

THE CIN-DRY NEWS



February 1989 👁

ANNUAL COMBINED ELECTION MEETING: by FRANK LARRICK

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THIS YEARS ELECTION MEETING WAS HELD IN TWO SEGMENTS. FIRST
WAS AN OPEN SRAPHICS SIG SROUP MEETING SO THAT ALL MEMBERS
COULD PARTICIPATE. COMPLETED MER DISCUSSIONS ON
"IT-ARTIST" INCLUDING USING COLOR AND PROBRAM USE TECHNIQUES
INCLUDING THE ENHANCEMENT SECTION. FUTURE MEETINGS WILL
EYCLORE "GRAPMY". "PICTURE-IT". "FAINT N PRINT' AND MORE.
RICK KELLOGG. THE DAYTON PRESIDENT, CALLED THE MAIN PART OF
THE MEETING TO GREER AT 1:40 PM. HE STARTED BY WELCOMING
ALL MEMBERS TO THE MEETING AND INTRODUCING THE OTHER
OFFICERS PRESENT. THEY MERE SAM MOON COMMINATI
PRESIDENT, FRANK LARRICK CONYTON SECRETARY/TREADTER, KEN
CAMPENTER (CINCINNATI TRASSURER), CARLYN CARPENTER
(CINCINNATI LIBRARIAN), ERIC BISHOP COAYTON LIBRARIAN) AND
ERIC SAUNDERS NEWSLETTER EDITORI, RICK THEN READ THE GROUP
MESCHAMDISE AT GROUP MEETINGS. RICK ASKED IF EVERYONE HAD
DISCLAIMER REGARDING THE SALE AND/OR PROHOTION OF
MESCHAMDISE AT GROUP MEETINGS. RICK ASKED IF EVERYONE HAD
RECCIVED THEIR NEWSLETTERS. RECEIPT WAS INDICATED BY ALL
BUT ONE. A MOTION WAS HADE THAT THE SUMMERY OF THE HINUTES
OF THE LAST MEETING BE ACCEPTED AS THE OFFICIAL READING OF
HOUSE AND AND AND AND AND THE HEADING OF OLD
BUSINESS THE FOLLOWING MERE DISCUSSED: RICK INTRODUCED THE
COMMITTEE. THEY MERE: HERE KINE (CAMPINE THE
COMMITTEE. THEY MERE: HERE KINE (CAMPINE THE
COMMITTEE. THEY MERE: HERE SIDE SOUD BY THE GROUP.
THE MEM SIGN UP AND RENEWAL SHEET TO BE USED BY THE GROUP.
THE MENSLETTER EDITIONS ARE NOW CAUGHT UP AND IT WAS
ANNOUNCED THAT WE ASAAN HAVE NOW CAUGHT UP AND IT WAS
ANNOUNCED THAT WE ASAAN HAVE NOW CAUGHT UP AND IT WAS
ANNOUNCED THE HEADING FORCE BEHIND THE PRESENT STRUCTURE OF
THE MENSLETTER AND ITS SUCCESS. SO "MUCH THANKS, JIM FOR A
LOT OF HARD WORK. RICK ANNOUNCED THE MEETING GALENDAR FOR
THE MENSLETTER AND ITS SUCCESS. SO "MUCH THANKS, JIM FOR A
LOT OF HARD WORK. RICK ANDOUNCED THE MEETING SOUNCED THE
MENSLETTER BUT THE HERBERS LITSTING EXPENSES. INCOME AND
OILSETTE SITE THE HERE ARE THINGS TO BE OUNE TO THE B

\$ 91LL STAGER WITHDREW AS MEMBERS OF THE ELECTION COMMITTEE BECAUSE OF THEIR NOMINATIONS FOR OFFICE. THEY WERE REPLACED BY JOHN NESS AND BILL POST. THE BALLOTS WERE THEN MARKED. COLLECTED AND HANDED OVER TO THE ELECTION COMMITTEE FOR TABULATION. A BREAK WAS TAKEN WHILE THE BALLOTS WERE SEND COUNTED. "SUPER RAFFLE" TICKETS WERE SOLD (WE REACHED OUR MINIMUM GOAL) AND THE LIBRARY WAS OPENED FOR PURCHASES OF GROUP DISKETTES AND SPECIALS. SAM MOON TOOK OVER THE MEETING AFTER THE BREAK TO DISCUSS AN ARTICLS IN "COMPUTER SHOPPER" ON A PROGRAM THAT PRODUCES IRS FORMS AND WORKS WITH MULTIPLAN TO FILL OUT THOSE FORMS. DISCUSSED ALSO WAS THE POSSIBILITY OF A SROUP OF MEMBERS POOLING THEIR RESOURCES TO PURCHASE THE ENTIRE PACKAGE FOR THE 1989 TAX YEAR. NO FIRM COMMITMENTS WERE MADE. RICK PRESENTED THE RESULTS OF THE MULTIPLAN TO FILL DUT THOSE FORMS. DISCUSSED ALSO WAS THE POSSIBILITY OF A SROUP OF MEMBERS POOLING THEIR RESOURCES TO PURCHASE THE ENTIRE PACKAGE FOR THE 1989 TAX YEAR. NO FIME COMMITMENTS MERE MADE. RICK PRESENTED THE RESULTS MERE AS FOLLOWS: PRESIDENT OF CINCINNATI CHAPTER, SAM MOON, UNANIMOUS, 14 VOTES: PRESIDENT OF DAYTON CHAPTER, SAM MOON, UNANIMOUS, 14 VOTES: PRESIDENT OF DAYTON CHAPTER, RICK PRESENTED THE RESULTS MERE AS FOLLOWS: PRESIDENT OF DAYTON CHAPTER, RICK CHAPTER, JOHN NEESS, 1 WRITE-IN VOTES: SECRETARY CINCINNATI CHAPTER, JOHN NEESS, 1 WRITE-IN VOTES: SECRETARY CINCINNATI CHAPTER, KEN CARPENTER. UNANIMOUS, 14 VOTES: TREASURER CINCINNATI CHAPTER, KEN CARPENTER. UNANIMOUS, 14 VOTES: TREASURER DAYTON CHAPTER, BILL STASER, 11 WRITE-IN VOTES, FRANK LARRICK, J WRITE-IN VOTES, BILL STASER, 11 WRITE-IN VOTES, FRANK LARRICK, J WRITE-IN VOTES, BILL STASER, 11 WRITE-IN VOTES, BILL STASER, 11 WRITE-IN VOTES, FRANK LARRICK, J WRITE-IN VOTES, BILL STASER, 12 WRITE-IN VOTES, BILL STASER, 11 WRITE-IN VOTES, FRANK LARRICK, J WRITE-IN VOTES, BILL STASER, 11 WRITE-IN VOTES, PRESENTING THEM WITH CERTIFICATES OF APPRECIATION, RICK QUICKLY WENT OVER ARTICLES IN "COMPUTER SHOPPER" AND "HICROPENDIUM"-TI FORM IN THE FORMER AND APPRECIATION, RICK QUICKLY WENT OVER ARTICLES IN "COMPUTER SHOPPER" AND "HICROPENDIUM"-TI FORM IN THE FORMER AND ATTUCKTAL ON DISK DRIVES AND REVIEWS ON THE "P-SRAM" AND "TI BASE V2.0 IN THE LATTER, RICK WISHED TO REMIND EVERYONE ABOUT THE UPCOMING LIMB FARE ON MAY THE 20th AND THEIR WEED FOR ADDITIONAL VIDEO TRAINS COMPUTED THE NEXT LARROW WISH AND THE WRONG THE "P-SRAM" AND "TI BASE V2.0 IN THE LATTER, RICK WISHED TO REMIND EVERYONE ABOUT THE UPCOMING LIMB FARE ON MAY THE 20th AND THEIR WEED FOR ADDITIONAL VIDEO THAT HE COMPOSITE AND ANALOG SEB VIDEO WAS VIVIDLY EVIDENT, FETTURES NOT DEMONSTRATED WEEL THE DIFFERENCE BETWEEN COMPOSITE AND ANALOG SEB VIDEO WAS VIVIDLY EVIDENT, FETTURES NOT SENDENCE IT SECH DEMONSTRATED ON BASE SECOND PRIZE WINNER WAS FRANK LARRICK WHO PECCIVED A THE COLOR MAY THE

CAVIL PLOT

| 1 !************************************ |
|--|
| 2 ! CALL PLOT IN XB * !Ø |
| 3 ! revised by A. HEINO * !2 |
| 4 ! T.I.s.H.U.G. 1987 * !Ø |
| 5 !****************** !Ø |
| 6 !CALL PLOT(X,Y) * !Ø |
| 7 ! X=1 TO 256 * !Ø |
| 8 ! Y=1 TO 192 * !Ø 83 |
| 9 (************************************ |
| 10000 SUB PLOT(V.Q):: IF I T HEN 10010 !124 |
| 10005 I=1 :: H\$="0123456789A BCDEF" :: N\$="00000001001000 11010001010110001110001001 |
| IF Y<0 OR Y>256 OR X<0 OR X> 192 THEN SUBEXIT !122 |
| 10020 C=C-(C=0)*143 :: W=INT ((X-1)/8)+1 :: Z=INT((Y-1)/8 |
|)+1 :: E=X-((W-1)*8):: F=Y-((Z-1)*8):: CALL GCHAR(W,Z,A) |
| :: A.D=MAX(32.A)!225 10030 CALL CHARPAT(A.A\$):: P |
| =E*8-8+F :: @=INT(P/4,06)+1 :: F=F+(F>4)*4 !116 |
| 10040 IF A<>32 THEN C=C+1 EL SE A=C :: IF C<34 THEN SUBEX IT !117 |
| 10050 B\$=SEG\$(A\$.a.1):: IF S EG\$(SEG\$(N\$.POS(H\$.B\$.1)*4-3 .4),F.1)="1" THEN IF D=32 TH |
| EN SUBEXIT ELSE 10070 !169 10060 CALL CHAR(A.SEG\$(A\$.1. |
| 0-1)&SEG\$(H\$,POS(H\$,B\$,1)+2^ (ABS(F-4)),1)&SEG\$(A\$,0+1,16 -0)):: CALL HCHAR(W,Z,A)!103 |
| 10070 C-C-1 :: C-C-(C-0):: S UBEND !025 |

FAIRWARE \



Don't forget our fairware authors!!



GIM-DAY SUBSCRIPTIONS Welcome;! William (IcCasline 'Remote (Iember) Remote (Iember) William (Iember) William (Iember) William (Iember)

Contraction and the contraction and the contraction of the contraction

XB SCREEN DUMP

| 100 ! XB SCREEN DUMP !115 |
|---------------------------------|
| 110 ! MINY UTILITY !052 |
| 120 ! BY ATRO HEINO !039 |
| 130 ! 30/08/86 !058 |
| 140 ! REPRINTED FROM |
| TISHUG NEWS DIGEST !14 |
| 9 |
| 150 PRINT "PIO.CR"::: ACCEPT |
| AT(24,1)SIZE(-26)BEEP:DV# : |
| : OPEN #1:DV\$:: PRINT #1:CH |
| R\$(27);"A";CHR\$(8);!009 |
| 160 FOR X-1 TO 32 :: PRINT # |
| 1:CHR\$(27);"K";CHR\$(192);CHR |
| \$(0)::: FOR Y=24 TO 1 STEP - |
| 1 :: CALL GCHAR(Y, X.C):: C=M |
| AX(C, 32):: IF C=CA THEN 190 |
| ELSE CALL CHARPAT(C.CH\$)!195 |
| 170 CA=C :: DP\$="" :: FOR U= |
| 16 TO 1 STEP -2 :: C1=ASC(SE |
| G\$(CH\$,U,1)):: C2=ASC(SEG\$(C |
| H\$.U-1.1)):: C1=C1+(C1>57)*7 |
| :: V=0 !203 |
| 180 FOR I=0 TO 3 :: V=V+(C1 |
| AND 2^I)+(C2 AND 2^I)*16 :: |
| NEXT I . DP4=DP4&CHR4(V). |
| NEXT U !181 |
| 190 PRINT #1:DP\$;:: NEXT Y : |
| : PRINT #1:CHR\$(10):: NEXT X |
| :: CLOSE #1 !230 |
| e e vijvoji Tri . žuju |

| • | _ |
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74L500

74LS74

1041016-06

1501392-25

CD2115

CD2114

Marty's Mind Dump - NorthCoast 99er's 4/10/88

HARDWARE TIPS

The Extended Basic Cartidge: If you have an Extended Basic Cartridge that has gone bad for some reason, this info may help. I killed my Ex Dasic recently. While soldering some new 'pieces parts' on my console main board, I crossed some wires. "I'm always in a hurry." When I turned the power on 1 already had the Ex Basic in the Gros Port. "Mistake!!!." I fed some current directly back into the Cartridge and rapped it. After a sEvere anxiety attack, and real depression, I thought. "HEy, this is the beginning of another project." Well, the project has been about two months in the making and I'm ready to let you all know the results. Extended Basic Cartridges are fixable and the parts may not cost a lot, depending on how bad you crashed it and if you can solder. One other consideration is this. If you have to replace all the chips in the cartridge it will cost around thirty dollars. You can probably pick up a used cartridge for around twenty. Since I'm out to put some aileage on my new soldering iron these things never bothered me.

So, lets go. MOTE: You're doing this at your own risk. If you have any problems arising from this article, I don't went to hear about it.

Try to open the cartridge as neatly as possible. You can glue it back together later, but it would be better if the original snaps worked. When you get the PC board out you'll see eight chips.

There are two piggyback chips at one end of the board you won't see unless you have to unsolder them. The next thing to do is check the PC board and every solder joint to sake sure that all the connections are good. If you find a cracked line or a poorly soldered leg on one of the chips, repairing it may solve all your problems. If we haven't accidently found the problem so far, we'll move on to the heavier stuff. There should be a 74LSOO and a 74LSO4 at one end of the board. If you are lucky, replacing these will put you back in business. Just de-solder them.

pick up two new ones at your local electronics supply, (they should cost less than fifty cents each), and solder the new chips back in. Then without bothering with the cartridge case, plug the board back into the console and see how lucky you are. In my case this was no help at all. The next

step in this project is to replace the two large

chips on the board. These are ROM chips and appear to be quick to fail in any adverse situation (static charge, etc.). The chip closest to the 74LS74 is listed as ROM, EXT. BASIC part number 1041016-0006, and the one next to it is ROM, EXT. BASIC part number 1501392-0025. Their prices are \$6.80 and \$5.60 respectively. These parts and others can be ordered from TI by calling (806)741-2265 or (806)741-2268. These are not toll free numbers. Replacing these two chips fixed by problem, and after doing a small amount of investigation, plus analyzing by own situation, it is by uneducated guess that replacing these four chips will fix the cartridge in at least 80% of the cases. I put a substantial charge of current back through the cartridge and did not hurt the piggyback GROM chips at the other end

of the board. So, replace the two large ROM chips and see if the cartridge works. I really hope it worked because we are now passing into the area where it would have been cheaper to gick up a good used Ex-Basic for \$20.00. If it still doesn't work, it's time to replace the GROMS. They are available from II at the same phone number and they sell for \$3.60 each. The way they are tied together if one has been demaged they are probably all damaged. Toward the ROM, the top GROM is 2115, this is TI SROM.EXT.BASIC 1015960-3115. The one it is piggybacked over is 2122 (TI GROW, EXT. BASIC 1015940-1122). The top GROW next to it is 2114 (TI 6ROM, EXT. BASIC 1015960-1114), and the chip it is piggybacking is 2113 (TI GROM, EXT. BASIC 1015960-1113). If you are replacing the GROM chips, I recommend you do them all at once. If you try to add in one new chip at a time to isolate the problem, the soldering and desoldering could damage your new chips and you'll never find the problem. The resistor, and capacitors you saw scattered around the printed circuit board will practically never fail, so don't worry about replacing that stuff. Here are some tips for electronic work. Use a low oomer soldering iron (15 Watt). Hold chips or a PC Board by the edges, like a photograph. Try to not put your fingerprints all

over the circuits or chip legs. Do not wear clothing that has caused you to get a static shock from the refrigerator door in the past. There is a notch or eark at one end of a chip to designate pin one, or the chip direction. Be sure you do not put a chip in backwards. Whenever you resove thips from a PC board use a vacuum type desoldering tool to remove all the solder from around the chip leas. *There have been times when I desaldered a leg, resoldered it, and then desoldered it again, in order to get a clean desolder job." Use long-nose pliers to miggle and loosen every chip leg. If the legs are not all free and you pry the chip off the board, you will demage the board. The chip should be loose enough to almost pick it off with your fingers. When soldering any electronic part, do not heat the part with your iron, and feed in the solder, this will over heat the chios. You should keep your iron clean. Hold the iron in one hand and the solder roll in

the other, with the item to be soldered on the table in front of you. Putting the end of the solder roll against the hot iron, accumulate a very small drop of molten solder on the end of the iron (don't do this directly over your project, place the iron against the part to be soldered for one or two seconds or until you see the molten solder flow around the wires or parts to be soldered. Do not hold the iron against the parts you are soldering any longer than necessary, and do not reheat a chip leg over and over. If you must replace the piggyback GROM chips, squeeze the legs of the top chip together until they fit tightly over the bottom chip, and then solder the chips together first. At that point solder the pair of chips to the board.

Have fun. Marty.

Page

GETTING THE MOST FROM YOUR CASSETTE SYSTEM BY MICKEY SCHMITT

NUMBER 9

UNDERSTANDING CASSETTE ERROR CODES AND MESSAGES
PART I

Understanding cassette error codes and messages is not quite as difficult as it may seem. Unfortunately, trying to find a list of the error codes and messages that deal specifically with the cassette recorder has been a difficult task! In doing my research for this particular article, I have had to combine many different sources of information - In order to be as informative and as complete as possible.

Basically, cassette error codes and messages can occur during one of two different types of commands. More specifically, I am referring to the "LOADING" (OLD CS1) procedure and the "SAVING" (SAVE CS1) procedure.

This month I will be examining the error codes and messages that can occur during the "LOADING" (OLD CS1) procedure.

When the computer finishes loading the data, it tells you whether or not it read the data properly. If the data were read correctly, you would see the following message appear on your monitor or ty screen:

* DATA OK

* PRESS CASSETTE STOP CS1 THEN PRESS ENTER

If, however, the computer did not successfully read your program into memory, an error occurs and the computer prints one of the following error messages:

* ERROR - NO DATA FOUND
PRESS R TO READ CS1
PRESS C TO CHECK
PRESS E TO EXIT

* ERROR DETECTED IN DATA
PRESS R TO READ CS1
PRESS C TO CHECK
PRESS E TO EXIT

When this occurs - You have a choice of using one of the following three options: Note, however, that the single-letter responses (R-C-E) that you type in at this time must be in upper-case characters!

- 1. Press R to repeat the reading procedure. However, before repeating this procedure, check to make sure that you have put the cassette tape in correctly That it is the correct cassette tape and that it has been placed in the cassette recorder with the correct side facing up. Then follow the directions as they appear on your monitor or tv screen.
- Press C to check the data you have read into memory. At this point you
 may wish to adjust your cassette recorder's volume control and tone
 setting. Then follow the directions as they appear on your monitor or
 tv screen.
- Press E to exit from the loading procedure. At this time another error message is displayed, indicating that the computer did not properly read your program into memoru:

* WARNING:

CHECK PROGRAM IN MEMORY

* I/O ERROR 56

If I/O ERROR 56 appears, something definitely went wrong. But DON'T PANIC! Generally speaking, when the error message "ERROR — NO DATA FOUND" occurs — The computer did not recognize the cassette recorder at all during the "OLD CS1" routine. On the other hand — When the error message "ERROR DETECTED IN DATA" occurs — The computer recognized only part of the data that the cassette recorder was sending to the computer. When this happens, recheck your cassette recorder's volume control and tone setting. Then recheck your cassette cable. Make sure that both ends of the cable are attached to the computer and to the cassette recorder. While you are at it — Make sure that the color-coded wires leading to the cassette recorder are connected correctly. The cassette recorder will not operate properly if the color-coded wires are reversed!

Next month I will continue with the topic of understanding cassette error codes and messages. More specifically, I will be examining the error codes and messages that can occur during the "SAVING" (SAVE CS1) procedure.

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(Part i of 3)

| ASC | 211 | | + BASIC | E/A PATTERN | BASIC/XB PATTERN | E/A | BASIC | X-BASIC |
|--------|------------|------------|------------|----------------|---------------------|-------------------|----------|--------------|
| ď | hex. | CHAR | BIAS | LOCATION | LOCATION | COLOR LOCATION | COLOR | COLOR |
| ==: | | 332233 | | | | | LOCATION | LOCATION |
| | | | | | | | | |
| 0 | >0 | | | >0800 | | >0380 | | |
| 1 | >1 | F/7 | | >0808 | | 1 | | |
| 2 3 | >2 | F/4 | | >0810 | | i | | |
| ა 4 | >3 >4 | F/1 F/2 | | >0818 | | į | | • |
| 5 | >5 | F/= | | >0820 | | ! | | |
| 6 | >6 | F/8 | | >08 3 0 | | i . | | |
| 7 | >7 | F/3 | | >083 8 | | i | | |
| • | • • | | | 70000 | | | | |
| 8 | >8 | F/S | | >0840 | | >0381 | | |
| 9 | >9 | F/D | | >0848 | | 1 | | |
| 10 | > A | F/X | | >0850 | | 1 | | |
| 11 | >B | F/E | | >0858 | | ŧ | | |
| 12 | >C | F/6 | | >0860 | | ŀ | | |
| 13 | >D | ENTER | } | >0848 | | ŧ | | |
| 14 | >E | F/5 | | >0870 | | 1 | | |
| 15 | > F | F/9 | | >0878 | | | | |
| 16 | >10 | | | >0880 | | >0382 | | |
| 17 | >11 | | | >0888 | | 1 | | |
| 18 | >12 | | | >0890 | | i | | |
| 19 | >13 | | | >08 78 | • | 1 | | |
| 20 | >14 | | | >OBBO | | 1 | | |
| 21 | >15 | | | >OAAO | | : | | |
| 22 | >16 | | | >0880 | | t | | |
| 23 | >17 | | | >0888 | | | - | |
| 24 | >18 | | | >08CQ | • | >0382 | | |
| 25 | >19 | | | >08C8 | | 1 | | |
| 26 | >1A | | | >08D0 · | • | 1 | | |
| 27 | >1B | | | >0606 | | i | | |
| 28 | >10 | | | >08E0 | | 1 | | |
| 29 | >1D | | | >08E8 | | 1 | | |
| 30 | >1E | CUR. | >7E | >08F0 | >03F0 | ; | >030F | >080F |
| 31 | >1F | EDGE | >7F | >0 8F8 | >03FB | | !SET C |) |
| 32 | >20 | SPACE | >80 | >0900 | >0400 | >0383 | >0310 | >0810 |
| 33 | >21 | ! | >81 | >0708 | >0408 | 1 | 1 | 1 |
| 34 | >22 | | >82 | >0910 | >0410 | i | i | į |
| 35 | >23 | # | >83 | >0918 | >0418 | • | SET 1 | i |
| 36 | >24 | \$ | >84 | >0 920 | >0420 | ı | | i |
| 37 | >25 | X. | >85 | >0928 | >0428 | 1 | : | ı |
| 38 | >26 | _ | >86 | >0930 | >0430 | ŧ | : | ł |
| 39 | >27 | , | >87 | >0938 | >0438 | | | |

Page 6:

| ASC d | II hex | CHAR | + BASIC BIAS | E/A PATTERN LOCATION | BASIC/XB PATTERN LOCATION | COLOR LOCATION | BASIC COLOR LOCATION | X-BASIC COLOR LOCATION |
|------------|-------------|------|------------------------------------|--------------------------------|---------------------------------|--|----------------------------|--|
| | | | | | | ====================================== | | |
| 40 | >28 | (| >88 | >0940 | >0440 | >0384 | >0311 | >0811 |
| 41 | >29 | | >89 | >0948 | >0448 | 1 | : | |
| 42 | >2A | | >8A | >0950 | >0450 | i | : | į |
| 43 | >2 B | + | >88 | >0958 | >0458 | Ì | ISET | 2 |
| 44 | >2C | , | >8C | >0960 | >0460 | İ | 1 | - i |
| 45 | >2D | | > 8D | >0 968 | >0468 | | i . | Ì |
| 46 | >2E | • | >8E | >0970 | >0470 | • | : | 1 |
| 47 | >2F | / | > 8F | >0978 | >0479 | | | |
| 48 | >30 | 0 | >90 | >0980 | \0480 | \070F | \071D | |
| 49 | >31 | 1 | >91 | >0988 | >0480 >0488 | >0385 | >0312 | >0812 |
| 50 | >32 | 2 | >92 | >0766 | >0490 | i I | i a | i |
| 51 | >33 | 3 | >93 | >0998 | >049B | 1 | | i T |
| 52 | >34 | 4 | >94 | >0 9A0 | >047B >04A0 | i | !SET | 3; |
| 53 | >33 | 5 | / 74 / 75 | >0 7HU >0 7AB | 204A8 | i | i | i |
| 54 | >36 | 6 | >96 | >09B0 | >04B0 | | j | i |
| 5 5 | >37 | 7 | >97 | | | i | i | i |
| JJ | /3/ | , | /7/ | >0988 | >04BB | | | |
| 56 | >38 | 8 | >98 | >0 9CO | >04C0 | >0385 | >0313 | >0813 |
| 57 | >39 | 9 | >99 | >09CB | >04CB | ! | 1 | 70013 |
| 58 | >3A | 1 | >9A | >09D0 | >04D0 | • | | 1 |
| 59 | >3B | • | >98 | >09D8 | >04D8 | ! | SET | A : |
| 60 | >3C | ż | >9C | >09E0 | >04E0 | • | 1361 | 4 i |
| 61 | >3D | = | >9D | >09EB | >04E8 | • | | • |
| 62 | >3E | > | >9E | >09F0 | >04E0 | • | | • |
| 63 | >3F | ? | >9F | >09FB | >04F8 | | | |
| | | | | | | | | |
| 64 | >40 | | >AQ | >0A00 | >0500 | >0386 | >0314 | >0814 |
| 65 | >41 | Α | >A1 | >0A08 | >0508 | 1 | ŀ | : |
| 66 | >42 | В | >A2 | >0A10 | >0510 | 1 | ł | ; |
| 67 | >43 | C | >A3 | >0A18 | >0518 | : | !SET | 5: |
| - 48 | >44 | D | > A4 | >0A20 | >0520 | 1 | : | 1 |
| 69 | >45 | E | >A5 | >0A28 | >0528 | 1 | 1 | : |
| 70 | >46 | F | >A6 | >0A30 | >0530 | : | • | : |
| 71 | >47 | 6 | >A7 | >0A38 | >0228 | | | |
| 70 | | | | | | | | |
| 72 | >48 | H | >AB | >0A40 | >0540 | >0387 | >0315 | >0815 |
| 73 74 | >49 | I | >A9 | >0A4B | >0548 | 1 | į. | : |
| 74 | >4A | J | >AA | >0A50 | >0550 | i | | 1 |
| 75 | >4B | K | >AB | >0A58 | >0558 | : | :SET | 6: |
| 76 77 | >4C | Ë | >AC | >0A60 | >0560 | i. | 1 | 1 |
| 77 | >4D | M | >AD | >0A68 | >0568 | • | | ł |
| 78 · | >4E | N | >AE | >0A70 | >0570 | i | 1 | i i |
| 7 9 | >4F | 0 | >AF | >0A78 | >0578 | | | |
| 80 | >50 | P | >BO | >0ABQ | >0580 | >0388 | >0316 | >0816 |
| 81 | >51 | Q | >B1 | >0A88 | >0588 | / UJGG | \^216 | \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |
| 82 | >52 | R | >B2 | >0A90 | >0590 | 1 | ± | • • |
| 83 | >53 | S | >B3 | >0A78 | >0578 | <u> </u> | !SET | 7 |
| 84 | >54 | Ť | >B4 | >0AA0 | >05AQ | • | , JE | , 1 |
| 85 | >55 | ப் | >B5 | SAAO< | >05A8 | • | • | |
| 86 | >56 | ÿ | >B6 | >OABQ | >05BQ | • | • | r. |
| 87 | >57 | W | >B7 | >0AB8 | >05B0 | · | · · | • . |
| U / | /3/ | ** | /6/ | /VHDO | >00 000 | | | |

TI-WRITER TIPS #3 - by Bob Seddon -

EFFECTIVE INDENTATION part 1: the Editor

When you load the Editor you are in a new, as-yet-named file. If you call up the Tab line (CTRL c, T, Enter) you will see that the file has L at O and R at 79. Every 5th position is a Tab. There is also an an Indentation, but you can not see it because it is on the column of the L tab.

You can verify that there is, indeed, an I "beneath" the L tab by keying CTRL m. This command (New Paragraph) creates a Carriage Return at the location of the cursor, then drops the cursor down (to a newly-created blank line) to the preset Indentation. You will see that the cursor moves all the way to the L tab when it drops because the L tab and Indent are the same column in an unnamed file.

AUTOMATIC INDENTATION of new paragraphs as you write (I right of L; CTRL m)

You can reenter Tabs and make the I visible by typing "I" on any column not occupied by L or R, then keying Enter. Each time you reenter Tabs the I appears at its last set position.

Thereafter, when you key CTRL m the cursor drops down to the new indentation, not the L tab. CTRL m (New Paragraph). by rights, GUGHT to be named, "End a Paragraph by Making a Carriage Return, Create a Blank Line Beneath the Carriage Return, and Orop the Cursor to the I Column on that Blank Line".

You can change the position of I as many times as you choose, so long as you remember to delete the old I when typing in a new I, you can't have more than one. O and, perhaps, I are the most common for indenting. A negative indentation of -4 (when I is LEFT of L) is useful for outdenting lists; the other side of this sheet discusses outdenting.

ADDING INDENTATION
to one existing paragraph
(This method independent of I)
(CTRL o, g, r)

This transforms an unindented paragraph into an indented paragraph. It is manual and has nothing whatsoever to do with where I is on the Tabline. It is very fast for indenting one or two isolated paragraphs: position the cursor and make three keystrokes:

- (1) Wordwrap must be on (solid cursor; CTRL O [zero, not the letter "o"])
- (2) Use CTRL m to put a Carriage Return at the end of the paragraph so that when you Reformat (CTRL r) text below that paragraph will not also Reformat.
- (3) Move the cursor to the place on the first line where you want the indentation to begin.
- (4) CTRL o (the letter o, not the number 0) creates a blank line. In effect, it leaves the cursor on the same line number and same column position, but pushes all text below the cursor down a line.
- (5) CTRL g (Insert). This command "breaks" the line, preparing it for Reformat. Admittedly, there is no text on the line to break but, nevertheless, CTRL g must precede Reformat.
- (6) CTRL r (Reformat) reorders all text between the cursor and the Carriage Return such that the first line begins at the cursor (the indentation) and the remaining lines of the paragraph begin at the L tab.

REFORMATTING AGAIN AFTER

CTRL o, g, r

If you change your mind about
the location of the indentation, key CTRL r again: text
Reformats again, this time
such that the indentation is
destroyed: all lines in the
paragraph (including the 1st)
begin at the L tab.

Reformatting after a vertical arrow also destroys indentation. (see box at right)

ADDING INDENTATION to several existing paragraphs (I right of L; CTRL 4, r)

f you have a series of paragraphs (all ending in Carriage Returns) you can rapidly indent all of them, one by one:

- Reset I to the place where you want all paragraphs to be indented.
- (2) Move the cursor to the first line of the first paragraph via NEXT (or LAST) PARA. NOTE: NEXT (or LAST) PARA must precede Reformat, otherwise the first line will not Indent. In other words, you cannot move the cursor to the first line by arrow keys.
- (3) CIRL r (Reformat) causes this first paragraph to indent to the Tab line setting.
- (4) CTRL 4 (Next Paragraph)
 moves the cursor to the
 first line of the next
 paragraph; the cursor automatically stops on the correct place where indentation is to begin.
- (5) Repeat (3), then (4), until you finish indenting all paragraphs.

REFORMAT AFTER NEXT/LAST PARA CTRL 4, 6, r

The first line of a paragraph Reformats to I if CTRL 4 or or CTRL 6 is used to reach that line; if you key CTRL r a second time nothing happens.

If you change your mind about having an indented paragraph and want to Reformat again so that the first line begins at L rather than I you must travel through the vertical arrow keys:

REFORMAT AFTER UP/DOWN ARROW
CTRL **, **, **

The first line of a paragraph Reformats to L if CTRL e or CTRL x is used to reach that line; a second keystroke of Reformat does nothing.

If you did use arrow keys and do wish to Reformat to I, you can do so quickly with only 3 strokes: CTRL 4, 6, r.

OUTDENTING (I left of L) 123456789 123456789 123456789 I...LT....T....T....T....T

The numbered lists used in this article are a good illustration of outdenting. By setting I left of L, the first line actually OUTdents relative to L, not INdents. The outdented part of the each first line contains the list's numbers; the text's body lines up vertically so that text does not appear beneath the numbers.

AUTOMATIC OUTDENTATION of new paragraphs as you write (I left of L; CTRL m)

This is the same procedure used to write a series of new indented paragraphs, except for I now being LEFT of L.

ADDING OUTDENTATION to one existing paragraph (This method independent of I) (CTRL x, o, g, r)

After reformatting a paragraph so that the first line is correctly positioned for an OUT—dent, you can laboriously INdent the remainder, line-by-line. Cursor horizontally to the correct column before doing the above little dance.

ADDING OUTDENTATION to one existing paragraph (I left of L; CIRL y, v, g, r)

f you set I left of L you can outdent the entire paragraph rather than do it line-by-line. I am including this only as an example of "how to get there from here". Since you must set I anyway, it is faster to use the methods after this one. In other words, there is a fast way to INdent a paragraph. (3 strokes) but no fast way to OUIdent a paragraph.

- (1) Call up the Tab line (CTRL C. T, Enter)
- (2) Type an I on column 0 and
- an L on column 4; Enter.

 (3) To type in the numbers you need to begin the first line of each entry on column 0; however, left cursor movement is stopped by the L tab at column 4. You can override the L tab with

L Margin Release, CTRL y. (4) Cursor to column O, CTRL v.

(5) CTRL g to "break" the line.
(6) Type in text on first line.

- (7) The combination of Wordwrap and the L margin being on column four causes succeeding lines of the entry to begin on column four.
- (8) You cannot Reformat the first line again without losing outdentation. You can Reformat repeatedly on any succeeding lines, down to the Carriage Return.
- (9) If you accidently Reformat Line 1 you can repair the damage by repeating this same procedure, or, by using the following method, which is probably faster.

ADDING OUTDENTATION to a series of existing paragraphs (I left of L; CTRL 4, r)

Except for I being laft of L, this is the same method used when adding indentation to a series of existing paragraphs. The next method is more useful:

ADDING OUTDENTED NUMBERS TO AN EXISTING LIST (I...L; CTRL 4, a, (n), r)

This is the best procedure to use to modify a series of sentences to turn them into an outdented, numbered list. Basically, all you are doing is adding a number in front of each sentence, then moving the sentences right so they will all line up at a new L tab.

- (1) Wordwrap on (solid cursor;
- CTRL O [zero, not "o"])
 (2) Verify a Carriage Return at
 the end of every passage.
 Use CTRL m as needed.
- (3) Tabs: (CTRL c, T, Enter) (4) Type I on U; L on 4; Enter.
- (5) Cursor to 1st line via NEXT (or LAST) PARA.

SEE NOTE in box on previous page prohibiting use of up/down arrow keys!

(6) Blank line with CTRL o (the letter, not zero)

(7) Type in (n), spacebar.
(8) Reformat (CTRL r).

(9) Next Paragraph (CTRL 4).

(9) Repeat (6) through (9) until you finish the list.

THREE WAYS OF PRINTING

These different ways of creating outdentation and indentation only do so on screen in the Editor. If you want to print work just as it appears on screen you have three options:

- Through the Editor (CTRL c, f, pf, Device Name, Enter)
- (2) Through the Fermatter (CTRL c, q, e, Z). Text on screen must be indented and Saved in the Editor and be preceded by .LM n;RM n;NF.
- (3) Through the Formatter preceded by .LM +4;IN -4, followed by .LM -4;IN +4.

PRINTING VIA THE EDITOR prints as on screen - not according to Tabs or Dots

f you use the PF (Print File) command in the Editor to print your work, the I setting on the Tab line IS NOT HONORED BY ITSELF; however, the actual indentations of each paragraph are. If you set an I some place on the tab line but do not also indent each paragraph, the printer will not indent the paragraphs either. The Tab line settings themselves are inconsequential, because the Editor prints as-is. merely reproducing whatever is displayed on-screen.

The Device Name for Parellel printers is PIO. [followed by CR (Carriage Return) or Lf (Line Feed)]; for Serial printers it is RS232. MIO (Modula Interface Output) is the Default Device Name for the WORDWRITER + cartridge.

PRINTING VIA THE FORMATTER prints according to the Dots, not the Tabs Nor as on screen

The two ways of printing indentation through the Formatter [points (2) & (3) above] are discussed in Effective Indentation Part 2.

187E5AA53CC3427E3C81817E5AE7

TIPS FROM THE TISERCUB

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catalog!

While they last, and the supply is limited. I will sell a single Texas Instr. cassette interface cable for \$2.50 with any order for casssette software.

My sincere apologies for a serious goof in the Sort Watcher program in Tips #33. The GOSUB in line 12# should go to line 1829, not 32767! Also, in line 218 please change the 928 to 938.

Steven Shouse of TIRUS sent this improvement to the GRAPHPAGE in Tips #33 -155 OPEN \$1:"DSK1.GRAPHPAGE" .OUTPUT :: PRINT #1:TAB(4):R PT*("_*,75):: FOR J=57 TO 1

STEP -1 :: J\$=STR\$(J)

The 99/4A Assistance Group (which is a commercial enterprise, not a user's group, although they charge a fee to "join"), sells public domain programs at \$3.49 each - but you can't order. programs, you have to buy a package deal.

I call good copyrighted programs, written by myself. for \$3.44, I let you pick and choose, even just one program if you want. I don't pretend to be a user's group (I know that Tigercub often gets misspelled as Tiger Club but I can't help that!), and I don't charge you to "join".

The reason for these remarks is that one of the public domain programs sold by that group is listed as SAMARKAND. It may be only an odd coincidence that I wrote a random music composer entitled SONS OF SAMARKAND and put it in public domain because I didn't think it was worth selling. Anyway, if you want it, here it is. 188 CALL CLEAR 119 REM - SONG OF SAMARKAND

programmed by Jim Peterson -Version 3 125 RANDONIZE

138 CALL CHAR(94, *88") 148 CALL CHAR(95, "88")

158 CALL SCREEN(11) 168 PRINT "From the Third No. vement of":":" THE NEVER -ENDING SONG": "": " y Emir Abdul Aziz":":".....

178 PRINT : : : : : : : : 111111 186 FOR J=1 TO 23

19# CALL HCHAR(12.5+J.ASC(SE 6\$("^THE^SON6^OF^SAMARKAND^" $J_{1}(1)$

244 NEXT J 218 CALL HCHAR(11,6,74,23)

229 CALL HCHAR(13,6,94,23) 23# M\$="107EFF4266B124C3DB66

SA18423C5AA542817E995A##18## 24BDBD3C667E666681##243C##42

669924187E4299241181810BC3* National 248 DIN N(38).S(21) 251 F=221 261 FOR J=1 TO 36 278 X=X+1+(X=|2) #12 28# IF (x=2)+(x=5)+(x=7)+(x=10)+(X=12)THEN 310 298 Y=Y+1 individual 315 M(Y)=INT(F#1.659463894^J

> 328 CALL HCHAR(1.1.32.328) 330 CALL VCHAR(1,31,95,96) 348 CALL HCHAR(24,1,95,64)

355 CV=2

3A4 K=R

318 NEXT J

37# K=K-INT(5#RND+1)+INT(5#R ND+L)+(K)21)=2-(K(1)=2

388 IF (K(1)+(K)21) THEN 378 39# CALL SOUND(-999, N(K),#,N

(K) =CV, 5, N(K) =3.75, 31, -4, 5) 446 X-INT(46ERND)

41 IF X>12 THEN 378

428 ON X+1 GOTO 438,498,548, 588,468,738,778,858,878,976,

998,1848,1868

438 IF INT(4=RND)(3 THEN 398

449 FOR T=K TO 25

455 CALL SOUND(-999.%(T),1)

468 NEXT T 478 K=1

488 60TO 398

498 FOR T=K TO 1 STEP -1

588 CALL SOUND (-999, N(T), 1)

514 WEXT T

528 K=T+1

538 GOTO 398

549 FOR T=K TO 1 STEP -1

558 CALL SOUND!-999,38888,38

,36666,38,N(T)#3.75,38,-4,4)

544 NEXT T

574 60TO 374

588 FOR TT=K TO K-INT(5#RNO+

·1)STEP -1

598 IF TT(2 THEN 378

6#9 FOR T=1 TO INT(7#RND+3) 618 CALL SOUND(-999, N(TT), f.

N(TT) #2, #3

628 CALL SOUND(-999,N(TT)=1.

43, 5, N(TT) =2, \$6, \$)

638 NEXT T

648 NEXT TT

458 GOTO 378

669 FOR T=K TO K-INT(3#RND+3

ISTEP -L

67# IF T<2 THEN 37#

689 FOR D=# TO 15 STEP 2 69# CALL SOUMB(-999, N(T) #2.D

,N(T)=3,0,N(T)=3.75,38,-4,8}

748 NEXT D 719 NEIT T 724 60TO 378 738 FOR X=1 TO 15 748 CALL SOUND (-999, N(X), S, N (16-X), #, N(1), 34, -4, 5) 750 NEXT X 761 60TO 371 778 FOR T=K TO K-INT(4#RND+1)STEP -1 788 IF TK2 THEN 378 798 CALL SOUND (188, N(T), S, N(T) #2, J, N(T) #3, 75, 35, -4, 5) BUT FOR IT=N(T)TO N(T-1)STEP -15 818 CALL SOUND (-999, TT, S, TT= 2,1,1123.75,31,-4,5) 82# NEXT TT 834 NEXT T 844 6070 374 859 CALL CHAR(32, SEGS(MS, INT (57#RHD+1)#2-1,16)) 869 GOTO 378 878 IF INT(4=RNO)(3 THEN 395 88# CALL SOUND (-31##, N(K), #, N(K) #2, f, N(K) #3.75, 38, -4, f) 898 FOR J=1 TO INT(5±RND+5) 958 S(J)=[NT(21#RND+1) 918 NEXT J 928 CALL SOUND (-1,3888,38) 93# FOR T=1 TO J-1 94# CALL SOUND (-999, N(S(T)). #,N(S(T))/1.68,#,N(S(T))#3.7 5,31,-4,1) 950 NEXT T 964 60TO 374 97# CALL CHAR(95, SEGS(MS.INT (57±RND+1)+2-1,16)) 988 6010 378 998 IF INT(4ERND)(3 THEN 398 1959 FOR J=228 TO 668 STEP 2 1818 CALL SOUND (-999, J, 8, 885 -J.1,N(12)#3.75,38,-4,8) 1020 NEXT J 1438 60TO 378 1949 CALL CHAR(32,"5") 1858 60TO 398 1868 CV=CV+(CV=2)/2-(CV=1.5) ±,5 1979 GOTO 375

If you are trying to exchange newsletters and are using the listings of user groups published by Texas Instruments and by others. you are finding that they are way out of date! Send me a disk and some return

.1):**

-CHR\$(2) THEN 238

218 FOR J=1 TO W :: IF F\$(J)

228 DISPLAY AT(12.1): "FILENA

ME? DSK"&F\$(J):: ACCEPT AT(1

2,14)SIZE(-12)BEEP:C*(J)238

NEXT J :: FOR J=1 TO N :: IF

F\$(J)=CHR\$(2)THEN 25# :: OP

EN #1: DSK %C\$ (J), OUTPUT ::

DISPLAY AT(12,1): "SAVING "&S

postage - or just send \$1.58 and I'll send you ay address list of about 148 groups I exchange with. It is updated every month from return addresses

newsletters I receive. For those of us who are still struggling along with one disk drive, this routine will transfer any number of D/VBA files, totalling up to about 42 sectors, from one disk to another in one pass. and will optionally under changed names. 115 DIM M\$(2500),F\$(25),C\$(2 5):: CALL CLEAR :: Ts=CHR\$(1 11# DISPLAY AT(8.6): "TIGERCU B FILEMOVER" :: DISPLAY AT(1 5,1): "PRESS ENTER WHEN FINIS HED. 128 F=F+1 :: IF F>25 THEN 13 1 :: DISPLAY AT(12,1): "FILEN AME? DSK"&T\$:: ACCEPT AT(12 ,14)SIZE(-12)8EEP:F\$(F):: IF F\$(F)<>T\$ THEN 120 13# F=F-1 :: FOR J=1 TO_F :: ON ERROR 268 :: OPEN #1:"DS K"&F\$(J), INPUT :: DISPLAY AT (12,1): "READING "&SEG*(F*(J) ,3,255)148 X=X+1 :: LINPUT #1:Ms(X) :: C=C+LEN(M\$(X)) 158 IF C>18888 THEN DISPLAY AT(20.1): "INSUFFICIENT MEMOR Y FOR "&SEG\$(F\$(J).3,255):: 60TO 196 168 IF EOF(1)<>1 THEN 148 17\$ X=X+1 :: M\$(X)=T\$:: CLO 18# W=#+1 :: NEXT J 198 X=8 :: DISPLAY AT(15.1): ** :: DISPLAY AT(12,1):"INSE RT COPY DISK AND PRESS : "ENT ER* 255 CALL KEY(5,K,ST):: IF ST ≥# THEN 2## :: DISPLAY AT(13

E6\$(C\$(J),3,255) 24# X=X+1 :: IF M\$(X)<>T\$ TH EN PRINT #1:N\$(X):: 60TO 24# FI SE CLOSE #1 258 NEXT J :: END 26# ON ERROR STOP :: DISPLAY AT(22,1): "CANNOT OPEN "&SES \$(F\$(J),3,255):: F\$(J)=CHR\$(2):: RETURN 188 Here is a very ingenious idea published in the Corous Christi U6 newsletter by H. Macdonald. He could not find the author/newsletter which gave him the idea, so if you know, tell me and I'll print due credit. I have modified it a bit. This short routine will load quickly and enable you to bypass loading and running the Henu Loader program on a disk when you already know the filename of the program you want to run.

Save the Menu Loader under the filename MENULOADER and save this routine under the filename LOAD - be sure to save it before you try it, because it erases itself! ISS CALL INIT :: CALL LOAD (-318**8**6,16):: DISPLAY AT(12.1) ERASE ALL: "RUN MENULDADER? (

115 CALL KEY(3.K.S):: IF S=9 THEN 118 ELSE IF K=78 THEN 138 ELSE DISPLAY AT(12.1)ERA SE ALL: "LOADING MENULOADER" :: RUM "DSK1.HENULGADER" 13# CALL CLEAR :: CALL LOAD? -31952,55,215,55,215):: END

Y/N)*

Here is one with a bit of a surprise at the end. Key the v,A in line 198 as FCTN V. CTRL comma. CTRL A. 188 CALL CLEAR :: CALL SCREE N(1A) 118 DATA 88C8A89888445269.88 8866866867EB1, 8143854911224 A76, \$555555151516155, 21459C2 A492A1CC#, 99993366####1824 129 DATA 8482395492543983.98 #19,18244281423C####,#F19#3# 7E1928488, 148944FF88888888 138 DATA ###F13E62#221D##.#C FB3467JA22DCJJ.814224FF.3JDF

2CC641443889, \$\$F\$C86F\$447897 F. 888888FF81F981F9 148 DATA 88FF898686888886.48 FF##6666##6666,##FF##3F3F3F3 F3F, \$1FF\$1F9F9F9F9F9, 8\$86868 186868193.11666611666611FF 158 DATA ##6666##6666#E6.3F 3F3F3F3F3F3F3F, F9F9F9F9F9F9F FF88FF, E688FF1887184887 168 DATA 3F##FF##FF1988FF,F9 11FF\$1FF8744FF,1F19995FF3198 175 FOR CH=96 TO 129 :: READ

CH\$:: CALL CHAR(CH,CH\$):: NEXT CH 188 DISPLAY AT(1,14) ERASE AL L: "'ab" :: DISPLAY AT(2,13):

"cdefq" :: DISPLAY AT(3.14): "hij" :: DISPLAY AT(4,12):"k lanosa"

198 DISPLAY AT(5,12): "rsssst u" :: DISPLAY AT(6,12): "YWWW xyz(" :: DISPLAY AT(7,12):") }}"v,A" :: DISPLAY AT(9,12) : "TISERCUB"

248 DISPLAY AT(11,12): "SOFTW ARE* :: DISPLAY AT(13,7):*15 6 COLLINGWOOD AVE. :: DISPL AY AT(15,7): COLUMBUS OH 43 213° :: CALL HIGHCHAR 218 60TO 218

228 SUB HIGHCHAR :: FOR CH=3 2 TO 129 :: CALL CHARPAT(CH. CH\$):: X\$=SE6\$(CH\$,3,12)&5E6 \$(CH\$,13,4):: CALL CHAR(CH,X \$):: NEXT CH :: SUBEND

Thanks to Ramon Martinez in the Grange County UG news letter - a double NEXT is accepted if the pre-scan is turned off.

148 J=1 115 129-128 FOR J=1 TO 188 :: IF J/1 #<>INT(J/10) THEN NEXT J ELSE PRINT J :: NEXT J

A computer without a program is like a car without gas. If everyone who filled up at a self-service pump drove away without paying. how soon would all the gas stations be closed?

MEMORY FULL!

Jie Peterson

Teach Yourself BASIC

The Mysterious K

COMPUTERS USE a very simple code, called binary, to represent information. Binary is very simple; it uses only two symbols, 0 and 1. The symbols, 0 and 1, are called binary digits, or bits.

In a typical personal computer, information is stored in the **memory** of the computer. The memory consists of many thousands of bits organized as bunches of bits in **memory locations**.

One memory location can hold eight bits of information. A bunch of eight bits is called a byte. So . . . one memory location can hold eight bits, or one byte. The memory of a typical personal computer has many thousands of memory locations.

- One memory location can store eight bits.
- A group of eight bits is called a byte.
- So, a memory location can store one byte.
- A computer memory has many thousands of locations. So the memory can store many thousands of bytes.

Perhaps you have heard about the mysterious K. People say a computer has 128K or 256K or 512K—or more—bytes of memory.

IK bytes equals 2¹⁰ bytes equals 1024 bytes.

Use the computer to change 1K bytes or 256K bytes or 512K bytes to ordinary numbers.

• You type PRINT 2010

It prints 1024

• You type PRINT 256 * 2^10

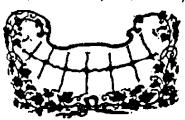
It prints 262144

You type PRINT 512 * 2^10

It prints 524288



1K bytes = 2¹⁰ bytes = 1024 bytes



Perhaps you have heard the ancient story about the wise person who did a great service for a king. The king asked her what reward would be appropriate. Her request was simple. She asked only for grains of wheat, computed as follows:

On the first square of a chessboard, one grain of wheat. On the second square, two grains of wheat. On the third square, four grains of wheat. And so on, doubling at each new square.

On square number n, there are to be 2ⁿ⁻¹ grains. Let's find out how many grains on square 16:

You type PRINT 2^15

It prints 32768

Inexorably, the grains pile up. How many on square 64?

• You type PRINT 2^63

It prints 9.223372E+18

Yup, that's a lot of wheat, more wheat than existed in all the kingdoms everywhere. The king realized that he had been duped.



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By Bob Albrecht and George Firedrake

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THIS MONTH'S DAYTON MEETING: February 11th, 1989 at 12:15 PM Coin Room, 5th floor , Downtown Lazarus. NEXT MONTH'S DAYTON MEETING: March 11th, 1989 at 12:15 PM Coin Room, 5th floor , Downtown Lazarus.

THIS MONTH'S CINCINNATI MEETING: February 11th, 1989 at 12:00 Noon Cappbell County Library, Meetingly March 11th, 1989 at 12:00 Noon Cambobell County Library, Mehiticky,

Attn:Greg Justice, Editor Dallas TI Home Computer Grp. P.O. Box 29863 Dallas, TX 75229

