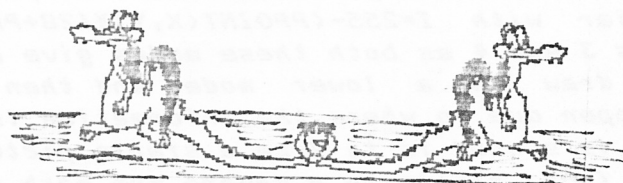


The Newsletter of the National Dragon Users Group

DRAGON



UPDATE

* ISSUE 60. 'Five Years Too Many?!' AUGUST 1989. *

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The Gaffer's Bit

It's victimisation, that's what it is!. Five years of this punishment and I STILL haven't been offered parole!. Yes, I know all about "never volunteer", and I DIDN'T, I just wrote one of those silly letters like the ones you write, asking "why doesn't someone start a National Dragon Group?", and instead of someone doing it they all assumed that I was going to, so like a complete idiot, I did!. Even then I was thinking more on the lines of a hundred or so members and a Group that would quietly disappear after about six months, like all the others around that time, which just shows how daft I can get!. Oh well, anyone wanna buy a a good used Group?, good condition for year, never raced or rallied?. Just been looking at Stephen's Editorial bit Stephen, I don't really like to mention it, but we're supposed to be writing garbage about computers, not films ... I don't think anyone's noticed yet, but maybe we ought to get back on subject before they do. News?. Well, there's the usual flood of new releases, or there would be if anyone had written them, the usual exciting new hardware developments, which are unfortunately not available, of course, and then there's the Oh forget it, if there's any news no-one has let me in on the secret yet. The entire scene appears to have gone into hibernation recently ... nothing interesting happening anywhere, and I don't just mean on the Dragon scene, from what I'm told the same applies to just about every type of computer, even the up-market PC's. Maybe it's the weather or something. I know one person at least who can think of more pleasant things to do than keyboard bashing when the temperature is around the 90 mark, and I doubt that I'm the only one. Of course, it COULD be that people are at last discovering that they don't need computers anyway, but somehow I don't really think that's the answer. There are times when I wish I was running the News of the World rather than Update there's so much more scope for "creative journalism" there ... there's all the fun of inventing news stories without any facts at all to base them on, plus being able to take any event, write it down, dirty it up, and sell a million copies!. There hasn't been a big news item on the Dragon since St. George retired. (What DID happen to him anyway?). Well, I suppose I ought to stop boring you to death and get on with the more interesting stuff. (what do you mean "I haven't written it yet"?, you SHOULD have!..). Paul.

Paul G.

The Editor's Bit . . .

Five years, eh? Who'd have thought it? Not me for a start, and I'd hazard a guess that Paul wouldn't have either. Still, I bet he'd love to receive all your birthday cards and goodwill cards with little badges saying "I am 5", so send them off straightaway.

If you look back at issue 58, you will see the front page tastefully adorned with my Great Questions of Life. My thanks to Robin Hemmings who sent me some very funny answers, and with reference to number 4, Robin, I most certainly was!

Robin was also the first (and so far only) person to suggest an answer for "what is my favourite film of all time", but I must say, Robin, that "A Haunting We Will Go" gets my vote over "Way Out West". Nice try, though. Anyone else care to have a go?
Stephen.

Dumping PMODES 0,1 & 2 ..Mike Townsend

I'm sure there must be a screen dump program out there which caters for all PMODES, 0 to 4, but I've never purchased one. If you use a basic PMODE 4 dump, you'll be familiar with $I=255-(PPOINT(X,Y)*128+PPOINT(X,Y+1)*64+ \text{etc.})$. This is fine for PMODES 3 and 4 as both these modes give a full size screen dump. If however you draw in a lower mode and then dump it with a PMODE4 dump, strange things happen due to where the information is stored. The best way to find out where it is stored is to draw a simple picture in each mode.

PMODE0 uses four pixels in a square for each PPOINT, but it only needs to store this information once, not four times. This means that all the information can be stored on one graphics page. As only 128 addresses are required to store information for 256 pixels, the second line of the drawing occupies the space where you would normally find the righthand half of the PMODE4 top line.

The dump is for a Memotech DMX80, it's fairly Epson compatible, but in case you are not familiar with the listing...

```
10, Speed up POKE, display picture, set Y to 0..
20, Reset the printer (or switch off an on).
30, Sets printer to Elite pitch (else I get oval circles).
40, Standard Bit Image Designation.
50, Start of FORINEXT loop.
60, Collects the data for the eight printer pins (see below).
70, Prints each pixel twice across (see below).
80, Line feed for 8/72 inch.
90, Add 2 to Y and re-scan picture if you aren't at the bottom.
100, Back to normal-speed POKE.
```

In line 60, X scans the left hand side and Z the right. Print the same pixel twice, at (X,Y) twice (one on top of the other), by putting it in positions 128 and 64 on the printer head. The same with the left hand pixel of the righthand (or SECOND) line (Z,Y) in positions 32 and 16. Back to the left for 8 and 4, to the right for 2 and 1. Line 70 simply prints CHR\$(I) twice, so each vertical row of eight pixels (four doubles) is printed side by side.

Now that you've wasted all your time reading this, the dump-minded ones of you are saying "Why not use a PMODE4 dump and change the 4 to a 0? It works." Three reasons: 1) This is much more fun, 2) Now you all know where the data is stored, and 3) Most important of all, it helps cut down the earache from Paul, moaning about not having any articles sent in.

Next month, PMODES 1 and 2.

```
10 POKE65495,0:PMODE4:SCREEN1,0:Y=0
20 PRINT#-2,CHR$(27);"@";
30 PRINT#-2,CHR$(27);"P";CHR$(0);
40 PRINT#-2,CHR$(27);"K";CHR$(&H0);CHR$(&H1);
50 FOR I=0 TO 127
60 Z=X+128:I=255-(PPOINT(X,Y)+128+PPOINT(X,Y)*64+PPOINT(Z,Y)*32+PPOINT(Z,Y)*16+P
POINT(X,Y+1)*8+PPOINT(X,Y+1)*4+PPOINT(Z,Y+1)*2+PPOINT(Z,Y+1))
70 PRINT#-2,CHR$(I);CHR$(I);:NEXT
80 PRINT#-2,CHR$(27);CHR$(65);CHR$(8);:PRINT#-2,CHR$(10);
90 Y=Y+2:IF Y>47 THEN 100 ELSE 40
100 POKE65494,0
```

Thanks Mike, but you'll STILL be getting your ear bashed, because since this Group first started we have had a total of less than TWO DOZEN contributors!. When the rest of the members start writing, I'll stop nagging!. Paul.

Yet again it has been a very quiet month for software with only two items dropping through my letterbox. Both of these items are from Dragsoft and they are FONEBILL and SETTER. The first of these programs helps you to check out your telephone bills by inputting length of call, time of day, and whether local or not. It also has the facility to change the cost per unit when BT put up their prices. Setter is a useful program for those people who want to fiddle around inside their Dragon and achieve better sound and vision. It also helps for adjusting television and monitor pictures - provided you know what you are doing inside one of these items.

Last month I told you of the late arrival of software from Prestons. Unfortunately it looks as though Bob has still got duplicating problems as I cannot get Copta Snatch or Invader Cube to load.

Although it has been quiet on the software front it has been fairly busy with mail and telephone calls. Quite a number of people have been asking about Co-Co software. Don't forget that the Group sell a program by Randy Longshore for converting Dragon to Tandy and vice-versa. Orange Software had most of their range able to run on either machine and this is now available from Pulser. Dragonfire also carry a fair variety of software able to run on the Tandy machine as well. Quite a lot of software will run on both machines without any problems apart from different keys being used for input. Revenge of the Alien Bongo Beast is one of these although it works quite normally on a Co-Co in joystick mode. Those of you out there with Dragons who have copies of the American software like SAILOR will know that 1 on the Tandy is achieved by pressing Q on the Dragon. Anybody who would like a copy of the conversion chart can send me a SAE and I will be more than happy to send them one. The same chart works for conversion both ways.

Last month I mentioned that I was going to get a ZIF switch fitted and I thought that I had better explain this to those of you who have never heard of them. A number of people use switchable Dos controllers which enable them to switch between 2 different Dos systems. Others, like I used to, load in a different Dos from disk. Now I have what I believe to be the ultimate. The Dos chip inside the cartridge has been replaced by a little box and a cable and now sits on top of the cartridge held into place on another box. By just moving a lever I can withdraw the chip and replace it with another Dos, then moving the lever to grip the chip securely in place. I have now got seven different Dos chips and am able to switch easily between them whereas, in the past, I had to pull the cartridge out from the computer and pull the ribbon from the other end. Having undone the screws in the cartridge I then flipped the chip out with a screwdriver, usually bending at least two legs, and then had to put everything back together again. Another advantage with this system is when I need to disconnect my Dos to run some cassette software I can now turn off the drive's power and turn the lever on the ZIF switch which is the same as pulling out the cartridge. Saves wear and tear on the cartridge connector or scrambling through my disk collection looking for a Dos detach program or another Dos on disk. I have seen a DOSPLUS TANDY chip which can be put into a Dragon controller and this enables a Co-Co machine to read a 40 track Dragon disk and then load the programs although some conversion may then be necessary to make it run. However, this can then be saved out to cassette and ultimately resaved onto disk.

Finally for this month has the demise of Dragon User helped people to solve adventures? Pete and Mike Gerrard used to get loads of queries but since I offered to help within my article there has not even been one request for help.

Just a word of warning, Mike, removal of the DOS EPROM with the Dragon still powered up isn't doing your controller chip any good at all ... just killing the drive power doesn't solve anything as the DOS draws IT'S power from the Dragon. I wouldn't make a habit of it if I were you. Paul.

The For...Next Loop(3)-J.R.Winchurch.

Hopefully it is now obvious that a FOR...NEXT loop is a way of making the computer repeat the same operation a number of times. Remember that FOR may be translated as "LET x=range of values from a bottom limit to a top limit or vice versa, in steps of z". If you don't tell the computer the value of z it assumes 1. NEXT tells the computer to increase or decrease the value x by the required amount z until the operations are completed, then exit the loop, and not a GOTO in sight. Problems arise when more than one FOR...NEXT loop is required at the same time, that is you require the computer to do two repeated things virtually at the same time. This combination of FOR...NEXT loops is called "nesting". Incorrect interlocking of loops can cause a program to crash. We have seen a simple for of nesting when using the delay mechanism:

```
10 CLS
20 FOR C= 1 TO 10
30 PRINT C
40 FOR D= 1 TO 100
50 NEXT D
60 NEXT C
```

What is happening here? The computer is told that the loop is going to work between 1 and 10 times. Remember that the 10th time is the exit time! It prints the first number, 1. Then there is a delay for a count of 100, BEFORE the computer moves onto line 60 and sees that the next C is required, ie 2, and thus knows that it must return to line 30 to print this new number out. Each time it prints one of the numbers it knows that it must then pause so that the number can be read. When it reaches line 60 and sees that C has reached 10 it knows that the program loop is over, and it exits the program. Note that the two loops are INSIDE one another, and not as shown in the following variations:

```
10 CLS
20 FOR C= 1 TO 10
30 PRINT C
40 FOR D= 1 TO 100
50 NEXT C
60 NEXT D
```

The loops now overlap, and a crash is imminent.

The computer will be trying to pause and print the next C at the same time. Even if the two loops are put the wrong way around, providing they are WITHIN one another the program will work, although the results cannot be guaranteed to be what you require.

```
10 CLS
20 FOR D= 1 TO 100
30 FOR C= 1 TO 10
40 PRINT C
50 NEXT C
60 NEXT D
```

Try it and see what happens. Thus not only can incorrect nesting cause problems, but so can incorrect order. Before looking at the problem of correct order, let us remember the golden rule for nesting: FIRST IN, LAST OUT. IE the first FOR must be the last NEXT, the next FOR must be the penultimate NEXT, and so on. Look at the pattern in the set of loops below:

```
FOR (a)
FOR (b)
FOR (c)
NEXT(c)
NEXT(b)
NEXT(a)
```

In the next article we will look at examples of the use of simple and nested FOR...NEXT loops.

The Dragon & Tandy Summer Show.

Just thought I'd let you know that I have made a definite booking for the Hove venue for 2nd June 1990, so whatever you do, make sure that you keep that date clear!. You can't say I'm not giving you enough notice!. Paul.

COLOSSAL CAVE - REVIEWED BY RAD

Now on sale exclusively by the NDUG, this is one of the classic text adventures for the Dragon, and worth obtaining for your archives even if you are not an adventure addict. It uses no less than 127 locations, most of them underground passages, canyons and caves, described imaginatively, and 67 objects for use within. You meet the usual Dwarves, a Giant, Troll, Pirate, Snakes, Bears, plus a Dragon. In addition there are cyphers and the perils of explosions and geysers to face. There is the obligatory torch, of course, and Mr Cowan has a nice gentle sense of humour, which will give you the occasional chuckle. The first few disasters you meet are remedied by returning you to the start location, and when you finish or quit the adventure you are given a rating as well as a score. The Basic Loader routine enables saving of the game at the point you have reached. The most impressive part of the programme is the syntax of around 225 words to which it will respond, making it more user friendly than most adventures. It has 93 text messages and was made in the days before Disc systems were in general use, for cassette only, with Twom Software's Adventure Writer utility. The advanced version of that utility, also on sale by the Group, now enables you to use Dos when programming your own adventure. (Software editor - "Cave" is priced 5.00, & Adv.Writer 7.50 inc. available from NDUGSOFT, 52 Downsway, Springfield, Chelmsford, Essex, CM0 7ND)

ANIMUS - REVIEWED BY STUART BEARDWOOD

I've seen some quite impressive graphics demonstrations on the Dragon. I've also heard some pretty nifty musical pieces. But I can't recall ever having come across a really good combination of the two until now. Animus proves that there are STILL unexplored areas of the Dragon's capabilities, and full marks to Dave Cadman and Tony Davis for bravely going....etc.

The disc contains seven, yes SEVEN different animated graphic displays set to music. Enough to cater for all tastes, from highbrow to Lowenbrau! They are:
SWAN - A white swan glides across a lake in front of an impressive castle drawing. The tune is a gentle classical piece, very relaxing to watch and listen to.

BONES - Three skeletons having a rattling good time to the tune of "Dem Dry Bones" -- What else!

GARDEN - Pmode3 for this one. Featuring a butterfly, fluttering by, in an English Country Garden.

DANCER - Pmode3 again. An Arabian beauty performs her seductive art to music -- P.G. rated!

BARREL - A barrel organ being energetically operated, with three different authentic sounding tunes, and dancing musical notes. It must be the monkey's teabreak!

ORGANIST - A hand-pumped pipe organ with enthusiastic player, but not so enthusiastic bellows operator! A touch of nostalgia in this one.

QUARTETTE - My favourite. Brings back fond memories of my days as a "Mecca Band" musician. One for the jazz fans with four classic tunes.

I would have liked some method of stopping and starting the displays, but nevertheless, a unique and enjoyable suite of demonstration programmes, bringing out the lighter side of Dragon computing. You'll love 'em!

ANIMUS available from the Group for 3.50 incl P&P on Dragondos disk.

Return of ARCSOFT!.

Alan Cook, otherwise known as ARCSOFT, has decided to re-release his adventure program "13th.Task" via the Group. This in my opinion is one of the best adventure tapes ever released for the Dragon, and as Alan is offering a discount to Group members how can you afford NOT to buy it?!. The price is 3.00, or 2.50 inclusive to NDUG members. Send your orders to ARC Software, 272 Mearns Road, Newton Mearns, Glasgow. G77-5LY.

Fishy Business Five...

Greetings fellow disciples of computer generated frivolity! (Or 'Hello games fans' if you like). This month is a month of prospects and...well, not a lot else to be honest. Although there are rumblings of great things in the pipeline from several directions, due to a technical hitch I only have solid info from Stewart Orchard of Kouga. Sadly there appear to be no new games on the market at present (Cue editorial comment listing the 500 new releases that have occurred in the time lapse between this being written and the compilation of this month's Update). (**Which 500 are those then, Dudley?...SWXX). Actually, speaking of our beloved Ed (**You rang?**), in reply to one of his great unanswered questions of life a couple of months back; No I will not be telling people anything about the games I look at because A) I wouldn't want to spoil the fun of the reviewer, and B) I haven't got much space, and NOT that the sort of games I enjoy require little more instruction than 'Kill, Maim, destroy etc'.

So, onto the rumbling, which is from the direction of the creator of Baldozer and ROTAB. It hasn't been named yet, but in a DTIGG exclusive I can reveal that it is something to do with destroying several very large ships, probably owned by the Alien Bongo Beast. Yes, I admit it's not much, but when a writer gets desperate he'll put down anything (within reason)!

Now, let me take you back...baack...baaack...to the first of my regular columns, when I requested any useful correspondence on Dragon games from all you games junkies. I felt I just had to thank you all for your colossal response which really defied all belief. Did I receive 50 letters? Nope. Did I receive 10 letters? Nope. Did I receive 1 letter? Nope. I didn't even get one from Reader's Digest! Now come on, would it really be too much trouble to drop l'il ol' me a few quick lines, the odd Hi-Score, poke, tip, recipe for apple pie? Let's be honest, if you don't start writing, you'll have to put up with this drivel for the entire column. Besides, if you write to me you won't feel so guilty when Paul & Stephen have their (well justified) moan about reader apathy. Anyway, for those who missed the address the first time, here it is:

"DTIGG, The Vicarage, Norwich Road, Watton, Thetford, Norfolk. IP25 6DB."

Well, do you all feel as though you have been enlightened as to the state of the Dragon games industry after reading this? Well, if you have a strange, empty feeling, you're probably heading in the right direction. If it wasn't for the fact that fish are naturally cheerful characters I'd be rather depressed. But don't let it get you down...go and write a game. Please! Thank you very much for your custom. Please call again. (ie goodbye 'Til next month!). Dudley.

Crossword 44 Answers...

ACROSS:

- 1A). Fortune Teller.
- 2I). Pate
- 3J). Talc
- 4B). Landslide
- 5K). T.C.P.
- 6A). Inspection Pit
- 8A). Groom
- 9G). Lulu
- 11G). Sisters
- 12A). Elevate
- 12I). Mint
- 13A). Rural
- 13F). Elephant

DOWN:

- A1). Floating Voter.
- B4). Lunar.
- C1). Romans.
- C7). Cobbler.
- E2). Badger.
- E8). Manual.
- F4). Sycamore.
- G1). Eyelet Holes.
- H10). Wise.
- I2). Pod.
- I5). Botulism.
- J1). Late
- J7). Squat.
- K7). Rotten.
- L3). Lucifer.
- M1). Receptionist.

JET SET WILLY+.KEITH STUART

This is a screen designer program to let you produce your own versions of the classic game. For copyright reasons the relevant sectors of the original JSW are not included and an automatic compilation process is provided to compile your copy of JSW. This need only be done once. When loaded you are presented with a menu screen showing the 9 edit modes, how much memory is left, how many objects you have in your game, and which screen you are about to edit. At first all the original JSW levels are in memory and all 99 objects are taken up so you must select which screen to edit.

At first the designing process seems complicated and arduous but as you become more acquainted with JSW+ it gets easier and you find yourself creating much more complicated and devious screens! The instructions are well written and to the point. Considering the Dragon's lack of memory the amount of features packed into this product is astonishing. Everything is very fast from loading JSW+ up to saving your own games (which is done by pressing T on the menu).

My only slight criticism is that the program does not allow you to design, or add already designed, new monsters, platforms etc. You have to use the ones created in the original JSW which means your screens will all look pretty similar to the original screens. This is not really a realistic request considering the limited memory.

Overall this is a marvellous product and once you are accustomed to the controls virtually anything you do becomes a playable screen. At 4.99 this piece of software is highly recommended.

Jet Set Willy + available from 10th Dimension Software, 18 Moorcroft Road, Sheffield, S10 4GS. (Software Ed - My list says cassette 4.00 plus 50p P&P so check the price if you are interested)

EASY MACHINE CODE (3)R.A.DAVIS

What you need to know about the 6809 microprocessor, the Dragon's heart, is that it contains a powerful arithmetic logic unit and several BYTES which we can regard as it's own RAM. These are known as REGISTERS. What you need to know about the operating system is that it holds the Microsoft Basic comand in ROM, from location(address) &H8000 and up. It uses some of 'our' RAM from &H00 to &H3ff at the 'bottom' together with some of the RAM at the top. The text screen uses from &H400 to &H5FF and the graphics screens &H600 to &H35FF if all 8 screens are in use. You can't alter the ROM from &H8000, but you can use it from your own machine code by jumping or branching to the routines in the ROM, saving you a lot of work! The lower RAM which it uses can usually be PEEKed to see what it holds and can sometimes be POKEd with new data to alter the effect of the ROM routines which use it. If you are still with me, the next subject is the registers, or some of them.

Goodbye . . . from David Isom.

Just a line or two to thank all those people in NDUG who over the years have helped me and my Dragon. The time has now come for us to part company as there is no room for my trusted friend. The National Dragon Users Group, and especially Paul Grade, have done a superb job!!! I cannot think of another organisation that has tried and succeeded in keeping something going as long. The memory of the Dragon and the good times it gave me will stay a long while. Goodbye. David Isom.



Coco Matters(5)...Chris Rouse.

Much of the DOS is taken up with routines concerned with file creation and handling. My own opinion is that used in BASIC programs these commands work well enough, not as good as those on the Dragon, but they do enable file handling programs to be written. However, when it comes to machine code there is almost no point in trying to use them, it is far better to write your own. Seventeen commands are used, and I will simply list their entry points and other information where appropriate.

CUN start \$CDF4 end &CE01. This checks that the string is only 5 bytes long, then converts it to a floating point number in FPA0. Exits to BASIC.
MKN# start \$CE02 end \$CE0F. Builds a 5 byte string from a floating point number. Exits to BASIC via the last part of a string handling at &B69B.
LOC start \$CE10 end \$CE36. Checks that the file buffer you have requested is open, using a routine at \$CE19, loads register D with the record number and exits to BASIC via \$B90E.
LOF start &CE37 end \$CE98. First checks that the file is open, using the routine at \$CE19, then prints the highest record number using the last part of LOC at \$CE14.
WRITE start \$D066 end &D0BB. This routine exits via an RTS and so could be used by your machine code program. Can be used to add data to a file.
FIELD start \$D0BC end \$D100. Initially checks that the file is a random access file (JSR &C82E). This routine will only exit to BASIC if there is an error, otherwise it exits to the calling routine. This could cause problems when used in a machine code program.
RSET/LSET Call \$D101 for RSET and \$D102 for LSET. This will also only exit to BASIC if an error occurs, so it is probably best to avoid using this routine.
FILES start \$D15C end \$D232. This command is used to reserve buffer space. Another one to avoid using.
GET# and **PUT#** exist in Color BASIC and are extended by DOS to allow their use in disk files. Start \$C2C1 end \$C356. A check that the file is a random access disk file is made, using the routine at \$C82E.

The following commands all exist in Colour BASIC, and the DOS initialisation routine patches these commands to allow their use with disk files. All check the DEVICE NUMBER, often using JSR \$A52A then TSTB. If the result is zero or 'minus' number routine jumps to the relevant Colour BASIC routine.

OPEN start \$C44B end \$C4C6.
INPUT and **LINEINPUT** are handled by an extension to the Console In routine at \$C5BC to \$C626.
PRINT# and **PRINT# USING** are handled by an extension to the Console Out routine at \$CC1C to \$CCAB.

Finally, two commands, EOF and CLOSE, finish those commands used by file handling. EOF again checks that the file is a disk file and exits to BASIC if not. The routine exits to BASIC by a JMP \$A5E4, or via the error routine if the file is not random access. Start is \$C90C, end is \$C934.

CLOSE start \$CAF9 end \$CC1B. First checks that this is a disk file. A check is made on the state of the file and if necessary the directory entry is updated.

All in all, this entire group of commands are of little use to the machine code programmer. Luckily, the remaining group of commands in the DOS more than make up for this. In general they are those that use the actual disk manipulation routine called DSKCON. The manual describes this routine, but only hints at its power.

If you do use any of the above routines then assume that all registers will be destroyed so be sure to save any important ones before calling.

I had intended to continue the instructions for upgrading to 64K for the CoCo1, but I do not seem to have left enough space, and so it will have to wait until next month. One last point, concerning the CLOSE command: you may have wondered why Dragon programs are always using CLOSE. There seems to be a bug in DragonDOS that causes problems after multiple disk access unless CLOSE is used each time. This situation does not occur with TRSDOS and if you are converting a Dragon program, the CLOSE command can usually be left out.

Letters To The Editor..

I am sure that many people are sick and tired of Paul having a go at them in the newsletter, but I feel that Paul is justified in berating the members. I will quote yet another case. In the June issue of Update there was a write up of a disc of Jingles written by Stuart Beardwood, available at the extortionate price of 1.99. It also said that ALL the income from the sale of this disc would go to the Westgarth Childrens Home. Stuart is going to pay for postage and cost of the discs. Partly because of where the proceeds are going, and partly because I had heard some of Dave Cadman's Dragon music, I decided to buy a copy.

I wrote to Stuart on July 12th, and much to my surprise I found that I was his first customer. I realise that not all Dragon users are going to rush out and buy every program that is published, and I know that music is not everybody's cup of tea, but in view of what is going to happen to the proceeds, I would have, though that out of a membership exceeding 1000 more people would have brought the program, if only to make a donation to the Westgarth Home.

Come on all you skinflints, give up a couple of pints and make a donation and get a disc full of music in return.

Eddie Freeman, Old Duston, Northhampton.

Sorry, Eddie, but that's about the usual response to just about anything ... that's what makes this job so damned depressing. Paul.

DON'T SQUEAL.GRAEME BREWIS.

This is a text only adventure and will operate on either Dragon 32 or 64. As all instructions are included in the program and are the usual commands it could pay to make a copy of the relevant commands as you cannot go back to them once the game is running.. Once through the instructions you are given a choice of normal or inverse text but unfortunately on my copy the inverse mode would not work. A very good point of this game is the commands FREEZE, THAW and STORE, RESTORE. FREEZE allows you to freeze your position at any point in the game, and as you seem to get killed quite easily in this early stage it pays to freeze your position quite regularly. THAW returns you to the last place that you froze your position, after being killed or at any other time during the game if you so wish. STORE allows you to save your position when you have had enough for one day, and RESTORE returns you to your last position on loading in the game from fresh.

Your task as a boozy ex-cop is to solve the case which involves kidnapping and drugs. The game starts in his flat with a strange phone call which outlines the job in hand. It's for you to get out and about - in the section I played, the town, finding clues and gathering objects. The job you have been given is to find the daughter of an ex-drugseller who has been kidnapped to force the seller to carry out one more job for his ex-boss. The town has many dark shady and dangerous areas which have to be avoided or got round in order to survive to complete this mission. There is also a SPEED command for computers that will handle the speed up poke to speed up the response time. For people who like adventure games this one should keep you shut up in your bedroom, or wherever you do your computing, for quite a while.

Don't Squeal available from Dragonfire Services, Unit 3, Rising Sun Enterprise Centre, Blaina, Gwent, NP3 3JW for 4.00 plus 50p P&P.

Apology.

For the benefit of those of you who have just joined, or who haven't bothered to read last month's issue, the SEPTEMBER Update will be much smaller than usual. The reason is that I have to do some rewiring on this place, and both the Dragon and the copier need a power supply in order to operate!. Sorry about this, but it has to be done, and things will be back to normal by the following issue. Paul.

The Editor's Late Bit..

Every once in a while, this job really gets on my nerves. It's usually at the end of each month when I have to type up the master disc. However, I do sometimes receive faint glimmers of hope, and Paul's idea that the September issue should be a short 'un is one of them. Great idea, Paul!

And on the subject of typing, I've had a few queries about sending in articles on things like Stylo etc. Unfortunately, no can do. The "word pro" which I HAVE to use is an incredibly grotty piece of programming, written by Paul (out of spite). It is so bad that it is even outclassed by TeleWriter! So, until it becomes industry standard, you might as well just send in printed pieces.

As you may remember, I was pretty bored last month, but I'm a bit happier now because a) I've found a suitable replacement for MOVIE magazine, and b) by the time you read this, I'll have seen BATMAN. Don't worry, though, I'm sure I'll be as bored as hell again in time for the September issue.
Stephen.

The Late, Late Bit

OK, let's get the business stuff out of the way first. Latest news from Andrew Hill is that he will be holding the next Dragon Show at Weston on 10th. December ... more details when I get them, but if you're in a hurry for the information, phone Andrew on 0495-292159. Next thing is would the Member who left a topless printer with me for possible repair at the Hove show please phone me as I've lost the sticker I put on it saying who it belonged to!! (Sorry, the news isn't good anyway, the printer ROM chip and the head are dodgy, and it is NOT an economic repair proposition). Other news? well, I've paid out good cash on the Hove hall for 2nd June next year ... YOUR cash!, so don't go arranging trips to anywhere else for that date!. Before I forget to mention it, space in the September issue will be limited, so I'd appreciate it if you could "hold" any advertising for the October issue, otherwise there won't be room for any articles!. Talking of advertising, you'll notice that there are more "complete systems" than usual being advertised this month ... several people haven't renewed subscription either, and the general excuse appears to be "I need to switch to a PC in order to get the memory I need for my database. wordproc, etc". You'd think the concept of writing directly to disc had never been invented, wouldn't you?. Even a D32 running discs has virtually unlimited memory available, but no one appears to be willing to write the software to use it. All this garbage about "more RAM" is becoming a bore I can run my old Apple in 32K mode, using CP/M and Wordstar, and keep writing until I run out of blank discs, yet it seems that some people need at least a 512K machine with a minimum of 1M hard disc, in order to run a cut down MS-DOS version of the same program. The wonders of Modern Technology, perhaps?, or the Status Game striking again?!. Odd, ain't it?. I still say that "bigger RAM" should only be of interest to a frustrated ewe.

Back on the subject of advertising for a moment, may I remind advertisers that ALL advertising should be sent to me, NOT Stephen, as the ads pages are typed up HERE. Also, anyone trying to sell a large number of items would be well advised to sell them as individual units rather than one large package ... after all, most people can afford to buy ONE item that they need, but very few have the cash spare to buy an entire system, however great a bargain it may be!. If most Members have the same cashflow problems that I do they have to think twice (at least!) before buying ANYTHING!.

In case you've been looking for the crossword, don't worry, your eyes aren't failing, it's the dreaded "Postal Delay" at work yet again for some reason post from Cumbria to Worthing is sent via a very sick carrier pigeon, and this month it never managed to complete the trip at all. Hopefully it will make it by the time the next issue is due for print, so please don't shoot the Editor (he's the only one I've got!), bite a postman instead. No, I'm NOT going to go on about "Five Glorious Years of Update" ... I STILL don't know what I did to deserve it!. I thought the Wages of Sin was twenty quid a night, not THIS!. Anyway, that's all I'm writing for now, so you can go back to feeding Polyfiller to the Parrot, or booking your holiday at Gatwick, or whatever you were doing. More next month ... aren't you lucky?!. Paul.

Paul

EASY MACHINE CODE (3) ... R.A. DAVIS

What you need to know about the 6809 microprocessor, the Dragon's heart is that it contains a powerful arithmetic logic unit and several BYTES which we can regard as it's own RAM. These are known as REGISTERS. What you need to know about the operating system is that it holds the Microsoft Basic command in ROM, from location (address) &H8000 and up. It uses some of 'our' RAM from &H00 to &H3FFF at the 'bottom' together with some of the RAM at the top. The text screen uses from &H400 to &H5FF and the graphics screens &H600 to &H35FF if all 8 screens are in use. You can't alter the ROM from &H8000, but you can use it from your own machine code by jumping or branching to the routines in the ROM, saving you a lot of work! The lower RAM which it uses can usually be PEEKed to see what it holds and can sometimes be POKEd with new data to alter the effect of the ROM routines which use it. If you are still with me, the next subject is the registers, or some of them!.

DOSFILES 2Ken Grade.

The routine described in the last write-up made a datafile of a certain number of items which have to be saved or loaded as a batch. To alter one item, the whole file has to be read in, amended, then saved as a new file. A random access datafile should allow reading or amending one record in a file, and adding or deleting records, all without needing to load the whole datafile. In other words, the disc is used as "virtual memory" - as RAM.

Before a datafile of this sort can be written to, one large enough to hold all records / items of data must be CREATED. e.g.:-

```
10 INPUT"NUMBER OF HEADINGS";NF          [20] INPUT"LENGTH OF EACH ENTRY";L
30 INPUT"MAX. NUMBER OF RECORDS";R        [40] INPUT"NAME OF FILE";N$
50 S=L*NF:"SIZE OF EACH RECORD"          [60] CREATE N$,S*8+20
```

NF stands for the number of field titles or headings for each of the entries making up a record. Length is the number of characters needed for each record entry. It is usual to limit this in the program (i.e. IF L>20 THEN ?"TOO LARGE"), because, whilst it is possible to allow for 255 characters for every entry, it is unlikely that each entry will use so many. Once allocated to a certain part of a record, those precious bytes on the disc cannot be re-claimed - unless the datafile is re-created.

Next, the essentials are written - the maximum number of records, the length of each record and the number of headings.

```
70 FWRITE N$,FROM 0;R      80] FWRITE N$,FROM 10;S      90 FWRITE N$,FROM 20;NF
```

The FROM specifies from what point the information should be written. Note the comma. The spacing of 10 between each bit of information seems to be necessary. The Dos system writes some data to disc for its own use, so some space has to be allowed for this. It's usual to write the field headings only once, as they are a set for the whole datafile.

```
100 FOR X=1 TO NF:LINE INPUT"HEADINGS";FT$(X):NEXT
110 P=20+NF+1      [120] FOR X=1 TO NF [130] FWRITE N$,FROM P;FT$(X):P=P+8
150 NEXT X
```

The "P" is a marker keeping track of where the next bit of data is to be written. From this point on, it is easier to use a variable, rather than exact numbers - it saves wear on the calculator batteries. Some check of the number of records written so far is needed, so 160 should be:-

```
160 P=P+5:FWRITE N$,FROM P;NR      At the moment, NR will be zero, of course, but
this can be updated immediately after writing each record to disc. The next
stage in most commercial programs is to write spaces or CHR$(255) into the
datafile - rather like formatting a disc. Whether this is essential or not,
the routine for doing that would be:-
```

```
170 FOR X=1 TO R:FOR I=1 TO NF [180] FWRITE N$,FROM L;RL      [190] NEXT I
200 NEXT X
```

This will be continued in a later issue - the master copy for Update is needed now!

Ken Grade.

GROUP SERVICES.

P.D.UTILITY LIBRARY. Contains a very good collection of utility programs and routines available at a nominal charge. New routines always wanted for Dragon, Tandy and other machines. For details send S.A.E. to:-
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