



## DRAGON UPDATE



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### The Gaffer's Bit.....

Now it has come to my attention that some of you imagine that this Group is run on some kind of organised basis..... that Tim sits in state giving orders to a flock of submissive sub-editors, etc..... that I spend my time lounging around in well upholstered luxury, counting the loot (sorry, subscription money), and helping Pierre Smirnoff to stay in business.... and that Update is produced by a band of willing (non-union) slaves, working a treadmill powered printing press somewhere near Wapping!.

It gives me no pleasure at all to inform you that you couldn't be more wrong!!!... Update is still printed by me on an ancient CP80 and a Toshiba photo-copier that deserves a place in the Science Museum..... Tim still goes mad trying to put the month's collection of articles together, and type 'em up in a format that will fit our page limitations.... and when not earning a living I spend most of my time answering the phone with one hand, repairing defunct Dragons with the other, and typing replies to your letters with.... no!, you can fill in the details for yourself!! The magazine with all the staff, offices, and expense accounts is Dragon User, NOT Dragon Update!! Right, having got that out of the way, one bit of news for you, and one request. News first... Microdeal will be holding a "6809 Convention" in Manchester on the 5th and 6th of April, with various stands, guest speakers, etc, but although we have been invited, I have to tell you that the Group will NOT be able to attend. Sorry, but the cost, in cash and time, would be just too much for my bank manager. However, it's a nice idea, and should they hold one nearer London we'll certainly try to be there. Perhaps one of you in the Manchester area will be able to give us a report on how this one goes? Secondly, a request. Jordi Palet Martinez, of EUROINDE (formerly of EUROHARD) would very much like to hear from ALL of you with an interest in OS9. You can write to him at Euroinde S.A. Edificio Jubansa Mirasierra, C/Costa Brava, 13-Sgdo. B., MADRID. Please do. OK?.

Well, I'll leave it at that for the moment... I know my writing is so perfect that you can't resist reading it, (and I'm so modest, too), but you really will have to force yourself to try reading the work of lesser mortals, 'cos, I've run out of space for this month..... Paul Grade.

*Paul G.*

### THE EDITORIAL BIT

Paul, I've lost all my submissive sub-editors, that means that I've got to type this lot in by myself, HELP!!!  
Running out of space he says, much longer and he'll run over onto page 2, the only advantage of his long winded rambling is that I don't have to tax my brain too hard to think of something to say on the front page when I run out of companies to be abusive to. I keep promising myself that one of these months I'm going to go through an entire editorial without actually saying anything, I think I've finally managed to do it. See you on the back page.

*T.L.*

2.BOARD WALK . . . . . GARY COXHEAD

When I first started this column two months ago, I wondered just how much interest it would generate. I am glad to say I have had at least two letters (more please) and a couple of phone calls, so at least a few people out there are reading my jottings. I don't know if you have noticed, but several computing magazines are now getting on the bandwagon and having regular monthly comms. columns too! It must be catching. Anyway, my first letter was from Eric Donagain of Manchester who kindly sent me a disc of some Viewdata programs he had written, which just goes to show that we have some talented people among our membership. Unfortunately, my disc drive was not compatible, but as Eric is offering the program to members at a good price (I hope), I will endeavour to get it on tape and do a review. If his previous efforts are anything to go by (I was given a copy of one of his earlier programs called Dcommapl), then it should be worth getting hold of. Anyway, as Eric is a Prestel subscriber and by way of paying me back, I hope to enlist his help in doing a review of Prestel for a future column. While I am at it, Eric has a copy of Dragcom, a public domain comms. program, which he is prepared to part with to any member who sends him a tape or disc with return postage (DragonDOS). Contact him on 0942 875860. My second letter came from Bill Stevenson, a member from Edinburgh, saying that he had heard a program on radio 2 about accessing the British Library Catalogue by home computer, and wondered if the humble Dragon could access this database run by the British Museum. After answering in the affirmative, it sparked in me the idea for the rest of this column. Many of our members are from very varied walks of life and it might be nice to compile a list of online databases and bulletin boards that cater for the more specialist or offbeat hacker. The truth is that if someone out there runs a public or private BB or database, then provided that you know where to gain the information to access it (legally!) then your trusty Dragon can be used to gain access. Two specific boards come immediately to mind. The Open University allows access to its computer to students studying at home and they can get information from the database about thier particular subject. Another one is the Clinical Notes Online. This database is for medical users and is, I suspect, part way towards what are known as "expert" systems. These give an opinion, based on the 'expert' knowledge programmed into them. The beauty of these systems is that the knowledge it contains is far beyond that capable of being known by any one 'expert' so a much wider band of knowledge and advice is available. So let's hear of your experiences and knowledge. (Letters to Gary please ....TL). Which brings me onto American databases, if only to see what is available to whet your appetite. After all, where the Americans go we eventually follow! However, one thing is for certain. Unless BT change their pricing policy and make local phone calls free, as in the US, then the growth in this area is going to be restricted. Abroad, there are literally thousands of BBs run by enthusiasts, but where the Americans really score is in commercial systems. Britain has only one -Prestel- the US has several. The two best known are The Source and Compuserve and they leave Prestel standing!! Compuserve has something like 250,000 subscribers and several multi-player games as well as the usual facilities, plus things like an online encyclopedia, weather briefings and radar maps for pilots. Even such things as chapters from books which you can download. I do have a list of some of these BBs for those of you who think you can afford the phone bills, but for the serious users amongst you, you will have to get into PSS (packet switched stream) system, which will cost as much as a phone call to your nearest PSS terminal. (I will cover this in a future column)

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DRAGON DIARY . . . . . NEIL SCRIMGEOUR

As you may have read in last month's Update, Paul wants to borrow a gun to shoot the Editor, Well, I would like to borrow it afterwards to shoot Paul!. I NEVER said that I wanted more software enquiries, I just said that I haven't had MANY! So please don't feel so sorry for me that you drown me under a deluge of letters!....just a few will do!.

This month is review month, All lovers of the Miner Willy capers will be glad to know that the programmer, Roy Coates has decided to start his own company and Microvision's first release is called Beanstalk.

You may have guessed that the game is built around the legend of Jack and the Beanstalk, the object being to progress through 60 screens of mayhem. I eagerly waited for a JSW clone to load but when it started I was disappointed. This is not a JSW clone but a mixture between Chuckie Egg, Cuthbert goes Digging and Cashman. The idea of the game is to pick up certain objects in the screen which, when done, allows you to move onto the next screen. To make things awkward there are the usual monsters, this time however you can dig holes for them to fall into and then run across them (a la Cuth/digging). Movement across the screen is done with the help of ladders, platforms etc. (a la Chuckie) but the screen is in PMODE 4 and shading and stippling effects are used. The end result is a screen looking a bit like Cashman. The size of our hero is about one print character, a simple looking character but amazingly well animated (as are all the characters). This hero can hang glide through well placed clouds and also make his way across suspended ropes and vines. As you can see he's a very fit sportsman.

What's the game like? well, there's not a lot more you can say about this type of game that hasn't been said before. The inclusion of digging holes and being able to fall through them is a nice touch, but other than that it's an average game at an average price. But holdeth there fellow keyboard bashers, there's something extra. On the menu screen option 5 is 'Reserved'. Sounds fishy! Of course I had to try it and of course it asks for a password which I didn't get right. Now through various channels I think I've discovered what it is, although I'm not prepared to say because I would like my body to stay in one piece for the rest of my life! However, what I will say is this: If I'm right then you'll never get bored with the game and 7.95 is a very good investment for the future and I thoroughly recommend Beanstalk. There are also a couple of other things to mention; there is a version for the Tandy Coco (if anyone still owns one) and if there is enough demand for it Roy will produce a version for nearly any DOS, be it Dragon, Cumana or whatever. If you do fancy a disc version then please write to him. So to sum it up, Beanstalk is yer bog standard game with an unusual twist that makes it well worth the asking price.

One other small ditty, the diary after next will be devoted to PEEKs and POKEs for infinite lives etc. If you've got any useful info, bung it in the post to me. And before you ask, yes I have got Tony Kendle's Arcade Addicts Handbook.

ASCI CORNER . . . . . PAULINE HAMPSON

Being stuck for something to do, I dug into the depths of the cupboard and found Castle Blackstar which I'd ignored because I'd never heard of the publishing company. That has taught me a lesson as this game deserves to be a Dragon classic like El Diablero or Return of the Ring. It really is excellent. Originally it was produced for the Spectrum and then adapted for several machines. The co-writer, Mark Sheppard must be a perfectionist as he told me that the game needed a bit more polish (where I don't know). The game has a total score of 250 which is gained by finding treasures and solving puzzles and accomplishing the main task of returning the orb to Artemis. I have counted well over a hundred locations not including the mazes and it takes ages to load. The best parts of the game really are the location

descriptions which are so atmospheric. There is a tall room, a chequerboard room and an island in the middle of a flaming lake just for example and the puzzles to be solved are challenging but there are also simpler tasks. It is a text only adventure (my favourite) with a save game and a freeze feature which is useful for potential suicides like me and less bother than all that loading loading and saving. I cannot understand how such a good game has not become well known.

My only regret is that their next game will not be Dragonised as there isn't enough memory. For anyone wishing to buy a copy, contact S.C.Adventures, 5 Christchurch Rd., Surrey. KT7 8JJ

Now, a plea for help. I have been finding Scott Adams adventures very difficult and in such cases of extreme stress I resort to cheating and look into the program for clues like words to use and locations I may not have found. I have spent hours trying to get into these games and I'm stuck, will someone help me please !!!

### UPGRADING THE DRAGON . . . . BOB HALL

When I wrote the 64k upgrade manual in the summer, I pointed out that the next logical step would be an upgrade to 256k of RAM, using the new 4256 series memory chips. Since then I've received details of a 256k upgrade called 'The Banker', designed and marketed by J&R Electronics in the USA for the Tandy Coco. This design looks quite suitable for use on the Dragon too and so I'd like to tell you what I know of it. My two sources of information are a letter from J&R; and a review of the Banker, including a circuit diagram, published in Sept. '85 'Hot Coco' (and kindly sent to me by Martin Vermeer of Finland). Firstly, the firm itself comprises mssrs J.W. Jackson and R.W. Rowe, who are 2 self-avowed 'Cocoholics', their address is:-

J&R Electronics, PO Box 2572, Columbia Md 21045, USA

Their Banker board is a small 2"x3" pcb which plugs into the SAM socket. It contains reassuringly few components:- two LS175 latches (one for the VDG bank address and one for the CPU bank address), an LS153 multiplexor, some decode logic (an LS133 and a humble LS02), and a new SAM chip - the LS785. the new 256k RAM chips go in the sockets vacated by the old 64k memory chips (What ! you say yours aren't in sockets!), and the ninth address line is taken by a patch wire (and 33ohm resistor) from these to the multiplexor. the decode logic allows you to program the VDG and CPU bank addresses by READING addresses in the range &HFFC0-&HFFDF (Contrast programming the SAM by writing to the same range of addresses). The CPU memory bank can be switched in blocks of 64k, or alternatively the upper 32k can be switched, leaving the lower 32k always as bank 0 (something like this is essential, or you'll never be able to set the thing up!!); the VDG is banked in units of 64k. Hardware hackers will find there is enough information in the Hot Coco article to knock up their own unit - 256k RAMs are readily available in this country for about 3.00 each, and the new 256-cycle refresh SAM chip is available from Tandy for about 14.00. However, less adventurous mortals may like to take up J&R's offer to supply the unit in one of its various stages of completion, especially since this includes some software for using it which should (?) be adaptable for the Dragon. The prices range from \$30 for the bare board (no ICs but plus software and documentation), via \$55 for bareboard and parts (except memory ICs), and \$70 for the assembled board less the memory ICs, to \$100 for the completed unit and memory ICs. All these prices include the software and documentation but add \$7 for postage.

Looking at the design, a few things strike me. Firstly, it should be possible to avoid the need to buy a new SAM chip by including a few more ICs to do your own refresh - most 256k RAMs have a mode ('CAS-before-RAS') for doing this with minimum fuss - the refresh could be done either during the many CPU cycles (E clock high) when the CPU isn't using the memory (see circuit in Oct '85 '68 Microcosm'), or during the VDG cycles (E clock low) at the end of each video line (which is when the SAMs do it!)(NB. if you do stick with your old



SAM chip, on a D32 you also need to make the standard mod to the LS138 decoder - see below). Secondly, the banking in units of 32/64k is rather chunky and inflexible, and I'd be tempted to arrange a 6116 static RAM to map the addresses from the CPU bus in smaller blocks (8k or less) into the 256k memory space (Motorola advertised a chip, the MC6829, which does just this but they've recently declared it obsolete). A third cautionary point is that the timing of the changeover signal to the LS153 multiplexor looks to be on the limit of the spec for most 256k RAMs - it is derived from the row address strobe and should really be delayed by another 40ns or so. Before leaving this topic, it's worth noting that, even at Tandy prices, the new SAM chip (SN74LS785) is significantly cheaper than the best prices for the older design (LS783) - if a firm such as Technomatic of Watford can be persuaded to stock it, the price could drop to a tenner, then you'd have even less reason for scrapping your Dragon if the SAM blows up! Finally, the decoder mod revisited. This is the mod which is present on the 64 and not on the 32, and which stops the ROMs in the address space above 32k being spuriously turned on in map mode 1 (64k mode) when writing to RAM. It is normally implemented by gating the CPU R/W line and the SAMs S2 line into an LS02, and applying the result to pin 5 of the LS138 3-to-8 decoder. However this has the unfortunate side effect of stopping the 'cartridge select' signal coming up when WRITING to addresses above 48k in map mode 0; this in turn makes it very difficult to have static RAM in the expansion port. Various people have suggested ways around this and here is my, slightly tentative suggestion (which you'll find buried in appendix D of the Upgrade notes). If you use the signal WE (write enable) from the SAM chip (pin 10) instead of the R/W line from the CPU and combine it with S2 etc as described above, then the 'cart sel' signal does come properly for both read and write in map mode 0, and not at all in map mode 1 - which is just what you want. Note that this relies on an experimentally determined, and undocumented, property of the LS783 - the few I've tested on a scope all behave the same way and both John Bussell and Alan Butler have also tried it out. Anyway, it's simple enough to try before embarking on more major surgery of the board. The LS785 doesn't need a decoder mod at all, according to the data sheet - in map mode 1 it puts out S=0 for a RAM read, S=7 for a RAM write for ALL memory below &HFF00. (contrast the quirky ragbag of signals from the LS783, which makes the decoder mod necessary) Happy Hacking.

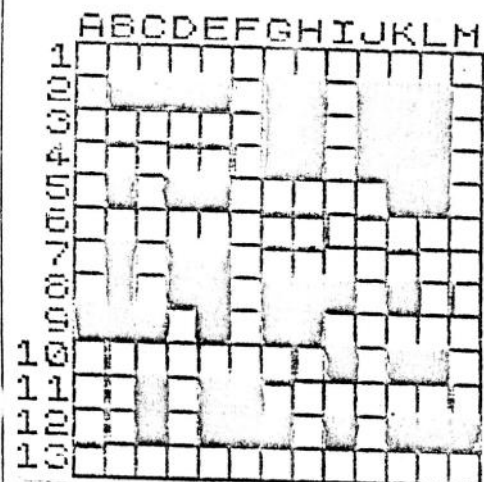
### CROSSWORD No. 10

#### Across:

- 1A) Use a modem to get information from this  
 3A) Open a parcel 4A) Wild flower found on some  
 printers 5F) Noise reduction system  
 6A) Graceful deerlike animal 6I) Rope for  
 catching cattle 7F) Mix shine and the formula  
 for carbon dioxide to give the act of sticking  
 together 9I) Greek letter found at the mouth  
 of a river 10B) Rearrange a red ray to obtain a  
 dull word 11G) A computer sort or a globe of  
 air in a liquid 13A) Popular greenhouse flower

#### Down:

- A1) Measure of the transfer rate of data  
 A10) Computer memory usually found on a farm  
 B10) Running exclamation C3&L6) Dragon software  
 house D9) Well know friend of Pinky F1) Call  
 out this person to a sick cassette H10) Common  
 name for iron oxide I1) Prickly fruit bearing  
 shrub or old Steptoe actor J6) To gather or  
 put together M1) Microdeal game sounds like  
 an attack on an old prison



XWORD No. 9 ANSWERSAcross:

1A)Dumper 1G)Eclipse 3F)Italics 4A)Grill 5E)Oboe 5K)Nee 7A)Superwriter  
9F)Rotten 10C)Lucid 11A)Wreck 11I)Diary 13E)Trekboer

Down:

A1)Dragons Claw C5)Maple Leaf D1)Prelude E8)Bucket F1)Rainbow Writer H1)Chase  
H8)Streak I4)Multitude K3)Centre L7)Sentry M1)Eddie Steady Go

The winner of crossword no 9 was Richard Hibbler of Norwich.

First correct entry for X-Word 10 wins "The Trial of Arnold Blackwood", by Nemesis.

DRAGON IN SCHOOL . . . . . TONY HUGHES

The gaffer's always asking for articles - so the time has come for me to put pen to paper.

I teach (or try to) in a small special school in darkest Avon. I'm the bloke who works the computers. Actually I've been using a computer in schools since Jan 1980. That's when I took my own TRS 80 to the classroom and my then head told me to take it back home again as 'it was a toy and a waste of valuable education time'. Nowadays we've had some changes in education (not many). After scrounging money from umpteen local charities, including a coin in bottle collection in a local pub, we've got ourselves a Beeb on the government half price offer, a secondhand Dragon with DOS and two rather basic printers. Needless to say, there isn't a penny left after all that for luxuries like programs, so they come on a catch as catch can basis. One of the best things about the Dragon, apart from it being comparatively cheap at the time and having a real keyboard, is that it will drive a printer. Therefore it will not only allow some simple word processing (ie writing stories) but also the production of a written record of work done. I have written a few fairly simple maths and spelling programs. These will take a child through some work at levels that I can set or that they can choose. They can then print out the questions along with the pupil's answers, marks and time taken - in a form that I hope they and their teachers can analyse quickly and easily (rewards may be forthcoming or suggestions for more learning), a little 'perk' that helps a bit to counteract the rudeness that they suffer at the hands of 'normal' children at ordinary schools.

I haven't yet learned how to use the DOS to keep records, any advice would be appreciated (simple of course). Could anyone out there in deepest Dragonland help me with another little programme idea? I want a little routine that uses presses on the space bar to shoot down a flying saucer as it passes overhead in either direction (at different speeds?). What I plan to do is use it as part of a programme in which 2 players take turns to answer a question and then get their shots, first to 10 wins. 'Fraid I haven't mastered graphics yet. By the way, are there any other teachers out there with our fire-breathing byte biters?.

Win a Trojan Lightpen!!!.

It being the Chairman's cat's birthday this month, we had intended to declare it a National Holiday, but it has been pointed out that someone named Thatcher is actually in charge of such matters, so instead we decided to give you the chance to win yourself a Trojan Lightpen.

All you have to do is write a routine to produce a playable game, IN NOT MORE THAN TEN LINES!.

Best entry received by April 30th. wins the pen, the next two win games tapes, and of course we'll be printing the three best entries in Update, so get writing!.

M/C GRAPHICS FOR BEGINNERS..JOHN MARTIN

Sorry for the absence of this article for the last month or so, but I've been rushed off my feet finishing Mooncresta (there's a plug in that last sentence somewhere, can you find it?). Anyway, this month we'll investigate sound on your Dragon.

There are two ways to produce sound using machine code. The first is the way you'll read about in books and the method I always used until recently. This involves poking a number into address \$FF20, increasing the number, poking again etc. until the number reaches 256 (this is 0 in m/c because 255 is the largest 1 byte number possible and increasing 255 produces 0). When this is reached, the whole thing is done again a certain number of times, so determining the length of the note. The program below shows this:-

```

LDA #$3F
STA $FF23      Enables the sound
LDA #100
TFR A,B
LDX #200
LOOP1 STA $FF20
INCA
BNE LOOP1
TFR B,A
LEAX -1,X
BNE LOOP1
RTS

```

The sound produced is caused by loading the accumulator A with an initial value of 100. Changing this value changes the sound of the note. The value 0 produces a low note whereas 255 is so high that it cannot be heard. Changing the value of x changes the length of the note.

One other way to produce sound allows you to change the volume of the sound. A value is poked into \$FF20 and this value represents the volume (255=loud, 0=can't hear). Then a delay occurs, the length of the delay represents the note. After this first delay, address \$FF20 is cleared and the delay occurs again before returning to the beginning of the loop. The program below shows this more clearly:

```

LDA #$3F
STA $FF23
LDB #100
LDA #255
LDY #1000
LOOP1 STB $FF20
LOOP2 LEAY -1,Y
      BEQ END
      DECA
      BNE LOOP2
      CLR $FF20
LOOP3 LEAY -1,Y
      BEQ END
      DECA
      BNE LOOP3
      BRA LOOP2
END
RTS

```

Here Y represents the length of the note, B represents the volume and A represents the note. Using this routine reverses the note values; 255 is the lowest note and 0 is the highest. This method of producing sound gives an echo effect if you choose your notes and lengths correctly and, together with the effect of changing the volume and therefore making the note fade, a useful explosion sound is possible for games.

Any questions or thoughts for this article are welcome, contact- John Martin, 35 Little Gaynes Lane, Upminster, Essex. RM14 2JR

## ANIMATOR & SCENARIO DESIGNER CARTRIDGE

The animator is an excellent utility cartridge for adding sprites to your own Basic or machine code programs. Sprites are user-defined characters which can be moved around the screen non-destructively. Up to 10 sprites may be used, each of which may take on any number of pre-defined fonts (ie. appearance both of shape and colour)

The sprites are designed using the cartridge and then made into a short machine code program (no machine code knowledge required). The sprites can then be easily used in your own programs, independently of the cartridge. 71 factors concerning each sprite can be controlled, ability to display, position, speed, direction, appearance (font), crash action (stop, bounce, continue) and a crash counter. Control from Basic is very easy and the sprites are interrupt-driven making movement fast and independent of the Basic program. The designer part of the utility is a let down, it allows you to design screens and make machine code screen dumps. Unfortunately it only supports the drawing of straight and diagonal lines, painting, getting and putting areas of the screen. Erasing errors is all but impossible. Better screens could easily be designed using a simple Basic program and obtaining machine code screen dumps is simple. This part of the program is best forgotten.

The four pages of instructions cover the utility fairly comprehensively, although failure to distinguish between sprites and fonts may cause difficulty and this is not explained. Only one very short demonstration program using the sprites is given, a better one would have been appreciated. Instead you are left to experiment for yourself, although it must be said that this can be one of the best ways to learn and there is plenty that you can do with them. If you intend writing arcade style programs then some sort of sprite utility is probably essential and this one is worth the asking price.

Available from J. Morrison Micros @ 19.95 or 14.95 if you supply an old Dragon Data cartridge. But do forget the designer feature which you are unlikely to use .... Philip Beed

## CASSETTE TO DISC GAME TRANSFER

One of my main interests at present, is transferring some of the excellent cassette based games to disc. This is to allow quick loading and avoiding the annoying I/O errors during some of the boring long loading sections which are often only title screens. HUNGY HORACE is a prime example, consisting of 3 separate m/c programs. The first makes the game auto run and sets the screen to PMODE3. The second is the title screen and the third is the actual game. The following short basic routine puts a short m/c routine in memory. It then loads the game from tape (ignoring the first 2 programs). Finally it stores the game and my short routine combined onto a disc.

```
1 FOR I=15337 TO 15359:READ A$:POKE I,VAL("&H"+A$):NEXT
2 DATA 7F,FF,48,86,E8,B7,FF,22,B7,FF,C3,B7,FF,C5,B7,FF,C9,B7,FF,CF,7E,7B,39
3 CLS:PRINT"press play":CLOADM"GAME:SAVE"HORACE.BIN",15337,32512,15337
```

The game can now be run from the disc using the command RUN"HORACE.BIN". The short m/c routine is to replace the first program that would normally set up the graphics screen..... Graham Smith

I have details from Graham for converting lots more games to disc and these will be published in later issues .... TL

If there is any particular game you are interested in getting on disc write and tell me, and I'll pass your request on to Graham....Paul G.



Just thinking.....Paul Grade.

Does anyone have any idea why computer owners are such dedicated masochists?.....We spend a fortune buying machinery that usually has very little in common with the claims made for it in the advertising, knowing perfectly well that within a couple of years at most it will be considered obsolete and that no one will be writing any software for it, or making anything useful in the way of add-ons. We pay extortionate prices for programs that appear to be written by a mentally retarded baboon, and we happily accept reviews written by "experts" who wouldn't recognise a computer if they were hit on the head with it...all without protest or complaint.....WHY??!! Just WHY are we so willing to pay to be "conned"?....WHY do we let ourselves be robbed, insulted, and generally messed about?....doesn't make sense, does it?, but we still go on doing it.

Don't you ever get sick of those reviews that praise the latest software offering to the skies, when you know perfectly well it will just be another boring, overpriced rip-off of something written for a ZX80 four years ago? No?...well I do. Ever get tired of firms that STILL produce programs which can't run with a DOS engaged, because there weren't any disc users when the original was written and they can't write well enough to convert it?...I do. The list goes on and on, but still we do nothing about it. WHY NOT?!, Why not refuse to buy magazines which print dishonest reviews?.....Why not return all software that doesn't "live up to the cover illustrations and the advertising blurb?.....you've every right to do so. When you send off your money to a Group or a Company that has advertised something, and never hear from them again, why do you only moan about it?....why not complain to the Police?.....obtaining by deception is still a criminal offence.

I get complaints about these things every week, but other than making sure that the word gets around, there isn't a lot that I can do. I'm only the guy who started the User Group and that doesn't give me any authority, even if it does give me a bit of influence....I can't prosecute the firms involved, I can't do more than write to the rip-off artists and tell them what I think of them....YOU are the ones that can change things, you don't HAVE to let yourselves be conned by every little cowboy in the game, YOU don't have to take it all quietly.

The only reason that computer owners get conned so often is that generally they're the softest touch in the world!...They always come back for more of the same!...It's not surprising that some people take advantage of that, is it? and they'll continue to do so until you prove to them that conning computer owners is NOT a profitable occupation, so let's change things...INSIST on a fair deal, and if we don't get it, make sure that whoever is responsible gets so much hell that they never try it again!!! THAT way things will change, but not otherwise.

A PLEA FROM BARRY CARUTH

According to Paul G. I have been appointed Advertising Editor or something similar. What this means is that I try to sell advertising space to companies and also get some programs for review.

Is there a program (or any other item) that you want to know about? If so then let me know what it is, who makes it, their address or phone no and what you want to know.

Certain generous companies may donate the item for review or prize, others will not. If they do then I'll pass it on to an expert (or if I can't find one then Paul will do). If they won't send the item I will try and find out what I can about it and let you know.

The next bit is relevant to authors and companies - please send your products for review, it's not going to do you any harm unless it's really bad.

Finally, If you want to get in touch with other users about a Dragon topic then let me know and I'll build up a database (people willing to help on certain topics please let me know.).

Barry Caruth, 132 Donaghadee rd., Bangor, Co Down, N.Ireland BT20 4NH (Phone 0247-460050 most nights after 6pm.).

# IO

## A MESSAGE FROM NEIL

As some of you may have noticed, my phone no has only recently been printed at the start of newsletter. The reason is that the rest of the people in this house take exception to the fact that I'm always on the phone, and printing my number would makes it worse. Due to the fact that I shall now be dealing with the problems members have with games software, my number now HAS to be printed. Please use it wisely. I don't have as much time to spare as some, and like Tim I also object to having to answer the phone at 3am! ...Niel scrimgeour.

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```
0 REM TYPEWRITER PROGRAM FOR THE CGP115
1 REM WRITTEN BY R.A.DAVIS.
2 CLS:PRINT:PRINT" THIS TURNS THE GP115 INTO A      TYPEWRITER.
   PRESS [SHIFT] TO GET AN UPPER CASE LETTER.      THE 'BELL' WA
RNS YOU THAT YOU HAVE 7 SPACES LEFT BEFORE THE CARRIAGE RETURN."
3 PRINT" PRESS [CLEAR] TO END.      PRESS LEFT ARROW FOR BACKSPACE. PRESS [
ENTER] FOR A NEW LINE. IT WON'T WORK WITHOUT A PRINTER"
4 INPUT"40 OR 80 CHARACTERS PER LINE";X:IF X<>40 AND X<>80 THEN 4
5 PRINT#-2,STRING$(X+1," ");
6 PRINT"NOW TYPE:- "
7 POKE 329,0
8 I$=INKEY$:IF I$=""THEN 8
9 PRINTI$;:PRINT#-2,I$;
10 N=N+1
11 IF N=X-8 THEN SOUND 200,2
12 IF N=X THEN N=0
13 IF PEEK(343)=223 THEN PRINT#-2,CHR$(8);:PRINT#-2," ";:N=N-1
14 IF PEEK(338)=191 THEN PRINT#-2," ";:N=0:GOTO 8
15 IF PEEK(339)=191 THEN POKE 329,255:PRINT#-2," ":END
16 GOTO 8
17 ' A G3LRO ORIGINAL!
```

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```
0 '***PAUL WILKINSON***
1 '***DRAGON SENSITIVE KEYBOARD***
2 CLS:CLEAR200,&H5000
3 FORX=&H5000 TO &H5029
4 READA$:POKEX,VAL("&H"+A$)
5 NEXT
6 DATA 4F,55,43,48,21,00,00
7 DATA BD,BA,77,BD,80,06,27
8 DATA FB,10,8E,50,00,8E,05
9 DATA 0C,A6,A0,A7,80,8C,05
10 DATA 11,26,F7,10,8E,80,00
11 DATA 31,3F,26,FC,7E,50,07
12 PRINT:PRINT"NOW TYPE EXEC&H5007 TO DEMONSTRATE":PRINT"THE NOW VERY SENSITIVE
KEYBOARD"
```

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## AN APOLOGY FROM YOUR EDITOR

In issue 17, three errors seem to have crept into the CTS article on pages 7&8. Page 7, 5th line from the bottom, 'drop of solder' should read 'drop of super glue'

Page 8, Note 1, 'uncased inputs' should read 'unused inputs'

Page 8, What happens, 'address independent' should read 'address dependent' *RY*

The CTS articles will be continued in the next issue of Update

## II

### REDUNDANT INFORMATION DEPT.

Provided you DIM correctly, it is quite easy to draw several screens behind a 'loading' screen, GET them and PUT them as needed during the program run, as follows:

PMODE 0        DIM=307 per screen  
PMODEs 1&2    DIM=614 per screen  
PMODEs 3&4    DIM=1228 per screen

Using GET(0,0)-(255,191) and PUTting them back when required.

Keep a check on the memory used so that you have sufficient for animation of any other graphics, but you will be surprised how many you can have in store even in PMODE4 and still have enough memory left for a Basic program.

To merge two programs, the last line no of listing A must be lower than the first line no of listing B

CLOAD A  
POKE25,PEEK(27):POKE26,PEEK(28)-2  
CLOAD B  
POKE25,30:POKE26,1

Now LIST and the programs will be merged.

For machine code programs, after loading, PEEK(487)\*256+PEEK(488) for the start address. PEEK(126)\*256+PEEK(127)-1 for the end address, and PEEK(157)\*256+PEEK(158) for the entry address.

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### BULLETIN BOARDS

More from the list of bulletin boards

NAME	BAUD	TELEPHONE	HOURS	COMMENTS
CO-CO BBS	300	091 265 1944	2100-0600	
COMET	300	0527 28515		
COMACO-NET	300	0482 831215	NOT KNOWN	
COMMUNITEL	1200/75	01 968 7402	24	
COMMUMOD	300	0274 45246	WD 7P-11P WE 12-M'T	
COMPULINK (WOKING)	300	0483 573337	24	
CUMPULINK FIDO	300	06286 63571	24	
COMPUTERS INC	300	0207 543555	24	
COMPOST HEAP (KENT)	300	0622 46923	24	
CYMRYTEL WALES	1200/75	0492 49194	24	

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### THE END BIT

The end of another Newsletter arrives, does that mean that I can spend a couple of days actually getting on with my own programs Paul ?? Oh go on, please.

You wouldn't think that just running up a modest little publication like this would take so much time would you ?

The main thing this month is that I should really apologise for the content of the last couple of issues. Yes, I know that they have been unbalanced, issue 18 was the worst but I really can't help it!. If you lot don't send me in the stuff for a balanced newsletter then I can't produce one. The way things are going, next month looks like being 4 pages of hardware mods, 4 pages of OS9, a bit of drivel from me and the regulars with maybe half a dozen software reviews thrown in at random.

So if you don't want to see that then send me something else to publish OK  
.....Now what did I do with those sub editors ???

Tim Lomas.....LONDON..... March 1986

## Classifieds &amp; Special Offers .

**FORTH O/S:** We can now offer you a real FORTH Operating System on disc which you can BOOT into either a 32 or 64 Dragon. NOT just FORTH language, this includes a Turtle Graphics mode and an 85 column Word Processor as well as the usual FORTH compiler. Written by John Payne, and available ONLY through the Group at the ridiculously low price of 8.50 in either DragonDOS or D/Density DELTA versions. Orders to Paul Grade. Cheques payable to the Group.

**UPDATES:** Back issues are now available either from John Cox or Chris Channing. You can contact John at 3, St. Peters Road, Portslade, Sussex (0273-422492), or Chris at 63, Churchfield Way, Whittlesey, Peterborough. (0733-208409).

**CIRCUIT SHEETS:** We can supply photocopies of these for the 32 and 64 and for the Dragon Data DOS controller. Price 1.00 each. Orders to Paul Grade. Cheques payable to the Group.

**DRAGONDOS:** Peter Williams of Computil will reblow your DOS chip to include the correction patches published in Dragon User for 3.50. Send your EPROM or cartridge to:-

COMPUTIL, 22, Grove Park, Burbage, Hinckley, Leics. or phone 0455-611914 for more details. Version 4.0 and 4.1 available soon. Phone for details.

**32 to 64 UPGRADE MANUAL:** Why pay 30.00+ for an upgrade when you can do the job yourself for a third of the price? Bob Hall has written a VERY comprehensive "how to do it" manual, which is available for only 2.00. Orders to Paul Grade. Cheques payable to the Group.

**5.25" DISCS:** SS/DD at 14.50 per box, DS/DD at 15.50 per box, plus 15% vat. 80 track also available, price on application. These are NOT the cheapest discs available...we can get cheaper ones, BUT they ARE 100% RELIABLE, that's why we are prepared to offer them to you. Orders to Paul Grade. Cheques payable to the Group.

**OS9 SYSTEM PROGRAMMER'S MANUAL:** We have the offer of a limited number of these manuals, usual price 19.50, at the VERY special price to Members of 6.90 each, inclusive of post and packing!!!. Order direct from the Publisher...CLEGLEN PUBLISHING LIMITED, 4, Garth Street, Cardiff CF1-2F0, but don't forget to mention that you are a Group Member!.

**SOFTWARE LIBRARY:** Mike Vine is operating a Software Library service, and anyone interested should contact him at 120, Auriel Avenue, Dagenham, Essex. RM10-8BU.

**6800 GROUP:** Anyone interested in joining the 68 Microgroup? As well as FLEX and various other OS's they are now starting a OS9 section to their Library, so if you're interest lies with the more "serious" side of things, you may well like to join them. You can get full details from the Membership Secretary, J. Turner, 63, Millais Road, London E11. (01-558-3681).

**FOR SALE or SWAP:** Cassettes and a few cartridges (Hi-res, Skiing etc @ 5.00 each). Cassettes include Robin Hood, Fearless Freddie, Athletix, Kung Fu, etc. Also disc software wanted to swap for other titles from a collection of well over 200, including Zaxxon, Abdabs, Willy, Rommel's Revenge, Speed racer, Dark Star, M. Miner, etc. SPECIALLY WANTED...any NEW Microdeal games except Trekboer and Shocktrooper. Phone Steve on 0468-73723. for further details.

**MAPLIN 232 INTERFACE:** Maplin interface for Dragon 32, giving two 8 bit i/o ports, two relays, and two Opto ports, plus instructions and software. PRICE ONLY 15.00. Contact Ken Grant, 10, Low Ash Grove, Wrose, Shipley, West Yorkshire.

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

**HELP!:** Can anyone supply a good screen dump to work with a Microline 80 printer? If so please write to R.J. Rolph, 69, Knaves Hill, Linslade, Leighton Buzzard, Beds.

**DRAGONDOS DISC EDITOR:** Disc Utility written by John Cox. Easy to use and has two operational modes, Examine and Edit. Will read and edit ANY discs, including those from most other systems, and will allow you to reclaim a KILLED file (provided you haven't over-written it, of course!). Access and change files directly from disc. Also includes DISC MENU which you can load and save onto any of your own discs, and which reads the directory and lists files 26 at a time on screen, allowing single key running. Price 6.50. Orders to Paul Grade. Cheques payable to the Group.

**BANK MANAGER PROGRAM:** Holds details of bank current accounts. Options include add, edit, view, print, save(disc), load. Monthly statements can



be produced of all credits and debits. Disc version ONLY. Price 5.00 or 4.00 to Group Members.

DISC DIARY PROGRAM: Holds data for every day of the year on a 48k disc file. Each day has four lines. Output to screen or printer. Daily steps back or forward, and jumps to any particular date. Price 5.00 or 4.00 to Group Members.

Orders and Cheque to R.Watts, 6/105, Brighton Road, Worthing, Sussex.

DUCKWORTH BOOKS: All discounted 50% to Group Members.

Pocket Handbook for the Dragon...now 1.50.

Exploring Adventures on the Dragon...now 3.50.

Dragon Programs...now 3.50.

Cassette of Adventures for the Dragon...now 4.00.

Order direct from Gerald Duckworth & Co.Ltd. 43, Gloucester Crescent, London NW1. Please add 30 pence per item post/packing.

TRACTOR FEED LABELS: As used on the envelope this newsletter arrived in!. 3.25 per 500 or 6.00 per 1000. Please add 50 pence towards postage/packing.

Orders to Paul Grade. Cheques payable to the Group.

OS9 PROGRAMS: OS9 Utilities...a set of eight routines available from Jason Shouler. For further details please phone Jason on 0202-722599.

WANTED...URGENT!!!: Please has anyone a spare DragonDOS or CumanDOS cartridge they'd consider selling at a reasonable price?, or perhaps swap for a Touchpad?. If so please contact Paul Grade soonest. Even a sick one, or just a board would do. Phone Worthing 207585.

DISC DRIVES: I may be able to get hold of some QUENE 40 track double sided uncased drives, less power supplies, at around 60.00 each plus postage. Very suitable as second drive for Dragon Data units, etc. Phone me on Worthing 207585 for details.

MORE OS9: An OS9 utility to copy ANY Dragon DOS file to OS9.....Price 8.00. Phone Jason Shouler on 0202-722599 for details.

### The Late Late Bit.....

Well, it's 2.00a.m. and I WAS going to dig out another article to fill this space, but to be honest it would take just too much energy!. Instead you'll have to put up with a few more lines of rambling rubbish from me.....and serve you right too!....If you had only started the Group yourself I could have just been a Member, and sat around criticising YOUR rubbish instead of having to write my own!

Anyway, at least I've got all the master copies finished on time this month, or I will have as soon as I've finished this bit, so you should at least get this issue somewhere near on time for once. All I've got to do now is spend the next five evenings running off the necessary thousands of photo-copies, and a couple more collating, stapling, labeling, folding and stamping this little lot, and you can have the privilege and pleasure of reading it....typo errors and all!.

One day I really am going to award myself a day off. Once upon a time, back in the days when floppies were things supported only by Playtex, I used to actually have time to write programs, and actually use a computer as something other than a typewriter. You don't believe it?.....well, OK, I know it's about as believable as a Compusense price cut, or a Party Political Broadcast, but it really IS true....(I think).

Which reminds me.....I have one redundant D32 for disposal to a good home, at the bargain price of 40.00 (that's including the usual 3.00 postage). It's a nice old machine, with no known faults, so if you'd like it please let me know. Miscellaneous odds and sods that you may find interesting: Update now goes out to nine different countries, and our material is copied/translated by at least five other National Groups outside the UK. So if you write for us you can certainly claim to be Internationally famous!.....Rumour and Alan Cook has it that there MAY be another 6809 Show after all, but no one seems to know where or when.....So far as I can find out, we are the longest running "one make" Group surviving, and the ONLY non-commercial Dragon one!.

Well, I reckon this ought to be enough to round off this page, so I'm going to knock off and leave it at that.

Be good, and don't get caught doing anything I wouldn't do. Paul.