>CURSOR™

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The Cursor Group

THE TINY MICRO COMPUTER NEWS SERVICE

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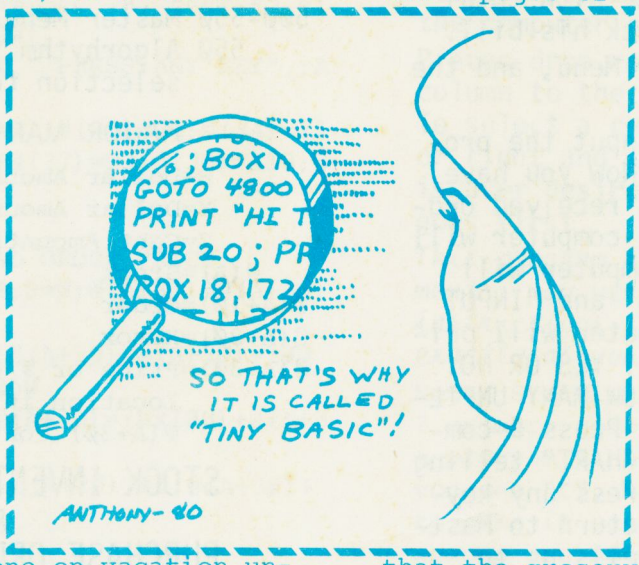
CURSES - FOILED AGAIN!!!

EDITORIAL
by
FRED CORNETT, MANAGING EDITOR

I'm sure you must have noticed that this issue arrived about 10 days later than usual. *#*%*#*$&*#&**#!!
Ah, how naive we at "The Cursor Group" must be! We thought that by leasing our new, more spacious offices, we would be able to increase our efficience by at least 50%. HAH!
As all of our issue deadlines approached, a record heat wave hit our area (over 105°F daily); did that phase us? Nah! We continued blithely onward until our central air conditioning decided to take a vacation. The temperature in our offices zoomed up to 140°F (our thermometer only goes to 140°). I in turn, was forced to put everyone on vacation until the air conditioning was repaired (over 1 week)! As for myself, I wish I could say I went to the beach or mountains, instead I alternated between vicious attacks on our landlord and gulping quart bottles of Malox. So much for excuses.....
Contrary to popular belief, "The Cursor Group" IS a full time business; with employees, rent, office machine purchases, insurance, tax, and all the other expenses any business has. So, *"what else is new?"* you say. Like any business, we must make a profit to continue printing our newsletter. Obviously, if we cannot pay the salaries of our employees, advertising, printing, etc., and have something of a profit, *this newsletter will cease to exist!!!*



We have come a long, long way since our First Issue (it wasn't even printed, it was xeroxed), with its' free-form schematics and errors. This massive quality upgrading was brought about by one thing and one thing only ----- spending money!!
Our July issue was printed in blue on gold paper (which produced green print - ugh); this issue is printed in "drop-out blue", and 2 pages of "Hoover Orange" vertical stripes. For those of you that haven't figured out what we are doing, we are trying to eliminate the wide-spread practice of certain individuals duplicating our issue and trading or giving it to friends.
This is a unique situation. The average individual who duplicates our issue is a God-fearing family man, who wouldn't or couldn't bring himself to shoplift from his neighborhood grocery store because he knows that the grocery store has to raise its prices to compensate for the theft. If the grocer is forced to raise his prices over and beyond what the prevailing prices in the area are able to sustain, he will go bankrupt and the market will cease to exist.
"CURSOR" is a hobbyist periodical, and unfortunately many hobbyists consider it fair game to shoplift our product -- "CURSOR"!!
I'm sure you must have noticed more and more "Cursor" issue space is taken up with advertising our own products. This space would normally be enough to include one or more tutorials or programs. We are forced to do this to cover expenses.
But alas, monthly production costs for "Cursor" have risen 300 percent in the last 60 days, due to our attempts to eliminate duplicating. Obviously, this type of

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situation cannot continue.
We greatly appreciate those individuals who have copied one issue and sent it to a friend with a recommendation that he subscribe. But, if you are currently xeroring ALL our issues for a friend, PLEASE suggest he take advantage of our $1 discount and subscribe.
Publishing CURSOR is not a game to us, we are trying our very best to constantly upgrade our contents and bring you the best of programs. PLEASE support "CURSOR" and allow us to have a payday just like everyone else. If we can't....no more "CURSOR". Enough said.

CURSOR INVENTORY PROGRAM

This program was created to be operated on a daily basis. When we opened our daily mail in the morning, we would input the info from our mail, thereby creating a "XEROX" order to our printer, complete with total price which allowed us to check his bill. There are 2 menus; the Master Menu, and the Inventory Update Menu.

Let's follow a typical day. Input the program and press "RUN" & "GO". Now you have the Master Menu. We have just received orders, so we select #1. Press 1-computer will print second menu- Press 2-computer will print "UPDATE UNFILLED ORDERS" and "INPUT CATALOG NUMBER". Press 1-computer will print "DID YOU WANT CATALOG # 1 ? YES OR NO. Press Y- computer will ask "HOW MANY UNFILLED ORDERS ARE YOU ADDING ?". Press 5-computer will now print "STATUS CHART" telling us to order 5 copies of #1. Press any key-Menu will print. Press 5 to return to Master Menu. Press 3-Cost chart tells us to order 5-#1's and pay total of $10.50.

If you ever have a need to clear all the strings in this program, use the following one line program without a line #.

```
FOR A=1TO 29;@(A)=0;NEXT A
```

NOTE: This program was designed to work with the 63 key ASCII Keyboard, but will also work with the Bally Keypad.

IMPORTANT: Starting with this issue, whenever 2 or more spaces are located together on a program line, ζ=SPACE. SO, whenever you see "ζ", key in a space (this is done to make it easier for you to tell how many spaces are necessary).

PROGRAM EXPLANATION

1 Jumps to main body of program
2 Print subroutine
3 Safeguard subroutine in case wrong catalog number is selected.
5 Subroutine reduces ASCII Code derived from A=KP to simple decimal #.
6- 7 Subroutine updates current status: If order quantity exceeds stock, Xerox quantity equals order quantity minus stock; if not, Xerox quantity equals zero.
20- 26 Inventory Update Menu
26 Algorhythm that sends menu selection to appropriate routine.
27- 29 Update Stock on Hand Routine
40- 42 Update Unfilled Orders Routine
60- 64 Update filled Orders Routine
80 Restarts "Inventory Update Menu" if "5" is pressed
100 Returns to Master Menu
120-140 Prints "Inventory Status" Chart
220 Look up table: # of pages in manuals
220-315 Prints "Print Order Cost Chart"
320-324 Lists Program & Dumps string arrays 1-29 on tape.
500-550 Master Menu
550 Algorhythm that sends Master Menu selection to appropriate routine.

MAJOR VARIABLE INDEX

B=Dollar Amounts
Y=Dollar Amounts
Z=Cent Amounts
@(A)=Stock
@(A+10)=Order
@(A+20)=Xerox
@(A+30)=Price or # of pages, dependent on Location in program. At one point @(A+30) contains Dollar & Cents.

STOCK INVENTORY STATUS & PURCHASE ORDER PROGRAM

BY

FRED CORNETT

```
 1 NT=1;GOTO 500
 2 PRINT "ζζINPUT CATALOG NUMBER";RETURN
 3 PRINT #1,"DID YOU WANT CATALOG # ",A,"ζ
   ?";PRINT "ζζζζY=YES N=NO";B=KP;RETURN
 5 A=KP;A=A-48;RETURN
 6 FOR A=1TO 9;IF @(A+10)>@(A) @(A+20)=@(A
   +10)-@(A);NEXT A;RETURN
 7 @(A+20)=0;NEXT A;RETURN
20 CLEAR ;PRINT "INVENTORY UPDATE ROUTINE"
   ;PRINT "ζζ1-UPDATE STOCK ON HAND
21 PRINT ;PRINT "ζζ2-UPDATE UNFILLED ORDER
   S";PRINT ;PRINT "ζζ3-UPDATE FILLED ORDE
   RS
22 PRINT ;PRINT "ζζ5-RETURN TO MASTER MENU
   ";PRINT ;PRINT "ζζ6-HALT",
24 GOSUB 5;IF (A>6)+(A<1)GOTO 24
25 IF A=6STOP
```

```
 26 IF A#1GOTO Ax2Ø
 27 CLEAR ;PRINT "ADD TO STOCK ON HAND";GOS
    UB 2;GOSUB 5;GOSUB 3;IF B#89GOTO 27
 29 INPUT "HOW MANY"S;@(A)=@(A)+S;GOTO 12Ø
 4Ø CLEAR ;PRINT ;PRINT "UPDATE UNFILLED OR
    DERS";GOSUB 2;GOSUB 5;GOSUB 3;IF B#89GO
    TO 4Ø
 42 PRINT ;INPUT "HOW MANY UNFILLED ORDERSζ
    ζARE YOU ADDING ?"U;@(A+1Ø)=@(A+1Ø)+U;G
    OTO 12Ø
 6Ø CLEAR ;PRINT ;INPUT "UPDATE FILLED ORDE
    RS";PRINT ;GOSUB 2;GOSUB 5;GOSUB 3;IF B
    #89GOTO 6Ø
 63 PRINT ;INPUT "HOW MANY ORDERS HAVE YOUζ
    ζFILLED?"P;IF P<=@(A+1Ø)IF P<=@(A) @(A+
    1Ø)=@(A+1Ø)-P;@(A)=@(A)-P;GOTO 12Ø
 64 GOTO 63
 8Ø GOTO 24
1ØØ RUN
12Ø CLEAR ;PRINT "MANUAL STOCK ORDERS XEROX
125 GOSUB 6
13Ø FOR A=1TO 9;PRINT #1,"ζζ",A,"ζζζ",#5,@(
    A),@(A+1Ø),#7,@(A+2Ø)
14Ø NEXT A;CX=-44;PRINT " PRESS ANY KEY",;A
    =KP;GOTO 2Ø
22Ø B=Ø;@(31)=3Ø;@(32)=21;@(33)=66;@(34)=71
    ;@(35)=6Ø;@(36)=63;@(37)=93;@(38)=113;@
    (39)=25
225 GOSUB 6
23Ø CLEAR ;PRINT "MANUAL ORDER PRICE
24Ø Z=Ø;Y=Ø;FOR A=1TO 9;B=Ø;@(A+3Ø)=@(A+3Ø)
    x@(A+2Ø)x7
25Ø IF @(A+3Ø)>99B=B+1;@(A+3Ø)=@(A+3Ø)-1ØØ
26Ø IF @(A+3Ø)>99GOTO 25Ø
27Ø Y=Y+B;Z=Z+@(A+3Ø);@(A+3Ø)=(Bx1ØØ)+@(A+3
    Ø)
28Ø PRINT #1,"ζζ",A,#7,@(A+2Ø),#5,@(A+3Ø)÷
    1ØØ,#1,".",RM
29Ø NEXT A
3ØØ IF Z>99Z=Z-1ØØ;Y=Y+1
3Ø5 IF Z>99GOTO 3ØØ
31Ø CY=8;CX=36;PRINT "TOTAL";CY=Ø;CX=44;PR
    INT #1,Y,".",Z
315 CY=-4Ø;CX=-44;PRINT "PRESS ANY KEY",;G
    OSUB 5;RUN
32Ø CLEAR ;PRINT ;PRINT "SAVE ON TAPE";PRI
    NT ;PRINT "START RECORDER.WHEN LEADERH
    AS PASSED RECORD HEAD,
322 PRINT "PRESS ANY KEY. PROGRAM &ζζSTRIN
    GS WILL STORE ON TAPE
324 :RETURN ;GOSUB 5;NT=1;:PRINT ;TV=13;LI
    ST ;FOR A=ØTO 29;PRINT #1,"@(",A,")=",
    @(A),;NEXT A;PRINT ";RUN ";STOP
5ØØ CLEAR ;PRINT "PRESS KEY FOR TRANSACTIO
    N";PRINT ;PRINT "ζζ1-UPDATE INVENTORY
51Ø PRINT ;PRINT "ζζ2-INVENTORY STATUS";PR
    INT ;PRINT "ζζ3-PRINT ORDER COST CHART
    ";PRINT ;PRINT "ζζ4-SAVE ON TAPE
52Ø PRINT ;PRINT "ζζ5-HALT",
53Ø GOSUB 5;IF (A>5)+(A<1)GOTO 53Ø
54Ø IF A=5STOP
55Ø GOTO Ax1ØØ-8Ø
```

CONNECT FOUR

BY

ROBERT LEAKE

EDITORS NOTE: This is the finest board game program we have ever seen written for the "Bally"! The graphics, color and sound is excellent. The computer makes each move totally cognizant of all the ramifications of his move. Hence, you are forced to play very well indeed in order to win (it beats us 8 out of ten times). This program alone is well worth the $9.75 subscription price for "CURSOR".

The object of this game is to get four of your playing pieces in a row (without any of your opponents pieces in between) vertically, horizontally or diagonally before the computer or your human opponent does.

Pieces drop vertically in the selected column to the lowest unoccupied position. To select a column, move the joystick left or right and squeeze trigger when indicator is over desired column. Joystick 1 always goes first.

This program loads in three separate segments; pay very close attention to the instructions, and input the information exactly as you see it.

Note: Starting with this issue, whenever 2 or more spaces are located together on a program line, ζ=SPACE. So, whenever you see "ζ", key in a space (this is done to make it easier for you to tell how many spaces are necessary).

CONNECT FOUR PARAMATER PROGRAM
BY
ROBERT LEAKE - ADAPTED BY
FRED CORNETT

This program MUST be input and run prior to inputting the "Connect Four Main Body Program"!!!

After you have keyed this program into the computer and pressed "RUN", the screen will clear, and the following will appear:

```
LINE #2 1=
```

This display is telling you to refer to the chart marked "LINE 2". Take the value shown in the box DIRECTLY below the "1" (which is 2), and input the value, check to see if you have input it correctly before pressing "GO"; the computer will space a line and print:

```
LINE #2 2=
```

Check box 2 (which is 32), input value, hit "GO" and continue thusly. *It must be stressed that you must check for errors before you press "GO" each time.* If you make only one error, this program will not function properly!!

Line 1 (Title Line) is absolutely necessary for data in subsequent lines to be accessed (do not delete)!

After you have run the "Parameter Program", and input the data in lines 2 through 7, the next step is to delete lines 100 through 310. This can be accomplished in one of 2 different ways.

1.Lines 280 through 310 comprise a small program that will load lines 1 through 7 on tape. Merely follow the directions that will be printed on your screen. Press "RECORD" on your tape machine and then press "GO" after the leader has cleared the record head. Use :LIST and playback the tape to make sure it has recorded. (Lines 2 through 7, which prior to running the program, contained numbers in sequence, i.e., 12345678, etc., now contain garbage to include such things as "??A4#)/??&". *Do not think you have done something wrong, the computer is merely trying to print info that does not conform to ASCII Code; you will see many "?" on those lines.)* If Lines 1 through 7 have loaded on tape, hit "RESET" and input tape, then key in "Connect Four Main Body Program".

OR

2.The only purpose of the "Parameter Program" is to assemble data in lines 1 through 7. Lines 100 through 310 are totally unnecessary after the data has been loaded. After you have completed inputting all the data for lines 2 through 7, you must delete all lines that follow Line 7. If you do this, do not bother to input lines 280 through 310 at the beginning (they only apply to loading lines 1 through 7 on tape). After you have deleted all lines except 1 through 7, key in "CONNECT FOUR MAIN BODY Program".

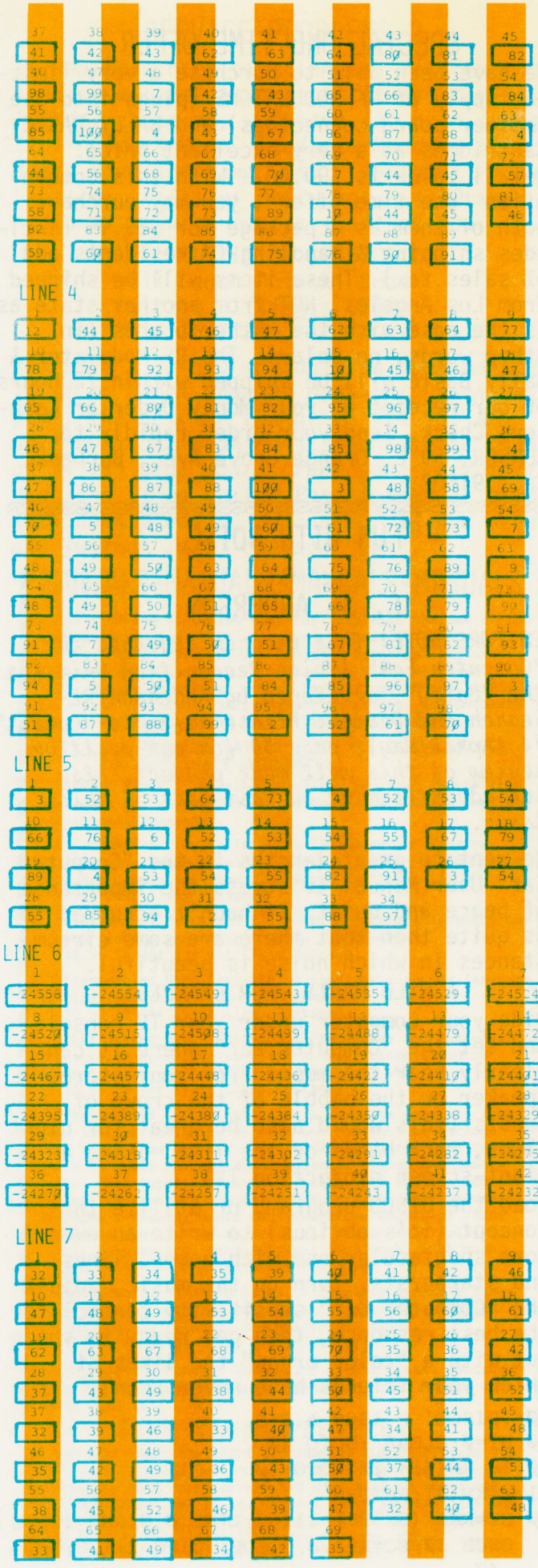
```
1 .CONNECT FOUR
2 .123456789Ø123456789Ø123456789Ø12345678
  9Ø123456789Ø123456789Ø123456789Ø1234567
  89Ø123456789Ø1234567
3 .123456789Ø123456789Ø123456789Ø12345678
  9Ø123456789Ø123456789Ø123456789Ø1234567
  89Ø123456789
4 .123456789Ø123456789Ø123456789Ø12345678
  9Ø123456789Ø123456789Ø123456789Ø1234567
  89Ø123456789Ø12345678
5 .123456789Ø123456789Ø123456789Ø1234
6 .123456789Ø123456789Ø123456789Ø12345678
  9Ø123456789Ø123456789Ø123456789Ø1234567
  89Ø1234
7 .123456789Ø123456789Ø123456789Ø12345678
  9Ø123456789Ø123456789Ø123456789
1ØØ Z=1;CLEAR ;NT=1
11Ø Y=1;GOSUB 2ØØ+Zx1Ø;IF Z=6GOTO 11Ø
115 IF Z=8GOTO 28Ø
12Ø PRINT ;FOR N=BTO N+C
13Ø Q=%(N):256
14Ø R=RM
15Ø PRINT #1,"LINE #",Z,"  ",Y,"=",;INPUT "
  "V
16Ø %(N)=256xV+R;Y=Y+1
17Ø NEXT N;GOTO 11Ø
21Ø B=-24558;C=96;Z=Z+1;RETURN
22Ø B=-24457;C=88;Z=Z+1;RETURN
23Ø B=-24364;C=97;Z=Z+1;RETURN
24Ø B=-24262;C=33;Z=Z+1;RETURN
25Ø Z=Z+1;Y=1;FOR A=-24223TO A+82STEP 2
252 PRINT #1,"LINE #6  ",Y,"=",;INPUT ""V
254 %(A)=V;Y=Y+1;NEXT A;RETURN
26Ø B=-24136;C=68;Z=Z+1;RETURN
27Ø Z=Z+1;RETURN
28Ø CLEAR ;PRINT ;PRINT " PARAMETER PROGRA
  M";PRINT "COMPLETED. START TAPE";PRINT
   "RECORDER ON 'RECORD'.WHEN READY TO LO
  AD ON TAPE,
282 PRINT "PRESS 'GO'
29Ø A=KP;IF A=13GOTO 31Ø
3ØØ GOTO 26Ø
31Ø :PRINT ;TV=13;LIST ,7;TV=13;:RETURN
```

LINE 2

1	2	3	4	5	6	7	8	9
2	32	68	92	3	32	33	71	95
10	11	12	13	14	15	16	17	18
4	32	33	34	74	98	6	32	33
19	20	21	22	23	24	25	26	27
34	35	56	77	100	4	33	34	35
28	29	30	31	32	33	34	35	36
57	80	3	34	35	59	83	2	35
37	38	39	40	41	42	43	44	45
62	86	3	36	68	69	90	5	36
46	47	48	49	50	51	52	53	54
37	71	72	92	93	7	36	37	38
55	56	57	58	59	60	61	62	63
56	74	75	95	96	9	36	37	38
64	65	66	67	68	69	70	71	72
39	57	58	77	78	98	99	7	37
73	74	75	76	77	78	79	80	81
38	39	59	60	80	81	100	5	38
82	83	84	85	86	87	88	89	90
39	62	63	83	84	3	39	65	86
91	92	93	94	95	96	97		
87	4	40	68	69	70	89		

LINE 3

1	2	3	4	5	6	7	8	9
7	40	41	56	71	72	73	90	91
10	11	12	13	14	15	16	17	18
10	40	41	42	57	58	74	75	76
19	20	21	22	23	24	25	26	27
92	93	94	12	40	41	42	43	59
28	29	30	31	32	33	34	35	36
60	61	77	78	79	95	96	97	10



CONNECT FOUR
MAIN BODY PROGRAM
BY
ROBERT LEAKE

```
 8 GOTO 14
 9 BOX Ø,43,87,1,2
1Ø BOX -49+12xC,43,9,1,1;RETURN
11 M=%(-24225+14xE+2xC);RETURN
12 U=Q:7;F=RM;IF F=ØF=7
13 BOX -49+12xF,-8+(Q-1):7x9,11,8,3;RETURN
14 CLEAR ;INPUT "ζζ1 OR 2 PLAYERS?"P
15 BC=1Ø;FC=183;FOR A=1TO 76;@(A)=Ø;NEXT A
   ;CLEAR ;BOX -1,14,87,56,1;FOR Q=1TO 42;
   GOSUB 12;NEXT Q;C=1;GOSUB 1Ø;T=-1;N=69;
   CY=-32
16 J=(T+3):2
17 D=C+JX(J);IF C#DIF Dx(8-D)C=D;GOSUB 9
18 IF (TR(J)#1)+(@(C)=6)GOTO 17
19 GOSUB 37;T=-T;IF P#1GOTO 16
2Ø L=-9999;FOR C=1TO 7;GOSUB 9;IF @(C)=6GO
   TO 36
21 E=@(C);GOSUB 11;W=Ø;FOR A=M+1TO A+%(M):
   256;B=%(A):256-24;S=@(B)
22 W=W+@(8Ø+S);NEXT A;IF W>=@(83)K=C;C=7;G
   OTO 36
23 IF @(C)=5GOTO 35
24 IF W>=@(77)GOTO 35
25 E=E+1;GOSUB 11;G=Ø;H=1;FOR A=M+1TO A+%(
   M):256;B=%(A):256-24;S=@(B)
26 IF S=-3G=1
27 IF S=-2W=W-2x@(78):3
28 IF S=2W=W-@(82):3
29 IF S=3H=Ø;W=-3333
3Ø NEXT A;IF G W=-6666;GOTO 35
31 IF H+(@(C)=4)GOTO 35
32 E=E+1;GOSUB 11;I=Ø;FOR A=M+1TO A+%(M):2
   56;B=%(A):256-24;S=@(B)
33 IF S=3I=1
34 NEXT A;IF I K=C;C=7;GOTO 36
35 IF W>L L=W;K=C
36 NEXT C;C=K;GOSUB 37;T=-1;GOTO 17
37 E=@(C);GOSUB 11;@(C)=@(C)+1;X=-49+12xC;
   Y=-17+9x@(C);GOSUB 9;BOX X,Y,9,6,1;BOX
   X,Y,5,2,(7+T):2;MU=84
38 FOR A=M+1TO A+%(M):256;B=%(A):256-24;S=
   @(B);IF S=4GOTO 46
39 IF SxT<ØØ@(B)=4;N=N-1;GOTO 46
4Ø S=S+T;@(B)=S;IF S#4xTGOTO 46
41 R=1;Z=%(-24144+B):256-31;IF B>31R=6
42 IF B>43R=7
43 IF B>64R=8
44 N=Ø;FOR Q=ZTO Z+3xRSTEP R;GOSUB 12;GOSU
   B 13;N=N-1;MU=87+N;NEXT Q;IF TR(J)RUN
45 GOTO 44
46 NEXT A;IF NRETURN
47 PRINT "ζζζζζζζGAME IS A DRAW
48 IF TR(J)RUN
49 GOTO 48
```

After you have loaded the assembled lines 1-7 and the "Connect Four Main Body Progr am" into the computer, you must load String Arrays 77 through 84 with data. This is done by typing in the following one line program without a line number:

```
FOR A=77TO 84;PRINT #1,"@(",A,")=",;INPUT ""@(A);NEXT A;RUN
```

Computer will print: @(77)=

Input the values from the following,checking for accuracy before pressing "GO":

STRING	VALUE	STRING	VALUE
@(77) =	12ØØ	@(78) =	1ØØ
@(79) =	8	@(8Ø) =	1
@(81) =	12	@(82) =	15Ø
@(83) =	8ØØØ	@(84) =	Ø

If you have done everything correctly, the program will run perfectly. We have tripple checked the info and listings for errors, there are none.

Next, we suggest you load the complete assembled program on tape, this will preclude any accidental loss of the program.

STEP 1: Load an unused tape into your tape recorder; press "PLAY" and run the tape a few feet past the end of the tape leader. Stop the recorder.

STEP 2: Load the following one line program into your computer without a line number-*DO NOT PRESS "GO"!!*

```
NT=1;CLEAR ;:PRINT ;TV=13;LIST ;FOR A=77TO 84;PRINT #1,"@(",A,")=",@(A),";",;NEXT A;PRINT ":RETURN ;RUN
```

DO NOT PRESS GO AT END OF PROGRAM LINE!!

STEP 3: Press "RECORD" on tape recorder; Press "GO" on computer. Complete program including string arrays will load on tape.

HAVE FUN

BACK ISSUES AVAILABLE

We have had numerous requests for info regarding BACK ISSUES! The following are available:

1. Jan. 80 Contains: Electric Bill Analysis; Plastic Puzzle, Instructions for adding a Full-sized ASCII Keyboard; Life Systhesis Model.
2. Feb. 80 Contains: PEEK n' POKE: Hex to Decimal Converter; String Array @(A) Memory Locator; Instructions on how to add a Printer; Bubble Sort; Camel; Memory Map; WUMPUS.
3. Mar. 80 Contains: Three Voice Music Assembler; Star Wars Music; Chopsticks; Chicago Loop; Lace Curtain; Character Set Size Multiplier; Rotation; National Distributor Info.
4. Apr/May 80 Contains: DMA Graphics (eliminates BOX & LINE commands, allows very complex graphics!); Reference Books, Product Review (Computer Ear-Speech Recognition Unit for Bally); Music Contest; RING; Alarm Clock; Byte Saving Hints.
5. June 80 Contains: Direct Color Video/Audio Circuit (for Color Monitor or VCR etc.); Galactibattle (Game); PRINT & STRING Tutorial; OTHELLO: ASCII Conversion Chart; Cursor Control Chart.
6. July 80 Contains: CURSOR Keyboard & 48K Memory Add-On info; ARCADE GOLF; Shell-Metzner Sort; Wavemakers "Maze-maker:; Floating Point Math; User Group Meetings.

SEND $1.60 per back issue desired to CURSOR: PO Box 266, North Hollywood, CA 91603

SPECIAL-ONE TIME OFFER

We have been able to purchase a very limited supply of RF MODULATORS (plugs into the "mother board connectors) and BALLY BASIC Cartridges at a very excellent price! Retail value is $90.00. With this combination "one time offer", you may purchase both of them as a package for $59.95 (includes shipping & handling-CA residents add 6% sales tax). These items will be shipped from Los Angeles, NOT from another state as is the case with the mother boards (in other words, no delay). The RF Modulator & Bally Basic will be shipped within 72 hours of our receipt of your Money Order or Cashiers Check. Send your order rapidly to CURSOR, 59 E. Orange Grove Ave., Burbank, Ca., 91502.

FUN WITH NOISE

BY

C. J. ANDERSON

EDITORS NOTE: This program requires the "Computer Ear" (Voice Recognition Unit for the "Bally", developed by Anderson Research and Design. Please refer to "Cursor" #4 (April/May), page 30 for our positive review of this well made product. Also see advertisement on last page of this issue.

We went to great lengths in the "Computer Ear" User Manual to stress the importance of peace and quiet. It hadn't occurred to us quite then that there are some circumstances in which noise is beautiful.

A WILD PARTY, FOR EXAMPLE!

Hide your computer under your TV console and set the "Computer Ear" where it can clearly hear the music from your stereo speaker or the babble of the crowd of guests (this would also be great for night clubs, rock bands or the like, using a giant-screen projection TV).

Load the DISCO program, or utilize the concept (it's obvious) to write an even more spectacular one with boxes, lines and starbursts. Turn on the music, adjust the "Computer Ear" sensitivity control for the best response, then get ready to space out with a "color organ" the likes of which your friends have never seen!

```
1Ø .DISCO! - 198Ø A.R.D.
2Ø NT=Ø;CLEAR ;GOTO 4Ø
3Ø IF KN(4)<-127GOTO 3Ø
31 X=KN(4);RETURN
4Ø XY=RND (22526)-11263;LINE Ø,Ø,RND (2);GOSUB 3Ø;BC=X+128;GOSUB 3Ø;FC=X+128;GOTO 4Ø
```

SERVICE PROBLEMS ?

If you have been experiencing difficulty finding a local repair center for the Bally Arcade, cheer up, you have not been forgotten! Dick Konopa, *Products Manager of Bally Manufacturing Corp., Consumer Product Division, tells us Bally has established a national service center just for you:*

REX TELEVISION SERVICE CO.
6011 South Pulaski Road
Chicago, Illinois 60629
312/735-2929

You have a 90-day warranty on your Arcade. If it is older than 90 days but under one year, the service charge is $24.95. Any unit over one year carries a service charge of $49.95 plus parts. Pack your unit well and send it by United Parcel Service along with your proof of purchase. If you need any further info, contact "REX".

MANUALS-MANUALS-MANUALS-MANUALS

1. Bally On-Board ROM Sub-Routines. Explains the use of the on-board routines which allow you to perform such things as you find in the "Machine Language Programs" in Cursor. Includes ASCII Standard & Nonstandard Character Sets, Cassette Memory Structure; Output Ports; Input Ports; Bally Data Base Locations; Bally Memory Locations; and On-Board ROM 8K Hex Dump. $3.50 (+ 25¢ 1st Class Postage).

NOTE: ALL PRINTED MATTER SENT 3RD CLASS UNLESS YOU DESIGNATE OTHERWISE!

2. Hackers Manual. Describes features provided in the Tiny Basic but not documented in the Bally Instruction Booklet (Additional Commands). $2.95

3. Disassembled Tiny Basic (CDOS Z80 Assembler Version 02.15). A complete assembly language listing including OP Code and comments of the Tiny Basic Cartridge. $6.50 (+ 45¢ First Class Postage)

4. Disassembled Brickyard & Clowns. A complete assembly language listing including OP Code and comments. $6.95 (+ 45¢ for 1st Class Postage).

5. Disassembled DEMO Cassette. A complete assembly language listing including OP Code and comments. $6.50 (+ 45¢ First Class Postage).

6. BALLY System Description Book. Extensive and includes "Electrical Specifications for Midway Custom Circuits" Timing, Interrupt handling explanations, etc. $6.95 (+ 45¢ First Class Postage).

7. Disassembled System Software. A complete assembly language listing including OP Code and comments to include: Home Video Game Equates; Port Equates; System Call Indexes ;Macros; Music Macros; Music Equates; System RAM Memory Cells; User Supplied Routines; Masks; UPI Routine Address Tables; Sentry; BCD Divide; BCD Subtract & Add; Decrement Counters & Timers; Music CPU; Vectoring Routines; Paint Rectangle Routine; Write Routines; Character Display Routines; Display BCD; Menu Routines, and much, much more. $10.50 (+ $1.00 First Class Postage).

8. Disassembled On-Board Games. A complete assembly language listing including OP Code and comments to include: Scribbling, Calculator, Checkmate, Gun Fight. $11.95 (+ $1.45 First Class Postage).

9. Bally Service Manual. Schematics, Parts Lists, instructions for removing RF Shields, and much more. No one should be without it!! $2.75

TIME SAVING DEVICE?

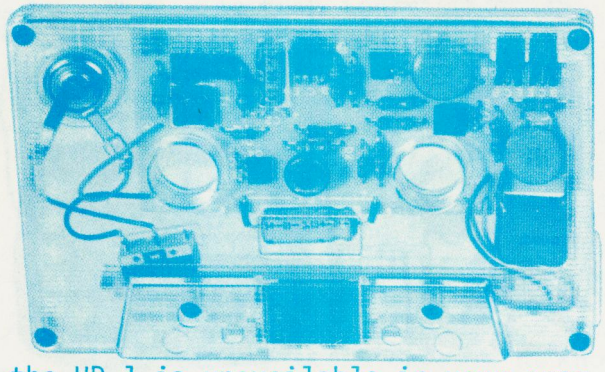
Do you only input the short programs in CURSOR because you don't want to spend two hours inputting the long ones- only to find you made input errors and will have to spend one more hour debugging? If so, why not spare yourself all the trouble and buy your issues on tape? $3.95 per Issue or $7.40 for any two issues.(Includes Postage, etc.) CURSOR, PO Box 266, N. Hollywood, CA 91603

HAVING TROUBLE LOADING TAPES ?

Head demagnetization is an important frequently-overlooked area in the maintenance program. Heads that become permanently magnetized can partially erase pre-recorded program tapes that pass over them. Heads can become magnetized by the normal ON and OFF current surges through the recorders' circuitry (magnetism will usually build up after more than 20 hours of play).

DANGEROUS NOTE: Some commercially-available demagnetizers create permanent magnetism instead of removing it (we had this type of problem with a cheap non-electric type Radio Shack product)!

Up till now, the only reliable way to demagnetize heads was to use a wand type and be very, very careful. But why bother? TDK makes an easy-to-use highly reliable demagnetizer, the HD-1, built into a cassette shell. All you have to do is to insert it into your recorder like any other cassette (making sure your recorder is unplugged) and press play. Wait until the LED turns on (about 1 second), and remove. Your heads will be completely demagnetized. (Unit is powered by a watch battery.)



If the HD-1 is unavailable in your area, send $23.95 (includes shipping & handling CA residents add 6% sales tax) to CURSOR.

NOW AVAILABLE
*** VOL I INDEX ***
Send $1.00 OR Order any Cursor Products totaling $5.00 or more and get it FREE!!!
The complete Index is too long to print in Cursor.

BLANK C20 DIGITAL TAPE

If you have wanted High Quality Computer Digital Tape Cassettes such as those RADIO SHACK sells for upwards of $3.50 but didn't want to pay the price, try CURSOR Brand C20 Digital Tapes. 10 TAPE CASE (includes individual poly boxes) $13.75 including postage. CURSOR, PO Box 266, N. Hollywood, CA 91603

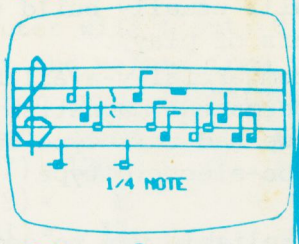
WAVEMAKERS

WAVEMAKERS BOX 94801 SCHAUMBURG, ILL. 60193

ALL TAPES ARE $6.95 + .50c POSTAGE.

Tape 5

SIDE 1

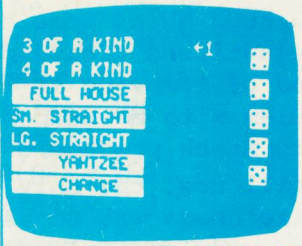


Music Composer

AWAKEN THE MUSICIAN IN YOU. YOU GRAPHICALLY PLACE NOTES ON A MUSIC STAFF AND ONCE YOU HAVE FINISHED YOUR MASTERPIECE, YOU CAN PLAY IT BACK IN ALL IT'S GLORY WITH EACH NOTE PRINTING ON THE STAFF, AS IT PLAYS. YOU CAN ALSO SAVE EACH COMPOSITION ON TAPE TO BE PLAYED BACK LATER WITH JUST A FLICK OF THE HANDLE AND A PULL OF THE TRIGGER.

ONE PLAYER ONLY, USES HAND CONTROL #1

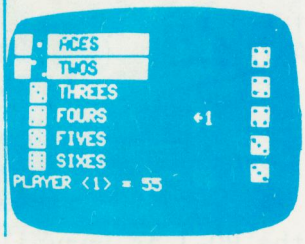
YAHTZEE



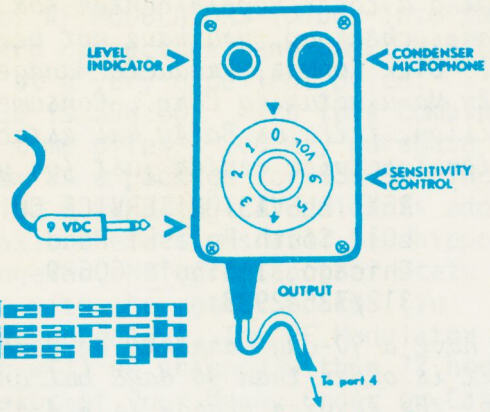
SIDE 2

BASED ON THE MILTON BRADLEY GAME OF THE SAME NAME. IF YOU EVER HAVE PLAYED THE REAL GAME YOU'LL KNOW WHAT FUN THIS ONE CAN BE. NO FUSSING WITH ADDING UP SCORE OR KEEPING TRACK OF WHAT COMBINATIONS YOU HAVE. IF YOU HAVE A FULL HOUSE, SMALL STRAIGHT, LARGE STRAIGHT, FOUR OF A KIND, CHANCE OR YAHTZEE. THE COMPUTER KNOWS AND FIGURES OUT YOUR SCORE. YOU EVEN GET BONUSES LIKE THE REAL GAME. FIVE GRAPHIC DICE FOR EACH PLAY AND TWO PLAYING FIELDS. YOU TRY TO GET THE HIGHEST SCORE DETERMINED BY VARIOUS COMBINATIONS OF THE DICE.

ONE TO FOUR PLAYERS, USES SEPARATE HAND CONTROLS.



The COMPUTER EAR



anderson research and design

Speech Recognition System for the Computer Hobbyist. You too can talk to your computer with the "COMPUTER EAR" hardware/software system. $59.95 COMPLETE (Minn. residents add 4% sales tax). Send to: Anderson Research and Design, Dept. C6, 1611 Lacota Lane, Burnsville, Mn 55337

USER GROUPS:

Steve Bryan, 11501 S.E. 230th Pl., Kent, WA 98031 (w)206-433-1253 (H)206-854-8006

Larry Kall, 3200 Octavia St., Raleigh,NC 27606 (W)919-829-0600 (H)919-851-5039

ASCII KEYBOARD

FOR SALE: ASCII Keyboard with Logic's, also 5 volt Power Supply, with additional components; all for $50.00. You must complete interfacing to the Bally. For further info please call 301/340-9369 and leave phone number where you can be reached. Paul Gannett, 621 Denham Rd., Rockville, Md. 20851

CURSOR

P.O. BOX 266, NO. HOLLYWOOD, CA 91603

NOTE 1: LOS ANGELES AREA USER GROUP: Meeting: 13 Sept 1980 (Sat) 1:00 PM Place: Cursor Office, 59 Orange Grove Ave., Burbank, CA 91502

NOTE 2: All Cursor Manual prices will go up 15% effective 9/10/80. Postmarked orders prior to that date get old price.

FIRST CLASS