

The Newsletter of the National Dragon User's Group

DRAGON



UPDATE

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The Gaffer's Bit

OK, who shook your tree last month?!. For longer than even I can remember there has been a shortage of material for Update. we've begged, pleaded, threatened, all to no avail, and suddenly, for no particular reason, we've actually got enough to make up a full issue without resorting to Grade/Wood waffle!. There's a catch in it somewhere, there HAS to be, but whatever it is DON'T STOP!!. If you're wondering why this issue has a variety of print styles, but is still very patchily printed, the answer is simple ... I'm having to invent/adapt printer drivers to match the new Epson as I go along (some more successful than others), which accounts for the varied styles, BUT we still can't find a replacement drum for the photo-copier, hence lack of improvement in print quality. OK?. For what it's worth, if anyone is thinking of investing in a new printer, I can honestly recommend the LQ570+ ... it's a good machine, with more facilities than most people are ever likely to find a use for, and is far more versatile AND cheaper to run than any of the BJ type machines ... I checked those out before getting this one and wasn't at all impressed. By the way, I trust you've all heard by this time that the Group now has an Educated Editor? ... Batman B.A has now returned from his life of academic idleness, and is once more heading the dole queue at Chelmsford, so anyone wishing to offer him suitable employment (i.e: a job paying in excess of £12K and requiring no more than two hours work per week) should contact him at the usual address!. Come to think of it, I wouldn't mind one of those myself. Paul Grade.

The Editor Says....

---something similar to what Roger Mellie says, usually, but sadly that isn't printable due to the Obscene Publications Act. Surely the printed version of that Act must in itself be obscene if it seeks to define what is considered too obscene for other publications to publicate? Conspiracy! Conspiracy! Aaaaannnnnyway. Bit of a disky issue this time, what with hard disks, utility disks, and disk drives fighting for space inside. Many thanks to everyone who has supplied an article over the past few months, perhaps in response to my no doubt tiresome pleas, perhaps not. However, don't stop there, what with fame going to your heads and everything. Current Group status is about as rosy as John Major's chance of re-election in the present climate, so if you have any more words of wisdom or even just words will do) to impart, then please impart them! Enough of my inane ravings. The Gridiron season is back, so it's off to the TV for me. See you in December.

Mister Ed. (No horse gags, please)

PEEKING THE DRAGON (47) BY MIKE STOTT

13 August Bank Holiday afternoon and I am only just starting to write this article despite the fact that it should already be winging it's way to Stephen. I have just returned from a week's holiday at Pontins, Blackpool and intended to have the article finished before I went away. Unfortunately, I went to Lancaster University several weeks ago on an activity holiday. After five days of squash, aerobics, badminton, volleyball, tennis, etc I ended up in the casualty at Lancaster Hospital after a collision with another player at basketball. The upshot was that I had damaged ligaments in my neck and would have to wear a cervical collar for a while, and I can assure you that I was certainly not in the mood for writing articles. Anyway, here I am now almost fully recovered and ready to give you all the latest news. News!! What news?? Philip Scott has written to me with help regarding the TELEWRITER problems that Richard Axe and myself had experienced. Here is the letter: "With regard to your TELEWRITER queries in the 'August' edition of Update, the 'disk full' problem is quite common. The solution is quite simple, a CLOSE has to be obeyed whenever a file is saved to disk. The easy way to do this is to LOAD "TELEDISK.BAS" and EDIT 10, inserting CLOSE: at the start of the line, then save the program again. This causes the disks to be closed every time the menu screen is written, overcoming the fault in DRAGONDOS/SUPERDOS housekeeping routines. As background, DRAGONDOS reserves up to 36 sectors (9K) of disk space when a file is opened for writing, but does not always free the unused space (unless CLOSE is used). With TELEWRITER, the unused space is lost whenever it is exited from. I have a large number of files with a number at the end of the filename, and never have any load/save problems. However, I use a combination of TELEWRITER 4 and DOSPLUS - though I cannot remember having problems with DRAGONDOS either. As the same routine is used for READ and SAVE to process the filename, I can only suggest a problem in your version of DRAGONDOS. If you do find the cause, could you publish the details so that the rest of us know too? I trust this has been some help." I thank Philip very much for this help and have published the complete letter as I feel many other people may have experienced similar problems and will gain from this help. With regard to the problems I had with filenames with a number at the end I think this was caused by dirt on my Dos chip. I later removed my chip from it's socket and blew on it and have experienced no problems with it whatsoever. Two new items of software have arrived from Alfred Knoetig of Dragon Power Software via Paul. They are both games but, unfortunately, neither of them have got much in the way of documentation with them so I have been struggling slightly to make any sense of what you are supposed to do with them. After several hours experimenting I think I have now got the idea of them so I will give you a brief description of them here and hopefully there will be reviews of them in the next Update. CUBE is based very loosely on TETRIS in that items appear at the top of the screen and drop to the bottom. Here the similarity ends as there are a line of cubes with dots on them and you have to change the number of dots on a cube at the bottom to match, move it along and fire it at a cube with the same number which will remove it from the screen. If cubes reach the bottom the game is over.. QUINKY 2 (QUINKY'S ESCAPE) is a maze type game and the object is to search the maze for items in order to build a balloon and make your escape. There is an adventure type element in it as you are not allowed to carry unlimited items. You also need to pick up food on the way and keep your power level up. As yet I have not got far at all with this game. They are priced at 5.00 each inclusive of postage from Dragon Power Software, Wilh.-Engelhardt-Str.40, Postfach 1623, DW-6430 Bad Hersfeld, Germany. The versions sent to me were on disk but releases from this company are usually available on cassette as well.

STOP PRESS My article this month is going to be slightly longer

because I have just received some P.C. software for review. What do you mean, this is a Dragon magazine? I have got a PC and I know of many others who have. Seriously, this is a DRAGON emulator for a PC. I have a Speccy emulator and have been trying for a Dragon one for ages without success. Then PC-DRAGON EMULATOR V1.01 arrived complete with a load of Dragon games. Installing to hard disk was very simple. Then DRAGON and ENTER and lo and behold I had a Dragon 32. The speed is very slow as yet and there is no sound but even though I have only had it for twenty four hours I am over the moon about it. It is released as freeware by Paul Burgin, 18 Moorcroft Road, Sheffield, S10 4GS. In the documentation he says he will send the latest version on 3.5" disk if you send him your name and address and 2.00(UK), 5.00(Europe, USA) and 10.00 (anywhere else). He has only had a PC for a few months so there is still a lot to be done but it is still a "talking-point" if nothing else. I will review this program fully in a later Update. For now I will just say - Do not expect programs to run on your PC exactly the same as the Dragon, you cannot play games very well although the adventures do not run too badly. Unfortunately the minimum requirements are an 80286 with VGA graphics card. Today I upgraded a 386 at work to a Dragon 32 but 4 meg upgraded to 24k was not fully appreciated. This, to me, is a must for PC owners. AMS7 is on at Stafford (usual venue) on Saturday 13th November (2.00 adult and 1.00 child). I will be there although not running a stand. If you want to see me there find Bob Preston, if he has a stand there as usual, and ask him to point me out. Another show is the International Christmas Computer Show at Wembley Conference Centre 19th to 21st November. I hope I have not bored you with too long an article this time - at least there are no moans.

BLOCK OUT REVIEWED BY PHIL CHATFIELD

This game is another TETRIS clone. Graphics, apart from one bit done in poor taste, are excellent. Sound is excellent. There are two flaws that consign this to the 'maybe later' pile. In this case much later! The first of these is that you are unable to slide the blocks at the last moment as TETRIS fans will be accustomed to with other versions of this game. My dear wife (!) has played this game for hours and it has to be said that you, like her, might learn to tolerate this departure from the usual playing style of this game. Do you want to try? The second flaw concerns joystick sensitivity. Too much of it. My other version of this game allows you to drop the blocks once they are lined up, and to rotate the blocks by use of the fire button. This game is the same but the stick is so sensitive that when you push the fire button the block rotates at a great rate of knots. The solution is to stab at the fire button to achieve the right deployment. Not very satisfactory. If you are not careful when pulling the joystick down, you end up with three or four blocks in succession crashing to the ground. On the bright side, this game does have some nice special features which can be selected by putting your joystick to the top right corner, including some interesting exploding blocks. On the down side the arrival of these special features is somewhat unpredictable in that you can play one game and get them quite soon, on another game you can play until you get a fairly high score and still not see them. All in all, and unless these matters are sorted out, I think this has to qualify for ONE DRAGON (dead). BLOCK OUT available on tape or disk from Dragon Power Software, Wilh.-Engelhardt-Str.40, Postfach 1623, DW-6430 Bad Hersfeld, Gemany (Please check with them for current prices.) MIKE STOTT - I received this piece of software a long time ago. When I played it I suffered a problem with a DN error and informed Alfred Knotig of the bug. The new version was returned to me and this is the version of the game which has been reviewed by Phil. CAVEAT EMPTOR - as we used to say in our Latin lessons.

Of Hard Disks...Jonathan Bird.

This article is really in two sections. The first bit is really a plea for information. I am contemplating the difficulties in connecting a hard disk to the Dragon. I know there are people out there who have done it, and I'm sure it can't be too difficult to do. At worse case getting hold of an old IBM XT and ripping the drive out of it, or even buying new is dead cheap - Maplin price for a 43M drive, more than adequate for a Dragon, is 158.00, the cost of a few floppy drives with 43 times the capacity of the floppy. The trouble is - just how do you go about connecting an IDE drive to a Dragon?? Any ideas, I'd like to know. Back to the floppies. The Dragon disk controller WD2797 chip is quite a versatile device. It can read and write most 'common' disk formats automatically. As I'm sure many people are aware, it is possible to read and write both IBM PC and BBC disk formats. In both cases, all the controlling software has to do is understand the structure of the different disks (such as disk catalogue etc), the disk controller automatically adjusts to the different disks. As an example, if you were to put an IBM disk in drive 1 and type SREAD 1,0,1,A\$,B\$ the command would return OK, and PRINTing A\$ and B\$ would display the first half sector 1 of the disk. The difference between PC and Dragon disk formats is that the Dragon disks have 256 bytes/sector and 18 sectors/track, and the IBM disks have 512 bytes/sector and 9 sectors/track. Hence, they both hold the same amount of data. Therefore, A\$ and B\$ only contain the first 256 bytes of the first sector. Something which isn't obvious from this is that in fact the controller has read the ENTIRE 512 bytes into memory - it's just DragonDOS isn't expecting more than 256 and therefore will only display the first section. To prove this, type:

```
L=PEEK(&HEE)*256+PEEK(&HEF):FOR X=L TO L+512:CHR$(PEEK(X));:NEXT
which will display the entire sector from the buffer in memory. From this, it is therefore not too difficult to write a program to read PC disks. At a simple level, suppose you wanted to transfer an ASCII file from PC to Dragon. On the PC you could save the file onto a disk, and find out where MS-DOS had put it. The using the Dragon, you could simply read these sectors off of the disk, and write them to a Dragon disk file. A more complex program could read the PC's disk catalogue, display it, and allow you to select which file to transfer. However, it is not advisable to use SREAD/SWRITE because DragonDOS will not be expecting 512 byte sectors in it's workspace, and you could corrupt something. Instead, the assembler call at [$C004] should be used to manipulate the disk. As an example, to do the equivalent SREAD call above:
```

```
POKE &HEB,1      * drive number
POKE &HEC,0      * track number
POKE &HED,1      * sector number
BF=3072          * buffer at 3072
POKE &HEE,INT(BF/256) * tell DOS where the buffer is
POKE &HEF,BF-INT(BF/256)*256
DC=PEEK(&HC004)*256+PEEK(&HC005) * DOS call address
POKE &HEA,1
EXEC DC          * seek to the track
POKE &HEA,2
EXEC DC          * read the sector
```

Then performing the FOR...NEXT loop shown above will display the sector just read. Ideally, this should be performed from machine code, as the [\$C004] call does not return an error to DOS (C flag set if error occurs in m/c). For BBC disks, it is just as simple, except first you must put the controller into single density mode (for DFS disks): POKE &H607,44. The BBC sectors are 256 bytes/sector with 10 sectors/track, numbered 0 to 9. POKE &H607,36 switches back. ADFS disks are like Dragon disks I think (but I've not tried this one!).

Before You Go... Dave Riley

Update is getting thinner and prospects for the Dragon look worse than ever, so before you go, why not let the Dragon teach you a bit about the C programming language, which looks as good a way as any of talking to that seductive new computer? The OS-9 C compiler comes with an otherwise informative handbook that gives insufficient guidance for OS-9 dimwits like myself to get the thing going, and I had to invoke the NDUG helpline before I could get it to compile anything. It says on the box that to disc drives are needed, but unless you have a DragonPlus board it would be a close thing finding sufficient disc space with single sided 40 track drives. The really important thing that the handbook doesn't say is that without the DragonPlus board, the 32 column screen must be used to free sufficient memory for the thing to work at all. No C programming tuition is given in the manual, but the compiler was created largely in accordance with "The C Programming Language" by Kernighan and Ritchie, the inventors of C. There has to be a snag - the compiler was written in line with the first edition of that book, which is now at Edition 2 with a few changes, most of them inspired by ANSI. The changes are explained in edition 2, but you have to be as clever as K&R to understand them. The compiler comes on 2 single sided discs. Disc 1 contains a CMDS directory which holds the bare minimum that you will need in your compiler system disc except 'echo', which is strangely omitted. If you don't have the DragonPlus board you will to call up the 32 column screen as well. To write the C source file, Dragon Data included 'build' on their disc, but there was room for 'stylo' on my double sided disc. Disc 2 just needed to be copied onto a double sided disc to run in drive 1. There are many example source listings given in K&R which can easily be written with Stylo and compiled with this software. The source file should be saved with a filename ending with '.c', which can be written to the root directory of either drive. When the compiler is run, the compiled file will be written to the same drive and with the same filename as the source, only with the '.c' left off. During compilation, a number of temporary files are written to the root of D0 which are only all erased if the compiler finds no problems in your source file and produces a compiled file. The temporary files generated during an abortive compilation should be erased before trying an updated source file, or strange error messages will be generated. By writing the source files to D1, the working files are kept clear of the temporary files. If you like 'chatty' books K&R is not for you. It has only 270 pages, but each one is fully packed with useful information. I have needed to pester my helpline contact a number of times to amend my source code to K&R edition 1 standard, though I expect little difficulty in converting this code to the more widely known ANSI C standard which would be offered for a new machine. I have got up to around page 80 of K&R at the time of writing, so if you pursue this course and have problems before page 80, just drop me a line at 20, The Avenue, Langport, Somerset, TA10 9SA, and I will do my best to help. The software cost about 10.00 plus postage from Prestons, and the book, published by Prentice Hall, costs more than twice that unless, like I did, you can find a second hand copy. If you are intending to stay with the Dragon, it would be even better if you could find an old Edition. Dragon deserters will not find software value like this whichever computer is chosen.

Over To You...

J.S.Mitchell is looking for help with the following problem on Iolo ap Gwynn's Cyrillic alphabet designer program, Dragon User July 1984 p23. Using one of the programs that has appeared recently in Up-2-Date, a tolerable printout is obtained. The question is: "...How can I save (and reload) what I have typed on the screen? Alternatively, is there a more comprehensive program I could adapt in a similar fashion?..." Any solutions, please, to the address. Stephen.

Sort Routines 1. - Roy Cashmore

Sorting is one thing a computer is particularly useful for. A sort can be used to put things into numerical or alphabetical order (either way) or to sort out particular similarities. The latter is usually done by a simple IF...THEN routine, for example:

```
10 DATA [list of words or numbers]
20 FOR A = 1 TO Z:REM Z IS NO. OF DATA ITEMS i.e words
30 READ A$
40 IF INSTR(1,A$,"A") > 0 THEN PRINT A$:REM SORTS ANY WORD CONTAINING THE
  LETTER A. If there is no A then INSTR(1,A$,"A") would be 0.
50 NEXT A
```

Note: This will not sort out words containing the letter a. To sort for both A and a, change line 40 to

```
40 IF INSTR(1,A$,"A") > 0 OR INSTR(1,A$,"a") > 0 THEN PRINT A$
```

If words whose fifth letter was e were wanted, line 40 would become IF INSTR(1,A\$,"e")=5 THEN PRINT A\$. (The INSTR function returns the position of the character counting to the right from the starting point, in this case 1). The above will work with numbers as they are READ as strings into A\$. Searching works fine using functions like INSTR, LEFT\$, RIGHT\$ or MID\$, but will not work with numbers. If you need to search numbers (e.g. for those containing the digit 5), first convert the number to a string using the function STR\$(number) before searching them. To sort all postcodes in the Leicester area, the following could be used:

```
10 DATA [list of postcodes]
20 FOR A=1 TO Z:REM Z is no. of DATA items
30 READ A$
40 IF LEFT$(A$,2)="LE" THEN PRINT A$
50 NEXT A
```

Note: The above routines can be used to search arrays for specific characteristics. For example, a database may have arrays N\$(X), A\$(X), T\$(X), C\$(X), PC\$(X) holding respectively names, addresses, towns, counties, and postcodes. One could obtain a list, on screen or printer, of all data for people living in, for example, the Leicester area thus:

```
500 FOR A = 1 TO X
510 IF LEFT$(PC$(A),2) = "LE" THEN PRINT N$(A), A$(A), T$(A), C$(A),
  PC$(A)
520 NEXT A
```

This will give a list, but what if the list is not in alphabetical order? I will look at this next time.

Simulated MOD function...Keith Redhead

A while ago, I came across a reference to the MOD function, taking the form IF A MOD B > Z THEN GOTO ... After some digging around, I found that MOD refers to the total remaining after dividing one number by another, for example dividing 21 by 9 gives 2 remainder 3, so 21 MOD 9 = 3. The Dragon doesn't have this function, of course, but it can be simulated easily enough as in the following example listing:

```
10 REM ROUTINE TO SIMULATE MOD FUNCTION
20 DEF FNY(X)=A-(FIX(A/B))*B
30 CLS
40 INPUT"ENTER FIRST NUMBER";A
50 INPUT"DIVIDE THIS BY";B
60 C=FNY(X)
70 PRINTA/"B"="INT(A/B)"REMAINDER"C
80 PRINT:PRINT"I.E., "A"MOD"B"="C
```

UTILITY DISK SYSTEM... Stephen Ross

I use a number of utilities regularly, and recently set up a way of using them all more easily. I now have two system disks both with nine utilities each which I can access quickly - needless to say you can have as many or as few as you like on your system disk. This can be done by using Orange Boot, available from PSE Computers, or the boot program on the Group's Disk Utilities 2. Give "MENUUTIL.BAS" (or whatever you decide to rename it) as the program to boot load. Next, you will need to adapt MENUUTIL.BAS to suit your needs. My version for System Disk One is printed below, and the changes you will need to make are: 1. Line 30, insert your choice of disk name in the inverted commas. 2. Lines 60 - 140, insert the names of the utility titles you wish to use. 3. In my first utility, Visitext Deluxe, you will notice that I have changed the default drive to 2 and boot-loaded the program. This is because I was unable to transfer the files to the main disk due to copyright protection. Therefore, I have changed the default to drive 2 in order to load the program from that drive. In this way, I do not need to remove the system disk, although I do have to switch the computer and drives off and on again after using the program. 4. You will also have to change the filenames in lines 220 to 360 to those of the utilities you wish to use. If you have less than 9 utilities, you will need to delete the relevant menu line numbers and whole sections such as "Ninth Utility" which will no longer be needed. Also, line number 180 will need A>9 changed to A> (new number of utilities). Next you will need to load in your utility programs. Note that some programs may load via a separate menu or loader program, and these will also need to be present. Finally, you will need to include a short program called "ST.BAS" which reads as follows:

```
10 REM CLEAR MEMORY/RESTART
20 CLS
30 CLEAR
40 BOOT
```

Using the system is easy. Simply type RUN"ST" for the menu. Select the required utility by a single number keypress. When finished, use the software's quit routine to return to DOS. Once there, type RUN"ST" again to choose your next utility. Some programs will not let you back in this way, but simply switch the computer off then on again, then type "RUN"ST". I have two disks full of utilities (18 programs) with only two having this problem, so it shouldn't prove too troublesome.

PROGRAMMERS NOTE: It is not always possible to change drives from within a Basic program using the DRIVE command. Use POKE 1546, then the drive number you wish to select. K.G.)

```
10 CLS:REM MAIN MENU
20 PRINT @ 41,STRING$(13,246)
30 PRINT@73,"UTILITIES 1:"
40 PRINT@105,STRING$(13,246)
50 PRINT@128,STRING$(32,"*")
60 PRINT@168,"1) VISITEXT DELUXE."
70 PRINT@198,"2) DRS DATABASE."
80 PRINT@230,"3) DESKTOP 1."
90 PRINT@262,"4) DISK USAGE CHECK."
100 PRINT@294,"5) BAD SECTOR CHECK."
110 PRINT@326,"6) ORANGE BOOT."
120 PRINT@358,"7) DETATCH DOS (NO RESET)."
```

```
200 DRIVE2:BOOT
210 CLS4:' SECOND UTILITY
220 RUN"DRSLOAD.BAS"
230 CLS4:' THIRD UTILITY
240 RUN"LOADER-1.BAS"
250 CLS4:' FOURTH UTILITY
260 RUN"CHECKDSK.BAS"
270 CLS4:' FIFTH UTILITY
280 RUN"DISKCHK.BAS"
290 CLS4:' SIXTH UTILITY
300 RUN"MENUBOOT.BAS"
310 CLS4:' SEVENTH UTILITY
320 RUN"DISCOFF.BAS"
330 CLS4:' EIGHTH UTILITY
340 RUN"DISKUTIL.BAS"
350 CLS4:' NINTH UTILITY
360 RUN"DUPLI-2.BIN"
370 END
```

```
130 PRINT@390,"8) MY DISK UTILITY."
140 PRINT@422,"9) DUPLIDISK 2."
150 PRINT@448,STRING$(32,"*")
160 INPUT "SELECT THE NUMBER REQUIRED:";A
170 ON A GOTO 190,210,230,250,270,290,310,330,350
180 IF A<1 OR A>9 THEN GOTO 10
190 CLS4:REM FIRST UTILITY
```


Teaching With Dragons...Beryl Cowen.

I had trained on BBCs like all teachers (those who got any training, that is), but I didn't honestly feel very impressed by them. My husband bought a Dragon years ago, which we still use for running our company, and for our own finances as well. I liked it, and thought it was much easier to use than the BBC, especially with having all the connections on the side where you can get at them, instead of underneath just where all the wires can get trapped and broken. But, in the state system, you do what the authorities tell you is right, and that includes Using The Best Computer (ie BBC). So I fitted in with the system, and used BBCs, and in fairness they aren't bad, just rather expensive for what you get. At home I carried on using our own, not because it was easier to use. Then last year, I started working in a new school, not a state school, but a Christian school set up, organised and run by a group of parents. The wages aren't up to state levels, but there was much more freedom to do what I wanted, in all sorts of ways. One of those ways was computing, and I got my chance when Malcolm's Dragon broke. We found, courtesy of Paul Grade, a repair man to fix our Dragon in the shape of Brian O'Connor, living only 30 minutes drive away in Oldham. When we met him, he turned out to be not just a supplier of working second hand Dragon kit, but an ex-teacher as well. By the time we finally left his house, I had bought two Dragons, a pair of tape recorders, and a stack of educational software that we could hardly carry. It was all good stuff as well, Cheshire Cat and similar standard. My teenage son, who goes to the same school, became computer monitor. His job is to set the machine up every morning. We haven't got a disk drive yet, so I tend to load one program from tape in the morning, and then leave it there all day. That's not a problem. I explain the program to the children when I load it, and then let them have a turn on the machine in pairs throughout the day, so that each pair of children gets a good quarter of an hour or so on the Dragon. I teach primary and junior classes, and so far I have mainly used the "Fun With Maths" program. I'm very happy with the results so far, the children haven't just learned, they've enjoyed learning as well, so much so that towards the end of the day I get a chorus of "please Miss, I haven't had my go yet." What are the results? Well, firstly I've answered the modern criticism that children don't learn the basics well enough, such as tables. My children are learning their tables, their maths is improving as a result, and they are enjoying it as well. Secondly, the ones without a computer at home have a chance to learn keyboard skills. Lastly, the ones with learning difficulties are showing improved confidence when they use the Dragon as a means of learning something for themselves. What's the total cost? So far about fifty pounds, and a couple of spare TVs which were not doing anything else anyway. Now all we want is a disc and a cheap printer so we can teach them basic word processing. Any offers?

Coming Soon...

Here's a brief rundown of some of the treats in store in December's Update. Bill Stevenson goes through the joys of swapping to a disk system after years of being tape only...Ron Warren gets diverted by Dragon Detour...Paul Marlow offers a beginners guide to ROM disassembly...Mike Townsend turns your TV into a bank of disco lights...Keith Nash discourses on Shaper...and John Payne offers something cultural. Plus reviews from Mike Stott, news from wherever it is, and cack from Paul and myself, all in Update 92, available in December from all good stockists. (**Actually, Paul, I've just been onto WHSmith, who have insisted that we lose this last bit**). A point worth mentioning was passed my way by the aforementioned John Payne, who is considering writing an article on his Forth Utility Disk, but wants to know if it will be worth the effort. Well, John, from my point of view your article would be most welcome, and would almost certainly find itself a slot in the February issue. If anyone else would care to express a desire for Forth articles, you know the address. SW.

DETOUR ... visited by "CARD".

I hear that no one has yet submitted an answer to Detour to relieve Paul of that tenner, how extraordinary!. We thought you would all be burning the midnight oil to have that rare pleasure!. Paul is convinced that his offer of a tenner prize is safer than a Lloyds investment!. Go to it and prove him wrong. As it is now six months since the programme went on sale we thought a few hints might not be amiss.

The programme can be saved at various stages for reload later without having to run through the stages already covered, BUT, of course, if these stages are not complete, then it will affect subsequent stages. Reaching the end of a stage is not a guarantee that it has been completed correctly. There are over 100 locations, but not all of them are essential to the success of the programme. When you get to the end you are invited to solve the conundrum. If correct then you are told so by the program .. contact Paul!. If incorrect or you can't make sense of the letters you have, then you could have missed some, and the consequences could be dire!. Recheck each part by loading in your saves and make sure that you have not missed anything.

Make certain that you leave the first part with a Lancastrian rose. If you can't survive the platforms (run in order 1-3) then try examining things more than once and be helpful to people in need. Also look out for a method of illumination, and the means to power it, which you may need later. It pays to be hungry in these three parts. Make use of INVENTORY to check on what you have got and what has been discarded by the programme. Make sure you get the right locker number, you should have had a clue on the same platform. The next part is straight forward, but at the Waxworks keep up with the news and you will be glad you can turn darkness into light!. You should get a bit house around here too.

Enough for now ... remember ... the clues are there.

THE FAX ABOUT TELEWRITER. BY RAD.

The Dragnet club of Radio Amateurs have found an additional use for Telewriter. We became completely disillusioned with Packet Radio, called AX25, (which in theory allows simultaneous use of a single channel for transmitting text through a modem of sorts over the air by more than one station), because all designated channels are now swamped by Nodes which relay long messages, destroying all hope of direct contacts even between local stations. We designed some Dragon Packets which would do a better job, on normal simplex channels. They need no modem, just the A to D Cassette port, to send full screens of Text or Graphics at speed. But data file sending was a problem. Noticing that Telewriter Tex files on Disc were more like Machine Code than Data, using the Cassette Menu we were able to send text files between stations who were Saving (transmitting) or Reading (receiving) with the same Menu on their Dragons. In a matter of split seconds a full length letter is exchanged over the air, using only the Cassette interface and leads. File 'Titles' are not needed for transmission and reception, which reduces the risk of errors, although subsequent saving to Disc for future reference does need a File Name as usual. GPO eat your heart out. It is not a self-operating system like a Fax Machine, but far less expensive. Further experiment proved that the Tex files could be sent and received without the W/P in the Dragon, as Machine Code programs, but the addresses for it to be saved had to be found after reception by using the Peeks for Cassette program addresses. Our transmissions take place on 2 Metres using F.M. over a range of about 25 miles, which covers all stations in the Net now. This word processor routine was originally in both Cassette and Disc versions, the latter thanks to that Guru of the 6809, Gordon Twist, who added the Disc routines for Microdeal. It was designed for use with Dragon Dos V1.0, and those with other so-called compatible Dos should expect the usual problems they unfortunately have with routines. Compatible, when applied to 'improved' Dos means that programmes made with them will run on V1.0, but not, necessarily, that they can run programmes made for V1.0 Dos, as is now well known. It has come to my knowledge, recently, that there are several versions of Telewriter all of differing lengths, which must have been doctored to run with various Dos systems. But no-one should encounter problems with this very powerful processor and a suitable Dos. A final word, beware of copies of Telewriter as the original BOOT routine has part of the programme, and the copy may not have that. There is always something new to be learned about the Dragon.

More Converting Disk Drives—A.N. Martin

Here is the circuit of the 40/80 track switch supplied with my 80 track Mitsubishi drives. It should work with any 80 track drive, provided the stepping rate of the drive is fast enough. An 80 track drive doing 40 tracks is NOT the same as a straight 40 track drive - the head is narrower. This has no effect when reading 40T disks, nor when writing disks to be read by another 80T drive, although you would get more capacity with 80T. It is only a problem if you write a disk you intend to transfer to a proper 40T drive. In this case, the wider head may pick up stuff from the disk which wasn't erased by the narrow head when writing. The solution is to always use a blank, new, unformatted disk if you intend to do this. Then you set the 40T switch and format for 40T. The main reason for writing 40T with an 80T drive is to mail it to someone else, and if you don't do it properly the other person assumes it got corrupted in the post. Dragon users are reminded that various DOS allow setting of the drive stepping rate; 12, 20 and 40 milliseconds are the usual choices. The controller chip doubles the speed for double density mode. The "rate" is the time between steps, so smaller numbers mean faster seeks. Default is often the slowest. If you have never tried increasing the speed, your drives may be working a lot slower than they could be, and most will go at the fastest rate without seek errors. The slowest rate sounds like a drumming noise; the fastest is like a buzz. None of the manuals make it clear that you should sort out the step rate in the installation section - you get the disks working and maybe perhaps find out about the step rate if you chance to read the right command...and even then you might not understand what they're on about. In Deltados, step rate is changed with the CONFIG command. A disk is then formatted with INIT will have the configuration recorded in the SIR on the disk. The SIR is read when SELECT is issued, and the information in the SIR is used to access the drive thereafter. This is a pain because step rate relates to the drive and not the media. In Flex, the step rate is changed using the STEP.CMD utility. Insert STEP in the STARTUP.TXT file to set the step each time you boot Flex, and check you've still got STEP.CMD on your disk. You've probably deleted it by now if you've never used it! Details are in the "Implementation Guide", and one rate is used for all drives in the system. In DragonDOS, I haven't a clue. If not using DragonDOS is a crime, I'm guilty as charged! Someone out there should be able to give the answer. Also, when posting disks, set the step rate to the slowest speed; if the step rate stored on the disk is too fast for your friend's drive, they will only get seek errors. Hopefully, this will avoid some of the inexplicable incompatibilities between disk drives that appear on the surface to be writing the same format. And if you're old drives are now zooming away over the horizon please write, I'd love to know how many have been kept in the dark by our manuals. Or maybe you're all experts?

Bat Chat...

Is it me, or is the console market showing signs of being cyclic, and are the console boffins showing signs of not learning from the past? Back in the early 80s, you had the Atari 2600 at the top of the heap, yet when competition arrived from the Intellivision and the ColecoVision, suddenly it all went horribly wrong, customers dithered over which one to buy, and the market went bye-bye. NOW, Sega and Nintendo have brought the market back, but again it is being swamped. Both companies already have two consoles on the market, but both are looking to launch new ones by 1995 or earlier. On top of this, Commodore have just issued the CD-32 ROM drive for the Amiga, Atari are planning a new games machine, dubbed Jaguar, to replace the ST...end result, too many formats, sales get spread thinly over the market, firms can't recover costs, bye-bye firms. Is this crass over-expectancy on the part of the manufacturers (a la Dragon Data), or is it gullibility on the part of the consumers who are prepared to keep lobbing out 300 quid for a new machine which is only "better" than the last one because it has three million different colours instead of two million? I'm not knocking the progress towards newer technology, I just doubt whether the money will be there to support it all, especially when new games cost an exorbitant 65.00. Sonic The Hedgehog 2 is better than the original. Er...allegedly. SW.

MORE BOOKS REVISITED. R.A.D.

6809 MICROCOMPUTER PROGRAMMING AND INTERFACING. by Andrew Staugaard, Jr. Published by Blacksburgs. £12.00. 270 pages.

This book is meant to be a tutorial for first experience of the 6809 or other high performance devices in general of that era. However, it is assumed that the reader has an understanding of the fore-runner, the 6800. Each chapter starts with a set of objectives, followed by review questions and answers. The text is illustrated with numerous examples demonstrating important software concepts. There is a chapter on the 6809 addressing modes, of which there are 19, and understanding these is stated to be the secret of the 6809 software concepts. The four appendices include some Motorola Specification Sheets and a summary of the instruction set. Not a volume for the tyro.

WORD SQUARE ANSWERS.

The twelve names you should have found last issue were:-

BLABY, COMPUSENSE, DRAGONDATA, GEM, GROSVENOR, INCENTIVE, LUCIDATA, MICRODEAL, MICROWARE, MORRISON, PREMIER, SALAMANDER.

There were one or two other legitimate names that crept in, thanks to the software used, and I accept those as alternatives, but this was completely unintentional!. Winners were: Dave Cadman and John Phillips (let me know which disc you want). No competition this month due to lack of space!.

The Late, Late Bit -----

I wonder why it is that Dragons have always had a bad press in this country?. After all, even back in the days before they disguised themselves as computers, they were never well known as family pets. Morons in recycled bean can suits were reputed to spend ages trying to bump the poor old beasts off, on the dubious grounds that they (the Dragons, not the Morons) were rather partial to the odd virgin or two between more substantial meals, which was a very dodgy allegation even at the time, if only because virgins were probably just as rare then as now, and if the allegations had been true dragons would have starved to death!. Even when dragons became computers things didn't improve for some reason everyone insisted that an inferior machine, sponsored and subsidised by a broadcasting company and manufactured by a firm named after a nut, was somehow preferable, regardless of the fact that it could do only half as much at twice the cost. Now?, people are junking a perfectly good machine in favour of a virtually unprogrammable heap called a "PC" (no, not Plod, although if you run Windows on it you may discover a connection), which has a hundred times the RAM space, and uses most of it just to run the OS, when anyone with more brain cells than your average amoeba would realise that a Dragon is absolutely essential for all the jobs your PC can't handle ... and there's plenty of those!., and anyway, just how many proud PC owners can actually program the damned things?!. So what's all this in aid of? gross desertion of the Group, that's what!. Up to a couple of months ago, back in the days before the weather got warmer and the Liberal Democrats and the BNP won a couple of silly local elections, about 80% of the Group members renewed their membership when the reminder slip turned up, even if one or two tended to wait for the "final reminder" before actually scribbling the cheque, but during the past four months or so things have changed, and not for the better!. Currently renewals are down to around 15% at best, and this means that the Group is now running at a loss of almost seventy quid per newsletter issue. Now I don't need to remind you that THIS balance of payments deficit is far more serious than the ones Major & Co keep whining on about ... THEY can increase taxation, borrow the odd billion or ten from the IMF, fiddle the books, and pull sundry other little tricks to keep things running, whereas the N.D.U.G is forced to rely on sales and renewals in order to continue ... if they stop, so does the Group, and you out there are the only ones who can do anything about the situation ... I can't. When the cash dries up things stop, so if you want the old Group (and your Dragon) to carry on don't get so carried away with your new 486/33 that you ditch the old Dragon and your Group membership, because if you DO, by the time you realise your mistake and decide to blow the dust off the Dragon and rejoin the Group, it may not be there ... and if that happens the fault is all yours!. Think about it. Paul G.

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