #13. The problem was helped, by replacing one of the regulator chips. The problem seems to now be completely eliminated, since I used a low-wattage soldering iron to reheat and re-solder all of the mouse, joystick, video and keyboard connectors on the back of the 9640 mother board. I have used a cable-tie to reduce the stress on the joystick port, caused by an old-style Wico adapter. The adapter was tied to back of the P-Box at a vent-hole. Another hint will allow you to exit Myword without a system lock-up. (1) Press both Shift keys, along with the Control key, all at the same time, to return to the GPL screen, (2) Press F3 to clear the GPL memory space, (3) Reload XB or whatever cartridge or program you plan to use, and there you are no lock-up! The latest software, after the Myart software for the mouse, is a GIF utility, which allows viewing of any of the high-resolution GIF pictures. Compuserve apparently has a vast library of GIF files. The GIF allows you to view and move the picture, so as to centre it on the screen. The picture can then be resaved in a format compatible with Myart. This program works quite well and could handle a couple of GIFs from the TI-Pro library on Delphi.

So much for this month's and years TID Bits, until next year, have a very Merry Christmas and a great 1988, from all of us at Newsletter 9T9!!!

**BE ELGIBLE TO VOTE OR RUN IN  
THE ELECTIONS, THIS JANUARY,  
AND BE A MEMBER IN GOOD  
STANDING, RENEW TODAY!**

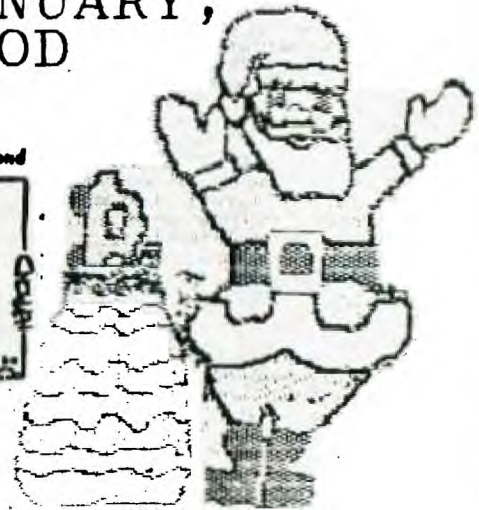


"At 9:02 this morning, I started to change a typewriter ribbon. It was not one of my better days."

DUFFY



by Bruce Hammond



# 9T9 LIBRARY

9T9 LIBRARY listing and notes, if any. Compiled by Gary Bowser on Dec. 9 1987

Disks have a nominal fee of \$2.00 per disk (includes disk and handling). All disks are available by mail, send cheque or money order with a list of disk numbers, to the club's address. Also disks are also available at any of the 9T9 User Group meetings for \$2.00 (includes disk) or \$1.00 if you supply the disk at the meeting.

There is also a DOM Disk of the Month that is available at every meeting or by mail for \$3.00 for a 1-SIZE DOM or \$5.00 for a 2-SIZE DOM. Both prices include disk and handling.

=====

**DISK code:**

- |                                      |  |
|--------------------------------------|--|
| A - Art displays/makers/pictures     | C - Catalogs of software/hardware      |
| D - Disk managers/editors/catalogers | E - Educational                        |
| G - Games                            | H - Home and financial                 |
| I - Instructions                     | J - Junk miscellaneous                 |
| M - Music players/makers             | P - Program languages/helpers/routines |
| S - Speech writers/players           | T - Terminal emulators/dialers/BBS's   |
| U - Utilities                        | W - Word processors/helpers/sorters    |

**TYPE code:**

- |                                       |  |
|---------------------------------------|--|
| ART - TI-ARTIST and GRAPHX pictures   | EA - Editor/Assembler loader and 32K   |
| EAAB - E/A or Extended Basic with 32K | FRTH - Forth                           |
| MM - Mini Memory needed               | MP - Multiplan templates               |
| RLE - Run Length Encoded pictures     | IL2 - Terminal Emulator II speech      |
| TEXT - Dis/Var 80 files               | XB - Extended Basic                    |
| XB32 - Extended Basic with 32K        | XMEM - Extended memory i.e. 128K, etc. |
| GIF - Graphics Interchange Format     | 9640 - GENEVE MYARC 9640 programs      |

SIZE is the number of disks needed.

VER. is the version of the program

DATE is when the program or update was added to the library.

DISK	PROGRAM	SIZE	TYPE	VER.	DATE	
A001	ART2PICT-1	2	ART			Selection of TI-ARTIST pictures
A002	ART2PICT-2	2	ART			Selection of TI-ARTIST pictures
A003	ART2PICT3A	1	ART		09/29/87	Selection of TI-ARTIST pictures
A004	ART2PICT3B	1	ART		09/29/87	Selection of TI-ARTIST pictures
A005	ART2PICT4A	1	ART		09/29/87	Selection of TI-ARTIST pictures
A006	ART2PICT4B	1	ART		09/29/87	Selection of TI-ARTIST pictures
A007	ART2PICT5A	1	ART		09/29/87	Selection of TI-ARTIST pictures
A008	ART2PICT5B	1	ART		09/29/87	Selection of TI-ARTIST pictures
A009	AUTO CAD	1	EA			Computer assisted drawing
A010	GRPHJACKET	1	XB			Prints a disk jacket using a GRAPHX
A011	JET SPRITE	2	XB			Sprite builder program
A012	JP GRAPHIC	1	FRTH			FORTH drawing program and demo
A013	MAX RLE	2	EA			Displays special graphics
A014	POSTER#01	1	XB			Selection of printer art
A015	TASS 2001	1	XB32	2.10	09/29/87	TriArtist Slide Show by Gary Bowser
A016	ART2PICT6A	1	ART		11/16/87	Selection of TI-ARTIST pictures
A017	ART2PICT6B	1	ART		11/16/87	Selection of TI-ARTIST pictures
A018	ART2PICT7A	1	ART		11/16/87	Selection of TI-ARTIST pictures
A019	ART2PICT7B	1	ART		11/16/87	Selection of TI-ARTIST pictures
A020	PICASSO	1	EAXB		11/16/87	Desktop Publisher
A021	ART2PICT8A	1	ART		12/09/87	Selection of TI-ARTIST pictures
A022	ART2PICT8B	1	ART		12/09/87	Selection of TI-ARTIST pictures
A023	ART2PICT9A	1	ART		12/09/87	Selection of TI-ARTIST pictures
A024	ART2PICT9B	1	ART		12/09/87	Selection of TI-ARTIST pictures
C001	CATALOG#01	1	TEXT		09/29/87	Selection of TI software catalogs
C002	FREWARE	1	TEXT			A freeware catalog
D003	DM1000	1	EAXB	3.8		Disk Manager 1000 from Ottawa UG
D004	FEDISK	1	EAXB			Disk copy program for TI Corcomp
D005	DISKU	1	EAXB	4.0a	12/09/87	Disk manager/editor
D "	SUPERCAT	-	EAXB			Disk catalog program
D "	ARCHIVER	-	EAXB	2.3	12/09/87	Archiver II with compression (CMP)
G001	CHINACHESS	1	XB			A new game
G002	CRAPS	1	XB32			Crap Game Requires 32K
G003	FRENZY	1	EAXB			Space game very well done
G004	MONOPOLY	1	XB			Plays like the board game



DISK	PROGRAM	SIZE	TYPE	VER.	DATE	
G005	MS ADVEN	1	XB32			Text adventure game
G006	OIL INVAS	1	FRTH			Oil Invasion (a game in forth)
G007	TI99'OPOLY	1	XB32			A well done version of Monopoly
G008	TRIVIA99er	1	XB32			Trivia Game
G009	WIT GAMES	3				Scrabble type games
G010	WORD WIZ	1	XB32			A word game with speech
G011	IC-SAMPLFF	2	EAXB			Infocom sampler of their adventure games
H001	CHECK BOOK	1				Cheque Book and Budget Management
H002	FAST TRANS	2				Checkbook Recapper/planner
H003	MP-BUDGET	1	MP		09/29/87	Budget template for Multiplan
H004	PR BASE	3		2.1	11/16/87	A good personal data base program
H005	VCR-DB	1				A Database for your VCR Tapes
H006	RECORDS/+	1	XB32		12/09/87	Data Base type program (Records Plus)
H007	AMORTIZAT	1	XB		08/16/87	AMORTIZAT by Jiri Svoboda (9T9 UG)
I001	FORTH DOCS	5	TEXT			Forth Manual on disk
I002	TI REWRITE	1	TEXT			Helper file for TI-WRITER commands.
M001	4thMUSIC	1	FRTH			Music or Graphics Demo in Forth
M002	AXLE F	1	XB			Music (Beverly Hills Cop)
M003	MUSIC#01	1	EA			Selection of music
M004	SORGAN	1	EA			Makes Keyboard an organ
M005	XBMUSIC#01	1	XB		09/29/87	Selection of music
M006	XBMUSIC#02	1	XB		09/29/87	Selection of music
M007	XBMUSIC#03	1	XB		09/29/87	Selection of music
M008	XBMUSIC#04	1	XB		09/29/87	Selection of music
M009	XBMUSIC#05	1	XB		09/29/87	Selection of music
P001	H.A.X.S	2	XB32			Editor Assembler on Disk Version
P002	SIAR	1	XB32			Super TI Assembly Routines for XB
P003	TI FORTH	1	EA			TI FORTH programming language
P004	TI PILOT	2	EA			TI PILOT programming language
P005	TOOL KIT	1	XB32			A set of programming utilities
P006	cBASIC	2	EA			cBasic Language Compiler
P007	P-SAMPLER	1			11/16/87	Sample of different languages for the TI
P008	XB*TOOLS	1	XB32		11/16/87	Tools to assist the Extended Basic
P009	EDP	1	XB32		11/16/87	Enhanced Display Package
S001	SPEECH/01	1	TE2		09/29/87	Selection of speech programs
T001	Fast Term	1	EAXB	2.7	09/29/87	A great Terminal Emulator.
T002	Omega	1	EAXB		11/16/87	Terminal Emulator for online RLE's
T003	Mass-Trans	1	EAXB	4.3	12/09/87	Another great Terminal Emulator.
T004	DELPHI/AID	1	XB32		12/09/87	Explains the DELPHI system and XMODEM.
U001	CALENDARS	1	XB			A set of different calenders progs.
U002	FACTAL	1	EA			Fractual explorer
U003	LABELER	1	XB		11/16/87	Prints labels with over 100 logos
U004	OMNILOADER	1	EA			Menu driven E/A program loader
U "	RAPIDSCROL	-	EA			Rapid scroll for Dis/Var 80 files
U "	SYSTEMX	-	XB32			Encode assy to a X/B program
U "	TI SORT	-	EA			Dis/Var80 sort program
U005	SCREENDUMP	1				Screen dump to printer
U006	SYSTEMTEST	1	XBMM			99/4A system test for XB or MM by TI!
W001	BA WRITER	2	EAXB	1.3	11/16/87	TI Writer on Disk Version and more!
W002	CRUNCH	1				Crunches Dis/Var 80 files
W003	FUNNELWEB	2	EAXB	4.0	11/16/87	TI Writer,E/A,Disk manager in one

DOM's available (Disk of the Months)

#	MONTH/YEAR	SIZE	#	MONTH/YEAR	SIZE	#	MONTH/YEAR	SIZE	#	MONTH/YEAR	SIZE
01	JAN/FEB 87	2	02	MAR/APR 87	2	03	MAY/JUN 87	2	04	SEP/OCT 87	2
05	NOV 87	1	06	DEC 87	1						



FROM DELPHI...

## THE GRAMULATOR FOR THE TI-99/4A

(The following is a slightly edited news release from Mark Van Coppenole)

At last! A direct equivalent for the popular but out-of-production Gram Kracker has been designed by an engineer in Massachusetts. It's called the Gramulator.

A wire-wrapped prototype was demonstrated to the MAGNETIC User Group in Andover, MA at their September meeting and to the Boston Computer Society TI-99 User Group at their November meeting. It performed flawlessly at both meetings. The Gramulator offers virtually all of the features of the Gram Kracker, but it is targeted to cost less.

No production Gramulators have been built yet. To go from a prototype to a production model requires an investment of about \$1000. As with anything else, the more that can be made on one batch, the cheaper they will be.

You are invited to respond to this offer if you would consider purchasing this product. Technical questions are welcome. Please write to:

Mark Van Coppenole  
52 Audobon Road  
Haverhill, MA 01830  
(617) 372-0336

Features:

The Gramulator simulates 64k of GRAM and 16k of RAM (in two 8k banks at >6000 - >7FFF).

1) You can customize the built-in TI operating system in GROM 0 and TI BASIC in GROM's 1 and 2.

2) You can backup your GROM and ROM cartridges to disk to protect your investment and reduce wear on the cartridge port. All TI, Atarisoft and Parker Brothers cartridges can be backed up. (Does not work with MBX.)

3) Acts as a "Super Space" cartridge allowing you to run programs requiring RAM at >6000->7FFF (including MYARC's XBII).

4) Allows you to use a customized GROM 0, 1, or 2, while a cartridge is in the slot. One application is that you can use your own character set with a cartridge like TI-Writer.

5) Capable of loading user written GPL code.

6) A total of 80k of memory with lithium battery backup.

The software needed to load and save GRAM and GROM will be built-in for instant access. A memory editor, which will be supplied on disk, will allow you to alter and save any program loaded into the built-in GRAM or RAM. User documentation and technical information will be included.

Memory expansion and a disk drive are required to take full advantage fo the Gramulator.

\*\*\*\*\*

Added notes by Walt Howe:

1. I saw the demonstration at the Boston meeting and was very impressed. Mark has designed the Gramulator to take advantage of inexpensive, readily available components that should help keep the price down.

2. One improvement over the Gram Kracker will be an external, easily accessed battery for quick replacement.

3. If you are at all interested in this, drop Mark a note. Without good evidence of user support, it will never be built. Make copies of this and pass it around on bulletin boards and hand it out at user group meetings. This project should really be supported!

## DON'T FORGET TO RENEW YOUR MEMBERSHIP

## HOW TO FIX DISKS

-By Niraj N. Shah Mike Ballman

Did you ever try to catalog a disk and find out the Disk Controller thinks the disk is NOT initialized? But you know better! What do you usually do with the blown disk? Most people Delete the file giving them the problem. Usually that does correct the problem, but it also gets rid of that file forever. The ultimate solution is to use DISK FIXER by Navarone Industries.

The DISK FIXER enables one to examine and change the contents of any disk on a sector by sector basis. I think it is worth its forty-dollar list price. It is available from some TI retailers or directly from Navarone Industries.

Here is the process to fix a blown-up disk...

First acquire a DISK FIXER from a friend buy one, they're worth it. Get a hardcopy catalog of the blown disk, or even better, get a complete (old) catalog of what should be on the disk. If a complete catalog is not available try to remember what should be on the disk and write those names down on paper. Once you have a catalog of the disk, you are ready to start using DISK FIXER.

Insert the DISK FIXER cartridge and select option 2 from the Title Screen. Upon doing so you should see the DISK FIXER menu. Do the following if the most recent catalog of the bad disk tells you there are more sectors used/free than is logically possible: 358 for single side d 718 for double sided disks. For example, IF the catalog lists 500 sectors used/free on a single-sided disk THEN do the following ELSE GOTO the paragraph on "SECTOR ONE".

This part tells you how to fix up Sector 0; which is the sector containing the information concerning the disk name and number of sectors used/free on the disk. If the disk catalog tells you the used/free sector information is in error then Sector 0 needs to be fixed. The easiest way to do this is to copy a good Sector 0 from another disk to the blown disk. Here is how to do that:

- 1) Insert a good disk in drive
- 2) Read Sector 0 of that disk:  
R 0,1 [ENTER]
- 3) Put the blown disk in drive
- 4) Write good Sector 0 to disk:  
W 0,1 [ENTER]

If you catalog the bad disk, you will see that the diskname and the used/free information is the same as the good disk But do not let that alarm you. We did that to fool the Disk Controller into thinking the bad disk is at least partially restored to normalcy. Now we need to fix up the blown disk as much as we can This is done by changing Sector 1.

Here is how to fix Sector 1. First, get the most complete catalog and the most recent catalog of the bad disk in front of you. Then compare the two catalogs to see which filenames are missing. Next, compile an alphabetical list of all the filenames which are and should be in the catalog.

Then you need to find the corresponding sector for each filename. This is done by using the Find String function of the DISK FIXER

- 1) Put the bad disk in drive
- 2) Find a filename by:  
F 0,2D0,1 [ENTER]  
type in the filename [ENTER]
- 3) Ignore the "ERROR IN SECTOR" message
- 4) Write down the sector number for that filename
- 5) If that filename could not be found make sure you typed it in correctly and try again; otherwise that file does not exist on the disk.
- 6) Repeat the process from step two for all of the filenames

You should now have an alphabetical list consisting of two columns: filenames and sectors. With that information in hand you are ready to begin fixing up the bad disk. This is done by modifying Sector 1 of the blown disk. First you have to read Sector 1 from the bad disk by doing this:

- 1) Put the bad disk in drive
- 2) Read Sector 1 of disk by:  
R 1,1 [ENTER]

Then you want to alter the contents of sector 1. This is done by using the alter function of the DISK FIXER. This process is best learned by observing a concrete example.



Lets say the blown disk has 14 files (filenames) on it. Thus there should be 14 entries on sector 1; one entry for each file. The rest of the sector should be all zeros. Lets alter Sector 1:

- 1) Keep the bad disk in drive
- 2) Enter the Alter function:  
A 0 [ENTER]
- 3) Type in the following just as shown, including the spaces:  
1 2 3 4 5 6 7 8 9 A B C D E
- 4) Do not press [ENTER] yet!
- 5) If you saw a non-zero entry after the E entry in the first column then type in [0] and a [SPACE] and repeat until the first column shows a zero.
- 6) Press [ENTER]
- 7) Write the revised Sector 1 to the bad disk:  
W 1,1 [ENTER]

You have just entered a table of pointers to the files on the disk. The table points to the corresponding sector for each file name. This is the table that is updated and sorted if you add/delete files to the disk.

Leave the DISK FIXER by typing [Q] for QUIT and press [ENTER]. Then catalog the disk. Lets call this new catalog the mixed catalog. You will see the reason once the disk has been cataloged. Notice how the catalog is NOT in alphabetical order It does however contain all of the file names that you hoped and prayed would be on the disk! The next step is to alphabe tize the catalog. This is done by first alphabetizing the catalog on paper and carrying along the appropriate sector number of each filename. Here is an example of a Mixed Catalog:

MIXED CATALOG FILENAME SECTOR		SORTED CATALOG FILENAME SECTOR	
CAT	1	APPLE	E
SCREEN	5	CAT	1
VOTE	2	DEMO	7
FIRE	6	FIRE	6
APPLE	E	HFILO	9
HELLO	9	JUSTIFY	D
SCROLL	C	LOAD	3
LOAD	3	LOGO	A
TIME	8	PLOT	B
DEMO	7	QUICK	4
QUICK	4	SCREEN	5
JUSTIFY	D	SCROLL	C
PLOT	B	TIME	8
LOGO	A	VOTE	2



The above example shows how you should alphabetize the filenames and the corresponding sector numbers on paper. If you are unsure when dealing with funny characters, the system alphabetizes by lower to higher ASCII values. These values can be found on your TI Basic reference card Once you have done this you are ready to enter this information into Sector 1. You do not have to enter the filenames, just the sector numbers.

Here is how to do that:

- 1) Put the blown disk in drive
- 2) Read Sector 1 by entering: R 1,1 [ENTER]
- 3) Enter the Alter function: A 0 [ENTER]
- 4) Type in the sector numbers in the order as shown for the above sorted example catalog. Separate each number by a space:  
E 1 7 6 9 D 3 A B 4 5 C 8 2
- 5) Then press [ENTER]
- 6) Write revised sector to disk:  
W 1,1 [ENTER]
- 7) Put a Write-Protect tab on the disk!

You have now fixed up the disk. For veri fication quit the DISK FIXER program and catalog the disk. You should have no pro blems during the cataloging process. But you are not completely done yet! DO NOT add/delete any files or programs to this disk!

Get a fresh disk and inititalize it to the same configuration as the blown disk Then backup the blown disk to the fresh disk. Then catalog the fresh disk and you will see that the used/free sector information is now correct. Thus, the fresh disk is now your working disk and the blown disk is now a disk for your archives.

Keep the blown disk in a safe place just in case you remember a file that was not previously recovered from the blown disk Go through the above procedures to recover that new-but-old file.

FOLLOWING PRESS RELEASE, CAME FROM GENIE...

## VIDEO PRODUCTION/CAD DEVISE OFFERED

Here's a hardware/software addition to your Geneve 9640 Computer that will help make video tapes of your vacation alot more interesting. It's called "Videoflex" and allows you to superimpose titles or graphics over your creations.

It flexes your video creative muscles and enables you to work within a complete and flexible graphics environment.

When you're done improving your videos the software also allows sophisticated desk top publishing and a link to most graphics pads or digitizing tablets so the Geneve can become a high resolution graphics tool. A mouse, joystick, or sketch pad can also be used as a drawing instrument.

The graphics system will allow overlays of various fonts and graphics on top of video images. The environment will consist of "pop" up menus which would be operated by keyboard, mouse, or sketch pad. This makes for very easy selection of options and requires very little experience to operate. All graphics will be compatible with MY-Art. This makes it possible to create your own pictures and fonts for use with the graphics environment.

GENEVE owners have a new graphics enviornment system available to them which takes video post production and computer assisted drawing to the forefront of technology. It's called "VIDEOFLEX" and allows the operator to combine video signals from your VCR, TV or other composite video product, with the output of the Geneve 9640.

This may involve the overlay of special character fonts for program titling or vdeo special effects. The professional video producer now has a tool available for under \$500 that eliminates the need for expensive character or special effects generators. What's more... "VIDEOFLEX"...has routines built-in which allows sophisticated desk top publishing, computer animation or computer design work.

### Hardware Specifications:

- Separate card whitch fits in Expansion system.
- Graphics system output genlocks to incoming NTSC composite video signal.
- Interfaces with all standard RS232 compatible digitizing tablets, sketch pads, or external frame grabber devices.
- System output changed by single key press
- Yamaha V9938 Video Display Processor has a resolution of 512(w)X424(h) with 16 colors on the screen simultaneously or 256 colors per screen in 512x212 medium resolution mode.
- Interlaced signal with true aspect ratio for better imagery
- Sprite animation built-in
- Analog RGB or NTSC Composite Video output
- Sync signal is extremely stable to assure realiability of test generator routines.
- BNC and RCA connectors for input and output.
- Standard Mouse input

### Software specifications:

- Signal test generator for diagnostic needs and setup.
- Windowing and pop up menus allow for ease of operation.
- Smooth bit scrolling as in the credits at the end of a movie.
- Special effects for fades, wipes, keyhole, marquee, framing, and much more.
- Sliding of text across one or more rows anywhere on the screen. As in notices that are transmitted by a local station over a movie.
- Ability to type in different fonts chosen by selecting the font desired from a pop up menu. These fonts can be added to for a wider range of choices. Each font can also be multi-colored. This allows for the fonts to appear in different textures, shadowed, rainbow, glassy, glowing, etc.
- Clipart can be pasted anywhere on the screen to have not only text, but graphics as well. Clipart can also be included in the bit scrolling and the sliding features as well.
- Movement of screen items can be done by just selecting the function off of a pop up menu. You can move, copy, and erase parts of the screen at will.
- Other screen options include ROTATION; the turning of any item on the screen, REDUCE and ENLARGE; to expand and contract items, either be a font or clipart, FLIP; to make the image appear to flip vertically or horizontally about the midpoint of the object.
- Animation will allow you to assemble clipart panels in a sequence to make the object "animated". For instance you could create panels of a man in different positions and make him walk across the screen.



-The Drawing Tablet will allow you to touch up your images, create background patterns, draw boarders, or create your own clipart.  
Additional Software routines can be added with ease to enable the software to grow. Some features may include:  
-3D perspective. To allow drawing in 3D with features to rotate around any axis or a line.  
-Shading and light source illumination to make an object appear more "realistic".

To learn more write or call Miller Communications, 8815 18th Ave S.W., Seattle, Wa. 98106(206-762-7610) or your Myarc dealer. The system has a suggested retail price of 489.95.

THE FOLLOWING IS THE SECOND OF TWO PARTS, THE FIRST PART APPEARED IN LAST MONTH'S NEWSLETTER-ED.

A long time ago... on a node far, far away (from PDPvax)

## DEC WARS

The further adventures of Luke Vaxhacker Episode n+1

COURTSEY OF: Saskatoon Texas Instruments Computer Club - March 1986.

The story thus far: Luke, PDP-1, and their droids RS232 and 3CPU have made good their escape from the Imperial Bus Signals with the aid of Con Solo and the bookie, Two Bacco. The Milliamp Falcon hurtles onwards through system space. Meanwhile, on a distant page in user space...

Princess LPAO: was ushered into the conference room, followed closely by Dec Vadic. "Governor Tarchive," she spat, "I should have expected find you holding Vadic's lead. I recognized your unique pattern when I was first brought aboard." She eyed the 0177545 tattooed on his header coldly.

"Charming to the last," Tarchive declared menacingly. "Vadic, have you retrieved any information?"

"Her resistance to the logic probe is considerable," Vadic rasped. "Perhaps we would get faster results if we increased the supply voltage..."

"You've had your chance, Vadic". Now I would like the princess to witness the test that will make this workstation fully operational. Today we enable the -r beam option, and we've chosed the princess' \$HOME of /usr/alderaan as the primary target."

"No! You can't /usr/alderaan is a public account, with no restricted permissions. We have no backup tapes! You can't..."

"Then name the rebel inode!" Tarchive snapped.

A voice announced over a hidden speaker that they had arrived in /usr.

"1248," she whispered, "They're on /dev/rm3. Inode 1248." She turned away.

Tarchinve sighed with satisfaction. "There, you see Lord Vadic? She can be reasonable. Proceed with the operation."

It tooke several clock cycles for the words to penetrate. "What!" \_LPAO: gasped.

"/dev/rm3 is not a mounted filesystem." Tarchive explained. "We require a more visible subject to demonstrate the power of the RM STAR workstation. We will mount an attack on /mnt/dantooine as soon as possible."

As the princess watched, Tarchive reached over and typed "ls" on a nearby terminal. There was a brief pause, there being only one processor on board, and the viewscreen showed, ".: not found."

The princess suddenly double-spaced and went off-line.

To be Continued...???

TRY OUT THE TISIG (416)-429-1700  
ON THE ONTARIO SCIENCE 300/1200/2400 BPS  
CENTRE'S BBS AT: 24 HRS

THE FOLLOWING CAME TO THE TI TOWER BBS, FROM OUR SISTER BBS' IN FLORIDA...

From the Siouxland Ninety Niner of Sioux Falls, SD comes this short article by Bob Daggitt (June 1987 issue)

Mike Lamontagne of MLsystems (P.O. Box 268, Valley Falls, RI 02864) has introduced an \$80 IBM keyboard interface card for the TI-99/4A. According to Jonathan Zittrain in the August 1987 COMPUTER SHOPPER, everything is included to properly connect an IBM PC/XT keyboard using a screwdriver, soldering iron and exacto knife. A keyboard is not included but they are easily available from other sources for \$29 and up. MLsystems' kit leaves the TI keyboard in place but disconnected, though John Willforth of the West Penn. 99ers was able to make a slight hardware modification so that both keyboards can be used. The card consists of an EPROM and a connector that bypasses the TI's keyboard. The EPROM will handle both 9-bit and 10-bit serial keyboards and has a number of functions built-in as well. Numeric keypad assignments, for example, PageUp and Home, have been defined for corresponding use with TI-WRITER. "OLD DSK1." and "SAVE DSK1." have been reduced to a single keystroke.

P.S. Our group was mentioned in the above newsletter as participating in their newsletter exchange program.

Now, I (REB) would like to make a few observations concerning the MLsystems KBM/99 interface card and the IBM keyboard.

### KBM/99 INTERFACE

A Review By: Robert E. Barnes

As most of you already know from the last meeting, I have added to my system the KBM/99 and a IBM compatible keyboard. Some time last May or June I saw my first advertisement for the card and that got me thinking about the alternatives to the Rave99 interface and key-board that I had thought about but put off because of the cost. So, I wrote Mike asking for additional information. This information was sent to me very promptly, which, needless to say, impressed me. After going on vacation, returning and thinking it over a while, I wrote Mike again asking some specific questions as to the compatibility of the card with my configuration (Ram Disk, GramKracker, etc.) I recieved his reply, again promptly, assuring me that there was no incompatibility with my set-up. One of the biggest questions on my mind was "how long would it take to receive the card". Mike's reply was "usually within 2 weeks of receipt, no longer than 1 month" So, as the story goes, I send off for my very own interface card and true to his word, I recieved it within 2 weeks.

I then proceeded to install the card in my TI console (with the aid of my boss at work since I don't profess to be an expert with electronics), it is a very simple job which should take an inexperienced person approximately 1 1/2 to 2 hours to do. There are 3 wires to solder on the motherboard inside the console. It is not within the scope of this article to detail how this is done, but I can say that the instructions are very easy to understand and once you get the console open, you will see for yourself. The card is installed inside the console with some spacers provided with the kit, and the card is then plugged into the motherboard in place of the TI keyboard. You could if you desire, make hardware modifications to enable you to use both the TI and new IBM style keyboards, as mentioned above. However, I am of the opinion that there is little to be gained by this. The best idea is to leave the TI keyboard out entirely and obtain a small piece of plastic or aluminum to cover the void left where the TI keyboard was.

Obtaining the IBM style keyboard is another story in itself. The MLsystems model KBM/99 interface card has been found to work with MOST IBM compatible keyboards on the market today. However, due to the nature of the Software Decode System incorporated in the card, some ODD models of keyboards have been found to function improperly. As of now, there are apparently 5 known keyboards that are compatible with the card. My keyboard was recommended by Mike since it was the one that he was using. It is available from B. G. Micro P. O. Box 280298 Dallas, Texas 75228 and is advertized in the COMPUTER SHOPPER for \$29.95. This was the model that was demo'ed at the meeting last month. Just make sure that the keyboard is IBM PC/XT compatible.

DUFFY®

by BRUCE HAMMOND



DON'T FORGET TO RENEW  
YOUR MEMBERSHIP



Now for some additional information on the goodies of this interface card. There are 50 pre-programmed function keys which allow you to enter many commands with the press of one or two keys. The first set of 10 function keys operate with only one keystroke. Some examples are: OLD DSK1., SAVE DSK1., LIST, and RUN. The original ERASE, BEGIN, PROCEED, AID, REDO, and BACK remain the same as the old TI keyboard (but with a single keystroke). By pressing SHIFT and one of the function keys (2 key strokes) you can enter PRINT, INPUT, OPEN #1, CLOSE #1, CHR(, RETURN, GOSUB, ACCEPT AT(, DISPLAY AT(. The other 30 pre-programmed keystrokes are obtained by pressing both ESC and a function key or CNTL and a function key. Many of the TI-Writer functions need only 1 key press. The joystick is not affected by the ALPHA-LOCK on the TI keyboard, and there is even a load interrupt by pressing the keyboard PrtSc key when using a screen dump program.

As with all IBM style keyboards, there is a separate numeric keypad. The pad has pre-programmed keys for use with TI-WRITER, for example: HOME, NEXT WINDOW, PAGE UP, PAGE DOWN, INSERT, and DELETE. The arrow keys are on the pad also.

I have not yet tried to learn what keys work with TI MULTI-PLAN but I am sure that those keys that work with TI-WRITER will also work with MULTI-PLAN. All applicable function and control keys should correspond with the cards new keystrokes.

I used the OVERLAY STRIP program and made up some strips and attached them to the open space around the function keys. This makes it easier to learn the new card functions. As a matter of interest, the ESC key replaces the old TI function key, and if you wish, you can still press ESC and the corresponding key and perform the TI function rather than use the new keystrokes provided by the card.

If you wish you had an IBM style keyboard but don't want to pay the cost of a Rave99, I highly recommend the KBM/99. If you do a lot of XB programming, the KBM/99 is for you. If you primarily use your computer for word processing, the KBM/99 will fill that purpose also. That was my primary reason for getting this card and IBM style keyboard, I use my computer mostly for word processing (that's why you get these REPRINT ROUNDTABLE's to read all the time).

(Note to Newsletter Editors participating in our newsletter exchange program...

If you would like to reproduce this article in your newsletter but would like to save typing it. You can call our group sponsored PHS, TI-HEAVEN BBS (PCP accessible) at (813) 633-1723. The file can be found on our ASCII drive #2 under the filename "KBM99/REV". You can view the directory by selecting (C)atalog and entering drive # 2. I would like to suggest that other authors consider the same and make it known what files can be found on what BBS for others to d/l.)

FOR A HAPPY NEW YEAR, HERE'S...

## MURPHY'S LAWS OF COMPUTING

COURTESY OF: K-TOWN 99/4A USERS GROUP, JUNE 1987

(reprinted from the April 1987 Northern Nevada 99er)

People always remember the last mistake you made.  
He who hesitates is probably smart.  
The one who does the least work always gets the most credit.  
The less a computer peripheral costs, the more it costs to fix.  
Experience is something you don't get until just after you needed it most.  
Confidence is the feeling you get just before you fully understand the problem.  
When you get to the point where you really understand your computer system, it's probably obsolete.  
As soon as you find that your computer is easy to use, you add some peripherals you don't understand how to operate.  
No matter what goes wrong with your carefully planned database system, there's always someone who says they knew it would.  
It's only when you need to knock on wood that you realize that the world is entirely made up of aluminum and plastic.  
You always find the information you need on the page of the manual you look at last.  
The first place to look for information is in the section of the manual you least expect to find it.  
You know you have a real crisis on your hands when you can't say "Let's forget the whole thing."  
The time it takes to fix the error in your spreadsheet is inversely proportional to the time it took to do the damage in the first place.  
When the going gets tough, upgrade.  
For every action there is an equal and opposite malfunction.

In technology, anything is possible if you don't know it isn't available yet.  
 To err is human... to blame your computer for your mistakes is even more human.  
 He who laughs last probably made a backup.  
 If at first you don't succeed, blame your computer.  
 That which cannot be serviced will require the most service.  
 If you take a computer apart and put it back together enough times, you will end up with two computers... neither of which work.  
 The easiest computers to use are those you don't have to.  
 If you consult enough computer experts, it is possible to confirm any opinion.  
 If you can distinguish between good advice and bad advice, you probably don't need any advice at all.  
 A complex system that doesn't work is invariably found to have evolved from a simple system that worked well.  
 No job is simple that it can't get screwed up.  
 The person who says that something can't be done should never interrupt the person who is doing it.  
 The number one cause of computer problems is computer solutions.  
 If an hour has been spent perfecting a sentence, a committee will decide to delete the paragraph.  
 A committee is a group of people doing the work of one person.  
 When you're asked if you need help to understand a computer program, say "no", then negotiate.  
 The further off new technological developments are, the better they look.  
 A specialist is someone who knows more and more about less and less until he gets to the point where he knows absolutely everything about nothing.  
 A conclusion is what you've come to when you reach the point where you can't think any more.  
 You can always spot a computer expert in a crowd. It's the person who says the project will take the longest to complete and will cost the most.  
 The component which has the shortest lifespan will always be located in the least serviceable location.  
 Any circuit design will always contain at least one part which is obsolete, two parts which are no longer obtainable, and three parts which are still under development.  
 Whenever you don't understand what you're doing, remember to always do it neatly.  
 Any technical problem can be solved given enough time and money, but you will never be given enough time and money.  
 A computer program will always do what you tell it to do, but never what you want it to do.  
 The secret to successful presentation is sincerity. Once you can fake sincerity, you've got it made.  
 In any department there will always be one person who understands computers. This person usually gets transferred to another department.  
 A project always expands to fill your system's available memory.  
 If it would be cheaper to buy a new unit, management always insists on repairing the old one. If it's cheaper to repair the old one, management will insist on replacing it with the latest model.  
 If it weren't for the last minute, nothing would ever get done.

**On The Fastrack**



**ON THE FASTRACK**





PRESENTS

# PICASSO PUBLISHER

VERSION 1.1



**TORONTO**  
T.O. USER GROUP  
**SPECIAL**

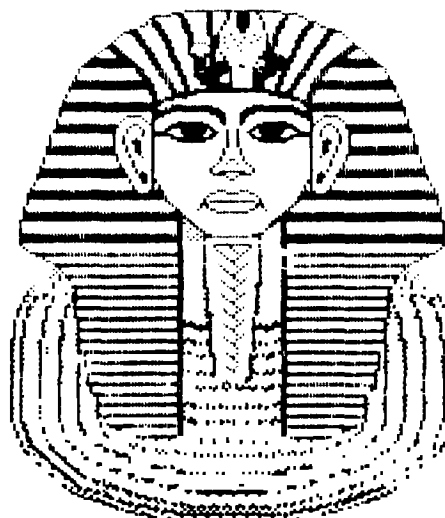
Picasso is a new TriWare program in our library from Arto Heino, 35/8 Guerysey Ave., Minto, 2566, N.S.W., Australia. It is called a publisher and allows input of text as well as graphics with built-in drawing and editing commands as well as 10 fonts. The program gives us a working window of a large sheet, that when complete prints half a 8.5 by 11 page. The screen can be printed directly or saved in an 85 sec. DV80 file and printed later singly or in a group by an extended basic program included.

Picasso is fully compatible with TI Writer, WriterEase or any other program that puts out a DV80 file of 60 columns in text mode, and any 25 sector graphic file such as TI-Artist, Jospaint Pal (Save any), Draw'n'Plot, RLE (TI-Artist format) or converted Graphx file. A program also on this disk to converts Bitmac files to this format.

This ad was done using Picasso and files from Corcomps WriterEase word processor and TI Artist version 2.0 and printed directly. This ad took about 50 minutes to complete.

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PICASSO VER 1.1  
WRITER-EASE BY CORCOMP  
TI-ARTIST VER 2.0

Andy Parkinson.

# ATTENTION TI-99/4A USERS

DID YOU KNOW....

-That the TI-99/4A is alive and well?

-That there are many third party peripherals and software available and still being made for the Texas Instruments TI-99/4A?

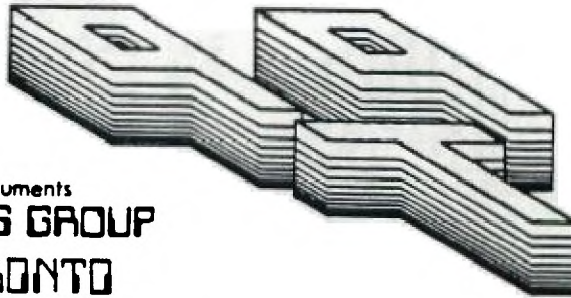
-That there are still publications, electronic BBS', and active user's groups for the TI?

-That a new powerful compatible to the TI, is now available?

-That you can request a free copy of our club newsletter, to find out about our non-profit user's group, the 9T9 Users Group, of Toronto and its publication, Newsletter 9T9?

-For more info., contact either Randy(469-3468) or Steve (657-1494), for a free issue of the Newsletter or to find out where to visit us at our monthly meetings. Modem users can contact our TI-dedicated BBS, called the "TI-TOWER BBS" at 921-2731, 300/1200 BPS, 24 HRS. or try the TI SIG on the Ontario Science Centre BBS, 300/1200/2400 BPS, at 429-1700

-Or you can write us at: 9T9 Users Group, #109-2356 Gerrard St., East, Toronto, Ont., M4E-2E2



Texas Instruments  
**USERS GROUP**  
**TORONTO**

**FOR THE TI-99/4A COMPUTER**  
and compatibles

# ATTENTION TI-99/4A USERS

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