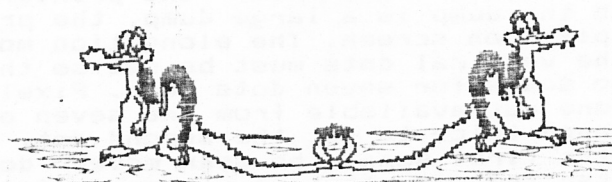


The Newsletter of the National Dragon Users Group

DRAGON



UPDATE

* ISSUE 74. 'Wanted: Articles, dead or alive!' DECEMBER 1990. *

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The Gaffer's Bit

Well, another year over and the Group is still here, just about!. We seem to be getting through Editors at an alarming rate though can't imagine why!. By the way, there is no truth at all in the rumours that ex-editors are wheeled quietly away to a nice little room with padded wallpaper, where their ravings wont disturb anyone, as Stephen can confirm when they take the restraint jacket off him!.

The Dragon scene is getting smaller now, as you all know, but I'd like to thank everyone who is still trying to support the old machine for their efforts ... and that doesn't just mean the software firms either!. People like Tony Davis, who do a lot of work for Dragon owners, not merely for no profit, but at their own expense!. Ray Smith gets nothing at all back for all the time and money he puts into keeping the Graphics Library going. Stuart Beardwood and Harvey Grey, and several others all put in a lot of time and money to keep the Dragon scene running, to say nothing of Mike Stott and Stephen Wood, without whose work you wouldn't be reading this at all. However, the same can NOT be said for a lot of Dragon owners, those who seem to imagine that all they have to do is send in their "sub" once a year and do nothing for anyone. A lot of the enquirers about the Group ask "what services does the Group provide?" what they should REALLY ask is "what can I do for the Group?". The Group is a bit like a computer, what you get out depends on what you put in nowt in, nowt out ... garbage in, garbage out. Just try to remember that in 1991, please.

Well, that's about all for now except to say "Thanks Steve, I'll be expecting a stream of articles for publication from you, starting as of now, of course", and "Robin, you don't know what you've let yourself in for!". To the rest of you out there, "have a good Christmas, and may all your presents be exchangeable!". See you next year. Paul G.

Paul G.

This Editor's Last Bit...

As you should know, it's really hello and goodbye from me this month, as this is the last issue which I will be editing. Hurray!!! Whilst I'm sure most of you will be glad to see the back of me, you should direct your attention to your new editor, Robin Hemmings, and send him vast amounts of new material, so that he can recover from the shock of his insane decision to take my place! His address is the same as the one for Dragonfire, namely 8, INGLEBY ROAD, WIGSTON, LEICESTER, LE8 1DQ. Please give Robin your support as it's going to be a monumental task to maintain Update throughout 1991, and he's very brave for taking up the challenge! I can tell you for a FACT that he will need more material, so if you've ever needed an excuse to write something, this is the perfect opportunity.

I shall be back later with a few thank-yous, but from me, it's adios to the front page.
Stephen.

NEXT ISSUE WILL BE FEBRUARY 1991.

PH

EASY MACHINE CODE (17) . . . R.A.DAVIS

In part 16 the commands to initialise the printer, and stores to hold information were set up. As the dump is a large dump, the printer will have to print 4 dots for each pixel on screen. The elongation mode will take care of the horizontal dots, but the vertical dots must be set so that two are printed each time. This needs two scans for seven dots deep. Pixels 1 to 3 need 6 dots set, and pixel 4 has only one dot available from the seven on the print head. So pixel 4 must be scanned twice to get the second dot, and the 5, 6 & 7 can have two dots each. After the first scan, the scan moves down to start again with the fourth pixel. After that it starts a new scan of seven pixels from the 8th, and so on. If your print head has eight pixels deep, the program can be much shorter of course. Part 16 showed how to use a Branch to jump over the data to the start of the program, a device commonly used. The start is labelled @BEGIN.

140 @BEGIN LDU #@ESC which points the U register at the address of the data to set up the printer into graphics mode.

150 JSR @PRINT this is a sub routine placed at the end of the program, and it uses the ROM routine to send information to the printer.

160 LDU #@ELONG which points the U register at the printer Data needed for elongation mode.

170 JSR @PRINT to send those commands to the printer. The same routine will print the dump in due course

180 @START LDX #3072 which is the first byte on the graphics screen with DOS connected. If you are using a cassette based system this number is \$1536 of course. The X register holds that address, not the data in that location, and is used as a pointer for the A register to get the data there.

190 PSHS X Using the S register as a stack, the address is saved for recall later in the program.

200 STX @SCREEN saving the address in space which was provided earlier for re-use within the scan routine.

210 LDY #9152 for DOS or 7616 for cassette users. This is a screen end address, which would normally be either 10751 (DOS) or 9215 (CASS), but as the final scan will be three pixels deep the screen end address must allow for this.

220 STY @SCREND which is the store provided for earlier, and it can be used for compare when needed.

230 LDA #80 or decimal 128. In binary this is 10000000 with only the right hand bit set. This can be used to test the byte on the graphics screen by loading the A register with that byte and using the BIT opcode for compare.

240 STA @BIT putting it into the store provided at line 80, where it can be modified and re-used.

250 LDB #32 In order to count across the screen, where each row consists of 32 bytes, the B register will be decremented by 1 every time a byte has been disposed of in the scan. When the B register records zero then the print head will need a C.R. and a new address is required in the X register to carry on with the next horizontal scan.

'The Rainbow' June 1990 Issue.

Various letters concerning products for the CoCo, including whether it would be possible for the CoCo community to build and market a CoCo 4, complaints about 0 and O appearing in the same listings, and praise for various suppliers are printed in this issue.

Programs usable by Dragon owners include:

CONSEC - an educational program to help school children find consecutive numbers that add up to a particular sum, e.g. find three consecutive even integers with the sum 60.

BETWEEN - to help younger children with naming the correct letter between two other letters.

COCO JUMBLE - a type of Scrabble game.

Option 1 & 2 - included in teh BASIC tutorial column.

MODIFY - a graphics manipulation program written in machine code

The articles include: how to bring CoCo discs back from the dead; and OS9 Level II windows utility, OS9 directories, reviews of the new 64K cartridge games, aswell as other software; general hardware projects, pen pals, and bulletin boards.

The rest of the magazine consists of adverts of software and hardware, mostly for the CoCo 3, but there are plenty of games and utilities for 1 & 2 owners.

Next time, I will hopefully be back with a review of the July issue. If you would like any questions answered on how to convert the machine code programs (e.g. MODIFY) to the Dragon, please send an SAE to 50, Lime Avenue, Bentley, Walsall, West Midlands, WS2 0JP.

Paul Marlow.

LABELLER :- This program was designed for printing multiple labels on a page or roll. There is a comprehensive manual detailing all the functions. The number of labels per page/roll across and down can be set up, number of lines per label and line length. It would be best to use sheet/roll paper, and use the Alter Setup mode to determine the labels layout, and when satisfied, note the settings for when using the program proper. It is in itself an involved program for what it has to do (I have written myself a very short basic routine which will do the same job without all the trimmings.) This is a bit too fiddly for me.

MENU MAKER:- This routine will set up a menu on your disk for up to 12 items. Handy if you have a lot of short routines on disk. @ **SCREEN DUMP:-** This was designed on a Star LC10 colour printer and will give a mono/colour printout. The printout size can be altered from 3.5 X 4.5 inches to 5.5 X 6.5 inches. The printer runs in single direction only, printing one line then pausing before printing the next line. The program is in basic, making it a very slow printout, not my cup of tea.

TELEPHONE MEMO:- This one prints out a 3.5 X 3.5 memo, six to a page. Information on the memo requests info To/From, tele number/Exten, etc. Handy to printout and keep by the phone if you are one of those who get a lot of calls but are never in, if like me you have teenagers in the house you know what I mean.

DISK SAVER:- This routine will recover those new/old disks which will not format ie CC ERROR!!. It works by going through the disk sector by sector and on coming across a bad sector, it will 'hide it'. Each track and sector is reported to the screen and any bad sector is also reported, and if needed reported to the printer as well. At the end a full report is given, number of bad sectors and remaining usable disk space. The whole operation takes about 20 minutes. Unfortunately, any 'deallocated' sectors will be found by the 'Backup' command, so using the disk to disk 'Copy' is the order of the day. This routine has recovered disks that other routines have failed to recover, so for me this is a must. Conclusions!! A suite of programs which will suit some and suit others, but not I think everyone, for me the Disk Saver is the best of the lot. **UTILITY PACK** from Pulser Software, 36 Foxhill, High Crompton, Shaw, Oldham, Lancs. OL2 7NQ. Price on application.

PEEKING THE DRAGON (30) BY MIKE STOTT

October 5th - Have received two new items from Dragonfire. Both are available on cassette only. The first is SCRABBLE which is the same as the board game and can be played by 1 to 4 players. The other is ACOLYTE, which is a text adventure for the 64 only. At first play it appears to be a very well written program marred only by some poor spelling which I hope will have been cured by the time you read this article.

Tony Drewitt has been struggling for a long time to capture the loading screen from PEDRO so that he can dump it out. In desperation he wrote to me and I will give the answer to those of you who do not know the secret. Purchase it from our Graphics Library along with the many other excellent pictures. Alternatively, switch on computer, POKE&H71,255 and press ENTER. CLOADM, ENTER (as usual) and then when the picture that you wish to capture is fully on the screen, press the RESET button and you will appear to have lost everything as the COPYRIGHT SCREEN shows. The graphics are still there. If you do not believe me write a short basic program e.g. 10 PMODE4,1:SCREEN1,1 20 GOTO20 and RUN it. See!! The disk method is similar. @ October 28th - It is amazing how many people are having drive problems at the moment, and also the differing number of cures being found. Phil Chatfield found WD40 cured his problems, Stuart Beardwood turned the belt on his drive inside out. Mine has been temporarily cured by spraying it with industrial Non-Slip Belt Dressing (not really recommended, although it has got a non-working drive up and running). For a permanent answer I am going to send the old belt to Kevin Jarvis at Greenweld Electronics, 27 Park Road, Southampton as he has assured me that he will be able to supply as many as I want. He also has a stock of Dragon books if there are any that have eluded you. Mention the Group when you contact him.

I notice in Update that Dudley is deserting the Dragon scene because not enough software is being written for him, yet Mike Palmer wants more help so he can USE his computer. The Dragon is NOT the best "games-machine", but is probably the best to learn about TRUE COMPUTING which is using the machine to do whatever you want. There are newcomers all the time who do not know even the most basic Pokes & Pokes (some out there probably do not even know what they are). I am still constantly learning new things about the Dragon, despite about seven years of owning one. If Mike or anybody else wants to write to me for any help, please feel free to do so, and, if I cannot help then I will appeal through my article for you (do not forget SAE when asking for help from another member).

November 3rd - R. Cleminson of Motherwell has written with help for Tim Lees. **CIRCUS** - a cheat sheet in fact, but briefly you must wear the costume to see the ghost clown, look clown, get note, read note, go closet, get whip etc. **FISHY** - another sheet; cake is to feed octopus, conch is for blowing, pistol kills guard, pearl is for throwing. **BATON** - yet another sheet; smash padlock

with hammer, salt from barrel kills slugs in cave on beach. HULK - EXAMINE MIRROR, the madder the Hulk gets the stronger he is, remember the name Strange said to get madder.

R. Cleminson would like help for himself in Perseus and Andromeda - he has got the invisibility helmet but cannot appear to be able to do anything new. He would also like help with ADVENTURE WRITER and wishes somebody would write an article with a ready made adventure, say MANSION, with instructions how to input this into Writer step by step.

Peter Hawes of Whistable is stuck in El Diablero - how to get the blue pebble, how to pass the golden bridge, and what to do with golden statue. BLACK SANCTUM - what to do with stone statues and skeleton in coffin. I did this about 7 years ago and cannot remember. Somebody else must. He also asks whether USURPER OF RONE (JUXTA2) was ever released. Not to my knowledge! Sorry I cannot review JOURNEY TO CENTRE OF PHOBOS/ANTI-GRAVITY or even tell you what it is like as Robin Hemmings has not sent me a copy, had not even heard about it until you told me. ACOLYTE will be reviewed shortly, but you must appreciate they are hard to review as they really should be completed first.

Stuart Beardwood has sent me a disk with some of the available PD software and it looks really good. What I did like was the programs for the Electronic Book, especially as I had purchased one only a week ago. If anybody has one to sell, please contact Stuart as he is on the lookout for a spare.

FAST EDIT REVIEWED BY RAYMOND ROACH

When I think that I have found the best text editor/word processor for the Dragon, up comes someone with another which offers much that the others do not. Geir Hovland has done just that with his FEDIT V.100 disc. I have reviewed it using my Dragon 64 with Superdos E6 and a Panasonic KX-P1081 printer.

The screen presentation is 64 x 32 upper and lower case characters. This, using a TV set for the screen, is a little difficult to read at my age, but is really very good. The program is fully menu driven and very straightforward to use. The left/right arrow keys bring the required menus on screen. Only one hiccup came to light in the edit mode. After making a deletion, the cursor did not flash until the left arrow was pressed a second time. Once this was known, no other problems were found. Block move, copy or delete functions are easy to use as are the word search/replace facilities. A menu allows you to control key repeat rate and delay time, and, if you like that sort of thing, have a keyclick. There is also a menu which allows you to upload and download text between computers at one of four Baud rates. The print menu provides for full or part print with or without linefeed. It also caters for serial and parallel printer connection.

Now I come to the part which I found sets this program apart from others. You can use the full IBM international character set within the text by pressing the CLEAR key followed by the ASCII number. These 255 possibilities have really expanded the Dragon in a way I have never found before.

Geir Hovland deserves every encouragement Dragon owners can give him - so PLEASE buy a copy of the disc, which brings a first rate English manual with it, and open up the Dragon for even greater use.

P.S. Having just printed a proof copy of this review I realised that I have forgotten another word of information. When you have finished your text, ALWAYS end with an ENTER. If you do not, the last line will not print out - as I have just reminded myself.

The disc can be obtained from G.E.Hovland, Stubbsvingen 67B, 7036 Trondheim, Norway. Because of the high charges involved in international cheques, please pay in Norwegian Kroner. The cost for disc and manual is only 100 Kroner. (Ask your bank how you can pay)

Copy Deadlines...

What with Update going bi-monthly, the old 'end of the month' deadline has become somewhat obsolete, as everything has moved onto a different time scale. Consequently, material may arrive too late for the next issue, so in order that you can plan when to send your bits in, here's how everything "works" (in a broad sense!) at the moment.

The deadline for completion of the master disc has been shifted back to the middle of the PRECEDING month, ie the February 1991 master will be completed by mid-January. Therefore, any material you send in should reach your new editor by about the 10th or 11th of the relevant month to be considered for the next issue. Going bi-monthly has meant that there is more editorial time to read material and finalise layouts, but it does mean that articles must be sent in earlier than before. To beat the deadline, send your material in during the start of the ODD NUMBERED months, ie January, March, May etc (presuming we get that far!), and Robin should (hopefully) have time to consider it for publication. OK?

Stephen.

POP-UP-PRINT-MASTER BY FRANK FISHER

This is one of those little utilities, which can be loaded in at Hi or Low Mem, or at Page 2 if graphics are not being used. What does it do?? At the touch of a control key, it will POP-UP, and, by selecting the function that you require, will switch your printer into whichever mode you require. After a few problems, (I found that where only one control code is used ie 15, the prefix 27 is best left out), I finally got things working. With my Panasonic, I got modes REDUCED, EMPHASIZED, UNDERLINE, ELITE or PICA, DOUBLEPRINT, SUPER/SUBSCRIPT and DOUBLE WIDTH ENLARGED, (my printer does not support ITALICS).

After installing the program at Page 2, loading a short basic program, and then selecting the various functions and doing an LLIST, interesting results came forth. From the large DOUBLE WIDTH ENLARGED to the smallest (SUPERScript + REDUCED), this gave the smallest printout that was readable. The program comes with a three page manual, which if you ignore the large crop of remarks, is fairly clear to follow, unless you are a bit thick like me. You have a Basic program which you customise by consulting your printer manual, RUN, this is then compiled by the compiler program, which then gives you the SAVE addresses. Then you are ready to use the program as it stands or install it into your own. A neat little program, written by the longtime and prolific pen of Jonathan Cartwright, (of Starship Software), who I understand is retiring from the Dragon scene after many years of sterling service. Farewell and good luck, you will be missed. The number of good writers are rapidly fading. Where are the new ones??

POP-UP-PRINT-MASTER available from Dragonfire Services, 8 Ingleby Road, Wigston, Leicester, LE8 1DQ available on DragonDOS disk only for 4.00.

Mortgage Repayments...Harvey Grey.

In this depressing age of fluctuating mortgage rates, it's often handy to calculate how the movement in interest rates affects your personal fortune. The following program is designed to do just that by giving you the monthly repayments on any size or type of loan. All you have to do is type in the information as asked and let the program do the rest.

This has been taken from a program that I developed several years ago to help calculate my monthly outgoings and allow me to keep an accurate record of all expenditure. It was developed originally for cassette but has since been upgraded for use with disc. Anybody who wants a copy should send either a formatted (DragonDOS 1.0, SuperDOS, or Cumana V2) disc, or a cassette, plus return postage to: Three Tees, Greens Farm Lane, Billericay, Essex, CM11 2NY.

```

10 CLSO:PRINT@71,"MORTGAGE REPAYMENTS";
20 PRINT@133,"ENTER TYPE OF MORTGAGE";:PRINT@196,"(E)NDOWMENT (R)EPAYMENT";
30 X$=INKEY$:IF X$="" THEN 30
40 IF X$<>"E" AND X$<>"R" THEN 30
50 CLSO:IF X$="R" THEN PRINT@66,"MORTGAGE PAYMENTS-REPAYMENTS";:GOTO 70
60 PRINT@66,"MORTGAGE PAYMENTS-ENDOWMENT";
70 PRINT@128,":::INPUT"LOAN AMOUNT";LN:INPUT"INTEREST RATE %";IR
80 INPUT"% RATE OF TAX RELIEF AGAINST INTEREST";TR
90 INPUT"MAXIMUM LOAN ALLOWABLE FOR TAX RELIEF";ML
100 IF X$="R" THEN INPUT"YEARS OF LOAN";YR:GOTO 190
110 D=LN:REM LN IS LOAN AMOUNT
120 IF D>ML THEN D=ML
130 TR=TR*(D*IR/100)/100
140 E(1)=((LN*IR/100)-TR)/12
150 PRINT@384,"REPAYMENT = ";:PRINT USING"####.##";E(1);:PRINT" A MONTH"
160 PRINT@448,"AGAIN (Y/N)";
170 X$=INKEY$:IF X$<>"Y" AND X$<>"N" THEN 170
180 IF X$="N" THEN END ELSE RUN
190 CT=0:W=0:Y=0:Z=0:TR=100-TR
200 IF LN>ML THEN GOSUB 260
210 L=LN
220 IF L>ML THEN L=ML
230 IT=1+TR*(IR/100)/100
240 FORX=0 TO YR-1:CT=CT+1/(IT^X):NEXT X
250 W=L/CT*IT/12:GOTO 290
260 Y=LN-ML:IT=1+(IR/100)
270 FOR X=0 TO YR-1:CT=CT+1/(IT^X):NEXT X:Z=Y/CT*IT/12
280 CT=0:IT=0:RETURN
290 E(1)=W+Z:GOTO 150

```

IMPORTANT!!!

PLEASE NOTE THAT AS FROM NOW ALL ARTICLES FOR PUBLICATION MUST BE SENT TO ROBIN HEMMINGS AT 8,INGLEBY ROAD, WIGSTON, LEICESTER.

AMS4, STAFFORD - REPORT BY MIKE STOTT

Just a brief report on the Alternative Micro Show at Bingley Hall Stafford on Saturday 10th November. Arrived there just before 8.30 with Nora and David to set up the group's stand and we were unable to get any breakfast until just before the show opened at 10.

To those members who came - "Thank you," and I hope those who had queries were satisfied with the answers that they got.

The members got more out of the show than the group. In seven hours I enlisted one new member, took 2 renewals, sold 5 items of software, 4 circuit sheets, and 5 back issues of Update and yet I was kept fairly busy all day. Most problems were drive related, mainly being about upgrading to disk from cassette. Hopefully I was able to answer the queries successfully. Most people seemed satisfied and headed straight to purchase new drives together with controllers. As you will realise most of my time was spent talking to people, but this is what the group is about - helping each other with whatever problems arise.

It was nice to see so many of my old friends there, meet quite a number of people that I had previously only spoken to on the phone or answered their letters, and also meet a few that I had only heard about in the past. In particular, may I say thanks to George Dawson who took me upstairs to buy me a pint.

Dragon representatives at the show were Knight Computer Services, Pulser, Dragonart Library, NDUg, Animal Rescue (also known as 6809 User), Dragsoft, and, of course, Bob Preston. Before the show started David was playing Paul Burgin's TETRAS and this created quite a stir. I had to put it on again a few times for people who had heard about it and wanted to see it. If it had been on sale it would have sold a lot of copies.

There were many stands with various computer (and non-computer) items for sale.

My best purchase was a copy of The Dragon Notebook containing many useful hints for the Dragon and obtainable from the Dragonart Library. We also came home with a 2.30 disk box for 100 disks, 3 1/2" drive for 5.00, anti-glare screen, Guinness cake, loads of cheap books for the school where Nora works, Cheshire Cat software for 5p each and many items for other people. Those of you who have never attended a show do not know what you are missing.

One of the worrying things at the show was the number of Dragon owners contemplating leaving the Dragon as they now have other machines. I have got a PC but would never part with my Dragon and intend supporting the group for as long as I can. One chap who spoke to me had obtained a Dragon for next to nothing without a power pack and was amazed how helpful everybody was in the Dragon world. Although he owned a considerable number of computers I am hoping he will join NDUg and have a long relationship with the Dragon.

The AMS Show - Report by F. Fisher.

Once again your intrepid explorer and ace reporter ventures into the wilderness. His objective? to track down that elusive beast, the Dragon!. After hacking my way through the Motorway jungle, and exploring the hidden recesses of the Byways, I finally tracked it down in its new lair, Bingley Hall, Nr. Stafford (just north of Birmingham). The venue was the Fourth Alternative Micro Show and Radio Rally. The size of the venue was even bigger than the Old Royal Horticultural Halls, and it was packed!. Believe me, you needed a bottomless pocket and a large van to carry away all the bargain goodies!. New and used disc drives of all sizes and at ridiculous prices, keyboards, electronic boards, components, even new and used computers!. PCs, new from 299.99, Einstiens, New Brain, Speccys, even the Oric User Group was there!. Software and hardware to suit everyone, and prices out of this world. Nestling away in a corner was to be found our favourite Beastie, the Dragon!, represented by Mike Stott on one stall, Stephen Knight and his brother on another, plus the NDUg Graphics Library 6809 User had a stall too!. Also on display was a 512K CoCo, displaying a semi-reclining nubile lady on its monitor screen (I understand this is an optional extra, not supplied as standard. Paul). Unfortunately there was nothing new to report, no fantastic new games or utilities. I did not get a chance to speak directly to anyone but Mike, but got the impression that business was much as usual. To be honest I was more interested in the show in its entirety, and I must admit that I got carried away and spent a little too much (what with travelling expenses and staying overnight as well ... I also had my wife with me, who showed interest at first, but after a few hours was beginning to flag a bit!). For the enthusiast a paradise, albeit expensive, but I think a weekend out with an objective does anyone a bit of good. I believe that the next AMS show may be in London, so if it is and you get a chance, have a go, but don't forget your cheque book!.

Computer Leaves... Geir Hovland.

In 1985, a group of scientists from Atlanta, USA, discovered a mathematical bracken. They used a computer and an iterative formula. A friend of mine rewrote their program to the Dragon's BASIC, and the result is given below. It is really fascinating to watch the leaf grow, and even if the program is written in BASIC, you don't have to wait for hours to get the result. Infact, the leaf is drawn in a few minutes. It looks exactly like the ones I find right outside my house. You may start to wonder: if a God exists, he really must be good at mathematics.

```

10 PMODE4,1:COLOR0,5:PCLS:SCREEN1,1
20 DIM H(3),K(3),T(3),FI(3),R(3),S(3),P(3)
30 DIM M(3,1,1)
40 N=50000:H0=23.75:VE=19:Z1=128:Z2=96:PI=3.14592654
50 H(0)=0:K(0)=0:T(0)=0:FI(0)=0:R(0)=0:S(0)=0.14:P(0)=0.005
60 H(1)=0:K(1)=1.6:T(1)=-2.5:FI(1)=-2.5:R(1)=0.85:S(1)=0.85:P(1)=0.8
70 H(2)=0:K(2)=1.6:T(2)=49:FI(2)=49:R(2)=0.3:S(2)=0.34:P(2)=0.0975
80 H(3)=0:K(3)=0.44:T(3)=120:FI(3)=-50:R(3)=0.3:S(3)=0.37:P(3)=0.0975
90 P1=P(0):P2=P(1)+P1:P3=P(2)+P2
100 FOR I=0 TO 3
110 T(I)=T(I)*PI/180
120 FI(I)=FI(I)*PI/180
130 M(I,0,0)=R(I)*COS(T(I))
140 M(I,1,0)=R(I)*SIN(T(I))
150 M(I,0,1)=-S(I)*SIN(FI(I))
160 M(I,1,1)=S(I)*COS(FI(I))
170 NEXT I
180 X0=0.5:Y0=0.5:M1=1
190 POKE &HFFD7,0:'THE SPEED UP POKE. USE WITH CAUTION.
200 PR=RND(0)
210 IF (0<PR) AND (PR<=P1) THEN K1=0
220 IF (P1<PR) AND (PR<=P2) THEN K1=1
230 IF (P2<PR) AND (PR<=P3) THEN K1=2
240 IF (P3<PR) AND (PR<=1) THEN K1=3
250 X1=M(K1,0,0)*X0+M(K1,0,1)*Y0+H(K1)
260 Y1=M(K1,1,0)*X0+M(K1,1,1)*Y0+K(K1)
270 IF M1>50 THEN I=INT(H0*X1)+Z1:J=INT(VE*Y1)+Z2:J=288-J:PSET(I,J)
280 X0=X1:Y0=Y1
290 M1=M1+1
300 IF M1<N THEN 200
310 POKE &HFFD6,0:'THE SLOW DOWN POKE
320 I$=INKEY$
330 IF I$="" THEN 330
340 END

```

Take note...

A constant problem with the group is people sending the wrong things to the wrong people. This makes more work for Paul and myself, and it means you will have to wait longer for a reply/whatever it was you wanted/anything else. So, for the benefit of any new members, plus all the old members who've "forgotten", here is a list of where to send what:

All group orders (except NDUGSoft), queries, subscriptions, non-Update business, etc etc goes to PAUL.

All Update material to THE EDITOR.

All software or reviews to MIKE. Please try to follow these guidelines, especially as we have a new editor next month, and he doesn't want any unnecessary mail to start with.

The commonest mistakes are crossword solutions, and classified advertisements. These both go to PAUL, without exception. If you send them to me, they'll only be delayed while I send them on.
Stephen.

SMUG REPORT!..

Harvey Grey has asked me to mention that the first issue of the S.M.U.G (Sprite Magic User Group) Newsdisc is now ready. Anyone interested who has NOT yet received a copy should send a BLANK FORMATTED DISC, stating which DOS they use, and include return postage. All that is required in return is that S.M users should have a go at using it, and send an article or program which can go towards making up the NEXT disc.

The address is: Harvey Grey, Three Trees, Greens Farm Lane, Billericay, Essex. CM11-2NY.

Joystick Keypad... Gareth Tuttiett

In Update 71 (July 1990), Richard Sutcliffe demonstrated a method for switching a resistor to create a 'function key' accessible from the joystick ports, and I have been working on a similar idea. The 'fire' button is used as a control key giving ten extra key presses.

While messing around with an old Tandy joystick, it occurred to me that one of the pots could be made up of single resistors instead of the carbon track. A small prototype showed that switching resistors across the wiper contact created different values. I continued experimenting with resistors, and decided on having just 10 keys. However, to remain with 100K ohms meant that each key needed a 10K ohm resistor, which caused a problem with delay. It took time for the resistance value to stabilise so that a value could be read, which I solved by writing program 1, which samples the joystick port until it stops changing. It does settle at J1=22 eventually!

Having designed the circuit diagram below, I planned a final version, and bought all I needed from Maplin electronics. Unfortunately, their keys are designed for PCB mounting and would not fit my veroboard, but they can be fitted into holes cut in aluminium, which is what I did. The resistors and wiper contacts were hard wired, the trimmer pot VR1 (set to halfway) was soldered to a scrap of vero and then wired to the rest of the circuit, and a 6 core cable was connected to the 5 pin DIN plug and to the circuit. The diagram shows which colour wire goes where, but the wiring and soldering MUST be checked before connection to the Dragon.

Use program 1 to find each key's value and test the keypad, which displays the values of JOYSTK(0), JOYSTK(1) and PEEK(65280) respectively. Press each key in turn and hold while you note the value for JOYSTK(0). Once you have these values, substitute them into program 2, which gives a colour selection program to test that it does work. The 10 extra keys are obtained by pressing fire at the same time, ie IF J1=10 AND (PEEK(65280)=254 OR PEEK(65280)=126) THEN VR1 could also be wired up, giving 40 possible keys! Perhaps a Dragon enhanced keyboard while retaining the left joystick. To use the left port, just use JOYSTK(2) instead. There may be problems reading the joystick and keyboard at the same time, but these can be solved by careful software design.

Incidentally, I don't have any qualifications in electronics, so unless you are confident about your soldering abilities, don't risk damaging your Dragon, but get help from someone who does know about electronics. If anyone can improve on my circuit, perhaps they would write an article for us?

```

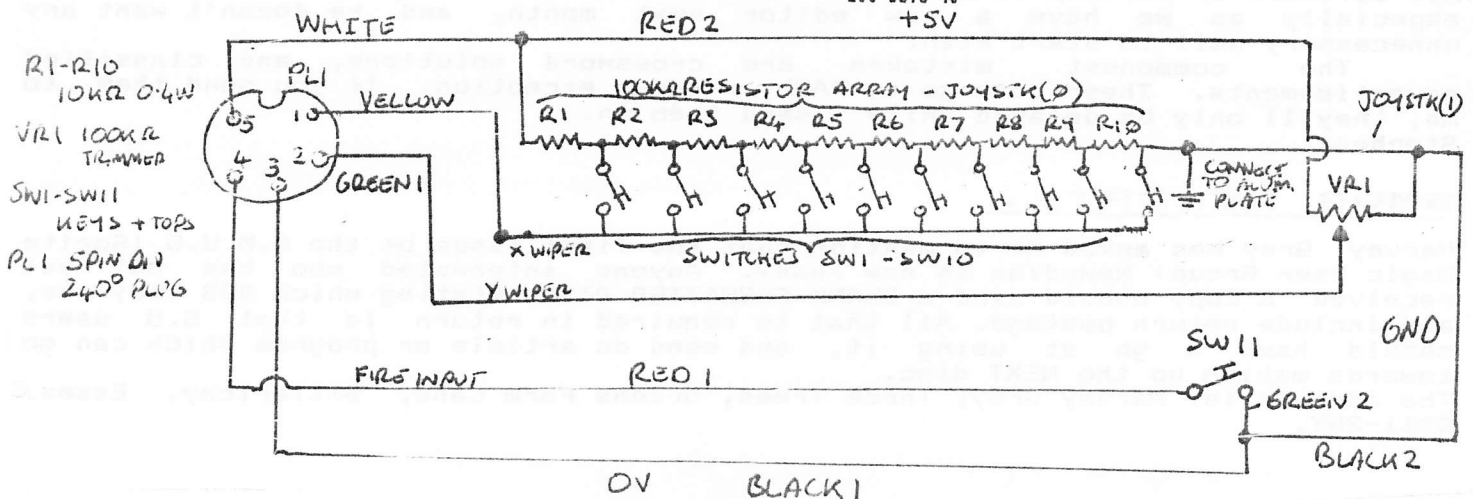
10 'KEYPAD SCANNER
20 'GJ TUTTIETT 31/7/90 V1.2
30 CLS
40 J1=JOYSTK(0):'FIRST READ OF PORT
50 J2=JOYSTK(1):'READ TRIMMER:32=HALFWAY
60 'CHANGING VALUE=KEY PRESS VALUE
70 PRINT@,J1;J2;PEEK(65280)
80 WAIT10:'DELAY SAMPLING
90 J4=JOYSTK(0):'SECOND READ OF PORT
100 IF (PEEK(65280)=254 OR PEEK(65280)=126) THEN SOUND50,1
110 IF J1<>J4 THEN 40:'HAS VALUE STABILISED?
120 GOTO 40

```

```

10 'KEYPAD SCANNER
20 'GJ TUTTIETT 31/7/90 V1.2
30 CLS
40 J1=JOYSTK(0)
50 J2=JOYSTK(1)
60 WAIT10
70 J4=JOYSTK(0)
80 IF (PEEK(65280)=254 OR PEEK(65280)=126) THEN SOUND 50,1
90 IF J1<>J4 THEN 40
100 IF J1=(value of key 1) THEN CLS1
110 IF J2=(value of key 2) THEN CLS2
120 IF J3=(value of key 3) THEN CLS3
130 IF J4=(value of key 4) THEN CLS4
140 IF J5=(value of key 5) THEN CLS5
150 IF J6=(value of key 6) THEN CLS6
160 IF J7=(value of key 7) THEN CLS7
170 IF J8=(value of key 8) THEN CLS8
180 IF J9=(value of key 9) THEN CLS9:'WHAT COLOUR IS THIS?
190 IF J1=(value of key 0) THEN CLS0
200 GOTO 40
+SV

```



Goodbye...

Well, after 32 (I think) issues of Update, this is finally my last one, and I'm handing the hapless job over to Robin Hemmings, who's in the hot seat from February 1991. I hope you'll give him the support most of you have given me, particularly as the Dragon scene dwindles away, as editing Update is going to get harder and harder next year. I shall of course be sending Robin all the unused articles I have 'in stock', but that shouldn't stop you forwarding any new articles to boost things along.

It's been an "interesting" two and a half years as Update editor, I've met a fair number of you at the shows etc, and have got to know several people quite well, but I don't think my typing fingers will ever be the same again! It's been a bit of a panic at times, especially when my drives decided to eat the master disc, and if I wasn't completely insane when I first offered to take the job, I most certainly am now!

I could use up an entire page with a namecheck of our dedicated article writers, but for fear of leaving anyone out, I'll just say a big thank you to EVERYONE who has written articles over the last 30-odd issues, especially the regulars; you know who you are, and many thanks for providing me with something to use every month - did I ever need it!

Well, the new team of Paul, Mike, and Robin, awaits your involvement, and now's the time to stop worrying about what will happen if the group closes down and instead do something to make sure it doesn't. Now more than ever, the group survives on what YOU put into it, so please do your bit, and hopefully we'll still be around this time next year.

I don't know whether I'll grace these hallowed pages again, but just in case I'll take this last opportunity to thank you once again, and wish you all a Merry (and possibly white) Christmas. Goodbye from me, and I'll now hand you over to Update's fifth editor.

Stephen.

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Cheques & PO's payable to MIKE TOWNSEND. -- 41 Hereford Street, Presteigne, Powys. LDB 2AT. Tel 0544 260178. Prestel 105447385

After several requests, (yes, SEVERAL!) for PD video title generation utilities, I've included a couple of my own routines in the Library. They scroll the text upwards on the hi-res screen within a user defined window at "normal" reading speed (whatever that may be!), to give a more professional touch to home videos. There is a 64 column PMODE4 version, and a shadow text version for PMODE3.

The P.D. Library is going quite well with an average of one request a week, which in the Dragon world is a hectic turnover!. I still need more material though, & there are NO databases or spreadsheet programs in the Library as yet, and some Epson printer routines would be welcome. How about some utility specific stuff written for Rainbow Writer, Edit+, etc?. I've begun a "clip-art" disc for use with Stephen Knight's Publisher, if anyone would like to contribute to that. Several people HAVE contributed material, but a general reminder seems to be called for!. S.B.

Letter from Tony Drewitt.

I have had a Dragon ever since it came into being, and in all that time I have not met or contacted anyone having the same computer, until some eighteen months ago when I placed an advert in Micro Mart asking for cassette programs which would run on a Dragon. I did have a few replies, including one from Pulser Software. They put me in touch with Paul Grade, who invited me to join the NDUG. In prompt reply I posted my subscription fee, at last, I thought, I could have others to contact and progress even further with my Dragon, perhaps even find tips and advice in the newsletter. Alas, not to be!. I did not get the information or assistance I required, so how about the majority of you so called members getting off your posteriors, putting pen to paper, and sharing a little knowledgw, with tips and advice, and maybe a small program now and again?. It would be conducive to all concerned. I'm not too well up on programming and such input to the newsletter would benefit me greatly., your assistance would be much appreciated, and maybe I could progress further. Help Paul and his colleagues to make the newsletter much more interesting, or is it that we are all in the same boat (including myself!) in not having sufficient grey matter to produce a good letter let alone a small program?.

Are there any members to help or produce a program for cassette written to order or specialise in one subject?.

REQUEST FOR HELP!> I'm trying to produce a picture or motif with user defined characters and firing the printer pins according to data lines, to scale that defined character up or down, to be able to print a string or character and place it anywhere on the paper, or create my picture with draw commands and then dump it to printer. Any suggestions?. My printer is a Brother M1209 (IBM/Epson) dot matrix, and I only work with cassettes. I know that is a disadvantage but one cannot progress without regular assistance and advice. Please phone me on BATH 424729.

Just a couple of points in reply, Tony; Firstly, you can't blame anyone but yourself for years of isolation ... there were magazines, Groups, Shows, etc ... where were YOU when they were still about? ... THEY needed YOU. As to not being able to progress solo ... most of us managed it, one way or another ... and I would have thought eight years a sufficient time for most people to learn Basic programming to an adequate standard. Re. your request .. what you need is a basic graphics program (several available) and an Epson type screen dump (same applies) .. you're trying to reinvent the wheel the hard way!. Paul.

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The Librarian, 5, Glen Road, Parkstone, Poole, Dorset.

TX Lo-res screen editor and manipulator. Written by Ian Rockett. Price 2.75 inclusive.
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THE PU LIBRARY is now fully operational once again. For full details of material available contact Stuart Beardwood. More contributions always wanted, so if YOU have any suitable material please let Stuart know. @ Stuart Beardwood, 38, Salisbury Place, Boothtown, Halifax. HX3-6ND.

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J. Russell, 33, Tennyson Avenue, Clevedon, Avon. BS21-7UJ.

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WANTED. Composite colour monitor for the Dragon. Contact Malcolm Cowen on 061-22544674 eves or weekends.

WANTED! Has anyone a copy of TELEWRITER INSTRUCTION MANUAL, please. Will pay!.
J. Brown, 45, Marlborough Avenue, Falmouth, Cornwall.

FOR SALE: Dragon 32 in perfect condition, still boxed. Also spare keyboard, pair of joysticks, and spare PSU. 50.00 o.n.o. Buyer collects or pays postage.

Contact W. Hird on 0429-821210. 5, The Green, Thornley, Durham. DH6-3HD.

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Contact David White on 0772-863742. 851, Garstang Road, Barton, Preston, Lancs.

..XMAS COMPETITION!..

PRO-TECH SYSTEMS (GB) have very generously offered to sponsor our Christmas Competition!. On offer to the senders of the SIX best entries are FREE PRO-TECH DISC INTERFACE P.C.B's, with circuit diagrams. All the components to build these boards into complete DOS cartridges are available VERY reasonably from Pro-Tech Systems, so here's your chance to build yourself a NEW DOS CARTRIDGE!. These are top quality boards with solder resist, legend screen, and gold plated edge connectors!. What's the catch? You have to write a short article on "How I use my Dragon", which shouldn't be difficult as you MUST use it for SOMETHING!. Please try to concentrate on the practical use aspects though, just listing your hardware won't win you anything at all!!.

All entries MUST BE SENT TO THE EDITOR (Robin Hemmings) by January 28th. Robin's decision on the winners will be final, and all usable articles will be published in future Updates. OK?, then start writing!.

MORE ADS

SOFTWARE SALE! Over 100 Dragon cassettes, games, utilities etc, plus some books including Inside the Dragon!. All one price 1.00 per title! (+postage). Also deceased D32 for spares/repair, very cheap. S.A.E for list to:-
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As of January 1st. 1991 the following rates will apply to ALL commercial advertising unless other arrangements have been made: Full page commercial ads 18.00 per issue; Half page commercial ads 10.00 per issue; Any size UNDER half A4 6.00 per issue.

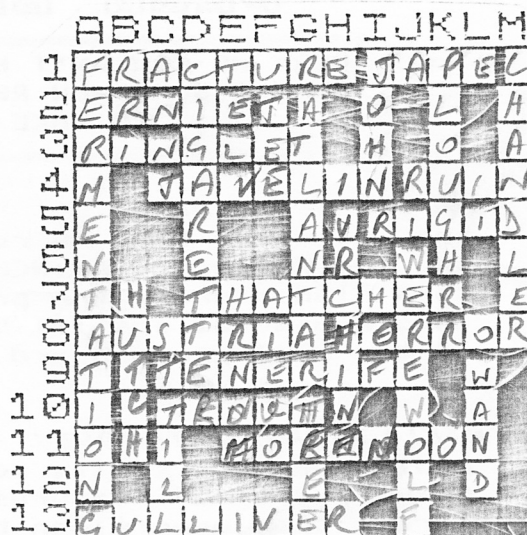
All small ads will continue to be free of charge as usual, although in the case of "continuous" ads a contribution to Group funds would be appreciated.

PLEASE NOTE THAT THE DEADLINE FOR ALL ADVERTISING IS THE 14th. OF THE PRECEDING MONTH. (e.g: Ads for February issue must be in by 14th. January). ALL ADVERTISING MATERIAL TO BE SENT TO PAUL GRADE ONLY.

ACROSS: 1a, Break a bone. 1i, Jest or joke. 2a, Electronic chap situate at Lytham who picks numbers randomly. 3a, Smalling or long curl of hair. 4c, Only field event in which England holds a world record. 4j, Broken down castle perhaps. 5i, Stiff, unyielding, not easily bent. 7d, Political lady who could perhaps mend roofs but has all the characteristics of 5i. 8a, European country. 8h, Powerful feeling caused by great fear mixed with disgust. 9c, Popular holiday location in Grand Canaries. 10c, Common fresh water fish. 11e, Before Midday. 13a, Sea traveller washed ashore in land of little people.

DOWN: A1, Process of yeast turning sugar into alcohol. B7, Rabbits home. C10, Positioned on shop checkout desk. D1, Finely cut tobacco rolled in this paper. F2, Golfers usually walk up to this then drive away from it!. G2, Site of the 1976 Olympics. G10, This plant could be a genealogical table of your ancestry. H5, Mischievous child which could be found on the sea bed perhaps. I1, Ian is Scottish for this. J6, Lycanthrope. K1, This earth mover can also be seen in the sky. L9, Magic stick. M1, Person selling ships supplies etc.

All entries to Paul Grade, please. First two all correct entries out of the box win a choice of programs from the Dragonfire list, or a game tape from the Group "prize stock".

[illegible]

The Late, Late bit.

Editor number five coming up! ... that makes four I've managed to wear out since starting the Group ... I wonder how long Robin will manage to survive? Anyway, I think Stephen is due our thanks and sympathy for all the work he has put in to the job during the past two and a bit years ... in fact I think I should revive an ancient NDUG custom of opening a "Buy the Editor a Drink Fund", so if you want to contribute something towards buying Stephen a bottle of his favourite corpse reviver, please send any contributions to me and I'll arrange the purchase and presentation!. OK?.

One good thing about the Group, at least we don't make as much fuss as the Conservative Party about a job change!. Now if anyone is interested in taking over MY job it only takes around 60+ hours per week now, plus a living room full of photocopier, computers, and several tons of paperwork any volunteers?. I thought not, there never is ... I wonder why?!

Oh well, I suppose I ought to be making noises about Christmas and all that sort of thing, but somehow I can't work up much enthusiasm for the Season of Expense, Indigestion, Hangovers, and Family Rows, so I think I'll ignore it altogether!. After all, the only amusing thing about the whole affair is trying to work out what stories people are going to tell their brats to explain how Father Christmas is going to get down the gas central heating system ... the best suggestion I've heard so far is that he appears up the loo instead of down the nonexistent chimney ... something on the lines of a reverse action Turtle! ... but that line could lead to some awkward questions about the messages he's been sent!.

Approximate "end of year statement" on the Group position as follows: total membership circa 530; total funds circa 3,000.00; new members during the past six months 38; subscriptions not renewed during the same period 127; no debts. And on that happy(?) note I'll leave you to finish the Christmas shopping! Happy Hangovers. Paul G.

Paul G.

==Thanks a lot!.

I would just like to thank the remaining Dragon traders for continuing to support the old beast throughout 1990, in particular Robin Hemmings (Dragonfire), Rob Preston, Brian O'Conner, John & Helen Penn, Mike Kerry, Geoff Barry (Pro-Tech), Mike Townsend, and Steve Knight. I hope you'll all still be "on the scene" this time NEXT year. Paul.

[illegible]

MERRY CHRISTMAS

FROM DRAGONFIRE

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