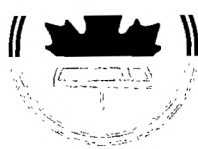


11



The Ottawa T.I. 99/4A Users' Group



VOLUME 5 NUMBER 04.....APRIL 1986



TI-FEST

SATURDAY  
APRIL 26, 1986

A FESTIVAL CELEBRATING  
THE TI-99/4A

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## T.I. 99 Users

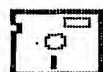
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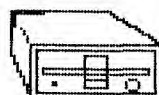
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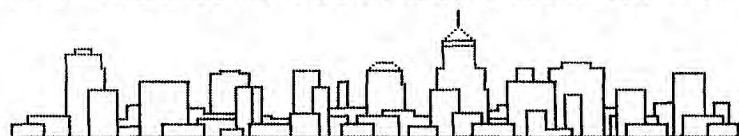
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### ENTERTAINMENT

As you all know, April brings with it the advent of the long awaited T.I. show. People will be coming from all corners of the world to discuss the various quirks and quarks associated with owning a T.I. Why not take the opportunity to get out on the Ottawa computer scene and see what's out there. Drop in to Mr. Diskette and see our wide assortment of both support products and machines. Whether it be supplies or IBM PC/XT compatibles that you're looking for, pop into either our Ottawa store at 119 O'Connor St. or our Nepean branch, 148 Colonnade Rd.



### And Finally. . .

A sincere welcome to Ottawa to all those who have come in especially for the show. We hope your stay here will prove both fun and informative, and we look forward to offering you our services whenever needed. If you have a specific need, drop by and ask us. We're happy to do what we can. Or just drop by for a look around... we may have a surprise.

## CHAIRMAN'S TWO CENTS WORTH

by Berry Minuk

As you can see by the beginning of Spring outside we are now nearing the end of another year of activities. We have only the Fest and 2 more meetings left.

Again this month this will be a short column due to the early deadline so the newsletter will be ready for the Fest. Speaking of the Fest, Jane still needs lots of volunteers to help out with it. If you have any spare time let her know.

The last meeting was very interesting as we had a demo of the Mechatronics Extended Basic Module that was described in the last newsletter. We also had an interesting demo of Version II of TI-Artist. This is greatly enhanced over the previous version and now features conversions so pictures, instances and character sets created with other graphic programs can be put into loadable form for TI-Artist. Both of these can be obtained locally from Bob Boone.

The Fest which is on April 26 will be described elsewhere in the newsletter will be followed by our May meeting featuring our 2nd annual rummage sale. If you have anything left to sell after the Fest you can sell it in May and if you have bought newer equipment at the Fest you can sell the old.

The June meeting will feature our annual programming contest and you should all be working on your entries. There will be prizes and prestige for all. We are still looking for someone to take over running the contest and Jane has offered her help to get you started.

We are still collecting for the following 3 freeware programs and are now over the \$60. mark but this is still not enough for the c99, Neatlist and Fast Term. There are only 2 more meetings so get your donations in. We are still a bit short on the Hard Disk drive so get that in also.

The Tutorial Schedule is as follows:

Date	Event	Time and Place
Tues Apr 22	Assembly Tutorial	7:30 Merivale H.S.
Tues Apr 29	Forth Tutorial	7:30 Merivale H.S.
Tues May 06	Assembly Tutorial	7:30 Merivale H.S.
Weds May 07	C Workshop	7:30 Peter Arpin's
Tues May 13	Forth Tutorial	7:30 Merivale H.S.
Tues May 20	Assembly Tutorial	7:30 Merivale H.S.

For every Tues there is also a BASIC/Extended BASIC Tutorial at the same time as the other tutorials.

I will see you all at the Fest and the May meeting. Bring as many people as you can as they will both be fantastic.

~~~~~

This month, acting on a suggestion from Bob Boone, there is a new format by including the names of a few of the people in the club who are willing to help if you are having difficulties. This will leave more space for articles. We will only publish the full Hotline page two or three times a year unless there are changes in it.

### HELPLINES

The following people have volunteered to help you solve any problems you may experience with your systems or to, at least put you in contact with those that should be able to help you out. Please call at reasonable times and rest assured we'll do whatever we can to help, but don't expect miracles.

|                  |          |               |            |
|------------------|----------|---------------|------------|
| Berry Minuk      | 234-5472 | Jane Laflamme | 837-1719   |
| Lloyd Galenzoski | 830-1522 | Dick Piche    | 521-8667   |
| Marg O'Connor    | 833-2626 | Bob Boone     | 1-623-7841 |

EDITOR'S NOTES  
by Marg O'Connor

"WELCOME TO ALL OUR VISITORS"

APRIL and our first attempt at a FAIR. This is a festival celebrating the TI-99/4A computer and demonstrating once again that it is still far from a dead computer, with new software packages being developed all the time and hopefully a new and bigger console coming soon. We are hoping that this will be the first of an annual event.

Greetings to Horizon Computer, Ryte Data, Timeline, Mr. Diskette, Computer Down Load, Maximen, Easyware, G-Plus, Myarc and Intelpro, along with all the user groups, such as 9T9 Users, Toronto, Club 60ti0, Quebec City and CIM 99, Montreal, P.Q., that go to making a gathering like this a great success.

We must also thank Tenex, Dhien, Millars Graphics and Micropemidium for items donated.

A bit about the day.... The canteen will be serving coffee and donuts or muffins during the day and a lunch of soup and sandwiches so please support them. After the show at about 5pm there will be a bar open at the Talisman Motor Hotel with dinner starting at 7pm. Please contact me at 833-2626 for reservations as space is limited.

We hope this will be a successful event for the distributors, user groups and individuals alike. It has been a great learning experience for us in the Ottawa group and we hope that next year it will be bigger and better!!!

**NEXT MEETING:** May 1st, starting at 7:30pm at the Merivale High School, 1755 Merivale Road in Nepean. There will be a Flea Market for used parts.

**DEADLINE:** Will be May 17th for submissions.....PLEASE try to be on time.



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PRIOR PATTERNS  
By Bob Boone

Upcoming projects....The New Horizons Ram Disk....A great big heartfelt THANK YOU!!!(on several fronts)....A Deafening Silence Still(on two fronts)....TI..

Mike Marcotte wants me to announce that the next series of XB Tutorials will take the form of a project to develop and write the ultimate Horse Race game. The scope of the project as described by Mike is mindboggling! I wish him and his team of(now) intermediate XB programmers every success in the project. The object is to assign each player a colt at the beginning of the game and allow the player to decide for example how many hours of rest, training, feeding and racing he will undergo while growing up....all leading to(of course)the Triple Crown. This genre of software(called interactive; because the player interacts with the game and has an effect on the outcome) is one of the most difficult to write because of the great number of variables involved. Its an ambitious project, but judging by the previous success of Mike and his team, its apt to generate impressive results...watch for it!

Speaking of ambitious projects....Art Green is looking for volunteers willing to spend some time REWRITING TI BASIC!!! Art is willing, and in fact, eager to take the reins and walk anyone interested through the Basic Operating system as it now stands. He has already put his formidable thought processes to the task of improving upon Texas Instrument's efforts. He has some fantastic ideas in mind. Its a humongous undertaking to say the least, he feels the outcome has the potential to warrant the effort. Anyone reading this that is interested can contact Art at the general meetings or address mail to:

Art Green's Basic O/S  
c/o The Ottawa TI-99/4A User Group  
Box 2144, Station D  
Ottawa, Ontario  
K1P 5W3

We'll forward your letter to Art and he'll take it from there...  
\*\*\*\*\*

We received a DSSD RamDisk from the New Horizons User Group a few weeks back. Luckily it was mailed directly to me or I'd probably never have had the pleasure of plugging it in to one of my systems! I feel this way because I now don't want to let it go, and I feel confident if someone else had it, they would likely feel the same way! On a scale from 1 to 10 I grade it a 12(at least). John, Dave and Ron(Clulow, Romer and Gries; the principals in the production of the product) are bending over backwards to make this product available to anyone that wants it at a price they can afford.... Prices range from \$42 for the circuit board, schematic diagram, parts list and support software(including source code) to \$230 for the DSSD, fully assembled, tested and warranted version that we've received(prices quoted are in US funds).

They've included routines to allow you to set the RamDisk drive number anywhere from 1 to 6, a resident disk manager(DM-1000 Vers 2.3 so far...), and several other nifty little CALL statements as well. It's all very well documented and simple to use and backed up with self-charging NICAD batteries as well. I can't say enough good things about the product or the people behind it to do justice to it: suffice it to say I now don't want to do without it!

It's available in SSSD as well at a price of about \$158 and is upgradable to DS later if you decide to go this route.

John Clulow called me last week to say that he, Dave and probably Ron as well would be here in Ottawa near the last week in June or the first week in July. They expressed the desire to meet with as many of our members as possible. As soon as we know the exact dates we'll fill you in somehow and if possible set up a special meeting date and place.

\*\*\*\*\*

Where should I begin??? Marilyn: you've put up with a lot over the past few years and I've acknowledged your support of my indulgence precious few times. Thank you for your backing, then, now and in the future. I love you dearly.

Jane: The effort you've put forth on behalf of all of us with regard to the Ottawa User Group, NUAC, and our upcoming TI-Fest has often been above and beyond the call of duty. The effort, I'm confident, is appreciated by us all and will be obvious to all, after the Faire is over and we can call it the success I'm sure it will be. If you ever want a reference for management anywhere, come see me! 'Tis a job well done, young lady!

To the Executive of the Ottawa User Group and the membership at large: your full support of our Faire, and NUAC, and Jane and I, in whatever hairbrained scheme we can dream up has been a constant source of wonderment to me..... Seriously though, without that support, and considerable risk on your parts, I doubt any of us would be as proud of, or loyal to, our little orphans. Thanks.

Bruce, Berry, Lloyd, Dennis, Tony, Ralph, Bill, Paul, Art, Terry A, etc, etc, where would we be without you now? 'Nuff said!

\*\*\*\*\*

We've not yet had a whisper of a response from Jerry Price at Texcomp yet and more than a month has flown by; wonder what he's up to now? Terry Atkinson has asked for and received permission to reprint my response in his TINS newsletter and put it on his TIBBS BBS and upload it to the Source and Compuserve as well. Should be roughly analogous to poking a stick into a hornet's nest, I think! Thanks Terry....

The other deafening silence has thus far come from my Career Manager's office; hopefully this means no posting this year, but we're far from over the hump as yet....



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NUAC NEWS  
By Bob Boone

You're a great bunch of people out there! Without you and the support you're giving us here in Ottawa we'd be much ado about nothing; instead we're getting to be a real entity! Thank you all.

Special thanks to Terry Atkinson of TI-Nova Scotia, who since his return from the sunny south seas, has injected new vitality into the Canadian TI scene. Timeline is fairly bristling with message traffic since he came home; with great product reviews, great Faire reviews and just to be different and a little innovative, a touch of software too. Well done sir! Terry has spared no expense and also expended much time and effort to contact high profile TI Glitteratti south of the 49th and keep himself and all Timeline Tiers in the know.

Thanks too, to the untiring efforts of Michel Johnson of CIM-99, who almost single-handedly(I'm told) has brought not one but now two large and very active Francophone TI groups into the fold...CIM-99 last month; GOTIK(of Quebec City) this month and next month the world, eh Michel!? Special thanks as well for your efforts in promoting our upcoming faire so capably to Quebecois throughout your Belle Province.

Michel attended our last general meeting here in Ottawa and was good enough to contribute a suggestion to our regular suggestion box at the meeting. Since the suggestion deals with NOAC I'll depart from my normal procedure and answer it here rather than in the Prior Patterns column...

Michel suggests that we encourage, and in fact solicit, submission of articles each month from those individuals and groups that have joined the Association. He asks ME; 'Do I think its possible?'. ...I'm gonna pass the buck on this one!

Do YOU think its possible!?  
(and if so PROVE IT by submitting something)

Describe your club; its origins, its history, its current state, its goals, a pet project...whatever.... Thats just for starters! Hardware and software reviews are always well recieved; wish lists for both hardware and software might tickle anothers fancy and generate some healthy wish fulfillment now and again! Maybe your express wish has ALREADY been fulfilled somewhere within sight of this newsletter! Do you want a soapbox on which to express your opinion on something; here's your chance! Give it a go and you might just find you enjoy seeing your name in print. If possible try to send files in DV-80 format on disk; if not possible please send them any which way you can.

Tony Hopkins(Ottawa UG Newsletter Ads Chairman) and I had a discussion a while back as to directions into which NUAC might diversify. He suggested we might all benefit by inviting input from other countries. We have friends with the gift of gab from England, Australia, USA, and most recently Argentina and Italy. I'm going to personally invite people from each of these locales to let us know whats happening in their neck of the woods. Might be exciting to see whats going on in THEIR TI microcosm.... Paul Berlinguette is returning to Germany mid-April to further broaden our arena in Europe. Prior to returning to Canada in January, he had already contacted a large group in Sweden and yet another in Denmark.

Report on the New Jersey Faire  
From the BETTER HALF

Eight of us went and despite a minor brush with a 24-wheeler and the fact we had two young and beautiful Canadian women merrily touring New Jersey, almost New York city too(perhaps co-incidentally my OTHER half was driving on both of these occasions....I'm smiling dear...), we did enjoy ourselves immensely! As with the Hamilton show it was over all too soon. They had a gymnasium chock full of distributors: Myarc, Texaments, Inscebot, Tigercub, Ryte Data(all the way from Haliburton here in Ontario!) were just some of the companies on hand. We were personally greeted at the front door by TICOFF organizers who, although they bent over backwards to do whatever

they could for us, experienced a lot of difficulty scaring up a system for us to use. The Delaware Valley Users Group eventually, very generously loaned us one, and sometimes two of theirs! Very special thanks go out to Jack Shattuck and his DV-99ers.....

Notable product releases were TI-ARTIST Vers. 2.0; Program Manager and Module Emulator (both by John Keown of Hatboro Pennsylvania), our DM-1000 Vers. 3.1, some new hardware products were shown at Bruce Ryan's RYTE DATA booth (notably the TI-Mouse and Gram Karte from Germany). Of high interest to all in attendance was Lou Phillip's new concept; that being his operating system on a card (more later)...

Notable names in attendance were our Tom Bentley (Turbo-Dataman), Barry Traver (Diskazine), John Keown (see above), Chris Faherty (TI-Artist), Paul Charlton (FastTerm etc.), Bruce Ryan and of course Lou Phillips from MYARC. Many many others with whom I've exchanged letters and/or software walked up to introduce themselves as well. A special treat for me was meeting Ellen Kramer, who, in her enthusiasm for her TI has joined anything and maybe everything with a TI in front of it over the past few months, including NUAC! A thoroughly charming lady and just one of many nice folks I can now put a face to.

Lou Phillips again kept a lot of people on the edge of their seats for most of his 2 hour presentation in the Auditorium. He finally pulled the cover off his new concept though. Visible disappointment and audible moans were seen and heard when we learned he STILL wasn't gonna plug it in and turn it on but... it wasn't the same as what we'd seen before.... A few people walked out at this point. I feel (and sincerely hope) they might someday regret leaving. I liked the idea he's come up with! It seems far more practical than building a whole new console and more realistically within the means of a small company like Myarc. He stressed that the console version was still in the works (for those who had unexpanded systems or none at all). This new concept briefly entails an operating system on a card, designed for insertion into TI's PEB and an IBM keyboard. Neat, compact and with all of the features originally planned for the old concept. WHEN??? Lou only had a prototype with him. I have since heard that he plugged it in at the New England Faire on April 5th. People actually saw it working and were suitably impressed until it blew a chip part way through the demo. The operative words there: PEOPLE ACTUALLY SAW IT WORKING!! and were impressed. They are CLOSE! Lou's best guess is 2nd quarter this year We might just be its debut! I just now called Myarc! Lou is 95% sure of being able to make it and will likely drag Paul Charlton along for the ride as an added bonus.

Take care; Keep on TIing and see a heck of a lot of you at the Faire!

#### SHOP TALK

This little bauble was downloaded from the White Rock BBS in Burnaby BC (604) 531-6423 by yours truly... Bob Boone

From PETER MACHULE-VANCOUVER, B.C. TO SPEED UP A STANDARD TI CONSOLE BY 19% (aprox.) DO THE FOLLOWING:: OBTAIN a 14.318 Mhz CRYSTAL, a one pole 2 position switch, 3 pieces of wire about 6 inches long and a soldering iron. Unsolder one lead of the existing 12.Mz crystal and solder in one of the wires. This wire will be the 'pole' wire ie. it goes to the center connection of the 3 connections on the switch. Solder another wire to the bare lead of the 12 Mhz crystal.

One lead of the 14.3Mhz crystal is soldered to the last wire, the other lead is soldered on the 12 Mhz's lead that is connected to the PC board. In other words all that's being done is a switch from one crystal to the other via the switch. The two wires coming from the crystals are simply soldered to the switch so that in one position the 12. in the other the 14.3 Mhz crystal is selected. SIMPLE HEH? It turns out that wire length, type etc. is not critical. I used 22 gauge solid wire .6 inches and a mini toggle switch HERE COMES THE NEAT PART: IT IS POSSIBLE TO SWITCH CLOCK SPEED WHILE THE PROGRAM IS RUNNING!!!!!!! (at least in BASIC AS that's all I've tried so far... this mod was done only 10 minutes ago. The hardest part is finding a location for the switch, I placed mine peeking out off the cooling slots on top of the console. GOOD LUCK AND LEAVE me a message as to your results..



**GRAMKRACKER REPORT #1**  
**From:Howie Rosenberg (DOWNLOADED FROM COMPUSERVE)**

I have now relegated my WIDGET to my museum corner which contains among other things my original TI99/4(without the A). As a friend once said, do not get rid of the console, one day it will be valuable, not in monetary terms but in memories. well at this point we can thank Miller Graphics for giving us a new machine because that's what I feel I now have. I already have the E/A, TI-WRITER nad XBASIC modules saved on disk. The E/A file contains the EDIT1 and ASSM1, and ASSM2 files so that the GK becomes a small RAM DISK. The files load even faster then from my RAM Disk. Incidentally there is one (not too significant)problem in that the utility which enables adding the E/A files does not appear to work properly when adding the optional CHARA1 set from TI Writer. the problem might simply be that I attempted using the 5 sector version(Pauls I think)and it may only work with the TI version. I have had so many things to play with that I haven't backtracked yet. I will some time today. The Utility disk also contains a number of Extended Basic CALLS which are added to your module. CALL CLOCK, BYE, NEW, and CLSALL. All are self evident except CLSALL which closes all open files(a nice idea). In order to deliver before Christmas a temporary Utility disk and manual were supplied to be replaced in a few weeks. An additional utility to make a tiWRITER RAM will be included. In addition there is a utility which allows using all of the module GRAM space for TI BASIC programs. On power up a menu of 9 of these programs will be listed.

For a temporary manual, the enclosed manual is superior to many others I've seen. It was simple enough to read and understand so that I was up and running, saving, loading and enjoying within minutes.

One nice feature. on initial power up the screen indicates a list of a number of items that are "ok". ie 6 GRAM 7 OK 7 RAMS OK etc. if you want to remember this screen take a picture. It's your assurance that the unit was completely tested. once you use the module the screen is gone forever. More later gotta get back to this beauty.

**PHYSICALLY SPEAKING:**

The GRAM KRACKER matches it's usefulness(very), and performance (flawless). A black metal case with a well engineered control panel. The functions of the five switches on the panel are clearly marked. Better then that. when in GRAM KRACKER mode you are prompted throughout as to which switch belongs where. I have not nor do I intend to open the unit. Mine was delivered with the optional additional GRAM installed. The reports that the delay(if one considers delivering a brand new product late by some weeks a delay) was due to tye fact that Miller Graphics refused to deliver boards with jumpers which early modifications during debugging would have necessitated. Instead the art work was redone and a jumperless board delivered. I am confident that the guts of my Gram Kracker is of a quality construction.

Several modules can all appear on the same menu at power up provided that they occupy different GRAM(original GROM) space. Utilities for changing this space so that TIW, EA and XB will be able to coexist in the KRACKER at the same time will be supplied on the update utilities. The present temporary manual contains documentation for a few patches to some modules. Ie TE11 1200 baud useful I suppose for anyone interested in some of the BBS's around which support TE11 graphics, and TAX module from TP and RS232 to TP and PIO. An example of an OP system change to allow auto start of a module also is given. Other options which appear in the index but are not in the interim manual(or which I haven't found yet in my excitement are: XB colors; Super EA CART!!; converting V2.2 consoles; Slashing the O. There are gaps in this manual but there sure is enough to keep us busy for the few weeks 'till the final arrives.

**THE MSAVE UTILITY..**

The temporary disk is supplied with a utility which adds the

Command CALL MSAVE to Console BASIC. You write or load a BASIC program and then execute the call. The menu prompts you for a program name, saves the program to GRAM, and finally adds it's name to the initial menu. The start up menu can handle 9 items all of which can be entered this way. One can have a menu of 9 selections of your choice, a toolkit of BASIC utilities, a whole new world of possibilities. The utility consists of MSAVE which allows sufficient GRAM space for a module ie XB or TI -WRITER, or MSAVE6 which uses all GRAM space for BASIC. The first thing that comes to my mind is a set short BASIC programs to alter printer settings, read files etc. Anything useful in support of TIW. All on the power up menu!!

As a next step I became somewhat daring and decided to modify my console OP system. No I have not disassembled the GPL code(yet I'll wait for Miller Graphics announced Disassembler for that). There are several examples in the temporary manual(an approximately 40 PAGE temporary manual.). The example I picked was to eliminate the title screen. No longer any color bars and PRESS ANY KEY. I will save thousands of keystrokes a year.

To change the OP system one enters the editor by selecting option 5. The editor is a full screen editor similar to that in EXPLORER. Oh in order to modify the OP system (GROM 0) or BASIC(GROMS 1 and 2) one needs the optional GRAMS installed. The change consisted of altering one BYTE in GROM 0, (actually GRAM 0). I decided not to go with another change which causes option 2 on the menu to autostart. I expect to be using option 1(GRAM KRACKER or BASIC depending on the position of the front panel loader switch) quite a bit. Incidentally, the GRAM 0/OP SYSTEM switch is now a no title screen/ title screen switch. Any options you build in are valid only when the switch is in GRAM 0 position.

Just for those who don't have the information handy, perhaps we should mention that people can order Gram Kracker by sending a check for \$178.95 (\$174.95 plus \$4.00 shipping) to:

Millers Graphics,  
1475 W. Cypress Ave.,  
San Dimas,  
CA 91773.

And they should do it now, because this is going to be one hot item, as more and more people find out what it can do. Add \$14 for the additional GRAM if you want it, and YOU DO WANT IT!

I attempted to SAVE a module that autostarted and was unable to do so as I could not inhibit the autostart function. it appears that this had been tried during testing of the GRAM KRACKER but only on machines that were using the CORCOMP controller which takes control on power up and thus allows execution of the GRAM KRACKER program. A call to Miller Graphics received a prompt reply. It's real easy to fix errors like that when you have the ability to change the OP system. I have uploaded the file which should be saved to GRAM 0 which inhibits the autostart and allows running GRAM KRACKER with an auto start module installed. The procedure to use to generate this code will appear in the final manual. The problem with the CHARA1 file which I mentioned previously was indeed due to my specifying a CHARA1 file of 5 sectors rather than one of the length of the file originally supplied. George Steffan's code which enables adding the CHARA1, FORMAT and EDIT files to the E/A file to make a mini RAM disk indeed work perfectly. I now have a true lower case in my Editor Assembler

The process of loading or saving modules is simplicity itself. From the main GRAM KRACKER menu one selects LOAD or SAVE and then just follows the screen prompts. just like the old tape recorder prompts. One point which is not documented. Certain of the modules require that the LOADER be in the off position (ie item one on the power up menu is BASIC and not GRAM KRACKER) in order for the modules to run. STATISTICS and PRK fall into this category. The MSAVE utility is extremely useful. MSAVE loads into GRAM 7. There now 8K of GRAM memory reserved for BASIC programs so the rest of the GRAM space can be used for modules. MSAVE6 reserves all of GRAM 3 to 7 for BASIC and thus do not allow for any Command module space. Using MSAVE is a pleasure. LOAD it and it is in memory for as long as you like.

When in BASIC one can now write or load short BASIC programs CALL MSAVE, assign a program name to your program and have the program(s) appear on the power up menu. The selected program will auto start and, on completion, take you back to power up. I discovered one problem. I set up several BASIC programs to set up my printer for various fonts from the menu. I attempted to do the same for initial set up of the MYARC RAM disk but found a CALL PART gave an error. As it appears that Tom Freeman/George Steffen already have an alternate way to accomplish RAM disk setup there really is no problem and I intend to take Tom up on his kind offer of the code. I'm elated at the performance of my MG-99/4A Howie

Bytes from the OTHER Half  
by Marilyn Boone  
(he won't let me say BETTER)

Had anyone said: "Marilyn, I'll give you two years and you'll be bitten by the computer bug!" my answer would not have been a polite positive. Thanks to a tolerant husband, a three hour drive to Haliburton, Ontario and a "mouse", here I am.

While Bob was on course in Borden, we met at the home of Bruce Ryan, of Ryte Data. He was demonstrating the workings of the TI mouse. Well!!! I became quite interested. It sits on a counter and one rolls it on a flat surface. Great for moms who have to blow noses with one hand while drawing with the other! Seriously, it will be a lot easier to use than joysticks or keyboard.

Being thus bitten, the boys and I journeyed to the TI Faire in New Jersey. I was overwhelmed at the camaraderie. We walked in the door and informed the people we were from Canada. Well, just mention Ontario, Canada and everyone stops what they are doing but if you mention in the same breath that you belong to the Ottawa User's Group, everyone almost bends over backward to get you established. It was a real treat to finally meet some men to whom I have talked on the phone - even if they did ask for Bob.

Three demos that really intersted the boys were: a car that travelled around on a record, robots that changed direction by touch or by clapping and a keyfinder that beeps when you clap your hands the right way. Unfortunately, these are not TI compatible. Interesting concepts, though.

As typical women, Tom Bentley's wife Sandra and I decided to take the van and go shopping. We got directions to one of the biggest malls with encouraging remarks such as "You can't miss it" and "It should take you twenty minutes". Needless to say, we missed it. We shopped for an hour but were away from the Faire for almost four hours. We saw a lot more of New Jersey than the others who came with us!

We arrived back in time to catch the tail end of the Faire. We were in on the discussion by Lou Philips about his new TI compatible computer. As the Faire came to a close, many Tier's were exchanging tidbits of info concerning upcoming Faires, new products, concepts and getting the latest version of DM1000.

Now that I've jumped in and got my feet wet, I may try to swim!

## NOTES ON THE NEW X BASIC II from the Chicago Faire

by J. Peter Hoddie  
Boston Computer Society TI User Group

Myarc has recently released a new version of Extended BASIC which they call Extended BASIC II (XB II). Lou Phillips, president of Myarc, describes this product as a stop gap program until they can get their new computer to market. Which is to say, XB II is essentially the version of BASIC that will be in the new machine with the exception of a few commands (such as mouse support) which are not included in the 99/4A hardware. The biggest advantages of XB II over TI's XB is that it runs between two and four times faster and it can use up to 512K for program storage. XB II will only work with a memory expansion/print spooler/ram disk card from Myarc with at least 128K of memory. The reason XB II is faster is that it is that the entire interpreter is written in assembly language instead of assembly and GPL (TI's slow, interpreted proprietary language). Furthermore, XB II uses CPU memory instead of VDP memory to store strings so that access time to string variables is drastically reduced. XB II is 100% compatible with TI's XB. Myarc uses the assembly loader from the Editor/Assembler cartridge instead of the TI's XB loader so that not only is load time cut way down but assembly programs can be linked which simplifies writing assembly code for XB significantly. The XB II cartridge also includes an empty GROM socket. Phillips said that this socket will allow you to put the GROM from your TI-Writer, Editor/Assembler, or other one GROM cartridge into the socket, thus creating, in effect a dual purpose cartridge.

Now to describe some of the new commands in XB II that really make it shine. First off, in XB II you can use 40 column text mode and bit map graphics. Myarc made this possible by moving nearly all the data and tables that TI placed in VDP memory into CPU memory. Thus nearly all of VDP memory is free and can be used for graphics. To support the new graphics modes, Myarc has added a CALL GRAPHS command to set graphics mode, CALL DRAW, CIRCLE, RECT(angle), and FILL commands which Phillips says are similar to GW BASIC from Microsoft. The DCOLOR command will allow you to set the foreground and background colors of the dots being drawn in bit map mode. The graphics routines were written by Mack McCormack who said they were the most difficult routines he ever had to write but he now says they work flawlessly. And Mack is one of the few people who could write these routines for the TI, so if he says they work, they work!

There is a CALL MARGINS commands which allows you to scroll one part of the screen while leaving the rest of the screen intact which will allow the creation of some pretty fancy windowing techniques.

To speed things up more there is a DEFINT commands which lets you create integer variables which run faster and take up less memory. Integers will take up one full word of memory (2 bytes).

Myarc has been around for a long time and worked closely with TI when TI was developing their XB. When TI asked Phillips what he thought of XB he told them (among other things) that he thought it could use a function he called TERMCHAR. This would allow you to know what key was used to terminate a line of input (i.e. ENTER, down arrow, up arrow, etc.). This would allow a programmer to make the program do different things (such as allow editing of the input field above if input was terminated with an up arrow) depending on how input was terminated. Thus XB II has this function and allows for eight different keys to terminate input.

The line editor has also been changed somewhat. Instead of having to hold down the right arrow key to get to the fifth line of a program line to make a change, you can now use the down arrow key which will now just go down one screen line and only go to the next program line after it passes the bottom of the current program line. The same idea applies to the up arrow key.

**NOTE** on 0038-end: This is a sector-by-sector bit map of sector use; 1=sector used, 0=sector available. The first byte is for sectors 0 through 7, the second for sectors 8 through 15, and so on. Within each byte, the bits correspond to the sectors from right to left. For example, if byte 0038 contained CF00 then the first byte equals 1100 1111. This means that sectors 0 through 3 are used, sectors 4 and 5 unused and sectors 6 and 7 used. Information for the 2nd side of a DS/SD disk starts at byte 0065 and ends at byte 0091.

#### SECTOR 1 - Directory Link

Each 16-bit word lists the sector number of the File Descriptor Record for an allocated file, in alphabetical order of the file names. The list is terminated by a word containing 0000; therefore, the maximum number of files per disk is 127 [(256/2)-1]. If the alphabetical order is corrupted (by a system crash during name change, for instance), the binary search method used to locate files will be effected and files may become unavailable.

#### SECTOR 2 TO 21 - File Descriptor Records

| ADDRESS    | CONTENTS                                                                                                                                                              |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| =====      | =====                                                                                                                                                                 |
| 0000-0009  | File name - up to 10 characters                                                                                                                                       |
| 000C       | File type: 01=Program(memory-image)<br>00=DIS/FIX 02=INT/FIX<br>80=DIS/VAR 82=INT/VAR                                                                                 |
|            | File deletion protection invoked by Disk Manager 2 will be shown by 08 added to the above.                                                                            |
| 000D       | # of (MAXRECSIZE) records/sector                                                                                                                                      |
| 000E-000F  | Number of sectors allocated to the file. (Disk Manager 2 will list one more than this number, thereby including this sector in the sector count)                      |
| 0010       | For memory-image program files and variable-length data files, this contains the number of bytes used in the last disk sector. This is used to determine end-of-file. |
| 0011       | MAXRECSIZE of data file.                                                                                                                                              |
| 0012-0013  | File record count, but with the second byte being the high-order byte of the value.                                                                                   |
| 001C - end | Block Link (see note)                                                                                                                                                 |

**Note on file storage:** Files are placed on the disk in first-come / first-served manner. The first file written will start at sector 0022, and each subsequent file will be placed after it. If the first file is deleted, a newer file will be written in the space it occupied.

If this space isn't big enough, the file will be "fractured", and the remainder will be placed in the next available block of sectors. The block link map keeps track of this fracturing. Each block link is 3 bytes long. The value of the 2nd digit of the second byte followed by the 2 digits of the first byte is the address of the first sector of this extent. The value of the 3rd byte followed by the 1st digit of the 2nd byte is the number of additional sectors within this extent.

Sectors 2 through 21 are reserved for File Descriptor Records and are allocated for file data only if no other available sectors exist. If more than 32 files are stored on a disk, additional File than 32 files are stored on a disk, additional File Descriptor Records will be allocated as needed, one sector at a time, from the general available sector pool.

## SUPER 99\*BYTEMASTER MERGER

### PRESS RELEASE BYTEMASTER COMPUTER SERVICES

Agreement Finalized: Super 99 Monthly Merges With The Smart Programmer!

Under an agreement with Millers Graphics, Bytemaster Computer Services has purchased all rights to \*The Smart Programmer\* and will merge its own publication, \*Super 99 Monthly\*, to form a new and timely quality publication. \*The\* "new" \*Smart Programmer\* merger, finalized on March 18, will offer improved, regular services to readers of the two publications. The staffs of both publications will continue as contributors, with Richard Mitchell serving as Editor. Additionally, talented programmer D.C. Warren will be added as a Contributing Staff Writer. Subscriptions will be honored without duplication. Bytemaster Computer Services will be responsible for the content, production and editing of \*The Smart Programmer\*.

According to Craig Miller, of Millers Graphics, the primary objective of the agreement was to combine resources to offer a quality product in a timely manner. Craig's role will be that of a Corresponding Staff Writer for \*The Smart Programmer\*. Many of the features of \*The Smart Programmer\* initiated by Millers Graphics will continue, including more memory maps and a 16-page format.

As of March 19, 1986, all renewal and new subscription payments received will be applied toward or pro-rated to new rates. All subscriptions should be sent to Bytemaster Computer Services, 171 Mustang Street, Sulphur, LA 70663. New rates are as follows:

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Copies of all back issues of \*Super 99 Monthly\* continue to be available at previously stated rates. All back issues of \*The Smart Programmer\* are sold out, so an announcement as to the availability of re-prints will be forthcoming.

The new format will debut with our issue to be released in April, at which time a new system of dating and numbering issues to satisfy the needs of subscribers to both publications will be announced.

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#### NOTE - TERRY ATKINSON

Just to set the record straight on the above message.

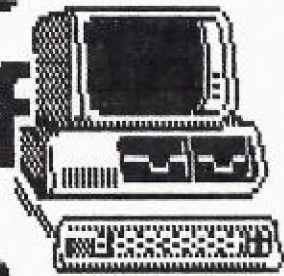
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XB II uses the same tokens as XB so that they are fully compatible. The only difference is that XB II must obviously use some of the tokens that were left unused so that it could incorporate the new functions.

XB II will also let you run TI BASIC programs as character sets 15 and 16 are available for use due to some moving around of things in VDP memory. This may mess up some programs that directly POKE or PEEK to VDP memory to control sprites but otherwise should cause no problems.

Phillips said that there will probably not be a compiler for XB II for the 99/4A but that there probably will be one for the new computer which will use an extension of XB II.

XB II is now available along with a 128K expansion card from Myarc for around \$250.

This file was written by J. Peter Hoddie of the Boston Computer Society TI-99/4A User Group based on a discussion given by Lou Phillips on November 2, 1985 at the TI Faire in Chicago. This article is a rough draft but may be reprinted or used in any other way you wish as long as you include the author's name and information about where more show information can be obtained. For over 10 pages of information and comments on the show come to the November 20 BCS TIUG meeting or send \$1 to:

Boston Computer Society  
TI User Group  
One Center Plaza  
Boston, MA 02108  
(617) 353-7369 (author's phone)  
(submitted for Peter by WALT HOWE  
70277,3530)

DISKO, a program that enables you to read individual bytes and sectors on a disk, was released into public domain by TI and is in our library. In addition, commercially available programs from Navarone and Miller's Graphics, among many, allow you to read disk contents, byte by byte. As many of our members have these programs, we feel the following article will be useful.

#### TI-99/4(A) Disk Format

=====

This article was received from Steven J. Royce, of the Western New York 99'ers Users Group. Thanks Steve!!

The following is a complete and, to the best of my knowledge, accurate description of the Disk Directory format and file storage allocation used by the TI-99/4(A) Earl Hall CompuServe ID - 72746,3244

| SECTOR 0 - Volume Information Block | CONTENTS                                                        |
|-------------------------------------|-----------------------------------------------------------------|
| 0000-0009                           | Disk name - up to 10 characters                                 |
| 000A-000B                           | Total number sectors on disk<br>(0168=360, 02D0=720, 05A0=1440) |
| 000C                                | 09 (# of sectors/trk)                                           |
| 000D-000F                           | 'DSK' (44534B)                                                  |
| 0010                                | 50 = Disk backup protected, 20 = not<br>protected               |
| 0011                                | # of tracks per side (28=40, 23=35)                             |
| 0012-0013                           | # of sides/density (0101=SS/SD,<br>0201=DS/SD, 0202=DS/DD)      |
| 0038-end                            | Sector allocation bit map. See note below                       |



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A LOOK AT THE MINI MEMORY  
by R. A. Green

The Mini Memory is one of my favorite modules. It is a powerful tool for assembler language programming. It also provides some significant features for the TI BASIC programmer.

Unfortunately, there is a bug in the MM's GROM code which limits the usefulness of the three RAM files provided for TI BASIC. Yes, there are three RAM files even though the MM manual mentions only two.

The three file names are: MINIMEM (the 4K RAM in the MM itself), EXPMEM1 (the 8K low memory RAM of the memory expansion) and EXPMEM2 (the 24K high memory RAM of the memory expansion). The bug in the GROM does not affect the use of the MINIMEM file. The MM manual gives some POKES that allow the EXPMEM2 file to be used. By reading the GROM code and with some experimentation, I have found a way to get around the bug and make all three files usable from TI BASIC.

First, I discovered that if the MINIMEM file is used first then the other two files will work even without a POKE. The bug occurs when the "first free" and "last free" memory pointers in the MM RAM are updated to show either the low or high memory portion of the memory expansion is unavailable. These pointers are used when loading assembler language programs. When the MM is being used as a file these pointers do not exist so they do not need updating and thus the piece of code with the bug is not executed.

So, how does the GROM code know when the MM is being used as a file? As stated in the MM manual, the first word of the MM RAM is 5AAS when the MM is being used as a file and is ASSA when the MM is being used for assembler language programs.

The solution to the bug is then to make the GROM think the MM is being used as a file. The following BASIC statements show how to do this. First, do a PEEK to save the first word of the MM RAM. Then before opening either the EXPMEM1 or EXPMEM2 file you POKE 5AAS into the first word of the MM and finally, after the file is open you POKE back the original contents of the first word of the MM that was saved.

```
1010 REM SAVE FIRST WORD OF MM RAM
1020 CALL PEEK(28672,S1,S2)
1030 REM SET FIRST WORD OF MM TO 5AAS
1040 CALL LOAD(28672,90,165)
1050 OFLN #1:"EXPMEM1",OUTPUT,INTERNAL,FIXED(60)
1060 REM RESTORE FIRST WORD OF MM
1070 CALL LOAD(28672,S1,S2)
```

X BASIC TUTORIALS/WORKSHOP

by Mike Marcote

The XB Workshop continues its operations every Tuesday night at the Merivale High School at 7:30 pm. The objective of this activity is to create some XBasic software while learning the fundamentals and subtiles of XB Programming. Those interested in joining should contact

Mike Marcotte at 727-9628  
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- PHM3061 Scholastic Spell 5
- PHM3082 Reading Flight
- PHM3083 Comp Math Games II
- PHM3088 Comp Math Games VI

- PHM3091 Subtraction
- PHM3092 Multiplication
- PHM3110 Chisholm Trail
- PHM3112 Parsec
- PHM3114 Alligator Mix
- PHM3115 Alien Addition
- PHM3116 Demolition Div
- PHM3117 Dragon Mix
- PHM3118 Minus Mission
- PHM3119 Meteor Multipl
- PHM3145 Sneggit
- PHM3146 Munch Mobile
- PHM3149 Space Bandit
- PHM3150 Sewermania
- PHM3151 Bigfoot
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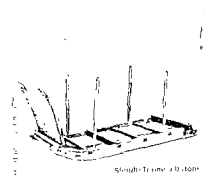
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