Southwest Ninety-Niners Newsletter

contributed by

- Tom Wills -

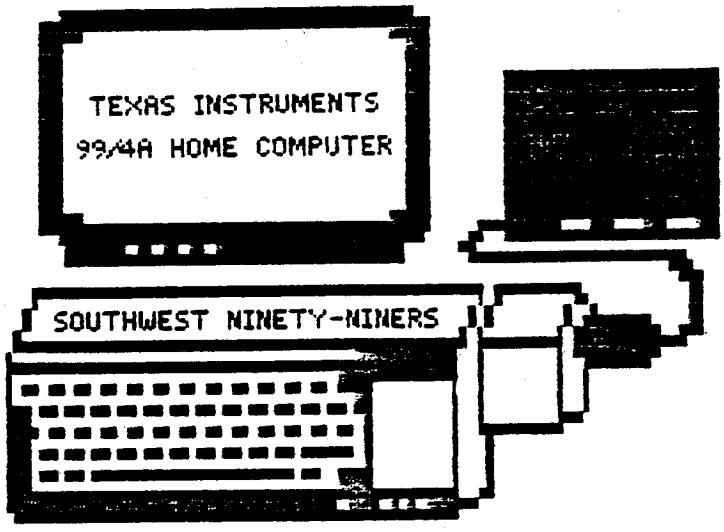
compliments of

TI99ers
On-Line
User Group

www.ti99ers.org

AUGUST 1987

P.O. Box 17831 Tucson, AZ 85730



ATTENTION MEMBERS

Next Meeting: August 4, 1987 at 7:30pm. Location-Tucson Fire Department Training Center on Ajo Way just west of Park.

General Users Workshop: 2nd Thursday of each month at 7:30pm (August 13th). Includes: Basic, ExBasic, Hardware/Software Problem-Solving, etc. Mathis Home - 5941 E 26th - 747-5046

Applications Workshop: 3rd Thursday of each month at 7:30pm (August 20th). Includes: Writer, Multiplan, DataBases, etc. Mathis Home - 5941 E 26th - 747-5046

Advanced Languages Workshop: 4th Tuesday of each month at 7:30pm (August 25th). Includes: FORTH, A/L, etc. Rod Stallard's Home - 7575 E Logan - 745-6071

PRESIDENT'S CORNER

The date for the '99 Fest West '88 has already been set. It will take place the 27th and 28th of February in Las Vegas, NV at the Palace Station Hotel. Mark your calendars now! They may change the name of the fest before it actually comes about. If we, as a group, wish to participate in a big way we need to start making our own plans now. We will discuss the possibilities at the August meeting.

I have placed several articles in the group library technical file this month. There is an article on putting Extended Basic inside the console, another on the 32K memory chip, another on a new DSR card that is being developed, and several schematics from TI. Check with Ida to see those.

Do you want to continue to have a Lending Library? Ida has expressed concern that very few ever check out anything. Has everyone read all these books? Do you know everything that is in the books and newsletters? Would you prefer we start cutting the library down and selling the stuff in it? Let's discuss this at the meeting, too.

*BJ Mathis * 747-5046*

ANTFARM

The AntFarm is now on-line 24 hours/7 days a week 300/1200 BAUD. The phone number is 889-6930. Through the use of a modem, an RS232, software and a computer, you can leave messages, get answers, obtain programs, pass programs to others, help solve problems, get your problems solved, find out about new developments, ...

MORE FAIRWARE

If you picked up a copy of the 'complete' Fairware list at a group meeting ($1.50), mark the following items available from the SW 99ers library. If you didn't get a list come to the next meeting.

If you send for fairware please contribute a copy to the group library.

55. * UNIVERSAL DISASSEMBLER - Rene LaBlanc, 8719 E San Lucas Dr, Scottsdale, AZ 85258. 2 SSSD or 1 DSSD.

56. * FORTH CONFIGURATION - Rene LaBlanc, see #55 for address. Provides an enhanced development environment with minimal equip. Now takes 3 DSSD disks.

64. * TI-SORT - David R Romer, see #63 for address. Manipulates DIS/VAR 80 files in single or bi-level ascended ASCII, Quicksort and Shell sort routines.

130. * WORD-COUNT - Jim Jasielski, Route 1 Box 826, Sanbornville NH 03872. Finally a program that accurately counts your words in your word processor. For those writers with 2500 word assignments this is a god-send. I have tested it on several different length articles and it's right on the money. Counts a 2,000 word article in less than 30 seconds!

131. * CHAINLINK - Walter Howe, 43 S Chelmsford Rd, Westford MA 01886. This is an excellent game using entire deck of 52 cards. A unique (to me) version of solitare that actually requires a little cogitation to beat it...you have to look at several moves in the future, like chess.

139. * PRINTIT - Rodger Merritt, 1949 Evergreen Ave, Fullerton CA 92635. This rather startling program opens up most printers far beyond what you thought possible! Everything from huge print to script. You can really doll up your letters, newsletters, bulletins, etc, even your invoices. He is not asking for any payment, but certainly contributions would not be returned. This program now takes six SSSD disks.

Add this NEW one to the end of your list!
194. * CO-LIST - Tony & Will McGovern, Funnelweb Farm, 215 Grinsell St, Kotara, NSW 2288 AUSTRALIA. Allows two-column listing of programs for newsletters, etc.

HINTS FOR REQUESTING FAIRWARE

by Jim Swedlow - Reprinted from Cleveland Area Users Groups, OH - Mar'87

Editor's note (Cleveland Area UG): Jim wrote "Side Print for Multiplan". This came from the Cin-Day newsletter without any credits. I am not sure, but I think Jim is associated with a southern California users group.

These hints can help you when you send for fairware:

SEND A NOTE or letter asking for the program. Fairware authors are in this to share their effort and to support the 4A. A check without any kind of note is discouraging. Mention where you heard about the program and describe your system.

IF YOU SEND A DISK, initialize it as SSSD (unless otherwise specified). Don't sweep. Format it and verify the sectors. This will make sure it is OK. Check with the postal service to make sure you are using enough postage (and not too much!!!). Be sure to include return postage.

Many fairware authors would greatly appreciate getting programs from you - it is a waste to send an empty disk! Send programs from your area that may not have migrated to where the author lives. Mention the programs in your note so the author will look for them.

IF YOU SEND MONEY, print your return address clearly. Better yet, send a mailing label. It not only helps the author, but the post office moves your mail faster when the address is typed.

Send your funds in the currency of the author's country. It can be anything from inconvenient to impossible to cash a check written in foreign funds. Your bank may be able to help or you can send an international money order from the post office. This is slow but sure - one that came to me from France took almost a month!

REACT AFTER YOU GET THE PROGRAM. Drop the author a line and let him know what you like (or don't like). Many fairware authors report that communication with other 4A owners is very important to them. Many programs have improved significantly from user feedback.

If you ask a question send a SASE (self-addressed stamped envelope). It will help assure that you get an answer.

SUPPORT FAIRWARE AUTHORS. If a contribution is requested and the program meets your needs, send it with a note. Some fairware authors give special support to people who support them. Examples are extra documentation, notices of fixes and updates, copies of updates and bonus disks.

USE COMMON COURTESY. Fairware authors are 4A owners who work and/or go to school full time. Fairware is a side line. Treat them the way you would like to be treated.

PROGRESS AND COMPATIBILTY - MYARC's 9640

by J. Peter Hodie - Boston Computer Society - June '87

As of late I have been in what some people call "hiding". I spent last week in New York state with Paul Charlton, working 12 to 18 hours a day to finish the operating system for the 9640 (I am mostly writing device drivers for the operating system for the various peripherals, while Paul is doing the operating system itself). There were a couple sleepless nights spent staring bleary eyed into monitors, lots of consumption of liquid cafeine, several phone calls from people wanting to know when the DOS would be finished (including MYARC's secretary Cynthia, who wants to know what to tell the flood of callers to MYARC looking for the OS), and lots of bugs created and later eliminated. The bottom line is that the OS is still not done. It is one huge project. We had hoped to have it ready to show at this month's Boston Computer Society meeting, but it didn't work out. Certain parts of the system that we had hoped to have finished last Wednesday, weren't really close until Sunday morning. Work goes on. Slowly. Tediously. But it continues. Believe me, no one wants this operating system to be finished more than Paul and myself. The work is slowly driving us crazy. The operating system could be finished in 24 hours, or it could take rather longer. We aren't stalling. There are huge amounts of code to integrate. The operating system is about 88K in size. That is larger by nearly a factor of 3 than the largest program you can create on the standard /4A system.

On a related note, I would like to set the story straight on hardware compatibility with the 9640.

First the TI, CorComp, and MYARC disk controllers will all work. It doesn't matter which EPROM you have in the card. The TI controller can handle 80 track drives (just not in double density mode), the CorComp controller and the MYARC controller can handle 80 track, and 16 or 18 sectors per track. The reason for this is that the EPROM or ROM in the disk controller is not used by the 9640, but is replaced with code included in the operating system. This allows the TI and CorComp controllers to run as fast as the MYARC currently does. The speed of disk access is very impressive - you may not recognize you disk drives.

Any RS232 card from TI, MYARC, or CorComp will work. Print spooling can be set by the user. The print spooler is accessed just like a normal device, such as PIO, rather than SPPIO as on the MYARC 512K card.

The Horizon RAM disk will work, however at this time in order to boot the system from it, it must use the Horizon EPROM from Genial Computerware. This is not a ploy for me to make lots of money, but a decision made because of several unfortunate characteristics of the ROS distributed with the Horizon card. Currently there is support for only 1 Horzon RAM disk, although this could change in the future.

The MYARC 512K card can not be used as it is. However, for $15 MYARC will convert it so that it can be used as additional memory for the 9640. Once the change is made, the 512K card can not be used with a /4A, so carefully consider having this modification made.

DaTaBioTics is currently working on a "super ram disk" which will feature something like 500K of memory that can be used as a RAM disk, or several smaller RAM disks, and print spooler. The product will also have a clock option to time and date stamp files, and should be 9640 compatible. If they can pull this one off, it looks to be a winner.

The speech synthesizer is supported, but you have to buy a special card to put it into the expansion box. Such a card is available for about $40 from Rave 99.

The TI 32K and other memory expansion cards such as the Foundation will not work. Since the 9640 has over 600K of memory in its minimal configuration, this should not prove any great hardship.

At this time, the Mechatronics GRAM is not supported.

The CorComp Triple Tech card will work, except due to a somewhat faulty hardware decision (works on the /4A but not on the 9640) the Triple Tech will eat up about one eighth of your available memory.

The 9640 also supports an internal RAM disk which can be set to any size by the user, within the constraints of available memory.

The current MYARC Winchester Personality card is supported, and of course the new MYARC hard drive/floppy controller will be supported when it becomes available. I hope this has cleared up any misunderstandings you may have had about the 9640 and your present hardware set up.

The documentation on the 9640 doesn't currently mention some of the more interesting features that are in the computer. For example, all disk files are time and date stamped at creation and on every update. This information is available on disk catalogs, and even from BASIC using an extension of the current method of cataloging a disk. The RAM disk support is done similarly to the MYARC Mini Peripheral Expansion System, in that if you assign the internal RAM disk to be drive 1, you can then make your physical drive 1 respond as drive 2. This means all drives can be always available, which is not possible on the /4A. This is done independent of CRU base, thanks to the single master DSR (device service routine) created for the 9640. For the assembly programmer, there is a wealth of system utilities for graphics available through XOPs, written by Chris Faherety. The operating system also supports a new powerful set of disk access commands designed by Paul Charlton, and implemented by both of us. These allow for easy file and disk access from assembly for disk and file copying and comparing. The operating system also supports multi-tasking when not in /4A mode. This means you could be editing a file with your word processor, while downloading a file from a bulletin board, while a graphic image of a frog dances on the corner of your screen. Multi-taskng allows you to run several programs at once - and this should open up some exciting possibilities in the future.

Until the operating system is released for the 9640, I would recommend taking anything you read from outside MYARC sources with a large grain of salt. I have read numerous articles on the 9640 which contain information that is incorrect. The articles claim the machine can't do certain things, or it will eventually do some things better than it does now - and they are completely wrong. While articles on the 9640 are popular, many of those writing are very badly informed. This problem is as much a fault of MYARC as anyone. To release the hardware with incomplete software to anyone but developers was a serious mistake in my estimation. It has calmed many people down, but has started a new furor over "where's the operating system" which is just as bad as the old "when will it be released". Lou Phillips has a habit of saying things to calm people down. If someone asks him when a product will be ready he tends to give the absolute best case answer. Unfortunately, in this business, it tends to be way off base.

TIPS and HINTS

From Front Ranger - April '87

1. PROGRAMMING TIPS: Technique for switching from JOYST to KEY: "Did you ever want to change a game from joystick to keyboard or vice-versa? Here is an example of a change done in the game "Aardvark" found in June '83 99'er Home Computer Magazine. Use this section of "Aardvark" as and example to change other programs:

Aardvark is like this...

```
630 CALL JOYST(1,X,Y)
640 IF X=-4 THEN FV=FV-1 :: GOTO 780
650 IF X=4 THEN FV=FV+1 :: GOTO 840
660 IF Y=4 THEN FH=FH-1 :: GOTO 900
670 IF Y=-4 THEN FH=FH+1 :: GOTO 970
```

Aardvark can change to this....

```
630 CALL KEY(0,K,S)
640 IF K=83 THEN FV=FV-1 :: GOTO 780
650 IF K=68 THEN FV=FV+1 :: GOTO 840
660 IF K=69 THEN FH=FH-1 :: GOTO 900
660 IF K=88 THEN FH=FH+1 :: GOTO 970
```

NOTES: This is in Extended Basic. In CALL JOYST the X and Y are the variables for the position of the joystick. 4 or -4 is always returned. (see CALL JOyST in the User's Reference Manual.) In CALL KEY, we are checking for the K or Key that is pressed. The numbers 83, 68, 69, and 88 are the ASCII codes for the S, D, E, and X (arrow keys). Always use the same logic and variables found in the program. It makes it easier. For example, the GOTO's are the same: FV and FH logic are the same; and even line numbers can be the same. Each identical line number is doing the exact same logic. For example, in line 640, the X=-4 is left on the joystick, while K=83 is S (left) on the keyboard.

2. SCREEN COLOR: To change the screen color for the programming mode: Type 10 REM and hold down the CTRL U until the cursor has covered about three lines. Press enter. Then TYPE 10 and press FCTN X. Now press the space bar once or twice. Next press the FCTN<4>. This trick is for Extended Basic. Now you will be able to program with a different screen color than cyan. In Basic, this trick will change the border color only. Whether using Extended Basic or Basic be sure to type 10 then enter to get rid of the line before you save your program. This can be done without loss of screen color.

NOTE: The color ranges in the above hint are very limited. In Extended Basic you call also type CALL SCREEN(12):: RUN Then press ENTER. The 12 will make the screen yellow, but any number can be used here. Foreground and background of characters can be changed the same way. BJ

3. JOYSTICKS: Have you ever had difficulty figuring out which joystick is to be used in a program? If the program is written for joystick #1 then #2 won't work. Or, if the program is written for joystick #2, then #1 won't work. You can use this little trick in your program prior to using CALL JOYST(X,Y,Z) to solve the problem. The computer will respond to whichever joystick you are using when you press the fire button!

```
100 CALL KEY(1,J1,STATUS)
110 CALL KEY(2,J2,STATUS)
120 IF J1+J2<>18 THEN 100
130 JS=INT(J1/18+J2/9)
```

4. SHARPER PICTURE: As you know, the screen color while running a program in BASIC is green (cyan in Extended Basic). If you have a color TV this is fine, but if you only have black and white, try this trick for a sharper picture. Add the following statement to the beginning of your program 10 CALL SCREEN(15). This will disable the

color-generation circuit in the 99/4A and remove the pattern of vertical lines often seen on a black and white TV. It also increases the sharpness of the characters.

5. ADVANCED PROGRAM TIP: You must have the Mini-Memory or the Editor/Assembler to use this programming tip.

Using Mini-Memory or the Editor/Assembler type in the following program from TI BASIC (not assembly). You will find that pressing the following keys will unveil some secrets: 'N' for NORMAL MODE, 'C' to CLEAR THE SCREEN, 'T' for TEXT MODE, 'M' for MULTICOLOR MODE (each character is a 4X4 block), and 'B' for BIT MAP MODE (99/4A only).

For you advanced programmers, you now know the secret of getting 40 columns on the screen (not the normal 32). You will also eventually figure out how to address every pixel on the screen. As you can see, contrary to most literature, it can be done from Basic.

```
100 PRINT "PRESS:":"'N' FOR NORMAL MODE":"'C' FOR CLEAR SCREEN'"
110 PRINT "'T' FOR TEXT MODE":"'M' FOR MULTICOLOR MODE"
120 PRINT "'B' FOR BIT MAP MODE"
130 CALL KEY(3,G,S)
140 IF G<>78 THEN 160
150 CALL POKEV(-32768,0)
160 IF G<>67 THEN 180
170 CALL POKEV(-32352,0)
180 IF G<>84 THEN 200
190 CALL POKEV(-32272,0,"",-30945,0)
200 IF G<>77 THEN 220
210 CALL POKEV(-32280,0)
220 IF G<>66 THEN 240
230 CALL POKEV(-32766,0)
240 GOTO 100
```

6. EXTENDED BASIC PRESCAN: Ever wonder why it takes so long for a program to run after you type in RUN? The pause is the time the computer takes to pre-scan your program to set up memory space for variables, arrays, data, and subprograms. The computer has to go over each line and reserve memory space. This takes a lot of time because it must proceed through each instruction, perform the appropriate functions, and establish variable values. The time required to pre-scan depends on the length of the program. There is a way to reduce this time using EXTENDED BASIC. This is just one of many reasons we recommend Extended Basic as the best first purchase you can make after buying the 99/4A.

This tip is documented in the Extended Basic manual supplement (pg 7), but few seem to take advantage of it. The commands are PRE-SCAN OFF(!@P-) and PRE-SCAN ON(!@P+). These commands allow you to control which instructions will not be pre-scanned. In a program, only those commands that contain the first reference to the variables need to be pre-scanned. Therefore, you will find many program lines don't require a pre-scan. A 23K byte program that would normally take 31.5 seconds to start RUNning will only take 9.5 seconds utilizing pre-scan commands.

7. BASIC PROGRAMMING: Don't use character sets 15 and 16 (ASCII codes 144-159) unless you really need to, ExBasic can't use them. If you use multiple colons :: as print separators, put a space between them : : : :. Then when you get Extended Basic, you will be accustomed separating the colons for print separators, which is required by ExBasic.

BUYER'S GUIDE

The following information is provided as a service to our members. The items listed are for sale by the individuals indicated and are subject to prior sale. The group assumes no responsibility for items listed and makes no claims as to their condition or interface capability with the TI-99/4A computer. Only computer related items will be accepted for publication in this newsletter.

WANTED - Super Sketch - Call Peggy Giddings 795-1915 or 621-7374 (work).

WANTED - Good used system w/single or double disk drive, 32K memory and RS232. Will buy separately. Dick Jones, 6748 E Voltaire Dr, Scottsdale AZ 85254. Phone (602)948-3475.

TI-99/4A Console $50; TI LOGO $15; (plus the following cartridges) Car Wars; Tax/Investment Record Keeping; Attack; Number Magic; Tombstone City; and TI Invaders. Documentation and cables included. Call and make an offer John 296-8198.

TI-99/4A Console, Cassette cable and two games $60. Call Ejaz 623-8257.

2-TI-99/4A consoles $50 ea, *2 CDC Floppy Drives DSDD half height $110 ea, Multiplan $30, *Speech Synthesizer $33, P-Code Card w/documentation & disks $90, *3 console power supplies(the good ones) $5 ea. All items are new/unused. *These items are <u>not</u> negotiable. Call Dick 790-4779.

TI Program Cassette Recorder w/cable $25. Call Mike 722-8620 evenings and weekends.

Star Micronics Thermal Printer w/4+, 100' rolls of Thermal paper & instruction book. Requires parallel RS232 hook up - $30 o.b.o. Call John Hale 296-5602 evenings.

PE Box w/32K, TI Disk Controller & SSSD drive $250, ParallAx Printer Interface works w/ or w/o PE Box - $30, TI 32K Memory Card for PE Box $75, TI Program Recorder $25. Modules: Extended Basic $35, Terminal Emulator II $8, Tax Investment Record Keeping $4, Household Budget Management $4, Personal Real Estate $4, Home Financial Decisions $3, Personal Report Generator $8, Personal Record Keeping $8. Book - Compute!'s Beginner's Guide to Assembly Language $8. Call Jack or BJ 747-5046.

Sakata SG1000 high resolution green monitor composite video w/video cable $60. Call George 742-3091.

TI-99/4A Console, TI Joysticks, Thermal printer, Cassette Recorder, 12" TV(BW), all for $125 o.b.o. Call Paul Garrison 747-3884(Days) or 573-0572(Evenings).

Star Micronics Gemini 10X printer $90. Call Ed McCullough 296-5183.

<u>FOR MEMBERS ONLY:</u> These items are for sale by SW 99ers, they are used. Call Jack or BJ 747-5046. TI-99/4A Console $30, P-code Card(no docs or disks) $50, PIO/RS232 cable (for Epson type printers) $8, Personal Report Generator $8, Personal Record Keeping $8, Tax Investment Record Keeping $4, Terminal Emulator II $8, $3 Home Financial Decisions $3, Household Budget Management $3, The Attack $3, A-MAZE-ING $4, Munch Man $3, Jawbreaker II $4, Return to Pirate's Isle $8, Tombstone City $3, Music Maker $7, Cassette & monitor cables $3 ea.