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

NEWSLETTER

VOLUME 5 NUMBER 05.............MAY 1986

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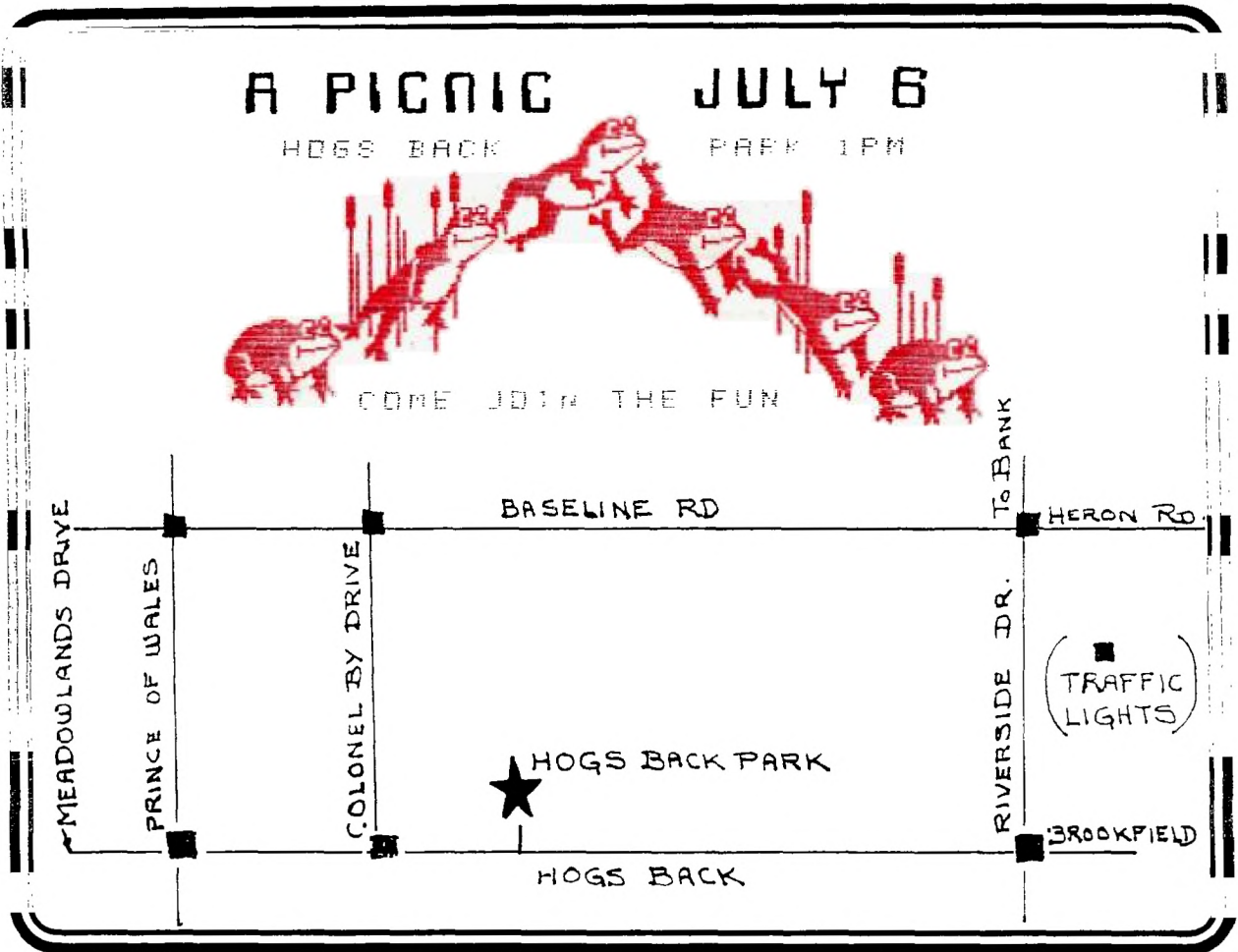
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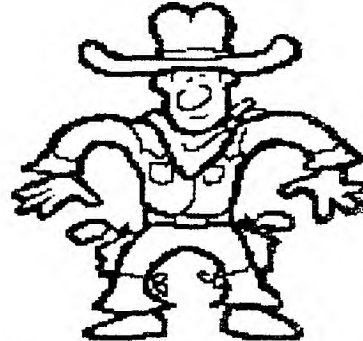
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EDITOR'S NOTES
by Marg. O'Connor

The Fair is over and I for one enjoyed it very much, even though I was at the door all day. I did get a quick trip around the room once and saw a lot of interesting things going on.

My husband and I left for England the Thursday after the show and were lucky enough to be there for the TI Fair in Leeds. We had quite a time finding them as there were no signs or directions. Finaly asked at the Tourist Bureau and as luck would have it they could give us directions and if we had not got mixed up with one way streets we might have had more time at the show. However we made it and were met with a very warm welcome by a lot of TIers that we have read about, also made a new contact from the Netherlands, a Mr. Berry Harmser, who is very interested in swapping newsletters with us — one catch is, we need someone to translate it as they of course print theirs in Dutch — any voluntiers?

The Fair itself was smaller than ours, though as well attended. They had about four dealers in one room, with an auction going on when we arrived, I take it this was instead of door prizes.

This auction was run by Clive Scally and his wife Audrey and I understand the things auctioned were donated and as there was a large crowd bidding. It seemed to be a popular advent.

In the next room there were three or four units set up, one with a Modem, Steven Shaw making copies for people and another demonstrating a RS232 Interface between a TI and a PC.

The third room had either two or three clubs represented. Peter Brooks was there with the OXON TI USERS selling hardware, software and books. The West Midlands Club was demonstrating but I was so busy talking to Peter Brooks of TI-LINES that I am afraid I didn't realy see what was going on.

It was a very enjoyable day but time went too fast and before we knew it we had to leave, only wishing we could have stayed longer.

Talking to Jane she tells me that we are to have a picnic again this year on Sun. July the 6th, at Hogs Back Park. 1pm, and in case of rain it will be held the following Sun. July 13th, same place and time.

NEXT MEETING:

The next meeting will be June the 5th starting at 7:30pm at the Merivale High School, 1755 Merivale Road in Nepean.

DEADLINE:

The deadline for the next issue will be Aug.16th....Lets see some great articles. How about you people with cassette based units, have you an article for us???

See you all at the meeting.

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

CHAIRMAN'S TWO CENTS WORTH
by Berry Minuk

Well the Fest is over and it was a success from every point of view. All our thanks go out first and foremost to Jane for an absolutely fantastic job in organizing and running it so smoothly. I should also thank all those people who pitched in and helped in any way. There were over 30 of us and every one deserves our thanks. Without that support the Fest could not have been such a success.

The last meeting for those of you who missed it was very interesting since we had an extensive report on the Fest and some of the new products that were shown there such as Myarc's new computer on a card. In addition to that you missed the bargains of our 2nd annual rummage sale. We have taped all of the Fest lectures and are to make them available in VHS and BETA formats if there is enough interest. We also decided to postpone the software contest until the September meeting to give you more time to prepare your entries. Henri Monat has volunteered to help run the contest but he needs a Co-chairman or woman to work together with him.

The next meeting will be the last of the season and instead of the contest we will have a demo of the Mouse from Ryte Data and some other new products. The meeting will conclude with a copy session (public domain and fairware). This should be an excellent oppurtunity to fill some of the holes in your software collection. Since we will need several systems for this meeting please volunteer when Dick Piche asks you. In fact call Dick and volunteer without being asked. Bob Boone's entire library will be there so don't miss this meeting.

Due to the resignation of Phillipe Tanguay as Librarian we are looking for a new one. If you are interested let me or anyone else on the executive know. This is also a reminder that Steve McWattie has agreed to act as Chairman in charge of pictures and other graphics created with any of the drawing programs such as GRAPHX, TI-ARTIST or DRAW N PLOT, etc. Give yours to Steve and he will see that you get those created by others in the Group.

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 for the rest of the season is as follows:

Date	Event	Time and Place
Tues May 20	Forth Tutorial	7:30 Merivale H.S.
Tues Jun 03	Assembly Tutorial	7:30 Merivale H.S.
Tues Jun 10	Forth Tutorial	7:30 Merivale H.S.
Weds Jun 11	C Workshop	7:30 Peter Arpin's
Tues Jun 17	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. There will also be a BASIC tutorial on May 27 as well.

I will see you all at the June meeting and let's have a super turnout for our last meeting of the season.

FLASH: There will be a picnic again this summer. Full details elsewhere in this Newsletter.
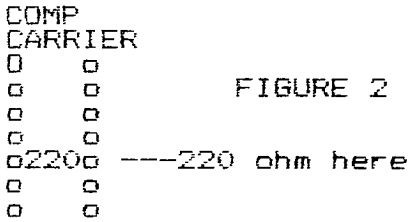
TI-FEST AND NUAC NEWS
by Jane Laflamme
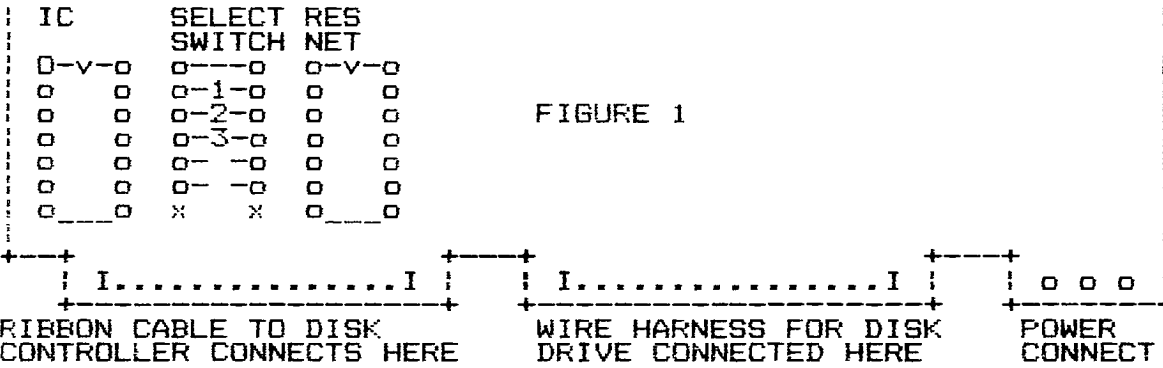
On behalf of the TI-99/4A NATIONAL USERS' ASSOCIATION OF CANADA (NUAC) and the OTTAWA TI-99/4A USERS' GROUP, I would like to thank all 99ers from Canada and the U.S. who supported our first annual TI-FEST, both directly and indirectly, with a special mention to the 45 plus Ottawa Users' Group members who gave so much of their time to bring the event to fruition. When we originally conceived

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bridge between pins 3 and 12 (DSK2) or pins 4 and 11 (DSK3).
        On other drives, the selection of drive number is done by
either plug in jumpers or by dip switches. Refer to your owners
manual for the correct method.
        5) Connect the system together while assuring that the drive
farthest from the disk controller card has the resister network
termination installed. This drive need not be DSK3. (In my
system the drive farthest from the controller card is DSK2.)

        That's all there is to it.

```
: IC      SELECT RES                                                    :
:         SWITCH NET                                                    :
: O-v-o   o----o  o-v-o                                                 :
: o   o   o-1-o   o   o                                                 :
: o   o   o-2-o   o   o        FIGURE 1                                 :
: o   o   o-3-o   o   o                                                 :
: o   o   o- -o   o   o                                                 :
: o   o   o- -o   o   o                                                 :
: o___o   x   x   o___o                                                 :
:                                                                       :
+--+        +---+      +---+                                       :
:  : I...............I : :    : I...............I : :    : o o o  :
+--+-----------------+  +-------------------+  +-------+
RIBBON CABLE TO DISK       WIRE HARNESS FOR DISK     POWER
CONTROLLER CONNECTS HERE   DRIVE CONNECTED HERE      CONNECT


COMP
CARRIER
O    o
o    o           FIGURE 2
o    o
o    o
o220o  ---220 ohm here
o    o
o    o                          D/V80
```

THE MYSTERY UNVEILED
A LOOK AT THE TI-99/8 COMPUTER
by JOHN PHILLIPS - from NATIONAL NINTY-NINER

It has been just about two years since TI made the announcement that they were pulling out of the home computer business. All current development projects were stopped. One of these projects was so near to completion that production lines were already established.

This project was the awesome TI-99/8. It was a year ahead of the Apple IIc and two years ahead of the commodore 128. - the 99/8 was more powerful than either of these machines.

--Since I possess one of these fine machines, I can give you a first-hand look at the capabilities - and potential. So sit back and enjoy reading about the TI-99/8 (code named "Armidillo").

The 99/8 - dimensions are 15" wide x 13" long x 2" high. It was to be made of the same beige plastic as the late generation /4A's. The keyboard on the /8 was 11" wide and contained 54 keys. The caps lock was not a click down - but and electronic circuit key. It was located in the upper left corner of the keyboard. The FCTN key was moved below the CAPS key and the CTRL key just below that so all special keys were on the left col/row of the keyboard. The SHIFT, ENTER, and FCTN keys are all oversized for easy access.

The cartridge slot is located - on the right side of the top. In other words, cartridges are pushed into the top - sit facing the ceiling (90 degrees different from the /4A).

The back panel- starting from right to left:

1.   The CC port for hexbus peripherals

2.   The cassette port - use standard subminiature cables for MIC EAR and MOTOR

3.   Joystick port same as 4/A but the caps lock no longer interferes

4.   Monitor port - similar to 99/4A

5.   TV port designed to be used with a video. You can use any tv game adaptor. TI's RF modulator no longer needed

6.   Channel select for use with TV.

7.   Power supply port. /8 uses same power supply as /4A.

On the right side of the console there is a port similar to the expansion port on /4A. However the /8 is not compatible with the expansion box. - This port was designed strictly for the Hexbus interface - a special set of peripherals which ran on 16 bit busses. More on this later.

The inside of the /8 is wonderful. First the /8 contains 280 K bytes of ROM. In essence it is packed. It contains 16 k of VDP RAM and 64K of CPU RAM. (ed. 80 K RAM total) If you need more the /8 can access up to 15 megabytes of RAM. The CPU - is the TMS9995. The 9995 is faster and contains a larger instruction set.

Within all that ROM - Extended Basic II as it's main language. Compatible with TI Extended Basic but contains a great number of additional commands to support the new architecture.

It also has built in: the P system for development of P-code from Pascal or Pilot. In addition, solid state speech is built in.

As a final plus, the /8 had a speed select mode which allowed you to choose which speed level: slow speed or /4A (for games) and /8 speed. You know how the TI-Writer will drop characters

on word wrap? Running TI WRITER on the /8 speed eliminates this problem. When set on /8 things run much more quickly. You should see PARSEC on fast mode!

The Basic interpreter included in the /8 is an integral part of the system software -intended to be ANSI and TI standard compatible - and provides access to some of the unique features of the /8's hardware - to access color graphics - sound generators contained in the machine. As much of the speed critical code as possible put into high-speed ROM in increase the speed of Basic. The ROM code portion of the interpreter is contained in 19 separate assembly-routines. The GROM portion of the interpreter is contained in five separate GPL modules. These modules are the I/O routines, and all of the GPL subprograms such as SOUND, COLOR, KEY.

In the 4/A mode there are 16 address lines from the 9995 and 24 address lines to physical memory. Because of this, there is a need for intermediary addressing logic. The Address Decoder and the Memory Mapper Chip are the intermediary components for the /8. - This scheme is used to differentiate /4A mode from /8 mode.

With the inclusion of Extended Basic II, there were additions to the graphics subsystem. Armadillo Basic has six graphic modes. Four new graphics subprograms have been added: CALL DCOLOR, CALL DRAW, CALL DRAWTO, and CALL FILL.

The format for selecting the graphics mode (1 to 6) is: CALL GRAHICS(mode)

1. a 32 col x 24 row grid of pattern position (like 4/A)

2. Text - a 40 col x 24 row alphanumeric grid.

3. Split screen 1, where the top 1/3 of the screen displays text and the bottom 2/3 displays high resolution graphics.

4. Split screen 2, where the top 2/3 displays HIRES graphics and the bottom 1/3 displays text

5. High Resolution color graphics, 256 x 192

6. Low Res. color graphics 64 x 48 blocks.

There are many enhancements to Extended Basic too numerous to mention here. Just take my word for it: Extended Basic II was every bit as good as MS BASIC for the PC!

The peripherals designed for the /8 are the Hexbus line of peripherals. (ed. note - these devices were covered in the back isues of 99'er mag) These included RS232 and wafer tape etc. I have the RS232 connected to my /8 for telecommunications.

It is difficult to describe to you, on paper, just how wonderful the /8 is. TI made a grave mistake in not releasing this machine. As I mentioned before, it was years ahead of its time. I hope my article has shed some light on the mysteries of the /8.

GRAPHX/ARTIST COMPARISON

Battle of the Pixels
By Warren Agee

Foreword

For such a long time, 99ers have had a rather limited choice in software. That limit applied especially to graphics software. In the past year or so, however, that problem has disappeared and another dilemma has taken its place: from which graphics package to choose!

We currently have four software packages that all try to do the same thing: emulate MacPaint. Realistically achieving that status is very unlikely due to current memory limitations. Fortunately, these packages do represent the best graphics

software around for our machine. I have not as of yet seen
Joypaint or BITMAC, but I have worked extensively with both
GRAPHX and TI ARTIST 2.0 . What I will try to do in this
article is compare, blow-by-blow, both of these packages,
pointing out the advantages and disadvantages of each, to
hopefully aid a potential buyer in making a wise purchase. This
is NOT going to be a full-length review of either TI ARTIST or
GRAPHX, just a short "shopper's guide" to graphics software.

Methods of Operation

GRAPHX and TI ARTIST represent two entirely different
approaches to computer drawing. Each uses a different technique
used by the Macintosh.

GRAPHX uses pull-down menus to choose the various functions.
Pressing one of the ten function keys either activates a
function or summons a menu. Instead of a mouse, the user may
use a joystick or trackball to select options from the menus.
As the joystick moves, the options are highlighted in a
different color, and hitting the fire button at the desired
option activates it. This is an easy method to use, but one can
get tired flipping through menu upon menu. For example, to save
a screen to disk, you have to flip through 2 or 3 menus.

TI ARTIST, on the other hand, uses icons, or symbols
representing the various function. But instead of the icons
appearing directly on the screen as the picture, you must flip
to a separate screen to view ALL the functions available to the
user by hitting the space-bar . This "menu" screen is very
nicely drawn, with each function contained in a 3-D box.   To
choose a function, just move the cursor to the box and hit the
fire button. The box will turn yellow, indicating that the
function is active. You may also press the key indicated inside
the box to choose an action. Since the program presents all
major functions on one screen, and a simple keypress is all that
is needed, the operation of choosing an action is much faster
and more convenient.

Specific Functions

Now let's get down to the nitty gritty. Here is a list of
all the functions BOTH packages have in common: Freehand lines,
Plot points, Draw continuous lines, Fill, Circle, Clear picture,
Text mode, Store/load from disk, Zoom, Redefine
foreground/background colors, Draw/erase mode, Print pictures,
Change cursor speed, "Clipboard" options and Copy/move commands.

Before continuing with the differences, a few of the
functions above perform differently on each program.

FILL: In GRAPHX, the user has complete control over filling.
Once in fill mode, the user must manually move the cursor to
fill the area.   Also, the cursor is not allowed out of an
enclosed area once filling has begun. In TI ARTIST, the filling
is automatic. This means that if a fill accidentally overflows
an area, you can stop immediately with GRAPHX and patch up the
area. This cannot be done with TI ARTIST.

CIRCLE: In GRAPHX, you can vary the shape of the circle, thus
creating an infinite number of different-sized ellipses.   This
cannot be done with TI ARTIST. Only true circles can be drawn.

ZOOM: The magnification process takes longer in TI ARTIST
than in GRAPHX. You have to wait a few seconds for the screen
to be re-drawn for magnification, while the magnification in
GRAPHX is virtually instananeous. However, the TI ARTIST zoom
mode proves to be more flexible than in GRAPHX. You may draw
circles, rectangles, fill, just about anything in zoom mode,
while the only functions available with GRAPHX is plot and erase
points and lines.

ERASING: This is one area where TI ARTIST excels.   To erase
anything in GRAPHX, all you do is draw single-pixel wide lines
in erase mode. In TI ARTIST, you can vary the brush size and
erase large portions of the screen is a short time. In
addition, all TI ARTIST drawing functions operate in erase mode;
draw a "disk" (filled circle) in erase mode, and it erases a
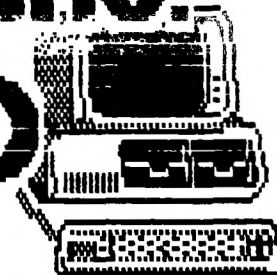circular area. Very handy indeed.
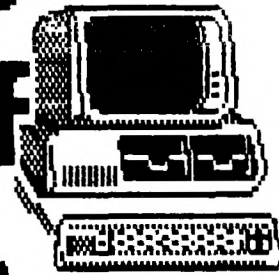
8

[ED NOTE: Faster erasures can be accomplished with GRAPHX   by going into the "typewriter" mode and spacing-out the portion to be erased.]

TI ARTIST Features

Here is a brief list of functions found only in TI ARTIST: Rays, Draw a rectangle (box), Draw a _filled_ rectangle, Disc: draw a _filled_ circle, Horizontal vertical lines, Swap color in one area for another color, Invert the colors of your picture, Resets colors of picture to black on tranparent, Mirror — draws in 4 quadrants, Fill with patterns, Different brush styles, Index pictures on disk and Flip — flip a portion of the screen either vertically and horizontally.

GRAPHX Features

Now, for the list of GRAPHX-specific features: Clear to grey boxes: draws a checker-board pattern — excellent for planning colors (each box is 8x8 pixels), Remove grey boxes and Change color of backdrop cursor color.

The grey-box backdrop is very, very hand since colors are limited to one foregroud and one background in a 8-pixel row. This allows you to plan colors as you draw your creations.

CLIPBOARD FEATURES

When TI ARTIST first came out, it had no clipboard features at all, which made it somewhat limited compared to GRAPHX. But with the release of version 2.0 , TI ARTIST now has in fact several different "clipboard" functions! Briefly, a clipboard is a storage place for objects. These objects can be symbols, pieces of a larger picture, or character fonts. GRAPHX has only one clipboard, and it can contain many objects, depending on the size of each. TI ARTIST 2.0 has three distinct clipboard features: slides, instances, and fonts. A slide is a small 8x8 object; about 20-25 slides can remain in memory at one time, and when in use, they are displayed around the border of the screen; to use a slide, merely move the cursor to the edge of the screen where it sits, and move it to the desired place on the screen. Then you have instances. While you are limited to the size of a slide, you are in no way limited to the size of an instance. However, an instance contains only one object, not several. So, an instance file can only hold one object, or one part of the screen. For instance, if you drew a disk on the screen, then chose SAVE INSTANCE, you enclose the disk with a box, and it is saved out as one file. This proves to be flexible because there is no size limitation on an object.

Lastly, one can use fonts. In GRAPHX, a font is just a clipboard. If you want to place your name on the screen, you have to load in the file, flip through the clipboard to find the first letter, place it (with the joystick) on the screen, go back to get the second letter, etc. Rather cumbersome. The method of text entry is greatly simplified in TI ARTIST 2.0. Simply load in the font and, on a separate screen, type (with the keyboard!) the words you want displayed. Hit enter, and you are brought back to the picture with a flashing box the size of the word you typed in. You can then move the box with the joystick to the desired position and hit the fire button, after which the text is finally drawn. This method is much easier to utilize than with GRAPHX. In addition, the flashing box is automatically centered on the screen when it initially appears. You can even choose to outline the text, which, with some fonts, really creates some attractive letters!

the idea, we didn't expect such a great response; it has been a learning experience for us and from this, should make next year even bigger and better.

We had a total of 28 booths chocked full of goodies and/or information. Attendance was estimated at around 350 plus. We came from Sault Ste. Marie, Ont. to N.B. and N.S.; from North Bay and Sudbury to Ogdensburg, N.Y. (Not to mention Myarc from Long Island, N.Y., and Horizon from Perrysburg, Ohio). Many user groups were represented by individuals, but those manning booths were 9T9 UG (Toronto), Carleton Home Computer (Bells Corners), CIM (Montreal), Club GOtiQ (Quebec City), and TINS (Halifax). Distributors were not firmed up until the day before the FEST! The following participated: G-Plus, Alphabyte, Ryte Data, Myarc, Maximem, Horizon, EasyWare, TimeLine, Wycove, Computer Download, Intelpro, Mr. Diskettes, and Software Depot. Other misc. booths sponsored by Ottawa UG were: Cassette based users, French, Freeware, Kiddie Korner, Ottawa BBS demo with hard disk, Odds 'n Sods (Swap, used equipment), and Hand-outs and Souvenirs. Two classrooms were used for speakers and a French TI-Writer tutorial. We saw the new computer from Myarc with projected release for the end of June! A happy hour was held at the Talisman Motor Hotel, a dinner, and finally, those who were left, moved to the lounge and just swapped news 'n views. I know I went home tired and happy....

Now I would like to write a note on NUAC. We in Ottawa felt, that as one of the larger and active user groups in Canada, we should take the initiative in uniting Canadian TIers. Exactly one year before the FEST, April 26, 1985, we sent out feelers to groups and individuals across Canada and today we have approx. 10 user and 20 individual memberships (including the U.S.). Its beginning to look like a viable entity! Some of you have been asking for the NUAC newsletter. As you can tell from the previous numbers, we do not have enough resources at the moment to support a Newsletter of the quality and content of the Ottawa Group's newsletter. We therefore are putting a column in the Ottawa Newsletter with plans for additional space in the future, and if it is feasible or even wanted, to break from the Ottawa group. Time will tell. BUT, an association is only as good as contributions of its members. WE NEED INPUT FROM YOU. Ottawa has provided the means now its up to you to support us and keep it going! The FEST gave you the opportunity of meeting each other, seeing what is available, and swapping goals and concerns, now for the next step... Please ask your group for time to speak at the General Meetings and give NUAC a plug. Appoint or elect a NUAC representative to liaise with Ottawa. Send us the feedback, ideas, etc. that we need; write an article on the history and goals of your group; tell them how much fun it will be to see their name and group's name in print! Anything, to keep the ball rolling.... Get them fired up; in the end, its to everyone's advantage.. We MUST support each other. These are possible short term plans; now for a few ideas for your group to contemplate for the future of NUAC:

A Constitution;
National Executive;
TI-FEST advisory committee;
National BBS (possibly multi-user
through Datapac?);
Bulk discount purchases;
National software contests and
conventions;
Representation from other countries -
or a global tie-in;
Representation from manufacturers.

These are just ideas to start you talking; you will probably come up with better ones! Its not an impossible dream. Let's think positive and big! Ottawa will be forming a steering committee to give recommendations on the future of NUAC and your suggestions and ideas will be passed on to them. (A note to Ottawa members: We will be asking for volunteers for this committee at the June general meeting. If you wish, you can contact either Bob Boone or myself for further information before hand.)

In closing, we enjoyed putting faces to names and it was great meeting so many, for us, new TIers.... Hope to be hearing from you and...

SEE YOU NEXT YEAR!!

MAR'S BYTES
by M. BOONE

Well, MY mouse finally arrived at our house following the Ottawa Fest (which was a smashing success; due to a tremendous amount of hard work by Jane.)

OOPS, before I continue I better state that THE mouse in question is Bob's. I bought it for his ?? birthday so that I could use it. After sitting and playing a game (BREAKOUT) with the mouse, I am impressed. I beat Bob's score by a Large margin. After getting a high score and wanting to try something new, I tackled the option (program) called "calculator". As the name implies, it works very much like a calculator except that there is a little red hand that points to the numbers and all you have to do is push the 'mouse' button to select a number or function when your 'hand' is over it; BUT if you hold the button down too long, you will get a whole string of the same number. Then what?? Through trial and error (because I didn't read the manual first) I chose the right option and voila! the numbers disappeared along with the rest of my calculation. Start again!? At another time, we'll try again!!!!!

What is a mouse? It is the niffiest piece of TI hardware that ever hit the market. "How so?"; you ask? You only need one hand. One can sit away from the console - the length of the cable (mouse tail) and be comfortable. You only need a smooth surface for the mouse to work on. The whole unit is so small and compact that the heel of your hand can rest on the back and all you need to move is your index finger to push a button (there are only two). The unit glides along a smooth, flat surface. A ball on the bottom of the unit gives it manouverability. While the MOUSE glides along, the red hand(in the calculator program) moves around the screen. The mouse allows control of movement, sound, speech and colours. While the mouse is attached, the TI will not interact with the keyboard. The TI-MOUSE can be used with certain software command modules or with your own EXTENDED BASIC programs.

On the TI-MOUSE are two "keys". The first is the mouse key(of course) and the second is the Home key. The MOUSE key is on the left side of the mouse. It transfers info to the computer whether it is pressed or not, and can be compared to the ENTER key. The HOME key (aptly named because by pressing this key, the cursor is reset to the home position) is located on the right. This key will only work if the ALPHA LOCK key is up.

There are three options on the MOUSE demo menu. Because they're easier for me in reverse order, that is how I will describe them.

BREAKOUT is a game where one shoots bricks out of a wall. While the ball hits the stones or is reflected off the side or top limits, it is in the game. If it falls to the ground, it is lost. To avoid this the player has a racket which is the MOUSE cursor to keep the ball in play. If all the stones are removed, a new round begins. At the beginning of the game, the player has six balls and can choose the level of difficulty, by moving the cursor(racket) under the chosen level and pressing the MOUSE key. The game starts when the ball is on the racket and the MOUSE key is pushed. To leave the program press FCTN Quit.

CALCULATOR is a BASIC program explained with the MOUSE. As mentioned before, this simulates a pocket calculator, in which the mouse cursor appears as a red hand. After having moved the cursor to a digit, press the MOUSE key to enter it. If a complete number is entered by this way simple arithmetic calculations are chosen in the same manner while the number disappears. Finally the result is displayed on the screen, after entering the "=" symbol. With "LO" the result is cleared and the CALCULATOR is ready for another problem. Erroneous entries during calculations are cancelled by "C", but will not cancel the whole arithmatical equation, as I found by trial and error and reading the manual. Illegal operations (dividing by 0 for instance) will cause an error. Due to the display of this message, the graphic of the CALCULATOR is shifted up on the screen. In this situation the CALCULATOR will not work correctly. To clear this error the console has to be switched off for a moment. With the "BASIC" option the program is

exited returning you to BASIC.

TI-DOS is a routine that enables you to read diskette contents. With the software diskette in drive 1 the directory of this diskette is displayed on the screen. At the left of each filename a symbol marks program OR data file. At the right, another symbol indicates protection if any. By moving the MOUSE around, an arrow cursor becomes visible with which options can be chosen. Moving it to the triangle in the upper left corner, and pressing the MOUSE key, the remainder of the directory will be displayed, if available. With the other triangle symbol you can proceed in the opposite direction. If the cursor is moved to the symbol of the second disk drive and the MOUSE key is pressed, the symbol changes its colour and the directory of the diskette in drive 2 is displayed.

To get more detailed information on files from TI-DOS the cursor can be moved to the symbol "?" at the right margin and the MOUSE key pressed. Like the display of directory move the arrow cursor to the triangle symbol and press the MOUSE key to see 15 pictures of explanation.

NOTE 1: the TI-DOS file is ONLY a demo.... For this reason the other functions described in DOSINFO will not work. MECHATRONIC offers the complete program.

NOTE 2: this program can only be exited by switching off the console.

    Several tips for the care of a MOUSE: .....store it away from any direct heat.....use the plastic protective strip when transporting...; and if the MOUSE gets soiled, take a damp, soft cloth and dry it with a soft towel before reattaching it to the computer. NOTE: As a precaution ,touch the MOUSE connector to a metal object to ensure there is no static build up before inserting the mouse connector into the console outlet.

    One comment from the "other" half as I was finishing the paragraph concerning care of the MOUSE kids and it will last a lot longer!!" Who's he kidding!!!!!!!!
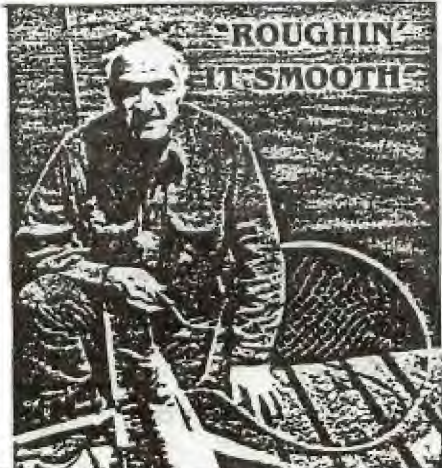
    I hope you try the mouse. I really enjoy it when I can get near the system and my other work is finished. I have definately got my "feet wet" now.
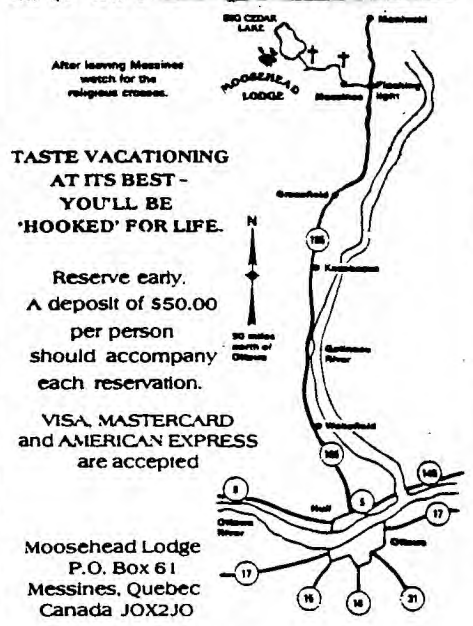
NUAC NEWS
By Bob Boone

We're at a crisis point right now with NUAC. We need ideas from all of you have cared enough to join us. What kinds of things do you want NUAC to do for you and can you also suggest how we can do them if the answer isn't obvious.

Jane LaFlamme and I have been asked to start up a steering committee to advise the Ottawa TI User Group on what directions we'd like to take with the Association. We desperately want ideas from people remote from our group here in the Ottawa Valley. Tony Robinson in Vancouver; Tom Hall in Edmonton; Francis Gaston in Saskatoon; Monte Blue in Lethbridge; Paul Degner in Winnipeg; Jean Paul Rheume from GOTIQUE; Larry Dickenson from Fredricton; etc etc etc...

                    rally to the call....

The steering committee will be appointed locally; it will convene several times over the summer and make its report to the OUG executive on the second Thursday in September. That report will essentially be NUAC's salvation or damnation. Things we're looking at are an ammendment to the OUG's constitution whereby NUAC will become an 'official' entity; enlarging the NUAC section of our NL with input from users in other countries and continents(letters have already gone out soliciting semi-regular input from Australia, England, Germany, France and even Argentina!) We also want input from YOU across the length and breadth of our country! Toronto is doing some great hardware tricks with the 99/4A; as are some of the users in BC. Many Canadian users and others from around the world are doing equally impressive things with software. Lets do everything we can possibly do to spread these accomplishments around!

TI-NUAC, right now is just a name. In name only, we co-sponsored a festival to celebrate the TI-99/4A computer on the 26th of April. Many of you came. From all known points in Ontario and Eastern Canada, you came! We were impressed!
In fact we were impressed enough to do it again next year. If you think it can be improved in any way let us know how... We've picked up several of our mistakes(eg: better crowd control so not so many will be able to sneak in next year...haha!). It was obvious from the very beginning our fairware booth and 'freebies' tables weren't visible enough...the Lecture room was kinda hard to find to wasn't it? Anything else??? Larry Dickenson, Luigi Tattonetti and Archie Simmonds have earned my everlasting gratitute for manning my booth for me while I took several badly needed breaks during the show....and still didn't see a thing! Thats gonna change next year to (fat chance)! It was exciting and we have a very good quality videotape of all the presentations to prove it! We're searching for inexpensive ways to reproduce it now for the benifit of you that may have missed out on them.

Myarc was represented by Steve Lombardi, of TEXAMENTS, from Patchogue New York. He showed MYARC's new computer on a card and both performed flawlessly. Wow, what a system thats gonna be when it switches from vaporware to reality hopefully near the end of June. John Clulow presented his fantastic Ram Disk and also spoke a little about Guy Gourney's Maximem module. Bruce Ryan of Ryte Data in Haliburton Ontario showed us some of the new hardware from Mechatronics in Germany and Charles Sincofski spoke about his Telecommunications network caled TIMELINE, based in Montreal. It made for a solid 3 hours of interesting viewing. Unfortunately there were no shots taken of the Distributor area during the show; an oversight that will hopefully be corrected next year....

Thats All for now! Please respond today with input as to what you would like to see NUAC provide for you!

PRIOR PATTERNS
By Bob Boone

WHAT A CLASS ACT!!!

ITS OVER! and...there were very few fronts on which it could have been better! The dust has nearly settled. There was no possible way to get an accurate head count...call it somewhere between 400 and 700 happy, excited and vibrant 99ers!

Many many elements came together under the able leadership of Jane Laflamme to make the day the success it was. The set-up and tear-down went flawlessly(or at least fairly smoothly and on schedule too!) The presentations by headliners went very well as witnessed by yours truely through the magic of video tape! The attendees had plenty there to spend their money on, both hardware and software, were there in abundance. Door prizes, amounting to more than $700 in value were given away throughout the day. (I won a Plato package...and no it wasn't fixed!). The dinner was attended by 69 happy TI-99ers(I hope they were happy anyway; the atmosphere certainly indicated they were...and sales at the bar did too!).

The vendors, and groups, that had booths, of which there were 26 at final count were immanently satisfied with your performance and you certainly, by all accounts snapped up a lot of what they had to offer(with the dual exceptions of Fairware and 'Freebies' as mentioned in my NUAC article elsewhere). Only 65 fairware disks were sold of the 500 we had prepared for the show. It was admittedly not well marked, and the products offered were not readily describable by the folks manning the booth but we had hoped to be able to sent lots more money back to the various fairware authors. Next year, if time permits we'll have descriptions of the software available for you to read; and the booth itself will be more visible. We had MicroPendiums; Miller Graphics catalogs; Corcomp product fact sheets etc. all for the taking and almost no one took them...how come? Clubline-99s were on sale at 50 cents off the cover price and our newsletter was available for a dollar. When the dust settled we were shocked to have sold only 15 Clublines and even fewer of our club's NL! I think invisibility was the major factor here again. We'll have to wait till next year to find out for sure.

The support we got from TI users here in eastern and central Canada was little short of spectacular and support from our users here in Ottawa was just as solid. Again we thank you all.

Known attendees at the show; Group by group from East to west were: TI Nova Scotia; TI Fredricton NB; GO-TI-QUE; CIM-99(and their Walrus:wow!); Carleton 99ers; Almonte TI Users; Kingston 99ers; 9-T-9 from Toronto; Channel-99ers; Waterloo Regional 99ers; North Bay UG; Kawartha 99ers; Sudbury 99ers and as far as we can tell 5 beautiful people from New York State. Well done!

(T)hats (I)t

ADDING ADDITIONAL DISK DRIVES
by Darnell Denison.

For many of you, this may be 'old hat'. However, this following information should prove quite useful for all. I promise not to go into the details of transmission line theory. Instead I will present a layman's view of what is needed and why, when more than one disk drive is connected to your 99/4A home computer.

First off, the way the peripheral expansion box (PEB) is designed makes it difficult to follow the transmission line design rule pertaining to proper termination of a signal. (Don't worry, termination here has a different meaning than what the mafia thinks it means.) Ideally, a transmission line likes to have a driver (the disk controller card) at one end and loads (the disk drives) located along the transmision line. Terminations are placed at the end of the transmission line.

A note on terminations. Imagine a single clothes line tied at one end to a fixed object like a door knob. You hold the other end in your hand and pull the line semi-taught. Now snap your wrist up and then back to the initial position. What you will see is a 'pulse' moving down the clothes line toward the door knob. When the 'pulse' hits the door knob, it is reflected back towards your hand, BUT IT IS UPSIDE DOWN. This same 'pulse' can be reflected off your hand and repeat its travel back and forth until it dies out. Now imagine sending multiple 'pulses' down the clothes line. Can you see the confusion at the middle of the clothes line where someone is trying to count only the pulses you are making and no reflections? Why? The clothes line was not terminated properly. If a mechanical damper had been connected to the door knob and the clothes line tied to the damper, then no reflections would have occured.

Meanwhile back at the PEB, you may note that when additional drives are added outside of the PEB (one or two drives are already installed in the PEB), the disk controller card ends up in the middle of the transmission line instead of at one end as we would want for an ideal set up. Not being readily able to do anything about that, our best alternative is to put the termination as far as possdible from the disk controller card. Just what is the termination? In the world of electronics, terminations are usually resisters tied from the transmission line to some reference. If you look at the TI shuggart drive with the card edge connectors facing you (see FIGURE 1), the termination is the thing that looks like an integrated circuit (IC). I labeled it RES NET which is short for resistor network.

TO ADD MORE DRIVES, 5 things must be done:

1) Get the following items:
Component carriers — 14 pin (one per TI Shuggart drive which is not the driive farthest from the disk controller card)
220 ohm 11/4 watt resistors (one per component carrier)
Soldering iron and solder (only needed for TI Shugart drives)
Sharp knife (only needed for TI Shugart drives).

2) carefully solder the 220 ohm resister between pins five and 10 on each component carrier as shown below. clip the excess resistor leads off after soldering. NOTE Pin 1 on the carrier is marked by the corner being cut off.

(Call Sounds editor's note: These carriers with resistor premounted are available _free_ (1 only) from Texas Instrument. Call 800 TI CARES)

3) remove the termination resistor network from all disk drives except the one which is farthest from the disk controller card. This resister network will be on all disk drives regardless of who made it. On TI Shuggart drives, install the component carriers with the 220 ohm resistors in place of the resister networks. Observe that pin 1 is in the upper left corner. Non-TI Shuggart drives don't need this 220 ohm resistor.

4) On the TI Shuggart drives, a select switch is just to the left of the resister network. This switch is nothing more than 6 jumper wire locations with no more than 2 jumpers installed. Determine the drive number for each drive. Now get a sharp knife, soldering iron, solder, and look at the select switch. The top jumper must be connected between pins 1 and 14. Pin 1 i marked below with 0. If this drive is not to be drive 1 (DSK1) then cut the jumper between pins 2 and 13 and carefully place a solder

WHAT ABOUT MYARC???

On Saturday afternoon, Myarc gave marathon presentation
beginning with programmer John Keown demonstrating a new item of
software called Program Manager (which allows you set up and
execute personalized menus) and a GPL Interpreter which will
allow you to suck cartridges.

All present were on the edges of their seats as Lou Phillips
showed off the new Extended Basic II.

As you know, I have been a critic of Myarc for some time and I
must say that EX II really blew me away.

Extended Basic II contains a number of Unix-like commands. For
example, if you are going to be working off drive #1, just enter
DSK1. in command mode and you won't need to do OLD DSK 1.xxx.
you can also RUN xxx with no quotes or drive designation. Just
that much enhancement is really nice.

Lou then showed a demo that was done for the 99/8 by TI and it
demonstrated the simplicity of drawing a line between two points
in XB II. You can also place a string on the screen not only
horizontally, but vertically using easy commands. It was also
noted that the manufacturers of the chips were Yamaha and
Microsoft (as we know them in this country). It will be
possible to use your 128K card to expand to 3/4 meg of CPU RAM!!
The entire memory space is 2 megs!!!

Phillips then showed memory maps of both the 4/A and the new
machine and contrasted the way things were laid out. He
indicated that it will have to be on an 8-bit bus since the
P-Box is set up for only an 8-bit bus but the Basic will be at
least as fast as the 520XT.

It can be used with a composite monitor, but not with a TV. The
9938 has direct analog RGB output. While the 520 does it's
video processing through software, the 9938 chip has scroll and
other features built into the hardware. There's a lot of
intelligence in this sucker.

There followed questions about multi-tasking, etc. and all
Phillips could say is that all avenues are being checked out.
He did say that when you powerup, it will be quite similar to a
PC. The direction seems to be similar to MS-DOS. You won't see
Basic on the menu, instead it search the drives. But, it will
have a Basic internal and a GPL interpreter in ROM. He placed a
high priority on a C compiler (since the big selling software is
in C). Also, Myarc plans to spend a fair chunk of money in the
education market, and many programs of all varieties are being
written in C.

I feel that he kind of misled the audience when asked about the
MS-DOS compatibility aspect. There is no way you can put an IBM
computer on a 5x7 inch card. If an IBM co-processor comes
about, it will have to be run through a special port not in the
P-Box. (think about it- Commodore has an Apple emulator that is
twice as big as the C-64)

It was also indicated that existing software will be compatible
with the 9995, and will run faster. (The 9995 has intelligent
instructions) Also, the 9900 requires byte instructions, where
the 9995 has intelligent instructions that does more work in
less time as well as internal pad RAM with very fast registers.

Price is still expected to be $499 list price, but still nothing
firm.

Phillips then showed an industrial- grade shielded cable (no
firehose) for connection to the P-Box and any other peripherals
that may come along in the future. A replacement interface card
will be a $70-80 option for using your P-Box. The interface

will be priced as low as possible as a break-even type thing.

As an aside, Myarc is offering an EPROM for $50 (for their controller) that will let you address quad density (the EPROM was developed by Paul Charleton).

Phillips indicated that they are very concerned about compatibility, but even TI couldn't make all their cartridges work on the 99/8 (mostly things that use Basic/GPL like Statistics).

If the market will bear it, there may be a special peripheral box, but Lou noted that even Atari doesn't have one yet.

Concerns were expressed about updates, to which Phillips replied that they intend to support users as fully as possible.

People wondered how close they were to which Phillips replied that the major work had been done with the development of XB II. Since the summer CES is in June, Phillips hopes to be able to take orders at that time. He said that they had spent three weeks running programs to ensure that existing programs will be compatible. It was also noted that with the new interface cable, some address lines will be brought out that TI had neglected to do, allowing for more possibilities.

Phillips noted that the 9938 has multiple video device interfaces, so you could expect to put data images over VCR images!!! (That is you could add 9938 generated images over a video image such as titles and maybe even digitizing).

Myarc was also taking names and addresses of user groups and press affiliations so that they can be notified when the thing is ready to go. This is a radical break from the past, as Myarc has never made any product announcements concerning the new computer.

As you know, I have been very critical of Myarc in the past and I am still a little leery. However, based on what I saw in LA and one- on-one talk with Lou, I will give them the benifit of the doubt this time.

No, the new computer was not working for the public, but I was told by a source close to Myarc that it was working in the motel room.

My personal opinion is that they're real close....the proof will be at the New Jersey faire on the 15th. At this point I'll give them a "definite maybe". I was VERY impressed with Extended Basic II. The capabilities of that software are reason enough to buy the 128K card.

Myarc seems to be opening up to us especially taking names for future marketing. Lou said that they are planning a newsletter as soon as they fill the backorders on XB II which will keep us abreast of what's happening. This is something that has NEVER been done.

Lou revealed that they have 20 prototypes which will be sent to major software developers so that there will be serious software support. (I told you that in last month's RaG)

I feel that I can separate BS from fact quite well, and I think that they are being above board this time.

Lou indicated that they will be producing full documentation so that everyone can see what's going on (as opposed to TI's attitude of treating the machine's internal workings like nuclear bomb secrets)

****

So, there you have it....a brief summary of what I saw in LA.

If nothing else, I came away with a better understanding of the business aspect of the home computer marketplace.

I would strongly suggest that you support your dealers. They're not making all that much on the things they sell and then need

our help.

It's quite similar to the photography business that I'm it. I make more money on a high-ticket item than something that costs $20. And many software packages are priced in the $20 ballpark which leaves little room for markup. You've got to sell lots of $4-5 markup items to pay the rent. And, with only a $30-40 markup on hardware, you've still got to move some volume to stay alive.

The people producing hardware aren't really making a killing either when you consider RD expenses and problems with suppliers, etc. I know that Craig Miller is getting up very early and going to bed very late just to support this machine.

And then let's not forget the distributors (middlemen) who will sometimes screw the dealers. I'm not suggesting that all distributors are crooks, but they're out there.

You have to realize that most hardware producers do not have people in a backroom somewhere soldering chips to circuit boards. Companies like CorComp, Myarc, and yes even Craig Miller will farm out the actual assembly. That allows them to drop ship to distributors and just shuffle papers at the office rather than worrying about sending 2 memory cards to one dealer, 3 controllers to another, etc. (I should note that Craig retains quality control and operates a bit differently) My rule of thumb in this business has been to deal direct whenever possible to keep costs down, but that's not always possible both in my business and in the computer market.

(Interestingly enough, there seems to be a great difference between the home computer market and the PC market. You and I will buy a disk drive for $75 no problem, not so for an IBM user. They won't pay under twice that for the SAME product. The same applies to RAM)

OK, you can take the soapbox away now, but I felt that you needed to understand the way things are.
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Canada 1

Decoy/Appelant
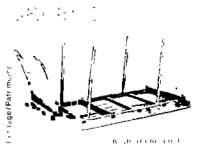
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