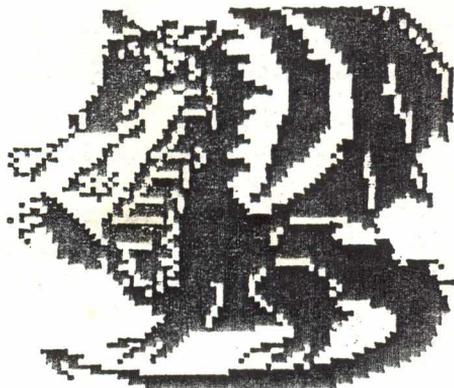


# Dragon Logic



ISSUE 3

U.K. ONLY

**INSIDE**

**£1**

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# Editorial

By DON MORRISON

This months big news is that Andrew Hill of Dragonfire Services is organising a Colour Computer Convention in Weston-Super-Mare later in the year.

Most of the Dragon and CoDo Suppliers with plenty of new software releases and some bargain show prices. For more details turn to page 4.

News is also coming in that NDUG may be organising a London and South East Show early next year. More news on that as and when we get it.

That's what's to come in the future, in the meantime let me tell you what we have for you this Issue.

We have two new columns starting this Issue. One is by Jonathan Cartwright, well known for his excellent programming capabilities. The other column, "Soundcheck" is launched by myself but starting from next Issue, Stuart Beardwood of the Westgarth Childrens Home is to take over. Stuart has had good experience in the music business for many years and he is probably in a better position to judge the good and bad points in music software.

Still on the subject of new writers. Ray Smith of NDUG's DragonArt Library has agreed to take over the Graphics column from next Issue. If there's anything you'd like any of our columnists to write about, then get in touch, they know what they're talking about.

This Issues reviews include Shaper, Computavoice, Hi-Res-Text, Lucifers Kingdom, Edit+, Drawzee, Mandragore, Ruby Robba, Perilous Pit, Desperado Dan and several former Microdeal titles.

As if that wasn't enough we have a useful Vocabulary tester program, ideal for students studying foreign languages, Adventurers Anonymous, a Hi-Res Character Printer routine, an article on the risks involved in 'upgrading' to the Atari St, and interview with Paul Brade and the usual news, letters etc.

Incidentally, we're starting a series of Book reviews shortly and we need volunteers to do the reviewing. If anyone's interested, drop us a line.

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## WE SAY!

DON MORRISON

*One of the reasons why Computer magazines in general find themselves short of material to publish is undoubtedly due to owner apathy. However, there is another, more serious reason which is preventing many users from coming forward with their views and ideas.*

*Several users, infact the overall majority, feel that any contribution they may make is likely to be uninteresting. NOT SO!*

*Every reader, beginner and 'expert' alike has views and ideas and Everyone has a right to express these views.*

*It doesn't take a literary genius to write a decent review or a programming Wizard to sit down and write a really useful peice of Software.*

*We all encounter new developments from time to time and it's our duty to share our knowledge with all Dragon users. If you don't nobody will.*

*So please don't feel embarrassed about coming forward with your views and ideas and let's have EVERYONE making a contribution.*

# LETTERS

Readers may be interested to hear that many of our games are now Tandy COCO compatible. Recently, there has been quite an increase shown in the Tandy side of the market, this of course means that we will be looking at more of our range with a view to conversions. Incidentally, we are always on the lookout for more software, so if any of your readers have written any software that they think might be of interest to other users, we would be happy to look at it and give them our opinion. There is very little money in the market, we pay our authors on a royalty basis and nobody is going to get rich any more, but you might help keep the interest going in our machines.

Graham Smith, Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent, NP7 9DP.

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On the whole, the first issue of Dragon Logic was very good and a joy to read. The reviews were concise and readable, i like your style of writing, although they were a bit dated. I enjoyed reading the CAD review. I'm debating getting an ST for its powerful graphics capabilities. I don't think 'Picture Maker' could stand up to that (maybe not, but it's a darn sight cheaper-ED), but it looks good and obviously takes full potential of the Dragons' graphics capabilities.

The interview with Harry Whitehouse was good, perhaps the best i've ever read! I really enjoyed it.

On the whole, i really enjoyed Dragon Logic, it IS good.

Matthew de Monti, 42 Kings Lane, Lt Harrowden, Wellingborough, Northants, NN9 5BL.

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I thought Dragon Logic looked well produced. I warned you it would be hard to part people from their money (you're telling me!), but if you stick it out for a bit it will be a good experience, whatever happens.

I agree that Harry Whitehouse's interview read well and will give a few people more idea of how the enthusiast supplier operates in these latter days.

Helen Armstrong, Dragon Publications, 49 Alexandra Road, Hounslow, Middx, TW3 4HP.

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I must congratulate you on your efforts in producing Dragon Logic, it is interesting and has a varied subject matter.

You've got an excellent magazine and i don't see why you shouldn't succeed with it.

Jonathan Cartwright, 23 Tintern Road, Cheadle, Hulme, Cheshire, SK8 7QF.

Editor: Don't miss Jonathan's new column, starting this issue.

# News

Andrew Hill of Dragonfire Services is arranging a Colour Computer Convention in Weston-Super-Mare, later in the year.

The Colour Computer Convention - for Dragon and Tandy owners takes place on Sunday, 4th December at the Arosfa Hotel, Lower Church Road, Weston-Super-Mare. Doors are open from 10am until 3pm.

All the Dragon and Tandy Colour retailers will be there including Broomsoft, Computape, Dragonfire Services, Dragon Magazine, D.U.D.E group, John Penn Discount Software, NATGUG, National Dragon Users' Group, Orange Software, Pulser Software and R & A J Preston.

There will also be new software releases at the show by some of the attending companies. Snacks will be available from 12 noon until 1-30 pm. Drinks from a licensed bar during licensing hours will also be available.

The entrance fee is £1.50 for adults and £1.00 for children under 16.

For more details send a SAE to -

The Colour Computer Convention, DragonFire Services, 13 Parry Jones Close, Blaina, Gwent, NP23 3NH. Tel - 0495 292088 (evenings only).

New Era Publications are currently preparing a Dragon Users' Handbook, a uniquely detailed 25 page booklet listing every item of software/hardware, books, magazines, accessories currently available for the Dragon, stating where the item is available and for what price.

The Booklet is available to users for £1.25 to subscribers to 6809 User (the new name for Dragons Roar) or for £1.65 to non subscribers.

A subsidiary of the Group, New Era Software is also due to be launched shortly. The aim of the software company is to provide the highest quality software for both the Dragon and Tandy machines.

The company guarantees that their royalties will be the highest available.

If you have a game or utility which you would like to be considered then write to Joanne Mayer, New Era Publications, 37 Collins Meadow, Harlow, Essex CM19 4EN. Tel - 0279 639616.

Jonathan Cartwright has just completed converting his three Destiny adventures for the Tandy COCO. The games are due to be published by Pulser Software, but no date has been settled.

Jonathan is also considering converting his two most recent games, Spy Against Spy and Utopia (both reviewed last Issue) to the COCO, but plans are not definite.

On the horizon is a Utopia Construction Set, which says Jonathan, will help "all of you who find the game too hard, or easy, to define your own planet and graphics".

Starship have just recently released details of their newest release - "Impossible".

The game features full colour perspective graphics, music and digitised speech. The final touches are being made to the game and it should be available shortly from Pulser Software.

As usual, the game will be available on Dragon-Dos disc or cassette at the same price.

# \*PROGRAMMERS LOGIC\*

By Jonathan Cartwright

Hello and welcome to the first of my columns. Exactly why I am writing this is still a bit of a mystery to me, but I am and that's what counts. What I intend to do over the course of these columns is to teach you a bit about programming. Exactly what I do tell you about is very much up to you, write and say what you want to know and I'll see about doing it. However, a word of warning, I don't run FLEX or OS/9 so don't even think about asking for stuff on those!! But I will deal with both BASIC and MACHINE CODE, if you want me to. I have had orders from the editor that I'm to do "something practical" rather than just shoot my mouth off on various topics of controversy. However, as this is our first meeting I don't know what you want to know about. Are sprites of any interest?? Just a thought for a future jotting.

If I'm going to deal with machine code, which seems pretty likely, then you're really going to need an assembler. Personally I use DASM, and I must confess to knowing only 2 other people who share the same great taste in assemblers as me!! Most other people tend to use DREAM. Well, I've never used it yet and I don't intend on starting now! The really great thing about DASM, in my view, is that you write your assembly language listings in BASIC. This allows me to write little test routines in BASIC directly after my code. This is a boon to me as it saves me having to assemble the code, then save the listing, then exit to BASIC, then write a test routine, then run the test routine, and then find that the machine "hangs"!!!

Another thing that you may notice when looking at my code listings is that I use a disc-drive. Thus I always talk about the top of the graphics screen as being 3072 and not 1536. This tends to affect where I place my code but if you use an assembler then this shouldn't matter too much. Oh yes, another thing that I can't really deal with is stuff concerning 64's, you see I don't

own one. (Thinking about it there's an awful lot that I can't deal with isn't there? It makes you wonder if I'll get anything done.....)

As I've nothing else to do at present I may as well recommend a few sources of reference. For all ROM routines I refer to the FIRMWARE series in Dragon User, this is especially useful as it usually gives the CoCo equivalents. For BASIC it is a little harder to recommend something. The manual was unmitigated drivel, well the copy I have is anyway. What you really need is a re-hash of the manual, there are plenty of these about so it's up to you to choose one. One that I have, and that is quite good, is MICROGUIDE FOR THE DRAGON, written by Professor Peter Morse and Brian Hancock, published by Century Communications. It's probably difficult to get hold of now but occasionally you find WH Smiths have a few books like this going for a song.

The time has come (sounds like a slogan for a political party to me...) to give you a listing or two. I imagine that graphics are pretty high on peoples lists of interests. Well I'm going to give you two listings to do exactly the same thing, however one is in BASIC the other in CODE. This will really show up the difference between the two. I'm taking something really simple to start with, inverting the screen.

The BASIC listing is as follows:

```
10 PMODE 4,1:SCREEN1,1:PCLS
20 LINE(0,0)-(255,191),PSET
30 FOR I=3072 TO 9215
40 POKE I,255-PEEK(I)
50 NEXT I
60 GOTO 60
```

This will invert the screen through BASIC. I've just put line 20 in so that you can see something happening. The assembly language listing is next:

```
ORG 9216
LDX #3072
```

```
@LOOP LDA ,X  
COMA  
STA ,X+  
CMPX #9216  
BNE @LOOP  
RTS
```

The assembly language listing doesn't put the computer into graphics mode, nor does it draw a line but it does invert the screen very fast. Please note that if you are using a cassette based Dragon then change the 3072's to 1536's and the 9216's to 7680's. Oh yes, and these programs assume that you're using either PMODE3 or 4.

Hopefully next time I'll have some more useful listings for you, but I need to know what you want to know!!!

Jonathan.



Name: Shaper  
Author: M.W. Smith  
Supplier: Shards (now John Penn)  
Price: £1

Shard's Software are renowned for their work in Dragon educational and adventure programs, but Shaper, is one program which perhaps gained Shards most respect among Dragon users. Shaper is a comprehensive sound utility for the Dragon 32 and Tandy Color Computer. It allows for the creation of 100 different sound-effects (FX as some people are now calling them) which are stored outside of BASIC ready for use within your own program. As the Dragon does not have its own sound chip, many manufacturers went about trying to produce Hardware add-ons to enhance the computers sound ability. The only problem with this, as stated in the Shaper manual is that sound effects created by such add ons can only be RUN on machines which also possess the same add on. Shaper, gets around this because it works on every Dragon and requires absolutely no extra Hardware. Shaper consists of the main program and a library of 100 pre-programmed sound effects ranging from explosions, lasers to synthesiser sounds.

After a rather noisy title screen which was obviously created using Shaper, the program Menu appears.

This menu gives you various choices. At any time you can press 'E' to get an explanation of any command. You can also build a sound, hear a sound, save sounds, change sounds, find a sound, reset sound store and transfer control to the user so you can load up your own program.

In order to create a sound you must pick the 'build' feature.

Once you're into this section a list of 10 parameters appears, that have to be entered. These include squeeze, expand, chain, volume, frequency and envelope values. If at any time you wish to hear a sound you simply press the space bar.

Once you are satisfied with your sound you can save it on cassette ready for inclusion in your own program. Alternatively, you might like to use any of the 100 pre-programmed sounds included in the library, some of which you might recognise from various games.

At the end of the program, you are shown how to load graphics into your own program and several routines are included which inverse the screen . ie green on black etc.

Using Shaper, is not easy. It's not a matter of just sitting down and writing 'wicked' sounds, it will take time. Hopefully, Shards accompanying booklet should show you how to use the program to the full.

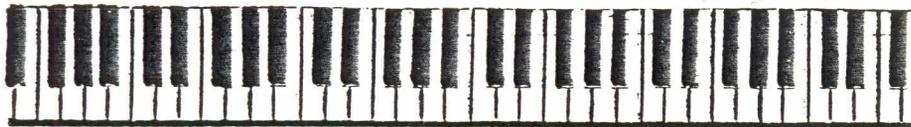
The booklet is presented very professionally and is very well written. It contains detailed notes and diagrams and makes life much easier on the user.

The possibilities are almost endless with Shaper. With Shaper you can create a variety of unusual sounds ranging from lasers machine guns, explosions, sirens, echoes, water drips, frog croaks etc to actual voice sounds.

Anyone who's tired of the very limited SOUND and PLAY commands would be well advised to buy Shaper. Unlike the Dragon's conventional commands, the sounds are limited only by your imagination.

→ excellent utility at an extremely generous price.

**mark:5/5**



Computavoice is a utility which enables you to make the Dragon talk. It is supplied on tape, but works equally well when transferred to disc. The addresses are 24416,32768,24416, start, end and entry. A small handbook accompanies the program, and without this you are not likely to get far!

Although it has been around for some five years, no-one appears to have used it in programs, apart from one enthusiast who showed how to make it say "player one" and "player two" in a small routine at one of the London shows.

Another ex-enthusiast attempted to make a routine which would speak any word typed in, but the results were not good enough. The program uses "phonemes" which are explained and listed in the handbook, and it is accompanied by a demonstration BASIC listing which will speak any number from one to nine when the appropriate key is pressed.

The words are most easily understood if they appear at the same time on the screen, especially as accents vary tremendously over the UK, eg my interpretation of a "BOOK" would be "BUK" whilst your might be "BOODOK" or even "BEWK"!

There is no doubt, allowing for these drawbacks that the routines could be used to enhance

many programs. Instructions such as .. "Hit a key" ... "Go North", etc can be defined as phoneme strings and used throughout the game, or adventure, or whatever and you will very easily think of many more ways to use it.

Some precautions are necessary. When you construct a phoneme string for a word, or a sentence, it may sound absolutely clear and concise to you at the time. But put it aside for 24 hours, and then RUN it again. It will probably sound like Swahili!, but once you have got it right then you have something which can be re-used time and time again in many programs.

Article by R.A.Davis  
FIRST PRINTED IN DRAGON UPDATE

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# clubs / FANZINES

by Chris Jobson

The North East Dragon Users' Club

The above club is still in existence after nearly 4 years. We have 12 members with an average age of about 40 (old, isn't it!). There are a number of other Dragon users associated with our club who are not members, but boost this North East concave to about 20. We meet every Wednesday in the lounge of a Sunderland pub and come from as far away as Durham and Middlesborough. If there is anyone in the North East that we have missed, drop me a line.

As well as general chatter, which ALL Dragon owners are good at, we have an arranged programme that has included, over the past year, Printer Control, AllDream, OS9 including Dynacalc and RMS, DragonDOS, DeltaDOS, Machine Code workshops, the 6522 VIA chip and the Touchmaster tablet.

A number of our members have upgraded to Dragon 64's and have added disc Drives. Some have cobbled together with 3" drives that you can buy mail order, very well priced, and requiring just a little electrical skill to fit and connect together along with a suitable power supply and reasonably priced DOS controller.

There have been various other items of hardware purchased by individual members including ROM programmers, DragonPlus boards, DeltaDOS controllers, Touchpads, and Premier Sprite Boards. We like to play around with various utility programs and OS9 is starting to play an important part in our programme since it certainly opens up new horizons for the Dragon (DL would like some material on OS9 for the beginner. Any info would be much appreciated-ED).

Members of the group subscribe to Dragon User (as should all TRUE Dragon users-ED) and NDUG.

In a recent edition of Micromart, the clubs page mentioned two other Dragon clubs, the Dragon Independent Users Association and the Slough Dragon 32 Users Group. We would like to hear from them, either by letter or preferably through the pages of DL.

Why not write a short piece, who knows, we might be able to exchange ideas for our programme of events.

The NEDUC can be contacted through me either by phone :- (091) 4165415 or by writing to :-23 Walsingham, Biddick Village, Washington, Tyne and Wear. NE38 7HF.

# software

By **DON MORRISON**

Name: Hi-Res-Text  
Author: Starship software  
Supplier: John Penn  
Price: £3.00

Note : Not to be confused with Microvision's Hi-Text Program.

Starship's Hi-Res-Text is a high resolution text program written in pure machine code for use in BASIC programs.

The package consists of three programs. The main programs are the actual versions of HRT, one operating in Pmode4 and the other in Pmode3. The other program is a Designer program. HRT is located on the 5th and 6th graphics pages. This is so that other routines in machine code (ie. Scrolling) can be placed in high memory.

The programs with the exception of the Designer program, are all written in machine code and thus stay in memory until the machine is switched off.

The package is rather difficult to use, as instead of simply loading up a new sized text screen, some detailed programming is required in order to achieve full use of the new sized text screen.

The program is called up by BASIC commands in your program, which are fully explained in the short but informative instruction sheet.

HRT uses the standard 32 column text display, so there is no difference in the size of the screen other than instead of 16 rows, there are now 24. The program prints white text on a black screen (in Pmode4), and black on a white border when inverted. Lower case letters are also accommodated.

The designer program can be used to design your own character sets for use with HRT. The program itself makes full use of HRT's facilities and is a useful demonstration of how HRT works for those who have yet to come to grips with the program.

The program is operated by the use of a menu. This offers you five choices. You can design/edit characters, display the character set, save or load a set or exit the program.

If you wish to design your own character set for use with HRT, you must choose the first option. This allows you to draw your own characters using the arrow keys and the number "1" to fill in squares. You can also invert your design if you wish. Once you are satisfied with your new character you can store it in memory and once all have been completed you can save your new character set to tape.

This program has great potential. Designing characters for foreign languages, graphics etc are just two of the many uses this program can be put to.

I would suggest that Starship produce a number of applications programs to run under this program eg. word processors, databases, mailing programs etc etc.

In summary, HRT is a useful high resolution text program which can be put to many uses. It may only offer 8 lines of text more than the standard text display but the display itself is much more professional and pleasant on the eye and the program opens up a great many doors for your own programs.

NAME: LUCIFERS KINGDOM.

Supplier: Orange Software.

Price: £5.99

## GAME OF THE MONTH

Lucifers Kingdom, the latest and possibly greatest release from Orange Software is a vertical scrolling "shoot-em up" in which you have to battle your way through different planets in order to destroy the evil Lucifer.

The game is split into five regions - Epsilon, Delta, Gamma, Beta and Alpha with each region having 6 planets, each of differing difficulties.

You begin the game in Region Epsilon, planet Giotto and must fight your way to Region Alpha, planet Lucifer for the final confrontation.

To gain access to another region you must collect a specified number of Crystals. These crystals are placed under the flashing characters and gradually appear as they are shot away. If, however you fail to collect enough crystals, you must return to the beginning of your present region until you collect the required number.

Out to stop you from completing your mission, though, are 8 different types of alien beings, each with their own method of attacking. Most aliens pose no real threat if avoided, but there are some who will do their best to make life hell for you. Some move down the screen, Caterpillar style, others home in on you while the most irritating of all and the ones to keep an eye on descend upon your level and then move left or right towards you, forcing you to move into another area of the screen.

You start the game with 5 lives, and as far as i can see it's not possible to add to that. Still, it makes the game just that bit more challenging.

One good point about the game is that in the event of you losing a life, you continue your mission from where you left off, infact often further ahead from where you were killed.

Strewn around the planet surface are literary hundreds of objects, there for the sole purpose of being shot at. Each object destroyed adds further points to your score, while collecting Bonus blocks adds extra points to your score. Aswell as the bonus blocks there are various other 'landmarks', some are just for show, while others tend to absorb your shots, making it difficult to destroy any oncoming aliens.

The game tends to increase in difficulty as you progress further into the game with ships becoming faster and the planets longer.

The game features probably the best graphics i've yet to see on a game of this sort. They really are breath-taking. At times, the screen appears to flicker but apart from that the scrolling effect is very effective. The planetary terrain is beatifully depicted in razor sharp PMODE4 3D Graphics and the animation is of the highest quality.

Sound is not a strong point with this game, but although it's limited to spot FX, it nevertheless gets by.

Lucifers Kingdom will, rightly or wrongly, always be compared with Utopia. Both games are of the highest standard and it's not my job to say which of the two is the better. They both have their individual characteristics - good and bad, but they're two different games and anyone into Arcade games should seriously consider buying the two.

Lucifers Kingdom isn't perfect, though. My main gripes are that the collision detection is not all it could have been, the game auto runs immediately after loading, leaving you little time to plug up and get ready and there doesn't appear to be any way to pause the game so you can have a rest, and believe me you will need one.

Orange Software deserve the highest accolade for this challenging and thoroughly addictive masterpiece. Lucifers Kingdom has set new standards in all respects and it will take something very special to surpass it.

# EDIT +

Supplier:Compusense, 68A Willoughby Lane, London, N17 0SP.

Price:£11.95 + £2 P+P

Format:Cartridge

The Edit + Cartridge contains two different utilities, HI-RES and EDIT. Both utilities are run on the Hi-Res screen display which consists of 51 characters by 24 lines.

## HI-RES

With HI-RES the following results can be obtained using the appropriate commands:

### Screens -

Black on green  
Green on black  
White on black  
Black on white

### Character Sets -

USA  
French  
German  
U.K.  
Danish  
Swedish  
Italian  
Japanese  
Dragon/Tandy

### Modes -

Underline on/off  
Cursor on/off  
32\*16 or 51\*24  
Sprites on/off  
Inverse video on/off

The PRINT @ command gives a print position on the 32\*16 screen, e.g. PRINT@64,"NORMAL" will print the word normal on the third line down.

The PRINT!102,"HI-RES" will print the word HI-RES on the third line down on the 51\*24 screen.

The PRINT%y,x gives a print position on the 51\*24 screen. Y denotes the row position, and x denotes the column position 0-255 and 0-191 respectively e.g. PRINT%0,0"\*" will print a \* character in the top left hand corner of the screen.

New characters can be defined by altering the positions of Pixels in a 8\*8 matrix. Extra characters can be printed from the keyboard by using the Clear key as an extra Shift key.

Text and graphics can be mixed on the screen without any difficulty.

### Edit

Edit is a full screen editor and programmers toolkit. It helps in the writing and modifying of programs. It allows the changing of characters just by overtyping, and also the inserting and deleting of characters at the cursor position. The cursor itself may be moved around the screen at will by use of the left/right/up/down arrow keys.

The following functions are also available:-

- Find a string
- Change a string
- Copy text to other places in the program
- Scroll up/down
- Goto specific line in program
- Enter a basic command to be used by operating one key
- Join another program from tape
- Automatic line numbering in tens

To sum up. The Edit + Cartridge adds quite a lot extra to your computer which makes like more interesting and easier when writing programs. But like any other complex utility, it needs to be studied and learnt before it can be used to its full potential.

Article by Ronald Walters

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## COMPUTER -- aided -- DESIGN

Name: Drawzee

Author: R.A. Davis

Supplier: NDUG, 6 Navarino Rd, Worthing, Sussex.

Price: £2.50 (cassette only)

Drawzee is described by the NDUG as being one of the best graphics utilities available. Their statement is perhaps a slight exaggeration considering the standard of similar utilities but nevertheless, Drawzee has some interesting features and could well prove to be a success for the NDUG.

The program enables accurate reproduction of drawings initially (but not necessarily) prepared on graph paper with an X axis of 0-255 and a Y axis of 0-191.

Before you can use Drawzee, you must first select the PMODE;PCLS colour and Screen colour.

Then according to your input, either a Pmode3 or Pmode4 screen will appear. The program uses the Dragons standard Draw commands with U for up, D for down etc. Also included are commands to turn the cursor at 45, 225, 315 or 135 degree angles. If you are in Pmode3 then pressing the keys 0-8 will select a colour for the cursor to draw in.

Aswell as being able to draw by hand using these commands there are a number of other, more adventurous commands.

If at any time you feel like a change of colour, pressing 'A' will allow you to change the PMODE;PCLS Colour and Screen colour. You can also PAINT different areas of the screen in a number of colours.

"Memorandum" is a feature which displays a list of commands.

The program also enables to draw coloured blocks in any colour. The same command can also be used to delete mistakes by making the block colour the same as the background colour.

Circles, ellipses, arc, dots, quadrangles and lines are also easily obtained from the program.

Before any of the above are printed on the screen, you are first required to enter the co-ordinates for where you wish them to appear. You may also have to enter the choice colour and the length of the sides in pixels. This shouldn't prove a problem if you have the drawing marked out on grid paper.

Pressing 'S' enables you to re-position the pixel when using the draw command by typing in new co-ordinates.

As is the norm with CAD programs, or should be, Drawzee supports a load and save command where you can save your screens ready for inclusion in your own program or load them for some re-touching.

Drawzee has gone one up on Picture Maker by allowing text to be displayed on the screen in a choice of sizes and colours.

This is a particularly useful feature and one which is often critical in CAD programs. Drawzee allows you to print in various sizes ranging from a small sized 4 in Pmode4 to a very large size 16. Pmode3 allows you to print in sizes 8 to 16.

Because Drawzee is written in Basic it's obviously slower than the likes of Picture Maker but if you're patient, the results achieved from Drawzee can be quite satisfying.

One minor weakness in the program is that the Break key is not disabled. If you do accidentally press 'Break', simply type CONT to continue as your picture should still be in memory.

Drawzee may not have the sophisticated capabilities of Picture Maker but it has some features which makes even Picture Maker look 'plain'.

A simple program but one with some very interesting features and above all, it does the job it's meant to, and does it well.

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From next Issue, Ray Smith of NDUG's Dragonart Graphics Library is to take over this column. Each issue he'll be reviewing some of the latest Graphics utilities to hit the market, comparing them with past successes, helping you to choose the best graphics utilities on the market, keeping you up to date with what's available in the Dragonart Library and answering your problems.

If you would like to take part in the column write to : Dragon Logic, 72 Diriebught Road, Inverness, IV2 3QT.

# VOCABULARY PROGRAM

The program chooses randomly from a list of words to test whether the person at the keyboard has learnt the correct translations.

This program could be modified for any question and answer situation.

B is the variable taken to the border routine to change the border.

Q String is the question string to be printed on the screen.

A String is the correct answer to the question.

X is the number of question words in the Data statements.

D is the position of the OK or XX marker.

E is the position of the question word.

F is the number of questions in one test.

There are two listings. The first is featured in this issue and is for a normal Dragon 32. The second version, which will appear next issue is for use with the EDIT Plus Cartridge which gives the 51 by 24 screen and extra characters for foreign languages.

Full instructions are included in the program for those wishing to add further words to be translated.

If you encounter any problems with the program if you contact me at the below address, enclosing a SAE, i will gladly help you.

Ronald Walters, 50 Hall Lane, Walsall Wood, Walsall, WS9 9AP.

\*\*\*\*\*

Editor:Strictly speaking this program is a German-English Vocabulary tester but it can easily be modified to suit any language. Simply remove all the German-English words and replace them with your own alternatives. The on screen instructions explain what to do.

\*\*\*\*\*

Article and Programming by R.Walters (C) 1988

```

10 REM*****
20 REM***VOABULARY PROGRAM*****
30 REM*****
40 REM***BY R.D.WALTERS 1986*****
50 REM*****
60 CLS:DIM Q$(1500):DIM A$(1500)
70 CLS:PRINT@195,"VOABULARY HELP PROGRA
M"
80 PRINT@232,"BY R.WALTERS"
90 PRINT@266,"MAY 1986"
100 PRINT@452,"PRESS ANY KEY TO CONTINUE
":B=238:GOSUB 290
110 B$=INKEY$:IF B$=""THEN 110
120 CLS:PRINT@ 133,"DO YOU WISH TO ENTER
"
130 PRINT@ 232,"NEW WORDS Y/N"
140 B=191:GOSUB 290
150 X=20
160 B$=INKEY$:IF B$="Y" THEN GOSUB910
170 IF B$="N" THEN 180 ELSE 160
180 CLS
190 PRINT@ 132,"IF YOU REQUIRE WORDS IN"
200 PRINT@ 202,"ENGLISH"
210.PRINT@ 295,"THEN PRESS 'E'"
220 PRINT@ 389,"OTHERWISE PRESS 'G'"
230 B=207:GOSUB 290
240 B$=INKEY$:IF B$="E" THEN 530
250 IF B$="G" THEN 420 ELSE 240
260 REM*****
270 REM***BORDER ROUTINE*****
280 REM*****
290 FOR A=&H400 TO &H41F
300 POKE A, B
310 NEXT A
320 FOR A=&H5E0 TO &H5FF
330 POKE A, B
340 NEXT A
350 FOR A=&H420 TO &H5C0 STEP 32
360 POKE A, B
370 NEXT A
380 FOR A=&H43F TO &H5FF STEP 32
390 POKE A, B
400 NEXT A
410 RETURN
420 REM*****
430 REM**LOAD GERMAN ROUTINE**
440 REM*****
450 CLS

```

```

460 PRINT@200,"PLEASE WAIT"
470 B=238:GOSUB 290
480 FOR A=1 TO X
490 READ A$:Q$(A)=A$
500 READ A$:A$(A)=A$
510 NEXT A
520 GOTO 1040
530 REM*****
540 REM**LOAD ENGLISH ROUTINE**
550 REM*****
560 CLS
570 PRINT@200,"PLEASE WAIT"
580 B=238:GOSUB 290
590 FOR A=1 TO X
600 READ A$:A$(A)=A$
610 READ A$:Q$(A)=A$
620 NEXT A
630 GOTO 1040
640 REM*****
650 REM***CORRECT SOUND *****
660 REM*****
670 FOR A=1 TO 5
680 SOUND 225,1
690 FOR B=1 TO 3
700 NEXT B
710 NEXT A
720 RETURN
730 REM*****
740 REM***** WRONG SOUND *****
750 REM*****
760 FOR A=1 TO 5
770 SOUND 50,1
780 FOR B=1 TO 2
790 NEXT B
800 NEXT A
810 RETURN
820 REM*****
830 REM***** QUESTION SOUND *****
840 REM*****
850 FOR A=1 TO 5
860 SOUND 150,1
870 FOR B=1 TO 2
880 NEXT B
890 NEXT A
900 RETURN
910 REM*****
920 REM***NEW WORD ROUTINE***
930 REM*****

```

```

940 CLS
950 PRINT@37,"ENTER NEW WORDS IN THE
      DATA STATEMENTS IN THE
      PROGRAM LISTING"
960 PRINT@162,"GERMAN FIRST / ENGLISH SE
COND"
970 PRINT@226,"THEN INCREASE THE NUMBER
OF      X IN THE LOADING ROUTINE
      LINE 150
980 PRINT@324,"BY THE NUMBER OF GERMAN
      WORDS ENTERED"
990 PRINT@389,"THEN RE-SAVE THE PROGRAM"
1000 PRINT@452,"PRESS ANY KEY TO CONTINU
E"
1010 B=254:GOSUB 290
1020 B#=INKEY$:IF B#="" THEN 1020
1030 CLS:LIST
1040 REM*****
1050 REM***** MAIN ROUTINE *****
1060 REM*****
1070 CLS
1080 PRINT@71,"WHEN YOU ARE READY
      FOR YOUR FIRST WORD"
1090 PRINT@232,"PRESS ANY KEY"
1100 PRINT@355,"AND THEN TYPE IN TRANSLA
TION      FOR WORD SHOWN"
1110 B#=INKEY$:IF B#=""THEN 1110
1120 CLS
1130 D=30:SC=0:E=0
1140 FOR F=1 TO 10
1150 C=RND(X)
1160 GOSUB 820
1170 PRINT@E,D#(C);:INPUT I#
1180 IF I#=A#(C) THEN PRINT@D,"OK":SC=SC
+1:GOSUB 640:GOTO 1210
1190 IF I#>A#(C) THEN PRINT@D,"XX":GOSU
B 730
1200 PRINT@D+2,A#(C):D=D+32:E=E+32
1210 D=D+32:E=E+32
1220 FOR C=1 TO 500:NEXT C
1230 IF E>480 THEN PRINT@491,"PACK UP AN
D LEARN THE WORDS":STOP
1240 NEXT F
1250 PRINT@481,SC;"OUT OF 10! ANOTHER GO
Y/N?"
1260 B#=INKEY$:IF B#="Y" THEN CLS :RESTO
RE:GOTO 120
1270 IF B#="N" THEN CLS 3:END ELSE 1260
2000 DATA GENIESSEN,ENJOY,BEWUNDERN,ADMI
RE,DIE WIESE,THE MEADOW,BEREITS,ALREADY,
SPAREN,SAVE,OBIG,ABOVE,LENKEN,STEER,FUTT
ERN,FEED,DER METZGER,THE BUTCHER,DIE ZIE
GE,THE GOAT
2010 DATA WEIDEN,GRAZE,DAS FELD,THE FIEL
D,DIE SCHAR,THE CROWD,WEICH,SOFT,ZART,DE
LICATE,HERZIG,CHARMING,SICH TRENNEN,LEAV
E,DAS WIEGENLIED,THE LULLABY,DIE ANSICHT
,THE OPINION,VERTRAGEN,BEAR

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**AN OLDIES**

**SPECIAL**

**microdeal**

Welcome to this Golden Oldies Special, a Tribute to Microdeal.

This Issue features reviews of three of Microdeal's most popular games in days gone by. They are, in order of appearance, Cashman, Speed Racer and Time Bandit.

All three games are now available from Computape, each at £2.99.

Next Issue sees the final instalment of our Tribute to Microdeal along with the biggest round up of Microdeal games ever published. Don't miss it.

By Donald Morrison

Name: Cashman  
Price: £2.99

Cashman is one of very few arcade games which allows two players to battle it out on the screen at the same time.

The basic idea behind this game is to collect as much money as you can while avoiding the many creatures that inhabit the screen.

Before playing the game, you must select a one/two player game. There are two characters, a Sheik and a Sailor who naturally looks like Popeye.

Cashman has more than 40 different sites, each divided into categories ranging from Easy to Expert.

The screen consists of several conveyor belts, trampolines and the carefully placed dollar signs. To collect a dollar you simply jump towards it and if you succeed it's added to your total. Once all the dollars have been collected, you progress onto another area.

Some of the creatures found in the game are friendly, in particular the birds, who will pick you up and drop you in another part of the screen if you approach them. Bombs drop from above, which if left for too long, may eventually turn into cats. On the other hand they sometimes also turn into eggs, which are useful for knocking out opponents.

You're not given any lives as such, instead you're given 10 power points which decrease each time you're hit by an object.

You can choose start where to begin your game, if you feel a little more adventurous.

Towards the end of the game, it really does get tricky and you're not helped much by the somewhat tricky movement system.

This is an interesting platform game with some distinct variations on the old Manic Miner type clone, which in actual fact is quite similar to another classic, Beanstalker.

Name: Speed Racer  
Price: £2.99

Up until recently, Speed Racer was without doubt the number one racing game for the Dragon. Although it's been somewhat overshadowed by Formula 1, it is still the classic it was when it was released all those years ago.

As was the usual with Microdeal games, a choice of colours was available. Black on White is probably the best choice, because the other colours tend to lose their sharpness.

There are four circuits to choose from. Each are just that little bit more difficult than the previous one.

Unlike Formula One, there's no actual opponent as such. Instead, you have to carefully drive your car, avoiding as many of the computer controlled cars as you can, being careful not to bump into them as you overtake. If, at any time you happen to crash, rather than the game ending, you simply re-start from where you left off. But each incident is a time waster and time isn't something you can afford to waste. If you complete the circuit within the set time, you progress onto a more difficult one. If you can last ten miles, a chequered flag appears and your time is recorded under the circuit map.

A nice extra touch is that if you drive too long on the outside of the track, your tyre is eventually replaced, but be warned it only happens once.

The game features superb graphics, beautifully detailed and well animated. The sound is smooth and realistic.

One minor carp - the game doesn't work well with a self-centering Joystick. Unless you possess a potentiometer type Joystick you may find it difficult to gain access to track 3.

Still, an excellent racing game, which is still unsurpassed in some respects. Buy it now!

Time Bandit is an arcade adventure that is in some respects similar to Touchstone, another of Microdeal's classics.

The game itself involves you controlling a little man around a world of fantasy and danger.

You begin life in a small hut and from here you must first pick up a key using either the joystick or the keyboard. Once the key is in your possession, you must head for the lock. From here you can pick any one of 20 areas to visit. There are three worlds, Western World, Fantasy World and Space World.

Once inside a map you are trapped. In order to escape, you must take the key/s to the lock/s. Only one key can be carried at a time and it unlocks the first lock you come across. Once all the keys, and to a lesser extent, the treasures have been collected, you must try to find your way to the Portal.

You have a laser with which to protect yourself from the many inhabitants of the game, but you also have to contend with the fact that your energy level is continually falling. Collecting treasures will revive it but for how long.

Once through to the portal, you are then returned to the beginning, ready to tackle another map.

Each location takes up more than screen, and scrolls neatly to the left or right, depending on your movements.

The game involves a great deal of skill, some logical thinking and quick finger.

The graphics are superb, the sound FX are out of this world, literally and the game overall is one which should appeal to a wide audience.

---

## 6809 HINTS AND TIPS

Here is one example of where the Dragon and Tandy can be coaxed into providing auto-repeat:

```
10 PMODE0,1:PCLS:SCREEN1,1
20 X=127:Y=95
30 IF PEEK(341)=223 THEN Y=Y-2
40 IF PEEK(342)=223 THEN Y=Y+2
50 IF PEEK(343)=223 THEN X=X-2
60 IF PEEK(344)=223 THEN X=X+2
70 IF X<0 OR X>255 THEN X=-255*(X<0)
80 IF Y<0 OR Y>191 THEN Y=-191*(Y<0)
90 PSET(X,Y,5)
100 GOTO 30
```

TANDY users should change the 223 to 247 in lines 30 to 60.

If any of you are using ELECTRONIC AUTHOR i'd better let you know where the bugs are. To start with, DON'T use the top and bottom space commands, they'll hang up your machine. The search and

replace commands also do this, at least on my Disk version, i can't comment on the tape version - Jonathan Cartwright.

The cheat code for Stone Raider II is STONE - type the code in carefully and it should work.

A well known problem with Telewriter is that it won't save any files once printing has been carried out. The solution to this problem was printed in an early edition of The Cuthbert Chronicle where a Mr Alan Price encountered the very same problem. His advice was remove the Remote plug from the tape recorder and actually have the tape running when the file is being saved.

If you have any hints and tips, send them to Dragon Logic, 72 Diriebught Road, Inverness, IV2 3QT.

# adventurers anonymous

Despite my continued pleas, threats and bribes for contributions, Adventurers Anonymous remains the soul work of myself and one or two adventure enthusiasts.

Were it not for the likes of Derrick Moores and Matthew de Monti there would be no adventure column. So count yourselves lucky that there are such committed adventurers around. Now come on, there must be someone somewhere who's stuck on an adventure and needs help. If you're one of them, then why aren't you writing to us for help?

On the other hand, surely there are some Dragon users who are prepared to share their knowledge about adventure games with other gamers. If you have some hints or solutions to share with the rest of us, why on earth aren't you sending them in??

Now that i've got that off my chest, it's time to take a deep breath, and tell you all what we have for you this issue.

Well once again Derrick Moores has come to the rescue with several hints on Larkspur Waldorf along with a map for the same game, featured alongside this column.

But for the moment, we have the COMPLETE solution for Starship Destiny (reviewed in Issue 1).

The solution is presented in the order in which you have to do things. If you don't want to know the solution don't read it.

Here goes (and by the way, i refuse to type it backwards!)...

- 1) From the start go N then E.
- 2) Type USE LIFT.
- 3) Go to level 1.
- 4) From the lift go W,S,W then GET KEYS.
- 5) Go back to the lift and type USE LIFT.
- 6) Go to level 2.
- 7) From the lift go W,N,W,W,W,S and GET SHIPS PASS.
- 8) EXAMINE the ships pass and note the contents.
- 9) Go back to the lift and type USE LIFT.
- 10) Go to level 3.
- 11) From the lift go W,N,W into the missile control room.
- 12) In order to diffuse the missile enter the following code - 04AL00.
- 13) Leave the missile control room and go back to the lift.
- 14) Type USE LIFT and go to level 2.
- 15) From the lift go W,S,E,E,N into the teleport room.
- 16) Type TELEPORT HOME.
- 17) When asked for the correct code type - 4U2P and your mission is complete.

Basically these steps are all that are required to complete the game. We've cut out the unnecessary bits in order to simplify the solution.

If you still have difficulties with Starship Destiny, send a SAE to me at the usual address.

The same goes for Derrick Moores who offers help on Larkspur Waldorf is Trapped (reviewed last issue).

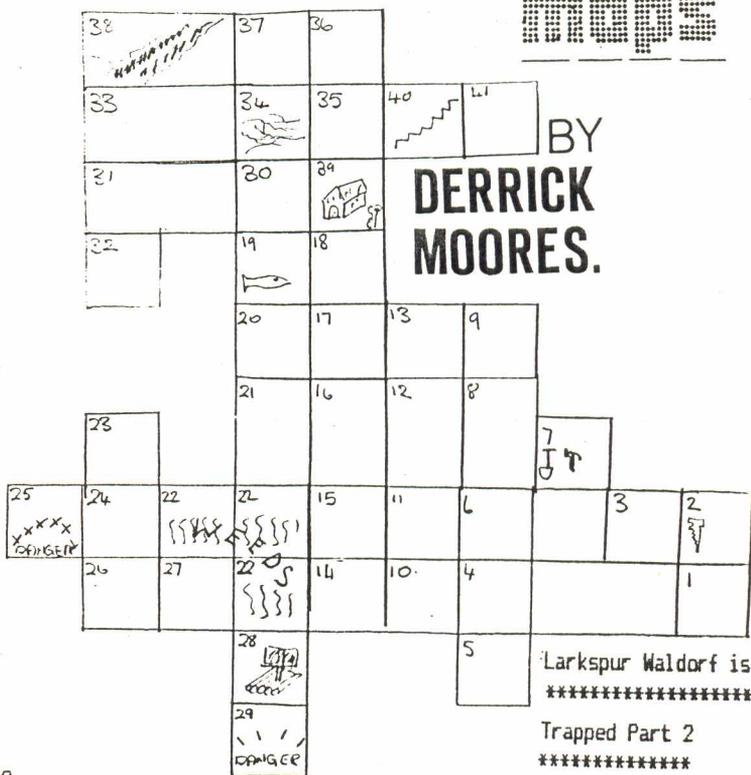
Anyone who would like maps and a solution should send a 20p coin and a SAE to: Derrick Moores, 15 Parkville Rd, Prestwich, Gt. Manchester, M25 5QG. For those of you who need urgent help with the game, Derrick has sent in a number of hints which should hopefully get you going ...

- 1) To get the saw from the idol, you need to know the magic word.
- 2) You must find the steak in case the idol is hungry.
- 3) You need to take steps to reach the balcony.
- 4) In the Castle Armoury - to get to the generator room go S,E,S,E,S.
- 5) You will need the hammer to open the cabinet.
- 6) To read the Book of Magic Spells you need the helmet.

Our thanks to Derrick for the hints and especially for the maps we've featured. Part two of Derrick's mini-series of maps is coming next so until next time, keep those letters coming in.

- 1) Cellar
- 2) Shrine
- 3) Tunnel
- 4) Changing Room
- 5) Cavern
- 6) Boat House
- 7) Store Room
- 8) Quay
- 9) Quay
- 10) Beach
- 11) Pier
- 12) Jetty
- 13) Lake
- 14) Lake
- 15) Lake
- 16) Lake
- 17) Lake
- 18) Lake
- 19) Lake
- 20) Lake
- 21) Lake
- 22) Lake
- 23) Lake
- 24) Lake
- 25) Lake
- 26) Lake
- 27) Lake
- 28) Lake
- 29) Waterwheel
- 30) Lake

- 31) Lake
- 32) Lake
- 33) Lake
- 34) Rapids
- 35) Beach
- 36) Beach
- 37) Going Down
- 38) Chasm
- 39) Beach Hut
- 40) Stone Stairway
- 41) Tunnels



# Kouga Software

\*\*\* \*\* \*\* \*\* \*\*

Although John Foster's recent attempt to set himself up in business, failed, he has now set up himself up in business as Kouga Software.

Under this name, he intends to produce Software for a variety of computers including the Dragon.

The company's first game is Mandragore which is featured in the following article. Also expected from Kouga in the future is a version of an old favourite, Break Out by Stuart Orchard.

The address to write to is Kouga Software, 94 The Oval, Firth Park, Sheffield S5 6SP.

---

Name:Mandragore

Author:Chera Design

Supplier:Kouga Software, 94 The Oval, Firth Park, Sheffield, S5 6SP.

Price:£4.00 (inc P+P)

Kouga Software is a new name in Dragon Software production. The aim of the company is to provide games software for computers across the board, primarily the Spectrum, Amstrad, Atari ST and of course the good old Dragon.

Kouga's first release is by good fortune, a Dragon game.

In this game you control a highly advanced exploration robot called Mandragore, hence the title.

During a routine investigation of an ancient pyramid, you inadvertently trigger the pyramid's self defence system.

As a result of your careless snooping, you must now battle your way through the two levels of the pyramid towards the exit. During your mission you will come across various inhabitants of the pyramid who have been roused by your presence. The pyramid's inhabitants consist of mummies, ghosts, trapped eagles, lazer firing ants and large mutant aardvarks. There are also several ramballs and tiny pyramids which you must avoid in your attempt to escape.

You must also beware of the sentinals that watch over your every move as you progress along the pyramid's five floors.

At the end of each floor, should you reach it, you must fight to the death with one of the sentinals. Only one of you can survive.

Should you, by chance, happen to be the victor you must fall down the hole to the next floor.

At the end of the fifth floor you will be sent to level two, which has the added complication of rogue bullets flying about.

The rather interesting loading screen sets the scene for what is to be expected.

A short burst of music (very short), and after pressing fire, the game begins.

Mandragore is played with a joystick only. Control of mandragore is said to be an art. You must learn how to move just one lane by tapping up or down on the joystick. It is not as easy as it may sound but it is essential if you are to complete level 2.

Mandragore is played in PMODE4 graphics, very detailed and very clear. The pyramid surface is laid out in 6 lanes each depicted in 3D.

Getting started in the game is somewhat difficult as it's difficult to come to terms with the system of movement. Sometimes it may seem that you're on the same lane as an aarvardk or whatever because with 3D graphics it's often difficult to distinguish just where you are.

Progressing through the screens is not impossible, you can only blame yourself for any accidents because mandragore is not a particularly difficult game. Granted there are numerous obstacles that have to be avoided but once you get to grips with the system of movement and start to plan your course it shouldn't be too difficult to progress through the screens until you get quite far into the game.

But the game is tricky. Not only is there the danger of being hit by a bullet, you also have to contend with the fact that should you hit any of the creatures, dead or alive, you will die.

The same goes for any obstacle, no matter how harmless it may seem. Towards the latter stages the game really begins to hot up and you really do have to be carefull whilst moving about. Something which might be off-putting is the fact that all the objects possess a shadow, and sometimes it's difficult to define where the objects are. My advice is not to look at the object itself, because that will tell you nothing, always look for the shadow because that is where the object is.

There is a score feature in the game but it's not really relevant. The object of this game is to escape from the pyramid, that is the prime objective, and any scores achieved aren't important.

There's a high score table for those who're interested in playing against others.

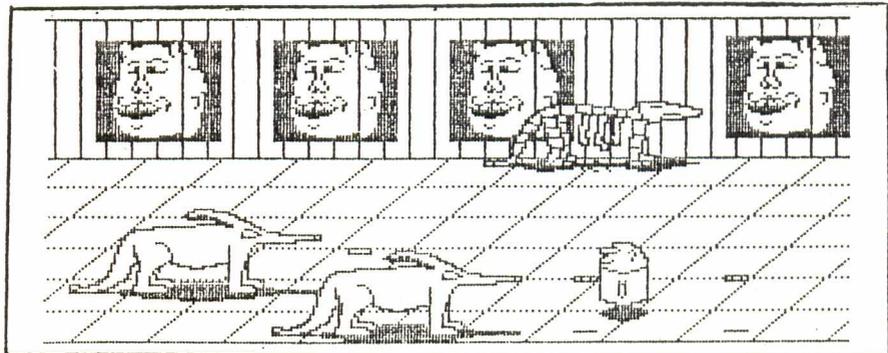
You are awarded 5 lives from the start and while this may seem a lot, i can assure you they won't last as long as you'd like them to.

Every inch of this game is a marvel of graphics. The picture is very detailed and clear and the animation is breathtakingly brilliant. Really, i was at a loss for words when i saw this game, the author is a real master of the graphics page. There's also some very good sound, though it's limited to the various beeps and bangs you get from hitting something. Even though, it's still nice to listen to.

What can i say, an original storyline, frightening opponents, impressive playability, astonishing graphics and sound, and a real challenge, combine to give an impressive and professional package and all this for only £4!

Kouga's next release is a version of an old favourite, Arkanoid (Breakout) which is due out shortly. If it's as good as Kouga's maiden release then it really will be something special.

**DON MORRISON**



This short routine prints characters on the Hi-resolution screen, from a Basic or Machine Code program, and would be particularly useful for anybody writing an Adventure game, which uses the graphics screens to obtain true lower-case letters.

To use the routine, enter the codes in Listing 1, using any of the machine code loaders printed in previous issues (of Dragon User - ED), and CSAVEM"M/CODE", &H7000, &H7054, &H7000. Then you can either type in your data for the characters or use Listing 2, saving it with CSAVEM"DATA", &H7090, &H7337, &HB371.

Before using the routine you must store your string in the computer's memory, ending it with a CHR (13) -- Enter. Locations &H7004 and &H7005 must be set up to a point to the first character of this string, and locations &H7002 and &H7003 set to the address the first character is to be printed at e.g. 1536 to start printing in the top left corner of the screen.

The routine uses all the characters from CHR (32) to CHR(90) and CHR (97) to CHR (122), although this could be altered to allow for extra graphics characters.

If a sentence is to be printed on more than one line it must be done in parts. This is because when the computer comes to the end of a line, it wraps-around, but only starts one byte down on the left-hand side, almost totally blocking out the previous line. I didn't include a check for this, as it would have made the routine longer, and it can easily be corrected by the user.

The data does not have to contain codes for alpha-numeric characters, as in Listing 2, and its position can be altered, but you must remember to change locations &H7022 and &H7023, to point to the first piece of data.

The routine is available from me for £1.50 provided you send me a cassette and SAE, or for £2 if you omit the cassette.

Anyone writing to me with a query about the routine, should enclose a SAE. My address is Bell View, Harleston Hill, Fressingfield, Eye, Suffolk. IP21 5TE.

Article and Programming by  
Simon Jones. (C) S.J 1988.

---

### Listing 1

```

7000 20 08 00 00 00 00 00 00 40
7008 00 00 A6 9F 70 04 81 1F 601
7010 23 42 81 7B 24 3E 81 61 677
7018 25 02 80 06 80 20 C6 08 539
7020 3D C3 70 90 FD 70 06 1F 914
7028 01 C3 00 08 FD 70 08 A6 743
7030 80 A7 9F 70 02 FC 70 02 934
7038 C3 00 20 FD 70 02 BC 70 894
7040 08 26 EC 83 00 FF FD 70 1033
7048 02 FC 70 04 C3 00 01 FD 819
7050 70 04 20 B6 39 00 00 00 387
    
```

## Listing 2

7090	:	00	00	00	00	00	00	00	=	0	
7098	:	00	10	10	10	10	00	10	=	80	!
70A0	:	00	28	28	00	00	00	00	=	80	"
70A8	:	24	24	FF	24	24	FF	24	=	726	#
70B0	:	18	3C	58	3C	1A	5A	3C	=	432	\$
70B8	:	00	22	54	28	14	2A	44	=	288	%
70C0	:	00	18	24	18	1A	24	1A	=	172	&
70C8	:	00	10	10	00	00	00	00	=	32	'
70D0	:	00	08	10	20	20	10	08	=	112	(
70D8	:	00	20	10	08	08	10	20	=	112	)
70E0	:	00	10	38	7C	7C	38	10	=	392	*
70E8	:	00	10	10	10	FE	10	10	=	350	+
70F0	:	00	00	00	00	0C	0C	04	=	36	,
70F8	:	00	00	00	7E	00	00	00	=	126	-
7100	:	00	00	00	00	0C	0C	00	=	24	.
7108	:	00	02	04	08	10	20	40	=	126	/
7110	:	00	18	24	2C	34	24	18	=	216	0
7118	:	00	08	18	08	08	08	1C	=	84	1
7120	:	00	18	24	08	10	20	3C	=	176	2
7128	:	00	18	24	18	04	24	18	=	148	3
7130	:	00	08	10	28	48	7C	08	=	268	4
7138	:	00	3C	20	38	04	24	18	=	212	5
7140	:	00	18	20	38	24	24	18	=	208	6
7148	:	00	3C	04	08	10	20	20	=	152	7
7150	:	00	18	24	18	24	24	18	=	180	8
7158	:	00	18	24	24	1C	04	38	=	184	9
7160	:	00	00	0C	0C	00	0C	0C	=	48	:
7168	:	00	00	0C	0C	00	0C	04	=	48	;
7170	:	00	06	18	60	60	18	06	=	252	<
7178	:	00	00	00	3C	00	3C	00	=	120	=
7180	:	00	60	18	06	06	18	60	=	252	>
7188	:	00	18	24	04	18	10	00	=	120	?
7190	:	3C	42	99	A5	A5	9D	42	=	892	@
7198	:	00	3C	42	42	7E	42	42	=	450	A
71A0	:	00	7C	42	7C	42	42	7C	=	570	B
71A8	:	00	3C	42	40	40	42	3C	=	380	C
71B0	:	00	78	44	42	42	44	78	=	508	D
71B8	:	00	7E	40	7C	40	40	7E	=	568	E
71C0	:	00	7E	40	7C	40	40	40	=	506	F
71C8	:	00	3C	42	40	4D	42	3C	=	393	G

71D0	:	00	42	42	7E	42	42	42	00	=	456	H
71D8	:	00	3E	08	08	08	08	3E	00	=	156	I
71E0	:	00	02	02	02	42	42	3C	00	=	198	J
71E8	:	00	44	48	70	48	44	42	00	=	458	K
71F0	:	00	40	40	40	40	40	7E	00	=	446	L
71F8	:	00	42	66	5A	42	42	42	00	=	456	M
7200	:	00	42	62	52	4A	46	42	00	=	456	N
7208	:	00	3C	42	42	42	42	3C	00	=	384	O
7210	:	00	7C	42	42	7C	40	40	00	=	508	P
7218	:	00	3C	42	42	72	4A	3C	02	=	442	Q
7220	:	00	7C	42	42	7C	44	42	00	=	514	R
7228	:	00	3C	40	3C	02	42	3C	00	=	312	S
7230	:	00	FE	10	10	10	10	10	00	=	334	T
7238	:	00	42	42	42	42	42	3C	00	=	390	U
7240	:	00	42	42	42	42	24	18	00	=	324	V
7248	:	00	42	42	42	5A	66	42	00	=	456	W
7250	:	00	42	24	18	18	24	42	00	=	252	X
7258	:	00	82	44	28	10	10	10	00	=	286	Y
7260	:	00	7E	04	08	10	20	7E	00	=	312	Z
7268	:	00	00	18	24	24	24	1C	00	=	160	a
7270	:	00	20	20	38	24	24	18	00	=	216	b
7278	:	00	00	18	24	20	24	18	00	=	152	c
7280	:	00	04	04	1C	24	24	18	00	=	132	d
7288	:	00	00	1C	22	3C	20	1C	00	=	182	e
7290	:	00	0C	10	10	18	10	10	00	=	100	f
7298	:	00	00	18	24	24	1C	04	18	=	152	g
72A0	:	00	20	20	38	24	24	24	00	=	228	h
72A8	:	00	00	10	00	10	10	10	00	=	64	i
72B0	:	00	04	00	04	04	04	14	08	=	44	j
72B8	:	00	24	28	30	28	24	24	00	=	236	k
72C0	:	00	20	20	20	20	20	10	00	=	176	l
72C8	:	00	00	36	49	49	49	49	00	=	346	m
72D0	:	00	00	38	24	24	24	24	00	=	200	n
72D8	:	00	00	18	24	24	24	18	00	=	156	o
72E0	:	00	00	38	24	24	38	20	20	=	248	p
72E8	:	00	00	1C	24	24	1C	06	04	=	138	q
72F0	:	00	00	00	18	20	20	20	00	=	120	r
72F8	:	00	00	18	20	18	04	18	00	=	108	s
7300	:	00	00	20	38	20	20	18	00	=	176	t
7308	:	00	00	24	24	24	24	1C	00	=	172	u
7310	:	00	00	22	22	14	14	08	00	=	116	v

7318 : 00 00 41 41 41 49 36 00 = 322 w  
 7320 : 00 00 22 14 08 14 22 00 = 116 x  
 7328 : 00 00 24 24 24 1C 04 18 = 164 y  
 7330 : 00 00 00 3C 08 10 3C 00 = 144 z

TOTAL CHECKSUM = 21531

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30 ALL

7000		30	FML	
7000		40	ORG \$7000	
7000 2008		50	@START BRA @PROG	
7002 0000		60	@PRTADD FDB 0	
7004 0000		70	@TXTADD FDB 0	
7006 0000		80	@CHRPOS FDB 0	
7008 0000		90	@NXTCHR FDB 0	
700A A69F7004		100	@PROG LDA [@TXTADD]	A
700E 811F		110	CMPA ##1F	S
7010 2342		120	BLS @NOPRT	S
7012 817B		130	CMPA ##7B	E
7014 243E		140	BCC @NOPRT	M
7016 8161		150	CMPA ##61	B
7018 2502		160	BCS @ADJUST	L
701A 8006		170	SUBA ##06	Y
701C 8020		180	@ADJUST SUBA ##20	
701E C608		190	LDB ##08	L
7020 3D		200	MUL	I
7021 C37090		210	ADD #7090	S
7024 FD7006		220	STD @CHRPOS	T
7027 1F01		230	TFR D, X	I
7029 C30008		240	ADD ##0008	N
702C FD7008		250	STD @NXTCHR	G
702F A680		260	@MORE LDA , X+	
7031 A79F7002		270	STA [@PRTADD]	
7035 FC7002		280	LDD @PRTADD	
7038 C30020		290	ADD ##0020	
703B FD7002		300	STD @PRTADD	
703E BC7008		310	CMPX @NXTCHR	
7041 26EC		320	BNE @MORE	
7043 8300FF		330	SUBD ##00FF	
7046 FD7002		340	STD @PRTADD	
7049 FC7004		350	LDD @TXTADD	
704C C30001		360	ADD ##0001	
704F FD7004		370	STD @TXTADD	
7052 20B6		380	BRA @PROG	
7054 39		390	@NOPRT RTS	
7055		400	END	

# '3 IN 1'

# BY J. CARTWRIGHT.

TITLE: Ruby Robba, Perilous Pit, Desperado Dan (Dragon-Dos disc)

SUPPLIER: R. & A.J. Preston

PRICE: £4.99 + 50p P&P.

This disc contains 3 budget games previously only available on cassette. On booting up the disc you are presented with the option of loading in either Perilous Pit, Ruby Robba or Desperado Dan. Pressing the appropriate key allows you to play your chosen game.

PERILOUS PIT is basically a platform game. It is the only commercial game I know of that was compiled using SPRINT, from Oasis. It isn't a bad advertisement for SPRINT as it shows what you can achieve if you're prepared to put the time and effort into it. My first gripe about this game is that it immediately starts you on a game, I think I lost a life before I could put the disc back in it's sleeve! Back to the game though. Do you remember the music that Donkey King/ The King played before starting you on a screen? Well, Perilous Pit plays you virtually the same tune whilst displaying how many lives you have left.

The idea of the game is to guide Boris the Miner (original huh?) in his attempts to fill his truck with diamonds. There are three diamonds available on each of the 4 screens. However, as you might expect, life is not that simple. To hinder you there are a few nasty, grubbly monsters. For a start there is one little guy, who looks a bit like a space invader, who moves from side to side. That probably sounds like he's really easy to avoid, he isn't. Just when you're least expecting it you accidentally move too close and WHAM!, you've lost another life! The moving platform is not strictly speaking a nasty but can do you an injury all the same. If you mis-time a jump and hit it, rather than land ON it, then you lose another of your precious lives. However, should you land on it safely then you can move on top of it and get to bits of the screen which are otherwise impossible to jump up to. The final, and undoubtedly the worst, of the monsters is the dreaded Orbis. He reminds me of one of those really old radios, that served as bits of furniture, but I suspect that he is meant to look like a ghost out of Pac-Man. This deadly character homes in on your position and takes great delight in eating you. Luckily Orbis does not start moving until you have jumped a few times, which is just as well really as far too often he starts very near to you on the screen!

The rail truck, into which you put your diamonds, moves slowly towards the edge of the screen, this is your time limit. If you have not collected all 3 diamonds by the time the truck is at the right edge of the screen then you lose yet another life. I must confess that I have never died in this way but by being eaten by one of the monsters. One touch in this game that I appreciated was that you can fall any distance so long as you land on a platform. This gives you much more of a chance to complete the game as you often mis-time jumps and fall down holes.

So far I have only got to the second screen (and it took me long enough to get there) so I can't tell you what the other screens look like. However, if they get progressively harder then I'd really like to meet the guy who completes screen 4!!

The graphics are small and none too detailed but they are perfectly adequate for a budget game. On the whole they move smoothly and the only character that flickers is you (Boris). If you disappear off one side of the screen then you re-appear on the other, very useful when trying to avoid Orbis.

On the whole this game is good, despite a few imperfections. It doesn't compare with the likes of Manic Miner but it does offer quite a challenge all the same. I really quite liked the game and I found myself loading it up again and again, though if I had the tape version I doubt if I'd play it quite so often. Whilst not appealing to everybody I think it might be appreciated by those who can't keep track of the hordes of monsters that attack you in other games such as Screaming Abdabs.

RUBY ROBBA always looked, from screen shots, that it was going to be a sort of maze game comparable to ALCATRAZ by Microdeal. However I was pleasantly surprised to find it as a cross between arcade and strategy.

What you must do is try to steal the Ruby from the screen. The screen is, to quote the instructions, "a complex defence system", in actual fact it's a 10 by 10 grid of blocks. To steal the ruby you must get it into the box at the top left of the screen. This is accomplished by pushing the various rows and columns of the screen. You yourself are a pointer which can rotate around the perimeter of the screen area. When you are in the desired position you can push the row or column in the direction that you are pointing. However, if the very end block of your row or column is occupied by something then you cannot push it. It very much reminded me of one of those sliding block puzzles, but of course it's far more difficult.

The complex defence system is made up of GUARDS; depicted as pistols, SNAKES; depicted as snake-heads, MINES; shown as skull and cross-bones, and MYSTERY BLOCKS shown as question marks. In addition to this are blue blocks, green holes and most importantly of all the Ruby itself.

If you push a snake or a guard into the box at the top left then the alarm system will be set and you will lose one of your three lives. Another way to lose a life is to let the time limit of 60 seconds tick away to zero. A further way, if I remember rightly, is to push the Ruby onto a mine. The Ruby may also be returned to its starting position (bottom right) if it is captured by either a snake or a guard. With all this against you it's just as well that you can gain a few bonus points here and there. For a start, pushing the mystery block into the box will give you a bonus score of either 100, 200 or 300 points. Pushing any of the nasties onto a mine also appears to give you some bonus points. Finally, should you complete a screen within the 60 second time limit then you will get 1000 points and a bonus, its size depending on how much time is left.

All the bad guys, (mines, guards and snakes) roam the screen looking for trouble. They are pretty intelligent and will home in on the Ruby so as to return it to its initial position. As you progress to further screens you are pitted against more and more nasties, no other different types but more of the same. The game starts off relatively simply but rapidly becomes frighteningly difficult. The instructions say that at 10,000 points you get an extra life although I cannot bear witness to this.

When the game loads you are given the option of reading the instructions, which are in the program as well as on paper. In addition to this you can set 1 or 2 players, difficulty level and whether you intend to use joystick or keyboard control. I liked the flexibility that these options allowed.

The graphics are nicely defined and in mode 3. The game really does get harder and it is very addictive. I enjoyed this departure from the standard arcade type games it's different from anything else I've ever played on ANY computer. Trust me, this one will leave you promising yourself "Just one more go....."

DESPERADO DAN is the last game of the three. Dan was, say the VERY brief instructions, a guest of Her Majesty's Prison until his timely escape. He now wants to collect his loot, but no-one has told him that a Super Market has been built over it.

As with Perilous Pit this game starts the moment it's finished loading, so rather unsurprisingly my first game didn't last very long! Controlling Dan is a bit of a hit and miss affair with the joystick, it doesn't always respond very well. However you soon learn to compensate for this.

I have found, after a bit of hacking and cheating, that the game has 11 screens. Here, however, lies a problem; they all look very much the same. The position of the walls and floors is the same on each screen, the various things that you must avoid however are not. These things include cannons (?), stacks of cans, fish, octopuses (I think that's right!), flying chicken and several other equally bizarre objects. In addition to this there is a ball, perhaps a cannon ball, that bounces around the screen in a similar fashion to the ORB in MR DIG!. This is perhaps the hardest of all the objects to avoid. Finally there is a chain type thing which goes up and down continually.

The first screen plays at quite a slow speed and serves as a "warm-up" for what is to come. The second screen is exactly the same, but faster! From there on various different objects are introduced and naturally you've got to figure out how to avoid them.

The first few screens are on land and would appear to be near the prison, that's my guess anyway! After this there are a few screens on water where you are driving a boat or aqua-sled of some sort. After this you are in the outside world, complete with houses, castles and trees. Finally you are in the supermarket where you encounter the previously mentioned flying chickens.

Throughout the game you move very smoothly indeed, and no flickering either! The graphics, however, leave a lot to be desired. The game plays in mode 3 although you might as well be in mode 1 as far as the graphics are concerned. To be fair though, they do get better as you go further into the game. Watch out for the Loch Ness Monster on screen 6!

Inbetween each level or life you are treated(?) to a short burst of music (or should that be muzak?). This is all very well the first time but it begins to grate after a while. If anyone has the Melbourne House book "Machine language for the absolute beginner" then you will be familiar with the "music" involved with the game.

A nice touch that I certainly appreciated was that you can steer Dan when he is jumping. For example you can change direction if you suddenly realise that you're about to smash into the side of a house etc. That brings me to another point however. The collision detection is not all that it might be. There are times when it seems you've cleared an object when you will lose a life, with only 3 lives that's pretty frustrating!!

The only way to obtain a score is to clear a screen whereupon you will be awarded 100 points. Finishing screen 11 will get you a further 1000 before you start all over again, only faster, much faster! There is no on-screen scoring at all, the only time you are given any information at all is when you are played that horrible music.

When all is said and done the nasties are fairly original and in most cases appropriate. The moving ones are the worst, to clear a car, van or whatever you really have to jump early, that's caught me out many a time!!

When I first played this game I really hated it. However after a while I got "into" it and now I quite enjoy it. Don't expect fantastic graphics or gameplay but it's a nice little game which is certainly worth playing once in a while.

On the whole I enjoyed this disc very much. (It's about time people started putting games on disc, after all the money you spend on a disc system it's very frustrating to find virtually no software available.) All three games have their good and bad points but they are all very playable and worth buying. For me RUBY ROBBIA was the best but there's nothing fundamentally wrong with the other two. At £4.99 this is a snip and worth every penny if you ask me. But a word of warning, these are budget games, don't expect them to be of the very highest quality. Having said that I enjoyed all three games and I don't see why you shouldn't either!

**RATING: 4/5**

# NEWS EXTRA

Orange Software, proving that they are the most prolific of Software suppliers have a number of new releases out this month.

On the arcade front, new software includes Geir Hovland's NORTH SEA ACTION, an original and addictive arcade game set far out in the North Sea. Also making a welcome return is Microvision's former game, MISER'S DREAM, a colourful and addictive game in which you have to guide falling money into your piggy bank whilst avoiding the descending coins and the money spider. Both games are available for £2.99.

New adventure games include WAR HAMMER OF GILLIBRAN and the FLEX based CURSE OF COMARC available for £3.99 and £5.99 respectively.

Simon Hargrave's complete set of Adventures rated very highly by prominent members of the Dragon community are now available for £20.

Aswell as selling Ex-Quickbeam stock, Orange have now turned their attention to Microvision's former stock and aswell as MISER'S DREAM this includes a number of Utilities.

HI-TEXT+ is an improved version of the HI-RESOLUTION TEXT Screen Driver previously available from Microvision. It gives a very readable 64 column display in PMODE 4 and also gives a WINDOWING facility. HI-TEXT+ is available on Cassette for the Dragon and Tandy and on DragonDOS Disk, priced at £2.99.

Also available is SHERLOCK, a FLEX based sector editor with a host of utilities running within SHERLOCK. SHERLOCK is available for £5.99.

Another FLEX package is Roy Coates Flex suite, QMON, a FLEX M/C monitor) along with FLEX PACK 1 containing various utilities. QMON is available for £5.00.

Other interesting news from Orange is that Phil Scott is developing an EPROM that will allow you to plug a Dragon DOS cartridge into a Tandy COCO.

"Obviously, programmes stored in Dragon tokenised form, would not run directly on the Tandy, but it will allow 40 track disks to be transfered between the Dragon and the COCO!", says Orange's Graham Smith.

For further details of any of the above, send a SAE to Orange Software, The Garth, Star Road, Nant-y-Derry, Abergavenny, Gwent, NP7 9DP. Tel - (0873) 880252.

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## Help-Line

Problem:Does anyone have a copy of TOUCHSTONE they're willing to sell to me.

Name:Derrick Moores.

Address:15 Parkville Road, Prestwich, Gt. Manchester, M25 5QG.

\*\*\*\*\*

Problem:Dragon Logic urgently requires someone with access to a photocopier to produce copies of the magazine. Reasonable rates paid. Preferably in the Highlands, but not necessarily.

Name:Donald Morrison.

Address:72 Diriebught Road, Inverness, IV2 3QT.

\*\*\*\*\*

# scroll BY D.HODSON.

This Issue, i have included an assembler listing of my Scroll program, featured last Issue.

There are a few points which i think i should mention about the listing. Firstly it was written on a Dream assembler and therefore it may require some modifications in order to work on other assemblers.

Secondly it is written to assemble directly into memory (ie at &H7FFF), and so any assembler at that address will be corrupted and attempting to re-enter the assembler will cause it to crash. The correct procedure (if using Dream) is as follows:

- 1) CLEAR 200,&H3FFF, to give Dream a larger workspace otherwise it will object due to the length of the program.
- 2) Type in the code.
- 3) Save the source code.
- 4) Assemble the source code.
- 5) Quit the assembler.
- 6) Save the code using (C)SAVE"SCROLL",&H7DFF,&H7FFF,&H7DFF.

The (C) being used if the data is to be saved to tape.

Also, i think i should explain some of the subroutines as te program could never be said to be organised (so much for structured programming!). The following is an explanation of the main sections.

SECTION	FUNCTION
*****	*****
START to LOOP	sets up basic to recognise Scroll commands.
CMDS to WORDS	the data for basic's command interpreter.
UP to DERT	scroll up routine.
DOWN to KERT	scroll down routine.
LEFT to TUG	scroll left routine.
RIGHT to MUW	scroll right routine.
HUT to FRET	reads variables for 'SCROL' commands.
KHAR	reads variable for 'BORD' command.
MESS to END	initialization message.
SIZE	routine for width command.

If you have any difficulties with this listing or the previous listing, please contact me at the following address:

41 Swinton Rise, Ravenshead, Notts, NG15 9FS.

	ORG	#7DFF	STA	#012A	JMP	#8371	
DMR	EQU	35242	LDX	#CMDS	CMDS	FCC /#SCROL/, 213	
GET	EQU	36483	STX	#012B	FCC	/#SCROL/, 196	
START	LDX	##012A	LDX	#DESP	FCC	/#SCROL/, 284	
	LDY	##0134	STX	#012D	FCC	/#SCROL/, 210	
LOOP	LDA	,X+	LDA	#57	FCC	/#BOR/, 196	
	STA	,Y+	STA	START	FCC	/#WIDT/, 288	
	CMPX	##0134	JSR	MESS	DESP	SUBA	##CE
	BLO	LOOP	JSR	#8434	BPL	IK	
	LDA	#6	JSR	#8000	JMP	#89B4	

LDX	#WORDS	GMUT	LDA	-1,X	LDX	#GRET	
JMP	#B4ED		STA	,X	LEAX	2,X	
WORDS	FDB	UP	LEAX	-1,X	STB	,X	
FDB	DOWN		CMPX	AD1	LDX	#TUG	
FDB	LEFT		BHI	GMUT	LEAX	2,X	
FDB	RIGHT		LDX	AD1	STB	,X	
FDB	KHAR		LDA	CHAR	LDX	#MUW	
FDB	SIZE	FWOG	STA	,X	LEAX	2,X	
UP	JSR	HUT	MUW	LEAX	32,X	STB	,X
LDX	AD1		CMPX	AD2	STB	HUW	
GRET	LDA	32,X	BLO	FWOG	DECB		
STA	,X+		RTS		LDX	#WET	
CMPX	BD2	HUT	JSR	GET	LEAX	2,X	
BLO	GRET		STX	AD1	STB	,X	
LDX	AD2	WET	LEAX	31,X	NEGB		
LDA	CHAR		STX	BD1	LDX	#FRET	
STB	,X		JSR	CMA	LEAX	2,X	
LEAX	-1,X		JSR	GET	STB	,X	
CMPX	BD2		STX	AD2	LDB	HUW	
BGE	DERT	FRET	LEAX	-31,X	NEGB		
RTS			STX	BD2	LDX	#BRET	
DOWN	JSR	HUT	RTS		LEAX	2,X	
LDX	AD2	KHAR	JSR	36433	STB	,X	
BRET	LDA	-32,X	STB	CHAR	RTS		
STA	,X		RTS		HUW	FCB	0
LEAX	-1,X	AD1	FDB	0			
CMPX	BD1	AD2	FDB	0			
BHI	BRET	BD1	FDB	0			
LDX	AD1	BD2	FDB	0			
LDA	CHAR	CHAR	FCB	96			
KERT	STA	,X+	MESS	JSR	#BA77		
CMPX	BD1			LDX	#1024		
BLE	KERT			LDY	#NAME		
RTS		QWE		LDA	,Y		
LEFT	JSR	HUT		CMPA	#0		
LDX	AD1			BEQ	END		
GHUT	LDA	1,X		STA	,X+		
STA	,X+			LEAY	1,Y		
CMPX	AD2			JMP	QWE		
BLO	GHUT	END		LDX	#1057		
LDX	BD1			STX	#88		
LDA	CHAR			RTS			
FROG	STA	,X	NAME	FCC	/SCROLL/,96		
TUG	LEAX	32,X		FCC	/U/,113,110,115		
CMPX	AD2			FCC	96,/BY/,96,/DLR/,96		
BLE	FROG			FCC	/HODSON/,96		
RTS				FCC	113,121,120,119		
RIGHT	JSR	HUT		FCC	0		
LDX	AD2	SIZE		JSR	36433		

(C) D.H 1987.

# ST - NO THANKS!

It seems that a number of Dragon owners are being tempted (as i was) to abandon their machines in favour of the ever-so-trendy Atari ST. For those of you in this position, and i hope that it is not too late, here is some friendly advice.

I have had the use of an Atari ST for nearly a year now and i'm glad that i didn't have to pay for it. The Atari ST hardware is really not bad. It is unfortunate that the system software lets it down. I have the impression that enough hardware was together to make a decent games machine, and that the system software was thrown together as an afterthought and as quickly and as cheaply as possible. The Atari ST market in general has developed into a shark-infested sea, where unwary users flounder at their peril. I honestly think that a Dragon owner contemplating moving to an Atari should save the money - or spend it on upgrading their Dragon kit. A Dragon 64 with twin Disk Drives, 80 Column Plus board, monitor and OS9 really makes the ST look pretty silly as far as the serious work is concerned. (OK, the Atari games LOOK better, but that's about the extent of the advantage). The Dragon market is small and friendly. The ST market is huge and hostile. I came as a big shock to me to discover exactly how greedy some suppliers in the ST market are. Here is a small selection of specific Atari ST grumbles:

- 1) The BASIC supplied is very mediocre and fails to make good use of the mouse and graphics. Documentation is appalling (MUCH worse than the Dragon manual).
- 2) Many Hardware and Software suppliers overcharge, fail to deliver, supply shoddy goods and i have experience of them being extremely rude.
- 3) ST magazines are firmly on the side of their advertisers. Presumably the market is so lucrative that they don't need to worry about their customer satisfaction. I have yet to receive a reply to any of my letters and i have written with specific complaints against specific suppliers.
- 4) The shortage of good software is so desperate that the market for PD Software is booming, even though 90% of it is rubbish (to be fair, some of it is very good though).
- 5) The Operating System leaves me speechless. It is an archaic single tasking imitation of MS-DOS (God rest its soul).
- 6) There is no command line interpreter. Very few programs have been properly adapted to run under GEM, which makes life for the developer vert difficult. After a week of alternately pointing and clicking then typing at the keyboard, i was obliged to spend another £20 on a command line interpreter just to run the program i had already bought.
- 7) Whilst GEM is a reasonable environment, Atari chose not to fully implement it on the ST. This means that some of the useful functionality of GEM is missing, and that not all GEM software can be ported to the ST, which makes a nonsense of the idea that GEM is a portable graphics environment.
- 8) The magazines are expensive, printed on thick paper and extremely glossy. Worse still, they contain advertisements, games reviews, endless facile introductions to BASIC and not much else.

To summarise : If you are thinking of trading your Dragon for an SF, DON'T DO IT - you'll regret it.

By Chris Jolly

First Printed In Dragon Update

On the Spot, this month features an interview with Paul Grade, Chairman and founder of NDUG.

For the past four years Paul has worked hard to achieve the success he has, and although his commitment to the Dragon is obvious, he shows signs of pessimism for the future. What follows is a true reflection of Paul Grade's views and experiences:

WHY DID YOU SET UP NDUG AND WHAT DID YOU HOPE TO ACHIEVE BY DOING SO

NDUG came about by accident. I wrote a letter to Dragon User asking why someone didn't start a National Group, and got a lot of replies assuming that i was going to do so myself, so i did. I never really set out to achieve anything.

IN YOUR OPINION, DO YOU FEEL NDUG HAS ACHIEVED EVERYTHING IT SET OUT TO ACHIEVE

It didn't set out to achieve anything at all, but it's still going well after four years, still solvent, still has more members than most and gets more compliments than complaints, which is i suppose quite an achievement in itself.

HOW DID DRAGON USERS INITIALLY REACT TO NDUG IN ITS EARLY DAYS

Very slowly and with great suspicion, because that was a time when a lot of "Grab the money and run" type groups and magazines were operating, and we had to live down THEIR reputations before we could really get established.

WHY DID YOU MAKE A PERSONAL CHOICE TO BUY A DRAGON

Because the type Dixons were trying to "hard sell" me into buying looked like a block of black chocolate covered with blue rubber fungus and allegedly made by that prat who was later awarded an OBE for persuading people that they could drive plastic washing machines.

WHAT EXPERIENCE DID YOU HAVE WITH THE DRAGON PRIOR TO NDUG

Two years of normal usage.

WITH SUPPORT IN THE DRAGON CONTINUALLY FALLING TO NEW DEPTHS, HOW LONG CAN YOU SEE THE NEED FOR NDUG

Currently the number of Dragon users (as opposed to owners) is fairly static, but with falling commercial support these numbers have to dwindle, and i would expect that another two years is about as much as anyone can hope for. After that there will probably be insufficient subscribers for a national group to remain viable.

WHAT IN YOUR OPINION HAS KEPT THE DRAGON GOING FOR SO LONG

It is probably the best general purpose computer ever sold, and is certainly the best programmers machine.

WHAT IS THE CURRENT MEMBERSHIP OF NDUG

Still hovering around the thousand mark, plus or minus twenty at any time.

WHAT IN YOUR OPINION HAS ATTRACTED SO MANY PEOPLE TO NDUG

Sheer desperation in most cases! Other than that, possibly the fact that we are totally NON commercial and offer a service that commercial set ups can't afford to compete with.

HOW LARGE A ROLE HAS NDUG PLAYED IN KEEPING INTERES IN THE DRAGON ALIVE

I don't really know. According to a lot of people we've done it single handed!, but i think that the group and Dragon User between then can fairly claim to have kept the machine alive for the past three years.

FOR SOME TIME NOW DRAGON USERS HAVE BEEN ABANDONING THEIR DRAGON IN FAVOUR OF 'MORE SOPHISTICATED' SYSTEMS. DOES THIS ANNOY YOU

Briefly, yes! If someone needs a function which can only be provided by a different machine then of course they should change, but generally the changers have been people who have no need of a different machines at all, and could achieve the same results or better by merely writing their own software for their Dragon. This is stupid, and i have no time at all for stupidity.

HAVE YOU ENJOYED YOUR TIME AS CHAIRMAN OF NDUG AND WHAT HAS MADE YOUR EFFORTS WORTHWHILE

Running the Group is like having a permanent toothache, it gives you no peace at all, and after a while you can't imagine a time when it didn't exist! However, i've met a lot of interesting people, and learned a lot, and hopefully helped a few people in return, which i guess makes it worthwhile.

WHAT DO YOU LIKE MOST ABOUT TODAY'S DRAGON USERS

Who said i liked ANYTHING about them?! Generally they're people who want to USE their machine rather than get high-scores on arcade games, and that makes them a lot more interesting to know than a lot of the original users, who would have really been happier owning Atari 2600's, and in most cases a lot more helpful too.

WHAT'S THE MOST UNUSUAL REQUEST YOU'VE HAD AS CHAIRMAN OF NDUG

I'm not telling you!, you couldn't print it, and it was physically impossible anyway, although very inventive!!

DO YOU THINK DRAGON USERS IN GENERAL ARE DOING ENOUGH TO KEEP INTEREST IN THE DRAGON ALIVE

About three dozen people are doing more than their share, the rest are doing nothing at all, and when the 'few' eventually get sick of carrying the remainder, the Dragon will finally die. Cause of death - owner apathy.

HOW DO YOU RATE THE DRAGON AS AN ALTERNATIVE TO THE MACHINES OF TODAY

As a home machine, still the best general purpose computer available. As a business machine, it's obviously outclassed on software by the IBM clones which can run "industry standard" material. Generally, "as good as any and better than most", or i wouldn't be using it.

WHAT HAVE BEEN YOUR BEST AND WORST MOMENTS AS CHAIRMAN OF NDUG

Best?, the day after the newsletter is in the post, and i can have almost a week off before starting work on the next one. Worst?, when the copier gave up in the middle of the

print run which was already a fortnight late because the Update master disc was corrupt! There aren't really any high or low points, the Group just keeps running ... it's all rather boring most of the time.

HOW DO YOU RATE THE STANDARD OF SOFTWARE AND HARDWARE CURRENTLY AVAILABLE FOR THE DRAGON  
Better than it has ever been, especially the software, but it's a case of too little too late. If we'd had better software to begin with, Dragon Data would probably still be in business!

DO YOU HAVE ANY NEW PLANS FOR UPDATE OR NDUG

Not really, Update depends on what members send us for publication, so changes are up to them rather than me. We are giving more coverage to the CoCo now, but that's about all, i think. The Group may be organising a London & South East Dragon Show early next year, and we've got some new software on release shortly.

WHAT DO YOU HAVE TO SAY TO USERS WHO PIRATE NDUG SOFTWARE

There aren't all that many, but to those who are stupid enough to do so ... "Keep away from dark alleys, never sit with your back to the door and don't forget to pay your insurance premium"!

WHAT SORT OF AGE GROUP AND COMPUTING CAPABILITIES DOES NDUG APPEAL TO

All ages from 8 to 87 at the moment, and from those who want to know how to load a program to the types who can write half a meg of Pascal programs before breakfast. We're a general group, and we try to cover all interests and abilities although for some reason we appear to have a very large number of professional software writers and hardware engineers in the Group. You name it, we've got one on the mailing list somewhere!

WHAT DO YOU MOST LIKE ABOUT THE DRAGON

It's cheap, efficient, simple to use and definitely not a 'fashionable' machine, and more to the point, does everything i need without complaint or undue expense.

WHAT FUTURE ROLE WILL NDUG PLAY IN KEEPING THE DRAGON GOING

We will carry on as usual until the number of members becomes too low to make this practical.

WHAT WOULD YOU SAY TO CONVINCING A USER WHO WAS UNCERTAIN ABOUT JOINING NDUG

I wouldn't. I'm not interested in persuading anyone to join. If a user thinks joining is worth the money, that's fine, but if they don't, well, that's their business. That's why we don't advertise, we aren't running a recruiting drive or selling the idea of joining ... we're here if anyone wants to join, that's all.

WHAT'S YOUR FAVOURITE GAME

Hitch Hiker ... the only game i've ever bothered to play right through.

WHAT DO YOU THINK ABOUT THE STANDARD OF LITERATURE AVAILABLE FOR THE DRAGON

As there are no longer any actual manuals published, i can only assume that you are referring to magazines. In this case all i can say is that although all concerned have had

to reduce production costs owing to restricted circulation figures, the quality of the material is better than it has ever been.

**WHAT DO YOU FEEL ABOUT OUR SUPPLIERS COMMITMENT TO THE DRAGON**

Anyone trying to make a profit supplying anything for the Dragon should be committed! There are very few suppliers now, and those remaining are in many cases running at below "break even" point .... how much more committed can anyone get?!

**TO WHAT DO YOU ATTRIBUTE NDUG'S SUCCESS**

My personal charm.

**DO YOU FEEL A SENSE OF PRIDE AT HAVING MADE NDUG THE SUCCESS IT IS**

If you can call a group with a membership of less than .2% of the total Dragon owning population as members a success, i do NOT!

**HAS IT BEEN HARD WORK CHAIRING NDUG AND HAS YOUR HARD WORK BEEN WORTHWHILE**

As this Group takes up approx. 70 hours a week, and has done so for the past four years, without a break, YES, it IS bloody hard work! Is it worthwhile, you tell me!

**©INTERVIEWER : DON MORRISON**

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Many thanks to Paul Grade for taking part in the above interview. Just for interest, the Group run an "at cost" repair service for member's hardware, they have their own Micronet Gallery pages, they publish a monthly newsletter called Dragon Update and they also produce their own software.

For more information on the National Dragon Users' Group, contact Paul Grade at 6 Navarino Road, Worthing, Sussex.

Next Issue features an interview with well known software writer Jonathan Cartwright. Don't miss it.

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**"CUR"** By Gary Barnacle

This Interrupt driven program converts the cursor into a flashing blob, making any program that uses the cursor more interesting. The program is particularly useful when used in conjunction with Paul Reid's Hardware modification as detailed in Dragon User March 1988.

10 DATA 1A,10,8E,7F  
20 DATA E3,BF,01,0D  
30 DATA 1C,EF,39,B6  
40 DATA FF,00,9E,BB  
50 DATA A6,84,B1,7F  
60 DATA 23,0D,81,FE  
70 DATA 2E,09,4C,A7  
80 DATA 84,A7,84,7E  
90 DATA 9D,3D,3B,B6  
100 DATA 80,7E,7F,F2  
110 CLEAR 200,&H7FD7

120 FOR N=&H7FD8 TO  
&H7FFF:READ D\$  
130 POKE N,VAL ("&H"  
+D\$):NEXTN  
140 EXEC&H7FD8  
150 POKE&HFF48,0  
160 CLS:PRINT@448,"  
press enter key to  
new loader";:PRINT@3  
20,"TO RETURN TO NOR  
MAL CURSOR TYPE P

DKE&H010D,0:POKE&H01  
0E,0":PRINT@0,""  
170 PRINT:PRINT:INPU  
T" AS YOU CAN SEE T  
HIS PROGRAM STOP  
S THE NORMAL FLASHIN  
G cursor AND R  
EPLACES IT WITH  
THIS";X  
180 CLS9:PRINT@32,"'  
C) 1984"

## Next Issue

In Issue 4 Jonathan Cartwright will be continuing his series with more in-depth programming advice, Stuart Beardwood of the Westgarth Childrens Home joins Dragon Logic's team to re-launch 'Sound Check' with some helpful advice on enhancing the Dragon's sound capabilities and Ray Smith of NDUG's Dragonart Graphics Library puts some new life into our Graphics series.

Next Issues software listings include part 2 of Ronald Walter's Vocabulary Listing, Daniel Hodson's Scroller Listing (for use with Scroll featured in Issue 2), and a 100% machine code tape back up utility.

On the Hardware side, we feature a DIY Hardware Report on 3.5" Disk Drives, at extremely low prices.

Reviews next Issue include Kouga Software's latest release - Ball Dozer, Bean Patch, Music Maestro, 'TX' - A Graphics Utility, Zotoka, Starman Jones plus much more. Our tribute to Microdeal comes to an end next issue and to mark the end of the series, we'll be printing one of the biggest round ups of Microdeal games ever seen.

Adventurers Anonymous features a host of hints on The Final Mission and Return of the Ring.

Other features in Issue 4 include up-to-the minute news, letters, Hints & Tips, Help-Line and a profile of the National Dragon Users' Group.

And to cap it all Jonathan Cartwright, well known magazine contributor and Software author will be On the Spot. .

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## Subscriptions

Dragon Logic is now distributed Bi-Monthly. This means that from now on there will only be 6 editions a year.

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1 copy of Dragon Logic costs £1. A yearly subscription of 6 editions will simply cost £6.

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