

# NIAGARA B.U.G. BULLETIN

Vol. 2 **1**  
No.  
Pg.



Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8



WELCOME ALL TO VOLUME 2!

WELCOME TO THE SECOND YEAR OF PUBLICATION! THIS YEAR WE HOPE TO HAVE MORE PROGRAMS - MORE SUBSCRIBER INPUT - AND ALL OVER MORE FUN! THIS YEAR LOOKS LIKE IT WILL INDEED BE AN ACTIVE ONE FOR ALL OF US - IN LIGHT OF THE MANY DEVELOPMENTS THAT ARE NOW TAKING PLACE, OF COURSE I MEAN THE NEW ZGRASS COMPUTER ADD-ON SYSTEM - CARTRIDGES - AND BLUE RAM SOFTWARE (THE BLUE RAM BEING THE ADD-ON SYSTEM WHICH IS ALREADY AVAILABLE) REF. 5

WHERE'S THE ZGRASS? IS A QUESTION A LOT OF US ARE ASKING. I HAD THE GOOD FORTUNE TO SPEAK WITH ONE OF THE "HEAD MEN" AT ALTERNATIVE ENGINEERING A LITTLE WHILE AGO - AND HE STATED THAT THEY HAD NOT YET CONTRACTED A COMPANY TO DO THE MANUFACTURING - DUE TO OTHER DELAYS IN DEVELOPMENT OF THE SYSTEM. HERE'S A LITTLE SOMETHING TO TIDE YOU GUYS OVER THOUGH - IT'S A PARTIAL LIST OF THE UNUSUAL COMMANDS AVAILABLE IN THE ZGRASS GRAPHICS LANGUAGE, THE MOST POWERFULL YET DEVELOPED. IT'S BEEN ON THE DRAWING BOARD FOR 10 YEARS, NOT MANY COMPANIES CAN SAY THAT. LET'S JUST HOPE THAT IT COMES OFF THE DRAWING BOARD AND INTO OUR HOMES - AS THEY PROMISE IN ABOUT TWO MONTHS TIME.

PARTIAL COMMAND LIST FOR THE NEW ZGRASS COMPUTER LANGUAGE, TAKEN FROM THE WINTER/SPRING 1984 ASTROCADE SOURCEBOOK - RMH ENTERPRIZES.

					Input / Outputs
<b>Math:</b>  ARCCOS ARCSIN ARCTAN COSINE EXP INT LENGTH.NUM LN LOG POWER SINE SQRT TANGENT	<b>Graphics/ Arrays:</b>  ARRAY ARRAY.INT ARRAY.STR BOX CENTER CLEAR CLEAR.CRT CLEAR.WIND DISPLAY DISPLAY.SCREEN DISPLAY.PAN LINE PATTERN PATTERN.FILL MOVE MOVE.UP POINT POINT.SNAP POINT.PAN SCALE SCALE.SCR SCALE.PAN SCROLL SHRINK SNAP	STRIPE STRIPE.STR STRIPE.OFF TEXT WINDOW WINDOW.BOX WINDOW.FULL WINDOW.CENTER  <hr/> <b>Program Flows</b>  .B .F GOTO IF JUMP.ERR RETURN SKIP STOP TIMEOUT WAIT	<b>User Information:</b>  ADDRESS.AR ADDRESS.STR ADDRESS.Z ANYARGS CORE HELP STATUS USEMAP VERSION  <hr/> <b>String Manipulation:</b>  ASCII LENGTH LPAD STRING STRING.NUM SUB.STR	<b>Disk:</b>  DBAKS DCREATE DDELETE DDELETE.BAK DFETCH DFETCH.ZAP DGET DGET.BAK DGET.OR DGET.XOR DGET.FAST DINIT DLOAD DLOAD.CLEAR DLOAD.SET DLOAD.ZAP DLOOK DPUT DPUT.TV DSETUP DSETUP.RESET DUSEMAP	CONTROL P GETDISK GETTAPE INPUT INPUT.NAME INPUT.STR PORT PRINT PRINT.FORCE PRINT.INP PRINT.CURSOR PRINT.CEOL PROMPT PROMPT.FORCE PUTDISK PUTTAPE RS232 RS232.GET RS232.PUT RS232.AGET RS232.APUT RS232.SGET RS232.SPUT RS232.BGET RS232.BPUT RS232.RESET TABLET TERMINAL
<b>Miscellaneous:</b>  COMPILE CONTROL DELETE DELETE.NULLS EDIT LOOPMAX RESTART					

## Z-Grass THE LANGUAGE:

The Z-grass software includes these advanced functions:

1. A Full Screen Text Editor for Fast Efficient Program Editing.
2. String Manipulation including Match, Concatenation, Replacement.
3. Program Execution in both Interpreted and Compiled Modes.
4. Multi-Dimensional Arrays and String Arrays.
5. User Customization of Language at Several Levels.
6. Advanced Graphics Commands: SHRINK, TEXT, ELLIPSE, SNAP, SHOW, ROTATE, SCALE, PATTERN, STRIPE, POINT.
7. 6 User Definable Keys for Special or Repititious Functions.
8. Over 30 Special Control Key Commands with Multiple Modes.

## INPUT COLUMNS:

ASTRO-BRAGGARTS IS OUR HIGH SCORES COLUMN. TAPE OR CARTRIDGE GAME SCORES ARE ACCEPTED. (YOU MUST - HOWEVER INCLUDE A PHOTO OF THE GAME SCREEN.)

Q & A IS OUR QUESTION AND ANSWER COLUMN. (WHAT ELSE) IF I CAN'T ANSWER YOUR QUESTION RIGHT AWAY I'LL KEEP IT IN MIND UNTIL I COME UP WITH A REASONABLE ANSWER. NEVER BE AFRAID TO ASK THE OBVIOUS.

SWAP CORNER IS THE TRADE/SELL ADVERTIZING COLUMN. WE ACCEPT ADS FOR ALL ACCESSORIES - ODDS AND ENDS. BUT PLEASE TAKE ADS FOR USED ASTROCADE UNITS SOMEPLACE ELSE!

SUGGESTIONS THIS IS PERHAPS NOT A COLUMN - BUT I THINK IT SHOULD BE SAID HERE. ANY SUGGESTIONS AS TO FORMAT - CONTENT - LAYOUT - ETC. ARE WELL TAKEN AND APPRECIATED.

SUPPORT OF THESE COLUMNS BY YOU THE SUBSCRIBER ENSURES A GOOD - AND AN EDUCATIONAL TIME FOR EVERYBODY. WRITE US AND SPEAK UP!

PUBLICITY - PLEASE! THE ARTICLE WHICH I WROTE FOR VIDIO & COMPUTER GAMING ILLUSTRATED (THE NEW NAME) SHOULD BE IN PRINT SOON. I DON'T KNOW EXACTLY WHEN - BUT KEEP AN EYE OUT FOR IT ....

12/2/83

ABC HOBBYCRAFT - ASTROCADE PRICE LIST - PRICES EFFECTIVE

INDEPENDENT TAPE SOFTWARE

(A1) items ASTRO BASIC only unless otherwise noted...

ASTROCADE VIBECOCABES

2001 280 Izzap/Dodgem	24.95
2002 Seawolf/Missile	24.95
2003 Red Baron/Panz. Att.	29.95
2004 Brickyard/Clowns	29.95
2005 Star Battle	24.95
2009 Astro Battle	29.95
2010 Dogpatch	29.95
2011 Galactic Invasion	<del>29.95</del> SALE 19.95
2013 Space Fortress	29.95
2015 Grand Prix/ Demolition Derby	29.95
2016 Pirate's Chase	29.95
2017 Incredible Wizard	34.95
2018 Solar Conqueror	34.95
2019 Cosmic Raiders	34.95
3001 Baseball/Tennis/ Hockey/Handball	29.95
3002 Football	29.95
3005 Astrocade Pinball	29.95
4001 Speed/Bingo Math	19.95
4002 Letter Match/Spell 'N Score/Crosswords	29.95
4004 Biorhythm	29.95
5001 Amazin' Maze/ Tic-Tac-Toe	24.95
5002 Blackjack/Poker/ Acey-Deucey	29.95
5005 Artillery Duel	34.95
6004 Astrocade BASIC with built-in interface	
Regular price:	59.95
Special sale price:	29.95

Astrocade DEMO (limited availability) 29.95

INDEPENDENT CARTRIDGE SOFTWARE

Muncher (limit. edition)	34.95
Treasure Cove (Esoterica)	32.95
Blast Droids (Esoterica)	32.95
Machine Language Manager (Bit Fiddlers)	54.95
Ms. Candy Man (L&M)	29.95
Sneaky Snake (New Image)	32.95

NEW Sea Devil (L&M) 29.95 (812)

ABC HOBBYCRAFT  
2155 E. MORGAN AVENUE  
EVANSVILLE, IN. 47711  
24-HOUR ORDER LINE: (812) 477-9661

BIT FIDDLERS

Goldfish Demo (both BASICS)	5.00
Chicken! (both BASICS)	12.95

L&M SOFTWARE

#1 Claim Jumper/ River City Gambler	12.95
#2 Cosmic Saucer Battle/ The Black Lagoon	12.95
#3 Bombardier/Meteoroid	12.95
#4 Target/Mind Bender	12.95
#5 Search & Destroy/ Air Raid	12.95
#6 Star Base 2000/ Space Quest 2001	12.95
#7 Phantom Star Fighters/ Space Checkers	12.95
#8 Crazy Ball/ Ayatollah Dart Board	12.95
#9 The Mummy's Treasure/ Galactic War 2002	12.95
#10 Coyote-Roadrunner Desert Race/Atom Smasher	12.95
#11 Sink the U-Boat/ Rescue Air Drop	12.95
#12 Mission: Impossible/ 3-D Tic-Tac-Toe	12.95
#13 The Fox & the Hare/ Space Sleuth	12.95
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#15 Secret of Pellucitar	15.95
#16 Exitor's Revenge	15.95
#17 Nautilus	15.95
#18 Candy Man	15.95

MAWENAKERS

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Guitar Course/Tune/ Progressions	15.95
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Pack-Rat I & II	15.95
Lookout for the Bull	15.95
Whiz Quiz (trivia)	15.95
Castle of Horror/ Four Famous Freebies	15.95
Monkey Jump/Gong the kong	15.95
Collision Course	15.95
Character Analysis	15.95
Dungeons of Dracula	15.95
L.T. (Little Terrestrial)	15.95
Gate Escape	15.95

HARDWARE & ACCESSORIES

Hand controllers (pair)	54.95
(each)	27.95
Replacement hand controller cords (with molded plug)	2.50
12 ft. hand controller extension cord (each)	NEW PRICE \$7.95

☆☆☆☆☆☆☆☆☆☆

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24 hour  
ORDER  
LINE:  
477-9661

ORDERING INFORMATION

Orders taken by mail or phone on 24 hour order line. (Call late nights and weekends and save money) NO COLLECT CALLS ACCEPTED!  
Add \$1.50 (\$2.50 in Canada) to total for shipping/handling. Shipments may be prepaid or COD \$1.65 COD fee added to COD orders. (No COD to Canada...) VISA & MasterCard accepted. (Be sure and give your card # and expiration date when ordering.) We ship UFS (preferred) or U.S. Mail. (U.S. Mail only to Canada.)



```

5 CLEAR;NT=0;BC=150
6 . PROG. C-I 2/82
7 . TWINKLE STAR
8 PRINT;PRINT
10 LIST 20,2
20 . #1 TWINKLE *
30 . #2 BOXES
70 PRINT "PRESS # / 0 RETURN
80 PRINT;PRINT "ERASE TO RESTART
90 G=KP-48
100 IF G=1 GOTO 200
110 IF G=2 GOTO 600
200 . *
210 CLEAR;C=3;NT=0
220 .LINE 332 B=B+E=DIFF. ART
226 .B 1 - 80 <13 BEST
228 . E <20 BEST
230 CY=0
240 INPUT "INPUT STEP SIZE" E
250 INPUT "INPUT BOX SIZE"B
260 CLEAR;NT=3
270 FOR D=1 TO 48 STEP E
280 FOR A=1 TO D STEP 1
290 BOX A,A,B,B,C
300 BOX -A,A,B,B,C
310 BOX A,-A,B,B,C
320 BOX -A,-A,B,B,C
330 IF &(22)=16 GOTO 5
340 IF &(21)=16 GOTO 230
350 BOX A,0,B/2,B/2,C
360 BOX -A,0,B/2,B/2,C
370 BOX 0,A,B/2,B/2,C
380 BOX 0,-A,B/2,B/2,C
390 NEXT A
400 BC=RND(17)*8+116      405 FC=BC+4
410 NEXT D
415 BOX 0,0,88,88,3
450 CX=-40;CY=0
460 PRINT " T H E  E N D
470 FOR Z=1 TO 2000;NEXT Z
480 GOTO 5
600 CLEAR
610 A=RND(20)
620 G=RND(5)*10+800
630 GOSUB G
640 FOR Z=1 TO 900;NEXT Z
650 BC=RND(256)
660 FC=BC +4+8*RND(30)
670 IF &(22)=16GOTO 5
680 GOTO 600
    
```

Stan Kendall - 1945 Washington Ave. Wilmette, IL. 60091

```

810 FOR B=2 TO 88 STEP A
811 BOX 0,0,B,88-B,3
812 BOX -15,0,B,88-B,3
813 BOX 15,0,B,88-B,3
814 NEXT B;RETURN
    
```

(a = → \* = multiply / = divide)  
 NOTES Stars twinkle best when B= 2 TO 8 & E= 6 TO 12.

Many other interesting variations possible

```

820 FOR B=2 TO 88 STEP A
821 BOX -10,0,88-B,B,3
822 BOX 10,0,88-B,B,3
823 NEXT B;RETURN
    
```

```

830 FOR B=4 TO 88 STEP A
831 BOX 0,0,88-B,B,3
832 BOX -20,0,B,88-B,B,3
833 BOX 20,0,B,88-B,B,3
834 NEXT B;RETURN
    
```

```

840 FOR B=4 TO 88 STEP A
841 BOX 0,0,88-B,B,3
842 BOX 0,0,160-B,B,3 ;
843 NEXT B;RETURN
    
```

```

850 FOR B=4 TO 88 STEP A
851 BOX 0,0,160-B,B,3
852 BOX -30,0,88-B,B,3
853 BOX 30,0,88-B,B,3
854 NEXT B;RETURN
    
```

\*\*\* 7/30/83 Slight modification  
 Improved list of art and screen title.

```

ADD: Line 388 IF D > 40 IF L=3 SM=2;
      CY=-40;STOP
      INPUT L=3 & RUN #1 , STEP 8, SIZE 10
      Then 388 GO. INPUT CY=0;PRINT " LINE
      ART C-II S.KENDALL";BC=149;FC=0;
      CY=-40 GO. THEN BOX 0,0,158,46,3;
      CY=-40 GO
      Then :PRINT, start tape & press GO.
    
```

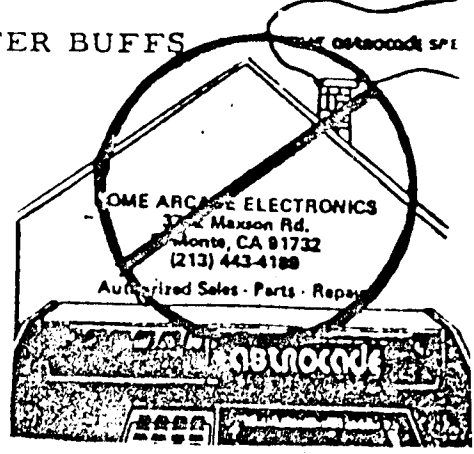
This will create an attractive un-cluttered screen.

The nice thing about ART of this type, and actually all ASTRO programs, is that it can always be changed, upgraded, improved, etc. It also gives one new ideas.

HOME ARCADE ELECTRONICS

has MOVED

We are now CPU ELECTRONICS
2972 S. 6th St. Suite C
Klamath Falls, OR. 97603
503-884-3225



We will continue to offer the friendly, reliable service than you got from HOME ARCADE but now we are able to offer you an expanded computer line including ZGRASS, NEC, Commodore, ColecoVision, SpectraVideo.

We do not charge for shipping.

We gladly accept Master Card and Visa orders.



We repair Video Games -- Bally/Astrocade, Atari, ColecoVision, Oddessey Game and Hand Controls.....\$69.95 (includes parts and shipping)

We carry all the latest releases for Astrocade including:

- Sneaky Snake by New Image.....\$30.00
Ms. Candyman by L&M Software.....\$30.00
Blast Droids by Spectrecade.....\$30.00
Treasure Cove by Spectrecade.....\$30.00

COMPARE Our Prices

- #6004 - Astrocade Basic (2000 Baud).....\$19.95
#BP1500 - Astrocade Unit w/basic + 3 Game Carts.....\$149.95
#2015 - Pirates Chase .....\$20.50
#2017 - The Incredible Wizard .....\$27.95
#HEI-1005 - 12 ft. Ext for Hand Control (by Wico).....\$ 9.95
#HEI-1008 - Sanyo Slim Model 5 Cassette Recorder .....\$39.95
#HEI-1009 - Data Tapes w/Hard Styrene Cases.....10 for 9.95

CPU Electronics is having a SPECIAL OVERSTOCK SALE!!

On SALE for \$10.00 each are these Astrocade Game Cartridges:

- #2004 - Brickyard/Clowns #2005 - Star Battle
#2007 - AstroBattle #2012 - Space Fortress
#2014 - Grand Prix #3001 - Baseball
#3002 - Football #4002 - Lettermatch
#5001 - Amazin Maze #6002 - Bally Basic (300 B)

Also available are GRAB BAGS for cassette games--3 Games for \$15.00 (Wavemakers, L&M, Esoterica, New Image)

Order by mail or call (503) 884-3225 for COD or Credit Card orders.

\*\*Computer owners we now offer a 24 hour on line computer for your enjoyment if you have a modem try dialing it up. 300/1200 baud, 8-bit word, 1 stop bit, parity disabled. (503)883-3735\*\*

- KEYBOARD ADDITION: WILL BE PRODUCED BY ALTERNATIVE ENGINEERING. THIS ADD-ON WILL CONSIST OF THE KEYBOARD SHOWN ON PG 18 OF VOLUME 1, AND A NEW BASIC CART. THAT WILL CONTAIN BOTH THE STANDARD AUDIO INTERFACE, AND A PLUG FOR THE KEYBOARD.

THE NEW BASIC CART. IS NEEDED BECAUSE THE ASTRO BASIC DOES NOT HAVE THE KEYBOARD-DRIVING LOGIC REQUIRED. HOW THE ACTUAL LANGUAGE WILL DIFFER FROM ASTRO BASIC (IF AT ALL) WE HAVE NOT BEEN INFORMED.

HOPEFULLY. THE FOLKS AT AE WILL FIND SOME ROOM FOR SOME ADDITIONAL "GOODIES" DURING THEIR RE-DESIGNING OF THE BASIC LANGUAGE. THIS ADDITION IS SIMPLY A PRELUDE TO THE FULL ZGRASS PACKAGE. LATER, YOU COULD PURCHASE THE MOTHERBOARD AND POWER UNITS, AND SIMPLY PLUG THEM IN!

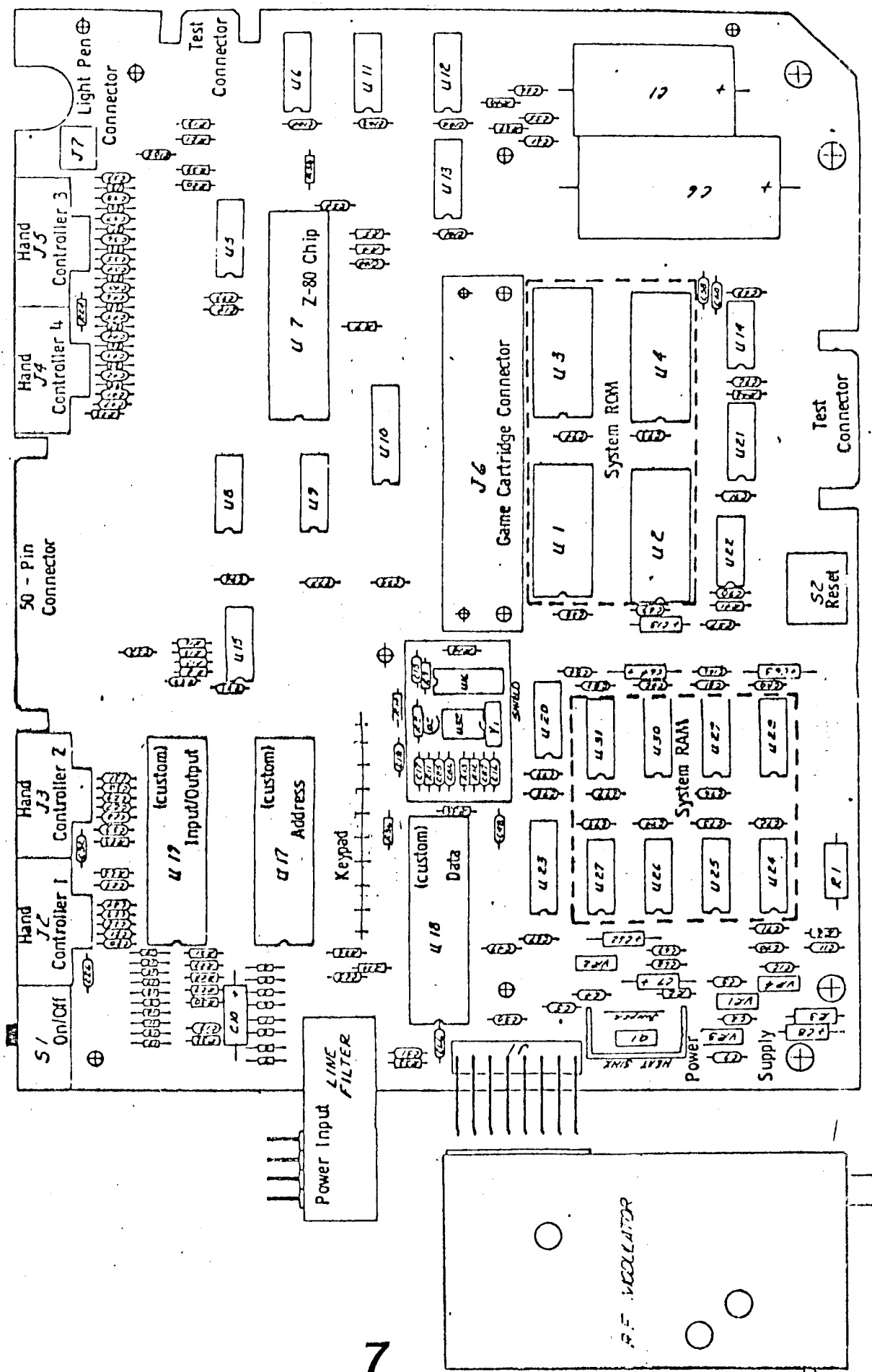
WHAT THIS MEANS TO PEOPLE WITH UNITS ON ORDER, I DON'T KNOW. I HAVE ALREADY WITHDRAWN MY ORDER UNTIL THINGS ARE MORE CERTAIN. MORE NEWS ON THIS AS WE RECIEVE IT.

- PERKINS ENGINEERING EXODUS? MAYBE. PERKINS ENGINEERING, A LONG STANDING SUPPLIER OF ADD-ON SYSTEMS FOR THE ASTROCADE, HAS FALLEN UNDER NEW MANAGEMENT, DUE TO THE UNEXPECTED ILLNESS OF ONE OF THE OWNERS. THE NEW OWNER JOE POELKING, IS JUMPING INTO THE FRAY, AND HE MAY NOW BEGIN TO SEE SOME NEW DEVELOPMENTS IN BLUE RAM HARDWARE. HE MAY, THAT IS. MORE NEWS TO COME.
- WHAT TO DO WITH BROKEN JOYSTICKS? WE'VE ALL HAD THE UNFORTUNATE TURN AT ONE TIME OR ANOTHER, OF GETTING CHIPS BROKEN OUT OF THE UPPER PORTION OF OUR JOYSTICKS. THEY BECOME UTTERLY USELESS! ONLY A PERFECT 90 OR 45 DEGREE ANGLE WILL REGISTER, (WITH THE PRESENT DESIGN,) AND IT'S NEARLY IMPOSSIBLE TO GLUE THE PIECES BACK IN. (AT LEAST, THEY DON'T STAY THERE!). NEXT MONTH, WE'LL HAVE PICTURES AND A SMALL WRITE-UP ON HOW YOU CAN BUILD YOUR OWN CUSTOM JOYSTICK WITH THE OLD PARTS. A REAL ARCADE-STYLE STICK WITH TWO FIRING BUTTONS!

## ASTRO-BRAGGARTS

STAN KENDALL REPORTS A NEW HIGH SCORE FOR PIRATE'S CHASE. HE BEGAN WITH 14 MEN AND QUIT WITH 6 STILL LEFT. EVEN SO, HE ACHIEVED A TOTAL SCORE OF 4,100,641 POINTS! ON SKILL LEVEL #1. GOOD JOB STAN! SWEATY PALMS FOREVER!

a look inside your



```

1 CLEAR; GOTO 900
2. PROG. F-I 7/83 S. KENDALL
  1945 WASHINGTON AVE / WILMETTE, IL 60091
3 LINE X, Y,  $\phi$ 
4 LINE -X, Y, Z; LINE -X, -Y -Z;
  LINE X, -Y, Z; LINE X, Y, Z;
  RETURN
6 FOR C = 1 TO 200; NEXT C; RETN
9 LINE  $\phi$ ,  $\phi$ ,  $\phi$ ; LINE X, Y, Z; RETN
20 CLEAR; NT = 6; CY = RND(60) -
  30; CX = -RND(50); PRINT "
  • N • E • X • T • • • = • → "
  GOSUB 6; RETN
30 BC = RND(250); RETN
40 FC = RND(250); RETN
50 G = RND(5) * 100; GOTO G
100 GOTO 400
200 CLEAR; L = 0; Z = 3; BC = 148;
  FC = 0
210 X = RND(8) * 4; Y = RND(8)
  * 4
220 GOSUB 3
230 IF JY(1) = 1 GOSUB 30
240 IF JY(1) = -1 GOSUB 40
270 IF TR(1) GOSUB 20;
  GOTO 50
280 IF L = 3 GOTO 210
290 GOTO 410
300 Z = 3; CLEAR; L = 3; GOTO
  210
400 CLEAR; L = 9
410 S = RND(6); Z = RND(3);
  IF Z = 2 * Z = 3
412 IF L = 0 N = 32
414 IF L = 9 N = 78
420 FOR X = 1 TO RND(N)
  STEPS
422 IF TR(1) GOSUB 20;
  GOTO 50
424 IF JY(1) = 1 GOSUB 30
426 IF JY(1) = -1 GOSUB 40
430 LINE X, X/2,  $\phi$ ; LINE -X,
  X/2, Z; LINE -X, -X/2, Z;
  LINE X, -X/2, Z; LINE X,
  X/2, Z; NEXT X
440 IF L = 0 GOTO 210
470 GOTO 410
500 CLEAR
570 X =  $\phi$ ; Y = 44; Z = RND(3);
  IF Z = 2 * Z = 3
511 C = C + 1; IF C > 50 C = 1;
  CLEAR
512 GOSUB 9
518 IF TR(1) GOSUB 20; GOTO 50
  
```

```

(a = → * = multiply / = divide)
• = space
520 IF Y <  $\phi$  GOTO 534
522 IF JY(1) = 1 GOSUB 30
524 IF JY(1) = -1 GOSUB 40
530 X = X + C; Y = Y - 1; GOTO 572
534 X = X - C; Y = Y - 1; IF Y < -44
  GOTO 544
540 GOTO 572
544 X = X - C; Y = Y + 1
550 GOSUB 9
554 IF TR(1) GOSUB 20; GOTO 210
560 IF Y >  $\phi$  GOTO 580
570 GOTO 544
580 X = X + C; Y = Y + 1
582 IF X >  $\phi$  GOTO 570
590 GOTO 530
  
```

```

900 CLEAR; Z = 3; BC = 0; FC = 133
910 CY = 20; PRINT "••• PROG.
  OF LINE ART A"; PRINT
912 PRINT "••• TR(1) FOR
  NEXT DESIGN"; PRINT
914 PRINT "••• JY(1) = 1 FOR
  NEW BC"; PRINT
916 PRINT "••• JY(1) = -1 FOR
  NEW FC
920 X = 78; Y = 42; LINE X, Y,  $\phi$ ;
  GOSUB 4
950 FOR C = 1 TO 2400; NEXT C;
  GOTO 50
  
```

SZ - Line 2 = 857  
 SZ - Line 2 & 900-950 = 1028

\* THIS PROG HAS (3) SUB-ROUTINES & PRODUCES (5) DIFFERENT LINE DESIGNS BY USING DIFFERENT PARTS AT DIFF. TIMES.

STANLEY KENDALL - 1945 WASHINGTON AVE.  
 WILMETTE, IL. 60091



# Niagara BUG Bulletin

\*\*\*\*\*  
CARTRIDGE SHAPPING  
\*\*\*\*\*

BY KEVIN O'NEILL

THE FIRST EPISODE TO AN INTERESTING SIDELIGHT. THE MENU SEQUENCE FOR THE SELECTION OF GAME PARAMETERS IN THE CARTRIDGE GAMES IS THE PERFECT OPORTUNITY TO SHAP CARTS. THE FOLLOWING ARE LITTLE "TRICKS" THAT I'VE DISCOVERED THAT GET SOME INTERESTING RESULTS.

PLAY INCREDIBLE WIZARD. AND WRITE DOWN YOUR SCORE. NOW, WITHOUT RESET-ING, PUT IN THE BLAST DROIDS CART. FROM THE MENU, PICK BLAST DROIDS, TRAINING SECTOR, SHAP TO INCR. WIZ, NOW CHOOSE 2 PLAYERS, AND THE REST OF THE OPTIONS AS REQUESTED, AND NEEDED. NOW, WHEN THE GAME BEGINS, YOU SHOULD BE STARTING WITH THE SCORE AS YOU LAST LEFT THE GAME, BUT WITH A FULL SUPPLY OF MEN! HACKING DOES HAVE IT'S REWARDS, FOLKS!

FOR A NEAT LITTLE "GLITCH", PUT IN THE INCR. WIZ, CHOOSE WHATEVER OPTIONS YOU WISH, UP UNTIL IT ASKS "# OF PLAYERS?" THEN SHAP CARTS TO ASTRO BATTLE, AND CHOOSE WHATEVER # YOU WISH. THE COLOR WILL BE DISTORTED, AND THE PLAY LEVEL IS (I THINK) EQUIVALENT TO FOUR.

IF YOU PUT IN THE MUNCHER CART., AND CHOOSE (FROM THE MENU) MUNCHER, THEN AT THE PROMPT FOR "# OF PLAYERS?" SHAP CARTS TO MS. CANDYMAN. ENTER WHATEVER YOU WISH. THEN RESPOND TO THE NEXT FEW PROMPS ANY WAY YOU WISH. AS THE GAME BEGINS, YOU SHOULD SEE THE FULL ROLL-CALL OF MONSTERS IN A ROW NEAR THE BOTTOM OF THE SCREEN. ALSO, THE MONSTERS WILL TEND TO STRAY FROM THE CHECKERBOARD MOVEMENT LAYOUT.

IF YOU KNOW OF OR FIND A USEFULL OR INTERESTING "GLITCH", TELL US, AND WE'LL PRINT IT.

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PERKINS ENGINEERING HAS A NEW ADDRESS.

4300 W. 194 ST.  
CLEVELAND, OH 44135

PHONE # ... (216) 676-0603

THE NEW OWNERS HAVE BEEN THE MANUFACTURERS OF THE BLUE RAM SYSTEMS FOR SOME YEARS NOW. THEY WILL BE DONE THEIR TRANSITION SOON, NOW, AND WILL HAVE A FULL LINE OF BLUE RAM HARDWARE AND SERVICES.

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# Niagara BUG Bulletin

## PROGRAMMING TIPS FOR ASTRO BASIC

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### REMEMBER THESE STEPS:

- IDENTIFY THE PROBLEM (WHAT DO YOU WANT THE PROGRAM TO DO?)
- DEVELOP AN ALGORITHM (A SERIES OF STEPS, OR PROCEDURE. IN LARGE PROGRAMS, AN ALGORITHM MAY BE NEEDED FOR EACH SUBROUTINE)
- CODE THE PROCEDURE INTO THE LANGUAGE GIVEN (IN OUR CASE, BASIC) BE CAREFULL TO USE LOOPS, SUBROUTINES, ETC. WHEREVER POSSIBLE TO AVOID REPETITION OF STEPS, AND WASTED MEMORY.
- KEY IN AND DEBUG (SEARCH FOR ERRORS)
- DOCUMENT (NO PROGRAM SHOULD EVER BE WITHOUT ACCURATE DOCUMENTATION, IF IT IS TO BE USED BY ANYONE BESIDES YOURSELF.)

REMEMBER THESE STEPS AND YOU WILL BE A BETTER, MORE EFFICIENT PROGRAMMER. AND WITH ONLY 1800 BYTES TO WORK IN, WE NEED ALL THE EFFICIENCY WE CAN GET!

### OTHER HINTS:

USE SPECIAL FEATURES OF THE ASTROCADE TO "PERK UP" YOUR PROGRAMS: USE THE 256 COLOR CAPABILITY, THREE-VOICE MUSIC, &(9), (THE SPLIT-SCREEN FUNCTION) &(10), (SCREEN CURTAIN) AND OTHERS TO MAKE YOUR CREATIONS COME TO LIFE!

NEVER LEAVE A PROGRAM WITHOUT SOME GRAPHICS. EVEN A TEXT PROGRAM CAN BE SOUPED UP WITH REVERSE BOXES TO HIGHLIGHT SOME OF THE SCREEN.

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### NIAGARA REGIONAL B.U.G. CULB TAPE

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/CANCELLED DUE TO LACK OF PROGRAM SUBMISSIONS/

IF WE EVER GET ENOUGH PROGRAMS, THE TAPE WILL BE PRODUCED.

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UNTIL NEXT MONTH, KEEP ON BUGGIN!

EDITOR: KEVIN O'NEILL



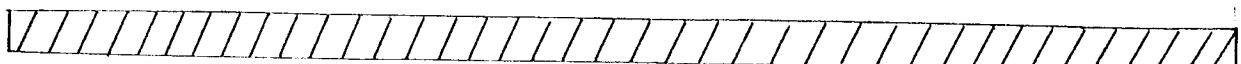
Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8

NEW CARTRIDGES: SOON TO BE AVAILABLE FROM DAVE CARSON ARE MAZEMAN, AND A CONVERSION OF HIS EXTENDED BASIC GAME FOR THE BLUE RAM SYSTEM, CALLED GOLDDIGGER. MORE NEWS ON THESE LATER.

ENHANCED PROGRAM LISTINGS: ON THE BLUE RAM ARE NOW POSSIBLE. THE LISTING ENHANCER, AVAILABLE FROM GEORGE MOSES CO. COSTS ONLY \$15! SOME OF THE FUNCTIONS IT WILL PERFORM ARE: KEYWORDS PRINTED IN LOWER-CASE CHARACTERS, UNDERLINE SYMBOLS DENOTE SPACES, CORRECT SYMBOLS USED FOR OPERATIONS. (+-/\*) ORDER FROM GEORGE MOSES P.O. BOX 686, BRIGHTON MI 48116.

SCREEN DUMPS: INCLUDED IN THIS ISSUE WERE DONATED BY STAN KENDALL. THEY WERE CREATED USING A SCREEN DUMP ROUTINE WRITTEN BY DAVE CARSON.

CUSTOM JOYSTICK: IS DOCUMENTED THIS MONTH. SOME OF THE PICTURES DIDN'T TURN OUT VERY WELL, BUT I'LL TRY TO DO MY BEST WITH DIAGRAMS. THIS NEW STICK DESIGN IS NOT MEANT AS A REPLACEMENT FOR THE ASTROCADE JOYSTICKS. I HAVE FOUND THAT NOTHING CAN BEAT THE "REAL THING" BUT THIS DOES MAKE USE OF THE OLD, BROKEN STICKS. AND GIVES YOU AN AID TO TRAIN YOUR FRIENDS ON YOUR SYSTEM.



## B.U.G. PROGRAMMING CONTEST #1

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### RULES:

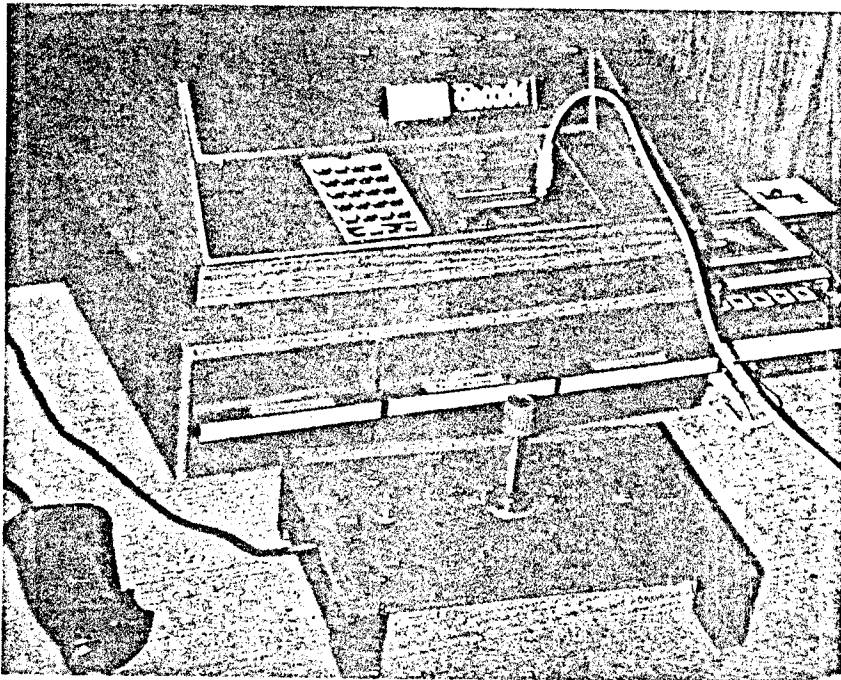
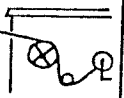
1. PROGRAMS WILL BE SUBMITTED IN ASTRO BASIC
2. THEY MUST BE ORIGINAL
3. THEY CAN BE OF ANY TYPE (GAMES. BUSINESS. UTILITIES)
4. ALL ENTRIES WILL BE SUBMITTED BY MAIL ON TAPE AND AS LISTING
5. A PANEL OF 5 JUDGES WILL DECIDE THE WINNER
6. JUDGES DECISION WILL BE FINAL

### THE PRIZE:

TWO CARTRIDGES. ASTRO BATTLE, AND GALACTIC INVASION

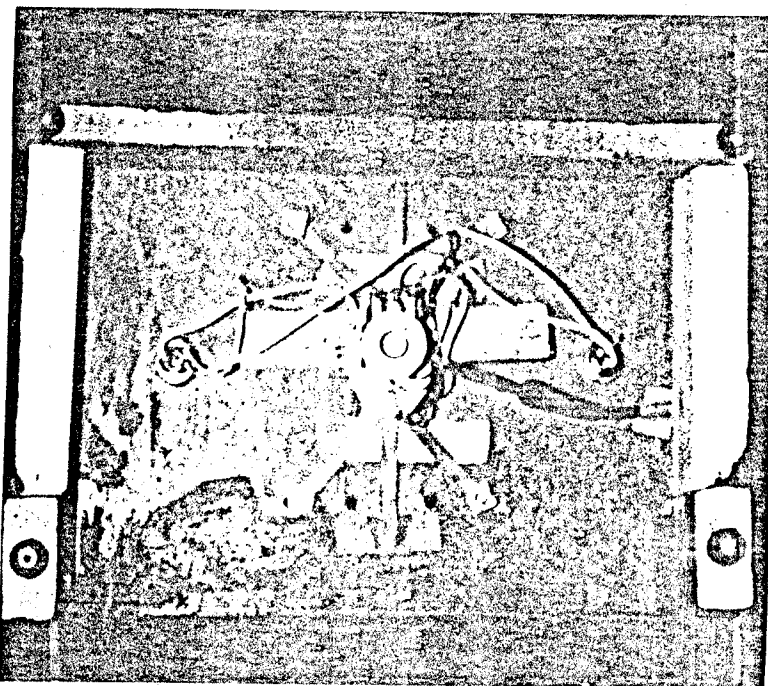
CONTEST ENDS MAY 5, 1984

GOOD LUCK, AND GOOD PROGRAMMING!

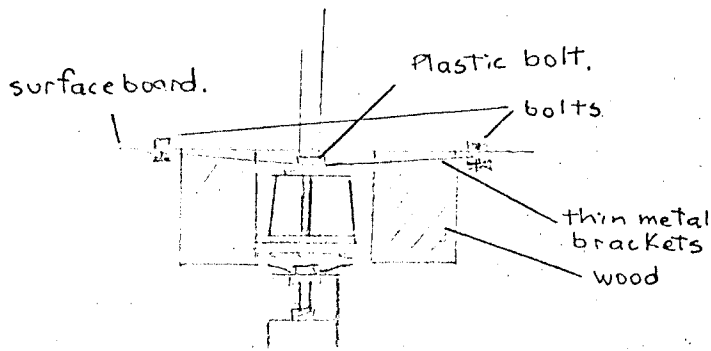
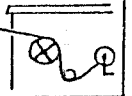


THIS IS A PICTURE OF THE JOYSTICK BY THE ARCADE UNIT. THIS PICK WAS TAKEN FOR SCALE, AND TO SHOW HOW WELL THE NEW DESIGN SUITS THE MACHINE. THE BOX DESIGN IS MORE OR LESS UP TO YOU. IF YOU WANTED, I GUESS THAT YOU COULD MOUNT THE STICK ON A LARGER BOARD TO GET THE "ARCADE FEEL", BUT IT DOESN'T LOOK RIGHT IN MY OFFICE.

THE PICTURE BELOW SHOWS THE UNDERSIDE OF THE NEW STICK, AND HOW I FASTENED IT TO THE BOTTOM OF THE BOARD. THE PICTURE IS NOT TOO CLEAR, SO DIAGRAMS ON THE NEXT PAGE WILL SERVE AS A GUIDE. THE METHOD I USED WAS NOT EXACTLY A PROFESSIONAL ONE, AND A FEW OF THE PARTS I USED WOULD BE TOUGH TO FIND. EX. THE BRACKETS SHOWN ACTUALLY CAME FROM AN OLD TELEPHONE RINGER. THERE ARE BETTER WAYS. I USED A COUPLE OF SMALL WOODEN BLOCKS TO STABILIZE THE WORKS, AND THIS COULD BE DONE ALL THE WAY AROUND.



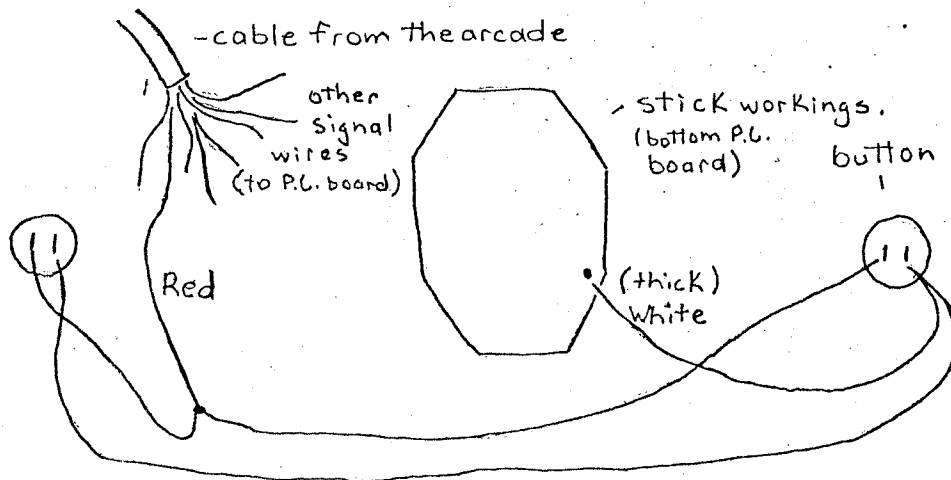
SOME "EXTRAS" I ADDED WERE THE SMALL RUBBER WASHERS TO PROTECT THE FURNITURE, THE PAINT, TRIM, ENCLOSED SIDES, ETC. A LOT HERE IS LEFT TO YOUR OWN IMAGINATION AND CREATIVITY.



this method is sort of "mickey-mouse".  
many other ways could be used.

THIS DIAGRAM SHOWS (IN BETTER DETAIL) THE ATTACHMENT OF THE STICK WORKINGS TO THE BOTTOM OF THE NEW BOARD. THE "PLASTIC BOLT" MENTIONED, (I DIDN'T KNOW WHAT ELSE TO CALL IT) IS A PART OF THE STICK WORKS ITSELF. IT FASTENS THE METAL PLATE AT THE TOP TO THE REST OF THE PLASTIC PARTS. I REMOVED THE SMALL NUTS WHICH HOLD IT IN PLACE, AND SLIPPED MY METAL BRACKETS UNDERNEATH.

## WIRING THE BUTTONS

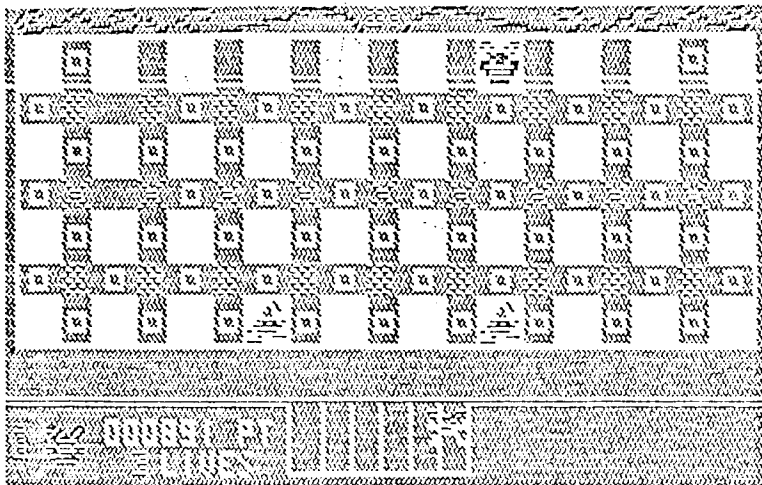
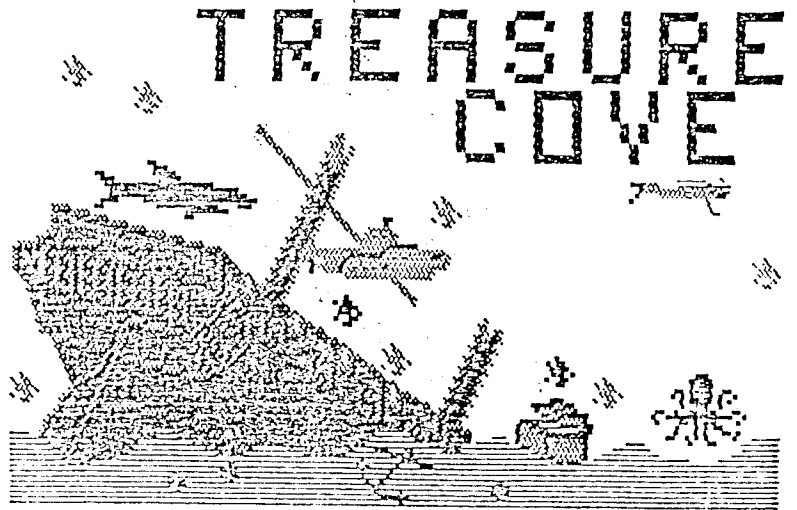
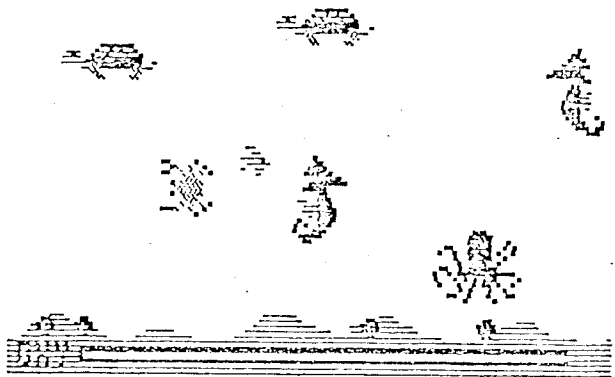
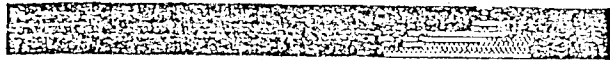
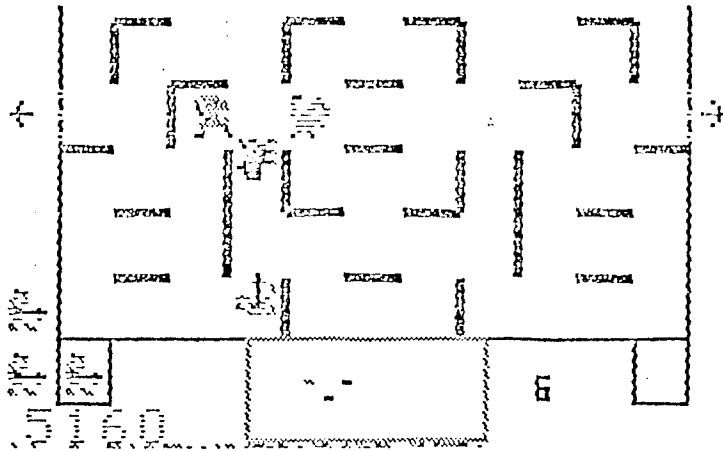


THE CURRENT FLOWING FROM THE ARCADE IS JUMPED FROM THE MAIN PC BOARD OF THE STICK, ALONG A THICK, WHITE WIRE. THIS WIRE USUALLY LEADS TO THE TRIGGER. IF THE TRIGGER IS PULLED, THE CIRCUIT IS COMPLETED, AND THE POWER FLOWS BACK TO THE ARCADE VIA A RED WIRE, TO REGISTER AS A SHOT.

THE BUTTONS ARE THE ONLY THING YOU WILL PROBABLY NEED TO BUY FOR THIS PROJECT, IF YOU'RE LIKE I AM. I NEVER THROW ANYTHING AWAY FOR FEAR I MAY NEED IT FOR SOME FUNNY PROJECT LATER. THE BUTTONS CAN BE PURCHASED AT ALMOST ANY LOCAL ELECTRONICS STORE, LIKE RADIO SHACK. THAT'S WHERE I GOT MINE. THE DIAGRAM ABOVE SHOWS HOW, ONCE YOU HAVE THE RED & WHITE WIRES DISCONNECTED FROM THE TRIGGER MECHANISM, YOU CAN WIRE TWO BUTTONS TOGETHER SO THAT LEFT & RIGHT HANDED PEOPLE CAN HAVE ALL THE FLEXABILITY THEY NEED.

# NIAGARA B.U.G. BULLETIN

ASTROCADE SCREEN DUMPS: ARE FOUND BELOW. THE SCREEN DISPLAYS ARE FOR: (FROM TOP) INCREDIBLE WIZARD. TREASURE COVE. AND MS. CANDYMAN. ALL ARE CARTRIDGES. THE LATTER 2 BY INDEPENDENTS



MS. CANDYMAN

MAY 20. 1984



Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8

THE ZGRASS IS HERE! THE ZGRASS IS HERE!

ALTERNATIVE ENGINEERING HAS FINALLY RELEASED THE ZGRASS PACKAGE. AND IS TAKING ORDERS THEMSELVES. THE IDEA ABOUT THE STAND-ALONE KEYBOARD ATTACHMENT HAS BEEN SCRAPPED, BUT INSTEAD, A LOWER PRICED ZGRASS SYSTEM WILL BE PRODUCED. THIS SMALLER SCALE SYSTEM PACKAGE WILL CONSIST OF...

- A CABINET CONTAINING 64K ADD-ON RAM, 2 RS232 PORTS TO PLUG IN PRINTERS, ETC., AND THE POWER SUPPLY.
- THE BK EXTENDED BASIC LANGUAGE.
- THE ZGRASS KEYBOARD, WITH THE 8048 CONTROL MICROPROCESSOR.
- A CASSETTE MACHINE. (TO ENSURE CASSETTE COMPATABILITY)

THIS SYSTEM IS EASILY UPGRADED TO THE FULL ZGRASS SYSTEM BY PLUG-INS, BECAUSE THE MOTHERBOARD IS COMMON TO BOTH MACHINES.

OTHER NEWS, ON THE FULL ZGRASS SYSTEM IS THAT, THE SYSTEM WILL INCLUDE, AS STANDARD EQUIPMENT, THE VERY NEWEST THING TO HIT THE DISK SCENE. THE NEW 96 TRACK PER INCH, DOUBLE-SIDED, QUAD. DENSITY DRIVE. ALL OTHER FEATURES OF THE SYSTEM REMAIN UNCHANGED.

PRICES: FOR THE ABOVE ARE \$495.00 U.S. FOR THE SMALLER SYSTEM, AND \$1,495.00 FOR THE FULL-BLOWN ZGRASS. (SEE FEATURE LISTS IN THE PREVIOUS VOLUME) DELIVERY SHOULD BE 6-8 WEEKS. THE ADDRESS: P.O. BOX 128, GARDINER, ME 04345.

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A WORD FROM THE WIZE: I HAVE BEEN INFORMED ABOUT THE NATURE OF OUR PROBLEMS WITH HAND CONTROLLER REPAIR. IT SEEMS THAT, BOTH THE CONTROLLERS, AND THE ACTUAL ARCADE CASE ITSELF, ARE MADE OF A SPECIAL PLASTIC, CALLED ABS BLACK. THIS IS THE SAME TYPE OF PLASTIC USED TO MAKE PIPES FOR PLUMBING. IT RESISTS ALL TYPES OF GLUE, EXCEPT PURE ABS. THIS IS WHY THOSE "SUPER GLUES" WON'T EVEN TOUCH IT. THE RIGHT KIND OF GLUE CAN BE FOUND AT YOUR LOCAL PLUMBING SUPPLY SHOP, AND IT IS BLACK, JUST LIKE THE CONTROLLER. THIS WAY, AS LONG AS YOU DO A REASONABLY GOOD JOB, IT WILL HARDLY EVEN SHOW UP.

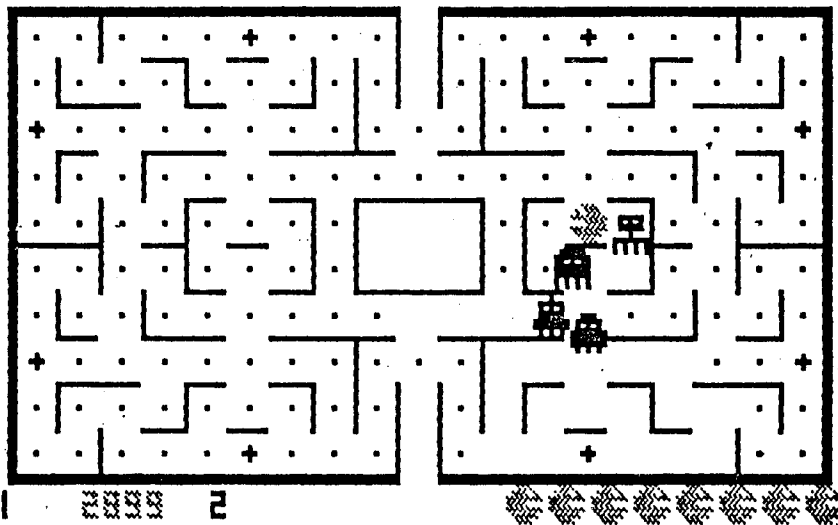
# MAZEMAN IS HERE!!!!

## AN ALL NEW MAZE CHASE ADVENTURE!!!

MAZEMAN is unlike any "gobble game" you have ever seen! Each time you clear a screen, you find yourself beginning a different maze. There are 12 completely different mazes, each requiring changes in tactics.

Here's a game that will not offend the non-gamers in the family. It is completely quiet. That's right, quiet! The program is so tightly packed with great graphics, smooth animation, great colors, the most precise control you've ever seen, and exciting action, that there's no room for even a simple sound routine. The game play gets so intense that you won't even notice a lack of sound after a couple of screens. If you really want to, you can always turn on the radio or play your favorite records or tapes. It might even convert some of those non-gamers!!!

This newest cartridge game for the Astrocade system allows 1 to 4 players with only one joystick. You may program the number of Mazemen from 1 to 9. You set up each player's difficulty level from one to nine as well. The four bad guys get slightly faster and a bit more aggressive with each new maze. The mazes cycle after 12 but the increase in difficulty goes on and on. From level one through nine there are eight "Jekyll to Hyde" transformers per maze. After L.9 there are only four. Mazeman has challenge enough for the serious gamer, but will provide hours of satisfaction for the beginner.



Actual Screen Print-out  
Player No. 1, Maze No. 2

MAZEMAN is not Pac-Man or Muncher redone. Although the "eat the dots, avoid the enemies" scenario is similar, the game stands alone on it's own merit.

Treat yourself and your family to a very pleasant gaming experience. Send \$30.00 (U.S.) in check or MO (MO is faster) for your MAZEMAN cartridge.

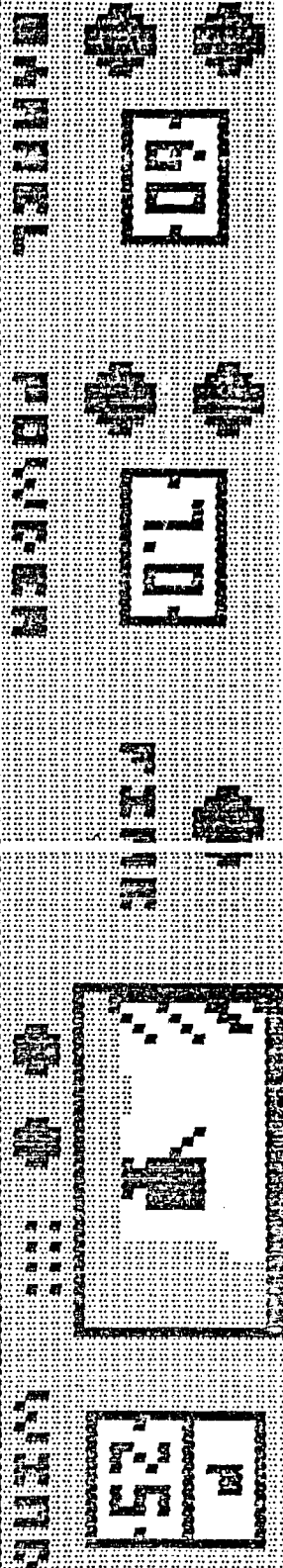
I also do custom screen to printer dumps of any screen the astrocade unit can produce. For advertising or just as conversation pieces, send your specific wants with a S.A.S.E. for details.

DEALER INQUIRIES WELCOME

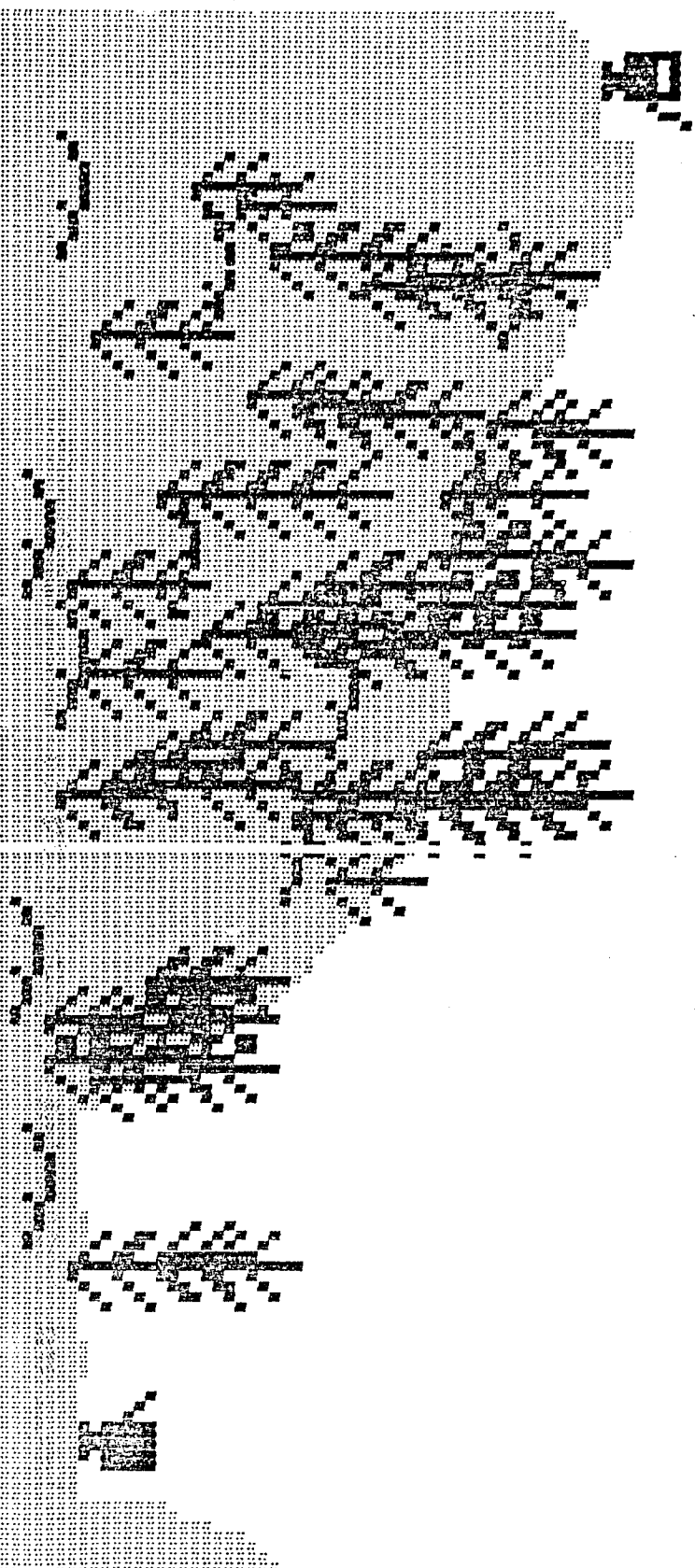
I'm considering setting up "micro-system software", but for now order from:  
David Carson, P.O. Box 39, Kipton, Ohio 44049

MAZEMAN (c) 1984 DAVID CARSON





----- THIS WONDERFUL IMAGE: -----



WAS PRODUCED WITH AN ASTROCADE/BLUE RAM SYSTEM, UNDER CONTROL OF THE  
 "SNDOOP CAMERA" SCREEN DUMP ROUTINE, WRITTEN BY MIKE WHITE. THE IMAGE  
 WAS PRINTED ON A PARALLEL MATRIX PRINTER, HOOKED UP TO THE BLUE RAM.  
 THE IMAGE IS OF ONE OF THE LATEST CARTRIDGE RELEASES BY ASTROCADE,  
 ARTILLARY DUEL. YOU BET THE NAME IS FAMILIAR. IT IS THE  
 CARTRIDGE VERSION OF THE SAME GAME PUBLISHED IN THE ASTRO BASIC  
 MANUAL. THIS GAME WAS ORIGINALLY WRITTEN IN 300 BAUD BALLY BASIC,  
 BY JOHN PERKINS. HE LATER UPDATED IT FOR THE NEW VERSION. FINALLY, HE  
 CREATED THE CARTRIDGE IN CONJUNCTION WITH ASTROCADE. AND NOW YOU  
 SEE THE SCREEN IMAGE HERE, PRINT ON THE BLUE RAM, WHICH HE AND HIS  
 BROTHER CLYDE DESIGNED AND BUILT. ((UNNNY HOW THESE THINGS WORK, ISN'T IT?

# Niagara BUG Bulletin

18

```
1 CLEAR ;&(9)=-1;BC=7;FC=8
2 D=0;L=0;R=0
3 NT=-20;CLEAR ;CY=30;PRINT "//////// FLAPS UP! //////////"
4 CY=10;PRINT " YOUR MISSION:";PRINT
5 PRINT " STAY ON RUNWAY AS LONG AS
6 PRINT " POSSIBLE. - BUT WATCH";PRINT " OUT FOR BOXES OF REPAIR";PRINT " SUPPL
IES!"
8 NT=1
9 IF TR(1)CLEAR ;GOTO 14
10 GOTO 9
14 BOX 0,20,155,10,1
20 BOX 0,-30,155,10,1
25 BOX 0,-30,155,8,3
30 NT=0;CY=29;PRINT "//////// FLAPS UP! //////////"
40 NT=1
220 P=0
230 D=0
240 D=D+JY(1)B4
245 IF D<-20D=-20
250 GOSUB 1000
252 NT=0;CY=-30;PRINT R,L;NT=1
255 IF R=20GOTO 20000
256 IF D=-20L=L+3;MU=L
260 IF RND (6)=1GOSUB 2000
500 GOTO 240
1000 BOX P,D,10,2,1
1010 BOX P-2,D+2,5,1,1
1020 BOX P+6,D+2,2,2,1
1030 BOX P-3,D+2,1,2,1
1040 BOX P-3,D-3,1,1,1
1050 BOX P,D,20,10,2
1060 RETURN
2000 U=-20;R=R+1
2001 FOR S=-60TO 60STEP 20
2011 BOX S,U,11,6,3
2021 BOX S,U,9,4,3
2022 BOX S,U,11,6,2
2031 D=D+JY(1)B4
2034 IF D<-20D=-20
2035 IF D=-20L=L+3;MU=L
2036 IF D<-11IF S=0 MU="B";L=L-30;GOSUB 10000
2041 GOSUB 1000
2061 NEXT S;RETURN
3000 CLEAR ;SM=2;CY=-40
3010 X=X+JX(1)
3020 Y=Y+JY(1)
3021 K=2
3022 IF TR(1)K=1
3030 BOX X,Y,1,1,K
3040 GOTO 3010
10000 CY=D;CX=P;PRINT "*"
10010 FOR T=0TO 8
10015 BOX P+RND (4)-4,D+RND (4)-4,4,4,3
10020 FC=RND (32)B3
10030 MU=FC;NEXT T
10040 RETURN
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# Niagara BUG Bulletin

## WHAT'S GOING ON WITH ASTROCADE?

IT HAS BEEN A LONG TIME. BUT THE COURT HAS FINALLY APPROVED THE REORGANIZATION PLAN SUGGESTED FOR ASTROCADE. ALL DEBTS WILL BE PAID, AND ASTROCADE WILL BE FREE TO CONTINUE WITH THEIR PLANS FOR THE FUTURE. ONLY A COUPLE OF THESE SCHEMES HAVE BEEN TOLD. ASTROCADE PLANS TO MANUFACTURE A UNIT IN KOREA (NOTICE THE WORDING -- A UNIT. PERHAPS A REMODELING OF THE CURRENT UNIT), AND THEY PLAN TO SELL THE ASTROCADE UNITS IN EUROPE. THE UNITS TO BE SOLD IN EUROPE WILL REQUIRE A CONVERSION CHIP, SO THAT THE ASTROCADE WILL FUNCTION PROPERLY ON A EUROPEAN T.V. SET.

IT IS POSSIBLE THAT ASTROCADE WILL HAVE A PROTOTYPE OF THIS MACHINE TO SHOW OFF AT THE SUMMER ELECTRONICS SHOW.

Bob's Electronics  
340 E. 4th Ave.  
Stanley, WI 54768  
(715) 644-2557

### SWBX-1

Allows continuous connection of tape recorder to Astrobasic cartridge, with no modifications needed. There is no interference! Change from :PRINT to :INPUT with a flip of the switch.

\$17.95 postpaid.

### SC-1

Suitcase designed to hold Astrocade, Hand Controls, Cassette Tapes, Tape Recorder, Wall Transformers, Cords and all Accessories. SC-1 is quality constructed of 1/4" plywood, lined with foam rubber and covered with rich brown vinyl to protect your equipment. It has a hinged top with locks and keys, a carrying handle, and rubber feet on two sides. Now you can take your Astrocade with you on your trips!! Size is 28 1/4 x 12 7/8 x 5 7/8". Shipping weight approx. 12 lbs. Please state size of your tape recorder.

\$30.00 postpaid. Custom made \$5.00 extra.

# Niagara BUG Bulletin

## NEW MEMBERSHIP LOW THREATENS TO 'DEBUG' US

YES, WE ARE CERTAINLY GOING TO HAVE TO DO SOMETHING ABOUT THE CURRENT STATE OF AFFAIRS CONCERNING THE NUMBER OF MEMBERS/SUBSCRIBERS. I ENCOURAGE ALL OF YOU TO TRY, IN WHATEVER WAY YOU CAN FIND, TO GET US SOME MORE MEMBER STRENGTH. A USER'S GROUP IS ALL ABOUT USERS, AND WE NEED MORE! I DON'T WANT TO BE BLUNT, BUT IF WE DON'T HAVE A LOT MORE MEMBERS SOON, I MAY HAVE TO CUT OFF THE NEWSLETTER AT THE END OF THIS VOLUME.

SO, ALL YOU BUGGERS OUT THERE, NOW IS THE TIME FOR ALL GOOD MEMBERS TO COME TO THE AID OF THEIR PRESIDENT! IN THE NEXT LITTLE WHILE YOU MAY SEE SOME INCREASED PUSHING ON MY PART, AND FOR GOOD REASON. I KNOW THAT YOU ALL WANT THIS NEWSLETTER BACK NEXT YEAR, AND IF WE DO MANAGE TO COME BACK, I WILL PROBABLY HAVE A LOT MORE PROGRAMS FOR YOU ALL. (BUT THAT'S A WHOLE OTHER STORY) IF WE ALL DO OUR BEST, WE CAN BOUNCE BACK NEXT YEAR.

YOUR DEDICATED EDITOR,

*Kein O'Neill*



Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8

## NOT AN ACTIVE MONTH

NO, NOT AN AWFUL LOT IS GOING ON THESE DAYS, BUT I CAN SAY THAT THERE HAS BEEN A LOT OF WONDERING GOING ON ALL OVER ARCADE-LAND, BECAUSE OF THE ANNOUNCEMENT OF ASTROCADE'S THAT THEY WERE GOING TO ENTER THE EUROPEAN MARKET.

WILL ASTROCADE HAVE TO TRANSLATE SOME OF THE GAMES? (WHAT'S "PLAYER #1" IN GERMAN?)

WILL THE NEW UNIT THAT THEY ARE GOING TO MANUFACTURE IN KOREA HAVE A TOTALLY NEW, INNOVATIVE LOOK? PERHAPS EVEN A KEYBOARD? MY GUESS IS--NO. A NEW CASE, MAYBE, BUT NOT A KEYBOARD. ASTROCADE MAY SIMPLY LEAVE THE GAMES THE WAY THEY ARE AND MARKET ALL THROUGH EUROPE, OR THEY MAY JUST STICK WITH ENGLAND.

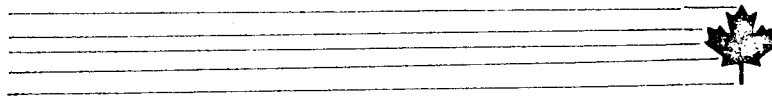
A MAJOR QUESTION, IN MY HEAD, IS--WILL THERE BE ROOM FOR BUGGERS ON THE TRIP TO EUROPE? I HOPE SO. ASTROCADE WILL BE MARKETING AS UNKNOWN MACHINE, THAT HAS NO VISIBLE SUPORT OTHER THAN THEIR OWN. MANY OF US FOUND OUT ABOUT THE UNDERGROUND BY THE LITTLE FLYERS IN OUR ARCADE BOXES. PERHAPS ASTROCADE WILL DO THE SAME FOR US.

A SUBSCRIPTION TO THE NEWSLETTER FROM OVERSEAS WOULD BE MORE EXPENSIVE, BUT FEASIBLE. THIS IS SOMETHING THAT I PROMISE I WILL LOOK INTO, AND REPORT ON LATER.

## REPACK UTILITY

IS INCLUDED THIS MONTH. THIS PROGRAM PUTS THE FANCY TITLE PAGES ON ASTRO BASIC GAMES, LIKE THE ONES YOU ORDER FROM THE VARIOUS TAPED SOFTWARE DISTRIBUTORS, LIKE WAVEMAKERS, L+M SOFTWARE, ETC.

A FEW DETAILS WILL HAVE TO BE COVERED IN ORDER TO USE THE UTILITY CORRECTLY. ONE OF THESE IS THE FILE SEARCHING UTILITY THAT WAS ALSO WRITTEN BY MIKE WHITE A WHILE BACK, AND WAS NOT PRINTED IN OUR NEWSLETTER. WE WILL EXPLAIN THAT PROCEDURE LATER. THERE ARE TWO SETS OF INSTRUCTIONS FOR THE UTILITY, ONE FOR THE STANDARD ASTRO BASIC WHICH MOST OF YOU HAVE, AND THE OTHER FOR PEOPLE WITH A MORE ADVANCED SYSTEM, THE BLUE RAM ADD-ON AND EXTENDED BASIC.



Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8

This Month: MAZEMAN From Dave Carson

A SHORT WHILE AGO I HAD THE PLEASURE TO RECEIVE THE FIRST GAME RELEASE BY ONE OF THE NEWEST SOFTWARE SOURCES FOR ASTROCADE, DAVE CARSON. THE GAME IS CALLED MAZEMAN, AND IS A VERY REALISTIC PAC-MAN LOOK-ALIKE.

I WILL HAVE TO DEAL WITH IT SOONER OR LATER, SO I'LL MAKE IT SOONER. FOR THOSE OF YOU WHO MISSED IT IN THE AD WE RAN A WHILE AGO, THIS GAME IS TOTALLY DEVOID OF SOUND EFFECTS. THIS DOES DETRACT FROM THE GAME ACTION SOMEWHAT, BUT IS NOT AS BIG A PROBLEM AS IT MAY SEEM TO BE. I KNOW THAT IT WON'T CATCH ON, BUT THE LACK OF SOUND IS BARELY NOTICEABLE AT ALL AFTER YOU GET INTO THE THICK OF THE GAME ACTION. THE GRAPHICS ARE WELL DONE, INDEED, AND I HAVE ONE MAJOR QUESTION FOR THE DISTRIBUTOR, AND/OR DESIGNER OF THE GAME. "HOW DID YOU EVER MANAGE TO GET 5 COLORS ON THE SCREEN? -- I SWEAR, THIS REALLY PUZZLES ME! MOST GAMES ONLY HAVE 4 COLORS, BUT THIS ONE HAS 5! -- THINK ABOUT IT.

THE MAZES, AND THERE ARE 12 DIFFERENT ONES, ARE ALL RATHER CHALLENGING, (MUCH MORE THAN NORMAL PAC-MAN MAZES) AND FAIRLY LARGE. THIS IS BECAUSE ALL THE WALLS ARE THINNER. THERE ARE 8 POWER PELETS, INSTEAD OF THE USUAL 4, AND 4 DETAILED, FULLY ANIMATED GHOSTS. THE GHOSTS AREN'T AS "STUPID" AS MOST, EITHER. UNLIKE IN THE MUNCHER GAME, THE GHOSTS WILL TURN AND RUN FROM YOU IF YOU HAVE EATEN A POWER PILL, AND ARE CLOSE BY.

THE VARIETY OF MAZES MAKES IT HARDER TO DEVELOP A PATTERN, SO THIS GAME WILL STAY CHALLENGING FOR A LONGER PERIOD OF TIME THAN OTHERS.

YOU ARE ALLOWED TO SELECT THE NUMBER OF MAZEMEN, AND THE LEVEL OF PLAY, FROM 1 TO 9.

NOW I HAVE A COUPLE OF NEGATIVE THINGS TO REPORT ABOUT THE GAME. THE ONE THING THAT I FOUND RATHER DISCOURAGING WAS THE PACKAGING. THE CARTRIDGE ITSELF REALLY PLEASED ME. AS A RULE, WITH VIRTUALLY ALL SYSTEMS, THIRD-PARTY CARTS ARE LARGER THAN THE ONES PRODUCED BY THE COMPANY, AND ARE HARDER TO PUT IN THE SLOT, AND REMOVE. THE MAZE MAN GAME, WAS THE EXCEPTION TO THE RULE, IT WAS PERFECT! NOT STICKY, OR LOOSE, AND A NOVEL GRAY COLOR. THE LABEL WAS WHAT TOOK ME DOWN. IT WAS A NORMAL, SELF-ADHESIVE COMPUTER LABEL. I THINK THAT MAZE MAN AS A GAME, DESERVES BETTER.

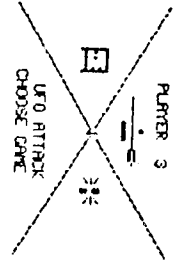
ANOTHER BAD POINT WAS THE INSTRUCTION SHEET. NO SCORE TABLE FOR THE NUMBER OF POINTS FOR EACH ITEM IS INCLUDED. I WOULD RATHER NOT TRY TO GUESS.

THE GAME ITSELF PLAYS WELL, HAS EXCELLENT GRAPHICS, AND SMOOTH ANIMATION, AND AS I MENTIONED EARLIER, STAYS CHALLENGING!

IT CAN BE PLAYED BY 1 TO 4 PLAYERS, WITH ONLY 1 CONTROLLER, BECAUSE YOU PASS THE PLAYER 1 CONTROLLER AROUND. A MESSAGE EVEN COMES UP SAYING "PASS THE HANDLE" WHEN IT IS TIME TO SWITCH.

OVER ALL, THIS IS AN EXCELLENT BUY. THE LACK OF NOISE MAY BUG SOME PLAYERS, AND YOU MAY GET SOME COMMENTS FROM YOUR FRIENDS THAT SOUND MYSTERIOUSLY LIKE A BURGER KING COMMERCIAL -- "WHERE'S THE SOUND?" BUT THE GAME ITSELF MAKES UP FOR THIS. STILL, I ENCOURAGE THE DESIGNER TO WORK ON SOME WAY TO INCLUDE SOUND, BECAUSE THIS WOULD MAKE THIS GAME ONE OF THE BEST EVER!

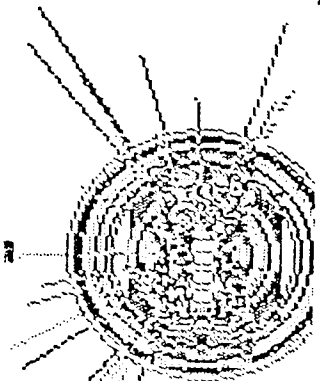
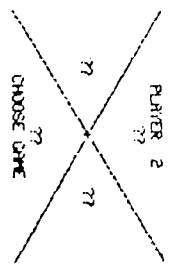
SEE THE AD IN LAST MONTH'S ISSUE, (PAGE 16) FOR ORDERING INFORMATION.



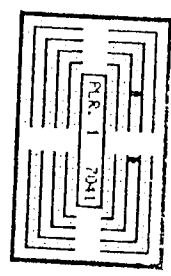
PERFECT PROGRAMS  
BY MIKE WHITE  
FILE SEARCHED  
FOR YOUR CONVENIENCE



PLAYER 1 UP    OUT 10598  
LEVEL 2    OUT 2400  
PLAYER 2    OUT 7210  
LEVEL 1    OUT 7210  
PLAYER 3    OUT 11094  
LEVEL 2    OUT 11094  
PLAYER 4    OUT 11094  
LEVEL 1    OUT 11094  
GAME WINNER  
PLAY POSITION? 1=VMS 2=MO

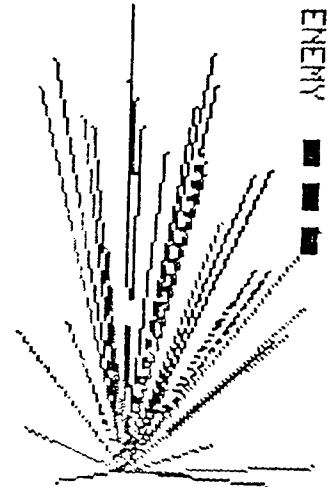


BY  
MIKE WHITE  
(C) 1983

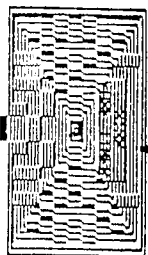
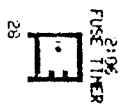
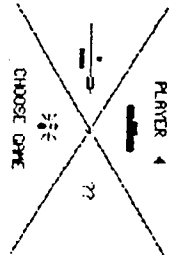


WINNER

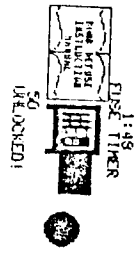
ENERGY



PLAYER 1 UP    0  
LEVEL 1    1 1 1  
PLAYER 2    1 1 1  
LEVEL 2    1 1 1  
PLAYER 3    1 1 1  
LEVEL 3    1 1 1  
PLAYER 4    1 1 1  
LEVEL 4    1 1 1



SOME ROBOT CUT THE LIGHTS!



CAN YOU BELIEVE ALL THIS IN ONE GAME?  
QUADRA STILL \$15.95

MIKE WHITE 4585 COUNTY LINE #2 R.D.#1 BOX 373 WAKEMAN, OHIO 44889  
SPECIFY FORMAT BB(300 BAUD) AB BRB 4K BRB 16K(2000 BAUD)



## INSTRUCTIONS FOR REPACK WITH A BLUE RAM

SAVE TO TAPE WITH:

```
PRINT ";RUN ";:PRINT %(16384),1887
```

TO USE:

LOAD "REPACK". WAIT FOR PROMPT. LOAD TEXT WHEN "AWATING INPUT" APPEARS.  
(TEXT SCRATCHPAD AS FAR AS :PRINT %(16384),1987 WILL BE SAVED)  
WAIT FOR PROMPT. LOAD PICTURE WHEN "AWATING INPUT OF PICTURE" APPEARS.  
(ONLY THE PICTURE THAT WAS TAPED WILL BE KEPT)  
WAIT FOR "REPACK" TO FINISH. THEN CHOOSE, 1-YES:  
(SETS UP TO FOLLOW "FILE SEARCHER" FROM PAGE 125 VOLUME 5 ARCADIAN)  
(FOR CLUB TAPES MAYBE?)  
OR CHOOSE, 2-NO:  
(DUMPS IT OUT AT THE TOUCH OF A KEY WITH :LIST BUILT INTO THE UTILITY)  
OR CHOOSE, 3-[HALT]

## INSTRUCTIONS FOR REPACK WITH ASTRO BASIC

[USE FOLLOWING PROCEDURE]

- >1. KEY IN PROGRAM TEXT, VARIABLES, STRINGS, AND MACHINE CODE IN STACK AREA
- >2. AFTER DEBUGGING, TAPE MACHINE CODE WITH :PRINT %(20237),60 [OR WHATEVER]
- >3. RUN 30 SEC. OF BLANK TAPE THROUGH AND TAPE THE TEXT AND VARIABLES THERE  
NOTE: USE :PRINT %(-24576),904;:PRINT %(20000),57
- >4. REWIND TAPE, ENTER :LIST , AND PLAY TAPE STOPPING WHEN CURSOR RETURNS
- >5. PRESS [RESET] AND KEY IN PICTURE PROGRAM OR LOAD AB SCRIBBLING  
NOTE: REMOVE WORK TAPE TO USE SCRIBBLING BUT DON'T REWIND
- >6. TAPE PICTURE PROGRAM OR SCRIBBLING BEFORE TEXT WITH PICTURE SHOWING
- >7. REWIND TAPE AND PRESS [RESET]
- >8. RELOAD MACHINE CODE WITH :INPUT %(20237) [OR WHATEVER] AND STOP TAPE
- >9. ENTER THIS LINE, PRESS [GO] AND PLAY THE TAPE

```
PRINT ";RUN ";:INPUT ;:INPUT %(-24576);:INPUT %(20000);  
IF KP:PRINT %(16384),1987 [OR WHATEVER]
```

- >10. GET OUT YOUR FINISH TAPE, START IT RECORDING AN HIT A KEY
- >11. USE :LIST TO VERIFY

## "REPACK" PICTURE CONTEST RULES

AS YOU HAVE SEEN, THERE IS NO PICTURE FOR "REPACK"

SIMPLY SEND IN A TITLE PICTURE FOR THE UTILITY, ON A CASSETTE TAPE OR  
A LISTING THAT DRAWS YOUR PICTURE

ALL CONTESTANTS RECIEVE A COUPON TOWARDS A QUADRA PURCHASE

THE BEST JUDGED PICTURE RECIEVES QUADRA FREE!!!

PRESENT OWNERS OF QUADRA ARE NOT ELLIGIBLE FOR AN OBVIOUS REASON  
[YOU ALREADY HAVE THE PRIZE]



```

REPACK
BY MIKE WHITE
4585 COUNTY LINE 2
WAKEMAN, OHIO 44889
 5 CLEAR ;CY=10;CX=-21;PRINT "ZERØING";CX=-9;PRINT "RAM";CX=-18;PRINT "PLEASE
,CX=-12;PRINT "WAIT
 10 A=24576;B=32767;C=-A;D=-22772;E=19998;F=20358;G=16384;FOR N=ATO BSTEP 2;%(
)=0;NEXT N;CLEAR ;PRINT "  READY";PRINT "  AWAITING INPUT
 15 PRINT "  0F TEXT
 20 :INPUT %(A);PRINT "    IN BLUE RAM
 30 H=28600;I=30500;K=31000;M=K;J=30858;L=%(20000);FOR N=CTO LSTEP 2;%(M)=%(N)
M=M+2;NEXT N;PRINT "    UNPACKING TEXT
 40 P=8192;R=2308;FOR N=GTO ESTEP 2;%(N)=%(N+P);NEXT N;M=H;FOR N=CTO DSTEP 2;%(
M)=%(N);M=M+2;NEXT N;M=K;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEXT N
 50 CLEAR ;PRINT "    TEXT UNPACKED";FOR N=ITO JSTEP 2;%(N)=%(N-R);NEXT N;PRINT
"  READY TO LOAD PICTURE
 60 :INPUT %(A);PRINT "    IN BLUE RAM
 70 FOR N=0TO R;NEXT N;M=K;PRINT "    REPACKING TEXT
 80 FOR N=GTO ESTEP 2;%(N)=%(N+P);NEXT N;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEX
N;M=H
 90 FOR N=CTO DSTEP 2;%(N)=%(M);M=M+2;NEXT N;FOR N=GTO ESTEP 2;%(N+P)=%(N);NEX
N;M=K;FOR N=CTO LSTEP 2;%(N)=%(M);M=M+2;NEXT N
100 CLEAR ;PRINT "    TEXT REPACKED";FOR N=ITO JSTEP 2;%(N-R)=%(N);NEXT N;M=0;F
R N=28346TO 28550STEP 2;IF %(N)M=(N-28344)c2
110 NEXT N;N=M+21b(M#0);PRINT "  DØ YØU WANT";PRINT "  FILE SEARCH?";PRINT "  1=
ES  2=NØ
120 O=KP-50;IF OINPUT "  FILE SEARCH NØ.?"Y
130 IF (O<-1)+(O>0)GOTO 120
140 PRINT "  PRESS ANY KEY FØR";PRINT "    :PRINT
150 IF KP=O:PRINT Y,1
 60 :PRINT %(A),1864+N;PRINT "  :LIST ";:LIST ;IF O:LIST
170 PRINT ;PRINT "  TO RERUN UTILITY PRESS";PRINT "    (GØ)
180 IF KP=13RUN

```

If you have any questions about this program, if you are a little confused, then you can write to the program author, Mike White, at this address:

```

MICHAEL D. WHITE
4585 COUNTY LINE #2
R.D.#1 BOX 373
WAKEMAN, OHIO 44889

```

We will soon have Mike on our team as a monthly tutorial author, so that you can all learn the programming techniques that make his programs so great. (well, maybe not all the techniques)

I look forward to printing the introduction to Mike's tutorial series next month.

until then, this is

Kevin O'Neill  
EDITOR

July 27 1984

## SUBSCRIBER SITUATION

Has been looking up lately, however, we will still require many more subscriptions in order to keep up the newsletter next year without a raise in the member dues. I know that this is a lot to ask, but we really need your support now, and even moreso around re-subscription time, to let people know about what we do, and the advantages to being a part of our activities.

## MONTHLY TUTORIALS

Are now being supplied by Mike White, one of our subscribers, and a prominent software supplier for Astro BASIC and the extended BASIC. The first of his series is included this month, and installments will continue every month.

## CARTRIDGE GAME REVIEWS

Will also be included this month. These are reprinted excerpts from the as-yet unpublished article which I wrote for Video and Computer Gaming Illustrated. Several new cartridges are spotlighted, including titles from independent producers. It may take a couple of months to print all of the reviews, as I don't have the space in a single issue.

## PROGRAM

Included this month is Lizzard Lunch, by Tim White. The joystick and knob position the lizzard's tounge. after a while your lizzard will die of starvation, if 20 flies are not caught. The salamander gets faster flies than the tadpole, but the monitor lizzard is the hardest and fastest of all!

## CARTRIDGE DRAW

Those of you who also receive the ARCADIAN newsletter will have read about the draw we are going to hold here. It seems that we have a couple of extra cartridges knocking around here. GALACTIC INVASION and ASTRO BATTLE.

I figured that since we cannot sell them, we might as well give them away. all subscriber's names will be placed in a hat, or reasonable facsimile thereof, and (for the sake of being novel) the names will be eliminated one by one until only the winner's name is left. The draw will take place some time soon. I think that I'll give another month for new members to sign up and be entered. Tell your friends! (if they don't have those games) And if you have them and win, we can either re-draw or you can hope that you have better luck trying to sell them than we did.

# Niagara BUG Bulletin

```
><>< TRICKS OF THE TRADE ><><
><><><>< A TUTORIAL BY ><><><><
><><><><< MIKE WHITE ><><><><<
><><><><< COUNTY LINE #2 ><><><><<
><><><><< R.D.#1 BOX 373 ><><><><<
><><><><< WAKEMAN, OHIO ><><><><<
><><><><< 44889 ><><><><<
```

THIS NEW AND CONTINUOUSLY RUNNING (I HOPE) COLUMN IS FOR ALL LEVELS, BUT AIMED AT NEW POTENTIAL SOFTWARE PRODUCERS. HOWEVER YOU "OLD TIMERS" OUT THERE HAVE A LOT TO GAIN AS WELL AS THE RAW BEGINNER.

NOW I'M NOT OUT TO SPOIL ANYONE'S SOFTWARE BUSINESS, IN FACT IF YOU WANT A JUMP ON THIS COLUMN I RECOMMEND THESE SOFTWARE ITEMS: PACK RAT, MONKEY JUMP, AND DUNGEONS OF DRACULA [BY MIKE PEACE OF WAVEMAKERS], NAUTILUS [BY BILL LOOSE OF L+M SOFTWARE], THE GREAT AMERICAN JIGSAW [BY ESOTERICA LTD.] (IF AVAILABLE), OTHERS THAT I WILL MENTION LATER (SOME NO LONGER AVAILABLE), AND QUADRA (OF COURSE) [BY ME].

ALSO PRINTED LATELY WAS "REPACK". THE SECRETS HERE LIE IN THE FACT THAT ASTRO "UNPACKS" EACH LINE INTO THE LINE INPUT BUFFER BEFORE EXECUTION. LINES #40, 80, AND 90, EXECUTE WHILE THE UTILITY "STEPS OUT" OF MEMORY (SO TO SPEAK). HALTING DURING UNPACK OR REPACK CYCLES CAUSES A PROGRAM CRASH. HOW CAN IT WORK IF IT STEPS OUT YOU ASK? THE LOOPS MUST RETURN THE UTILITY TO MEMORY BEFORE ASTRO "UNPACKS" ANOTHER LINE (AT THE END OF THE CURRENT LINE). FOR N=0 TO LSTEP 2;ETC. RETURNS "REPACK" TO MEMORY (LINE 30 SAVES THE UTILITY TO BEGIN WITH). USING ASTRO'S OWN BUILT IN "PACKING AND UNPACKING" ROUTINE WE CAN EITHER USE A LOOP, OR TAPE FROM -24576 TO -22771 AND PERFORM THE FEAT.

IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLYS.

NOW ON TO OUR "CLIFF HANGER" FOR THIS MONTH. IN LESSON #1 OF THE ASTRO BASIC HANDBOOK YOU SAW THIS:

```
10 FOR A=1 TO 12
20 PRINT A
30 NEXT A
```

WE ALL KNOW WHAT THIS DOES RIGHT? DID YOU EVER TRY:

```
10 FOR A=1 TO 12
20 NEXT A
30 PRINT A
```

WHAT WILL IT PRINT? A 12? SO SOME THINK! NOT 12? WHAT THEN? RUN IT AND SEE! WHY? THAT IS NEXT MONTH'S LESSON.

"FOR NEXT LOOPS AND DJNZ RELATIONSHIPS"

ANY CLUES? YES! REREAD LESSON #1 ASTRO BASIC HANDBOOK HINTS? ONE! TRY CHANGING THE STEP AROUND! KEEP BUGGIN'

LIZZARD LUNCH  
BY TIM WHITE

b stands for X c stands for ÷ and a = right arrow

```

1 Q=0;CLEAR ;NT=0;CX=-30;CY=0;PRINT "LIZZARD LUNCH";FC=34;BOX 0,0,140,25,3;F
A=0TO 180;&(10)=A;NEXT A
2 IF TR(1)NT=0;GOTO 700
3 GOTO 2
10 CLEAR ;BC=8;FC=140;S=0;T=5
11 BOX 0,0,160,80,3;BOX 0,0,156,76,3
12 CX=30;CY=30;PRINT "FLY #
13 CX=30;CY=-18;PRINT "TIME:
20 BOX 44,0,4,14,1;BOX 43,0,2,10,3;BOX 47,0,14,6,1;BOX 56,0,10,14,1;BOX 60,0
,18,1
21 BOX 41,1,2,1,3;BOX 41,-2,2,1,3;BOX 39,0,1,4,1;BOX 58,0,8,8,2
22 BOX 58,0,10,4,1;BOX 65,0,20,2,1
30 LINE 38,0,4
40 X=JX(1)b30-30;Y=KN(1)c84b30
50 IF TR(1)MU="a";LINE X,Y,3;LINE 38,0,3;LINE X,Y,3;LINE 38,0,3;IF X=HIF Y=
SUB 550
60 T=T-1;IF T<1GOSUB 500
70 J=RND (10)+75;MU=J
71 Q=Q+1;IF Q>200GOTO 650
72 IF S>20NT=10;MU="^";MU="_";NT=50;MU="a";NT=0;GOTO 600
80 GOTO 40
500 BOX H,V,12,12,2;H=RND (3)b30-90;V=RND (3)b30-60;T=RND (P+1)
501 BOX H,V,3,9,1;BOX H,V,1,11,3;BOX H,V,11,1,1;BOX H+5,V,2,3,3;RETURN
550 M=12;FOR A=MT0 1STEP -1;FC=RND (10)b10;BOX X,Y,M,M,3;BOX X,Y,M,M,2;MU=M;M
-1;NEXT A;FC=140;S=S+1
551 CX=10;CY=18;PRINT S;GOTO 500
600 CX=18;CY=-30;PRINT Q;CX=-30;CY=0;PRINT "GAME OVER";BC=0;BOX 0,0,160,80,3
601 IF TR(1)FOR A=180TO 0STEP -1;&(10)=A;NEXT A;RUN
602 GOTO 601
650 CX=-40;CY=15;PRINT "DEAD LIZZARD!";BOX 42,-8,40,10,2;BOX 41,1,2,1,3;GOTO 6
700 FOR A=180TO 0STEP -1;&(10)=A;NEXT A
701 CLEAR ;FC=107;BC=7;CX=-60;CY=30;PRINT "ENTER DIFFICULTY
702 BOX 0,30,160,20,3
703 CX=-40;CY=15;PRINT "1-MONITOR LIZZARD
704 CX=-40;CY=6;PRINT "2-SALAMANDER
705 CX=-40;CY=-3;PRINT "3-TADPOLE
706 FOR A=0TO 180;&(10)=A;NEXT A
707 P=KN(1)c84+2
708 IF TR(1)NT=1;GOTO 10
709 CX=-70;CY=-35;PRINT P
710 GOTO 707
ENTER>PRINT ";&(10)=0;RUN ";;PRINT %(16384),1892 [REC]

```

The above command (see ENTER>) saves the program to tape on the Blue Ram add-on system.

The command :PRINT should work in Astro BASIC.

Thanks for this program Tim, and to our readers, I hope that you enjoy Tim's work.

## Cartridge Reviews

-----

Excerpts from an article by Kevin O'Neill

### TREASURE COVE

by Esoterica, Inc. \$32.95 U.S.

This unique sea adventure takes you to El Bayo del Matta Fisha, or the bay of deadly fish. You are a scuba diver, searching for treasure from a lost spanish galleon. You must swim down from your ship, toward the bottom of the bay, all the while avoiding many different sea creatures that try to stop you, and being careful not to exhaust your limited air supply. you may swim at one of two speeds (the trigger makes you swim faster) but swimming faster, although it is handy, exhausts air more quickly. The treasure must be collected one bit at a time (no pun intended), and once all treasure is collected from one part of the bay, you will be transported to another part, where more, different, and more deadly fish await you. This game is a great display of the super animation that your Astrocade is capable of, as every character on the screen is multi-colored, and animated. I have seen over seven characters on the screen at a time with no blinking! Special features of the game are a constantly playing three-voice musical score, with two pirate hits, and the lack of a normal menu before game play. Instead of the menu, as soon as you plug in the cart and press reset, you will see a beautifully detailed graphic mural of the sunken pirate ship, fish, a rainbow-colored title, and your diver. In all, this game is a super buy, and will keep you entertained for some time to come. There are 20 levels, and I have never even heard of anyone making it past level 8! A variety of fish and thrills await you in Treasure Cove.

### Cosmic Raiders

by Astrocade, Inc 34.95 U.S.

Well, here's another much delayed release by Astrocade! The wait was well worth it, however, as this is a supreme quality spece game. This game plays very much like the arcade game, defender. I say, the ARCADE game defender, because the home version of this game for Atari's pitiful 2600 system bears no comparison at all. There are a few differinces that should be noted. 1) Instead of protecting humanoids, you must stop bombs from falling to the surface of the planet. These bombs are often nested in a cluster of enemy spacecraft. 2) Instead of smart bombs, you may run through bonus energy stars, which will make you impervious to attack for a period of time (like in Vanguard). During this time, you may destroy the enemy ships by simply running through them. 3) No flashing, or disappearing ships during rapid fire!

<Continued on next page...>

The graphics in this game are superb. Almost all figures are animated, although every one is multi-colored, and beautifully detailed. The scoreboard and terrain on the home planet are also well done. Sound effects are well done, indeed. The sound of dropping bombs, laser blasts, and your ships engines are so realistic, you'd swear that you were there!

One of Astrocade's best new games yet!



More reviews to follow next month. Until then, KEEP ON BUGGIN!

Kevin O'Neill  
B.U.G. President

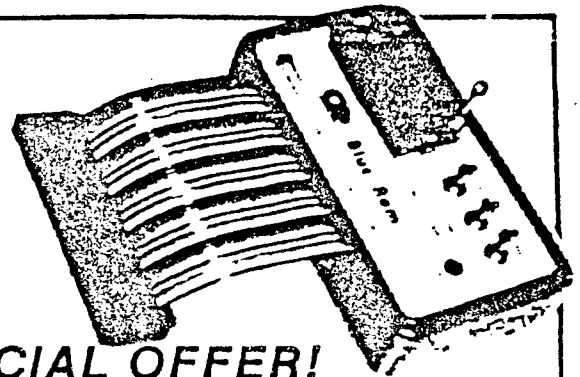
## 16-K AND 32-K BLUE RAMS NOW BEING SHIPPED

The Blue Ram by Perkins Engineering has already opened the door to hundreds of creative programmers who love the powerful graphics and sound capabilities in the Astrocade, but were stymied by its lack of random access memory (RAM). No more! Now, instantly, you can have up to 32768 bytes of additional memory.

You can use the Blue Ram to copy a game cartridge on regular cassette tape using the machine language routines included in the Blue Ram Utility program. Learn Z-80 machine code and modify an existing game cartridge! Write your own cartridge! And, with the 24 pin socket on the Blue Ram you can adapt your computer to drive a modem, a printer, a keyboard and many other applications! Regular price is \$249.95. (32K model is \$369.95).

### Blue Ram Extended Basic Cartridge

Written by Jay Fenton and John Perkins to take advantage of the Blue Ram's exclusive input and output ports, hardware and software switching mechanisms, and the Astrocade's outstanding game and graphics design capabilities. With 16K Blue Ram it gives up to 15,500 bytes of programming space (total SZ. With 32K Blue Ram total SZ is 31,894), with special POINT, CIRCLE and SNAP commands, 4 colors, built-in math routines, keyboard and printer-driving logic, 300 baud or 2000 baud data output and much more! Will not operate without a Blue Ram or other extended memory. Regular price is \$49.95.



### SPECIAL OFFER!

New 16K Blue Ram and the  
Extended Basic Cartridge  
a \$300.00 value

**\$275**

New 32K Blue Ram & Extended Basic Cartridge, \$395



**The Blue Ram Keyboard!** A 82 key typewriter style assembly mounted on wooden end blocks and fitted with a 3 foot cable to plug into the Blue Ram ZIF socket. Eally's command words are added to the keys. Price assembled and tested is \$39.95  
4300 W. 194 St., Cleveland, OH 44135  
Phone (216) 676-0603, Joe Poelking  
When ordering specify whether you have  
300 baud Bally Basic or 2000 baud Astrocade Basic



**PERKINS  
ENGINEERING**

Aug. 20, 1984

## MICHIGAN 'ASTRO BASH' NEWS

here are some interesting tidbits which I recently heard from one of our subscribers.

- \* **George Moses**, the noted expert on music for the arcade, has created a new three-voice music tape for Astro Basic featuring the music of the **Beatles!** When we hear news about the availability of this new tape, we will inform you.
- \* A new **cartridge** was also on display at the astro bash, a third-party creation, called LIFE. It is not like the board game, but like the math/logic game which challenges you to make up a pattern of cells, which, according to the rules of regeneration layed out in the manual, will mutate and grow.

## CONTEST RESULTS ARE IN!

The list below is of the last FIVE names picked out of the hat. As you can see, **Roy Dal Poggetto** of San Francisco, California is our big winner, and is entitled to the two cartridges.

All he has to do is write us to confirm that he would like us to mail them to him. If he already has them, he will not write in, and next month's issue will tell you that the next person down the list can write to receive them. I would like to continue these contests, if I could get some distributors to contribute prizes.

### The winner list:

- 1-Roy Dal Poggetto
- 2-Dave Carson
- 3-Jim Bonnar
- 4-Mike Kasberger
- 5-John Ernst

'The Big Winner!'

I admit that this system is a little strange, and I hope that the winner(s) don't resent having to write a letter to get the prize. This is the only way we could think of to get the prize to someone who would really appreciate it.

I don't think that the prize will be passed down 4 times, but I printed 5 names just to show how close some people came, as a point of interest.

# Niagara BUG Bulletin

```
><>< TRICKS OF THE TRADE ><><
><><><>< A TUTORIAL BY ><><><><
><><><>< MIKE WHITE ><><><><
><><><>< COUNTY LINE #2 ><><><><
><><><>< R.D.#1 BOX 373 ><><><><
><><><>< WAKEMAN , OHIO ><><><><
><><><>< 44889 ><><><><
```

BEFORE RETURNING TO FOR NEXT LOOPS, I WANT TO EXPLAIN THIS MONTHS PROGRAM SOMEWHAT. HERE IS A REPRINT OF "FILE SEARCHER EB"

```
ENTER>DE.;CLEAR
1 :INPUT
10 CLEAR ;DATA BC,7,165,91,0;DATA NT,0,-25,8,6;PRINT "STOP TAPE
20 NT=3;FOR G=0TO 50;MU=RND (26)+64;NEXT G;CLEAR ;FOR G=1TO
%(27808)c10-8;PRINT #3,G,;GOSUB 80
30 NEXT G;CC=5;PRINT "YOUR CHOICE?
40 G=KP-48;IF (G<1)+(G>%(27808)c10-8)GOTO 40
50 CLEAR ;DATA CX,-29,8,6;PRINT "START TAPE";NT=0
60 :INPUT W;CLEAR ;CY=12;IF Y=G CC=6;CX=-17;PRINT "LOADING";
GOSUB 80;RUN
70 CC=5;CX=-35;PRINT "SEARCHING FOR";GOSUB 80;FOR D=WTO X;NEXT D
;FOR D=WTO X;NEXT D;GOTO 60
80 IF G=1CX=-(# OF LETTERS+SPACES)b3+1;PRINT "PROG. TITLE
90 IF G=2 ETC.
(LAST LINE NO.) RETURN
ENTER>PRINT ";GOTO 10";:PRINT %(24676),1690
```

THE SET UP IN LINE #1 IS BECAUSE UNLIKE AB, EB EXECUTES INSTRUCTIONS WHERE THEY LIE. WE NEED TO SET UP A STARTING POINT SO THE COMPUTER DOESN'T GET LOST. USING LINE #1 IN AB WILL WORK. IN FACT, YOU HAVE THE ADVANTAGE OF SETTING UP THE LINE INPUT BUFFER OF YOUR "SLAVE" PROGRAMS. TAPE THOSE AB PROGRAMS:

```
ENTER>PRINT ";&(0)=170;&(1)=170;&(2)=7;&(3)=7;&(9)=20;RUN ";
:PRINT %(16384),1937
```

(THIS EXAMPLE TAPES "GOLF" PG.46 VOL.3 ARCADIAN). IN EB YOUR SLAVE PROGRAMS WILL HAVE TO START WITH:

1 ..

TAPE THEM BY FIRST TIMING A :PRINT (OF THE ENTIRE DUMP) NEXT ENTER THIS LINE TEMPORARILY AND FIND VALUES FOR W+X THAT GIVE A DELAY A LITTLE LONGER THAN YOUR DUMP ROUTINE TOOK.

```
30000 FOR Z=WTO X;NEXT Z;FOR Z=WTO X;NEXT Z
```

THEN TAPE WITH:

```
ENTER>:PRINT W,3;DA.W,(YOUR #'S);:PRINT (YOUR DUMP ROUTINE)
```



# Niagara BUG Bulletin

THE PUZZLING PART OF THIS PROGRAM IS THE PART DON GLADDEN DID NOT PRINT IN THE ARCADIAN, %(20111). PUT AB IN THE SLOT AND RESET. ENTER>PRINT %(20111). NOW ENTER [WORDS] [GO]. WHAT LINE # ARE YOU AT? ENTER:

```
10PRINT "YOUR NAME
```

NOW >PRINT %(20111). WHAT DID YOU GET NOW? RESET AND ENTER>%(20111)=9990. NOW ENTER [WORDS] [GO]. WHAT LINE # ARE YOU AT NOW? ARE YOU NOW FAMILIAR WITH THE +10 ADVANCE REGISTER? IN OLD BB IT WAS AT %(20068), %(-32608) IN VIPER-SOFT, AND %(27808) IN BLUE RAM BASIC. THIS SETS THE LOOPS AUTOMATICALLY IF A CHANGE IS MADE TO THE MENU. (NEW ADDITION PERHAPS). JUST ENTER:

(LAST LINE #) [PAUSE] [PAUSE], JUST BEFORE TAPING. DONT FORGET!

IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLY'S. NOW ON TO:

## FOR NEXT LOOPS AND DJNZ

DID YOU FIGURE THAT LOOP OUT FROM LAST MONTH? ON PAGE 21 OF THE ASTRO BASIC INSTRUCTION MANUAL YOU WILL READ:

"THE WORD NEXT IN LINE 30 MEANS ADD 1 TO A AND LOOP BACK TO THE WORD FOR."

NOT "HE WILL GO BACK TO LINE #20, ADD ONE TO 'A', AND REPEAT THE PROCESS, (LOOP), UNTIL 'A' IS MORE THAN FIVE.", AS DON GLADDEN SAID ON PG.69 VOL.5 ARCADIAN. NOW I,M NOT SAYING THAT DON'S TUTORIALS IN VOL.5 WERE MISLEADING, IN FACT THIS IS THE ONLY TIME THAT A TECHNICAL MISTAKE WAS MADE! IF YOU HAVEN'T GOT VOL.5 GET IT! DON'S (AND OTHERS) WRITINGS ARE INVALUBLE! WHY DID THE LOOP OVERRUN A 13? YOU ASK? WHEN BASIC WAS WRITTEN THE "WIZZARDS" IN THE BUSINESS DECIDED TO GIVE US A LOOP INSTRUCTION THAT RESEMBLES DJNZ! WHAT'S DJNZ??? YOU ARE WONDERING. DJNZ IS THE ASSEMBLY LANGUAGE MNEMONIC FOR A MACHINE CODE INSTRUCTION USED FOR LOOPS. DJNZ STANDS FOR "DECREMENT AND JUMP IF NOT ZERO" THE B REGISTER INSIDE THE 280 (NOT BASIC VARIABLE B), IS PRESET. THEN WHEN THE DJNZ IS ENCOUNTERED B IS DECREMENTED BY ONE THEN TESTED. IF B=0 THE NEXT INSTRUCTION IS EXECUTED. IF NOT, THE OFFSET VALUE (IMMEDIATELY FOLLOWING THE DJNZ) IS ADDED TO THE PROGRAM COUNTER, CAUSING A JUMP TO OCCUR, + A LOOP TO BE FORMED. NOTICE THAT THE "NEXT" IN BASIC DOES THE SAME. THE VARIABLE IS ADDED TO THE "STEP", THEN IT IS TESTED TO SEE IF IT HAS PAST THE END OF THE LOOP. IF YOU TRIED CHANGING THE "STEP" AROUND YOU WOULD HAVE FOUND THAT THE VARIABLE STOPED ONE "STEP" OVER THE END. NOW, I'LL GIVE YOU SOMETHING TO HOLD YOU TILL NEXT MONTH.

ON PG.103 VOL.4 ARCADIAN I READ (CONCERNING GOTO AND GOSUB), "THE COMPUTER GOES BACK TO THE BEGINNING AND SEARCHES FOR THE NEW LINE NUMBER.-SHOULD BE NEAR THE BEGINNING TO SAVE TIME." FOR NEXT LOOPS HAVE NO SUCH HANGUPS AND CONSEQUENTLY RUN FASTER. BUT ,CAN YOU WRITE A FOR NEXT LOOP THAT WON'T END? IT HAS BEEN DONE. SEE MONKEY JUMP OR QUADRA! ANSWERS NEXT MONTH. KEEP BUGGIN'!

# Niagara BUG Bulletin

```
1 CLEAR;BC=0;FC=158
3 FOR W=1 TO 600;NEXT W;RETURN
6 .PROG. F-6 * S.KENDALL,WILMETTE,IL USA
8 .EVER CHANGING CROSS
9 .FROM BALLY BASIC M-II
10 CY=36; PRINT "ATTRACTIVE VARIATIONS:";
    PRINT " CHANGE BOX SIZES,LINE
20 PRINT " 110,140 &170";PRINT;PRINT "
    BOX & STEP SIZES CAN
30 PRINT " BE CHANGED FROM KEYPAD.";
    PRINT ;CX=-40;CY=-34;PRINT "KP TO GO"
40 GOSUB 3;BOX 0,0,158,86,3;BOX 0,0,152,82,3
50 BOX 0,-34,100,10,3
60 IF KP GOTO 100
100 CLEAR;BC=119;FC=0
102 S=RND(3)+1
110 FOR A=12 TO 24 STEP S
120 FOR C=1 TO 30
130 B=RND(A)*2
140 FOR D= -50 TO 50 STEP 10
150 BOX D,0,B,B,3
160 NEXT D
170 FOR E= -30 TO 30 STEP 10
180 BOX 0,E,B,B,3
190 NEXT E;NEXT C;GOSUB 3
200 BC=RND(256);FC=RND(256);IF BC=FC GOTO 200
210 BOX 0,0,158,86,3;NEXT A
```

This program by **Stan Kendall** creates user-variable graphics. Note the built-in instructions in the rem (.) statements.

## OOPS!

Last month's issue contained the program Lizzard Lunch by Tim White, on page 28. On that page I stated that the statement after the **ENTER>** line was for taping the program on a system equipped with a **Blue Ram** add-on.

This was a big mistake. You see, since I had never seen a direct-entry command quite like that before, I assumed that it was for the Blue Ram, which I have little experience with. However, I began to understand later that the command is the way you tape a program when you want it to auto-run.

The statement places **RUN** in the line-input buffer, where commands are stored during entry, before you push **GO**. The computer will execute that statement as soon as the program is fully loaded. This gives you the equivalent of **:INPUT ; RUN** with only **:INPUT**.

In the case of Lizzard Lunch, it also places a command in the L.I. buffer that closes a 'curtain' down over the screen, by setting the value of **&(10)** to 0. This is another 'hidden built-in' of **Astro Basic**.

The auto-run procedure will be fully documented next month in Mike White's tutorial.

Sept. 22. 1984

## Cartridge Availability

Some of our members have discovered a few interesting details about the current state of affairs, concerning cartridges for the Astrocade.

- Astrocade will be shipping more copies of the latest releases, **Solar Conqueror** and **Cosmic Raiders**, but they expect small demand.
- It seems that there has been a shortage of the third party release, **Treasure Cove** (a review of which appeared in our July issue). What contributed to this shortage we do not know. More news as we receive it.
- Hanimex, Canada (the Canadian distributor for Astrocade) has recently been unloading cartridges for only \$10.00 Canadian apiece (to defray the cost of shipping, they say). If you would like to add a few of the older titles to your collection, I strongly suggest that you try Hanimex. Their most recent titles are **Incredible Wizard**, and **Artillary Duel**, although we do not know just how big their supply of these games are.

Send funds, plus a letter of explanation and list of games to:

**Hanimex (Canada) Limited**  
207 Idesa Road  
Markham, Ontario  
L3R 1G8

## More Contest News

Roy Dal Foggetto was pleased to accept the prize of two cartridges. He will be receiving them this month, along with his newsletter.

Roy's letter of acceptance also contained some very interesting information about himself. Roy is a Certified Electronics Technician, and has made several modifications and additions to his Astrocade in the five years that he has owned it.

**Some of them are:** a large up-front rocker switch for power on/off, an LED power on/off indicator, an audio output jack to his stereo, and a keyboard, wired into the unit through an old 300 baud Bally Basic audio interface.

A couple of these projects were outlined in the Arcadian newsletter, but it takes considerable skill to make them work. Good going, Roy!

# Niagara BUG Bulletin

```
><>< TRICKS OF THE TRADE ><><
><><><>< A TUTORIAL BY ><><><><
><><><><>< MIKE WHITE ><><><><
><><><><>< COUNTY LINE #2 ><><><><
><><><><>< R.D.#1 BOX 373 ><><><><
><><><><>< WAKEMAN, OHIO ><><><><
><><><><>< 44889 ><><><><
```

## FOR NEXT LOOP LOCKING:

IS WHAT I CALL A METHOD OF TIEING UP A VARIABLE SO AS TO CAUSE A FOR NEXT LOOP TO RUN (POSSIBLY) FOREVER. I TOLD YOU LAST MONTH WHY YOU MAY WANT TO DO SO. ALSO, I SAID TO LOOK INTO "MONKEY JUMP", OR "QUADRA". IN "MONKEY JUMP" YOU WILL FIND THIS:

```
110 FOR F=1TO 4STEP 0;IF E=38E=0;GOTO 230
```

DID YOU GUESS IT WAS THIS EASY? IN "U.F.O. ATTACK" (PART OF "QUADRA"), YOU CAN FIND THESE LINES: (BETWEEN OTHERS)

```
37 FOR R=MT0 Q;GOSUB 6;IF WK0BOX Z,-39,1,3,1;IF TR(U)GOSUB 6;C=Z;W=0;GOTO 11
```

```
40 IF L=1IF NK2R=R-1;Y=Y+F;GOSUB 8;IF V=4Y=Y-5
```

THE LOOP IN LINE 37 DEFAULTS TO STEP 1. THE "R=R-1" IN LINE 40 LOCKS THE LOOP. THIS CAUSES THE FLYING SAUCERS TO STOP WHILE ONE LITTLE GUY COMES ACCROSS, GUNS BLAZING, LIKE "GALAXIAN". THE LOOP NORMALLY MOVES THE U.F.O.'S "SPACE INVADER" STYLE. (ONE AT A TIME). IF YOU TRY CHANGING THE "TO" OR "STEP" VALUE AFTER THE LOOP STARTS, YOU ARE IN FOR A DISAPPOINTMENT. THESE VALUES ARE "PUSHED" ONTO THE "STACK" AND ARE QUITE UNTOUCHABLE. TRY:

```
10 FOR A=0TO BSTEP C
20 B=5;C=1
30 PRINT A
40 NEXT A
ENTER>B=100;C=10;RUN
```

THE EXPRESSION "ENTER>" MEANS ENTER WITHOUT A LINE # AND EXECUTE IMMEDIATELY. YOU WILL FIND THAT THE VALUES DON'T CHANGE AND RND #'S CAN BE PUT IN DIRECTLY AS WELL AS USING B OR C IN THE LOOP FOR ANYTHING ELSE. SEE LINE 90 OF "CROSSING SIGNAL", THIS MONTH'S PROGRAM.

"CROSSING SIGNAL" IS A DEMONSTRATOR OF "SCREEN TAPING" AND "AUTO RUN". THE PROGRAM OPERATES ON THE PRINCIPLE THAT &(9) CAN BE MOVED INSIDE A LOOP. THE TITLE TO "THE SECRET OF PELLUCITAR", (WHICH HAD RAVE REVIEWS) DID THE SAME TRICK. THE PROGRAM ENDS AT LINE #110, AND BEYOND IS A TAPE COPY ROUTINE. NOTICE THE SCREEN IS ASSEMBLED AND TAPED GRAPHICS SHOWING. ALSO, IT "AUTO RUNS"!!!

# Niagara BUG Bulletin

THE "SECRET" BEHIND "AUTO RUN", IS THAT THE MICROPROSSER, THE Z80, THE BRAIN OF THE MACHINE (IF YOU WILL), KEEPS TRACK OF WHERE IT'S AT IN A BASIC PROGRAM WITH ITS OWN DE REGISTER. SO, DE STOPS AT THE WORD "INPUT" WHEN WE LOAD A TAPE. TO GENERATE AUTO RUN WE MUST FUDGE IN ";RUN" SO THAT THE ARCADE "THINKS" IT SEES ":INPUT ;RUN ". USING ":PRINT %(16384),1887" TAPES JUST TO THE WORD "RUN ". NORMAL :PRINT STOPS SHORT OF THE LINE INPUT BUFFER, AND THEREFORE CANNOT BE USED. ON PAGE 103 ASTRO BASIC HANDBOOK IT SAYS THAT THE LINE INPUT BUFFER STARTS AT %(20154). LEAVING TWO BYTES FOR THE :INPUT MAKES %(20156). ON PAGE 98 SAME BOOK, YOU SEE THE CODE FOR ";" IS 59 (TRY TV=59), AND FOR "RUN" IT'S 106 (TRY TV=106). TO GET THE RIGHT ORDER WE MUST MULTIPLY THE SECOND ENTRY (THE "RUN") BY 256. THAT GIVES 106\*256+59=27195 WHEN THE SCREEN IS IN PLACE, AS IT IS WHEN WE TAPE THIS MONTH'S PROGRAM, IT'S EASIER TO USE THIS ONE POKE. OTHERWISE USE:

```
ENTER>PRINT ";RUN ";:PRINT %(16384),1887
```

THIS HAS THE ADDED BENEFIT OF ALLOWING USE OF THE BUFFER FROM TAPE. SEE WHAT WE DID TO "GOLF" LAST MONTH IN THIS COLUMN. YOU MAY EVEN START YOUR PROGRAMS OUT IN THE MIDDLE WITH A GOTO AND THIS AUTO RUN. THE BRB QUADRA DOES!!

TO ALLOW SUCH TAPINGS TO BE FILE SEARCHED YOU MUST USE THE MODIFIED FILE SEARCHER SUGGESTED LAST MONTH. YOU DON'T HAVE TO :INPUT W,3 HOWEVER. THAT WAS SO DIFFERENT LENGTH PROGRAMS COULD BE FILED. "FOR D=0 TO 11000;NEXT D" DOES IT ALL FOR AB. IF YOU WANT TO USE THE LINE INPUT BUFFER FROM TAPE IN BRB, AND NOT START YOUR SLAVE PROGRAMS OUT WITH "1 ..", ADD LINE 5:

```
5 .ABCD
```

AND CHANGE LINES 1,30,AND 60, TO:

```
1 ..;:INPUT ;RUN
30 NEXT G;DATA A,>1,>5+1,27948,C;FOR E=ATO BSTEP 2;%(D)=%(E);
D=D+2;NEXT E;CC=5;PRINT "YOUR CHOICE?
60 :INPUT W;CLEAR ;CY=12;IF Y=G CC=6;CX=-17;PRINT "LOADING";
GOSUB 80;%(C)=8224;CALLB
```

AND TAPE USING:

```
ENTER>PRINT ";RUN ";%(5+1)=11537;%(5+3)=-13971;
:PRINT %(24576),1688 [REC]
```

WHEN YOU SEE [REC] IN ANY OF MY PROGRAMS IT MEANS START TAPE RECORDING THEN PRESS GO. IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLY.

THESE CHANGES WERE ORIGINALLY WRITTEN TO TAPE BRB 4K SCREEN AND TEXT SIMULTANEOUSLY. THE ATTEMPT FAILED, BUT LEFT THE "LINE INPUT BUFFER CALLBACK ROUTINE" (AS I CALL IT) IN ITS WAKE!

# Niagara BUG Bulletin

WHEN THE PROGRAM "AUTO RUNS" IT SEES THE PERIODS IN LINES #1+5, IGNORING THOSE LINES. WHEN IT GETS TO ALTERED LINE #30, IT SETS 3 VARIABLES, THEN MOVES THE CONTENTS OF LINE #1 TO THE LINE INPUT BUFFER BY PEEK AND POKE, (SAME WAY "REPACK" MOVED THE TEXT TO PACK AND UNPACK). WHEN THE CORRECT PROGRAM IS FOUND, (IN LINE #60), TWO SPACES ARE POKED INTO THE FIRST TWO BYTES OF THE LINE INPUT BUFFER (256b32+32=8224). "TV=32" GIVES A SPACE. (SEE PAGE 98 ASTRO BASIC HANDBOOK). I'M NOT SURE EXACTLY WHY THIS HAS TO BE "SPACE SPACE SEMICOLON", BUT BELIEVE ME, IT WORKS THIS WAY. TO GET THE COMPUTER BACK INTO THE LINE INPUT BUFFER REQUIRES MACHINE CODE. YOU CAN'T DO IT FROM BASIC, EVEN BRB! WHEN WE TAPE THE PROGRAM, WE POKE A VERY SHORT ROUTINE INTO LINE #5, AND CALL IT FROM THE END OF LINE 60. THE MACH CODE PART IS:

```
LIBCBR.LD.DE,27949 ;FUDGES A NEW DE VALUE
.RET. ;RETURNS TO BASIC INSIDE LINE INPUT BUFFER
```

REMEMBER THAT THE DE REGISTER (INSIDE THE Z80) IS THE BASIC TEXT PROGRAM POINTER. LIBCBR IS A LABEL, MEANING "LINE INPUT BUFFER CALLBACK ROUTINE". ".LD.DE,27949" IN ASSEMBLY LANGUAGE MEANS LOAD DE WITH 27949, (ADDRESS OF 2ND BYTE OF LINE BUFFER). ".RET." IN ASSEMBLY CODE MEANS RETURN (TO BASIC), AT THE PLACE THE DE REGISTER NOW INDICATES!! WELCOME TO THE WONDERFULL NEW WORLD OF MACHINE LANGUAGE! TO GENERATE THE TWO POKES I USED "THE ASSEMBLER" [FROM GENERAL VIDEO]. A MUST PURCHASE! ALL EB USERS!!

BE SURE TO LEAVE 5 BYTES AHEAD OF THE SEMICOLON ON YOUR SLAVE PROGRAMS. LIKE THIS:

```
ENTER>PRINT " ;RUN " ;:PRINT W,3 ;:PRINT %(24576),1766
```

3 SPACES ARE ADDED TO THE QUOTE. ALSO "1766" TAPES THE ENTIRE LINE INPUT BUFFER. (IN BRB)

```
TO STOP "AUTO RUN" ENTER>CLEAR ;PRINT ;:INPUT
```

AND PLAY THE TAPE. THIS DISPLACES THE DE REGISTER AND ALLOWS YOU TO LIST THE PROGRAM AND LEARN ITS CONTENTS. DON'T USE THIS TO PIRATE TAPES! THOSE COPYRIGHTS THEY PRINT ARE LEGAL IN COURT EVEN WITHOUT EVER BEING REGISTERED. TO COPY GAURD A TAPE (IN AB)

```
ENTER>PRINT " ;RUN " ;%(20120)=199 ;:PRINT %(16384),1937 ;
%(20120)=3779 [REC]
```

MOST PURCHASED SOFTWARE IS LISTABLE, HOWEVER. IF WE COULD ONLY UNDERSTAND THE LISTINGS!! TRY THIS: (IN EB ONLY)

```
10CLEAR ;XY=0 ;FOR A=0TO 100 ;LINE RND (160)-81,RND (88)-45,3 ;@(A)
=XY ;NEXT A ;XY=0 ;FOR A=0TO 100 ;LINE @(A),B.(@(A),1),3 ;NEXT A ;RUN
```

CAN YOU DO THIS IN AB? SEE NAUTILUS [BY L+M], OR CHANGE THE "BYTE ( @(A),UPPER)" TO "@(A)c256-(RM#0)b( @(A)<0)", OR SEE PG. 59 VOL. 5 ARCADIAN. HOW? WITH THAT? NEXT MONTH! KEEP BUGGIN'!!!

# Niagara BUG Bulletin

## Corrections/Additions

Last month's issue contained a graphics program by Stan Kendall, on page 34. Stan sends these corrections, and suggested alterations.

09/03/84

GOTO 10 is missing in LINE 1. LINE 220 is also missing.\*

LINE 220 is used when loading a prog. to tape. It keeps the CURSOR at the bottom of the screen, etc.

The following make attractive screen designs:

LINE 110: A=4 TO 24

LINE 140: D=-60 TO 60

LINE 170: E=-30 to 30 STEP 5

Try different numbers in LINES 110,120,130,140 & 170.

The \* in LINE 130 is supposed to be X for times.

There are lots of things which can be done to this prog. to enhance it. Setup a LOOP 80 to 214 and change the constants in LINES 102 to 170 to variables which change from LOOP to LOOP.

\* Line 220 NT=3;SM=2;CY=-40;STOP

Stan also sends this program for a clock. It will run in AB, BB, or EB. AB and BB users should delete the first statement (CF=SM.) in line 500. This sets the variable character font size available in Extended BASIC on the Blue Ram and Viper add-on memory systems.

```
10 CLEAR ;NT=0;BC=158;FB=91;FC=0;CF=L.
20 .'CLOCK' S.KENDALL' 5/19/84'
70 CY=30;INPUT " ENTER HR & MIN"A,B
71 CLEAR
100 BOX 0,0,100,40,2
120 FOR H=ATO 24;IF H=24 A=1
130 FOR M=BTO 59;IF M=59 B=1
140 FOR S=0TO 59
144 CY=10;CX=-34;PRINT "HR MIN SEC"
150 CY=-10;CX=-34;PRINT #1,H,#2," : ",#2,M,#2," : ",#2,S
160 FOR N=1TO 740;NEXT N;.TIME ADJUST.
170 NEXT S;NEXT M;NEXT H;GOTO 120
500 CF=SM.;CLEAR ;LIST
```

OCT 27, 1984

## Humming Right Along:

We are rapidly approaching the end of the present volume of the Niagara B.U.G. Bulletin, and it will soon be time to re-subscribe. In order to gain more member strength, we will be offering a special 'deal' on subscriptions.

It's called 'The Buck Back Plan' and it works like this. If you convince one of your friends, who has never subscribed to the B.U.G. Bulletin before, to join, then after you have sent in your subscription fee, you get a dollar back, for helping us. If you convince two friends to join, you get two dollars back, etc. The money you get cannot exceed what you pay for the subscription.

Your friends will have to state in thier letter, who told them to sign up. Remember, the person has to be a brand new member.

## Hardware Mishaps

If you have owned your machine for three years or so, you may have been having a bit of a problem. On my machine, and those of a couple of our closer members, every so often, the colors on the screen go a little 'weird' and the sound gets muffled, and quiet.

You may also have discovered (goodness knows how!) that a sound rap on the left side of the machine, just adjacent to the keypad, restores normal order. I was shown this rather direct but effective measure by a member one day when, during a demonstration, the machine started to act up.

When this problem presented itself again later, I debated over and over whether this was 'the thing to do'. A while ago, I happened to open up my machine, and, while I was in there, not being the technical type, I (very carefully, mind you) poked around and put a couple things in what seemed to be proper order.

Now you expect me to say that when I plugged the machine in again, it blew up, right? Sorry! As a matter of fact, it worked prefectly, and I haven't encountered any problems with the picture and sound since. Now here's what I did:



# Niagara BUG Bulletin

## Hardware Mishaps Continued...

- 1) I don't care how unprofessional it sounds, I wiggled the R.F. modulator a little! I admit it! but there is a sound reason behind it! it cleans the metal contacts. Do this very gently, and when you are finished, make sure that it is properly re-mounted.
- 2) There are several little bits of copper tape between the metal covers over the motherboard. These are non-adhesive, and are held in place by static electricity, as far as I can tell. I think that they are used to ground the system. If any don't seem well stuck on, wherever they are, push them down a bit.

I won't take any responsibility for what happens to your machine or yourself if you follow my advice, because I'm not an expert. However, I know that it worked for me, very well. Take a little more advice:

- 1 - make sure that the machine is unplugged and cool before you open it.
- 2 - There are 5 star-head screws to remove on the bottom of the case, in order to open it. Remove them very carefully and be sure to know which screw came from which hole.
- 3 - wear rubber gloves if you have any, and make sure that you discharge any static electricity that you may have picked up before you touch anything.
- 4 - if you don't know what an R.F. modulator is, and just where to look for it, check the diagram on page 7. An R.F. modulator converts the computer's signals into radio frequency to be interpreted by your T.V. (hence the name)

Good luck, and clear pictures to all of you!

# Niagara BUG Bulletin

```
><><   TRICKS OF THE TRADE   ><><
><><><><  A TUTORIAL BY   ><><><><
><><><><<    MIKE WHITE   ><><><><<
><><><><<<  COUNTY LINE #2  ><><><><<<
><><><><<<< R.D.#1 BOX 373  ><><><><<<<
><><><><<<<< WAKEMAN , OHIO  ><><><><<<<<
><><><><<<<<<    44889   ><><><><<<<<<
```

NAUTILUS [L+M SOFTWARE] HAS A VERY INTERESTING TITLE PROGRAM WHICH SEES A SUBMARINE EXPLODE WITH RANDOM LINES AND THEN THESE LINES DISSAPPEAR LEAVING THE SUB WITHOUT A SCRATCH! HERE ARE THE TWO LINES RESPONSIBLE FOR THIS (THOUGHT TO BE IMPOSSIBLE) FEAT:

```
6 FOR A=1TO 20;FC=114;NM=3;NV=255;LINE 24+RND (26H)-H,-40+H-RND
(Hb2),4=XY;X(A)=XY;FC=7;LINE 24,-40,3;↓;NEXT A
7 FOR A=1TO 20;FC=114;NM=3;NV=255;XY=X(A);LINE 24,-40,3;FC=7;↓;
NEXT A;FC=8;BC=238;&(10)=154;&(9)=-1;&(15)=0
```

IGNORING THE COLOR CHANGES, SOUND ENHANCEMENTS, AND THE PORT COMMANDS (AT THE END), YOU GET BASICALLY:

```
10 FOR A=1TO 20;LINE RND (150)-51,35-RND (150),0;X(A)=XY;LINE 24
,-40,3;NEXT A;FOR A=1TO 20;XY=X(A);LINE 24,-40,3;NEXT A
```

IN THE FIRST LOOPS, H=75. IN THESE LAST LOOPS YOU CAN SEE WHAT DOES THE RANDOM LINE ERASE. AN INVISIBLE LINE IS DRAWN TO A RANDOM LOCATION. THE VARIABLE XY IS STORED, AND A VISIBLE LINE IS DRAWN TO THE SUBMARINE. THE SECOND LOOP MOVES VARIABLE XY TO THE STRINGED LOCATION WHERE OUR VISIBLE LINE STARTS, THEN IT REDRAWNS THE LINE TO THE SUB USING XOR (REVERSE LINES). ON PG.109 ASTRO BASIC HANDBOOK IT TELLS US "EACH LINE IS DRAWN BEGINNING AT THE END POINT OF THE MOST RECENT LINE DRAWN. THE LOCATION OF THIS END POINT IS STORED IN THE TWO LETTER VARIABLE XY". MEANING THAT WHEN A LINE IS DRAWN IT DRAWS FROM THE LOCATION IN XY TO THE LOCATION SPECIFIED IN THE LINE COMMAND, THEN BALLY UPDATES VARIABLE XY. IF WE DRAW AND REDRAW THE SAME REVERSE (XOR) LINE WE WIND UP WITH THE ORIGINAL PICTURE REGARDLESS OF WHAT IT MAY HAVE BEEN. THE PROBLEM (UP TO NOW) HAS BEEN HOW TO REDRAW A LINE FROM THE STRUNG XY. ON PG.110 AB HANDBOOK IT SAYS "THE Y VALUE OCCUPIES THE HIGH ORDER BYTE OF THIS WORD, X THE LOWER BYTE". WE MUST PERFORM A "BYTE SPLIT" TO FILL A LINE COMMAND WITH THIS NO. THESE THREE LINES OF PACK RAT [WAVEMAKERS] SHOW US SOMETHING:

```
405GOSUB 60;&(17)=129;FOR A=840TO 255STEP -8
406BOX A,-2,8,8,3;BOX A+8,-2,8,8,2;BOX A-24,-2,6,6,3;BOX A-16,-2
,6,6,2;&(21)=A;&(23)=A
410NEXT A;&(16)=19;GOTO 15
```

NOTICE THE "A" VARIABLE IN THE BOXES IS OVER 255. THIS MEANS THAT BALLY IGNORES THE HIGH ORDER BYTE BETWEEN COMMAS IN BASIC!!

# Niagara BUG Bulletin

THE X PART IS DONE FOR US THEN. THE Y PART IS DONE ONE OF 3 WAYS. USING THE BYTE COMMAND (AS I DID LAST MONTH), DIVIDING BY 256 (WHICH GETS MESSY), OR USE VOL.5 PG.59 ARCADIAN. HERE ARE:

## RANDOM LINE ERASE PROGRAMS AB

```
10 CLEAR ;FOR A=0TO 100;LINE RND (160)-81,RND (88)-45,3;@(A)=XY;
NEXT A;XY=0;FOR A=0TO 100;B=@(A);LINE B,Bc256-(RM#0)b(B<0),3;NEX
T A;RUN
```

```
10 CLEAR ;FOR A=0TO 100;LINE RND (160)-81,RND (88)-45,3;@(A)=XY;
NEXT A;XY=0;FOR A=0TO 100;B=@(A);LINE B,%(20005),3;NEXT A;RUN
```

IN THE FIRST ONE I BORROWED ANOTHER VARIABLE SO AS TO CUT 2 BYTES OFF OF THE SUGGESTED "c256" METHOD I HINTED AT LAST MONTH.

IMPROVEMENTS ARE THE NAME OF THE GAME HERE. TRY USING THE KEYWORD "DEFAULT" IN PLACE OF "XY=0" IN THE EB VERSION PRINTED LAST MONTH. XY IS ZEROED ON A DEFAULT COMMAND IN EB, OR ON CLEAR IN AB. YOU MAY NOT BE ABLE TO USE THIS IN A PROGRAM THOUGH, FOR OBVIOUS REASONS, CLEAR SCREEN OR DEFAULT ALL 2 LETTER VARIABLES!

THE 2ND AB LINE ERASE USES VOL.5 PG.59. REMEMBER THAT EACH VARIABLE USES TWO ADDRESSES IN MEMORY. "B" USES %(20004) FOR THE LOW ORDER BYTE AND %(20005) [%(20004+1)] FOR THE HIGH ORDER BYTE. IF WE HAD USED A "Q" INSTEAD OF A "B", THE HIGH ORDER BYTE FALLS AT %(20035). IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLYS.

OVER THE LAST TWO MONTHS I'VE BEEN TALKING ABOUT DIFFERENT WAYS TO FILE SEARCH AND AUTO RUN. THE REASON IS THAT THERE ARE MANY WAYS OF TAPING PROGRAMS. WHY? LET'S SAY YOU HAVE A PROGRAM THAT WON'T FIT IN 1800 BYTES. USE EB? CAN'T SELL IT TO AB USERS. USE 2 PROGRAMS? WHY NOT? BECAUSE AB TAPES THE VARIABLES!! IF YOU WISH TO KEEP THE VARIABLES INTO THE SECOND PROGRAM YOU MUST USE:

## CARRY OVER MEMORY

THERE ARE THREE METHODS OF HOLDING VARIABLES INTO ANOTHER PROGRAM. THE FIRST IS SEEN IN "HAUNTED HOUSE" (NEW IMAGE), THE SECOND IN QUADRA (AB + BR 4K VERSIONS), AND THE ONLY PLACE YOU WILL SEE THE THIRD IS IN "SPACE MISSION", THIS MONTHS PROGRAM.

YOU MUST ENTER THE TEXT EXACTLY AS SHOWN IN THE LISTING OR PART 2 (NEXT MONTHS PROGRAM) WILL BLOW RIGHT OUT!! THE CARRY OVER IS IN THE CUSTOM CHIPS. LINES 710 AND 720 DO SOME PRETTY FANCY STUFF TO LOAD THE INTERCEPT FEEDBACK REGISTOR WITH 1 OF 2 POSSIBILITES FOR VARIABLE A. ONLY IF THE TEXT IS IN THE RIGHT PLACE IS INPUT PORT 8 (SEE PG.102 AB HANDBOOK) GOING TO GIVE THE RIGHT NUMBERS. THE CUSTOM CHIPS IS ONE PLACE TO HIDE A VARIABLE THAT YOU WISH TO PASS ALONG FROM ONE PROGRAM TO ANOTHER, BUT NOT A STRING, OR THE WHOLE SCRATCHPAD. HOW CAN WE CHANGE A PROGRAM TEXT AND KEEP THE SAME SCRATCHPAD (SCORES OR STRINGS)? SEE THIS COLUMN NEXT MONTH! (OR QUADRA, OR HAUNTED HOUSE) KEEP BUGGIN'!!!

# Niagara BUG Bulletin

## CROSSING SIGNAL

```
10 PRINT " MANUAL-1  AUTOMATIC-2";B=KP-49;IF (B<0)+(B>1)CY=24;RUN
20 BOX 0,32,160,24,2;BC=220;&(0)=220;&(1)=220
30 &(2)=0;&(3)=0;TC=30
40 FOR A=0TO RND (5)+30;FOR VC=15TO 1STEP -1
50 FOR T=0TO 5;NEXT T;&(9)=19;FC=90;NEXT VC;FC=0
60 &(9)=22;FOR VC=15TO 1STEP -1
70 FOR T=0TO 5;NEXT T;&(2)=90;&(3)=90;NEXT VC
80 &(2)=0;&(3)=0;NEXT A
90 FOR A=-32767TO RND (32767);IF TR(1)GOTO 20
100 IF BNEXT A;GOTO 20
110 GOTO 90
120 CLEAR ;BOX 2,-20,6,40,1;BOX 2,-10,15,5,1
130 BOX -10,-10,9,9,1;BOX 13,-10,9,9,1;NT=0
140 CX=-42;PRINT "CROSSING SIGNAL
150 CX=-36;PRINT "BY MIKE WHITE
160 CX=-48;PRINT "NIAGARA & BUG R&R
170 CY=24;%(20156)=27195;:PRINT %(16384),1887
ENTER>GOTO 120 [REC]
```

ENTER>:INPUT [GO] TO LOAD

MANUAL-1 CAUSES SIGNAL TO FLASH ONLY ONCE  
AUTOMATIC-2 REPEATS FLASHING IN 5 OR 10 MINUTES  
TR(1) CAUSES FLASHING TO START REGARDLESS  
(CONNECT TO SWITCH UNDER MODEL RR TRACK?)

CROSSING SIGNAL  
BY MIKE WHITE  
NIAGARA & BUG R&R



NOVEMBER 17, 1984

## I Have Good News, And I Have Bad News..

First of all, the bad news. After six years of bringing programs and tutorials to the owners of the Bally/Astrocade, the Arcadian newsletter, which I have mentioned here before, is stopping publication. The California-based newsletter has been losing subscribers steadily (Sound familiar??) and it's producers have decided to pack it in. Will we follow suit? Hardly!

As a matter of fact, we are going to make some major changes, for the better. I have sent out a flurry of letters, to try to get some of the old Arcadian contributors to come along with us. Next year, we will begin printing double-sided pages, which will enable us to print up to 10 pages of material each month. That's twice as much as this year. Here's the best part, though. We are **not** going to raise the subscription fee!

## Tutorial Blackout

This month, Mike White's tutorial will not make it's usual enlightening appearance, because we needed all the space in order to publish part one of his program **Space Mission**. Part two will appear next month, along with the usual tutorial.

Next year, we will not have this problem, because of the increased size of the newsletter.

## It's About That Time Again!

The time of year when I have to politely ask you all to send in next year's dues. As I said near the top of this page, the resubscription fee will be the same this year, \$7.00. Next year, if all goes well, we will have more material. More programs, and hopefully more articles, as we try to pick up all of the refugee authors from the Arcadian newsletter.

This sounds a little cold, I know, but The **Niagara BUG Bulletin** is the only monthly newsletter left, for Bally fans, and we must all band together to keep it alive. The Bally/Astrocade will never be a compeditor in the computing field, but those of us who own one can still get more than our money's worth out of it, if we want to.

# Niagara BUG Bulletin

SPACE MISSION  
BY MIKE WHITE  
IN 2 PARTS  
USES HAND CONTROLS



## FLYING TIPS FOR SPACE MISSION

GANTRY MUST BE COMPLETELY BACK TO LAUNCH  
HOLD TRIGGER IN FOR COUNT DOWN, LET UP, COUNTING STOPS  
AFTER LIFTOFF IT FLIES SOMETHING LIKE A LASER DISK GAME  
USE THE CONTROL HANDLE DIAGRAM TO COMPLETE THE MISSION

**GOOD LUCK!!!**

[PART 2] NEXT MONTH! THE FLIGHT CONTINUES!!

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS. UNDERSCORES ARE SPACES.

[SZ=1570]

## SPACE MISSION TITLE SCREEN

BY M.D.W. (NOTE) TAPE TEXT FIRST, [RESET], THEN TAPE THIS PICTURE

```
10 clear ;print "_SPACE_MISSION
20 print "_BY_MIKE_WHITE
30 print "_IN_2_PARTS
40 print "_USES_HAND_CONTROLS!
50 B=21;for A=-25to -20;box 60,A,B,1,1;box 60,A-6,B,1,1;B=B-2;next A
60 B=1;for A=-31to -27;box 60,A,B,1,2;B=B+2;next A
70 B=1;for A=30to 25step -1;box 60,A,B,1,1;B=B+2;next A
80 box 60,0,11,52,1;:print
```

ENTER>run [REC]

(NOTE) USE "REPACK" TO ASSEMBLE FINISHED PROGRAM  
(SEE NIAGRA BUG BULLETIN VOL.2 PG.24 + 25, OR WRITE ME)



# Niagara BUG Bulletin

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS. UNDERScores ARE SPACES.

[SZ=44]

SPACE MISSION [PART 1] (2 PILOT)  
BY MIKE WHITE 4585 COUNTY LINE #2 WAKEMAN, OHIO 44889

```
10 clear ;BC=221;FC=0;X=0;Y=-38
20 E=1;M=1;N=0;L=0;NT=2
30 G=0;H=0;A=0;gosub 140;gosub 200
40 if JX(1)goto 30
50 if TR(1)=0goto 40
60 C=rnd (3);for B=10to 0step -1;if B=0goto 280
70 print "_T_MINUS",#3,B;if C=2BC=211;goto 220
80 if C=1print "LAUNCH_VEHICLE_MALFUNCTION";goto 100
90 if L=30if TR(1)next B
100 CX=-10;CY=0;print "H0LD"
110 if JX(1)gosub 140
120 if L#0goto 110
130 K=KP;run
140 L=L+JX(1);if L<0L=0
150 if L>30L=30
160 box L+4,Y,14,12,2;box L,Y,5,12,1;box L+4,Y-1,2,10,1
170 box L+6,Y-2,2,8,1;box L+8,Y-3,2,6,1;return
180 box -1,Y-9,1,5,3;box 1,Y-9,1,5,3
190 box 0,0,5,88,2;Y=Y+E
200 box 0,Y,1,10,1;box -1,Y-1,1,10,1
210 box 1,Y-1,1,10,1;return
220 CX=-40;print "BAD_ST0RM_SCRUB";goto 100
230 E=1;NT=2
240 CX=-70;CY=0;print "AB0RT!"
250 for D=1to 100;if (JY(2))+<TR(2)>return
260 next D;return
270 CX=30;CY=0;print "SAVED!";return
280 if JY(1)=1NT=-1;goto 470
290 FC=103;CX=-20;CY=30;print "[SHUT_D0WN]"
300 gosub 250;if JY(1)=-1gosub 270;goto 110
310 FC=76;gosub 240;if TR(2)if JY(1)=-1gosub 330;goto 110
320 gosub 420;goto 110
330 NT=-1;&(23)=100;&(21)=255;for F=Y+7to Y+37step 2
340 box X-Ax(2+Hx3),F-2xM-3xE,2-M,1+M,C
350 if E=1if F=Y+7goto 370
360 box X-Ax(3+H),F-3xM-E,5xM+Hx4,Ex4+5xN,2
370 box X-HxA,F-E,Hx3-1+4xM,Ex3-1+4xN,1
380 box X-HxA,F-E,Hx3+1,Ex3+1,1
390 if E=2next F;return
400 if N#0return
410 if E=1if TR(2)next F;G=1
420 box X,Y,12,12,2;NT=2;for B=-5to 5
430 line X,Y,0;line X+Bxrnd (5),Y+rnd (10),3;MU=1
440 line X,Y,0;line X+Bxrnd (5),Y-rnd (10),3;MU=1
450 next B;if G=1goto 270
```



# Niagara BUG Bulletin

```
460 :NT=15;print "100101100+20220110-11000";return
470 &(23)=255;&(21)=255;if Y>0E=2
480 FC=76;gosub 180;if Y<36goto 470
490 clear ;BC=213;Y=-32
500 if Y>5if JY(1)=-1goto 570
510 gosub 180;if Y<30goto 500
520 gosub 230;if TR(2)if JY(1)=-1gosub 330;goto 130
530 gosub 420;goto 130
540 line X+4xA,Y+5,0;line X,Y+1,1;line X+A,Y,1
550 line X+5xA,Y+4,1;line X+5xA,Y+5,1;line X,Y,1
560 line X-2xA,Y-2,3;clear ;X=X+Ax2;Y=Y+2;return
570 &(21)=0;gosub 250;if JY(2)#1goto 520
580 FC=103;gosub 330;Y=-40
590 clear ;BC=211;gosub 330;if Y=-40Y=-4;goto 590
600 Y=32;A=JX(2);if A=0goto 520
610 clear ;if Y>36Y=-40;BC=2
620 gosub 540;if X#72xAgoto 610
630 X=-70xA;E=0;H=2;M=0;N=1
640 if Y>36Y=-40;BC=0
650 gosub 540;if X#0goto 640
660 F=Y;gosub 360
670 if C=0if JY(1)=-1H=1;FC=7
680 X=X+Ax3;if JY(2)=-1C=0;&(21)=0
690 gosub 340;if X#75xAgoto 670
700 if H#1goto 530
710 FC=0;clear ;CX=-30;CY=0;print "START_TAPE
720 CY=16;TV=A+101;box CX,CY,18,8,2;FC=7
730 gosub 250;:input ;run
```

```
ENTER>print ";NT=-1;&(23)=-1;CY=-40;box 60,-38,21,13,1;&(21)=-1;box
60,-38,1,13,2;for A=1to 11;print ;next A;run ";;print %(16384),1937[
REC]
```

## " You've GOT to be Kidding! "

That's what I hear, every time I quote the lowest going price for new Astrocade machines. Now, it's dropped to \$34.95 at ABC Hobbycraft. (that's less than the same outlet charges for a pair of extra hand controllers!)

ABC Hobbycraft is also selling a full line of program tapes from some of the best third-party software suppliers, for \$3.95 each. Write them for a list of thier software.

Check page 3 of this volume for the old price list and mailing address.



Niagara Regional B.U.G.  
6 Wood-Dale Dr.  
St. Catharines, Ont. L2T 1Y8

December 17, 1984

I would like to start off this issue by wishing all of our subscribers the joy of the season, and the happiest new year! During the past year, we here at headquarters have done our best to bring you programs, news, hints and tips on the wonders of your Bally Arcade/Astrocade. We held a cartridge draw, and with the borrowed talent of Michael White, we gave you hours of enlightening experimentation, in the form of tutorials.

I have already recieved some resubscriptions, and a few of the letters suggested that I should use some of the space in our enlarged newsletter to print subscribers letters, and questions. This is something that I have always tried to do, but unfortunately, most of the subscribers never take the time to write us with your troubles. This too, is a part of the service that we provide, and you pay for each year. Write us!

Next year, I also plan to introduce an idea for a project, which will hopefully be a collective effort, to be worked on by many of us, and made available to all subscribers upon completion. I also have a set of plans for for a keyboard here, donated by one of the subscribers, that I plan to print in the next issue.

This is **the last issue** of the volume, so send in your \$7.00 right away, if you want to recieve your first issue on time. You can make your cheques and money orders out to Kevin O'Neill. Thank-you.

## FLYING TIPS FOR SPACE MISSION

[PART 2]

STOP TAPE WHEN THE STARS COME OUT  
USE HANDLE CONTROL DIAGRAM TO FLY THE SPACECRAFT  
ORBIT BEGINS IN LOWEST SCREEN, SO FLY UPWARD NOT DOWN  
YOU MUST BE FLYING BACKWARDS TO FIRE RETROS  
YOU DESEND THROUGH EVERY SCREEN YOU GAINED SINCE LAUNCH  
OPEN THE PARACHUTE ON THE LAST SCREEN  
GOOD LUCK!!!

# Niagara BUG Bulletin

```
><>< TRICKS OF THE TRADE ><><
><><><>< A TUTORIAL BY ><><><><
><><><><< MIKE WHITE ><><><><><
><><><><>< COUNTY LINE #2 ><><><><><
><><><><>< R.D.#1 BOX 373 ><><><><><
><><><><>< WAKEMAN , OHIO ><><><><><
><><><><>< 44889 ><><><><><
```

BEFORE KEYING IN THIS MONTHS PROGRAM, TRY THIS:

```
ENTER>CALL3177
```

THE ARCADE STILL FUNCTIONS, BUT YOUR BASIC PROGRAM IS GONE FOREVER, (SEE ARCADIAN VOL.1 PG.31 AND 39). ALSO, RELOAD "SPACE MISSION [PART 1]", [HALT], AND RUN THIS LITTLE TEST:

```
ENTER>CLEAR ;CY=16;TV=100;A=&(8);CLEAR ;CY=16;TV=102;B=&(8);
CLEAR ;PRINT A,B
```

THIS CHECKS THE INTERCEPT FEEDBACK NUMBER RETURNS.

```
IT SHOULD PRINT:      143      159
```

IF IT DOESN'T, YOU'VE GOT A MISTAKE IN KEYING IN THE FIRST HALF OF PART 1 TEXT, AND PART 2 WILL "CALL3177", (SEE LINE 10 OF THIS MONTHS PROGRAM). IF YOU CAN'T FIND THE BUG, WE CAN CHANGE "CARRY OVER" METHODS. CHANGE LINE 720 OF PART 1 TO READ:

```
720 %((20260)=A;FC=7
```

AND CHANGE LINE 10 OF PART 2 TO READ:

```
10 A=%((20260);IF ABS(A)#1CALL3177
```

NOW LET'S SEE WHAT WE'VE DONE. %((20260) IS 2 BYTES INTO THE "STACK AREA", (PG.103 AB HANDBOOK). IF WE USE ":PRINT " WE DON'T TAPE THAT ADDRESS, SO OUR DATA HAS "CARRIED OVER". IN "QUADRA" I CARRIED A STRING IN "THE STACK" WITH THIS LOOP:

```
440FOR Q=0TO 12;%((Z+QB2)=@((Q);NEXT Q;CLEAR ;CX=-30;CY=0;
PRINT "START TAPE
```

Z=20264 IN THIS LOOP. THE SCORES ETC. ARE MOVED OUT INTO THE @((X) STRING FOR EACH PROGRAM. NOW YOU MAY SAY "WHY DO THAT WHEN YOU CAN USE THE "STOP SHORT" METHOD THAT HAUNTED HOUSE FROM [NEW IMAGE] USES?" THAT METHOD WAS BETTER! SIMPLY TAPE THE FIRST PROGRAM NORMALLY, THEN TAPE THE OTHERS THAT FOLLOW A SPECIAL WAY SO AS NOT TO TAPE OVER THE VARIABLES! HAUNTED HOUSE WAS TAPED:

```
ENTER>:PRINT %((-24576),904;:PRINT %((20000),1
```

# Niagara BUG Bulletin

AS YOU PROBABLY GUESSED, THE TEXT AND "TXTUNF" (PG.103 AB HANDBOOK) WAS ALL THAT WAS TAPED. TO SAVE THE SCREEN ALSO, USE:

```
ENTER>:PRINT %(<16384),1809
```

THIS LEAVES THINGS WHERE THEY LIE, MEANING THAT NO LOOPS ARE REQUIRED HERE. BUT, IN QUADRA I WISHED TO END EACH PLAY SEGMENT BY PRINTING "REWIND TAPE AND PLAY BUT DON'T [RESET]". NOW IN THE FIRST PROGRAM, I WANTED TO USE "AUTO RUN". ALSO, ONE OF THE PLAY SEGMENTS USES THE LINE INPUT BUFFER TO SET &(9). I HAD TO TAPE OVER THE VARIABLES TO GET TO THE LINE INPUT BUFFER, (SEE PG.103 AB HANDBOOK). SO "TAPE SHORT" WAS OUT, AND I USED THE "MOVE IT OUT OF THE WAY" METHOD. BUT, WHY NOT USE "TAPE SHORT" IN "SPACE MISSION"? BECAUSE, A CHECK SUM BYTE GOES TO TAPE AND INPUTS AT THE END OF EVERY TAPE LOAD, (FOR THE :LIST FUNCTION). IT APPEARS AS GARBAGE IN THE ADDRESS FOLLOWING AN INPUT. ALSO, THE TXTUNF MUST BE TAPED OR STRANGE THINGS OCCUR, (MORE ON THAT NEXT YEAR), SO THE VARIABLE "A" MUST BE MOVED TO BE KEPT. ALSO, THIS IS WHY WE USE VARIABLE "Y" TO "FILE SEARCH" WITH, INSTEAD OF "Z". "BC" FOLLOWS, AND WE WOULD LOSE OUR COLOR WITH EVERY TEST PASS. (SEE VOL.5 PG.59 ARCADIAN) (REMEMBER THAT %(<20000)=TXTUNF).

NOW, YOU MAY BE WONDERING WHERE I PUT MY "CHRDIS" ROUTINE (VOL.5 PG.14,15,37,AND 72 ARCADIAN) FOR MY CHARACTERS, IF I USED THE STACK TO CARRY OVER MEMORY. WELL, NEXT YEAR I'LL TALK ABOUT THAT WHEN I DISCUSS "TIME SHARING, THE USE OF USED MEMORY". ALSO WE'LL GET INTO "THINGS CALLED STRINGS" AND LOOK AT ALL FIVE WAYS TO RUN MULTIPLE ARRAYS!! (THEY CAN ALL BE DONE IN AB). I'LL TELL YOU WHAT I FOUND INSIDE "THE GREAT AMERICAN JIGSAW" [ESOTERICA LTD.]. BUT FIRST, I WANT TO TALK ON SOUND. THERE ARE TWO WAYS TO ACCESS THE SOUND IN THE BALLY, DIRECT AND INDIRECT. THESE ARE ALL WRITTEN UP IN THE ARCADIAN VOL.1 PG.62-66 FOR DIRECT, AND PG.71-73 FOR INDIRECT. NOW, I'M NOT GOING BACK OVER ALL THAT. I AM GOING TO SHOW THE DIFFERENCES FROM VOL. 1 (OLD BB) AND AB. IF HOWEVER, YOU HAVE EB, THE TUTORIAL APPLIES TO YOU 100%!! YOU MAY CONSIDER PURCHASING "THE PORT TO VARIABLE TRANSLATOR" BY [GEORGE MOSES]. IT CONVERTS AB TO BB, OR EB!! FINALLY, YOU MAY WISH TO REMOVE THE "&(16)=71" FROM LINE 20 OF SPACE MISSION PART 2 AND HEAR WHAT HAPPENS! NEXT YEAR I'LL EXPLAIN "MO SHIFT, A KILLER"!!

FOR RIGHT NOW, HOWEVER, LET'S LOOK AT THESE LOOPS:

```
                LOOP 1                                LOOP 2
10 NEXT A                10 FOR A=1TO 100STEP RND(10)
20 PRINT "IT WORKS!!"    20 PRINT A
30 FOR A=1TO 100        30 IF TR(1)RUN
40 RUN                    40 NEXT A
```

ENTER "GOTO 30" TO START LOOP 1, RUN STARTS LOOP 2. TRIG.(1) CHANGES STEP, IN LOOP 2. HOW? SEE PAST (OR FUTURE) EPISODES OF THIS COLUMN. REMEMBER IF ANY OF MY PROGRAMS PUZZLE YOU, DON'T HESITATE TO WRITE. A S.A.S.E. SPEEDS UP REPLY'S. KEEP BUGGIN'!!!!

# Niagara BUG Bulletin

LOWERCASE WORDS ARE 1-BYTE KEYPAD WORDS. UNDERSCORES ARE SPACES.

[SZ=16]

SPACE MISSION [PART 2] (2 PILOT)  
BY MIKE WHITE 4585 COUNTY LINE #2 WAKEMAN, OHIO 44889

```
10 B=&(8);if B#159if B#143CALL3177
20 A=(B-151)÷8;&(23)=60;&(16)=71;if A=1N=5
30 D=JX(1);E=JY(1);if M>3M=3
40 if D=0if E=0if C#0&(21)=0
50 B=1;if D#0&(21)=255
60 L=L+D;O=-1;if M<-3M=-3
70 X=X+3xA;if L>2L=2
80 Y=Y+M;if L<-3L=-2
90 N=N+L÷2;if I>9E=2;goto 500
100 gosub 180;if H=0goto 570
110 gosub 270;O=1;if C=11if X=0goto 670
120 gosub 270;if C=0if TR(2)=0goto 570
130 M=M-I÷3;if C#1goto 30
140 CX=-47;CY=30;print "FUEL_CELL_TROUBLE
150 CX=-26;C=11;print "FIRE_RETR0";goto 30
160 for C=1to 51;box rnd (160)-80,rnd (88)-44,1,1,1
170 next C;C=rnd (10)
180 if ABS(X)>72X=-Ax72;clear ;if H>0goto 160
190 if Y<-39Y=38;H=H-1;if H<0clear
200 if Y>39Y=-38;H=H+1
210 return
220 if D=1box X-Gx(4-B),Y-Fx(1+B),1,1,3
230 if D=-1box X+Fx(4-B),Y-Gx(1+B),1,1,3
240 box X+Gx(Bx3-3),Y+Fx(6-Bx3),5-Bx2,Bx2-1,K+J÷2
250 box X+Gx(Bx5-5),Y+Fx(10-Bx5),Bx2-1,5-Bx2,K+J÷2
260 box X,Y,5,5,K;return
270 if N=0N=8
280 if N=9N=1
290 if N=1G=-1;F=1;goto 480
300 if N=2G=-1;F=-1;if D=1B=2
310 if N=3G=-1;F=-1;goto 220
320 if N=4G=1;F=-1;if D=-1B=2
330 if N=5G=1;F=-1;goto 440
340 if N=6G=1;F=1;if D=1B=2
350 if N=7G=1;F=1;goto 220
360 if N=8G=-1;F=1;if D=-1B=2
370 line X+4xG,Y+4xF,0;if D=0B=5
380 line X-3xG,Y-3xF,K;line X-3xG,Y-2xF,0
390 line X+2xG,Y+3xF,K;line X+3xG,Y+2xF,0
400 line X-2xG,Y-3xF,K;line X-5xG,Y-1xF,0
410 line X-4xG,Y-2xF,5-B;line X+1xG,Y+3xF,3-J
```

# Niagara BUG Bulletin

```
420 line X+3xG,Y+1xF,0;line X-2xG,Y-4xF,3-J
430 line X-1xG,Y-5xF,3x(B=1);return
440 if A=1goto 490
450 E=Ex0;if TR(2)=0if C#0goto 490
460 &(23)=100;&(21)=255;FC=76;I=I+1
470 box X+3xA,Y,2,1,3;C=0;goto 490
480 if A=1goto 450
490 if E#0&(21)=255;box X,Y-3xE,1,3,3
500 M=M+E;B=2;goto 220
510 line 0,Y+5,0;line -20,Y+25,1;line -7,Y+25,1
520 line 0,Y+5,1;line 7,Y+25,1;line 20,Y+25,1
530 line 0,Y+5,1;box 0,Y+26,41,2,1
540 box 0,Y+27,39,2,1;box 0,Y+28,35,2,1
550 box 0,Y+29,29,2,1;box 0,Y+30,19,2,1
560 box 0,Y+31,7,2,1;return
570 CX=-20;CY=-30;print "OUT_OF_ORBIT
580 D=0;NT=0;FC=7;I=2
590 box X-14xA,Y+9,12,12,J;box X-9xA,Y+14,12,12,J
600 gosub 180;if H=0BC=2;if Y<5J=2;FC=103
610 if H=-1BC=211;K=1;if X=0A=0;J=4;L=3
620 if H=-2BC=213;FC=76;if X=0A=0;J=4;if L=3clear
630 if H=-3BC=221;clear ;J=0;if JX(2)I=1
640 X=X+2xA;Y=Y-I;N=7+A;if H=-4goto 670
650 B=1;gosub 270;if I=1gosub 510
660 gosub 270;if (K#1)+(E=2)goto 590
670 if I#1NT=15;print "100101100+20220110-11000
680 if I=1CX=-30;CY=0;print "SPLASH_DOWN!"
```

```
ENTER>H=1;I=0;J=0;K=3;M=0;N=1;X=77;Y=18;BC=0;FC=7;NT=-1
ENTER>clear ;print "-----EVERYTHING'S";CX=-20;print "A-OK!";CY=0;pr
int "-----ALL_SYSTEMS";CX=-29;print "ARE_G0!";:print [REC]
```

(NOTE) FOR CONVENIENCE TAPE BEHIND PART 1

FUEL CELL TROUBLE  
FIRE RETRO



SPLASH DOWN!