R E M I N D E R   ■   R E M I N D E R

E   N E X T   M E E T I N G   E

M   T U E S D A Y   9/26/89   M

I   7 ' O C L O C K   P. M.   I

N   R O U N D T A B L E P I Z Z A   N

D   W E S T 4TH & V I N E   D

E   R E N D ,   N E V A D A   E

R E M I N D E R   ■   R E M I N D E R

◆◆

‡‡ MEETING MINUTES - 8/29/89 ‡‡

The meeting was called to order by the president, Dic Slunaker, at 7:02 P.M. at the Round Table Pizza parlor. 17 members were present.

‡‡ OFFICER'S REPORT ‡‡

Dic made it known to all present that a receipt book had recently been acquired for all future business transactions of the computer group.

Andy Yuan read the minutes from the last meeting, and only one correction was noted, concerning the Disk of the Month #2 - Richie Wagner's Greatest Hits. Due to circumstances beyond our control, Ed Conradt was unable to make copies of the flippy program. Instead, Disk #01A - TI Extended BASIC Games, which includes the BINGO game, was substituted in its place. We apologize for any inconvenience. The minutes were approved.

The Treasurer's Report for July, as given by Richard Emblen, follows:

ITEM	AMOUNT
Bank balance	311.28
Cash on hand	4.51

‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡
INCOME

Bank interest	
Library sales	
Program sales	
Disk sales	5.00
Raffle proceeds	18.00
Donations	
Dues	
Miscellaneous	
TOTAL	23.00

‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡
EXPENDITURES

Printing	12.06
Postage	
Program purchases	
Equipment purchases	1.47
Misc. supplies	
Misc. costs	5.00
Bank charges	
Taxes	
TOTAL	18.53

‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡‡

The Program Librarian, Ed Conradt, covered briefly the two Disks of the Month offerings, to be demoed at the end of the formal meeting.
He also said that the library had 77 (seventy-seven) blank disks available for sale to members at .50 cents each.

Roland reminded the group about the TI FEST WEST '90 computer fair in Tucson, Arizona on February 17,18 at the Days Inn. More info? Ask him.

OLD BUSINESS

Andy Yuan dutifuly called everyone up last week to remind them about the August meeting. But, it seems he was only able to contact one person IN PERSON! The rest had answering machines!
"Please leave your message after the beep... BEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEEP."

(I think they're on to you, Andy!)

NEW BUSINESS

1. S.I.G. MEETINGS - Discussion began on the Special Interest Group meetings, mainly about the lack of good ones. Jim Nucholls commented that the past S.I.G. meetings he had attended did not seem to be organized and that many people were having a hard time keeping up with the instructor/s. He said, a majority of the meetings seemed to start out ok, but tended to get off track after awhile. He recommended that future S.I.G. meetings be well thought out in advance, teaching members a program ONE-STEP-AT-A-TIME, on a continuing basis, and that the instructor/s alone should take charge of the class proceedings from beginning to end.

Sandy Goetze mentioned that she would like to learn how to properly load different kinds of programs. Several others expressed an interest too. (After the formal meeting, a sign up sheet was distributed around the room to find out how many would be interested in attending a S.I.G meeting on this subject. 14 people signed up! Also, 10 people signed up to learn more about Terminal Emulators. So... Do we have any volunteers to give a S.I.G. on these two subjects? Please contact Dic Slunaker at the next meeting.)

2. SWAP MEET - Your humble newsletter editor suggested that at our next meeting, everyone bring in their unused TI software and hardware for purposes of buying, selling, and trading with active members of our local group. I'm happy to report that it was motioned, seconded, and unanimously passed! Therefore... 4N will be holding its first annual TI SWAP MEET on September 26, 1989! Bring your old cartridges, cassettes, joysticks, disk drives, etc. Now's your chance to upgrade your system, get rid of your spare STUFF (One man's junk is another man' treasure!), or find that certain hardware you've been looking for at a bargain price! You might even want to come a little early... Say SIX-ish.

3. RECRUITING - There was a brief discussion on how to recruit new members, since our present membership is down by 1/3 as of last year. Two ideas were mentioned: 1) Send questionnaires to, or telephone, inactive members to see why they had lost interest, with the hope that their responses might give some insight into how best to serve the needs of our members. (This plan has been tabled until the next meeting.) 2) A poster should be displayed on bulletin boards in offices, cafeterias, computer stores, grocery stores, etc. for the purpose of informing others about 4N and its support of the TI-99/4A. (This plan too has been tabled, pending approval by the members on a final draft of a poster, which has yet to be designed.)

Editor's Note: Any takers out there? Everyone is encouraged to participate. Why not take out your favorite graphics utility program now and start drawing! It'll be good practice! And, maybe our president could

also be coerced into providing a prize to the one who designs the best all around poster... What do you say, Dic?

4. FREE TURKEY - Dave Belanger has promised to donate a turkey to the group, to be used as a prize, for the first person completing a 'Blackout' on his/her BINGO card at the October meeting.

DISK'S OF THE MONTH

The following programs will be featured this month:

Disk #1 -

CADMASTER V 1.9 - A freeware program by JOHN MILLER, 2458 TRANSIT AVE, ANAHEIM, CA 92804. Asking price - You be the judge!

This is a COMPUTER-AIDED DRAWING tool which assists the user in making architectural-type drawings. Some of the features provided: An accurate built-in Scale, an Overlay Load function, pencil-tip size, Auto measure mode, box mode (with expansion/contraction feature), fill, inverse, circle mode, text entry mode, OOPs-key.
Movement of the pencil cursor is controlled by key presses. Each drawing may be saved to disk in a special file. Autoloads in XBASIC. 4-page instructions included. Future improvements proposed by the author are: More precise circle drawings, monochrome or color option, print feature, zoom mode, and templates. If you plan some landscaping or an addition to your house, this disk will definitely be worth your while.

Disk #2 -

EE BONDMASTER - A freeware utility program by REAL ESTATE PROJECTIONS, 409 ELBERON AVE, SUITE #2, SAN PEDRO, CA 90731. Asking price - $10.00.

This disk is for the purpose of calculating the actual, or accrued value of Series EE Government Savings Bonds. The main menu displays the following: 1) Load/Save data 2) Catalog disk 3) Manipulate data 4) Update interest 5) Calculate/Print 6) End session. Also included with the disk is an 8-page manual. Autoloads in EXBASIC. Very useful utility.

As usual, people, if you think the programs are really keen, show your appreciation with a little bit of green! 'Nuff said.
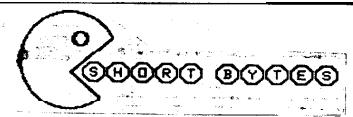
BINGO

This months prize was a HUGE box of printer labels, which was divided in half, and given to the winners of our first monthly BINGO game: SANDY GOETZE and FRANK SCHWEGEL. Congratulations to you both!

Since everyone enjoyed Dic's impression of the Speech Synthesizer so much (we didn't have one), it was motioned, seconded, and carried, to continue the BINGO games, in place of the monthly Raffles, until further notice.

CLOSING

The formal meeting was adjourned at 7:56 P.M.

◆◆

SHORT BYTES

```
100 ! MYSTERY PROGRAM #2
      BY CHRIS SCHRAM
110 ! REQUIRED XBASIC AND
      EXPANSION MEMORY
120 CALL CLEAR :: CALL SCREE
N(1)
130 CALL INIT
140 FOR X=1 TO 28
150 RANDOMIZE
160 CALL PEEK(-31808,A,B)
170 CALL SPRITE(#X,46,16,A+1
,B+1,A-128,B-128):: CALL PEE
K(-31877,C):: IF C AND 32 TH
EN CALL SCREEN(10):: CALL SC
REEN(1)
180 CALL LOAD(-31744,A,"",-3
1744,B):: NEXT X
190 GOTO 140
200 END
```

◆◆

InfoBits

THE VIEW FROM THE POINT

By Harry Brashear

My view this month is of all the other computers in the world. It was fueled by a letter to the editor from the June Computer Shopper.

The letter was one of thanks to CS for supporting classic computers (all of the 8-bit wonders), TI included. It made me realize that I am not the only one in the world that is being trampled to death by the Big Blue syndrome. There are Atari people, Commie people, Sinclair, Adam, and even CPM 89ers.

The majority of these people had a better chance than we did. The companies that they bought their machines from, went on to offer others. This, at least, allowed the owners to remain loyal to a product line. If they didn't want to move up though, they were harassed just as much as we were. Like us, the companies have dropped these people like hot potatoes, simply because they weren't ready to switch. Also like us, they are now totally dependent on their own communities for hardware and software. (This hasn't happened to the Coco as yet... but look out!)

We hang onto the TI because it is different. It's simple, powerful, programmable, useful, and does everything a computer is supposed to do for us.

Unfortunately, we are constantly being told how much better other computers are. The new 486 chip will extend the present clone speed to 60mhz. It's amazing, when you consider that it will require as much code as is in the TI-Writer Editor, to slow it's input down. (That's so a person can type his name legibly without repeating letters.) What's the point? I know there are reasons for all of this, but somehow, I just don't think it applies to you, me, and the rest of the orphans.

There are five major elements that interface between us and any given computer. They are: the word processor, the data-base, the spreadsheet, graphics, and finally, entertainment. (I should also include communications, but less than half the users get into that.) Generally speaking, we, and the others have all of those elements, and they are getting better every day. Why? Simply because, we as users want better, and the creators of the software keep up with those demands. For John Doe, average home computer user, that's enough.

For the techie, the guy that insists that faster and bigger is better, there is never enough. He has the same requirements you and I do, and will accomplish the same results. He balances his checkbook with LOTUS, makes yardsale posters with VENTURA, keeps his Christmas address list on D-BASE, and writes letters with WORD PERFECT. The only difference is, that it cost him twelve hundred dollars more for the programs.

Some of us, sometimes, are faced with broader requirements, and therefore are forced to move up one function at a time. That can't be helped. We hang on for as long as we dare, but there is no doubt that big business requires big memories. That's a problem that occurs to only a few people though. For the most part, we can all be quite grateful for what we have: a little eight bit, or sixteen bit computer that does just exactly what we tell it to do.

Long live the 9900, the 6502, and the Z80!

Another Tiny Gram

TIny LOTTO

A TIny GRAM

by Ed Machonis

The first program I ever wrote on my newly purchased TI-99/4A was a random number generator for NY State Lotto games. When I finally got the program to generate 6 numbers between 1 and 40, I was elated. Not having any way to save the program, I copied the code on to paper with a pencil.

Knowing I was on my way to my first million, I decided to splurge on a cassette recorder. Leaving the computer turned on, I embarked on a two hour trip into the city to purchase a recorder. Upon my return about five hours later, I saved the program. The first number generator eventually grew to 46 sectors with nearly every conceivable bell and whistle, and took over 3 minutes to load from cassette.

Here I am, 5 years later, still writing Lotto programs and still chasing that first million. Hope also springs eternal in the compulsive programmer's [Gambler's?] breast! If nothing else, I did learn to write them smaller.

But don't let the small size fool you. This screen full of code does a lot of work and once again proves the power of the TI-99/4A. It will generate random numbers for any of the popular lottery games, WIN 3, WIN 4, Pick 6 LOTTO and WIN 10 or Keno. The low number can be a zero or a one. The high number can be what ever is being used, 40, 48, 54, 80, 999 or 9999. It should work in any state.

The same RND statement, in line 4, borrowed from son Michael's BASIC 10 liner LUCKY LOTTO, is used to generate the random numbers for all games. It's a clever piece of code well worth your study.

Where multiple numbers are generated for a game, as in Lotto or Keno, duplicate numbers are discarded and the numbers are sorted in ascending order to make it easier to fill out your bet slip. Output can be directed to screen or printer. When several games are played, the hard copy is easier to check for winners than the individual tickets.

Leading zeroes are inserted where required to keep the columns neatly aligned and to reduce the possibility of transcription errors. A total of ten Lotto games (the bet slip capacity) can be displayed on the screen without any scrolling off.

The N.Y. State Lottery states "...if you are playing LOTTO for the big prize, pick your numbers randomly." Early on, I distrusted the randomness of TI's RND function, and in my niavety visualized having to split that first million with half the TI owners in NY State. Dispité a RANDOMIZE statement, the computer often generated identical series of numbers.

TI's User's Reference Guide states on page II-96, "The random number function gives you the NEXT PSEUDO-RANDOM number in the current SEQUENCE of pseudo-random numbers." Page II-95 states: "When the RANDOMIZE statement is used ..... a different and unpredictable SEQUENCE of random numbers is generated ..... each time the program is run." RND generates numbers in accordance with a built-in sequence. The RANDOMIZE statement merely insures that a program does not ALWAYS start with the same sequence. But it can, HAS and will.

The RANDOMIZE statement in line 3 can be placed in three different positions. Placing it before the start of the G loop will cause an unpredictable sequence to be selected each time the program is RUN. Placed before the start of the K loop, a new sequence is used for each game. Placing it after the start of the K loop, as it is, causes an unpredictable sequence to be selected for each number that is generated. As only one number is used from each sequence, we are no longer governed by the built-in sequence and the program generates truly random numbers.

WIN 3 numbers can be selected with TIny LOTTO in one of two ways. We can use a Low Number 0, a High Number of 999 and 1 number per game. Or one can use a Low Number of 0, a High Number of 9, and three numbers per game. The same two methods are available for four digit numbers using 9999 and 1, or 9 and 4, as required. In the first case, a three digit number is selected, in the second case each digit of the three digit number is separately selected. Just a little user friendliness to conform to the way the user thinks of the numbers.

If you find that you only play one type of game, and are always entering the same information in response to the prompts, line 2 can be changed to permanently assign values to the variables. Suppose your regular selection is for 10 games of Pick 6 Lotto, with a low number of 1 and a high number of 54, with output to a printer. Line 2 would read:

```
2 L=1 :: H=54 :: T=6 :
: Q=10 :: P=1 :: OPEN
#P:"PIO"
```

Due to sale of public domain programs by some software distributers, a copyright notice has been placed on this program. It may be freely distributed provided no fee of any kind is charged. This article and/or program may be published in Newsletters of non-profit user groups.

e.m.

```
1  !$$$$     TIny LOTTO     $$$$
   $      Copyright 1988      $
   $        by Ed Machonis    $
   $ QB-99'ers, Bayside NY $
   $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

2 CALL CLEAR :: INPUT "LOW N
UMBER? ":L :: INPUT "HIGH NU
MBER? ":H :: INPUT "NUMBERS
PER GAME? ":T :: INPUT "HOW
MANY GAMES? ":Q :: INPUT "SC
REEN=0 - PRINTER=1 (0/1)?":P
  :: IF P THEN OPEN #P:"PIO"

3 H$=STR$(H):: FOR G=1 TO Q
:: FOR K=1 TO T :: RANDOMIZE

4 N(K)=INT(RND*(H+ABS(L=0)))
+L :: FOR D=1 TO K-1 :: IF N
(K)=N(D)AND H>9 THEN 4

5  ...
   ...

6  ...
   ...

7 M=N(K) :: N(K)=N(K+1) :: N(K
+1)=M :: F=1 :: U=K

8 NEXT K :: IF F=1 THEN 6

9 FOR K=1 TO T :: N$(K)=STR$
(N(K)):: PRINT #P:RPT$("0",L
EN(H$)-LEN(N$(K)))&N$(K)&" "
::: NEXT K :: PRINT #P:;;;;;
:: NEXT G ! GOOD LUCK
```

TEXTWARE, SOFTWARE & ELSEWHERE by Jack Sughrue

TIW III

Coming back to the T.I.Writer Word Processor in an investigative frame
of mind is good for the soul. I always manage to uncover some little
goodie or two; something I had forgotten or had never used or had missed
along the way.
For example, I have had TIW since 1982, and have done all my writing
on it almost exclusively: all my school work [as a teacher and as a
student], all my freelance writing, all my very extensive correspondence
[I am one of those people who love to write and receive letters.], all
my household writing, all my poetry. A day seldom goes by when I am not
on the TIW for at least an hour. I don't think 2000 total logged hours
would be an exageration.
And, in all that time, I never used the S command.
[AUTHOR NOTE: In the four years since I wrote this column, I confess
to using S at least 5,000 times. Whenever I use the FS or RS commands
I first do S then 1 to get to the very beginning. An S followed by an E
here will take you to the very end. Very handy.]

First I press FCTN/9 to get in the COMMAND/ESCAPE mode.
Next I type S .
Then I type the line I want to view [27] and ENTER.
Voila!
Line 27 [in my single-window formatting structure there is only one
screen width] - "I will now." - appears at the top of the screen where
something else had been. The cursor is there with it. Very fast. I'll
have to think of a use for that, I'll have to think of a use for that,
as I will for CTRL/S [which just repeated the line "I'll have to think
of a use for that" when I typed it in. I suppose it would be great for
lyricists. [Though to be perfectly honest I use it all the time when I
use Templates to make boxes and lines and TL graphics with the PLUS!
disk. There it is a VERY handy tool.]
Have you ever used your Word Tab? That's CTRL/7 or CTRL/W [which makes
sense]. [Be patient a bit.] I'm going to run my cursor back to the
beginning of this paragraph [CTRL/6 or CTRL/H] and try out the Word Tab.
Oops! The CTRL/6 took me back to
the previous paragraph. No problem. I just typed CTRL/4 [or CTRL/J]
to leap me back to the next paragraph, which is where I wanted to be
[starting with "Have you ever"]. Now I'll try the Word Tab.
That was fun! It leaped from Have to you to ever and on to the
end of the screen line [the word "Tab?"] and stopped dead against an
invisible wall.
I was forced to take control of the cursor, move it to the next line,
and begin again with the CTRL/W.
I hardly ever use the regular Tab [FCTN/7 or CTRL/1] in the kind of
writing I usually do. As a matter of fact, I don't use it at all
[though I vaguely remember trying it out once]. For me, it's just so
much easier using the cursor in the repeat mode.
So any of the Tabs [after I have set the 1/L, 5/I, 38/R when I first
enter the EDITOR] are really wasted on me.
There's even a Back Tab [CTRL/T] which I know I've never used until
right this second. It leaps back the defaulted tabs. If you hold the
keys down the cursor whizzes around so fast there appear to be four or

five cursors on the screen at the same time. Wow! I wish I'd used this
before.

     I   DO remember using the Home Cursor before [CTRL/L] but, again, not
often. This leaps the cursor back to the first space in the upper left
of the screen.
     I'm more apt to use Beginning of Line [CTRL/V]. I use it often, as I
do CTRL/K which wipes out everything to the right of the cursor on the
same line.   That and Delete Line [FCTN/3 or CTRL/N] are two most often
used by me. All the proofreading as I go along, I guess. Which is why
I know FCTN/2 [or CTRL/G] so well. That is how I insert characters and
eventually lines and paragraphs. CTRL/R brings it all together as
Reformatter. CTRL/2 does also, if you think of FCTN/2 as separating the
words for insertion and CTRL/2 as pulling them all back together in
reformatting.   It may seem easier that way, though I ALWAYS use CTRL/R
for no intelligent reason.
     Changing the screen colors is fun [CTRL/3], but I don't find it as
soothing as Screen Color 7 from the FUNLWRITER menus: black lettering
on dark green. Unfortunately, this is not available from the EDIT mode
and will be lost forever if you Show Directory, so be careful.
     I find New Page [CTRL/9 or CTRL/P] extremely useful for a lot of the
stuff I do for school or for poetry. It's so convenient to pop in a
New Page mark whenever you want.
     The only time I use Next Window is when I'm screen-reading someone
else's stuff. It's one of the few FCTN keys [5] that doesn't have a
corresponding CTRL key somewhere.
     I do find essential, however, the Insert Blank Line key [FCTN/8 or
CTRL/O], as I'm always needing to run up to the beginning of something
to add a heading or code or an explanatory line or two. Very handy.
     The Roll-Up/Roll-Down keys and Arrow keys and Toggle Line Number key
and Left-Margin Release key are probably used so much by most TIWers
that a mention isn't necessary.
     But the most important key [for me, at least] is CTRL/U. That is the
key that opens up your printer to some extraordinary adventures.
Through the EDITOR for some things, but through the FORMATTER for the
 real goodies.
     As I never PRINT from the EDITOR, anyway, I'm probably a terrible
person to tell you how wonderful the PRINT options of the EDITOR is. It
is wonderful.
     However, the FORMATTER is the thing! It lets YOU do the driving and
the CTRL/U key is the scenic route.
     The next time you hop aboard your TIW take a few side trips along your
keyboard. You'll be astounded at the power of the environment.   And
we've only touched on the screen control of the CTRL and FCTN keys, not
on anything about the TL or about LOADing, PRINTing, SAVEing, FINDing,
WHATEVERing.
     If you have PLUS! download the docs, keep those reference and mnemonic
TL and Boxref charts out in front of you and discover the fun of
learning again.   This time the learning will have immediate rewards:
mastery of one of the most powerful tools ever created for the thinking
person - a magical word processor.
     Using the version 4 series of FUNNELWEB [from your user-group library]
will be as close as a TI word-processing user will get to paradise.
After seven years I still love wordprocessing.   My wife's getting
terribly jealous. I hope I don't have to decide between the two.

     [Just kidding, Elaine.]

TI-WRITER PRINTER CODES
by Alice Cassidy, SFV 99ers

One evening as I was bragging that I had complete control of my
printer by using the translitrate command, Ken Johnson (our fine
editor), asked me why I went to all that trouble? He told me about
page 146.

Have you read and understood page 146 of the TI WRITER manual? If you
answered Y E S then skip this article. If you answered yes i think
so or no i don't then read on. If the only reason that you use the
Formatter is for printer codes then read on. Look at page 146 to get
an idea what it looks like. Go to page 98 and read that. If you
still don't understand what it says don't worry. Below and on the
next page are charts that show what keys to push for different printer
commands. If you would like to print your letter in Continuous
Expanded (Double-width mode) but don't want to leave TI WRITER to
change the printer, just do the following on the top line of your
letter.
        PRESS: CTRL U, FCTN R, CTRL U, W, CTRL U, SHIFT A, CTRL U.
Both the Epson and the Gemini would use the above. The codes are
CHR$(27);"W1" or CHR$(27)&CHR$(87)&CHR$(1). At the end of the letter you
would turn the Double-width mode (Continuous Expanded) off.
        PRESS: CTRL U, FCTN R, CTRL U, W, CTRL U, SHIFT 2, CTRL U.
All codes can be embedded in the body of your letter but be sure that
you take into account the space(s) used by the codes.

RX 80 EPSON PRINTER CODES FOR TI-WRITER
===

SCREEN DISPLAY	DISCRIPTION	CTRL	FCTN	CTRL	KEY	CTRL	SHIFT	CTRL
'◄	Condensed On					U	O	U
'►	Condensed Off					U	R	U
'◘G	Double Strike On	U	R	U	G			
'◘H	Double Strike Off	U	R	U	H			
'◘M	Elite On	U	R	U	M			
'◘P	Elite Off	U	R	U	P			
'◘E	Emphasized On	U	R	U	E			
'◘F	Emphasized Off	U	R	U	F			
'◄	Expanded One Line					U	N	U
'◘W·₁	Expanded On	U	R	U	W	U	A	U
'◘W·◘	Expanded Off	U	R	U	W	U	2	U
'◘s·₁	Half Speed Mode	U	R	U	s	U	A	U
'◘4	Italics On	U	R	U	4			
'◘5	Italics Off	U	R	U	5			
'◘@	Master Reset	U	R	U	@			
'◘s·◘	Normal Speed Mode	U	R	U	s	U	2	U
'◘T	Script Mode Off	U	R	U	T			
'◘S·₁	Subscript On	U	R	U	S	U	A	U
'◘S·◘	Superscript On	U	R	U	S	U	2	U
'◘--₁	Underline On	U	R	U	—	U	A	U
'◘--◘	Underline Off	U	R	U	—	U	2	U
'◘2	1/6" Line Spacing	U	R	U	2			
'◘0	1/8" Line Spacing	U	R	U	0			
'◘3	7/72" Line Spacing	U	R	U	1			
'◘A·◘	5/72" Line Spacing	U	R	U	A	U	E	U

GEMINI-10X   PRINTER CODES FOR TI-WRITER
==

SCREEN DISPLAY	DISCRIPTION	CTRL	FCTN	CTRL	KEY	CTRL	SHIFT	CTRL
'•B·₃	Condensed On	U	R	U	B	U	C	U
'•B·₁	Condensed Off	U	R	U	B	U	A	U
'•G	Double Strike On	U	R	U	G			
'•H	Double Strike Off	U	R	U	H			
'•B·₂	Elite On	U	R	U	B	U	B	U
'•B·₁	Elite Off—	U	R	U	B	U	A	U
'•E	Emphasized On	U	R	U	E			
'•F	Emphasized Off	U	R	U	F			
'••	Expanded One Line					U	N	U
'•W·₁	Expanded On	U	R	U	W	U	A	U
'•W·•	Expanded Off	U	R	U	W	U	Z	U
'•4	Italics On	U	R	U	4			
'•5	Italics Off	U	R	U	5			
'•e	Master Reset	U	R	U	@			
'•T	Script Mode Off	U	R	U	T			
'•S·₁	Subscript On	U	R	U	S	U	A	U
'•S·•	Superscript On	U	R	U	S	U	2	U
'•—·₁	Underline On	U	R	U	—	U	A	U
'•—·•	Underline Off	U	R	U	—	U	2	U
'•2	1/6" Line Spacing	U	R	U	2			
'•0	1/8" Line Spacing	U	R	U	0			
'•3	7/72" Line Spacing	U	R	U	1			
'•A·•	5/72" Line Spacing	U	R	U	A	U	E	U

EXAMPLE CODE:

In order to find the code for 5/72" Line Spacing look in your printer
manual for the Line Feed Controls. The RX 80 Epson and the Gemini-10X
show this code as ESC "A" n or CHR$(27);"A";CHR$(n) or CHR$(27)&CHR$(65)
&CHR$(n), where n is as n/72 for the CHR$(n). On page 98 we are told to
press CTRL U to enter the Special Character Mode. Now go to page 146
and look for the ascii code for escape which is ascii code 27. In
looking across the page it shows that the key press of FCTN R is the
same as CHR$(27). So we now know that we need to press CTRL U FCTN R
CTRL U, to send CHR$(27) to our printer. Next we need to tell the
printer what to do. We do this by pressing the key A, which is the
paper feed command for n/72 inch spacing. Next we have to tell the
printer what the value of n is. So back to page 146. We know that we
want to move the paper 5/72 inch so we go down the ascii code column
untill we come to the 5. In the press key column we are told to press
SHIFT E. We now have the entire code necessary to tell the printer to
set the line feed at 5/72" line spacing. Be sure to remember that you
must press CTRL U before and after each key press from the Special
Character Mode (page 146).

If you have trouble understanding any of the above feel free to call me
and/or come to the August meeting of the TI Writer SIG. Call me to find
out where and when. We do not meet on any set date, just when ever we can
all get together. All members are welcome to attend. Come share your
knowledge with us and we will share our knowledge with you.

P.S. This entire article was printed using the TEXT EDITOR and in some
places I used 17 printer codes to print the Screen Display Column.

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issues No. 33 through 41.
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```
*********************************
*        NOW READY            *
* TIPS FROM TIGERCUB VOL.5    *
* Another 49 programs and     *
* files from issues No. 42    *
* through 50. Also $10 ppd    *
*********************************
```

TIGERCUB CARE DISKS #1,#2,#3
and #4. Full disks of text
files (printer required).
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letters #42 thru #45, etc.
Nos. 2 and 3 have articles
mostly on Extended Basic

programming. No. 4 contains
Tips newsletters Nos. 46-52.
These were prepared for user
group newsletter editors but
are available to anyone else
for $5 each postpaid.

Someone wanted a program
to teach how to make change.

```
100 CALL CLEAR
110 DEF I$(X)="$"&SEG$(STR$(
X),1,POS(STR$(X),".",1)+2)
120 CALL COLOR(1,2,8,2,2,8,3
,2,8,4,2,8,5,2,8,6,2,8,7,2,8
,8,2,8,9,2,8,10,2,8,11,2,8,1
2,2,8)
130 CALL SCREEN(5):: D$=RPT$
(" ",112)!programmed by Jim
Peterson Apr. 1988 for the p
ublic domain
140 GOTO 180
150 CALL KEY :: CALL CLEAR :
: CALL SOUND
160 A,P,C,G,T,F,D,Q,D,N,S,TT
,X,B$,QQ,K,M$,J
170 !@P-
180 DISPLAY AT(2,3)ERASE ALL
:"MAKING CHANGE":::"   by
Jim Peterson" :: RANDOMIZE :
: CALL KEY(3,K,S)
190 DISPLAY AT(6,1):"Do you
want to":::" (1) Input amoun
ts":" (2) Use random amounts
" :: ACCEPT AT(6,16)SIZE(1)V
ALIDATE("12")BEEP:A :: CALL
CLEAR
200 IF A=2 THEN 240 :: DISPL
AY AT(2,1):"Price of item? $
":::::::: :: ACCEPT AT(2,17)V
ALIDATE(NUMERIC)BEEP:P :: IF
 P<0 THEN 200
210 DISPLAY AT(4,1):"Amount
offered by customer?":"$" ::
 ACCEPT AT(5,2)VALIDATE(NUME
RIC)BEEP:C
220 IF C<>INT(C)AND P=INT(P
)C-INT(C)THEN DISPLAY AT(22
,1):"Even dollars please!" :
: GOTO 210
230 IF C>P THEN DISPLAY AT(2
2,1):"Not enough!" :: GOTO 2
10 ELSE IF C=P THEN DISPLAY
AT(22,1):"No change needed "
 :: GOTO 200 ELSE GOTO 260
240 RANDOMIZE :: P=20*RND+.
1 :: P=INT(P*100)/100 :: DIS
PLAY AT(2,1):"Price of item
" :: DISPLAY AT(2,16):I$(P:
00)
250 C=INT(4*RND+1)*5 :: IF C
```

```
<=P OR C=15 THEN 250 :: DISP
LAY AT(4,1):"Customer offers
 $" :: DISPLAY AT(4,18):STR$
(C)
260 G=C :: C=C-P :: T=INT(C/
10):: C=C-T*10 :: F=INT(C/5)
:: C=C-F*5 :: Q=INT(C):: C=C
-Q :: Q=INT(C/.25):: C=C-Q*.
25 :: D=INT(C/.1):: C=C-D*.1
 :: N=INT(C/.05)
270 C=C-N*.05 :: X=C*100 ::
TT=0
280 DISPLAY AT(7,1):"OK, sta
rt adding change from the pr
ice until you reach the cus
tomer's amount." :: TT=P+.00
1
290 IF X=0 THEN 330 :: GOSUB
 640 :: IF B$<>"P" THEN M$="
No, give pennies to reach
"&I$(TT+X*.01):: GOSUB 670
300 DISPLAY AT(11,1):"How ma
ny pennies?" :: ACCEPT AT(11
,19)VALIDATE(NUMERIC)BEEP:QQ
310 IF QQ=X THEN 320 ELSE IF
 TT+QQ*.01>G THEN GOSUB 680
:: GOTO 300 ELSE GOSUB 690 :
: GOTO 300
320 DISPLAY AT(7,1):"You hav
e reached "&I$(TT+X*.01):::::
::: :: TT=TT+X*.01
330 IF N=0 THEN 380 :: GOSUB
 640
340 IF B$<>"N" THEN M$="No,
if the cents portion is .10
or .20 or .35 or .45 or .60
or .70 or .85, add a   nick
el" :: GOSUB 670
350 DISPLAY AT(11,1):"How ma
ny nickels?" :: ACCEPT AT(11
,19)VALIDATE(NUMERIC)BEEP:QQ
360 IF QQ=N THEN 370 ELSE IF
 TT+QQ*.05>G THEN GOSUB 680
:: GOTO 350 ELSE GOSUB 690 :
: GOTO 350
370 DISPLAY AT(7,1):"You hav
e reached "&I$(TT+N*.05):::::
::: :: TT=TT+N*.05
380 IF D=0 THEN 430 :: GOSUB
 640
390 IF B$<>"D" THEN M$="No,
add dimes to reach .15 or .
50 or .75 or 1.00" :: GOSUB 6
70
400 DISPLAY AT(11,1):"How ma
ny dimes?" :: ACCEPT AT(11,1
9)VALIDATE(NUMERIC)BEEP:QQ
410 IF QQ=D THEN 420 ELSE IF
 TT+QQ*.10 THEN GOSUB 680 :
: GOTO 400 ELSE GOSUB 690 ::
```

```
GOTO 400
420 DISPLAY AT(7,1):"You hav
e reached ";&I$(TT+D$,1):;:;::
:: :: TT=TT+D$.1
430 IF Q=0 THEN 480 :: GOSUB
640
440 IF B$<>"Q" THEN M$="No,
add quarters to reach an eve
n dollar." :: GOSUB 670
450 DISPLAY AT(11,1):"How ma
ny quarters?" :: ACCEPT AT(1
1,20)VALIDATE(NUMERIC)BEEP:Q
Q
460 IF QQ=Q THEN 470 ELSE IF
TT+QQ$.25)G THEN GOSUB 680
:: GOTO 450 ELSE GOSUB 690 :
: GOTO 450
470 DISPLAY AT(7,1):"You hav
e reached ";&I$(TT+Q$.25):;:;
:;: :: TT=TT+Q$.25
480 IF J=0 THEN 530 :: GOSUB
640
490 IF B$<>"D" THEN M$="No,
add dollars to reach a mult
iple of five dollars." :: GO
SUB 670
500 DISPLAY AT(11,1):"How ma
ny dollars?" :: ACCEPT AT(11
,19)VALIDATE(NUMERIC)BEEP:QQ
510 IF QQ=Q THEN 520 ELSE IF
TT+QQ)G THEN GOSUB 680 :: G
OTO 500 ELSE GOSUB 690 :: GO
TO 500
520 DISPLAY AT(7,1):"You hav
e reached ";&I$(TT+Q):;:;:::
:: TT=TT+Q
530 IF F=0 THEN 590 :: GOSUB
640
540 IF B$<>"F" THEN M$="No,
add a five dollar bill to r
each a multiple of ten." ::
GOSUB 670
550 DISPLAY AT(11,1):"How ma
ny fives?" :: ACCEPT AT(11,1
7)VALIDATE(NUMERIC)BEEP:QQ
560 IF QQ=F THEN 570 ELSE IF
TT+QQ$5)G THEN GOSUB 680 ::
GOTO 550 ELSE GOSUB 690 ::
GOTO 550
570 DISPLAY AT(7,1):"You hav
e reached ";&I$(TT+F$5):: TT=
TT+F$5
580 IF T=0 THEN 650 :: GOSUB
640
590 IF B$<>"T" THEN M$="No,
add ten dollar bills to reac
h";&I$(G): GOSUB 670
600 DISPLAY AT(11,1):"How ma
ny tens?" :: ACCEPT AT(11,16
)VALIDATE(NUMERIC)BEEP:QQ ::
```

```
IF QQ=T THEN 620
610 IF QQ)T THEN GOSUB 680 :
: GOTO 600 ELSE DISPLAY AT(1
4,1)BEEP:"That's not enough!
" :: GOTO 600
620 DISPLAY AT(7,1)BEEP:"You
gave the correct change!":"
":"";""
630 DISPLAY AT(14,1):" -
PRESS ANY KEY" :: DISPLAY A
T(14,1):" -    press any ke
y" :: CALL KEY(3,K,S):: IF S
=0 THEN 630 ELSE 200
640 DISPLAY AT(11,1):"Will y
ou now give":" (P)ennies":"
(N)ickels":" (D)imes":" (Q)u
arters":" (O)ne dollar bills
":" (F)ive dollar bills":" (
T)en dollar bills"
650 DISPLAY AT(19,1):"":"":"
":"":"":""
660 ACCEPT AT(11,19)SIZE(1)V
ALIDATE("PNDQOFT")BEEP:B$ ::
DISPLAY AT(11,1):"":"":"":"
":"":"":"":"" :: RETURN
670 FOR J=1 TO 5 :: DISPLAY
AT(20,1):D$ :: DISPLAY AT(20
,1)BEEP:M$ :: NEXT J :: RETU
RN
680 CALL SCREEN(7):: FOR J=1
TO 15 :: CALL SOUND(-99,110
,0,-4,0):: DISPLAY AT(14,1):
"" :: DISPLAY AT(14,1):"You
gave too much change!" :: NE
XT J :: CALL SCREEN(5):: RET
URN
690 DISPLAY AT(14,1):"No, th
at's wrong!" :: RETURN
```

And here's a one-screen
tinygram - you could convert
this to speech and it would
do a better job of making
change than most clerks do
nowadays!

```
1 !*************************
!*       CHANGEMAKER       *
!*        TINYGRAM         *
!*      by Jim Peterson    *
!*************************
100 CALL CLEAR :: B$(1)="S"
110 DEF P$(X)="$"&SEG$(STR$(
X),1,LEN(STR$(X))-1)
120 DATA 10,5,1,.25,.1,.05,.
01,CENT,NICKEL,DIME,QUARTER,
DOLLAR BILL,FIVE DOLLAR BILL
,TEN DOLLAR BILL
130 PRINT TAB(8);"CHANGEMAKE
R":: :: INPUT "PRICE? ";P :
: INPUT "AMOUNT OFFERED? ";B
```

```
:: IF B<P THEN 130
140 PRINT :: C=B-P :: FOR J=
1 TO 7 :: READ X(J):: A(J)=I
NT(C/X(J)):: C=C-A(J)$X(J)::
NEXT J :: Z=P+.001
150 PRINT P$(P+.001);" OUT O
F ";P$(B+.001):;:: :: FOR J=7
TO 1 STEP -1 :: READ A$ ::
Z=Z+A(J)$X(J):: IF A(J))0 TH
EN PRINT "AND";A(J);A$&S$(-(
A(J))>1))&" IS ";P$(Z):;: :
160 NEXT J :: PRINT :: RESTO
RE 120 :: GOTO 130
```

The Extended Basic Manual
did a very poor job of show-
ing us how to use USING. My
thanks to Karl Roasted for
telling me how to do it with
DISPLAY AT - put a semicolon
directly before USING -
```
100 CALL CLEAR :: DISPLAY AT
(12,5):USING "$##.##":1.23
```
Other commands can go
either before the AT or
after the parameters -
```
110 DISPLAY ERASE ALL BEEP A
T(12,5):USING "$##.##":1.23
120 DISPLAY AT(12,5)ERASE AL
L BEEP:USING "$##.##":1.23
```
However, to output to a
printer, put a comma before
USING -
```
120 OPEN #1:"PIO" :: PRINT #
1,USING "$##.##":1.23
```

The trouble with PRINT
USING "$##.##" is that it
will print nothing but as-
terisks if the integer con-
tains more digits than the
number of # left of the dec-
imal, and will leave blanks
between the $ and the first
digit if the integer con-
tains less digits than the
number of ## left of the de-
cimal. This algorithm will
correctly print dollars and
cents values of ANY size,
rounded off to the nearest
cent and with the dollar
sign directly before the
first digit or decimal.
```
100 INPUT A :: PRINT USING "
$"&SEG$(RPT$("#",LEN(STR$(IN
T(A)))),1,-(INT(A)=0),255)&"
.##":A :: GOTO 100
```

Thanks to Ed Machonis for

```
171 DISPLAY AT(8,12):"V.1.2"
190 DISPLAY AT(18,7):"TURN P
RINTER ON!";;:"SET TOP OF FO
RM HALF INCH  BELOW PERFS"
200 DISPLAY AT(23,8):"PRESS
ANY KEY" :: DISPLAY AT(23,8)
:"press any key" :: CALL KEY
(0,K,S):: IF S=0 THEN 200 EL
SE CALL CLEAR
330 IF P=1 AND S$<>"Y" THEN
DISPLAY AT(12,1):"EMPHASIZE
D? (Y/N) Y" :: ACCEPT AT(12,
19)VALIDATE("YN")SIZE(-1)BEE
P:E$ :: IF E$="Y" THEN PRINT
#1:CHR$(27);"E";
390 IF NC=1 THEN 410 :: AV=I
NT(TA/(NC-1)):: DISPLAY AT(1
2,1)ERASE ALL:"COLUMN SEPARA
TION?":"MINIMUM 2":"MAXIMUM
"&STR$(AV)&" AVAILABLE ";"2"
400 ACCEPT AT(15,1)VALIDATE(
DIGIT)SIZE(-2)BEEP:CS :: IF
CS<2 OR CS>AV THEN 400 ELSE
S$=RPT$(" ",CS)
450 LSP=12 :: DISPLAY AT(10,
1):" ":" ":"LINES PER PAGE?
60":" ":"?":" ":" " :: ACCEP
T AT(12,17)VALIDATE(DIGIT)SI
ZE(-3):LP :: IF LP<61 THEN 4
90
460 !DELETE
470 !DELETE
480 LSP=72/(LP/10):: PRINT #
1:CHR$(27);"A";CHR$(LSP)
510 DISPLAY AT(15,1):STR$(LP
)&" lines per page":"with "&
STR$(INT(LSP))&"/72 line spa
cing"
540 !DELETE!
550 IF LEN(M$(IP))<=CW THEN
670 :: T$=SEG$(M$(IP),1,CW):
: CALL SOUND(1000,110,0,-4,0
):: DISPLAY AT(12,1):M$(IP);
" OVER";CW;"CHARACTERS":"TRU
NCATED TO ";T$:"OK?"
660 CALL KEY(3,K,S):: IF S=0
THEN 660 ELSE IF K<>89 THEN
STOP ELSE M$(IP)=T$
```

MEMORY FULL!

Jim Peterson

WORD LIST

Word Search Grid	Word List
D Z U I N S J A W F A T H O M U L G I X	AMAZING
Z T F S A G L Y D E M O N A T T A C K N	BLASTO
G D A M A Z I N G O A S B Y U 2 6 J G E	BUCKROGERS
C Q B F L G R O T B A U Q G L J X E F U	BURGERTIME
L E Z Z U S C S O C R A U M A M A N C U	CARWARS
J I S E C E A Z V G U P W A R P I G I D	CENTIPEDE
T G U G S L P H E N C E J L G L J P O U	DEMONATTACK
S O D F B A U R C J R B G I W U S I K U	FATHOM
F H A B Z A T H A S P E G C B A N A G E	HANGMAN
D P J O D I H E U T N R G G E U G P R B	HOPPER
A F E X H A G P G E C G J S W P C D I Z	INVADERS
T E K E N T M U K C R I S O E N A R B W	MICROSURGEON
Z Q W M C U R R A W O O W E K E H O B C U	MOONMINE
R H I C W G O E S C A R T H I P K G P Z	MUNCHMAN
C T A E E S S P A N S R U N P I I A G D	OTHELLO
R I M O E S O X S D A K F E E S T V P I	PARSEC
O E N R S F B L U T E G A U C G C S N U	STARTREK
F B S U L H A N S X M G B F C X B Y U X	VIDEOCHESS
L G P Z Q O T H E L L G S U M J W A R V	WUMPUS
U Q K B H B A H U M G G G N A M G N A H	ZEROZAP

Hagar the Horrible by Dik Browne

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