

DRAGON'S TEETH



THE MONTHLY NEWSLETTER OF
THE DRAGON CLUB AT THE DUNGEON

ISSUE 10, DECEMBER 1983

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OFFERS



So how do we stand on software for our fiery beast? It seems only a matter of weeks since the D32 had a reputation as the machine without commercial software, but now there must be 400-500 tapes published. Has the quality improved as the quantity increased?

We would be the first to agree that some of the earliest Dragon software was, frankly, pretty awful (it's slightly disturbing that quite a lot of the titles concerned are still with us.) Crude block graphics, poor text presentation and slow running (even with the speed-up POKE) were the order of the day. One exception was Microdeal, with the CoCo conversions from the U.S.A. Now Microdeal are "getting their own back", sending Dragon conversions back to U.S. D32/64 users. Others were Dragon Data and Compusense, with other U.S.-licensed m/c offerings (more on this below.)

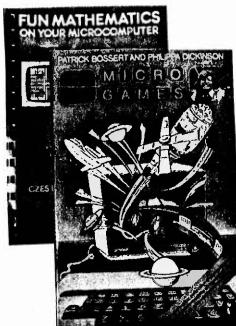
Morrison's were the first U.K. software house to produce home-grown machine-code programs, followed by Cable, with their 'Dragrunner' subroutines and fully coded 'Cave Fighter.' At the same time, Pentagon were trying to break into the market with 'Dragon Hawk.' They subsequently gave up the rights to (who else?) Microdeal.

Throughout the summer Oasis wrestled with a coded version of 'Chess' and Compusense more or less gave up the games market to return to the field they excell at - 6809 cartridge-ware. Salamander produced their first code for the Dragon, an excellent conversion of Jeff Minter's 'Gridrunner' and Programmers' Guild came in briefly with 'Pacdroids' and 'Ninja Warrior.' The latter disappeared in September in a legal wrangle, but were

BACK ISSUES

Back issues of Dragon's Teeth are available at 50p., post free, with the exception of Issue 1, for which the charge is 30p.

- ISSUE 1, March 1983 : 'Dragon Trek' from Salamander Software -
'Calixto Island' from Dragon Data -
'Dragon Chess' from Morrison Micros
- ISSUE 2, April, 1983 : The Dragon & Tape Recorders - Cousins -
'Pimania' from Automata -
'Gem Pack IV' from Gem Software -
'Death's Head Hole' from Peaksoft
- ISSUE 3, May, 1983 : Why do I need a Printer? - Programming -
Dragon Internals
'Attack' and 'Star Trek' from P.S.S. -
'Strategic Command' from Romik
- ISSUE 4, June, 1983 : Appending - Progressing to Telewriter -
New Games
'Games Compendium' from Salamander -
'Golf' from Salamander -
'Grand Prix' from Salamander -
'Cosmic Zap' from Microdeal -
'Aliens +' from Wizard -
'Smash' from Wizard
- ISSUE 5, July, 1983 : Ventures - That Speed-up POKE - New Games -
CoCo Conversion
'Flipper' from Microdeal -
'Dragon Games Tape 2' and 'Dragon Games Tape 4'
from Morrisons
J.C.B. Sound Extension Module
- ISSUE 6, August, 1983 : S.M.A.U.G. Word Processor - Ventures - CoCo
Conversion (Conclusion)
'Funmaths' from Gem Software -
'Maths-Trek' from Dungeon Software -
'Dataplan' from P.S.S. -
'Textstar' from P.S.S. -
'Cashflow' from Dungeon Software -
'Doodles & Demos' from Automata
- ISSUE 7, September, 1983: Cousins - Ventures
'Star Jammer' from Salamander -
'Cuthbert Goes Walkabout' from Microdeal -
'Talking Android Attack' from Microdeal -
'Character Generator' from Gem Software
- ISSUE 8, October, 1983 : New Dragonware - Letters Special -
'Space Shuttle' from Microdeal -
'Crusader' from Morrison -
'Oscar the Owl's Maths Test' from Dungeon Software
- ISSUE 9, November 1983 : Children's Software - 3-D Graph Dump - Ventures
That Disc Drive
'Picture Writer' from RamPage -
'Witchway' from Wellbrooksoft



BOOKSHELF SPECIAL



"INTRODUCING DRAGON MACHINE CODE" by Ian Sinclair (Granada Publishing £7.95)

by Ged Mead

"Introducing Dragon Machine Code" by Ian Sinclair is a book with the specific and clearly defined aim, as the title implies, of introducing the reader to the complex world of machine code. No pretence here that by the end of the book you too will be an instant expert - a misleading claim that all too often can be found in the blurb on book covers nowadays! The author sets out to lay a firm foundation on which the complete beginner can build up an understanding of the subject and I believe he does this very successfully.

Assuming no previous knowledge of any kind of machine code, the book takes the reader a carefully described step at a time through the jargon-infested jungle of 6809 programming. He begins his book by describing some of those often heard (but less often completely understood) terms such as bytes, bits, tokens and VARPTR, before moving on to an explanation of how programs are stored in memory. In turn, the following chapters cover the MPU, binary and hexadecimal numbers, registers, introduction to assembly language and addressing methods. I was pleased to find that, although you are left in no doubt that an assembler package is a necessary purchase if you are going to really pursue the subject, nevertheless all the example programs and explanations could be entered and tried out without this facility.

Chapters 5, 6 & 7 contain step by step descriptions of short machine code routines, together with useful hints for incorporating into more advanced programs. In Chapter 8 the author explains what you can expect to get for your money if you decide to invest in an Assembler and Monitor and follows this with the final chapter of machine code routines. The book also contains a set of appendices which include useful memory addresses and the complete 6809 instructions set.

Written in a style which is easy to follow, the author tries hard to lighten the presentation of this difficult technical subject. Areas which are particularly difficult or important are emphasised and summarised throughout the book.

I think that Ian Sinclair's book achieves its aim. It will certainly help to take a few tentative steps into the world of machine code and should encourage you to move on to the next stages. Who knows - thanks to the start given you by this book - you may yet get that elusive, fast-action arcade game transferred from your imagination into the Dragon's memory...and then watch out, Jeff Minter and friends!

"DRAGON MACHINE LANGUAGE FOR THE ABSOLUTE BEGINNER by John Vander Reyden-
(Melbourne House £6.96) / "INTRODUCING DRAGON MACHINE CODE" by Ian Sinclair-
(Granada £7.95).

by P.C. Asbury-Smith

The two contenders for the Title for THE BOOK to introduce nervous novices to the mysteries of Machine Code are:-

On the left - "Dragon Machine Language for the Absolute Beginner" by John Vander Reyden

On the right - "Introducing Dragon Machine Code" by Ian Sinclair

RESULT - A very honourable draw.

JUDGES' REPORT - Although both these books have the same objective, they set about their task in strikingly different ways, with the result that where one book is strong, the other is weak. I was very glad that I had both to hand. The counsel of perfection is often costly. Although I feel that either of these books could teach the machine code elements, both leave much to be desired. It might be best if I contrasted one with the other.

Vander Reyden is logical, academic and thorough. He explains everything simply, one step at a time, creating a sound, basic position from which to explore the New World. He asks for a painstaking effort from his pupils and I am sure that they would be well rewarded in making the effort. His motto is "Slow but Sure". This is at once both a credit and a criticism.

Sinclair is a Showman who leads you on an exciting adventure. He kicks off by showing you the part of the Dragon's Basic Interpreter which is in Machine Code. He knows that you are impatient to be typing a program, however puerile, into your machine and he satisfies this itch with almost indecent haste. The result is that his explanations are muddly, disjointed and not properly integrated. He has only one clear advantage as against Vander Reyden in that he does explain the use of an Assembler, a Monitor, giving a full account of DASM and DEMON respectively. But even this could be a bit off-putting if you have some other Assembler, etc.

I cannot honestly say that either of these books are likely to become classics. If you cannot afford the counsel of perfection and get both books and haven't got the patience to wait till Mike James comes out, I would rather reluctantly suggest Sinclair and ten bottles of aspirin.

This leaves me with a question and a point. The question is - in the new Dragon 64 will the lower section of the memory map be the same as in the old Dragon 32? I am referring to numbers dec00000-03072 (hex00000-0C00). Of course, I expect that the high ROM numbers, DEC32816-65534 (hex8033-FFFE) to be different. (N.B. I could check these numbers in Vander Reyden but not in Sinclair.) Perhaps an intellectual can rescue us h-droppers.

Now for the point I wish to make. Ever since I entered the Computer World, now nearly a year ago, Machine Code has been presented to the Neophytes as a kind of Magic answer to a Maiden's Prayer for anyone struggling with the limitations of BASIC. Now that I have stuck my nose into the Promised Land, I can see much Milk and Honey, but I can also see that Machine Code is NOT a cure all for BASIC limitations. I have already thought of a couple of useful routines that would be just as laborious in Machine Code as they would be in BASIC. While I can see that an Adult Programmer must be bilingual, other languages should be considered. FORTH and PASCAL come to the fore, as DRAGON DATA have cartridges that will implement them - PASCAL on the 64 only, by the way. What would be useful would be an article from some member of the Brains Trust, that would help us in our choice.

COMPETITIONS

(With this issue we welcome aboard Mark Towlson of Nottingham, who has kindly agreed to baffle us all with Competition Corner. We have seen some of Mark's more advanced problems and can assure you that you will find yourself fully stretched in the months ahead.)

First, I would like to thank the Dungeon Master for letting me take over this corner of Dragon's Teeth and, second, the results of last month's Competition:

Ladder and Wall: Minimum height up wall = 4.52 ft.
Maximum height up wall = 8.92 ft.

Goat and Silo: Area grazed = 2583.86 sq. ft.

(Many thanks to Mr. J. Hurfurt of Ashbourne for providing me with a superb piece of integration for this puzzle.)

The Winner (with the closest answer) was E.P. Williams of Hinckley, Leics., and we quote from his letter - "You didn't give a dimension from the goat's neck to his mouth so I have assumed you wanted to know the area covered by the rope."

Photocopies of mathematical solutions to these problems can be obtained by sending a stamped, addressed envelope to:

M. Towlson, 29, Conway Street, Long Eaton, Nottingham, NG10 2AF.

During the next few months I would like to publish in Dragon's Teeth some of my own puzzles and present slightly disguised versions of classical existing puzzles. This month's puzzle is of the latter sort:

A pig enters a square field at a gate in the south-east corner and runs directly towards the north-east corner at a constant speed. A farmer, who runs twice as fast as the pig, enters the field via the south-west corner, at the same time as the pig enters the field. The farmer is a little dim and always runs directly towards the pig, making no attempt to head him off. How far up the edge of the field does the pig get before he is caught?

Software to the total value of £15.00 is offered for the best correct answer.

```
140 PRINT" T = STEP LENGTH 0/255 = "T
150 PRINT"PI1 = PITCH STEP -128/127 = "PI1
160 PRINT"PI2 = PITCH STEP -129/127 = "PI2
170 PRINT"PI3 = F 340 IFQ$="P11" INPUT"VALUE FOR PI1 "PI1
180 PRINT"PN1 = N 350 IFQ$="P12" INPUT"VALUE FOR PI2 "PI2
190 PRINT"PN2 = N 360 IFQ$="P13" INPUT"VALUE FOR PI3 "PI3
200 PRINT"PN3 = N 370 IFQ$="PN1" INPUT"VALUE FOR PN1 "PN1
210 PRINT" AA = A 380 IFQ$="PN2" INPUT"VALUE FOR PN2 "PN2
220 PRINT" AD = D 390 IFQ$="PN3" INPUT"VALUE FOR PN3 "PN3
230 PRINT" AS = S 400 IFQ$="AA" INPUT"VALUE FOR AA "AA
240 PRINT" AR = R 410 IFQ$="AD" INPUT"VALUE FOR AD "AD
250 PRINT"ALA = P 420 IFQ$="AS" INPUT"VALUE FOR AS "AS
430 IFQ$="AR" INPUT"VALUE FOR AR "AR
440 IFQ$="ALA" INPUT"VALUE FOR ALA "ALA
450 IFQ$="ALD" INPUT"VALUE FOR ALD "ALD
460 IFQ$="P" INPUT"VALUE FOR P "P
470 IFQ$="L" INPUT"VALUE FOR L "L
480 GOTO90
```

AUTO REPEAT

Dear Sirs,

I was interested to read the letter from R.D.Hall in the last issue of Dragon's Teeth regarding 'Auto Repeat' on the Dragon keyboard.

The Keyboard Rollover Table (&H0150-0159) must be cleared before a key can be repeated. As the table contains a copy of the last key pressed it is normally only cleared when the key is released.

To obtain a true 'repeat' on the Dragon requires the use of a machine code routine to clear the table each time a key is pressed. Every time a key is pressed a call is made to the RAM location 362 which normally contains a 'Return' instruction. By changing this to a Jump we can insert our own routine to provide the repeat.

I have included two different routines one just gives the basic repeat, the other giving a more realistic repeat ie: it starts repeating after a delay.

Both a Basic loader version and a machine code listing are enclosed for each of the routines.

Hoping they will be of use to all Dragon users.

J.R. Ford,
77 Arundel Drive,
Harrow HA2 8PN.

LISTING 1 FOR BASIC REPEAT

```
10 RESTORE
20 FOR A=32000 TO 32023
30 READ B:POKE A,B
40 NEXT A
50 POKE 362,126:POKE363,125:POKE364,00
60 NEW
70 DATA 52,18,142,58,152,48,31,38,252,134,255,142,1,80,167,128,
80 DATA 140,1,96,38,249,53,18,57
```

7D00	7D00	ORG	32000
7D00	3412	PSHS	X,A
7D02	8E39A98	LDX	£15000
7D05	301F	LEAX	-1,X
7D07	26FC	BNE	WAIT
7D09	86FF	LDA	£\$FF
7DOB	8E0150	LDX	£\$150
7DOE	A780	STA	,X+
7D10	8C0160	CMPX	£\$160
7D13	26F9	BNE	CONT
7D15	3512	PULS	A,X
7D17	39	RTS	
7D18			

POKE 326,126:POKE363,125:POKE 364,00 TO SWITCH ON THE REPEAT
POKE 362,57 WILL SWITCH OFF THE REPEAT

LISTING 2 FOR DELAYED REPEAT

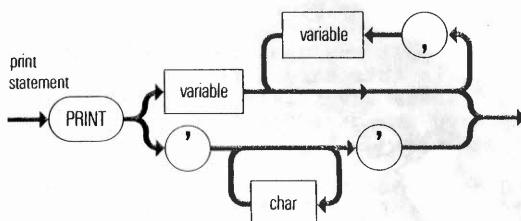
```

10 RESTORE
20 FOR A=32000 TO 32057
30 READ B:POKE A,B
40 NEXT A
50 POKE 362,126:POKE363,125:POKE364,0
60 NEW
70 DATA 52,22,177,125,58,39,11,95,141,21,32,10,183,125,58,53,22
80 DATA 57,198,2,141,9,189,128,6,39,241,141,12,32,237,142,125
90 DATA 54,58,174,132,48,31,38,252,198,255,142,1,80,231,128,140
100 DATA 1,96,38,249,57,97,168,19,136

```

	ORG 32000
7D00 7D00	PSHS A,B,X
7D00 3416	CMPA TEMP
7D00 B17D3A	BEQ SHORT
7D05 270B	CLRB
7D07 5F	BSR TERM
7D08 8D15	BRA FAST
7DOA 200A	END STA TEMP
7DOC B77D3A	PULS X,B,A
7DOF 3516	RTS
7D11 39	SHORT LDB £2
7D12 C602	BSR TERM
7D14 8D09	JSR \$8006
7D16 BD8006	FAST BEQ END
7D19 27F1	BSR CLEAR
7D1B 8DOC	BRA END
7D1D 20ED	TERM LDX £TIME
7D1F 8E7D36	ABX
7D22 3A	AE84 LDX ,X
7D23 301F	WAIT LEAX -1,X
7D27 26FC	BNE WAIT
7D29 C6FF	CLEAR LDB £\$FF
7D2B 8E0150	LDX £\$150
7D2E E780	NEXT STB ,X+
7D30 8C0160	CMPX £\$160
7D33 26F9	BNE NEXT
7D35 39	RTS
7D36 61A81388	TIME FDB 25000,5000
7D3A	
7D3B	
7D3B	

POKE362,126:POKE363,125:POKE364,0 TO SWITCH ON THE REPEAT
 POKE363,57 TO SWITCH OFF REPEAT



SOFT VIEW

MEMBERS' VIEWS

(We frequently receive letters from Club Members commenting on various tapes which have been purchased. These are not formal reviews but we think that other Members might be interested to learn of fellow Dragon owners reactions to some of the software on the market. We start with David Longshaw's (from Merseyside) views and should be pleased to publish others if you feel like breaking into print.)

I would like to start with Shards Software's production of "Empire." This cassette has recently been at the centre of a large amount of publicity in Dragon's Teeth.

After loading the game I was presented with a good graphical depicitive of the world. From here the computer and I simultaneously chose 13 territories each, while 13 were given "neutral status", making a total of 39 subdivisions. The object is, of course, to conquer the "Dragon Empires" territory. The game has 8 levels of difficulty, but be warned! Levels 1-3 are easy, but levels 5-8 are almost as hard as swimming the Atlantic!

Although the game can last for many, many hours, the outcome can often be predicted (especially at the harder levels) in the first 10-15 minutes. The most annoying features must be the hours of time it takes to deploy large armies of 100+, together with the poor sensitivity of the keys. To emphasise how difficult the game can get, you should expect Dragon armies to defeat your own, even when outnumbered 3-1. I once sat and watched 198 armies of my own defeated against 140 Dragon armies (and the Dragon was still left with about 50 armies at the end of the rout.) I therefore have to take Clive Gifford's side and say that, while I think the program is nicely written, it has too many setbacks to be judged top of a list of ten. Before I go off the subject of "Empire", I would like to say that the game has a high speed Poke in line 21 and this has to be deleted on my machine before playing the game. It was especially annoying when the program crashed while I was carving up Asia.

Hold on a minute! There is a way that 'Empire' could top a list of 10. That is if all the other games are as bad as P.S.S.'s "Flight Simulator." You are first given the choice of colour or black and white television modes. Although I have a colour television, I preferred the black and white mode which was, I feel, better than the different shades of green offered in colour.

You can have the option of "Full Flight Simulation" or just the "Landing." Having first chosen the "Landing" stage, I was given a view of the cockpit and horizon and placed 20 miles from the runway. The landing is not easy but, with no significant sound, poor graphics and an extremely irresponsible craft, I was tempted to switch the game off first. There is no actual feeling of flight, because of the poor cockpit view.

Although I do not like to pull any game completely down without saying something good about it, in this case I find it difficult to console anybody who was caught by the "flashy advertising" and bought the game. A joystick option would have improved the game but my advice to P.S.S. is to scrap it completely and start again.

If I have just pulled down your Christmas stocking fillers, then here is a game which you should think of asking for for your birthday!

I find "Champions" by Peaksoft far more enjoyable than either of the last two games. It combines skill and luck to try and pull your team up from the 4th Division to the 1st and then win the European Cup. It includes many enjoyable features such as Transfer Market, Promotion and Relegation, Reserves and Tables, etc.

Most of all it gives you a sense of realism, which many games lack.

To start off with you are given an average side and £150,000. Each player is given a mark of 1-9 (9 is best) and if you wish to buy a player it costs you £10,000 per unit of skill.

I would like to advise anybody against spending all their money at once, because if you fall into debt you can sell players at only £5,000 per unit skill. Not to be forgotten is the nice sense of humour incorporated in statements such as "Brian Clough says you're Rubbish; Morale soars!"

Although I like this game, I feel it may have been improved by perhaps adding another trophy e.g. F.A. Cup, although I suppose we could say this about all games.

Another sports simulation game I am currently playing is Audiogenic's "Golf". After choosing a handicap, you play yourself through 9 different holes. You can play on your own or against a partner. You "Tee Off" by selecting your club (there are 11 choices.) You then calculate an angle at which to hit the ball and a distance you want it to go. Avoiding water and sand pits, you find yourself with an enlarged view of the green and a put. Unfortunately, although each hole is different from each other, they are always the same. You can therefore pre-calculate shots and wallop unsuspecting friends. Again, I would like to add that this is unrealistic. It is sadly lacking in anything out of the ordinary, which I feel makes a game into a classic or just one more simulation. There are so many features which could have been included. Concentrating on the game itself, it is disappointing to find you have to play the same 9 holes again and again.

The next game is partly simulation, partly arcade. Peaksoft's S.A.S. has an unusual start, whereby the task set for you is typed out in front of you. Basically, you control a figure of a man which you must cross from one side of the television to the other, destroying enemy bases and mines and avoiding the enemy helicopters. There are nine screens to run through. The game gets increasingly more difficult and the night action feature is almost impossible. Peaksoft deserve some credit for bringing different features like "Night Action" and also attempting an entirely new type of game. My main criticism here, though, is repetition. Having played the game a few times you get a bit bored.

In the same group of games as S.A.S. is 'Lionheart', by Peaksoft again. You are presented with two parts to this game. Part I involves collecting a minimum of 400 men to cross to Palestine. This is in itself fairly amusing and can be played at 9 different levels. While collecting your men you must avoid "Prince John's" armies.

After collecting the 400 men you are taken to Palestine where you must increase your force and supplies for a final attack on the Sultan's castle. To help or hinder you there are villages and witches. Like S.A.S. there are some new features but this is a strange game in some ways and I am being honest when I say that I do not know exactly if I like or dislike this game.

My final 'review' is of "Valley" from ASP. While the initial cost almost certainly is its biggest drawback, the game is in my opinion the best of the bundle. It would take me well over a page to properly review this huge

adventure game. It introduces some very nice features such as being able to pick your character type, Ratings, many different monsters, different settings, random jewels and the ability to tape your current position. It is by far the best of the games I have commented on and certainly worth double some. If you can afford it, buy it.

SPRINT

PSEUDO FLOATING POINT WITH THE SPRINT COMPILER

After some helpful conversations with Stuart Smith, the author of Dragonforth and John Spence, one of our more experienced customers, it seems there may be a way to introduce pseudo floating point into the Sprint Compiler, or , for that matter, anything else.

The basic idea is to put an Ascii string into memory, tokenise it and execute it. There is, of course, no increase in speed and variables in the pseudo compiled code do not relate to variables in the compiled code.

A routine to do this might be:

```
START    LDX    ASCII -1    ; Point X to the byte before string
        STX    $ A6
        JSR    $ 9F
        JSR    $ 8F67    ; Tokenise
        JSR    $ 9F
        JSR    $ 84DC    ; Execute
        JSR    $ A5
        TSTA
        BNE    LOOP
        RTS
LOOP      DEFN   "POKE 343, INT (10*SIN(1.5))"
        DEFB   0          ; End marker
        END
```

The routine could be assembled and POKE'd into an array whose absolute address can be obtained with the VARPTR function. The line of BASIC can comprise multiple statements delineated with colons. The DEFB 0 marks the end of the string to be executed. Statements which make use of line numbers such as GOTO, GOSUB, FOR-NEXT are of course not available.

Data can be passed between the compiled BASIC and the pseudo BASIC using locations in an array whose starting address is again found using the VARPTR function.

Sadly, time has not allowed us to experiment fully with the technique and establish the pitfalls and limitations, but we would be most interested to hear from readers who can get the technique to work with the Compiler.

from John Gross,
Oasis Software.
Tel. 0934 419921

M/C CORNER

by Philip G. Scott

This month we shall look at the instruction format and the REGISTERS which form the internal data storage for the 6809 microprocessor. 6809 program instructions take from one to five bytes of memory.

e.g. 46	RORB
10A3 C9 6819	CMPD \$6819,U

The second of these examples shows all the features of the instruction architecture. The first byte (\$10) is a PAGE BYTE OP-CODE which is really an instruction in its own right, and is used to set internal "switches" to change the function performed by the following instruction. It is, however, normally treated as part of the following instruction, as this fits better with the ASSEMBLER MNEMONICS (RORB, CMPD etc). The second byte (\$A3) is the OP-CODE, in this case changed from SUBD to CMPD by the preceding byte. This particular op-code uses INDEXED ADDRESSING (q.v.) which requires a further byte, the POSTBYTE (\$C9) to define which form of indexed addressing is to be used. In this case, a further two bytes (\$68 and \$19) are needed to supply the 16-bit offset for the instruction. As can be seen from the first example, only the op-code is an essential element and all the other elements required are defined by the op-code or op-code/postbyte combination.

For the programmer, there are four 8-bit registers and six 16-bit registers which may be manipulated. The 8-bit registers are A,B, CC and DP; while the 16-bit registers are D,X,Y,U,S and PC. It must be remembered, however, that D is a means of accessing A and B as a 16-bit value, with $D = 256 \cdot A + B$. Hence, if $A = \$21$ and $B = \$42$ then $D = \$2142$.

Most arithmetic is performed using ACCUMULATORS - A, B and D - which affect the flags in the CONDITION CODES register CC, though there are limited facilities for arithmetic using X and Y (affecting only the Z flag) and U and S (affecting no flags.) This is covered in more detail in other articles in this series.

Registers X and Y are INDEX registers and are designed to be used as pointers to data locations in memory, while U and S are STACK POINTERS which can also be used as index registers (as shown in the example above.) The remaining registers are used for special purposes: DP is the DIRECT PAGE register (used in DIRECT ADDRESSING) and PC is the PROGRAM COUNTER which is used to control the flow of the program, but may be used for a limited form of indexing. The use of these registers will become more obvious with future articles in this series.

(Welcome aboard to Philip Scott, who is taking over Machine Code Corner. The D.M., to whom "stacked" refers to shapely ladies rather than memory, is eternally grateful that we now have somebody who can handle all those confusing mnemonics.)

1490 22 34 1D CD 6F 19 C3 E0 12 D5 11 40 03 19 D1 C9
14A0 11 14 00 CD 60 19 11 51 1B 06 14 CD 50 19 3E 20
14B0 77 D5 11 40 00 19 D1 7E FE 98 CC 19 15 18 3E 2E
14C0 77 CD 58 19 13 10 E4 2A 39 1D CD 4C 19 CD 98 17
14D0 CD 46 19 22 39 1D 3E 09 D3 04 3E 01 D3 04 2A 3C
14E0 1D 7C B5 28 0C CD 4C 19 CD 98 17 CD 46 19 22 3C
14F0 1D 24 3E 1D 7C B5 28 0C CD 4C 19 CD 98 17 CD 46
1500 19 22 3E 1D 2A 34 1D CD 4C 19 CD 98 17 3E 0F 77

NOVICE VIEW

by P. Asbury-Smith

(This new series presents first-time owners' reactions to the D32 and computing in general. Similar short articles would be appreciated.)

Hello there! I am Peter Asbury-Smith. You will remember that in November's Dragon's Teeth the D.M. appealed for reviews and articles from members. Well, I had the cheek to take him at his word. So you are lumbered with the tale of a "demicenturion", who bought his Dragon last February because he didn't know any better (and has never for a moment regretted his folly.) 'Peter', I said to myself, 'it is no good hanging around till you retire before you find an interest for your old age. You had better start at once while you are still barely capable of learning to use it.' So now you have a Dragon owner who, while he would not try to RAM a ROM and only occasionally POKE's a PEEK, as he hovers nervously on the brink of Machine Code.

After photographing my first 'SN ERROR' for my heirs (to the overdraft) to be auctioned at Sotheby's on my demise, I "bewildered" my way through the manual. After typing out a number of programs from the two magazines I subscribe to, I decided to try my hand at a simple Computer "Good Friday Card". This consists of 3 suitable texts in Low Res, separated by a Hi Res drawing of a cross inscribed with the Latin motto "Sub Hoc Signo Vinces" ("Under this sign conquer"), which Emperor Constantine is said to have seen in a vision just before his conversion. While the Cross is displayed, two Good Friday hymns are played. My friends were complimentary, but then I only have good friends!

By now I was keen to do something practical with Ivor (my wife has named my Dragon 'Ivor' after 'Ivor the Engine', in respect of his Welsh origins). As our Church Treasurer, I have three accounts to reconcile and somehow I managed to create from first principles a program to do this. I deliberately did not get a tailor-made tape, since I realised that the experience would be invaluable.

Then came a gap in my computer activities as I helped to fight the General Election. A friend, who is a Party Member and a fellow "Dragoneer" (I prefer "Dragoneer" to "Dragonist" - do you?) discussed the need of a Database to codify and analyse canvass returns. As I was the one who owned David Lawrence's "The Working Dragon", it fell to me to adapt one of his modules to this end, although my friend helped with advice and encouragement. We have tested the database in a local Council By-election, and have made some modifications to the original.

While on the subject of books, in addition to Lawrence's work already mentioned, I have found the following titles very helpful and can strongly recommend:-

- | | |
|--------------------|---|
| John Vander Reyden | - "Dragon 32 Programmer's Guide" |
| Mike James | - "Anatomy of the Dragon" |
| K. & S. Brain | - "Dragon 32 Games Master" |
| K. & S. Brain | - "Advanced Graphics & Sound for Dragon Computer" |

I have to add that I think Mike James's work is a model textbook in any subject and that I am waiting with mounting impatience for his forthcoming work on Machine Code. (Aren't we all! - D.M.)

I must not give the impression that it has been all work and no play for Ivor, for that would make him as dull as his owner. Being tied to a semi-senile operator, he does not have much chance to show off his arcade skills except for illuminating Cuthbert's Walkabout and a shower of meteorites. He is more often called to help me do shady deals in Deadwood, attempt to conquer (or is it conker?) the Roman Empire or crash my Light Plane on the Golf Course. Then there is that Maze Game we developed from the above-mentioned "Gamesmaster" book. To stop myself turning this introductory article into a review, I will simply say that I have enjoyed myself and trust that Ivor has too.

VIEW FROM THE DUNGEON Contd./

finally reborn under the Program Factory label. We are not sure whether Romik's vastly underrated 'Convoy Attack' should be included, since we have never been certain whether it is in code or simply BASIC with Auto-run.

Then came the Autumn, with the flood of Microdeal and Dragon Data launches. Some of Microdeal's 'Cuthbert' series were of U.K. origin, but most were again U.S. imports.

Recently we have seen a growing number of machine-code games, culminating with A. & F.'s epic 'Chuckie Egg' - courtesy of the Spectrum. A new U.K. software house, Sphinx, promises much, with its first offerings 'Hydrus' and 'Andromeda' and Alligata have implemented a splendid version of 'Asteroids' in their two-game coded tape 'Jaws.' Imagine have finally converted 'Leggit' for the Dragon and Softek have introduced their delightful caveman arcade game 'Ugh!'

Finally, we have Program Factory's 'Taskship', a fully programmable 'Skramble' in excellent colour and that's about it for the machine code scene. Lots and lots of BASIC programs with simple block graphics, some with m/c subroutines (e.g. 'Pettigrew's Diary'), but a dearth of the sort of tapes that have become routine on such machines as the Spectrum.

Many magazines criticise the Dragon for its "notoriously poor graphics." To them we would only say, have a look at 'Chuckie Egg' or 'Shark Attack' and realise that it's not the machine - it's the software!

We suppose part of the problem has been the lack of a suitable compiler, but now Oasis have removed that excuse. See elsewhere in this issue for comments.

@	CLOCK	DATA	ELSE	FOR	INPUT	LLIST	MKIS\$	PEEK	RENAME	SET	TAN
ABS	CLOSE	DEFDBL	END	FORMAT	INSTR	LPRINT	MKSS	POINT	RESET	SGN	THEN
AND	CLS	DEFNN	EOF	FRE	INT	LOAD	NAME	POKE	RESTORE	SIN	TIMES
ASC	CMD	DEFINT	ERL	FREE	KILL	LOC	NEW	POS	RESUME	SQR	TO
ATN	CONT	DEFSNG	ERR	GET	LEFTS	LOF	NEXT	POSN	RETURN	STEP	TROFF
AUTO	COS	DEFUSR	ERROR	GOSUB	LET	LOG	NOT	PRINT	RIGHTS	STOP	TRON
CDBL	CSNG	DEFSTR	EXP	GOTO	LSET	MEM	ON	PUT	RND	STRS	USING
CHR\$	CVD	DELETE	FIELD	IF	LEN	MERGE	OPEN	RANDOM	RSET	STR\$	USA
CINT	CVI	DIM	FIX	INKEY\$	LINE	MIDS	OR	READ	RUN	SYSTEM	VAL
CLEAR	CVS	EDIT	FN	INP	LIST	MKD\$	OUT	REM	SAVE	TAB	VARPTR
											VERIFY

LETTERS

ARCADE FANATIC

I have just received my first issue of "Dragon's Teeth" and I think its great. The views of the other Dragon owners are interesting to read. Now to the main part - I have a few questions to ask.

- 1) Does The King scoreboard go into millions?
- 2) Does the level on The King go beyond 99? If not, then what happens? Otherwise, where does it go to?
- 3) Does anyone get a bug on the conveyor belt screen - it gets really frustrating because the screen freezes and that's the end of the game.

How about a review of the very latest 'Microdeal' bunch, e.g., Scramble, Galaxians. As I am a Scramble-addict I hope you would review Programmers' Guild (U.K.) 'Taskship', Microdeal's 'Scramble', 'Cable Software', 'Cave Fighter', in the near future. Also, what's this I've been hearing about 'Junior's Revenge'? I've heard it's available in the United States and there are rumours that it is even better than 'The King'. Is this possible? If it is, then it is an unimaginable thought. I always thought 'The King' was the best game for the Dragon. Maybe you could tell me when it will be available in the U.K.

Here is my Top 10 - O.K.?

- 1 - The King (Microdeal) What else! Tom Mix 'Kong'
- 2 - Crazy Painter (Microdeal) Sticky Fun!
- 3 - Bonka (J. Morrison) Very fast!
- 4 - Frogger (Microdeal) Colourful!
- 5 - Cuthbert in the Jungle (Microdeal) Tom Mix Special!
- 6 - Cuthbert Goes Walkabout (Microdeal) Great Sound!
- 7 - Space Shuttle (Microdeal) Tom Mix Original!
- 8 - Katerpillar Attack (Microdeal) Tom Mix Centipede!
- 9 - D.G.T.2 (Morrison) Great Value!
- 10 - D.G.T.4 (Morrison) Great Value!

P.S. You may have noticed I love Arcade Games! Keep up the good work. D.M!

Ashok Rishi,
1 High Ash Close,
Exhall,
Coventry.

(We hear that 'Junior's Revenge' is everything that it's cracked up to be, but have you tried our own Arcade No. 1 - 'Chuckie Egg'? Your Morrison's placings answer some of the previous critics! - D.M.)

THE RING

I have had my Dragon since April '83 and find it extremely time-consuming; one can certainly get hooked! The only adventure game I have is The Ring of Darkness, which was given to me at Christmas. The achievement so far is 5853 points, how does one compete with the invisible slayers down on level 8 in the dungeons and, also, can you climb the mountains? How do you manage to acquire a large number of hit points? I have only managed about 1200 so far. Also, can the guards in the towns be killed off? Hoping someone can answer some of these questions for me! Many thanks for a good magazine.

R.G. Deakins, 11 Oakfield Rd.,
Hawley, Blackwater, Surrey.

(Come on, you Wintersoft fanatics! Help Mr. Deakins out. - D.M.)

CHEATING ON 'MADNESS'

Please find enclosed 3 listings of some programs. Firstly, the program Madness & The Minotaur is listed with the machine code within a certain area converted to characters. This obviously is going to make this (and many other) adventures a lot easier, as one can see all the nouns, verbs + the locations. At the end of the listing of part of M. & T. M. there is a hi-res screen to printer dump for a Shinwa CP-80 (there is also an example). On the other side is a (very) BASIC ASCII TO CHR conversion program with which to list the machine code text. All of the programs are very simple and can be easily improved on. The program used to do the listing for M. & T. M. was the "DEMON" by Compusense and the screen dump is also a conversion of the Dump in Compusense's advert for the EDIT+ Cartridge (used for an Epson.)

I would also like if possible the back copies of the Dragon's Teeth up to June. I would also recommend the Shinwa CP-80 as you said that you may stock them. I hope that these programs mentioned above can help someone (Clive Gifford) - he has probably done this anyway.

P.S. - A review! - "Anatomy of the Dragon" is brilliant!

Alistair Dickson,
24 Henmore Avenue,
Deans, Livingston,
West Lothian EH54 8NE.

(Naughty, naughty! Breaking into the program to solve the problems seems to be carrying adventuring too far. However, the listings supplied didn't mean a lot to us - being entirely in machine code, so we're not much the wiser as to the solutions to the "hidden ledge", etc! - D.M.)

DRAGON COMPILER

I wonder if any of the club members have been any more successful than I have with "SPRINT" the basic Compiler produced by Oasis Software.

I was very excited when I first saw the Compiler advertised, thinking that this was the way I was going to improve the speed of sorting and report writing on all those infuriatingly slow databases! The adverts said the Compiler covers "virtually everything except floating point arithmetic and associated commands."

I was disappointed to find how complicated the necessary changes required in the program were, but worst of all, none of the cassette data handling or printer procedures are supported.

I did ask for help from Oasis which was replied to extremely promptly and courteously by phone call. They suggested I could overcome the printer and file handling problems, by Pokeing 254 or 255 to address &H 6F, so that the next "Print" command would be directed to printer or tape. My inexperience in handling such techniques no doubt explains why this has been unsuccessful.

I then tried to compile, say a sort routine, so that it could be called from the Basic program. No luck again!

Included with the program from Oasis is a 3-d noughts and crosses game in Basic and compiled versions, which is so successful that it makes the frustration even greater!

Has any member any help or advice to offer me in getting what I am sure

could be a good £14.95's worth out of this tape!

H. L.Nyman,
213 Woodcock Hill,
Harrow, Middx.

(We approached Oasis on this subject and give their helpful reply below.-D.M.)

TEETHING PROBLEMS

Dear Users,

We were sorry to hear about the difficulties experienced by Mr. H.L. Nyman. In fact, it was not surprising the POKE didn't work because, I'm ashamed to say, it didn't for me either when I actually tried it out. I'm sorry to the users who had the extra patch in the manual with this information which I popped in after the phone call!

We have a solution! Version 1.1 is sitting on my desk now and supports the additional commands and functions:

EOF, PRINT# -1, PRINT# -2, INPUT# -1, LINE INPUT # -1,
POS (extended for use with the printer), OPEN, CLOSE,
PRINT TAB, PRINT USING, AUDIO, MOTOR.

It now supports all non floating point commands. Perhaps of more importance, we've included an appendix which covers all the difficulties our customers have had to date and we've corrected any 'bugs' reported. The Compiler is now a good deal easier to use, with all the ambiguities in the manual fully explained.

The upgrade to version 1.1 is available for one pound seventy five pence which includes the additional documentation. Please send your old Compiler tapes when ordering (not the whole package!) However, the upgrade is available for fifty pence through the Dungeon Users Club.

Also in this newsletter is an article which describes a method of introducing pseudo floating point into the Compiler. A free Pascal for the first letter we open from a reader who gets the method to work!

John Gross,
Oasis Software,

GRAND PRIX DEBUG

I am the owner of a Dragon 32 but still a little bit green when debugging a program. So if any of your members have tried 'Grand Prix' from Sixty Programs for the Dragon and 'Missile Runner' from the monthly magazine Which Micro? and have found the bug, I would be most interested to know.

I am looking forward to receiving your monthly magazine.

Ivo Galea,
"St Anne",
Għobnejra St.,
Zabbar,
Malta.

THE RING (AGAIN!)

A query for Clive re 'Ring of Darkness'. After a couple of months playing perhaps one evening a week, I have amassed approx. 3,500 experience points. To my surprise, I have just 'lost' Port Stillwater! The symbol has changed to a 'z' and my enquiry gets the response 'There is nothing here.' Is this to be expected, or is there a bug? I have got nowhere really but in view of the experience points I will keep plodding on and hope (as D.T. leads me to expect) that the collection of hit points may get easier as the experience points build up. I can't imagine how one gets 40,000 hit points; I've never got more than 500!

Many thanks for an interesting magazine.

Tony Little,
57 Proctors Way,
Bishop's Stortford,
Herts.

(P.S. - After writing the above, I played for about 1½ hours and the 'Game' side appears to have developed a fault. During the loading I am getting I/O errors all over the place (not at the beginning) usually at lines 2000 and 4000 odd! It may be that my Dragon has overheated and I will try again in a few days. If the problem is still there perhaps I could return the tape to you with precise details of the problem for your thoughts.)

(Anyone else lost Port Stillwater? - D.M.)

THE WORKING DRAGON

May I comment on J. Richardson's criticism of "The Working Dragon"? I found the modular form ideal for my programming requirements. I was able to use a composition of "Artist", "Words" and "Typist" to provide a rather successful spelling program for my 3½ year old daughter, (changing the word "Design" to "Artist" in line 2060 of the "Words" program should resolve all loading problems.)

However, I could do with assistance with the Brains' "Music Editor" that was printed in P.C.W. - I am constantly getting an 'FC ERROR' in line 60. Any offers?

I would appreciate an article on "letter quality" printers and would like to hear from anyone selling a second-hand printer that I could use for my business.

Finally, any comments regarding the compatibility of Bush televisions with the Dragon? I have both a colour television and a portable black and white and the picture quality is about the same on both, pretty unstable with a lot of wobble and line wavering (the Dragon has visited a service agent.)

Mr. A. Mein
57 Astor Road,
Nuneaton,
Warwickshire.

(We have never yet typed out a magazine listing without finding at least one printing error! - D.M.)

ANATOMY OF THE DRAGON

With reference to Mr. R.D. Hall's letter on Mike James' 'Anatomy of the Dragon'. It may not be the beast's fault! There are an awful lot of errors in the book. I've found the following and I'm sure there will be others in sections I haven't studied:-

- Pg. 24 Even and odd addresses (lines 13-15) should be vice-versa.
Pg. 32 Line 1030 - 31-X should be 31-Y
Pg. 45 Mode 2F should be 128x128 NOT 64x128
Pg. 47 Line 3010 - SA should be SN
Pg. 48 Subroutine 5000 does not work. I think (but I have lost my notes) that it can be made to work by putting 5010 FOR I = 0 TO 4 and 5020 POKE &HFEC7 + I*2-(SN AND 2 I)/2 I
You must also include a screen clear routine such as FOR I = 0 TO 1024 : POKE S + I,0 : NEXT at the appropriate place (such as line 55.)
The easier way to make this work is however to change S to &H400, omit 5000 - 5040 altogether (and DEL 60) and change SN(or SA!) in 3010 to S.
If it eventually turns out to be the Dragon ROM again - this may not work either!
Pg. 54 The table of values is simply up the creek. There are so many errors I'm not sure what it should be. Anyway, the total seems to be 27 not 26.
Pg. 84 Lines 50 and 60 should be 40 and 50
Pg. 97 Line 20 HEX\$ should be PEEK.
Pg. 132 Line 20 there is a redundant &H30 value which will crash the program
Pg. 136 Table - R2 should be R0

As you will have guessed - I have already complained to the publishers. After all - the book costs enough and it's too good to be spoilt like this!

Ian Murray-Watson,
Slade Farm,
Peterchurch,
Herefordshire.

ADVERTISEMENT

DRAGON USER PEN-PALS

Mr. A. Adamson, of "St. Elmo", Slab Lane, West Wellow, Romsey, Hants, SO5 0BY, is trying to co-ordinate DRAGON USER PEN-PALS in the SOUTHAMPTON to SALISBURY area, with possible later club meetings. Any Dungeon Club members living in those areas who are interested, please contact Mr. Adamson.

REVIEW

'CHUCKIE EGG' (A. & F. Software) £7.95

by Gavin Stewart

This game should be banned! All my good intentions regarding programming, getting into machine code and generally improving my knowledge of Dragon "innards" have gone for a Burton recently since "Chuckie Egg" arrived on the scene. There have been arcade games, good arcade games, chart-toppers and classic arcade games, such as "The King". "C.E." beats 'em all and is undoubtedly, indubitably and unarguably the most addictive Dragon game to date. Be warned! Even small doses of "Chuckie Egg" can lead to bleary-eyed, sore-fingered addiction!

After what seems an incredibly long loading period for a machine-code program (you see, why later) a neat and colourful header screen appears (bearing the Hi-Score table) and the "Birdie Dance" tune sets the tongue-in-cheek scene. You immediately gather that this is a well-supported program by the scrolling message "tape" at the base of the screen. This offers an option to redefine the control keys (set in default as the cursor arrows for direction and the spacebar for "jump"). On calling up the optional instructions one gathers that the object of the exercise is to collect eggs from the henhouse perches while avoiding the attention of some lethal chickens.

Enough of the instructions! Let's look at Screen 1, which flashes up after the player number option has been selected (from 1 to 4 players.) Our hero is a fat little farmer with an Amish-type hat, who runs with a giggle-forcing gait ("poddles" would be a better verb.) For someone so fat, he can make amazing leaps via the spacebar (too far, quite often, until you get the hang of things.)

The screen is set up in a familiar fashion, with ladders connecting the perch platforms. The latter appear (oddly) to be made of bricks, but no complaints can be made regarding the graphics. These come to us via the Spectrum (for which "C.E." was first written) and are as good as anything seen on the Dragon to date. Yes, as good as (if not better than) Tom Mix. Scattered around the platforms are eggs and heaps of hen food. As noted, the object is to collect the eggs by walking on them - an odd way to bring home the breakfast! Bonus points are gained by collecting the piles of hen food, unless the chickens get to them first. Sound is excellent, with a satisfying "squelch" as each egg is squashed and an even better "scuelch" for the piles of (henfood?). The best "squelch" of all comes with the final egg on each screen.

The chickens, which are bright blue and presumably radio-active from their effect on the farmer, toddle along quite slowly and deliberately, with quite complex movement patterns. The gaps and positions of the platforms are cleverly thought out, with many routes only approachable via jumps from higher perches. Some are shortened to the point that your farmer has a tendency to bounce off them into space, unless the force of his jump is accurately calculated. The author has also plonked in some nasty little traps, such as the mini-hole positioned just where your farmer might land after a logical jump.

Screen 1 starts with a fairly straightforward ladder/platform combination, with only two chickens. This is soon mastered and you rapidly start to work out "speed runs" (for time bonuses.) Screen 2 adds further chickens and platforms, but is again fairly straightforward. The fun starts on

Screen 3, where the farmer starts on an isolated platform, which he must force leave via a Kong-type lift system. The lifts come in pairs and he has to jump for the second before it appears (judging the time interval.) Ladder, egg and chicken routes are now much more difficult. One egg has to be secured via a jump off the mid-point of a ladder (hint: try it below a chicken on the same ladder, otherwise after a failed jump you slide down the ladder on top of the lethal chicken.) Another egg on this screen can only be reached by a jump onto and off the lift in one movement and for the first time you discover that a really long jump from a higher platform can sometimes bridge the "lift gap", without use of said lift. Also, for the first time, you find an egg which can only be obtained by sneaking up a ladder behind a chicken and dashing off right when the chicken turns left for a moment (no time to get back to the ladder, it's squash egg and jump off platform end before the chicken turns back.)

I won't describe further screens, in case I spoil the game for you. Half the fun is wondering what devilish platform/egg/chicken/lift combinations are to come. Suffice it to say that there are such delights as eggs suspended in mid-air which can only be obtained via death-defying leaps. Ladders with gaps, involving tricky jumps between them (and chickens below for jumps that don't come off and result in the former sliding back down the ladder out of control.) Platforms get smaller and really tricky (just large enough to land on.) Chickens move in more and more complex routings (some of which remain obscure, even after hundreds of games) and the number of chickens constantly increases. Lifts become more and more awkward to reach and, on the later screens, there is virtually a key egg which can only be reached with fatal results. Obviously, this has to be the last egg "collected" on that screen so that the screen completion takes precedence over the potentially lost "life."

Should you make it to screen 9 (screen 7 is, to my mind, the trickiest of all), the "parrot cage" at the top of the screen opens and out flies the worst hazard of all - the Mad Duck! This horrid beast makes lethal chickens positively benign! Problem is that it can fly and moves slowly and sedately straight at the farmer. You then have to go through the first 9 screens again, with all your strategies gone to pot!

No longer can you wait for the critical moment when a chicken's back is turned - you have to keep moving and pretty smartly too! The only way to survive is to keep moving, move fast and constantly change direction. Sounds easy, don't it? Just you try it! Your mind has to work like lightning and life is decisions, decisions, decisions.

What comes later, I don't know as yet, but one of the Dungeon's "whiz kids" has made it to screen 24 and 200,000-plus points!

One aspect of movement that must be mentioned is "farmer bounce." On jumping against the side of the screen or the side of a platform, the little chap bounces off at a perfect angle for the force and direction. This introduces an interesting element for strategy, with deliberate bounces achieving inter-platform movement in some very complex ballistics.

So what hooks you on this game? Apart from the great graphics and sound, the element which brings you back again and again, is the conviction that another route combination or a fresh approach to a particular problem will finally get you through to that next screen. The measure of a classic game is the urge to have "just one more go" and then find that you have been playing for another hour!

"Chuckie Egg" just has to top the charts. There must be 20 million different ways of playing it and even "The King" fanatics have been heard to say that

"C.E." puts it in the shade.

For once, I cannot think of a single fault to counter the praise. I wouldn't change a single thing. My only grouse is the addictive qualities - I really must do some serious work again!

Game Quality.....	10
Use of Graphics.....	9
Ease of Play.....	9
Lasting Appeal.....	10
Value for Money.....	10
Overall.....	10

THAT ORANGE TEXT SCREEN

The D.M. offers apologies to all for not having checked the content of the November issue closely enough. While the little item on the printing of text on an orange screen was correct as far as it went, the position is both simpler and more extensive.

In actual fact, the orange screen can be called up from any of the PMODE's 0, 1, 2, 3 and 4, simply by inserting the command SCREEN0,1 after the text commands, e.g.,

```
10  CLS : PMODE1
20  PRINT @ 230,"TEXT";CHR$(175)
30  SCREEN0,1
40  GOTO 40
```

ADVERTISEMENT

WELLBROOKSOFT present 'WITCHWAY'

a graphics adventure

(Reviewed in Dragon's Teeth Issue No. 9, November 1983 -
"A remarkable first effort....more please!")

A game to give you weeks of sheer fun - obtainable from
The Slade, Peterchurch, Herefordshire at £6.00

DISC DRIVES

We anxiously await a report on actual user experience with any Dragon Data, Delta or any other Dragon 32/64 disc system. Don't worry about your journalistic ability - it's information fellow Club members are after!

NEW TAPES

NEW DRAGON TAPES

1. 'JAWS' (Alligata) £7.95

Essentially two games - the best implementation of 'Asteroids' seen on the Dragon (but here the asteroids are aggressive ships firing missiles), with great explosions and a loosely linked helicopter joystick rescue sequence. The latter has blood-curdling "shark pulls down victim" sequences. Both in colour on hi-res (in M/C).

2. 'TRANSYLVANIAN TOWER' (Richard Shepherd) £6.50

Good beginners tape for graphics adventures. 3-D exploration of the Tower, with bats to be shot à la arcade.

3. 'CASTLE OF DOOM' (Paramount) £6.50

Similar to Transylvanian Tower, but better 3-D implementation and a much more complex scenario. For a change, this adventure has a vocabulary command to list all permissible words. Scenario runs from haunted house through the town to Doom Castle. Some delightful monsters.

4. 'ROMAN EMPIRE' (Lothlorien) £6.95

'TYRANT OF ATHENS' (Lothlorien) £6.95

'WARLORD' (Lothlorien) £6.95

'SAMURAI WARRIOR' (Lothlorien) £6.95

All above are detailed, complex simulation games, including "management decisions". You can either try to last out as Emperor of Rome, Head of an Alexandrian empire, Warlord of a 13th century Japanese village or a 12th century Samuarai warrior. "Thinking games", requiring much play time. (In stock shortly, Lothlorien's "Johnny Reb", an American Civil Wargame - £6.95.)

5. 'UP PERISCOPE' (Beyond) £6.95

Fairly complex game of strategy involving command of whole fleets of subs and ships, as well as the usual periscope/torpedo end games. Scrolling maps.

6. 'UGH!' (Softek) £6.95

Children's favourite (they love Terry, the Tyranosaurus.) Hi-res (M/C) arcade game, involving caveman collecting pterodactyl's eggs (and getting bombed with rocks in the process.) Great graphics and delightful sound.

7. 'DEATH MINES OF SIRIUS' (Phoenix) £9.99

Phoenix's first double-tape package with a 'Lunar Lander' variant, where success is necessary on 9 screens to get the code to play the graphics adventure (which is superior to the first tape.)

8. 'KLARTZ & THE DARK FORCES' (Dungeon) £9.95

Massive (and complex) multi-adventure, with the whole galaxy and all time to search in a one-man Time Capsule. All the adventures interlink and one problem is to locate a suitable planet where the final end-game can take place. Game-save (which will be required!) and the prize of a Dragon Data Disc Drive for the first player to map out all the various Time Zones.

9. 'FIRST NUMBERS' (Dungeon) £5.95

A delightful nursery-school tape from Margaret Norman, with attractive graphics and tunes. 'Numbers' takes a trip in a magic car through Nursery Rhyme Land and 'Counting' takes the child through popular counting songs (all words shown in lower case.)

10. 'DRAGON DIGITS' (Dungeon) £6.95

Four "fun" games from the keyboard of a Senior Maths Master. 'Formuline', 'What Next', 'Reversal' and 'Lander' will provide hours of entertainment from ages 10 to adult. None of your boring maths-drill here!

11. 'OSSIE' (Peaksoft) £6.95

Amusing arcade variant involving the life of a Fish-Eagle and an egg-snatching poacher. Drove the Dungeon staff wild with frustration, as they attempted to catch fish before starvation sets in!

12. 'PHOTO FINISH' (Peaksoft) £7.95

A full day's betting at the Sport of Kings, with hi-res views of the races and the "photo" of the finishes available. Runners, riders, form and bookies' odds all very true to life.

13. 'HORROR CASTLE' (A. & F.) £7.95

Fairly complex text adventure on the well-worn haunted house theme. Has some interesting locations to explore.

14. 'GO FOR BROKE' (Omega) £6.95

An interesting variant of the 'Monopoly' theme, with property investment scattered throughout the U.K., from the Gorbals to Luton Airport. 2 - 4 players.

15. 'LEGGIT' (Imagine) £5.50

The Spectrum game successfully converted to Dragon hi-res. Automata should sue 'em, since 'Jumping Jack' is obviously the Pi-Man! We love his reaction to the many head-bashes he gets as he attempts to jump up the various screens. All the Spectrum "baddies" (witches brooms, etc.) fully implemented.

16. 'TASK SHIP' (Program Factory) £8.95

A programmable 'Skramble' (if you don't think that the set scenario is hard enough.)

17. 'CYCLOPS' (Romik) £9.99

A programmable 'Pac-Man', where every aspect of the game can be reset to make it easier or harder. Some 20,000 versions available from the single tape.

18. '3-D GRAPHICS' (New Dimension) £7.95

An amazing machine-code utility, which permits the user to draw their own 3-D images and then to rotate or move them round the hi-res screen. Comprehensive manual supplied. (We hope to review this utility next month.)

19. 'CHUCKIE EGG' (A. & F.) £7.95

See review elsewhere. The best arcade game for the Dragon to date.

20. 'WITCHWAY' (Wellbrooksoft) £5.45

Ian Murray-Watson's 3-part graphics adventure. See advert. elsewhere in D.T. and review in Dragon's Teeth, Issue 9.

21. 'HYDRUS' (Sphinx Data) £4.95

Probably the best implementation of "Snakes" to date on the Dragon. 100% machine code and very smooth (and fast) movement. In this version the red "shrink pills" when gobbled shorten the snake. The yellow point-scoring pills lengthen the snake.

22. 'ANDROMEDA' (Sphinx Data) £6.95

High-speed M/C arcade "zapping hordes of aliens" game. Spaceship must dock for fuel between waves. Many screens and quite hard.

23. 'THE FILING SYSTEM' (Progressive Software) £19.95

A database light years ahead of most of the competition. Four tapes supplied in the package, totally comprehensive manual (including full listings of the programs, to assist in customising.) Hot Line support. Various tutorials on tape (verbal instructions to take you step by step through the uses of the programs) etc., etc.

A full review of this utility is in hand, but, in summary, the system compares well with disc-based business systems (300 records per file, with up to 22 fields each, very powerful search facilities, including "wild card" searches.)

24. 'RAINBOW WRITER' (Microdeal) £19.95 tape/£21.95 disc

User-friendly word-processing program, with nearly all the facilities you would expect in a system four times the price.

25. 'GRAPH DRAWER' (Compusense) £19.95

Business utility to draw bar charts and dump them to popular printers. Special price of £14.95 if purchased with Hi-Res or Edit-Plus cartridges.

26. 'KREIGSPIEL' (Beyond) £6.95

Strategic war-game, which we haven't seen yet (so can't comment.)

27. 'SPRINT' COMPILER (Oasis) £14.95

Version 2 now available, supporting virtually everything in basic except floating point arithmetic. Upgrade available to Version 1 owners (special price through the Dungeon.)

28. 'GUARDIAN' (Hornet) £8.00

Classic, fast-moving M/C arcade game with wave after wave of wildly mutating aliens.

29. 'LOST IN SPACE' (Salamander) £9.95

Second in the Dan Diamond trilogy. This adventure lacks the humour of 'Franklin's Tomb', but is still streets ahead of most text adventures.

30. 'LASER ZONE' (Salamander) £7.95

The second Jeff Minter game to appear for the Dragon (when do we get the Mutant Camels?) An arcade classic!

31. 'SUPER-DOODLE' (Gough) £9.95

Now reduced from £12.95. Apart from the comprehensive hi-res graphics drawing facility, various "frames" can be placed in memory to assist animation, etc. Action replay, pause commands and extensive text on graphics facilities. Sub-routines may be stored for own programs. Good manual and tutorial.

(N.B. - No signs yet of 'Junior's Revenge'!) Nor have we seen actual copies of any of the Horace programs!)

NEW YEAR SALE

The following overstocked titles are available to Club Members until the end of February (or until stocks run out) at big savings:

SALAMANDER	:	GRIDRUNNER, WIZARD WAR, STAR JAMMER, EVEREST AND NIGHTFLIGHT	Normal Price £7.95 Club Offer £6.50
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COUSINS

(NEWS OF THE U.S. 6809 SCENE)

At last the Programmers' Guild legal hassle seems to have been settled (P.C.S., the Lancashire wholesalers, have bought out the U.K. end) and goodies such as "Ninja Warrior" are back on the market. The new U.K. company will be known as The Program Factory.

We thought that we would devote this month's "Cousins" to a review of the latest offerings from Spectral Associates, who are now supporting both the Dragon 32 and 64 in the U.S. Many of their games have appeared through Microdeal, Compusense, etc., and some of their latest e.g. "Whirlybird Run", have been licensed by Dragon Data. We do not expect to see "Ms. Gobbler" in the U.K. - this is an anti-sexist Pac-Man version (although we fail to see how Pac-Man is male-orientated in the first place.) We do, however, hope to see "Lancer" before long, having been most impressed by the Spectrum versions of this medieval tournament game.

The latest machine language games from S.A. include "Le Mans", the simulation of the classic 24-hour race; "Piggy", which appears a curious arcade game for 1 - 4 players, with the aim of getting your pig to the slop-bucket first! "Space Chess" is an interesting version of the standard game, with spaceships in place of the usual pieces. But the most interesting new title, which is not an arcade game in the normal sense, is "Croid", a machine code implementation based on the famous ELIZA artificial intelligence program. The very latest release in code, the "Cubix", a Dragon/CoCo implementation of the famous Cubert arcade game, is the one with the cube pyramid and the deadly snake.

Latest adventures include "Keys of the Wizard", which has already appeared here via Microdeal, and a new graphics adventure "Escape from Prison City." We note that S.A. have now brought out the original Crowther & Woods "Colossal Cave" adventure on disc for the lucky owners of the FLEXPLUS DOS.

On the BASIC games front, most items appear variants of well-known existing titles, including (interestingly) your actual "Monopoly." Automata, with their on-going court case, would no doubt feel badly about this, since the U.S. copyright laws obviously differ from the U.K.

A. have also brought out a variant of the space trading game, under the less than original title "Space Traders." In true American fashion, however, the game involves multi-galactic holding companies and similar financial niceties.

Following the current trend towards "arcade adventures", S.A. have just launched "Naugus", in which you play the role of Byron Axehead, former Captain of the Kings of the Border Legion. The many on-screen fights through the 99 rooms of the castle involve many weird monsters and the object of the game is "different" - that of winning a pardon from the King!

Turning to the more serious software, it is clear that the whole U.S. Dragon scene is dominated by FLEX, which makes us even more anxious to see this excellent DOS available in the U.K. Goodies in this area include a "Sleuth" Disassembler, the "Talbularasa" electronic spreadsheet, "Lucidata" PASCAL and a cross assembler.

It is interesting to note the number of plug-in and add-on memory extensions for the CoCo available through S.A., including the "Supercharger", which for \$39.95 boosts the machine from 32K to 64K. An interesting new item is "Soundsource", written by John Gabbard, a utility which explores the

sound capabilities of the 6809 system. The idea of this program is to record on cassette tape any particular sound which is then translated into code and placed in memory. The code may then be edited (by means of the joysticks!) and stored data can also be displayed on the screen in hi-res to study the audio-wave forms.

ZAP'S BIT

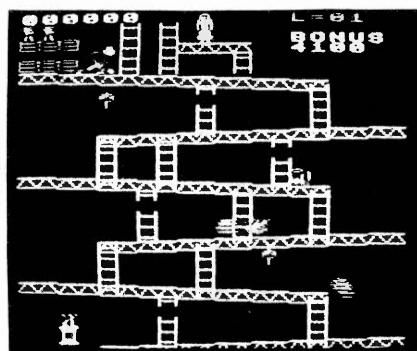
(The Dungeon's own pet dragon writes)

You'll have read of 'Chuckie Egg' elsewhere, but take it from me that it knocks spots off every other Dragon arcade program. My claws are getting sore with bouncing "Farmer Giles" off the ladders! One hint to those despairing of getting off Screen 7. You can jump from ladder to ladder sideways, provided you hit the UP key just as you hit the second one (get your timing wrong and its doomsday again!) As you'll no doubt gather, the best way to get onto the first "hanging ladder" is to creep up one step behind the Guard Chicken and jump like lightning before it turns round. You can then hang above it and jump sideways at the suspended eggs.

The D.M. has also complained about me hogging 'Task Ship' on the spare D32. This one is also addictive, in that you can set up your own run/cave system/enemies, etc. I just love being able to add the near-impossible touches to what is already a jolly hard game!

To the frustrated reader who can't reach the "mutation" screen (Screen 21) in 'Bugged', I can only suggest that he works out a strategy to lure the Bugs over the lines of Indy-Bugs and open up gaps to escape through.

Finally, can anyone tell me what lies ahead in 'Leggit'. I can't get off Screen 1!!



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