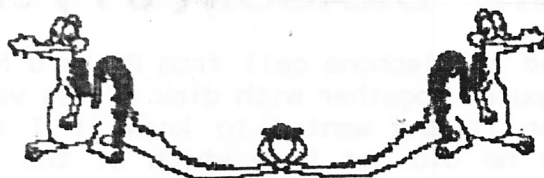


The Newsletter of the National Dragon User's Group

DRAGON



UPDATE

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THE GAFFER'S BIT

Yes, still here!. A new year, probably a new Government soon, new restrictions, new taxes, new bills ... but the same old NDUG!. Odd, isn't it?. Surprisingly, we still have a lot of the same old members, too, dedicated masochists all, but I can quite see why so many still keep plodding away with the old Dragon even when surrounded by Multi-Meg Multi Media Auto-Catflap and Coffee-making PC machinery with the Dragon it's still a simple matter to write a routine to handle any particular job you may want to do, but attempting the same thing on a current PC is such a major operation that it's usually less painful to write a cheque for some grotty commercial package than to attempt to write anything yourself. Sure, the PC has its uses, typing this stuff in is one of them, if only because my PC has a long, long keyboard lead which means I can do this sitting in front of the fire instead of putting various portions of the Gaffer anatomy at risk from frost-bite in order to use the Dragon, which is parked on the desk in a freezing corner of the room ... a distinct advantage, but other than that the PC has little to recommend it, and is definitely not a machine about which one can get enthusiastic ... a boring beastie that runs even more boring software.

Which reminds me occasionally, one or other of our remaining members fails to renew his or her subscription, and simply disappears without trace or explanation, which is a bit worrying from this end of things one is left wondering whether we said something that will result in their seconds appearing on the doorstep, or whether we've bored them to death, or they've simply given up due to lack of interest, funds, time, breath, or whatever so should any of you be contemplating a disappearance from the Dragon scene do please consider providing a word or two of explanation first, it really would be appreciated.

However, as it looks as though the old Group is going to be around to haunt you for at least another year (barring disasters) I hope you'll continue to stay with us your subscription money should be safe for a while yet!.

So, we're still here, hopefully you are too, which means that all we need is your subscriptions, and some material to print in Update think you can manage that?.... Stephen is suffering from acute Editoritis at the moment, caused by severe article deficiency, so help us find a cure before his condition deteriorates into terminal bad temper!.

Paul Grade.

The Editor's Bit . . .

I wish I could say that the new year has already brought us joy and good tidings and a mail-load of new material, but sadly not. New Year, Old Update.

Thanks to those of you who have sent stuff in recent weeks, there is just about enough to fill a slimline Update this time, but as for the rest of the year, who knows? Perhaps 15 years is enough for the beige (32) or grey (64) beastie, and it should be retired to the back streets of Port Talbot to be left in peace...?

SW.

PEEKING THE DRAGON(67) .MIKE STOTT

A short while ago I had a telephone call from Richard Major from Northampton who had acquired a BBC computer together with disk drives very cheaply. He was trying to obtain software for it and wanted to know if I could help him with this problem. Unfortunately he did not know which of the many models that it was. Eventually we managed to work out that it was a BBC B that had had the disk filing system chip replaced at some stage. As many of you will remember this was one of the earlier models and was one of the choices I was presented with when I first bought a computer, together with the VIC20. My wife, who is a schoolteacher, still has access to some software for the BBC B but unfortunately it is all for young infant children. Our local Education Authority, in it's wisdom, has closed down the department which used to co-ordinate the software used in the Borough so it is now difficult for schools to keep in touch with each other regarding computer software. The larger schools have now moved on to PCs almost completely and small schools like my wife's have been left very much out in the cold. Anyway back to the original query; has anybody got any BBC B software on disk that Richard could get a copy of or does anybody know where any can be obtained?. The AMS at Stafford would probably have been a good choice. I did not know about this until after I had been at the show so did not look around for any. I know that quite a few of our members have access to several of the older computers so I am sure that at least one of you will be getting in touch with me with help for Richard in this matter. By the time you read this details of the new PC processor should be known. I have heard that it will be called the MMX and will be particularly useful for improved graphics. One person even told me that everything is going to be on the one board and the master chip will then send the information to the graphics chip, processor chip,, sound chip etc instead of having everything on different boards. (Sounds just like a Dragon to me!. Paul). The PENTIUM and PENTIUM PRO did not last very long did they?. I bet a lot of people spent a lot of money in the January sales buying "the latest Pentium technology" only to find it will soon be out of date and they will soon be able to buy the same systems for about half the price. At least we only had to change from DragonDOS to SuperDOS!!. As it is getting difficult to find anything new to write about I thought I would fill out this article with some reviews of old programs. MODULE MAN (MICRODEAL) - The graphics in this program are very basic indeed but it was one that I always enjoyed putting on. You steered your hero from the top of a castle where the king sat on his throne and went from screen to screen looking for the sword. On the way you came upon other treasures which were of use to you in gaining access to certain locations. Various creatures were placed to stop your progress and you had to shoot them before they killed you. Most screens were entered through doors or up and down ladders although there were a couple of hidden places. The treasures were placed in a number of differing locations so you had to search for them. When you returned the sword to the king you were rewarded with a "firework display" and then off you went to find it again. Very basic looking back, but good fun to play for all ages. MAGBASE (PSE) - Over the years I have found this program to be invaluable. It is a database for magazine articles etc. My copy came with completed databases for DRAGON USER and UPDATE up to the date that I obtained my copy. It was very handy to search for articles in my two favourite magazines rather than thumbing through all the copies. For instance I did a pattern search in Dragon User for printer. Loading the records took only a short while and I was soon told that there were 37 records. Using the keyword search after this using EPSON I was told that there were 4 records and which of the 37 contained my keyword. The records show ARTICLE SUBJECT, EDITION, PAGE, and BRIEF DETAILS so with all this information it is an easy matter to turn up the relevant articles. It is easy to add on each edition of the magazine as it comes out so you can keep up to date with Update. It can be used for any type of magazine so you can use it for all your hobbies if you have time to spend on anything other than computers. I am afraid that I have never added to the databases that came with it although I kept scrounging more up to date versions off Brian O'Connor.

The Price Is Right...Clive Scott

We have all read about the horrific cost of modern computers - I have been guilty of saying the same myself, so I thought it would be interesting to take a rational view on the subject.

For the article, I have taken my original Dragon system, complete with 14" colour television, single Dragon Data floppy drive, and an OKI 7 pin printer bought in August 1982. I have used complete systems to make them comparable: £809.00

My second system is my Acorn Master 128 (since sold to a school) complete with medium resolution colour monitor, twin 80 track 5.25" drives, and Panasonic 9 pin printer bought in March 1986: £1,119.00

Thirdly, a Packard Bell 286 system, complete with 3.5" and 5.25" drives, 40 mb hard disk, VGA screen, and 24 pin printer from 1990. I never actually bought a 24 pin printer, but this allows for the progression in technology: £1,043.00

Lastly, a system based on a PC advertised by Tiny Computers; a 100MHz Pentium PC with 3.5" drive, 1.2Gb hard disk, 6 speed CD ROM, soundcard and speakers, and SVGA screen. To complete the system I have included a Hewlett Packard 5L laser printer: £1,221.00

If you adjust the above figures to today's terms, using the retail price index for the time of purchase, you get the following:

Dragon 32: £1,512

Acorn 128: £1,772

Packard Bell: £1,228

Tiny Computers: £1,221

Lo and behold, the Pentium is the cheapest! had I used the average earnings index, which almost always outstrips the RPI, the figures would have been even more dramatic. Apart from the processor, which is light years ahead of the Dragon in speed, it is also highly specified with a full multimedia kit, enormous hard disk, and a high resolution colour monitor.

It must be remembered, though, that £1,221 is still a hell of a lot of money and it has to be paid all at once. The Dragon could be used on an existing television with a cassette recorder which I already had for playing music tapes. The other items were added later. To a large extent you don't have that option with modern computers, it is all or nothing. You can also pay far more if you buy well known branded makes and, of course, the software can be far more expensive.

BJ-10SX Scr.Dump..Gareth Tuttiett

Notes:

10 sets line spacing to 20/190" (1/9")

20 Loop to get each line down the screen of data

40 Set single density mode (192 being the y axis length on the screen)

50 Get location of each block of data starting at PMODE4 graphics memory address - &HC00 for DOS users, &H600 for tape users

60 Collect and print a row of data

70 After one row, do a CR/LF and pick up next row, until screen finished

100 Reset back to default 1/6" spacing (30/180")

Note this program has not been tested in IBM mode or on any other BJ-10 model.

10 PRINT&-2,CHR\$(27);"3";CHR\$(20)

20 FOR I=0 TO 31

30 'SET SINGLE DENSITY GRAPHICS MODE

40 PRINT&-2,CHR\$(27);"K";CHR\$(192);CHR\$(0);

50 K=&HC00+I+191*32 'USE &H600 FOR TAPE SYSTEMS

60 FOR J=0 TO 191:PRINT&-2,CHR\$(PEEK(K));:K=K-32:NEXT J

70 PRINT&-2:NEXT I

80 'RESET TO 1/6" LINE SPACING

100 PRINT&-2,CHR\$(27);"3";CHR\$(30)

110 END

From Jon Bird...

So, here are some thoughts which may or may not form a coherent article based mostly around some questions raised in the last Update, and the fact that almost every bit of software I've tried to write recently has gone stupid.

Sound Inputting: IO locations \$FF20, \$FF28, \$FF30, \$FF38 are all from the same place, the PIA at \$FF20. The others are just echoes in the address map. You'll find the same thing occurs at \$FF00 to \$FF1F for the other PIA.

The bottom bit is described as the cassette data bit input and is used during cassette loading to determine the frequency of the sound applied to the port and hence if it is a logic bit 0 or 1. According to "Inside The Dragon" a 0 is represented by 1200Hz and 1 by 2400Hz.

OS9 Startup Files: calling the command line 'login </term' from the startup file can turn out to be wasteful with memory and depending on what you are doing with OS9, memory can become scarce very rapidly. It can be quite helpful to look at what's in your startup file if say the C compiler throws up out of memory messages or documents won't load fully into Stylograph. As an example, running 'mfree' (memory free) and 'procs' (no. of active processes) on my system gives:

Usr	£	id	pty	sta	mem	pri	mod	address	pages
0	2	0	act	3	Shell			0800-B3FF	172
0	1	0	wai	1	SYSGO				
									total free 172 = 172*256 = 43K

However, running the startup script with printer and login gives 0E00-AEFF free, total 161, leaving $161*256=40.25K$, a loss of nearly 3K for very little gain, and a number of obsolete Shell sessions active in memory. It's best to avoid calling things that load up into memory as part of the startup script - this also avoids fragmenting the memory up into smaller (and often useless) chunks.

Windows/smartdrv: If you remove smartdrv, everything is great. The normal result is that Windows thrashes around on your disk and most things run 14 times slower. You may get a better result by reducing or even eliminating the Windows swap file, although you may not be able to get away with this if you don't have a lot of memory.. That great big hidden file is in fact the swap file, and far be it from me to defend Windows but it's only there if you selected a permanent swap file (which you can easily change back to a temporary one) or if the things crashed out and didn't get a chance to delete it. Obviously, the solution is to stick 5Gb of memory on your machine and no problem.

Finally, the question was raised 'can you run a VGA monitor from a D64?' I would guess no, sounds overly complicated and what would you get out of it? I strongly suspect the Dragon isn't anywhere near fast enough to manipulate a 1or 2Mb video card sufficiently well to be usable. On the PC-Dragon subject, I have some software which links a Dragon-PC together via parallel ports. In brief, it uses a Maplin IO card on the PC and an extra PIA on the Dragon, and allows OS9 to use the PC's VDU for display (text and graphics), hard disk, and easy interface to MSDOS files and devices through standard OS9 commands. Feel free to drop me a mail: jrb@delphi.com or 01424 210652 after 6pm.

+++ Just one small point, Jon, re the Win "swap file" you're forgetting that a lot of people are still running 3.1, which unlike 3.11 etc. doesn't give you the option of selecting permanent or temporary or even of adjusting the size allocated. Personally I always cut down the file size to an absolute minimum whenever possible anyway but far too many people have bought machines with Win Something-or-other already installed, (or if some of the machines I've seen are anything to go by, thrown onto the drive!) and wouldn't dream of attempting to change a setting even if they knew how to!. It's like telling someone to edit the redundant garbage out of Win.ini or System.ini horrified screams of panic are the usual reaction!. Oh, and you're wrong about Smartdrv ... try it sometime, on a typical small h/d 386 or SX25 with a max. of 4Mb RAM!!!. Paul.

PC Batch Files...Mike Townsend

Yes, I run a PC as well as my Dragon. I can't program the PC but I do enjoy writing Batch Files - which is the nearest I've come to basic - QBASIC is well beyond my grasp. It's very useful to be able to run regularly used routines from batch files that have a single character name. This saves lots of typing by using just 2 key strokes instead of having to change drives, access a subdirectory, operate another file etc. Even a simple command like 'go to root directory' - CD/ <enter> - is just 4 strokes.

```
@CLS @CD/
```

The @ just says "don't echo (print) to the screen". An alternative is to start every batch file with @ECHO OFF but this is 9 characters in length and I only use it in longer batch files. You can also add a DIR command on the end if you wish. To write it, type COPY CON R.BAT <enter> - COPY the CONSUL (keyboard) to a file called R.BAT.

```
@CLS
```

```
@CD/^Z - control Z is obtained by the F6 key.
```

The ^Z bit terminates copying of the consul and saves your file. All these batch files should be located in a directory that is in your path - in my case it's my UTILS directory. You may need to EDIT this directory into the PATH in your AUTOEXEC.BAT file e.g. PATH=C:/DOS;C:/WINDOWS;C:/UTILS - the "=" can be replaced with a space in DOS 6.x. Gaining access to such a regularly used directory is easy with a batch file. I use U.BAT to send me there from wherever I am

```
@CLS @C: CD C:/UTILS
```

The next two batches are very useful for selective directory listings. They are written with <MS-DOS 6.xx in mind so an earlier DOS may not have the "/A" switch (show files with all attributes, including system and hidden files) so you may have to miss this bit from L.BAT.

```
@CLS
```

```
@DIR %1.* /P /A
```

When you use /P after a DIR you get one page full of files at a time, as in SuperDOS. The %1 is a variable and picks up anything you type after L. Just L <enter> acts as a DIR /P /A and lists all files in the directory, but L ST* <enter> will only list files that start with ST. The ? is a wild card for one character so L ST??? will list files starting with ST with names of only 5 characters long e.g. START.COM. But how do you locate a file with a specific extension?

```
@CLS
```

```
@DIR *.*%1 /P /A
```

X <enter> will only list files without extensions; X B* <enter> will list all files with extensions starting with B, such as s.BAS and .BAK.

There are several batch commands available for use in menus, installations files, and various other time saving batches. These include ERRORLEVEL, PAUSE, CHOICE, REM, CALL, GOTO, SHIFT, ECHO, and IF - used with IF EXIST or IF NOT EXISTS and several other true/false situations such as IF ERRORLEVEL x GOTO yyyy. In later versions of DOS you could use the EDIT command to write these files but it can leave an annoying extra carriage return on the end, so for short batch files I prefer to use COPY CON. I haven't found a use for SHIFT yet but if anyone has any queries on batch files that can't be answered with the HELP screen on modern DOS, I'll do my best to help out: 101750.1474@compuserve.com or 01242 232523

Safety In Numbers 3...Bob Smith

Last time I finished with the thought that conversion of computer numbers to decimal is complicated. If we look at byte 10100110 then we have to think of each bit as representing a power of 2, such that the righthand bit is 2 to the power 0, the next is 2 to the power 1, etc. We then have to add all the powers of 2 where the byte digit=1, thus $128 + 32 + 4 + 2 = 166$.

To convert decimal numbers to another base is even more complicated. One method is successively to divide the number by the base number and building up the number by jotting down the remainder from right to left. For example, 87 to base 2 looks like:

87	1
43	11
21	111
10	0111
5	10111
2	010111
1	1010111
0	

Computers take much of the tedium out of such calculations, so I have written a Dragon BASIC program to convert decimal numbers to any base not greater than 16 (Hex). SAVE the program then RUN it, and answer the questions. When you are tired of it, type in a number ≥ 9999 and the program finishes. Next time I will give you a program to convert a number in any base to decimal.

```

10 BASE=99
20 FOR I=1 TO 2
30 INPUT "WHICH BASE";BASE
40 IF BASE>16 THEN I=1 :ELSE I=2
50 NEXT I
60 FOR I=1 TO 2
70 INPUT "NUMBER TO CONVERT";NUMBER
80 IF NUMBER>9999 THEN END
90 LFTOVER=NUMBER:QUOTIENT=NUMBER:NWNO$=""
100 FOR J=1 TO 2
110 LFTOVER=(QUOTIENT/BASE-INT(QUOTIENT/BASE))*BASE
120 IF LFTOVER<10 THEN NWNO$=CHR$(LFTOVER+48)+NWNO$ :ELSE
NWNO$=CHR$(LFTOVER+55)+NWNO$
130 QUOTIENT=INT(QUOTIENT/BASE)
140 IF QUOTIENT>0 THEN J=1 :ELSE J=2
150 NEXT J
160 PRINT:PRINT NUMBER;"TO BASE";BASE;"IS ";NWNO$:PRINT
170 I=1
180 NEXT I
190 END

```

IMPORTANT NOTICE.

I have just received a note from Keith Nash, informing me that Stuart Beardwood died shortly before Christmas, and suggesting that it would be greatly appreciated by Stuart's family if they did NOT have to deal with requests relating to the Dragon PD Library and similar matters.

I have no further information at this time, and I have no idea if or when anyone else will be taking over the PD Library side of things, but I will let you know as soon as I can. Meanwhile, I trust that you will respect the family wishes.

More PC History... Sotos Mandalos

The remarkable success of the PC family and the growing importance of personal computing will continue to alter IBM's development in the years to come. The IBM PC has assumed a position of importance now second only to IBM's mainframe lines. Now we will enter to some historical stuff that are important. Please make a note of all these things. I have gathered information from a number of sources. It is all very interesting. In 1980, IBM formed a new manufacturing and development division called the Entry Systems Division (ESD). The headquarters were based in Boca Raton, Florida. This was in fact the birthplace of the IBM PC. This group headed by the late Philip Estridge, who is in fact the father of the IBM PC, became one of the most startling success stories in IBM's long history. With only a core staff of 14, they created the PC in four months and brought it to market place in less than a year. Along the way they established a division with more than 10,000 employees and estimated annual sales of \$6 billion. ESD was grown from a small business unit with a stand-alone product to a large division with products strategically significant to IBM's, but also other PC manufacturers such as Compaq, DELL, and AST.

During those early days, the PC became a major player in IBM's product computing line. IBM has changed the focus away from isolated personal computers by bringing the PC into mainstream of its products strategy. From 1981 on, IBM PC strategy was handled almost exclusively by the company's Entry Systems unit, IBM allowed Entry Systems a high degree of autonomy and permitted them to follow strategies that often conflicted with those of other IBM units. Entry Systems created products from IBM, without any coordination with other IBM product divisions, PCs therefore remained primarily stand-alone products for IBM, with links to IBM host and office systems added more as an afterthought than as an integral part of PC product strategy.

Management shifts and reorganisations within IBM point to new plans for the PC. To integrate PCs more closely into other product offerings and sales strategies, IBM reorganised responsibilities regarding ESD. The changes included relocating many of its executives from Boca Raton, Florida to the National Distribution Division in Montvale, New Jersey and establishing a more formal structure for ESD's product lines. This move converted ESD from an entrepreneurial startup into an integrated mainstream IBM unit. The decision to relocate parts of ESD operation came from the determination that the PC was a stand-alone product, but instead strategic to the long range success of the company. The PC was rapidly becoming the terminal for every computer system made by IBM and ultimately developed into IBM's desktop workstation of the future. Therefore, the strategy and product planning for the PC had to fit in with the IBM products from other divisions. Personal computers were increasingly being purchased by the same executives who bought mainframes. In the following table I have listed the dates of each system launched by IBM up and until 1986. There is no point in going further than this as we are all now aware where we stand with regards to PC products:

IBM System	Model Number	Announced
IBM PC	5150	12 Aug 1981
IBM PC XT (extended)	5160	3 Aug 1983
IBM PCjr	4860	1 Nov 1983
IBM RT/PC (risc technology)	5180	21 Jan 1984
IBM portable computer	5155	16 Feb 1984
IBM PC AT (advanced technology)	5170	14 Aug 1984
IBM Convertible	5140	2 April 1984
IBM PC XT 286	5162	2 Sept 1986

I will give you more notes next time.

Whatever Happened to Logic?

I've read the books, I've seen the adverts, I've listened to the experts, but I still can't understand. Maybe I'm just not bright enough to be a computer user, but somehow it just doesn't make any kind of sense to me. Example: Innocent prospective punter writes letter to the expert employed by his favourite computer magazine, saying that he wants advice on buying a computer to be used for keeping a database of his stamp collection and writing the occasional letter or two, and has a maximum of about fifteen hundred quid available. So expert advises that the minimum entry level machine now would be a Pentium 133, although it might be better to go for a 166 version, naturally. No point in having anything smaller than a 1.2G hard drive, and of course at least a x12 CD drive, and it's impossible to do anything with less than 16Meg of RAM, although double that would be better with Win95. Printer could be a BJ type, but a full colour laser machine would give a better quality output, and with some careful shopping around it should be quite possible to buy an outfit of this specification for within a couple of hundred pounds of the proposed expenditure. Even if one discounts the fact that the specified job could be done perfectly well on a Dragon 32 or even a Spectrum, the most ancient of XT machines, coupled to a reasonable 24 pin printer, would be more than adequate, be far simpler to use, and leave the punter with enough change to have a months holiday as well!. So just WHO decides what is "entry level"? ... certainly not the private punters, and it certainly isn't the business scene most firms would much prefer to carry on with the systems they bought in 1982, and the software that came with them. Not the retailers, generally, they are constantly terrified of getting caught with a stock of last month's hardware that they'll never be able to give away at the local jumble sale if the "entry level" goes up another notch. So just who is it that sets these levels? the writers who are scared stiff that they won't have a job next week if they don't praise the latest pile of review junk to arrive on their desks?, the magazine publishers who will do anything at all to please the companies that are willing to pay the extortionate rates charged for full page colour ads?, the CIA (Crafty Intel Advertisers) who are determined to brainwash everyone into buying their latest innumerate and unstable slab of overheating plastic (which of course won't run in the "old" machines!)?, the Bill Gates Appreciation Society, who know that the next version of the dreaded Windows will be so slow owing to the sheer weight of bugs that no current spec machine will ever be able to get past the title page logo in less than a week?. Or maybe it's the commercial programmers who are convinced that good programming means that you have to use 16Meg to run the C+++++ equivalent of a FOR...NEXT loop?. So OK, maybe the old XT didn't come with a x12 CD, but it usually had an old Type 1 10Meg MFM drive, that was more than adequate for running all business software, and maybe it couldn't show MPEG videos and play music CDs, but why should anyone WANT to do these things on a computer there's a thing called a VCR that handles video recordings much better and cheaper, and I'm sure there's a CD player thingy somewhere in my old stereo system. One thing about the old XT ... like the old Dragon and many others, it was decidedly short on gimmicks, but it at least did the job it was designed for, and still would, if the Mysterious Entry Level Arbiters would give it a chance. My theory? I reckon they're a bunch of aliens (probably from the Lycra System), sent here to demonstrate that there really IS no intelligent life on Earth and they're doing a damned good job of it too, aren't they?!. Another case for the X Files?. The Truth is Out There Somewhere but you won't find it in a computer magazine or advertisement!. Like I said, I don't understand it all, and it makes about as much sense as all the garbage you read about Software Pirates when was the last time you saw anyone wandering around a computer show bellowing things like "Splice the Mainframe", and trying to force you to buy copies of Porthole 96 for a disc box full of bits of sixteen (Yes, I know it used to be pieces of eight, but what with inflation and all that)? Logic? Come back, Spock, all is forgiven!.

P.G.

FORTH MIDI IMPROVEMENT . Ken Grade .

John Payne has added yet more improvements to his Midi program which means you can program your keyboard to do pretty well anything.

Percussion can now be written in as an extra voice to the music, used on its own. Two really useful Forth routines have been added. One will play a phrase repeatedly until a key is pressed, the other will do so a pre-set number of times. The type of drum sound can be defined, of course, and more than one could be used at once. There are more refinements to the musical vocabulary; you can have stacatto, slurred notes, loud and soft, crescendo's and decrescendo's written into the music strings. There is a word (Forth routine) to repeat sections of a song/piece of music, which saves writing or LOADING it more than once.

In other words you could use your marvellous Yamaha/Casio/Roland as drum machine, to play backing tracks, or play a complete song or any other piece of music. When using the MIDI facility, SEVEN octaves are available, even if the keyboard only has a five octave range as keys.

TRANPOSE is another neat idea. If you've got a piece written for B flat clarinet or saxophone, then you don't need to work out the actual pitch of the notes to write in. Use TRANPOSE to re-set the pitch for that instrument down a tone and type in the notes as normal. As a final touch there's now a PROOF reading routine which checks and reports timing mistakes.

Forth Midi will work with Ian Jones' Midi interface, as described on the advert. page. I haven't seen the interface, but I've heard it is a vast improvement on Alfred Knotig's rough and ready device, hence the price! The Midi program is still £6.50.

THE LATE, LATE BIT

Well, we've made it into another year roll on Christmas, I suppose!. Which reminds me, it may be a bit late, but thanks to all of you who sent cards very much appreciated, even if my "card list" rather went to pieces this year (it never recovered from my hard drive fun and games of a few months ago). One big advantage of Dragons, I suppose, is that at least you can't lose more than one floppy full of data at any one time, but of course, being a total idiot I left far too much important stuff on just the PCI really should know better!.

The computer scene generally seems just as depressing and depressed as last year I'm sure Comet and places like that did well selling over-priced systems to gullible punters who had been watching all the Intel adverts and thought that you had to have a "Genuine Pentium" so you could stick your CD into the CPU chip as seen on TV, and I'm sure the same stores had to take on extra staff to handle the complaints the following week from all those same punters when their "Win95 installed" software fell over and they found that the original discs and CDs hadn't been included in the deal!, but other than that activity and news still seem about zero. On the Dragon scene, I had a call from Rob Preston just before Christmas, informing me that he was getting rid of the last of his Dragon stock (virtually a van load of it!) and offering it to the Group to aid Group funds if I could arrange to collect it!. You can't get a more generous offer than that, but unfortunately there was no way I could arrange anything even if I could have managed the collection, there's nowhere to store it here, and we couldn't think of anyone else who would be willing to take it on and try selling it for the Group, so I had to leave everything "on hold". Much as Group funds need boosting, there's no way I can handle it, and even Mike Stott (who usually shows a positive genius for solving problems) couldn't come up with anything this time. Whether we will be able to come up with anything useful before Rob has to consign the lot to the local tip is anyone's guess. 'Tis sad but true ... the Dragon scene is definitely shrinking these days. Anyway, as there's not enough space on this page for much more I may as well close this bit off with a scrounge session: anyone got any pens (even dead ones) for a C.ITHO CX6000 plotter? ... they're like HP ones only shorter and narrower. If so please let me know, as I need one/some as patterns. P.G.

Page ten
GROUP SOFTWARE SALE.

The grand sale did even better during December, thanks to those who've taken advantage of these special offers. A few more items have shown up since:-

ELECTRONIC AUTHOR: Tape based word processor by Wayne Smithson.

COMPOSER : The original on tape, with instructions. (Composer Companion is still unsold.) Transferable to disc.

CARTRIDGES: EDIT+; A hi-res screen editor with extra commands added to BASIC. Upper and lower case on screen.

RAIL RUNNER; Arcade game-need I say more?

PRICE: £5.00 EACH, or offers for both.

UTILITY TAPES: FILMASTR(database); SPRINT COMPILER(BASIC compiler); D.R.S. (database/filing prog. Transfers easily to disc. 1 copy.); ALLDREAM (transferable to disk); DUPLIDISK; DRAGON DATA UTILITIES:-Personal Finance(2 copies), Special Selection 2; Composer Companion; The Tape Doctor; TELEMED (improvement patch for Telewriter);

PRICE: £0.50 each; will haggle for batches of five and over.

BOOKS: THE DRAGON COMPANION, M. Jarvis; PROGRAMMING the DRAGON for Sound and Graphics, Geoff Phillips; GUIDE to the D32, Ian Sinclair; ADVANCED SOUND and Graphics, Keith and Steven Brain. All in good condition.

PRICE: SPECIAL REDUCTION - £0.50P EACH!

There are also 20 original games tapes, including adventures, like Madness and the Minotaur, Backtrack, Golf (P.S.S.), Stockmarket, Interplanetary Trader, Grand Prix, Graphic Animator, Combat Air Patrol and 10 Spanish programs produced by Eurohard.

PRICE: £0.50 each, or offers for lots of 5 and over (postage gets heavy for tapes, so can't haggle very much).

JOYSTICKS: A PAIR OF unbranded sticks - £4.00. One D.D. joystick:-£2.00

HARDWARE SALE:

1 DRAGON 32, with all leads and power supplies, tested; £10.

1 D32 MAIN BOARD with dodgy SAM chip; £4

If you want more details, phone me on Worthing 207585 most evenings. I can give a full list and come to an arrangement on price/postage. Ken Grade.

ANOTHER MUSIC ITEM...Ken G.

You've all heard of shareware, and most people with a P.C. will probably have used it, if only from a magazine cover disc or C.D. Very often it's a "time-dated" version of the program, or, just as bad, one where most of the facilities cannot be used, because the access has been blocked. It was good to find one which hadn't been mangled or crippled in any of the above ways, and one which did exactly what the author/company said it would do. The program is called NOTEWORTHY, written by a Scots company called Braeburn Software, and it prints music in any form using most types of printer. It is an on-screen music editor, which can cope with multi-part (orchestral) pieces or simple one-stave efforts. All the associated symbols can be used as well as normal text. Printer drivers for 9-pin, 24-pin and laser printers are included. Everything in the shareware version works, and the price for the "registered" up-dated version is £40. This isn't anything to do with Dragons, but it's not often something turns up which is worth giving a plug. I can give the full details to anyone who's interested. Write to me at the same address as Paul.

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HERE WE GO AGAIN!

ANOTHER YEAR STARTED AND THE OLD GROUP IS STILL HERE, EVEN IF IT IS GETTING
SLOWLY BUT STEADILY SMALLER EVERY TIME I HAVE TO WRITE THIS!. PERSONALLY I'M
AMAZED THAT IT'S HERE AT ALL AFTER ALL THIS TIME, WHEN ACCORDING TO ALL THE
EXPERTS IT SHOULD HAVE DISAPPEARED UP ITS OWN NEWSLETTER YEARS AGO!. ANYWAY, I
RECKON YOUR SUBSCRIPTIONS WILL BE SAFE FOR ANOTHER YEAR, SO LONG AS WE GET
ENOUGH MATERIAL COMING IN TO KEEP UPDATE GOING AS WELL I'M AFRAID FUNDS
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