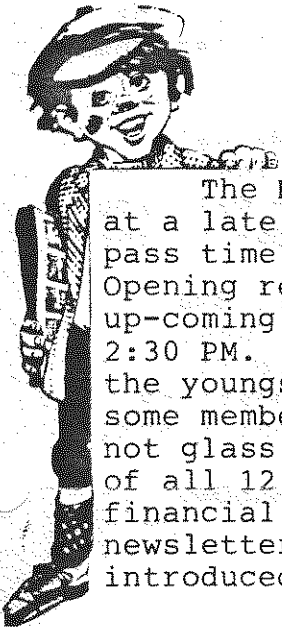


ISSUE #6 JUNE 1987

FOR THE RECORD

by Frank N. Zic
for Ed Bittner
Recording Secretary



The May meeting of the West Penn Ninety Niners was called to order at a late 7:15 PM by President Scott Coleman, (John was at his favorite pass time again, keeping us better informed than just about any group). Opening remarks were centered around last months news letter and the up-coming CLUB picnic on June 14th (Please attend if you can). Time 2:30 PM. Plenty of ice will be provided as will toys and prizes for the youngsters. Come on out for just a few hours at least and meet some members of the P.U.G. and Airport U.G. Please bring plastic and not glass containers and glasses. Scott said that there was a sell-out of all 12 Surge protected outlet strips for \$9 each. Jan gave a quick financial report and will have a more complete report in the next newsletter. Good job on the goodies again Jan. John at this time introduced Dr. and Mrs. Francis Heck (looking our group over).

Old business discussion centered around the purchase of a TI system for the club. In particular the purchase of Darren Leonard's entire unit (less monitor). Included were some 400 filled disks. He was asking \$550 and yours truly made a motion that the club purchase the entire system. Motion seconded and approved by all.

New business comments were made about the various newspaper ads placed to try to build up our total membership. By the way the meeting was attended by 32 members, a nice turn out indeed for our new club (about 50%). Lots of thanks for this showing goes to our very energetic center core of officers and their helpers. Thanks to all for being interested. Let's keep on enjoying our so called obsoleted computers. A disk catalog will be obtained from the L.A. users group with an exchange of disks in mind. John brought in the recently received newsletters from other clubs. This is a nice bonus we should all utilize (lots of good info available).

Well Ed, this time you might complain on how your article was written but not on how the notes look. Maybe I'm gaining (hum maybe not). Until next time may the good 4's be with you.

Respectfully (but hesitatingly submitted),

Frank N. Zic

I HOPE THAT YOU WILL JOIN ME IN EXPRESSING OUR APPRECIATION AND SHARED SORROW FOR JAN TRAYERS AT THIS TIME, IN THE RECENT DEATH OF HER GRANDMOTHER, WHO SHE HAS BEEN SO CLOSE TO.

RATHER THAN HAVE A DETAILED REPORT ON THE FINANCES OF THE WEST PENN 99ER'S AT THIS TIME, I WILL GIVE YOU JUST THE BALANCE OF CASH ON-HAND AND IN THE BANK.....\$587.20 REMEMBER THAT WE STILL HAVE SOME DISKS TO SELL AND THESE WILL BE AT THE NEXT MEETING FOR ANY WHO STILL NEED SOME.

WE HAVE AQUIRED ANOTHER WHOLE SYSTEM, AND SOON IT MAY EVEN BE POSSIBLE TO STORE BOTH SYSTEMS AT THE CHURCH. THIS SHOULD NEARLY ELIMINATE THE NEED FOR SOMEONE TO BRING IN THEIR OWN SYSTEM EACH MONTH, WITH THE POSSIBILITY OF DAMAGE BEING DECREASED.

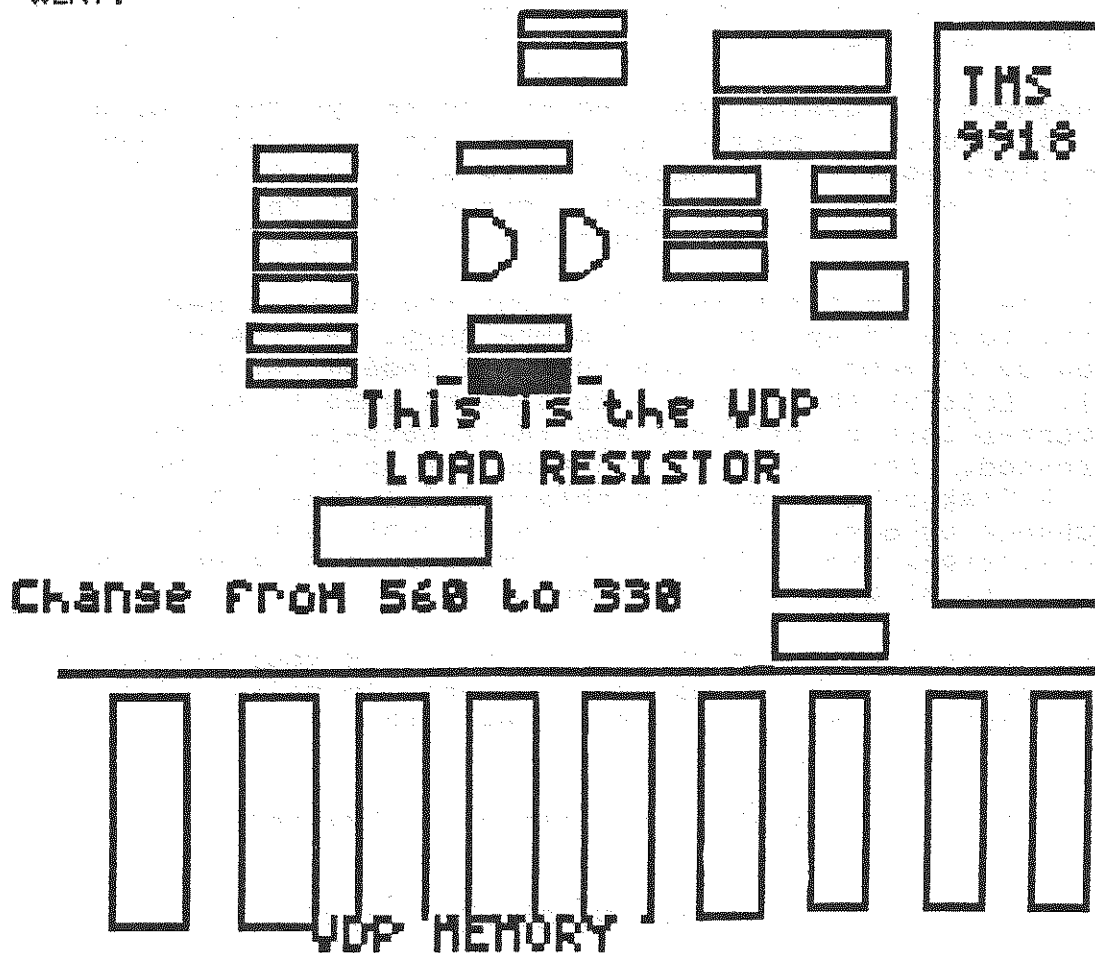
Improved Video

by, Bob Lawson

In my travels through the Texas Instruments Manuals, specifically the TMS-9918,28,29 Manual, I read,"The load resistor (RL, pin 36 to ground) defines the sharpness of the edges on the video signals. A lower resistor value gives faster fall times and a sharper picture." Hmm! I don't remember any 330 ohm resistors.

Well, I pulled out the "TI Console and Peripheral Manual, and sure enough, R212 pin 36 to ground was 560 ohms per the schematic. The next step was to check out a console, and well you guessed it, R212 was 560 ohms, not 330 ohms as recommended in the TI Manual!

Next step was to try some different value resistors, 330 ohms seems to be about the best common value resistor to use. I wonder why TI chose to use 560 ohms. I did find one old TI Manual which recommended 390 ohms (1979), but they're sometimes hard to find in 1/4 watt. This 30 cent change gives about a 40%, that's right, I said 40% improvement in the picture. The improvement is so good, you'll wonder where the WHITE SHADOWS WENT.



SOME SUPPLIERS OF STUFF FOR THE T.I. 99/A.....
by John F. Willforth

I feel that some of you may have heard of a product or seen something that was demonstrated at a U.G. meeting, and would like more information about this item, or would like to sleep at nights, and pay for something that you are now using, but don't know where it came from. I've compiled this list of vendors, and hope that you find it useful.

ENHANCED PC PURSUIT SERVICE now available.
GTE TELENET COMMUNICATIONS CORPORATION 1-800-368-4215 8AM TO 5PM M THRU F
12490 SUNRISE VALLEY DRIVE 1-800-835-3001 24HRS
RESTON, VA 22096

DATABASE 1 AVAILABLE.
SPC SOFTWARE COMPANY
BOX 121
BRIGHTWATERS, NY 11718 1-516-587-5462

CONSOLE, ETC, REPAIR.
TEXAS INSTRUMENTS REPAIR DEPT.
2305 NORTH UNIVERSITY AV.
LUBBOCK, TX 79408 1-800-TICARES

PARTS YOU WOULD LIKE TO ORDER.
TEXAS INSTRUMENTS INC.
ATTN. DEALER PARTS
P.O. BOX 53
LUBBOCK, TX 79415 1-806-741-2265, -2268

INTERNATIONAL 99/4A SIG FOR EDUCATORS PROPOSED.
INTERESTED PERSONS CONTACT:
MRS. BONNIE L. SNYDER (OR TERRIE MASTERS OF L.A. UG)
62 S. ROOSEVELT ST.
COLORADO SPRINGS, CO 80932 1-303-578-1583 (AFTER 5PM COLORADO TIME)

VIDEO TITLES AND SUPER XBASIC ON DISK. VIDEO TITLES I, II, III ACCELERATOR,
J+KH SOFTWARE III, AND VIDEO TITLES COMBO.
4911 SOUTH 31st ST. SUPER EXTENDED BASIC AND LISTING
ARLINGTON, VA 22206-1655 1-703-820-4131 MULTI-DISK INFORMER

FAST-TERM AUTO DIALER.
DAVE JOHNSON \$2.50 = BLANK DISK FOR PROGRAM
2109 PULLMAN CIRCLE
PENSACOLA, FL 32506 1-904-453-4667 (24 HR BBS)

SOME GOOD STUFF... FONT WRITER, HI-GRAVITY, PRE-SCAN TI, T.O.D. EDITOR
ASGARD SOFTWARE GRAPHX COMPANION, ARTIST INSTANCES, TOTAL FILER
P.O. BOX 10306 NEW IN JULY! "LEGEND" AN ANIMATED ADVENTURE!
ROCKVILLE, MD 20850 1-301-559-2429

RAMSOFT ENTERPRISES
1501 E. CHAPMAN AV. SUITE 338 RAM-LABEL AND TC-MAIL
FULLERTON, CA 92631 1-714-738-5665

T.A.P.E. Ltd. MECHATRONICS PRODUCTS:
1439 Solano Pl. * EXTENDED BASIC II + * EPROMER * MORE.
Ontario, CA 91764 1-714-989-9906

Forth Interest Group
P.O. Box 8231
San Jose, CA

Complete support for the FORTH enthusiast.
95155 1-415-962-8653

IT'S HERE, A LISP INTERPRETER (as fairware).....

Charles Rentmeesters
410 N. Carroll St.
Madison, WI 53703
1-608-256-0725

Send \$15. and one disk/mailer. Incomplete but will be updated. FAST! Has 44 commands, supports recursion, includes brief primer.

SOFTWARE SUPPORT FOR THE "GENEVE"...
AEI
6700 Belsrest Rd. Suite 723
Hyattsville, MD 20782
(no phone in at this printing)

AC-BASIC, AMOS, AC-PASCAL, AC-FORTRAN, either available now, or nearly ready. (call).
Soon to release 360K upgrade for the original HORIZON RAM DISK.

QUALITY 99SOFTWARE
1884 Columbia Rd. # 1021
Washington DC 20009-5161
1-202-667-3574

DM IV, DRAW n' PLOT, SCREEN DUMP II,
DE99, SPAD XIII, MUCH MORE. CALL OR
WRITE FOR FREE CATALOG # 23W

AMNION HELPLINE
116 Carl St.
San Francisco, CA 94117
1-415-753-5581

"A NON-PROFIT VOLUNTEER EFFORT, FREE HELP TO
" ORPHAN + CLONE " COMPUTER USERS"
9 to 4 (Pacific Time), Monday thru Saturday.

DISK ONLY SOFTWARE
P.O. Box 244
Lorton, VA 22079
1-301-369-1339
Touchtone order by dialing:
1-800-446-4462 and at tone
enter "897335" for recorded order
message.

9640 (GENEVE), Modified Myarc 256K and 512K cards for the 9640, DELPHI Starter Kit and Help Disk, ORPHAN SURVIVAL HANDBOOK, Programs for the TI Home Computer, and Intro to Assembly Language for the TI, LOTTO MANIA, PRO TEST UTILITY, DRAGON STORM, PIRANAH, CURRENCY EXCHANGE UTILITY, FLYING FORTRESS FLIGHT SIMULATOR, KARATE, EPROM for HORIZON RAM DISK, GRAM PACKER, XB:BUG, and TI WRITER TIPS AND TRICKS

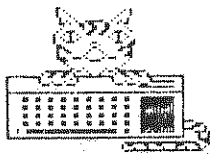
DELPHI You can use the TI Information Network SIG on DELPHI by dialing your local Tymnet or Telenet number. At the "Please Log In" or similar prompt, enter DELPHI. At "Username", enter "JOIN99". At "Password", enter "TELEDATA". For \$10. you receive a membership account, and 1 hour online credit. For \$29.95, you receive a User's Manual, Command Card, Membership account, and 3 hours of online credit. Rates are \$7.20/hr. 300-2400 baud and no network line charges.

PRINTERS APPRENTICE
McCann Software
P.O. Box 34160
Omaha, NE 68134

is written in Forth and handles only it's own fonts, but has a scheduler function, which lets you have a lot of freedom in where you put graphics in your document. Don't let yourself be a captive to convention because of it's incompatibility to a font other than it's own! \$22.50

EPROM for 128K FOUNDATION CARD, which allows you to run the new MYARC EXTENDED BASIC II software. You can get the EPROM for \$10. IF you purchase the EXTENDED BASIC II. MYARC * also Myarc carries complete line of controller products for the TI and the New GENEVE (9640)
241 Madisonville Rd.
Basking Ridge, NJ 07920
1-201-766-1700

CORCOMP.....Has some new things out. The "REAL" TI/IBM connection 2211-G Winston Rd..a program on cartridge to move ASCII files from a TI Anaheim, CA...DSDD disk to an IBM disk and vice versa, all on your TI 92806....system ! Corcomp has a full line of controllers and 1-714-956-4450..... support.



TIGERCUB SOFTWARE
156 Collingwood Ave.
Columbus OH 43213

TIGER CLUB SOFTWARE has introduced Nuts & Bolts #3, containing another 140 subprograms in merge format. Contents include 19 screen character fonts, etc.; 17 screen display routines; 6 screen formatting, 8 plotting, 6 joystick and keyboard, 32 math, 4 time and date, 10 input and accept, 9 string handling, 15 file handling, and 9 misc. routines. The 11 pages of documentation contain a programming example to demonstrate each of the routines. \$15. each for Nuts & Bolts #1, #2, #3.

ED. NOTE: These routines from Jim Peterson have been cited as the basis of many of the very best xbasic programs being used by TI'ers today.

KEYBOARD INTERFACES...(almost a P.C.).....(only BETTER !).....

RAVE 99 Co.
23 Florence Rd.
Bloomfield, CT
06002
1-203-242-4012

Installs in the TI console in place of the TI keyboard, and will allow a P.C./X.T. keyboard to (through the interface) drive the CRU chip in the same fashion as the Original TI keyboard, but without the many dual key depressions, and allows for a more uniform familiarity with other systems. Available with/without a keyboard, or in KIT form. Contact RAVE for current prices.

ML SYSTEMS
P.O.Box 268
Valley Falls, RI
02864

This is another choice for an interface for P.C/X.T Keyboard to the T.I. Console. This interface differs primarily in three areas. It is intelligent, and can have custom key encoding done easily, it does not require that the T.I. Keyboard be removed, and it is not available in KIT form.

ED.NOTE: Before you buy either, you should talk to some one who has used both, and make your decision.

HARDWARE MANUAL FOR T.I. 99/4A SYSTEM..... IT DESCRIBES:

The BUNYARD GROUP
P.O. BOX 53171
LUBBOCK, TX
79453
\$19.95

- * Console design
- * TMS 9900 H/W organization
- * Interfacing pitfalls
- * PEB Schematics
- * EXTENDED BASIC MODULE description and schematics.
- * Custom chip design
- * TMS 9900 instruction set
- * Console schematics
- * GROM simulator design

STATIC RAM CHIPS FOR RAM DISK, 32K, SUPER CART, DSR CARD, etc.:

MICROPROCESSORS UNLTD., INC.
24000 South Peoria Av.
Beggs, OK
74421
1-918-267-4961

6264LP-15 (8K x 8 Bit) chip 4 needed for 32K.
62256LP-12(32Kx 8 Bit) chip 1 Needed for 32K.
They also carry most dynamic rams at very good prices.

GREAT LAKES SOFTWARE, INC.
804 E. GRAND RIVER AV.
HOWELL, MI 48843

- * GENEVE
 - * Extended Business Graphs II
 - * JOYPAINT
 - * BANNER
- 1-517-546-0566

R.G.B. CONVERSION FOR YOUR T.I. CONSOLE.....

DIJIT SYSTEMS 4345 Hortensia St. San Diego, CA 92103

1-619-295-3301

Horizon Ram Disk.....
P.O. Box 554
WALBRIDGE, OH 43465
1-419-666-6911

Provides the perfect up-grade for your system. DSSD Disk equivalent with battery back-up. Very FAST! Comes as bare board w/manual/software, or assembled in either sssd or dssd models.

HEIM INDUSTRIES
P.O. BOX 296
CLIFTON PARK, NY 12065

Has a statistics program for the T.I. .
Requires 32K, xbasic, disk, and a printer.
\$19.95 + \$3.50 S/H

This list is not complete by a long shot. I will add to it as the information becomes available, and accumulates to a page worth. I don't want to use all the available space in this newsletter this month. If you have some, please contribute. JFW of WP99

GETTING ON LINE: AN INTRODUCTION TO TELECOMMUNICATIONS

Part Four: Software Packages - How to Transfer Data
By, Fred and Amy Mackey

The saving and sending of information over telephone lines via modems may seem awesome, but all it actually requires is some basic knowledge and understanding of several simple concepts. Now that your computer has properly accessed the database or BBS you are now ready to receive information from the "Host" computer, a procedure called downloading, or your computer can send a file to the host computer, a procedure called uploading.

SELECTING A FILE FOR DOWNLOADING

Bulletin board systems (BBS) and commercial information services (databases) are menu driven, which makes them user friendly, so don't be afraid to explore. After your computer is "connected" to the host computer, the host's menu will appear on your screen. Select the file transfer section, and look for and choose a file you would like to "download".

SETTING THE XMODEM PROTOCOL

After making your selection, you will need to select the protocol to be used for the file transfer. The protocol is merely the set of rules governing the file transfer that your computer and the host computer will agree to use. Select XModem as your transfer protocol.

SELECTING MEANS FOR ERROR CHECKING

If every part of the transfer does not work perfectly, errors will occur in the files you receive. In the case of a text file or a program written in basic, the error could possibly be easily seen and corrected. But, an error in an assembly or machine language program would be almost impossible to spot. This makes a method of error checking fundamental.

Therefore, some systems will ask you to select a method of error checking. The choices are Checksum, which is a method whereby a 128-byte section of data is transferred at a time, and checked out at both ends to make sure the sum of the hexadecimal values of all 128 characters is the same when received as when sent. The other choice is CRC, which is a method where one block of data is transferred at a time, and a polynomial calculation is made on each block before it is sent and again after it is received to see if the value is the same both times. There is only a one in 10 to the 12th power chance that it will miss an error.

SIGNAL TO BEGIN TRANSMISSION

After these selections are made, the host computer will prepare for the file transmission and wait for your signal to begin. The signal you input depends on the telecommunications program you are using (ie. 4A/TALK uses FCTN 9, MASS TRANSFER uses FCTN 7).

When you input the signal, your software will first ask you what storage medium you want the file transferred to. Most telecommunications programs allow the incoming data to be saved to the disk, a memory buffer (a block of memory temporarily being saved), or directly to the printer. After you make the selection, the transfer will begin.

BLOCK, RECORD, RETRIES

The host will send a block of data to your computer. Your telecommunications program checks the block, makes the CRC or Checksum calculations, and checks the figure sent by the host computer. If both are the same, the data was sent without error, and the next block is sent. On your screen you will see Block, Record, and Retries. Block and record state how much information is being transmitted. There are several records in each block of data. Retries indicates the number of times the host has to restart the transmission record. The transfer is restarted whenever an error is detected in the transmission. Most telecommunications programs will retry up to ten times before giving up.

SUCCESS!

Hopefully, the next thing you will see is "Successful File Transfer" on your screen. If the file was transmitted to your buffer, you should now dump it to a disk. If it was directly to a disk, it can now be accessed. And if it was transferred to the printer, well, the printer is probably still printing.

If the file transfer was unsuccessful, there are several things you might want to try.

- * Choose a different method of error checking.
- * Check to see if the disk you are transferring the file to has enough room on it to hold the file.
- * Try a different telecommunications program that may be more compatible with the host's system.
- * Page the sysop for some suggestions.
- * If all else fails, call Jonathan - that always seems to work for us!

NEXT MONTH: Software Packages Available For The TI
FUTURE ARTICLES: Databases and BBSs; How To Start Your Own BBS
THE PHONE NUMBERS OF THE OFFICERS:

PRES: SCOTT COLEMAN 412 271-6283
V.PRES: MICKEY SCHMITT 412 335-0163
C.SECTY: GENE KELLY 412 829-0469
REC.SECTY: ED BITTNER 412 864-4924
LIBRARIAN: CLYDE COLLEDGE 412 828-3042
TREASURER: JAN TRAYERS 412 863-1575
EDITOR: JOHN WILLFORTH 412 527-6656

T. I. Writer (Part 10) Stan Katzman

Well let's continue our discussion of dot commands in the Formatter. The next commands I want to discuss control the number of lines on a page (.PL _), if you want to have the document double or triple spaced (.LS _) and if you want to skip some lines in your document (SF _).

Let's start with (.PL _) the page length command. The default setting for the number of lines on a page in T. I. Writer is 66. You cannot have more but you can have less. To do this, at the start of your document type .PL 60 <enter>. Now type your document. When your document is put through the formatter there will be only 60 lines per page. If you want 55 just enter 55 in place of the 60 (or whatever you want to have).

The default setting for spacing in the formatter is single spacing. If you want your document to be double spaced or triple spaced just type .LS 2<enter> at the head of your document or .LS 3<enter> for triple spacing.

If you want, say, five blank lines, for some reason, in your document, on a separate line unto itself type .SF 5 <enter> and the formatter will skip five lines and then continue printing the rest of your document.

What I am going to discuss now is a handy feature but not dot commands. In the beginning of the formatter there is a time when it says "What Pages (A)". Meaning what pages do you want printed from a multipart document. If you just press enter it will print all pages from 1 to the end. If you want selected pages printed out just enter them as described next. Say we want to print page 6, pages 12 through 15 and 22 to the end, type the following in response to the "What Pages" question, 6,12-15,22-E and only those designated pages will be printed out.

As kind of a close out I would like to show you what the formatting (dot) commands would look like for a document to have margins of L 17, R 77, double spaced, right adjusted and a page length of 58.

```
.LM 17<enter>
.RM 77<enter>
.FI<enter>
.LS 2<enter>
.AD<enter>
.PL 58<enter>
```

Try these formatting commands and happy "processing".

"TIPS FOR BEGINNERS"

-BY FRANK N. ZIC

HERE WE GO TOGETHER-NO. 6. SO YOU ARE HAVING TROUBLE WITH YOUR FILING SYSTEM. SEEMS LIKE I HAVE HEARD THAT TUNE BEFORE. WELL, HERE IS A NEAT AND CLEVER SYSTEM I DEvised THAT YOU MAY FIND HELPFUL. I'VE ALWAYS LIKED COLORS SO WHAT BETTER APPROACH THAN TO USE A COLOR ORIENTED SCHEME. FIRST MAKE A LIST OF THE DIFFERENT CATAGORIES YOU WANT TO KEEP TRACK OF. DESIGNATE A COLOR SCHEME FOR EACH CATAGORY. MY GROUPING LOOKS LIKE THIS:

1. BUSINESS-RED
2. COPY PROGRAMS -YELLOW
3. DIAGNOSTIC-YELLOW/BLUE
4. EDUCATIONAL-BLUE
5. FINANCE-RED/BLUE
6. GAMES-(UNMARKED) OR BLACK
7. MUSIC-RED/YELLOW/GREEN
8. PRINTER & DUMP-YELLOW/GREEN
9. TI ARTIST(ETC.)-GREEN
10. UTILITIES-RED/YELLOW
11. WORD PROCESSOR -RED

WHAT I DO NEXT IS CUT A 1/4" STRIP ACROSS A 3/4" PIECE OF THE DESIGNATED COLORED TAPE AND PLACE IT HORIZONTALLY ON THE FRONT UPPER LEFT CORNER OF THE DISK. WHERE THERE ARE TWO OR MORE COLORS CALLED FOR, HALF LAP THE SECOND COLOR OVER THE FIRST ONE. NOW WHEN SEARCHING FOR A DISK IN YOUR BOX OR REFILING ONE IT IS EASY TO SPOT THE COLOR GROUP YOU WANT. ANOTHER FEATURE IS TO USE A PIECE OF THE COLORED TAPE OVER THE SQUARE WRITE PROTECT HOLE AND A PIECE OF PLAIN BLACK TAPE, "SCOTCH" ELECTRICAL WORKS FINE, OVER THE ROUND PUNCHED OUT HOLE. NOW YOU HAVE A QUICK EYE REFERENCE TO WHEN YOU ARE LOADING THE "A" SIDE OF THE DISK IN THE DRIVE(COLORED) SIDE UP OR THE "B" SIDE(BLACK) UP. HOW MANY TIMES HAVE YOU CATALOGED YOUR DISKS AND THOUGHT IT WOULD BE NICE WHEN YOU WENT TO CATALOG THE NEXT TIME IF YOU HAD A WAY OF REMEMBERING ONLY THE NEW DISKS YOU RECEIVED. THIS CAN EASILY BE ACCOMPLISHED BY AGAIN TAKING A PIECE OF COLORED TAPE AND PLACING IT IN THE UPPER RIGHT HAND CORNER OF THE DISK. WRAP THE TAPE 1/2 OVER THE FRONT AND 1/2 OVER THE BACK IN A VERTICAL FASHION. REMOVE THIS TAPE AFTER THE NEXT CATALOGING AND YOU ARE UP TO DATE. SOME OF YOU MAY BE THINKING THAT TAPE IS MESSY AND DOESN'T STICK WELL, NOT SO, YOU CAN BUY A FIVE(5) COLOR PACK AT RADIO SHACK STOCK# 64-2340 FOR \$1.89 THAT WORKS JUST FINE AND CAN BE USED OVER AND OVER AGAIN WITH GOOD RESULTS.

I LIKE TO MARK THE CATALOG OF THE DISK ON THE ENVELOPE SO THAT I CAN TELL WHAT PROGRAMS ARE ON THE DISK WHEN THE DISK IS IN THE DRIVE UNIT. WHEN YOU DO THIS YOU SHOULD NOW IDENTIFY THE DISK WITH IT'S OWN ENVELOPE. THIS IS EASILY ACCOMPLISHED BY USING A PIECE OF "SCOTCH MAGIC TAPE". THIS TYPE IS THE SEE THROUGH KIND AND IT IS EASY TO WRITE ON WITH A BALLPOINT PEN. JUST DON'T PRESS TOO HARD WHEN WRITING ON THE DISK. I'VE DONE THIS FOR YEARS NOW WITH NO PROBLEM. ON THE DISK, MARK AN IDENTIFYING NUMBER SUCH AS 87/5-32. TRANSLATED THIS SAYS YOU OBTAINED THIS DISK IN 1987 IN THE MONTH OF MAY AND IT IS THE 32nd DISK ADDED TO YOUR COLLECTION SO FAR THIS YEAR. USE THIS SAME NUMBER ON THE ENVELOPE. JUST BELOW THIS INFORMATION I WRITE WHO I GOT THE DISK FROM, THUS PREVENTING GIVING THE SAME PROGRAMS BACK IN A LATER EXCHANGE. UNTIL NEXT TIME MAY THE GOOD 4'S BE WITH YOU.

THE ARTICLE BELOW WAS TAKEN FROM THE "KID'S KORNER" OF THE NEWSLETTER "TopIcs" OF THE LA USERS GROUP. I WOULD LIKE TO THANK THEM FOR PRINTING THE ARTICLE, AND TO MR. MOORE FOR WRITING IT. MANY OF YOU KNOW THAT SAM MOORE JR. HAS CONTRIBUTED MUCH IN THE WAY OF VERY GOOD SOFTWARE TO THE TI COMMUNITY.

```

100 CALL CLEAR :: CALL SCREE
N(6)
110 REM
120 REM *****
      PGM BY SAM MOORE JR
      SHERMAN, TX 9/27/81
      *****
130 REM
140 AS="<SPACE GEM>" :: FOR
GG=1 TO 7 :: DISPLAY AT(RND*
20,RND*20)BEEP;AS :: NEXT GG
150 PRINT "DIRECTIONS? <Y/N>"
"
160 CALL KEY(O,K,S)
170 IF S=0 THEN 160
180 IF K<>89 THEN 270
190 PRINT : : "THE OBJECT IS
TO MANEUVER YOUR SPACE SHI
P TO AVOID BEING HIT BY T
HE OTHER SPACESHIPS."
200 PRINT : "A RUNNING TOTAL
IS KEPT OF THE NUMBER OF TI
MES YOU ARE OVERRUN. THE OBJ
ECT, OF COURSE IS TO MAK
E IT THROUGH"
210 PRINT "UNSCATHED. TO MAN
EUVER-ENTERS OR D OR E OR X
(ARROWS). "
220 PRINT : : "THE COMPUTER W
ILL ASK YOU WHAT VELOCITY
YOU WANT.": "<2> IS A GOOD ST
ART."
230 PRINT : : "PRESS ANY KEY
TO CONTINUE..."
240 CALL KEY(O,K,S)
250 IF S=0 THEN 240
260 CALL CLEAR
270 PRINT "WHAT IS THE VELOC
ITY OF YOUR"
280 PRINT "SPACESHIP?(1-9)"
290 CALL KEY(O,K,S)
300 IF S=0 THEN 290
310 CALL CLEAR
320 V=K-48
330 V=V*10
340 PRINT "SKILL LEVEL DETER
MINES HOW LONG THE GAME WIL
L RUN AND SPEED OF THE ENEM
Y.": ""
350 PRINT "WHAT SKILL LEVEL?
(1-9)"
360 CALL KEY(O,K,S)
370 IF S=0 THEN 360
380 LVL=K-48
390 CALL CLEAR :: CALL SCREE
N(4)
400 REM SPACE GEM
410 REM DEFINE SPACESHIPS

```

```

420 AS="0000070F107F7F10"
430 BS="0000E0F008FEFE08"
440 CS="0F070B112060F0F0"
450 DS="FOE0D08B04060F0F"
460 CALL CHAR(104,AS)
470 CALL CHAR(106,BS)
480 CALL CHAR(105,CS)
490 CALL CHAR(107,DS)
500 CALL MAGNIFY(4)
510 REM MAKE SPACESHIPS
520 CALL SPRITE(#1,104,9,125
,100)
530 FOR AA=10 TO 15
540 SPEED=RND*LVL/5*60+RND*2
0
550 CALL SPRITE(#AA,104,16,1
,AA*45-445,SPEED,0):: NEXT A
A
560 CALL SCREEN(2)
570 REM MOVE RED SHIP
580 CALL KEY(O,K,S)
590 IF K<>68 THEN 600 :: CAL
L MOTION(#1,0,V):: GOTO 650
600 IF K<>83 THEN 610 :: CAL
L MOTION(#1,0,-V):: GOTO 650
610 IF K<>69 THEN 620 :: CAL
L MOTION(#1,-V,0):: GOTO 650
620 IF K<>88 THEN 630 :: CAL
L MOTION(#1,V,0):: GOTO 650
630 CALL MOTION(#1,0,0)
640 REM CHECK FOR HIT
650 CALL COINC(ALL,CC)
660 IF CC THEN 720
670 KK=KK+1
680 IF KK>29 THEN 810
690 MM=MM+1
700 IF MM=60+LVL*40 THEN 760
710 GOTO 560
720 CALL SCREEN(9)
730 HIT=HIT+1
740 FOR ZZ=1 TO 4 :: CALL SO
UND(-400,-5,5,ZZ*11+110,9,ZZ
*12+110,9):: NEXT ZZ
750 GOTO 560
760 REM END OF GAME
770 CALL SCREEN(4):: PRINT "
END OF GAME": "YOU SUFFERED
";HITS;"HITS"
780 PRINT : : : : :
790 FOR D=1 TO 999 :: NEXT D
800 END
810 REM CHANGE ENEMY MOTION
820 KK=KK-28
830 FOR AA=10 TO 15 :: SPEED
=RND*LVL/9+10
840 CALL SPRITE(#AA,104,16,1
,AA-455,SPEED,0)
850 NEXT AA :: GOTO 700

```

THE THEORY OF DARK SUCKERS

by Paul Holgren
Condensed by Rick Alston

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For years it was believed that light was emitted from an electric bulb, recent information has proven otherwise - dark is sucked into the bulb therefore, the bulb is a dark sucker. This theory also proves dark is heavier than light, and dark is faster than light. A few examples follow.

ELECTRIC BULBS: There is less dark near an electric bulb than at a distance of 100 feet when it is operating, therefore, it is sucking dark. The larger the electric bulb the more dark it is able to suck, this is easily proven. Also note that when an electric bulb becomes full of dark it ceases to suck dark

and is itself dark, indicating it is full of dark. This phenomena can also be observed in fluorescent bulbs, the end of these bulbs indicate when they are becoming full of dark.

CANDLES: These are primitive dark suckers, the center core is a dark sucker protected by a soft insulator to extend its life expectancy and maintain rigidity. Proof of its dark sucking ability is relatively simple. Examine a new, unused candle. Notice that the center core is not dark. Ignite the center core and allow it to burn for 5 minutes. Notice the lack of dark around the candle! Now extinguish the candle and observe the center core. It is now dark, proving the candle has sucked dark. Moving a pencil through the flame further illustrates the dark sucking capacity of the candle. When this is done, the pencil blocks the flow of dark and dark is deposited on the pencil.

DARK IS HEAVIER THAN LIGHT: Dark always settles to the bottom of lakes and rivers. This can be proven by descending into a lake or river, the deeper you go the more dark there is! This phenomena can be observed when looking into deep holes where dark has fallen, proving dark is heavier than light

DARK IS FASTER THAN LIGHT: If you were to open a drawer very slowly, you would notice light going into the drawer. (You can see this happen.) You cannot see the dark leave the drawer. Go into a closet, close the door and turn off the dark sucker. Now have a friend open the door about 1 inch, neither you or your friend will see any dark leave the closet. Now open the door until the closet is half dark. Since 2 objects cannot occupy the same space at the same time, you will not feel any change in pressure by compressing the dark. So it is logical to assume that dark is faster than light.

I hope that no one is too taken back by the above Theory of Dark Suckers. We live in an AGE of Discovery ! Every day something new and exciting is discovered, that had never been thought of before. Believe me I never thought of the Theory of Dark Suckers before. How about you?

NEXT MEETING: Tuesday JUNE 16th, at the UNITED PRESBYTERIAN CHURCH OF THE COVENANT at the corner of 4th and Oak streets in IRWIN, PA. If you need directions, just call any of the officers listed on page 6. The Meeting begins at 7:00 PM, followed by SIGS at about 8:30. We have refreshments the "whole" time. Come and bring a friend. TI WRITER, ASSEMBLY, HARDWARE, and ADVENTURE SIGS are currently planned.

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