



DRAGON UPDATE



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 CHAIRMAN : Paul Grade, 6,Navarino Road, Worthing, Sussex. Phone:0903-207585.
 SOFTWARE EDITOR: Neil Scrimgeour, 125, Occupation Road, Corby, Northants.
 EDITOR :Tim Lomas. 211a,Amesbury Avenue,London SW2. Telephone 01-674-0327.

The Gaffer's Bit.....

This WAS going to be one of my nastier epistles.....I'm getting more than a little peeved with the attitudes of Eurohard and certain other firms connected with the Dragon, but I think it would be fairer to wait and see what goes on at the Show before doing my (verbal) Hulk act. It IS just possible that sense will have prevailed over greed, although I rather doubt it.

Anyway, I want to thank all of you who sent in programs etc for us to use as competition prizes....we've quite a nice selection to offer now, and it means that we'll be able to run more and better competitions in future. Much thanks. One thing that we DO still need, unfortunately, is hardware spares for use in repair work. Some of you are finding repairs expensive, I know, but unless we have "dead" machinery to break for parts we have to buy new, and this means that repairs are not always an economic proposition. Anyway, if you DO have any defunct hardware you don't need.....printers, drives, computers.....NOT necessarily Dragons even.....and you'd be willing to let the Group have them at "scrap" price, it would be a great help in enabling us to carry out your repair jobs at a price you can afford. OK, I'm not asking you to scrap your Dragon when the memory is full!.....it's just that it's MUCH easier to improvise cheap repairs if we have some parts to work with!, so if you can help, please do so.....we may be able to help YOU when you need it then.

Here endeth the scrounge, and I'd better stop now or Tim will be complaining that I'm encroaching on his Editorial Space. Hope to see you at the Show.....and don't forget, if you think anyone there is trying to sell you rubbish, or is overcharging, DON'T be polite about it...TELL THEM SO!.

Paul G.

THE EDITORIAL BIT.....

No I'm not going to have a go at the Post Office for managing to direct the master disc for the last newsletter via North London, losing it for over a week and playing football with it before finally delivering it (almost) intact, I'm just glad they didn't send it via Glasgow or Timbuktoo (is that how you spell it?). This month I'm back to a subject that I thought I might manage to avoid, ARTICLES, or more to the point, lack of them. Come on I can't have insulted/abused/bored all of you yet can I? So why aren't you sending anything for me to print, do you think that my writing is so good that you want a full newsletter of it? I certainly don't, my bits range from rubbish to downright tedious so send me some informative, interesting (and not too libellous) articles (Please). Don't sit there and think that someone else is bound to write better articles, get out your pens and paper and write something, the other person you think is going to write it is probably sitting there thinking the same thing. O.K. thanks. The other thing I've noticed is that the articles tend to be written by only a few of you, come on, I know that there are lots of you hiding out there somewhere, don't you want to be famous and get your name in this exclusive publication ??

A.L.

COMMUNICATION (5) . . GARY COXHEAD

PART FOUR-LOOKING AROUND T.B.B.S. & C.B.B.S.

There are two main types of bulletin board systems; T.B.B.S. (The Bread Board System) and C.B.B.S. (I don't know what that stands for, perhaps someone could tell me). Each has it's own different approach of maintaining and using the system. I will explain each in turn and hopefully give a flavour of the facilities and how to use them.

T.B.B.S.

Firstly, no two systems are identical but there is not quite so much variation between systems as CBBS. Each Sysop has his own ideas as to what, and how, different facilities and features should be implemented and fitted together. This is one of TBBS's strong points, flexibility. It is also very user friendly, giving newcomers plenty of help and advice prompts.

A typical TBBS operates from a main menu which may be something like; <M>essages-all types, <I>nformation-system information and help, <A>dverts, ulletins (news), <U>tilities, <F>ile transfer, <E>ntertainment. Each of these represent a sub menu with even more selections, for example the <M>essaging selection may lead to; <P>ublic mail, <E>lectronic mail (private), <S>pecial interest groups, <T>ime on system, <G>oodbye-to terminate, <X>it back to main menu.

Some of these you may not have access to until you have registered on the system. Details are often given in the <H>elp, <N>ewcomers or <R>egistration section. Most of the menus are self explanatory, eg. <E>ntertainment being on line jokes and games, <U>tilities being change of password, screen width etc.. Each sub menu give access to a futher menu which will be something like <F>orward or <R>everse multiple, <N>ew messages, <M>arked messages, <S>elective retrieval, <I>ndividual retrieval, <A>bort retrieve. This may be confusing and it is advisable to steer clear of <S> and <I> unless you know exactly what you are doing. <N>ew messages is often the best to select because TBBS can keep track of the last message you accessed the last time you called so you can read on from there. <M>arked messages are for those messages where you have browsed through the headings and marked them for later retrieval. When a message is waiting for you it is often <M>arked for your retrieval. Remember, if the system tells you that there is a message waiting for you, it also tells you where to find it, ie.*E-MAIL*. For futher information, call up the newcomers pages or help pages which will explain the above in more detail.

C.B.B.S

CBBS varies more from system to system than TBBS. It has a much larger main menu but does not give any details of what each item is for. Not all systems make use of all the features and very few of these items lead to sub menus. A typical main menu on CBBS might be something like;

/,A,B,C,D,E,F,G,H,K,M,N,O,P,Q,R,S,T,U,V,W,X.

You must enter your selection or ? if not known. Some CBBS have other sub menus, but these are just parts of the main menu cut up and put under a different heading. CBBS message entry is not so flexible as TBBS, having no block entry mode, messages can only be downloaded one line at a time which could cause priblems if your software doesn't support this. So messages will often have to be typed in by hand causing longer call times.

One thing in its favour is that CBBS supports a very powerful search and message editing facility. for example, typing '100,modems and software' would start at message 100 and search for messages containing the words 'modems' and 'software'. For more details type 'help' and 'messages' the next time you call a CBBS. Typing 'help' and any menu option will give you help on that particular subject. Remember, if you have a printer, switch it on and get a hard copy of all the help and instructions, it will save time in the future. Happy exploring !!

DRAGON DIARY NEIL SCRIMGEOUR.

Welcome fellow keyboard bashers who are intrigued to find out what Dragon Diary is. It is a diary, a personal view by yours truly, on the Dragon scene. Our beloved Chairman thought that we needed some less technical stuff so I took up the enormous challenge !! I shall from time to time, be reviewing some software that doesn't normally get covered by others in this news rag and that's what I'm going to do in this issue. I shall be bringing up certain touchy subjects such as pirate copying and why there are so few women programmers (and users come to think of it). So if you feel strongly about a subject then drop me a line.

Right, down to a review, a few months ago an advert started to appear in Dragon User from Datacom announcing the first Monopoly (proper Monopoly) game released for the Welsh beast. As the months went by, I was hoping that someone would do a review but nothing turned up, so here I am. Hotel on Mayfair has to be one of the best board game conversions ever released for the Dragon. For a board conversion to be popular the program has to be accurate and have a one player option, I'm glad to say that HOM does. On one side of the tape is a one player option and on the other side a multi-player version. The graphics are in PMODE 4 and it doesn't use the print screen except for the instructions. The view of the board is from the top, a 3D view is out of the question due to the resolution of the Dragon. The only gripe I have against the program is that you can't tell who owns which area, so I usually make a map and mark it off with different coloured pens. All the options of the board game are available and the computer plays a meanish game, I have beaten it once due to a lot of luck but within an hour, I've normally gone bankrupt. Space in this column is limited so that's as far as I can go. All I can say is that if you want Monopoly on your Dragon then this is the best, especially at 3.95

ASCII CORNER Pauline Hampson

Hello fellow adventures, the powers that be have decided to let me loose on ASCII corner so I thought I would begin with my comments on a couple of adventures, one old, one not so old. My first big mistake as an intrepid adventurer was to attempt Madness and the Minataur as my second ever adventure, I never got anywhere at all and vowed never to touch it again. Strangely enough, over the years I have hoarded every bit of information I could find about this game. Eventually, reading in a magazine how to save the current position to tape I thought that perhaps now was the time to re-enter the fray (my second big mistake ??). Just in case any of you still don't know, to save your position input 'quiet', press <break>, then <shift> and <1>. To load the saved position, repeat the first part and then press <shift> and <9> (pressing the appropriate buttons on the cassette of course). Anyway back to the game, the famous mushroom is easy to find and the mapping seems to be fairly easy. As I like to have a reasonable map before I begin seriously I tried to map the mazes. Woe is me, I don't seem to be able to take enough objects to drop to map it properly, so I am again harrassed and frustrated and I'm not going to play it again (unless someone out there can help the abject failure). What a way to start a column, admitting such a failure. Now to the latest game I have tried, Scott Adams 'Secret Mission'. In this game the you find yourself in a briefing room and are informed of your mission, to prevent a saboteur from destroying a nuclear reactor with a time bomb. The saboteur is apparently a heart patient who intends to die with the bomb (one way to explain it I suppose), my keys and map are in an envelope which is missing (so what's new?!). Once inside, I find myself in a series of different coloured rooms and passages, there are also doors of different colours monitored by security cameras, obviously I must look around for the correct combination to open the doors. The game is in fact very enjoyable indeed with some very difficult problems to solve. I am fast becoming a Scott Adams addict, apart from 'the Hulk' which left me

cold. Well, that's all for this month, I wonder where that M&M tape is ?? maybe I'll have another try after all.

DELTADOS DIRECTORY J. C. BUSSELL

This program will print out the directory of a deltados disc with addresses.

```

1 DEF FNA(X)=PEEK(X)*256+PEEK(X+1):D=&H486F
2 FOR I=&H3000 TO &H3029
3 READA$:POKEI,VAL("&H"+A$):NEXT
4 DATA BD,C0,18,5F,BD,C3,75,8E,40,00
5 DATA CC,00,02,34,06,9F,20,BD,D1,81
6 DATA 35,06,10,83,00,12,2A,0A,9E,20
7 DATA 30,89,00,F0,CB,01,20,E7,BD,C0
8 DATA 18,39
9 CLS:PRINT"SINGLE OR DOUBLE DENSITY (S/D)";
10 D$=INKEY$:IF D$="" THEN 10
11 PRINTD$:IF D$="S" THEN 12 ELSE D=&H4FFF
12 EXEC&H3000
13 PRINT
14 FOR X=&H4000 TO D STEP 24
15 IF PEEK(X+8)=&HE5 THEN 17
16 IF (PEEK(X+8)AND&H0F)=1 THEN GOSUB 19:'CHECK FILENAME
17 NEXT
18 END
19 I=X
20 FOR Z=I TO I+7:PRINTCHR$(PEEK(Z));:NEXT:'PRINT FILENAME
21 B$=HEX$(FNA(I+16)):'GET START ADDRESS
22 GOSUB30
23 PRINT" ";B$
24 B$=HEX$((((FNA(I+14))+1-FNA(I+12))*256+FNA(I+16)):'GET END ADDRESS
25 GOSUB30
26 PRINT" ";B$
27 IF (PEEK(I+8)AND&HF0)=&HF0 THEN PRINT" PROTECTED";:'CHECK PROTECTION
28 PRINT
29 RETURN
30 IF LEN(B$)<4 THEN B$="0"+B$:GOTO30
31 RETURN

```

SEIKOSHA GP-500A W. Borrman

I have been using the GP500A for nearly six months now and have found it to be efficient and reliable. It is similar to the GP100A in operation although it looks completely different. Being pinfeed only, you are restricted to fanfeed paper but the dot matrix quality is good with no variation in tone, but having no descenders does detract from the end product a little. The only problem I encountered was after about 1000 sheets when the ribbon cartridge jammed due to a damaged ribbon. This may have been a once only (I hope) occurrence. The ribbon cartridge itself contains a removable inkpad which may be reinked to the extent of its lifetime.

The GP500A has some useful control functions as well as 8 different language character set. There are 139 upper/lower case characters, numerals and symbols. Both linefeed and carriage return are controllable as well as the print position in both character and dot units, double width characters are supported. All in all, this printer is most useful. Unless you want a 'near letter quality' document then I have no hesitation in recommending this machine.

A WONDERFUL COMPETITION!!!

Datapen have very kindly sent us one of their Lightpens, and much as Paul and I would like to keep it for ourselves We feel that this would hardly be fair!. So, we have decided to offer it as a prize for a competition (WOW). As the Lightpen is a graphics aid, we have decided that the prize will be awarded to the person who sends in the BEST GRAPHICS PROGRAM WRITTEN IN 5 LINES OR LESS. Remember to keep to the 5 lines as any program longer than this will be disqualified at once. The competition will be decided by an independant judge and the closing date will be the 7th December, so get your skates on.....PG/TL.

THREE ADVENTURE BOOKS ..Pauline Hampson

Before setting out to compare these books, I thought about the sort of information I would like to see in them. A short simple adventure program, fully explained is a must, information about planning, how to draw a map, setting up puzzles and ideas to get you started should also be included. After this, maybe a longer, more complex game could be dealt with. Lots of long listings only give you finger ache and anyway, having typed them in the clues are all given away. Finally, perhaps a section on frills ie. sound and graphics.

Andrew Nelson's book (Greeting Adventure Programs, Interface 4.95) is not written specifically for the Dragon but can be adapted fairly easily, for example, the RND command must be altered. Unfortunately no conversion sheet is supplied. The book concentrates on the fighting monsters and buying in markets type of game, a simple room set up is used at first, which is an excellent beginning. It then progresses to a long adventure program, broken into parts with lots of explanation. There is a section on floor plans, a random name generator and a suggestions for further reading. Games included are Citadel of Pershu, Werewolves & Wanderers and Asimovian adventure. The book is not bad for people who can live with the fact that it isn't written for the Dragon. Clive Gifford's book (Greeting Adventure Games on your D32, Interface) is written for the Dragon. It doesn't contain enough detail for me and contains some irrelevant games like Solitaire and Alien Swarm, although the sections on sound and graphics are useful. The games included are Dark Forest, City of Atlantis and The Nielson Papers, I found these rather long (as I explained previously, the purpose is not to play them but to teach) and I think that the book tried to include too much, certain parts could have been left out in favour of more detailed explanation.

Peter Gerrard's book (Exploring Adventures on the Dragon, Duckworth) is the most recent. the games included are long but the explanation is excellent, each line being explained in different sections. All the common words such as eat, feed and kill have a page including listing and a complete explanation. I would have omitted the history section in favour of a short adventure to start with. Many computer terms like GOTO and MID\$ are explained at the start, this could be useful for those with limited programming knowledge. The book contains plenty of ideas and a section on mapping, games including Underground Adventure, Castle Maze and Tunnel Adventure. the first of these is explained in detail. this book is in my opinion the best of the three and will teach you most about writing your own adventures.

GROUP SUBSCRIPTIONS.

Just so there is no misunderstanding and subsequent complaints...A reminder slip will be sent to you with your Update for the month in which your renewal subscription is due. If your renewal has NOT been received by the time the NEXT issue is sent out, NO FURTHER COPIES WILL BE SENT, and we will have to assume that you have decided to leave the Group. I hope this will avoid any confusion. Paul Grade.

New Products for the Dragon..R A Davis.

When the BBC program MICROLIVE announces that the day of the home computer is over, at least here and in the USA, we should be grateful that some enterprising manufactures are still supporting the Dragon.

Lucidata is one of these and they have supplied some information on the Dragon's Claw and the Snap Dragon, both expected to be advertised in the November issue of Dragon User (top right of page 31 ..TL).

The Dragon's Claw is a versatile interface which plugs into the cartridge port, providing two parallel digital interfaces which are comparable with the BBC user port and centronics port. It has it's own internal timer, counters and shift register and an extension socket for further devices. This enables many peripherals designed for the BBC to be used by the Dragon, and other devices such as digitising cameras, weather satellite decoders and so on. It takes its power from the Dragon and is housed in a standard plastic cartridge box.

The Snap Dragon consists of a Micro Robotics EV-1 camera and requires the Dragons Claw to operate. It has a resolution of 256x128 pixels and the software displays this on the PMODE 4 screen. It is fitted with a 24mm Pentax lens but other lenses of 110 format can be used. All the software required to measure exposure, capture images, compress images for storage and expand images for display are supplied in PIC and routines for image enhancement and object detection are included. The demo tape includes a Basic program which shows how it can be used to produce false colour like those of the Earth Satellite systems, and it can capture up to 8 images per second. The Dragon's claw will retail at 29.95 and the Snap Dragon at 149.95 (VAT and P&P included).

Lucidata is also planning to give us the Beastly Robot Arm, various sensors and a complete low cost weather satellite receiver and decoder which will bring an entirely new dimension to your Dragon. All they need is our support.

BULLETIN BOARDS

More from the list of bulletin boards

NAME	BAUD	TELEPHONE	HOURS	COMMENTS
CBBS SURREY	300	04862 25174	24	N/A
CBBS S.W.	300&1200/75	0392 53116	24	N/A
CHATHAM-KENT	300	0634 815805	1800-2100	N/A
C.N.O.L.	300	0524 60399	24	CLINICAL
CO-CO BBS	300	091 265 1944	2100-0600	CO-CO BRD
COMET	??	0572 28515	??	N/A
COMACO-NET	300	0482 831215	N/K	N/A
COMMUNITEL	1200/75	01 968 7402	24	N/A
COMPULINK-FIDO	300	06286 63571	24	FIDOBOARD
COMPUTERS INC	300	0207 543555	24	N/A

Apologies.....Paul G.

I thought I'd use this spare inch or so of paper to apologise to those of you who write to me, for the rather shorter than usual replies you've been getting recently.

It isn't that I don't WANT to write more, but things are pretty hectic at the moment....the Group's a lot bigger than it was!...and what with Shows and things, plus having to earn a living as well, I don't always get as much time for writing as I'd like. Hope you'll understand.

Paul G.

ALTERNATIVE DISC DIRECTORY.

I don't know about the rest of you but one of the things that irritates me most about DragonDOS is the disc directory. Some of my discs abound with 30 or 40 small data files and when I want to check their state, it's a case of let's play reaction times on the shift and @ keys. So being the cantankerous sod I am I decided to rewrite the routine and then decided that the result was so pretty that you lot might like to see it as well, so here it is.

Please note that the routine works by interrupting the routine at \$9F that loads the accumulator with the next byte to be processed, so if you already use this method, watch it. When you have input the program, save it to disc and EXEC it, this will add the routine to Basic, it can then be called from direct mode by typing '!'. If you require the routine to run within a program then EXEC it 7 bytes further on from the beginning, ie. if you load the routine at \$0C01 then EXEC at \$0C08. The routine is completely relocatable and can be loaded at any point. As shown, it lies at the beginning of the first graphics page. Obviously, if you are using graphics you will need to relocate it, but be careful that the area you use is protected from overwrite, as the routine interrupts the operating system and if you corrupt it, you will almost certainly cause a system crash. As shown the routine does not show protection or length of files (I didn't need that when I wrote it), I may include that later, if I do I shall publish the amendments, but if you need these, the normal 'dir' command is not affected and may be used as normal.

```

$0C00 CC 0C 08 FD 00 A9 39 81 21 26 09 B6 00 A6 81
$0C10 02 27 05 86 21 7E BB 26 34 76 BD BA 77 86 03 B7
$0C20 00 ED 86 14 B7 00 EC 8E 0C 76 BF 00 EE CE 04 00
$0C30 86 0F B7 0C 5A 86 0A B7 0C 75 8D 0B CE 05 E0 17
$0C40 01 70 35 76 7E 00 9F BD C1 04 8D 0F 7C 00 ED 86
$0C50 0A B7 0C 75 7A 0C 5A 26 EE 39 00 10 8E 0C 76 34
$0C60 20 A6 A0 84 81 26 03 17 01 10 35 20 31 A8 19 7A
$0C70 0C 75 26 EB 39 0A 89 00 00 00 00 00 00 00 00
$0C80 00 00 00 00 00 00 00 00 00 00 00 00 00 89
$0C90 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0CA0 00 00 00 00 00 00 00 00 89 00 00 00 00 00 00
$0CB0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0CC0 00 89 00 00 00 00 00 00 00 00 00 00 00 00
$0CD0 00 00 00 00 00 00 00 00 00 89 00 00 00 00
$0CE0 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0CF0 00 00 00 89 00 00 00 00 00 00 00 00 00 00
$0D00 00 00 00 00 00 00 00 00 00 00 00 89 00 00
$0D10 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0D20 00 00 00 00 00 89 00 00 00 00 00 00 00 00
$0D30 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0D40 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0D50 00 00 00 00 00 00 89 00 00 00 00 00 00 00
$0D60 00 00 00 00 00 00 00 00 00 00 00 00 00 00
$0D70 00 00 00 00 00 00 00 00 00 1F 31 C6 08 A6 A0
$0D80 81 00 26 04 86 60 20 06 81 39 22 02 8B 40 A7 80
$0D90 5A 26 EB 86 6E A7 80 C6 03 A6 A0 81 39 22 02 8B
$0DA0 40 A7 80 5A 26 F3 33 C8 10 11 83 05 E0 26 02 8D
$0DB0 01 39 8E 0D C9 A6 80 81 0D 27 04 A7 C0 20 F6 BD
$0DC0 85 2B BD BA 77 CE 04 00 39 50 52 45 53 60 41
$0DD0 4E 59 60 4B 45 59 60 54 4F 60 43 4F 4E 54 49 4E
$0DE0 55 45 0D

```

Please note that it is not necessary to enter the \$0C77 to \$0D79, they form the disc input buffer, I just put them there to make sure that they are not overwritten.....TL

WORD NO. 5 ANSWERSAcross

1)Dragonfly 5)Ladder 7)Aurora 9)If 10)Bambi 13)Microsoft 16)Nun 17)Eair
(real) 18)Speedracer 21)Exec 23)Dmie (dime) 24)Key 25)Trace 27)Axlestand

Down

1)Dragon 2)Autumn 3)Fan 4)Tractor feed 6)Dim 8)RAC 10)Bike 11)Board 12)Island
14)Red 15)Orcim (micro) 18)Seek 19)Pixel 20)EEC 22)Eye 26)AD

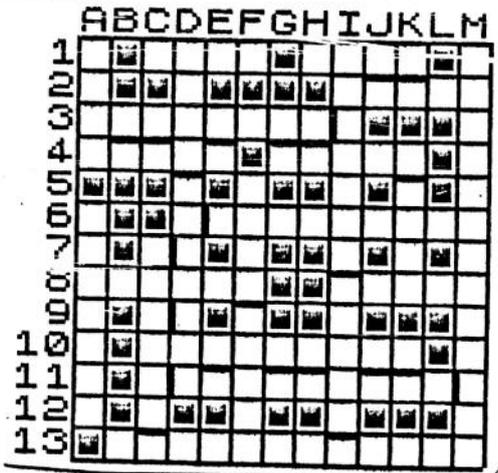
CROSSWORD NO. 6Across

1C)A portion 1H)Safety device 2I)tennis shot
3A)Night music 4A)Ear bone 4G)S.American missile
6E)Iron ore used as an early compass 8A)Arachnid
8I)Send a king north for air raid warning
10C)Meeting point 11D)Slender flexible limbs
13C)Sleepwalker

Down

A1)Between the wrist and elbow
A6)To space out type or to show to be right
C7)Wasting away with anxiety D1)Against D5)Green
F5)Noise from a large feline F9)S.African homeland
I1)Unserviceable I8)Pile up inFforth
K5)S.African of Dutch descent M1)Required for
lower case

This month's prize is one of the Franklins Tomb Trilogy.

FOOTBALL MANAGER Barry Caruth

Reading my Dragon User, I saw an article on Addictive's Football Manager, on the strength of this I sent off my money and 5 weeks later got my tape. The game has a loading system I've not seen for a long time, up on the screen pops the famous prompt 'O.K.', hours spent on the protection obviously. It is not a bad program for 535 lines of Basic but as was said in 'WHY' in issue 10, this sort of program with its attendant publicity should be nicked under the Trades Description Act. On running the program, you are given a choice of being any one of 32 teams; next you pick your skill level, the range is 1-7, the instructions suggest that you start on the beginners level but then fails to tell you which this is. Now to the program, you start with a menu;

- 1-Sell or list players
- 2-Obtain a loan (there is a credit limit) 3-Status You are told your ratings
- 4-Save and load game

If you type 99 you go into phase 2, you are told who you are playing and are given the energy, moral, defence, midfield and attack for both teams. You drop and pick players and they can be injured. 99 again continues the game, I was waiting for the little men to run out and play a game on my screen but no, all I got was the message 'Match in progress' and the score was updated each time a goal is scored with different pitch beeps. You are then told the gate receipts and the other scores, you see the league table and pay your bills. Now you can buy a player, this is unrealistic because if you bid the given price, your bid is often refused. The price of the player also goes up each time a bid is refused, I tried to see if there was a limit to this and got to 6.583167×10^{13} before getting bored. You repeat this until you have played 14 matches and the FA cup, then you are told who is promoted etc. and start all over again.

The program is a great idea but if you want a version with graphics you must either buy a Spectrum (less of that sort of language .. TL) or write your own.

OS9 & PIPES (part 1) . . . Jason ShoulerUNIFIED INPUT/OUTPUT

Many Dragon owners are aware of the device redirection available from the Dragon's Microsoft Basic which allows program output to be sent to the screen, printer or tape, simply by changing the value of a variable under software control. I/O redirection takes this tentative concept to it's full and logical conclusion. In its simplest form OS9 will allow you to redirect the output from a program to such things as a disc file (on any drive or directory), the parallel or serial printer or even another terminal. You will notice that I've named the output devices by their functional descriptions rather than by giving them a pure hardware description. This is an important concept within OS9; devices are called up by device descriptor modules which automatically differentiate

between say an RS232 being used for communication and one being used to drive a printer. OS9 itself does not differentiate between a binary file and a text file, to OS9 they're all the same, which is as simple as they could be one byte at a time. The problem of translation is left to the device descriptors which will always try to translate the received data to a form which their attendant devices can read or write. A good example would be to 'list' a binary file, OS9 will execute this command quite happily (and successfully) although the user will mainly see garbage. Rather more intriguing is the ability to redirect input to come not from the keyboard but from any of the devices already mentioned (well maybe not the printer). Chiefly this would be from the disc text files, but it could be from another program running concurrently (multitasking) which brings us to 'pipes'.

PIPING

Piping is the ability to redirect the output of one program to be the input of another. There is no limit to the number of programs which can be linked together in this manner, providing enough memory is available. OS9 will automatically synchronise all the programs together in such a way that data will pass down the line in an orderly manner and like the weakest link in a chain, the speed of data transfer is that of the slowest program module. It takes only a little thought to realise that this process must involve multitasking, and it certainly does, although as far as the user is concerned OS9 will take care of all the housekeeping required to accomplish this. Before we go on to discuss the practical means to carry out these feats, it is important that we come to terms with a few concepts which lie at the heart of OS9 and UNIX systems.

IS INPUT/OUTPUT REDIRECTION USEFUL ?

If you can imagine that you wanted to write a simple routine to convert any word entered on the keyboard to upper case, you would most likely do just that and so would anyone using OS9 or UNIX. What you've done is write a program which takes it's input from the standard input (the keyboard) and directs the output to the standard output (the screen). Any program written in this manner is both easy to write in the first place and easy to test in the second. Up to this point, there is little practical difference whether you're writing in Microsoft, Basic09, 'C' or whatever. However, a great divergence is likely to take place with the next step you make. With a conventional operating system, if you want to do any number of different operations such as sending the output of your program to disk and/or arranging for the program to read a disk file as it's input, it's necessary to modify your original. OS9 or UNIX users can do all of these things and an awful lot more without so much as a single alteration to their original program. As you've no doubt guessed, this is accomplished by instructing OS9 to redirect the standard input/output (of the original program) to whichever device, file or program you wish to use, all of which can be done from a single command line.

(This article will conclude in next months issue.....TL).

JOYSTICKS I . R .

There are two main types of joystick, analogue (floaters) and switch (self centered). Analogue joysticks return values according to the relative position of the stick, when it is released, it remains in the same position unlike the switch type which always returns to the central position when released. This makes analogue types ideals for programs such as artist designer etc., while although some arcade programs require analogue, most are better with switch type, these tend to give much more precise control over speed of movement etc. If you want to play and get any enjoyment at all with the highest quality arcade games then switch joysticks aren't just preferable, they are necessary. All switch joysticks are self centering and this in itself makes a tremendous difference, they also offer faster response as they only need to react to the 8 compass points and no relative positions have to be returned. If you find arcade games too difficult then you may find that a change of joystick makes all the difference, playing something like Screaming Abdabs with an analogue joystick is like trying word-processing on a rubber spectrum. All the joysticks mentioned here are S/C switch types except for this first one, the Voltmace Delta 3D which is a S/C analogue, ie. it returns to centre when released but returns relative values. The self centering is not as good as is usually found but is good enough for the type of application I would assume the unit was designed for, ie. menu/window selection as opposed to strictly arcade zapping. Control and response are good as is the joystick action and the unit has 3 fire buttons, however these units have a serious design fault. The problem is the springs used to recenter the joystick, these are too weak to take any sort of prolonged strain, mine broke within one week and so I wrote to Voltmace for replacements, when these also snapped I asked for and got a refund. It would be a simple job for anyone to replace the springs with stronger ones, no electrical know how is required. Simply unhook the old ones and hook on the new, the only problem being that this may cause extra 'out of spec' strain on the other parts and invalidate the guarantee. The Sureshot is an excellent unit but a bit expensive. The design is similar to the Delta; a rectangular base with 2 buttons but the Sureshot is much bulkier. This is because they are extremely well made, very strong and durable, definately made to last and take the sort of pounding to be expected. Control, action and response are all first class and in fact the only fault I could find was that the large base cramped my hand after long bouts of playing. Flightlines Hotshots are for my money the best available. They're not much to look at as they use the 'standard' design (square with a wedge handle and single button) but they are very strongly built and easy to handle, the action, control and response all matching the Sureshot. Mine has had a constant hammering for the past 8 months and is still O.K. The quality of construction coupled with the low price is probably due to the fact that Flightline were producing joysticks long before the Dragon appeared. A few short notes to end, I've never used a Quickshot for any length of time but I found them to be clumsy and very fragile, but they are very popular all the same. Wico are a firm who like Flightline have been producing joysticks for a long time. They have a reputation for high quality and used to manufacture for the Dragon although they were very pricey. You may be impressed by the large variety of joysticks available for the CBM/Atari (don't be, most are the pits), well interfaces are available to use these on the Dragon. I have never used them but my information is that they only allow up/down left/right movement. This may not worry you but if it does then check first.

Genius required!!!.

Lee Cook, of 117, Limbrick Lane, Worthing, Sussex. would like to have any data and/or ideas for the design of a 6809 based Micro (capable of reading Dragon software). Can anyone help?

Chairman's note:- There IS such a machine...it is called "Dragon" and is available at an extortionate price from Compusense Ltd.

REDUNDANT INFORMATION DEPARTMENT

Do you keep getting ?PE errors in when writing to a disc file ??, this can occur if-

- a) the file length is a multiple of 256 and an extension is required or;
- b) an extension directory record is needed and this is the first file write access

For machine coders, if the directory backup routine to copy track 16 to 20 is being used and an error occurs, the routine can return to Basic instead of the calling routine.

If you can use the 'speed up poke' then CSAVE it in dual speed mode, load it back at normal speed then POKE146,8:POKE147,4:POKE148,8, the time saving is 50%!! (I havn't tried this as my machine won't work at 'high speed' but I'm assured that it works try it if you like....TL)

To create a flashing cursor for INKEY\$ then try:

```
10 A$=INKEY$:EXEC&H8009:IF A$=""THEN 10
20 PRINT A$:GOTO10
```

And finally some useful PEEKS:

135 ASCII code of last key pressed

136/137 text position in low res

178 graphics foreground colour

179 graphics background colour

180 active colour

181/2 graphics mode

346/347/348/348 for joystick positions (after exec 32768 for joystick routine)

Before I finish this "Redundant info", I would like you to give ME some; does anyone out there know the routine which write the data from the disc buffer to disc, if so please let me know, I know it appeared in one of the mags about a year ago but I can't find it anywhere. all I need is the address. Tim Lomas.

THE END BIT.....

Well we come to the end of another edition, also my nerves, phone bill and scotch (Paul was right after all. Now I have at least 10 minutes rest before the next edition needs to be thought about, I never seem to have much time to program myself these days (I wonder why). While the thought strikes me, and just to keep this bit as disjointed as usual, have you all read the latest Dragon User (November issue)? Now not wishing to knock another publication (not much I don't) if you look in the news you will see how up to date they are, they actually know that the next show is being run by Edition Schemes but if you take a peek at page 10 you will see a big full page advert for the show; and who does this ad tell you to contact? yes you guessed, the now defunct Computer Marketplace, never mind, maybe the proof reader was on holiday (or maybe they can't read up there). Anyway, that's all from me for the month, I'll no doubt see some of you at the show when you can all tell me (fairly politely please) what you think of this masterpiece (and give me all those articles you will have written for me by then (won't you !!!).....Tim Lomas, London November 1985

WANTED!

Can anyone let us have details of a HARDWARE screen inverter mod. for the D64?. I get lots of requests for one, but I don't get a chance to take my machine off line long enough to experiment. If you can help please let me have full details and a diagram for publication soonest. Paul G.