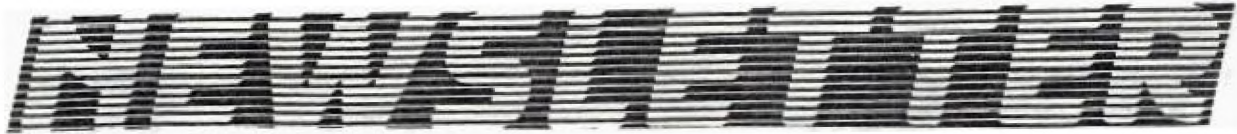


Ottawa Jan 86  
GEC  
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The Ottawa T.I.99/4 Users' Group



VOLUME 5 NUMBER 01.....JAN 1986

## C o n t e n t s

### NEXT MEETING....

THURSDAY the 6th of February, starting at 7:30pm  
at the Merivale High School, 1755 Merivale Road in  
Nepean.

### EXECUTIVE NOTES....

DONATIONS of double sided disks to copy BOB BOON'S  
LIBRARY will be gratefully accepted. Lets get this  
before he gets transfered.

### FEATURE ARTICLES....

NUAC NEWS by Bob Boone.....HIGHSCORES by Shawn  
CHAIRMAN'S TWO CENTS WORTH.....LIBRARY HOLDINGS by  
JANE Laflamme.....FREEWARE LIST from the LA 99'ers..

### DEADLINE...

The 15th of FEBRUARY is the cutoff date for  
submissions....PLEASE Try to be on time.

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# Mr. Diskette Monthly

Mr. Diskette's advertising Newspaper

## Welcome 1986

Vol. 1

No. 1

**Don't Bug Me Now. I'm on my way to Mr. Diskette.**



Yes Folks, that's right. Billy the bug can't stop right now. He's going to Mr. Diskette to get a look at the Panasonic 455 drives. Double sided double density drives that are perfect for his T.I. 99. And Billy can't believe the price... only

**\$179**

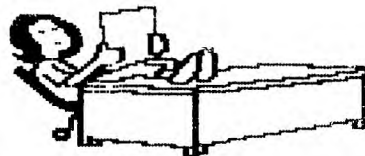
**The Magic Continues : Mr. Diskette's Dream Price For January:**

The Panasinic 1091 printer. 120 cps of the finest print you've ever seen. Perfect for home or office use: Only

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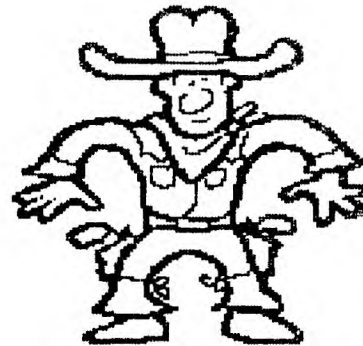


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(613) 232-5203

148 Colonnade Rd.  
Nepean, Ontario  
K2E 7J5  
(613) 727-0180

## HOTLINE NUMBERS

The executive has expressed a desire to assist all members should you have some problems or have some questions, do some library swapping or borrow a book. This will be the place to look. Of course if you wish to be placed on the list just give me a call...I know there is a lot of expertise within our Group. I hope to add to this list and improve the coding. Please respect normal hours unless you specifically know that someone doesn't mind a call at 3am or use the BBS to leave a message at 738-0617, 24 hours a day, 7 days a week.

BERRY MINUK.....CHAIRMAN...TUTORIALS,ASL,B,F,XB..... (M)234-5472  
JANE LAFLAMME.....V/CHAIRMAN.RECORDS,Lb,Lc,Ls,MBX,Mwp,B.. (M)837-1719  
BILL SPONCHIA.....F/CHAIRMAN..TUTORIALS,B,Ls,XB..... (M)523-0878  
DENIS DENNY.....TREASURER..... (M)596-0276  
CAROL LECOURTOIS..SECRETARY..... (M)824-5591  
BOB BOONE.....NUAC CO-ORD..UG CO-ORD,CC,I,Ld,Ls,S,SS.... (M)623-7841  
PETER ARFIN.....CO-SYSOP.BBS..... (M)523-0017  
BENOIT TANGUAY..CO-SYSOP..ASL,MBX,Mmp..... (M)830-1718  
MARG. O'CONNOR..EDITOR.....NEWSLETTER.....833-2626  
TONY HOPKINS..ADVERTISING..BUSINESS,Lb,Ld.....746-4463  
SHAWN MILLAR...YOUTH CO-ORD.SCORES..... (M)684-3466  
MAURO TOMIETTO.LIB.CHRMN..OTIUG SOFTWARE,Ls..... (M)230-3535  
LLOYD GALENZOSKI.MEMBER/CHRMN.MEMBERSHIPS..... (M)830-1522  
ART GREEN.....ASL.....837-1955  
PAUL LECOURTOIS...TIBBS CO-ORD..... (M)824-5591  
JEAN-PIERRE MORIN.....F,.....729-4579  
DICK PICHE.....TECK..... (M)521-8667  
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\*HARDWARE AND SOFTWARE REPAIR DEPOT IN RICHMOND HILL (TORONTO)\*

SOFTWARE:::ASL=ASSEMBLY LANGUAGE  
B=BASIC  
F=FORTH  
L=LOGO  
Lb=BOOKS/MAGAZINES  
Lc=CASSETTE LIBRARY  
Ld=DISK LIBRARY  
Ls=U/G SOFTWARE SALES

Mp=PLATO  
Mea=EDITOR ASSEMBLER  
Mmm=MINI-MEMORY  
Mmp=MULTIPLAN  
Mwp=TI WRITER  
S=SALES  
XB=EXTENDED BASIC

HARDWARE:::BBS=SYSTEM OPERATOR  
CC=CORCOMP EQUIPMENT  
I=INSTALLATION  
M=MODEM EQUIPPED

MBX=VOICE RECOGNITION  
MY=MYARC EQUIPMENT  
R=REPAIRS  
SS=SALES

EDITOR'S NOTES

by Marg O'Connor

A brand new year and it looks like a very exciting one for our club.

In the plans are a number of Tutorials and Workshops. One new Workshop that has just started is the 'Basic' - Extended Basic Workshop on tuesday evenings at the Merivale High School. Last week, the first night, there were 11 people showed up to take part. We are about to write a new program in extended basic, which should prove a lot of fun.

Come on out and join us - the more the merrier. Remember Tuesday at 7:30 p.m. at the Merivale High School.

We are still looking for donations for the library which we must get copied before Bob gets transferred and we loose it. Please, even one disk would be a help, help us get the job done. Contact Bill Sponchia at 523-0878 or see him at the meeting.

I was talking to Jane Laflamme to-day and she tells me that the NUAC are planning a Computer Show on April 26th, right here in Ottawa and already Clubs from Ontario, Quebec and Nova Scotia have indicated that they will be comming.

Jane and Bob are going to need a lot of help and support to organize this to make it a really good show. We also need to hear from groups across Canada and the U.S.A. to let us know if they would be intrested in taking part with us.

The program is not finalized as yet but I am sure it will be very interesting. So come out and help show that the TI is alive and very well.

I for one was glad to see the way the demonstrations were presented at last month's meeting. Its the first time that I have been able to see what was going on as in a wheelchair you can't see over or through people - I am sure I wasn't the only one to appreciate the fact that you could see what was going on. Good work Bob.

REMEMBER when you support our advertisers tell them that you saw their ad here in our Newsletter.

See you at the next meeting.

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*       PROSPERO COMPUTER BOOKSTORE   *
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## CHAIRMAN'S TWO CENTS WORTH

by Berry Minuk

Well here we are at the beginning of a new year again. Once again the Group is hoping that all of the members that haven't yet renewed their memberships will do so quickly. The Group cannot continue to flourish without a strong and active membership and when you think of the benefits we all derive from it, it is well worth the \$20 annual fee.

The last meeting was most interesting since we had not only a demonstration of Guy Gournay's MAXIMEM with some further improvements but a chance to compare it with Craig Miller's GRAM Cracker which was demonstrated by Bob Boone (the only authorized Canadian Distributor). All those who were there were impressed with both products and we hope to have a comparative review of both products in the newsletter soon.

At our next meeting we will have a demonstration of TURBO DATAMAN which is an improved version of the DATAMAN which we saw about a year ago. The new version requires the 32k memory expansion but adds many Assembly routines and is therefore much faster. In addition it has some new features. This program is produced right here in Ottawa and one of our own members, Tom Bentley is a co-author.

The Basic and Extended Basic Tutorials have started at the Merivale High School every Tuesday at 7:30pm. Call Bill Sponchia or Mike Marcotte for further details. And the Forth and Assembly Tutorials are continuing on alternate Tuesdays. See the schedule below or Jean-Pierre Morin or myself for details.

We are also trying to organize some more workshops on various topics and if you have any suggestions or wish to volunteer to run one please contact me or anyone else on the executive. We are always glad to hear from any member about any topic.

One workshop which is already definite is the continuation of the Beginners Assembly Tutorials which were started last year to give those who were just becoming interested in Assembly Language a chance to catch up to those who had been taking the tutorials for some time. The first 2 were held in November and December at private homes on the Tuesdays when the Merivale High School was unavailable. There will be a third on February 18th at a home to be announced.

To continue with our listing of our other Tutorials and Workshops and try to keep up to date on them the Schedule for the future is as follows:

Date	Event	Time and Place
Tues Jan 28	Assembly Tutorial	7:30 M.H.S.
Tues Feb 04	Forth Tutorial	7:30 M.H.S.
Tues Feb 11	Assembly Tutorial	7:30 M.H.S.
Tues Feb 18	Beginners Assembly	To be announced
Tues Feb 25	Forth Tutorial	7:30 M.H.S.
Tues Mar 04	Assembly Tutorial	7:30 M.H.S.

For further details you can phone me at 234-5472 or 996-1371 (work) or Jean-Pierre Morin at 994-3425(work).

P.S. Since writing the above two additional workshops are being arranged. One on how to make and use a super-cartridge and led by Lloyd Galenzoski will be on a Friday in the near future. The other on the 'C' language and led by Tom Bentley will also take place soon.

See you at the February meeting where further details on all of the above workshops will have their final dates and places announced. Remember to renew your membership if you haven't done it yet.

Try to bring a prospective member to the next meeting.

Due to severe time constraints this is going to have to be a short column this month. I do want to stress that things are looking very rosey for us in the new year ahead though.

Phil Thompson of the Kawartha 99ers called yesterday to announce his group in Peterborough has decided to join NUAC. Phil's group numbers 35 and they meet on the 1st Wednesday each month at 7:30 PM in the Queen Alexander Building on Bernardo St. in Peterborough. He stresses that the welcome mat is out to anyone that can make it out to any of their meetings. He also adds that Bruce Ryan of RYTE Data fame in Haliburton was at their last meeting and demonstrated a couple of new TI products from Germany.

The German Enhanced Ex-basic module was there and a compact stand alone 32K box too. Both products generated considerable excitement with the Peterborough membership at large. Bruce Ryan is negotiating with the German company building these and other products and is trying to get them into the marketplace here in North America. I'll be contacting Bruce in the near future to see if we can arrange a demo here in Ottawa. Watch closely for updates....

Bruce Ryan of RYTE Data got into a spot of trouble a while back with several groups that I've been in contact. Notable among these groups were 9-T-9 in Toronto and TINS in Nova Scotia.... To the best of my knowledge these problems are now in the past and have been laid to rest to everyone's satisfaction. My personal impression Bruce had just gotten himself in too deep and was snowed under by correspondance. I have spoken to him on several occasions and have never found him less than sincere in his efforts toward Tiers. He has a definite tendancy, like me, to badly over-extend himself. Hopefully, when the dust does settle he'll still be there supporting us all....or trying to anyway.

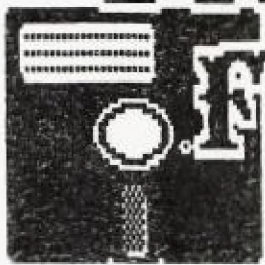
I had the opportunity to visit North Bay for 3 days early this week and spent an evening with 3 of their members at NUAC member Pat Graham's home. In anticipation of this chance I had brought along some of my software library and GramKracker and Maximem. The evening was all too short but exceedingly enjoyable and I'd like to thank Pat and his fellow Tiers for their hospitality. Sorry I don't have more time to continue here but the Newsletter deadline is too fast approaching....

Next month I'll have more news for you all on our upcoming TI-Fest and also plan to print screendumps of the Canadian User Group logos that have found their way into my library to date....later....

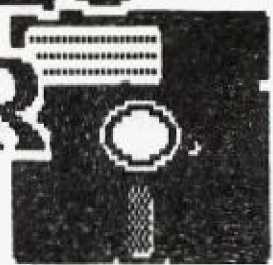
All eyes next month will be pointed to the west coast San Diego UG who are sponsoring TI-Fest West on the last weekend in February. I had the opportunity to meet Terry Masters in Chicago last November and only wish there were some way I could make it; I'm sure it'll be a doozie!!!

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## HIGHSCORES

by Shawn Millar

Game Name	Score	Person's Name	Age
Anteater	016-848	Doug Boone	10
Barrage(double)	810-200	Daniel Hopkins and	13
Barrage(double)	810-200	Steve Woodard	??
Barrage(single)	889-250	Chris Giles	16
Barrage(single)	842-150	Chris Giles	16
Barrage	155-250	Doug Boone	10
Blasto	039-110	Chris Giles	16
Buck Rogers	079-500	Doug Boone	10
Burgertime	104-700	Gregory Simmonds	10
Burgertime	018-500	Doug Boone	10
Burgertime	284-250	Chris Giles	16
Burgertime	129-400	Devin Johnstone	13
Defender	773-900	Chris Giles	16
Defender	409-909	Chris Giles	16
Dig Dug	023-070	Kathy Berlinguette	11
Donky Kong	042-600	Mike Berlinguette	09
Donky Kong	810-200	Daniel Hopkins	15
Fireball	020-090	Doug Boone	10
Guardian	012-470	Mike Berlinguette	09
Guardian	155-410	Keat Maddison	13
Guardian	100-500	Gregory Simmonds	11
Hen House	056-330	Dominique Laflamme	14
Hustle	019-900	Tanya Craig	10
Jawbreaker	012-470	Amanda McAllister	10
Jawbreaker	005-320	Jeanine Laflamme	08
Jawbreaker	008-100	Gregory Simmonds	11
Jumpy	179-000	Philippe Tanguay	14
Jumpy	130-700	Jim Jones	38
Micro-Pinball	220-000	Benoit Tanguay	19
Micro-Pinball	175-400	Shawn Millar	15
Micro-Pinball	147-500	Bob Lanoy	28
Micro-Pinball	119-100	Philippe Tanguay	14
Miner 2049'er	010-535	Doug Boone	10
Miner 2049'er	065-350	Daniel Hopkins	14
Miner 2049'er	021-850	Dominique Laflamme	14
Moonmine	079-810	Chris Giles	16
Moonpatrol	030-950	Daniel B. McCormick	??
Moonpatrol(champ)	026-850	Shawn Millar	15
Moonpatrol(champ)	020-100	Gary Millar	44
Munchman	017-850	Doug Boone	10
Par-Fore-Golf	000-061	Tim Slack	38
Parsec	369-000	Benoit Tanguay	19
Parsec	532-800	Pete Arpin	60
Pinball	098-620	Paul Berlinguette	37
Pole Position	029-030	Jeanine Laflamme	08
Pole Position	408-800	Keat Maddison	13
Pole Position	234-470	Philippe Tanguay	14
Pole Position	090-920	Paul Berlinguette	37
Q*Bert	016-695	Shawn Millar	15
Slymoids	024-935	Daniel Laflamme	12
Starfort	012-150	Shawn Millar	15
TI-Invaders	025-682	Gregory Simmonds	11
TI-Invaders	002-400	Philippe Tanguay	14
TI-Invaders	007-860	Kate McAllister	17
TI-Runner	012-200	Mike Berlinguette	09
TI-Runner	062-600	Shawn Millar	15
Topper	030-190	Shawn Millar	15
Topper	032-570	Gary Millar	44
Word Race(hardest)	016-380	Bob Boone	??



TI 99/4 USER GROUP  
EAST END LIBRARY HOLDINGS

Jane Laflamme  
83D Glen Park Dr.  
Gloucester (Blackburn Hamlet)  
Tel: 837-1719

USER GROUP HOLDINGS:

Basic Programs for Home Financial Management  
Author: W.B. Goldsmith, JR.  
(Donated to the User Group by Yvan Bretan)

The Best Texas Instruments Software  
By the authors of Consumer Guide  
(Donated to the User Group by Stephen Bridgett)

How to Use the TI-99/4a Computer  
Authors: Bill Brewer & Jerry Willis  
(Donated to the User Group by Stephen Bridgett)

36 TI-99/4A, Programs for Home, School & Office  
Author: Len Turner

101 Programming Tips & Tricks (for the TI-99/4A Home Computer  
Author: Len Turner

Entertainment Games in TI Basic and Extended Basic  
Authors: Khoa Ton and Guyen Ton

Programs for the TI Home Computer  
Author: Steve Davis

TI-99/4A: 24 Basic Programs  
Authors: Carol Ann Casciato and Don Horsfall

TI-99/4A Technical Data, Book #2  
(For those who wish to design peripherals)  
Author: Texas Instruments Inc.

TI Extended Basic Student Guide  
Author: Texas Instruments Inc.

TI-Writer Student Guide  
Author: Texas Instruments Inc.

PERSONAL HOLDINGS: (Available for members)

Basic Fun (A Kids' Guide to Basic Programming  
Authors: Susan Drake Lipscomb and Margaret Ann Zuanich

Introduction to TI Basic  
Authors: Don Inman, Ramon Zamora, and Bob Albrecht

Using the TRS-80 in Your Home  
(Fairly easy to translate to TI Basic and/or Extended Basic)  
Author: Charles D. Sternberg



## PRIOR PATTERNS

By Bob Boone

A new year and an old beginning....Something is rotten in the State of California....New products from new and old sources....Suggestions from the January meeting....

From 196 to 104 in one fell swoop! Our club year runs from January to December so officially we now have a total of 104 paid up members. It hurts a bit that we never quite reached the 200 mark(yet!!!), but it does give us another shot this year! A big hooray to the 104 Tiers that joined on or before our meeting this month. Its the first time in our history that we began our year so strongly. Traditionally you all have straggled back over the first three months of the new year. Looks like we now have only 92+ of you to warn that your period of grace is over with the publishing and mailout of our February newsletter.

Many of you are aware that Texcomp of Granada Hills California are using our DM-1000 freeware package wrongfully as a promotional item for the 'Explorer' package they are selling through Micropendium. I wrote to Jerry Price of Texcomp in late October last year expressing our strong disapproval of his actions in this matter. He, as yet, has not seen fit to reply either through direct response to us or through any other medium. The ad complete with its free 'give-away' offer of our program has continued to run in Micropendium!!! We have seen evidence that many TI user groups across the US and Canada are standing strongly behind us in this matter. Individuals and Groups alike have written to express concern at Texcomp's tactics and we feel its time to mount a more direct attack to achieve our point. I'd like to take this chance to invite all who think strongly enough that Texcomp is wrong to offer a Fairware product like DM-1000(I hear there have also been others) to write and express your disapproval to: Texcomp, PO Box 33084, Granada Hills, California, 91344; ATTN: Mr Jerry Price. I suggest you also send a copy to Micropendium PO Box 1343, Round Rock, Texas 78680 and let them know as well of your dissatisfaction with that particular ad. Please take the time now to write; it can make a difference!!!

Craig Miller of Miller Graphics has come through again with, not one but two new offerings for the TI-99/4A!!! GramCracker has come to Canada and was debuted at our January meeting. One feature we did not expound was its ability to save to and retrieve from cassette. This feature, now also available on Maximem, by Guy Gournay in Montreal, will allow unexpanded Tiers access to very powerful machine language games and utilities. A disk drive and 32K card was needed to run this type of software....

Craig has also published a new book, written by Ron Albright called The Orphan Chronicles, which in my opinion should be required reading for all dedicated Tiers. It's 172 power-packed pages have 10 facinating chapters and 11 appendices that'll keep you enthralled from start to finish. It tells the history of our machine from its inception on the designer's board in Lubbock Texas to that infamous 'Black Friday' in October 1983. In addition to its high interest value it will also be a valuable reference book with User Groups; BBSes; book reviews etc. detailed in its appendices in the back pages of the book.

Craig will sell you these two items directly for \$195 US and \$10.95 respectively or they may be purchased through me for \$260 CDN and \$15 (The price quoted for GramCracker includes the 3 optional memory chips)

Corcomp has produced and marketed a new firmware product(module) that will allow you to test all aspects of operation within your TI system. Its a diagnostics module who's main advantage over Craig Miller's product is that you don't need a working 32K and Drive to load and run it. It comes complete with a loopback cable and instructions to allow you to test all peripherals without having to hook up anything to your RS-232 for instance. Terry Atkinson of Dartmouth Nova Scotia, has one and will be forwarding a review of the product to us in the very near future.

Dave Romer and pals from the New Horizons UG have gone ahead with the production of their 96K ramdisk project and to-date have

sold 35 of pre-fabricated boards. Dave applied to us for permission to install our DM-1000 in their package as its resident disk manager. We agreed and now have a mutual understanding that we will receive \$2 US per unit sold from them as a form of royalty. Good stuff!!! Dave recently wrote to say the RamDisk will soon be available in kit form for about \$42 US. That will bring it within reach of my budget and I'm liable to jump on their bandwagon when it happens. Watch here for more info.

Asgard Software has been busy since Chicago and have just recently brought out Graphx Companion II. For those of you that have seen their Companion I disk its time to get really excited....I hear Companion II is even better!!!

The authors of Character Set and Graphics Design and TI-Artist(tm) are corroborating to produce versions of their 2 packages that will be able to use files from both. This is fantastic news for TI artists the whole world over and will soon have Apple "PRINTSHOP" owners drooling! Incidentally....although very slow Dave Rose's(CSGD Author) BANNER program is very good. All who were at the last meeting can bear witness to that fact thanks to Steve McWatty. TI-Artist Version II will be available soon at an estimated cost of \$20 CDN. CSGD is fairware.

From the Suggestion box... A member suggests we try to have fact-sheets available at meetings for products we are reviewing at the meetings.... Its an admirable thought, Bob, but not always a snap to accomplish. The fact sheet needs to be compiled by someone first from whatever sources are available, then it needs to be copied somehow for distribution to you all. We have found in the past that very few members are interested in the nuts and bolts of a product being reviewed and that the majority of users are quite happy to see just HOW it works. We have never denied the facts to anyone that wants them. The products and data sheets are coming in too fast and from too many directions for any one person to keep on top of. We will try to do better though. As far as publishing an agenda of each meeting in the newsletter each month and the planned content of an upcoming meeting, at least the last part of your wish will be acted upon...hopefully in the president's 2 cents worth...

Steve Bridgett would be willing to wait till the monthly meeting to get his newsletter and feels a good number of you would be willing to as well. As the idea can save us a very considerable amount of money we are going to act on Steve's suggestion at the next general meeting. We will accordingly conduct a poll at the next meeting of all members there to see who among you would be willing to take delivery this way. Those that agree can expect to get your next newsletter at the March meeting and our thanks for the 41 cents per issue you'll save us.

Steve Bridgett's suggestion from December struck a lot of your fancies and we're happy to announce that a Basic/XB class will soon be started up with the intended format being to group-author a specific(but as yet-undetermined) program. Mike Marcotte and Bill Sponcia will be co-gurus....thanks to the 15+ members that expressed enough interest to allow us to go ahead with this long-promised class and thanks to Steve for his exciting proposal. I can't wait to see what you all come up with....Tom Bentley's vote for subject is for an XB compiler by the way and Mike Marcotte's personal vote is for a Flight Simulator..and yours??

Mr Marcotte has again come up with yet another 'blockbuster idea' that should have surfaced eons ago...monthly 'official' time allotted at meetings expressly for software/hardware review.... Time, or the lack of it, is fast becoming a problem at Merivale Highschool where we have to vacate the premises by 10 PM but the idea is so good we'll try to incorporate it as soon as possible.

Thank you all for your suggestions and occasional kind words. I'd better let this go now or I'll soon have a book...not an article!!!

Till next month....keep on TIing...Bob Boone

## FREWARE LIST

As best we can ascertain, this list contains most of the FREEWARE available for the TI 99/4A as of Oct. 1985. It has been culled from the newsletter exchange, with most of it from the LA 99'ers TopIcs.

As explained many times, if you use and like the program, send a contribution to the author. If we do not have it in the library, send a blank disk, return postpaid mailer, and some small money to cover the author's time and trouble making the copy, and follow up with the requested contribution if you find it useful. A plus sign before the name means we have it either in the Lending Library or it is available on request from Steve McCalla.

HBM PRINT - by Bob Lawson, 16223 Mill Point Drive, Houston Texas 77059. Ed/Assem required. Auto loads from option #3 Load Run. Prints out hard copy from files of the Home Budget Manager Module. It is written in FORTH.

+TK WRITER - by Tom Knight 7266 Bunion Drive, Jacksonville, Fl 3222. Eliminates need for TI WRITER Module. loads from XB or E/A. Tom has the #1, in popularity, piece of Freeware. HELP on the disk.

+MASSCOPY - by Steve Lawless 2514 Maple Ave Wilmington Del 19808. A multi feature whole disk copier. Will copy varied density, tracks, and make two copies at once if you have the extra drives. 3 passes if you have the standard SSSD PE box drive.

+NEATLIST - by Danny Michaels, rt#9 box 460 Florence Al 35630. XB. Quick easy reference to variables and line #'s of your programs.

+COMPUTER CRAPS - by Ramon Martinez 11125 Ferndale Ave, Fullerton Ca. 92631. A fantastic Simulation of Las Vegas Craps table. Learn the real game without the pro's taking you to th cleaners.full instructions on the disk.

DM1000 - BY BRUCE CARON P O BX 2144 STA.D.OTTAWA,ONT KIP 5W3 A disk based Disk Manager which supposedly rivals CorComp's.

X DISASM - by Fred Hawkins 1020 North 6th Street, Allentown, Pa. 18102. An XBasic disassembler. If you are willing to pay, excellent documentation is available.

SUPER DISK DUPLICATOR - by Tom Knight (see above) allows input of start and stop sector number for copying.

SCREENDUMP -by Danny Michaels (see above) Works with Epson compatable printer with double size or single size, vertical or horizontal page printout.

+FAST TERM - by Paul Charlton 1110 Pinehurst court, Charlottesville, VA 22901. An Excellent Terminal Emulator for your modem.

The DIRECTOR - by Ron Rutledge 1020 3rd st, Waukee, IA 50363. XB program database that allows cataloging disk-based programs.

MASTER CATALOG - by Mack McCormick 215 a Yorktown, Ft. Lee Va 23801. Assembly language disk cataloger that will handle up to 2000 files. Super fast.

SIRITE BUILDER - by John Taylor 2170 Estaline Dr., Florence Al 35630.XB graphics generated with assembly language routines for sped at crucial places. Includes a full disk of preformed graphics.

EASYSprite - by Tom Freeman 515 Alma Real dr. Pacific Palisades CA 90272. An extremely fast XB program with assembly routines to create graphics sprites with easy cursor control. Save for program insertion.

PILOT 99 - by Thomas Weithofer 100 Harbury Dr. Cincinnati, OH 4520. An ENTIRE language for the TI that is among the simplest proramming languages known.

DISASSEMBLER - Marty Kroll 218 Kaplan Ave. Pittsburgh pa 15227. A multifeature all Assembly program.

TECHIE BBS - by Monty Schmidt 121 N Blair, Madison Wi. 53703. BBS system for the 99/4A.

PRO 99er BBS - by Mark Hoogendoorne 21 Long st, Burlington Ma 01803. A BBSsystem with true TE-2 transfer capabilities.

DISKMANAGER - by Todd Kaplan, 5802 N Western Apt #35, Chicago Il 60659. A complete disk manager to replace TI's DM-II.

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FAST FORTH - by Tim Curran, 4153 Four Pole Road, Huntington WV 25701. XB loader. fast editor, fast editor locator. 40 col auto repeat.

+TE-1200 - a 1200 baud term emulator. No author on our copy - does anyone know who deserves the credit?

TRIVIA99er - by Robert Wessler;

## A LOOK AT SPEED by R. A. Green

The speed of computers is usually specified in "Millions of Instructions Per Second" or simply, MIPS. IBM's newest and fastest computer, the 3090-200, is rated at 30 to 45 MIPS. You would not expect that kind of performance from the II 99/4A (a \$99 bargain), but let's have a look at just how fast it can operate.

There are three areas of CPU RAM in the 99 where machine language programs and their data can reside: (1) the 256 byte scratch pad memory in the console, which we will call "PAD"; (2) the 24K bytes in the memory expansion, which we will call "EXP"; and (3) the 4K bytes in the MINI MEMORY.

The PAD memory is on the 9900's 16 bit bus and has faster access than the EXP or MM which are both on the 8 bit peripheral bus. I found that the MM and EXP are equivalent.

There are three possible program setups.

1. All data and instructions in EXP.
2. Data in PAD, instructions in EXP.
3. All data and instructions in PAD.

Since the PAD memory is only 256 bytes, option 3 above is quite impractical for any real programs. Most of the data that a program works on is in its 16 workspace registers, so that we could consider the above three setups to be equivalent to the following.

1. Workspace registers and instructions in EXP.
2. Workspace registers in PAD, instructions in EXP.
3. Workspace registers and instructions in PAD.

These are the three situations I experimented with.

The Assembler Language program at the end of this article was the basis of the tests. This sample program is set up for situation (1), with no test instruction.

Running this sample would give us the time for the loop overhead which can be subtracted from later loop timings to give the time for the test instruction itself.

In the sample program, the positions of the Workspace registers and the program instructions is varied by changing the first and second statements. The instruction to be tested is placed inside the TEST loop. The Mini Memory's EASY BUG was used to display test results.

The program uses the VDP interrupt which occurs every 1/60th of a second. The program counts how many times the TEST loop is executed between VDP interrupts. It does this counting 10 times for each test just to be sure the results are repeatable. The whole test for an instruction takes a grand

total of 1/6th of a second!

The loop counts obtained are converted to seconds per loop by the formula:

$$\text{seconds/loop} = 1/(\text{count} * 60)$$

Then, the time to execute the test instruction is obtained by subtraction of the time to execute the loop with no test instruction.

I tested various instructions and found that most of them are the same, the time to execute an instruction being dependent upon the number of words of memory to be fetched and/or stored. I found that the byte instructions were the same speed as the word instructions. That is, ADD BYTE took just as long as ADD WORD. Of course multiply and divide are the exception to the rule - they take a long time.

Enough said, here are the numbers! The instruction times are in micro seconds.

```

*****
|           Workspace in | PAD | PAD | EXP |
|           Code in   | PAD | EXP | PAD | |
|---|---|---|---|---|
| Instruction | Size | (1) | (2) | (3) |
|*****|*****|*****|*****|*****|
| DEC REG      | 1 | 3.4 | 4.7 | 7.5 |
| ADD REG,REG  | 1 | 4.7 | 6.1 | 10.2 |
| ADD @PAD,REG | 2 | 7.4 | 8.8 | 12.8 |
| ADD @EXP,REG | 2 | 8.8 | 11.5 | 14.2 |
| ADD @PAD,@PAD | 3 | 10.3 | 14.2 | 14.2 |
| ADD @EXP,@EXP | 3 | 14.2 | 18.2 | 18.3 |
| MPY REG,REG  | 2 | 18.6 | 18.9 | 24.2 |
| MPY @PAD,REG | 2 | 20.3 | 23.0 | 27.1 |
| MPY @EXP,REG | 2 | 21.6 | 24.0 | 28.4 |
|*****|

```

So, how many MIPS is the T1 99/4A? As a good guess, we could average the first six entries in column (2). This gives us an average instruction time of 10 microseconds -- that's 0.1 MIPS. The IBM 3090-200 is only 300 to 450 times faster.

#### ASSEMBLER SOURCE

```

*
*TITLE :      SPEED TEST PROGRAM
*AUTHORS:    R. A. S. J. Green
*
WSP      EQU    >C000      Workspace Registers in EXP
INST     EQU    >A100      Test instructions in EXP
*
        ADRB   >A000      Driver program in EXP memory
        DEF    START      Define entry point
START   LIM1   0          Interrupts off

```

```

        LWPI  WSP          Load Workspace Pointer
*
* Use VDP interrupts for timer
*
        L1    R0,INT      R0=user interrupt routine address
        MOV   R0,@>83C4  Set the interrupt vector
*
* Move test loop to test address
*
        L1    R8,INS1     R8=test loop address
        LI    R9,TEST     R9=test instructions
        MOV   *R9+,*R8    Move test loop to test address
        MOV   *R9+,@2(R8)
        LI    R2,DATA     R2 points to 10 counters
        LI    R1,10       R1 = 10 times to test
*
* This loop is restarted each VDP interrupt
*
LOOP    CLR   R0          Clear timing count register
        LIMI  2          Allow interrupts
        B     *R8        Go to the test loop
*
* This is the user interrupt routine
*
INT     LWPI  WSP        Reload workspace pointer
        MOV   R0,*R2+    Move count to storage space
        DEC   R1         Decrement loop counter
        JNE  LOOP       And continue for 10 times
        BLWP @0         Done, go to title screen
*
DATA    BSS   20        10 speed counters
*
* Test loop
*
TEST    INC   R0         Count times thru loop
*       TEST INSTRUCTION
        JMP   TEST      Loop till interrupted
        END

```

### CONSUMER REPORTS SURVEY

Consumer Reports Sep '85 issue contains the results of a 1985 questionnaire answered by some 10,000 owners of home computers.

This is a very respectable sample. Polling organizations have accurately predicted elections on samplings 1/10 that size. They compare 1985's answers with a very similar poll taken two years ago.

There are no big surprises, but the comparison of changes in percents in only two years is most interesting.

Word processing is still the #1 use for a home computer. It is up to 85% in '85 from 59% in 83 - and 59% is a respectable percentage. Obviously if you don't have a printer and some word processing software, you are not able to take advantage of the major reason for owning a computer.

Filing and record keeping was reported as a use by 59% up from zero in '83. (Unfortunately CU neglected to inquire about this use in '83). Use to play games was down to 55% from 69%. - still a high percent. Useage to learn about computers was reported down to 54% from 63%. The desire to learn program is declining even more, - down to 41% from 83's 61%.

Home accounting was off a little from 45% in 83 to 41% in 85. Education, which has always been touted as a major reason to have a computer - "Help the Kiddies etc" only had 34% in 83 and is down to 29% now. Business accounting, Telecommunications, and Technical Calculations ran 26%, 24% and 20% in 1985's survey. The article is well worth your while scanning at the local public library. It also reports on user satisfaction with various software packages and programs. You will see, again, that often there is no correlation between software cost and ease of use and customer satisfaction. Apple's Macintosh continues to lead the whole home computer field when it comes to ease of use and percentage of users who report being very satisfied.



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## MORE SECRETS HIDDEN IN THE 99/4A

Editor's comment: Almost every month 99'ers are discovering undocumented and hidden features of the 99/4A. Most probably these were meant to provide TI with a means of selling owners additional software (on disk?) and/or firmware (modules). Here via the courtesy of Dave Hultberg of the C.A.U.G. is a discovery from one of the Canadian U.S.'s.

Reprinted from the C.A.U.G ALERT Oct. 1985. Original source listed below:

---

The following information is from the Victoria (B.C., Canada) 99'er Group's August newsletter.

Over two years ago Johan Vanimschoot had spoken with me about a large high quality widget type device for more than three modules. The concept was a six or eight slot expansion box with line drivers and a buffered selector for each module. This was to remove the Navarone Widget's worst features, limited expansion and noisy switching.

This idea has hung around and a couple of months ago he and I were talking about it, and I mentioned that I had read about supposed software existing in the TI for multiple pages of cartridges. This built in software would supposedly work with the proper extra hardware. Lending credence to this information was a Millers Graphics newsletter (The Smart Programmer) referring to the address decoding required. Johan and I had both had a screen with "REVIEW MODULE LIBRARY" come up from time to time during assembly language development. We talked about the hardware problem and devised a simple scheme to test how the software worked (and if it would work at all).

I loaned Johan a wire wrap and breadboard prototyping system I had built for the cartridge port and with considerable effort Johan managed to locate some 36 pin sockets.

**THE SOFTWARE DOES WORK!** This is what appears to be possible:

The TI menu comes up as it usually does and an extra selection is added "REVIEW MODULE LIBRARY". If this option is chosen the next available cartridge page is displayed on the menu as if it were the only cartridge plugged in and the option "REVIEW MODULE LIBRARY" is also displayed. This action continues in a loop thru all modules until a selection is made of an application.

Now this is nice, no need to flick switches and up to 16 modules could be available in a monster box. But there is more!

The GPL (Graphics Programming Language) system is designed so that with this hardware the built in software allows one cartridge to access the devices and calls in another. This allows for example, console basic to access all of the plugged in modules' call routines and device names at one time. "MINIMEM1", "MINIMEM2", and "SPEECH" and CALL PEEKV, POKEV, LOAD, etc. are all available from basic.

TI FORTH can access "MINIMEM1" and "MINIMEM2" and "SPEECH" as devices with no need to switch anything or to modify any console hardware. The operating system in the console handles all accesses transparently.

This was built in from day one with the 99/4 and is on my pre 1983 black and silver console. I don't know for a fact if this is on the newer models, but I suspect it is.

The software during the module library selection finds only those pages that contain grom or grom and rom combined. The slots with rom only (third party stuff) do not come up on the menu. Much like the post 1983 consoles.

The Victoria company Osram Industries is currently developing an inexpensive "Super Widget" to take full advantage of this in console software.

---

Ed. Comment: Assuming the above comes to pass, imagine the **POWER** this might add to Extended basic. For example with the Mini Memory module plugged into the 'super-widget' you would have an additional 4K for CALL LINKs to Assembly Language routines as well as CALL PEEKV and CALL POKEV. Now add the TE II module and Extended basic would have easy text to speech. Boggles your mind - doesn't it??!! D/V80

## A LETTER TO THE TI-99/4A USER GROUPS

From Jim Peterson, Tigercub Software 11/2/85

I am operating a kitchen-table software business on a shoestring. My advertising therefore consists of about \$20 worth of small classified ads on the back page of Micropendium, another \$20 worth of classified ads buried in the hundreds of pages of Computer Shopper, and a newsletter which I mail to about 120 user groups at a cost of \$45.00 plus many hours of work.

Recently in Computer Shopper, Randy Holcomb quoted a letter from me stating that I received more business from the Computer Shopper ad than from all those newsletter .

These are the facts. I use different spellings of my address in different ads, so I know that in the last two months my catalog requests and direct orders have been 43 from the Computer Shopper ads, 37 from the Micropendium ads, and 20 as a result of newsletters, BBS publicity, word of mouth and everything else combined!

My newsletter is being reprinted every month in about 40 newsletters. Other user groups tell me they are reproducing it and passing it out at their meetings. It is being placed on some BBS's. The officers and editors of many user groups have done everything they could think of to help my business - a couple even sent me cash contributions, a few others reprinted my entire catalog in their newsletter. I was voted a lifetime honorary member of one group, etc., etc. I do greatly appreciate all of this - but it hasn't done much good!

The reason I am writing now is because I have been receiving a few requests that I take out paid ads in U.G. newsletters, and one letter suggesting that I had a responsibility to take out advertising, and to offer substantial discounts as well, to the user groups who were "keeping my business alive"(!)

Now a \$5 ad in each of 120 newsletters would cost me more than my net profit in an average month - and I have no reason to think that it would bring me any business whatsoever!

However, I will make an offer. If anyone sends me an order before 1 January 1986 and mentions the name of his user group, next January I will send directly to that user group a rebate of 10% of the order, not including FP&M chargers (the FP&M portion of postpaid full disk collections is \$1.50). This is not a discount to the individual, it is a payment to the user group for whatever advertising, promotion or support that you choose to give me.

I am not suggesting that you have any obligation to support my business. I know that many of you are only interested in business and financial programs, which I do not offer. I know that most of the user groups have large libraries of public domain software -although some of you charge your members quite a bit for those programs. I also know that too many of you get all the software that you want by piracy. That is why most of my business is coming from those who do not belong to user groups, who do not have access to all the public domain and freeware and piracy. I put some of my Basic programs on cassette in a local retail store, and sold more cassette programs in that one store than I did by mail order worldwide. It seems that it is time that I divert my efforts to finding those who still want what I have to offer. (D/V80)

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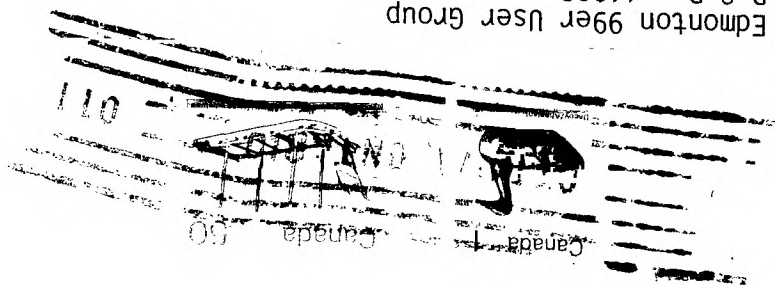
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