# Newsletter

# OCTOBER 1988

## NOVEMBER 1988

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 : November 27, 1988
                       Time : 2:00 P.M. (note change)
                       Place : 1334 Aikins St.

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by Darrell Wyatt

Another summer has come and gone putting us smack into a new season once again. Speaking for a definite minority I for one am very glad to be done with the harsh heat of summer and look forward to a long pleasant winter season, heh heh, yes I know that many will disagree but look at the record. July and August were dead....no news or product updates all summer long and here we are into September and already the new products are starting to pour in(thanks Asgard).

All joking aside though, it promises to be another good year for the group with more updates, software and members to be welcomed into our fold. I have already started buying more than I should and probabaly will continue to do so all year long as I did last year.

One of the big announcements to make this year is the fact that we now have a new BBS locally in the city. I am pleased to announce that Rick Lumsden, one of our biggest supporters has established a TI USER'S GROUP BBS(1-204-254-1612). This is a board that is a closed system for TI user's and friends. We of course welcome out of town TI'ers to phone and take advantage of the upload/download capabilities of the board, or just to read the messages and leave news of the outside world. For new members, just log on and you will be asked for all the pertinent information, name, password, etc. but will not be given true access till the next time you phone(Rick is quite fast at validating new user's, usually within 24 hrs.). Out of town guests are invited to use the GUEST format, this means under first name type GUEST and just a return for last name. Under password, use the extended basic module number and you will be admitted to the features of the board. This board is definitely a great asset to the club and we owe Rick a hearty thanks for going to the trouble to set it all up and run it. One of the best ways to

thank him, of course is to use the board so all bulletins and announcements will be placed there for your perusal. Also all TI news and fairware will also be made available through the board, as well.

Another item of news is the fact that I will be passing on the reins of newsletter editor to another. Ralph Mills will be taking over as of this month while I settle back as co-editor.

As co-editor I will still receive all mail and will pass it along to the proper people, but due to an extremely active season I unfortunately will not have the time to spend that is needed to do a proper job. Welcome aboard Ralph and all the best to you.

Although this will be my last editorial, I will still be submitting articles as I hope the rest of you will so that the newsletter continue to flourish with many original articles as well as passing on newsworthy items from other sources.

Well, I guess that is about all for now so have a good season as I hope to and KEEP ON TI'ing.

HELPFUL HINTS
by Rick Lumsden

It's the time of the year to fire up the old computers again and get down to some serious computing. It's been a pretty hot summer out here on the prairies and judging by the BBS activity, I would say that many of our members were out enjoying the sunshine. It was probably best that the board was not that busy, as it had a few bugs that have been since worked out, and it has also been upgraded to 640K with the majority of the program in RAM Disk now. I think you will notice and enjoy the increased speed.

To start off our fall session I thought I would discuss the Horizon Ram Disk and it's various operating systems.

There are at least seven of these units in our club now and some of the newer users are still a little baffled by the different sizes of disks and the various operating systems.

Originally, thanks to the wizards of the New Horizons Group, namely John Clulow and Ron Gries, the Horizon started life as a 104K unit using the Hitachi HM6264LP-15 (or equivalent) 8K memory chips. It could be expanded by piggybacking 11 more of the 8k RAMS onto the existing chips and using the expansion jack that was available on the board, you could boost the capacity to 192K. This was the extent that the Horizon Group had taken the board and combined with the Horizon Ram Disk Operating System that came with the board, it was a fantastic piece of equipment. The original HRD ROS was about 12K long so if you had a 104K board, you had about 92K left for actual Ram Disk. This is roughly equivalent to a SSSD disk. After expanding to 192K, you had 180K or the equivalent of DSSD disks.

It wasn't long before some other electronic wiz noticed that the addressing for the card was not fully decoded. What that meant was there was enough addressing space left to actually use 256K. All one had to do was piggyback another eight 6264 s and add a couple new decoder chips and we had the 256K version. This version, after loading the ROS, had 244K of disk space. This amount of space falls in the middle of DSSD and DSDD but at any rate WE HAD MORE ROOM!!!

About the same time, the Miami TI Group decided that there was a great deal of potential in this expansion card, perhaps even some things that had never been thought of. One of these things was the power-up link. The released to PUBLIC DOMAIN no less, a new operating system for the HRD. It was pretty much same as far as using the RAM as a RAM disk, but they had also trimmed a few of the less used Calls of the HRD ROS and had added this new thing called

a Power-up Link. A power-up link works as follows: When you first turn on your 4A, the computer scans the PEB for the various DSR routines in each of the expansion cards. It then hands over the reins to the GROM code which loads the title screen into VDP (amongst a few other things) and when it is all set, it will beep and display the title screen. What John Johnson of the Miami club thought was " Why not grab control of the computer before it hands the reins over to the GROM?" If one were to do this, a program on the Ram Disk could be loaded and run instead. In all fairness, this was not the first time this had been thought of because the CorComp Disk Controller does much the same thing. This little gem of programming was called the VerMenu operating system and only used up 8K of space to operate. Combined with the program called MENU on the HRD and the Power up link, it proved to be extremely popular in the TI Community. You now had the power to just press a key from a menu screen and the program was instantly loaded from the Ram Disk. Many users don't realize that the program called MENU on the VerMenu operating system is just that.... An E/A program. The VerMenu ROS will, on a power up link, run a program called MENU from the HRD. It doesn't matter what that program is as long as it is an E/A program. Try renaming DM1000 from MGR1 and MGR2 to MENU and MENV then hit the QUIT keys and see what happens. Only probelm is, unless you rename a disk manager program it can be a little tough getting out of the program back to Basic or anything else for that matter. There is a way around that as well. When you hit QUIT, quickly hold down one of the SHIFT keys and the ROS will bypass the power up link and give you your familiar title screen. Then, assuming you have DM1000 set up as a call from Basic, or with the DMII module installed, just rename your files back to original. Well how much Ram is enough??? A computer user never seems to have enough

and with the advent of the HM62256LP chips, a new breed was born. The 62256 chip is the same type of RAM chip as the 6264 but instead of 8K per chip, it has 32K!!! Imagine if you will, your whole 32K memory expansion card on one 28 pin chip!!! It wasn't long that again someone noticed there was a way to use 16 bit decoding to access 1 MEG or more of peripheral memory. Previously only 8 bit decoding had been used. It was now possible to get 288K on the HRD without piggybacking any of the RAM chips, and if your budget allowed, you could piggyback them and take the card up to 1 MEG of memory. This mod required quite a bit of piggybacking of the support chips however, and the multilayers of chips are prone to wiring errors during assembly. Still another update and Bud Mills Services has redesigned the PC board to eliminate much of the support chip piggybacking. There you have a much condensed version of the whole story. There have been many new versions of the VerMenu ROS and the latest we have here is 7.3. The HRD is almost timeless in design as it will work just as well in the Gen'eve as the old 4A. There are a few quirks when using it with a Gen'eve but there is still another ROS called Phoenix which makes the transition very much smoother and according to Darrell it works like a charm. There have also been other ROS's developed such as Art Green's Ram Boss. I have discussed this in previous newsletters so I won't go into it any further. Suffice to say it is also very useful and allows you to store different modules on line in the Ram disk ready for instant loading. I am still waiting for a ROS that would allow me to use the HRD as CPU memory and run Myarc's XBIV. Maybe someday. I have purposely not gone too deep into the actual workings of the different ROS's because they all come with very good documentation. Between all the users in the club who do have an HRD I am sure if one of us is stuck, someone else can sure help them out. Besides.... My damn fingers are

getting tired!!! Hope this helps you when someone mentions the HRD they are using and next time we'll see what new and exciting topic I can try and explain. Let me know if there is something you would like to read about and I will try to oblige. Type at y'all later......

### LEGEND V1.1

A Review by Brian Lesko

THE LEGEND CONTINUES!

The best game program ever made for the TI has been improved! The numerous programming bugs that plagued the first version have been eliminated. But, as is to expexted with such a huge(180K) program,some bugs will find a way to creep in. I encountered a serious bug when I found the western portal, and tried to close it. The program crashed and I got the error message,"SYNTAX ERROR IN 1200". Fortunately, to continue on in the quest,I merely had the program skip to the routine that is encountered when the portal is successfully closed. else does, I would greatly appreciate hearing from you.

This version has several new features. Such as,MULTIPLE ATTACKS-each of your characters now has at least 2 attacks for each combat round. This will increase when the players level rises.

Also new is the feature that allows you to speed up or slow down the length of time text appears on the screen. This will be appreciated by experienced players!

Another new option is one that I personally greatly appreciate. This is the ability to "SAVE GAME" from anywhere on the islands. But be aware that once this is done,you must re-boot the game to continue.

New potions have been added to

assist you in your quest. One is the new "STEALTH POTION". This makes you invisible to the monsters! But beware! The effect does not always last long. By the way, this replaces the MAGIC #3 potion, so use your supply wisely!

One very dangerous new spell is the "SLOW" spell. This enables the user to slow the opponents to only 1 attack per turn. Both you and the monsters can use this spell. But due to the wisdom of the programming wizards that created this game, you have a way to beat this. Just use the "DISPEL MAGIC" spell and all will be well!

The improved graphics will be appreciated by all of us adventurers. There are 4 types of terrain that we can travel through, but unlike the last version, where you travel can mean success or a devastating attack by the multitude of difeerent monsters. Grasslands are safest,forests are trouble,swamps get you hurt, and the dark swamps seperate the brave from the living.

One very important point is the fact that when you chose a higher playing level,the amount of gold and expieriance you get after a successfull battle, will increase.

There has not been a better effort made to supply us TI users with a enjoyable program, I urge all users to give this a look, you will not be sorry!

One last thing, ram-disk and/or myarc 9640(Geneve) users will love this one. With either unit, you will be able to speed up the over-all amount of time it takes to play this fine game!

PROGRAM NAME:LEGENDS V.1.1
AVAILABLE FROM :ASGARD SOFTWARE
ADDRESS :P.O.box 10306
ROCKVILLE, MARYLAND

For local users,contact Rick Lumsden,our club supplier.

An ASSEMBLY LANGUAGE TUTORIAL
by Sheldon Itscovich.

(editor's note: this is the first of a series of articles by Sheldon on assembly language. They were originally presented at club meetings displaying his material on a computer, with explanations.)

OPT. CODE FIELDS
-----------------

1) LABEL FIELD

2) OPERATION FIELD

3) OPERAND FIELD

4) COMMENT FIELD

LET'S LOOK AT EACH FIELD BRIEFLY FOR NOW WE WILL GO INTO GREATER DETAIL AS WE GO ON WITH ASSEMBLY.

THE LABEL FIELD
----------------

THIS AREA CAN BE MADE UP OF UP TO 6 LETTERS OR 1 LETTER IN THE 1st. POSITION AND 5 OR LESS NUMBERS.
THE LABEL IS USED TO MARK THE START OF A SUBROUTINE OR SUBPROGRAM WITHIN A LARGER PROGRAM. IT IS ASSIGNED A LOCATION IN MEMORY BY THE ASSEMBLER.
THERE IS ONE BLANK SPACE BETWEEN THIS FIELD AND THE NEXT FIELD CALLED THE OPERATION FIELD.

THE OPERATION FIELD
--------------------

THIS AREA IS MADE UP OF UP TO 4 LETTERS. THESE ARE NOT OF YOUR CHOICE, BUT ARE SYNTAXS OF THE E/A LANGUAGE. SOME EXAMPLES ARE.... DATA , BYTE , MOVB , MOV , A , SB . THESE ARE JUST A FEW THERE ARE MANY MORE. WE WILL LEARN THEM SLOWLY AS TIME GOES BY.

THE OPERATION FIELD AND THE NEXT FIELD CALLED THE OPERAND FIELD ARE SEPERATED BY ONE BLANK SPACE.

THE COMMENT FIELD
------------------

THIS AREA IS LIKE A REM STATEMENT IN BASIC. IF IT IS PUT ON THE SAME LINE AS CODE YOU NEED ONLY SEPERATE IT FOR THE CODE BY ONE BLANK SPACE.

HOWEVER AN ENTIRE LINE CAN BE A COMMENT AND IN WHICH CASE AN * MUST BE IN THE FIRST POSITION OF THE LABEL FIELD.

*THIS IS A SAMPLE OF A REM STATMENT

SO THIS IS HOW ONE LINE OF CODE IS USED.

LABEL OPERATION OPERAND COMMENT

THERE IS A EXAMPLE LINE:

START DATA >A800 FIRST MEM. LOC. IN HIGH MEMORY

IN ORDER FOR YOU TO PROGRAM MORE EASILY TI HAS BUILT IN SEVERAL UTILITY ROUTINES

THERE ARE SEVERAL BUT FOR JUST NOW WE WILL LOOK AT TWO. THEY ARE VSBW AND VMBW

VSBW STANDS FOR Video display memory Single Byte Write.

VMBW STANDS FOR Video display memory Multiple Byte Write.

THESE ROUTINES USE UP TO 3 OF THE 99'S 16 REGISTERS.

A REGISTER CAN BE THOUGHT OF AS A BOX CONTAINING SOME THING.

ROUTINES USE REGISTERS 0 1 AND 2 . EACH HAS A SPECIFIC USE IN THE ROUTINE.NOW LETS LOOK AT SOME SAMPLES.

LETS LOOK AT VSBW FIRST.

```
LI R0,440
LI R1,>41
BLWP VSBW
```

LI STANDS FOR LOAD IMMEDIATELY. THAT MEANS THE COMPUTER WILL PUT INTO BOX R0 THE VALUE 440. THIS IS A DECIMAL VALUE BECAUSE IT IS NOT PRECEEDED BY THE > SIGN.

THE NEXT LINE LOADS INTO R1 THE VALUE HEX 41

NOTICE THAT COMMAS ARE USED TO SEPERATE THE SECTIONS OF THE OPERAND FIELD. THE TRIPLE SPACES BETWEEN LI AND THE R0 AND R1 IS THERE TO MAKE READING EASIER, ONLY ONE SPACE IS ACTUALLY REQUIRED.

THE NEXT LINE IS BLWP WHICH STAND FOR Branch and Link Workspace Pointer. THIS TELLS THE COMPUTER TO GO TO THE ROUTINE IN MEMORY. THE ROUTINE WILL THEN USE THE VALUES IN REGISTERS 0 AND 1 AND RETURN TO YOUR PROGRAM.

NOW LETS LOOK AT VMBW.

```
LI R0,>A08
LI R1,CHAR
LI R2,8
BLWP VMBW
```

LINE ONE LOADS R0 WITH HEX A08
LINE TWO LOADS R1 WITH CHAR
LINE THREE LOADS R2 WITH 8
LINE FOUR TELLS THE COMPUTEER TO DO THE VMBW ROUTINE.

THIS 4 LINE PROGRAM WILL DIRECT VDP MEM. POINTER TO LOC. >A08 THE LOC. OF THE A CHARACTER DESCRIPTION.THEN LOAD THE VALU OF CHAR INTO R1. THEN LINE 3 TELL THE ROUTINE THAT THERE IS 8 BYTES TO LOAD AND LINE FOUR TELLS THE COMPUTER TO GO TO THE VMBW UTILITY. THE RESULT IS THAT THE A CHARACTER WILL CHANGE IT'S SHAPE TO WHAT EVER THE LABEL CHAR IS DEFINED AS WITH A DATA OR BYTE INSTRUCTION.

OK NOW THAT YOU KNOW IT ALL

.......... LET'S LOOK AT SOME PROGRAM SAMPLES.

IF YOU HAVE QUESTIONS ASK NOW OR FOREVER HOLD YOU MOUTH SHUT!!!!!!!!

OK THEN HERE WE GOOOOOOOO....

GENEVE C..NER
by Darrell Wyatt

As the only resident member who has a Geneve, I guess it falls to me to try to keep everyone abreast of the latest inovations regarding the newest upgrade in the TI community.

As previously mentioned, the summer was basically quiet without much activity on either the TI or Gen'eve, but at the start of September I called down to Ottawa to see if there was anything new and lo and behold, there was a whole battery of new updates for the Gen'eve. I busily started downloading and received a new operating system(MDOS 1.06), GPL(1.01),a fairware assembler package and an updated wordprocessor(MYWORD 1.2B).

MICROPENDIUM and COMPUTERSHOPPER are announcing the final releases of all software by Nov. 1st and commercial software to immediately follow. As I said in the editorial, I will probably be overspending for some time to come.

One of the things that I uploaded from Ottawa, was the Gen'eve message base and I read with some interest a discussion on some menu that people were using in GPL mode and the awkwardness of getting it set up. I have purchased a program myself, called Gram Packer that was designed for a Gram Kracker card but does an admirable job of creating menus in gram for the Gen'eve as well. Simply put, the Gram Packer allows you to pack small programs into gram that will show up on the main TI menu.

The program has utility programs that will allow you to load EA5 type

programs from any disk you specify(including Horizon) and even has a general loader for any EA5 program you wish to type in. This program works flawlessly and will create dozens of menus in minutes, easily and without hassle. I use it as a menu for Myword PRBase, Funnelweb...etc. etc. The Gram Packer is very low priced and well worth it if you use GPL mode a lot.

I also recently called Alabama and talked to Jack Riley for some time and he was very enlightening ....,shedding some light on questions I had regarding the software and hardware configurations that I use. They are apparently planning to release the fix for the Myarc 512k card in October's Micropendium, so all those who are waiting to convert their cards over to get over 1 meg of memory will soon be able to do so although I was advised that the fix is quite tricky and not to be tried by amateurs(so Rick, don't make any long range plans, heh heh...I have a job coming up for you).

Well, I guess that is enough for now, I don't promise to have a monthly column but whenever there is something new to write about I will be sure to keep everyone informed, as soon as I am of course...take care and happy computing.

TI CHAT by Ralph Mills

From the Ottawa TI Users Group

The June/88 newsletter has a warning to DM1000 Version 3.6 and later users. They recommend that we go back to the 3.5 version as the most stable or bug free available. It seems that Version 4.0 was inadvertently released prematurely. They hope to have a good version available in the fall.

DM1000 version 3.5 is quite fast

when selecting options for example, and is much worse with the Geneve. A fix for this problem was published in the Oct/86 issue of MICROpendium for version 3.1. The recommended change works for version 3.5, but at a different location in the sector. The fix is as follows: Copy file MGR1 to a new disk, and load a sector editor. Find sector 36 or hex string 86 03 16 F9 03 08 00 A0 FF 00 C0 1D. The important bytes are 98 and 99 - 00 A0 above. Changing these will modify the repeat speed. The range of acceptable values is 00A0 and 07D0. After making the change, save it and copy the modified file to the working copy of DM1000.

In addition to DM1000, other fairware from the Ottawa club - eg. JP Graphics, S. McWatty's Graphic labelmaker, Sideways for Multiplan by M. Tomietto, and some assembly language utilities by Art Green, is available.

From 'The TI Forum' COMPUTER SHOPPER

The column in the June issue described two software items - Graphic Lister, and XCOM; and has a discussion of TI software availability, etc.

After Texas Instruments stopped production of the TI-99/4A in late 1983, dealers shifted their interest to other computers. Since then, considerable support has grown - a cottage industry, providing hardware and software development; and user groups with software and bulletin board services. Several businesses in the US providing software and hardware are identified: - Genial Computerware of Boston; Asgard Software , Rockville MD; Triton Marketing, San Fransisco, CA; Tenex, South Bend IN; Queen Anne Computer Shoppe, Seattle WA. (there are many others, of course RWM).

The software available through BBS networks is 'fairware'. Elswhere in the column, a supplier of fairware is identified. Bob Neal (317 Hickory, Romeoville, IL 60441) will send catalog of 'all major fairware packages'. Send SASE to him (in Canada ? ). Cost is $2.50 per program, for disk and postage.

Graphic Lister, is a combination of utilities enhancing the usefullness of TI Artist, including generation of custom mailing labels, a listmaker prog (BASIC). Printing is done with one of three 'fast' c99 progs, giving a choice of three font sizes. In addition to TI Artist, 32K mem-expansion, printer and disk drive are required. The package is available from Nameloc (3971 S.E. Lincoln, Portland OR, 97214) or Texaments (53 Center St., Patchogue, NY 11772) at $10. The 3 - c99 source code progs for printing are $5 extra.

XCOM is a compiler package on disk with a 10 page manual, enabling MERGEing and other programming features in BASIC. A Mini-Memory module, 32K mem-expansion, and disk drive are required. The package is $50 from DKM Enterprises (P.O.Box 501046, Indianapolis IN 46250-1046). Further details can be obtained from the supplier.

Yet another description of the 'average TI owner' from the survey conducted by Ali Ulgen of North Coast 99ers in Ohio. Typically, he is 45+ years with college degree, self employed or professional and uses a computer some at work. He has 2 systems - one fully expanded, with 32K mem card, a TI controller, one SSSD drive, and has a Star Gemini printer. He uses a monitor with this system. He programs mostly in Extended BASIC, has ~ 25 modules - some games, and also uses it for word processing. (A listing of the survey results was printed in the Feb.'88 issue of MICROpendium.RWM)

The column in the August issue reports the release and features of

'TI-Base' from Texaments (53 Center St. Patchogue, NY 11772. It requires XBASIC, E/A or Mini-Mem. modules; 32K mem expansion and 1 disk drive. Price $24.50 US plus shipping. The reviewer compares it favorably with dBase II, identifying many features including math, algebraic and Boolean functions. Limitations were: 17 fields/record, print output, and a somewhat skimpy manual.

Ron Albright, one of the writers of the Computer Shopper column, has written a book 'The Communicating Computer a Guide to Telecommunications, for beginners, etc. It's a 120 page soft bound introduction, and is available for $10.00 US from him at P.O.Box 12288, Columbus, GA 31907. A descriptive flyer is also available.

A bulletin board system, the Paradigm BBS has become available as fairware, and is described as an 'almost complete overhaul and rewrite' of the TIK BBprog. The latest version is available from Mike Kimble, 1000 Hyatt Ave. Columbia, South Carolina 29203, for $5. Registration and additional documentation are available for $30 more.

From the H U G newsletter, April '88.

Two articles on PRBASE - Tips for the beginner, and PRBASE ENHANCEMENT, were presented. These were reprinted from Northcoast 99 'ers.Jan'88. The latter article is about accessing utilities apparently buried within the PRBASE program. Both are too long for reprinting again here (1 1/2 pages).

Letter from the Editor
by Ralph Mills

The September meeting wasn't very well attended, probably due to summer activities still going on. Hopefully, the upcoming one (end of Oct.) will see an increase in turnout.

This issue of our newsletter is a bit shorter than usual because some of our contributors have been unable to write their column due to other commitments. We are sure next month's issue will include their contributions again.

Anyone wishing to contribute to the newsletter can do so. Please provide Darrell with their D/V 80 file on a single density disk, tabulated – left 1 or 2, right 40. In word wrap mode, please leave the c/r symbols. Printer control characters won't effectively carry through the program I use for multicolumn printing, so please don't use them. Please make your submissions for the newsletter at least 12 days before the scheduled meeting date – the last sunday of each month.

Alternatively, a file can be made available to Rick through his BBS, and then copied by Darrell and put on a disk for me to use for the newsletter.

Hope you will all come out regularly to the group meetings at Darrell's. Good TI'ing.

An ASSEMBLY LANGUAGE TUTORIAL
by Sheldon Itscovich.

(editor's note) A couple of errors crept into last month's article. The corrections are as follows – the two bits of instruction code should read:

```
LI R0,440          LI R0,>A00
LI R1,>41    and   LI R1,CHAR
BLWP @VSBW         LI R2,8
                   BLWP @VMBW
```

- - - - -

THE SCREEN LAYOUT
-----------------

THE SCREEN IS NOT MADE OF ROW AND COLUMN BUT INSTEAD POSITIONS ON THE SCREEN ARE NUMBERED FORM 0 TO 767. 0 IS IN THE TOP LEFT CORNER AND RUN TO 31 IN THE TOP RIGHT CORNER. 32 IS THEN IN THE SECOND ROW LEFT MOST POSITION... AND 767 IS THE LAST POSITON AT THE BOTTOM MOST RIGHT OF THE SCREEN.
THERE IS A FORMULA TO CALCULATE THE NUMS FOR YOU SO YOU CAN CONVERT ROW/COLUMN INTO SCREEN POSITIONS.

C+(Rx32)=POSITION

SO:

COLUMN 5 ROW 7 IS

5+(7x32)=229

SIMPLE ISN'T IT ??????

THE CHARACTER DESCRIPTOR TABLE
------------------------------

AS IN BASIC THE DESCR. OF CHARACTERS CAN CHANGED. BOTH ON AND OFF PIXELS CAN BE ALTERED. FOR DEFINED CHARACTERS THE DESCR.TABLE STARTS AT >900 AND CHARS ARE MADE UP OF 8 CHARACTERS. THERE ARE 12 SETS IN THIS AREA. EACH CHARACTER TAKES 8 BYTES IN MEMORY TO DESCRIBE IT.

>20/32 TO >27/39 IS A SET
>28/40 TO >2F/47 IS ANOTHER
ETC DOWN TO
>7F/127 WITH IS THE LAST REDEFINED CHAR. ANYTHING AFTER 127 IS UNDEFINED BY THE SYSTEM AND YOU CAN DEFINE THEM FREELY WITH MESSING UP THE STANDARD CHARACTER SET.JUST LIKE IN BASIC.

THE HEX CODES USED ARE THE SAME AS BASIC SO THERE'S NOTHING NEW TO LEARN HERE.

THE COLOR TABLE
---------------

THE COLOR TABLE HOLDS THE COLORS OF THE FOREGROUND AND BACKGROUND OF EACH CHAR. IN THE DEFINED AREA IT STARTS AT >384 AND GOES TO >38F
>384 HOLD THE COLORS FOR SET >20/32 TO >27/39 >385 HOLDS THE COLORS FOR SET >28/40 TO >2F/47 ETC.

THE COLORS CODES ARE:

```
0 TRANS           8 MED. RED
1 BLACK           9 LIGHT RED
2 MED GREEN       A DARK YELLOW
3 LIGHT GREEN     B LIGHT YELLOW
4 DARK BLUE       C DARK GREEN
5 LIGHT BLUE      D MAGENTA
6 DARK RED        E GRAY
7 CYAN            F WHITE
```

HERE IS AN EXAMPLE:

```
LI   R0,>384
LI   R1,>F100
BLWP @VSBW
```

THIS PROGRAM WILL CHARNGE THE COLORS OF THE SPACE (32) TO ' (39) TO BLACK ON WHITE.
THE ONLY IMPORTANT DATA IS THE >F1 OF >F100 THE 00 IS IGNORED BUT FOR SOME REASON I HAVE YET TO DESCOVER IT MUST BE THERE.
SO THIS 3 LINER IS THE SAME AS THE BASIC STATEMENT:

CALL COLOR(1,2,16)

SO TO CHANGE THE SCREEN COLOR WE WOULD SIMPLY CHANGE THE COLOR OF THE SPACE CHARACTER AND THE FILL THE SCREEN AREA WITH SPACES.

CALL SCREEN(2) WOULD LOOK LIKE THIS:

(continued from page 1)

```
        LI   R0,>384
        LI   R1,>1100
        BLWP @VSBW

        LI   R0,0
        LI   R1,>20
        LI   R2,767
LOOP    BLWP @VSBW
        INC  R0
        DEC  R2
        JGT  LOOP
```

THAT'S ALL FOR HERE FOLKS. LET'S LOOK AT
FOUR SAMPLES NOW.

1.   CLEAR THE SCREEN AND THEN
     PRINT A REDEFINED CHARACTER
     ---------------------------

```
        DEF  PRINTA
        REF  VSBW,VMBW
MWS     BSS  >20
CHAR    BYTE >3C,>42,>99,>A1,>A1,>99,>42,
             >3C

        LWPI MWS

PRINTA LI   R0,0        CLEAR THE SCREEN
        LI   R1,>2000
        LI   R2,767
LOOP    BLWP @VSBW
        INC  R0
        DEC  R2
        JGT  LOOP

        LI   R0,>A08    REDEFINE A CHAR.
        LI   R1,CHAR    AS COPY RIGHT
        LI   R2,8       SYMBOL
        BLWP @VMBW

        LI   R0,340     PRINT NEW AT LOC.
        LI   R1,>4100   340 ON SCREEN
        BLWP @VSBW

HOLD    JMP  HOLD
        END  PRINTA
```

2.   CLEAR THE SCREEN AND THEN
     PRINT A REDEFINED CHARACTER
     AND CHANGE ITS COLOR TO BLACK
     -----------------------------

```
        DEF  PRINTA
        REF  VSBW,VMBW
MWS     BSS  >20
CHAR    BYTE >3C,>42,>99,>A1,>A1,>99,>42,
             >3C

        LWPI MWS

PRINTA LI   R0,0        CLEAR THE SCREEN
        LI   R1,>2000
        LI   R2,767
LOOP    BLWP @VSBW
        INC  R0
        DEC  R2
        JGT  LOOP

        LI   R0,>A08    REDEFINE A CHAR.
        LI   R1,CHAR    AS COPY RIGHT
        LI   R2,8       SYMBOL
        BLWP @VMBW

        LI   R0,>388    CHANGE CHARSET
        LI   R1,>1400   OF @ THRU H TO
        BLWP @VSBW      BLACK(1) ON D.B.(4

        LI   R0,340     PRINT NEW AT LOC.
        LI   R1,>4100   340 ON SCREEN
        BLWP @VSBW

HOLD    JMP  HOLD
        END  PRINTA
```

3.   CLEAR SCREEN AND PRINT " A "
     ON THE SCREEN
     ----------------------------

```
        DEF  PRINTA
        REF  VSBW
MWS     BSS  >20

PRINTA LI   R0,0
        LI   R1,>2000
        LI   R2,767
LOOP    BLWP @VSBW
        INC  R0
        DEC  R2
```

```
        JGT  LOOP

        LWPI MWS
        LI   R0,340
        LI   R1,>4100
        BLWP @VSBW

HOLD    JMP  HOLD
        END  PRINTA
```

4.   CLEAR THE SCREEN AND THEN
     PRINT A LINE OF TEXT
     ---------------------------

```
        DEF  PRINTA
        REF  VSBW,VMBW
MWS     BSS  >20
GREET   TEXT 'HELLO HOW ARE YOU'

        LWPI MWS

PRINTA LI   R0,0
        LI   R1,>2000
        LI   R2,767
LOOP    BLWP @VSBW
        INC  R0
        DEC  R2
        JGT  LOOP

        LI   R0,323
        LI   R1,GREET
        LI   R2,17
        BLWP @VMBW

HOLD    JMP  HOLD
        END  PRINTA
```

## GENEVE CORNER
by Darrell Wyatt

Well folks, another month has rolled around and it is time for another article. The world of Geneve in Winnipeg has been pretty quiet lately but there is alot of things happening in the larger centres. I have just ordered my hard disk drive controller card and am patiently waiting now, but many have already received them and the response has been very positive.

By next month I should be able to give you the lowdown on it and who knows, maybe even a demo.

Some of the programs I have recently received have not been as exciting on the Geneve as I had thought though. After waiting for PRBase to come in I found that I was not able to make use of it after all. For the TI it works great...it's fast and has a lot of options that will make it desirable to have in your library if you do any programming at all, but on the Geneve I found that the 80 column mode slowed it down to a crawl..especially the columns from 40 to 80 and as well the line speed(that is to say the speed from which the cursor moves from line to line is also extremely slow). Although I could have probably lived with this the final problem and this may be true on the TI as well...I haven't checked it out yet or it could be a controller problem as I also have a Myarc controller..but anyway if you leave a blank line between program lines or lines of text..the PReditor locks up and you have to reboot..and as it happens all of my files have blank lines..I use them as spacers so it will probably sit on the shelf till some updates come out to correct these problems.

I also have received TIBase and it is very impressive..I am familiar with DBase 3+ so the docs were definitely sufficient for me but of course this program only works on the TI as well and not on the Geneve. I expected this though because there was no claim ever mentioned that it would so I didn't think it would although rumour has it that they are making one that will run on the Geneve and use all of the capabilities it has to offer...memory and speed and of course 80 columns, etc.

So as I said, this has been a quiet month for the Geneve but by next month I expect to have a hard drive working and an extra 512k for hardware improvements and all of the software promised to me...Run time pascal and Advanced Basic and full Dos support etc. So there should be definitely more to write about then.

One final thing though, when I ordered my hard drive controller card, it occured to me that I would need a power supply and case for a hard drive and these turned out to be very expensive, sooooo....after talking to a few people more knowledgeable than me, I decided to go a different route and I purchased a second hand IBM case(empty) and IBM power supply (65watts) and now I have the ability to hold up to 4 drives if I want although I would have to exchange the 65 watts for 150 this would still be cheap...oh yes the total cost for this was $35.00. Alot less than the $120 american that the other would have cost and I have more power and space to grow as well.

I guess that that is really it this time so take care, have a good month and I should have much more next time.

## TI-CHAT
by Ralph Mills

After having what seemed like an increase in system crashes, I decided to go back to DM1000 Vn 3.5 (I had been using the prematurely released Vn 4.0) After reloading Vn 3.5, and noting its speed, I changed the speed as per the bit in last month's column. There must be an explanation, unknown to me, but the key hex code - 88 A8 - appeared at bytes C2 and C3 rather than 98 and 99 of sector 36, as reported before. Using a sector editor search facility, the string 86 83 16 F9 83 88 88 A8 FF 88 C8 1D, can be found easily.

Safety Tip on Cleaning Computer Screens

Someone in California was cleaning his personal computer with an alcohol based glass cleaner. When his finger touched the screen, he discharged the static that had built up, igniting the alcohol and causing a fire. This is not an isolated incident, according to the source.

The Multicolumn Program used to print last month's newsletter can be be used for 2 or 3 column pages. It can be copied with 'some' instructions on it's use from disk at a club meeting if you're interested.

From the New Ninety Niners Users NL.

This group (in B.C.) held a special meeting July 28, with Bob Boone as a speaker. Among other things, he said the Ottawa Group would release DM 2000

(continued from page 3)          so anyway!)."

in the fall.   It's  to  be  a
'complete  re-write of DM 1000.  They're
planning the release for the Nov.   12th
TI-FAIRE in Chicago.

From EAR 99'ers User's Group.

A  fix  for  Legends  Vn  1.1  from
Mid-South 99 users group.   "For  those
who  have  made  it almost to the end of
the game you have  probably  encountered
an error in Line 1200.  The error can be
corrected by changing OK=K to LK=F (hope

### From Ottawa TI99/4A User's Group

Barry    Boone's    Archiver    III,
released  in  Aug/88  was  reviewed   by
Charles  Earl.   This  version will pack
and compress in ONE step, a  significant
improvement.  In addition, it is faster,
easier to use,  requires  smaller  disk
space,  extract  a  single  file from an
archive and send a catalog of  archives
to a printer.   It has a View File option
to extract a d/v 80  file  and  read  it
without   leaving   Archiver.   A  brief
history of archiving is also included in
the article.

MICROpendium - recent reviews:

In   the  June  issue  -  Desk  Top
Publisher V1.0; TEXLINK a BBS program; a
32K  RAM  made  by  Captain's Wheel; and
TI-BASE, a description of features  more
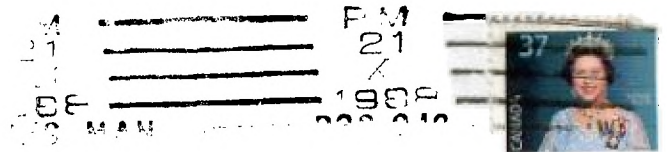than a review.
July   -   Artist   Enlarger   (for
TI-ARTIST)
Aug.  - Gramulator a  successor  to
GRAM Kracker; and Barrage, a game
Sept.- Myarc  Hard and Floppy Disk
Controller

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