WINNIPEG

Newsletter

APRIL 1987

The Winnipeg 99/4 Users' Group is a non-profit organization made up of people who use the TI-99/4A Home Computer and compatibles. The Winnipeg 99/4 Users' Group publishes a newsletter twelve months of the year. The content of the newsletter doesn't necessarily represent the view of the Winnipeg 99/4 Users' Group. With this in mind, the group can't be held responsible for errors, omissions, or copy infringements, as presented in the newsletter. Unless otherwise stated, all articles may be republished in other newsletters provided that source and author are identified.

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        Next Meeting - Date : T.B.A  Contact Paul
                       Time : T.B.A  Degner for
                       Place: T.B.A  more information

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EDITORIAL:

The last meeting was held at Dave Wood's house. The turnout was a bit weak though the diehards came through as usual: Bill, Dave, Hank, Ralph, Rick, Peter and Sheldon. The usual demonstration of new software and hardware was given.

A discussion of the group purchasing a photocopier was held at the meeting and consensus was to hold off until a reasonable dry copier was found.

It has come to my attention that the group should have election to fill the vacancy of President of the Winnipeg 99/4 Users' Group at one of the upcoming meetings. The current President, Jim Bainard, has been unable to attend the meetings due to the failing health and just recent death of his son, Jason.

I am pleased to welcome the Victoria 99ers (British Columbia, Canada), the EAR 99'er Users Group (Lakenheath Suffolk, England) and Houston Users' Group (HUG) (Houston, Texas) to our mailing list. The group tries to keep the exchange mailing list current as possible. The group has a policy on newsletter exchanges that the exchange group's subscription will be put on hold when our group doesn't receive their newsletter within a time lapse of three months. We will reactivate their subscription once a regular exchange is established.

All submissions for the newsletter, accepted in paper form or text file (DIS/VAR 80), should be handed in one week prior to the meeting which is usually the last Sunday of the month. Text files can be modemed over to me or dropped off on a disk in my mail box and I will return the disk at the next meeting.

Those people wondering where TIers hang out? On on BBSs, of course. You might want to phone Camilla at 889-1432 and 831-6276. Camilla is run by a former TIer on a IBM TURBO XT clone. Camilla is written in Forth (F83) by Bruce Walzer which is capable multiuser operation. The author has his own operating at 783-3650 (Ariel II). Camilla supports a TI-99 message section though no downloads yet. This summer may see a TI BBS up and running again. I am considering operating one as I have all of the necessary hardware and software but no phone line yet.

MISCELLANIA:

Miscellaneous news and reminders.

The 9T9 Users Group March 87 Newsletter has a article on hacking a TI Disk Controller Card, with support code, for DSQD access. The necessary source code generated looks like PCODE assembler source code. It involves reburning the DSR ROM and cutting a few etches on the TI Disk Controller Card. I think the easiest way would be purchasing a Myarc DC or the DOS 80 upgrade.

Mark Beck wrote to us about an update to his Creative Filing System (CFS) which nows stands at version six. He says substantial improvements to the program and manual have been made with many ideas and suggestions from CFS users included. CFS is a database filing system that is said to be extremely versatile and user friendly. This version looks interesting even to the casual user of a database. He says to send one disk mailer with return postage, 3 single-sided disks or 2 double-sided disks, and $10.00 (US) to Mark Beck; 166 Delaware Circle; Jacksonville, AR 72076.

Glenn Wright wrote to us about some new games he has written for our computer in Extended Basic. I believe these programs are for cassette based systems. He has the following for sale: Double-Up Joker-Poker @ $7.00, Casino Blackjack @ $4.50, In Between (Poker Game) @ $4.50, and Star Trek @ $7.00. He supplies the return postage, cassette, and complete instructions, either on-screen, or from computer print-out. Glenn Wright; 2330 Duff Court, Apt. 7; Lachine, Quebec; Canada H8S 1G2.

Myra D. White wrote to us about Dots-Perfect, an upgrade (package containing new ROM chips, complete installation and operating instructions and an attractive printer reference menu) for your Epson FX, JX, RX and MX printers to give it NLQ (near letter quality) print mode and a few extra modes as well. I have seen the type from this NLQ mode and it is comparable to daisywheel output. It is available for $63.00 + $2.00 S/H (US) from Myra D. White; 849 E. Bonita Ave; La Verne, CA 91750.

This month's newsletter contains a owner's survey devised by Ali Ulgen of Seven Hills, Ohio. He has sent out 171 surveys to TI user groups. He will publish the results of this survey as soon as possible. Please complete this survey and mail it to him.

All you old TIers might have heard about or even used UMBBS way back when. It is now operational again. Before you get all excited and start dialing DATAPAC, you may want to know it is only available to people who have accounts on the Amadahl. Such is life! Word is GEnie may be the place to be. Upcoming at the Ottawa TI-Fest a GEnie representative will be in attendance and will have some interesting information for Canadains who want to access it.

Rick Lumsden called me about a conversation he had with Bob Boone. Bob said that Myarc has not yet shipped the 9640 because of some kind of upgrade to the boot ROM. Bob said they have 11 preordered 9640s so it may take a while to get one if you order from him once they start

shipping.   Bob also mentioned the 9640 has gone up a bit in price.

The R/D COMPUTING V20 issue contains the modification for the HRD 256K upgrade. It involves some more piggybacking and soldering. This issue also has the 32K INTERNAL DESIGN. Sheldon has made up a few of these boards if anyone is interested. They are also advertising the GPL package which contains the Assembler, Linker and the Intern book. I have just received this package from Ryte Data (Intern was not in stock at the time I ordered). Sometime in the future I will do a review on the GPL package.

OUT AND ABOUT:

Feature articles from the various sources of information.

The following was taken from The Edmonton 99'er Computer User's Society April 87 Newsletter

PROGRAMMING TIPS by Jim Beck

These 15 basic steps will help you to become a better programmer.

1) Never comment your code; it only helps people to find redundancys in it.

2) Remember: If it aint a game, it aint worth programming. (Unless someone pays you.)

3) Never work on a program for more than four hours. If it takes that long, save it on a disk, place it in your disk box (preferably at the back) and forget about it.   Plan on finishing it between now and the death of your great grandchildren.

4) Never use structure programming techniques.   All programs should look sloppy, confusing, and completely unreadable. When programming in BASIC, every third statement should be a GOTO. This, when others look at your listings, will make you look like a genius. (Which, in most cases, is a sharp contrast to reality.)

5) Never organize your disks. Remember: A tidy disk box is the sign of an exceptionally weak mind.

6) Debugging is to programs as decaffeinating is to coffee! Never keep your source code after you've compiled it. Only an idiot puts out later "bug-free" versions.

7) Always use global variables. Programmers have enough problems without passing parameters.

8) Never make flowcharts or pseudocode. A program should come from the top (or in some cases the bottom) of your head. It should never do what was planned for it and should seldom, if ever, do what it does completely correctly.

9) Try not to use descriptive variable names. In languages that require you to predefine your variables, predefine all posible combinations of letters and save it as a template for all your programs. This allows you to use whatever variables you want without having to go back and insert.

10) Never spill Coke on your keyboard more than once a week.

11) Only use disks as coasters under cold drinks.

12) Always have an excuse if things don't work properly. Some good examples are: "It's not supposed to do   that!",   "The   instructions   were unclear/unreadable/completely wrong.", and, of course, "This computer is broke!"

XX) Never use the number 13 in your programs: it's unlucky. Define it as a constant, such as "XX".

14) Do not hit your computer with objects like wooden baseball bats. Use aluminum ones: you'll have less problems with static.

15) Never, but NEVER read the instructions. If it does not work, plug it in, fix it, or bang it against the wall.

P.S. By the way, if your computing teacher says anything contrary to these basic rules, calmly point it out to them. If they still disagree, then ask them why they make their living teaching instead of programming, if they're so smart!

The following appeared in Computer Language Feb 87 issue.

Dear Editor:

I hope you will find this rhyming salute to C refreshing:

That's What I Love About Coding in C (Sing to the tune of "These Are a Few of My Favorite Things")

Pointers and structures
And rapid compiling
Tightly wound object code
Keep me sailing
Looks quite a bit like its Grandfather B--
That's what I love about coding in C.

Do while and for
For some great varation
Loops to control
Your program's iteration
Keeps all the code doing what it should be--
That's what I love about coding in C.

First I tried BASIC
Then I tried COBOL
But it just wasn't the same
RPG Pascal

PL/I Ratfor
C just puts them to shame.

So I always come back
To the one with the braces
It puts all of them
Quickly back in their places
High-level structured so eloquently--
That's what I love about coding in C.

Mark Clarkson
Wichita, Kans.

REVIEWS:

This column presents reviews of materials that may
be of interest to the reader. The views expressed are
the opinions of the reviewers, exclusively.

A Review by Paul Degner

I was reading a issue of MICROpendium (February) and
came across a small picture of a rabbit engaged reading a
hardware manual. The front cover described various
applications the manual is supposed to cover on our
computers. I thought to myself that the description
sounds strangely familar to the TI-99/4A Console and
Peripheral Expansion System Technical Data manual put out
by TI.

In earnest, I contacted a friend, Rick Lumsden, and
asked as to his conclusions, another subscriber to
MICROpendium. He believed it to be similar to the tech
manual. He also commented that to be sure we as might as
well take a look at it in depth. The best way I could
think of doing that was to buy it. The cost of the
manual was $19.95 (US) which I considered to be a
reasonable amount.

A week or so later a large brown paper envelope
appeared in my mailbox that I believed to be the manual
(or those XXX magazines from Sweden). I took the letter
opener to the envelope and sure enough it was. The
author of the manual is Michael L. Bunyard, PE who is
said to have a fair amount electronic knowledge by his
education and past employment with Texas Instruments. He
now owns Angelo Microcomputer Systems.

The manual states "Texas Instruments neither
commissioned the writing of this Manual nor contributed
to it." I knew now the manual would be worth the reading.

The manual is broken up into 11 sections and 7
appendixes. I find the table of contents in this manual
to be quite explicit.

The first section covers the whys, hows and wheres
known as the introduction. The second section provides
the general system description of the whole computer.
The third section covers functional block descriptions.

The fourth section covers interfacing pitfalls of our
computer. The fifth section deals with TMS 9900 hardware
description. The sixth section covers the TMS 9900
instruction set. The next 5 sections cover the
Peripheral Expansion Box, 32K Byte Memory Expansion,
RS232 Card, P-Code Card and Disk Controller Card. The
appendixes cover command module port pin definitions, I/O
port pin definitions, PEB backplane pin definition, grom
simulator, TI-99/4A schematics and the Extended Basic
command module.

Each section is informative though some of it is a
little above me as usual. I would recommend this manual,
even though I just started reading it, to anyone who
wants to know more about our computer. I think this is
the manual TI should have came out with in the first
place!

You can get the manual from THE BUNYARD GROUP; PO
Box 53171; Lubbock, TX 79453 for $19.95 (US).

A Review by Rick Lumsden

Well another month gone and still some more reviews
for you. This time I'll review a piece of hardware and
also a piece of software that works with the hardware.
Now that that is said on with the review.

The hardware item I've been babbling about is
brought to us by Horizon Computer Ltd. It is the Horizon
Ram Disk(HRD)card for your PEB. After my club membership
this has got to be the most worthwhile thing I have ever
purchased for the old TI. It functions EXACTLY as a disk
drive but multitudes faster. It even retains everything
when powering down because it is battery backed.

I can hear you all now. There have been other Ram
Disks and even some that have an auxillary power supply
to maintain their memory, but none like this one. Try
pulling your other Ram Disk out of your PEB and taking it
over to a friend's place all the while maintaining
everything on the disk. The Ramdisk Operating
System(ROS) is included with the card and is in RAM.
What this means is that with the proper software, this
card could feasibly be configured to almost anything you
desire, within physical limits. Obviously it could not
be made to work as an RS232 card because it is not
equipped with the necessary ports and communication chips
necessary but any card that is memory related could
probably be emulated. Possibly even a 32K card but I am
a little unsure about that.

The card at present is available in 3 versions. All
are identical in operation with the difference in the
memory size. There is the 104K,192K and recently a 256K
version. The 104K and 192K represent the SSSD and DSSD
drive respectively while the 256K version is a hardware
modification that can be performed by the end user
himself. You can order the card in many different ways
as well. As a bare PC board, a kit that must be built or

a complete ready to run version in the size of your choice with a warranty.

The ROS that comes with the card is very easily loaded into the device and once loaded get ready for some REAL FAST file and program loads. The ROS also has provisions for numerous Call statements that when executed perform various functions related to the card. For example a CALL DN(x) where x is a number between 1 and 6, renames the HRD to whatever drive you please. If you were to Call Dn(1), your original drive one would be replaced by the HRD. In effect the physical drive would become invisible. This is handy with programs like TI-Writer, Multiplan etc. that look to drive one for further files. Other calls set the Write protect, maximum sectors and one even loads DM-1000 in about 2 seconds flat!!!

As I mentioned earlier, where the HRD really shines is the fact that the ROS is in RAM and can be altered to suit the requirements of the end user. There are at the present, four different Operating Systems(OS) available that I know of. The first is the ROS that comes with the HRD which I have already explained briefly. Another is the RAM Boss program from Art Green of Ottawa which loads into the HRD and it then becomes a GROM Emulator. This allows you to unload various GROM only modules to the HRD and with a menu you are able to load a multitude of stored modules. This is a great place to keep your E/A and DM-II(if anyone still uses it) with out ever again having to bother with module swapping.

The other two are perhaps the best thing that has happened to the TI since '79. I will discuss them together because they both accomplish the same thing but are slightly different in their storage medium. I am speaking about the VER_Menu program from the Miami Users Group. This particular piece of software takes control of your TI and let's you decide what you want to load. On power-up the VER_Menu ROS does a power up link. When you normally turn on your TI the CPU does a running check to see what devices are connected to it and then proceeds to display the Color Bar screen we all know and love. Just before this happens, the VER ROS takes control and redirects the CPU to run a short program off the HRD. This short program is a MENU program that displays a menu of your choice. With one simple keypress you can load your favourite disk manager, terminal program, data-base etc. and it loads from the HRD therefore loading is almost instantaneous. Virtually all the programs you store on the HRD can also be set up to be accessed as CALL statements if you so desire. And to top it all off, these features are easily and readily set-up from a loader that is included with the software. How much for this fantastic piece of software? Would you believe that is is Public Domain? That's right. The authors mention in the documentation that you may send a few bucks if you like but it is not necessary. Once you see this program

in action in co-operation with the HRD I'm sure you'll be glad to send them a few dollars.

The last piece of software is very similar to the VER_Menu program but is offered on an EPROM chip. This requires that you remove one of the RAM chips(the one that stores the ROS) and replace it with the EPROM so that any power line glitches will not knock out your ROS. From what I can gather form the advertising it is quite basically the same, but don't take that as gospel because I am just speculating. I hope to have one of these EPROMs ordered very shortly and at that time I'll write another short review.

In closing, this has to be the best buy for any PEB owner. All the other Ram Disks are great, but that is where they stop. They are Ram Disks or print spoolers and their ROS is in a ROM chip and therefore cannot be changed. The HRD ROS is in RAM and that is perhaps the best place for it. I will admit that some inadvertent messing with the ROS or power line problems can cause your system to hang occasionally but it is very simple to remove the batteries and reload the OS. The EPROM chip mentioned will eliminate any problems of the latter nature but it then defeats the idea of the OS in RAM, however it does give an alternate choice of the color bars and some peace of mind to those a little squeamish about opening their PEB's. I am equally sure that with all the great programming talent in the TI community, that there will be more OS's for this great card but I can't think of what they may be.

If you have any questions about the card, Paul Degner, Doug Howe, Sheldon Itscovich or myself can probably answer most of them. I believe they can be bought in the DSSD version for about $250 CDN. See Paul or myself about where to order etc.

HELPFUL HINTS AND TIPS!
(FOR THE USERS, BY THE USERS!)

This column features tips brought to my attention from members of this group. WARNING: These hints and tips are to be used at your own risk!

Videodroming by Rick Lumsden

Here's a little hardware hack for all you out there that are a little tired of the rainbow coloring and smearing of your text on your monitors. It works best on monitors with seperate Luma and Chroma Inputs but will also work with a straight composite input type but the results will not be quite as dramatic.

I first came across the idea when J&J Electronics offered the TMS9928 VDP chip at bargain basement prices($3.00) about a year ago. I also had them copy the fact sheet on this and the TMS9918A chip found in all our consoles. Reading the information I was convinced that

one could use this new chip with the proper circuit to enhance the TI display. At the rear of the manual was a part number and address to send for a convertor board that would turn the color difference signals of the 9928 into either RGB or composite out that would work with the appropriate monitors. It also mentioned the 9918 smearing problem was inherent and could not be corrected with external circuitry. Intrigued, I sent to TI twice about the convertor board but to no avail so not having enough electronics knowledge to pursue it further, I put the whole works on the back shelf.

A couple months later, an article in Ryte Data got me back digging out the 9928 and manual. The article was from a Steven Schmitt of 2306 10th Avenue N.W. in Rochester Minnesota 55901. There was a schematic drawing of the exact circuit I was looking for. I then ordered all the parts I required to build it and stuck it all together on a piece of perfboard but alas I could not get it to work. I then sent a letter to Mr.Schmitt requesting more information. He was kind enough to send a letter back saying that he could offer me an undrilled PCB with complete documentation for $10 U.S. I quickly sent off the cash and shortly thereafter received everything in the mail. I soon realized that this was an updated circuit from the one published earlier in Ryte Data and went about collecting the few other parts I needed. When I finished this one, AGAIN no work. I looked the circuit over and over but could see no problems so I decided that possibly one of the IC's was bad. Before I reodered them, however I called Ralph Mills another member of our group and a little more wise to electronics than myself, and explained the problem. He offered to have a look and get back to me. A week or so later he called to say there seemed to be a problem in the signal grounds, specifically at the video connector on the computer. For some strange reason this particular connector had no grounding strap on it and I was therefore getting all kinds of interference on the input to the video board. He made a makeshift repair and I hauled it all home again and VOILA!!!. It worked pefectly. I was very impressed with the results. No more smearing or rainbow. I could count every pixel on the screen if I so desired.

I won't go into any great detail about the circuit because I believe the designer and builder of the PCB is entitled to some recognition and payment for his effort. I have left his full address here as well as the price. This is a little more complicated than a lot of other hacks so BE CAREFUL!!! It also requires a few minor mods(none that can't be undone) inside the console. I'd be glad to help out anyone who decides to order the board and I do have information on where to get the proper parts. The coil will be perhaps the hardest unless you have the necessary knowledge to wind your own. I do have a spare one that will go to the first person who asks so

if you are thinking about building it, ask quick.

TV "HERRINGBONE" by Peter Gould

The recent addition of a modem to the system, caused excessive R.F. ripple (herringbone) on the old-beater color T.V. used as the computer "monitor". The reason, the added cables to the rats nest of cables there already. The added cables were:
1. Phone-jack cable to modem.
2. Phone cable to modem.
3. Transformer low voltage cable to modem.
4. RS232 Y-cable (port 1 for printer, port 2 for modem).
5. RS232 ribbon cable between Y-cable and modem.
These additional cables when disturbed caused the herringbone on the screen to come and go. This is a classic example of R.F. interference caused by unshielded cables transmiting and/or picking up radio frequencies. To correctly prevent this shielded cables should be used wherever possible. However, the horrid cost of replacing unshielded cables that already work just-fine goes against the "cheapskate" in this writer; so eliminating the effect of using unshielded cables was looked at.

The first solution was very inexpensive indeed. Radio Shack has small round magnets (rather like an overgrown washer) for $0.40c each. Two of these face-to-face with the phone line looped through them at the wall jack, reduced the herringbone a little. Then the same to the low voltage line to the modem, a further improvement. However, with a 12 year old using the computer either he goes or the magnets should not be used. The thought of magnets and discs even in the same room as a 12 year old is a combination waiting for an accident to happen. Total cost $1.60c.

The second solution was again from Radio Shack, and non-magnetic this time. This was a packet of "2 snap on chokes for R.F. interference" at $7.49c packet (part #279-8201). The instructions call for cables to be wrapped around these gizzmo's, but they work just fine another way. A ribbon-cable folded in half to fit through the choke and then "bowtie" looped back and forth until the choke is full works very well indeed. A spin-off advantage is they also act as a cable-tidy too. They were added to the ribbon cables in the rats nest, and the herringbone was eliminated. Total cost $7.49c.

TI-99/4A OWNERS SURVEY   DATE:_____

PLEASE USE A DARK COLORED FELT PEN, THANK-YOU
### YOU MUST SELECT ONLY 1 ANSWER, NO EXCEPTIONS.

A1(2) WHAT IS YOUR SEX?   M __   F __
A2(5) WHAT IS YOUR AGE GROUP?   17 OR UNDER __   18-24 __   25-34 __   35-44 __   45 AND OVER __
A3(5) HOW MANY YEARS OF EDUCATION?   11 OR LESS __   12 __   13-15 __   16 __   17 AND OVER __
A4(5) YOUR OCCUPATION?   STUDENT __   BLUE COLLAR __   WHITE COLLAR __   PROFESSIONAL __   RETIRED __
A5(2) DO YOU USE A COMPUTER AT WORK?   Y __   N __
A6(8) WHICH BRAND?   N/A __   IBM __   APPLE __   DEC __   SPERRY __   NEC __   DONT KNOW __   OTHER __
A7(3) HOW MANY TI-994A OR 4As DO YOU OWN?   1 __   2 __   3 OR MORE __
A8(4) HOW MANY PESystems DO YOU OWN?   0 __   1 __   2 __   3 OR MORE __
A9(7) WHICH MEMORY EXPANSION DO YOU HAVE?   NONE __   TI __   CORCOMP __   FOUNDATION __   MYARC __   MECHATRONIC __   OTHER __
A10(6) WHAT SIZE?   N/A __   32K __   128K __   256K __   512K __   1024 __
A11(6) WHICH DISK CONTROLLER CARD DO YOU OWN?   NONE __   TI __   FOUNDATION __   MYARC __   CORCOMP __   OTHER __
A12(4) HOW MANY 5-1/4" DISK DRIVES DO YOU OWN?   NONE __   1 __   2 __   3 OR MORE __
A13(5) CONFIGURATION?   N/A __   SS/SD __   DS/SD __   DS/DD __   DS/QD __
A14(2) DO YOU OWN A HARD DISK SYSTEM?   Y __   N __
A15(4) WHATS THE SIZE?   N/A __   10 OR LESS MEG __   20 MEG __   30 OR MORE MEG __
A16(2) DO YOU OWN A MODEM?   Y __   N __
A17(4) INDICATE HIGHEST BAUD RATE?   N/A __   300 __   1200 __   2400 __
A18(10) WHICH PRINTER DO YOU OWN?   NONE __   TI __   EPSON __   PFDWRITER/NEC __   OKIDATA/C ITOH __
    STAR MICRONICS __   COMREX/TOSHIBA __   BROTHER/CANNON __   JUKI CITIZEN __   OTHER __
A19(2) DO YOU OWN A MONITOR?   Y __   N __
A20(2) ARE YOU USING A TV?   Y __   N __
A21(10) WHICH MONITOR BRAND?   N/A __   TI __   AMDEK __   SANYO/TAXAN __   NEC __   TATUNG/SAMSUNG __
    MAGNAVOX/SONY __   EPSON/PRINCETON __   HITACHI __   OTHER __
A22(4) IS YOUR MONITOR?   N/A __   RGB __   RGB/COMPOSITE __   MONOCHROME __
A23(2) DO YOU HAVE THE GRAM KRACKER?   Y __   N __
A24(3) HOW MANY SOFTWARE CARTRIDGES (MODULES) DO YOU OWN (INCLUDE CASSETTE) ?   9 OR LESS __   10-24 __   25 OR MORE __
A25(3) HOW MANY SOFTWARE DISKS DO YOU OWN?   9 OR LESS __   10-24 __   25 OR MORE __
A26(4) HOW DO YOU USE YOUR TI?   ENTERTAINMENT __   BUSINESS __   EDUCATION __   PROGRAMMING __
A27(7) PROGRAMMERS, WHAT DO YOU PROGRAM IN?   N/A __   BASIC __   XBASIC __   ASSEMBLY __   FORTH __   C __   OTHER __
A28(2) EVER WRITE A COMMERCIAL PROGRAM FOR TI (INCLUDE FREEWARE)?   Y __   N __
A29(7) IN WHAT LANGUAGE?   N/A __   BASIC __   XBASIC __   ASSEMBLY __   FORTH __   C __   OTHER __
A30(2) DO OTHERS USE YOUR TI?   Y __   N __
A31(4) HOW MANY OTHERS?   N/A __   1 __   2 __   3 OR MORE __
A32(2) DO YOU OWN ANY OTHER BRAND OF COMPUTER?   Y __   N __
A33(6) IF SO WHICH BRAND?   N/A __   IBM __   APPLE __   COMMODORE __   ATARI __   OTHER __
A34(4) APPROXIMATELY HOW MANY HOURS PER WEEK DO YOU USE YOUR TI?   4 OR LESS __   5-9 __   10-14 __   15 OR MORE __
A35(2) ARE YOU A MEMBER OF A USERS GROUP?   Y __   N __
A36(8) HOW MANY MEMBERS?   N/A __   UNDER 33 __   34-66 __   50-74 __   75-99 __   100-150 __   151-199 __   OVER 200 __
A37(2) ARE YOU MEMBER OF A COMMERCIAL NETWORK?   Y __   N __
A38(5) WHICH ONE?   N/A __   COMPUSERVE __   SOURCE __   GENIE __   OTHER __
A39(6) HOW MUCH IN DOLLARS DO YOU USE IT PER MONTH?   N/A __ $29 OR LESS __   30-49 __   50-74 __   75-99 __   100 OR MORE __
A40(2) DO YOU PLAN TO PURCHASE (OR HAVE) THE MYARC 9640?   Y __   N __
A41(9) WHAT SOFTWARE AREA YOU WOULD LIKE FOR THE 9640?   N/A __   CAD/GRAPHICS __   DESK-TOP PUBL __   DATABASE __
WORD/PROC/MULTIPLAN __   TRUE BASIC __   ASSEMBLY __   C-LANG __   OTHER LANG __
A42(8) WHAT ABOUT HARDWARE FOR THE 9640 ?   N/A __   APPLE COMPATIBLITY __   IBM COMPATIBILITY __   RGB MONITOR __   3.5" MICRO
DISKETTE __   CD ROM __   SPEECH RECOGNITION __   INTELLIGENT MODEM __
A43(2) DO YOU PLAN TO PURCHASE (OR HAVE) TRITONS TURBO XT?   Y __   N __
A44(8) HOW MANY EXTRAS DID YOU BUY WITH THE TURBO-XT?   N/A __   1 __   2 __   3 __   4 __   5 __   6 __   7 __
A45(2) WOULD YOU LIKE AN 'AT' UPDATE FOR THE TURBO-XT?   Y __   N __
A46(3) HAVE YOU PLANS TO PURCHASE CARDS BY OTHER VENDORS?   Y __   N __
A47(2) DO YOU PLAN TO PURCHASE (OR HAVE) RAVES KEYBOARD?   Y __   N __
A48(2) DO YOU PLAN TO PURCHASE (OR HAVE) A MOUSE?   Y __   N __
A49(2) DO YOU SUBSCRIBE TO: MICROPENDIUM Y __   N __
A50(2) DO YOU SUBSCRIBE TO: SMART PROGRAMMER Y __   N __
A51(2) DO YOU SUBSCRIBE TO: COMPUTER SHOPPER Y __   N __
A52(2) DO YOU SUBSCRIBE TO: GENIAL TRAVELER Y __   N __
A53(2) DO YOU SUBSCRIBE TO: UG PUBLICATIONS Y __   N __
A54(5) WHAT IS YOUR OPINION OF THIS SURVEY?   VERY POOR __   POOR __   OK __   GOOD __   VERY GOOD __

AC$(3) THE NEXT 2 QUESTIONS ARE DEMOGRAPHIC. IF YOU ARE IN USA OR CANADA WHAT IS YOUR TELEPHONE AREA CODE. ALL OTHERS ENTER
CITY: _____
ZC$(3) IF YOU ARE IN USA OR CANADA PLEASE ENTER YOUR ZIP CODE. ALL OTHERS ENTER COUNTRY: _____

FOR COMMENTS, PLEASE WRITE A BRIEF LETTER & ENCLOSE IT WITH THE SURVEY.
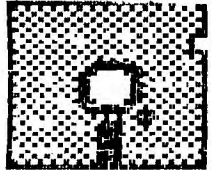IF YOU WANT: SEND YOUR NAME & ADDRESS ON THE OTHER SIDE OF THIS FORM.

MAIL TO: ALI ULGEN ATTN: SURVEY 952 E PARKHAVEN DR SEVEN HILLS OH 44131-3918   [Dn; SURVEY Fn; S/TI].
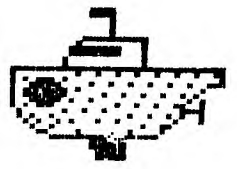
WINNIPEG

99/4 USERS' GROUP

TEXAS INSTRUMENTS

36 CANADA

TO:

EDMONTON 99'ER COMPUTER USERS' SOCIETY
P.O. BOX 11983
EDMONTON, ALBERTA
CANADA T5J 3L1