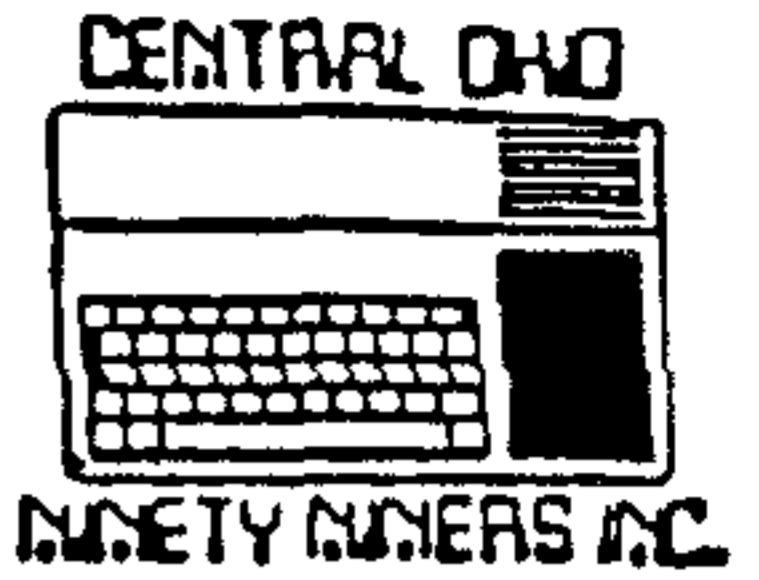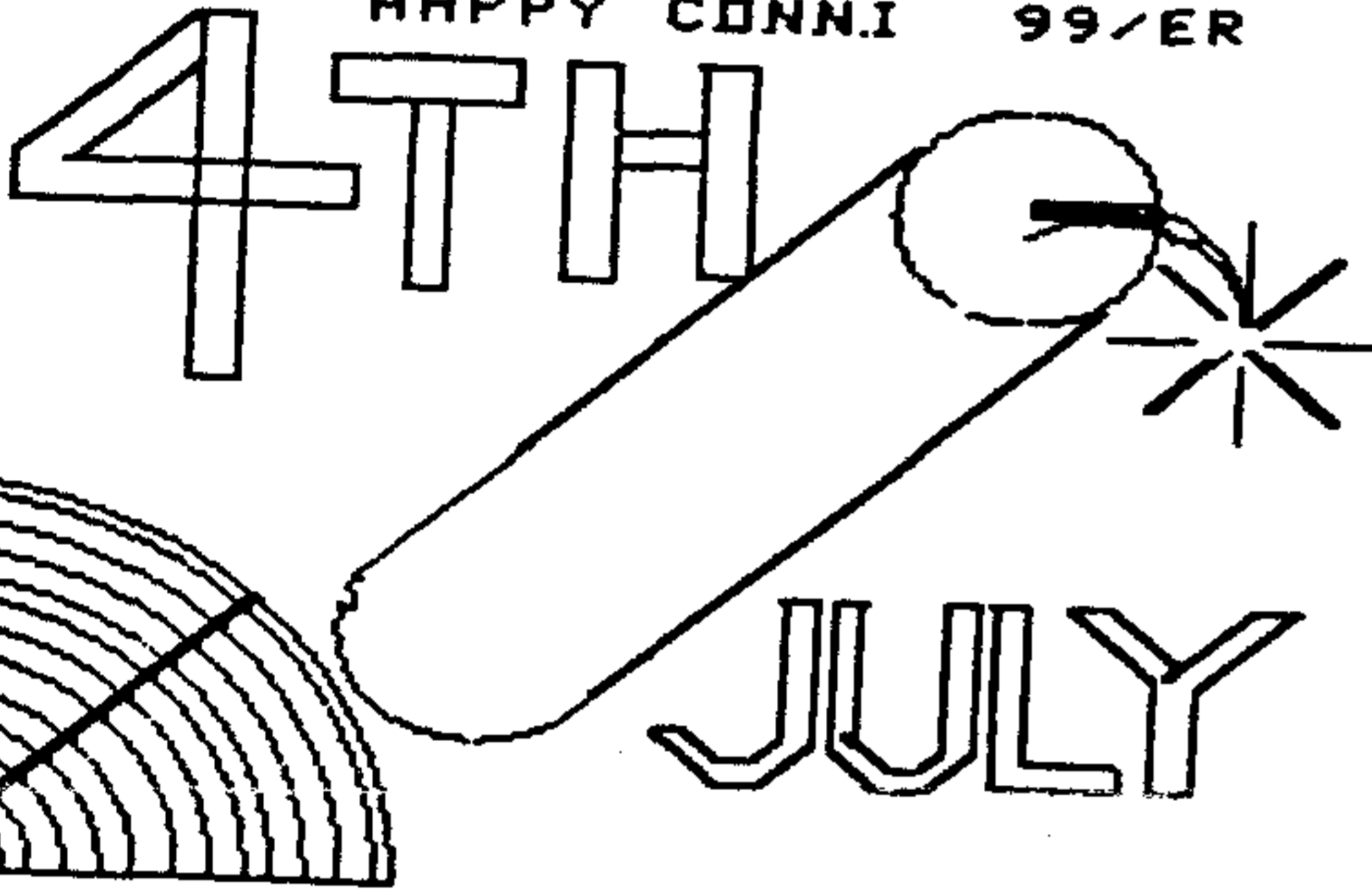# Spirit of 99

CENTRAL OHIO
NINETY NINERS INC.

THE OFFICIAL NEWSLETTER OF THE CENTRAL OHIO NINETY-NINERS INC.

PUBLISHED MONTHLY IN COLUMBUS OHIO

HAPPY CONN.I 99/ER

4TH

JULY

But for America...

(Thanks BLUEGRASS NL)

LASER PRINTERS AND THE TI
by Mike Maksimik
Chicago User Group

Laser printers can work fine on the TI and Geneve. The IBM 4019-001 laser printer I installed at the company I work for came with a technical reference manual including all codes necessary to get the printer to work in several modes: IBM PPDS mode (IBM mode), HP mode (Hewlett Packard), plotter mode, and Epson compatible printer mode.

In Epson mode the printer behaves like any standard PC dot matrix printer. It produces excellent text in this mode, and several fonts are available from the front panel and software (and cartridges) to add distinction to your text.

The IBM mode is similar, but adds some commands to change the font styles and also to download them into different memory areas of the printer, so that several fonts can be downloaded and retained in the printer's memory, as long as the power is on. Using software commands (escape codes) you can rotate the fonts, enlarge them, or shrink them (scaling). You can also control the paper supply using escape codes. In fact, all the necessary codes for controlling the printer need no special software to run on the 4A, just TI Writerand a little patience in entering the escape codes into a document .IP include file.·

JULY CALENDAR FOR CONNI
1993

JULY

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4 CELEBRATE OUR U.S. BIRTHDAY	5	6	7	8	9	10
11	12	13	14	15	16	17 CONNI MEETING CHEMICAL ABSTRACTS
18	19	20	21	22	23	24
25	26	27	28 CONNI MEETING MC DONALDS CLEVELAND AVENUE	29	30	31

Queen Anne Computer Shoppe, Seattle, Wa.

TI-PEI
A Review by Gary Kuehn
Pittsburgh User's Group

Three thousand years ago in the remote country known today as China, the emperor was having his new palace built. No expense was spared and slaves brought the finest lumber and the highest quality of gold and silver that was available in the known world. The emperor himself oversaw the entire project and no nail was pounded nor any brick laid without his approval. His eye saw any imperfection and he would reject even the smallest hint of a problem.

Years of work had passed and the new grand residence was on schedule and nearing completion. A party had been ordered by the emperor with lords and kings coming from all over the land to attend the grand extravaganza in honor of the palace and the royal family.

As all the rooms were more beautiful than the next, it was hard to pick the most beautiful but in the emperor's eyes the bath was to be his favorite. He longed to sit in the waters of the natural warm spring pool that was to be the centerpiece of the bath. He had chosen the finest tile to be found and as it was to come from a far-away land it was the last of the building materials to arrive. The tile maker had made each piece by hand and fired each piece with loving care. As this was to be his finest work he had numbered each one with his own special markings so no tile setter would make a mistake as to where to put the tiles. The designs were beautiful when put together but the code had to be followed to the letter.

The fateful day came when the tiles arrived by ship and were then carried miles overland to the site of the palace where slaves and laborers awaited the shipment of the precious cargo. The boxes were carefully unloaded and unpacked and laid on the ground with the tile maker code markings turned up for viewing by the tile-setters. As the emperor watched on he noticed that some of the tiles had the same markings as others but there were many different markings and finding a match was a great puzzle. The emperor was fond of puzzles and for him to see this great new mystery of the tile pieces was gleeful fun. "Wait", he told the tile-setters, "I want to study this thing that has come from afar." "First, if I take away this one and that one, I can remove more...", the emperor thought. "Then if I remove the next one and that one over there?" Well, after a few hours while the workers waited patiently, (they were getting paid by the hour), the great emperor puzzled over his new found plaything without ever looking at the side of the tiles which held the beautiful painting that had been commissioned.

After many days of playing with the tiles and of course, scuffing up the finished side till the tiles were useless, the emperor had his carpenters make new ones out of wood with the same markings on them. The emperor decreed, "This new game

the tile maker has made for me shall be forever known as TI-PEI,the city where I live and where this wonderful puzzle was first discovered."

The tile maker was paid three times his asking price and the emperor's bath has never been finished. The game became the rage of the land and was played for many years in the court of the rulers of the strange and far land of the emperor.

TI-PEI is played by placing 5 layers of tiles on a playing surface, each layer smaller than the other until the top layer is only one tile. The object is to remove two tiles at a time until all are gone from the playing surface. The only rule is that only tiles that are free on the left or right side can be removed. This makes for some long searching for free tiles. The program will allow you to see all the tiles that are free at that moment in the game but you must exit that help mode before playing can continue.

It's fun to speculate about how the game of TI-PEI originated and although this is my version, each of us can make up their own story of the early days of games and puzzles.
TI-PEI is a challenging game to be played today on the TI or Geneve. The graphics are good and the skill needed is very small. Anyone can learn the rules in a few minutes and play for hours.

Available from Asgard Software, P.O. Box 10306, Rockville, MD 20894.

Enjoy!

PROGRAMS REPRINTED FROM VAST NEWS

Do you yearn for the sounds of a GRANDFATHER'S CLOCK....but don't have one???? Try this program.

```
1 REM *By Chick DeMarti, LA9
9'ers, from an idea by W. Be
rendts in the CIN-DAY NEWS 1
989

100 FOR X=1 TO 6

110 FOR C=0 TO 30 STEP 2

120 CALL SOUND(-500,110,C/4,
500,C,1250,C)

130 NEXT C

140 NEXT X

150 FOR C=0 TO 30

160 CALL SOUND(-500,110,C/4,
500,C,1250,C)

170 NEXT C
```

Try this for sounds of "THE DEEP"!!

```
1 REM *Courtesy of Australia
n Newsletter TISHUG, from LA
99'ers. 1989

10 FOR R=1 TO 5

20 FOR X=1 TO 30

30 CALL SOUND(-1000,262,X)

40 CALL SOUND(-1000,197,X)

50 CALL SOUND(-1000,111,X)

60 NEXT X

70 NEXT R
```

WHAT CAN A COMPUTER DO FOR ME?
by JOAN JOHNSON

Before I purchased my TI (short for Texas Instruments), I used to think to myself, "Why do I need a computer?" What would I use it for? All my children had computers, but I put off buying one. I didn't want to spend two thousand dollars for a machine that I might never use!

All that changed in July of 1991 when my husband and I attended a "free" computer class at the Orange Senior Center. In a way, that meeting changed our lives.

After learning a few things that the computer could do and finding out how cheaply we could get started with a TI99/4A computer, we were hooked. Now we can't live without it. Well, I guess we could, but we wouldn't have as much fun.

Here are some of the ways in which we use our computer. Others use their computers for different purposes.

1. WRITING LETTERS... The word processing program is great! Anyone can produce a professional looking letter. This article is being produced with the word processing program. When I have it exactly as I want it, I will instruct the computer to print it. If I'm not satisfied, I'll edit it, but I DO NOT have to retype the entire article.

2. MAKING LABELS... We no longer handwrite addresses on envelopes. We use the computer to make a label, peel it off, and slap it on the envelope. The Postal Service appreciates typed addresses because it speeds up their sorting process.

We send labels with our address on them to our friends around the country. All they have to do is peel one off and stick it on an envelope. Saves them from having to look up our address in their rolodex, write out the envelope, etc.

3. SPREADSHEETS... It wasn't too long ago that I didn't know what a spreadsheet was. Now we use such a program to track investments, help figure income tax records, sort lists of family names and address for genealogy purposes and many other uses.

4. TRACK SAVINGS BONDS... There is a program that will help you keep track of the current value of your bonds.

5. HOUSEHOLD INVENTORY... Using the computer to list your household items by name, date of purchase, purchase price, serial number, etc. is a valuable tool for insurance purposes in the event of theft or fire.

6. CREDIT CARD NUMBERS... Making a list of all your credit card numbers, including the telephone number to call if the card is lost or stolen, is another way to use your computer. Just remember to file your list in a safe place.

7. GAMES... Some people think that is all a computer is good for. The fact is that a computer can be a friend to a lonely person. You can play games such as bridge, poker, cribbage, backgammon, chess, you name it, with the human playing against the computer. It can be a lot of company. The uses are unlimited.

8. TELECOMMUNICATIONS... Using a modem, you can hook up to other computers and bulletin boards via the telephone lines.

Maybe the above ideas will get you thinking of how you could use a computer. Operating a computer does require some effort on the part of the user, however. Even though some computers are more "user friendly" than others, all require a training period to learn to operate them. MANUALS ARE A MUST!. Getting a free computer is no bargain unless you get the manual with it.

Maybe you thought you never came in contact with a computer. Well, think again. Everyone probably drives a car, uses a microwave, VCR, calculator, telephone, bank ATM card. All of these everyday items have microprocessors in them, and they are computers.

Many modern automobiles have a part referred to as a "brain". If the brain goes bad, the car won't run. That is only one of the computers in the car. Air bags use microprocessors and sensors to tell them when to inflate.

We can't go back to the days before computers, we probably wouldn't want to.

For Your
Information

Interesting stuff from many & varied sources.......

Want to know how much space is left on some disks, but don't want to run a disk catalog to find out? Type this in and try it. The results can be sent to your printer:

```
100 ! DISK MEMORY AVAILABLE
120 ! by Chick DeMarti 1983
130 !
140 CALL CLEAR
150 PRINT "PRESS (S) SCREEN ON
LY" ::
160 PRINT " (P) COPY ALSO" ::
170 PRINT " (ENTER) TO EXIT"
180 FOR ROLL=1 TO 6
190 PRINT
200 NEXT ROLL
210 GOSUB 380
220 OPEN #1:"DSK1.",INPUT ,REL
ATIVE,INTERNAL
230 INPUT #1:A$,J,J,K
240 IF AN$="P" THEN 250 ELSE
270
250 OPEN #2:"PIO",OUTPUT
260 PRINT #2:" - DISKNAME=";A$
;"AVAILABLE=";K;" USED=";J-K
270 DISPLAY "DISKNAME -";A$;"
AVAILABLE=";K;"USES=";J-K
280 PRINT
290 PRINT "-ENTER NEXT DISK:"
300 PRINT
310 IF AN$="P" THEN 320 ELSE 3
30
320 CLOSE #2
330 CLOSE #1
340 AN$="NUL"
350 GOTO 210
360 CALL CLEAR
370 END
380 ! CHOICE FROM MENU
390 CALL KEY(0,A,S)
400 IF S=0 THEN 390
410 IF A=69 THEN 360
420 IF A=83 THEN 440
430 AN$="P"
440 RETURN
```

According to TIPS99, the Newsletter of the Puget Sound 99'ers, Lynwood, WA., here's how much console memory you can expect to have after using one of the four CALL FILES commands:

```
CALL FILES(1)..12,876 bytes
CALL FILES(2)..12,358 bytes
CALL FILES(3)..11,840 bytes
CALL FILES(4)..11,322 bytes
```

Obviously, if you need only one open file, you'll have more memory available for programming longer programs.

CALL CHAR characters.....

Here are some ready-made characters that can be used in any Basic or XBasic prgm. These were formerly published by Rick Kellogg in the MICRO Newsletter in Bloomington, Illinois.

```
            Slashed zero
CALL  CHAR(48,"0038444C546444
38")
            Right Arrow
CALL  CHAR(48,"000804027F0204
08")
            Left Arrow
CALL  CHAR(48,"00102040FE4020
10")
            Copyright Symbol
CALL  CHAR(48,"003E415D515D41
3E")
            Cent Sign
CALL  CHAR(48,"00083C4848483C
08")
            PI Symbol
CALL  CHAR(48,"0000FE28282828
28")
            Check Mark
CALL  CHAR(48,"00020204044828
10")
            Solid Line
CALL  CHAR(48,"00FF").
            Up Arrow
CALL  CHAR(48,"081C2A49080808
00")
            Down Arrow
CALL  CHAR(48,"000808084 92A1C
08")
```

The CALL CHAR statements above use zero (48) as the designated character, but any available character may be substituted.

(Thanks HOCUS)

PAGE PRO 99

TO MAKE A PAGE WITH
PICTURES AND WRITING
FOLLOW THESE EASY
STEPS.

1. DRIVE 1 - PAGE PRO
2. DRIVE 2 - PICTURE
   DISK.
3. BOOT UP PAGE PRO.
4. PRESS CTAL O
5. REMOVE PAGE PRO
   FROM DRIVE ONE AND
   PUT IN INTIALIZED
   DISK.
6. PUT CURSER WHERE
   YOU WANT PICTURE.
7. PRESS CTRL L TYPE
   IN DSK2.n(PICTURE
   NAME. WHEN ALL PICS
   ARE ENTERED.
8. FIND SPOT ON PAGE
   AND BEGIN TYPING IN
   YOUR MESSAGE..
9. TO PUT IN LARGE
   LETTERING. PRESS
   CTRL 9 - NOW TYPE
   IN PAGE PRO 99..
10. PRESS CTRL 9 AGAIN
11. NOW TO UNDERLINE
12. PRSS CTRL 8 THEN
    PRESS - E - UNDER-
    LINE PAGE PRO 99.
13. PRESS CTRL 8 AGAIN.
14. NOW TYPE IN YOUR
    MESSAGE.
15. TYPE VERY SLOWLY
    WHEN GOING FROM LEFT
    TO RIGHT SIDE OF THE
    PAGE.
16. WHEN FINISHED - TO
    SAVE THE PAGE. PRESS
    CTAL F PRESS 2 SAVE
    PAGE. DSK1.n - ENTER.

TO PRINT
THIS PAGE

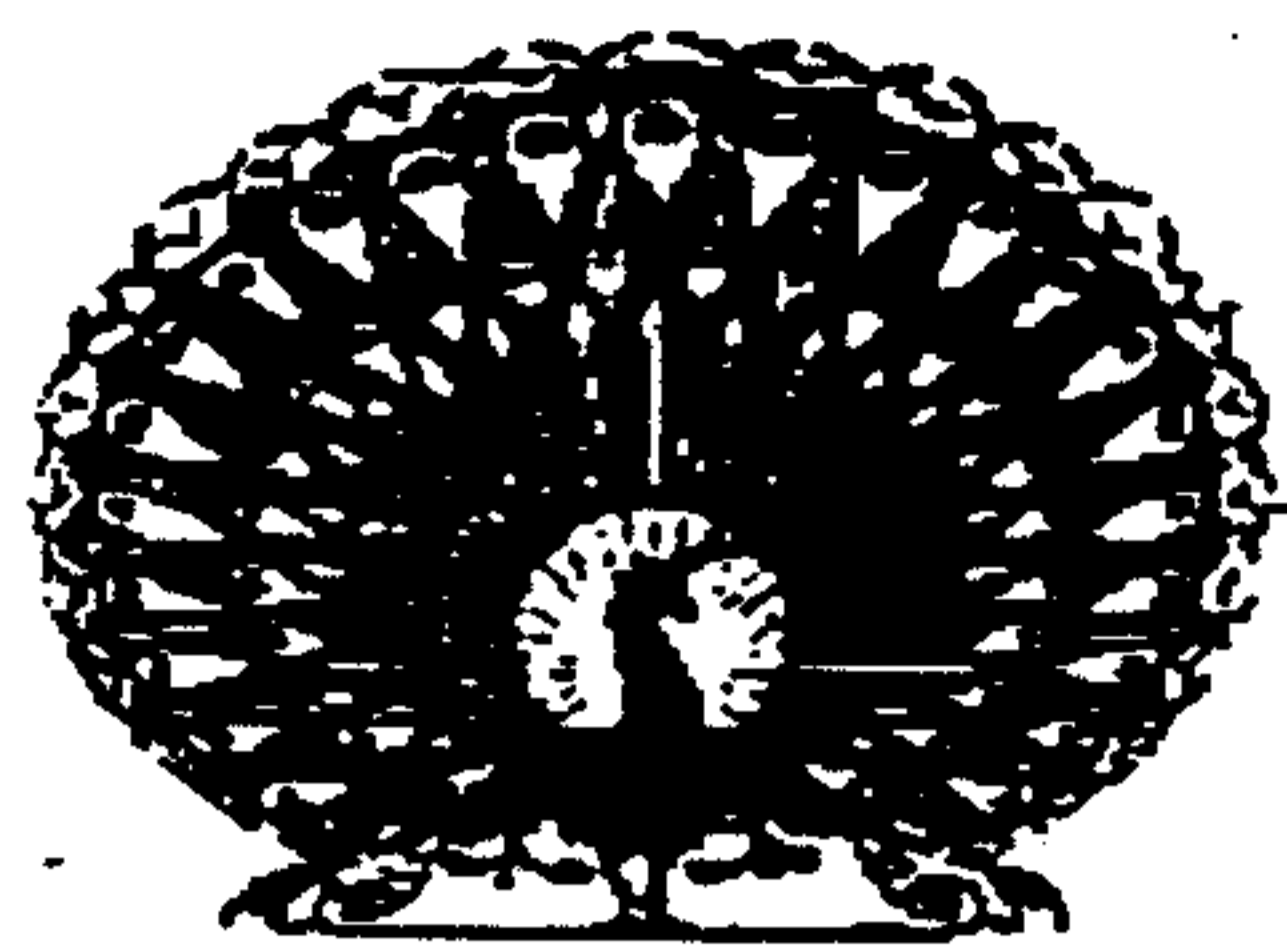DISK #1:
PAGE PRO

DISK #2:
PICTURE
DISK.

BOOT UP
NOW PUT
IN DISK
#1:SAVED
PAGE...

PRESS
CTRL F
#1: LOAD
PAGE...

TYPE IN
DSK1.n
(NAME OF
SAVED
PAGE.)

WHEN PAGE
IS LOADED

PRESS:
CTRL P
MAKE SURE
Y IS PUT
IN TO
TURN PIC
TURE ON.
YOU WILL
GET PRINT
OUT.....

YOU SHUULD
HAVE SEEN THE
ONE THAT GOT
AWAY!

EASY INFO
FOR MAKING
AND PRINT
OUT OF THIS PAGE............

DID YOU PAY YOUR DUES FOR 1993

TI WRITER SURPRISE

By Frank W. Aylstock

Since I won the Laser Printer at the 1993 FEST WEST NORTH , I have been playing with TI-WRITER and have tried some of the forgotten uses that our benefactor(Texas Instruments) had incorporated in the program. This is a tale of one of these facets of the program which I feel many of us may have over looked.

I was printing out another copy of a DISK I had received from the Chicago USers group which contained a collection of there newsletter articles that had been written by KROM DOME about the Geneve.

I would mention that this is a good tutorial and a story of how a geneve user suffered and worked out the problems. It also is a good example of how to create an autoexec file with a menu. I first printed out the articles one at a time and ended up with a collection of 150 pages. This caused me to look at the problem of reducing the paper work.

I figured that the only way would be to print on each side of each page.

ANSWER::

I created an INCLUDE FILE to set up the FI,AD and all of the other printer commands. This would allow the pages to look alike , but I had to go to each file and strip them of all printer commands which had come with the disk. I then renamed the files and added their name to the INCLUDE FILE per example.

(.FI;AD;LM8;RM70;PL60)

(.FO   PAGE %)

.IF FILE1

.IF FILE2

ETC.   Until all of the files have been renamed. I believe most of the users know how to us INCLUDE FILES.

Now I went in and place a PAGE BREAK (BP) at the end of each file.
Next when in the FORMAT phase you are asked which page? Your answer would be 1,3,5,7,9 ETC. instead of accepting the default A(all). You can do 5 to 10 pages with little trouble, but the buffer can only hold so much, so I only did a few pages at a time.

The big item here for those with tractor feed is after you have printed the ODD pages the turn the paper over and feed it in with the EVEN numbers.

When you get up to the later pages it takes time for the computer to load the programs,figure where each page ends, which page to print, etc.

This all can be done with tractor feed paper and/or single sheet. With the single sheet you can also put the numbers of the pages in consecutive order and state that you wish to PAUSE at the end of each page. Then feed each page in and then turn it over to print the next side.

The reasoning in doing both sides of the page is to reduce the number of pages you have to have in your DOC FILES.

I appreciate the extensive docs that have come with many of the latest programs such as DM-1000 VER.6, Funnelweb VER. 4.4 OR 5.

I like the more extensive docs as I feel like they are explaining ever detail to make the program more user friendly and to explain in detail the use of its many built in functions.

We have in the past have had skimpy docs that left a lot to be desired.

I hope that you understand this as again I am doing the same thing, skimpy docs.

```
100 !-------------------------------------------------
110 !         AUTO-CAT
120 !-------------------------------------------------
130 !  COPIED  MAY 1993          BY BRAD SNYDER
140 !-------------------------------------------------   (Thanks WEST PENN)
150 !         REQUIRES
160 !     EXTENDED BASIC
170 ! 32K MEMORY EXPANSION
180 !       DISK SYSTEM!
190 ! JOYSTICK - FOR INPUT
200 !-------------------------------------------------
210 !       SAVE DSK1.LOAD
220 !-------------------------------------------------
230 !  FROM K-TOWN 99'ERS              APRIL 1993
240 !-------------------------------------------------
250 CALL CLEAR :: CALL CHAR(128,"0000183C3C18"):: CALL COLOR(13,7,1):: CALL SCRE
EN(15):: FOR S=0 TO 12 :: CALL COLOR(S,5,1):: NEXT S
260 DIM NM$(127),TP(127),FL(127),TYPE$(5):: CALL INIT
270 DATA DF,DV,IF,IV,P
280 FOR X=1 TO 5 :: READ TYPE$(X):: NEXT X
290 IMAGE " ########## ##"
300 IMAGE DISK: ########## PG # OF #
310 DISPLAY AT(12,5):"LOADING DISK CATALOG" :: OPEN #1:"DSK1.", INPUT ,RELATIVE,I
NTERNAL
320 FOR RD=0 TO 127 :: INPUT #1:NM$(RD),TP(RD),B,FL(RD):: IF NM$(RD)="" THEN 340
330 NEXT RD
340 CLOSE #1 :: N=1
350 DISPLAY AT(1,1)ERASE ALL:USING 300:NM$(0),N/44+1,INT((RD-2)/44)+1
360 ROW=1 :: FOR DIS=N TO N+43 :: IF DIS=RD THEN 410
370 IF ABS(TP(DIS))=5 OR(ABS(TP(DIS))=4 AND FL(DIS)=254)THEN CH=32 ELSE CH=128
380 RDIS=INT((ROW+1)/2)+2 :: CDIS=1-(ROW/2=INT(ROW/2))*14
390 DISPLAY AT(RDIS,CDIS)SIZE(14):USING 290:NM$(DIS),TYPE$(ABS(TP(DIS)));:: CALL
 HCHAR(RDIS,CDIS+13,CH)
400 ROW=ROW+1 :: NEXT DIS
410 ROW,COL,LROW,LCOL=3
420 CALL JOYST(1,CV,RV):: ROW=ROW+(RV/-4):: IF CV=-4 THEN COL=3 ELSE IF CV=4 THE
N COL=17
430 IF ROW<3 THEN IF N>44 THEN N=N-44 :: GOTO 350
440 IF ROW>24 THEN IF N+43<RD-1 THEN N=N+44 :: GOTO 350
450 RC=2*(ROW-2)-1+((COL=17)*-1)+N-1
460 IF RC<1 OR RC>127 THEN ROW=ROW-(RV/4):: GOTO 420
470 IF NM$(RC)="" THEN ROW=ROW-(RV/-4)ELSE 500
480 IF CV=-4 THEN COL=17 ELSE IF CV=4 THEN COL=3
490 GOTO 420
500 CALL HCHAR(LROW,LCOL,32):: CALL HCHAR(ROW,COL,62):: LROW=ROW :: LCOL=COL
510 CALL KEY(1,K,S):: IF K<>18 THEN 420
520 IF ABS(TP(RC))=5 OR(ABS(TP(RC))=4 AND FL(RC)=254)THEN 530 ELSE CALL SOUND(30
0,110,0):: GOTO 420
530 RN$="DSK1."&NM$(RC)
540 CALL PEEK(-31952,A,B,C,D):: LS=A*256+B :: LE=C*256+D
550 FOR T=LS TO LE STEP 4
560 IF T>32767 THEN P=T-65536 ELSE P=T
570 CALL PEEK(P,A,B,C,D):: LN=A*256+B
580 IF LN=1000 THEN 610
590 NEXT T
600 CALL SOUND(300,110,0):: DISPLAY AT(12,7)ERASE ALL:"PROGRAM ERROR" :: STOP
610 PR=C*256+D :: IF PR>32767 THEN PR=PR-65536
620 CALL LOAD(PR,169,199,LEN(RN$))
630 S=1 :: FOR X=PR+3 TO PR+2+LEN(RN$)
640 CALL LOAD(X,ASC(SEG$(RN$,S,1)))
650 S=S+1 :: NEXT X :: CALL LOAD(X,0)
660 CALL CLEAR :: CALL CHARSET :: CALL SCREEN(8):: DISPLAY AT(12,1):"LOADING "&R
N$
900 RUN "DSK1.PROGRAM-NAME"
```

CECURE TAKES OVER MIDI MASTER 99

As reported in the April 1993 issue of Micro Pendium---

In a move that should please TI users, Cecure Electronics has taken over distribution of Mike Maksimik's MIDI-Master, according to Don Walden of the company. Maksimik had previously announced that he would limit his distribution of MIDI-Master to TI Faires. By giving the distribution rights to Cecure, Maksimik insures that the product will be available through more accessable mail-order channels.

Cecure can be reached at P.O. Box 132, Muskego, WI 53150-0132.
Phone: (414)-679-4343
BBS: (414)-529-9659

CRYSTAL SOFTWARE ANNOUNCEMENT
By Mike Maksimik

Work continues on MIDI Master v3.0; however, standard 32k architecture

will not be supported. After consulting with my brother on this, I have decided that version 3.0 will only be available as 3.0G and the prior versions of 3.0E and 3.0EX. There will not be any 3.0S! The minimum system memory requirements are 128k.

The best way to cope with this is to have a RAMBO installed on your ramdisk and allocate 128k for programs. Or purchase the Horizon 4000 Ramdisk. I appologize to version 2.3 owners who anticipated a miracle for their 32k 90k disk systems, but the project is unrealistically being held because of consitant memory problems.

To avoid conflicts with this issue, I will extend a full refund to all owners of v2.3 who are not willing to upgrade, and who are completely dissatisfied with MM99 v2.3. Only registered owners of the software will be given a full refund.

If you do not wish a refund, but would rather upgrade, please note: to run version 3.0E you will need a TI with 32k memory card, 128k RAMBO compatible memory expansion, a double sided disk system (NOT two single sided drives!!!) and an rs232 port. THERE ARE NO EXCEPTIONS TO THESE SPECIFICATIONS. THE ASGARD AMS WILL NOT BE SUPPORTED!!! To run version 3.0EX you will need the above, plus an 80 column adaptor with 192k video RAM, a serial mouse, and a DSDD controller (hard disk preferred, but not required). Version 3.0G will require a Geneve with a hard disk system. There is no exception to this rule, either. There is more than 1.5 meg of files in the 3.0G package. Running from floppy is too slow.

You can still operate under v 2.3, as 3.0 will export SNF files to disk, allowing you to still play music generated by version 3.0.

3 1/2 INCH DISK DRIVES ON THE TI99/4A
BY FRANK AYLSTOCK

The 5.25" (360k) drives are becoming another orphan, like our TI. The disk controllers do not know if you have 3.5" or 5.25" drives. The only thing they know is what your input is, and the only control you have is the number of tracks per sector, number of sides and density. The TI disk controller will handle double sided but only single density. The Corcomp controller will handle double sided and double density. The Myarc card with the QUAD CHIP installed will handle disk drives up to 720k. The 5.25" quad density drives are another orphan but you can use 3.5" disk drives. The 3.5" drives can be up to 1.44meg this means that you will have 2880 sectors or the equivalent of 8 SS/SD floppy disks. The only drawback to the 3.5" drive is that all the programs you receive come on 5.25" floppy disks. However you can set up your system so that you have at least one 5.25" disk drive and the others 3.5" drives. The HFDC by Myarc will also accept up to quad density disks.

I would recommend that you switch over to the 3.5" drives as they are a superior form of storage for the following reasons.

1) The disks are enclosed in a shell/cover which hold them rigid and will not allow the disk to get bent. You can even write on the disk directly without harming the data.

2) They contain there own sliding reuseable "write protect tab". By merely moving the tab up or down the disk can be protected.

3) The size is a large consideration as they require a lot less space to store or transport them.

4) They contain a sliding door which protects the storage medium at all times. This door opens and closes automatically when the disk is inserted or removed from the drive.

5) The size aEso helps to read and write data faster than the 5.25" Eloppy disk drives.

6) The disks are coated with superior oxide which is less vulnerable to data loss.

7) They are considered more reliable than 5.25" disks especially important when dealing with quad density disks.

8) The drives take less current during the reading and writing process. In fact some of the 3.5" drives use only the 5 volts.

Last but not least is the price. Around this area (Los Angles) the drives can be purchased for as little as $50.00 and there is no conversion or other hardware changes to be made and they will replace the existing drives with very little labor.
    Look into these drives!

The above was reprinted from the BREA USERS GROUP (Thanks WEST PENN)
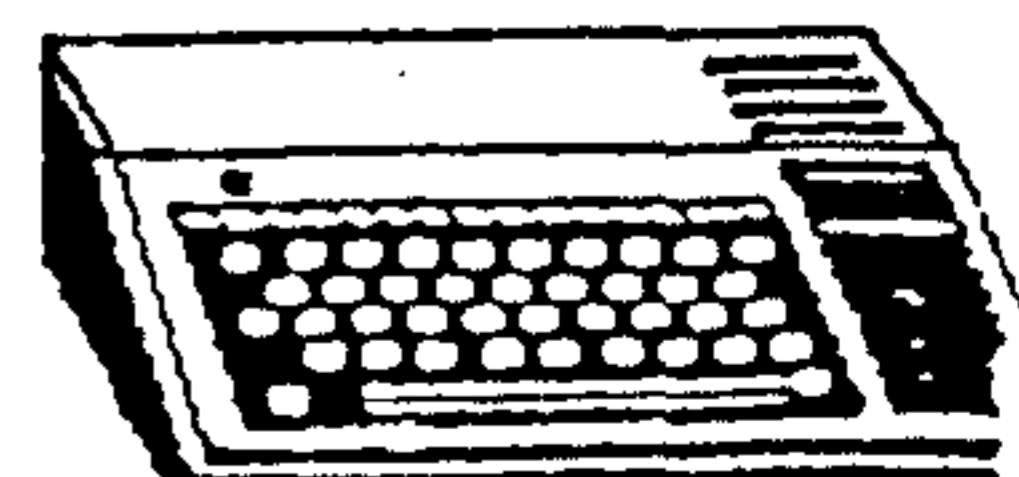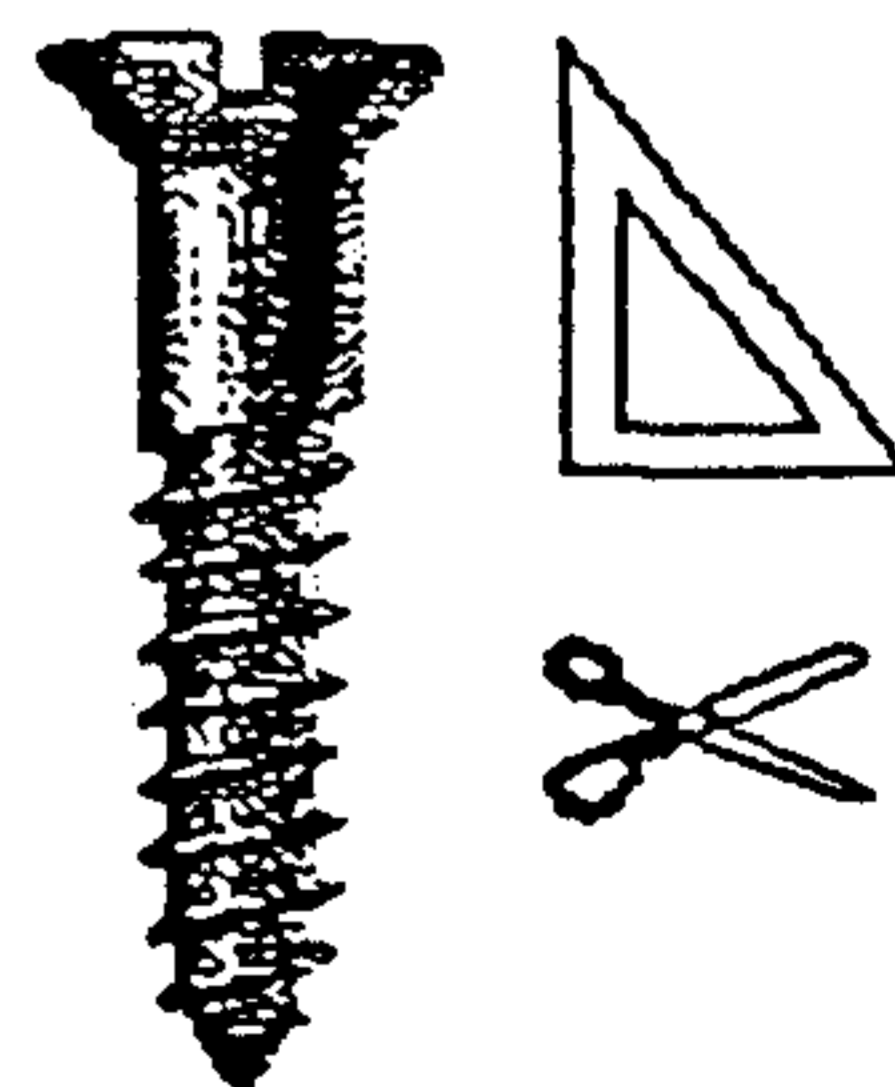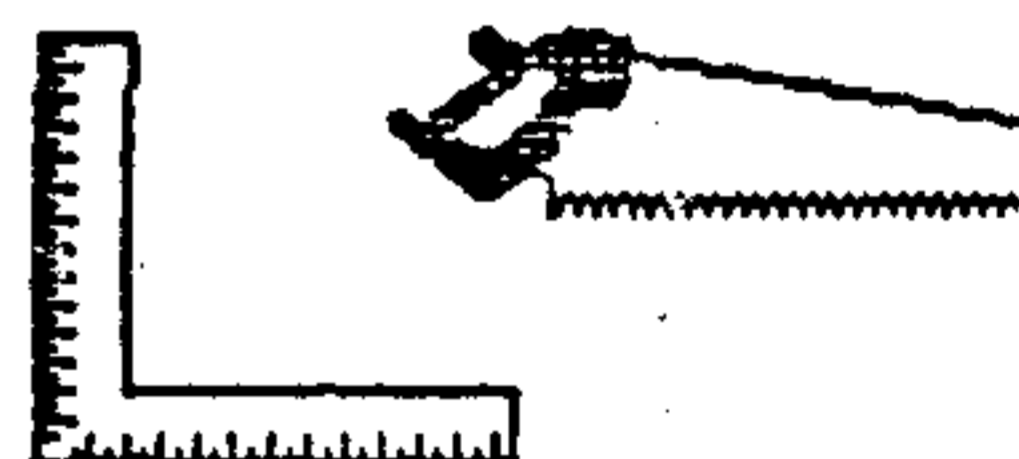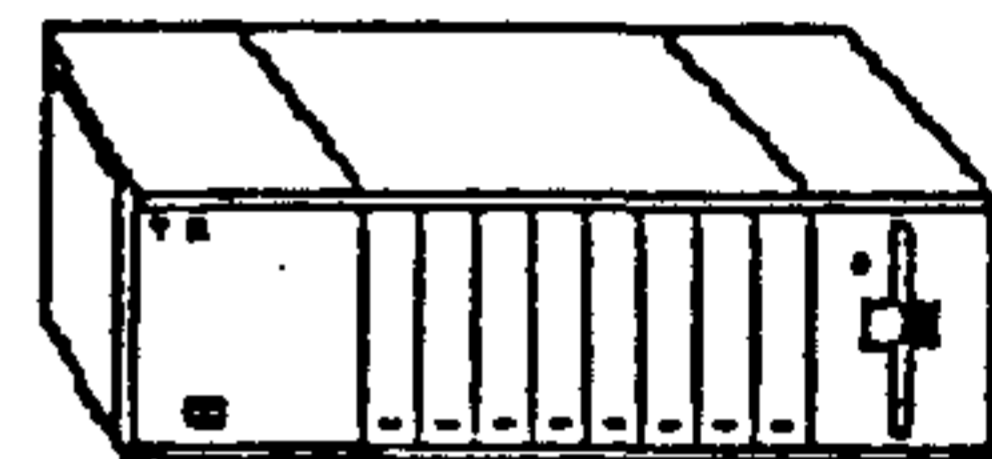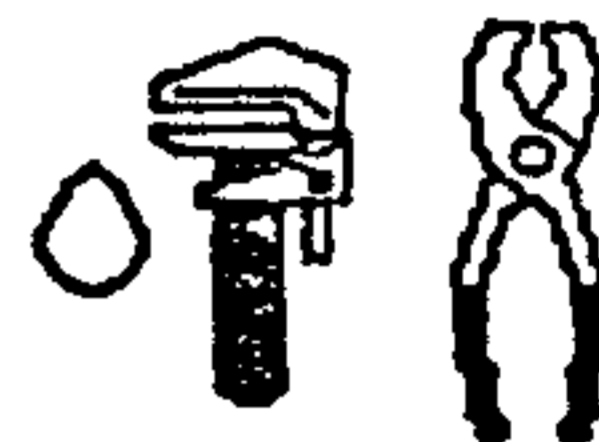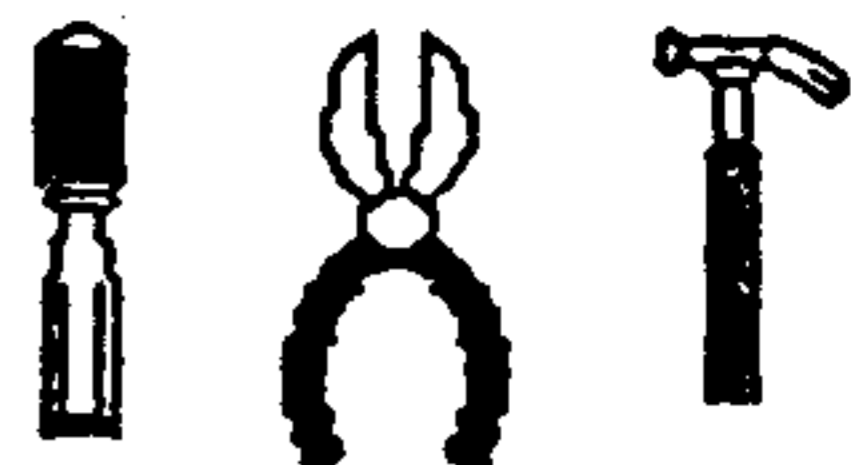
TRANSFERRING FILES TI TO PC

by Philip Harris
Ottawa U.G.
December 1992

(Thanks
LONG
ISLAND)

In case you're not sure how I passed TI Writer files to the PC, then let me explain. You will need the following hard/software: a null modem connector (approx. $8 at most computer stores), a female/female gender changer ($8), one or two modem cables, a modem program for both the PC and TI, TI Writer (Funnelweb), and the DF128/DV80 program (available from the Sysop on the Ottawa BBS).

Firstly, I download all the newsletter contributions from our BBS. After de-archiving any archived files, I then load up TI Writer.

Next, I select the first file for the newsletter and load the file as normal into TI Writer. Then merge in the next file by typing LF for Load File, and then type E DSK1.filename. This loads the file called "filename" from DSK1 and places it in the current document after the last line.

After all files are merged in, I can then do a rough deletion of unwanted formatting codes, then PF (Print File) to a file instead of a printer from the command line. The commands are: PF <enter>, C DSK1.Document <enter>. The "C" tells TI Writer to print the file stripping it of any TI Writer format characters and storing it in a "plain text" format.

The next step is to exit TI Writer and run the program DF128/DV80 and convert the DSK1.Document from a DV80 file to a DF128 file (ASCII standard).

Once the file conversion is complete, hook the two computers' serial ports together using the above equipment. Actually, you could do it DURING or even before the conversion.

Lastly, run a modem program on each computer, enter terminal mode and set the baud rate at 9600. You should now be connected! You can test this by typing a few letters on the TI, and they should appear on the PC's screen. To transfer the files, simply select "up load" on the TI, Xmodem protocol, and type in the name of the file to send (e.g. in Telco: DSK1.DOCUMENT). Before pressing enter on the TI to send, select "download" on the PC, Xmodem, plus the file name (including path if needed) and press enter on both machines. The files should "scream" between machines. After the transfer, load your PC's word processing package (e.g. WordPerfect) and load in the ASCII text file. It's that simple!

ADDENDUM by Mark Schafer: I have successfully transported files between a TI and a PC, and the only connectors I used were a TI modem cable and a null modem cable (as opposed to a null modem connector). I didn't use a gender changer. Maybe you only need one if you don't have a null modem cable. I have no idea how easy a null modem cable is to come by.

If you think his second step reads a little awkwardly, it's because I changed it. He was going through a little more trouble than he needed to, so I simplified it. I couldn't say "I then merge..." because it isn't the way the author said he did it.

And speaking of unneeded trouble, I may be off the mark since I don't know a whole lot about telecommunications, but isn't it true that in some cases it would be easier just to download the file to a PC in the first place?

Also, I believe the above steps could be reversed if you want to go the other way. If the program DF128/DV80 that he referred to cannot convert the other way, there are programs that can. The conversion could also be done at the PC before sending.■
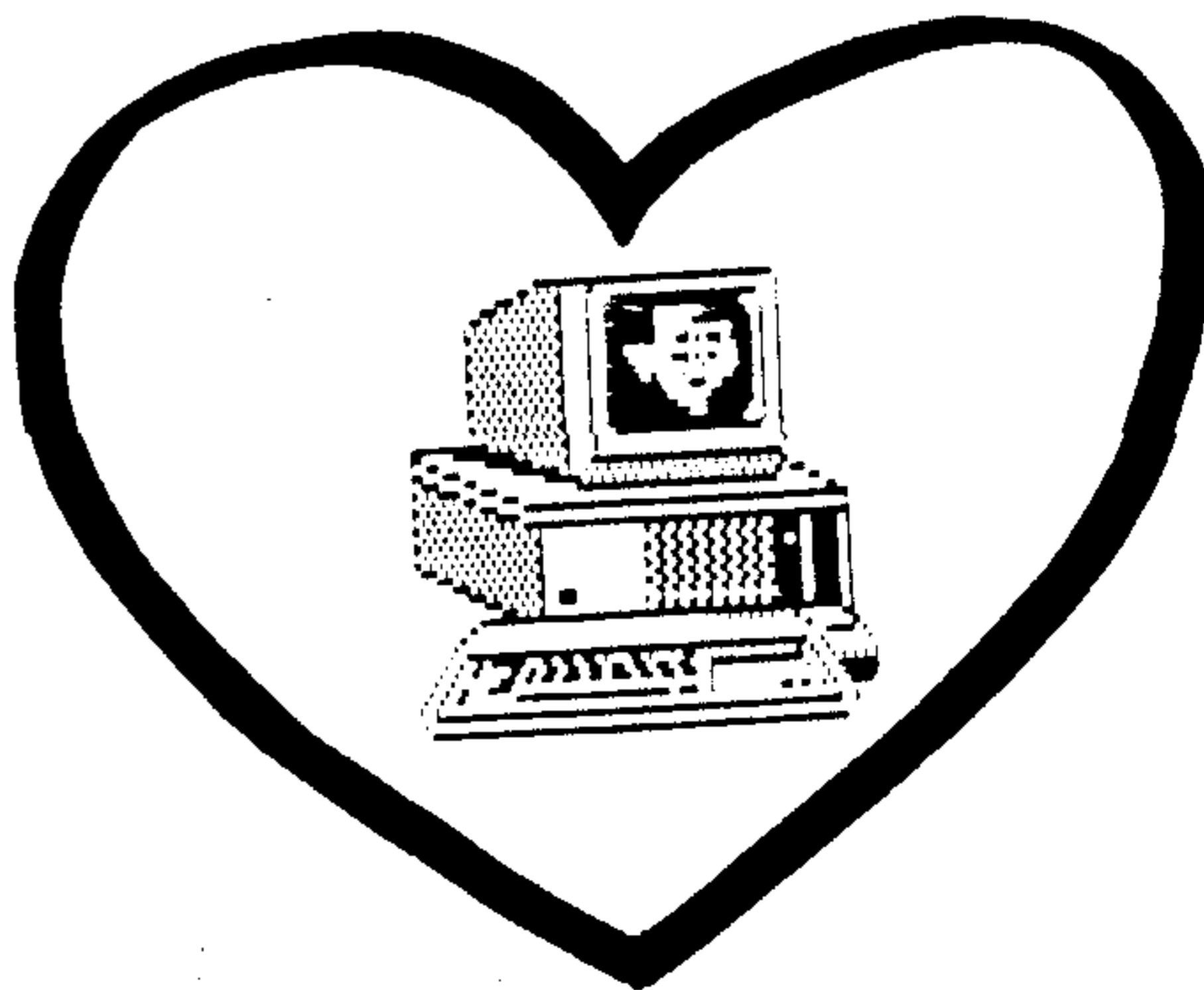
(Thanks B.C.)

The following is an edited version of the Chemistry and Physics of Re-Inking. Written by Jimmie A. Moglia, Director of Computer Friends, Portland, Oregan. Editing by Ed McNish and Terra Atrill

The data regarding ribbon and the effect of re-inking was obtained and described by Don H. White, Ph.D., Professor of Chemical Engineering at the University of Arizona.

Computer Friends conducted many tests to determine the expected life of a re-inked ribbon and the target number of re-inkings before the ribbon is discarded.

Regular re-inking of a nylon printer ribbon with the proper dot matrix ink increases the life of the ribbon and printhead.

FACTORS INFLUENCING RIBBON PERFORMANCE AND USABLE LIFE — (Part I)

A print-head is a device consisting of a column or columns of metal needles, each traveling in a plastic cylinder and electromagnetically driven to respond to the computer commands so as to form letters. When the needles hit the paper there are 4 elements involved:

- the nylon ribbon
- the ink
- the paper
- the striking needles

The ink transfer process depends on these characteristics:

- Printing force of the striking pin (or fully formed character in the case of daisy wheels)
- Ribbon / paper contact time
- Ribbon characteristics (absorption and affinity to the ink)
- Ink chemistry (including darkness of the dye) and viscosity
- Paper characteristics (porosity and treatment)

Printing forces of current printers range from 5 to 200 pounds. Even in a single printer the pressure endured by the ribbon varies significantly, depending on the surface occupied by the character to be printed. The contact time of the ribbon with the paper varies from 10 to 200 microseconds, depending on the print speed, force, hammer (needle) weight, etc.

Paper properties are a function of the type of fibre used and of the paper mechanical treatment. The properties, in turn, affect the porosity, the roughness and the affinity of the paper to ink. However, apart from papers designed for special applications, standard computer paper 15 lb, 18 lb or 20 lb weight yields fairly consistent and repeatable performance, irrespective of the brand or manufacturer.

Fabric-ink compatibility is strongly affected by the finishing process used on the fabric during manufacturing. The type of fabric most widely used across the industry is nylon. The nylon manufacturing process follows these steps:

- melted nylon is compressed through a draw plate to form a bundle of filaments
- filaments are gathered in a thread, which is stretched to improve its resistance
- before weaving, the nylon undergoes a series of treatments including the coating of the threads via a protective layer of polymer
- the nylon is woven into a ribbon and cleaned of the protective polymers
- the ribbon is impregnated with ink by squeezing the ribbon between inked rubber rollers.

Ink absorption depends on the surface and bulk properties of the nylon; these include:

- fibre geometry and roughness
- fibre chemistry, including the polarity of the polymer used for coating and PH of the fabric surface. The higher the polarity of the polymer, the higher the wettability of the ink.

In general, nylon has less absorption capability than natural fibres, such as cotton. To increase the porosity of the ribbon, nylon undergoes a process of texturization. This is a thermal treatment that fixes the shape of the filaments into a highly twisted thread structure. This method is efficient with low density fabric ribbons (low number of filaments per unit volume).

To increase the resistance to ribbon wear and to maintain good character definition with high speed printers it has been necessary to increase the density of the ribbons (hence the term used in the trade, "high density" ribbons). High density ribbons have less porosity (i.e. they dry sooner) but they do not tear (i.e. they last longer). High speed printers and 24 pin print-heads require high density ribbons. A high density ribbon is more expensive than a normal density ribbon. Computer Friends have standardized high density ribbons for all the cartridges they manufacture.

MULTIPLAN TIP - COPY COMMAND
By B.J. Mathis, SW99ers
From NET99

When using MULTIPLAN, the Copy command is probably one of the most useful commands. It is especially useful for setting up a spreadsheet. You can Copy Right, Down, or From. Each of these commands is useful for copying formulas or other information to another part of your worksheet.

Copy From lets you copy an entire rectangular area to another part of the worksheet. You can copy from one single cell to another single cell or you can copy from a group of cells to another group. In order to copy from one block of cells to another you first designate the boundaries of the group you wish to copy. For instance if you wish to copy the information in row 3 column 2 through row 7 column 5 to the area with the boundaries of row 24 column 9 through row 28 column 12, you first choose the Copy command, then choose From. Now type R3C2:R7C5, tab to the next section, type R24C9, press Enter. Notice it is not necessary to give the computer the boundaries of the area you wish to Copy to, you only have to tell it where to start copying to. It will figure out the rest.

If you want the information in one cell to appear in another group of cells Copy From can do that too. Let's say you want the information in row 5 column 3 to appear in row 6 column 7 through row 10 column 9. You will again chose the Copy From command. The command line should read "COPY FROM cells: R5C3 to:R6C7:R10C9".

Copy Right will Copy cells to the right in the same row. If you want an item that is in row 8 column 10 to appear in row 8 columns 11 through 20, use the Copy Right command. To do this it is best to position your cursor at row 8 column 10, press "C", press "R", enter your number of columns, in this case, 10 and press Enter.

Copy Down is much the same as Copy Right, however it copies down the column instead of across the row.

When copying formulas with RECALC turned off, the numeric value that was in the original cell will appear in the new position, however when you activate RECALC the numeric value will change based on the information MULTIPLAN finds in the cells referenced by the formulas.

When you Copy a formula that contains references to a specific row or column you may have to change that reference to relate to the specific row or column in it's new position.

Copy can also be used to copy text, this will not change when RECALC is turned on.
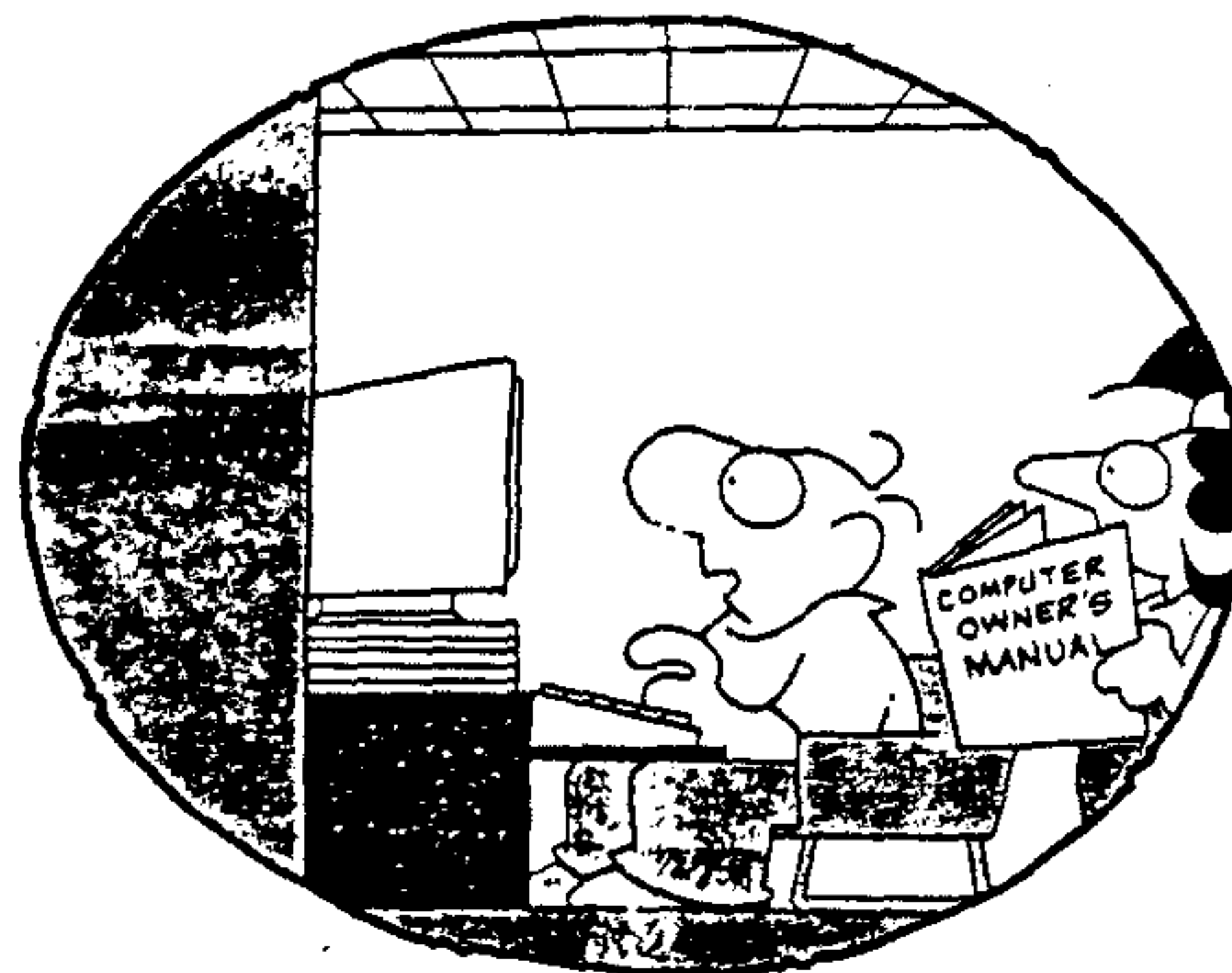
"It says our checkbook balance is 3 cups of flour, 2 cups of sugar and 1 egg beaten until frothy."

MEETING DATES
FOR
1993

C.O.N.N.I. BOARD MEMBERS

3RD SATURDAY

17 JUL 1993
21 AUG 1993
18 SEP 1993
16 OCT 1993
20 NOV 1993
18 DEC 1993
15 JAN 1994
19 FEB 1994

4TH WEDNESDAY

28 JUL 1993
25 AUG 1993
22 SEP 1993
27 OCT 1993

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Vice Pres. - Chuck Grimes	614/268-8821
Treas - Bill Sheppard	614/881-5742
Sec/Sat - Jim Peterson	614/235-3545
Sec/Wed - Dick Beery	614/459-3597
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