

YESTERDAY'S NEWS

VOLUME 4 NUMBER 7 Established 2016

JULY 2019

30 Years Ago...

Historical Information taken from Bill Gaskills TIMELINE

JULY 1989:

Jim Uzzell of DDI Software announces the release of APPOINTMENT SCHEDULER for the Myarc Geneve computer and ARTIST UTILITY, a companion product for use with TI-ARTIST.

Harrison Software releases a new Word Processor for the TI-99/4A.

Tymnet announces Starlink, a service that allows long distance calling of a BBS without the long distance charges.

TI-SORT from Insebot Inc. is released by distributor Texaments.

BAM! PLAYING GAMES

UNKNOWN AUTHOR



Although many people believe that playing games on a computer is merely for children, there are many advantages to this, not the least being that its good for self-improvement.

Unknown to most users, computer games now well exceed the simple arcade programs found in the arcades. With a greater capacity for memory, home computer games have become more complex in both graphics and scenario. Because of this, the arcade game is rapidly becoming obsolete. Users have found that home games are far superior, and thus, there is no need for the other type.

However, the question that has arisen is, why are we all wasting time and money playing games? After all, there is only so much value for a game as a means of entertainment. What is beneath the obvious enjoyment partaken by game playing?

INSIDE



INFORMATION

TI CLASSROOM - Tigercub Tips #2	Page 1
Purchasing from Tex-Comp	Page 1
Review of Super Space	Page 2
Mail Order Madness	Page 3
Review of The Missing Link	Page 3
Disk Drive Bits and Bytes	Page 5
Review of Wyvern	Page 7

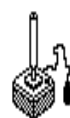
Many educators as well as psychologists believe that game playing develops a logic and problem solving ability that would otherwise become quite rusty from misuse. Another great advantage is that of a learning tool for children. Computers provide a colorful, attention getting method for which kids will undoubtedly have a more positive reaction than that of more conventional means. However, beneath the glitter of the computer, is the fact that people play for the various reasons that affect the user as an individual.

Perhaps the most appealing reason for playing computer games is its competitive aspect. In today's society, many people are confined to watching others battle on television, such as Sunday afternoon football. However, computers are a way for these armchair warriors to relieve any aggressive behavior that could otherwise have to be directed elsewhere.

Others enjoy computers for its ability to take the user into another world of fantasy. "Getting away from it all" is supremely achieved by the computer as you can travel through time and space to situations undreamt of.

A more practical use for these games is that they infinitely improve the concentration of the user. This is a definite advantage in real world computing where a single error becomes quite costly.

In conclusion, we can assume that games are not merely for entertainment but also as a means of self-improvement. In a day and age where every person must seek any advantage for financial success, the computer is an immense aid for accomplishing this goal.



TI CLASSROOM



TIPS FROM THE
TIGERCUB
By Jim Peterson

NUMBER
2



PURCHASING FROM TEX-COMP
Editorial by Charles Good
LIMA Area 99/4A User Group

TEX-COMP

TEX-COMP, advertising themselves as the "largest independent TI99/4A retailer in the world" gets a lot of bad press in the newsletters. They are criticized for selling public domain and fairware software of "giving away" such software with the purchase of specific items. They are also faulted for not having a live person to talk to when you call their order line and are forced to listen to their pre-recorded messages long distance before you place your order. I have purchased a number of items from this dealer over the years and have had no problems with timely delivery of the goods. In this context, I would like to discuss the above two criticisms.

The following are authorized to be reprinted in any User's Group Newsletter - But if you retype a routine, PLEASE do Key it in once from the ready-to-print copy to make sure you got it all right!!

This program will play and print the frequency codes for the two "secret" sub-octaves of bass notes on the TI-99/4A. - Jim Peterson, Tigercub Software

```
110 DEF R(X)=INT(X+.5)      170 F=F/1.059463094
120 F=1652                 180 IF J<>12 THEN 200
130 FOR J=1 TO 25         190 RESTORE
140 READ N$               200 NEXT J
150 PRINT N$;"=";R(F)     210 DATA A,A FLAT,G,F#,F,E,E
160 CALL SOUND(500,30000,30, FLAT,D,C#,C,B,B FLAT,A
30000,30,F,30,-4,0)
```

To play these bass notes, the CALL SOUND must contain 3 tones and a noise. The first two tones may be of either an audible or inaudible frequency and volume The third must be the frequency code (which is not the actual frequency) for the note, with an inaudible volume; and the noise must be -4, with an audible volume.

This program plays tremolo notes. Change the value in line 150 to 1.01 or 1.03 for less or more tremolo. The tune is "St. James Infirmary Blues" - Jim Peterson, Tigercub

```
110 FOR J=1 TO 60 STEP 2   190 DATA 2,330,2,294,4,330,4
120 READ A,B              ,294,4,330,4,294,4,262,8,220
130 FOR L=1 TO A         200 DATA 2,330,2,294,6,330,2
140 CALL SOUND(-1000,B,0) ,294,4,330,4,262,12,247
150 CALL SOUND(-1000,B*1.02, 210 DATA 2,294,2,262,4,294,4
0)                       ,262,4,294,2,330,2,294,4,262
160 NEXT L               ,8,220
170 NEXT J              220 DATA 4,262,4,262,4,220,4
180 CALL SOUND(-1,30000,30) ,262,4,247,16,220
```

```
100 REM - WHAT HAPPENED? byJ  :: CALL CHAR(K,CH$)
im Peterson, Tigercub Soft-w  120 CH$=NUL$ :: NEXT K :: DI
are                             SPLAY AT(14,3):"UT EHT DENRU
110 CALL CLEAR :: FOR K=65 T    T OHW !YEH" :: DISPLAY AT(12
O 90 :: CALL CHARPAT(K,A$)::   ,13):"?NWOD EDISPU"
FOR J=15 TO 1 STEP -2 :: CH    130 INPUT Q$ :: GOTO 130
$=CH$&&SEG$(A$,J,2):: NEXT J
```

HAPPY HACKIN' Jim Peterson

Tips Number 1 was
Published in the
Vol. 2, No. 7 issue
of Yesterdays News.

The sale of goodies that are public domain is quite common. All the Sherlock Holmes stories and novels are now in the public domain, but you don't find your local bookstore giving these away at cost. Anyone who wishes to republish and sell these novels is free to do so without payment of royalties, since the international copyrights have expired. TEX-COMP, which sells some PD and fairware software for \$5 a disk is certainly not the only outfit in the TI world that sells such software. Most User Groups do the same thing. In many cases this is a primary way of earning money for such group expenses as newsletter publication and meeting room rent. Five dollars per SSSD disk is not at all unusual for a user group copying fee. Both, TEX-COMP in its catalog and user groups in their newsletters, specifically state that fairware authors should be compensated for their efforts over and above the copying fees charged. Amnion Helpline's "Free Access Library" isn't free. The library sells PD "volumes" at \$5 each in SSSD format. This pays the Helpline's phone bill and allows TI users access to a valuable free service. TEX-COMP is also not the only organization that "gives away" PD software with the purchase of specific items. Tigercub Software "gives away" PD stuff with the purchase of a disk of full of copyrighted Tigercub Programs. PD software is included in the fairware PLUS! package. There is nothing illegal about selling PD software. It is up to the consumer to decide if there is anything morally wrong with doing so. If user groups sell PD and fairware software at \$5.00 a disk, why fault commercial dealers who do the same thing?

The lack of personal over-the-phone help from TEX-COMP is not total. You can get help if you know who to call, and if they have a problem with your order they will call you! One of the things stated on the prerecorded message on their order line is that you should leave a phone number where you can be reached evenings. the "voice of TEX-COMP (the same lady you hear on the prerecorded message) actually called me once about an order. She was not sure that UPS would deliver to the rural address that I had given. I assured her that I often got UPS deliveries.

555-555-5555 will get you through to a real live person at TEX COMP!!! I recently purchased a pair of half height drives and a cable kit for PE box installation from TEX COMP. They had the best advertised price by far. I sent off an order form and a money order (they delay orders paid by personal checks for several weeks until the check clears) and my order was delivered to my door 14 days after it was mailed. Hand written on the invoice that came with my new drives was this note: "Call Jerry at 555-555-5555 M/Th 6-9pm California time for any technical help!". I was being offered over the phone assistance in setting the jumpers on each drive for drive 1 and drive 2, finding and removing the termination pack on drive 1, and fitting the drives into my PE box. It turned out that I didn't need this phone assistance, but it is nice to know it was available. I had trouble finding the jumpers on the drives' circuit boards. Lots of people would get lost with these jumpers. Please note that the phone number above is NOT the regular published TEX COMP number. Now that I have published it, anyone who needs to can get through to a real live talking person at TEX COMP. I believe that the "Jerry" referred to in my invoice note is the owner.

I think TEX COMP has received undeserved bad press. (Please note that under my editorship, this newsletter has in the past had nasty things to say about some less than honest organizations such as HOME COMPUTER RIPOFF and RYTE DATA.) TEX COMP offers lots of nice goodies, sometimes at excellent prices, and has always delivered ordered goods to me in a reasonable time. If they can make the price right, they deserve your business.



Computer Shopper 6/86
Ron Albright
Jonathan Zittrain

Distributed by
Databiotics

Interested in creating your own cartridges from Assembly Language programs? "Super Space," a module available from DataBioTics of Palos Verdes Estates, CA, will let you do just that.

Super Space is a souped-up Editor/Assembler module, containing an additional 8K of CMOS RAM that can be accessed by Assembly Language programs or used to store such programs. A lithium battery within the module will allow a program to remain in memory for at least two years if the module is properly cared for. Of course, it is not difficult to erase an old program and use a new one in the module as the user desires.

The RAM memory in Super Space occupies address space from >6000 to >7FFF, similar to where a cartridge would reside

in the computer's hexadecimal memory system (many regular Assembly Language programs reside starting at >A000 in memory). The extra memory provided by the module can be used by Assembly Language programmers for extra buffer space, but the most prominent and easy-to-use feature is to create a pseudo-cartridge with that memory.

With little understanding of Assembly Language required, one can add a "GROM header" to an existing Assembly Language program, making the program appear on the main startup screen when the module is inserted. Since the module also contains Editor/Assembler, a typical startup screen would display 1 for TI Basic, 2 for Editor/Assembler, and 3-7 for the program(s) of your choice. With only 8K to work with, probably only one extra program at a time will fit, though.

If the Assembly Language program to be added to the module contains certain Assembly Language statements (USBW, UM BW, USBR, UMBR, UWTR, KSCAN, GPLLNK, and DSRLNK) a file called UTILITIES (found on a disk accompanying the Super Space module) must be included when the program is assembled. These utilities are normally loaded when a CALL INIT is issued from Basic or option 3("Load and Run") is selected from the Editor/Assembler main menu, but they will not be automatically accessed if your program is included as a pseudo-cartridge, from options 3-7 on the main TI menu.

To load the programs into the module, the user need only use the module's built-in Editor/Assembler and load the program normally. If the GROM header were included correctly, the program will appear on the main TI menu when the menu is next accessed. To simply keep the program in memory without the GROM header, an AORG >6000 statement is needed in the source code to force the program to load into the module.

In actually working with Super Space I found few problems. The module seemed to be very sensitive to removal and reinsertion to the computer, whether the computer was on or off. The manual warns that turning the console on or off too quickly or not touching a metal object before handling the cartridge (to discharge any accumulated static electricity) could damage the RAM contents of the module, and this did seem to be the case. The user should make sure that a safe copy of any assembly program in the module is also stored on disk just in case it becomes accidentally garbled or erased.

Documentation for the Super Space module was complete and easy to understand. A spare parts list is given for the Kit form and the disk accompanying Super Space includes several demonstration programs, the necessary GROM headers for placing assembly programs in to the main TI menu list, a MENU program written in Basic that allows a power-up menu to be created that will load the given programs from disk, and the UTILITIES file that I mentioned before. Also

included is a program called "CVAC" which allows ROM-only (most of the later TI modules are NOT ROM-only) modules to be saved to disk and reloaded loaded for use with Super Space. The saved cartridges still require Super Space to run, a concept similar to Millers Graphics more powerful (and more expensive) GRAM Kracker.

Super Space is patterned after (and generally interchangeable with) the Super Cart module from Ron Gries, David Romer, and John Clulow of the Northwest Ohio User Group. The construction of a Super Cart requires a previously-owned Editor/Assembler module, and is more of the homebrew variety than Super Space. A game module must also be dismantled for Super Cart in order to get a usable circuit board for construction of the Super Cart and inclusion of the Editor/Assembler GROM. The building of both Kits requires soldering of delicate ICs, so building from Kit form should be attempted only with prior Kit-building experience.

Although the Super Space module comes with the Editor/Assembler GROM inside, neither the Editor/Assembler disk nor E/A manual is included. The E/A disk includes the actual editor and assembler, so for heavy E/A use that disk will be needed from another source, possibly TI itself.

Some programs already modified for use with "Super Space/Cart" include Edgar Dohmann's Superbug II (an improved version of TI's public domain Superbug, \$10 for diskette and manual), a disk of software from David Romer is available for \$6, and Paul Charlton's Fast-Term, in a compressed version. Dohmann also designed the Super Space module. When these programs reside in the module, loading time is cut down drastically due to the speed of RAM access (and the slowness of disk access).

Super Space is a Super Cart with the whistles and bells of documentation and the extra disk included; both are worthy of consideration if you are interested in the capabilities of a "super module." The module, disk and manual sells for \$49.95, assembled. The Kit is available for \$42.95 and the disk and manual alone are \$14.95. DataBioTics is the distributor of Super Space.



**MAIL ORDER
MADNESS!**

By Randy Hale

Ozark 99'ers User Group



Like so many other people, I purchased my TI-99/4A Home Computer after the date Texas Instruments discontinued production. There were many reasons for my purchase of

See "MADNESS", Page 8



THE MISSING LINK

Review by Bill Gaskill

REPORT CARD	
PERFORMANCE	A
EASE OF USE	A-
DOCUMENTATION	C+
VALUE	A+
FINAL GRADE	A+

The Missing Link (TML), which was written by EZ-KEYS author Harry Wilhelm, is an assembly language program that gives Extended Basic users and programmers access to the 99/4A's bit-mapped graphics display mode. Programmers with the ability to work in assembly gained access to this mode when TI brought out Editor/Assembler, but it has never been directly accessible to Extended Basic programmers. TML has changed all that. You can now write programs in Extended Basic that display the same kind of stunning detail and graphics that appear in programs like Parsec or MunchMan. Even if you are not a programmer, you can still benefit from TML through applications that are written in the TML environment.

THE PRODUCT:

The \$24.95 (plus \$2.50 S/H) package comes with a SS/SD diskette and a laser-printed, 30-plus page manual. There is no specific loader provided, just RUN "DSK#.TML" is all that's required. You must have a 32K memory expansion card or unit, and either TI's Extended Basic V110 or the Triton/MG Super Extended Basic module. At least one SS/SD disk drive is required.

SUPPORT:

The Missing Link is warranted for a 90 period from date of purchase, with a \$5.00 replacement fee required after the 90 day warranty has expired. No upgrade policy on the program has been announced to my knowledge. The usual Texaments upgrade policy offers upgrades at 40% of the original purchase price with the return of the original diskette. Free support after the sale is offered by Texaments via queries that are addressed to the author, through Texaments.

OVERVIEW:

The Missing Link is a programming environment that supports the creation of peripheral applications in much the same way that TI-Base does through its command file programming language. The "platform", in this case TML, provides the environment and the appropriate commands to access that environment, then you provide the custom code by writing your programs using TML supported statements. With the introduction of TML the Extended Basic programmer has a powerful new tool for professional application development with high-res graphics, and the Extended Basic user has the ability to access those applications, from nothing more than the Extended Basic module (and 32K memory of course).

A program called PaperSaver, that comes on the TML disk, will give you a superb idea of what I mean when I use the term "professional application development". PaperSaver is a multi-window, multi-font program that displays a "preview page" of a formatted TI-Writer document. Along with the display of the page, which shows exactly how the document will look when printed, two other windows on the same screen allow you to edit the contents of the page or just read it if you like. Of course you can print it too. This is ALL done with an Extended Basic program. If you buy the \$3.00 demo of The Missing Link you get to see PaperSaver in action too, though it is not the full-bore program.

FEATURES:

TML is feature-laden, but not intimidating. It supports windows, multiple colors, multiple fonts, varying text formats, Cartesian Graphics (lines, circles, boxes etc.), TI LOGO-like turtle graphics, Sprite Graphics, it both loads and saves TI-Artist pictures and it even has a single-density screen dump feature that you can see in use in the Mutual Fund Performance program that accompanies this article. While you will have to learn how to "tweek" The Missing Link to make your XB programs fit it's environment, you DON'T have to learn a new programming language to take advantage of all of the powerful features that it offers. The list below gives you an idea of the command structure required.

CALL LINK("CLS")-clears the screen.
 CALL LINK("COLOR",16,5)-makes the screen blue with white text.
 CALL LINK("PE")-sets the status of the pen (that you draw with) to pen erase.
 CALL LINK("WINDOW"r1,c1,r2,c2)-defines the upper left then lower right corners of a window.
 CALL LINK("PRINT",row,column,string, number or string variable)-displays text or numbers on the screen.
 CALL LINK("INPUT",row,column,string,number variable,length,prompt string)-accepts input from the screen, with input parameters for length and suggested responses)

As you can see, there is not a lot of mystery to the commands. Except where features unique to The Missing Link are called, like CALL LINK("PIXEL",row,column,FG color,BG color), the CALLS are much like most of the 40 Column display packages available for the 99/4A. Creating the commands with that kind of familiar structure is a credit to Harry Wilhelm's foresight, and it makes the package that much friendlier to the first-time or novice user.

PROGRAM OPERATION:

You don't have to be a wizard to figure out how to use The Missing Link, or even how to set it up if you want to change some of the default parameters. That which isn't clearly explained, or already obvious on the screen displays, is covered well in the manual when it comes to

the mechanics of getting the program up to speed. After typing in OLD "DSK1.TML" and RUN or just RUN "DSK1.TML" you are prompted to choose between Myarc or TI controller cards (because it makes a difference on how many files you can have open at the same time) and then whether you want to use the 16 color mode or the two color mode. That's about it. If you want to change default fonts or other parameters the screen displays are again functional and the manual answered any questions that I came up with.

PERFORMANCE:

The Missing Link proved to be a flawless performer, with no crashes or lockups or any other unwanted surprises. Speed is on par with what an Extended Basic program without TML can produce. I saw no indication that beeps, honks or any CALL SOUNDS are supported by The Missing Link.

One of the things that you are advised of right up front with TML is how much of the VDP RAM (Stack) is taken up in gaining access to that Bit-Mapped Graphics mode through Extended Basic. It's a lot. Enough so, that you will have to watch your use of string variables in program design. There just isn't a whole lot of room left for large arrays and such. So sloppy or indiscriminate use of string variables won't cut it.

EASE OF USE:

With the exception of a couple of programming things that I couldn't find in the manual, I found TML pretty painless to use. One of the biggest reasons for that is the fact that I already program in Extended Basic, so I am not really learning a new language. I am simply taking advantage of the enhancements to Extended Basic that The Missing Link has given me. TML scores high in ease of use because Harry Wilhelm has opted to make virtually all of the power of the program available through the familiar CALL LINKS and CALL LOADS that I grew up with.

DOCUMENTATION:

Despite that fact that The Missing Link comes with 31 pages of detailed instructions, there were still some questions that I couldn't find the answers to. The biggest one was how to convert the Row and Column positioning that I am used to using in the XB Graphics mode, to the dot-row/dot-column designations required for TML screen display and input. Harry Wilhelm provided the answer to this by explaining that I needed only multiply the graphics row or column number times 8 and then subtract 7 to come up with the equivalent bit-map position. In other words, the formula is the same as that used in determining Sprite positions. This applies only to the default 8 X 8 font though. The other fonts require some experimentation on your part.

I also found experimentation necessary when designing and then using windows. I discovered that a window must be called before it can be used, and it is called by

redrawing it. So I discovered that routines to draw and use windows are best placed as CALL SUBs at the end of your XB program or at least as subroutines that are accessed with a GOSUB and RETURN, because they are accessed often. Other experimentation revealed at least a workable way to do inverse video. I couldn't find instructions on that in the manual either, though the manual does make reference to the fact that it can be done.

Overall, the manual covers a lot of ground, but it skims over some of the material too quickly. It ignores some areas all together and proved to be a frustration to me at first. From an appearance aspect, the manual is on par with some of the best produced in the TI community. From a content point of view I rate the documentation as average for the most part and inadequate in a few areas. The manual is not TML's strong point.

CONCLUSION:

The Missing Link is a VERY impressive programming environment, that cries out for some innovative applications along the line of the PaperSaver program that comes with the package. Though TML sports a self-professed limitation in the amount of stack space available for string use, the author shows us how that limitation can largely be overcome through the judicious use of DATA statements and recurring use of variables. With nothing more than familiar Extended Basic-like programming statements, anyone can create superb graphics or convert existing XB programs to the TML environment. I took the Mutual Fund Performance program that appeared in the December 1988 MICROpendium and converted it to the TML environment in less than an hour, and that was while I was still learning the ins and outs of TML.

While I can't honestly say that The Missing Link has the same impact on the TI community as the introduction of the Editor/Assembler package did back in 1981, I think it comes close. The Missing Link has a much broader audience. I would guess that most every 99/4A still in use has the Extended Basic module plugged in most of the time. If this statement fits in your case, then The Missing Link is for you. It is an excellent application that is sure to find a place in your software library.

ROTCR TTP? ROTCR TTP?

If you have the speech synthesizer and the TEII cartridge here is a trick for debugging programs. All you have to do is enter your program, type LIST "SPEECH" and hit enter. The computer will read your listing back to you!

If you have the TEII cartridge and the Speech Synthesizer type in the program on page 37 of the TEII manual. Try entering strings of K's, Q's, U's, W's, J's, or X's for different sound effects. Mix them for more sounds.

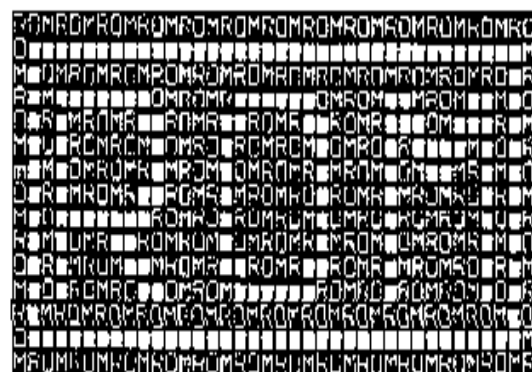
DISK DRIVE BITS AND BYTES

By Ken Hamel

ROM Newsletter

USERS GROUP OF ORANGE COUNTY

May 1988



Well now, let's see here...if I dig around this closet for awhile, I think we got something on...Yep, here it is, disk drive bits and bytes.

First, a little bit/byte of history...I vaguely recall back in the dark ages of pre-minicomputing in the the late 1960's, the earliest small computers, if we can call them that, only spoke Fortran and used punched paper tape for storage of information. The holes in the tape stood for logic 1 and the absence of a hole for logic 0. I remember when I was in college, that paper tape and all the neat little holes made swell confetti that was a hell of a mess to clean up if you had your room "papered" by gremlins with the stuff. Them little yellow dots would stick to everything in the dormitory rooms during the winter because of the static electricity. Needless to say, the use of paper tape was bulky, noisy, because the machinery had to punch all those holes in the tape, slow, not easily corrected, and messy, especially if you were the dorm nerd.

Then came magnetic tape. This was a major improvement. It was convenient and cheap, could hold large amounts of data and was faster than the paper tape. The one major problem with this is well known to all frequent users of the TI 99/4 cassette tape OLD CSI loading routine, the tape operated in sequential fashion. If the user was at the end of a tape and the program he wanted was at the beginning, he had to wait a frustratingly long time for the tape to rewind. This is almost as bad as waiting for Multiplan to Recalc!

The early '70's saw the invention and use of the floppy disk drives. The idea was simple: instead of tape, use a rotating disk and instead of waiting for the tape to rewind, move the read/write head directly over the location of the desired program. This is just as one would move the tone arm on a phonograph to select a certain tune from a LP that contained several other tunes.

It wasn't until 1973 when the Big Blue (IBM) became the first company to announce the use of a flexible disk with read/write capability into a system. The diskettes were 8 inches in diameter and the drives were about as big as the 99-4/A console. The latest thing in 1979 was to have a

\$50,000, 64K memory, word processing computer in your office typing pool with two of these drives built in. Currently these beasts are becoming increasingly rarer but you can still see a few of them around.

The 5 1/4 inch disk drive as we know them were introduced by Shugart Associates in 1976. This name should be familiar to all 99er's with the TI PHP 1250 drives for the Peripheral Expansion Box (hereinafter referred to as PEB). TI used the Shugart Model 400L drives for this peripheral...Nothing like the best!

Okay (for you Forth programmers...OK...for Ramon...AV), now that we got the closet cleaned out, let's cover a few things on the Shugart 400L drive. If you have one of these you know this is a single sided drive, capable of storing data on 40 tracks, up to a maximum of 90K with TI equipment. This is a very well built and reliable unit, like the PEB, almost bulletproof, and should last for a long time under normal home computer usage. It is one of the quietest operating drives manufactured due to the design which uses the stepper motor and a snail cam to move the read/write head over the disk. The drive is also equipped with a solenoid operated pressure pad which presses the disk unto the head only during read/write operations. Only a few manufacturer's provided drives with this extra. This is a nice feature since it keeps the head and diskettes from unnecessary wear. The TI disk system spins all drives connected to the controller even though it is only accessing one of the drives. If it wasn't for this solenoid, any disks in the other drives would also be rubbing against the heads unnecessarily. The distinct click of the solenoid can be heard whenever the drive light switches on or off during disk operations.

About maintenance...Keep in mind that it is usually the mechanical parts in a computer system that break down or wear out first. Disk drives are many times the first things that go on the fritz. For the average home computer user, maintenance should be limited to periodic cleaning of the drive head with one of the commercial head cleaning kits and maybe annual removal from the PEB or other enclosure to clean out any accumulated dust.

One must avoid the temptation to oil the drive, especially the rails on which the read/write head slides. The drive is designed to operate without oil on the rails. Oiling can actually gum up the drive. This is due to the fact oxidation will cause a thin layer of oil to become gummy. The effect is even worse when the oil is heated or warmed. To this gummy substance, one only needs to add dust which is normally found in most environments, and what one now has is one helluva mess inside the disk drive. This could keep the drive from operating properly and would require a major teardown to clean up. In the PEB the situation is even more aggravated because the airflow generated by that humongous loud fan that is keeping the cards nice and cool is sucking in air through the equipment, including any

airborne dust and dirt. Sort of reminds me of those TV commercials during the "Cold and Flu season" where they show all those cartoon germs and buggers flying around your head...

Equipment that is transported often or used heavily can be subject to troubles which show up as disk errors during read/write operations. One of the culprits is disk drive rotating speed as covered in Ron Rutledge's article which was reprinted in the April issue of the ROM. The other more likely problem of disk read/write errors is head alignment. On the 400L Shugart, alignment is easily accomplished in most cases by loosening the locking screws on the stepper motor and slightly adjusting it back and forth until it reads the disk that you want it aligned to.

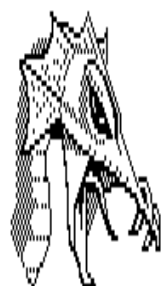
For instance, let's say all your other 99er buddies have disk drives that can read a particular disk. Yours can't read the disk at all. The chances are good that your drive is no longer in alignment. What you need to do is to use that disk to line up your drive. If you really want to get picky, the ultimate test is to get one of those industry standard diskettes and calibrate your drive to that. I find that is not really necessary in most cases and especially for single density operation. I have had satisfactory results on 40 track drives just by using a TI original disk version of a program to align the head. If you can get your drive to read original unmodified TI disks, the chances are good that your alignment is okay...(OK).

I have to caution you that this is not something to do if you are not mechanically inclined or when your wife's calling you to dinner. There could be a considerable amount of adjustments involved, depending on how far out of whack the drive is. One time I bought a used double sided drive which took about an hour to align because both heads were out of adjustment. I learned how to do it by tinkering, but then again, I also repair antique clocks as a hobby. You might say the same caution should go for Rutledge's hints. If you do not fully understand what he is recommending, then...Don't do it! Above all, a good rule is: Don't fix what ain't broke!

Rutledge's article also covered the special resistor pack required to connect up a second disk drive to the PEB very well, but he failed to mention that the resistor is only needed if you are using the 400L as Drive 1. If you have another brand or model drive, and are using it as Drive 1, then the special TI resistor is not needed. In any event, the required resistor is readily available at any electronics store (you all know my favorite). Also, he mentioned a required adapter board. This special board is only required if you use the original TI hookup. This hookup included special keyed connectors that allowed connecting the cables in a certain configuration to control the drives without doing any internal jumpering at

the disk drive strapping pack. A cable and jumpers could be easily made up to run any number of add on drives up to the maximum of 3 for TI controllers without the adapter board. All you need is some 34 position connectors, some cable, a vise and a little bit of know how.

Well, that's all for now, next time, will try to dig information on TI manufactured disk controllers out of the inner sanctum of the closet for your perusal. In the meantime, be careful out there and tell them you saw it FIRST!...in the ROM...Ken H.



WYVERN

Review by Erin O'Conner
Data/Ware Development
99'er magazine
October 1983
Volume 2, Number 12



Those of us who majored in English will remember struggling through Beowulf, the Old English epic poem from the 7th century. As we all remember, Beowulf was killed by a Wyvern, a mythical, dragon-like creature who guarded a mound of treasure. In Wyvern, Data/Ware's version of the old struggle between dragon and hero, your goal is the Wyvern's treasure, which you seek in a random succession of three rooms. You accumulate points as you escape each chamber with treasure.

Reinforcements on the way

Beowulf battled his dragon alone, but we latter-day heroes need help. In Wyvern, you go into battle with three men and can call on as many as six if you marshal your forces with skill. Your first 1500 points wins you an additional man, and every 2500 points after that wins you another, up to a maximum of six men at any one time. And don't feel sheepish about calling in these reinforcements: Our modern-day Wyvern has allies too - a giant spider and troops of baby dragons. We don't think he needs them. He swoops down on the man who enters his chamber with a terrifying swiftness, and if the Wyvern himself doesn't kill your hero with his poisonous touch, his independent fire blast will probably incinerate him. This Wyvern doesn't stand on ceremony either. He never gives an invading hero a chance to get his bearings but is upon your man the second he crosses - no, approaches - the threshold.

In the two other chambers of the Wyvern's citadel are his allies - lesser threats who seem to exist mainly to give your heroes a fighting chance. If your man doesn't drown on his way across the moat, he must take his chances in one of the castle's three rooms. If he's lucky, it won't be the Wyvern's; perhaps he'll find himself in the baby dragon chamber, where sprite-generated troops of dragons

move across the screen in a medieval freeway formation reminiscent of Frogger. On at least the early levels, your hero will be able to negotiate his way through the dragons to pick up the necklaces at the top or bottom of the room. On the first level of play, he can pick up a total of 3 necklaces in any one of the three rooms; on succeeding levels, each room contains a maximum of four treasures. He can't escape a room until he's picked up at least one gem. He advances to the next level of play when he's taken at least one treasure from each room.

If your hero, or one of his avatars, escapes the baby dragons and fortune still smiles, he'll find himself next in the spider's webby chamber. Here he must make his way to more treasure by out-maneuvering the attacking giant spider and advancing around or through the treacherous spider's web. The cleverly designed m-shaped spider moves about his room spinning even more bits of web as he goes. If your man perches on the web, he may break through it after a short wait, but the spider's advance toward him will accelerate as he sits there.

We found that the shift from room to room (from game-to-game really) keeps interest high, as does the difficulty of the game in each room. Short transition times between rooms and quick waves of reinforcements maintain a good momentum of play. One complaint: The Wyvern in his chamber is too formidable a foe. On even the lowest levels of play your man often doesn't even make it into the Wyvern's chamber, and your rapidly diminishing reserve forces (displayed at the top of the screen under your score) fare no better. Several of us played the game, and only our ace player was able to keep her men - or one of them - alive to escape with treasure.

The best defense

Data/Ware's documentation - short on background story and long on helpful hints for loading and playing the game - seems to acknowledge that the Wyvern's chamber presents a difficult level of play when it suggests (1) that you pay attention to the unique entrance sound for each room so that you can point your man in some evasive direction even before he enters the room, and (2) that in the Wyvern's room, the best evasion is constant motion in all eight directions that your joystick allows. Imitation may be the most effective means of defense. We found that we could best evade the Wyvern by emulating his sweeping, triangular flight pattern which goes beyond the boundaries of the room.

As you progress to the upper levels of play, the Wyvern's attack speeds up; the baby dragons move along their freeway in thicker and faster formation; and the spider spins more complex and stronger webs. (Your man must wait longer to break through.) At the same time that your foes get faster and offer more frequent attacks, your poor heroes tire and slow down. While this is in keeping with the story logic, it doesn't seem quite fair; a skillful

player with quick reflexes can feel hampered and even hopeless as his heroes respond with maddening slowness to intensified attacks. Given this limited ability to respond, positioning rather than speed is the only tactic left a player.

We liked the ingenious simplicity of Wyvern's graphics. The citadel is quite adequately suggested by a stone-like outline. The Wyvern himself is a graphics triumph, looking like the real thing, though the action of his fire blast seems oddly independent of its owner. But even if the behavior of the fire blast is a departure from traditional accounts of dragons, it nevertheless contributes to the high level of difficulty you'll encounter in the Wyvern's chamber. Some of us felt that the baby dragons looked more like baby dragonflies, but this is just a quibble in our generally high regard for Wyvern's inventive use of sprites. The treasure is recognizably made up of necklaces and rings, and in a room crowded with baby dragons or a fast-growing spider web you'll find yourself grateful for a treasure large enough to spot easily.

Wyvern's scenario is a bit sketchy, but we didn't mind the documentation's spending so little time on "the story." The brief paragraph devoted to a history of the Wyvern's citadel and treasure is really all that's needed for so familiar a tale, and it's a refreshing change from the poorly written elaborate narratives of so many fantasy games. The documentation moves quickly from establishing the scenario to an orderly sequence of clear instructions and strategy tips.

The strategy tips are especially appreciated, as Wyvern presents a combination of difficult games that verge on the impossible. Our players found this more challenging than discouraging, and we think you'll want to cross that moat and undergo the Wyvern's varieties of hospitality too.

YN

"MADNESS" continues...

this particular brand, not the least of which was the unbelievably low price. Here was a computer that had just months before sold for nearly \$300 now selling for \$69.95. It was too good to be true. What an understatement!

Of course, I was also influenced by several people I knew who owned a TI and the promise of what seemed to be an unlimited supply of public domain software. What I hadn't reckoned with was the problems of buying hardware to upgrade my system once the computer bug had bitten. It was then I was introduced to the world of MAILORDER.

It all began so innocently. First a friend showed me a catalog from TENEX. Then offers of free catalogs seemed to spring up from all sides. TRITON, UNISOURCE, TEX-COMP; all beckoned me with the promise of the lowest prices with the greatest selection. Then the ultimate in mailorder, THE COMPUTER SHOPPER!!

It was so easy. Call a toll-free number, give them a credit card number, and, within a few days, here came UPS delivering the goodies. Like I said, easy. WELL....

Not always. Through trial and error I discovered pitfalls along the way. One company seemed to always take forever to deliver; another would deliver in just a few days, but not exactly as you ordered. As can easily be guessed, it can become quite frustrating. But such is life for the owner of an "orphaned" computer.

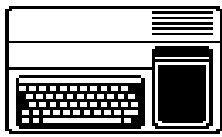
My first experiment with mailorder was for a printer. I did not own a PE box and was still working with cassettes, therefore, my choices were limited. After several weeks of research I selected the brand of printer and the interface needed, leaving only the decision of where to order. Local outlets were either much too high in price or could not provide the interface. Finally, I settled on MIDWEST MICRO PERIPHERALS in Ohio. It was a very pleasing choice.

Next came the PE box. Not such an easy chore. I obtained catalogs from six different TI specializing firms and studied them continuously for a month. The deciding factor came down to cost. A spring catalog from a west coast firm arrived advertising a price nearly half of all the others. Great, huh! No, not entirely. There were a few glitches, such as a long delay in shipping, a slight error in what was shipped (actually to my favor after all was said and done), and extreme difficulty in communicating during several lengthy, toll-free calls.

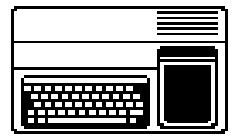
Here are a few dos and don'ts:

1. Try to order from a firm with a toll-free number. If they invested that much money they are probably pretty safe.
2. Check with friends and other club members to see what luck they have had with a particular firm or with a piece of equipment. Learn from their mistakes or good fortune.
3. Don't jump right in to purchase a new item just because it sounds good. If it is good then someone else might carry it at a lower cost.
4. Don't conceal your misfortunes. Share the information so others won't get burned also.
5. If you order by mail rather than phone, use a postal money order. It's insured and personal checks create long delays.
6. Last but not at all the least, avoid as much as possible ordering by phone from a firm that hires people strictly on their inability to converse in the English language. It is difficult enough making yourself clearly understood on a telephone without trying to do so with someone who couldn't understand you face-to-face.

So there you have it. A quick recitation of my mailorder experience. Those of you who have shared this experience can sympathize; those who are yet anticipating ordering, the adventure has just begun.



Yesterday's News Information



Yesterday's News is a labor of love offered as a source of pleasure & information for users of the TI-99/4A and Myarc 9640 computers.

TI-99/4A HARDWARE

TI99/4A COMPUTER
MODIFIED PEB
WHT SCSI AND SCSI2SD
MYARC DSQD FDC
MYARC 512K MEMORY
HORIZON 1.5 MEG HRD
TI RS232
CORCOMP TRIPLE TECH
1 360K 5.25 DRIVE
1 360K 3.50 DRIVE
1 720K 5.25 DRIVE
1 720K 3.50 DRIVE

TI-99/4A SOFTWARE

PAGEPRO 99
PAGEPRO COMPOSER
PAGEPRO FX
PAGEPRO HEADLINER
PAGEPRO GOFER
PAGEPRO FLIPPER
PAGEPRO ROTATION
PIXPRO
PICASSO PUBLISHER
BIG TYPE
TI ARTIST PLUS
GIF MANIA

PC HARDWARE

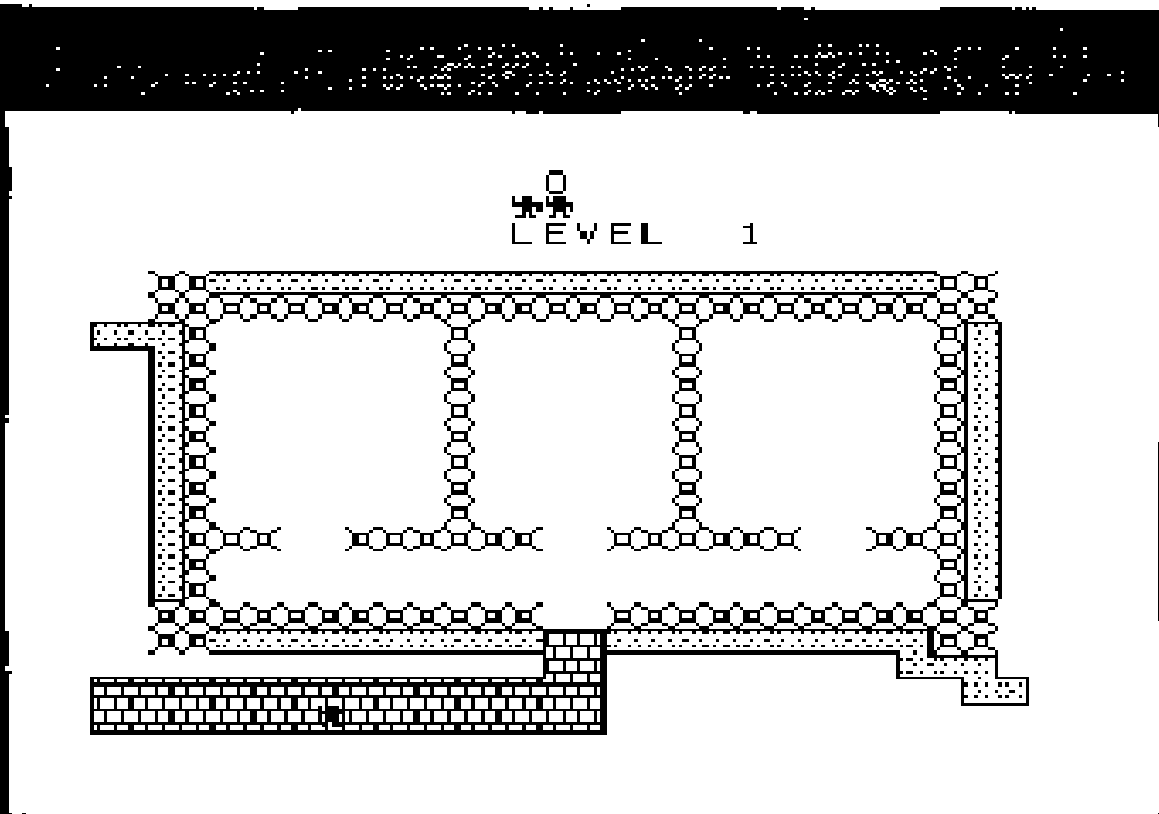
COMPAG ARMADA 7800
COMPAG ARMADASTATION
SAMSUNG SYNCMASTER

PC SOFTWARE

DEAD WINDOWS 98SE
FILECAP
PRNZPENS
IRFANVIEW
ADOBE DISTILLER
ADOBE ADOBE ADOBE

Yesterday's News is composed entirely using a TI-99/4A computer system. It consists of 11 PagePro pages which are "printed" via RS232 to PC to be published as a PDF file.

NOW PLAYING



color monitor

