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THE NEWSLETTER OF THE NATIONAL DRAGON USERS GROUP.



# DRAGON UPDATE



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

First thing this month has to be an apology. Issue 20 was VERY late going out, and some of you will have found that the print quality of two or three pages was exceptionally bad. I'm sorry, but there was nothing I could do about it. The old Toshiba copier finally wore out more parts at the same time than I could bodge back to life, which meant a lot of delay before I could even persuade it to complete the print run at all, and even then I couldn't manage to get an acceptable standard of copying. Eventually I had to order several new parts, SOME of which have now arrived, so hopefully this copy will be readable, but I'm still waiting for others, so I'll apologise in advance for any delay, in case they don't arrive in time. Quite simply the machine is overworked...it has to handle a 1000% overload!...and there have been suggestions that I ought to ask Members to subscribe a pound each towards the cost of a new machine....Well, if any of you think a new copier would be a worthy cause, all contributions would be very welcome!

Second point is a warning. I've had a lot of complaints recently that Dragons sent for repair to certain companies advertising in National magazines have been returned (with a bill!) in worse state than when they were sent for repair, and in some cases with dud chips substituted for sound ones or even missing altogether!. Judging by some of the "returned" machines that have been sent in to me for repair, the complaints are fully justified. If your Dragon gives up, and you can't repair it yourself, don't forget we're always willing to attempt it for you for the cost of materials plus postage, and if it can't be done, well, all we'll charge is the return postage. DON'T GET CONNED!!!  
Final point is Copyright. I see that a lot of Newsletters are now printing a copyright notice on their material, and I would like to make it clear that WE DO NOT!. All material in Update may be copied by any Group or individual who wishes to do so, provided they acknowledge the source. We want to HELP Dragon owners, NOT restrict them.

OK, that's all from me for now. Once again apologies for the state of Issue 20.

*Paul G.*

## ASCI CORNER.....Pauline Hampson.

This month Computape have kindly donated "The Hulk" and "Sorcerer of Claymorgue Castle" for review. They are selling twin packs of adventures for 5.50, which must be an all time bargain. More of The Hulk in the next Issue, but now on to The Sorcerer  
You, as Beanwick (who else?) must save the world by finding 13 stars and storing them in the right place. To aid you you have several spells and you will find others, but you must find out how to use them!. A castle is before you, and casting a spell lowers the drawbridge (or you ~~could~~ swim if you like). In the castle is a courtyard, a ballroom, kitchen, and a plain room which turns out not to be plain at all, and has a cresses in several directions. Searching the unmentioned cabinets in the kitchen is a useful experience. The spells have lovely names like Permeability, Lycanthrope, Light Squared, and Wicked Queen, to name but a few. I found the game really enjoyable but difficult, manzing different parts but being unable to manage them all because some spells could be used for several jobs but once used were gone. Then I realised that some spells last quite a time, and at last I seemed to be getting somewhere!.  
As in most Scott Adams games, there are few locations, the puzzels making up the main part of the game. It really held my interest, and I had to be dragged away more than once!. I have almost finished the game, but at present I'm stuck, and MAY have discovered a deliberate mistake...or is it a bug?!. Does your Yoho spell land you on the box? If it does then I think YOU may be suffering from the bug too!. I have talked to the Publishers (Adventuresoft, not Computape who sell the programs), and now must wait to see who is right.

## THE EDITORIAL BIT

Well, after last months problems with the photocopier, we have had to make a few changes. As you will see, this newsletter seems a little thinner than usual, this is because it is a little thinner than usual! What we have had to do is change the printing to condensed text, the effect of this is that you have less pages than normal BUT because of the condensation, you actually have the same amount of text. We did this to reduce the number of copies that have to be photocopied in the hope that we can get the print run through without the copier having another tantrum before we manage to get the rest of the spare parts. You may even like this format better, if so, drop me a line and let me know. *T.L.*

## BAUD WALK ..... GARY COXHEAD

Back in Issue 14, an article by R.A. Davis was published about how to go about becoming a radio amateur and then using your Dragon to help. He also mentioned using your Dragon to 'hack' RTTY messages from the airwaves. As this column is about all types of communication, I thought it would be a good idea to follow this aspect up, and give our members some insight into how to go about it. For those who don't want to become radio amateurs, but were none the less sufficiently intrigued as to how to get an 'ear' as to what is going out over the ether, for a start, you don't need a lot of money, provided of course you don't want the latest Japanese radio receiver with all the knobs and bells on! For a very modest outlay, you can pick up an old (and often large!) receiver at one of the amateur Radio 'boot' type sales. Once we're on the air, what is out there? Well, vast quantities of data traffic are transmitted daily over the radio waves, but ones of interest to us would be the worlds press agencies, commercial and maritime messages, meteorological data, and international police messages. The techniques for radio hacking are similar to those for computer hacking. Data is transmitted usually in a series of 2 audio tones to indicate binary 0 & 1, the commonest protocol uses the 5 bit Baudot code rather than the 7 or 8 bit ASCII code. Transmission speeds tend to be 50 or 75 baud and can be heard as a rapidly warbling audio signal. The material of greatest interest is to be found in the HF (High Frequency) or Short Wave part of the radio spectrum, which goes from 2MHz, which is just above the medium wave band, to 30 MHz, which is at the far end of the 10 Metre Amateur band. This is just above the well known Citizens Band at 27MHz. There are other areas of interest (given at the end) but the reason this range is so interesting is that these frequencies have the capacity for worldwide propagation without the use of satellites. The radio signals will be reflected back by the ionosphere (now there's a good word!). This special quality means that everyone wants to use HF, including the international broadcasters, which is good news for us. What you need then is a receiver, a suitable antenna (aerial to you), an interface and/or software and your computer. A suitable receiver should have a range from 500kHz to 30MHz, have a resolution >10kHz and have AM, upper side band, lower side band and CW (Morse). These can be purchased secondhand for under 100.00, but if your expectations are modest, an older (and larger) receiver can be used, but will generally have less range. The radio I will be using (when I fix it!) is an old Halifax Aircraft HF receiver with a range of 160 kHz to 4.6MHz. Not the best, but sufficient to get started, and it only cost me a fiver! The aerial and cable are very important and should be the best you can afford. An active dipole aerial is good and compact and should be mounted as high up as possible. For further info., consult the manufacturers' instructions or a good radio amateurs book from the library. Please remember that the CPU of the Dragon can cause interference, so don't have the radio too close to the computer. As for the interface, you'll be pleased to hear that you don't need one! The Dragon is quite capable of 'hearing' the audio signals via the cassette port, and with suitable software, it can decode those signals direct from the sound output of the receiver and display them on the screen. This puts other computers to shame (as usual), as most of them require some sort of hardware interface.

There are a few Dragon programs on the market, but in my opinion, by far the best is the G4BNK RTTY program supplied by Grosvenor Software. Mr Kerry is an accomplished radio 'Ham' and this is reflected in the quality of his RTTY software. It is capable of decoding RTTY signals directly input from the cassette port at speeds up to 150 baud, and with a suitable tone demodulator can handle speeds up to 350 baud. Many useful facilities are featured including an 'invert' function in case you are listening on the wrong side band. It is available on cartridge or cassette, and that's about it, apart from to say, if you have a go, let me know.

There now follows some info on where to listen (c) M.J. Kerry - reproduced by kind permission) Amateur transmissions are centred about the following frequencies. 80Mtrs (3.60MHz), 40Mtrs (7.04MHz), 30Mtrs (10.145MHz), 20Mtrs (14.09MHz), 17Mtrs (18.10MHz), 15Mtrs (21.09MHz), 13Mtrs (24.91MHz), 10Mtrs (28.05MHz), 2Mtrs (144.6MHz SSB/FSK), 2Mtrs (145.2MHz FM) and 70cms (432.6MHz). BATTG, the British Amateur Radio Teleprinter Group, broadcasts news on Sundays on 2Mtrs at 12.00 and 12.30 GMT and on 80Mtrs at 12.00, 12.30 and 19.00. A Dutch station transmits news on Friday evenings at 20.30 GMT on 3.6MHz repeated at 10.00 GMT on Saturdays. ARRL sends news on Sundays at 17.30 GMT on 14.095 to Europe. Most amateurs use 45 baud and upper side band is the standard on all bands. Many international news and other RTTY transmissions may be found on short wave, especially between 7 and 19 MHz. 50 is the commonest baud rate, then 75 and occasionally 45. Both lower and upper side bands occur, LSB being the most common.

|              |         |        |    |     |
|--------------|---------|--------|----|-----|
| TASS Russia  | English | 14.70  | 50 | LSB |
| TASS Russia  | English | 11.50  | 50 | LSB |
| TASS Russia  | French  | 16.18  | 50 | LSB |
| KCKA N.Korea | English | 12.175 | 50 | USB |
| KCKA N.Korea | ?       | 9.38   | 50 | USB |
| Stampa ?     | Italian | 13.97  | 50 | ?   |
| China        | English | 3.75   |    |     |
| MAP Morocco  | Various | 18.49  | 50 | LSB |
| ADN GDR      | English | 18.05  | 50 | LSB |
| Interpol     | English | 3.572  | 50 | ?   |

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### Competition entries.....

Because several areas have had postal strikes and "go-slows", several members have asked me to keep the Lightpen Competition open a little longer, so to be fair to all concerned I have decided to extend the closing date until the 31st May. We'll be printing the results in Issue 22, and of course the best entries will be printed as well.

I've got a lot of cheat pokes etc. so I can't waste space here. I received 3 letters (a new record) containing various infinite lives and screen pokes, from Barry Caruth, John Davis (or Davies, I can't make out the signature) and Mike Vine, so thanks to all of them. If you find that some of your own pokes appear in this or the next issue (if I got them from mags etc.) then drop me a line and I'll gladly acknowledge you. I haven't had time to test them all as I trust Messrs Caruth, Davis and Vine. All further queries to them.

The major problem entering cheat pokes is that most games auto run and sometimes the auto run routine can be hard to strip off. Here's Mike's solution, it should be typed in as a direct statement.

S=100:POKE S,142:POKE S+1,4:POKE S+2,0:POKE S+3,126:POKE S+4,183:POKE S+5,91:SKIPF:EXEC S

You may find that the title page will be corrupt but don't worry about that. Also after loading the program you may have to press (BREAK). This routine works on most loaders, including those damned awkward Microdeal ones but it doesn't work on Dark Star. Assuming you've got past the auto run, here are some of his pokes. I will only give the locations to poke, if there is a limit of lives, I'll mention it.

Assume up to 50

|                      |                 |                    |                       |                    |                   |
|----------------------|-----------------|--------------------|-----------------------|--------------------|-------------------|
| — Cuthbert Cooler    | 8295 (up to 14) | — Robin Hood       | 15712                 | — Caverns of Chaos | 26865 (up to 100) |
| — Shocktrooper       | 13895           | — Eddy Steady Go   | 27152 (19 shows #)    | — Tubeway Army     | 12367             |
| — Munchback          | 25384           | — Galactic Raiders | 19664                 | — Ice Castles      | 19160             |
| — Lunar Rover Patrol | 22312           | — Jet Set Willy    | 18610 (125 slow game) | — Invaders Revenge | 14719             |
| — Rommel's Revenge   | 16516           | — Dark Pit         | 11255                 | — Jet Boot Colin   | 7329              |

Mike has also sent some pokes for colour screens and various stages of games:

|                    |                                     |
|--------------------|-------------------------------------|
| — Ice Castles      | 13071,232 (for buff)                |
| — Caverns of Chaos | 26860,224 (for green)               |
| — Jet Set Willy    | 7859,232 (for colour)               |
| — Screaming Ab Dab | 10999,232 (for colour)              |
| — Worlds of Flight | 14039,224 (for colour intro)        |
| — Tubeway Army     | 12388 (1 to 6 for different stages) |
| — Astro Blast      | 21067,224 (for colour)              |

Also here's a routine from Mike to find your own pokes. He says 'When peeking through a game, the LIVES location usually has the value 134 and either 189 or 151 after it', so :

FOR I=(START ADD) TO (END ADD):PRINT I,PEEK(I):IF PEEK(I-2)=(No of lives in a game) THEN EXEC 41194:NEXT

This will stop at a possible location and wait for a key press (EXEC41194) then if you think it's the right location, stop the program and poke it with the number of lives you want. WARNING - There may be more than 1 or 2 possible locations.

Next month an offer of help from Mike to disc owners and more pokes.

## Crossword No. 12.

ACROSS: 1a Artificial music producer.

3c Microvision game.

4a Painful muscle contraction.

4i Old sea map.

5a Holding position without pay.

6d Dragon mag. publisher.

7c Country of the sacred cow.

7i A form of this is hydro electric.

8a & 18 Munchback's cathedral.

8g Intense light source now used in surgery.

9k Mouse-like flying animal.

10a A plot of building ground.

10e & 13 A person who steals clocks could be called this.

11h Aromatic seasoning vegetables.

13a Instruments which can show waveforms.

DOWN: A1 Set a timepiece to standard time.

C3 See 1/e.

C9 Small room at the top of a house.

D1 Sounds like a drink for golfers.

E4 Insurance company once associated with the Dragon.

G6 Italian sausage.

H2 To reside for a time.

I4 Defunct radio (computer) program found in most High Streets.

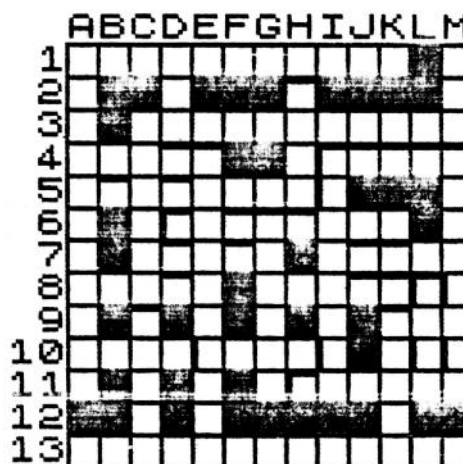
K9 Arm muscle.

L8 See 8a.

M1 Animals with backbones.

The first correct entry this month wins a copy of Scott Adams 'The Hulk'.

The winner of last month's competition was J.E.Slade of Thanet, Kent.



CROSS WORD NUMBER 11 ANSWERS

## ACROSS :

1B) Rod 1F) Bench 2A) Demon 2H) Boot 3D) Knight 4A) Right 5D) Artificial 6A) Cobol 7H) Pint 8A) Owl 8E) Cursor 9K) Cue  
11B) Car 11K) BBC 12J) Blue 13A) Characterset

## DOWN :

A2) Directory C1) Omega C10) Data D3) Chaos E1) Knot EB) Cumana G6) Mark G11) Dot I1) Conditional K3) Glint K9) Cable  
M1) Intelligence

DRAGON CURVES .... John Payne

What is a Dragon curve you ask? The simplest way to make one is to get a long thin strip of paper and fold it in half. Continue to fold the strip in half (in the same direction) N times. Then, looking along the edge of the paper, unfold it until the paper makes a right angle at each crease. The paper now has the shape of a Dragon curve of order N. You will have difficulty making a Dragon curve of order 11 by this method because the paper won't fold 11 times without tearing. Thier, unfold it until the paper makes a right angle at each crease. The paper now has the shape of a Dragon curve of order N. You will have difficulty making a Dragon curve of order 11 by this method because the paper won't fold 11 times without tearing. Thier handed Dragon curve of order N :-

Draw a Dragon curve of order N-1. Join on (at 90 degrees to the left) a left handed Dragon curve of order N-1. A right handed Dragon curve of order N is drawn by the same method except that the order N-1 curves are joined to the right. If you feel that this description is inadequate, you are quite right, you also need to know that an order zero Dragon curve is a straight line.

It goes without saying (but I'll say it anyway) that you have Forth with turtle graphics so you can understand and use the definitions below. Once they are loaded, 11 LEFT DRAGON will draw an order 11 left handed Dragon curve. Naturally, the instructions that tell the Dragon to draw a Dragon curve include the word SELF.

Dragon curves have several interesting properties. The most obvious is that you CAN actually unfold the paper at right angles without it getting in it's own way. (You can't do this at 60 degrees for example). Less obviously, Dragon curves fit together - so if you're tired of Vidipix you can play jigsaws with Dragon curves instead.

## SCR # 190

```
: SELF LATEST PFA CFA , ;
IMMEDIATE ( When used within the
word DRAGON, SELF calls the word
DRAGON. )
90 CONSTANT LEFT
-90 CONSTANT RIGHT
2 VARIABLE SIZE ( of the order
zero Dragon curve ) --)
```

## SCR # 191

```
: DRAGON OVER IF ( ORDER > 0 )
OVER 1- LEFT SELF ( DRAW LEFT
DRAGON OF ORDER 1 LESS )
DUP LT ( TURN LEFT/RIGHT AS
SPECIFIED BY CALL )-
OVER 1- RIGHT SELF ( DRAW
RIGHT DRAGON OF ORDER 1 LESS
) --)
```

## SCR # 192

```
ELSE ( IF ORDER = 0 )
SIZE @ FD ( DRAW LINE OF
LENGTH SIZE )
ENDIF DROP ( ANGLE )
DROP ( ORDER )
( STACK DIAGRAM OF WORD DRAGON
IS: ( ORDER ANGLE --- )
```

DUPLIDISC REVIEW ... ROGER MERRICK

Imagine my excitement when I saw the advert in Dragon User, 'This tape to DragonDOS converter will convert most of your tape based games to disc', just what I wanted to jazz up my disc system. Out came the cheque book and off went the money. Time went by and eventually along came the program. Unbelievably, it is supplied on CASSETTE!. Will it copy itself to disc?. Of course not!. Which of my programs will it convert then?

It DID convert: Chuckie Egg, Pommel's Revenge, Cave Fighter, Jet-Boot Colin, Space Raiders, Crazy Painter, Intergalactic Force, Touchstone and Cuthbert in the mines. Total 12

It DID NOT convert: Megamaze, Cruising, Galacticans, Ultrapede, Hide & Seek, Star Swoop, Copta Snatch, Juniors Revenge, Mr. Big, Space Fighter, Talking Android Attack, Storm, Cuthbert goes Walkabout, Fury, Space Fighter, Golf, Timebandit, Athletyx, Fearless Freddy, Galactic Ambush, Tea Time, Toppler, Pit fiend, Ice castles, Pinball, Buzzard Bait, Worlds of Flight, Moonhopper, Blockhead, Bandito, Zakkson, Bedlan, Raaka-tu, The Hulk, Backtrack, Hotel on Mayfair, Hunchback, Return of the Ring, Death Mines of Sirius and Ninja Warrior. Total 42

There is a majority of games which I have access to which could not be transferred. Was I just unlucky, not being a teenage games fanatic? You decide!

(I assume that you have written to both Dragon User and Quickbeam, demanded your money back and reported them to the Advertising Standards Authority Roger ? ... TL)

OS9.....

I don't know what's happened to the usual OS9 article from Jason Shouler this month.....either Tim has mislaid it or it arrived too late for inclusion.

Anyway, many apologies to all concerned, and it WILL be back again as usual in the next Issue, so don't worry, we haven't taken a dislike to OS9 users or anything like that.....HONEST!!!. Paul.



PRESTEL MODEM PACKAGE (Part 2)

So, where were we. Lets look at the adaptor in action. First of all plug it all in, on power up you are greeted with the copyright notice and a green/white screen option. Next, an 8 option menu, each option of which leads to a sub menu.

1) LOG ON/OFF - This leads to a sub menu with 2 options. To log on, you just select option 1, wait for the tone, switch the modem on line and press the spacebar. If alls well, you then get the Prestel welcome page, if not the (shift)(up arrow) takes you back to the menu to retry.

Option 2, log off, is very neat. Normally on Prestel you have to go to #9# and log off manually, this option automatically takes you to #9# and if no messages are waiting logs you off. A nice touch.

2) TERMINAL - this jumps into the terminal mode using the hi res screen. The colour part of Prestel is ignored for display on the Dragon but is saved to tape so that a suitably equipped terminal would show the colour. The terminal mode redefines the character set to give a very readable 48 col screen. As Prestel uses mainly the numbers, # and @, the keyboard has been redefined so that (:) gives # and (-) gives @ they are also still available in their original forms. When in terminal mode, you are automatically in lower case, the (shift) being used in the normal way to obtain upper case. One last feature is that (shift)(up arrow) takes you back to the menu allowing the use of the other functions without logging off.

3) SAVE FRAME - Selecting this option allows you to save the current frame to tape. After entering a filename and pressing (enter) the tape save is automatic. It is fast enabling several frames to be saved for later viewing while still on line without doing too much damage to your phone bill!

4) LOAD FRAME - Compliments (3), allows previously saved frames to be loaded and viewed. pressing (reset) aborts the load and returns to the main menu.

5) PRINT FRAME - This option allows you to dump a copy of the current frame to a printer. If your printer is Epson MX compatible, you can get an enlarged sideways dump of the screen, otherwise, you select option 1 and the text is printed, ignoring the graphics. This routine is too slow to use on line, it is better to save the frames and print them later.

6) DOWNLOADER - is a telesoftware downloader. Originally when the Dragon was selling well, Micronet intended to provide software to download. However provided the software is in basic, it should be possible to download as an ASCII file to be loaded and converted later. When you have found the program, return to the menu, select option 6 and the Dragon searches for a header. You are prompted to prepare the tape and the program is downloaded to tape. You can download to memory but if you do, you will be logged off immediately afterwards.

7) MAILBOX - All Prestel subscribers get a mailbox on joining and can receive and leave messages. This option goes to a sub menu which allows you to send, prepare, save a message to tape or load a message from tape. You can of course send a mailbox live, manually but this option allows you to prepare them in advance, save them to tape and then load and send them when required. This makes sending a lot faster and more efficient. Option 8 returns you to basic, from where EXEC reenters the viewdata system. I have been using bulletin boards for some time now and this system is has been the most convenient, sophisticated and easy to use software that I have seen. Do I have any criticisms? Yes, just one, I think the writers were a bit short sighted to expect it to be used for Prestel only. There are lots of 1200/75 boards now and it would have been nice to have a nice large text buffer so that many messages could have been stored. It would also been nice to see an upload facility, allowing me to upload my software to upload my programs to a BB.

Overall a very professional and well thought out system which is convenient to use, the modem and software complimenting each other nicely, and now with a free 3 month Prestel sub thrown in and the modem on offer from Modem House at 29.95, the whole package from them will cost you less than 60.00. That's about the best offer you are ever likely to get ..... Gary Coxhead

Delta Disc Controller (RAM in a ROM slot).

Having sorted out the CTS signal on my 64 so that it behaved like a 32, ie. active for writes as well as reads, thoughts were turned to the controller card to see what was necessary to turn a ROM socket into a RAM socket. My DELTA card was obtained secondhand, and I suspect that some will be around without a link, however it makes no difference. Diag.3 is the part of the controller circuit that we're interested in before I set to with my pick and shovel, while diag.4 is the rearranged landscape as it were, and diag.5 is the map both before and after. Note that no positions have been changed, only the connections. On the controller PCB I have, a 2764 ROM was fitted in slot 12 while slot 13 was originally empty. Slot 13 now has a 6264 CMOS RAM fitted, a device which is "pin out compatible" with the 2764 ROM. As slot 13 was originally intended for a ROM a few changes had to be made to allow the RAM to work, these being evident when the two "in-outs" shown in diag.5 are compared, ie. the compatibility does not apply to the control lines. Now to the real bit, what to do. There is a "Less work" option to how I did it, and I'll cover that later. First cut the tracks as shown in diag.3 (The x identifies the cut with a number in a circle).

Cut 1 underside.....between link and 14/12.

Cut 2 topside.....as shown in diag 5.

Cut 3 topside.....as shown in diag.5.

Cut 4 underside.....between pins 12/20 and 12/22.

Cut 5 underside.....between pins 13/20 and 13/22.

Cut 6 topside.....as shown on diag 5.

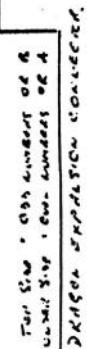
Now to put it all back again.

Connect 14/12 to 12/20 ROM select.      Connect 14/10 to 13/20 RAM select.      Connect 1/6 to 12/22 and 13/22 Read enable.      Connect 1/3 to 13/27 Write enable.      Connect 14/11 to 13/26 RAM select2.

Don't forget 1) Remove ROM chips before soldering. 2) Short application of heat only. 3) Double check that ALL work is as it should be, and that NO track shorting has occurred. 4) Take care when inserting ROM and RAM.

The concluding part of this article, including Diag.5 will be in the next issue of Update. (Issue 22).

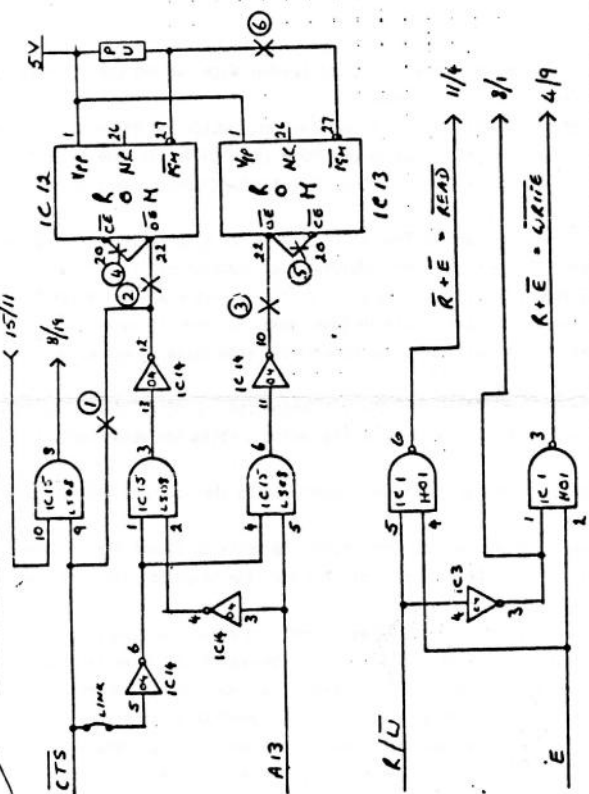
## 5/



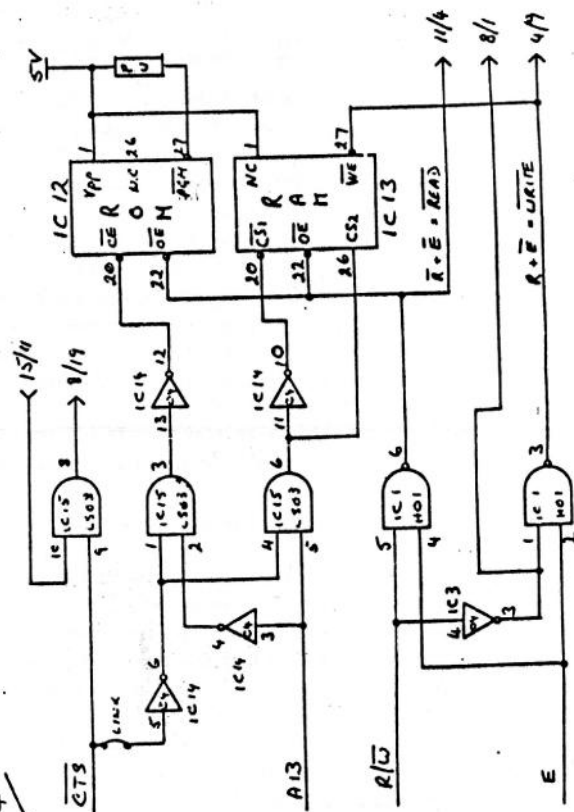
2 : Alor Conco (2)

m/

AS SUPPLIED CUTS SHOWN BY X, 6 1/4"



## 4/



# Cassette to Disc Transfers.....Graham Smith.

Now as a follow on to last month's article, here are the "how to do it" utilities, as promised.

```
10 'THIS ROUTINE WILL LOAD A M/C PROGRAM FROM CASSETTE AND DISPALY
20 'THE START, END AND EXEC LOCATIONS.
30 'RUN THE BASIC LOADER AND SAVE THE M/C TO DISC USING LINE 90
40 'NOT FOR AUTO RUN PROGS
50 '
60 CS=0:A=47FC0:'EXEC LOCATION
70 READ D$
80 IF D$("<")<"" THEN POKE A,VAL("<H"+D$) ELSE 100
90 CS=CS+PEEK(A):A=A+1:GOTO70
100 IF CS<4642 THEN PRINT"DATA ERROR":STOP
110 SAVE"CFINDER.BIN",47FC0,A,47FC0
120 DATA 80,80,92
130 DATA 86,73,8D,1A,FC,01,E7,8E
140 DATA 19,86,65,8D,11,9E,7E,30
150 DATA 1F,1F,10,8D,0D,86,78,8E
160 DATA 05,DC,9D,8D,05,39,BD,B5
170 DATA 4A,39,0F,6F,BD,95,7A,39
180 DATA ##
```

```
10 'THIS ROUTINE WILL LOAD AN AUTO RUN M/C PROGRAM FROM CASSETTE
20 'WITH AN OFFSET OF 4H1000. IT WILL ALSO DISPLAY THE ORIGINAL
30 'START ADDRESS, THE NEW FND ADDRESS AND THE EXEC LOCATION +4096
40 '
50 CS=0:A=47FC0:'EXEC LOCATION
60 READ D$
70 IF D$("<")<"" THEN POKE A,VAL("<H"+D$) ELSE 90
80 CS=CS+PEEK(A):A=A+1:GOTO60
90 IF CS<5301 THEN PRINT "DATA ERROR":STOP
100 SAVE "FINDHIGH.BIN",47FC0,A,47FC0
110 DATA 8D,88,B3,8E,10,00,BD,B7,40
120 DATA 86,73,8D,1A,FC,01,E7,8D
130 DATA 19,86,65,8D,11,9E,7E,30
140 DATA 1F,1F,10,8D,0D,86,78,8E
150 DATA 05,DC,9D,8D,05,39,BD,B5
160 DATA 4A,39,0F,6F,BD,95,7A,39
170 DATA ##
```

```
10 'LOAD M/C WITH 4H1000 OFFSET
20 CLEAR9,47FF0:A=47FF0
30 READD$:IF D$("<")<"" THEN POKE A,VAL("<H"+D$):A=A+1:GOTO30
40 DATA 8D,88,B3,8E,10,00,BD,B7,40,39,##
```

```
10 'THIS PROGRAM WILL LOAD A HEADERLESS M/C PROGRAM FROM CASSETTE WITH
20 'AN OFFSET OF 4H1000 AND DISPLAY THE NEW START, END AND EXEC LOCATION
30 '
40 CS=0:A=47FC0:'EXEC LOCATION
50 READ D$
60 IF D$("<")<"" THEN POKE A,VAL("<H"+D$) ELSE 80
70 CS=CS+PEEK(A):A=A+1:GOTO50
80 IF CS<3345 THEN PRINT"DATA ERROR":STOP
90 SAVE"FINDHOLS.BIN",47FC0,A,47FC0
100 DATA 8E,10,00,BD,B7,58
110 DATA 86,73,8D,15,CC,10,00
120 DATA 8D,8A,86,65,8D,0C,9E,7E
130 DATA 30,1F,1F,10,0F,6F
140 DATA 8D,95,7A,39,BD,B5,4A,39
150 DATA ##
```

```
10 'THIS ROUTINE IS USED TO FIND THAT PROGRAM YOU SAVED TO DISC
20 'AND THEN FORGOT TO NOTE THE START, END AND EXEC ADDRESSES
30 'RUN THIS ROUTINE, LOAD THE MYSTERY PROGRAM AND EXEC 47FC0
40 'THE START, END AND EXEC LOCATIONS WILL BE DISPLAYED
50 '
60 CS=0:A=47FC0:'EXEC LOCATION
70 READ D$
80 IF D$("<")<"" THEN POKE A,VAL("<H"+D$) ELSE 100
90 CS=CS+PEEK(A):A=A+1:GOTO70
100 IF CS<4239 THEN PRINT"DATA ERROR":STOP
110 SAVE"DFINDER.BIN",47FC0,A,47FC0
120 DATA 86,73,8D,1B,FC,06,52,8D
130 DATA 1A,86,66,8D,12,FC,06,54
140 DATA F3,06,52,8D,0E,86,78,8D
150 DATA 06,FC,06,56,8D,05,39,8E
160 DATA B5,4A,39,0F,6F,BD,95,7A
170 DATA 39,##

10 'LOAD HEADERLESS M/C TO 4H1000
20 CLEAR9,47FF0:A=47FF0
30 READD$:IF D$("<")<"" THEN POKE A,VAL("<H"+D$):A=A+1:GOTO30
40 DATA 8E,10,00,BD,B7,58,39,##
```

More useful routines from R.A.Davis (G3RLO).

```
0 REM R.A.DAVIS
1 CLS
2 L$=" THIS GIVES YOU A TELETYPE OF PRINTING ON THE SCREEN, VERY USEFUL FOR INSTRUCTIONS, OR ASKING F
OR A RESPONSE.":GOSUB6
3 L$=" AND WITH UPWARD SCROLL AS WELL.":GOSUB6
4 L$=" PROGRAM BY R.A.DAVIS.":GOSUB6
5 GOTO5
6 PRINT0511," "
7 FOR I=1 TO LEN(L$)
8 IF MID$(L$,I,1)<>" " THEN PRINTCHR$(130);PLAY"T25505C":C$=MID$(L$,I,1):PRINT CHR$(8);C$ "":GOTO10
9 PRINT CHR$(127);PLAY"T25505C":PRINT CHR$(8);" ":GOTO10
10 FOR J=1 TO 65:NEXT J:NEXT I
11 PRINT:RETURN
```

More useful routines.....R.A.Davis (G3RLO).

```

0 REM Listing from R.A.Davis.
1 CLS: 'DIM US IF MORE THAN P
2 Z=0
3 US(0)="THIS IS A BANNER STRING WHICH WILL TAKE A STRING OF UP TO 255 CHRS."
4 US(1)="AND AS MANY AS YOU WISH."
5 US(2)="BUT SET TO REPEAT AFTER THREE LINES AT PRESENT."
6 AS=US(2)
7 I=2248-2:I=I-31:P=I:N=I:L=LEN(AS):X=0
8 IF P=J THEN N=N+1:I=I+1
9 IF P>31 THEN P=31
10 PRINT@I,MID$(AS,N,P):X=X+1:P=P+1:I=I-1
11 SCREEN0,!: 'OPTIONAL
12 FOR D=1 TO 100:NEXT D:IF X=L+31 THEN 14
13 GOTO 8
14 Z=Z+1:IF Z=3 THEN 2 ELSE 6

```

The late, late, bit.

Well, it looks as though I've got to write myself a 'filler' for the rest of this page.....we aren't used to using this condensed format, and we seem to have underestimated things a bit. Still, not to worry, there's plenty to rabbit on about!.

Holds up all of you who have read the June issue of Dragon User.....What, only you?!. Oh well, most of you will probably catch up with it sooner or later, but for the benefit of those of you who don't make it, and those of you who sent cheques off to the Subscription Department and never heard from them again, it seems that Dragon User, having closed down the original Subs. office without notice, and presumably lost all mail sent to it, have now decided that we ALL have to send 'em money in advance!.....As of now, Dragon User will only be obtainable or subscription, and all cheques are now to be sent to the MAIN office at Little Newport Street. Dragon User will no longer be obtainable from retail shops.

Dunno about you, but so far as I'm concerned they've just lost one reader.....judging by the complaints I get about it, their subscription mailing record is a long way from reliable, and I've no intention of joining the queue of people waiting for the Issue before last!.

'Other thing in the June issue is a somewhat peculiar letter from me old mate Stan Opyrchal of Compusense.

Now I know that Dragon User edit letters pretty severely, but I'm damned if I can see what our Stan is on about, even allowing for over-zealous editing. He appears to think that we're against other Dragon Groups, and says... 'The National Dragon User's Group does not have a monopoly, and is in no way "official". So any other group, from the lunatic fringe to dedicated professional is welcome. All that is required is enthusiasm and a common interest.'.

Now one thing we've always stressed is that the Group is just a collection of Dragon Owners....no office, no staff, and most important of all, no connection with ANY commercial business or organisation. 'Official'?....there never HAS been an official Dragon Group, even the one long promised by Dragon Data never got off the ground, and Eurohard CERTAINLY aren't backing anyone, so where does this implication that we claim some kind of 'Official' status come from?.....Getting paranoid in your old age Stan?.

As to other Groups.....In the couple of years that we've been around we've done everything possible to encourage and assist other Dragon groups, both local and in other countries, and a considerable quantity of Update material is reprinted in other newsletters. What would you like us to do, Stan, send them a grant or something?.

As to monopolies, well, I would have thought Compusense were on VERY dodgy ground with THAT subject, wouldn't you?.....WE aren't the ones with the exclusive Eurohard agency, and we don't boast about having 'established a firm price for the Dragon either.

Enthusiasm and common interest?.....Yes, I agree, those are VERY necessary, but unfortunately they aren't ALL that is required to form a group, as far too many former groups have discovered.

Also needed are minor things like working capital (even paper and toner cost money, as does postage and telephone calls), a handful of people willing and able to spend around 60 hours every week each, a reliable photocopier, computer, printer, and disc drive, a good working knowledge of the Dragon's hardware peculiarities (you should try repairing computers aided by enthusiasm alone!), and a lot of damned hard work for no monetary return.

Why don't YOU start a User Group, Stan?.....NOT connected with Compusense at all, of course. After all, surely YOU have enthusiasm and common interest with Dragon owners?.

Now it may well be that the fault lies with the editorial staff of Dragon User, in which case Mr Opyrchal, please accept my unreserved apologies for any criticism implied in the above, but if not, do please get your facts straight before going into print....it's most confusing.

Of course we aren't 'Official'....we're just a few hundred people who happen to own and use Dragon computers. We aren't a business even....I sometimes wish we were so that I could award myself a salary!. (OK Tim, Barry, Neil, Garry, Bob, Alan, and the rest of you, I KNOW you want one too, but we aren't ever going to get it unless we can persuade the Government that computing is an Art Form....then we might be eligible for a grant or something!).

Oh well, I reckon that just about uses all the space I had to fill....at least, I hope so, 'cos I don't really have anything else to go on about at the moment!.

Anyway, be good, don't get caught doing anything I wouldn't do, and in case anyone thinks otherwise, this condensed type format is NOT being sponsored by the Opticians Union!!!!.....Hopefully we ought to be back to normal by next issue...unless of course you LIKE it this way!...If so, please let us know soonest.



## Classifieds & Special Offers.

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

**UPDATES:** Back issues are now available either from John Cox or Chris Channing. You can contact John at 3, St. Peters Road, Portslade, Sussex (0273-422492), or Chris at 63, Churchfield Way, Whittlesey, Peterborough. (0733-288499).

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

**DRAGONDOS:** Peter Williams of Computil will reflow your DOS chip to include the correction patches published in Dragon User for 3.50. Send your EPROM or cartridge to:- COMPUTIL, 22, Grove Park, Burbage, Hinckley, Leics. or phone 0455-611914 for more details. Version 4.0 and 4.1 available soon. Phone for details.

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

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

**OS9 SYSTEM PROGRAMMER'S MANUAL:** We have the offer of a limited number of these manuals, usual price 19.50, at the VERY special price to Members of 6.99 each, inclusive of post and packing!!!. Order direct from the Publisher...CLEGLEN PUBLISHING LIMITED, 4, Garth Street, Cardiff CF1-2FQ, but don't forget to mention that you are a Group Member!.

**SOFTWARE LIBRARY:** Mike Vine is operating a games/utilities Software Library service, (400+ titles). Anyone interested should send an s.a.e. to: 120, Auriel Avenue, Dagenham, Essex. RM10-8BU.

**HARDWARE:** Used D64's inc. software & sticks...110.00; 40 track SS uncased drives inc. PSU & lead...60.00 or 2 for 110.00; Smith Corona printers...used, with lead & tractors...90.00 or NEW, inc. lead...120.00; 2 9" green-screen monitors...30.00 each. Phone Bruno Bugalski on 0733-64312 any evening for further details. (All items guaranteed).

**FOR SALE:** Original Dragon tapes. Personal Finance (A0504); Special Selection 2 (A0501); Madness and Minotaur; Drone Datatank; Circus Adventure. All at 1.00 each plus postage. D.Lock. Lancing 753347.

**DELTA DOS UTILITY:** A machine code utility to copy all BASIC and m/c files from disc to tape in one operation. BASIC listing of loader and m/c dump 1.00, or m/c cassette 2.50. Contact J.C. Russell, 33, Tennyson Avenue, Clevedon, Avon BS21-7UJ. (0272-075520).

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

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

**BANK MANAGER PROGRAM:** Holds details of bank current accounts. Options include add, edit, view, print, save(disc), load. Monthly statements can be produced of all credits and debits. Disc version ONLY. Price 5.00 or 4.00 to Group Members.

**DISC DIARY PROGRAM:** Holds data for every day of the year on a 48k disc file. Each day has four lines. Output to screen or printer. Daily steps back or forward, and jumps to any particular date. Price 5.00 or 4.00 to Group Members. Orders and Cheque to R.Watts, 61195, Brighton Road, Worthing, Sussex.

**DUCKWORTH BOOKS:** All discounted 50% to Group Members.

Pocket Handbook for the Dragon...now 1.50.

Exploring Adventures on the Dragon...now 3.50.

Dragon Programs...now 3.50.

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

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

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

Orders to Paul Grade. Cheques payable to the Group.

**OS9 PROGRAMS:** OS9 Utilities...a set of eight routines available from Jason Shouler. For further details please phone Jason on 0282-722599.

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

**DISC DRIVES:** I can now get you QUME 40 track double sided uncased drives, less power supplies, at 60.00 each plus 3.00 postage. Very suitable as second drive for Dragon Data units, etc. Phone me on Worthing 207585 for details.

**DRAGON CLAW!!!:** A very special offer to Members ONLY from Lucidata Ltd. The CLAW interface, complete with manual, for only 20.00.....This offer is for a limited period ONLY, and surely you can't afford to miss it. Order direct from: Lucidata Ltd, PO Box 120, Cambridge CB1-1DQ, but don't forget to state that you are a Group Member!. Price includes VAT, Postage & Packing!.

**DELTA DOS CARTRIDGE,** fitted with additional ENCODER 09 chip...35.00. **DELTA DOS FLEX DISC...**25.00; **DELTA Dynastar I Dynaspell I Dynaforn w/processor package...**35.00, **DBASIC and GRAPHDRAWER** 10.00 each. Inside the Dragon...3.00; **Leventhal's 6809 Assembly Language...**5.00; **Sinclair's Introducing Machine Code...**2.00; **James' Language of the Dragon...**1.50...plus misc. other books. 04248-4500.

**DRAGON BOARDS!!!:** We can now get sets of new D32 boards...keyboard, main circuit board, and PSU/Modulator board...for 27.00 per set plus postage (2.50). These are NOT guaranteed but are new and believed perfect and are supplied by Proops of London. Orders/cheques to the Group...boards will be despatched direct from Proops. Sorry, no individual boards, sets only!. Phone Paul Grade for further details if necessary.

**PRINTER PROM II:** For D32 + Seikosha 100A. Ideal for writing letters etc. 64 character screen with true upper and lower case characters. Only 5.50 or 4.50 to Group Members!. Cheques and orders to: Andrew Hill, 13, Parry Jones Close, Blaina, Gwent NP23-3NH. (or s.a.e. for details only).

Do YOU have anything that you want to sell?, or would you like to get in touch with someone to help on a particular subject?...All it will cost you is the price of a stamp....these ads are FREE to members, and you can't get a better bargain than that, can you?!

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"ELECTRONIC AUTHOR" is THE machine code advanced word processor. Features include: Automatic page numbering, centering, paragraphing, 51/64 x 24 true upper/lower case screen display with full screen editing; either 'What You See Is What You Get' (WYSIWYG) type printing or let the computer arrange text, and it is all VERY easy to use. JUSTIFIED TEXT, making your letters, documents, etc., beautifully neat. Full block copy, delete, move included. Repeat key, excellent phrase search, change or delete facility. Fast typing, no missing out characters. Loading/saving rewritten to abolish I/O errors and allowing filenames of up to 20 characters. Comes with full documentation and configure program to allow it to run with ANY PRINTER. Text space available is a massive 17,000 bytes!! DRAGON DOS VERSION NOW AVAILABLE. Cost is £14.95 (cassette) or £19.95 (disk).

...It is an excellent program...easy and very versatile to use. A must for anyone who owns a printer. - T. Bottomley, Wakefield.

'Excellent' - Jason Ortaum, Dragon User.

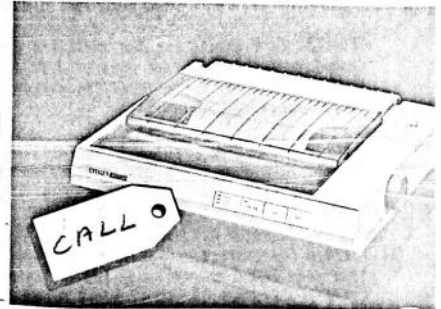
'...it is advertised as THE wordprocessor for the Dragon...it probably is.'

- Barry Johnson, Dragon Update.

## MSP 20

### Features:

- 200 CPS (Draft)
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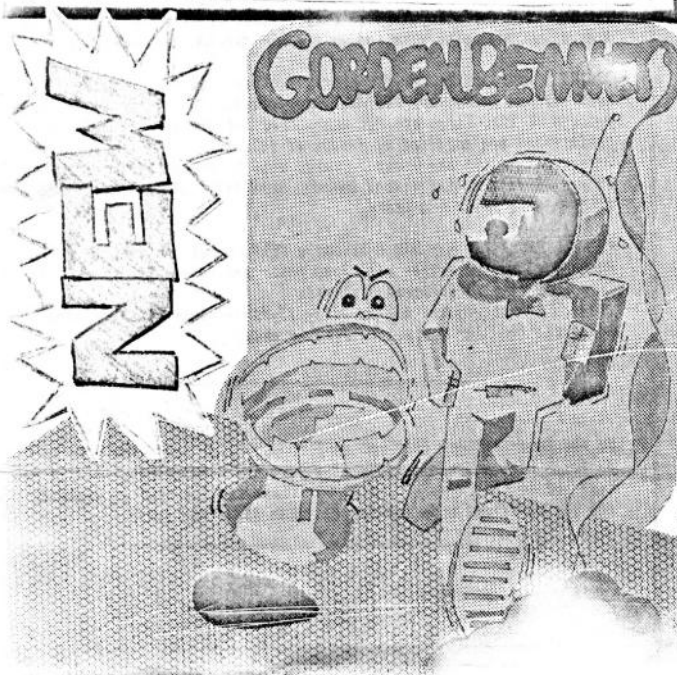


## \* PRINTERS \*

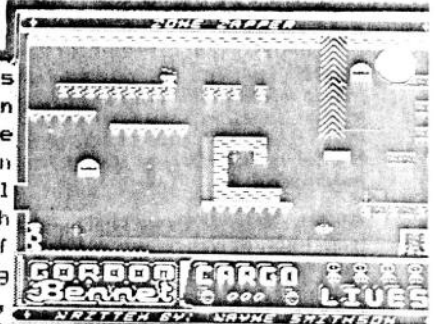
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## DRAGON SOFTWARE



**GORDEN BENNET!** is a new multiscreen megagame for the Dragon 32/64. Can you control Gordon through the maze of caverns avoiding steaming cowpats, man eating toilets and many other nasties as well as negotiating the collapsing floors, rising and sliding pillars, matter transporters, conveyor belts, the list goes on. Walk from screen to screen collecting the lost cargo as you go, returning for the ones you couldn't get at a later stage. Great graphics, superb music and sound, a thoroughly daft, silly, and enjoyable game! If you don't agree, we will give you your money back, how about that for confidence! The cost for this fantastic masterpiece is only an incredibubble £6.00



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