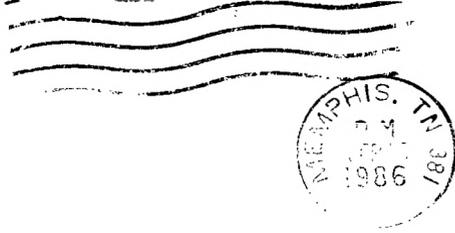


P.O. Box 38522, Germantown, In 36183-0522



*Phil Searcy  
Sept 14 86*

# TIDBITS

## PRESIDENTS BIT

Well the summer is winding up and our tans will soon be fading and we will be settling down for another cold winter. But don't be discouraged because it will be a great time to renew our interests in the 99/4A. I for one have a lot of catching up to do. I see all kinds of new computers coming on the market every day with all kinds of claims, but I don't think the people buying them will be having any more fun than we do with our machines. In fact, many of them would not believe what ours can do and theirs can't, and for a lot less money. Lets look at an example, While writing the PRESIDENTS BIT I have become somewhat familiar with TI-WRITER and have it to be one of the neatest word processor programs I have ever experienced. And remember, I work on some pretty 'fancy' computers for a living. I hate to tell them, we have theirs beat. To say our equipment is very old and useless would be a tragic misuse of the English language... Anyway, who says 'NEW IS ALWAYS BETTER'?

I certainly want to thank everyone who was involved in putting together our August Newsletter. It was the GREATEST newsletter I have ever seen from any Users Group anywhere. There was something in it for everyone. The only thing that I have seen bigger than that newsletter was the last Sears Winter Catalog. Great work guys on a job well done.

I just found out, 'THE HARD WAY', that the battery in the GRAM KRACKER that is supposed to be good for one year, ISN'T. So I am getting to write this PRESIDENTS BIT again. Well thats the way it has been going for the old Pres lately. Why is it, 'the harder you work the behinder you get'. Just lucky I guess. Gary Cox tells me that the only battery that will fit is made in Lybia. So getting batteries could be lots of fun. JUST KIDDING... Would someone revive Craig Miller and everyone else who has a GRAM KRACKER.

I don't know about other companies, but mine thinks that LABOR DAY means you should be at work LABORING, and I will be. This is our normal end of year and requires people there due to weird things that come out of the woodwork at year end. If I have said it once I have said it twenty times... 'IT WORKED LAST YEAR'... ha ha ha...

As soon as I get a GOOD copy of a TERMINAL EMULATOR program with XMODEM protocol I will be back on the board. I have heard nothing but good things about the new format of the BULLETIN BOARD. Pierre is doing a super job with the board. Folks, you wouldn't believe how much work goes into keeping that board the best around.

I would like to put in a request for help... I have two (2)

~~~~~

Peripheral Boxes broken down with bad transformers. If anybody knows where I can get them other than from T.I., I would appreciate the help. I really don't want to go through the hassle of shipping these P.E. Boxes back to T.I. Plus they want 67 dollars per Box to replace them, and I think that price is just a little outrageous. If anyone can help, see me or call me anytime.

I hope to see everyone at the September Meeting. I don't know what Gary has cooked up but I can guarantee it will be worth your while to be there. The common exchange of ideas is the primary reason for the Users Group and I don't know of any place on earth to get access to as much knowledge as at one of our Users Group meetings or workshops. See you at the September Meeting, and until then 'KEEP THE FAITH'...Gerald Smith...President

## NEW TI BBS'S

I would like to welcome our new member Beery Miller who moved here from Lexington Kentucky. Beery ran a Techie brand TI BBS in Lexington and now has it set up here in Memphis making it the second TI bulletin board in Memphis! His board is called "Risky Business" and operates 24 hours a day at 901-726-5623. Beery's board will give our club's TIBBS (901-357-5425) some good competition as he is running two Teac DS/DD drives, 1 TI SS/SD drive, a Myarc 512K card/ram disk, New Horizon Ram Disk, CorComp Triple Tech clock card with 64K printer buffer, Corcomp disk controller, Star SG-10 printer and a Volksmodem 300/1200 modem. Techie has some features that TIBBS does not have but TIBBS also has some features Techie does not have; so both boards will provide us with a refreshing change in formats and features not to mention that it will spread the callers out making access to both boards easier. Special access is granted to members of the Mid-South 99 Users Group, the Blue Grass 99'ers and to those people who upload programs. I might add that the downloads are very good so I highly recommend giving it a call today! I know many in the group have modems but not everyone is using them. Give them a try as I think you will wish you had started using your modem sooner. One note though, only use FAST-TERM or 4A/Talk when accessing the Techie system as TE2 seems to have some problems and besides all downloads are using XMODEM which TE2 does not support. FAST-TERM is available FREE of charge from our library.

The Music City 99 User Group in Nashville has started their own TIBBS system running at 300/1200 baud. As of this writing the system is only operated during the hours of Monday-Thursday from 5pm to 6am and from Friday at 5pm to Sunday at 10pm. Give it a call today at 615-851-0427... Gary Cox

## COMPUTERS

### WHAT THEY ARE AND HOW TO SELL THEM

Computers have become a part of our everyday lives. We're very familiar with our paycheck--printed by computer; we watch computerized scoreboards at sporting events and even the children are learning to use computers in school. By learning about computers and how to use them, you will be becoming a part of the COMPUTER AGE. You will have some understanding of what they can

and can not do and why they are becoming an important part of your lives. I will not attempt to educate you in the technical aspects of how a computer works, but will provide enough (I hope) information that you will be at ease when talking to customers about computers.

What follows is a general discussion of computer characteristics and selling techniques written by and for the computer novice who has experienced or is experiencing the bewilderment of trying to make the right decisions concerning computers in this market so rampant with changes in technology. The following principles result from my three years of owning a personal computer; the experiences of a beginner learning about computers by poring over manuals and magazines, and the many hours of peering into a monitor screen.

Before we get too far along, there are some basic points that need to be stated. Firstly, from the customers point of view, there will almost always be something a computer can't do and he/she may regret purchasing the particular computer you sold him/her. Within the personal computer field, no one computer may have all the features the customer may want, and a compromise may have to be made.

Secondly, regardless of how impressive a particular computer may seem, consumers usually adjust their expectations upward. Whatever they have now, they will want to expand, either with more hardware or more software.

Thirdly, computers won't be coming down in price in the foreseeable future (exceptions may be some close-outs on discontinued models), and lastly don't expect the customer to be as thrilled as you are (or give the appearance of being) about the computers we sell. Its up to you to educate them.

#### WHO BUYS A PERSONAL COMPUTER?

After selling computers for some time, you will notice that computer buyers can be grouped into several categories:

Type 1- the electronics amateur who is interested in any new technology. Fiddling with the equipment is enough reason for him to buy.

Type 2- The aware parents who want little Johnny to be up on "the latest". The family can play games and learn about computing as well as do the budget, etc. The average family will want a computer that is flexible, versatile, inexpensive and "friendly" (easy to use).

Type 3- The small business owner or professional person who wants to automate his office. He will agonize over whether a \$1000 system will do all he needs, or will he have to spent \$2000, \$3000 or more to get the job done. Too little and it becomes a kids toy; too much and he feels terrible about the amount of money he might have saved.

The list could go on, but these are the main types that you will encounter. However, what you must always remember is that there is no "typical" computer buyer. Each prospective buyer has only one thing in common, they all want a computer, and it is up to you to help him/her make the best selection.

## WHAT IS A COMPUTER?

A computer is a manipulator of data. Everything it does is done in simple steps; each one having been pre-planned and programmed into its memory. It accomplishes tasks in seconds or minutes what once took man hours, days or even years to complete. A computer works in a language all its own called BINARY (a number system based on two digits, 0 and 1.) This language is very difficult to learn and as the result programming (the talking to computers) was limited to those who spent years to become programmers. With the development of BASIC (an easy-to-use programming language. BASIC is an acronym for "Beginners Allpurpose Symbolic Instruction Code.) The programming of a computer became simple enough that businessmen could quickly learn how to operate and "talk" to the new small desk-side computers and the ground work for the personal computer boom began.

Some BASIC features will vary slightly from one type or model of computer to another, but the similarities far outweigh the differences. You might consider these differences as dialects of the same language. You'll notice one striking fact about BASIC: it's very much like English. You'll see words like PRINT, GO TO, RUN and END. The meanings of these words in BASIC are almost identical to the definitions you already know and understand. This fact is what makes BASIC so easy to learn and fun to use.

## FEATURES OF A COMPUTER

Every computer has certain built-in features. These are the keyboard (the manual data entry device), a power supply, a certain amount of memory, and connector ports/jacks to connect a monitor/tv (visual output device), printer, joystick, etc.

## MEMORY

Memory can be divided into two basic types: ROM and RAM. ROM is "read-only-memory" that contains certain 'housekeeping' instructions the computer needs to operate. It can not be accessed nor changed (usually) and is in cartridge type programs/games/etc as well. It is often counted as part of the total memory of a computer.

RAM has traditionally been the abbreviation for random access memory. This may be slightly misleading since both RAM and ROM are random access. More accurately, RAM should be described as read and write memory. This is the memory that is available in which to write programs and to store data. The more RAM a computer has, the longer/larger the programs that can be run. IMPORTANT: WHEN YOU TURN THE COMPUTER OFF, ALL THE CONTENTS OF RAM IS ERASED! This is why computers must have a storage device attached to save programs/data for future use.

A "bit" is the smallest piece of information that a computer deals with, and there are 8 bits in a 'byte'. A byte is the amount of memory necessary to code a character (a number/letter/punctuation mark, etc). A computer that has 16K bytes of memory has about 16 thousand bytes and can work with about 16 thousand characters of information in a single program. (NOTE: Look at the header when you turn on the Commodore 64-- it says that it has 38911 bytes free. So where are the rest of the 64K? That's the ROM portion mentioned earlier.)

## ACCESSORY DEVICES (PERIPHERALS)

An accessory device is any additional equipment that attaches to the computer and extends its functions or capabilities. These include preprogrammed cartridges and units which send, receive or store computer data, such as printers and disk drives. Prior to shutting off the computer, it is necessary to save the data in RAM memory, otherwise it will be lost. The most common for the personal computer are the disk drive or the cassette recorder. The cassette recorder is the least expensive method of storing computer data but it has some disadvantages that have contributed to its decline in popularity.

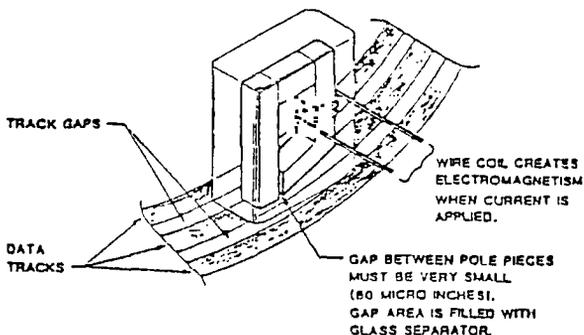
First, the amount of programming available in cassette format is becoming very limited. Secondly, although not always a major factor, the cassette is extremely slow to load or to save data. Coupled with this is the search time for the program on a tape if there are more than one program on it. Compare finding a certain program with finding a particular song on a tape compared to the ease of finding that same song on a record. The disk works in that same random manner, skipping over the unwanted data and going directly to the proper sector of the disk for the desired program...David Cotner

## DISK DRIVES EXPLAINED

The humble 5.25" mini diskette first appeared in 1976 and made recording data and programs for computers a much easier, more reliable and quicker task. It reduced saving and loading time from minutes to seconds for even small programs.

The heart of a diskette is a thin sheet of Mylar coated with a magnetic material such as iron oxide, capable of storing information which can be used at a later time. The information is imprinted on the magnetic material by a read/write head which works on the same principle as the head on a tape or cassette recorder.

The head on a disk drive performs the read, write and erase functions on a diskette. The outer covering of the head consists of a barium titanate ceramic material which is magnetically inert IE, it will not conduct magnetic pulses or signals. This supports the ferrite core and wire coil which serve as the electromagnet that rearranges the iron oxide coating on the Mylar diskette into meaningful information.

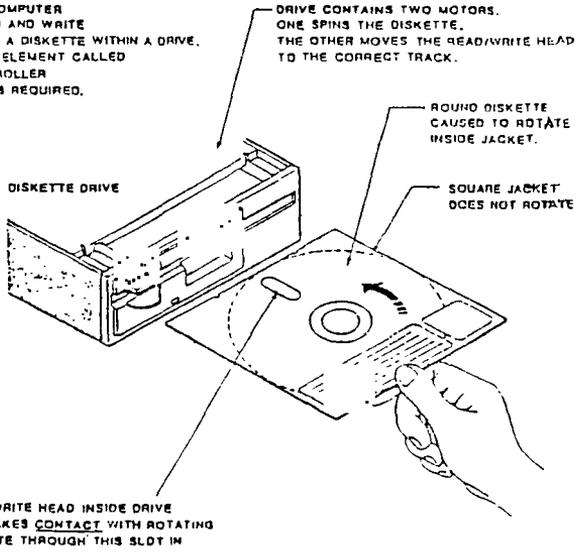


The computer sends the information to the disk controller card which sends electrical impulses to the head where they are converted into magnetic pulses by the coil wound around the ferrite core. The ferrite core is positioned such that the magnetic field produced, rearranges the material on the diskette surface; the information will remain on the diskette until removed by another magnetic source. For this reason diskettes should be stored away from any source of magnetism, e.g. TV's, telephones, and any electrical motor including the fan in the FEB.

Before a diskette can be used it must be formatted or initialized. This is because computer systems are not compatible with each other. Therefore each diskette must be set up by the computer to its own requirements. These include single or double sided, single or double density and the number of tracks. Single or double sided depends on the disk drive installed, whether it has one or two heads. Most diskettes will support double sided recording. However, some are certified for single sided use only. Single or double density is determined by the disk drive controller, the TI controller will not support double density but the Corcomp and Myarc will. If you wish to use double density it is better to use diskettes designed for that purpose as they have a better coating than the cheaper diskettes. (NOTE Most drives including the TI drive will write double density.)

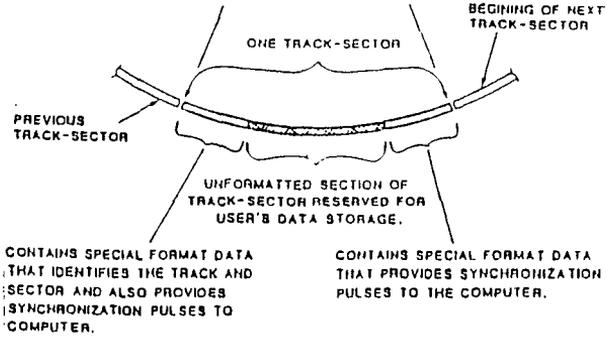
A single sided diskette is divided into 40 concentric circles called tracks which are numbered from 0 on the outside to 39 on the inside. Each track is divided into 9 sectors around the diskette. The sectors and tracks can not be seen with the human eye because they represent a magnetically defined area rather than a physically defined area on the diskette.

NOTE:  
FOR A COMPUTER  
TO READ AND WRITE  
DATA TO A DISKETTE WITHIN A DRIVE,  
A THIRD ELEMENT CALLED  
A CONTROLLER  
BOARD IS REQUIRED.



Having 9 sectors with 40 tracks gives the user 360 track-sectors

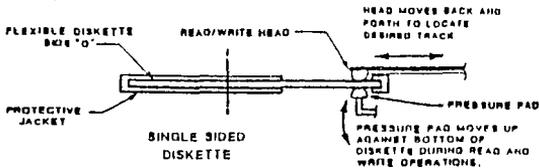
per dislette side, however they are referred to simply as sectors. Each sector is capable of storing up to 256 bytes or 2048 bits of information. Each sector has additional space used only by the controller to verify identification and data accuracy. The sectors are numbered from 0 on the first track through to 359 on the last track for both single and double sided, with double sided having an extra 360 sectors on the second side which are numbered from 360 on the last track to 719 on the first track.



The disk controller uses sectors 0 and 1 of the first track to form an index of file locations. If these sectors become damaged or unreadable the computer cannot locate any files on the diskette.

To locate the first sector on a diskette the small hole beside the large central hole is used. A light beam is shown through the hole and when the hole in the actual diskette lines up the beam it is detected and registers the position. This is called "soft sectoring".

Single sided drives have a read/write head on one side and a pressure pad on the other side. Unlike the head on a hard disk system the head makes actual contact with the diskette during read/write operation. Double sided drives have a read/write head on both sides. A stepper motor moves the head in and out across the surface of the diskette, accurately positioning the head above the tracks. A separate motor rotates the diskette at 300 R.P.M.

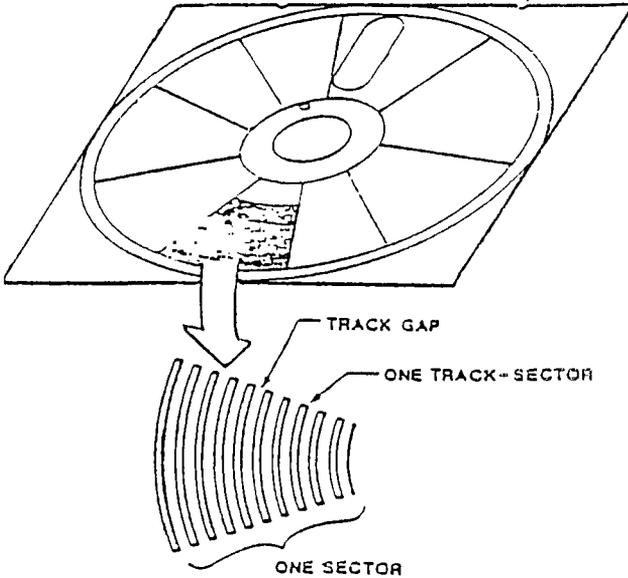


(ON TWO SIDED DISKETTES, BOTTOM PRESSURE PAD IS REPLACED WITH A SECOND READ/WRITE HEAD. NOTE: ONLY ONE HEAD READS OR WRITES AT A TIME)

To prevent accidental erasure of a program the small notch on the diskette envelope can be covered. When the notch is covered the write function of the head is disabled, allowing the head to only read information from the diskette to the computer. The cover must be removed if any information is to be written to the diskette.

If after initializing a diskette, you come up with sectors used

there is probably a build up of oxide on the head (or a bad sector on the diskette). To clean the head, obtain a cleaning diskette and apply the fluid supplied to the surface, insert the diskette and call up a program. This will cause the diskette to spin and clean the head.



This article written by Paul Mulvaney came out of the August HV 99er newsletter of Australia...

### HIDDEN GRAPHICS

There are some graphics capabilities in BASIC or XB that you may not be aware of by using control characters (ASCII 128-143) and using PRINT statements to display them. These control characters can be defined as graphics by the usual method of using the CALL CHAR statement. After redefining the characters to be graphic characters you can obtain them by pressing CTRL and the appropriate key. The graphics characters can then be placed into PRINT statements instead of using CALL HCHAR or CALL VCHAR to display them thus making it easier to plot graphics on the screen. Once the characters are defined the only way to erase them (put them back in their original form) is to redefine them or go to the title screen. "NEW" or loading in another program will not erase them. However, here is the catch. These characters must be defined before you can see them otherwise they are invisible. For example, if you define these characters and place them in a print statement, save it out to a storage device (disk or cassette), then come back later after turning off the computer or after going back to the title screen and load the same program back into the computer, The graphic characters you placed into the print statements will be invisible. In other words the control

characters will be back to their original invisible form. Once the characters are defined again they will reappear in the print statements as visible graphics characters. Therefore, what you will need to do is place the CALL CHAR statements at the beginning of your program so that the control characters will be redefined before the PRINT statements are encountered which you use to display them. You may also think of some other way to do it but just make sure the characters are defined before the PRINT statements are encountered otherwise nothing will be displayed. Below is a list of the characters that can be defined and retrieved by hitting CTRL and the appropriate key. For example, the first ASCII code in the chart is 128. Type CALL CHAR(128,"1B3C7EFF1B1B1B1B") and then hit CTRL , and a graphics character will appear. ASCII code 128 corresponds to the key press of CTRL , . All key presses have a ASCII character code of their own.

| ASCII CODE | CHARACTER | ASCII CODE | CHARACTER |
|------------|-----------|------------|-----------|
| 128        | CTRL ,    | 136        | CTRL H    |
| 129        | CTRL A    | 137        | CTRL I    |
| 130        | CTRL B    | 138        | CTRL J    |
| 131        | CTRL C    | 139        | CTRL K    |
| 132        | CTRL D    | 140        | CTRL L    |
| 133        | CTRL E    | 141        | CTRL M    |
| 134        | CTRL F    | 142        | CTRL N    |
| 135        | CTRL G    | 143        | CTRL O    |

ASCII codes 128-135 belong to character set 13 and ASCII codes 136-143 belong to character set 14. You can use CALL COLOR to define the color of the characters also. Please note that your character will only be the defined color while the computer is executing the program that your character is used in and only if the CALL COLOR statement is also in the program. Below is a sample program to give you an example.

```

10 CALL CHAR(133,"1B3C7EFF1B1B1B1B")
20 CALL CHAR(132,"0B0C0EFFFF0E0C0B")
30 CALL CHAR(131,"1B1B1B1BFF7E3C1B")
40 CALL CHAR(130,"FFFFFFFFFFFFFFFF")
60 CALL CHAR(129,"103070FFFF703010")
60 CALL CHAR(140,"001F17FFFFFFFF4200")
70 CALL CHAR(141,"1C0B493E0B0B1422")

```

Now run this program to define the characters. (Note, nothing will happen on the screen)

Now add line 80.

```

80 PRINT " E A D C B L H"

```

\* NOTE \* - Instead of typing E A D C B L M in line 80 hold down the control key and type those letters. Make sure you let up on the CTRL key when you press the space bar to put spaces between the letters. Also the first half of the program (lines 10-70) do not have to be ran first before inserting line 80. However, by defining the characters first then typing line 80 makes it easier for you to draw the graphics as you will be able to see the

~~~~~

characters you defined.

Using this method of drawing graphics may be easier than having to plot the graphics using CALL ICHAR or CALL VCHAR statements...  
Gary Cox

## KEYPAD CONTINUED... .

In my first article on adding a 10 key keypad to your TI-99/4A (August newsletter), I covered the keyboard matrix and basically how to wire up the keypad. In this article I will describe the development or modification of the matrix for your keypad. (I used an old calculator keypad and cut off all the keys leaving only the central number block.)

Once you have selected your pad, be it from a calculator, telephone, etc., turn the keypad over and remove any covering necessary to expose the circuit board on the "bottom". You will notice that there are pairs of "pins" directly below each key on the "top" of the board. These are the contact connections for those keys, and they will be the points to which you will be attaching the lead wires from the computer keyboard. You will also notice that the pins are soldered to thin metal "wires" that make up the printed circuit on the board.

Trace out the circuit of "connecting wires" to visualize how it is laid out. The matrix you must develop is based on the computer keyboard's matrix, and to refresh your memory, the matrix for the numbers 1234567890 is as follows:

```
Number:..1...2...3...4...5...6...7...8...9...0  
"X":.....7...7...7...7...7...2...2...2...2...2  
"Y":.....8..13..14..15...9...9...15..14..13...8
```

To operate properly, your keypad must have the same matrix. This means that one pin of the pin pairs for numbered keys 12345 are all connected together, and that similarly one pin of the pin pairs for 67890 are also connected together. Additionally, the other pin of keys 1 and 0 are connected, of keys 2 and 9, 3 and 8, etc.

Use small hook-up wire (24-28) such as left over ribbon wire, etc. to wire the matrix. (I prefer stranded wire, and remember to pre-tin the wire ends to ensure good solder joints.) Always take your time. you may find that some of the boards original printed circuitry will fit in to your required matrix while other sections must be 'cut' to keep from shorting out the matrix. Use a sharp knife to "cut"/scrape off the undesired portion of the printed circuit, being careful not to disrupt any of the pin solder areas. Once the keypad matrix is "wired", find a suitable pin to solder the leads from the computers keyboard (ie. lead #7 would be soldered to one of the pins in the connected series for the number keys 12345 ). Take your time soldering, pre-tin the wire ends and ensure that you don't let any of the solder run over to another "wire" or pin (as the pin pairs and/or "wires" on some printed circuit boards are often quite close together.) If in doubt run the sharp edge of a knife thru the gap to keep it clear.

Once the wiring is done, all that is necessary is to put a back on

your pad so it won't short itself out during use. I used a block of wood, but any non-conductor will work. Just design it to fit the angle and position you find most comfortable in the location you intend using it.

If you have any questions or suggestions, let me know... David Cotner

## LIBRARY INFORMATION

I would like to start off by reminding everyone that hundreds of programs are available FREE of charge from our groups library either on cassette tape or on diskette. The programs available are games, programming utilities, educational aids, teaching programs, business applications and just about anything you can think of. A listing of available programs (Shareware and Public Domain) are available at the meetings or by placing a call to Pierre or me (for disk) and to Adolph Butler for cassette.

A complete cassette listing has been in the works for a while now and should be completed by meeting time. This list contains several hundred programs for use with either the BASIC console or the XB cartridge. Since cassette programs take so long to copy they are not copied at the meetings. However, you may call Adolph and arrange to have you a copy of particular programs by meeting time where you may pick them up. Also you can tell Adolph at the meeting which programs you would like and he will copy them and bring them to the next meeting or arrange for you to get them sometime during the month. You will need to bring your own cassette tape though as I do not think Adolph has many blank ones left. Since Adolph now has a disk system too, the programs on the cassette listing are also available on disk by special request to Adolph.

Our library also contains about 4 boxes full of magazines and books including some of the old 99'er etc... Since there are so many books and magazines it is impractical to bring all of them to the meetings each month. However, a list is available from Adolph on what we have as well as you may call him and he could suggest a good book on whatever you are looking for. You need to contact Adolph before a meeting in order for him to bring the item that you would like. I am sure he would also arrange for you to pick one up during the month. We really need someone else to handle the books and magazines though as the cassette and the books and magazines are too much for one person to handle. If anyone could take care of all the book and magazine requests at each meeting please contact Adolph.

The disk library is split up into two sections. The main section is where most of the programs are located. Programs from this section are only available in volumes or sets. The reason for this is because whole disks can be copied much quicker than individual programs off of several disks. So for example, you may want MATH disk 1 which contain many individual math assistance and support programs and it all comes on one disk. Then if you want FR BASE, it comes in a set of two diskettes because the program requires both disks to run. You may bring your own disks to the meeting to get a copy or you may buy disks for \$1 a piece from the library. There is NO CHARGE for copying any programs except that

you must be a member. Copies of the programs are made at the meeting so that you may take them back home with you. However, sometimes so many requests are made that not all of them can be filled in one night. In that case the disks can be picked up at a later date or just picked up at the next meeting.

The second section of the disk library has been under revision for some time now. It is the individual program listings of programs in XB and console BASIC. Dicko Vandenberg is working on the list for this portion of the library. However, due to it's size it may be several months before it is completed. Each program on the list has a description of what the program does. Consequently each program must be ran in order to find out what it does which takes a while. I am sure Dicko could use you help, not to mention you could copy the disks while you are helping. So talk to Dicko if you can be of assistance.

Pierre, Adolph, David Ferguson, and others who help with the library work very hard to maintain and improve on it so be sure to say THANKS to these guys for a job well done and as always volunteers are welcome ... Gary Cox

## REAL OR COMPUTER?

Is it real or is it computer generated? This is the question you will be asking when you see what a new program called MAX/RLE can do. MAX/RLE which is Public Domain and available in our library will read, display and print pictures created by GRAPHIX, TI-Artist, pictures in D/V 80 format and D/F 128 format. It will even allow us to print digitized pictures created by other brand computers! Thus we could call Comuserve or a friend and download a picture or a weather map and then print it onto any Epson compatible printer or just display it on the screen (if you do not have a printer). Then if you wish you can have MAX/RLE save the picture back out to disk in any of the 4 formats. For example, I could download a weather map which, if it was not made for the TI will be in D/F 128 format and load it into MAX/RLE. Then I could in turn save the picture back out to disk in GRAPHIX format and read it with GRAPHIX and modify the picture. In fact if I wanted a larger picture than what MAX/RLE will print, I could save the picture to disk in GRAPHIX format and have GRAPHIX print it in its large picture printing mode!

Now you may be wondering what are "digitized pictures"? Digitized pictures are actual photographs taken of people, places and things and are then converted into computer format. This is basically what is going on when you get a picture taken of yourself by a video camera at some T shirt place and they have a computer print your picture onto the shirt. In fact, I have seen at Stewart Software special ribbon of which you can print your own T shirts with your printer! What will they think of next? We currently have 9 disks worth of pictures for use with MAX/RLE. However, like I mentioned, you can convert the format using MAX/RLE to whatever type of graphics drawing program that you have. MAX/RLE requires 32K and a disk drive and either FunWriter or E/A to load it. FunWriter is also available free of charge from our library. MAX/RLE is also available on our LIBRS along with a few pictures. On page 22 in this newsletter we will have some digitized pictures

~~~~~  
printed using MAX/RLE... Gary Co: ....

## IN THE NEWS

This month "In the News" article will be a little shorter as I have not had the time to dig for all the news like usual because of my starting back to college...

Please keep a note on our TIBBS phone number as we have the slight possibility of having to change it in the near future. If we do have to change it we will be sure to post the new number in the newsletter, on the board (before it changes) and just everywhere... However, our problem may work itself out and it may not be any problem.

According to a letter from the Amnion Helpline by Guy Romono dated August 6, 1986 which I obtained from the LA 99ers newsletter, Home Computing Journal (HCJ for short) is really gathering up complaints. The letter goes on to say:

"It seems that at the same time HCJ was sending out their "postcard" offer to subscribers, they were also closing down and dissolving Emerald Valley Publishing. The new company, composed of all the very same people, is called something like Computer Technology Publishing. Call them to complain about what they did to TI owners and they'll tell you they are not liable for anything since Emerald Valley Publishing is no more. They will refuse to talk to anyone further. The district attorney in Eugene, Oregon has received enough complaints that they have begun an investigation. They are interested in hearing from any and all complaints about HCJ. They have exerted pressure on HCJ so that a few people have actually gotten their money back on unfinished subscriptions. To strengthen the case against HCJ, however, they need to hear from "damaged parties" or they will be helpless. Anyone who was cheated by HCJ is strongly urged to contact:

DISTRICT ATTORNEY  
CONSUMER RELATIONS  
400 LAKE COUNTY COURTHOUSE  
EUGENE, OREGON  
(503) 687-4261

If people will just take a few minutes of their time to let them know about their personal complaints, maybe the scam can be ended permanently... All complaints should be leveled against Emerald Valley Publishing Co. aka HCJ, etc etc.

In reading the August LA 99ers newsletter I found that Nyarc is offering an Eprom for the Foundation Ram Disk that will allow it to utilize Nyarc's XRTI level IV. The Eprom will only cost \$10 with the purchase of the XRTI.

Available from Tenex is a chip that will allow the Foundation 128K card to act as a Ram disk. For more information on the chip contact Tenex.

Hillers Graphics has released its new utility disk for the Gram

~~~~~

Cracker. The disk price is \$10 which includes shipping and a 22 page manual. Millers Graphics will also soon have out a FROM chip for use with the CorComp disk controller card to modify it's operations. The chip among other things will add several new CALL statements and will get rid of the Corcomp title screen. Contact Millers Graphics for more information...

Soon to be released is a new version of DM 1000 and FAST-TERM. I will let you know when we get them... Gary Cox:

## The Orphan Chronicles

The Orphan Chronicles is not a movie (although it would make a good one). It is not an adventure book (although it comes close). It is not fiction (but some it may sound like it). It is not a comic book (although some of the characters may be considered comical). It is not a technical or programming manual, its audience ranges from experts in computers to novices to children and adults alike. It is not a "how to book" (although a survival manual is included)... The book I speak of is written by a person well known in the community and distributed by one of the most famous companies we know. The person I speak of is Ron Albright and the company is Millers Graphics and what I am speaking of is a new book from Millers Graphics.

The Orphan Chronicles is a history of the TI from the beginning to the present and even into the future. I found particularly interesting finding out how everyone in the TI community got started. For example, Lou Phillips of Myarc once worked for TI, Craig Miller once owned a Camera store, formed from a small group of business enthusiasts was CorComp and so on... Did you also know that TI had made an upgrade to the 99/4A called the 99/8 of which only 100 were made? Many of us have heard about the 99/8 but how about the one after the 99/4? It was called the Ranger and it's price came in too high so the 99/4A was developed. The Ranger never left the drawing room. Particularly interesting was the long and involved computer war that went on between TI and Commodore. Commodore was producing a machine called the VIC 20 which although inferior in quality and capabilities to the TI, was selling because of a lower price it could be made cheaper because of its lesser capabilities... Bad marketing decisions and TI's policy of a "closed system" was the downfall of the 99/40. TI would not let anyone know the inner workings of the computer. Therefore very few third-parties were able to make anything for it. Thus TI has a monopoly on most everything. Just recently most of the inner workings of the computer have been exposed so we are now just getting into our hardware and software revolution making more available today than ever before. The best thing TI did for us was to get out so we now have lower prices and more available. The book even tells of how 99'er was started as well as Micropendium and the other publications out today...

The book not only tells a historical account but gives valuable as well as interesting information on continuing to survive, where to find hardware/software, a BBS list and much much more. I must say I highly recommend this 172 page book packed with information. After reading the book I felt even more loyal to my TI than ever! Those of you that have lost interest in the TI or thinking of

~~~~~  
going to another computer I would spend the \$9.95 + \$2 shipping and buy The Orphan Chronicles and read it as I think you will change your mind fast. We may not have the most advanced or fastest computer but we definitely have the "BEST"! The Orphan Chronicles is available from Millers Graphics, 1475 W. Cypress Ave., San Dimas, Ca 91773 phone number (714) 599-1431

## PROGRAM

6:10 - Doors Open.

6:30 - Library opens.

7:00-7:20 General discussion and business. We will be taking a vote of members to see if we should buy a 512K card for TIBBS. The details of what it will do for us and the price will be discussed at the meeting. Donations for the FREEWARE fund will also be taken. Each month money is raised in some manner and a certain author is selected to send money to. This way we try to give more support to the FREEWARE authors.

7:20-7:30 Demonstration on how to clean your XB and console by Gary Cox as many problems with the computer is directly linked to dirty contacts...

7:30-8:10 A new graphics design program. Joypaint 99 will be shown. Believe me it leaves all the others in the dark including programs on other brand computers such as MacPaint! Seat belts will be required at this meeting as this program will do nothing less than blow you out of your seat! Bring your friends with other computers and watch their mouths hang open as they will not have not seen anything like it before either. The demonstration will be by Jonathan Leslie who will finish up his demo last month of BitMac. Jonathan was unable to show the pictures he had spent hours drawing because his disk was double density and the system we had was only single density so he will be showing them...

8:10-8:40 Demonstration of the new Gram Cracker utility disk by Gary Cox. These utilities will give you some good ideas of what the GK can really be used for!

8:40-9:10 c-99 programming demonstration, tips and tricks continued by Dicko Vandenburg.

9:10-10:00 Library still open, main system available for whatever anyone wants to do.

NOTE We now have a new copy program for the library which is so fast it will cut copying time in half thus giving us the ability to copy much more for everyone. You just will not believe it's speed!...Gary Cox

## 99/4a Q/A (Questions and Answers)

NOTE: Send any questions or answers to: John Craig, RT.1 Box

86-A1, Atoka, TN 38004. If you don't desire your name printed with the question or answer, state so and we will designate an I.D. for it. Q/A's must be received before the end of the month to be published in the next month's newsletter. Keep those cards and letters coming folks !

First: Many thanks to Marshal Ellis for his help with the Organizer and Outline Editor programs. Our Group Works !!! (John Craig)

QUESTION #1: I have been using Graphx for a while now, I do like it. But sometimes I would like to cover a page with a drawing without it having to be an expanded version of the original. I really cannot make a nice greeting card with it (so far as I know of ). At other times I would like to place the graphics figure at the location of my choice on the page. So, can Graphx actually do this or is there a graphics package which can do this?

Anyone have any suggestions ?

QUESTION #2: I have, after a long wait, upgraded my disk storage system to include two half-height, double-sided, drives. Now, the thought crossed my mind about also using my old full height, single-sided drive (why not?). Now, all I need to find out is about the power supply requirements of the T.I. supplied disk drive. Is one Amp capacity enough for the 12 Volt line? Would one-half Amp be sufficient for the 5 Volt line?

The answer to your question all depends on the power requirements of your disk drive. On my TI drive the specifications read .4 Amps for +5 and .7 Amps for +12. So to answer your question, if your TI drive has the same specifications as mine .5 Amps is enough for the +5 line and 1.0 Amps is plenty for the +12 line. Some drives such as the Canon, which a few people in the group purchased, requires 1.4 Amps on the +12 line and 1.0 Amps would NOT work on it! Always supply just a little more Amps than required to make sure you do not overload the power supply. If enough power is not supplied the drive will not operate properly and will probably cause lost data on a disk! Also note that if you connect two drives to the same power supply you need to add the Amps on both drives together and then check the power supply to make sure it will supply enough power for both drives. Although both drives may not run at the same time they both require power when one is activated. CAUTION: DO NOT connect two full height or two full power drives to the FEB power supply! In all cases only one full power drive should be run from the FEB power supply as the FEB has other devices it must power as well and two drives may overload it and cause damage to the FEB power supply! However, it is safe to connect two low power drives to the FEB power supply (such as the Teac 55b). Just buy a power splitter cable for disk drives (available at The Computer Center or from where you purchase your drives) to split the power to both drives. Next month I will have an article on how connect more drives to your system and discuss all the parts needed and where to buy them. If you have problems just give me or Al Doss a call. By the way disk drive power supplies are available at low cost from The Computer Shopper as

~~~~~  
well as low cost disk drives.... Gary Cox

QUESTION #3: In respect to the cleaning of disk drive heads with a prepared package : is there a recommended program or routine which will ensure the adequate contact of the head(s) and the effectiveness of the cleaning?

The method I use is I just go into XB and type OLD DSK1.TEST and keep hitting FCTN 8 (Redo) until the recommended time has expired on cleaning the drive. The following program works even better though:

```
10 ON ERROR 30
20 RUN "DSK1.LOAD"
30 ON ERROR 40
40 RETURN
```

Run the above program several times until the time has expired for the cleaning as recommended by the cleaning kit.

However, I do not think that you should clean your drive unless you are having problems with it. In other words do not fix something that does not need fixing. The only time you should clean the drives is when you receive bad sector errors when you initialize several known good disks. Also use a liquid cleaning system and not a dry system as the liquid is better on the heads. Cleaning the drives too often (in my opinion) does more harm than good as the more you clean them the more surface you scrape off of the drive head and also the more they seem to need cleaning. Dust and dirt seem to be attracted quicker after a bunch of cleaning... One more tip, keep the environment around your computer clean of dust and dirt as a healthy computer lasts longer and causes less problems. I have a dust cover I place on mine when not in use... Gary Cox

Why does my console lock up often and why do I get garbage on the screen sometimes when I go into XB...?

The console and XB cartridge probably needs cleaning. You would be surprized at how well a good and a properly done cleaning can help the operating of the computer. I will demonstrate how to clean the console in less than 5 minutes at the meeting... Gary Cox

### BANKING ON THE MODEM

I have for the last 2+ years been utilizing a little known banking service available to the home computer owners who have telecomputing capabilities through the use of a modem. This banking service is offered by only 8 banks in the USA, but is made available by a local Memphis bank - United American National Bank. The bank at home service appealed most directly to my extreme dislike of standing in lines, and allows me to bank after regular banking hours. Using a bank teller card, I am allowed to deposit or receive cash advances on my account in conjunction with the Bank At Home service which is available literally at my finger tips.

In addition to the Memphis local number, I can access any of these

~~~~~

service through the 200+ Compuserve local access numbers. I imagine that this feature might have some appeal to traveling hackers, who might have a twing of paranoia about their bank account at home.

What services are available to the home banking subscriber? The UAB service currently offers their subscribers three basic services: 1. UAB Express Statements, 2. UAB Express Tel-A-Pay; and 3. Instant Cash Management.

The Express Statement allows the subscriber to see a listing of the checking account or savings account. This enables the subscriber to reconcile their bank account any time during the month, making this sometimes unpleasant duty a more convenient task since it can be done just prior to paying bills. Most individuals pay their bills on an average of twice per month, making the regular bank statement ineffective in finding any arithmetic errors until the next statement. Also, another nice feature is that most modern households usually run two checkbooks out of one checking account, which would of course complicate keeping up with a current cash balance.

The Express Tel-A-Pay is a service that appeals to the greedy and the power seekers. This is basically a bill paying service which allows payments to be made to predetermined creditors via the keyboard. The service differs from the "Standing Order" type bill paying service offered by other banks since it allows the subscriber the power to determine three criteria for paying a creditor. The subscriber can select the creditor to be paid, the date of payment, and the dollar amount to be paid, none of which have to be the same from one month to the next. This means that if one was so incline, a creditor could be set up to receive a varying check amount each day of the month. The cost of this service is the same as the cost of a stamp. This reduces the need to stand in line to buy stamps, since the stamps your do buy last longer, and you won't find any of those payments that should have been mailed above the visor in your car.

The Instant Cash Management feature gives the latest certificate of deposit, savings, and money market interest rates offered by UAB. I haven't used this feature very much since I am mostly concerned about "Is there any money" rather than "how much money".

Needless to say, this service has led to a higher degree of connubial bliss. We no longer argue over who's going to the Post Office on Saturday morning, or have to slink around for days because the payment was found hanging is the car visor like a pendulum of doom. The wiz kid at UAB who can tell you all about his pet (banking at home service) is Terry N. Taylor who can be reached at (901) 766-2853...Yvonne Morgan

## TIPS AND TRICKS

### GAMES:

Ever wish you could really rack up the points on a game? Using a test mode built into some cartridges you are able to do this although it would not be a fair game. At the title screen of some cartridges (not the computer title screen) pressing shift 8 3 8

will send the game into a test mode where you can set the number of men, skill level etc... Only some of the cartridges have this test mode. Among these cartridges are Alpiner, Munch Man, TI Invaders and more, just try all of them out. The Star Trek cartridge is a little different. You must hit shift 0 3 0 3 which seems to do nothing but actually gives you almost unlimited shield, warp and photon power. Have fun!

The next game tip is an error found in the Parsec game cartridge. By following the exact steps listed below the game will suddenly jump from game level 1 to level 3! Here is the procedure that comes from Brian Abbott.

1. Crash one ship before firing.
2. Work up to the Bynites.
3. Crash after destroying each Bynite (crash all ships).
4. Push "REDO" before the "GAME OVER" appears.
5. Crash 1 ship before firing.
6. After swoopers comes the killer satellites -- be fast!
7. You are now level 3 (red zone).

#### PROGRAMMING TIPS:

Ever curious to how much memory you have left in TI BASIC (console basic)? XB has the command "SIZE" to determine the remaining amount of memory but TI BASIC has no such command. Using the following technique you can still determine how much memory you have available with a program in memory.

Insert these two statements into your program in a location where the heaviest use of memory will occur (you may have to change the line numbers to something other than what I have). Also make sure it is placed in a location where the program will run across the statement so don't place it in a location where it would only be hit once in a million years.

```
1 ZZ=ZZ+8  
2 GOSUB 1
```

This has the effect of calling statement 1 again and again, and adding 8 to ZZ on each call. (If your program already uses the variable ZZ you may use something else.) Each call requires another 8 bytes of memory to stack the return address. Thus, this routine eventually uses up memory and stops with a MEMORY FULL error. At that point print the value of ZZ (type PRINT ZZ) to learn how many bytes of memory are available. You may now remove the two lines and continue with your business. This is a handy little trick to find out how much memory you have available to program...

Want to run a program quickly? The usual method of loading a BASIC or XB program is to type OLD CS1 or OLD DSK1.FILENAME and when loaded type RUN. Well the two steps can be combined into one command by typing RUN "CS1" or RUN "DSK1.FILENAME". This will both load and run a program at the same time thus saving you time.

#### ASSEMBLY LANGUAGE:

The TI Writer cartridge allows a utility option (#3) which will load SPELL CHECKER and several other programs including FAST-TERM.

In fact, loading with option #3 of TI Writer will load FAST-TERM about twice as fast as XB. When you select option #3 a default will come up as DSK1.UTIL1 so you just press ENTER and it automatically loads in a UTIL1 file. What you probably do not know is the E/A is just as easy and does exactly the same thing as TI writers utility option #3. By selecting 5 (Run program file) on the E/A menu and then by just pressing ENTER in a blank line when it asks for FILE NAME the E/A will automatically try to load a DSK1.UTIL1 file although no DSK1.UTIL1 default is displayed on the screen. So to load SPELL CHECKER, FAST-TERM or any assembly file names UTIL1 just select option #5 of E/A and hit ENTER and it will automatically load.

#### MISC:

Need a TI Writer manual? Many who just have the Funlwriter may not have the TI Writer manual which contains much valuable information. In a recent conversation with a TI representative on the 1-800-TI-CARES phone number I was told I could purchase a TI Writer manual from TI for only \$3. To purchase one just call the 1-800-TI-CARES phone number toll free... The number is also open for asking question...

#### EQUIPMENT PROBLEMS:

In and out of warranty TI brand equipment is still serviced by TI through its repair and exchange center in Texas. Call 1-800-TI-CARES for details. When you do have problems with equipment you may feel free to bring it to the Saturday Workshops and we will take a look it and determine the source of the problem and suggest a solution. Just ask Rick, we've had pieces of his system spread out all over the table before... Also during the month you may call one of the officers (or Rick) for help...

#### NOTE:

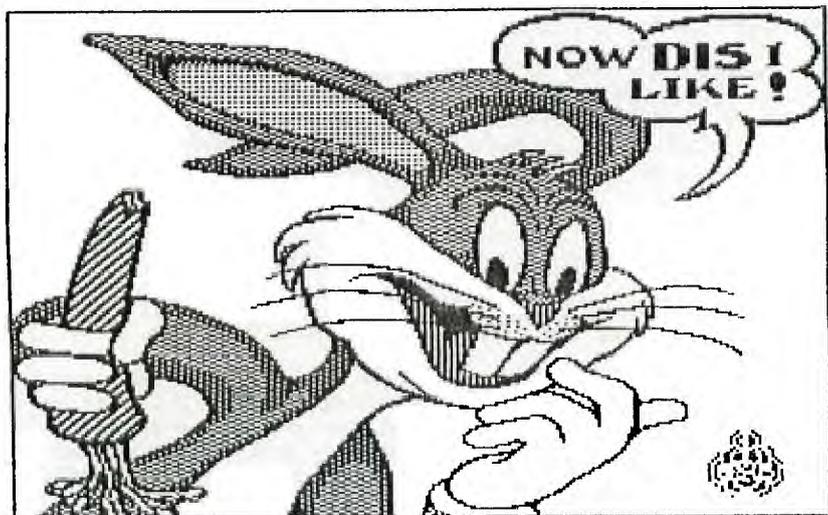
Please contribute to FREeware (SHAREWARE) authors besides what we raise at each meeting. These authors are a major source of high quality software today and without support or even a THANK YOU they may not continue to write and support their software. Many times those that do contribute receive additional support and even updates so do your part to contribute and send in your donation today to your favorite FREeware author...Gary Co:

## NEWS UPDATE

The August MICROpendium has an interesting AD by RYTE Data of 210 Mountain Street, Haliburton, Ontario Canada K0M 1S0.

The AD mentioned a BASIC compiler (translates your BASIC or XB programs into assembly language for more speed...). According to the ad this new compiler is easy to use and supports virtually all BASIC and XB commands. Also listed is an enhanced GPL assembler, a super clock support package for the Triple Tech card and the most interesting note is about a 1 megabyte (1024K) Ram memory expansion card! According to the ad this device connects directly to the I/O connection on the console and adds the standard 32K memory plus 992K of extra memory. A "SUPERVISOR" program monitors memory use, RAMDISK functions and bank-switching for application

programs. A console, drive and XB or E/A is required for MegaRam. The ad goes on to say it is compatible with virtually all TI programs. RYTE Data also offers many other products including multifunction cards such as a card which has both 32K and an RS232 on the same card or a DS/DD disk controller with 32K on the same card. Check out the August MICROpendium for details... Gary Cox



~~~~~

## PROTECTION

There are strong FEDERAL LAWS against duplicating copyrighted programs. Please do not break these laws!

**24hr TIBBS BULLETIN BOARD**  
**901-357-5425 300/1200 baud**

---

## DISCLAIMER

The Mid-South 99 Users Group is not affiliated, sponsored by or has any relationship with any company implied or otherwise. Any mention of a company or product is not an endorsement of either the company or the product.

## NEWSLETTER INFO

Visitors and potential members may receive 3 free issues of Tidbits while they decide if they wish to join (no obligation). A GREEN newsletter and/or dollar signs (\$\$\$) indicate that your dues are due. Please pay your dues to be able to continue to receive the newsletter and other benefits of the group. You will note a letter and date on the top of your address label. The letter indicates if you are a member and the date indicates the last time you paid your dues. One year from the date your dues are due!

PLEASE NOTE LARGE TYPE IS AVAILABLE PH. 743-6781

## CALENDAR

MEETINGS: September 18, October 16, November 20 (3rd Thursday!)  
WORKSHOPS: September 27, October 25 November 29

## OFFICERS

Gerald Smith	President	901-363-6273
Dick Vandenberg	Vice-President	901-274-1892
Ralph Wilson	Secretary	901-382-0795
Mac Swope	Treasurer	901-363-3880
Pierre LaMontagne	Chairman - Library and Sysop	901-357-8110
Adolph Butler	Chairman Cassette Library	901-948-0732
Al Doss	Editor #1 - Newsletter	901-743-6781
Gerald Smith	Editor #2 - Newsletter	901-363-6273
Gary Cox	Chairman - Program	901-358-0667
Gary Cox	Information and Assistance	901-358-0667
Mac Swope	Chairman - Equipment	901-363-3880

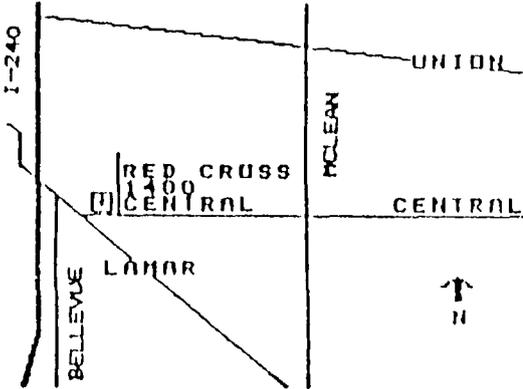
## GROUP MAILING ADDRESS

Mid-South 99 Users Group  
P.O. Box 38522  
Germantown, Tn. 38183-0522

NOTICES

**MEETING**  
 7:00 P.M.  
 Thursday, September 18th  
 Red Cross Building  
 1400 Central Av.

**WORKSHOP**  
 9:00 - 12:00  
 Saturday, September 27th  
 TO BE ANNOUNCED



**MEMBERSHIP APPLICATION**

NAME \_\_\_\_\_ \$15.00 FAMILY  
 ADDRESS \_\_\_\_\_ \$10.00 JUNIOR (under 15)  
 CITY \_\_\_\_\_ ST \_\_\_\_\_ ZIP \_\_\_\_\_ \$10.00 ASSOCIATE (N/L only)  
 PHONE ( ) - : INTERESTS \_\_\_\_\_  
 \_\_\_\_\_  
 EQUIPMENT, ETC. \_\_\_\_\_

Detach and mail with check payable to: Mid-South 99 Users Group,  
 P.O. Box 38522, Germantown, In, 38183-0522.