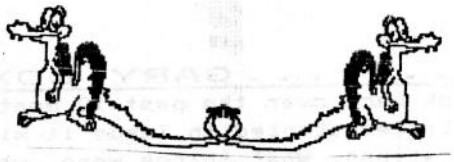
Newsletter of the National Dragon Users Group.

DRAGON UPDATE



DRAGON UPDATE

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Issue No.26. October 1986.
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The Gaffer's Bit.....

OK, you can stop worrying. We now have confirmation that we will have a stand at Microdeal's London show in November. I'll expect to see you all there, of course...I HATE those shows where we sit around with a half cold coffee which tastes like recycled antifreeze, wishing we were in the bar, and waiting for the doors to open, and then when they do, nothing happens for half an hour until THE CROWD pour in...both of them....and they wander around aimlessly, watched be all the exhibitors, until they finally go up to a stand and ask THE question that brought them there, the question that only the combined skills of all these experts could possibly answer....."Can you tell us where the toilets are, please?". Honest, I HATE shows like that, so be there, or I'll set Barry Caruth onto you!.
Anyway, other than that there isn't really much to say this month, not even any good complaints to whine about, so I think I'll ruin Tim's day and leave him more space to fill up than usual!.

Paul G.

THE EDITORIAL BIT

OK, this month Paul seems to have left me some space to fill, so just to get my own back for last months comments, I'll proceed to do just that.
Firstly, this month it's time for me to hand out a bouquet, I've been moaning to all and sundry for months (a few years actually) that the utility that really needed writing for the Dragon was something that would enable you to run the Dragon in 64k mode while still retaining the use of the DOS, thus giving more memory for Basic, not just the odd 8k for m/c. Many people after buying the 64 went on to say that they seemed to have not much more than a 32 unless they moved into Flex or OS9. Well, it finally seems to have happened, Harris have brought out Basic42, well done to them. I haven't actually seen the program yet, but it seems that they have done more than I would have expected and produced a nice little product (review in this issue).
It has also just come to my notice for anyone in the London area (or anywhere else if they want to travel) that there is an adventurers convention occuring at Sutton Library (that's Sutton Surrey) on 1st November at 10am, tickets 2.00 each. I don't have full details yet but there will be at least 3 MUD type games on line (Gods, Shades, MUD2), and talks on how to write adventures and how to play adventures. As well as this there will be players by the score and probably the Sysops of some of the MUGs.
Hmmm. not quite full yet, if I leave it like this Paul will have another dig no doubt. So, I will use it for a little plea from me. Does anyone out there know where I can get hold of a good 1200/75 comms program which can handle MUGs properly without corrupting half the output. (Chatplus 2 doesn't do it before anyone says that). The problem is that all the ones I've tried have trouble when the I/O are simultaneous. T.L.

Blast!!, Foiled again!!...he actually DID manage to fill the extra space!
..but I'll get me revenge next month!. Paul.

BOARD WALK .....GARY COXHEAD

This month I propose to look back over the past 12 months, a communications update if you like. The articles started in issue 11 with six articles as a beginners guide to communications. What things were, what they did & how to connect them. next I covered hardware, yet again things look good, although the 32 has no RS232, adaptors abound either ready built or as kits. With more & more people getting hold of D64s, communicating is much easier. The cost of an RS232 is eliminated and programs like Chatplus2 will handle any speed your modem can use. It seems unbelievable that two years ago such modems would have cost in excess of 250.00!

After this I mentioned connecting up. Even today, this is one aspect that always causes the most trouble. I am sure that most of it is due to bad manuals. The next articles covered the 2 most popular BB systems, TBBS and CBBS. Since then, an absolute proliferation of BB systems have sprung up, some early ones which weren't up to the mark falling by the way. The main push was when a BBC ROM package emulating Prestel appeared allowing your average BBC owner to run his own Prestel like BB with graphics & colour. The availability of relatively cheap multi standard modems with auto speed detector have helped to fuel the fire. As for the Dragon scene, Radio Dragon bit the dust, but ARCNET (formerly React) is still going strong and the 6809 board in London is rapidly becoming the main forum for communicating Dragoneers. As for other boards, the subject of the next article, I'm glad to report that there are as many as ever, most better than before, the Sysops having added extra features in response to demand. Most of them carry a page or 2 of numbers to try. On to board walk, apart from a few tips and comments, I covered American Databases. Not many of you have experienced them I'm sure but the standard is higher than ours. Also there are many more online databases catering for businesses. I'm sure that in the future the costs of PSS will come down and international communication from home will become both commonplace and economical. I next covered the standards set for TBBS boards and the Association of Free Public Access Systems, them went on to hacking the radio waves.A very interesting subject that I don't know enough about nor have much experience of. A hint of what is to come is that a friend of mine actually logged onto a TBBS type BB on his amateur radio rig, the board being in Spain! The other radio hacking was of the various news agencies. One aspect of hacking, that of unlawful access to databases etc. has become abundantly clear. The prosecution and conviction of Messrs Gold & Schiffren for forgery highlights the risks you face if you veer from the straight and narrow. The fact that it also showed the incompetence and poor security of the Prestel system was lost on all but those who could read between the lines.

The last two months covered the exciting and intriguing subject of cellular radio (cellphones) and packet radio. This subject is still in its infancy, so expect to see some remarkable leaps forward. Well, that's about it for my reminiscences, except to say that communications is the fastest growing aspect of computing.

This is the last article in my Board Walk series. There were many other subjects that I would have liked to cover, but time & commitments have got the better of me. For those who wrote or phoned, I hope any help helped you on your way. Don't forget, this magazine needs your support. The people who run it can't do it all on their own, you have to do your bit. So, write in with a letter, article or review yourself, I did it. For those of you who need it, I am still happy to give advice on the phone (or you can write).

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Prestel Mbx 375672137

DRAGON DIARY . . . . . NEIL SCRIMGEOUR

Well, the Beanstalker patch program did manage to finds its way to my humble abode, about 3 days too late to get into the last Issue. Anyway, having perused the program, I can't really add anthing to what I said last month. It allows you to save and load screen designs and access the screen designer. I decided to save the original 60 screens to see how long it took, about 2 minutes which isn't bad at all, considering how much it's got to save. the only glitch in the program is that you can't give the saved screens a filename, apparently due to the way the file is saved. The cassette that came had Beanpatch written on it so I presume it's now got an official name. As I said, it's 2.00 from Microvision.

I had another cassette pop through my letterbox, a game from Meridian called Decathlon. My first thoughts were 'Not another sports simulation', but it isn't. Do you remember those wonderful days when Salamander used to produce games for the Dragon? Do you remember their games compendium? Well, that's what Decathlon is, a multitude of mini games although this time they're all loaded at once. Futhermore, they're not a patch on Salamander's offerings which came out long ago. As all the programs are loaded at the same time, they obviously have to be small programs and the compendium really suffer because of it. I'm not going to list all the games but the old favourites are there, Anagrams, Hangman, Shootout etc. and probably the only original one, Cuckoo, which entails lobbing your egg into a lone nest. This is reminiscent of the Duckshot game I saw on a mainframe 4 years ago. I personally found the cassette pretty uninteresting and bland, some of the games being on the print scree, then again, the game is not aimed at the individual but at a party group. Having said that, I still don't see much appeal in loading it up for a group of friends. On the other hand, Pauline Hampson found it interesting, it's really a matter of taste. The game costs 3.95 from Maridian, Birchmore Cottage, Nairwood Lane, Prestwood, Great Missenden, Bucks. If Decathlon had been released by one of the bigger companies, I would have been more critical but Maridian is a small company starting off, they face a problem that I'm aware of. Everyone has to start somewhere and this invariably means that the first couple of games can be a bit rough. This leads to the problem that just one duff program in a batch of half a dozen can get a company off to a bad start and the last thing I want to do is discourage a Dragon software company. Programmers can only get better with experience and so for someone like Maridian we will just have to be patient. Their adventure, Underbeings of Croth, should be reviewed by Pauline later and I hope this turns out a lot better. I'd like to give some advice to anyone out there just starting out a Dragon company, make sure your first release is a good one. Producing games like Decathlon isn't going to do you much good, futhermore, it's not going to stretch your programming skills very far. If you're starting afresh, you also need fresh ideas for games, a company like Blaby can get away with the old formulae like Manic Miner clones but someone new needs something relatively fresh. A case in point is the late Eclipse Fenmar who had a cracking idea for a game but messed it up by advertising well before the game was ready. If they had produced the game on time, I think they'd still be around today. In the best trditions, I'll finish with a moral: If you're going to release something, make sure it's as original as possible, well programmed and most important, not over hyped. And, don't forget to sell it at a decent price.

BASIC42 (Harris) ..... JOHN COX

Basic 42 uses the Hires screen, upper & lower case (with descenders) and has some very useful extra commands at your finger tips! You can toggle between the normal 32x16 text screen and the Hires 42x24, the latter being very clear. There are 3 character sets; English, French & German which may be loaded and used from the disc. The option of defining your own characters with the facility of saving and loadingto and from disc are incorporated in the DRAWCHRS program, which made this very useful. WAIT, there's more! Defining a control key (incorporated in the HELP utility), so you can access the special characters for printer purposes etc. It obeys all the normal PRINT commands, plus a few extra. There is a command LIBRARY which lists all the commands available to the user, good for quick reference; In brief you have ROW & COLUMN, these set the cursor position, ROPOS, COLPOS, HEIGHT & WIDTH, these report the current row, column and the maximum number of rows & columns of the current window. The user has 10 windows to play with, 8 of which you can define yourself with the FRAME command. You can INVERT the screen and underline text.

There's a CATCH (there always is!). Although you can fill the screen with windows, you can only access one at a time, so by using the CATCH command, you can use one window while remaining in another; ie CATCH2 in effect means that you can use a program that prints to or uses screen 1, but if the program is halted by STop, BREAK or an error, the cursor automatically returns to window 2, thereby leaving window 1 intact. CATCHOFF switches off the CATCH process. It has auto repeat on the keys which can be switched on or off. One big advantage with Basic42 is that it accepts commands in upper or lower case (Clever enough to know whether it should really be in upper case).

HELP. No, that is another utility that may be purchased seperately, to be used with Basic42. This has SCROLL ON/OFF, key REPEAT ON/OFF, CURSOR (redefines the cursor character), PAUSE ON/OFF (waits for a keypress after each program line has been run .. great for error trapping), TRON/TROFF (this prints the program line in the top right hand corner, instead of all over the screen), BREAK ON/OFF (use with care!), HELP <command>, this will give a brief meaning or syntax of the command or function that you require. The dreaded error messages are also expanded, so instead of F/C error, it now prints 'Illegal function call. Most of these calls are self explanatory. Next .....

SPOOL. This is another utility that allows the user to use the computer whilst dumping to a printer. The limiting factor is that it has only a 3.5k buffer which means that it is only really good for a letter or short report etc. The other drawback is that if your printer has a buffer then it takes longer to print, thereby outweighing any advantage. The utility includes the program TYPIST, this turns your computer into a sort of electronic typewriter. The screen is split into 2, the upper half displays what you have typed and sent to the printer while the lower half display what you are typing (up to 128 characters). The program asks for line length and tab, when you type up to the number of characters per line or a C/R, the program automatically dumps it to the printer, so watch it and listen for the beep that sounds when you are reaching the maximum!

The DOS patch routine is available for the various DragonDOSs. The instructions were clear and concise, they include memory maps, the neccesary pokes for accessing routines (if you don't buy the HELP utility). I especially liked the 'honest' approach of pointing out the limitations, eg the Spool buffer.

All in all, I found it an extremely useful and well thought out program (I'm sure that a lot of hard work and hours went into writing it). Possibly a bit on the pricey side, thirty pounds for the whole suite, but a must for the serious user. I feel that it will prove to be an invaluable utility, it's just a pity there aren't more programs of this calibre around for the Dragon.

ASCI CORNER.....Pauline Hampson.

At home I have an enormous file of adventure solutions so anyone who is stuck only has to ask. It hasn't been getting much thicker lately. The supply of adventures is drying up. Anyway,I decided to try the small ads. to see what they had to offer. I found Castle Dracula (save your money) and Underbeings of Croth from Mardian,Birchmore Cottage,Nairwood Lane,Prestwood,Great Missenden,Bucks at 3.95.

After the first one this helped to restore my faith in adventure writers. The game has its own character set which is perhaps not neccessary,but sets the atmosphere. You start in a cage over a pit with wild beasts below. Help!Your aim is to escape from this land full of beasts,apemen and toothworms which are not very friendly. Soon you end up in a cell but try to escape. The game was very enjoyable with plenty of interesting puzzles which weren't too taxing. There are 96 locations and you can enter sentences like 'grab box' then 'open it'. The response was a bit slow but on some Dragons you can use 'fast' for a quicker response using the speed-up poke,I guess. Anyway,I thought the game was worth buying and the notes are in my folder.

It is not often that educational programs come my way,so I was pleased to receive'Mazerace'and'Spellbox'from Mardian Software. The games give help with maths.and spelling. 'Spellbox',for 7-12 year olds,has a 600 word vocabulary. You choose between maths and spelling and you have to say if the spelling or sum is correct. Sound and graphics come into their own as a large machine comes into action and gives you time to answer. If wrong or too slow,then you get a broken T.V. screen displayed,but if right,a telly with a smiling face shows. 'Mazerace',for 6-11 year olds also tests spelling or numbers. In this game a maze similar to a crossword grid is presented with a picture or sum. You have to steer a man to catch the correct letter etc. in time.You also get a few chances. Sound and graphics again are used. Both games have automatic level selection,altering the difficulty according to performance. This is a big plus-there is nothing worse than a child doing something too easy or too difficult.

The games are both lively and interesting. I think that children would benefit from them. The automatic level selection lifts it from being just a testing game to a teaching game. While they both are designed for 6-12 year olds,I think 6-10 is more realistic. One program costs 3.95,two cost 5.95 - a bargain.

Pauline Hampson.

Crossword 15 answers.....

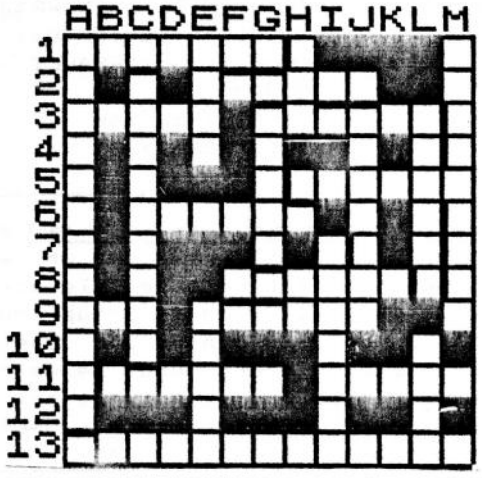
1A Kippers:1H Flight:2H Finale:3A Sirloin:4C Fraction:5E Thoughts:6A Carriage:7E Piechart:8A Return:9B Night:10C Orchestrate:12C Sundial:13A Cartridgeslot.

A1 Kesh:A6 Circus:B7 Tennis:C1 Perforations:D9 Grout:E2 Moat:F4 Chain: G4 Together: H10 Slag: I9 Stile: K3 Motorola:M1 Teleprinter.

Crossword 16. Compiled by J.D.Bateman.

ACROSS: 1A)Frogs and children shouldn't play in this:2E)Distance in swimming:3A)Dots and dashes:3G)Take some broken pottery and make a software house:5H)Martial art:6C)Scottish software house:8F)A written account:9a)Deoxyribonucleic acid:9E)Inkless pen:11B&G3)This game could have been called Jaws:11I)Take a compass point from a redman to get a country:13A)Sieve soil on red ring to obtain a useful tool.

DOWN: A1)Baby game:C2)Ancient man made them from flint:E1)A wiry operating system:E9)Popgroup of the 70's who apparently find these crosswords very easy:G3)See 11B:H1)This caveman might have used C2:I7)Footballers may get sent off for this:J3)Athletes:L3)Firm who produced H1:L10)Form used when a money transaction takes place:M1)Yet another software house/supplier.



No winner last month, so this month the first correct entry wins both Drone Datatank AND the KET Trilogy!...Don't say I'm not generous!!.

ANALOG TO DIGITAL (2) ... BARRY CARUTH

The crucial memory location is $FF20, it is responsible for communication with the cassette port, printer port and TV speaker. Bit 0 is responsible for all I/O to the cassette port. It is designed for digital input but will respond to other noises. It converts sounds into 1's and 0's which the A to D converter stores from $2500 to $7900. Location $790B contains 6, poking low values here give short, higher quality reproduction and vice versa. $790B and $792F both contain the number 6 but different numbers change quality and length. Section 1 can stand alone and is the A to D part. Section 2 (playback) needs section 3 to work and section 3 isn't much use on it's own. These programs are not relocatable but you can change the memory areas that data is stored easily. The program works on any Dragon or Tandy Coco.

```
0 CLS:PMODE0:PCLEAR1:CLEAR200,&H24FF
20 'A TO D CODE
30 DATA 8E,25,00,7F,FF,20,C6,08,10,8E,00,06,31,3F,26,FC,74,FF,20,49,5A,26,F1,A7,
80,8C,79,00,25,E8,39
40 'PLAYBACK CODE
50 DATA 8D,23,8E,25,00,A6,80,C6,08,48,76,FF,20,10,8E,00,04,31,3F,26,FC,5A,26,F1,
8C,79,00,25,E8,39
60 'VOLUME CHECK CODE
70 DATA 8D,05,76,FF,20,20,FB,B6,FF,01,84,F7,B7,FF,01,B6,FF,03,84,F7,B7,FF,03,B6,
FF,23,8A,08,B7,FF,23,39
80 FORN=&H7900 TO &H791E:READDA$:DA=VAL("&H"+DA$):CS=CS+DA:POKEN,DA:NEXT:IF CS<>
3092 THEN PRINT"DATA ERROR LINE 30":END
90 FORN=&H791F TO &H793C:READDA$:DA=VAL("&H"+DA$):CS=CS+DA:POKEN,DA:NEXT:IF CS<>
5944 THEN PRINT"DATA ERROR LINE 50":END
100 FORN=&H793D TO &H795C:READDA$:DA=VAL("&H"+DA$):CS=CS+DA:POKEN,DA:NEXT:IF CS<
>10442 THEN PRINT"DATA ERROR LINE 70":END
110 PRINT"     ANALOG TO DIGITAL."
120 PRINT"           (C) 1985"
130 PRINT"      BY BARRY CARUTH."
140 PRINT
150 PRINT"1. VOLUME CHECKER"
160 PRINT:PRINT"2. READ DATA FROM TAPE"
170 PRINT:PRINT"3. PLAYBACK DATA"
180 I$=INKEY$:IF I$="" THEN 180
190 I=VAL(I$):ON I GOTO 210,240,260
200 GOTO180
210 CLS:PRINT"VOLUME CHECKER - <RESET> TO     RETURN TO BASIC"
220 PRINT"SET VOLUME ON RECORDER"
230 MOTORON:EXEC&H793D
240 CLS:INPUT"PRESS ENTER WHEN READY";A$:MOTORON:PRINT"DIGITALISING"
250 EXEC&H7900:MOTOROFF:CLS:GOTO110
260 CLS:INPUT"SPEED 1-15 (DEFAULT =6, ENTER   FOR DEFAULT)";SP
270 IF SP=0 THEN SP=6
280 IF SP>15 OR SP<1 THEN 260
290 POKE&H792F,SP:EXEC&H791F
300 CLS:GOTO110
```

New Adventure release!!!.

Remember Alan Cook?...the one who wins all our programming competitions?!, well, he's at last released his adventure program "The Thirteenth Task", and it is on special offer to Group members. Normal price is 3.00 plus postage, but to you only 2.50 plus 30p. postage...and for every one sold Alan is donating 50p to Group funds as well!. The program is better than most costing three times the price, so what are you waiting for?...order your copy from: ARC Software, 272,Mearns Road, Newton Mearns, GLASGOW 77-5LY.....you can't afford to miss it.

GRAPHICS (4) . . . . . R A DAVIS.

From the drawings described in parts one to three, you can now make the back view, using the front view and a few PSETs.

```
850 FORX=2 TO 9:PSET(X,3,4):PSET(X,4,4):PSET(X,5,4):NEXT
860 FORX=3 TO 8:PSET(X,6,4):PSET(X,7,4):NEXT
870 FORX=4 TO 7:PSET(X,8,4):PSET(X,9,4):NEXT
880 GET(0,0)-(11,32),B,G
```

So, now you have A,R,F and B graphics, all with the same coordinates.

```
890 PCLS
900 LINE(0,133)-(255,135),PSET,B
910 PUT(100,100)-(111,132),A,PSET      920 FORD=1 TO 250:NEXT
930 PUT(100,100)-(111,132),F,PSET      940 FORD=1 TO 100:NEXT
950 PUT(100,100)-(111,132),R,PSET      960 FORD=1 TO 250:NEXT
970 PUT(100,100)-(111,132),B,PSET      980 FORD=1 TO 250:NEXT
990 GOTO910
```

The listing, which has been made deliberately as clear as possible can be considerably condensed when using this method. Data can be joined into one or two lines and more loops can be used for the PSET details. Half of each drawing can be used with a lower portion for the leg movements nedded for horizontal or vetical animation either with GET and PUT or programs such as Sprite Magic.

DELTADOS IN MAP MODE 1 . . . J.BUSSELL.

This article was written as an addition to the CTS series.
There are several benefits to running DeltaDOS in map mode 1 on a D64 or upgraded 32:-
1) the main one is that you have nearly an extra 8k of RAM available from $E000 to $FEFF. This can be used to hold an assembler disassembler, Premiers toolkit or any other file which can be loaded from disc.
2) Getting back the 1.5k of RAM that the DOS takes from $7900 to $7FFF. When DeltaDOS automatically boots up at switch on, it checks the locations $27/28 to find the top of RAM, if we change location $27 to $FE instead of $7F (default) and then restart Delta, it will set its direct page register to $F9 and all RAM below $7FFF will be available for use.
If we now type:-

```
RUNM "MAP1"      :'get into map mode 1 (see prog below)
POKE &H27,&HFE :'kid mc ramtop=$FEFF
POKE &H71,0      :'force coldstart
EXEC &HC002      :'restart DOS
CLEAR200,&H7FFF:'make ram available
```

As with any gain, there are usually losses, ours is that Delta will only work in single density in map mode 1, so you will have to reformat a disc for this mode; use the Delta CONFIG command. This is not a problem because Delta configures itself automatically to the disc selected.

This is a short program to copy the Basic interpreter and DOS into mode 1 and then exit in mode 1.

```
10 FOR I=0 TO 32
20 READ A$:POKE&H01DA+I,VAL("&H"+A$)
30 SAVEM "MAP1",&H01DA,&H01FC
40 DATA 1A,50,8E,80,00,10,8E,80,00,B7,FF
50 DATA DE,A6,80,B7,FF,DF,A7,A0,8C,FE,FF
60 DATA 2F,F1,B7,FF,DF,86,1E,B7,BB,C2,39
70 END
```

TEXT & GRAPHICS ON THE CGP115. .P.J.BEED

At 49.95, the CGP represents extremely good value for money, when one considers the cheapest you are likely to pick up a dot matrix printer is around 100.00 and even then you are looking at the bottom end of the market. It is obviously not directly comparable with a DM printer, but for anyone who feels that they really need hard copy it could well be the answer. It prints on 4.25 inch roll paper, using 4 small ball point pens, replacements of both are available from Tandy; 2.30 for 3 pens, 7.98 for 3 rolls of paper, the life of both is reasonable long and running costs do not ammount to much.
Connection to the Dragon is simple, I would recommend purchasing the custom made lead through Tandy, it costs only 11.00 & simply plugs straight into both ends. It comes complete with several feet of ribbon cable, allowing remote positioning of the printer. Having priced the parts in the Maplin catalogue it is no cheaper to buy the parts separately and make up your own cable.
In text mode, print size can be set to 80 or 40 columns using a dip switch, print is extremely neatly formed, unlike the bottom of range dot matrix in which the dots can be clearly seen. Switching of the pen colour & print size can be easily accomplished through software and in fact print size can be varied right up to 1 character per line. All the LLIST commands are fully supported & other commands are sent to the printer using PRINT #-2, Print speed is the weakest point at 12cps, it is extremely slow and the only answer is to have a cup of tea, walk the dog and read War & Peace if the printer is doing more than a few lines work! In graphics mode, the printer works like a simple turtle, you can move it to any point on the paper with the pen up or down, the only thing required by the user to get good results is a little bit of mathematics, there are built in commands to create graph axes for those of you who wish to use the printer for mathematical applications. It is also possible to write text in graphics mode, and text may be in any of four directions, of any size. On the software front, there is not much available commercially, I have yet to see a screen dump which uses all four colours. There have been a few listings in the magazines which incoporate dumps specifically for the CGP115.
In summary, if you are after a budget priced printer, this could be a good buy, its drawbacks are narrow paper, slow speed & lack of software and documentation. The first 2 we can do nothing about but for the last, watch out for more articles.
NOTE: There ARE four colour dumps for the 115.....I've got one!. P.G.

HI RES SCREEN INVERSION ... CHRIS FRY

The following routine will produce an inverted version of any graphics screen in any PMODE. It accesses memory locations $BA/BB and $B7/B8 in the base page which hold the start and end addresses of the current graphics screen respectiveley. Each byte between these values is then replaced by its ones complement.

```
10 CLEAR 200,32000
20 FOR A=32500 TO 32508:READ A$
30 POKEA,VAL("&H"+A$):NEXT
40 DATA 9E,BA,63,80,9C,B7,26,FA,39
50 PMODE4,1:SCREEN1,0:PCLS:SCREEN1,0
60 FOR A=4 TO 80 STEP 4
70 CIRCLE(100+A/2,95),A:NEXT
80 FORA=1 TO 2000:NEXT
90 EXEC 32500:GOTO80
100 'Lines 50 - 90 show the effect of this routine
```

Frequency generator.....I.M.Rees.

```
10 REM DRAGON SOUND FREQ:BY I.M.REES
20 CLS
30 PRINT@36,"DRAGON SOUND GENERATION"
35 PRINT@68,"**********************"
40 PRINT:PRINT">ENTER FREQUENCY REQUIRED IN HZ."
50 PRINT">PROGRAMME WILL PRINT DRAGON     SOUND NUMBER."
60 PRINT:PRINT">IF FREQUENCY IS NOT AVAILABLE   NEXT HIGH/LOW IS INDICATED."
70 PRINT:PRINT">TONES WILL BE SOUNDED."
80 A=255:PRINT"------------------------------":INPUT"FREQUENCY 170-7400HZ >";F
90 IF F<170 OR F>7406 THEN 20
100 RESTORE
110 FOR C=1 TO A:READ D
120 IF D=F THEN PRINT" #"; C;"=";D;"HZ":SOUND C,100:LET C=255:GOTO 140
130 IF D>F THEN PRINT" #";C;"=";D;"HZ":SOUND C,20:LET A=C-1:GOTO 100
140 NEXT
145 IF A<255 THEN PRINT" #";C-1;"=";D;"HZ":SOUND C-1,20:LET C=A
150 GOTO 80
160 DATA 170,171,172,172,173,174,174,175,176,176,177,177,178,179,180,180,181,182
,182,184,184,185,186,186,187,188,189,190,191,191,192,193,194,195,196,197,197,198
,199,200,201,201,202,203,205,206,207,208,209,210,210,211,213,214,215,216,217,218
,219,220
170 DATA 221,222,223,224,225,226,227,229,230,231,232,233,235,236,238,239,240,242
,243,244,246,247,248,249,251,252,254,255,257,259,260,261,263,264,266,268,270,271
,273,274,276,278,280,281,283,285,287,289,291,292,294,296,298,300,303,305,307,309
,311,313
180 DATA 316,318,320,323,325,327,330,332,334,337,340,342,345,348,350,354,356,359
,362,365,368,371,374,378,381,384,387,391,394,398,401,405,409,412,417,421,425,429
,433,438,442,446,451,455,460,465,470,475,480,485,491,496,502,508,513,520,526,532
,539,546
190 DATA 552,559,566,574,581,589,597,605,613,622,631,640,650,660,670,680,690,701
,713,725,736,748,761,775,789,803,818,834,850,866,884,902,920,940,960,981,1004,10
28,1053,1077,1105,1133,1163,1194,1227,1263,1300,1339,1381,1425,1472,1523,1578,16
36,1699
200 DATA 1767,1840,1920,2008,2104,2209,2325,2457,2605,2761,2945,3158,3407,3684,4
020,4420,4920,5634,6409,7406
```

NEGATIVE OFFSETS ..... R.A.DAVIS

I have always had real difficulty in calculating the required negative offset to CLOADM a program which is in PIC to a lower point in RAM. Some of the explanations given by the "experts" are tortuous and I looked for a simpler way. The result was this short listing. Tested against examples it seems to work.

```
10 CLS:PRINT"  NEGATIVE OFFSETS"
20 PRINT:PRINT" DO YOU WISH TO
USE DEC OR HEX.":INPUT"D OR H";X$
30 IF X$<>"D" AND X$<>"H" THEN 20
40 IF X$="D" THEN D=1 ELSE D=0
50 PRINT:PRINT"WHAT IS THE CURRENT
START ADDRESS"
60 IF D=0 THEN INPUTX$:GOTO100
70 INPUTX
80 INPUT "NEW START ADDRESS";XN
90 GOTO 130
100 X=VAL("&H"+X$)
110 INPUT"NEW START ADDRESS ";XN$
120 XN=VAL("&H"+XN$)
130 P=XN-X
140 IF XN>X THEN PRINT" YOU NEED A
POSITIVE OFFSET -- ";P;" NOT A
NEGATIVE OFFSET.":END
150 DF=X-XN
160 OS=65536-DF
170 A$=HEX$(OS)
180 PRINT:PRINT" THE NEGATIVE OFFSET
NEEDED IS ";
190 IF D=0 THEN PRINT A$ ELSE PRINT OS
200 IF D=0 THEN 230
210 PRINT" CLOADM";CHR$(34);"TITLE";
CHR$(34);",";OS
220 GOTO 240
230 PRINT " CLOADM";CHR$(34);"TITLE";
CHR$(34);",&H";A$
240 GOTO 240:REM G3RLO
```

OS9 PAGE . . . . . JASON SHOULER

This month, back to my favourite subject - using pipes with Basic09. I did cover this subject quite a few months back but this time I'll cover some more advanced features. The basic structure of a pipe is the familiar;

```
ON ERROR GOTO 100
WHILE NOT(EOF(#0)) DO
(*input & output statements go here
ENDWHILE    50 END
100 errno=ERR
IF errno=211 then 50 (*clean exit on 'eof'
ERROR errno (*otherwise return error to system
```

There are principaly two ways of reading input, by reading a line at a time (using INPUT or READ) or by taking chunks of fixed size (using GET). GET is normally used to read a byte at a time and is the fastest way of receiving data from another process. This is because the GET and PUT statements bypass the line editing functions of INPUT and READ. When reading a line of data, READ or INPUT are generally prefered since they make it uneccesary to search for a $0D (eol) character (which is done for you by the line editing function). Much the same arguments apply to the output data. For maximum speed use PUT but for the most flexible output use PRINT. The input statement has some very interesting features when used with pipes. The point about INPUT to remember is that it opens a path in UPDATE mode, which means that as well as receiving data, it also outputs it's own prompt. At first this seems to be an annoying habit but it can also be put to good effect. The clue lies in which path number is used with INPUT. Lets take the 3 in turn.

INPUT#0,"prompt" - When in normal keyboard mode this works just as you would expect an INPUT statement to. However, used in a pipe it behaves rather differently. The prompt, instead of being directed at the standard output is directed back at it's own input! This means that you can't pipe into this filter but you can pipe from it, without getting all those prompts mixed up in the output. Useful as a stand alone program or as an initiating pipe. ie the first in a chain.

INPUT#1,"prompt" - This is the default INPUT statement. Just as with #0, this works quite normally when in keyboard mode. You can pipe into the program with no trouble but when you try to pipe the output, all those prompts keep appearing. This is useful as the terminating pipe.

INPUT#2,"prompt" - This is a very useful feature as neither the input or output of this statement have any effect in a pipe line. This allows the construction of what I call a 'T pipe'. If you want to prompt for information, from within an active pipe, which is not available from standard input, then use this statement to prompt the user. This statement would usually be used outside the main loop of a pipe.

Four drives with OS9 - I've just put another 2 drives onto my system which gives me 3 drives on line (one is too unreliable to use). Although sceptical at first, I've found that having more than 2 drives available can be a great boon on a system like OS9. While a disc intensive procedure is running on 2 of the drives, it is possible (just) to carry out simple operations with the 3rd drive. The cheapest and easiest way of adding a futher 2 drives to your system would seem to be by buying a BBC drive with PSU. Just clamp a 34 way connecter onto the middle of the ribbon cable (on the BBC drive) and then plug this into your Dragon Data drive. Set up the drive selects and you have a 4 drive system. By the way, don't be put off by the underselling imposed by the limitations of the AcornDOS, an 800k drive for the BBC is really 1.4M on the Dragon!

* OS9 PROBLEM SERVICE * As from now, I will try to answer any problem which is left on TBBS BLANDFORD 0202-59994. This board has an excellent messaging facility and can handle reasonable size answers (2048 chars). If you're not already conversant with this board, you'll first need to register. Try to keep the messages open in the unspecified special interest area. If there is sufficient response, I'll try to get the sysop to open a true OS9 area.

REDUNDANT INFORMATION DEPARTMENT

Use of EXEC: A feature of this command is that it will accept variables as an argument; This means that the basic programmer can name M/C programs and call them as procedures, ie.

```
10 MOVE=31000:EXPLODE=32000
.......
200 EXEC MOVE:EXEC EXPLODE
```

Not only does this make the program easier to follow but the routines are also accessed faster.

Peek & Poke: Similarly when using peek & poke, to gain speed always use hex values or for even faster access, variables giving speed increases of up to 100% over decimal values.

Arrays : Remember when using a multi dimensional array that the first value accessed is 0, ie. DIM A(100,2) actually gives an array of 101x3. This will enable memory to be saved in programs using large arrays. When using large arrays, it is often faster to use a number of 1 dimensional arrays than a single multi dimensional array, enabling speed savings of up to 40%+

Thanks to Chris Fry for that little lot.

INTERFACING MODEMS & D64s . . . M.GANLEY

Making a Dragon talk to a modem is not as easy as you might think, the task being made no easier by the modem manufacturers who seem to insist on supplying them with a lead suitable for the BBC or no connector at all. However with a little forethought and a few minutes with a soldering iron, the job should be within the scope of most people.

First, consider the connections provided on the D64 serial port;

```
Pin one   - Ground
Pin two   - Receive data (Rx)
Pin three - +12 volts
Pin four  - Data terminal ready
Pin five  - Clear to send (CTS)
Pin six   - Transmit data (Tx)
Pin seven - -12 volts
```

A typical low cost modem, such as the Demon or Voyager 7 will have a similar connection, the Demon having ground, Tx, Rx, RTS and CTS. Now, Tx, Rx and ground are fairly straightforward, remembering that the convention with modems is to connect Rx to Rx, Tx to Tx and ground to ground. The complication arises ith the handshake lines, because they don't quite match up. There are two possible answers, firstly wire both the Dragon CTS and DTR to modem RTS. It's alright to ignore modem CTS, all it does is go high when a carrier is detected, you can use this for autoanswering but that's another story. Using this method usually works but remember that the D64 can only send when its DTR is high. The answer to this is to wire Dragon CTS to +12v (pin 5 to pin 3) using a short link wire inside the DIN plug. This method works well and the computer can send all the time. Don't forget to be extra careful when wiring up the DIN plug, and check carefully for shorts between the pins.

Please remember that the Dragon 232 socket is numbered (clockwise) 6,1,4,2,5,3,7.

DRAGON USER OCT 86

For those of you who no longer subscribe, here is a list of the items in the latest D/User, back issues 1-25 from them.

News; power supplies, Maridian,Blaby, Proops, Pammcoms & a bit about us. Reviews of Cassette 50 & Electronic Author. A disc rescue prog. A hidden line removal prog. A games prog (Mission Impossible), an article on data encryptation. A l/case prog and user defined graphics, M/C screen clearance or semigraphics, the usual Arcade Corner and Adventure Trail, Dragon Answers and the quiz. Plus of course the ads.

Classified and Special Offers Page.

EXCHANGE my Premier (Delta) DOS cartridge for your DragonDOS or equivilant. ALSO Dragon 32 for sale, as new, takes double speed poke.45.00.
Telephone Roger Merrick on 021-384-6885.

Elecktor modem. 300/300/1200/75. Auto answer. Cased with full info. Needs work to complete. 25.00 o.n.o. Also Sony printer/plotter. Centronics. Works well with Dragon. Good graphics. All modes controled from BASIC. 75.00 o.n.o.
Phone Mike Ganley on 0272-332411.(evenings).

WANTED:Copy of OS9 Editor/Assembler manual...URGENT!.
Phone Chris on 091-416-5415.

Serial Interface board for Microline 92. 25.00 o.n.o.WANTED: Copy of OS9 Users MAnual, or original.
Phone Mike on 0272-332411.(eves).

Maplin 232 interface for Dragon 32. 15.00, and 2 boxes of 5.25 discs.10.00.per box.
Contact Bob Wiseman. 12,Southwood Gardens, Leigh on Sea. Essex.

Absolute Bargain!.EPSON P40 thermal dot matrix printer. New, never used. 60.00 inclusive.
Paul Grade, Worthing 207585.

WANTED!!!. Disc Telewriter on tape, please. Maarten Van Wamelen. 3,Lijnmetestraat, Oedelem 8330. Belgium.

Tandy TP10 thermal dot matrix printer. 40.00. This is serial input, but a Centronics converter is available for 5.00 extra.
Alan Johnson, 23, Ashmole Road, Abingdon, Oxon. (0235-23661).

Contacts wanted to exchange programs and information. Please write to Meir Zisu, PO Box 5387, Holon, ISRAEL, as soon as possible.

Shugart 5.25" 40 track S/S disc drives. Full Height uncased. 30.00 plus 3.00 postage.
Qume 5.25" 40 track D/S disc drives. Full height uncased. 45.00 plus 3.00 postage.
MPI 5.25" 40/80 track D/S. Cased. 70.00 plus 3.00 postage.
All the above drives are used but working. Some manuals available.
Dual 8" disc drives plus PSU. Cased. Untested, condition unknown but probably good hence 25.00 BUYER COLLECTS.
Alan Butler, 16, Barnston Green, Barnston, Great Dunmow, Essex. (0376-4234, evenings after 6. only.).

FORTH OPERATING SYSTEM: Simply the best there is. Written by John Payne, and available for DragonDOS or Double density DeltaDOS.Available ONLY through the Group. 8.50 inclusive.
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Dragon Upgrade manual: 32/64 conversion method fully explained so that you can uprate your 32 yourself without difficulty. Written by Bob Hall and available only through the Group. Price 2.00.
Cheque/order to the Group. 6, Navarino Road, Worthing, Sussex.

Delta DOS utility: A m/c utility to copy all BASIC and m/c files from disc to tape in one operation. BASIC listing of loader and Hex dump 1.00 or on cassette for 2.50.
J.C.Bussell, 33, Tennyson Avenue, Clevedon, Avon BS21-7UJ. (0272-875528).

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Contact Howard Knight on 021-777-2477.

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DRAGON CLAW INTERFACE: Lucidata are still keeping open their offer to Members. ONLY 20.00 COMPLETE.
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Computil, 22, Grove Park, Burbage, Hinckley, Leics.LE10-2BJ.

BACKDATE UPDATES: Copies of all earlier Updates available from either John Cox, 3, St.Peters Road, Portslade, Sussex. (0273-422492) or Chris Channing, 63, Churchfield Way, Whittlesey, Peterborough. (0733-208489).

WANTED: OS9 Stylograph Key Assignment chart/summary to replace my lost one!. Also wanted one or two double sided 80 track drives and a good dot matrix printer.
For Sale: MCP40 printer/plotter + pens, paper etc, and many cassette games.
Details from Nic Coome on Swindon 643035.

Dragon 64, hardly used and in good condition, with all leads, manual etc, and two joysticks.
Various books (Inside the Dragon, M/C for the Absolute Beginner, Advanced sound and Graphics, etc.).
Tape software (Telewriter, Rainbow Writer, Dream, Dreambug, Sprite Magic, Shaper, Composer, Computavoice, Shenanigans, Pettigrew, Empire, Ugh, Leggit, The King, Shuttle, and various grots!).
Cartridges Dragon Chess, Spectaculator (Spreadsheet), Logic 3 Basic course with book....and 20 blank C15 cassettes. All for 100.00 including delivery.
Phone 091-2341597.

Disc Diary: A new program written for the Group by Tony Simmons....keep track of dates and events without having to keep track of all those bits of paper you wrote them down on!. Available on DragonDOS for D64's at only 5.00 inclusive.
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AUTODIAL: New, and available ONLY through the Group!. This unit operates via the Dragon cassette remote port without interfering with its normal use, and enables you to dial direct from your keyboard or via a menu, and includes a redial facility. For use with any modem, or just as a memory dial unit for your phone!. NOT BT app. (but nor are 98% of phone accessories....we KNOW you'd never dream of offending Telecom), but complete with software for ONLY 13.50 plus postage.
Phone I.Rees on 01-908-0519 for further details.

The Late, Late bit.....

So what rubbish can I bore you with this time?, complaints perhaps?....but you've all been so disgustingly well behaved I can't really think of any good ones. News?..like what?, the Copier fund now stands at appx. 138.ØØ, which may not be enough yet to get us a replacement, but says much for your generosity and interest...many thanks to all concerned.....Micronet are trying to persuade us to put the Group "on line", which could be a good idea if enough of you are interested, so let me have your views on the subject, please.....The price of copier paper has just increased by 4Ø%, which means that we might have to think about a slight (honest!) increase in the subscription rate next year, especially as the postal costs have just gone up as well!.....and the Post Office seem to have invented a new machine for delaying and destroying mail.....first class post between here and London (all of 5Ø miles) is currently taking around ten days, when it gets through at all!, and some mail, particularly to the States, is being delivered minus contents and several weeks late, so if this doesn't reach you until 1989 don't blame me, blame GPO.

Other than that, anyone out there fancy themselves as a hardware/software genius?. Reason being that I want to find a way of interfacing a standard video camera or recorder to a Dragon, and I haven't a hope of ever finding time to work it out for myself!.If a grotty plastic box like the Commodore 64 can have a "frame grabber" add-on then I'm sure it's possible to make one up for the Dragon....after all, it's only really an elaborate form of A to D converter, so how about it?, anyone feel like trying to solve the problem?.

Before I forget to mention it...one or two people have asked when I'm going to write the follow-up to "Up the Drive". Well, I WILL write it, just as soon as I get a chance, but the work rather piles up sometimes, and this month it's been a choice between answering your letters, etc, and writing articles, and rightly or wrongly I thought the mail was more important. I'll do my best to get it done for the next issue, but if not, then as soon as I can afterwards. OK?.

Well, I suppose I'd better get this page finished off....once that's done and I've printed a master copy this issue is all ready for photocopying. See you at the Show, I hope.

Paul G.

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