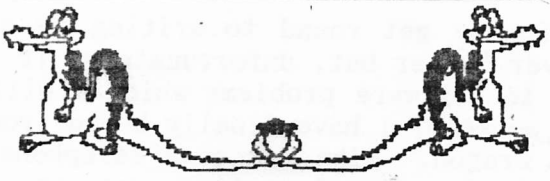
The Newsletter of the National Dragon User's Group

DRAGON UPDATE



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ISSUE 107 *PC OR NOT PC?* *JUNE 1996*

THE GAFFER'S BIT . . . . . .

There I was, expecting howls of outrage, lynch mobs gathering on the doorstep, my name on every contract list in the country, and similar signs of displeasure, and what do I get?, total silence from most of you, and a rather less than keen acceptance from about a dozen or so that "if it will help keep the old Group going for a bit longer to include some PC material, then go ahead, maybe it isn't such a bad idea ...". Well, I said I'd go along with the majority view, and as the rest of you don't appear to HAVE a view I can only work with those stated, so please don't complain if future Updates contain a page or so of PC trivia along with the more important Dragon stuff. Don't worry, I certainly have no intention at all of allowing more than around 10% of Update to be "non-Dragon", and of course SOMEONE will need to write the material, whatever machine it applies to, so as usual it is still up to you to decide the contents of Update .... you write it, we'll print it. OK?. Messrs Grade and Wood are NOT authors, technical or otherwise, and "Everything we print is written by YOU". At least, it should be!.
Other than that, there doesn't seem to be anything much happening on the computer scene at all. So far as the Group is concerned, there is still a small but unfortunately steady "drop-out" of members, although to some extent this is countered, if not balanced, by people deciding to rejoin after several years on "more modern" machines ..... it's surprising just how many have decided to blow the dust out of the old Dragon and bring it back out of hibernation in the attic!. 586/686 machines have their place, and they do serve a purpose (however badly and expensively), but as a general purpose computer, one that virtually anyone can program, the old Dragon takes a lot of beating, and it can still do a lot of things far more easily than any PC.
Come to think of it, the Dragon has two ENORMOUS advantages over all the PC type computers, firstly, it is totally unable to run Windows, and secondly, it makes absolutely NO money at all for Bill Gates!. Now what more could anyone reasonably ask of a computer?!. Oh well, Now Read On. *Paul G.*

THE EDITORS BIT . . . . . .

So far, it's been a less than enthusiastic response to last time's suggestion that we run PC-based articles in Update, and I can't say I'm particularly disappointed. That's not to say that the extra material wouldn't be handy, of course, but it would be nice to keep Dragon Update as a source of Dragon knowledge as far as possible, whilst there are still people out there who want to read it.
It's not too difficult to write a page of material about the Dragon. Keith Redhead this month admits that he didn't really know what to write, but decided to do so anyway. Some more of this would be splendid... S.W.

PEEKING THE DRAGON(63).MIKE STOTT

28th April 1996 - I finally get round to writing my article. Originally I had intended to start it over Easter but, unfortunately, it is our company's year end on 31st March and, due to software problems which I will explain later, I had to go into work over this weekend. I have finally heard from somebody who has used a Deskjet printer with a Dragon. Mike Townsend telephoned me to say that text is fine (apart from LLIST which prints long lines past the edge of the paper) but he has not yet tried graphics. POKE &H148,0:POKE &H9B,32:LLIST - sends listing to the printer thirty two characters wide which is the same as it appears on the Dragon screen. Do not forget the other important printer poke which is POKE 330,2 - I am always using this one to give an automatic line feed as my printer is shared by the Dragon and my PC. POKE 330,1 turns it back off again. Without this one I would need to alter a dipswitch on the printer every time I changed computer. These and many other useful PEEKS, POKES, and subroutines etc are all to be found in the DRAGON NOTEBOOK which I bought off Ray Smith many shows ago. I think that it is still available from NDUG Dragonart Graphics Library. This is a real wealth of information in an easily understood form. Mike also told me that his DISK DOCTOR suite of programs looks like being a long time before it becomes available but he might release a disk refresh program before then. Hopefully he will write an article about why he considers it useful together with a listing and a disk version will be available on UP2DATE in the future. In the last UPDATE Clive Scott wrote about DYNAFAST, DYNAMISER, and DYNAXREF and Mike mentioned to me that they looked very useful. I was unable to tell him who now has the rights to this software and therefore whom he could purchase it from. Martin Waller from St Helens, Merseyside has had problems with the TV that he has been using with his Dragon and has been in touch with me to see about replacing it with a monitor. If anybody has one that they would like to sell to Martin then give him a ring on 01744 - 810196. I will now tell you about the software problems that we have hit at work. It is not Dragon I know but it will help fill my article. We use PEGASUS accountancy software at work and used to have the main program files on the hard disk in their own directory. All data files were kept on three separate floppies. One for Nominal, Wages, and Purchase Ledger. A second for Salaries and a third for Stock Control. Although everything is slower using floppy it has been a perfect system allowing me to write down our many stock items every six months as all the information was on a separate floppy disk. The latest version of PEGASUS will no longer allow this and has everything within one directory on the hard drive. As many reports for wages and salaries had the same name one of them obviously had to have their's changed. Backups then became a problem. Before we used to backup onto the hard disk to subdirectories of the main PEGASUS directory. Now we have to select only data and report files to backup to floppy as the directory is now massive. The batch file we now use for the backup is rather unwieldy despite using the *. format for many of them. I am now forced to write down the stock before anything else can be done on the computer and this took me three whole days over Easter. Also I cannot work on year end data on one floppy and current year on another. Why cannot software companies carry on supporting what they have done for many years?. I doubt that there is much more programming to do to give a choice of drives to select for the data to be read from and written to, and surely it was already there in the original program. This was only an update (albeit fairly major) and probably caused more work than if they had left this part the same as before. Software Companies and writers now do not care about what the customer wants. Take WINDOWS, have you ever tried to get a modern version of a piece of software that will run under DOS. All you get told is "Nobody uses DOS now.", WELL I DO!. I can control my computer better under DOS using my numerous BOOTUP disks with varying AUTOEXEC.BATs and CONFIG.SYSs. Soon WINDOWS95 will be the only operating system that is supported by software and I do not look forward to this at all. By the time a computer boots up into WINDOWS95 I can have my DOS machine running and have the job completed.

I know some of you think I am exaggerating but believe me I am not!!!.

Machine Coding(4)...Tony Shellard

Believe it or not, SCNINV6 runs at double the speed of SCNINV1!

```
*     SCNINV6
@     LDX     <$BA    *Start of screen
      LDD     £$F400  *Complement of size
LP1   COM     $01,X   *COMplement one byte
      COM     ,X++    *and increment
      INCB            *Increment counter
      BNE     LP1     *Include carry
      INCA            *to A register
      BNE     LP1     *Branch if not done
      RTS
```

This wunderkind combines the advances of programs 2,3 and 4 by using auto increment indexed addressing, halving iterations and counting to avoid CMPs. It runs twice as fast for an extra 4 bytes. Note the counting 'up' to zero to simplify counting: no carry/borrow needed.
No 6809 series would be complete without mentioning Direct Page addressing, so here's SCNINV7:

```
*     SCNINV7
@     LDA     <$BA    *Start of screen
      TFR     A,DP    *DP = first page
      LDB     £$18    *Initialise counter
LP1   COM     <$00    *COMplement byte
      INC     LP1+1   *Increment pointer
      BNE     LP1     *Page done ?
      INCA            *Increment page
      TFR     A,DP    *Update DP
      DECB            *Keep count
      BNE     LP1     *Not done yet
      TFR     B,DP    *Zero DP
      RTS             *Finished
```

The concept of direct addressing is an extension of the zero-byte mode available on less advanced processors. In theory it allows more efficient execution by saving a byte of memory, and therefore a clock cycle, for many instructions. In this example only a small speed advantage is obtained for a large increase in size and complexity. The reasons for such mediocre performance are related to the limitations of the DP register itself. Firstly, it only gives access to 256 bytes at a time, so the above routine spends a lot of effort keeping it updated. Secondly, accessing the register itself is restricted to TrannsFeR and EXchanGe instructions which are compact but slow. This evidently undermines the savings.

SCNINV7 minimises these overheads quite effectively: the A register holds the DP value between increments, minimising costly TransFeRs. Since the routine terminates when B=0 we inherit a handy zero to restore the DP register to, which must ALWAYS be done before returning to BASIC. If you use the DP register elsewhere, you must save and restore the value, remembering to change the LDA <$B7 instruction to the extended addressing version, LDA $00B7.
Direct addressing is best used on blocks of data less than 256 bytes with the Direct instructions within and the DP adjustments outside the most deeply nested loop in order to multiply the savings made. SCNINV7 is not position independent - next issue reveals why this is and how to make is so. Don't you just love cliff-hanger endings?
+++ Please note that all £ signs in these listings should really be read as #

Programmer's Utlities.Clive Scott

Here is a review of a utility program, originally marketed by Compusense on cartridge and disk which is an invaluable aid to the serious programmer. The Dragon has never been over endowed by utilities, unlike IBM PC compatibles, so if you see this on sale secondhand I can highly recommend it. My reviews are based on the disk version.

EDIT +

This product comprises the screen utility HiRES, which was available on its own, and Edit +, a full screen editor for BASIC programs.
HiRES uses a special character set to produce a 51x24 text display on a mode 4 screen. The display, similar to TeleWriter, can be shown as black type on green or buff backgrounds, or inverse.
A PRINT ! in place of the normal PRINT@ command (which can still be used for the 32x16 display) gives access to all 1224 print positions. Various foreign character sets can be selected by extensions to the CLS command. Text can be freely mixed with graphics. HiRes is not as versatile as Rainbow Writer and when combined with EDIT+ consumes considerably more memory, but it is worth it for the screen editor which is a vast improvement over the Dragon line editor. Type EDIT and the screen will clear and the BASIC program in memory will be displayed.
The CLEAR key is used in combination with other keys to select the various options of the program. Auto repeat is implemented for easier movement around the screen, which is by means of the cursor keys. The screen, unlike a word processor, will not scroll when the cursor reaches the bottom of the screen, but it can go up a screen at a time, or jump to a specified line.
The default mode is overwrite, but although insert can be selected it will return to overwrite when an alteration is confirmed by pressing ENTER. Inserting into a long line can be slow, so it pays to extend the line first. If too much text is entered into a line (maximum 255 characters) it will beep and show an overflow marker. New lines can be added or old lines deleted.
Characters can be deleted individually at the cursor, or from the cursor to the end of the line. Single or blocks of characters can be copied by placing markers and then inserted elsewhere in the program or moved by deleting the old block after the copy has been made. Markers will remain for further copies until removed.
The program can be searched for a specified string of characters, which can be selectively replaced by an alternative string.. This is ideal for changing variable names
I find the whole program indispensable for developing programs.

PC Article In Update Shock!

Ain't biros brilliant? You can write things down. Like notes and letters to the milkman and loved ones. With some you can even write on keyboards and VDUs.
Ain't MicroSoft Word brilliant? You can write notes and letters to people you don't like. And they wouldn't know you're a milkman. You can even edit programs; like MS-Write.
If you load up MS-Write execute file into MS-Write, with 'no-conversion', you can replace all references to *.WRI with "." (star dot star space space). When you've saved it (say as Rite.exe) when you next run Rite.exe the open file option will automatically list ALL files. No matter what the extension. Now ain't that brilliant?

Alan Greenwood (although idea stolen from Mike Hardaker [thanks Mike])

HenceForth 23...Bob Smith

Paul's informed sources were right! Some time ago, just before putting the finishing touches to some material for Update, I was out on a clear winter's night with my Woolworths binoculars trying to discover some comets before the Japanese did when -whoosh- I was sucked up into a strange craft peopled with beings I had never seen before. In a short space of time we were landing on an alien world where I was whisked off to a large forbidding building. Suddenly I entered a room full of small, beautifully engineered computers. A vacant chair was indicated and I sat down to a familiar keyboard even though the key symobls were different. I looked at the logo, and some quick key strokes produced the word FORTH. With little hope I pressed Enter, and to my amazement a Forth editing screen came up. I repeated this with BASIC, FORTRAN, COBOL, C, etc, but only got error messages. I then realised I was on a perfect world. By this time, my hosts had produced an interpreter and he explained that they had culled the universe to find the computers and systems that were best suited to their needs. Their problem was that the Forth system they had acquired was based on the decimal system and their numeration was base 7. Could a program be written to do everything to base 7? "In Forth," I said, "nothing could be simpler. Just write 7 BASE ! and the job is done." After giving them some facts about Earth, like there being 10 days in a week, about 42 hours in a month, and 1031 days a year, they smiled and told me they had 6 days in a week, 6 weeks in a year, and their planet took 6 years round their sun, and then arranged for me to be returned to Earth. (If you want to check my figures, you'll have to invest in John Payne's Forth. It takes about 30 seconds. If you want to use any other programming language or Windows it'll take you a bit longer!)

Do you like word plays? Do the words FIZIGIN, SOKANOZ, or LIVITUP do anything for you? If so then you might like to try programming and playing WOTAGEM, based on a suggestion I first read about so long ago that the details are lost in the mists of time. The original proposal was to employ a computer to simplify the naming of organic chemical compounds, which tend to have difficult names like 3-trihydroxybenzene. These names are precise and meaningful to an organic chemist, but are veritable tongue twisters - even to organic chemists. The proposal to use a computer was based on the fact that one can always pronounce a word where the consonants and vowels alternate. Such a system to generate random names where the first letter is always a consonant and consists of seven letters would enable to computer to name some 34000000 organic compounds. This proposal was never adopted, but it gave me the idea of at least seeing what the computer would come up with, using its uncritical, mindless randomness (NOTADAM). The program I came up with produces 10 NOMONEMs, and then writes them out for private study. A gentle key touch then produces 10 more, and so on DACAPOS. The procedure is very simple. Two tables are built into the program, one containing all the consonants, the other all the vowels. Two randomising subroutines are used to generate numbers in the reanges 1-20 and 1-6 respectively to get first a consonant and then a vowel. A counter to stop the program with a question after ten loops is enough to get you started. Your first ten tries may not produce more than WOTABOR, and you will begin to think of restrictions to exclude unpromising combinations of letters. A word of warning here: do not totally exclude any letters or combinations, rather use a weighting process to reduce certain chances. You never know, the GEMOGEN may lie exactly in the least promising area. The process I used is very simple. Each letter receives a percent weight (1-100) and each time a letter is generated a random number is also generated in the range 1-100, and is this number is greater than the weight number then the letter is not used, and the computer tries again. If you ever demonstrate this program publicly, remember the computer can produce any combination of letters. This can be embarrassing if interpreting the innocent NOMONEM to be a meaningful but obscene, racist, anti-religious, etc, slogan. It might save a lifelong friendship if you exclude letter combinations such as DGO, FKU, and the names of your friends that can be NOMONEMised e.g. TOM, DIK, HARI.

Sorry, but there is no room for the program this time, so why not try writing your own. My version will appear next issue.

Dragon Graveyard.Martin Waller

Back in the heady days of a thriving (well, sort of) software market, Dragon users were treated to quite a number of top quality pieces of programming by authors who have now gone on to much more profitable sectors of the industry. Picture the time when companies such as Quickbeam, Wintersoft, Incentive, and MicroVision were releasing the stuff that many would regard as their best, their pinnacle, their piece de resistance. Yet as everyone remembers, these would soon follow many other as the profitability of the scene rapdily disappeared. It's always seemed a pity to me that these people were unable to release any more software, although at the time, just before they closed, they were apparently still planning, and indeed in many cases drawing to a finale, many projects that would never see the light of day for a ravenous Dragon public, hungry for more stuff. Some of these projects would perhaps be glimpsed at a show, as a secretive programmer rapidly whipped away the demo disc before anyone could really get into it, cruelly whetting the appetite of many a spectator. Many would hear through the grapevine of an exciting advancement in game technology, bigger, faster, more challenging, and this was all well and good for everyone concerned. There was, however, a disappointment on a few horizons. As the companies began to vanish, software was left stranded in some mythical space, a software graveyard, where tortured programmers would wail and curse the death of their beloved creations. I've wondered for many a time just how and where this graveyard might be, and by resurrecting the names of some of its members, maybe someone will perhaps hold the key.

The first of these poor souls was perhaps one of the most eagerly awaited games in the history of the Dragon. If you were heavily into adventure gaming, and probably still are, then you will be familiar with Juxtaposition: Barons of Ceti V, an absolute classix of its type. This game was hugely successful any immensely popular, and Wintersoft, its creators, promised a sequel, Usurper Of Rune. The release date was set, and all eagerly awaited the game. However, we were then told that this would have to be extended, as there were problems getting everything to fit into the memory. This didn't seem too serious, though, as it did suggest that the game was all but completed. The problem must have been bigger, though, as the game was still not released over a year later, and things began to look doubtful. It was then announced that Microdeal were buying out Wintersoft, and the release of J2 was nevermore. I'd love to know if anyone can shed any light on the game, and let us know if it was ever completed; is it buried in the graveyard, or is it still roaming the Earth in some programmer's old disc box?

The second piece of software that was prophesied as being great without ever being released was a game from Quickbeam called Metal On Metal. I definitely remember this game as it was shown by someone briefly at an Ossett show, and was a shoot 'em up in the memorable PMODE3 style of Quickbeam. I think it was the work of Dave Gibbons if I remember correctly, but once more, it was shelved when Quickbeam decided to call it a day. Does it rest in peace?

The third and fourth pieces were games touted as The Talisman and Timelord. These were supposedly to be released by MicroVision and Incentive respectively. I think that they were of a similar vein in that they were both arcade/adventure types. However, not much was heard of these two after their initial coverage. It would be brilliant if someone knew where Roy Coates actually got up to in Talisman. Timelord, I feel, is well and truly buried in the graveyard, as I don't recall any of the people who worked with Incentive, but maybe someone out there knows something...?

In conclusion, then, I'm sure that the graveyard has many more members, all of the languishing somewhere out of reach. There is that small chance, however, that one or two might just be retrieveable, and wouldn't it be great to see one of these games in all its glory, even if it is seven or eight years too late!

On a similar note, if anyone has any copies of either the 'Mysterious Adventure' and Scott Adams adventures, I'd be interested in buying/borrowing them...

Lateral Thinking.Keith Redhead.

The sharper eyed amongst you will have noticed that Paul and Stephen occasionally make plaintif suggestions along the lines that somebody out there should write something for Update. Now if this is meant to hurt us in our collective conscience then I must confess that in my case it works very well, and I would answer the call if only I wasn't pretty sure that anything I might have to say hasn't already been said by others far better qualified to say it.
On the other hand, if I can't actually write a decent article then I am willing to risk making myself look a complete prat by way of indulging in a bit of lateral thinking regarding accessing disc drives whilst in 64K mode and using normal Dragon (Microsoft) BASIC.
We all know that the Dragon suffers from the (to me at any rate) serious drawback that EXECuting into 64K mode means saying goodbye to your dsic drives and having to rely instead on tape. Yes, I know that BASIC42, OS9, and Flex all make use of the full 64K of RAM in their various ways, but the point is that as far as I can see, you don't actually get any more BASIC memory to program with. BASIC 42 provides the user with the same amount of programming space that he would normally have, without the options of creating more by getting rid of the graphics pages with PCLEAR1. OS9 and Flex appear to be better with 48K of user memory, but that's only until BASIC09 or DBASIC is loaded in, whereupon we find ourselves back with about 22K again. OK, I will anticipate Paul's rejoinder that this ought to be sufficient if care is taken to write economical and efficient code; I agree, but notwithstanding, there are occasions when having 48K available for BASIC programming PLUS the use of the disc drives would be very nice, thank you.
In contrast with other home computers, there is very clearly an enormous user benefit inherent in the design of the Dragon 64 insofar as it is fully compatible with the Dragon 32. In spite of this, it has always seemed a pity that this compatibility had to be bought at such a high price, and I have often wondered whether things couldn't have been managed somewhat better.
Well, here's where the lateral thinking comes in. Or question, rather, which is, has anyone ever considered the possibility of designing an auxiliary circuit board incorporating an alternative DOS that could be accessed whilst in 64K mode via either the tape or RS232 sockets? Initially, I had two major problems to overcome; 1) replacing the cassette handling routines in the appropriate part of BASIC RAM (FF00-FF5F) with a new routine to convert tape i/o commands to DOS compatible ones, and 2) finding a way to pass between the Dragon and the new DOS via one of the existing sockets - or perhaps both could be pressed into service? Frankly, I don't know if the idea is remotely feasible; I suspect not, otherwise it would most likely have already materialised. But if there is any mileage in the idea, perhaps we can expect to see something develop from it. If not, please use simple language when explaining why it can't be done.

++ I'll expect at least three fully exlanatory articles, complete with circuit diagrams, component lists, and photo-etch patterns to arrive in ample time for inclusion in the next Update .... a couple of working prototypes for evaluation and review purposes wouldn't come amiss either, so don't just sit there, Keith has given you a hardware project to design, and you ought to have it half way completed by now ....!. Paul.

OK, You asked for it!.

About a dozen of you took the trouble to reply to my request for views on whether we should include some PC type material in Update ... not a lot, but I can only judge from what I get, and in all cases that was a rather reluctant ""YES", with the general condition that this material should be limited and not be allowed to "take over" from the Dragon side of things. So be it. You can now write us some PC "Hints & Tips as well as the Dragon material!. Start writing!!. *Paul Grade.*

Dragon e-mail List. Graham Kinns.

HOW DOES IT WORK?

The list operates on a simple mail forwarding basis - messages sent to the list addresses are received and then automatically distributed to all the list subscribers. The list runs from my dial-up account, so there may be a delay of a day or two before the message is forwarded on - anyone who is on the list and sends a message should receive a copy of their own message back at approximately the same time as everyone else on the list gets it.

HOW DO I SUBSCRIBE TO THE LIST?

Send an e-mail message to dragon-list-request@grempc.demon.co.uk with the keyword "subscribe" in either the subject line or the body of the message. Please ensure your mailer is correctly configured with a full working e-mail address - if you want Dragon List mail to be addressed to an alternative address, set the Reply-to field accordingly or include the preferred address in the body of the subscribe message.
When the subscription has been processed, you will receive a welcome message with confirmation of the e-mail address that list messages will be sent to, and some details of how to use the list. Also included are pointers on where to obtain the Dragon emulators, the CoCo mailing list, and Usenet/Netnews newsgroups where Dragon/CoCo/6809/OS9 related material is occasionally discussed.

WHO ELSE IS ON THE LIST?

At the time of writing there were 46 subscribers to the list, around half in the UK and half from countries all around the world. A list of subscribers is automatically maintained and can be retrieved by e-mail; details of this are given in the Welcome message - there are more than a few names on there that Update readers should find familiar!.

WHAT GOES ON ON THIS LIST?

Anything Dragon related is more than welcome - emulators, games, hardware, 6809, CoCo, OS-9, etc.

Finally, I'm happy to provide further information or answer any queries (or any general Dragon/PC/'Net related questions) by e-mail to the address below.
GRAHAM E.KINNS GEKinns@IEE.Org

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MORE BOOKS REVISITED. R.A.D.

6809 MICROCOMPUTER PROGRAMMING AND INTERFACING. by Andrew Staugaard,Jr.
Published by Blacksburgs. £12.oo. 270 pages.

This book is meant to be a tutorial for first experience of the 6809 or other high performance devices in general of that era. However, it is assumed that the reader has an understanding of the fore-runner, the 6800. Each chapter starts with a set of objectives, followed by review questions and answers. The text is illustrated with numerous examples demonstrating important software concepts. There is a chapter on the 6809 addressing modes, of which there are 19, and understanding these is stated to be the secret of the 6809 software concepts. The four appendices include some Motorola Specification Sheets and a summary of the instruction set. Not a volume for the tyro.

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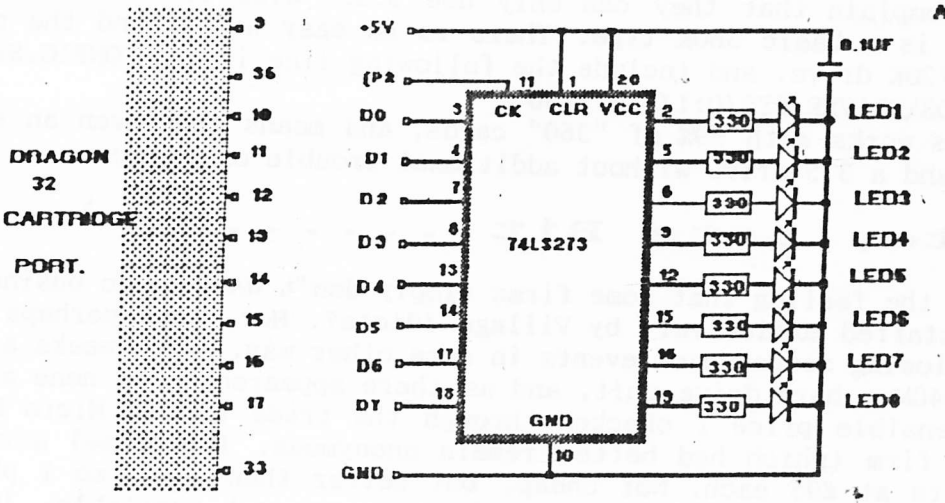
A SIMPLE DRAGON OUTPUT PORT.

By Mike Collings.
Using Windows Paintbrush.
April 1996.




```
PROGRAM TO TEST OUTPUTS.
10 REM OUTPUT PORT TESTER
20 INPUT D
30 PRINT D
40 POKE 65360,D
50 GOTO 20
```

```
INPUT VALUE 0 = ALL LEDS OFF
"     "   1 = LED NO.1 ON
"     "   2 = LED NO.2 ON
"     "   4 = LED NO.3 ON
"     "   8 = LED NO.4 ON
"     "  16 = LED NO.5 ON
"     "  32 = LED NO.6 ON
"     "  64 = LED NO.7 ON
"     " 128 = LED NO.8 ON
```

The eight L.E.D.s indicate the Binary equivalent of the decimal input number.

Consider LED 1 as value 1
" LED2 " 2
" LED3 " 4
" LED4 " 8
" LED5 " 16
" LED6 " 32
" LED7 " 64
" LED8 " 128

By adding the values of the various LED's together will give the equivalent decimal value.

This circuit is only useful for single step control but nevertheless offers many possibilities of output control ,especially if the LED's are replaced by logic gates arranged to decode various data combinations.

****

Johnny Brown .....

I've just been informed that Johnny Brown, of Falmouth, died suddenly on 27th.April. Even after a serious accident a couple of years ago, Johnny continued to help a lot of Dragon owners, and was a much valued contributor to Update, and his death will be a sad loss to all his many friends on both the Dragon and Amateur Radio scenes. I have no further details at this time. Paul Grade.

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If I Must ..... Paul G.

Well, if we are to include some PC material, I suppose I might as well start things off with something simple. Some owners of more ancient PC machines (XT/1512 etc) complain that they can only use 5.25" disc drives because their controller card is a basic 360K type. There is an easy way around the problem, just fit a 3.5 720K drive, and include the following line in the CONFIG.SYS file

DEVICE=C:\DOS\DRIVER.SYS/D:1/N:9/T:80

You'll find this works with 99% of "360" cards, and means that even an early XT can run a 5.25 and a 3.5 drive without additional trouble or expense.

The Late, Late Bit ....

Do you ever get the feeling that some firms simply don't WANT to do business?, or that they are staffed exclusively by Village Idiots?. No?, then perhaps you can explain the following sequence of events in some other way. A few weeks ago I had to purchase a 540Meg hard drive unit, and as there appeared to be none available locally at a sensible price I checked through the trade ads in Micro Mart and found a London firm (which had better remain anonymous, I suppose) advertising second-hand units at £95 each. Not cheap, but better than some, so I phoned to check that they actually had some in stock. Yes, several available, just send cheque and order ... so I did, and sat back to await delivery. Sure enough, about five days later a package arrived containing a disc drive, a Seagate disc drive ... with the type number label missing completely!. This could have been quite a problem, as most computers like to be told what they are getting stuffed up 'em, so I decided to try a diagnostic routine on the beast before actually configuring .... and promptly discovered that the alleged 540 Meg drive was actually a 210 Meg, which wasn't quite what I'd ordered or paid for!. Phone firm and enquire politely what they intend doing about it. Firm says to send the thing back and they'll check it themselves and if incorrect send the right one. Enquire as to which branch to return it to and am told "the address on the invoice". OK, spend four quid on recorded delivery postage and send it off to address on invoice. Wait. Wait some more. Wait ten days and phone firm again, only to be told that "we can't find any trace of it, are you sure you got it from us?". Assure than that I did. "Which branch did you return it to?". "The one on the invoice, as directed". "Which one was that?" ... explain, and read the address back to them ... "Oh you shouldn't have sent it there, it should have gone to mail order, I'll check and phone you back." Two hours later, firm phones back ... "We've found it, but the covering letter is missing, the branch you sent it to must have kept that when they sent the drive on to us ... why did you send it back?". Explain, at great length and much detail, that one of their performing monkeys had sent the wrong unit, that I'd paid for the right unit, and that if it failed to arrive here VERY rapidly someone at their firm had better renew their BUPA subscription as getting it back from where I'd stuff the thing would be a very expensive and painful operation!. "Oh dear, hold on, I'll check". Much bleeping, clicking and crossed lines later moron returns ... "We don't seem to have one in stock at the moment ... what should I do?". Resist temptation and offer no suggestions!. "Look, if you don't hear anything by Friday, phone again and give whoever answers a bollocking, OK?". "Right, I'll do that, what name should I ask for?" .. "Johann .... Oh!". OK, will phone you Friday!". On Friday morning, one disc drive arrives, a 540 Meg Quantum, this time covered in no less than EIGHT stickers signed by various "testers", a warranty slip, and sundry other paperwork, and incredibly it both worked and turned out to be precisely what it said on the label!. OK, so eventually I DID get what I paid for, but the messing around involved was totally unnecessary and something I could well have done without. Personally, I reckon the firm doesn't WANT to do business, so employs village idiots in an attempt to discourage potential customers .... or have you a better explanation?. OK enough of this waffle. I KNOW this issue is two pages short again, but the reason is the same as before .... you forgot to write them!. P.G.

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