

Issue (5)



# DRAGON UPDATE



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Firstly editorial apologia; sorry it's late -sod's law proving itself once again, produce an issue of Update, write a prolog assignment, do research for dissertation, build a box set and run two parties, all in the same fortnight. Secondly, and more seriously, part two of the speech synthesizer has walked I hope to have it back for issue nine.

Following on from what I said last month, this could be my last newsletter as editor. Henceforth can you send any material to Paul who will handle things in the transition, if I'm still editing next months he'll pass them back to me, otherwise on to my successor. By the way we've had one or two people who are interested but it's not too late to put your name forward. For the Dragon things seem to be a bit mixed, the group's going, there is a board for the beastie and Eurohard are actually churning new machines out. On the other hand, despite the interest shown at the two 6809 shows there seems to be a dearth of new products and programs and software has all but disappeared from the high street. Hopefully the new machines was start to pick up the momentum lost by Dragon Lata and we will see a renaissance of the market, onlt time will tell.

In case this is my last issue I would like to thank all those I have been associated with over the last months, particularly Paul, Neil and Pauline who have been the mainstays of the newsletter. To everyone else who has ever contributed ta!! To the readers thanks for putting your money where my mouth is. It has been a privelege and sorry about the spellin.

## THE SECOND 6809 SHOW.

Thousands of people attended the Show during the last weekend in March. All of the old names were there but, encouragingly, so were quite a few new ones. The message from this Show is the same as the last.....Support for the Dragon is strong, but software houses STILL cannot persuade distribution agents to take on software for our machines.

First the big news...Following the appointment of Compusense as the UK Agent for Eurohard's products, the Dragon has a new home. Consequently the Dragon is very important to Compusense. They provide not only their excellent Flex suite of software but also hardware. I for one have ordered an additional disc drive from them. I have also bought the wonderful "Colossal Cave Adventure". Even though I had bought my copy ahead of the Show, Ted Opyrchal tells me I am still permitted to take up his challenge, which is that if ANYONE can make a working backup copy of this disc based program, and return it to Compusense, Mr Opyrchal will send him (or her) a free Dragon 64!! The only limitation to this challenge is a straight forward one...to be eligible you need to return the guarantee / registration card that you receive when you purchase the program. (I've tried, but so far been unsuccessful).

Compusense seem to be 100% committed to the Dragon, and they deserve our support. On the horizon is a hard disc system, an 80 column by 24 line display, plus full support from Eurohard...so keep your eyes peeled.

Telecommunications is an area of growing interest for Dragon owners. Over 30 enquiries were received at our Show stand about this subject. The Demon (nee Unicom) modem is available for less than fifty quid, and Dragon Users Group Member Barry Knapp is currently writing an OS9 modem software package.....Let's hope that it will be available soon. Brian Lloyd is running a 24 hour bulletin board for the Dragon; it uses an 8 bit, no parity 300/300 baud protocol. The home number is:-0376-518818.

Cumana Ltd. were having another successful Show. They now offer their own Dragon DOS compatible disc controller, and tell me that the old Premier Delta is no longer selling very well. It would be interesting to hear from other Members with drives as to their favourite system.

A new software / hardware company called Vidipix have bought out a title which is not only original but better than the Jigsaw game that it simulates. Neil Scrimgeour can tell you more about this highly recommended piece of software, and about Vidipix's other products....a combat flight simulator and a 232 board for the Dragon 32's. Neil can be contacted at 125, Occupation Road, Corby, Northants NN17-1EG.

Another new company to the Dragon market is Quickbeam Software. They have some excellent titles to offer, including "The Shrinking Professor", "Dickie's Den", and my personal favourite, "Dickie Spaceman". Quickbeam can be contacted at 67, Nazeing Road, Broxbourne, Herts.EN10-6RN. This company produces the famous DUPLICAS tape back-up utility, and are worth contacting for this alone!.

Design Design have available soon a new OS9 generated program called "Dark Star". Those of you who have seen "Rommel's Revenge" will want to rush out and buy this, but you can't! Instead you will have to telephone your order on 061-205-6603. Once again we Dragon Users have to suffer because of the lack of retail outlets!.

Peaksoft are famous for their sport simulations. They also sell the best pot joysticks that i've ever used!. My original Dragon Data pair finally gave in a

week before the Show.

The news from Peaksoft is that they have a bigger and better version of "Champions" available at the 'trade-in' price of just 150 pennies !!.

Blaby have some brilliant games at budget price. Don't let the low cost fool you!. What's more, they have masses of new titles in the pipeline. Two stand out....one is an (as yet) unnamed graphic adventure, the other is called "Gissajob", and looks to be great fun. Blaby intend selling 3 in 1 compilations for less than four pounds!.

Our Dragon Users Group stand was extremely busy for most of the time. Many new Members signed up, and lots of application forms were taken, so let's hope that the Group continues to expand.

Ken Grade proved to be invaluable on the Saturday, answering many queries. In fact there seems to be a very real need for a forum within our Group to answer Members problems and general queries. (There is!...all that thinking makes my brain hurt!!!!. Paul.G.). How about it?, if you are interested contact Paul on Worthing 207585.

Finally, a big "Thank You" to the organisers, Computer Marketplace Limited, whose faith in the Dragon enabled the Show to be held. In particular, "Thanks" to Ray Rhodan for his very generous help and cooperation. Stephen Cotterell.....Telephone:-0273-779295.

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## ASCI (ADVENTURES, SIMULATIONS and CONUNDRUMS INCORPORATED) CORNER

This months ASCI corner is going to be a bit different. I was going to review J. MORRISONS first adventure 'RIVER of FIRE' but the problem is that i've got absolutely nowhere with it! Therefore i can't tell you what it is like. First impressions are that it is good value at 3.95, with some reservations.

So this month i am going to review 'JET SET WILLY'. Now i know your'e all saying that it's an arcade and shouldn't be in this column, but i think it's the nearest we are going to get to an 'Adventure Arcade'.

I got the prog at the recent 6809 show which was held in London. The guy managing the Software Projects stand was none other than the Author Roy Coates. My own company's stand, Vidipix, was next door so i had the opportunity to have a good natter with him. He also decided to join the group, so we might get some tips from him on how to play his programs.

So whats the program like? Well i suppose the best way to describe it is that for the past week when i've come home from work i've loaded the prog up and played with it until food time. After food time i've gone back to it again. Regular readers will know that i am not an arcade fan so this should give you some idea of how good it is.

In Manic Miner you had to progress through a set pattern of rooms collecting all the objects before you went on to the next screen. In JSW you can wander from room to room and do what you like. The Spectrum version had 60 rooms, the Dragon version has 75! I've been playing JSW for a week now and have only been to about 35 rooms, and i haven't even started collecting the items yet!

The animation of the characters is quicker than MM. By that i mean that the figures move more quickly. The problems set are in some ways the same as MM as there are certain routes you must take to get through to the next screen. One of the worst features in MM (Manic Miner) is that you only had 3 lives. This has been amended and now you get 7 in JSW. If i was to criticise anything in the prog (and it would be nit picking) it would be that some of the rooms are very bland and devoid of problems (the Back Stairway is one). I presume it is because Roy had to copy the original JSW. Mind you, easy rooms can give you time to relax.

The controls are as MM with the addition of optional joystick control (a welcome addition). Instead of the perpetual music being on or off you can have it as loud or as quiet as you want. There is also the obligatory PAUSE key.

To sum up the prog then, I hate Roy Coates. I can't get anything done now. As soon as i see that cassette there i've got to load it. This prog deserves an Oscar or a computer equivalent! Hold on, guess what cassette i've seen!

Neil Scrimgeour

## INTRODUCTION

The OS9 Pascal package consists of two disks and a large User's Manual. The language conforms, in all but a few and well documented instances, to the level 0 ISO spec. The principal differences lie with the fairly extensive enhancements which abound within OS9 Pascal. However, these are optional, and so a high degree of portability can be maintained if desired. The manual includes the full set of Pascal functions and procedures, so anyone well versed in Basic09 should have little trouble picking up the language if they're a newcomer.

A warning is given that a dual drive is required to use the package. This is somewhat misleading, as it's just possible to use a single drive, providing you don't intend to compile very large programs. However, having just said that, it can't be emphasized too highly that any operations with OS9 are a lot easier with twin drives. One disk contains the compiler and run-time interpreters (yes, there are two!) and the other, the native code translator. It's possible to put all of the files onto one disk, but this leaves so little space for normal OS9 system commands that the disk would be effectively unusable.

It should perhaps be made clear that 'OS9 Pascal' is not a stand alone package. You will also need some form of text editor to prepare your source listing, and if you want to produce native machine code from the Pcode produced, you will also need the OS9 assembler. Since the OS9 editor/assembler contains a macro-editor, anyone starting from scratch will need the OS9 system, editor/assembler and Pascal packages to really get started.

OS9 Pascal complements rather than replaces the operating system. All the powerful OS9 input/output facilities are available to the pascal programmer. Multi-tasking while compiling, for example, is a doddle.

## THE COMPILER

The compiler follows conventional form in that the first step is to produce a disk text file of your Pascal source program. Both 'stylo' and 'editor' are useful here (or even 'build' if you're really desperate!). Having done that, 'PASCAL' is called to compile and check for errors. Extensive optional parameters may be added to the command line to inhibit source listings, specify page length and width, pcode file name, symbol dumps etc. The actual command line is rather interesting as it accepts its input via an OS9 redirection specifier. The implication of this is that 'normal' input is via the keyboard, and on experiment, this is found to be the case although no mention of this is made in the manual.

The printed program listing (if requested) provides very comprehensive information including page number, title, subtitle, statement number, byte location and nesting level. When errors are encountered, a pointer and pascal error number are printed under the relevant statement. Providing the 'pascalerrs' file resides on the system disk full english error messages will also be provided, just as they are by the OS9 'printerr' module. You can also personalize the messages with suitable comments if you wish!! One problem with the compiler, which is shared by many other compilers (such as Basic09) is that a single error can have an accumulative effect causing many other error messages throughout the listing. A nice touch with OS9 Pascal is that error messages refer back to previous errors, in an attempt to



8 overcome this problem.

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#### THE RUN-TIME INTERPRETER

There are two interpreters, the Normal interpreter (PASCALN) and the page Swapping interpreter (PASCALS). Pascaln is used for the majority of applications, providing the Pcode file is not too big for available memory. Pascals is used to run pcode files which are too big to be handled by conventional 64k micro systems by using disk space as virtual memory. The manual suggests that the maximum is over 8 megabytes of code. However, until someone attaches a harddisk to the Dragon, that figure is destined to be purely theoretical. Running the pcode file is simply a matter of typing 'pascaln' followed by the name of the file to be run (if no file name was mentioned at the compile stage, then the pcode file will be called PCODEF by default). Many optional run-time parameters may also be specified on the command line, as well as the ability to pass information to the program itself. Run-time errors are also easily dealt with by the use of a debug option which specifies the precise statement line at which an error occurs.

#### ASSEMBLY CODE THE EASY WAY

Having fully debugged your source program, the second disk provides you with the ability to convert the Pcode file to an Assembly code listing. The pascal translator (PASCALT.PRUN) has to be RUN by Pascals (P RUN - get it!), the page swapping interpreter, and this clearly makes a considerable load on the operating system. So much so, that it's necessary to abandon the normal Dragon/OS9 6.0k display (51X24) for the 0.5k 32X16 display. You can forget about multi-tasking too, for the program requires communication with the user. The listing produced is impressive, being written in fully position independent re-entrant code (re-entrant: may be used by two or more tasks/users at the same time!).

Experienced assembly programmers may edit the listing at this point if they wish. A nice feature is the inclusion of statement numbers in the form of comment lines which allow a comparison to be made between the original source program and the assembly code which replaces it.

The last step is to use the OS9 Assembler (not included) to produce a native (machine)code command module which will reside in the CMDS directory. The module may then be freely used like most other OS9 commands. The increase in speed possible is well demonstrated by the accompanying table.

#### EXPERTS START HERE!

The foregoing would probably satisfy most pascal programmers, but there is more. A further module (PASCALE) allows the linking of, speed essential, External native code within a compiled pascal program. Add to this, the extensive range of serial/random access input/output functions, the ability to pass commands to OS9 via the SHELL function, then the opportunities for the system programmer start to look very exciting!

PASCAL	Dragon	BBC	Apple	QL	Dragon	Spectrum	Amstrad
BENCHMARK	ISO	ISO	USSD	Pcode	Native	Native	Native
magnifier	4.98	2.48	6.48	1.88	8.38	8.85	2.95
repeatloop	56.98	119.78	63.38	48.18	3.38	7.88	38.58
whileloop	71.68	128.88	78.98	45.18	4.88	8.98	33.88
forloop	58.98	29.68	74.38	11.88	5.88	7.18	29.58
literalassign	71.48	52.38	88.58	22.88	6.18	7.58	38.58
memoryaccess	72.88	53.18	91.88	28.78	6.48	7.88	38.48
unequalif	97.38	185.28	115.38	48.58	7.98	18.68	33.48
equalif	99.38	185.68	116.78	42.58	8.18	18.68	33.58
noparaweters	33.68	38.78	58.28	15.38	11.28	6.58	18.68
reference	36.38	34.88	55.38	17.58	12.88	7.28	19.48
value	36.38	37.98	54.48	18.78	12.28	7.28	19.58
realalgebra	48.48	58.38	83.48	37.98	36.78	21.48	28.88
realarithretic	62.78	61.28	93.88	43.88	58.88	28.78	19.98
vector	171.38	282.18	283.38	77.58	51.78	17.88	48.58
maths	332.48	346.18	66.88	18.28	321.28	9.38	9.88

Notice how the Dragon and the BBC micro are both penalized for their full 9.5 significant digit calculating accuracy in all maths functions.

### Special offers:-

If all goes according to plan we may have some VERY interesting hardware offers for you next month!..... For those of you into construction and EPROM blowing we may be able to offer some exceptionally useful video machine boards....many in full working order...at ridiculously low prices, and an equally cheap selection of EPROM chips as well!

In addition, I'm told that we may be able to get hold of some ex-news agency machinery....like greenscreen monitors for less than 28.88 and printers for under 38.88, so watch this space!!!, as soon as I have more details I'll let you know.

Currently, the Group has made a purchase of self adhesive, tractor feed labels, the same as the ones on the envelope that this Newsletter arrived in. We can offer these to members at 3.88 for 588 including postage, or 5.75 per 1888 inclusive. If you are interested, please order NOW, because we may not be able to get any more at this price.

Orders to Paul Grade, cheques made payable to the Group.

### DISCS.....

We can still get you top quality (guaranteed) 5.25" discs at reduced prices:-

SS/DD Soft or hard sector.....normal price 22.88.....our price 14.58.

DS/DD Soft or hard sector.....normal price 27.88.....our price 15.58.

We can also get you 88 track discs at a greatly reduced price (Yes, Dragon DOS can handle them):-

SS/DD 88 track.....normal price 42.88.....our price 22.48.

DS/DD 88 track.....normal price 46.58.....our price 24.88.

ALL PRICES ARE PLUS 15% vat BUT INCLUSIVE OF POSTAGE PER BOX OF 18 DISCS.

Some contribution towards postage costs would be appreciated on larger orders.

## PIXEL PARK.

Fearless Freddy by Pocket Money Software.

This is one of a breed of £1.99 games available through Microdeal. The first screen consists of a set of platforms with an ascending lift in the middle, and dotted around are various pieces of furniture which must all be collected before you move onto the next screen. Don't forget to avoid the fireballs and cauldron, and keep your eye on the thermometer. To make matters worse the controls are extremely responsive and the slightest nudge on the joystick moves you halfway across the room! I got the hang of it eventually and so on to screen two. This consists of more platforms, with conveyor belts going backwards and forwards, I suspect all the screens are like this -thes same platforms and lifts arranged in different ways. But then aren't all games like that? However I have only had time to play it once so I can't vouch for the other screens.

If it had cost the usual £7.99 I would have been pushing it to say it was worth it, but at £1.99 it's a snip! Give it a go, if only to support the new move towards cheaper, quality software.

Graphics	65
Sound	50
Originality	50
Interest	60
Overall	60

Alan Cook.

## Issue Eight.....April 1985.

Well, where were you?????..We had a stand at the Show, we had a lot of enquiries from prospective new Members, but only a couple of dozen of YOU actually turned up!!!. OK, I know it is a long way for a lot of you to travel, and I know, only too well, that money is tight at the moment, but if the old Dragon is going to do more than just survive it needs YOUR support, and that can best be shown by being SEEN to be interested. Attendance at the Show was good, though not as great as at the November one, but just about every exhibitor that I spoke to had the same complaint....everyone looking, no one buying! Well, in some cases that could well be their own fault, there are still a lot of firms pushing the same tired software at inflated prices, but there ARE some trying hard to be original and to give you a fair deal, and they can't survive without help from YOU. Support for a machine is more than just saying "I like it", it means demonstrating that it is WORTH software and publishing companies investing their money in it, so please, don't just sit at home and complain that there's no support for the Dragon...GIVE IT YOURS!!.

While we're on the subject of the Show, I'd like to say thank you to Steve Cotterell, Jonathan Hughes, Ken Grade, Walter Norrington, and the others of you who spent time helping out at the Stand, and to Neil Scrimgeour who did the signwriting for us ...your help is much appreciated, and we couldn't have managed without you.

Thanks too to Ray Rhoden of Computer Marketplace for his very generous cooperation.

That's enough on that subject for the moment. As you read in the last "Update", Jeremy will be giving up Editing the Newsletter shortly, owing to pressure of other commitments, and I'm sure you'll agree that he's owed a vote of thanks for all the work and effort that he's put into getting this Group off the ground and getting the Newsletters out every month. Jeremy was one of the first to reply to my letter about starting a group, and without his assistance it would probably have never got started at all.

Until we finalise arrangements for a new Editor, please send ALL material for publication to me, otherwise there's a chance that your contribution might get mislaid in the "changeover". Don't worry, the Newsletters will still be out on time as usual, so keep the material coming in...the more the better!.

Paul Grade.

## Questions

[1]. Can anyone tell me why the Dragon 64 in 48 mode and with Dragon DoS plugged in will NOT accept a PEEK command if it is given in Hex format?... It will accept "PRINT PEEK(1536)" for example, but NOT "PRINT PEEK(&H600)". If you know the answer, please let me know.....Paul G.

[2]. Why..or rather HOW do some machine code routines, if called in from disc by a BASIC program, overwrite and corrupt the BASIC even when it is well "cleared"???...it doesn't happen on my old 32, so presumably there's something odd going on that Dragon Data forgot to mention!. Incidentally, this seems to be common to ALL 64's.

Dear Jeremy,

First of all, I have recently bought a new Dragon 64 and disk drive from Compusense, to stop my old 32 getting lonely. (One of the first from Eurohard). So I now have more time to use it because my wife still doesn't speak to me yet. What a difference disks make, and what a saving in coffee!.

Following your review of Cotswolds' modem package, I purchased one. (Wife and dog now want a divorce!!). Seriously, this is an excellent package, everything worked first time and I use it now virtually every night. I am setting up a charity to pay the 'phone bill. It is well worth it though, if only to use Brian Lloyd's board. (A very helpfull man is Mr. LLOYD).

On the subject of modems etc, I'll enclose a few tips and a simple basic program for anyone who wants to use the 64's RS232 port. This could save someone the hours of wasted time that I spent trying to get it working, as the 64 supplement is less than useless. To connect the port to a modem, wire only Rx, Tx and GND, then short CTS across to DTR, simple when you know how. To control the port, there are four memory locations, &HFF04 to &HFF07. FF04 is the read/write loc'n, FF05 is the status word loc'n, FF06 is parity set loc'n and FF07 is the bit set and baud rate set loc'n. Anyway here is the short program to run a modem using it:-

```
5 CLEAR200,11999:X=12000
10 IF (PEEK(&HFF05)AND8))>8 THEN20ELSE30
20 PRINTCHR$(PEEK(&HFF04));X=X+1:POKE X,PEEK(&HFF04)
30 I$=INKEY$:IF I$=""THEN10
40 POKE &HFF04,ASC(I$):GOTO10
```

Before using this, Loc'ns FF06 & 07 have to be set up. For most Bulletin Boards use POKE &HFF06,75:POKE &HFF07,54. But for the Dragon Board, which uses 8 bit characters, POKE &HFF06,11:POKE &HFF07,22. Line 20, as well as printing whatever is recieved to the screen, Pokes the info' into spare memory, so that it can be reviewed after 'hang up' with a basic line such as - FOR X=12000TO32766:PRINTCHR\$(PEEK(X));:FORT=1TO10:NEXT T,X. It can also be printed or saved as a machine code file.

Eric Dongain,  
Manchester.



## Redundant Information Department.

By popular request (!), a repeat of a couple of old routines:-  
To disable the autorun on a m/c tape program try the following:-

CLOADM "NAME",1298

CSAVEM"NAME", START ADD.+1298, END ADDRESS, ENTRY ADDRESS

CLOADM"NAME",64238

Having done this, peek the new addresses and resave in the normal way.

For those of you who can't remember which addresses to peek, the following routine is as good as most:-

PRINT PEEK(487)\*256+PEEK(488)

PRINT PEEK(126)\*256+PEEK(127)

PRINT PEEK(157)\*256+PEEK(158)

Right!, that's my contribution for the month, but how about some hints from the rest of you???... It doesn't matter what they are, SOMEONE will probably find them useful.

## Wanna winna program???

Roy Coates of Software Projects has very generously given us some copies of "Jet Set Willy" and "Manic Miner", and as I'm feeling generous at the moment I thought I'd give you a chance to win one of 'em.

I could do with a bit of artwork for the Newsletter, and it's not fair to make Neil do ALL the work, so the three best graphic routines to draw a DRAGON... (animal variety, not plastic!)... that we can use via a screen dump (mine works best in PMODE4 ) win one of Roy's tapes each. OK?. Send your listing to Paul G., and please state which tape you'd like if you win.

THIS  
SPACE  
TO  
LET

Dragon update takes classifieds, if you've a printer to sell, a program you need, a game you've written.....IT PAYS TO ADVERTISE.....especially if it only costs a stamp, well two actually, one on your letter to us and one on the inside to cover any costs, this is your newsletter -so use it!

## DELTADOS DISK BENCHMARK TIMINGS.

(Harvey Nyman).

In a recent copy of the Dragon Users Group Newsletter, I was interested to read of the benchmark tests, which Jason Shouler had carried out on DragonDOS on the Dragon 32. He asked for volunteers to test other drives and the Delta operating system, as marketed by Premier Microsystems (also no longer trading!!).

I run a Cumana drive under Delta with my Dragon 32, which as you probably know, is a single sided, double density drive giving 180K bytes per disc. Additionally, I have a friend who has the same DOS with a Canon drive, as originally supplied by Premier, which is double sided, single density of similar storage capacity.

Jason kindly supplied the DragonDOS version plus the original of Eric Bagshaw's Benchmark test program. With considerable help from Jason I have converted this to run with Delta, and the test results for the two systems, with the DragonDOS results for comparison, are as follows.

DOS	T0	T1	T2	T3	T4	T5	T6	T7	T8
DRAGON	2	17	32	13	11	66	9	86	20
CUMANA	3	47	34	49	12	147	25	162	37
CANON	3	31	16	31	13	137	28	178	40
	T9	T10	T11	T12	T13	TOTAL			
DRAGON	8	12	142	18	25	461			
CUMANA	9	25	566	302	69	1519			
CANON	11	28	581	384	80	1550			

As you see, the DragonDOS seems to outperform DELTA in most tests. The differences are particularly marked in those tests in which file creation is involved. Test 7, for example, measures the time taken to create and open 20 random files in turn, write one record (10 bytes long), and then close. Delta's minimum size file is one domain of 256 bytes, and I have not been able to create shorter, and therefore faster, files. The original program is in Basic-80 V 5.2, which only allocated the necessary disc space and no more. Both Jason and I feel that DeltaDOS is therefore unlikely to perform well if asked to create these unnecessarily long files. Has anyone with rather more experience than I, have any suggestions?

In spite of all this even DeltaDOS doesn't do badly, compared to other more expensive systems.