8·16

The Bournemouth and Poole Atari User Group's Newsletter

ATARI

BAPAUG

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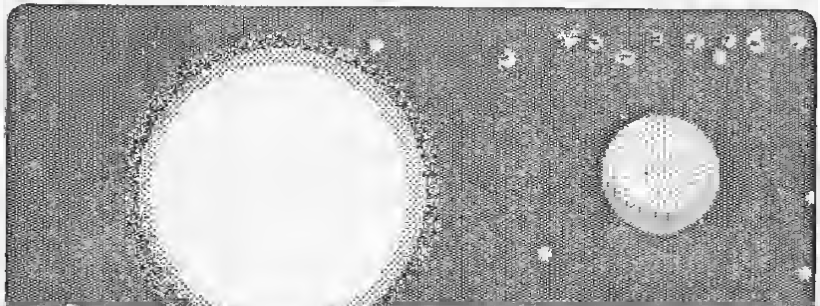

Reviews :

Planetarium

Midnight Magic, Stargate, Solaris
Start - The ST Quarterly
Four Great Games Volume II
Henry's House
Gnome Ranger

Programs :

STBUF - A printer utility for the ST & 8-bit owners.

L: Device Handler - A program from Page 6 revisited.

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-How to contact us-

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This issue of 8:16 was produced on an Apple Macintosh Plus using MacDraw, MacPaint, MacWrite and Pagemaker. Output was produced via 'Percy' the laserprinter. All listings were produced using the Atari 1020 printer/plotter with an Atari 800XL and using the L: device handler.

It is hoped that future issues will be produced using the Atari ST using Calligrapher (when the money for the software becomes available)

The Bournemouth and Poole Atari User Group (BaPAUG) is a member of the Association of Atari User Groups (AAUG).

The opinions expressed within 8:16 are those of the authors and not necessarily held by the BaPAUG.

The BaPAUG is an non profit making organisation and no members make money from club activities.

-Start Here-

Welcome to the first issue of 8:16, the Bournemouth and Poole Atari User Group's Newsletter. This is a new publication dedicated to supporting all Atari computer systems. We are aiming mainly to support the 8-bit and ST range of machines, but will also allocate space to the VCS and PC when necessary. We also intend to cover all the aspects of computing. This issue has reviews on three VCS games, Planetarium, a revamped program just re-released by Atari for the 8-bit and on START the ST magazine and disk from ANTIC Publishing. Also included are two programs. The first a revisit to an 8-bit program originally published in Page 6, the second for 8-bit and ST owners which turns the 8-bit into a printer buffer for the ST. Finally there is a roundup of the software released over the past few months.

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-Editorial-

The success and survival of any publication, especially user group newsletters, depends upon many factors. The most critical factor being the quality and style of the articles enclosed,combined with their interest and usefulness. On top of this is the requirement for something unique and different, something this publication does or can give to make it stand out from the others and therefore worth purchasing.

I hope this, the first issue of 8:16 meets these requirements, without losing the balance required when covering several different computer systems. No matter how well the contents appear to be balanced to the people who produce the publication, it is the readers who have the final say. If the contents are good, it will sell. So please read on and let us know what you like and what you dislike, so that we can represent your requirementsin future issues.

See you in issue 2.

Notice Board

Atari Workstation

During the PCW show recently held in London, Atari showed approximately 50 software houses it's product plans. Included within these plans is the T800 transputer workstation, recently completed by Perihelion under commission. Also to be made available are development units which require the Mega ST's. Firm dates for both projects have not yet been announced. Ataris workstation will run the T800 at 20OMHz, have 4 Mbytes of main memory and 1 Mbyte of video memory with true colour raster operation. As with all Atari ventures the expected price of the workstation will cause it competitors to shudder.

ATARIS IN GERMANY

Do you want to own an **800XE** or **260ST**?

Yes, then you'll have to import one from Germany (or emigrate if you prefer), because both these machines are available there. The 260ST everyone knows about, while an advert for the 800XE recently appeared on the back page of Happy Computers Atari Special. It looks just like the 130XE, but is presumably without the extra 64K bank of memory. If anyone owns one or has used one we shall be pleased to hear from you.

Drop my ST!

In the August 1987 issue of Byte, within their 'Best of Bix' section is a message from Landon Dyer of the Atari Corporation in response to a problem. The problem was a fault with a 520ST and SF354 system, which always indicates zero bytes contained in zero files. Landon states that the problem is most usually *related to a gummed up or misseated glue chip*, and his first solution is *pick up your ST and drop it about three inches to the table*. More worrying is his statement that this is a *'tried and-true technique in our Taiwan manufacturing plant'*. What! Landon's second suggestion is much safer, this being *get your dealer to reseat the chips for you*. This solution is by far the safest.

New ST OS

The latest releases of the 520STFM have a new version of the operating system. Within the package is a note titled 'Important', which reads:

'This Atari ST Computer is fitted with the Atari Operating System ROM Version 1.09. This is the latest version of the operating system and has been introduced to facilitate your ability to upgrade to future products such as the Atari Blitter.

Please ensure that you purchase software compatible with this operating system version. Your Atari dealer has been advised of the few titles that are incompatible with this version. The authors of incompatible software products have been informed and will be releasing compatible versions.'

Keith Campbell of the Computer Shop (Parkstone) has tested his 88 ST titles and found 23 which will not work. He has also been unable to obtain a list of the incompatible titles. Some the titles that failed are 3D Galax, Tai Pan, Thai Boxing, Leader Board, Indiana Jones & The Temple Of Doom, Road Runner and all the Origin games including Autodual and Exodus. The percentage of titles that failed is a lot higher than that indicated by the note.

The reason these titles failed, according to Silica Shop has nothing to do with Atari, it being the software houses to blame. The story goes like this. Within the memory map of the ST is 13K of RAM reserved for future use. The software houses were told not to use it, but inorder to squeeze more out of the machine they did. The new operating system now uses this memory. Hey presto, a clash in requirements and the system crashes.

Atari User Christmas Show

This years Atari User Christmas Show organised by Database Exhibitions is once again being held at the Champagne Suite of the Novotel in Hammersmith, London. The dates for the show are Friday November the 20th to Sunday November the 22nd. Doors are open to the public from 10am till 6pm Friday and Saturday and from 10am till 4pm on Sunday.

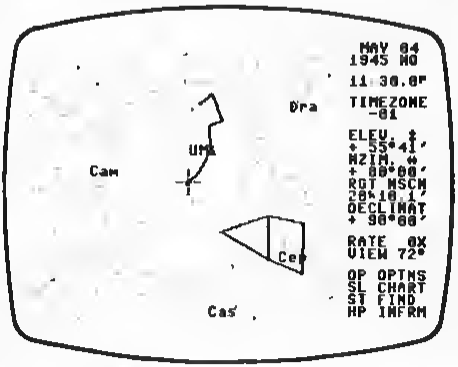
There should be plenty of interest for all Atari users and we will print a report in issue 2 of 8:16.

I must agree with Les Ellingham of Page 6 that a new show or one of the current shows should be held in the north. I know this may make it unlikely for us in the south to attend but feel it will be fairer for those users who live in North England and Scotland, who currently have to travel down to London.

- Planetarium -

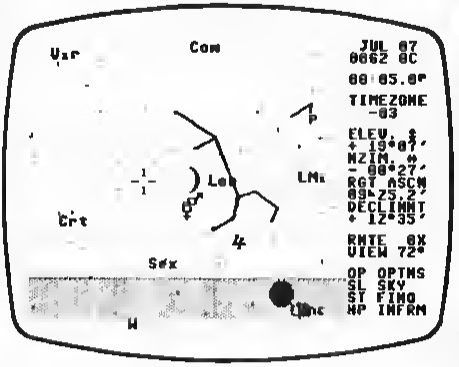
(Atari - XL/XE Only)

Ah, a program for people who own a telescope But no, this program is for those people who don't own one. Because with planetarium you can see the sky like you never could with your eyes only Planetarium will show you the regular cyclic positions of the major objects within our Solar Sytems and has a database of 1200 stars, all 88 constellations and more than 300 deep-sky objects.



The program is supplied on a disk which has to be booted with BASIC. Side one contains the program while side two the astronomical data. Included within the package is your warranty card and a manual - and what a manual! 120 pages in a ring binder. You have to read it first, because it gives you all the details you need to know about life, the universe and everything. It is just like the hitchhikers guide to the galaxy, but this time for real.

Okay, lets go, I switch on the drive, put in the disk and turn on my trusty stead (the computer). It says in the manual, that it takes a couple of minutes for the data to load and I tell you they are not joking. The drive is spinning round and round like its the last thing in its life But finally, there it is, the main title picture. Two thirds of the screen contain the sky picture and the rest a lot of numbers and letters. The program always starts in the year 1985, so you have to change the year, month, day, time and location every time the program is run. To do this you use the *SELECT* key to toggle through a menu. This menu gives you the ability to select different locations on earth, to change the time and date, to display the sky as seen from earth or display the sky as an astronomical star map.



With the date set (the program allows you to go backward or foward in time about 10,000 years), select the sky mode and there it is, the sky tonight. You can now move the cursor over every star you see and by pressing *HELP* the program gives you details such as its name, what it is and how far away it is Yes, the good old *HELP* key comes in useful after all. When you press *START* you can search for the mooo, sun, planets, Halley (if he is around) and constellatioos like Aries, Hercules and the Water Monster The *OPTION* key lets you change the settings like lines/no lines, names/no names, symbols/no symbols, track/no track and sound (gives you a little spaceship and the special Atari woosh sound instead of a cursor). You can also select deep sky which lets you go even further and study the universe. As well as using the functioo keys you can also use the letters N, S, W and E for north, south, west and east, as well as *<SHIFT>P* and *<CNTL>P* for printing the maps to either Atari XMM801 or EPSON FX-80 printers.

The very good manual provides you with a guided tour though the program and the universe, thus enabling you learn about both in an instructional way. There are also sections covering past, present and future astronomical events, the history of astronomy, an overview of celestial and positional navigation, space exploratioo and a table of cities and islands giving their latitude and longitude coordinates. They also list the 'name stars and navigational stars' telling you where to find them and the constellations in their English and Latin names. When you get hooked - and you will, they also provide a list of further reading.

This program is a must for anyone who is interested in the galaxy and even if you don't know too much about space (like me) you soon get hooked and want to see and know more about it. Are the stars right for romance tonight? Get the program and find out, while me, I'm just leaving the solar system behind.

Thomas Holzer.

VCS Reviews

-Midnight Magic-

(Atari - £12.99)

Midnight Magic is a normal pinball machine game. The colours and sound are very good for a VCS version and the gameplay is, wait, lets have one more go, yes its a game you can get hooked on after a while.

There is really not much to say about a pinball game, except that this is the old David's Midnight Magic game from Broderbund released in 1982 for the 400/800 Ataris, converted to the VCS.

The strategy is to shoot for the targets with the arrow, to light the bumpers, to get the kickers and centre post. When you hit all five targets the score multiplier increases and you can go for the top rollovers to win an extra ball. The first time I played the game I hit 150000 points.

Overall its an easy game for people like me to play and its different. You can relax a bit and even have a beer on the side (if you are of age) Cool, this is one for me.

Thomas Holzer.

-Solaris-

(Atari - £12.99)

VCS games are back and they're better than ever. The game, Solaris, is a basic shoot 'em up with a bit of Star Raiders, Moon Patrol and Zaxxon.

The Zylons are back, it says in the manual, so hop into your starcruiser, rev the engine and go. Oh, and remember - if anything flies your way, blast it.

I like this game, its fast, noisy and colourful. The plot is to find the lost planet Solaris and hyperwarp from quadrant to quadrant to fight those evil Zylons. On your journey don't forget to pick up the stranded pilots on the enemy planets. Once you've rescued them blast up the planet. Warp to a federation planet to refuel and repair damage. Fly over a corridor and shoot those Guardians, pick up the key and if you make it though the ion door you can blast another Zylon planet.

You start with three fighters and can earn an extra fighter when you rescue all the pilots in the sector. The game ends when you find Solaris or you run out of fighters.

Overall this is a good game for the VCS machine — more please.

Thomas Holzer.

-Stargate-

(Atari - £12.99)

First of all, Stargate is a defender clone, there are humanoids, smart bombs and landers. You also get to meet those evil mutants again.

Secondly, you need two joysticks to play the game. One for maneuvering your ship, the other to activate the smart bombs, inviso and hyperspace.

So now to the story, by the way this game is already three years old and has just been re-released by Atari. The aliens are attacking your planet and kidnapping your fellow countrymen and it is up to you to pilot your ship across the landscape, destroying the marauders and rescuing as many humanoids as possible.

The graphics are very good and colourful and the sound is crystal clear. On the screen in front of you is the battle area and your scanner, which can show you where the humanoids are in danger. [illegible] you rush to the nearest 'stargate' for immediate transportation into that sector. This option is the only real difference between stargate and defender.

If you are in trouble you can use inviso to make yourself invisible for about two seconds, or more drastically, hyperspace to send you into space warp and finally some unknown location on the landscape, be it free or full of marauders.

There are nine different aliens that attack you and of course, the humanoids you fail to rescue turn into mutants. You can hear them scream as they are being accosted by landers.

So stargate is a fly in the sky, save the humanoids and kill the aliens type game, that will not go amiss in any VCS collection. Buy it.

Thomas Holzer.

Do you own a VCS machine?

Want to see your name in lights?

Then send a review of your favourite cartridge to:

8:16
c/o 248 Wimborne Road,
Oakdale, Poole, Dorset.

-L: Device Handler-

In issue 13 of Page 6 was a program (written by David and Mary Lynch) which inserts a device handler called 'L:' into the device handler table. The L: device gives you the ability of listing programs to the 1020 printer/plotter in its 80 column mode by typing ***LIST "L:"***. The only problem and a major one at that, is that it will not work with the XL and XE range of 8-bit Ataris. Issue 19 of Page 6 produced a solution to this, this being to add a line to your BASIC program, as follows:

32000 OPEN #1,8,0,"P:":?#1;"<ESC><ESC><CNTL>S" :POKE 181,1:LIST:CLOSE #1

Thus to list your program (plus this line) in 80 columns all you need to do is type ***GOTO 32000***. This is fine if you use just BASIC, but it will not work with PILOT, Assembler Editor etc., so why does the L: device fail to work with the XL/XE range. The answer to this was rather simple and quite easy to fix.

The original L: device had hard coded the addresses of the P: device into the L: device table. These addresses changed as the routines they pointed to were moved during the OS rewrite (though the device handler table stayed where it was), thus the L: device will jump to the wrong code in the XL/XE range.

Listing 3 is an Assembler Editor source for a hard coded version that will work with the XL range. This is still not the ideal solution, but for owners using just the XL range it is OK (I do not know if it works with the XE).

Listing 4 is a more professional solution. This copies the P: device table to the L: device table, except for OPEN which requires the new routine LOPEN. The addresses required by the routine LOPEN are taken from the P: device table - note that one has to be added as the vectors within the device tables are stored in the format 'address - 1'. This is done by taking the addresses from the P: device table, increment them by one and then store them into the LOPEN routine where required (see lines 1700 to 1960).

Listings 1 and 2 are the BASIC loaders for listings 3 and 4, for those of you without assemblers. If you have the Assembler Editor cartridge type in listings 3 or 4 and assemble using ***ASM,,#D:AUTORUN.SYS***.

Next time you boot your system with this disk the L: device will be installed.

Colin Hunt.

```
1000 REM SETS UP L: PRINTER HANDLER
1010 REM   by David & Mary Lynch
1020 REM
1030 REM       modified for XL
1040 REM        by Colin Hunt
1050 OPEN #2,8,0,"D:AUTORUN.SYS"
1060 TRAP 1100
1070 FOR I=1 TO 65536
1080 READ Q:PUT #2,Q
1090 NEXT I
1100 CLOSE #2
1110 END
1120 REM
1130 REM Load vectors.
1140 DATA 255,255,160,6,255,6
1150 REM Initialization routine.
1160 DATA 165,12,141,182,6,165,13,141
1170 DATA 183,6,169,181,133,12,169
1180 DATA 6,133,13,56,176,3,32,184
1190 DATA 6,160,0,165,26,3,201,0,240
1200 DATA 3,200,208,202,192,34,208
1210 DATA 242,56,96,169,76,153,26
1220 DATA 3,200,169,220,153,26,3,200
1230 DATA 169,6,153,26,3,96
1240 REM 'L:' vector table - XL only.
1250 DATA 234,6,6,255,132,254,202,254
1260 DATA 162,254,132,254,76,153,254
1270 REM Device 'L:' Open routine.
1280 DATA 32,183,254,169,27,32,203,254
1290 DATA 169,13,32,203,254,169
1300 DATA 155,32,203,254,160,1,96
1310 REM RUNAD vector for SYSTEM RESET.
1320 DATA 224,2,225,2,160,6
```

Listing 1: BASIC loader for XL L: device.

```
1000 REM SETS UP L: PRINTER HANDLER
1010 REM   by David & Mary Lynch
1020 REM
1030 REM  modified for all 8-bit's
1040 REM       by Colin Hunt
1050 OPEN #2,8,0,"D:AUTORUN.SYS"
1060 TRAP 1100
1070 FOR I=1 TO 65536
1080 READ Q:PUT #2,Q
1090 NEXT I
1100 CLOSE #2
1110 END
2000 DATA 255,255,0,0,152,0
2010 DATA 165,12,141,22,6,165,13,141,23,
6
2011 DATA 169,21,133,12,169,6,133,13,56,
176,3,32,24,6,160,0
2012 DATA 185,26,3,201,0,240,9,200,200,2
00,192,34,208,242,56,96
2013 DATA 169,76,153,26,3,200,169,117,15
3,26,3,200,169,6,153,26
2014 DATA 3,160,2,185,48,228,153,117,6,2
00,152,15,208,243,174,48
2015 DATA 228,172,49,228,232,208,1,200,1
42,133,6,140,134,6,174,54
2016 DATA 228,172,55,228,232,208,1,200,1
42,138,6,142,139,6,142,143
2017 DATA 6,140,144,6,142,148,6,140,143,
6,96
2018 DATA 131,6,0,0,0,0,0,0,0,0,0,0,76,0
,0,32,0,0,169,27,32
2019 DATA 0,0,169,13,32,0,0,169,155,32,0
,0,160,1,96
2020 DATA 224,2,225,2,0,6
```

Listing 2. BASIC loader for non machine dependent L: device.

```
                        1400 ; L_XL.ASM
                        1410 ;
                        1420 ; Set up XL I/O handler
                        1430 ; By David & Mary Lynch
                        1440 ;
                        1450 ; Modified for XL by Colin Hunt.
                        1460 ;
0000                    1470          OPT NOOBJECT
                        1480 ;
0000                    1490          *=  $600
                        1500 ;
                        1510 WATABS =   $031A
                        1520 DOSINI =   $C
                        1530 ;
                        1540 ; System RESET trap
                        1550 ;
0600 A50C               1560 LIMIT  LDA  DOSINI
0602 8D8A06             1570        STA  SYSRES+1
0605 A90C               1580        LDA  #<SIOINIT
0607 8D8806             1590        STA  SYSRES+2
060A A906               1600        LDA  #SYSRES&255
060C 850C               1610        STA  DOSINI+1
060E 38                 1620        SEC
060F 2A01               1630        ROL  LSETUP
                        1640 ;
0611 20F006             1650 SYSRES JSR  DUPPY
                        1660 DUPPY
                        1670 ;
                        1680 ; Look for free handler entry
                        1690 ;
0614 A008               1700 LSETUP LDY  #8
0616 B91A03             1710 LOOP   LDA  HATABS,Y
0619 C900               1720        CMP  #0             ;free entry ?
061B F003               1730        BEQ  FREE
061D C8                 1740        INY
061E C8                 1750        INY
061F C8                 1760        INY
0620 C0FA               1770        CPY  #$FA           ;End of HATABS ?
0622 D0F2               1780        BNE  LOOP
0624 38                 1790        SEC                 ;Error, no free entries.
0625 60                 1800        RTS
                        1810 ;
0626 A91C               1820 FREE   LDA  #1L
0628 991A03             1830        STA  HATABS,Y
062B C8                 1840        INY
062C A90C               1850        LDA  #L(PRGEND-1
062E 991A03             1860        STA  HATABS,Y       ;handler address.
0631 C8                 1870        INY
0632 A906               1880        LDA  #L(A-256
0634 991A03             1890        STA  HATABS,Y       ;handler address.
0637 60                 1900        RTS
                        1910 ;
0638 A91C               1920 L(A    =    *-1            ;New open
063A 8DFF               1930        .WORD OPEN-1        ;Old Close.
063C CAFE               1940        .WORD GETBYT        ;Old Read.
063E CAFE               1950        .WORD PUTBYT        ;Old Write.
0640 FCFE               1960        .WORD GETST         ;Old Status.
0642 CAFE               1970        .WORD SPECIAL       ;Old Special.
0644 4C00FE             1980        JMP  INITIO         ;Old Initialization.
                        1990 ;
0647 20C2FE             2000 OPEN   JSR  GETCCB
064A A910               2010        LDA  #10            ;DESD
064C 20CBFE             2020        JSR  PUTBYT
064F A015               2030        LDA  #15            ;CONTROL
0651 20CBFE             2040        JSR  PUTBYT
0654 A038               2050        LDA  #$38           ;CR/LF
0656 20CBFE             2060        JSR  PUTBYT
0659 A901               2070        LDY  #1
065B 60                 2080        RTS
                        2090 ;
                        2100 ;
0700                    2110          *=  $700
                        2120 ;
0702 0006               2130 VHNDB  .WORD LIMIT
0704                    2140          END
```

Listing 3. Assembler Editor source listing for XL L: device.

```
                        1000 ; L_ASM
                        1010 ;-------
                        1020 ;Serio set up I/O handler.
                        1030 ;By David & Mary Lynch.
                        1040 ;
                        1050 ;Modified to work with all Atari 8-bit computers;
                        1060 ;by Colin Hunt
                        1070 ;
                        1080 ;New OPEN routine
                        1090 ;
0000                    1100          OPT NOOBJECT
                        1110 ;
0600                    1120          *=  $600
                        1130 ;
                        1140 WATABS =   $031A           ;Start of Handler Address TABLE
                        1150 DOSINI =   $0C             ;Initialization address for disk boot
E478                    1160 PORTB  =   $E478           ;Start of PI device table.
                        1170 ;
                        1180 ;System RESET trap.
                        1190 ;
                        1200 LIMIT
0600 A50C               1210          LDA  DOSINI
0602 8D8A06             1220          STA  SYSRES+1
0605 A90C               1230          LDA  #<SIOINIT
0607 8D8806             1240          STA  SYSRES+2
060A A906               1250          LDA  #SYSRES&255
060C 850C               1260          STA  DOSINI+1
060E 38                 1270          SEC
060F 2A01               1280          ROL  LSETUP
                        1290 ;
0611 20F006             1300          JSR  DUPPY
                        1310 ;
                        1320 SYSRES
0614 2000E0             1330          JSR  $E000
                        1340 ;
                        1350 ;Look for free handler entry
                        1360 ;
                        1370 LSETUP
0617 A008               1380          LDY  #8
                        1390 LOOP
0619 B91A03             1400          LDA  HATABS,Y
061C C900               1410          CMP  #0             ;Free entry ?
061E F003               1420          BEQ  FREE
0620 C8                 1430          INY
0621 C8                 1440          INY
0622 C8                 1450          INY
0623 C0FA               1460          CPY  #$FA           ;End of HATABS ?
0625 D0F2               1470          BNE  LOOP
0627 38                 1480          SEC                 ;Error, no free entries
0628 60                 1490          RTS
                        1500 ;
                        1510 FREE
0629 A91C               1520          LDA  #1L
062B 991A03             1530          STA  HATABS,Y
062E C8                 1540          INY
062F A929               1550          LDA  #L(PRGEND
0631 991A03             1560          STA  HATABS,Y
0634 C8                 1570          INY
0635 A906               1580          LDA  #L(A-256
0637 991A03             1590          STA  HATABS,Y
                        1600 ;
                        1610 ;Transfer PI device table to XL device table
                        1620 ;
063A A002               1630          LDY  #2
                        1640 LOOP2
063C B900E4             1650          LDA  PTAB,Y
063F 997A06             1660          STA  LTAB,Y
0642 C8                 1670          INY
0643 C00F               1680          CPY  #$0F
0645 D0F5               1690          BNE  LOOP2
                        1700 ;
                        1710 ;Transfer old OPEN address into LOPEN routine.
                        1720 ;
0647 AE0004             1730          LDX  PTAB
064A AC01E4             1740          LDY  PTAB+1
064D E8                 1750          INX                 ;Add 1 to lo byte
064E D001               1760          BNE  JUMP           ;Check for overflow ?
0650 C8                 1770          INY                 ;If zero add 1 to high byte
                        1780 JUMP
0651 8E3206             1790          STX  LOPEN+1        ;Store lo byte
0654 8C3306             1800          STY  LOPEN+2
                        1810 ;
                        1820 ;Transfer PUT address into LOPEN routine
                        1830 ;
0657 A004               1840          LDY  PTAB+4
0659 AC05E4             1850          LDY  PTAB+5
065C E8                 1860          INX                 ;Add 1 to lo byte.
065D D001               1870          BNE  JUMP1          ;Check for overflow ?
065F C8                 1880          INY                 ;Add 1 to high byte
                        1890 JUMP1
0660 8E9A06             1900          STX  LOPEN+8        ;Store lo LOPEN routine
0663 8C9B06             1910          STY  LOPEN+9
0666 8E8F06             1920          STX  LOPEN+1
0669 8C9006             1930          STY  LOPEN+2
066C 8E9306             1940          STX  LOPEN+5
066F 8C9406             1950          STY  LOPEN+6
0672 8E9706             1960          STX  LOPEN+10
0675 8C9806             1970          STY  LOPEN+11
0678 60                 1980          RTS
                        1990 ;
                        2000 ;L: device table.
                        2010 ;
                        2020 LTAB
                        2030          .WORD LOPEN-1       ;New Open.
                        2040          .WORD CLOSE         ;Close.
                        2050          .WORD GETBYT        ;Read.
                        2060          .WORD PUTBYT        ;Write.
                        2070          .WORD STATUS        ;Status.
                        2080          .WORD SPECIAL       ;Special.
                        2090          JMP  INITIO         ;Initialization.
                        2100 ;
                        2110 LOPEN
067B 20C0E0             2120          JSR  $E0C0          ;Old OPEN address
067E A910               2130          LDA  #10            ;DESD
0680 20CBE0             2140          JSR  $E0CB          ;Old WRITE address.
0683 A015               2150          LDA  #15            ;CONTROL
0685 20CBE0             2160          JSR  $E0CB          ;Old WRITE address.
0688 A038               2170          LDA  #$38           ;CR/LF
068A 20CBE0             2180          JSR  $E0CB          ;Old WRITE address.
068D A001               2190          LDY  #1
068F 60                 2200          RTS
                        2210 ;
0690 0006               2220          .WORD LIMIT
0692                    2230          END
```

Listing 4. Assembler Editor source listing for non machine dependent L: device.

-START The ST Quarterly-

At the recent PCW show I purchased three copies of START The ST Quarterly, the dedicated ST magazine and disk produced by Antic Publishing, at three different prices of £6.95, £9.95 and £12.95. With the recommended price being £12.95, is this magazine really worth it? I hope this review of what I found in the Fall 1987 issue convinces you that it is.

First the Magazine .....

START is of the high standard expected from Antic Publishing, and covers all aspects of ST computing. There are no listings, so you have to print them yourself if you want to study them at your own leasure. This also means that the articles take on a tutorial/user guide format without there being any code walk throughs, which is a pity as this is by far the best way of learning.

Along with the articles required to run the programs on the disk there are also articles that do not require any programs (just like any other magazine). Within this issue there are reviews of Fleet Street Publisher, VIP Professional, three hard disks - the Astra System HD+, the Supradrive and the Atari HD204, and four MIDI patch editors - CZ Patch, CZ Android, Perfect Patch and DX Heaven. There is also an article detailing the results of a chess tournament between Chessmaster 2000, Psion Chess and Techmate. The final ratings for these programs being 1904, 2109 and 1700. Also included is a light hearted article entitled 'How not to run a computer store'.

The magazine is roughly split 60/40 in favour of the articles. As well as the articles being very interesting the adverts give a great insight into the products that will be soon available here in the UK and thus should not be ignored because of their American only slant.

..... now the disk .....

Firstly its this that puts the price up and therefore it's the contents of this that determine whether you buy the next issue or not. Before you can use the programs you need to convert them as they are stored on the disk in the Archived (compressed) format. This will take about one evening and 2 or 3 blank formatted single sided disks. If you have a RAMdisk use it, as this will save a lot of time. Each arc'ed file on the disk contains several different files, these including the executable code, data files, instructions and sometimes the source listing.

Are the programs useful and of good quality? The simple answer to this is yes, but I will expand on this. The programs within the Fall 1987 issue include graphic utilities, a word processor, a calculator desk accessory, a game and some benchmark routines.

By far my favourite program is Pixel Pro, a 'prismatic pixel processor' which enables you to manipulate NEOchrome or Degas compatible pictures. You can modify the RGB components of the picture palette and work on the picture assuming different graphic modes (eg. 1 colour 16 shades, 2 colours 8 shades etc). Among the special effects available are 'chunkify', which expands the centre pixel into a 3x3 or 5x5 matrix. You can also rotate matrixes and smooth outlines. In my opinion this program is worth the £12.95 on its own. The only thing missing though is the source listing which is only available on Compuserve.

My second favourite program is STwriter version 1.75. This is an exact copy of Atariwriter available on the 8-bit range of Ataris and if like me you've upgraded to an ST and are already using the original, STwriter may well be a welcome addition to your ST library. All the commands are identical, with the addition of one very useful feature, a routine enabling you to port Atariwriter files into STwriter via the 850 interface (if you have one) and a null modem cable. Included with this program is a program which will count the words within your document, a full blown manual which you need to print, a quick reference guide and printer configuration files. Once again this program could also be worth the whole cost of the magazine.

Other programs available on this disk are Grapher and 3DGrapher, two programs that allow you to plot those mathematical functions you hated at school, either in two or three dimensional styles. The source program for these programs is written in Personnel Pascal and are available on the disk. The single game on the disk is called Brickyard, and is a exact copy of breakout (Illusion on the disk magazine FASTER, Volume 2 Number 3 is better). Brickyard is written in GFA Basic with the source code available on the disk. The final 'usable' program is a desk accessory called the START Calculator. Oh no, not another calculator? I hear you ask. Well yes, but this one is quite different, as it's an exact copy of Texas Instruments TI-35 programmable scientific.

The final two files on the disk are the benchmarks used in evaluating Mark Williams C Compiler and Kuma's K-MUX transputer.

..... and finally the conclusion.

Overall the magazine is well balanced and provides enough information to supplement the disk. All the articles are very informative, interesting and easy to read.

Overall all the usable programs are very good, with Pixel Pro and STwriter standing out. The other two issues of START that I have (Winter 86 and Summer 87) are also of the same high standard and are all worth the £12.95 price tag, though if you wait until the next computer show you may get some back issues cheaper. I have a simple method of letting magazines know if I like them, I subscribe and my subscription for START is currently winging its way across the Atlantic. This magazine is a must for anyone interested in ST computing.

Colin Hunt.

BaPAUG meetings are held on the 1st Friday of every month at Kinson Community Centre, Penhams, Millhams Lane, Kinson. Starting at 7.30pm.

Software Roundup

-ST-

Gremlin Graphics have released an arcade game called ***3D Galax*** priced at £19.95. ***US Gold*** have released the concluding chapter of the role-playing saga Phantasie, with ***Phantasie III*** now available for £29.95. A bit pricey in my opinion. If your interests lies with strategy games, ***PSS*** have finally released ***Annals Of Rome*** at £19.95. ***Talent Computer Systems*** are currently allowing possible purchases of ***TRIMbase***, a two week trail period. So, if you are interested in a relational data base and want to 'try before you buy', you'll want to talk to them on 01-552 2128. ***MicroAPL*** have just cut the price of ***APL.68000*** by a staggering 50% to £99.95. ***Digita International*** have recently announced three products. These being ***Mailshot*** and ***Home Accounts*** for £24.95 and ***Spectrum Analyser*** for £99.95. I think the titles indicate quite adequately their functions. I would also be quite interested in seeing Spectrum Analyser. ***Barbarian*** is now available along with its awful packaging. ***System Exclusive*** have now released a colour version of ***Iconix*** their midi sequencer. ***Microprose*** have a bagful of games due for release in the near future. These including ***F-15 Strike Eagle***, ***Project Stealth Fighter***, ***Airborne Ranger*** and ***Drge***. ***Level 9*** have just released ***Gnome Ranger*** and with ***Rainbird*** plan to release ***The Time and Majik Trilogy*** which includes the adventures - ***Lords of Time***, ***Red Moon*** and ***Price of Magik***. Talking about adventures, ***SSI/US Gold*** have just released ***Rings OF Zilfin*** an animated adventure on 3 disks for £24.95. ***US Gold*** are also just about to release ***Indiana Jones and the Temple of Doom***, ***Sub Battle Simulator***, ***Gauntlet II***, ***Solomons Key***, ***Charlie Chaplin*** and ***Dat Run***. There, that should keep you busy. The topselling board game ***Trivial Pursuit*** is now available from ***Domark Limited***. Also available from the same software house is ***Not A Penny More, Not A Penny Less***, the computer game based upon the best selling novel by Jeffrey Archer. Domark are also releasing a copy of ***Star Wars***, the arcade game. ***Bug Byte*** have entered the ST budget market with ***Missing : One Droid*** for £9.95. This game is available on the 8-bits for £2.99. Don't think these prices will ever occur with ST software. ***Computer Concepts Limited*** have released ***Calligrapher*** at £69. This is the program I intend to use when producing future issues of 8:16. ***Wordperfect Corporation*** have just released ***Wordperfect*** at £199, phew! ***Michtron*** will be showing their desktop publishing package called ***Easy Page*** at the Atari User Christmas Show. At [illegible] is the cheapest publishing package [illegible]. ***Infogrames*** have just released a platform and ladders game called ***Bubble Ghost***. In this version you play the ghost and blow a bubble around. Weird! Adverts for ***Star Trek*** at £13.99 have appeared in the computer press with the words 'now available'. Maybe this time it is true. I hope so, as this is one game I'm going to buy. Moving back to ***Rainbird***, they have the following software due for release, all written by different software houses. Titles include ***Universal Military Simulator*** by ***Intergalactic Development***, ***Carrier Command*** by ***Realtime Software*** and ***Jinxter*** by ***Magnetic Scrolls***. ***Eidersoft*** previewed ***Quantum Paintbox*** at the PCW. This painting package allows a staggering 4096 solid colours on the screen at once.

-8 bit-

On the 8-bit market, a fruit machine simulation called ***Dizzy Dice*** has been released on the budget label ***Players***. At £1.99 you really can't go wrong. ***Mastertronic*** are as busy as usual, with ***180***, ***On Cue*** and ***Molecule Man*** all entering Atari Users software chart in November's issue. Strange, I haven't seen any of these yet. Talking about Atari Users chart have you noticed the massive increase in budget titles available (there being only 4 titles above £3 in the top 20) and the increase in different software houses supplying Atari software. Companies currently represented in the chart are ***Firebird*** (with 2 titles), ***Mastertronic*** (with 6 titles), ***Bulldog*** (with 2 titles), ***Domark***, ***US Gold***, ***Microprose***, ***First Star/Prism*** (with 3 titles), ***Rhino***, ***Players*** and ***Codemasters***. Well done to all of you. ***Tynesoft*** [illegible] Atari 8-bit market, have ***Winter Olympics '88*** due for release when the real thing happens and an arcade game called ***Mirax Force*** also due out. These are both £9.95 on disk, with Mirax Force also available on cassette for £7.95. A review of their ***Four Great Games Volume II*** can be found in this issue of 8:16. ***Bug Byte*** have just released ***Missing : One Droid*** for £2.99 on cassette only.

-VCS-

Atari have just re-released just about all of their VCS game cartridges. These include ***Super Breakout***, ***Cookie Monster Munch***, ***Tennis***, ***Warlords*** (anyone know where I can get this for my 8-bit) and ***Big Bird Egg Catch*** all at £6.99. At £9.99 you can now buy the old classics such as ***Joust***, ***Jungle Hunt***, ***Kangaroo***, ***Dig Dug***, ***Galaxian***, ***Moon Patrol***, ***Battlezone***, ***Space Invaders***, ***Centipede***, ***Millipede*** and ***Ms Pac Man*** and all those games you knew and loved those many moons ago. For £12.99 you can buy ***Junior Pac Man***, ***Solaris*** and ***Midnight Magic***. You can find reviews of the last two in this issue of 8:16.

Software houses, please lets us know about your future releases so we can include details in this software roundup. Thanks.

-PC-

No PC news this issue. Does anyone know if the Atari PC will run normal PC software, or is it like the Amstrad and will run machine dependent PC software?

-STBUFF-

(A printer utility for the ST)

After five years of owning an Atari 800 and two years of owning an Atari 800XL, I've succumbed to the temptation and bought an Atari 520STFM (at £299 I just couldn't resist). So now to use my new machine in a constructive manner, but what? Without a compatible printer, debugging any programs is going to be a pain. I can't afford another £200 and I'm not going to sell my other two machines as I might need them. Wait a minute, I have a printer for them, the Atari 1020 printer/plotter, its slow but adequate for the job. Maybe I could use that, but how? Well this article describes how I did it.

When telling the ST to produce a listing the output is presented to the parallel port. This port is a cut down centronics port, supporting only the STROBE and BUSY lines (along with the required 8 data lines). When the ST wants to send information to the printer it first checks that the BUSY line from the printer is high. It will poll this line for about 40 seconds before deciding that there is no printer connected. When the BUSY has been detected as high the ST sets up the data bits and toggles the STROBE line low. This latches the data into the printer input buffer. At this stage the printer may pull the BUSY line low in order to give itself enough time to print the character before the next arrives. This sequence of events will continue until either the file has been printed or a timeout has occured.

In order to be able to use my 1020 I had to emulate the behaviour of a printer using my 8-bit Atari and convert ST character codes into 8-bit character codes. To do this I needed a cable to connect the two machines together and some software within the 8 bit. The cable required nine inputs and one output, these requirements being easily met by the two available joystick ports. Figure 1 shows the cable required. I built the cable using two lengths of 6 core cable, about 6 inches long, with two female 9-way D-types and a male 25-way D-type. In order to get the length required between the two computers I brought two joystick extension leads, though you could build the cable the required length if you want. None of the components required are difficult to obtain, both Tandy and Maplin stocking almost everthing you will need. The joystick extension lead you will have to obtain from Tandy.

The joystick direction lines all go to the peripheral interface adaptor (PIA), which on power-on is configured in input mode. These pins can be changed by a program to any mixture of input and output. For my application bits 0-6 needed to be input lines (DATA 0-6), while bit 7 an output line (BUSY). The PIA is mapped into addresses $D300 - $D3FF (54016 - 54271). Only the first 4 locations are actually required, as they are repeated through the rest of the page. The first two locations are called PORTA and PACNTL. On the XL/XE range the second port is used to control the memory mapping, while on the 400/800 the second port looks after the 3rd and 4th joystick ports.

To program the joystick port you first have to tell the PIA you are going to make control changes by setting bit 2 of PACNTL to zero. You then write to the port (PORTA) with each bit representing a direction, 1 is for output. Thus to set bit 7 as an output, leaving bits 0 to 6 as inputs you have to write 10000000 ($80). You then tell the PIA to go back to normal mode by reseting bit 2 of PACNTL thus enabling you to read and write to the port normally.

The two joystick triggers are mapped into memory addresses $D010 (53264) and $D011 (53265) respectively. These memory locations are called TRIG0 and TRIG1 and can only be used as inputs. I've used TRIG0 as the STROBE input and TRIG1 as the last data line input (DATA 7).

The software used is listed in Listings 1 to 5. These programs do not provide a full blown printer buffer utility. In order for it to work with your printer you will probably have to write your own 'interface' routine or modify one given. This routine can either operate as a stand alone program or within the main routine. Examples of both are provided, the stand alone routine being the buffered 1020 while the inbuilt routine is the unbuffered version (see lines 340 to 500 of Listing 1). If you are unable to produce your own routine I have added an option that will transfer the printed file to the 8-bit disk. You can then use a wordprocessor to do any changes required. Remember, if you decide to include your routine within the main program a buffered version will be limited in its buffer area unless you use a RAMdisk or disk drive as temporary storage. The graphic dump routines, option 3 and 4 within the main program, will be provided in a later issue of **8:16**.

Listing 2 produces the object file D:STBUF.OBJ which is loaded in by the main routine. The source listing for this is on page 14. If you are modify the source you will have to change line 1260 to *= *$600*, as this was changed in order to produce the listing using the L: device handler. They both occupy the same memory. This routine will return the character number in X if no timeout has occured. If a timeout has occurred it returns a value greater than 255.

If you write your own routines, or make improvements to these, lets us know and we may print them in future issues. Improvements that are already in the pipeline include re-writing the routines in assembler.

Colin Hunt.

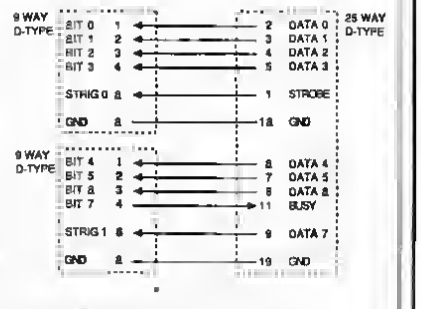


Figure 1 STBUF Cable.

```
100 REM STBUF main menu  AUTORUN.BAS Ver
sion 1.0
110 REM A printer buffer for the Atari S
T.
120 REM The routine looks after the init
ialization and main menu.
130 ------------------------------
140 PORTA=54016:PACNTL=#D302
150 POKE PACNTL,56:POKE PORTA,#80:POKE P
ACNTL,60:POKE PORTA,128
160 BLOAD "D:STBUF.OBJ":GRAPHICS 0
170 TRAP #0000:POKE #02F0,1
180 ? " STBUF - A printer buffer for the
 ST"
190 ? "------------------------------
==="
200 ? :? "1) Atari 1020 (Buffered)"
210 ? "2) Atari 1020 (Unbuffered)":? "3)
 Atari 1020 (Graphic dump - mono)
220 ? "4) Atari 1020 (Graphic dump - col
our)"
225 ? "5) Transfer to disk drive"
230 ? :? "Make selection":GET TYPE
240 TRAP 260
250 ON TYPE-48 GOR OPTION_1,OPTION_2,OPT
ION_3,OPTION_4,OPTION_5
260 REM Error ????
270 TRAP #0000:? "" GOTO 230
280 END
290 ------------------------------
300 REM Here for Buffered 1020
310 # OPTION_1
320 RUN "D:BUFF1020.STB"
330 ------------------------------
340 REM Here for Un-buffered 1020.
350 # OPTION_2
360 ? :? "Initializing....."
370 DIM CODE$(256)
380 CODE$(1)=" ":CODE$(256)=" ":CODE$(2)
=CODE$
390 REM Setup xref for Atari 1020.
400 FOR I=0 TO 127
410   CODE$(I+1,I+1)=CHR$(I)
420 NEXT I
430 CODE$(11,11)=CHR$(155)
440 ? :? "Initialized."
450 TRAP 480
460 OPEN #2,8,0,"P:"
470 X=USR(#0600):IF X>#FF THEN 470
480 ? #2,CODE$(X+1,X+1),:GOTO 470
490 CLOSE #2
500 GOTO 460
510 ------------------------------
520 REM Here for mono 1020 graphic dump.
530 # OPTION_3
540 RUN "D:MGR#1020.STB"
550 ------------------------------
560 REM Here for coloured 1020 graphic d
ump.
570 # OPTION_4
580 RUN "D:CGR#1020.STB"
590 ------------------------------
600 REM Here to transfer to disk.
610 # OPTION_5
615 DIM FILENAME$(15)
620 ? "Enter filename (Dnifilename.ext)"
:INPUT FILENAME$
630 FLAG=0:OPEN #2,8,0,FILENAME$
640 X=USR(#0600):IF X>#FF AND FLAG=1 THE
N 680
642 IF X>#FF AND FLAG=0 THEN 640
650 ? #2,CHR$(X);:FLAG=1:GOTO 640
660 CLOSE #2
670 CLR :GOTO 170
680 ------------------------------
```

Listing 1: STBUF main routine.

```
10 REM Generate STBUF.OBJ file.
20 REM
30 OPEN #2,8,0,"D:STBUF.OBJ"
40 TRAP 60
50 FOR I=1 TO 1000:READ Q:PUT #2,Q:NEXT
I
60 CLOSE #2
70 END
100 DATA 255,255,0,6,57,6,104,120,169,0,
133
101 DATA 18,133,19,133,20,141,0,211,166,
19,224
102 DATA 8,240,28,173,16,208,208,245,169
,128,141
103 DATA 0,211,173,0,211,174,17,208,208,
2,41
104 DATA 127,133,212,169,0,133,213,88,96
,169,128
105 DATA 141,0,211,133,212,133,213,88,96
```

Listing 2. Routine to produce D.STBUF.OBJ.

```
100 REM BUFF1020.STB Version 1.0
110 REM A printer buffer for the Atari S
T.
120 ------------------------------
130 EXEC INIT
140 I=0:BUFFER$=""
150 I=I+1:X=USR(#0600):IF X>#FF THEN 180
160 BUFFER$(I,I)=CHR$(X):TEMP=ASC(BUFFER
$(I,I))+1:? ";CODE$(TEMP,TEMP);:GOTO 150
170 ------------------------------
180 IF LEN(BUFFER$)<1 THEN 140
190 OPEN #2,8,0,"P:"
200 FOR I=1 TO LEN(BUFFER$)
210   TEMP=ASC(BUFFER$(I,I))+1
220   ? #2;CODE$(TEMP,TEMP);
230 NEXT I
240 CLOSE #2
250 GOTO 140
260 ------------------------------
270 PROC INIT
280   ? :? "Initializing....."
290   DIM CODE$(256),BUFFER$(FRE(0,-1020
)
300   CODE$(1)=" ":CODE$(256)=" ":CODE$(
2)=CODE$
310   REM Setup xref for Atari 1020.
320   FOR I=0 TO 127
330     CODE$(I+1,I+1)=CHR$(I)
340   NEXT I
350   CODE$(11,11)=CHR$(155)
360   ? :? "Initialized."
370 ENDPROC
```

Listing 3: Buffered 1020 routine.

-Gnome Ranger-

(Level 9 - ST - £14.95)

Gnome Ranger is the latest adventure from the Austin family collectively called Level 9. The adventure is supplied in a case very similar to a double cassette box. Within the packaging is the disk and a diary written by Ingrid Bottomlow our heroine.

The disk is dual formatted, that is, it will operate with both single and double sided drives. When used with a double sided drive additional pictures are available. Owners of ST's with only single sided drives can purchase a picture disk containing the additional pictures for £2. See the READ ME file included on the disk for details. You can also obtain free of charge a cluesheet by sending the cover and a self addressed envelope.

The diary details the days from Ingrid leaving the Institute of Gnome Economics to the day her father gives her a scroll as a reward for all she has done for them. The first thing you will notice about the diary is the gnames of the days. The week starts on Sandday and then continues through Mudday, Treesday, Waterday, Airsday and Fireday to Stoneday. Reading the diary you soon realize why her family are so eager to get rid of her!

This adventure has all the latest adventuring features including multi player puzzles, characters with their own lives and high level commands. These commands include means to follow other characters and move to other locations quickly. The two ways of moving quickly are *run to location* and *go to location*. The first takes you straight to the gnamed location, while the second describes the route taken. To use these commands you first gneed to work out the location gnames. Try guessing possible location gnames using the 'go' command, you'll soon find several locations you may of missed. As well as being able to go to a location you can also go to an object. Great if you've dropped something and forgotten where. Once again you can find objects by gussing object gnames. The fact that you can go straight to locations you haven't visited or go to objects you haven't found seems a bit silly. But as the adventure depends upon getting other characters to do things for you, the time saved gnot wandering around looking for that bridle is a god send. These commands also reduce the amount of mapping required, which is another major advantage.

The adventure starts with Ingrid walking home after being teleported into the wilderness, far from home, by a faulty scroll. Remember the gift from her father. Your job is to make sure Ingrid gets home while sorting out one evil witch. This is accomplished via three mini adventures, each having to be solved before you can move on to the next.

The screen is split 60/30 between the picture and text, though you can move the picture up and down using the mouse, thus allowing more text to be shown. Here comes my first complaint. The text is in 80 columns and on my television is difficult to read. It's a shame that a 40 column option could gnot of been included, without the pictures if necessary.

The description, as with all Level 9 adventures are well detailed and add greatly to the atmosphere. The picture are gnice but gnot really gnecessary and after a while become boring.

I will gnot detail much about the contents of the adventure as its gnew and I do gnot want to ruin your fun. So in order to detail my second complaint lets assume I've been wondering around for a while and eventually end up on a grassy plain. Lets examine something, examine grass. The program responds with *You don't gneed to use "grass" to finish this part of the game*. This message appears whenever the program does gnot recognize something. Does this, in our example, mean the grass will be required later on in another section of the game, or is it a way of saying you don't gneed it at all. What ever happened to the 'the grass is green and uninteresting' type of response.

One of my grudges against most adventures is the inability to see what I did in the recent past, not just the last two or three moves still shown on the screen. This has been overcome by the inclusion of an input text buffer which you can skip through using the cursor control keys. As well as this you can edit previous commands and the re-execute them. Also included is a multiple cops command which will take you back through this input buffer. Thus, you can try a campaign to solve a puzzle, fail, undo your moves and try another approach.

I've deliberately limited the amount of information supplied about the its puzzles and the characters you will meet. This is because the adventure is such a pleasure to play and is full of amusing responses that each individual should start with gno knowledge about its content. This review is intended to show you how it feels to play and thus convince you to buy it, as this is the best yet from Level 9. Oh yes, one more thing, all the words beginning with *n* begin with *gn*. This is something you either hate or love - its up to you.

Colin Hunt.

-Four Great Games Volume 11-

(Tynesoft - £3.99 twin cassette, £5.99 disk - 8 Bit)

Here they are, the best of, the super best of and yes the super mega best of. Yes, four great games for your Atari, but I have to say they are not so great. I mean, okay, at last they care to bring out these compilations, so maybe its a start.

The first game is ***Who Dares Wins II.*** Its a Rambo type shoot all and everything kind of game. You fight your way through various levels and free your fellow officers, if you can or dare. The graphics are under average and so is the sound, though the music is a little tune you can hum along to. Thats about it, thanks, nice try.

The second game is called ***Space Hawk*** . Here you guide your gunship over some terrains in space and blast everything that comes your way, progress to the next level and start again. Golly, I have a better blast 'em up collection on my VCS with better graphics and better sound. Next please.

Alright, lets see. Oh yes, now we have a game called ***Mouse Trap*** (nothing to do with the old Coleco version). Its a platform and ladder game, its fun and the best game from this collection. There are 22 screens to master and a few bugs, but who cares ? Marvin the Mouse must search for his favourite food, a wedge of golden cheese, whilst avoiding all the obstacles on his journey. The program is not the very best, like it claims to be, but is good clean fun. the graphics are simple (including the bugs) and the music once again is a little sing-a-long. This one you should give a try.

The last game on the double tape is ***Killer Cycle***. You'd expect death on two wheels with blood and guts. Ha, won't you be in for a surprise. Remember surround, an old VCS game. Thats right, two lines on the screen, longest surviving line wins. Well, heres that game again with the only difference being with the number of players, now increased to four. You can, if you want, play against the computer. This game is most definitively second best.

For £3.99 you can not expect the best games ever produced and anyway for that price its not much of a loser. There is some promise here (expecially with Mouse Trap) and I hope Tynesoft continue in support also in the future. Watch out for the new Winter Olympiad '88 available soon.

Thomas Holzer.

Issue 2 of 8:16 will be available at the end of Feburary 1988.

To reserve your copy send 75 pence to 8:16 with your name and address and we will post it to you.

-Henry's House-

(Mastertronic - £1.99 - Tape only - 8 Bit)

Mastertronic, one of the leading software companies for budget priced games have just produced another classic. The name of the game? Henry's House. It is a platform and ladders game and before you say 'oh no, not another', let me tell you this is the best platfrom and ladder game since Miner 2049'er.

Little Henry, one of the royal children was playing in his father's laboratory. His father has just invented a new potion and Henry could not resist the challenge and took a small sip. Now he has shrunk and is only 6 inches tall and has got himself locked into the clothes cupboard. You have to help him find the key to get him out and then get him back to full size. Thats the story so far. You then guide little Henry through the royal household avoiding all the obstacles like the terrible toothbrush, stamping boots, flying eggs and much more. You must collect all the items in each screen in order to get the key for the next. Once you have completed one level the picture changes and you see little Henry coming out of the door, down the hallway and into the next door (level).

Nicely made, the graphics are very good and detailed. The music is short but superb. The special effects are nothing special but they do there purpose for the gameplay. There are eight levels to complete and if you die you just press the fire button to start within your current level. Very good for training and so you get the chance to see all levels, some of which are very funny. If you want a good game which is not to difficult to play, but will give you many hours of entertainment this is one for you.

Thomas Holzer.

-STBUF-

```
                1000 ;STBUF ASM version 1.2
                1010 ;A pointer buffer for the ATARI S
                1020 ;
                1030 ;T/C routine for use in STBUF TUR
                1040 ;
                1050 ;Assembly directives :-
                1060 ;
0000            1070          OPT NOEJECT
                1080 ;
                1090 ;Data pointer declarations :-
                1100 ;
0012            1110 RTCLK1 =    $12        ;Clock, incremented every 1/50 th second.
0013            1120 RTCLK2 =    $13        ;Clock, incremented every 4.27 seconds.
0014            1130 RTCLK3 =    $14        ;Clock, incremented every 18.7 minutes.
0024            1140 RESULT =    $D4
D010            1150 STROBE =    $D010
D011            1160 BIT7   =    $D011
D300            1170 PORTA  =    $D300      ;BUSY = bit 7; Data = bits 0-6.
D302            1180 PACTL  =    $D302
                1190 ;
                1200 ;Variable declarations :-
                1210 ;
0000            1220 TCNT   =    $0         ;Timeout count.
                1230 ;
                1240 ;Origin declaration :-
                1250 ;
0000            1260          *=  $3000      ;Not really necessary as code relocatable
                1270 ;
                1280 ;Program :-
                1290 ;
3000 68         1300          PLA            ;Clear stack of i/p count.
3001 78         1310          SEI            ;Disable interrupts.
3002 A500       1320          LDA #$0        ;Clear BUSY.
3004 8512       1330          STA RTCLK1     ;Clear clock counts.
3006 8513       1340          STA RTCLK2
3008 8514       1350          STA RTCLK3
300A A00003     1360          STA PORTA
300D A613       1370 STBUF    LDX RTCLK2     ;Loop until timeout,
300F E000       1380          CPX #1CH1
3011 F01C       1390          BEQ LSTCOM
3013 A010D0     1400          LDA STROBE     ;or until STROBE low.
3016 D0F5       1410          BNE STBUF
                1420 ;
3018 A500       1430          LDA #$0        ;Set BUSY.
301A 800003     1440          STA PORTA
301D A00003     1450          LDA PORTA      ;Read data bit 0 to 6,
3020 AE1100     1460          LDX BIT7
3023 D002       1470          BNE STBUF2     ;Zero?
3025 257F       1480          AND #$7F       ;Yes, therefore set bit 7 in data byte to
w.
3027 8504       1490 STBUF2   STA RESULT     ;and save.
3029 A500       1500          LDA #$0
302B 8505       1510          STA RESULT+1   ;Clear high byte.
302D 58         1520          CLI            ;Enable interrupts.
302E 60         1530          RTS            ;Return to BASIC.
                1540 ;
                1550 ;Here if ST timed out.
                1560 ;
302F A500       1570 LSTCOM   LDA #$0
3031 800003     1580          STA PORTA      ;Set BUSY.
3034 8504       1590          STA RESULT
3036 8505       1600          STA RESULT+1
3038 58         1610          CLI            ;Enable interrupts.
3039 60         1620          RTS            ;Return to BASIC.
303A            1630          .END
```

Listing 4: STBUF source code.

-Wanted-

Can anyone help Thomas out, as he is looking for the following VCS games to complete his collection. You can contact Thomas via 8:16.

ATARI: 3D Tic Tac Toe (CX 2618), Donald Ducks Speedboat, Fun With Numbers, Flag Capture, Gremlins, Hangman, Home Run (CX 2623), Krull (CX 2682), Night Driver (CX 2633), Pengo, Shooting Gallery (CX 2603), Starship, Slot Racer (CX 2606), Snoop VS The Red Barron, Swordquest, Fireworld (CX 2657), Track and Field, Xevious, Black Jack, Slot Machine (CX 2653), Football (CX 2625), Real Sports: Baseball (CX 2640), Real Sports: Football (CX 2668) and Real Sports: Basketball (CX 2679)

ACTIVISION: Checkers, Crackpots and Dolphins.

PARKER: Hulk, James Bond and Lord of the Rings.

SPECTRAVISION: Galactic Tactic, Gas Hog and Mangia.

STARPATH: Frogger, Fireball and Suicide Mission.

TIGERVISION: All

-Info-

The programs:

All programs within 8:16 are written using either Turbo Basic or with Ataris Assembler Editor cartridge. Turbo Basic can be purchased from several different public domain libraries, including Page 6 (0785 213928), who supply a printed manual and additional programs on the disk. Alternatively you can obtain Turbo Basic and all the programs within this issue of 8:16 direct from us for £1.50. If you do this we suggest that you also buy a copy of Monitor Issue 15 (Monitor, PO BOX 3, Rayleigh, Essex.)

Have you written a useful utility?

Played a game you think everyone should play?

Then send an article to 8:16.

-User Group File-

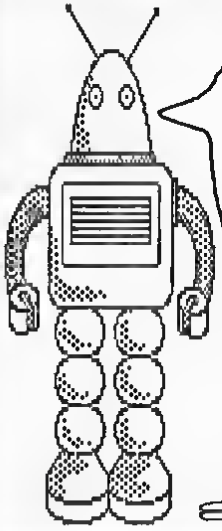
Name	Bournemouth and Poole Atari User Group (BaPAUG).
Contact:	Colin Hunt - 0202 677895.
Members:	17
Meetings:	1st Friday every month at Kinson Community Centre, Penhams, Kinson.
Newsletter:	8:16
Interests:	Hardware and Software development.
Age:	4 months as BaPAUG, 4½ years with Bournemouth Area Computer Club.

-User Group File-

If you would like your User Group to be included within our User Group file, please send the following information to 8 16 (address as page 1) :

The groups name.
The contacts name, address and telephone number.
The number of group members (Atari members if a mixed club)
Membership Fees.
Meeting place (if any) and dates of meetings (eg 1st Friday each month)
Name of any newsletter and release dates.
Special interests within the group.
The age of the group,
and finally a copy of this page with a mark showing us where you are

Future issues of 8.16 will list the information supplied by each group on the page opposite this map This map will be used to indicate where the groups are situated. As you see, our group is already indicated, so come on lets find out where all these user groups are.



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For more details see the
User Group File

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