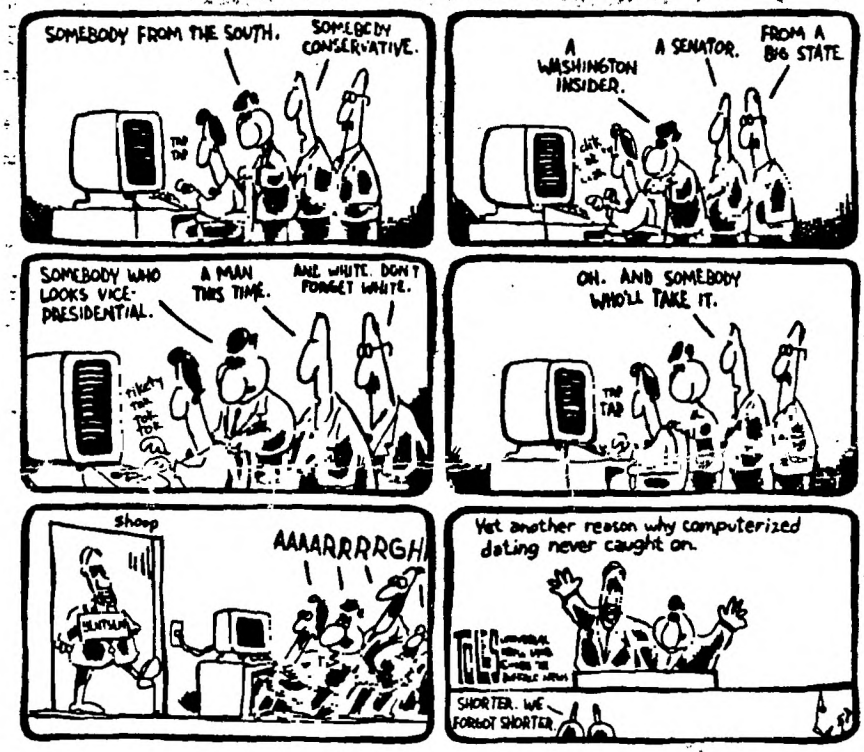
# NEWSLETTER

# 9T9

Texas Instruments
USERS GROUP
TORONTO

FOR THE TI-99/4A COMPUTER
and compatibles

AUGUST/SEPTEMBER 1988
DOUBLE ISSUE





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


TO: Edmonton 99' er Users Soc
P. O. Box 11583
Edmonton, AL T5J 3L1

# 9T9 USERS GROUP

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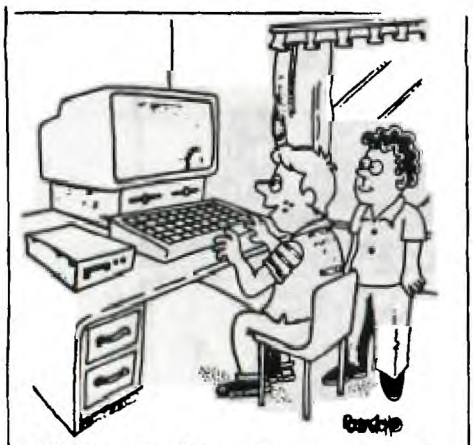

*"This oughta be good—I just switched Club 21's menu with McDonalds."*

## MEMBERSHIP FEES

FULL MEMBERSHIP $30.00 / year
NEWSLETTER SUBSCRIPTION $20.00 / year

All memberships are household memberships. An newsletter subscription is only for those who do not wish to attend meetings, but wish to receive our newsletter and have access to our library. You are welcome to visit one of our general meetings before joining the group. If you wish more information contact either our president, in writing, at the club address on the front cover or phone him.

Our BBS, The TI Tower BBS # (416)921-2731, 300/1200BPS, 24 hrs.

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Any business wishing to reach our membership may advertise in our newsletter. The rates are as follows. (width by height):

| | | |
|---|---|---|
| FULL PAGE | (7" x 10") | $50.00 |
| HALF PAGE | (7" x 5") | $25.00 |
| QUARTER PAGE | (7" x 2 1/2") | $15.00 |

Please have your ads camera ready and paid-for in advance. For more information contact the editor.

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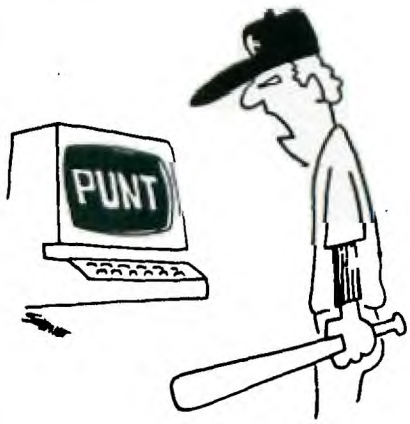
*"Watson, that confounded disk drive whirring destroys my concentration!"*


*. . . Wrong Season!*

# TId Bits #21

-By Steve Mickelson, President 9T9 Users group, Toronto
Compuserve 76545,1255; Delphi SMICKELSON; GEnie S.MICKELSON

## Back In The Saddle:

September is here, already, and I trust that all of you had a good summer. Surprisingly, much, has happened in the world of TI, since the last issue of the newsletter.

The August/September double issue of the newsletter, was originally planned to be out a few weeks prior to our September 24 meeting. As you can see it is not. A few things seem to have "conspired" against me getting work completed, as far as the club is concerned. My Geneve had to go back to Myarc for repairs, I took a vacation in August, and whe postal strike seemed to hold-up my mail for over a week.

Also, I found that I had become quite spoiled with the faster 80-column Geneve and MYword. I commadeered my kids system, Triple Tech and all, and found the slower speed, the toggling of windows and the dropping of letters at the end of lines, was too much for this two-fingered typist. I recently purchased through Damark liquidators, a NEC PC-8500 laptop, which let me type in 80-columns again, without dropping letters, etc. I found that the RS-232 harness, which I had made for my Imagewise Digitizer project enabled me to transfer articles from the NEC to the TI, for final editing and printing. Still, the limited TI keyboard, with double keystrokes for TI Writer ,(and triple srokes for Fast Term), plus time sharing with my kids made progress on catching-up with work on the newsletter and correspondence very slow, at best.

The problem with my Geneve, a black screen, was found, by Myarc, to be component failure in the composite output of the Geneve. Lou Phillips seemed surprised that I was able to use my Magnavox Pro 8CM873 multimode display without having a load resistor on the sync line, as some other Geneve user had done. I have run the 9640 for about a year with no problem except the odd flutter. While my Geneve is back at Myarc, I am having installed the additional 32K zero wait memory cache', which is supposed to improve the speed of many programs, as much as 20%. An article, by Paul Charlton describes this project. However be fore-warned that if the user undertakes this one, you may void your Geneve's warranty. I was informened that Myarc is about to introduce two new cards for the peripheral expansion system. One will have dual functions, including MIDI interface,( see my TId Bits last fall re: this card's rumour). As to what the other function the MIDI card will have, we'll have to wait and see. If the cards are half as good as the HFDC, we'll see a whole new era of computing in our community. Lou, also informened me that their New Jersey arm will be strictly technical, for manufacture, repair and R & D aspects of operations. Jack Riley will undertake the customer service, public relations, and publicity arm of operations. Myarc's new number for the technical operations, in New Jersey, has been changed to (201)805-0006.

This issue features an interview with Lou Philips, from Compuserve. With its HFDC and 9640 cards, Myarc has taken a leading role in our community. Myarc has managed to get its Hard Floppy Disk Controller, (HFDC), out, with utility disks. I had one on order from Disk Only Software since the end of last November. The HFDC arrived August 17, just before my postal service "ended" due to the current strike, and works both with the 99/4A and Geneve. See my review, elsewhere in this newsletter.

This, however, gave me the opportunity to put the HFDC through its paces. And with the exception of articles edited for this newsletter earlier on the Geneve; this will be the first issue not totally edited on a 9640, since June of '87.

## Contact From Other TIers:

Also, having a week's vacation at home, enabled me to finish my Imagewise digitizer and power supply project. Which leads me to a call from Steve Andrews of the North Bay Users Group, July 6. Steve informed me that he and another TI-er had completed the same digitizer kit as well as the receiver/displayer kit. It seems they had ordered two digitizer and one receiver kits, and completed all three projects after I received my kit and before I found time to complete my digitizer.

Steve complained of the relatively low resolution of the TI Artist/RLE pictures resulting from Steve Lagguth's freeware utilities for the Imagewise projects. The origional data of the digitized image is in the form of a Run Length Encoded DF128 file , 246 sectors long. To convert to TI Artist format, this relatively large data file is reduced by a factor of 10, to the standard 25 sector file. I agree with our friends in North Bay that losing 90% of the image information, is too much a waste. They were hoping that some software were forthcoming to at least convert the image files to Picasso format, a higher resolution image for the 4A than that used with TI artist.

I tried, unsuccessfully, to get Paul Charlton's GIF2 and MYart to use/display these files. It appears, to begin with, I need a DV128 file. Also, I may need to experiment with the DIP switches on the digitizer board, perhaps to switch-off the compress and RLE bits prior to digitizing an image. I hope to take the Turbo Pascal Source Code files, which were provided with the Imagewise kit,(in IBM Format), convert the code, using Mike Dodd's utility, to a format usable by Turbo Pascal, and then recompile the utility. At present, I have a Freeware version of Turbo Pascal from the Swedish Pascal SIG, downloaded from GEnie. If this doesn't work I can either try the commercial Turbo Pascal from Tenex or see if the file runs on the Run Time Pascal, for the Geneve. A friend of mine who has an IBM clone looked at the IBM Pascal source code files for showing a digitized image and indicated that two of the three files may be corrupted. I will have to check it out.

Steve Andrews, also, asked about who was distributing the commercial version of Picasso, mentioned in TId Bits #20. The answer came from issue number two of Asgard News. It seems that Arto Heino did copy from the Paint 'n Print, by Navarone. Heino, apparently was contracted for a commercial Picasso by Chris Bobitt. Bobbitt found out later re: the true author of Picasso. He contacted Navarone and worked out the following solution: Picasso 1.1 will continue to be available as trialware, but don't pay Heino, if you can find him, since his disappearance. Tenex, as it had previously, will have exclusive rights to the sale of Paint 'n Print; and Asgard will make the commercial,( V 2.0 or higher), Picasso exclusively for Tenex. This new magazine is well done and fills a number of gaps in the news department. I think we as users will benefit, by seeing Micropendium and the TI bi-line of computer shopper covering a broader type of readership, from what is now covered. I think all three publications complement each other, with very little duplication of articles.

I received a couple of enquiries, one from the president of the Tri-Valley Users Group and the other from the president of the WW99ERs in Illinois. I received the first letter via GEnie mail before my Geneve was out of action and was able to answer his questions in an on-line reply. The second letter, arrived while I was out of town, on vacation, sometime during the first two weeks of August. By the time I had returned, our Canada Post was taking their yearly strike. Since I did not even receive any mail the last two weeks of August, I decided to answer that letter in this issue of Newsletter 9T9, which will be mailed as soon as the strike has ended.

Here, is the letter from the WW99ERs users group and my reply. If Jim or Gary would like to add anything to my reply, which follows the letter, please contact Marc Levine, at the return address given:

3 Genevieve Lane
Champaign IL 61821-7213
USA
July 18, 1988

Steve Mickelson
15 Kersdale Ave.
Toronto, Ontario M6M-1C9
Canada

Dear Steve,

I read with much interest your reports of Jim Ballantyne and his dumping of Adam cartriges and the possibility of dumping Nintendo carts. I find this very interesting and a big story in our TI community. Can you give me more information? How is it physically done? What types of software and hardware does one need or that Jim has developed to do this.

It's difficult to even ask questions before knowing what physical setup he has to do this. This would especially be so for Nintendo carts. The Nintendo, not being a "computer" does not have the typical "ports" that one would expect necessary to do this. It seems to me that if Jim came up with some type of adapter plus software to allow one to take a Nintendo cart and either run it off the TI or dump it and run it off the TI that no royalties would be needed. If, however, Jim had to dump them and modify them first it would be a different story. I'm sure he would have to pay royalties and I doubt that Nintendo would let him do it even if he offerered.

I expect I'm getting ahead of things since from what I've heard, he has only dumped Adam carts. OK, some more basic questions. The Adam obviously used the 9918 video chip. Does the Nintendo also use the 9918? Could, theoretically, any machine that uses the 9918 have it's games modified to run on the TI? What video chip does the Sega use?

I have a 6K (not minimem), Myarc 80 Track controller, 256K Horizon RAM Disk and Horizon RAM Disl 384K+. Could I run any of his dumped Adam carts on my system or would I need some other hardware item he has developed?

I would love to get some of these, however, if he does not want to pass them around, I hope someone from your group will at least make it to the Chicago TI Faire in November to demo all this. I live 150 miles South of Chicago and always make it to their Faire. I've met Bob Boone there a number of times.

SINCERELY,

Marc C. Levine
President, WW99ERs
TI 99/4a users Group

The initial version of Jims Z-80 Simulator, is a program which will run out of Editor Assembler and will allow unaltered cartridge dumps from the Adam computer to run on the TI-99/4A. The Z-80 Simulator executes about thirty instructions for every single Adam instruction.

The Adam uses the same 9918 video chip, but the higher clock speed of the Adam, plus the fact that each action or sound must be interpreted, makes the software run very slowly, on the 4A. The Geneve's capability, at GPL speed 5, to run TI software three times as fast, as on the 4A, allows the Adam cartridge dump to operate more closely to the way it did on the Adam.

At a recent meeting, we demonstrated a cartridge dump of Antarctic Adventure, on my Geneve. The software uses the TI or Geneve host computer for video output, joystick/keyboard access, and disk drive access,(the latter to load in the software). Even with the new 64K zero wait memory cache', the Adam software is still slower than on the Adam. But it does work.

The color table and keyscan are different on the Adam's 9918 than the 4A, and must be reinterpreted through the Z-80 Simulator software, in order to work with the TI.

Three members of our club have purchased used Adams, and collectively have about eighty modules that can be dumped. Club member, Gary Bowser, has built, on a Proto Card, a card, which sits in the peripheral expansion system and will permit an Adam cartridge plugged into it and the contents dumped into the RAM on-board the card. This card acts much like the GRAM Kart.

Besides the speed problem, with Adam software, the Geneve has a memory problem, with 32K Adam cartridges, such as The Dukes Of Hazard. It seems that in order to load the Adam cartridge, the Geneve must, load into RAM, the MDOS Operating System, the GPL Interpreter,(which enables the Geneve to simulate the 99/4A); the Editor Assembler Cartridge; Jim's Z-80 Simulator; and Finally the Adam Cartridge Dump. After this is all loaded, there is not enough pageable memory to handle the larger, 32K, cartridge dumps. One solution might be to rewrite the simulator to run out of MDOS. Another would be to consider the 512K memory expansion of the 9640. This still doesn't help solve the slower execution speed of the Adam software.

The apparent solution is to build a card for the peripheral expansion system, with an advanced Z-80 CPU,( clock speed 16 MHz), with 64K of RAM on-board. This card would take the Adam cartridge dumps, and allow them to perform at regular speed or upto several times origional speed. The co/processor card would be more or less an Adam on a card. Not only does this solve the speed and memory problems, but will allow the Z-80 Simulator to run either with the Geneve or the 4A.

The card would come in a package, which would include a Z-80 Assembler, so the user can run Z-80 Source Code or write his own Z-80 code. No price of this card has been announced. Also, to my knowledge, the Nintendo aspect of this project has not been persued, and probably won't, for copyright reasons.

The simulator was shown, by Jim, in Ottawa, last spring, to interested on-lookers, including Chris Bobbitt. Bobbitt expressed more than a passing interest in this project.

I don't know whether Jim or Gary will be at Chicago or, if either attend, if the Z-80 Simulator will be shown.

Sorry about the delay in answering your questions, Marc, I really hoped to have this issue of Newsletter 9T9 out long ago.

This Meeting:

I hope to have show both the HFDC and digitizer at the September and October meetings, respectively. Look foreward to the announced club software contest to be discussed.

This meeting we will, also, feature a new disk of the month and give users the opportunity to pay their fair share for the Freeware Software of the Month, see Cecil's notice below:

## SUPPORT TRYWARE/FAIRWARE

By Cecil G. Chin, Officer at Large

For those of you who have not yet contributed to ARCHIVER 2*4; you can still do so by contacting Gary Bowser or myself with your contrubitions as early as possible; as the money order will be purchased soon.

The next Program on our list is DISK UTILITIES better known as DSKU. This program is written by John Birdwell in Assembly language. It is a Disk Manager and Sector Editor which is very user friendy. It has so many features I will not be able to list them all; but to name a few: apart from the norm, it has Disk and File Compare, View File (screen or printer), Print Sector, Input and/or read Comments. There is also a Hex-Dec/Dec-Hex converter.

The author is asking US$15 so, CAN$15 plus 20% for exchange and other expences should cover it.

The necessary form for the contribution will be available at the next meeting. If you cannot make the meeting please contact Gary Bowser (960-0925) or myself (671-2052) and arrange for a delivery or pickup.

No Word From Bob:

No word to date, as to whether or when Bob Boone will visit us. Gary Bowser gave me his new address and phone number: 126 Sage Rd., North Bay, Ont., P1A-3A4, phone (705)476-0265.

That fore-mentioned week at home gave me the chance to drop by TI in Richmond Hill and leave a couple of hundred fliers about our club. The art work for this was created by Steve Findlay, ala Certificate Maker, with a couple of inserts, by yours truely. If you are interested in helping promote the 9T9 Users Group, by posting one or a few of these fliers at a local library, supermarket, etc. we will have extra's available at the next meeting.

New Meeting Place:

The September 24 meeting, may be the last held at the Gregory library. Thanks to my friend and neighbor, Mike Zeleniak, who is an IBM user and owns an unexpanded TI, we may be able to use, free of charge, a meeting room, leased by Canada Remote Systems. The CRS operates a commercial data base and, apparently, sells the lowest priced, (in Canada), CD ROM storage device. Mike gets their newsletter, which contained the following announcememt:

CANADA REMOTE SYSTEMS

SUITE 311, 4198 DUNDAS STREET WEST
TORONTO, ONTARIO
M8X 1Y6

1-800-387-1901
1-800-268-2705
(416) 231-2383
FAX 416-231-9174

## NEED A MEETING PLACE? FREE?

**An open offer to clubs:**

**In order to conduct seminars, we've made arrangements to lease, in our building, a seminar room. This seminar room will be set up in such a way to facilitate meetings as well as seminars.**

**If you're involved with a club, and are looking for a place to meet, we're more than happy to offer our seminar room. It holds about 50 people, and has all the appropriate audio-visual equipment necessary for seminars/lectures/meetings.**

**There's no charge, and the room can be reserved through Brenda Brennan for one meeting or a series of meetings.**

**We can't use it every day, but perhaps some of you clubs can. If you're looking for a good place to meet, call us. Make sure that you give us some notice. The room is not heavily used, but there are some times that it will be unavailable.**

**Best of all, your use of it is FREE!**



The nature of my work keeps me from easily getting to a phone, for personal phone calls. Therefore, I called Randy and asked that he make an enquiry, on behalf of our club, with the purpose of booking the room, possibly on the old traditional meeting date, the last Tuesday of the month. I want to thank Randy for making the call, on behalf of the 9T9 Users Group.

As the room and facilities are free, our club will save $200 a year, over our current rent. Many members and several people interested in joining the 9T9 Users, have complained that Saturday meetings conflict with work of family activities. As no day would be without some conflict for somebody, returning to monthly meetings on a weeknight, seems to have fewer conflicts than a Saturday morning. I hope that we can get the place on a regular schedule, without a conflict, and that the room is at least as good as that at the Gregory library. We hope to discuss the facilities at September's meeting. If you miss this meeting and plan to attend October's meeting, contact any one of the 9T9 Executive members; their phone numbers are in the inside cover of the newsletter, to find out where/when October's meeting will take place. Modem users can check the TI Tower BBS at (416)921-2731, 300/1200 BPS, 24 hrs.

That's all for this month's TId Bits.

# Myarc HFDC Review

-By Steve Mickelson

One of the main reasons TI users abandon their 4A for some other brand has been the limited size of space available to store data files. The problem has been addressed through double and quad density floppy controller cards, as well as RAM disks with battery backed memory, up to one full megabyte in size. The price, however ($590. US for an assembled one meg. Horizon RAMdisk), has made many TIers balk at such prices, and tough it out with a limited system. Enter the Myarc Hard and Floppy Disk Controller, HFDC, Card, and we see a whole new world of data storage.

The Myarc HFDC card, (available for $325. US, from Disk Only Software, plus shipping), is a mult-function card which will permit either the TI-99/4A or Geneve computers to interface and control up to three hard drives, four floppy drives, and one tape streamer. The streamer can be used to back-up the hard drive(s). Hardware requirement for the HFDC are 99/4A console or Myarc 9640 card, monitor, TI Peripheral Expansion Box,( or equivalent), Myarc or TI 32K expansion memory,(not needed for Geneve), one or more floppy disk drives and cables, and hard disk drive,(including cabinet and power supply).

The HFDC can support up to three hard drives, each having a capacity of 134 megabytes. The drive must be ST506/412 compatible. Run Length Limited, (RLL), drives cannot be used with the HDFC card.

The Floppy controller will support of up to four drives, either 3-1/2" or 5-1/4" single/double sided; single, double or quad density, with 9,16, or 18 sectors per track. The head step can be set to 16, 8 or 2 msec. The memory capacity of each drive can be either 360K or 720K, with 40 or 80 tracks. All settings for each of the four drives can be set by means of DIP switches on the board, thus allowing the mixing of various types of drives in your system. Provision has been made, also for 80-track, 36 sector, 1.44 Meg. capacity drives,(for possible future option for expansion).

DIP switches on the HFDC, also allow the user to change the CRU address of the card on the computer's I/O bus. This will permit the card to reside in the expansion system, along side another card sitting at the CRU address 1100, allowing for up to four additional floppy drives, four controlled by the other controller card, and four more by the HFDC. The CRU location can be any of sixteen from CRU of 1000, 1100, 1200, and so on, to 1F00.

The card comes in a standard plastic clamshell, along with a TI- style three-ring binder, containing a well written user's manual. My compliments to Walt Howe, for a job well-done. In addition to the documentation are two cables, one 34-pin edge connector and another 20-pin cable with edge connector on one end and a slotted pin connector on the other. This will enable the user to connect the HFDC to any standard hard drive, (e.g. Seagate ST-251).

The software consists of Myarc Disk Manager V, for use with both the TI and 9640. Included, are upgrades for the Geneve software to permit the 9640 to access and use hard drives. The 9640 software, namely MDOS, V1.06; GPL, V1.01, and MY-Word, V1.20, will enable access to the hard drive(s), but at present, not floppies. This necessitates keeping your old floppy controlle card, and setting the CRU address of the HFDC at 1000, at least until an update of the MDOS operating system is complete. This review will be restricted to useof thecontroller with a 99/4a, as this is the most complete application of the HFDC card.

The manual is well-written, with a very useful trouble-shooting section,( especially useful to this greenhorn to the world of hard drives). It guided me through several problems I had initially, with formatting the hard drive. Formatting the drives, unlike other computer systems, does not have a low and high level of formatting; rather a single format command results in the software and firmware going through a format and verification process, similar to that found with standard 99/4A floppy disk manager software. It appears both low and high level formats are performened at the same time. However, with a large capacity drive of more than 30 MEG's, be prepared to have a coffee or two while that first initialization takes place.

There are sections, in the manual, covering selection of drives, setting of the DIP switches to configure the card, command sets supported by the card and software, connecting the cables. Also, included is an addenda sheet for the manual.

For the software writers, a chapter covers Basic and Assembly language support for the card, with full memory map, CRU definition, internal disk data structures, and software interface specs.

One useful feature is DSK1 and DSK emulation, which enables the HFDC to have programs normally restricted to residing on DSK1, (FUNEL Writer), or a specific DSK,( e.g. DSK.TIMP for multiplan), located on the hard drive with the same name. Thus when the software, as in the case of Multiplan, looks for the disk called "TIMP", it finds it on the hard drive under the root directory TIMP, containing all the pertinent files, which are loaded, as if from a floppy of the same name. For such specific disk directory access, the HFDC looks in the hard drive first to if the specific disk is emulated on the hard drive. If not found, then the HFDC will look through the various floppies for the disk specified by the software.

The card comes with an optional extended warranty, which may be purchased by the user, for up to four years, at about $25.US per year. This entitles the user to any updates of the software, released during the warranty period. I would highly recommend this option for a card which is relied upon, so heavily.

The complaints I have with the Myarc HFDC package are, mainly, with the Myarc Disk Manager V software; namely setting the date. On power-up and default interlace settings. When the system is powered-up, in order to properly date-stamp each file the date and time must be keyed-in. If,however, you are using the HFDC with a Geneve, then the HFDC will "read" the Geneve clock. A nice touch, for TI users, with Triple Tech or MBP real-time cards, would be to read the clock on those cards, if they are installed. As far as the interlace is concerned, a novice user is left "in the lurch" as far as to what values to select, when intializing a floppy disk. The Corcomp disk manager has default interlace settings of 7 and 10, respectively, for single-density and double-density drives. What interlace is chosen can have a bearing on whether or not you have read/write errors to the disk that you have formatted. Also, 16-sector tracks, another undocumented option, can result in a disk which cannot be read on the drives of your friends with TI or Corcomp disk controllers. I am sure future updates of MDM V will address these problems.

My opinion of the Myarc HFDC rates this unit as the "best buy" for the money, for an upgrade in our TI community. The fact that the controller has been designed for the 99/4A as well as the Geneve, shows that Myarc has not abandoned our community. The fact that the HFDC can support up to 402 megabytes of hard drive memory, indicates not only some forethought as to the dropping prices/megabyte of hard drives, but gives a clue to exactly which niche in the computer market, Myarc would be aiming at, if it ever marketed the much-rumored stand-alone 9640. Such a rumor may soon become a reality, as the commercial software for the 9640 is released,( namely GEME, MY-Pro Word, and MY-Pro Art). If, like me, you have accumulated hundreds of disks, over the years, and waste time looking through lists and labels, to gather a series of related articles for a newsletter; such waste is virtually eliminated through an orderly set-up of the "directory path" of the hard drive. The speed of access and memory capacity of current drives; user-friendly Myarc Disk Manager V; and competive price when compared to RAM disks, should put it on the top of the TI user's shopping list. Also, in most cases, the hard drive(s) will be located externally, with respect to the P/Box, it would be nice if the cables provided to connect the HFDC to the drives were a couple of feet longer, to give more flexibilty as to the choices of where to locate the hard drives.

In the future, I hope to have an article detailing the Myarc 9640 with the HFDC, as well a review of Myarc Disk Manager V.

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The following comes from the Sept/88 issue of the Sudbury 99'ers Newsletter:

## RAVE 99 KEYBOARD MODEL 99/105

-By Jim McLaren
Site 1,Box 7
Whitefish, Ontario
P0M-3E0

As mentioned in my last newsletter I had ordered the Rave 99 keyboard. John McDevitt sent it on Tuesday May 30/88 by UPS. I received it on Monday June 6/88 delivered to my door.

Here is the price breakdown.

| | |
|---|---|
| 105 Keyboard enhancement...199.95 | Federal tax.31.39 |
| 1 Cover kit.....11.95 | Duty.....17.69 |
| 1 Load reset cable.....6.95 | Brokerage...16.75 |
| Shipping and handling.....10.94 | --- |
| Special handling outside US..5.00 | Total.....65.83 |
| Credit card surcharge.....7.04 | |
| --- | |
| Total.....241.83 | |
| Duty/Federal/Brokerage.....65.83 | |
| --- | |
| Total Cost>>>>>>>>>>>>>>>>>>307.66 | |

On Thursday after I returned from the meeting my wife said that there was a phone call for me. They were inquiring about a Rave 99 keyboard and left a number to call back.

Panic time,why were they keeping it a the border. I decided to give Bob Boone a call Bob had alot of expierience with border customs and duty. Left a message on his answering service. Next step give John McDevitt a call. John was unaware of any problem that there might be. He said I made sure to ask UPS if there would be any problem delivering it to Canada and they assured him there was no problem at all.

John said he would check things on his side and I could check things on my side.

The next morning I returned the call (1-800-263-8125 Canadian number only) it was the UPS people they had my keyboard at the border but needed the ok from me to go ahead with the border customs and the total cost would be 65.83 for duty/federal and brokerage fees. They would collect the money COD. I said I would pay the charges and they said it would be delivered Monday June/6/88.
Soon after I phoned UPS Bob Boone phoned to offer his help. He was aware of the customs and explained more about it.
After talking to Bob I phoned John back to let him know that everything was ok. I received his answering service and left a message.
That night I was on the computer when the Horizon ramdisk was not working. I tried loading the operating system still no luck. When I ran the Memory test it said to check CR4 to CR7 the diodes on the ramdisk. It was down to Radio Shack to pick up some new ones. Went over to John Majkots house so that he could solder the new diodes in. We rebooted the system but soon after the same error. Time to give Bob Boone a call, Bob said dont worry Jim we will have your Horizon ramdisk fixed. Send me yours I will send you another while yours is being fixed. Bob had first offered to trade mine in for a $10.00 exchange if I had the 32k chips but I had the 8k chip version.

When I arrived home my wife said John McDevitt had phoned. Some how I knew that he would phone back thats the kind of a guy John is he cares about people and the products he sells.
I gave John McDevitt a call to explained the charges. He was surprised that there was duty on it and the brokerage fees. Being a computer item there should have been no duty. Both John and I were surprized with the charges.

John had said that he had sent to other countries with no problem. John said I will make it up to you since both of us were unaware of the extra charges. You wanted to order the Myarc Extended Basic for your memory card I will let you have it for $45.00 instead of the regular $75.00 to help offset the extra charges.

That was very generous of John to give me a discount on the Myarc Extended basic.

This is one reason I decided to buy the keyboard John had given me alot of support for the memory card as well as returned calls to help me out with the memory card. This kind of support generates more sales they make a product and they support it.

Talking to Bob Boone about customs he said that the UPS people were not as familular with duty. If it would of come by regular mail then you would have bypassed the brokerage fees and maybe the duty. John McDevitt said it cost quite a bit more to send it by mail than UPS maybe it balances out in the end. I still think UPS was the way to go. It was delivered in one piece. I have had articles sent by mail that look like someone used it for a football.
All prices are in American currency so the Canadian prices are subject to exchange which at this time was about .25 cents on the dollar.
Its nice to know that just a few simple phone calls to a few dedicated people can solve alot of your problems.

INSTALLATION

I ordered the load/rest cable along with the cover kit. Let me tell you for the price it is well worth it. Having a load interupt activated from your keyboard is a real bonus.

The keyboard comes with a installation and operating manual. It has lots of diagrams and very good instructions.
It took me about 45 minutes to install the Rave interface card and remove the original TI keyboard. I read the manual once and then took one step at a time to install the card. It is clearly marked but just a reminder to install your two threaded posts that will be used to attach your cover to after.
Installing the load interupt was another fairly easy task. It to has diagrams and is explained well. I had John Majkot do the soldering for me. If you have never done any soldering before it might be wise to get some one to do it for you. It is well worth the $6.95 for the load/reset cable.
As far as the custom cover goes I'll put it to you this way. Would you ride around in your car without the hood on. The cover will help protect the card as well as keep dust and dirt out. Also the job will look complete.
Now once you have everything complete turn on your computer when it says to "Press Any Key" press the "ESCAPE" key to insure proper operation of the interface card.

KEYBOARD

There are two operating modes
1. Multiplan
2. TI-Writer

You use the shift lock to toggle between the two modes.

Shift lock up.....Multiplan
Shift lock down....TI-Writer

You now have F1 to F24 they replace all the FCTN +1,FCTN 2,CTRL 1,CTRL 2 etc. They all replace the two key combination with just a one key touch.

It will take some time to get familar with the new keyboard. What I did in Ti Writer FCTN 2 is now F2 (ins char) now CTRL 2 is now F12 if you use the old overlay strip just add 10 to the number for example F2 + 10 = F12 which is (reformat). Soon you will remember what each key is for.
There are two dedicated keys just below the RETURN key. The DELETE and INS keys these do the exact as FCTN 1 (del) FCTN 2 (ins). I am right handed and I use these keys constantly especially in TI-Writer. Close to the numeric keys and the ins delete keys are the designated arrow keys. These keys have actual arrow on the keys. With the left arrow having "back space" written on it as well. You can still use the ALT plus e,s,d,x to fuction as FCTN e,s,d,x but these arrow keys make it alot easier.

There is a separate numeric keys with the "0" key larger than the rest. This key obviously will be used more often and should be larger.
The "ESCAPE" key is used in TI-Writer to replace FCTN 9 so that you can escape back to the commands or you can use "F9".
There is a SCRL/BREAK key that replaces FCTN 4 or clear.
There are three keys to the right of the keypad "*-+" keys. You don't have to use shift to access them they are independant. You still have them with the number keys also.

The ENHANCE key provides for the missing keys that TI decoded but did not include them in the keyboard.
The control key is used to replace CTRL in the TI keyboard. You will find a use for them like CONTROL P in telecommunications.
Once you installl your load/reset cable you will have two combinations.

LOAD INTERRUPT.....CONTROL + HELP
RESET COMPUTER.....ALT + HELP

You have to use both hands to access this key combination hence no FCTN QUIT that has happened to me a few times. It was purposely set up this way.
The ALT key now does the same as the FCTN key on a TI keyboard.
The ALPHA LOCK clears up the nuisance of the joystick up or down the joystick will still operate. Also the eliminates the shift the Quote key. If the Alpha lock is depressed just press the " key .
The RETURN key replaces the ENTER key and is a little more than twice the size of the regular keys.

Your actual keyboard has two colors of lettering white for the letter keys and number keys and grey for the function keys. The RETURN,CONTROL,SHIFT,ENHANCE and 0 keys are the larger ones. The ESCAPE,BACK SPACE,SHIFT(right side) and DELETE keys are about 1 1/2 the size of the regular keys.
To sum it up it is a well designed keyboard once you have tried one there is no turning back. As well as looking great it is a welcome addition to the streamlining of my computer.

I downloaded the following, for your information(Ed.):

Transcript of the conference on CompuServe with Lou Phillips, president of Myarc, INC. held on Tuesday, July 19, 1988.

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(Jim Horn) Want to start off with any announcements, Lou?

(LOU) LETS START WITH THE QUESTIONS, THE ANNOUNCEMENTS WILL BE FOR LATER

(Michel) When...Advanced basic... Remember/. ..WHEN ga

(LOU) DOS IS NOW AT THE 1.04 LEVEL. WHEN THAT IS COMPLETE, AB WILL FOLLOW IN SEVERAL WEEKS

(Michel) What is DOS 1.04? What is the relation with AB?

(LOU) AB USES MOST OF THE ROUTINES (ESPECIALLY THE DISPLAY). DOS 1.04 CONTAINS FIXES TO THE DISPLAY ROUTINES, TO VARIOUS PAGING PROBLEMS AND OTHER FIXES TO ALLOW AB TO RUN. GA

(Michel) If DOS 1.04 is "ready" how comes DOS 1.02 (supposed to be required for the hard disk cont.) is not available for the 9640? ga

(LOU) IT IS DOS 1.2 WHICH CONTROLS HARD DISKS IT IS NOT 1.02 AND IT IS DOS 1.1 AND AND FINALLY DOS 1.1 IS THE NEXT AFTER 1.04 GA

(Michel) I see... Any developpement on 1.2 or are u still at war with Paul C

(LOU) PAUL IS THE ONE WHO HAS PRODUCED 1.02-1.04 AND WE HAVE GOTTEN VERSIONS 1.03 AND 1.04 WITHIN THE LAST 2 WEEKS I GUESS THAT MIGHT SAY SOMETHING GA

(Michel) but will he continue to work on DOS? ga

(LOU) TO FIX BUGS, YES, BUT DOS HAS ALREADY THE FEATURES WE NEED FOR A GOOD DOS FOR A SINGLE USER MACHINE, OUR THRUST WILL BE MORE ON GIMI

(Michel) A last question before I pass it on others : When the realease of AB? How many earth days?

(LOU) WHEN WE GET 1.10 DOS, AB WILL BE SEVERAL WEEKS BEHIND

(John) How about the pascal run time system? !

(LOU) JOHN WE HAVE HAD THAT RUNNING NOW FOR ABOUT A MONTH WE ARE JUST FINDING A BUG NOW AND THEN AND REFINKING SOME ROUTINES IT DEPENDS LITTLE ON THE MDOSOTHER THAN GO TO X,Y BEEN MORE OF A STAND ALONE EFFORT... THE PROBLEM WITHIT HAS BEEN WITH PECAN WHICH WE LITERALLY TOOK LEGAL ACTION AGAINST TO GETTHE P-SYSTEM IN TI" FORMAT TO RUN IT ON A GENEVE GA

(Jane Jim) Lou.. First of all welcome to the lion's den <grin>. Second,Jack told us he would ship the HDCC about a month go.. Still no sign...Also last week, we were told you.. were shipping.. Is the re another hold-up?(Am waiting with baited breath!) ga

(LOU) FIRST. THERE ARE AB OUT 40-50 HFDC'S OUT THERE AT THIS TIME (ADD 25 TO THAT, IN EUROPE) THE REASON IT HAS BEEN NOT MASS SHIPPED AS YET IS BECAUSE MDOS 1.2 IS NOT COMPLETE (THP AND I WERE WORKING ON FINISHING THAT IN NJ LAST WEEK) AND SECOND, THE ROM ON THE CARD STILL HAS A BUG OR 2 LEFT, AND IT IS COSTLY TO MAIL TO EVERYONE A SECOND OR THIRD TIME JUST TODAY WE FOUND ANOTHER BUG -- THE ROM IS ONLY 16K WHICH IS THE SAME ON A CORCOMP FDC BUT IT CONTROLS A CLOCK, 3 WINCHESTERS, AND 4 FLOPPIES and IT HAS THE STANDARD CALL'S IE DIR, DT (DATE AND TIME), ILR, LR, LLR, FILES, ETC BY FAR AND AWAY THE MOST "DSR" EVER FOR THE COMPUTER GA

(Jane Jim) When do you think it will be in the hands of the user? Both 1.2 and the HFDCC card....

(LOU) ALSO, WE WERE FINDING BUGS IN THE DISK MANAGER, WHICH HAVE BEEN FIXED THIS CARD WILL GO OUT THE MOST FLAWLESS OF ANY PREVIOUS GA AS FOR TIME THE DM5 IS COMPLETE AND HAS BEEN ESTED FOR SOME TIME NOW AS BEST WE KNOW ALLBUGS ARE GONE THE ROM IS COMPLETE AS FAR AS FEATURES GO, BUT THERE ARE STILL A FEW BUGS THESE BUGS ARE RARE BUT DO OCCUR

(Jane Jim) You are now shipping GENEVE's with the 3.8 EPROM. I still have 3. 7. What is the difference?

(LOU) THE LATEST WAS NOT GOING TO DISK DRIVE 1 WHEN A WINCHESTER WAS NOT INITIALIZED WE HOPE TO HAVE TO YOU IN HAND BY MONTH END ALSO AS OF TODAY, WE ARE NOW ABLE TO LOAD AND TEST MDOS 1.2

(Michel) Yipppeeee!!!!!

(LOU) (THANKS TO PAUL) SO THE WINCHESTER TESTING

(Michel) (sorry)

(LOU) IS BEING COMPLETED THERE GA

(Jane Jim) I sent a question in the middle.. Can you read it?

(LOU) COME AGAIN

(Jane Jim) re EPROMs. We are receiving... GENEVEs with V3.8 EPROMS now.. and was wondering about the 3.7 in my GENEVE ga.

(LOU) THE DIFFERENCE IS IN 2 AREAS 1 IF YOU HAVE A 80 TRACK DRIVE AS DRIVE 1 AND PUT IN A 40 TRACK FLOPPY WITH SYSTEM/SYS WITH SOME OF THE FILE ON SIDE 2, YOU NOW THE SECOND, THE OTHER DIFFERENCE IS THAT THE ROM RESETS THE KEYBOARD EVERYTIME IT EXECUTES THE ROM

(JIM) Looks like JJ crashed a little bit. GA Dave.

(Dave R) Lou, there has been talk of an external DSR specification... Can you shed any light on this (both technically and when we might see it)?

(LOU) YES WITH DOS 1.2 THERE WILL BE THE FOLLOWING DIFFERENCES. FIRST, A TABLE WILL BE USED INTERNALLY TO DETERMINE DEVICES (IE YOUR RAM DISK CAN BE DSK1 ,DSK1 CAN BE DSK6, ETC.). SECOND, THERE WILL ONLY BE SUPPORT FOR ONE INTERNAL RAM DISK (OF CPU MEMORY TYPE). OTHER RAM DISKS (EXTERNAL) WILL BE SUPPORTED WITHIN THERE OWN SOFTWARE/HARDWARE. THAT IS, MDOS WILL ASK FOR SECTOR (EQUIVALENT); THE RAM DISK WILL GIVE IT AND MDOS WILL PROCESS. IT THAT WAY WE WILL NOT HAVE TO SUPPORT EVERY HARDWARE CONFIGURATION. LASTLY, WE WILL SUPPORT USER LOADABLE DSR'S (THAT YOU CAN LOAD FROM DISK) WHICH YOU CAN CHANGE AT WILL , SINCE YOU NO LONGER NEED TO BURN AN EPROM.

(Dave R) This implies that an applic ation will be able to access this environmental description table in some way. add entries, and delete entries. Is this correct? Will there be new XOP calls to support application level access to this info? ga

(LOU) THE ANSWER IS YES BUT REMEMBER THE I/O XOP IS ACTUALLY PROCESSED BY THE DSR ITSELF, SO YOU CAN DEFINE WHAT AN OPEN IS, ETC. THE SPEC IS NOW BEING FINALIZED BY PETER HODDIE AND YOU SHOULD CONTACT HIM FOR FINAL/NEAR FINAL SPECS AND PROBLEMS ASAP

(Dave R) Ok. one last item then... The video XOPs have been a problem for a long time. Any progress in improving them (speed, removing bugs, etc.)? ga

(LOU) THE BUGS ARE PRETTY MUCH GONE (THANKS TO ABASIC) AS FOR THE SPEED SOME WORK STILL NEEDS TO BE DONE, BUT THAT WILL BE ONE FOR A LITTLE LATER

(John) for software developement. And a CRU map would be nice. Is this information in the works in the near future? ga

(LOU) JOHN, PLEASE LETS TAKE A MINUTE, SO YOU CAN EXPLAIN WHAT YOU MEAN BY A CRU MAP? GA

(John) I was contemplating the problems that might arise trying to implement a BBS program on the 9640. Access to the 9902 might be necessary to test some of the inputs. This may explain my interest in a CRU map.

(LOU) THE 9902 IS AT THE EXACT SAME CRU MAP AS IN THE 99/4A (THAT IS DETERMINED BY HARDWARE) THE DIFFERENT CRU LOCATIONS ARE GIVEN IN THE MANUAL (HOWEVER THERE ARE ERRORS IN THAT DESCRIPTION). IF YOU WOULD LIKE THE ACTUAL MAP, SEND US A LETTER ASKING FOR ONE AND WE WILL SEND YOU THE CORRECT MAP. AS FOR THE DEVELOPMENT SYSTEM, THE AUTHOR OF THE PIECE DECIDED NOT TO FINISH, BUT IS A PROJECT SLATED FOR LATER THIS SUMMER

(John) What would be nice to have are the instructions for the vdp registers to select the different modes and functions. some of the dos xops are very slow and direct access would be faster. How do we get these? ga

(LOU) john, they are all in the 9938 manual which we sell for a modest amount (i guess around $15?) ga

(John) I had been told that the manuals weren't complete. Is this contrary to facts? ga

(LOU) they are a direct copy of the gospel as given to us by Yamaha page by page ga

(John) sounds good. Thanks ga

(Matt) ~Lou, two questions, Firstly, in regards to the Programmers development package, who will get it, what will it include, and WHEN will they get it? ga

(LOU) the package must contain a debugger, an assembler, and a linker the debugger must reside with the os and these features will be in mdos 1.10 i would like to see it by early fall

(Matt) so, the PDP will be included in mdos 1.10?

(LOU) not included, but requiring features of mdos 1.10 ga

(JIM) NOTE: LOU HAS ONLY FIFTEEN MORE MINUTES.

(Matt) OK, In regards to a new user looking to purchase a geneve, isn't 1800 dollars a lot to spent, when he can get an IBM clone for half that price?

(LOU) what is 1800 dollars?

(Matt) roughly 500 for 9640, 250 for a pe-box , 300 for disk CC, 200 for disk drives, 200 for monitor, 250 for printer, 100 for misc. Now I can get that in IBM format for under 700. ga

(LOU) once again we can't compare apples to apples like this the clones today come with 0K ram (ram has tripled in price)

(Matt) right, but to an outside user looking to come in, isn't he gonna go into the IBM store as opposed to the 9640 store? ga

(LOU) second if the printer is 250 for the 9640, then it is 250 for the clone

(Matt) yes, but you an get startup packages for the clone. none offered on 9640 end.

(LOU) perhaps the new user, but don't forget is for the 4a user with an investment in hardware/software we don't as yet put out a clone "killer"--

(Matt) wouldn't it be more economical to persue the outsiders rather than the handful inside?

(LOU) --as we are considering. ga

(Ruth) First, on the programmer's development package... Do you have another programmer currently working on that?... Secondly, Does Myarc have any plans... to package the various pieces of information the programmers need (9938 info, XOP list, etc.)... in a more integrated, accessible manner? ga

(LOU) the pieces will be included in the package

(Ruth) First question?

(LOU) as for the programmer as it stands at this moment, the gimi programmer will start the package when complete ga

(Ruth) One quick follow-up... What do you expect to sell the programmer's package for... and will all relevant information be available to programmers who do not... purchase the full package?ga

(LOU) around 80 to 100

(LOU) what do you mean by relevant info?

(Ruth) i.e. If you pull together all the info (9938, XOP list) at some point into a set of documentation organized into an accessible format. ga

(LOU) i think you want to see examples of xop usage yes, they will come with the package. ga

(Jane Jim) Lou, how many GEneves are on the marke today?

(LOU) i think you know I don't give out those sort of numbers but it is in 4 digit numbers, ga

(Jane Jim) How soon will you be able to complete the original pkg. promised with GENEVE?

(LOU) if all goes well (and we don't control all the variables) at the end of august we at myarc will all be proud to be complete

(Jane Jim) BTW, Lou, are YOU happy with the number of units on the market? Or in other words, is it enough to keep MYARC viable? I'm sure this is question that all the GENEVE users have... and I felt it should be asked...

(LOU) so far so good and with the backlog of hfdc's and other software coming out this may be myarc's best year yet (except 1983 when we were like part of TI) ga

(Jane Jim) I hope that is reassurance.. How about some new software in the near future (Last question)

(LOU) we showed gimi at the south Jersey user group yesterday we have most of the utilities package complete we are working on MYPROWORD and there are other packages coming on line for it from other developers

(BRUCE) Lou, I tuned in late and I am sure this was covered but when is the next version of mdos and hfdc or GEneve due out.

(LOU) with the shipping of the HFDC around the corner, and with so many of these people ordering these, can we work on letting these people leave messages for myarc on possible bugs?

(LOU) good night to you all and thank you for coming and i'll see you soon thanks

(JIM) Thanks YOU Lou. Will work on collecting bug reports, etc.

(BRUCE) So when is MSDOS v1.02 coming out??? I missed it.

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Transcript courtesy of the TI FORUM, Compuserve, (Jim Horn, Sysop)
Original edit by Warren Agee. Reformatted by Jerry Coffey.

## The Downs of UPS

Commentary, By Steve Mickelson, President 9T9 Users Group, Toronto

This commentary is directed to both US suppliers, as well as Canadian TI users, who rely on mail and/or shipping services to take care of orders for Canadian users, and concerns the UPS "customs scam", (I can think of no better term for what UPS is doing to Canadian consumers). The opinions expressed are my own, but are based upon several experiences, I had with UPS, over the last year.

Let me say that other than a few suppliers. La Flamme/Wrigley, Bob Boone, and a couple of others, Canadian TI users must rely on three methods to purchase hardware and software for their systems:

First, is to go to the US, buy it and bring it back, o.k. if you want to spend your vacation at Texcomp's warehouse. Also, a tad expensive; not quite like going to the corner store for a loaf of bread.

Second, wait once a year for either the Ottawa TI Fest or the new Nova Scotia Fest, or wait for either a lucky buy from the buy and sell. This means waiting six months for that piece of hardware or software, hard on the nerves, unless you happen to live in the city of the TI Fest, and your buying needs happen to coincide with the date of the Fest.

Third, phone or write for the item you want and have it shipped to you. Here is where the scam begins:

With the need of several software and hardware suppliers depending heavily on what is collectivly referred to, as "mail order" business, a "mystique" has evolved, both in the minds of the suppliers and users, as to how to ship to Canada; specifically how to handle Canada customs. After all, who hasn't sent a parcel in either direction without having to stick that little custom's declaration sticker to the parcel. If you have to fill one for a souvenir of your native land, which has no commercial value, then a piece of computer software or hardware seems to require the esoteric insight of an experienced customs broker,( if you follow this line of reasoning).

Enter UPS, one of many parcel delivery firms, who somehow convince suppliers that the carrier's vast knowledge of Canada customs and tarrifs, as well as "fast", reliable and "cost competitive" service will take all the pain out of dealing with the customs problem. Not to mention, since UPS will pick-up the parcel at the supplier's door, there is no need to go to the post office and wait in line, and fill out those mysterious customs declarations forms. Also, if the Canadians are suffering through their annual mail strike, the parcel will be delivered, all for a nominal fee. Besides, UPS is so fast in delivering throughout the US, they'll be just as fast in Canada, which means they'll beat the mail, right? **WRONG!WRONG!WRONG!**

If you read the RAVE Keyboard Review, from the Sudbury 99er's you'll see what typically happens with an order processed through UPS. In Toronto, UPS shipments, depending on their point of entry will be "held ransomed" in a warehouse in either Windsor or Ft. Erie, Ontario. A clerk will then open and read any packing slips for the phone number of the party to whom the package is sent. If there's none, then they will use a phone book or directory assistance, to see if the addressee is listed. If not, then they will send a notification card to the addressee, by Canada Post!!!If you aren't home the UPS people ask that you merely call their toll "free" 800 number, to speak to their clerk. The call may seem to be free, but you'll pay for it, and then some, in the end.

This notification, whether by phone or mail, is to inform you that the parcel, from the states is languishing in a holding area and will continue to languish until you come down to bring it through customs. Sounds like the first way I described as to how to obtain your hardware/software, except the three hour round trip to Ft. Erie or ten hour return drive to Windsor is by no means a leisurely drive. But not to worry, all's not lost, for your friendly UPS will save you the hassel of driving to the border and talking to those nasty customs officers, and with your verbal o.k., UPS will take your parcel through, for a **nominal** fee. The fee and the duty will be combined in a single COD charge collected when your parcel is delivered. By now, you are so anxious to get your long awaited parcel, and relieved that you don't have to drive darn near half way to supplier, that you'll gladly pay any extortion fee.

Also, if you happen to have several parcels; UPS will not combine them and bring them all through, at the same time, for only a single **nominal** fee. No that's not the way the scam works. If you want them, you'll have to pay a seperate fee for each one, even if they arrived at the same time! This process takes another day or so for the customs. Allow another day or so for it to reach your door. The parcel, when it arrives, will not have any paperwork as to what fee UPS has charged you for the privledge of taking it through customs, that will be **mailed** to you anywhere from one to six weeks, later!

Now what would happen to this same parcel, shipped through the postal system?

First, it will go directly to Canada customs, to be opened for evaluation. If a tag is affixed, then it may not be opened at all, as in the case of software usually forwarded directly to the destination.

In the case of there being no custom's declaration, then it is usually opened for evaluation of any duty and Federal tax, based upon the receipt. No customs forms are really needed. If it is decided that duty/taxes must be paid, a bill, payable by cheque, money order or Visa number is enclosed. This evaluation can be argued, if you think the duty is too high, and you can withold payment, while the matter is being resolved. Though if you refuse altoghter, even after appeal, then you may risk suspension of mail delivery, until your payment is received.

So what's the advantage of the mail?

The duty/brokerage fee, though possibly in error, has already been paid by UPS and they want it paid COD, or you don't get your shipment. It makes it tough to appeal a duty charge, since it's been paid by your "agent", UPS. The fact that you have agreed to let UPS be your agent leaves your hands tied, depending solely on a clerk, who's prime directive is to get as many parcels through as possible. If an error in duty charges has been made in the government's favor, who is going to act on your behalf? Then there is the fact that it may take UPS up to three weeks or more to finally make it to your door. Even longer if there is no phone number of the addressee, it may take five or six weeks, as with one item I ordered.

I ordered a CEI modem from the US. This modem had a five year warranty. What I didn't know was that the supplier send to Canada, only, through UPS. I remember well paying duty and the UPS add-on fee. Then, I had to send it in for repairs. Because it was under warranty, I saw no need to include my phone number. I anxiously waited a month, before I received in the mail, a card from UPS. On the card was a form message telling me that UPS had unsuccessfully tried to find

my phone number in the Toronto telephone directory, and that if I did not call them within a few days that the parcel was to be returned to sender. I called UPS and found, again, I would have to pay UPS their usual fee, based on the value of the parcel. It did not matter that I had already paid them their "pound of flesh" for my modem when it first arrived, UPS insisted on their fee, even though the modem was repaired free of charge.

I have delt with, not by choice, and paid UPS their "rake off" fees several times, in the last year, for items ordered from the US. I feel, even with "Free Trade", that UPS will skim-off a fee for shipments. I cannot tell you how pleased I was, having ordered software from Larry Conner, that it could only be shipped through the mail and not by their regular domestic carrier, UPS! I told Larry about the "downs" of UPS, at least in Canada.

So the next time you order from the US, request insured parcel post. The package, according to postal authorities, will be tagged in such a way, that if there were some delay, the package can be readily traced. If your supplier deals only through UPS, let the supplier know what kind of scheme UPS has cooked. Tell the supplier that the parcel will take two to three times as long, as if were shipped in the mail. Tell the supplier that whatever goodwill is generated towards the supplier by picking-up the parcel at the supplier's door, is negated by the bad will, on the part of the user, who must pay a ransom to get his parcel and by the delay's on the Canadian side. Suppliers let UPS know that you know about the UPS racket, and that UPS better straighten their act or you'll be dealing with another carrier.

In conclusion, if you are ordering from the US, and the supplier says the order will be shipped right away, via UPS, just say thanks, but **no** thanks, that you prefer to rely on the mail and deprive UPS of their extra fee.

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## DATABIOTICS GRAND RAM

A Review by John Guion

The following was downloaded from Delphi and came origionally from Dallas 99 Interface, the N/l of The Dallas TI Home Computer Group:

After a substantial wait, the DataBiotics Grand RAM is Finally here! About a year ago, twelve members of our group got together and ordered twelve 512K Gran Ram P-Box cards. Now, a year later, Data Biotics has shipped us a "Grand" total of one 128K Grand RAM. The advertised price for the 512K version had been $240 plus shipping and was to include the card, a manual, software (complete with source code). However, memory prices went up and DataBiotics has ceased to advertise the card. There's a lot more to the story, but I'll leave it to someone else to explain it all.

The Grand RAM is a RAM-Disk that can be configured to have anywhere from 64K to 512K. Unlike some other RAM-Disks (Myarc, CorComp, Foundation), The Grand Ram is also battery backed so information stored on the card is retained after the power to the system is shut off. While there are other RAM-Disks that are battery backed (Horizon, RAVE MX101), the Grand RAM also has a few extra features. These include a print spooler, clock, extra Expansion ports, a power-up menu, and "hot keys".

The operating system that allows the RAM memory to be used like a disk is stored in RAM on the Grand RAM card. It occupies 12k of memory that cannot be used for other features on the card. The operating system is loaded by what is called the Configurator program. This program is loaded by the Editor/Assembler or Extended Basic Module. Once the Configurator is loaded, the Grand RAM's operating System can be loaded from disk into the card. All of the other features, such as setting up the print spooler and RAM-dick, are accomplished with the Configurator. This is similar to using the CONFIG program on the Horizon RAM-Disk, but all functions are accessed from a single screen by pressing one key. The Configurator is also used to save the operating system back to disk once it has been customized by the user.

The most prominent feature, of course, is the RAM-Disk. This allows the user to use RAM memory to emulate a floppy disk drive. This not only offers more storage for your system, but the RAM-Disk operates about ten to twenty times faster than a floppy disk. In the 512k configuration, 500k of memory can be used for RAM-Disk. Since the TI system is limited to a maximum of 400k per drive, any memory used for RAM-Disk past 400k must be divided into multiple RAM-Disk drives. I tested the card with 128k of of memory and then added another 64k of memory to the card (using my own chips). This allowed me to set up RAM-Disks of 464 and 720 sectors, respectively. If Desired, this could be broken into smaller drives or increased with more memory chips. Other than the setup and speed, the RAM-Disk functions just like a floppy disk drive.

Another important feature is the print spooler. Memory on the Grand RAM can be traded between RAM-Disk an print spooler in 2k increments. Thus, some memory can be set aside for the spooler while leaving the rest available for the RAM-Disk. The Spooler "intercepts" information that is being sent to the RS232 card and stores it in the Grand RAM's memory. The information is accepted by the Grand RAM at very high speed instead of going to the RS232 card. Use of the computer is returned to the user while the Grand RAM then takes care of sending data to the RS232 card (and printer) at whatever speed it can. This greatly reduces the amount of time spent waiting for te printer to print when other work could be done. The print spooler does essentially the same job as an external print buffer. Unlike a print buffer, however, the print spooler must use the computer to operate and therefore slows down other operations of the computer.

The Grand RAM also has an optional real-time clock. Like the memory, the clock is battery-backed and does not need to be reset if the power is shut off. The clock provides time, date, and day of the week information. There are two methods for using the clock. First, it may be accessed through programs (BASIC, Assembly, or others)by opening a file called "TIME". The time and other information may then be read by the program. This is a very simple operation and is similar to the methods used by the other clock devices for the 99/4A. Second, the clock may be activated by a series of keystrokes so that the time is always in the upper right corner of the screen. Whether in BASIC, TI-WRITER, or almost any other program, the time is available in this manner. The time will be displayed regardless of whether or not a program is currently running or even if the screen has been cleared. A different set of key strokes are used to turn this feature off.

An optional menu may also be used that will appear whenever the computer is turned on or reset. Instead of the TI title screen appearing, the menu (Called ROOT) will appear. the ROOT menu offers several features. The user can use it to catalog a disk, display or print a file, run either an assembly language or Extended Basic program, and create a list of fifteen programs of the user's choice that may be run with the stroke of a single key. The user programs can also be in assembly or Extended Basic, however, any XB program run from this menu requires that the XB module be inserted in the computer. No module is required to run the assembly programs. The ROOT program was written by John Johnson for use with the Grand RAM and is identical in appearance and operation to both his MENU and BOOT programs.

The primary operating difference between the Grand RAM and other RAM-Disk cards is that all functions can be controlled by what are called "hot-keys". The hot keys are a series of keystro9kes that are set up by the user to control certain functions of te Grand RAM. Functions such as turning the ROOT power-up on or off, turning the clock on or off, cancelling spooler output, and other features are handled through the hot keys. When the Configurator program is run, it will ask the user to press the keys desired to activate a series of functions. Once the hot keys are set up for one function, the Configurator proceeds to the next function. When all of the hot keys have been assigned, all that is required to control these functions is pressing the key combinations that have been selected. For Example, I set up the keys so that pressing CTRL,FCTN and T all at the same time will turn on the clock disply. Pressin CTRL, SHIFT and T will turn it off. Once they are set up, the hot keys are always active. This means that any function controlled by the hot keys may be accessed from either BASIC, the ROOT menu, the TI title screen or from a running program.

One problem that has always plagued RAM-Disks is that they cannot be 100% compatable with a real floppy disk drive. Early attempts at RAM-Disk cards were incompatable more often then not. Like the Horizon RAM-Disk, however, the Grand RAM is just about as compatable as a RAM-Disk can get. With the exception of programs such as high speed disk copiers that access disk controller cards directly, the Grand RAM is compatible with all floppy disk functions. I tested the Grand RAM with BASIC XB, E/A, Funnelweb, Disk Utils, Fast-Term, ARchiver and other programs with no problems. In fact the only difference noticed was the speed increase due to the RAM-Disk. Since the size of the RAM-Disk is variable, it can also be set up to be the same size as a floppy disk, should any programs require it. This is also nice in that it allows the RAM-Disk size to match your floppy disk size which makes backing up the RAM-Disk more convenient.

The Grand RAM also has a selectable CRU base which determinse the memory space accessed by the card. This allows it to be added to a system without the problem of interfering with another card in the system. I Tested the card with both a Foundation and a Horizon RAM-DISK in the box and all three cards worked together. Once notable aspect of the Grand RAM design is that it does not replace the 32k card. Unlike RAM-Disks that do replace the 32k, multiple Gran RAM cards can be used in the same system in addition to other RAM-Disks, as mentioned above. This also allows it to be used with consoles modified to use the 16 bit bus for the 32k memory.

The Grand RAM has several good points. It provides an impressive increase in speed over floppy disks and is comparable to the other avialable RAM-Disks. The design of the card allows the user to choose a wide variety of memory sizes, so the user does not have to purchase more memory than they want or can use. The card is designed so that the only thing required to increase the memory is plugging in more 32k RAM chips (43256 or 62256 type). No soldering or other alterations are required. The battery-backing is also convenient in that is saves the time required to reload the RAM-Dick if the system has been shut down. The clock is a nice feature that no only allows a constant time display, but aldso is easy for programmers to access through software. The ROOT menu software is of a proven design and isd probably the most useful feature of the RAM-Disk. It allows the user to set up a system with his/her favorite programs to that they are instantly and easily accessible. The spooler not only speeds up printing procedures, but also eliminates the need for yet anothr device connected to the system. Finally the Configurator software is the first program of its type to allow the novice user and easy and direct way to to set up a RAM-Disk.

Unfortunately the Grand RAM also has quite a few problems. While I don't know everything about the 99/4A, I do consider myself an experienced user. I have owned RAM-Disks for four years and my family now has seven of them. Understanding the operation of the Grand RAM has been a thoroughly confusing progect. The manual was supplied on disk (no printed copy) and is very poorly written. One of the documentation files even required fixing with a sector editor before it would print. Not only are the operating instructions incomplete, the procedures that are described are neither fully explained nor consistant throughout the manual. the Grand RAM was also supposed to be supplied with commented source code for its operating system. This might have shed some light on the problems I encountered, but it was not not included as advertised. The package also was advertised as including 4A TALK and DISKMASTER. Aside from the fact that I found neither of these programs suitable or useful for the Grand RAM, neither program had any documentation.

A very disturbing fact was that the board was shipped with broken solder cnnections as well as two connection that had NEVER been soldered. These had to be soldered before the card was used. Wires had been added to fix improper board layout and one transistor had been added to the board with only one of its three pins soldered to anything. The physical design of the board also disturbs me in that it uses PAL chips and other components that are not readily available. This, coupled with the fact that no Schematic were provided, makes the user intirely dependent on DataBioTics should any problem with the card arise. The two expansion ports on the top of the card may have a useful purpose, but DataBioTics has made no announcement concerning the release of the proposed devices for these ports. At the moment, they only add to the complexity and cost of the card. Another disturbing design flaw is that the card is too tall to allow the lid to be placed on the P-Box. The metal plate on the lid contacks the card and does not allow the closure clips to even touch the lid. The battery is also an uncommon device that is very thick and presses tightly against any card that is next to it.

Aside from the potential problems and inconveniences, the operation of the card also has bugs. When setting the hot keys, the Configurator does not always accept the keys that were pressed, even though the display shows that it has. This is even more annoying since the manual's only mention of entering the hot keys says to follow the prompts in the Configurator, which makes little sense. The clock display is a handy feature, but it causes problems when ued with programs such as TI-WRITER since it overwrites part of the screen. Pressing the keys to turn the clock off will work, but they are sometimes interpreted by the program being used as some other function as well. Having to turn the clock on and off during normal use also detracts from its usefulness as a convenient clock.

The biggest bug I found was when the operating system was corrupted (which happened quite often). When a Horizon RAM-Disk has a corrupted operating system, it will usually fail to load the menu and require reloading of the operating system. When the Grand RAM corrupts its OS, there is no indication until an attempt to write something to the RAM-Disk is made. At that point, it wipes out the contents of the RAM-Disk, losing whatever data may have been on it and locking up the computer.

The only conclusion I can reach is that the Grand RAM, in its current state, is not a good purchase. DataBioTics has a product which not only suffers from delivery problems, but also is subject to the current RAM pricing problem. The user is dependent on the product support, with which they have failed even before the card is available. These factors, along with the various software and hardware problems, are not encouraging. Perhaps, if the card could have been delivered when advertised or if more work in development had taken place, the Grand RAM could have been an excellent product. With the current situation, However, it seems that the money would be better invested in other products.

Editor's note the following project would be undertaken at the user's OWN risk. Myarc will do this modification to the 0-wait state RAM memory for a nominal fee, plus shipping. Contact Myarc for an estimate. In some instances, this modification will speed up processing as much as 20%. If undertaken by the user, however, you could void your Geneve warranty.

# Adding 32K More 0 Wait State RAM To Your Myarc 9640

*"He was looking for the Fountain of Youth and only discovered silicon chips."*

First Short Evening Hardware Project for your Geneve

(How to add 32k more zero wait state memory)



What this modification gains you:

1) 32k more of zero wait state memory, this allows many programs which run from MDOS mode to execute more quickly.

2) satisfaction of abusing your computer with a soldering pencil and living to tell the tale

3) something to tell your friends

DISCLAIMER: all information in this document is provided as-is, with no warranties. If you choose to use this information, you do so at your own risk, any violation of warranty terms on your hardware is your own liability. Don't not have fun doing it.

First you will need some parts, an adventurous frame of mind, about twelve dollars, and some equipment.

Equipment:
- 1 Soldering pencil (not a solder gun!)
- 1 roll of fine (20 awg ) rosin core solder <not acid solder>
- 1 foot of fine (30 awg ) wire wrap wire
- 1 something to strip the wire wrap wire with
- 2 32k x 8 Static rams (28 pins)
  (one 32k ram is sufficient, if you get the other one from its socket on the Geneve)
- 1 pair needle nose pliers
- 1 broad blade flat screwdriver (for IC removal)

Step 1: remove Geneve from PE box

Step 2: remove clamshell from geneve, using flat screwdriver this is done fairly easily if you place the screwdriver in the indentation at the lower left corner of the card and pry, the repeat the process in the indentation on the lower right corner of the card. If you have difficulty with this step, give up, since you'll probably ruin something else while you're at it! place card on table with the chips on top, and the connectors for the keyboard, etc. on your right. (this orientation is used in subsequent steps, until I tell you otherwise.)

Step 3: remove the old 32k Static ram from its socket by prying gently underneath the edges of the chip with the screwdriver.

(if your 32k ram is not socketed, I guess you will have trouble with this step...you figure out what you want to do about it!)

removal works best if you pry a little on one end, then pry a little on the other end, keep switching ends until the chip is free.
( this chip is the 3rd IC up from the large square chip, the 1st is a 40 pin chip, the 2nd is a 28pin eprom, and the 3rd (28 pin) chip is the one you need to remove)
note that the indentation on one end of this chip is to your right, away from the bank of 16 rams.
(note: there are two types of indentations used by various IC manufacturers, one is a dimple right beside pin #1, the other is a notch in the edge of the IC beside pin #1 )

Step 4: bend the leads of the new 32k rams to a straight position (they were probably flared out a bit on new chips) this is easily accomplished by placing the pins against a smooth flat surface and gently twisting the chip towards the ends of the pins.

Step 5: place one of the 32k rams directly on top of the other, the pins of the top chip should press against the pins of the lower chip, holding it in place on top. Make sure that the indentation on the edge of the lower chip is at the same end as the indentation on the upper chip. (so that pin #1 matchs on both chips)

Step 6: bend up pin #20 on the upper chip, so that it points out at a right angle to the other pins, and does not touch pin 20 of the lower chip. Top view:

```
14   ...   9 8 7 6 5 4 3 2 1
 ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦
[----------------------------]
¦                            o ¦
¦  32k static ram             <   indentation
¦          *                  ¦
[____________________________]
 ¦ ¦ ¦ ¦ ¦ L ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦ ¦
  16  18  20
          * bend this pin up at right angle to other pins
```

Step 7: with caution and a hot soldering pencil, solder pins 1 to 19 of the upper chip onto pins 1 to 19 of the lower chip (this should be pretty easy since you succeeded in step 5) also, solder pins 21-28 of the upper chip to 21-28 on the lower chip. pin 20 should remain unsoldered.

Step 8: cut about 8" of wire wrap wire from the roll. strip about 1/10" of insulation from each end of this wire (ie: not much)

Step 9: apply a little solder to pin #20 of the upper chip, enough to cover it with a thin layer.

Step 10: apply a little solder to one end of the wrap wire.

Step 11: apply heat to pin #20 of the upper chip, touch the end of the wrap wire with solder on it to the pin, and remove heat while holding wire steady. The wire should now be firmly connected to pin #20 of the upper chip.

Step 12: place the lower chip into the socket from which you removed the old 32k ram. Be sure that the indentation is to your right, and the pin #20 and wire is pointing down towards you. Make sure that all pins go into the socket, and that none of them get bent under the chip.

Step 13: run the free end of the wire through one of the small holes at the connector facing you (if the small holes are all filled with solder, just run the wire though the notch at the left end of the connector)

Step 14: flip the board over, so that the chips are against the table. flip the board left-to-right, so that the large connector at the bottom edge is still closest to you, and the keyboard and video connectors are to your left. (this is important for the diagrams which follow)

Step 15: locate the pin marked with an X in this diagram: (it's directly over the large square chip on the other side of board)

```
  0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0                     0 0
0 0 0 0 x 0 0 0 0 0 0 0 0 0
  0 0 0 0 0 0 0 0 0 0 0
```

BOTTOM VIEW

<--- left is towards the keyboard connector

¦ down is towards the large connector at bottom of board

V

*"Our hero, to be sure, was a handsome, one-legged pirate called Long John."*

"X" marks the spot

Step 16: solder the remaining end of the wrap wire to the spot marked with an "x" in the above diagram --- make sure that solder doesn't bridge over to adjacent pins or circuit traces.

Step 17: PRAY

Step 18: place the Geneve board upside down in the top half of the clamshell case, with the alignment pins on the case going through the holes near the top edge of the Geneve board

(make sure that the LED is near it's hole in the case)

Step 19: with the Geneve still upside down in the top half of the case, hinge the lower part of the base into the upper edge of the top half of the case, then snap the lower edge of the case together.

Step 20: re-install Geneve into the PE box

Step 21: PRAY

Step 22: turn on Geneve...PRAY

Step 23: assuming you booted, try "CHKDSK" to see that the memory on your computer is now "589824" (for those of you fortunate enough to NOT OWN a 512k expansion card)

or "1114112" for those of you misfortunate enough to own the 512k expansion card.

Step 24: Have fun.

Step 25: many programs will now run faster because of the increase in zero wait state memory available.

complaints about the grammar and syntax of this document MAY NOT be sent to user TI994A on delphi.

complaints about incorrect or misleading information in this document SHOULD be send to user TI994A on Delphi (that's me, Paul Charlton.) This sort of message should be placed in the public message base in the TINET group on Delphi, thanks.

punchily yours,
Paul Charlton.

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F.Y.I.

| Appliance | Av. Wattage | Monthly kWh. | Approx. Cost $ |
|---|---|---|---|
| Air Cleaner — Room Type | 40 | 10–30 | .50–1.50 |
| — Furnace Type | 20 | 10–15 | .50–.75 |
| Air Conditioner (Room) | | | |
| 6000 BTU | 750 | 60–450 Per Season | 3.00–22.50 |
| 9000 BTU | 1,050 | 90–630 Per Season | 4.50–31.50 |
| Barbeque Grill | 1,350 | 3–9 | .15–.45 |
| Broiler | 1,400 | 5–15 | .25–.75 |
| Clock | 5 | 3–5 | .15–.25 |
| Clothes Washer, Automatic (Excluding Hot Water) | 500 | 5–20 | .25–1.00 |
| Clothes Dryer | 4,800 | 50–125 | 2.50–6.25 |
| Coffee Maker | 900 | 4–8 | .20–.40 |
| Computer (Monitor & Printer) | 200 | 10–60 | .50–3.00 |
| Deep Fat Fryer | 1,500 | 5–9 | .25–.45 |
| Dehumidifier | 350 | 12–20 | .60–1.00 |
| Dishwasher (Excluding Hot Water) | 1,300 | 10–30 | .50–1.50 |
| Electric Blanket | 180 | 5–15 | .25–.75 |
| Fan (Portable) | 115 | 2–6 | .10–.30 |
| Food Freezer (15 cu.ft.) | 335 | 60–140 | 3.00–7.00 |
| Frying Pan | 1,150 | 10–20 | .50–1.00 |
| Furnace Fan Motor — Intermittent | 350 | 55–145 | 2.75–7.25 |
| — Continuous | 350 | 250 | 12.50 |
| Garbage Disposer | 450 | 2–9 | .10–.45 |
| Grill (Sandwich) | 1,160 | 2–4 | .10–.20 |
| Hair Dryer (Portable) | 1,000 | 4–6 | .20–.30 |
| Hot Plate | 1,320 | 6–10 | .30–.50 |
| Humidifier | 100 | 8–12 | .40–.60 |
| Iron (Hand) | 1,000 | 10–15 | .50–.75 |
| Kettle | 1,500 | 10–15 | .50–.75 |

| Appliance | Av. Wattage | Monthly kWh. | Approx. Cost $ |
|---|---|---|---|
| Lighting | | | |
| Single Lamp (60W) | 60 | 1–12 | .05–.60 |
| Ceiling Fixture (3 Bulbs) | 180 | 2–35 | .10–1.75 |
| Tri-Light (Table Lamp) | 100 | 1–20 | .05–1.00 |
| Chandelier (5 Lamp) | 300 | 6–55 | .30–2.75 |
| Fluorescent 2 Tube (4 ft.) | 100 | 1–20 | .05–1.00 |
| Microwave Oven | 1,000 | 15–30 | .75–1.50 |
| Oil Furnace (Burner) | 260 | 25–75 | 1.25–3.75 |
| Range | 12,500 | 50–80 | 2.50–4.00 |
| Range (Self Cleaning Cycle Only) | 3,200 | 2–5 | .10–.25 |
| Refrigerator – Freezer | | | |
| Frost Free (17 cu.ft.) | 500 | 100–150 | 5.00–7.50 |
| Non-Frost Free (13 cu.ft.) | 300 | 50–100 | 2.50–5.00 |
| Rotisserie | 1,400 | 1–3 | .05–.15 |
| Sauna (5' × 6') | 6,000 | 50–150 | 2.50–7.50 |
| Television (Black and White) | 200 | 10–40 | .50–2.00 |
| Colour | 330 | 10–110 | .50–5.50 |
| Toaster | 1,150 | 2–4 | .10–.20 |
| Video Cassette Recorder | 120 | 5–25 | .25–1.25 |
| Vacuum Cleaner — Portable | 800 | 2–5 | .10–.25 |
| — Central | 1,600 | 5–10 | .25–.50 |
| Water Bed Heater | 400 | 20–50 | 1.00–2.50 |
| Water Heater | | | |
| Typical Family of Four | 3,800 | 375–525 | 18.75–26.25 |
| Typical Family of Two | | 250–350 | 12.50–17.50 |

**HOW TO DETERMINE THE COST OF RUNNING APPLIANCES USING THESE TABLES**

**Example:** A video cassette recorder used extensively might consume approximately 25 kW.h per month (as a high estimate). Therefore the cost would be 25 kW.h × the local utility power rate* (on average about $.05 per kW.h) — 25 × .05 = $1.25

*Call your local hydro for cost per kW.h

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The Electricity People

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