



CALL SOUNDS

The Newsletter of
The CENTRAL WESTCHESTER 99'ERS

MAY 1986



ANNOUNCEMENTS

Next Meetings: Thursday, May 15th at 8 pm sharp, at the American Legion Hall, 50 Broad St. Hawthorne NY

Program for May 15th will be a **Show and Tell** by **Hubert Deri** of his Myarc MPES. This is a dual half height drive, DsDD expansion system complete with 32k Memory and RS232/P10.

In addition we will have nominations for club officers for the 1986/87 season. Thus far we have only a few volunteers. Carney Mims has agreed to serve another term as President, Al Trudeau has volunteered for Vice Pres/Program. Art Byers has volunteered for Treasurer. We still need someone to be secretary.

Free Disk Software for May is the Up date of DM-1000, version 3.1. This is fairware. If you had it before and paid for it, you do not have to send any additional \$\$ to the author. If you are getting it for the first time and you like and use it, you are expected to pay for it as requested in the doc's.

PROGRAM for June: This will be the big auction - Swap - Sell evening. Immediately after elections, We will auction off the first 6 items purchased from Databiotics. Then members can put any TI equipment, modules, or ORIGINAL software on the auction block.

DATABIOTICS MAP REPORT #4

We have received several communications from DBT, both by mail and phone. Items of general interest are:

SUPERDISK / now 512 K from day one, projected receipt of our Beta test sample June/July. This will be a full feature Ram disk, partitionable as both a print spooler, from 1 to four disk drive simulations, plus additional "Corcoop type utilities"

PILOT / a disk based version generating 9900 assembly code (a compiled language in other words) is almost complete. However, the manual needs proofing which is taking more time than anticipated - In our hands, hopefully, in June.

DISKMASTER I. According to Author Todd Kaplan, a version compatible with the Myarc MPES 50 is in work. Regular version has already been reviewed here.

4A/TALK version 1.4 is in our hands and a short reprise review is in this issue.

MINIWRITER III We have received an upgrade version that allows relocation of the column at which the bell rings.

Also both Nils and Steve did not mention that **MINIWRITER II & III** have file linking capabilities similar to those of **TI WRITER**

SUPERSPACE: Two reviews are in this issue. In addition, new goodies for this module will include a FORTH kernel located in the >6000 to >7FFF CPU which frees up RAM for other FORTH applications.

Metro Region Conference Well Received Myarc Computer on a Card works.

The Queensboro CC 99'ers, in a relatively small regional conference, scooped the larger TI fairs by having the first successful public showing of the new Myarc computer. Representatives of some eight clubs went back with some interesting news for their memberships.

Attendance was about the same as at the November MARC that we hosted, 55 adults.

Among the highlights were a hardware presentation by Brett Kroft of the Hudson Valley 99'ers who showed his custom modification of the E/A module to hold several other GROMS in addition as well as a console with 32K installed. Brett also demo'd a home sentry system. Steve Lamberti gave a fine demonstration of a super programming tool called XB Detective, and Art Byers explained the 7 hidden commands in the PRK module. Steve Citron showed a color printer/plotter and Ed mehanis gave a fine demo on programming your printer.

All in all the conference accomplished its purpose for which it was formed - to not only educate the TI community, but also give us a chance to meet and greet fellow 99'ers. Frank Coty and Peter Coomber put out a nice refreshment spread, the Audio/visual equipment worked well and we are all looking forward to the next one.

PART 5 OF ASSEMBLY LESSONS By Steve Royce has been postponed until the June issue. The whole series of more than 10 lessons is available on disk to any one who wants it in advance. Ask Art Byers.

IN THIS ISSUE

SPECIAL 2 SHEET INSERT -----	TI 99/4A
	MEMORY MAP
	page#
Announcements -----	1
DataBioTics MAP #4 -----	1
Metro Area Region Conf. #2 -----	1
HCM KERSHPLATT -----	2
Notes on Call Sounds -----	2
SUPER SPACE review#1 by Carney Mims	3
4A/Talk Redeax -----	3
Club Cork Board -----	3
List of officers and committees ----	3
Error Traping Techniques	
By Ted Mills -----	4
SUPER SPACE review#2 by Al Trudeau -	5
HACKERS-a book review by M7B of WNY-	6

HCM KERSHPLATT!

OR

**THE MAN WHO HELPED LAUNCH THE SHIP
STOOD ON THE PIER AS IT SAILED OFF**

By the time this newsletter arrives in your mailbox, it is almost certain you will have heard that Home Computer Magazine has ceased publication. The last issue ~~some~~ received was Vol.#5 issue #6 and accompanying "ON_DISK". Other subscribers never got this issue. The reason is unknown, but ~~one~~ can guess. Lack of money for postage? or Printing? or any of the problems that beset a business that runs in red ink.

They even "stuffed" our own member Bob Amenta for the \$50 he was supposed to get for a program of his they printed!

A company called Home Computer Journal has contacted ~~some~~ subscribers and offered to send them a number of issues of their new publication, equal in value to the remainder of the HCM subscription. It is a "diskazine" at \$15.00 per issue, so IF it ever arrives, the "equal value" won't buy the year or so that some subscribers are still due. Other subscribers have never gotten this notice. Why? again only conjecture!

Telephone calls to HCJ have revealed that Gary Kaplan and Dave Brader are definitely connected and active. Again, you might be tempted to conjecture and guess!

The past 12 months have seen several computer magazines (Popular Computing, Computers and Electronics, Creative Computing, etc) fold their tents and vanish. As the bloom fell from the rose of the home computer business, so the support base of the magazines diminished.?

Will HCM be missed by 99'ers? (We won't presume to guess how the Apple, IBM, and Commodore owners who subscribed might feel.) I am afraid not too much. Why? Because HCM stayed in one place while the 99/4A community raced ahead. HCM still assumed their active 99'er base had only 16K and at most Extended Basic - while in truth, 9 out of 10 active 99/4A's have disk drive and 32K expansion. HCM never published a FORTH screen or program while 150 club newsletters reported tons of FORTH activity. You would never know from HCM that the plethora of great fairware programs even existed. Club newsletters became full of Assembly subroutines, articles on Small "c", tutorials on everything from Multiplan to the secrets of the Device Service Routines. A veritable wealth of riches exists for the 99/4A that HCM chose to ignore because all five brands of computers covered were tied to the same articles.

The 99/4A community literally sailed off on a fun cruise and while Gary Kaplan and HCM chose to stay behind. Did he wonder why many did not renew their subscriptions. Mr. GK was even reported to have felt anger and "betrayal" at the many warning editorials and articles in User Group Newsletters. (When he should have profited from this accurate feedback.) In retaliation, HCM ceased publishing any news about any U.G. - IBM, Atari, Apple, Commodore, or TI!!!

The publishers of the defunct computer magazines above thought enough of their subscribers to have an active, established computer magazine pick up the balance of subscription still due. HCM was not capable of doing this, - perhaps because no reputable magazine was interested because HCM had no audited base. I suspect it was more likely that HCM'S publisher never even tried to accomplish what other deceased magazines felt was due as a moral obligation. **TA B**

SOME NOTES ON CALL SOUNDS

Our Priorities - First, important club notices such as club business and finances, meeting dates, planned programs, announcements, listing of club free software, library additions etc.

Second - hot news, if any, of new developments in the TI 99/4A world.

Third - Articles written by members of the Central Westchester 99'ers.

Fourth - articles that the editor believes will be of interest to most club members. These may be culled from the Newsletter exchange or from exchange of disks with other clubs or even down load from CompuServe.

DEADLINE - usually a few days after our monthly meeting.

Mailing date - We try for the first of the month listed on the masthead or even a day or two earlier. Therefore the May issue will be mailed any time from April 29th to May 1st or 2nd.

REPRODUCTION is via photocopy. We are exceptionally fortunate that, thus far, the editor has been able to get the **FREE** use of a photocopy at one of his customers. However, we do have to supply the paper, and as a courtesy, any paper not used from the room is left with the owner of the copy machine. Without this free access to a photocopy, the newsletter would go back to one double sided page of announcements and notices as it was when we first started.

SIZE - because of the weight of paper, the binding staples, and stamp, five sheets of 20# copy paper is all that will go for one First Class stamp. We did send out a 6 page newsletter once without extra postage, but that was possible only because the lot of paper we had then was slightly under the 20# specification. Even at that, it was a close call in our favor by the postmaster.

COMPOSITION is mostly done on TI WRITER except those few articles reproduced by photocopying something from another club newsletter. The "typesetting" is done on a TI 99/4 impact printer in Condensed print, 60 characters to a column/line. **ADDRESS LABELS** are done via a data base made with the Person Record Keeping module and printed out with a TI BASIC program, written by Art Byers, that uses the seven hidden additional Basic commands found in the PRK, Statistics, and Personal Report modules. The full detailed explanation of these was published in our newsletter at the end of the Summer '85.

SUPER SPACE EXAMINED

By Carney Mims

Product: Super Space Module. Mfg. By DataBiotics -an E/A module with the addition of 8K battery backed RAM located at >8000 to >8000

Current Suggested Retail: \$49.95

Available: Via Mailorder from most houses that carry TI or direct from DataBiotics.

The good news about DataBiotics Super Space is that it is the TI Editor/Assembler cartridge, plus a few features. And the bad news? If you are, like most of us, uninitiated in the mysteries of assembly language, it's the Editor/Assembler cartridge again.

Not that I wasn't warned. Like nearly all hardware and software connected with the Editor-Assembler, the Super Space begins its manual with the caution that information about the Editor/Assembler must be gotten from the Editor/Assembler manual, which of course contains a hundred or so pages of hieroglyphics, decipherable only by those who know something about some assembly language, if not necessarily TMS 9900. Furthermore, as the manual states, Super Space does not come with TI's Editor/Assembler diskettes, so if you buy Super Space and don't already have a TI E/A package, you had better get on the horn to TI CARES right away and get the manual and diskettes.

Once past this point, you can skip most of the rest of the manual, which describes the procedure for assembling Super Space from a kit. After, however, there is a useful and readable description of Super Space's unique feature: 8K of battery-backed RAM which can be filled with programs created on the Editor/Assembler. Just to show that this space can be used by ordinary mortals, DataBiotics thoughtfully provides on disk a version of the Lines Memo which accompanies the Mini-Memory. This I was able to load and run from the E/A menu without any trouble. With a little effort, I even think I could implement the manual's suggestions for modifying the program to change colors and to output the patterns to my parallel printer.

Anything much beyond this is, however, likely to be more than the average programming novice can hack. Unfortunately, this leaves Super Space's most immediately useful feature just over the horizon: placing a small, constantly used program in the cartridge's 8K memory. The manual does provide assembly language templates for this purpose, so there is still hope. Among the ideas I have are putting the latest version of DM 1000 or the so-called "skinny" version of Paul Charlton's excellent Fast-Term telecommunications program into the cartridge, as I use both constantly and would enjoy instant access to them from the E/A menu.

Otherwise, well, one can dream. It just recently occurred to me that Super Space might be the perfect vehicle for Core Wars, the assembly language exercise from Scientific American I reported on in this newsletter last year. If only I had paid more attention to our club's lectures on assembly language!

All in all, Super Space is a worthwhile alternative to TI's E/A cartridge. The current retail price is competitive with what other companies are offering a similar product. The program storage feature is useful even to non-programmers and with the help of the accompanying utilities disk and some Fairware such as Superbug II, I am sure it would be invaluable to the real assembly experts.

4A/Talk Redeax

Shortly after we received 4A/Talk for review, a new version #1.4 was released. We wrote away for this version, and because Bob Cataldo had done our first article on this program, it was passed along to him for a short second look. Bob reported the results after the April meeting.

Well, it seems there was good news and bad news. First the good news, the parity and bit problems experienced when toggling from 300 to 1200 and back have been solved. Unfortunately, the problem at 1200 baud of the buffer getting full when spooling to the printer, and the printer spitting out undecipherable garbage has not been fixed. To work around this, you must hit FCTN S to stop the screen, dump the buffer to the printer, press FCTN Q to restart the screen and continue. Without a warning on screen that the buffer is getting full, this is a judgement call so be careful. The problem is non-existent at 300 baud as the printer easily keeps up with the download. Barry Traver, on Comuserve, has confirmed that 4A/Talk is among the most easy to use Terminal Emulator programs. Will will have two copies at the June Auction.

CLUB CORK BOARD

Our board is brought to each meeting. You are welcome to pin up notices of equipment for sale, etc. Bring your own push-pins. The cork board often has many important items posted on it. Please check and read it at each meeting.

CENTRAL WESTCHESTER 99'ERS Club Officers and committees.

President- Carney Mims 914-961-5993

VP/Programs Art Byers 914-528-5402

Secretary -Vacant.

Treasurer- Kathy O'Brien

Newsletter - Art Byers

Free Cassette Software - Hubert Deri

Equipment Manager - Pat Leigh

Hospitality - Charlie Willoughby

Disk Librarian - Bob Sweeney

Backup Disk Librarian - Art Byers

ERROR TRAPPING TECHNIQUES

By TED HILLS

Computers generally have built-in error handling procedures. At a minimum a computer will stop when it encounters an error condition. But first the computer will store certain information, at designated memory addresses, concerning the type of error encountered and the line where the error occurred. On my Apple these error messages can only be accessed by PEEKing into memory through an error handling subroutine written into the program. Otherwise the program simply stops when an error occurs. The TI 99 4/A, however, not only routinely describes the error type but the line where it was encountered as well. (In addition, The 99/4A's TI BASIC has some built in error routines that do not stop a program but rather issue a warning. One example is entering an alphabet value into an INPUT statement that expects a numerical value. Another: EXTENDED BASIC's ACCEPT AT statement allows you to VALIDATE the type of data you want entered and will give you a WARNING "honk" and refuse to accept any other than the data specified. See page 48 of the XB manual.-Editor)

MS-DOS computers feature only a slight improvement in error-handling in that the line is actually displayed after the program stops and places the cursor over the actual error.

Error handling functions are not only used to trap errors in newly written, or typed-in, programs, but also error handling routines have useful programming applications. The latter were the initial purpose of this article. However, some general comments might also be appropriate.

Extended basic has two error statements - ON ERROR and CALL ERR. ON ERROR simply tells the computer what to do when an error condition is encountered. Generally, ON ERROR will GOTO or GOSUB to a subroutine.

ON ERROR can be used in many ways. The most common is to keep a program from crashing when the user does something wrong such as trying to load a blank or not initialized data disk, hardware goofs ie. you left the door open on the disk drive, or you misspelled PIO as P10.

CALL ERR is best used for debugging a program. Once the program is error free, the CALL ERR lines can be deleted. The Syntax of the CALL ERR subprogram contains four variables describing some aspect of the error condition. The statement is in the form CALL ERR(Error Code, error type, severity, line number). Error type simply distinguishes between program errors and input/output errors. Frankly, I have never understood the usefulness of the severity message. (Neither have I! -Editor)

So far so good! If the error is in the line where the error condition was encountered, life becomes relatively simple. However, the error may originate somewhere else, such as a bad value generated earlier that does not show up until later. The best procedure, therefore, is to place an ON ERROR statement near the beginning of the program that GOSUBs or GOTOs an error trapping subroutine at the end.

The subroutine should include a CALL ERR subprogram. Once the error codes and line number are identified then PRINT statements can be added to the subroutine to print out each of the variables in the line where the error condition was encountered. Watch out, though, for BAD VALUES arising from an improper use of reserved words. I once typed in a program, written in TI BASIC, using EXTENDED BASIC. The TI BASIC version had a variable DIGIT which is an EXTENDED BASIC reserved word.

The TRACE command is a useful supplementary debugging tool. However, I prefer to insert "I,M HERE AT (LINE)" to follow program flow. If you do use TRACE, especially on a long and involved program, it is helpful to have a screen dump in low memory to print the TRACE flow on to paper. The one by Qualitysoft works very well, we also have one in the club library for free.

The ON ERROR statement should be a useful programming tool. I routinely insert ON ERROR statements in my programs that either return to the main menu if an error occurs or saves whatever data has been entered so far to disk. It is very exasperating to lose a lot of data when a program comes to a screeching halt due to an error. Similarly, ON ERROR can be used to close a file.

Last fall I typed in a stock charting program that could chart a lot of price data that I had accumulated. Among the inputs for each data point were the day, month and year. These I entered in through READ/DATA statements. To check for typing accuracy, and to count the weeks, I included a subroutine which read and printed the data items. Instead of using an end of data identifier I simply used an ON ERROR statement to terminate the looping process. For actually entering the price data I used another ON ERROR message to save the data to disk as soon as I had run out of DATA statements.

Some programmers hold forth that a fully debugged and properly written program should not need error traps, except to guard against the hardware errors discussed above. They consider use of ON ERROR as a programming tool to be somewhat inelegant, but I believe it provides an important measure of safety which I like.

One final comment. It is possible to have many ON ERROR routines in the same program, as long as each one is turned on and off at the right time. For example, I usually insert an "ON ERROR GOTO (Menu)". However, an "ON ERROR (Save File)" heads my insert data routine. After the file is saved then I return to the "ON ERROR GOTO (Menu)" command.

TIPS FROM THE TIGERCUB

Are now distributed only at meetings. You will find them in the "pockets" attached to the club cork board.

SUPER SPACE by DATABIOTICS

Review by Al Trudeau

Well I must admit the name intrigued me especially when one is holding a rather familiar styled cartridge with a large white label which read S U P E R S P A C E. Actually I am rather fond of superlatives and this name conjured up visions of megabytes, maybe even warp drive. So I plugged her in and cranked up my console only to find myself staring at the old familiar menu for the EDITOR/ASSEMBLER. Well reality drifted back and it was clearly time to read the manual.

In order for everyone to fully understand the concept of SUPER SPACE one needs some background on the memory space and usage for the 99/4A. The TMS9900 microprocessor has an address space of 64K bytes or hex FFFF. In the 99/4A the first 8k is ROM and contains TI-BASIC and TI routines. The next 8k is RAM and is assigned to the Memory Expansion Unit and referred to as "the low memory". The next 8k are built into various peripherals cards and account for the Device Service Routines used to operate disk drives, RS232, etc. The next 8k is german to Super Space and will be discussed later. The next 8k is built into the console and contain RAM and can be thought of as workspace for the interpreter, keyboard, VDP control, etc. Actually, you can use some of this space for your programs . . . if you're careful. And finally is the High Memory Expansion and this is 24k bytes of RAM. Now that we are all experts, one should better understand the whats and why's of SUPER SPACE.

Remember the 8k space I said will be discussed later, well this is the space assigned to the Command Module Port and would probably contain a prepackaged program . . . like EXTENDED BASIC. This is where SUPER SPACE comes into play. Normally, this space was unavailable to house your application program or data, except you Mini-Memory owners. Now with SUPER SPACE everyone can gain access to this space and even add some jazz to your system.

SUPER SPACE provides a total of 8k additional bytes of memory for programs and/or data at address space 16000 to 17FFF (this is the command module port space) extending your total memory expansion capability from 32k bytes to 40k bytes, plus 8k bytes of GROM (i.e. the Editor/Assembler chip), plus some interesting features, such as a built in battery to preserve your data while the console is shut down and the ability to "create your own cartridge".

The manual is 17 pages long and is intended to be used as a general guide referring as necessary to other material written on the subject. Although my cartridge came ready to go the manual devotes the first 10 pages to aid the consumer in building this product from a kit, including diagrams, construction notes, testing and debugging tips.

Basically this product is intended for the users who already have the TI editor/assembler cartridge and has gained some expertise with it. Remember, the actual editor program and the actual assembler program are not included so one must have or acquire these elsewhere. The purpose of

the E/A GROM is to provide the user with two (2) program loaders, i.e. Load and Run and Run Program File, which is the way one gets one's program into the SUPER SPACE cartridge. Additionally, one can create a grom header and essentially add your program to the start up menu. For example, let say I wrote an assembly language program and stored it (AORG) in the SUPER SPACE cartridge. By following the manual and using the examples provided I could link this program to the start up menu and simply select it as number 3. It would then start to run immediately, just like store bought modules. Very adequate technical information as well as examples are provided.

The following software is included:

CATALOG DISK

```

DSK2 - DISKNAME= SUPERSPACE
AVAILABLE= 184 USED= 174
FILENAME SIZE TYPE P
-----
DEMO 18 DIS/FIX 80
DEMOSRC 7 DIS/VAR 80
GRMHDR1 5 DIS/VAR 80
GRMHDR2 7 DIS/VAR 80
GRMHDR3 8 DIS/VAR 80
LCPSRC 82 DIS/VAR 80
UTILITIES 38 DIS/VAR 80
    
```

Reference is made to Edgar Dohmann's Superbug II and its increased usefulness when it resides in this memory space, thereby allowing all of the standard memory to be used for your programs and data while allowing the full capabilities of Superbug II to be fully used.

Overall, I found this product nicely done and packaged professionally. It is, however, intended for the experienced and informed user and is not a general purpose memory expansion device. For those of you who are writing bigger and better assembly language programs, this is just what you've been waiting for. By the way, rumor has it that a AORG 16000 version of TI-FORTH will be forthcoming and this means an additional 8k of memory would be available for your applications and dictionary.

NOTICE TO OTHER 99'er CLUBS

Almost every article in this newsletter, except those obviously reproduced by photocopying another newsletter's article, is available on disk as a Display Variable 80 file. If you are interested in any article, send us a blank disk and postpaid return mailer.

You are welcome to reproduce any article herein. Please give credit to the original source.

We exchange newsletters with over 40 clubs. Each month we put the newsletters in a 3-ring binder and place them in our lending library so all our members have a chance to keep up with TI news. We suggest exchanges leave sufficient left margin for 3-hole punching.

HACKERS by Steven Levy/Book review
Courtesy West NY 99'ers

The last time I sat down and read an extensive piece of literature was at least five years ago. Normally, it's all tech manuals and science magazines, but this book caught my eye in Waldens and I decided to "try" to read it. I never put it down until it was finished.

The book starts in the late fifties at MIT with a campus hobby group known as "The Tech Model Railroad Club". To hook up some wild wiring or machinery to accomplish something for the railroad layout was called a "hack", hence, the kids that took care of the layout wiring under the table were known as "hackers".

Some of these kids discovered the Electronic Accounting Machinery area, better known as the EAM room, the main artery to a giant IBM704. Those were the days when everything had to be punched into cards and fed from hoppers into the computer. The people that interpreted the programs and results were considered priests of a sort, and there were no guarantees on anything.

Anyway, the kids discovered the computer, wormed their way into the good graces of the people in charge, and began playing with the programming. One kid would program something, throw it in a drawer, and someone else would come along and try to make the program more efficient by "bumming" out a line or two. Then someone else would do the same. There were no secrets, only a constant flow of input and output between people and machine to explore and understand. This was the "hacker ethic", to make it better, to explore the workings of the code and computer, to "hack away" but never, ever harm do damage.

At the same time, the west coast had Stanford University. Things were a little different there (aren't they always). The kids didn't take things quite as seriously. There were partys and the like well mixed with the hacking, while the MIT kids were mostly misfits that didn't get involved in the "social order of things". The going ons that occurred in the computer room at Stanford would NEVER have happened at MIT. I took delight at the fact that a few diehards at Stanford LIVED between the ceiling and roof over the computer so that they could access the terminals anytime someone else couldn't make a time slot.

The book takes you from the first Altairs, (the first little bell and whistle computers sporting a mighty 256 bytes of memory) supported by The Homebrew Computer Club, to the present Seara Online software company. Along the way we meet Steve Jobs, "the Woz", Captain Crunch and all the rest of the folk-heros you've heard about. What made them tick and how they got started. Most of all, though, it's about me... and you, and the guy over there with the messy hair and his shirt hanging out. You know him, don't you? He's the one with all the answers and the pocket full of nuts, bolts and chips.

I think the book is fantastic as a series of stories about people, but if you're into computers, it'll tell you why, and what YOU are all about.

It gets a little dry here and there and I found myself skipping a page or two, but if you stick to it, it will leave you thinking, and perhaps inspired. Isn't that what a good book is for? -htt

The Central Westchester 99'ers
c/o Art Byers
1261 Williams Dr.
Shrub Oak NY 10588



DALLAS TI HOME COMPUTER GROUP
1221 MOSSWOOD
IRVING TX 75061