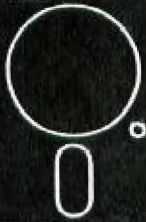


WINNIPEG



Newsletter

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The Winnipeg 99/4A User Group is a non-profit organization formed by computer hobbyists for users of the Texas Instruments 99/4A Home Computer and compatibles. The content of this publication does not necessarily represent the view of the Winnipeg 99/4A user Group.

Next General Meeting - Date : April 24th 1988
Time : 1:00 P.M.
Place : 1334 Aikins St.

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LETTER FROM THE EDITOR

by Darrell Wyatt

Another month goes by and spring approaches, although no-one seems to have told Mother Nature about it. Oh well, every cold day is another day on the computer, so needless to say, my computer has been getting quite a workout.

Rick and I have been in almost constant communication and have been quite busy sorting out disks and working with our new drives etc. As Rick had some floppy disks he wished to sell, I suggested that we put our new fairware releases on them and sell then sell or trade them so this month we are going to give it a try. At 50 cents a disk loaded with fairware this is certainly a bargain...or just trade a blank disk for a full one...either way it is a good value. I am hoping that this will save on copying during the meeting so let me know what you think of the idea.

Rick, Gord and I got together once this month to go over the fine points of the editor assembler module--loading and running different types of programs and using program names etc. and I also gave a small tutorial on PRBase. This was an enjoyable evening I think that once or twice during the month small Special Interest Groups could get together to share ideas and pass on information to newer members etc. so if anyone has an area that they feel they would like to explore more, let us know and we could possibly arrange something for an evening.

Every month we attempt to offer something in the way of software to the members in the form of disk. Unfortunately we are guilty of neglecting to offer the same service to the members who are not blessed with disk drives so as an attempt to remedy this problem I will make my cassette collection available to anyone who wishes to borrow it(not all at once of course) and this way everyone may have something to look forward to.

I guess that's about it for now, as I said it has been a busy month and I would like to extend my congratulations to Rick on his latest venture as a TI software and hardware dealer(and maybe even a TI sysop!). I am sure that the Winnipeg TI community as a whole is going to appreciate his services immensely in the coming up months. Take care and we'll see you all next month.

HELPFUL HINTS

by Rick Lumsden

Well! it has been a pretty hectic month for me and some of the other members. As I mentioned at our last monthly meeting I had hoped to set up a small sideline to sell TI hardware and software. Well that deal has been

virtually finalized and if you require anything for your TI or have some questions about something, give me a call and I hope I can help you out. As it stands now, at the time I am typing this, I probably cannot quote exact prices but that will be worked out very shortly.

At last month's meeting I gave a short demo on the Horizon Ram Disk card just before Darrell's demo of the Gen'ève. From that demo I was able to gather orders for 3 various version of the board. Although that amount was not enough to get us any discount maybe in the future we can set up a group buy. I was, however able to get firm orders for 5 Toshiba 1/2 height DSDD disk drives that I had mentioned at the meeting as well. Two are now happily purring away on Darrell's Gen'ève and keeping a big grin on Darrell's face as well. Sorry but that was all the drives I could get at that price(\$120) but I may have one left over. On the subject of those drives, we did encounter a very strange problem with them at Darrell's. These particular drives are IBM AT and XT compatible. Since I had used drives like this before I had no doubt they would work fine again. The problem arose with the IBM AT compatibility. The AT senses when a disk has been removed from the drive by monitoring a sensor at all times on the drive itself. This feature helps to eliminate operator error when switching disks. For example, say you were using a program that consisted of multiple files and you removed the program disk from the drive before all th files were loaded. It is possible therefore for the computer to know that the disk has been removed without ever having to start the drive spinning. This is detected by an opto coupler type sensor that is situated in such a way that when a disk is inserted, it blocks the opto coupler and signals the controller a disk is indeed in the drive. All the other drives I had ever used either lacked this feature or it was an option set on the drive itself by a jumper of some sort. These units, when used with an XT or an AT, adjust themselves accordingly. When Darrell and I tried formatting a disk, the first went with no problem but the next one, the computer failed to recognize that there was even a disk in the drive!!! Taking the same disk over to the TI system with the old Shugarts, we encountered no difficulty at all. Hmm... Now what??? Drives no good??? Well the curious thing was the disks we were trying to format were the coloured jacket variety and when we tried a regular black jacket disk, all worked well. WHAT THE HECK IS IN THE DAMN COLOUR??? After frantically pulling my hair out for an hour we just decided that the coloured disks would have to be used on the TI until we could decipher the problem. Darrell has a good friend Mike who is an absolute electronics wiz and a call the next day to him unravelled the problem. He came by and with a quick look at the drives he said that the opto coupler had a powerful enough beam to actually

shine through the jacket of the lighter coloured disks. These particular coloured disks you can actually see the magnetic media through the jacket and thus the light from the sensor in the top corner could also see through it. Mike placed a black write protect tab in the offending corner of the disk and all worked well. After a little wire tracing, he found the plug for the sensor, removed the wire to disable it and Darrell is happily formatting his coloured disks now.

The demo on the Gen'ève that Darrell worked on was indeed impressive. There is alot of potential in this machine and is worthy of your consideration when you plan to upgrade. The software available now does not really take advantage of the power of the machine. Something like passing judgement on the 4/A after seeing an old game module like Hunt the Wumpus running. Don't get me wrong!!! I am not condemning the software for the Gen'ève but there is a learning period to really understand the machine and then utilize it to its fullest. In other words THE BEST IS YET TO COME!!!! In the meantime, much of your favourite software from the 4/A will run and at increased speed. Think about it before you switch camps. I left the TI community for a few months and now I have my faithful 4/A beside me once again.

On to the Horizon.... It seems every article I write I talk about this card. Simply put, you cannot spend your money on a better peripheral, period. Even if you bought it today and tomorrow you decided to buy a Gen'ève, the Horizon is compatible with it as well. As a matter of fact, Darrell has installed the new Horizon operating sytem VER MENU 7.3 from the Miami club, and is booting his Gen'ève from it. Meanwhile I would like to see a few of the more talented 4 /A programmers out there take this as a challenge. I think it is possible to load an operating system into the Horizon to allow it to emulate a 128K memory expansion. Why would this be of any use you ask since without using Assembly language the extra memory would be inaccessible? The Myarc XEII package requires 128K to operate!!! If a new operating system set up part of the memory on the HRD as memory for the 128K operating system required by the XEII and used the rest as a Ram Disk, that would forgo having to buy a special memory card to run that language. With that same operating system, part of the card could be used as normal 32K expansion when not running XEII. With the advent of the new 1 MEG HRD's, this seems even more feasible. Perhaps I am wrong in assuming this is possible, but I do remember when Paul Degner mentioned a HRD beyond the 192K version it was thought impossible as well.

That's about it for this month's ramblings. Sorry I didn't get into something a little more informative but I

am still reviving my 4/A and it's software. I also will not be at this month's meeting as it is spring break and my wife has a small getaway vacation planned for that weekend. I am still always open for questions at the number on the front so give me a call...

DISK DRIVES

by Gord Windatt

Over a period of time and the purchase of 3 lots of various used computer equipment packages I have aquired a total of 5 disk drives of 2 vintages in various state of repair.

Through asking a lot of questions,reading any books and mags I can find,and experimenting,I have found out a few things that may be of interest.

---1. There are older drives around that only support 35 tracks. Mine worked to 34 and 36 tracks and unaware of the above thought both were in trouble. More on this later. Mine have 2 PC boards.

The standard is 40 track with 9 sectors each for a total of 360. (numbered 0 to 359). There is also double sided and double density giving a total of 2 or 4 times the capacity per disk. Disks loaded in either of these formats cannot be read on the 5550 type drive.

---2. Despite conflicting information in some books the standard TI Disk Controller Card will support single or double sided drives. (Not double density).

---3. The power supply in the PE box will support one standard or 2 half power drives. You can mount 2 half height drives in your PE box but unless they are half power your will have to provide separate +5 and +12 volt power for the second one.

Typical power requirements:

Voltage within 5%

Pin 1 +12V peaks to almost 2 amps

Pin 2 -12V return

Pin 3 -5V return

Pin 4 + 5V steady just over 0.5 amps

---4. Multiple drives 3 and/or 2 can be connected by a simple bridged cable. (ie a ribbon cable with 2 or 3 connectors all in parallel.) The Shunt Pack (SP) looks like an IC with six shiny straps. It must be adjusted to set the address for each drive. It is located on the back corner of the PC board opposite to that of the 4 pin power connector. On my drives, various vintages of 5 5550 Shugarts, there are 6 metal bridges HS, DS1, DS2, DS3, M1, and BLANK. The socket extends one space further than the plugin and is labeled HM.

HS is left connected on all drives. DS1 is connected on drive 1. DS2 on drive 2, DS3 on drive 3. All other bridges are broken so there is no continuity.

---5. In front of the SP is the Terminating Resistor Pack (TRP). It also looks like an IC and is plugged in. This is where the confusion starts.

The 1982 issue of TI Disk Memory Drive manual states

on page 4 that the TRP is used on single and last drives.

A 1983 TI addendum suggests conflicting information.

When I first tried to set up multiple drives I had a lot of difficulty as some of my drives had problems and due to the conflicting information on TRPs. As I operate now with 3 drives on my #1 PEbox I have TRPs in drives 1 and 2 but not in #3. This is at variance with my electronic experience in other fields but it is the only way they will work correctly.

If the TRP is shorter than the socket it should be inserted to the position toward the edge of the PC board.

---6. One article suggests that only 10% of drive troubles are electronic. Remember that many ICs are CMOS and can be damaged by static charges. Turn all power off, wait a few minutes for condensers to discharge before disconnecting anything. Ground yourself by touching a metal chassis, desk, etc. Do not touch the circuit board or connectors indiscriminately. I have not blown an IC yet but I know it is very easy to do.

---7. Typical pin assignment for the drive connect cable.

All odd pins are ground.

Pin

8 Sector index Low pulse

10 DS1 Low select

12 DS2 Low select

14 DS3 Low select

16 Motor Low run

18 Direction Low out

20 Stepper motor Low pulse

22 Write data Low true

24 Write gate Low w-enable

26 Track 00 sensor Low 00

28 Write protect Low protect

30 Read data Low true

32 Side select on DS 0 opposite, 1 normal

---8. Drives that are listed as IBM-PC compatible imply that they are 6 ms. (or less). I have heard that this is a requirement for our CPU.

---9. I have fixed my defective drives with cleaning and lubrication. I would strongly recommend to keep all coffee cups, soft drinks etc away so there is no possibility of a spill into the works. It is also a good idea to cover your equipment with a cloth (not plastic) to keep out the dust.

---Suggested materials;

---OIL--Radio Shack Archers Precision Oiler, sewing machine oil, 3 in 1, WD40. (Do not use a silicon or graphite based lube)

-----Vegetable oil for plastic parts (ie doors)

---SOLVENT--Disk Drive Head Cleaner, 91% alcohol.

---GREASE--White lube.

Clean the parts with a lint free cloth and solvent.

Apply oil sparingly. I dip a fine bare wire into the oil

to get a micro drop and transfer it to the bearing. It allows easy access to tight areas. Any petroleum based lubes should be kept off plastic parts that may swell or dissolve. Vegetable, fish, or baby oil can be used on them.

I have had most trouble with the head carriage and rails on one used drive. A sticky substance gets on them and the drive fails on the higher numbered tracks. I finally removed the rails and carriage to thoroughly clean and lube them and seem to have solved the problem. This really emphasizes the need to keep all liquids and contaminates away from the equipment.

---10. If your disks are hard to remove at times it may be that the guide rails have come loose. I fixed mine with some epoxy glue.

---11. I have read in many places that due to high repair costs that it can be cheaper to replace than repair. I am inclined to believe this when I look back at the time I have spent on some successful and some otherwise repairs. When your equipment is manufacture discontinued it may not be possible.

In any case one can always look inside for broken wires, burnt parts, check the voltage levels, and check for worn controls. On mechanical devices it is worthwhile to clean and lube. If you belong to a CPU club ask questions, someone there may have had a similar problem.

---12. It is easy to check the speed using a neon or small lamp (ac only) and the strobe disk on the drive motor. The 60 cycle bars should be fairly steady (ie not rotating and not going forward and back).

---13. If you are going to attempt a speed and/or stepper motor adjustment and have some disks that will not read on other drives; you should make a copy reading on this drive to a good drive before any change is made.

---14. Pink pencil erasers are useful for cleaning PC board contacts.

I hope this summary is of use to some of you. If you feel there are errors or omissions I would appreciate hearing about them. If you open your equipment I cannot be responsible for what happens. For all you know you might fix it, in any case you will learn something-GOOD LUCK.

GENEVE CORNER

by Darrell Wyatt

As promised here are the further updates on my Geneve for those interested in following its progress.

I would first of all like to thank MICROBYTE LTD. at 959 Portage Ave. for spending the time and effort that they did in helping us with a monitor for the demo. Unfortunately there was just not enough time to get the proper cable hookups but a sincere effort was made and is appreciated.

February 1988).

EZ-KEYS

Asgard Software has begun publishing 'Key Notes', described as a quarterly journal devoted to owners of its EZ-Keys program.

The first two issues will be free to purchasers of EZ-Keys, according to Chris Bobbit of Asgard Software. He says that at the end of six months the company will examine costs to determine whether to continue free or paid circulation for the publication. For further information, contact Asgard Software, P.O. Box 10306, Rockville, MD 20850.

TI ARTIST

Here is a TI Artist Tip from Stephen C. Lamberti of Texaments.

While in the drawing mode of TI Artist the cursor speed can be toggled between fast and slow mode by pressing the function and semicolon keys simultaneously (FCTN ;). Although it is difficult to find this speed control toggle key in the TI Artist manual, it does appear on the page marked "Key Layout." This particular page also provides valuable information about controlling the cursor, color and pen mode.

Reprinted from Cin-Day News (Dec. 1987).

TI BITS * Number 5
By Jim Swedlow

[This article originally appeared in the User Group of Orange County, California ROM.]

DISPLAY VARIABLE 80 FILES * MULTIPLAN AND TI WRITER

The DV80 file is TI's workhorse. TI Writer uses this format. If you open a file without specifying a type (<OPEN #1:DSK1.MYFILE>), it will be DV80. Assembly language source code files are DV80. This month we will cover some interesting aspects of these files as they are used by TI Writer and Multiplan.

First, you can save a Multiplan spreadsheet as a DV80 file on disk. Then, later, you can use that DV80 file for printing or for merging into a TI Writer file. You choose Print and then File. You must be careful to use a different file name than the one you used to save your spreadsheet as, unlike Transfer Save, Multiplan does not warn you if you are about to overwrite an existing file.

Just as when printing on a printer, you can control the margins and page format with Print Margin. One of

The most obvious addition to the computer is the addition of a stand for the expansion box. This definitely clears the keyboard and gives you free and easy access to the drives. Getting the disks in and out of the drive without some system is an annoyance I am sure most have had one time or another. The stand tilts the PEB slightly so that the drives are even more free. Once again the stand was purchased at Microbyte for anyone interested.

The next additions are the shiny new Toshiba drives which Rick is reporting on so I won't duplicate his article other than to say WOW what a difference.

Finally I got hold of the new Horizon operating system 7.3 which enabled me to use the Horizon effectively in the Geneve and I am now booting from battery backed RAM. I still have room for the most used utilities, making the Horizon a very attractive addition to the Geneve system.

Well those are the physical changes this month and as far as software goes I have received a fairware terminal program that is very nice. It has a couple of bugs yet but is much simpler to use than the patched version of Fast Term and I am quite impressed with the Dos loading and escape ability as well as the on board help screens. It has basically been a month of getting used to the system and I am quite comfortable with it now. I have started working with batch files and I am getting quite well versed with the main Dos commands. Micropendium and Computer Shopper continue to be a wealth of information so I am confident that my knowledge and capabilities will continue to grow with the 9640. See you next month with probably even more new toys and info.

TI-CHAT

Compiled by Marie

Here are some Funnelwriter tips courtesy of Rick Alston. This article originally appeared in MAD HUG March 1988.

The following items are for use in the Text EDITOR mode.

Converting uppercase characters to lower case meant you retyped everything, until now!

Depress CTRL and "." (period), the cursor is then able to pass over each character converting every character the cursor passes over to lower case. Very nice in word wrap mode.

Converting lowercase characters to uppercase is just as simple.

Press CTRL and ";" (semicolon), autorepeat functions also. (Thanks to the McGovern's).

(The following has been reprinted from MICROpendium.

the items that Print Margin lets you set is Print Width. If you set this to a number greater than 80, Multiplan will write a DV80 file wherein each record is longer than 80 characters.

Should you attempt to read such a file with a Basic program, your system will produce a strange error code and lock up. Apparently the folks at TI thought that a DV80 file couldn't have a record longer than 80 characters so their error handling language does not consider that possibility.

TI Writer, however, will read this illegal file. It will only input the first 80 characters in each record but it is just about the only way to access the file (another is a disk sector editor).

Incidentally, TI Writer is very forgiving when reading files. More than once I have used TI Writer on a file with a glitch that prevented me from reading it. First I loaded the file into the Text Editor and then I saved the file back to disk. This process can remove a glitch.

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