

NOV. 1984
Vol. 2 No. 11



THE
SPRITE

a monthly newsletter of
THE 9900 USER'S GROUP, INC.

A voluntary organization for the sharing of knowledge and resources of people having interests in, or ownership of 9900 processor based Home Computers.

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The Bulletin Board is available to all callers at no charge. Common courtesies prevail. The BBS is up most days 9AM - 11PM. The phone # for the BBS is 609-435-7301.

INTRODUCTION:

Well, since this newsletter will get to everyone after Thanksgiving all I can say is that I hope everyone had a good holiday. Now we can get into some REAL holiday cheer!! I hope the upcoming holidays will be full of happiness and family enjoyment not only for all of us but for the whole world.

And now! I can copy that disk in less than ONE PASS! If someone could do it they would! Actually, a one pass disk copier is not too far off. Now with the Foundation 128k card working well with the Corcomp card it's just a matter of time before someone writes one. Actually, all the work has been done. It's just a Mod now. Boy! A 128k card, DSDD capability, an 80 column card, and of course a CP/M card. That's a lot of flexibility. If you have any serious plans for expansion NOW's the time to do it. The recommendation from here is the Corcomp Micro-expansion system. With that setup the largest piece of equipment will be the disk drive cabinet. That can now be stuck anywhere.

To be fair there is also another DSDD controller available. It however is only available (as far as I know) for the expansion box. It is made by MYARC, Inc. a company right here in New Jersey. It's cost is slightly more than the equivalent card by Corcomp.

Before I forget. There's another computer show up at the Meadowlands on December 9, 1984. Last chance this year to save! The show is at the Meadowlands Hilton Exhibition Center. Rout 3 & Meadowlands Parkway - Secaucus, NJ. (1 mile east of NJ Turnpike exit 16W & the GIANTS stadium). We will have discount tickets at the next meeting for this show. First come, first served.

We now have four Splinter Groups going. I think. BASIC (I think) run by John Bagocius, Extended BASIC by Ray Osowski, Editor Assembler by me, and Forth which is just trying to get started with Doug Ferguson. Almost all the Splinter Groups are meeting once more around the first week of December at someones house. There is no combined meeting of the Splinter Groups at Marlton Middle during December due to proir school requirements. The only two languages not represented are LOGO and PASCAL. I know people have bought LOGO and some even have the PASCAL card so why not get together once a month or so and stretch your imaginations and try your hand at what computing is all about. Learning. Don't worry about how much you think you may not know. It could very well be that everyone is there to find out the same thing. "What do I do next?"

I haven't a thing of wisdom to say this month. I hear all those sighs of relief!! This month you and I get to gather our thoughts and reflect to ourselves. Next month

will be the year end round up issue. It will also be the end of our second year as a User's Group. See ya all at the meeting.

CHARTER MEMBERSHIP: Next Month

It has come to that time of the year once more. Send in your Charter Membership dues now and avoid the rush. Dues MUST be payed by the 1st meeting date in 1985. After that you will have to pay a Regular years fee to be re-instated as a Charter member and then pay the ridiculously low Charter dues of \$12. Remember, ALL Charter memberships expire 31 December 1984.

THE GORILLA-GUIDE to TELECOMMUNICATIONS PART II (or how to get on line without making a monkey of yourself) by Barry T. Boland

CHAPTER 5 - getting started a guided tour

OK, now we're ready to actually do something with it! Turn on the computer (remember that you have to turn everything else on first, the computer console should be the last thing you turn on!) and plug in the TERMINAL EMULATOR II module. Now we're looking at the computer TITLE SCREEN, the one with the nice color bars. "READY - PRESS ANY KEY TO BEGIN" it says. OK, press a key, any key... Now you should have the console MENU SCREEN:

```
PRESS:
1 FOR TI BASIC
2 FOR TERMINAL EMULATOR II
3 FOR DEFAULT OPTION TE II
```

Generally you can use 3, the "DEFAULT OPTOIN", but I will walk you through option 2 and explain a few things first - so press "2". The first thing you see is the "TERMINAL EMULATOR II" title screen, and after apause of a few seconds, this is replaced by the "COMMUNICATIONS SET-UP" menu. You will see 3 columns labled "PARAMETER", "OPTIONS", and "CHOICE". The first parameter is "BAUD RATE", this means how fast the data travels throught the phone line. Both modems (yours and the one on the recieving end) must be set to the same speed. The most common setting is 300. Some modems are able to use 1200, but those are the \$400 and up ones. We will go with 300 for now. Looking at the "OPTIONS" column, we see: 1 - 300 2 - 110 You will notice that the TE II module gives us two choices here, 110 and 300. 110 baud is EXTREMELY slow, and hardly ever used anymore. We want choice number 1. Looking at the "CHOICE" column, we see that it already shows the choice as 1! This is the 'default' choice. Since it is also the one we want, we can just press the "ENTER" key. let's do that. Nowe the cursor moves down to the next row, which is "PARITY". Parity has todo with

error-checking. When you send an "ASCII" character through the phone line, what you're sending is not a letter, but a 'code' consisting of a series of 1's and 0's. Error-checking is done by adding another 1 or 0 to the end of this series. This extra number is called the 'check-bit'. What it does is make the number that you get when adding all the 1's in the series that represents the letter either an ODD number, or an EVEN number. That's PARITY. You can probably see that if you're sending ODD, and the modem on the other end is checking for EVEN, it will assume that something is wrong. So both modems have to be set to the same parity. Most of the Bulletin Boards and Data Bases that I use are set for EVEN PARITY, which again is the default, so just press "ENTER" The cursor should now be on the row for "DUPLEX". If you have read the booklet that came with your TE II module, you may have seen that you use FULL DUPLEX to talk to a BBS (that means Bulletin Board System) or one of the big mainframe computers that are used for COMPU SERVE and THE SOURCE. The book did tell you that if you were to talk to a friend who is using his TI-99/4A and modem (just like you are) you would want to use HALF DUPLEX. Let me explain that a little more - What DUPLEX does in this case is to either 'echo' what you type on your keyboard to your screen, or not 'echo'. If you use FULL DUPLEX, the system does not 'echo' back, but just sends what you type to the other modem. That's because the system on the other end, if it's a BBS or mainframe computer, will 'echo' what it receives back to your screen. If you used HALF DUPLEX, the TE II module would 'echo' back what you type as you type it - and then the system on the other end will 'echo' it back to your screen too! If you type "HELLO" and see "HHEELLLLLO" print out on the screen, that's what is happening. On the other hand, when you talk to a friend with a TI-99/4A, who is using the TE II module just like you, his computer will not 'echo' what it receives back to your system. In this case, if you use FULL DUPLEX, you type "hello" and see " " on your screen! It prints on the other end, but not on yours! So we use HALF DUPLEX to print what you type on your screen before sending it, so you know what you typed. *BUT* one point I want to make clear, is change the DUPLEX setting HERE, ON THE TE II MODULE, and *NOT* the switch on the MODEM! Even though it is called the same thing, what it does is different. Our first session will be either the Club BBS, or THE SOURCE, so we want FULL DUPLEX for now. Press "ENTER" to accept the default choice. The next row is "RS-232 PORT".

There are two different kinds of output 'ports' on the RS232 card. The 25 pin plug (the one that points straight out, or back) is the "SERIAL" or RS232 connection. The other plug is a 16 pin plug (the one that points straight down) and that one is the "PARALLEL" or PIO connection. If you have a printer connected to the RS232 plug on your card in the PERIPHERAL EXPANSION BOX, you'll need a "y" cable to hook up the modem! The easiest way around this is to hook the printer to the PIO plug. It's cheaper and faster too. If you happen to have one of the 'stand/alone' boxes, you may have two 25

pin plugs, check your RS232 booklet to see which one is RS232/1 and which one is RS232/2. Press which ever choice is appropriate here.

(To be continued Same time, Same Channel "a real cliff hanger?)

UNDER THE HOOD: by Dave Ramsey
via the Washington DC Users Group

Well, I'm back again this month with another assembly language article. This month I'm going to get into some of the more advanced areas of assembler. Specifically, I am going to show a little piece of code designed to do sector by sector access of your disks. I have to thank Mike Lambert for giving it to me.

Before we get to the program, there are some addresses you should be familiar with when using this disk routine. The first of these is hex 8356. This address holds the VDP address for a dummy PAB. The PAB itself must be one word long and contain the number of the sector that you wish to access (in hex format of course). You also need a VDP input buffer. This VDP address should be placed at hex 834E. Two more bytes of significance are at hex 834C and 834D. The byte at 834C contains the drive number you wish to access. The byte at 834D contains a flag with hex 01 for READ and hex 00 for WRITE. These parameters must be set before you BLWP @DSRLNK with a following parameter of DATA 10. Note: This is different than the normal DSRLNK using DATA 8. That is basically all there is to the mysterious sector I/O routine. Below is a routine worked up by Dick Vandenberg which reads sector zero which is the beginning of the disk directory.

```

DEF SECACC
REF DSRLNK, VMBW, VMBR, VSBW
BUFFER BSS 256
STATUS EQU $837C
PABADD EQU $8356
BUFADD EQU $834E
SECTOR EQU $8350
DRVFLG EQU $834C
X0000 DATA $0000
X1000 DATA $1000 VDP BUFFER ACCESS
X0470 DATA $0470 VDP PAB ADDRESS
X0101 DATA $0101 DRIVE # READ FLAG
X0110 DATA $0110 CONSTANT FOR SECTOR ACCESS
LI R0, $0470
LI R1, X0110
LI R2, 2
BLWP @VMBW
MOV @X0101, @DRVFLG
MOV @X0000, @SECTOR
MOV @X1000, @BUFADD
MOV @X0470, @PABADD

```

```

BLWP @DSRLNK
DATA 10
MOV @BUFADD,R0
LI R1,BJREF
LI R2,256
BLWP @VMBR

```

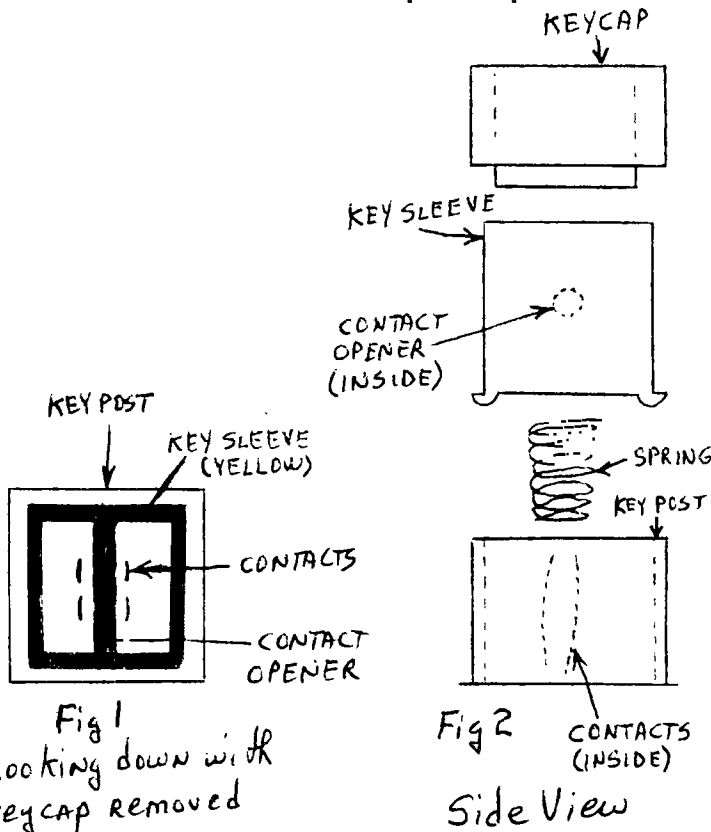
CLEAN UP AND RETURN TO MAIN PROGRAM

CLEANING UP THE KEYBOARD: by Ken Chandler
via Washington DC Users Group.

I've had my TI-99/4A for about a year and a half and lately I've had trouble with console keys repeat-printing. In other words, you press the 'R' key and instead of printing just one 'R' on the screen it prints 2 or 3 or more. This problem didn't affect all the keys, but just certain ones, like the 'A' and 'R'. This problem made word processing a real pain, since I had to go back and correct misspelled words on almost every line.

I called the TI Exchange Center and they said they had seen this problem on consoles of similar vintage. They offered to exchange my console for \$29.38. I asked if it was possible to somehow clean the key contacts and they said "maybe", but they didn't know how to do it.

So, I decided to give it a try. The drawing below details the construction of each key assembly:



The keycap press-fits down inside the yellow key sleeve. When you press the key down the keycap/key sleeve assembly slides down inside the key post, lowering the contact opener and allowing the contacts to close. The spring pushes the assembly back up and opens the contacts again. The contacts actually close with a wiping action intended to keep them clean. However, when they do become dirty, this wiping action can cause multiple closures, which results in several "keypress" signals being sent to the CPU.

WARNING: FIRST UNPLUG THE CONSOLE!

The first thing to do is to remove the keycap. You will need something with a tiny hook on the end to slide under the keycap and pull up. A bent paperclip will probably work or maybe a knitting needle. You will need two of them, one on each side of the keycap so that you can pull straight up without binding. If you only have one hook, use your finger on the opposite side of the key to apply pressure and prevent the keycap from cocking sideways. Use even, steady pressure and the keycap will slide right up. Occasionally, the keycap is stubborn and the whole keycap/key sleeve assembly pops out. Don't panic! Simply remove the keycap from the assembly and press the yellow sleeve down over the spring, inside the key post, until it clicks home (See Fig 2.).

You should now see something that looks like Fig. 1. To clean the contacts, you will need a small cotton swab and some isopropyl alcohol (don't use regular rubbing alcohol!). Dip the swab in the alcohol and carefully clean in between the contacts, being careful not to bend them out of position. After cleaning, push the yellow key sleeve down with your fingernail and make sure the contacts close properly. Also, if the key sleeve sticks or binds in its travel, put a small amount of silicon lubricant between it and the key post.

Now you're ready to reinstall the keycap. Just press it down inside the key sleeve and you're done! I cleaned all of my keys this way and apparently cured my repeat printing problems. I say "apparently" because this may only be a temporary cure and I may still wind up exchanging the console with the built-in GROM checking routine. Now, if there was just some way to make it stop misspelling so many words when I type!!

Editor's Note: There have recently been some ads where some "surplus" TI keyboards have been for sale for about \$9. Look in the back of some magazines like BYTE or in the Computer Shoppers Guide.

FILE PROCESSING: PART III

What we will deal primarily with this month are techniques, and a short program or two to demonstrate


```

420 CLOSE #1
430 CALL CLEAR
440 PRINT " CLEARING ARRAY....."
450 PRINT ";;;;;;;;;"
460 FOR X=1 TO 6
470 A$(X)=" "
480 NEXT X
490 FOR Y=1 TO 300
500 NEXT Y
510 CALL CLEAR
520 PRINT "DO YOU WISH TO INPUT DATA? "
530 CALL KEY(0,K,S)
540 IF S=0 THEN 530
550 IF K=78 THEN 600
560 IF K=89 THEN 610
570 IF K=110 THEN 600
580 IF K=121 THEN 610
590 GOTO 530
600 END
610 OPEN #2:"CS1",SEQUENTIAL,INPUT ,FIXED 192
620 FOR X=1 TO 5
630 INPUT #2:A$(X),
640 NEXT X
650 CALL CLEAR
660 PRINT "PARTIAL ARRAY HAS BEEN INPUT"
670 PRINT ":::::"
680 PRINT "ZIP CODE HAS NOT BEEN INPUT"
690 PRINT ":::::"
700 PRINT "TO VERIFY THIS, AT 'BREAK' "
710 PRINT "TYPE IN 'PRINT A$(6)' AND"
720 PRINT "DEPRESS ENTER. AFTER THAT"
730 PRINT "PLEASE ENTER 'CONTINUE' AND"
740 PRINT "DEPRESS ENTER. "
750 FOR Y=1 TO 900
760 NEXT Y
770 BREAK
780 UNBREAK
790 CALL CLEAR
800 PRINT "SHUT OFF CASSETTE RECORDER. "
810 PRINT ":::::"
820 FOR Z=1 TO 500
830 NEXT Z
840 PRINT "INPUTTING ZIP CODE. "
850 PRINT ":::::"
860 INPUT #2:A$(6)
870 CALL CLEAR
880 PRINT A$(1);A$(2);A$(3);A$(4);A$(5);A$(6)
890 PRINT ":::::"
900 PRINT "END OF DEMO"
910 GOTO 600

```

MEETING DATES:

MONTH	GENERAL MEETING	SPLINTER MEETING
NOV	28	13
DEC	20	None
JAN	29	10
FEB	28	12
MAR	27	13
APR	30	15
MAY	29	14

MEETING AGENDA:

7:00PM - 7:15PM Introduction and new news.
7:15PM - 7:45PM How does the 99/4A work!
7:45PM - 8:00PM Open Question time. Door Prizes!
8:00PM - 9:00PM Free Period. Get together.
Join the Group, order from the Group,
buy from the Group.
9:00PM End Session. See ya next month!

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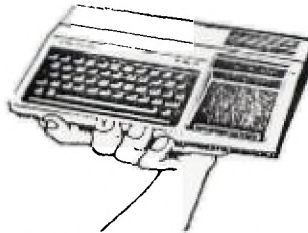
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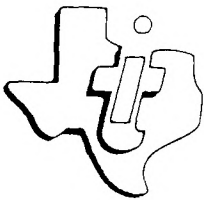
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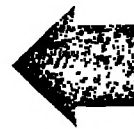
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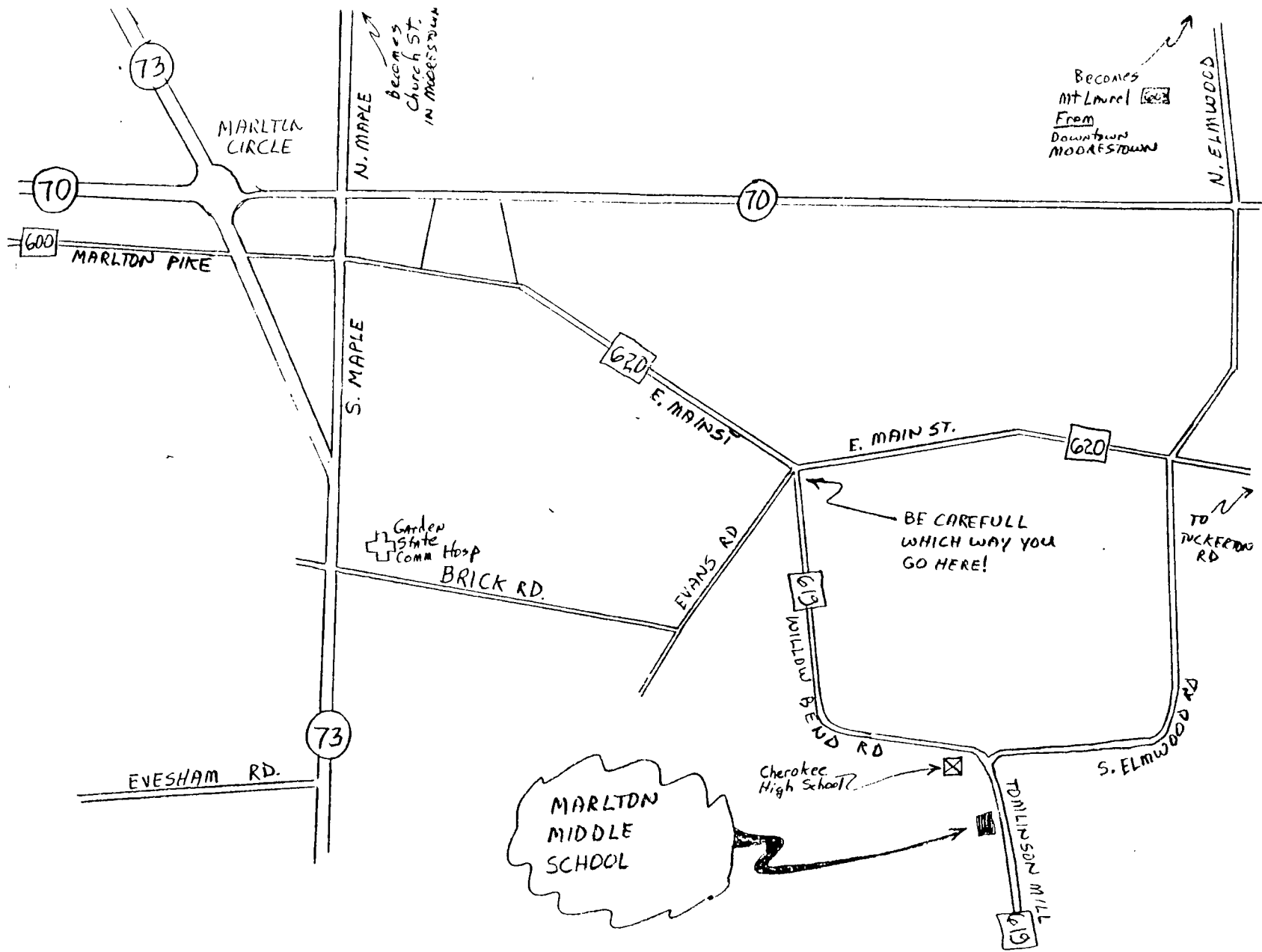
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