

# CALL SOUNDS

The Newsletter of  
The CENTRAL WESTCHESTER 99'ERS

OCTOBER 1986



## ANNOUNCEMENTS

**Next Meetings:** will be held on Thursday, Oct. 16th, at St. Joseph's Rectory, 15 Cedar Street, Bronxville, N.Y. The meeting will be called to order at 8 pm sharp.

**PROGRAM** for the OCTOBER meeting: After a **SHORT** business session, we will have a Q & A session followed by the second part of our series on Multiplan. Speakers will be Carney Mims and Ted Mills.

**EB-SIG** the Extended Basic Special interest group will meet Monday Oct 6th 8:pm at the home of Charlie Willoughby.

**TELECOM-SIG** will meet Thursday October 9th, 8 pm at the home of Carney Mims. We will download RLE graphics from CIS.

**DUES:** If your label has a red circle on it, this is the last issue of Call Sounds you will receive unless your dues are paid up to date by the end of October. Mail \$6 to Art Byers at the address on the label page.

**FREE DISK SOFTWARE:** It has been about 3 years since we handed out any games as free software. So Bob Sweeney will put together a disk of some of the better ones.

### From the September Meetings:

Show and Tells were the Turbo Console (with 32k on the 16 bit data bus inside the console), and the \$90.00 printer and PFD advertised in Micropendium.

The Question and Answer period was mostly taken up with the difference between copying a disk file by file, bit map, sector copy and track copy. Some of the problems of multiple fracture of files was graphically explained by Ted Mills who lost vital data (on his company's computer) because of excessive file fractures.

**Business:** We discussed **REDUCING DUES** - it was decided to postpone this until December. Any new dues arrangement voted at that time will start with January 1st.

### ON THE CLUB CORK BOARD

Posted on the Cork Board were the following: A Notice of the Chicago TI FAIR Nov 1st, Brett Kroft's repairs and special hardware modifications, A pocket with copies of Tiger Cub #38, Notice for TICOFF'87.

Please remember, if you have anything for sale you can put it on a 3 x 5 card and post it at meetings.

## IN THIS ISSUE

Page 2. We continue with the second part of Tom Kennedy's Multi Plan tutorial (d/l from Compuserve) which ties in with this month's meeting program which is the second part of our series on Multi Plan. We wonder how many of you have realized that when you work with a spreadsheet such as Lotus or Multiplan you are really working with a programming language!!!???

Page 4, Part 9 of our ten part Assembly language tutorial sent to us by Steve Royce of the WNY 99'ers. One more lesson to go.

Page 5, Part 2 of a **brief** 3-part series on user written CALL SUBprograms in Extended BASIC.

Page #6, Some questions and answers about printers, - which we hope will be helpful.

Page #7, by guest columnist, Ino Itall. - The start of a series of articles called **COMMON SENSE** (to steal a title from a famous author). This is part 1 of 2 about taking care of your console. Next month will see a more lengthy (with diagrams) portion on disassembling and cleaning modules, the console, and the right angle adaptor - also keyboard replacement. If you ask really nicely, We will include the part about reassembly!! This will most likely be one of our special, removeable, inserts.

Page 8. **The View From Milan** (Italy) by the well known programmer, Paolo Bagnaresco. An overview of the 99/4A in Italy with comments on England, France, Germany and Greece.!

Page 9, Some miscellany and a cartoon which the editor thinks is just great. Those not familiar with disk files won't get it at all.

**BACK COVER:** If you've wondered why the TELECOM SIG is excited about the graphics capability of this computer, take a peek at what's back there! One picture is worth a thousand words.

**STOP THE PRESSES! EDITOR IS  
OFF TO THE CHICAGO TI FAIR!**

November Call sounds may well be delayed as the editor is off to the Chicago TI FAIR (plans as of October 1st) and will stop the presses for his show report

**MICROSOFT MULTIPLAN(tm) Part 2**

by Tom Kennedy CIS#74176,774

Now that you know how everything will look, begin by formatting the cells. Upon start-up, the cells are set with a number of defaults. You may want to change the widths of some columns, to between 3 and 32 columns, to show all of the entry for the cells. If the data in a cell is too large to fit the width of the cell, it will be truncated to fit, unless it is a numerical entry, where it will be replaced by a string of "#"'s.

FORMAT CELLS is used to set cell alignment and display format. A cell can be aligned to either center text for columnar headers, etc., or to align data displayed in tables. For instance, a table of dollar values could be shown with a "\$" in front and decimal points aligned.

The display formats are used to show how the data appears in a cell. CONTinuous allows the text in a cell to run over the right boundary to the next cell. If all cells are made continuous, you have a word processor-type format. EXP displays numbers in scientific notation. Fixed Point rounds off decimals to a defined number. GENeral is as you see when starting up, values displayed as entered. INTeger rounds off all numbers to integers. "\$" (Dollar) adds a dollar sign to numbers and rounds to two decimals. "\*" Replaces the number with an equivalent number of asterisks, to use like a bar graph. "%" displays the number in percent form. Lastly, the "-" just leaves the setting at the previous option.

Now that the cell formats are defined, it's time to start entering data. Begin by labeling your rows and columns, as necessary. To enter data, either text or values, move the cursor to the desired cell and hit either "A" or "V", depending on the type. The command line will disappear and you'll be prompted for either text or value. Type in your entry and hit enter either <ENTER> to return to the command line, or use the appropriate FCTN-ARROW key to move to the next cell. With the FCTN key, when you land on the next cell, you are prompted only for text/value entry. In this case, you do not hit A or V to declare type, but when you begin entering data, Multiplan decides what style the data is, and responds accordingly. The only disadvantage is that there's a slight delay between the first character of your entry and the remainder, so if you type in, for instance, the word "TOTALS" too quickly, all you'll see in the cell is "TTOLS". After a bit of use, a "stutter" habit is developed in how you enter data, so this becomes less apparent. When entering data, if an error is made, do not use the FCTN-S key to backspace for correction (as programmers are used to), the backspace key is CTRL-H (as telecommunication folks are used to).

If, after creating part of a worksheet, you need to add or delete rows or columns, three commands apply. DELETE completely removes any number of rows or columns. BLANK just removes the data in the cells, the row/columns remain and retain their formats. INSERT creates a new row or column set to the default settings.

Formulas are used to perform a mathematical computation upon the data in a cell or group of cells. One example is in a sales order form, where you have a column of data that is totaled at the bottom, multiplied by a tax percentage, and the tax added to the result. The cell in which the sub-total is to appear would contain a formula describing a sum of the data in the columns, expressed as either a chain addition problem, (R3C5+R4C5+...+R10C5) or using the SUM() function and a range of cells. (SUM(R3C5:R10C5)). The formulas can become quite complex, depending on the work performed. Appendix C contains a list of the mathematical functions that can be used in building formulas.

Formulas can also consist of names of cells as the operand, as in "SUBTOTAL x .079", to calculate the entry for a cell named TAX. Names are assigned with the name command. Names can be any continuous string of alphanumeric characters, but must begin with a letter. Simply place the cursor over the cell to name and press N. Type in the desired name to the response field, and TAB to the next field. The current cell will be shown as the proposed response. If a range of cells is desired, hit the FCTN key, at the cell response, to move the cursor from the current location to the end point, then hit <ENTER>. In this manner, a whole row or column can be named. Names can also be used in the GOTO command to aid in moving quickly to a location. "GOTO TOTALS" for example.

Windows allow you to view more than one area of your worksheet at one time. You can split a row or column of titles to form a window over the data, so as the cursor is moved throughout the worksheet, the headers remain in place to see what data is shown. Also, separate worksheets can be developed in one and divided into windows so all can be seen at once. After selecting the window command, four options are shown. SPLIT is what opens the windows, either horizontally, vertically, or at preset titles. LINKing lwn or more windows scrolls them together as you move through the worksheet. BORDER is used to put a border of any character surrounding the windows, to make them easier to read. A window is cancelled with the CLOSE option.

Once you have finally created the worksheet, and all the data has been entered, what do you do with it? In a sense, the end product is the worksheet, because you may refer to it constantly as new data is applied, and a printed copy might become outdated quickly. After all, that's part of the reason you are working on an Electronic Spreadsheet in the first place, the instant and easy update of information.

In some cases though, a printout is desired, either in the form of a disk file that can be incorporated into a document on a word processor, or a hard-copy printout for reference. The printer command has four options used in printing the worksheet. FILE prints the worksheet to disk in display variable 80 format, which can be loaded into a word processor. Before printing a hard copy, you must first set margins and print options. The MARGINS option sets the limits of rows and columns in the printout, along with indentations and paginations. OPTIONS defines the portion of the worksheet to be printed, using a range of cells. The

set-up field contains the device name of your printer. The last two fields let you print the formulas "hidden" in cells, and whether or not to print the row/column numbers. After margins and options are defined, select the PRINTER option to begin the print-out. If the width of the worksheet exceeds the width of your printer carriage, the left half will be printed entirely, then the right half below that, so the two can be cut-&-pasted together.

In some cases, you may be working on a number of worksheets that are related to each other, such as in a business with SALES/PAYROLL/INVENTORY spreadsheets. These separate files can be linked together so data can be drawn from, as an example, the INVENTORY file to be used in the SALES worksheet and information from SALES could be used in PAYROLL.

The EXTERNAL command, (press "X" at command line) is used to COPY data from an inactive sheet into the active one. You are prompted for the filename of the source sheet, the name (or R/C reference) of the source cell, the destination cell of the data, and the LINK option. If LINK is selected, then the two sheets will become linked so that when the destination sheet is loaded, the source sheet will automatically be used to supply data where needed. The LIST option displays the names of all sheets supporting the active sheet. The USE option allows you to switch which inactive sheets will support the active sheet, so long as they are in the same format. As an example, the SALES sheet would call upon different INVENTORY sheets for each month, all created in the same format, with different data.

Multiplan is one of the most powerful tools to be used on any computer. It's versatility allows it to be used in many different applications. Word Processing, record keeping, budget/accounting, etc. Any application that requires storing data in a tabular format. The instant update of information and the advanced mathematics capability can be used in a variety of ways.

Versatility is the main attraction of the many spreadsheet programs used on various machines, and in fact, Multiplan can even use files stored in VISICALC(tm) format. VISICALC, one of the "first" major spreadsheets, is similar to Multiplan in many ways: the screen display; cursor positioning; error correction; and entering data and formulas. The referencing of cells is more detailed with Multiplan, including the ability to name cells for ease of use. It has been shown that Multiplan can be easier to pick up and use for the person not familiar to spreadsheets, although once the concepts are mastered, the usage is similar in all. With a familiar knowledge of a program like Multiplan, you could do away with a word processor, a database manager, or even a pocket calculator, although each has it's specific advantages.

I have tried to cover the basics of getting started in working with spreadsheets, but I have still only scratched the surface of the wealth of information within the manual supplied with Multiplan. A walk-thru in the first half provides a very good introduction, and the second half

documents each command and function in detail. There also a number of good books available on Multiplan, and the software is the same on nearly every machine.

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APPENDIX A COMMANDS

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ALPHA	NAME
BLANK	OPTIONS
COPY	PRINT
COPY DOWN	PRINT FILE
COPY FROM	PRINT MARGINS
COPY RIGHT	PRINT OPTIONS
DELETE	PRINT PRINTER
DELETE COLUMN	QUIT
DELETE ROW	SORT
EDIT	TRANSFER
FORMAT	TRANSFER CLEAR
FORMAT CELLS	TRANSFER DELETE
FORMAT DEFAULT	TRANSFER LOAD
FORMAT DEFAULT CELLS	TRANSFER OPTIONS
FORMAT DEFAULT WIDTH	TRANSFER RENAME
FORMAT OPTIONS	TRANSFER AVE
FORMAT WIDTH	VALUE
GOTO	WINDOW
GOTO NAME	WINDOW BORDER
GOTO ROW-COL	WINDOW CLOSE
GOTO WINDOW	WINDOW LINK
HELP	WINDOW SPLIT
INSERT	WINDOW SPLIT
INSERT COLUMN	HORIZONTAL
INSERT ROW	WINDOW SPLIT
	TITLES
	WINDOW SPLIT
	VERTICAL
LOCK	EXTERNAL
LOCK CELLS	EXTERNAL COPY
LOCK FORMULAS	EXTERNAL LIST
MOVE	EXTERNAL USE
MOVE COLUMN	
MOVE ROW	

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APPENDIX B KEY FUNCTIONS

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FCTN-E	
FCTN-X	CURSOR
FCTN-S	SCROLL
FCTN-D	
CTRL-E	
CTRL-X	PAGE
CTRL-S	SCROLL
CTRL-D	

CTRL-W (CTRL-6) NEXT WINDOW  
 CTRL-3 (CTRL-F) NEXT UNLOCKED CELL  
 CTRL-I (CTRL-Q) HOME  
 CTRL-Z (FCTN-1) LOWER RIGHT

<SPACE> MENU RESPONSE TAB  
 FCTN-9 (CTRL-H) BACKSPACE  
 CTRL-A (CTRL-2, TAB  
 CTRL-1)  
 CTRL-C (CTRL-=) CANCEL  
 FCTN-4 PRINT CANCEL  
 <ENTER> ENTER RESPONSE  
 FCTN-1 (FCTN-7) HELP  
 FCTN-8 RECALC  
 -, +, 0-9 VALUE RESPONSE

FCTN-9 (CTRL-H) BACKSPACE  
 FCTN-0 (CTRL-Y) CHARACTER DELETE  
 CTRL-4 (CTRL-L) CHARACTER FORWARD  
 FCTN-4 (CTRL-K) CHARACTER BACK  
 CTRL-5 (CTRL-P) WORD FORWARD  
 FCTN-5 (CTRL-D) WORD BACK  
 CTRL-7 REFERENCE

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 APPENDIX C MATHEMATICAL FUNCTIONS  
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ABS	MAX
AND	MID
ATAN	MIN
AVERAGE	MOD
COLUMN	NA
COS	NOT
COUNT	NPV
DOLLAR	OR
EXP	PI
FALSE	REPT
FIXED	ROUND
IF	ROW
INDEX	SIGN
INT	SIN
ISERROR	SQRT
ISNA	STDEV
LEN	SUM
LN	TAN
LOG10	TRUE
LOOKUP	VALUE

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**TIPS FROM THE TIGERCUB** are now distributed only at meetings. We do this as most of the clubs with whom we exchange n/l's already get this directly. Just printing enough for our own members saves us some money. It is also a "perk" for regular meeting attendance.

TMS9900 ASSEMBLY LANGUAGE TUTORIAL PART 9  
 Courtesy of Steve Royce, WNY 99'ers

A DSRLNK FOR EXTENDED BASIC AUTHORED BY JOHN CLULOW

Device Service Routine Link by Texas Instruments, Modified by John Clulow, 1982

Because Extended BASIC utilities don't include a DSRLNK, such a utility must be provided separately for Ext BASIC routines which access, for instance, RS232 I/O. The routine shown below was produced, in part, from a source pgs supplied by Texas Instruments and in part from a consideration of the DSRLNK utility in the Mini Memory Mod.

IF the DSRLNK object code is loaded in the Ext BASIC program IMMEDIATELY after the CALL INIT statement, then the assembly program utilizing DSRLNK should use the equate DSRLNK EQU %2532

DEF DSRLNK	CB R1,%DECIMAL
SCLEN EQU %B354	JNE LNK\$LP
SCNAME EQU %B356	LNK\$LN MOV R4,R4
CRULST EQU %B3D0	JEQ LNKERR
SADDR EQU %B3D2	CI R4,7
BPLWS EQU %B3E0	JGT LNKERR
VSR EQU %2028	CLR %CRULST
FLGPTR DATA 0	MOV R4,%SCLEN
SVGPRT DATA 0	MOV R4,%SAVLEN
SAVCRU DATA 0	INC R4
SAVENT DATA 0	A R4,%SCNAME
SAVLEN DATA 0	MOV %SCNAME,%SAVPAB
SAVPAB DATA 0	SROM LWPI 6PLWS
SAVVER DATA 0	CLR R1
NAMBUF DATA 0,0,0,0,0	LI R12,%0F00
DLNKWS DATA 0,0,0,0,0	NDRDM MOV R12,R12
TYPE DATA 0,0,0,0,0,0,0,0,0,0	JEQ NDOFF
C100 DATA 100	SBZ 0
H20 EQU %	NDOFF AI R12,%0100
H2000 DATA %2000	CLR %CRULST
DECNAL TEXT '.'	CI R12,%2000
HAA BYTE %AA	JEQ NODSR
DSRLNK DATA DLNKWS,DLENT	MOV R12,%CRULST
DLENT MOV %R14+,R5	SBO 0
SZCB %H20,R15	LI R2,%4000
MOV %SCNAME,R0	CB %R2,%HAA
MOV R0,R9	JNE NDRDM
AI R9,-8	A %TYPE,R2
BLWP %VSR	JMP %S02
MOVB R1,R3	SG0 MOV %SADDR,R2
SRL R3,8	SBO 0
SET0 R4	SG02 MOV %R2,R2
LI R2,NAMBUF	JEQ NDRDM
LNK\$LP INC R0	MOV R2,%SADDR
INC R4	INCT R2
C R4,R3	MOV %R2+,R9
JEQ LNK\$LN	MOVB %SCLEN+1,R5
BLWP %VSR	JEQ NAME2
MOVB R1,%R2+	CB R5,%R2+

**USER WRITTEN CALL SUBPROGRAMS**

Part 2: Utilities, By Art Byers  
with thanks to Jim Peterson!

**In Review:** In part 1. we looked at the same XB program written two different ways. The first was using GOSUB and the second was using our own CALL SUBS.

It was obvious that a program strewn copiously with GOSUBs was exceptionally difficult to follow and understand while a program that used only user-written CALL SUBs was easy to understand.

To increase clarity, it is best to use **meaningfull names** for the CALL SUBs. CALL CHOOSE1-B(C) is clear. CALL CH(C) could call the same subprogram but would be as meaningless as "GOSUB 2140". Of course, in the event of a very long program where you may need to squeeze out bytes for arrays or programming, you can shorten the names trading off some clarity for extra useable bytes.

I divide my own CALL SUBPROGRAMS into at least three types:

#1 is general utilities used over and over in most programs. These are saved as high number MERGE programs and can be added to any program I write in XB. These can include programs to sound an error tone, a fancy kaleidoscopic screen wipe, etc.

#2 is a category of programs that do something, such as math calculations and return a value to the main program.

#3 are CALL LINK's to assembly routines such as a screen dump or Sort of large amounts of data where the machine language speeds program operation in a very material manner.

This article will cover reusable utilities. Again, I highly recommend the purchase of one of TIGERCUB - Jim Peterson's Nuts & Bolts disks for over 100 prewritten useful CALL SUBs that will save you hours of typing when you are programming.

One of the first important steps is to number your reuseable CALL SUBs, not only with high numbers, but also consecutively so that you can MERGE several of them into your programs without overwriting each other. Here are a some of my most often used, in 28 col. listing

```
20000 SUB ANYKEY
20002 DISPLAY AT(24,1):"<<Pre
55 any key to continue>>"
20004 CALL KCY(0,K,S) :: IF S
=0 THEN 20004
20006 SUBEND

20008 SUB HONK
20010 CALL SOUND(300,-3,3)
20012 SUB END

20014 SUB WAIT(D)
20016 FOR W=1 TO D :: NEXT W
20018 SUBEND
```

These, plus a few more I find universally useful are saved in MERGE form as a single unit and put into almost every XB program I write. They are so simple, they do not need detailed explanation. They are called with CALL ANYKEY, CALL HONK, and CALL WAIT(value) - with the length of the delay or wait entered in the ( ). A short wait would be 300. A long wait 1000 or more.

Here are a few important things to remember: The CALL SUBS must be after the END statement and nothing can be between the END statement and the call subs- that is, no GOSUBs or program lines. I also suggest putting DATA statements (if used in a CALL SUB) inside the CALL SUB with a RESTORE pointer to the line number so that each CALL SUB can stand on its own and be MERGED into other programs.

Part 3 will cover transferring values to and from CALL SUBS.

**DSRLNK - CONTINUED FROM PAGE #4**

JNE S60	SDZ 0
SRL R5,B	LWPI DLNKWS
LI R6,NANBUF	MOV R9,R0
NAME1 CB #R6+,#R2	BLWP @VSBR
JNE S60	SRL R1,13
DEC R5	JNE IOERR
JNE NAME1	RTWP
NAME2 INC R1	NODSR LWPI DLNKWS
MOV R1,@SAVVER	LNKERR CLR R1
MOV R9,@SAVENT	IOERR SWPB R1
MOV R12,@SAVCRU	MOVB R1,#R13
BL #R9	SOCB @H20,R15
JMP S60	RTWP
	END

Next month will complete the ten part assembly tutorial, mostly written by **Steve Royce** of the WNY 99'ers. All ten lessons are available on disk. All you have to do is ask!!!.

**SHOPPING GUIDE**

The new **TENEX** and **TRITON** catalogs have arrived -Plus the latest **Micropendium**. The prices quoted below represent the lowest comparison price found after careful study:

TENEX - page 37, a 64K printer buffer, works with any computer and standard parallel printer \$59.95 plus shipping. Page 29, the CorComp Load interrupt switch, \$11.95

TRITON - Page 4, Extended Basic \$29.95, page 17, either TI Writer or MultiPlan for \$29.95, page 18 Speech Synthesizer \$29.95.

TEXCOMP (from August Micropendium page #31) for those still operating only with a console, A dot Matrix Printer completewith Axiom PIO interface (with daisy chain) and cable \$89.95. Guest Art Lewis brought this to the last meeting. It is a great value, the PIO interface alone sells for \$59.95.

**THE 99/4A ANSWER MAN** by AJB.

re: Printers and wordprocessors etc.

**Q.** I have two printers - a daisy wheel and a dot matrix. BOTH are parallel interface. How can I hook them up to my 99/4A. My RS232 card only has one PIO?

**A.** Buy a second RS/232 card. TI used to modify the second card for you so that the computer recognizes it as PIO/2, RS232/3 and RS232/4. Calling their Tech help line will get you the mod, it is very simple (so I've been told moving one resistor lead and one wire). Cor Comp also has a mod for their card that does the same. If those two do, MYARC must also. Phone the manufacturer first and see if they will do the mod, even if for a fee, as your own modification, even at their instruction, probably voids the warranty on a new card. An alternate is to buy (or build) one of those switching boxes advertised in computer shopper that connects two printers to one PIO port.

**Q.** I have an IBM PC at work and a TI-99/4A at home. Both are used mainly for word processing. Is there any way to transfer text from one to the other? I have tried booting disks from one on the other and it does not work!

**A.** If you have a modem for each machine, and terminal emulator software such as PC TALK for the IBM and 4/A TALK or FAST-TERM for the 99/4A, you can use the capture buffer method and send from office to home and vice-versa. The text file can then be loaded into the word processor for each machine. If there is no one at home (or at the office) when you are not there, you can join a service such as Comuserve. They give you a 128K storage space free. When you are at home, load your text file into your CIS storage and unload it at the office when you get there. You can even carry your modem in your briefcase, if you have the proper cables, and use one modem for both computers.

**Q.** One of the only real faults of the 99/4A is the 28/40 column screen. Is there a way that I can have an 80 column screen on the 99/4A without buying major hardware?

**A.** That depends on what you call "major". Mechatronics of Germany is supposedly just about ready to market an 80 col. card for the 99/4A PEB. It would require a good hi/res monitor. My guess that total in bucks would be around \$300 - \$350. If that is major to you, the answer is "NO" as the new MYARC computer on a card will sell for \$500 plus a hi-res monitor. The only alternative is that TI-FORTH supports a 64 column editor. (BUT as far as I know, there is no word processor available either as fairware or commercially that is written in TI FORTH). When you consider that no one writes a business letter from edge to edge on a letterhead. Usually the left and right margins are 8 or 10 each, 64 columns would do nicely. HOWEVER, on the low res tv's we use as monitors, the 64 col. screen is hard to read. Another alternative that will work with TI-WRITER is to buy a used dumb terminal, they sometimes sell as low as \$100., and connect it to the 99/4A via one of the RS232 ports. then "print" your text to that port and it

will appear on the 80 col. terminal screen. That is not all roses either as if you have more than one screen of text, you must put a new page char in every 24 lines and set up the formatter to stop after each page. Next you must remember to remove those "new pages" before you run out to your printer!

**Q.** (1) When using the TI-Writer Formatter: I press fctn/4 to abort. I get an interrupt message on the screen but the printer keeps on printing for a short while. Why?

**A.** All printers have a built-in storage buffer. Less expensive ones usually enough for just a line or two, and the printer keeps on going until the buffer is clear. Some of the new better quality printers have a 5k or 8k buffer which will hold several pages of text. To abort and clear the buffer on these printers, you have to lugge the printer off line by pressing the on line button and press the buffer clear button (if there is one) or turn the printer off/on to clear the buffer. Special print buffers that connect between your computer and your printer are available starting as low as \$80 for 64k to \$250 for 256k. They will free up your computer for other tasks while your formatted document is printing page after page from the special buffer. -much like your printer kept on going after tried to abort. Most of the new RAM disk cards come with software that enables a sizeable part of their 512k to be used as a printer buffer.

**Q.** Is it possible and practical to hook two or more computers up to the same printer?

**A.** Yes, of course. In the case of home computers a special interface is sold, commercially, just for this purpose. You plug two parallel cables (one from each of two computers) into it and another cable goes to the printer. This is strictly a mechanical device with a switch that selects which computer will have access to the pinter. For networking a few or many computers and/or terminals to one master printer, a much more sophisticated very expensive electronic device is needed to avoid letting a terminal or PC interfere with a print job already in progress, store the text, and print it in its proper sequence. Let's just say there is more cost involved here than you would want to invest in a home computer system.

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**CLUB OFFICERS 1986/87**

**Carney W. Nims** - President 914-961-5993

**Al Trudeau** - VP/Programs 914-592-2080

**Charles Willoughby** -Secretary 914-323-6019

**Art Byers** -Treasurer 914-528-5402

**COMMITTEES**

**Ed Bornemann** - Hospitality

**Robert Amenta** - Lending Library

**Robert J. Sweeney** - Disk Librarian 914-961-8024

**Art Byers** - Newsletter

**Pat Leigh** - Equipment

**Al Trudeau** -XB Special Interest Group

**Carney Nims** - Telecommunication SIG

Editor's Note: CALL SOUNDS is most fortunate to have among its regular contributors the famous Italian computer expert, Mr. Ino Itall. Among his memorable articles of the past are: "Is the Comodore 64 a better canoe paddle than the Atari 130" and "Is it true Gary Kaplan is really a Martian?". The follow contribution is of a more practical vein.

**COMMON SENSE PART 1. The CARE and FEEDING of the 99/4A**  
or I have met my enemies and they  
are keyboard bounce and lockup!  
by Ino Itall

**Subheading 1.:** Smoke gets in my eyes, or Cooking bacon in the computer room is a No No!

**Why?!!** Because greasy, oily smoke insidiously deposits itself on every vital part of your beloved 99/4A computer, including the keyboard contacts and the module port lands. Once there, no way to remove it exists except to place your console in the washing machine with half a cup of Tide detergent. As you may surmise, the cure is far worse than the disease in that event. "AHA!", you may say, "I do not cook bacon in my computer room, what is this nutty Italian talking about?" To Which Ino answers "BUT you do smoke, and that is just as bad, if not worse!!"

Tobacco Smoke actually deposits some ash along with an oily brown residue. While it is possible to remove this from module and module receptical lands, the keyboard bounce resulting from such deposits on key contacts means a complete new keyboard is the only "fix". (See the part entitled "TAKING THE CONSOLE APART - or - Why can't I find the screw that dropped on to the floor and rolled under the radiator?").

**Subheading 2.:** "My days and nights in the Kansas Dust Bowl - or - Close the door, Mom, they're coming through the windows."

Dust, while eventually deleterious to the console, is unavoidable. Its effects can be delayed by always using a **DUST COVER** on the console when not in use, but sooner or later it must be removed. There are two good ways. The first is preventive maintenance. Buy either a set of soft bristle artist brushes or cosmetic brushes, and regularly remove dust from between the keys, and generally keep the console clean. The second is to blow the dust out with a jet of compressed air. First try this without disassembling the Console, if that does not work, more drastic measures are required. (See the part entitled "TAKING THE CONSOLE APART - or what to do with parts and screws left over after reassembly!").

"Compressed Air??" you may ask. "where do I get compressed air??" The answer is many and several places: The exhaust port of the household vacuum cleaner is one, and that air is filtered. Some good old Italian (What! you thought I was going to say American?) ingenuity can fit a cheap aluminum funnel onto the end of the hose and you have a great dust ejector. Another is to buy a lever/piston type

oil can, and just do not put any oil in it. That gives a nice needle shaped air jet ideal for delicate places. A last resort is lungs and puckered mouth! POODF!"

**Subheading 3.:** Coffee, Cocoa, Coca Cola, Chocolate Chip Cookies, Pizza Pie and Pasta - or Krumbz in the Kon-sole.

Computer keyboards and foods, both liquid and solid, do not mix. A cup of Cocoa placed on top of the PE Box will surely find its way into the Disk Drives. The point is made, let's not beat it to death. Starvation is preferable to Pesto Sauce under the FCTN key!!

**Subheading 4.:** Your computer and the electric power utility or It is possible to get an electrical engineering degree by mailorder from a Carribean University.

The following common sense rules are violated at your computer's jeopardy:

(a) Buy or build a good quality surge protector for your AC line to the computer.

(b) Do not use your computer during electrical storms, in fact disconnect it completely from the power by unplugging it. Unplug when you go away on a trip. We know, personally, of one business and one friend that lost expensive computers to lightning hits.

(c) You modem is not immune from spikes over the phone line, disconnect the modular plug when not in use or get one of the special surge protectors for modems.

(d) Static electricity can produce sparks of incredible voltages that will destroy computer chips and parts. During the dry Winter heating season, have a humidifier going in your computer room. If controlled temperature and humidity is good enough for the professionals, why not you? Also, solder a piece of multi-strand lamp wire to a small metal plate and ground it on the center screw of your wall socket. Touch it before you start using the computer, after you have walked around the room (especially if it is carpeted) and frequently while using your computer. This may sound like overkill but it is better than killing your computer!!

**NEXT MONTH:** How to take your computer and modules apart for cleaning and servicing - or Maw! phone 800 TI-CARES and find out how much their console replacement charge is! **PLUS:** The Right Angle Adaptor -or- I didn't know Rube Goldberg worked for Texas Instrument!!!!

#### TO THE EXCHANGE NEWSLETTER CLUBS

**CALL SOUNDS** is the newsletter of the Central Westchester 99'ers club. We are a non profit user group. Almost everything appearing in this newsletter is available as a DIS/VAR 80 file on your request. Please send a postpaid return mailer and blank disk to the editor at the address near the mailing label. You are free to reprint any material from this newsletter but please give credit to the original source. **CLUBS INTERESTED IN PROGRAM EXCHANGES** should write to Bob Sweeney, c/o St. Joseph's Rectory, 15 Cedar St., Bronxville NY 10708

## THE VIEW FROM MILAN ITALY

by Paolo Bagnaresi (Author of BA Writer)

From the Ottawa TI 99/4A UG Newsletter, August 1986 issue. This is a letter written by Paolo to Bob Boone of Ottawa.

TI-99/4A seems to be the fourth largest used computer, Commodore VIC 20 and C-64 being first. They are followed by ZX Spectrum and QL (Sinclair) and Apple II. However, PC IBM and compatibles are catching up really fast. Other Computers, Atari 510-1040 ST, Apple McIntosh; are slowly increasing their market share. Commodore Amiga hasn't shown up yet: It will be available in the next few months

TI-99/4A typical configuration is console and tape recorder. A 5-10 percent of owners have also the disk drive system, expansion memory, a RS232 and a printer. Few users also have a second drive and maybe some fancy disk controller (CorComp or Atronic, this one from Germany).

Users of TI-99/4A have not gathered into any user group. This may be due to the Mediterranean way of life: everybody does not trust too much anybody else. Moreover, in a user group you would have to work for free. Are we crazy? We do not like to work even if we get paid for, let alone for free. No way we will do it. Some others argued that a TI club could be seen as a blatant American supporting team: we could be bombed by our mighty neighbor on the other side of the Mediterranean Sea (Kaddafi) as a dangerous US base (since we would have US computers we might as well have some US missile, couldn't we?). I think that it is mainly for this second reason why we do not have a user group.

There is a wild Frontier life here. You exchange a program for another program, sometimes for two programs, if you are lucky. If you do not have anything to exchange with, chances are you are gonna pay for that program you want. Mind, we are talking about programs that have been imported, that are copyrighted, that are sold by dealers in North America at regular prices. Anyway, no one here seems to give a damn about copyright, about rewarding a programmer. The only concern seems to be "is it copyable?" that's enough, what the hell!

Here the real smart guy will join a user group in the US, get some really good stuff and then he will sell it all over Italy: prices for any program from US span \$15 to \$35. To the smart guy that programs costs \$2.00 each, the copy fee he payed to the US user group! Good business, isn't it? Here there is a real spaghetti market. Only spaghetti, the meat balls are gone forever.

I know one of those smart guy, he lives in Bologna. He used to write US user group pretending he was an user group! He was also able to get his name published on Home Computer Magazine, Oregon, USA. In this way he was able to receive a vast number of programs. Now he can sell you ANY program you can think of, no matter what. Obviously, having been in this business for over three years, he did not have time to learn to program yet. But after all, who cares? Good money

will come to him as a steady flow anyway: net income, no income tax to pay, no anything. Good life, isn't it?

Ah, I forgot to tell you: documentation will not be provided by the pirate. It is like a "mafia": a dumb user it is not supposed to have the right to know how to use a program. The less he knows, the better for the pirate distributor. Obviously the dumb user gets hungry for some understandable program. Eventually, he will some other program from the pirate distributor, a program that will be more or less the same as the one he bought previously. That program was rather useless, wasn't it? The next one will be the same. By now, the trend has already been started. The dumb user gets addicted to the pirate distributor. He will consider him like a good willing person who does his best to help the fellow man. The pirate distributor is his friend, no doubt about it. If only those darned programs were easier to use....

On the other hand, photocopies are too costly and too time consuming. As a result, intelligent users will have to figure out by themselves how to use that pirate program: well, well, well, that is the fun or it, isn't it?

So much for the bad news. As for the good news: we have none. Here everybody seems to be waiting to see when the new Myarc computer will be working and ready to be shipped to Europe.

As for the res of Europe. Germany (and Austria) are the strongest market for TI-99/4A. There are several companies that are developing good hardware and software. Most of what is available in Germany is already imported in North America by RYTE DATA of Canada.

France used to be a good country as for TI-99/4A. After all, the fabulous "TENNIS" game, by nicesoft, come from Nice, France. There was a French magazin "99 MAGAZINE", from Paris, that used to be pretty good. Unfortunately, it ceased publishing last year. Now we do not hear too much anymore from our cousins on the other side of the Alps.

We do not know what is going on in England. We know the Queen is still kicking and alive (God save Her), but we are afraid that TI-99/4A is dead there. I'll be happy to be wrong on that assumption.

Greece does have some small market, but the seem to have only the console, no disk drive and only a few few memory expansions.

We do not know anything about Spain, aside from the fact that Bill Bronos lives there.

Back to Italy. There is a slow, but steady, shifting of users toward the PC IBM (and compatibles). Each month some friend calls me up and says: "Paolo, I am sorry, but I wanna sell out my system. Can you Help? You see, I have been offered a true PC IBM compatible. It's such a deal... I know, I know, we said we will never give away our beloved TI-99/4A. But you see I simply need it for work. They recently asked us employees to become PC IBM expert. Our office will be fully equipped with lots of PCs. and I don't want to be the least informed person in my office. C'mon, don't take it so hard, after all, we did not marry TI did we?"

This rap kinda goes on now and then. Roys, does it



give me a chilly on my back! Will I be the last survival of an dwindling race?.

If you ever publish this article, I would be glad to receive a copy of that newsletter.

I developed a small assembler routine, names PARTS. It is good to partition the MYARC RAM DISK, and chose the drive number to emulate while in assembler. These functions can be easily performed in Basic by two CALLS provided by Myarc. However, when you are in Assembler, no hints have been given by Myarc on how to perform the same task. I faced this problem. My solution seems to work well. As explained in the source code, it will work also in a running extended basic program, while with normal Myarc calls you can't do that. It is possible to modify the source code, just to change the drive # you are emulating in a running extended basic program. You are free to publish it, if you think it is worth it.

Yours truly,  
Paolo Bagnarese  
Via J.F. Kennedy 17  
20097 San Donato Milanese, Italy  
Phone 514.202 (Milan Area Code: 2. Calling from U.S.  
dial 011-39-2 first)

News from Databiotics' Bill Mosied.

ALL ITEMS NOW BEING SHIPPED!: A new parallel interface for 99/4A that has among its features An ASCII DUMP to printer, set left and right margins. List XB programs to printer with a separate line number column to the left of program lines, AND also puts each part of a multi statement XB program line on a separate line. PLUS Two kinds of word wrap etc. etc and yes, more etc.

A completely new disk based version of PILOT for the II with compiler. Documentation is a printed book, not the usual DV/80.

An improved FORTH: SUPER FORTH supports Speech and Sound. Kernel can be put into SuperSpace type of module and leaves added 8k free for programming. There are lots more goodies in this package also!??

Ready for shipment: Superspace II - a 32k RAM battery backed module with E/A GROM. Has four 8k RAM blocks accessed via bank switching. Plus at least 2 full disks of programs and utilities, including (with permission) RAG's MACRO utilities, C by Clint Pulley. Using the module RAM frees up VDP space and PEB RAM for more programming - we are almost regular BIG C now! Incidentally, Clint Pulley and Bill Mosied collaborated on many of the goodies on the 2 or 3 disks including menu facilities. Last, A NEW WORD PROCESSING available both on cassette and disk.

Attention: all Newsletter Editors  
BEST 99/4A ARTICLES OF 1986

We have begun to receive articles for judging. One or two of you out there have "buried" us with several disks. Please lets use the arrow to the bulls eye, not the shotgun approach. Send the BEST one or two articles, not a dozen. Please send them as a DV80 file.

**BUT SEND THEM** - the deadline is Dec 10th.

**RULES:** The article must be an original by a member of your club that appeared or will appear in 1986 in your club's newsletter. It can cover any computer related topic, such as copyrights, programming in any language useable on the 99/4A, product reviews, etc. and more etc. If a program is part of the article, a separate "runnable" copy must be submitted. All material should be on disk with articles in DIS/VAR 80 format. A return postpaid mailer must be included.

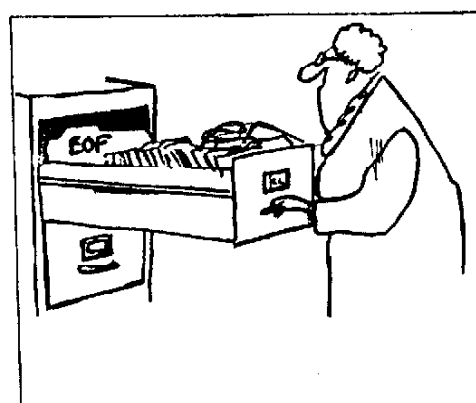
Please note that although we organized this effort, we deliberately excluded ourselves from the judging. These Good 99'ers have volunteered to be judges: Dave Mullberg of the CAUG in PA., Jack Shattuck of the Delaware Valley UG, Dee Turner of Omaha, and Johnathan Zittrain of Pittsburgh who is a Sysop on Compuserve's II Forum and Deanna Sheridan of Rocky River, Ohio.

Judging is very simple. Each judge will receive a copy of all articles submitted, and will rate them from #1 to the number of articles. The ones receiving to lowest points are the winners and the one with the highest scores, will be left out!

Address Mail to: The CW 99'ers c/o Art Byers, 1261 Williams Drive, Shrub Oak NY 10588. CIS #73547,2014

Remember! It will be free to all 99'ers who provide a disk and postpaid mailer.

Let us hear from you!!

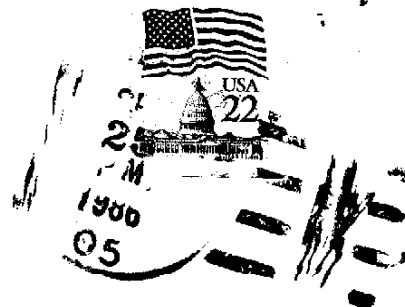




These TI-974A graphics via courtesy of the Mid-South 99/4A UB, of Memphis TN

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The CW 99'ers Newsletter Exchange  
c/o A Byers  
1261 Williams Drive  
Shrub Oak, NY 10388



DALLAS TI HC GROUP  
1221 MOSSWOOD  
IRVING, TX 75061