J*U*G*S NEWSLETTER

FEBRUARY '85

Our meetings are held at Ken And Cathy's (1401 S.HWY 161 JACKSONVILLE,AR) house on the second and fourth Sunday of each month starting at about 1:30 PM. Club dues are $20.00 a year.

Although we are a relatively new and small users' group, I don't want anyone to get the idea that we have no talent, this newsletter is composed of articles written by our own members(for the most part). We need more of this sort of thing! Pick a subject, and write!

JUG : President...(501) 985-2739.....Ken Gilbert
: Vice President...(501) 988-1700.....Mark Beck
Jacksonville Users Group : Secretary...(501) 988-2537.....Bill Alcott
P.O.Box 525 : Treasurer...(501) 985-2739.....Cathy Gilbert
Jacksonville, AR. 72076 : Editor.....Cathy Gilbert

MORE TI NEWSLETTERS ,MAGAZINES AND CATALOGES

Write to the companies below for more information on their publications & cataloges.

SUPER 99 MONTHLY
BYTEMASTER COMPUTER SERVICES
171 MUSTANG ST.
SULPHER, LA 70663

CHRYSON COMPUTER
109 LISA DRIVE
BROCKTON ,MA 02402
(Software Hardware cat)

ARIZONA 99
4328 E LAPUENTE AVE
PHOENIX,AZ 85044

MICRO-BIZ HAWAII
98-1409 D KAAHUMANU ST
AIEA, HAWAII 96701
(SOFTWARE CAT)

TIGARCUB SOFTWARE
156 COLLINGWOOD AVE
COLUMBUS, OH 43213
(SOFTWARE CAT)

J K H SOFTWARE
2820 S ABINGDON ST.
ARLINGTON VA 22206
(SOFTWARE CAT)

From the Source Post & letters we receive: People who would like to trade programs,

Scott
3226 Timber Lane
Erie, Pa 16506

Robert L. Cooley
R.D.2 Box 473
Hookstown, Pa 15050

Walt Gauntt
861 Hancock St #808
Hayward, Ca 94544

SST Basic Compiler $30.00
SST Expanded Basic Compiler $49.95
SST Expanded Basic Compiler with Hi Res Graphics Pkg. & Text Mode $59.95
These are excellant prices compared to what they were originally asking.

SOFTWARE INC
P.O.BOX 26
CEDARBURG ,WI 53012
(414) 771-8415

LOGO NUT
By C. West

How would you like to be able to display the T.I. LOGO on your T.I. logo programs? Use TILES 2-10,then mc 11,this is the one tile that is missing;

```
TILE 11:        A SAMPLE PROGRAM
00000000        PT 2 5 4
00000011        PT 3 6 4
00000011        PT 11 4 4
00000011        PT 4 4 5
00000011        PT 5 5 5
00000011        PT 6 6 5
00000011        PT 7 4 6
00000011        PT 8 5 6
                PT 9 6 6
                PT 84 14 5
                PT 46 15 5
                PT 73 17 5
                PT 46 18 5
                PT 76 19 5
                PT 79 20 5
                PT 71 21 5
                PT 79 22 5
```

IF YOU WISH TO RUN LOGO ONLY ONCE IN A PROGRAM THEN REMOVE IT, YOU CAN AS FOLLOWS -> The ERASE COMMAND will work in a program. Be sure & debug your program before adding the ERASE statement & save it under ALL before running it after inserting the ERASE statement. Any other notes on LOGO will be appreciated & possibley published.

```
TO GAME
LOGO
ERASE LOGO
.........
.........REST OF GAME
.........
```

BBS NUMBERS: For all you stought hearted people who want to run your phone bill up here's some more numbers.

(713) 699-2073..... HUG-TIBBS something was mentioned about cartridge sucking.

(919) 851-8460..... Many original downloads ,24 hrs.,7 days aweek SysOps: Amnon Nissan & Randy Jones

(219) 854-4787..... INDIANA TIBBS

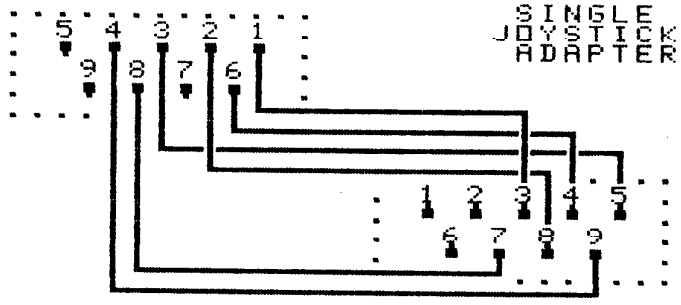
(602) 991-0144..... This BBS covers TI, COMMADORE, RADIO SHACK, IBM, APPLE, BASIC, PASCAL, CP/M, ATARI, and many more. It operates on 300/1200 baud, 11 meg, 36 bulletin boards, 600 + general files & downloads.

While on line to the HUG TIBBS we downloaded a large listing of TIBBS numbers as well as some other T.I. board numbers. We hope to have these available to the members very soon.

TI-99/4A JOYSTICK ADAPTER(SINGLE)
BY Bill Alcott

This is a "HOW-TO" article for those of you who are not satisfied with, or cannot get the original T.I. joysticks. It will allow you to use any of the "ATARI" compatible joysticks on the market with your T.I. computer. I have included both a single stick adapter (this month) and a dual stick adapter (next month's newsletter). The single is easier and cheaper to build, but limits you to single player games. Most single player games use joystick #1, but a few I have seen require the use of joystick #2. To build the single adapter, you must decide which joystick you want to use, or as an alternative, build one for joystick #1, AND one for joystick #2!

To build the single adapter, you will need the following: Fine tip soldering pencil, rosin core solder, wire cutters, wire strippers, two nine pin SUB-MINIATURE D Type connectors; one male and one female, and about 2 feet of stranded wire. Cut the wire into six equal parts,, then strip and tin the ends. Before you start soldering, look at the two different plugs and notice the tiny numbers next to each pin. The two pins are NOT numbered the same! The female, or the one that plugs into the console, is numbered one to five left to right, then 6 to 9 from left to right. The male plug is numbered from right to left. Once you have found the numbers, you are ready to start assembling your adapter. Following the listing shown below, solder one end of a wire into the correct pin on the male plug, then solder the other end of that wire into the corresponding pin on the female plug. repeat for all six wires. $NOTE: THE LAST WIRE IS SOLDERED INTO ONE OF TWO PINS ON THE FEMALE PLUG DEPENDING ON WHETHER YOU WANT JOYSTICK #1 OR JOYSTICK #2.



MALE PIN	FEMALE PIN
1	3
2	8
3	5
4	9
5	NOT USED
6	4
7	NOT USED
8	7 FOR JOYSTICK #1 2 FOR JOYSTICK #2
9	NOT USED

Once you have the wires soldered in place, check each connection for loose strands of wire, bits of solder between pins, and anything else that could affect the operation. When it looks good, plug it into your console, and plug your joystick into the other end. ENTER and RUN the following program to check the operation of your adapter. when you RUN this program, you should get two columns of zeros start up your screen. As you move your joystick, 4's and -4's will take the place of the zeros. If the up position on your joystick has no effect, check to make sure the ALPHA-LOCK button is up!

```
10 CALL CLEAR                    40 CALL JOYST(X,A,B)
20 REM MAKE X=JOYSTICK #         50 PRINT A;B
30 X=1                           60 GOTO 40
```

If you run into any problems with this adapter, see me at any meeting, or call me at home at 988-2537. Next month I'll print the schematic and instructions for making a dual adapter.NEXT MONTH A DUEL ADAPTER

OUR BBS

Those of you who attended the last meeting know the BBS is getting closer to going on line. The AAAD (auto answer auto dial) hardware is complete (& works !) What we lack is a system to dedicate to the board & a phone line. We currently have a stand alone system, but lack the 32K stand alone, so as soon as we get the 32K we'll be up & running.(The phone line is no problem)

$$$ IN THE BEGINNING $$$

BY MARK BECK

Programming a computer is like talking to a three year old child, you have to tell it everything to do, step by step. Unlike the child, the computer will do exactly what you tell it to do and remembers! Also computers don't cry or need diapers changed. But how does one talk to a computer? This is accomplished with a thing called BASIC, the subject of this article. If you have never gone beyond plugging in modules then this article is for you.

Before we get started, dig out the USERS REFERANCE GUIDE (you thought was packing material) and read pages II-2 through II-15. This is the area I will be covering. You can skip page II-14 for now because we will cover this later on.

The best place to start is to turn on your computer and select number one for **TI BASIC**. You will see the words **"TI BASIC READY"** pop up on the screen followed by a black box called a cursor. Whenever you see a cursor, the computer is waiting for you to input information. The computer is now in the immediate mode and there are 3 modes used; immediate, program, and edit. The immediate mode is entered when you turn on the computer or interrupt a running program. Entering the edit mode is accomplished by typing a line number and pressing **FCN 1** (down arrow) or by entering **EDIT "n"** where n equals any line number. Entering **RUN** will start a program and put the computer into the program mode if a program is loaded.

In order for the computer to run a program, all statements entered must be preceded by a line number. Line numbers can be any number from one to 32,767. That's quite a few lines! The computer will always start at the lowest line number when running a program. There are two ways you can enter line numbers, entering the numbers before each statement is one way or you can simply enter **NUM** and the line numbers will automatically appear each time you enter a statement.

At this point the computer knows nothing. You can prove this by typing **PRINT A** and then pressing **ENTER**. A zero will appear at the bottom of the screen because you haven't told it what **A** is equal to. Now enter **A=15** and then **PRINT A**. The number fifteen will now appear. The letter **A** is called a numeric variable because it represents a number and its value can vary. The number fifteen is called a numeric constant because fifteen will always equal fifteen. The same is true for letters. These are called string variables and constants. Lets try the same thing with strings. Enter **PRINT A$**. Nothing was printed because the computer still doesn't know what **A$** is equal to. Now enter **A$="Jack Brown"** and then enter **PRINT A$**. This time **Jack Brown** is printed. **A$** is called a string variable because it could represent anything and **"Jack Brown"** is a sting constant because **"Jack Brown"** will always be **"Jack Brown"**. Catching on yet? This may sound a little elementary but it is essential to programming. Both string and numeric variables are limited to fifteen characters in length maximum.

Are you ready to get your feet wet? Lets try a short program using the information covered. First type **NUM** and then press enter. The line number 100 will appear and the cursor will be flashing waiting for data to be entered. Now type in the following program.

```
100 A=33          130 A$="The answer is"
110 B=3           140 PRINT A$;C
120 C=A+B
```

What do you think will be printed on the screen? Press enter after line #150 appears to get out of the NUM mode. Now type **RUN** and find out. If you entered it properly, the sentence **"The answer is 36"** will appear at the bottom of the screen. Notice the word **## DONE ##**. This is telling you that the computer has completed the program.

Like I stated before, the computer will start at line 100 and go wherever you tell it. In this example the program ends after line 140. This straight line method of programming is ok for very small programs, but in large programs this style would waste a tremendous amount of memory. We will talk about programming style in later articles.

Try changing the variables around to get different results. If you feel daring, enter **110 B=B+1** and then enter **150 GOTO 100**. This time the program won't terminate because we sent it back to line 100. Also the variable **B** will be incremented by one every time the computer passes. To break the program press **FCTN 4**. To become familiar with this concept try changing the program around. You don't have to worry about damaging your computer by entering the wrong statements. The worst that will happen is the program will stop with an error message. No explosions, I promise.

You're probably thinking "How is this little program going to help me?" or "Who needs to learn this stuff?". If you recall in first grade, the teacher did not bring in Einsteins Theory of Relativity for reading material. The point is, you have to start somewhere. The best way to learn programming is first read the material, enter the example programs and then experiment by changing them around.

I hope you learned that computers don't byte(sorry, had to do that). To prepare yourself for the next lesson, read pages II-17 to II-43 (THAT'S THE USERS REFERANCE GUIDE, REMEMBER ?). Good luck.

LITTLE BYTES

By
Gene Thomas

We have all noticed and talked about a programs initialazation time. There are actually two time periods of interest here.

1. The period of time between typing RUN and the actual running of the program.
2. After the program begins to RUN, the period of time that it takes to initialize variables, and fill arrays.

The first period is the time that your computer takes to pre-scan the program. During this time it sets aside space for variables, and prepares for subprogram calls. In doing so every entry of every line is scanned. If the program is long this action will take quite some time. Here is how you can cut the prescan down to just a couple of seconds, no maatter how long the program is. !@p- is a group of symbols that instruct the TI/994A to stop pre-scanning.

HOW TO USE !@P-

All variables and calls to subprograms must be pre-scanned, or the program will not function. Look at these lines:

```
100 REM PRESCAN EXAMPLE
110 GOTO 140::CALL SOUND::CALL CLEAR::CALL KEY
CALL HCHAR::CALL SPRITE::CALL MOTION
120 GOTO 140::I,J,K,S,N=0::A$,F$,P$,C$
130 !@P- :: PRE-SCAN STOPS HERE
140 CALL CLEAR::PRINT "PROGRAM STARTS HERE"
```

During the pre-scan the computer will establish the necessary relationships that is has with the variables and subprograms it has prescanned. After pre-scanning, as you can see it will jump streight to line 140 before beginning to execute any of the program. Even if th program contains hundreds of lines of programming the prescan will only consume the time necessary to scan 4 lines! But be cautioned - if you leave out any variables, or subprogram calls the program will stop with an error. The two errors that you get are SUBPROGRAM NOT FOUND IN LINE ###, and SYNTAX ERROR IN LINE ###.

How much time can be saved? I have one which uses about 13,000 bytes of RAM, and which begins to RUN in about 2-3 seconds!

Notice that the variables and subprogram names mentioned after the GOTO 140 do not have to be syntatically correct. Also, you MUST include within the pre-scann DIM statements, OPTIONS base statement, the first DATA line, and all SUB and SUBEND statements. One way of getting the latter two in is to put !@P+ before your first DATA line to restart the pre-scanning process. Make your DATA lines the last lines in the program, or if you have USER written SUBPROGRAMS just before them. Your computer will pre-scan your first few lines - stop - and start again at the DATA lines or SUBPROGRAMS, leaving out the bulk of the programming lines.
BYE

THE WORKS OF TI MULTIPLAN

by Tim Schultz

TI Multiplan is a very large and complex spreadsheet program written by MICROSOFT for TI. Hopefully this article will help explain or unlock some of the mysteries of this program.

First, TI has released a updated version of Multiplan. Take the diskette you received with Multiplan to the next users group meeting and have your diskette updated so you have all the changes. The biggest change in the program I see is in the FCTN UP, DOWN, LEFT OR RIGHT keys. In the old program you would have to release the keys then depress them again to continue scrolling the screen. Now you just hold the keys down and the screen keeps scrolling until you release them. Be sure you make a backup diskette of the original program just for safety's sake. You must have the 32K card and at least 1 disk drive for the program to operate.

With the Multiplan cartrige in the GROM port and the diskette in drive 1 let's get into the program itself. Before you press "enter" to load the program from diskette, you have the option of screen colors by pressing the space bar. My choice is the colors they bring up, white against blue. Press "enter" and load the program into memory.

A spread sheet will appear and in the lower right hand corner of the screen you will see 100% TEMP. When you create your own spread sheets your file name will replace TEMP. The 100% is how much memory is still free. If you create a spread sheet that

takes up 60% or more of memory, only leaving 40% or less for your entries, you need to stop and regroup; your spread sheet is too large and you'll run out of memory when you make your entries. If you are using 2 disk drives, keep the Multiplan diskette in drive 1 and insert your diskette for your files in drive 2. Press "T" for Transfer then "O" for Options. Now Control Tab or Control 2 to move to setup. Now enter "DSK2" and press "enter". Now the spread sheets you create and save will be saved on DSK2. Everytime you begin working on Multiplan you must do this if you are using 2 drives. You only have to do this one time as long as you don't leave Multiplan. If you leave Multiplan and then return to it you must redo this sequence to load or save from drive 2. If you are using 1 drive, after loading the program, remove the Multiplan diskette and insert your files diskette. Now the bottom of the screen should have all your commands with a large cursor on ALPHA. You can select any of these commands by moving the cursor by tapping the space bar and pressing "enter" when the cursor is on the command you wish, or by pressing the first letter of the command you want. EXAMPLE, to transfer a file you can press "T" for transfer or move the cursor right, by spacing right, to Transfer and then press "enter" when the cursor in over Transfer. This is true for all commands, even the sub commands within the main commands. Press "O" for OPTIONS. You will see reclac (yes no). Hit the space bar once to put the cursor on no and press "enter". This turns the auto reclac off so that after you enter somethi into a cell it won't recalc after every entry, it will recalc the entire spread sheet before it saves it. Now you should have a cursor in the upper left hand corner of the s this position is called the HOME position and a cursor over the word ALPHA. Press "A" for ALPHA to insert letters, or "V" for VALUE to insert a number or formula in the position the upper cursor is located. I use the first row for titles for my columns going across the page. After you enter a title for row 1 column 1 press "enter" or FCTN right to move to row 1 column 2. Now type the title for this position and continue to the right until you have all your titles in their proper positions. Now to get

back to row 2 column 1 press "G" for GOTO. Three names appear, NAME, ROW & COLUMN. Since we have not named any cells yet, we must go to a row and column number. Press "R" for ROW, type 2 to goto row 2, CTRL TAB to get to "column" and type 1 to goto column 1. Now press "enter" and the upper cursor will be at row 2 column 1. Lets save the spread sheet before going on, press "T" for TRANSFER and then press "S" for SAVE. Now type in the name you want to give your spread sheet and press "enter". By returning the cursor to row 2 column 1 it will reappear that way when you load your file the next time you want to work on it.

Multiplan works well once you learn how the program works. To us, it is a great asset not to have to balance the books every month, just let Multiplan do it. More on entering values and formulas next month.

JACKSONVILLE TI99/4A USER GROUP
P.O. BOX 525
JACKSONVILLE, AR. 72076

***** Membership Application *****

Name :_____

Address :_____

City :_____

State :_____

Telephone No.:_____

Occupation :_____

Please fill in the appropiate information on the attached membership survey. Meetings are conducted during the 2nd and 4th Sunday of each month unless notified of a schedule change. We start the business meeting at 1:30 and have program demonstrations, programming technics, hardware problem/solution discussions, and many other interesting computer related seminars. The J.U.G. library, containing 500 - 600 programs, is free to members only. Future plans include a club bulletin board to be on line by February 1985 and the goal is to automate the J.U.G. via modem. The BBS program has been tested and runs fine. An auto answer/dial device is under construction and is to be tested soon. New news is obtained through newsletters from other user groups, National 99er User Group Association, The Source, and local members. We are in contact with the world of TI99er's!

If you have the time, we need your ideas, problems, support, help, understanding, talents, etc..
You are the one who keeps the TI99/4A alive, we are just the organizers. Join up and enjoy the world of computing on YOUR TI99/4A!!!! Annual dues are $20.00.

KENNETH E. GILBERT
President Jacksonville TI99/4A User Group