HOCUS 99

MAY 1992

<<<<   HOCUS NEWSLETTER INDEX   >>>>

July Meeting - Annual Group Picnic

As is becoming our annual affair, once again we will be holding our regular July Group Meeting on the 3rd Saturday at Lake Denoon for a great picnic and family get-together. It starts at 1:00 in the afternoon and lasts til everyone goes home. The whole family is invited, just bring a dish to pass, salad, desert cassarole, hors d'oeuvres, snacks or whatever. The group is supplying the hot dogs, brats, polish sausages, soda, grills, and if possible maybe some fresh farmers' sweet corn. Come on out and enjoy the sunshine, crystal clear water, volleyball, hoseshoes, swimming, wading, boat rowing, feet splashing or just plain relaxation. If it's anything like last year, there'll be lots of shooting the breeze and family mixing fun. We plan on capping the evening off with a big bon fire down by the lake.
   July 18 - 1:00 til Midnight
   West 200 South 10771 East Shore Drive
   Lake Denoon, Muskego, 30 minutes drive
   414-679-3388

June Almanac Trivia

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1 Voting Machines patented by Thomas Edison 1869
2 Women in Italy voted for the first time 1946
3 Major Ed White made first US spacewalk 1965
4 US troops liberated Rome 1944
5 Senator Robert Kennedy assassinated 1968
6 Securities & Exchange Commission established 1933
7 Shevuos
8 First commercially made ice cream sold 1786
9 "Donald Duck" first seen 1934
10 Cole Porter, composer, born 1893
11 Greeks seized Troy 1184 B.C.
12 George Bush, 41st president, born 1924
13 Thurgood Marshall appointed to Supreme Court 1967
14 Flag Day
15 Magna Carta signed 1215
16 USSR launched first woman into space 1963
17 First commercial around-the-world flight 1947
18 Sally Ride became first US woman in space 1983
19 "Garfield" comic strip first appeared 1978
20 First day of Summer
21 Father's Day
22 Justice Department created 1870
23 Typewriter patented 1868
24 Selective Service Act signed 1948
25 First commercial color television broadcast 1951
26 First boardwalk completed in Atlantic City 1870
27 Telegraph service began between New York & Boston 1847
28 U.S. bought Panama Canal from France 1902
29 Shakespeare's Globe Theater burned down 1613
30 "Gone With The Wind" published 1936

Monitor Specs

It pays to know a few phrases of spec-speech when shopping for a monitor. They'll help you find your way around dot pitch, convergence, and bandwidth, all of which directly affect the quality of a monitor's screen image. You'll need to know that you should match the horizontal scanning frequencies of your monitor and display card, and that a noninterlaced monitor can mean the difference between productivity and a headache.

Dot pitch measures the width of the dots that make up a pixel on the monitor screen. The smaller the dot pitch, the sharper the image. In color displays, three dots in red, green, and blue (RGB) make up a pixel; on monochrome screens, each dot is itself a pixel. Dot pitch is expressed in millimeters: a .31 dot pitch is 31/100 of a millimeter. Avoid any monitor with a dot pitch greater than .31mm, the accepted standard. Those in the .25-to-.28mm range, such as the CPD-1320 13-inch monitor from Sony, which offers a .25 dot pitch for $995, are better still.

Convergence refers to a color monitor's ability to focus on a single point the electron beams that generate the three colors of the pixel. With poor convergence, the text on your screen will appear fuzzy and lead to headaches and eyestrain. To check convergence, examine a white line on your screen. If the convergence is off, you'll see a tinted haze that is the color of whatever beam is not lined up. You can't adjust convergence yourself because it depends on the positioning of the electron guns within the monitor. Monitors with a smaller dot pitch usually have better convergence.

Bandwidth measures the difference between the lowest and highest signal frequencies a monitor's circuits can handle. With a bigger range of signal frequency, more data can be fed to the monitor, resulting in a higher resolution. Each RGB beam in a CGA monitor is received on a separate bandwidth of about 10MHz. Total the three bandwidths, and the monitor has a 30MHz bandwidth.

Horizontal scanning frequency (HSF) measures how fast the monitor can draw a horizontal line across the screen. It's important when you're matching a display card to a monitor: unless both handle the same frequencies, the circuitry inside the monitor could burn up. The faster a monitor can draw a line, the more capable it is of providing higher resolution. For example, a CGA monitor with 640-by-200 resolution has a 15.75KHz HSF. VGA with 640-by-480 resolution has a 31.5KHz HSF. HSF ratings for other display standards are 17.75KHz for Hercules, 21.8KHz for EGA, 35.5KHz for Super VGA, and 15.5 to 35KHz for multiscanning monitors, which are able to adjust to the different signals produced by different display adapters.

Vertical scanning frequency (VSF), or **refresh rate**, measures how many times a second the entire screen is redrawn, or refreshed, on a monitor. The higher the vertical refresh, the less flicker you'll see. Monochrome monitors have a 50Hz refresh rate. CGA, EGA, VGA, and Super VGA have a 60Hz rate. The NEC MultiSync 3D, which supports a variety of display standards, has a refresh rate of 50 to 90Hz.

Interlaced and noninterlaced monitors: Each time an interlaced monitor refreshes the screen, it scans only every other line. The monitor may produce more lines and higher resolution, but if it has a slow refresh rate, the trade-off is likely to be noticeable screen flicker. The IBM 8514 analog monitor for PS/2 systems is one of the few interlaced monitors currently on the market. A noninterlaced monitor scans every line each time the screen is refreshed, producing a steadier image. Still, before buying a monitor you should inspect it under real working conditions to avoid the headache of a flickering screen.

—**Kathleen Richards**

AUTOMATIC COMPUTER MUSIC
by Earl Ragusa
UGOC ROM — Aug '91

About 15 years ago there was some music that was supposed to have been composed by a computer. It was pretty good I thought, but I doubted the word composed. Generated may have been a more accurate word. Although music is a mathematical subject, I will never believe that some genius' formula will do a truly creative task. However, listening to the "music" played by the following little program, written by a 12-year old almost makes me a believer, a non-disbeliever at the least. It is short, type it in and run it, it's worth the effort. Press any key to stop it.

```
100 ! SAVE DSK1.AUTOMUSIC
105 ! from ENTER magazine
        (by a 12-year old),
    reprinted in NEWJUG North
        Newsletter April '85,
        author not named.
110 ! echo
120 DIM A(6)
130 RANDOMIZE
140 DATA 247,262,294,330,349
,392,440
150 FOR B=0 TO 6
160 READ A(B)
170 NEXT B
180 B=INT(RND*7)
190 C=B
200 D=B
210 GOTO 250
220 D=C
230 C=B
240 B=INT(RND*7)
250 CALL SOUND(-200,A(B),0,A
(C),9,A(D),19)
260 CALL KEY(0,E,F)
270 IF F=0 THEN 220
```
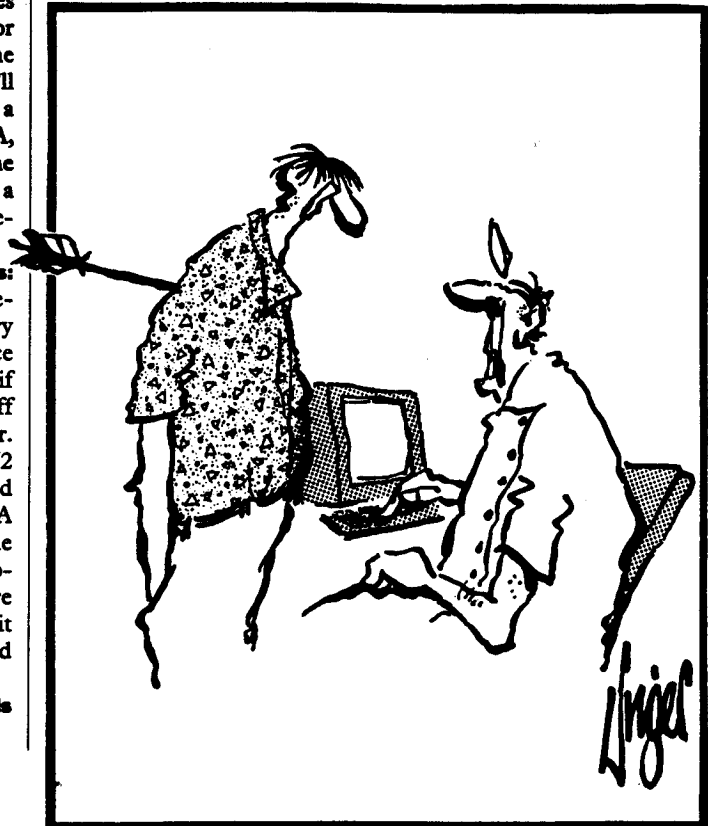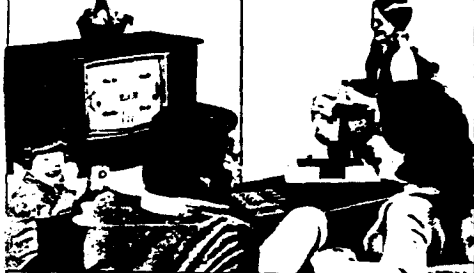

"Rapid pulse, sweating, shallow breathing. . . . According to the computer, you've got gallstones."

Ralph Baer, a division manager at Sanders Associates in New Hampshire, originates the home video game when he develops an electronic unit with hand controls that sends broadcast signals to a TV set.

Magnavox buys the patent rights to Baer's TV/hand-control invention, then sells the sublicensing rights to Atari and other manufacturers.

Left with a stock of unsold chips, Intel puts the 4004 microprocessor in its catalog. To everyone's surprise, the chip takes the industry by storm and paves the way for most of the advances of the decade.

IBM announces the System/32, a desk-size unit that contains all the computer hardware.

Intel develops the 8008 microprocessor, originally designed for the Display Terminal Corporation (now Datapoint) CRT. The 8008 ultimately satisfies all customer requirements except in the area of speed.

In a move to reduce clutter and clatter in the newsroom, the Augusta (Ga.) *Chronicle* and *Herald* install CRTs for use in writing and editing stories.

Atari founder Nolan Bushnell invents and markets Pong, considered by many the first milestone in video game history.

Diablo Systems of Hayward, Calif., develops the first automatic printer for data processing systems. The "daisy wheel" Hytype Printer I features a glass-reinforced nylon disk and can print 30 characters per second; integrated circuits do much of the work.

The Summer Olympics in Munich, Germany, are the first games to use computers as "primary" judges of times and finishes. The computer companies involved are Gebr. Junghams GMBH and Compagnie de Montres Longines Francillon S.A.

The National Computer Conference is held at the New York Coliseum June 4–8, replacing the fall and spring joint conferences.

Intel turns out the 8008 microprocessor, which is 20 times faster than the original 4004 chip.

Shugart Associates of Sunnyvale, Calif., ships its first 8" floppy disks. Replacing punched cards as a data entry medium, the reusable plastic/oxide disks weigh less than two ounces and store programs and files.

Truong Trong Thi, a Frenchman of Vietnamese origin, introduces the first commercially available microcomputer system, based on the Intel 8008, but fails to secure adequate distribution.

The July cover story of *Radio-Electronics* magazine tells how to "Build the Mark-8, Your Personal MiniComputer" (with an Intel 8008 microprocessor).

Computer magazines now range from *Computer Law and Tax Reporter*, which documents legal battles in data processing, to *Creative Computing*, one of the first magazines devoted to recreational use of computers.

In the first experiment with bank computer terminals, two branches of the Lincoln, Neb., Hinky Dinky grocery chain install computer terminals for bank deposits and withdrawals. In six weeks First Federal Savings & Loan takes in 672 new accounts.

Two leading designers at Intel leave to form Zilog, another microprocessing firm. They develop the Z80 chip, which competes directly with Intel's new 8080.

The January 1975 issue of *Popular Electronics* features a cover story on the MITS Altair, the first widely available personal computer.

In a five-week period, Harvard student William Gates and associate Paul Allen adapt BASIC to fit the microcomputer. Having wrested the new computers from the hands of a small group of assembly language programmers, they form Microsoft to market their version of the language.

Objective Design of Tallahassee, Fla., offers Encounter, the first commercial personal computer game, in assembly language on paper tape.

The New York *Times* starts to convert to electronic editing and typesetting on a Harris 2550 system.

With a surplus of calculator chips, Commodore enters the personal computer market through MOS (metal oxide semiconductor) technology.

The first Adventure game is programmed by Crowther and Wood at Princeton University.

The number of computer magazines grows to include *Byte: The Small Systems Journal* (aimed at the "personal computer" amateur and professional), the quarterly *Computer Graphics and Art*, and *Dr. Dobb's Journal of Computer Calisthenics and Orthodontia* for the microcomputer hobbyist.

Storage systems become smaller, more powerful and more convenient. Micropolis Corporation of Northridge, Calif., announces the Metafloppy, a family of integrated 5¼" floppy disk systems with the storage capacity of 8" disks.

The newsweekly *Computerworld* begins a Microcomputing section to handle the flood of information on micros.

Apple markets the Apple II, ultimately to become the personal computer equivalent of the Volkswagen.
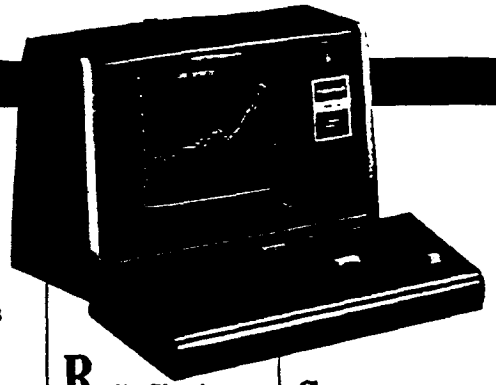
Radio Shack unveils its fully assembled microcomputer, the TRS-80 Model 1, with keyboard, CRT and cassette unit. The whole system, which offers some graphics and can be programmed in BASIC, sells for $599.95.
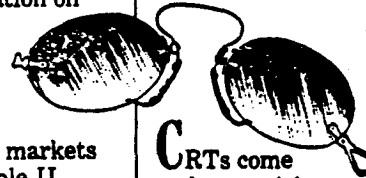
CRTs come under suspicion when two New York *Times* copy editors are diagnosed as having cataracts. Tested for radiation, the machines are ultimately cleared. This is the first of many complaints linking eye irritations and CRTs.

Commodore International, enters the personal computer field with PET (personal electronic transactor).

Computer-Land, among the largest of today's computer retailers, opens its first store.

Originally developed for computerized astrology machines, CP/M (control program for microcomputers) is offered by Gary Kildall and his Digital Research Company. CPM will soon become a standard for business applications on personal computers.

Fed up with time-consuming projections using a calculator and spreadsheet, first-year Harvard Business School student Daniel Bricklin teams up with Robert Frankston at M.I.T. to create VisiCalc, an electronic spreadsheet that can recalculate all related numbers when one variable changes. They pool their finances and with $16,000 found Software Arts in Wellesley, Mass.

Seymour Rubenstein, formerly of IMSAI, founds MicroPro International and commissions John Barnaby to write the word processing program that will become WordStar.
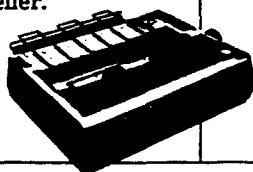
Texas Instruments produces its Speak & Spell toy, the first widespread offering of digital speech synthesis.

Epson America in Anaheim, Calif., introduces its 80-column dot-matrix printer, which becomes a runaway best seller.

Personal Software markets VisiCalc, soon called the "smash hit of software." The first version works only on the Apple II and thus boosts that computer's sales. VisiCalc is credited with taking micros out of the home and making them "serious."

Publisher Adam Osborne sells his company to McGraw-Hill and founds Osborne Computer in Hayward, Calif.

Video games appear everywhere: in restaurants, gas stations, bars. With threatening names like Centipede and Space Invaders, the quarter-gobbling dwarfs cause concern among parents.

The Source offers an electronic service enabling home computer owners to read newspapers, get stock info, check airline schedules and browse through restaurant guides. Similar services will include CompuServe and Dow Jones News/Retrieval.

Shugart Associates markets the 5¼" Winchester disk drive, which stores 30 times as much data as a standard small floppy and transfers the information 20 times faster.

Texas Instruments unveils its first personal computer, the TI 99/4, based on a 16-bit processor and list-priced at $1,200. With modifications and aggressive marketing, this computer eventually lists for $99 before almost bankrupting the company.

Radio Shack introduces the TRS-80 Color Computer for recreation and education.

Four eighth-graders at Manhattan's private Dalton School use its terminals to link up with other computers. By trial and error, they gain entry into several Canadian companies' computers, temporarily destroying certain data and preventing legitimate users from accessing the systems. The FBI and Royal Canadian Mounted Police join forces and catch the 13-year-olds after a week of their long-distance raids. No charges are pressed despite a loss of several thousand dollars' worth of computer time.

Commodore introduces the VIC-20, destined to be the first home computer model to sell more than one million units. Waiting in the wings is the more powerful Commodore 64, the first popularly priced machine to have 64K of memory built in.

Osborne Computer unveils the Osborne 1, the first portable micro. Its 24 pounds hold a disk operating system that can handle word processing and electronic spreadsheets.

Zork, a "second-generation" adventure game capable of responding to complex sentences, is introduced by Infocom. Originally written in a proprietary language on a mini-computer, the game is quickly converted by Infocom into versions for virtually every popular personal computer model.
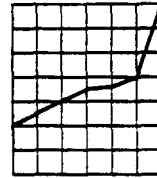
The six-year-old personal computer industry passes the $1.5 billion mark.

At ENIAC's thirty-fifth birthday celebration in Philadelphia, the trail-blazing machine is pitted against a Radio Shack TRS-80 and commanded to square all integers from 1 to 10,000. The young micro wins handily, completing the exercise in a third of a second vs. ENIAC's six seconds.

Computer camps become popular among kids (and some adults).

Watchmaker Timex Inc. contracts with England's Clive Sinclair to market Timex/Sinclair 1000, the first fully assembled under-$100 computer in the U.S.

The IBM PC debuts, with a memory that can store more than 250 pages of data and a system that can complete about 700,000 additions per second. The PC is as powerful as anything on the market, which shifts dramatically toward the industry's giant.

IBM chooses Microsoft's MS-DOS operating system for its PC. When other hardware manufacturers hop on the IBM-compatible bandwagon, MS-DOS becomes the new standard for business applications programs.

In a lean Christmas shopping season, computer video games (with TV hook-ups) are huge hits. The favorites are Intellivision and Atari.
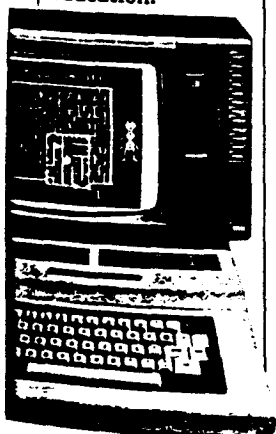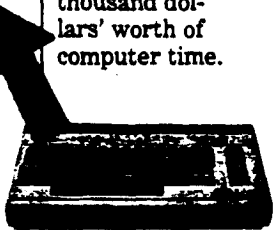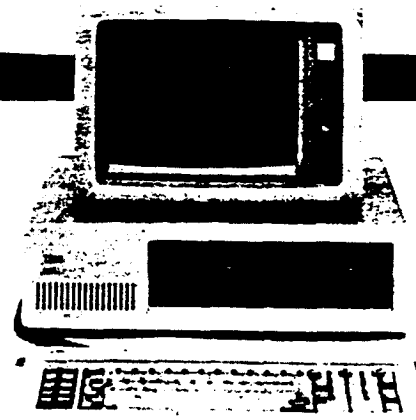
Milwaukee Area TI User Group Founded

TIGERCUB PRINTALL
VERSION 1.6
by Jim Peterson
****

This program will print your text in a choice of 1 to 5 columns, and gives you complete choice of fonts, left and right margins, spacing between columns, lines per page, etc., etc. I think the prompts are self-explanatory.

<u>NOTE</u>: Some folks have thought that this program didn't work because they expected it to reformat text into the desired column width. Use Reformatter+ or the FUNLWEB Formatter to do that.

It takes some time to read in text and format it into multiple columns, so if you need to print more than two copies, or will need more copies in future, it will pay you to print back to the disk. To do this, at the printer prompt type over the PIO.LF default with DSK. and a drive number and file name. The text will then be formatted and printed to a D/V 254 file.

The next prompt is for the record length, which will be the default of 80 if the text was prepared with TI-Writer or whatever. *However, if you enter 254 you will be prompted for an input file name of a file printed to disk by this program, and for the number of copies wanted, which will then be printed immediately.*

If you have Triton's Super Extended Basic module, you can LIST an XBasic program to disk in 28-column format by LIST "DSK1.filename":28:1-32766 . The result will be a D/V28 file. With this program you can print the listing in 5 columns by selecting 28 record length, elite condensed, 5 columns, 28 column width.

This version has been modified slightly so that it will allow the use of "Control U" codes input by FUNLWEB, to underline, emphasize, double-strike, etc. an individual word or line. Note that if you are printing in more than one column **you must turn off the codes at the end of the line,** or they will also affect the same line in all subsequent columns. You must also remember that <u>the control codes will be deleted in printing</u>, which will affect the format.

If the file has a Tab setting, first enter T to get to the tab line, place a period to replace the R, then go to the end of the tab line and place an R.

For instance, if you want to underline a word, press CTRL 0 to get the open cursor fixed mode. Position the cursor on the first letter of the word, type FCTN 2 and then space bar 3 times to open up 3 spaces, backspace to the first of these, and type CTRL U, FCTN R, CTRL U, -, CTRL U, CTRL A, CTRL U. Move the cursor to the first space beyond the word, type FCTN 2, space 3 times, backspace 3, type CTRL U, FCTN R, CTRL U, -, CTRL U, CTRL @, CTRL U.

If the word is at the end of a line or you are underlining a complete line, and the line is not completely filled with characters, go to the end of the line first and put the "turn-off" codes starting in the space just after where the last character would be. For instance, if the column width is 40, start the codes in column 41.

With this method, you can print individual lines or words in *italics*, double-struck, <u>underlined</u>, superscript, emphasized, or in *different NLQ fonts* or different colors. However, do not use any CTRL U codes for a feature that you plan to select from Printall, or you will turn it off for the rest of the text.

<u>NOTE</u>: When a line contains CTRL U codes, the program will **NOT** warn you or truncate a line which is more than the selected column width.

Although this program is intended primarily for multiple-column printing, it has other uses. If your letter turns out to be 70 lines long and you would like to print it on one page, use this program and select 70 lines. If you need a double-spaced manuscrpt, select 30 lines. If you need a tiny list, such as a list of the songs to put in the case of a music cassette, select elite condensed subscript and 120 lines per page.

Since the TI-99/4A has limited memory, you may get a MEMORY FULL error if you try to format much more than 60 lines of condensed print per page. You can increase this limit considerably by entering CALL FILES(1) and then NEW before loading this program.

```
100 DIM M$(600),F$(50)
110 GOTO 160
120 K,ST,SET,S,P$,P,CL,DW$,S
S$,I$,D$,E$,NC,CH,TC,TA,TX,A
V,CS,S$,LT,A$,LSP,LP,RM,OK$,
OG$,X,F$(),SL,F,IP,N$(),T$,F
LAG,J,PP,LT$,G$,F,RL,N
130 EV$,COMP,MAXL
140 CALL CLEAR :: CALL KEY :
: CALL COLOR :: CALL SCREEN
:: CALL SOUND
150 !@P-
160 CALL CLEAR :: CALL KEY(3
,K,ST):: ON WARNING NEXT
170 FOR SET=0 TO 14 :: CALL
COLOR(SET,2,8):: NEXT SET ::
CALL SCREEN(5)
180 DISPLAY AT(3,6):"TIGERCU
B PRINTALL" :: DISPLAY AT(5,
11):"V.1.6.1":"":" for the N
X1020R and other  Epson-com
patible printers"
190 DISPLAY AT(10,1):"Progra
mmed by Jim Peterson"
200 DISPLAY AT(18,7):"TURN P
RINTER ON!":;;:"Set top of fo
rm half inch  below perfora
tions"
210 DISPLAY AT(23,8):"PRESS
ANY KEY" :: DISPLAY AT(23,8)
:"press any key" :: CALL KEY
(0,X,S):: IF S=0 THEN 210 EL
SE CALL CLEAR
220 DISPLAY AT(12,1):"Printe
r designation?" :: DISPLAY A
T(14,1):"PIO.LF" :: ACCEPT A
T(14,1)SIZE(-28)BEEP:P$ :: I
F POS(P$,"DSK",1)<>0 THEN 24
0
230 IF POS(P$,".LF",1)=0 THE
N P$=P$&".LF"
240 OPEN #1:P$,VARIABLE 254
:: PRINT #1:CHR$(27)&"@";;;
CALL CLEAR
250 DISPLAY AT(12,1)ERASE AL
L:"Input record length? 80"
:: ACCEPT AT(12,22)VALIDATE(
DIGIT)SIZE(-3)BEEP:RL :: IF
RL<>254 THEN 320
260 DISPLAY AT(12,1)ERASE AL
L:"Filename? DSK" :: ACCEPT
AT(12,14)BEEP:F$
270 OPEN #2:"DSK"&F$,VARIABL
E 254,INPUT
280 DISPLAY AT(14,1):"How ma
ny copies? 1" :: ACCEPT AT(1
4,18)BEEP:N
290 FOR J=1 TO N
300 LINPUT #2:M$ :: PRINT #1

:M$ :: IF EOF(2)<>1 THEN 300
310 RESTORE #2 :: NEXT J ::
CLOSE #2 :: GOTO 220
320 DISPLAY AT(12,1):"Print
size?": :"  (1) Pica":"  (2)
Elite":"  (3) Condensed":"
(4) Elite condensed"
330 ACCEPT AT(12,13)VALIDATE
("1234")SIZE(1)BEEP:P :: IF
P=2 THEN PRINT #1:CHR$(27)&C
HR$(77);ELSE IF P=3 THEN PRI
NT #1:CHR$(15);ELSE PRINT #1
:CHR$(27)&CHR$(77)&CHR$(15);
340 CL=(P=1)*80+(P=2)*96+(P=
3)*136+(P=4)*160 :: CL=ABS(C
L)
350 DISPLAY AT(12,1)ERASE AL
L:"NLQ characters? Y" :: ACC
EPT AT(12,17)VALIDATE("YN")S
IZE(-1)BEEP:G$ :: IF G$="N"
THEN 380
360 DISPLAY AT(12,1):"Font?
1":"":"(1) Courier":"(2) San
serif":"(3) Script":"(4) Ora
tor"
370 ACCEPT AT(12,7)VALIDATE(
"1234")SIZE(-1)BEEP:F :: F=(
F=1)*0+ABS(F=2)+(F=3)*-4+(F=
4)*-7 :: PRINT #1:CHR$(40)&C
HR$(40)&CHR$(70)&CHR$(41)&CH
R$(41)&CHR$(F)
380 DISPLAY AT(12,1)ERASE AL
L:"Use color? N" :: ACCEPT A
T(12,12)VALIDATE("YN")SIZE(-
1)BEEP:O$ :: IF O$="N" THEN
410
390 DISPLAY AT(12,1):"Color?
1":"(1) Black":"(2) Red":"(
3) Blue":"(4) Violet":"(5) Y
ellow":"(6) Orange":"(7) Gre
en"
400 ACCEPT AT(12,8)VALIDATE(
"1234567")SIZE(-1)BEEP:J ::
PRINT #1:CHR$(27)&CHR$(114)&
CHR$(J-1);
410 DISPLAY AT(12,1)ERASE AL
L:"Double-width? N" :: ACCEP
T AT(12,15)SIZE(-1)VALIDATE(
"YN")BEEP:DW$ :: IF DW$="Y"
THEN PRINT #1:CHR$(27);"W";C
HR$(1);;; CL=CL/2
420 DISPLAY AT(12,1)ERASE AL
L:"Superscript? N" :: ACCEPT
AT(12,14)SIZE(-1)VALIDATE("
YN")BEEP:SS$ :: IF SS$="Y" T
HEN PRINT #1:CHR$(27);"S";CH
R$(0);
430 DISPLAY AT(12,1)ERASE AL
L:"Italics? N" :: ACCEPT AT(
12,10)VALIDATE("YN")SIZE(-1)

BEEP:I$ :: IF I$="Y" THEN PR
INT #1:CHR$(27);"4";
440 DISPLAY AT(12,1)ERASE AL
L:"Double-strike? Y" :: ACCE
PT AT(12,16)VALIDATE("YN")SI
ZE(-1)BEEP:D$ :: IF D$="Y" T
HEN PRINT #1:CHR$(27);"G";
450 IF P<3 AND SS$<>"Y" THEN
DISPLAY AT(12,1):"Emphasize
d? Y" :: ACCEPT AT(12,13)VAL
IDATE("YN")SIZE(-1)BEEP:E$ :
: IF E$="Y" THEN PRINT #1:CH
R$(27);"E";
460 DISPLAY AT(12,1)ERASE AL
L:"Number of columns? (1-5)"
:: ACCEPT AT(12,26)VALIDATE
("12345")SIZE(1)BEEP:NC
470 DISPLAY AT(12,1):"Column
width (number of)": :"charac
ters?" :: ACCEPT AT(14,13)VA
LIDATE(DIGIT)BEEP:CW
480 TC=NC*CW :: TA=CL-TC ::
TX=TC+NC*2-2
490 IF TX<=CL THEN 510 :: DI
SPLAY AT(18,1):STR$(NC)&" co
lumns of "&STR$(CW)&" charac
ters":"plus 2-column spacing
equals"
500 DISPLAY AT(20,1):STR$(TC
)&" characters; maximum":"av
ailable in print size":"sele
cted is "&STR$(CL)&".":"****
Please reselect****" :: GOTO
320
510 IF NC=1 THEN 530 :: AV=I
NT(TA/(NC-1)):: DISPLAY AT(1
2,1)ERASE ALL:"Column separa
tion":"minimum 2":"maximum
"&STR$(AV)&" available ":"2
520 ACCEPT AT(15,1)VALIDATE(
DIGIT)SIZE(-2)BEEP:CS :: IF
CS<2 OR CS>AV THEN 520 ELSE
S$=RPT$(" ",CS)
530 TA=TA-CS*(NC-1):: IF TA<
2 THEN 570
540 DISPLAY AT(12,1)ERASE AL
L:"Left margin width?": :"ma
ximum "&STR$(TA)&" available
" :: ACCEPT AT(12,20)VALIDAT
E(DIGIT)BEEP:LT :: IF LT>TA
THEN 540
550 DISPLAY AT(12,1):"Altern
ating left/right":"margins
(for pages to be":"later re
produced on both":"sides) N"
560 ACCEPT AT(16,8)VALIDATE(
"YN")SIZE(-1)BEEP:A$
570 LSP=12 :: DISPLAY AT(10,
1):" ":" ":"Lines per page?
60":" ":" ":" ":" " :: ACCEP

T AT(12,17)VALIDATE(DIGIT)SI
ZE(-3)BEEP:LP
580 LSP=72/(LP/10):: PRINT #
1:CHR$(27);"A";CHR$(LSP)
590 RM=TA-LT
600 DISPLAY AT(12,1)ERASE AL
L:STR$(NC)&" columns of":STR
$(CW)&"-character width":"le
ft margin of "&STR$(LT)&" sp
aces"
610 DISPLAY AT(15,1):STR$(LP
)&" lines per page":"with "&
STR$(INT(LSP))&"/72 line spa
cing"
620 DISPLAY AT(17,1):STR$(CS
)&" spaces between columns":
"right margin of "&STR$(RM)&
" spaces": :"OK? Y"
630 ACCEPT AT(20,5)VALIDATE(
"YN")SIZE(-1)BEEP:OK$ :: IF
OK$="N" THEN 320
640 DISPLAY AT(12,1)ERASE AL
L:"Pause at end of page? N"
:: ACCEPT AT(12,23)VALIDATE(
"YN")SIZE(-1)BEEP:OG$ :: IF
NC=1 THEN 660
650 DISPLAY AT(12,1)ERASE AL
L:"Print last page in even":
"columns? Y" :: ACCEPT AT(13
,10)VALIDATE("YN")SIZE(-1)BE
EP:EV$
660 DISPLAY AT(1,1)ERASE ALL
:"Input filenames to be":"pr
inted.":"Press Enter when do
ne."
670 X=X+1 :: DISPLAY AT(X+3,
1):"Filename  DSK" :: ACCEPT
AT(X+3,14)SIZE(-12)BEEP:F$(
X)
680 IF F$(X)="" THEN X=X-1 :
: GOTO 710 ELSE F$(X)="DSK"&
F$(X)
690 ON ERROR 700 :: OPEN #2:
F$(X),INPUT ,VARIABLE RL ::
CLOSE #2 :: GOTO 670
700 ON ERROR STOP :: CALL SO
UND(1000,110,0,-4,0):: DISPL
AY AT(20,1):"CANNOT OPEN "&F
$(X):: X=X-1 :: RETURN 670
710 ON ERROR STOP
720 SL=1 :: IF NC>1 THEN F=0
:: GOTO 790
725 X=0 :: PP=1 :: LT$=RPT$(
" ",LT):: FOR J=1 TO X :: OP
EN #2:F$(J),INPUT
730 LINPUT #2:G$ :: IF ASC(G
$)=128 THEN 770 :: X=X+1 ::
PRINT #1:LT$;G$&CHR$(10):: I
F K<LP THEN 770
740 IF OG$="N" THEN 760

750 DISPLAY AT(24,7):"PRESS
ANY KEY" :: DISPLAY AT(24,7
):"press any key" :: CALL KE
(0,X,S):: IF S=0 THEN 750 E
SE DISPLAY AT(24,7):""
760 PRINT #1:CHR$(12):: K=0
:: PP=PP+1 :: IF PP/2=INT(P
/2)AND A$="Y" THEN LT$=RPT$(
" ",RM)ELSE LT$=RPT$(" ",
770 IF EOF(2)<>1 THEN 73
780 CLOSE #2 :: NEXT J ::
INT #1:CHR$(12):: STOP
790 F=F+1 :: IF F>X THEN 87
:: ON ERROR 800 :: OPEN #2
F$(F),INPUT ,VARIABLE RL ::
DISPLAY AT(22,1):"Reading "
F$(F):: ON ERROR STOP :: GO
O 810
800 CALL SOUND(1000,110,0,-
,0):: DISPLAY AT(20,1):"COL
D NOT OPEN "&F$(F):: STOP
810 FOR IP=SL TO LP*NC :: L
NPUT #2:M$(IP):: DISPLAY AT
24,12):IP :: IF LEN(M$(IP))
0 THEN 860 :: IF NC>1 AND P
S(M$(IP),CHR$(13),1)<>0 THE
M$(IP)=SEG$(M$(IP),1,LEN(
(IP))-1)
815 IF LEN(M$(IP))=0 THEN M
(IP)=RPT$(" ",CW)
820 IF ASC(M$(IP))=128 THEN
IP=IP-1 :: GOTO 870
830 IF ASC(M$(IP))<32 OR PO
(M$(IP),CHR$(27),1)<>0 OR A
C(SEG$(M$(IP),LEN(M$(IP)),1
)=32 THEN 860
840 IF LEN(M$(IP))<=CW THEN
860 :: T$=SEG$(M$(IP),1,CW)
: CALL SOUND(1000,110,0,-4,
):: DISPLAY AT(12,1):M$(IP)
" over";CW;"characters":"tr
ncated to ";T$:"OK?"
850 CALL KEY(3,K,S):: IF S=
THEN 850 ELSE IF K<>89 THE
STOP ELSE M$(IP)=T$
860 IF LEN(M$(IP))<CW THEN
$(IP)=M$(IP)&RPT$(" ",CW-LE
(M$(IP)))
870 IF EOF(2)=1 THEN CLOSE
2 :: SL=IP+1 :: GOTO 790
880 NEXT IP :: IF EOF(2)=1
HEN CLOSE #2 :: GOTO 910 E
E GOTO 910
890 FLAG=1 :: FOR J=IP+1 T
NC*LP :: M$(J)="" :: NEXT
:: GOTO 910
910 PP=PP+1 :: IF PP/2=INT
P/2)AND A$="Y" THEN LT$=RP
(" ",RM)ELSE LT$=RPT$(" ",
)
```

```
920 IF EV$="Y" AND F)X AND I
P<LP$NC THEN LP=INT(IP/NC)+1
930 FOR J=1 TO LP :: ON NC G
OSUB 950,960,970,980,990 ::
NEXT J :: PRINT #1:CHR$(12):
: SL=1 :: IF F)X THEN STOP E
LSE IF 00$="N" THEN 810
940 DISPLAY AT(24,1)BEEP:"Pr
es; any key to continue" ::
CALL KEY(0,K,S):: IF S=0 THE
N 940 ELSE DISPLAY AT(24,1):
"" :: GOTO 810
950 PRINT #1:LT$&N$(J)&CHR$(
10):: RETURN
960 PRINT #1:LT$&N$(J)&S$&N$
(J+LP)&CHR$(10):: RETURN
970 PRINT #1:LT$&N$(J)&S$&N$
(J+LP)&S$&N$(J+LP$2)&CHR$(10
):: RETURN
980 PRINT #1:LT$&N$(J)&S$&N$
(J+LP)&S$&N$(J+LP$2)&S$&N$(J
+LP$3)&CHR$(10):: RETURN
990 PRINT #1:LT$&N$(J)&S$&N$
(J+LP)&S$&N$(J+LP$2)&S$&N$(J
+LP$3)&S$&N$(J+LP$4)&CHR$(10
):: RETURN          END
```

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PROGRAM OF THE MONTH
————————————————

by Bob August

The program this month will
read and list any TI-WRITER
program to the screen or
printer. The program can
be any size and it will
still read it. It will
also read and/or print any
DV80 file, like data files.
You need to check line 210
to make sure that the
printer name is the same as
yours. It is set for "PIO".

To stop the screen from
scrolling, so you can read
the screen, press the enter
key. To start the scroll-
ing again, press the space
bar.

Hope you enjoy.

```
100 ! <READ TI-WRITER >
110 !  IN EXTENDED BASIC
120 !  BY R.W. AUGUST
130 CALL CLEAR :: CALL SCREE
N(5):: FOR CS=0 TO 12 :: CAL
L COLOR(CS,16,1):: NEXT CS
140 DISPLAY AT(6,6):"< READ
TT-WRITER >": : : :"DSK DRI
VE [1-9]:[1]"
150 ACCEPT AT(10,19)VALIDATE
(NUMERIC,"123456789")SIZE(-1
)BEEP:N :: N$=STR$(N)
160 DK$="DSK"&N$&"."
170 DISPLAY AT(12,1):"ENTER'
filename'": :DK$
180 ACCEPT AT(14,6)SIZE(10)B
EEP:F$ :: FILE$=DK$&F$
190 DISPLAY AT(16,1):"TO Pri
nter [P]":"or  Screen [S]:[P
]" :: ACCEPT AT(17,18)VALIDA
TE("PS")SIZE(-1)BEEP:P$ :: C
ALL CLEAR
200 OPEN #1:FILE$ :: IF P$<>
"P" THEN 230 ELSE 210
210 DISPLAY AT(12,1):"PRINTI
NG FILE < ";F$;" >" :: OPEN
#2:"PIO",OUTPUT
220 LINPUT #1:A$ :: PRINT #2
:A$ :: IF EOF(1)THEN 320 ELS
E 220
230 PRINT "Press:": :"[ENTER
 KEY] to stop listing.": :"[
SPACE BAR] to continue.": :
240 FOR DELAY=1 TO 800 :: NE
XT DELAY
250 LINPUT #1:A$ :: PRINT A$
 :: IF EOF(1)THEN 290
260 CALL KEY(0,K,S):: IF S<>
1 THEN 250 ELSE 280
270 IF S<>1 THEN 330 ELSE 28
0
280 CALL KEY(0,K,S):: IF K<>
32 THEN 280 ELSE 250
290 CLOSE #1 :: PRINT :"End
of File < ";F$;">": :"Press
any Key."
300 CALL KEY(0,K,S):: IF S=0
 THEN 300 ELSE STOP
310 IF S=0 THEN 300 ELSE STO
P
320 CLOSE #2
330 DISPLAY AT(14,1):"FILE <
 ";F$;" > PRINTED" :: CLOSE
#1 :: END
```

Adapted From The Official Computer
Haters Handbook by Ed Machonis, QB-99ers

On the TI Pullout:

*"The evil that men do
lives after them...."*
Julius Caesar, III,1

Upon Reading The E/A Manual:

*"Though this be madness,
yet there is method in't."*
Hamlet, II,2

Upon Writing His First Program:

*"An ill-favoured thing, sir,
but mine own."*
As You Like It, V,4

On User Groups:

*"Misery aquaints a man with
strange bedfellows."*
The Tempest, II,2

Upon Blowing His Last Back-up Disk:

*"If you have tears,
prepare to shed them now."*
Julius Caesar, III,2

On Programming Speech Synthesizers:

*"Speak the speech, I pray you,
as I pronounce it to you,
trippingly on the tongue."*
Hamlet, III,2

On The Price of Peripherals:

*"Costly thy habit
as thy purse can buy..."*
Hamlet, I,3

**On His Subscription to Home Computer
Magazine:**

*"Oh what a goodly outside
falsehood hath."*
Merchant of Venice, I,3

**On TI's Packaging a SSDD Drive
With a DSSD Controller:**

*"Something is rotten in the
state.....of the art."*
Hamlet, I,4

Whilst Playing an Adventure Game:

*"Is this a dagger
which I see before me,.....?"*
Macbeth, II,1

**After Losing a Night's Work to The
Quit Key (FCTN =):**

*"O villian, villian, smiling,
damned villian."*
Hamlet, I,5

On The Turbo XT Keyboard:

*"What's in a name?
That which we call a Rose
By any other name would smell.....*
Romeo and Juliet, II,2

Upon Buying a Geneve with DOS .9:

*"Have we eaten of the insane root
That takes the reason prisoner?"*
Macbeth, I,3

On The TI-99/4A Grom Port:

*"The Gods are just,
and of our pleasant vices
Make instruments to plague us."*
King Lear, V,3

On Debugging Source Code:

*"When sorrows come,
they come not single spies,
But in battalions."*
Hamlet, IV,5

On The Speed of the TI-99:

*"My flocks feed not,
My ewes breed not,
My RAMs speed not,
All is amiss."*
The Passionate Pilgrim

On Purchasing Software:

*"I am a man more sinned against
than sinning."*
King Lear, III,2

On Software Pirates:

*"One may smile, and smile,
and be a villian."*
Hamlet, I,5