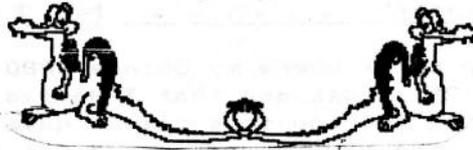


The Newsletter of the National Dragon Users Group

DRAGON



UPDATE

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The Gaffer's Bit

Well, this month I'm going to make myself unpopular again. There are a couple of matters which make me wonder what certain people use for brains, and judging by the number of complaints I've been getting, it's time said matters got an airing!

The first point is an old one, but possibly more important now than ever. I've had several complaints recently about members being asked for copies of Group programs etc FORTH, Disc Utility, Jason's OS9 routines, even Upgrade manuals and in many cases those asking have also been Group members!!!. Now I know times are hard, but not THAT hard!, and the only explanation is greed and stupidity. The Group doesn't have any paid staff, it operates at cost, and I'm trying to keep prices and subscription charges down to an absolute minimum, but I couldn't do so without the small profit that we make on sales of these things. If anyone thinks they can do the job better, they can take over the Group and try I could do with some time to myself for a change. If not, and you want the Group to continue, stop being so damned moronic and greedy, or go join someone else's Group, because you aren't wanted in THIS one. OK?.

Second point is very similar If you ask for something, and a member sends it to you, at least have the manners to reply and say "thank you", and if you borrow something from another member, GIVE IT BACK WHEN YOU'VE FINISHED WITH IT. Failure to do so is not just bad manners, it's theft, and as of now I will be printing full details of all complaints that I receive about this sort of thing. It's only fair that members know just who can and can't be trusted. Alan Cook tells me someone has repeatedly ignored requests to return a magazine they borrowed and there are several others as well I hope the items borrowed will be returned before I have to print names. If this concerns you, put matters right you have been warned.

Paul G.

THE EDITORIAL BIT

Oh dear, apology time again, two errors have come to light in the June issue. In the article at the top of page 8 by R.A. Davis, the first line 30 should have read 30 CIRCLE (128,96),50,2:POKE178,X. otherwise you end up trying to paint in green on green, my typo error, sorry.

The other one concerns the article on page 2, there should have been 2 diagrams with this but they seem to have disappeared. You'll get them in the August issue when I get copies from Bob.

Well, apart from that things seem pretty quiet on the Dragon front, maybe it's the hot weather and everyone watching the cricket. maybe everyone's gone off on holiday. Still, you've got some exciting things to look forward to, anyone for Pascal? Yes? Well, you'll just have to wait until next month.

T.L.

2.

AMSTRAD DMP 2000 NEIL SCRIMGEOUR

Some time ago I came to the point where my Shinwa CP80 caused compatability problems with my Amstrad 6128, I decided that I needed to change to an Amstrad DMP2000. After a fair running in time it's time I gave a review of it and at the same time compare it to the NDUGs recommended Shinwa (Well Paul recommends it to everyone!). Some say the DMP looks futuristic, to me it looks fragile although as yet I haven't managed to break it. Part of the reason may be that it has metal wire legs that fold out and allow you to feed paper from underneath. The colour is the same as the Amstrad CPCs, dark grey casing with grey smoked lid. The switches on the front are On line, Form feed and Line feed. The DIP switches are at the back, easily accessable (maybe too easily?) mounted beside the Centronics port (a lead comes with it to connect to the Amstrad CPC but it's no use for the Dragon). Draft speed is supposed to be 105 cps but you don't notice the difference from a standard 80cps. Near letter quality is a slow 15 cps. The most unusual feature is paper feed from the front, most feed from the rear, round the roller and out at the top. This caused me a problem, my workspace is set up so the paper comes from the back of the table. This is where the folding legs come in, the paper can run under the printer and in at the front. The greatest advantage of the system is that the paper isn't wrapped round the roller which means you can put postcards, envelopes etc through and they stay flat. Because of this feature the printhead is mounted above the paper and it comes out at the back which causes problems. If you only use half a sheet of tractor feed you could tear it off with the Shinwa, the exit point being so close to the print head, on the DMP the exit is a good 6" away which can be a pain. Personally I think the ability to print flat things outweighs this problem. The Shinwa uses a standard ink ribbon or Meiler type, the latter is recommended as an ink ribbon can gum up the works, the Meiler has limited life and is not cheap. The DMP uses a standard typewriter layout, oddly the price is about the same but with the DMP you can get it reinked for around 2.00 a time. So, what's the print quality like? In draft mode the Shinwa is streets ahead because a) it's got 9 pins and b) they're square rather than round on the DMP. On NLQ the story is different as the Shinwa doesn't have one (the newer models do but I haven't seen them). The DMP produces very nice NLQ but it is slow and produces an odd looking 'i' and 't'. The other odd thing is that the 80 cols for the DMP is longer than the Shinwa and takes all the paper width. Using elite on the DMP looks quite like the Shinwa draft mode. The DMP has most of the typefaces of the Shinwa but because of the wider printing, the output is not the same. The DMP does have a print buffer (all of 2k), that's not much but it can be useful if you do a lot of printing. It's worth pointing out the the DMP has a bigger brother, it costs 25.00 more than the 2000, it has an IBM character set which is switchable, useful if you upgrade to a PC but a waste of money otherwise. Having used the DMP for a few months I've got used to it, it's not as good as the Shinwa (except for NLQ, the ability to print flat and reinking ribbons). I had to change for compatabilty, if it wasn't for that I would have kept the Shinwa but the DMP fills my needs and at 155.00 it's not bad at all.

METASOFT PROLOG

I've just recieved a letter from Metasoft (better known as Chris Jolly who you've seen in these pages), he's just released an implementation of Prolog for the Dragon under OS9. To quote the letter .. 'Prolog programs consist of facts, rules and relationships; execution of a Prolog program consists of a controlled deduction through these facts and rules.'
Metasoft Prolog is available diectly from Metasoft at 29.95 including post & packing and a 100 page manual. A review will be appearing shortly.
Metasoft, 4 Pinehurst Walk, Orpington, Kent BR6 8DD

3.

ASCII CORNER... Pauline Hampson.

Being short of new adventures I thought you might like a few solutions. Has anyone got any requests?. El Diablero seems a good place to start. I find myself in endless cactus but it really does end. In familiar places I remember all sorts of things. I gaze at pools too. This shack is a real find. Look at those threads. This bowl is a bit fragile. Next a trip to the graveyard for a bit of quiet reading. I dream about mountains and do some gardening and return with a twig. Now if I move this brushwood I might go somewhere interesting.

I am now ready to gaze at yellow water. If I meet anyone nasty I will throw a stone at him. This shaft is a pest. I say how do I get up. Now I need some beetles and a feather. I could dream up a nest and cut down a plant.

Now I'm fed up with this canyon. I want to go caving. Wake me up when you've thought it out. Well now for some ring pulling and bell ringing. Now for a swim. Rocky shores are all the same or are they?. I need some weight, I can always drop it later.

That pillar looks a bit of a push over. I must give these statues a second glance. The lizard reveals himself. Out I go for a smashing time and a bit of balancing. I knock down a statue. I hope I read the stones well or I'm a dead 'un. No, I've won!

Any requests for the next set of adventure hints?...write and tell me, the address is 10, Cherry Lane, Lawton Heath, Alsager, Stoke on Trent. ST7-36Z.

COPIER REVIEW DAVE MARTIN

I think a lot of people will have written their own routines to easily copy/backup disc files by now. However this program goes about the job in a different way to the one I've written, it's quite nifty in fact. The program reads the disc directory and either selectively copies the files (auto) or asks you for the name of the file(s) to be copied (manual). While you select the files it creates a copy file which it uses to transfer the files, leaving you to confirm or abort the copy as normal. Most of the input requires just one keystroke which I like and the program caters for up to 4 drives. Each input has to be verified before proceeding to the next.

Anyone who presents ANY Delta listings or information in my opinion deserves top marks but a little constructive criticism...

There is no error trapping included (ie an illegal drive can be selected and the program will crash if a non existant file is specified)

The screen presentation could be made a little more attractive.

After the files have been transferred it would be nice to see some confirmation ie JOB DONE and perhaps the option to repeat the same operation without rerunning the program.

To summarise it's a useful utility which could be expanded to include the points mentioned above. Studying the listing could give useful information on how to go about accessing the Delta directory.

DELTA FILE COPIER STUART MILLS

This is the program reviewed under the name COPIER in this issue.

```
10 DIM MN$(25)
20 GOSUB100
30 GOTO 300
100 'SET UP DRIVES
110 CLS:PRINTTAB(8)"COPIER":PRINT
    TAB(8)"*****":PRINTTAB(4)"PRESS
    ENTER TO ACCEPT":PRINTTAB(4)"OR A
    SINGLE LETTER A/D"
545 X=0
550 FOR Z=&HCFO TO D STEP 24
560 IF PEEK(Z+8)=&HE5 THEN 580
570 GOSUB600
580 NEXT Z:Y=X-1
590 GOSUB740:RETURN
600 I=Z:F$=""
610 FOR Y=I TO I+7:F$=F$+CHR$(PEEK(Y))
```

4.

```
120 SD$="A":TD$="B"
140 PRINT:INPUT"SOURCE DRIVE (A)";A$
150 IF A$<>" " THEN SD$=A$
160 PRINT:INPUT" TARGET DRIVE (B)";A$
170 IF A$<>" " THEN TD$=A$
180 CLS
TERMINATES
190 PRINT:PRINTTAB(8)"SOURCE =";SD$
200 PRINTTAB(8)"TARGET =";TD$
210 GOSUB1100
220 PRINT"DRIVE SPEC OK?"
230 A$=INKEY$:IF A$="" THEN 230 ELSE
    IF A$="Y" THEN 240 ELSE 110
240 RETURN
300 'SELECT OPTION
310 GOSUB1110
320 PRINT "AUTO OR MANUAL A/M ?"
330 A$=INKEY$:IF A$="" THEN 330
340 IF A$="A" THEN GOSUB500:END
350 IF A$="M" THEN GOSUB700:END
360 GOTO330
500 GOSUB2000
510 DR=ASC(SD$)-65
520 POKE 1538,DR
530 EXEC1536
540 IF PEEK(&HC07)=0 THEN D=&H0C00+
    &H95F ELSE D=&HC00+&H10EF
    1320 INPUT"FILENAME";F$
    1330 RETURN
    2000 FORZ=&H600TO&H62D
    2010 READZ$:POKEZ,VAL("&H"+Z$)
    2020 NEXTZ:RETURN
2040 DATA 20,01,00,BD,C0,18,F6,06,02,BD,C3,75,8E,0C,00,CC,00,01
2050 DATA 34,06,9F,20,BD,D1,81,35,06,10,83,00,12,2A,09,9E,20,30
2060 DATA 89,00,F0,5C,20,E8,BD,C0,18,39
620 NEXTY:GOSUB1100
630 PRINT "PRESS Y TO ACCEPT";:PRINTF$
640 A$=INKEY$:IFA$="" THEN 640
650 IF A$="Y" THEN N$(X)=F$:X=X+1
660 RETURN
700 X=0:PRINT@354,"ENTER ALONE
710 GOSUB1300
720 IF F$="" THEN 735 ELSE N$(X)=F$
730 X=X+1:GOTO710
735 PRINT@354,"":Y=X-1
740 FOR X=0 TO Y
750 GOSUB1200
760 NEXT X
770 RETURN
1100 ' STATLINE
1110 PRINT @386," "
1120 PRINT@386,;
1130 RETURN
1200 'COPY FILE
1210 F$=N$(X):IF F$="" THEN 1250
1220 GOSUB1100
1230 PRINT"COPYING....";F$
1240 COPYSD$+"":'+F$,TD$+"":'+F$
1250 RETURN
1300 ' GET FILENAME
1310 GOSUB1100
```

SUPERKID BARRY CARUTH

One of the newest offerings from the Quickbeam household is Superkid by Wayne Smithson of Smithson Computing. The game loads most unusually with some sort of speed load.

As with all superheroes, this one has a good 'ole bootiful maiden to save. His task is suitably hampered by snails, dogs and bees. The program includes speech (very high quality - no static) and some of the best music heard on the Dragon since.. well since the last Quickbeam game. In addition to the snails, bees and unavoidable dogs, you have to jump at cherries in the passing trees to keep your energy up.

Fire Force was criticised as too hard but this game has a level of difficulty which makes it constantly challenging to get that bit further each time. Good graphics and sound never have and never will make a good game on their own but Superkid has both these and a playable nature.

Now showing at a Dragon near you, Superkid, only 8.95. I wonder if we'll have a Superkid II, III, IV etc?

5.

EASY MACHINE CODE (10) . . . R.A.DAVIS

With the DASM assembler it is quite easy to reserve bytes for data with RMB, these can then be filled with the data with the FCB or FDB commands. The data may be ASCII codes for printing, graphics or numbers, or they may be zeros to retain spaces for storing the results of calculations. Fortunately with DASM you don't have to keep referring to tables to find the ASCII codes for the letters or numbers etc., which you want to use. If the letter etc. is preceded by an exclamation mark (!) DASM will interpret it as the hex ASCII code of the letter etc. Try this assembly on DASM:-

```
10 CLEAR 400,&H6FFF          110 LDX #$0508
20 EXEC &HCFFA              120 LDY #@DATA
30 ALL                       130 @PRINT LDA ,Y+
40 @START EQU *             140 CMPA #$00
50 BRA @BEGIN               150 BEQ @END
60 @DATA EQU $7003          160 STA ,X+
70 RMB 16                    170 BRA @PRINT
80 FCB 0,!T,!H,!I,!S,$60,!I,!S,$60 180 @END RTS
    ,!U,!P,!D,!A,!T,!E,00    190 END
90 @LEN EQU *
100 @BEGIN JSR $BA77
```

If you EXEC &H7000 you will see the result. If you EXEC&HC000 with DASM, you will be in the monitor and can examine the bytes from &H7000. There you will see the letters stored as hex characters, pressing <clear> will show the actual letters stored. Line 40 above starts the program at &H7000 but line 50 tells it to jump to the actual commencement of the routine at @BEGIN. In between is the data already stored in place by the assembler, taking bytes &H7003 to &H7011. At @BEGIN the screen is cleared by jumping to the ROM routine. Next the X register is loaded with the number of the screen location at which we want to start printing, using immediate addressing and the Y register which is similar to the X register, is loaded with the address of @DATA, again with immediate addressing, in this case &H7003. PRINT loads the A register with the data pointed to by the Y register and increments the Y register to point at the next item of data. We have ended the data with 00 which does not need to be printed out, so we compare the A register with the number 00 to see if the routine has ended, if so the program will branch to the end at @END. Otherwise the data now in the A register is stored at the location pointed to by the X register in line 160 and the X register is incremented to point at the next location, ready for the next item of data. Line 170 sends the program back to @PRINT to get the next item of data and so on. Other assemblers may differ slightly and if you haven't got one yet and wish to try this out with the BASIC poke routine given in previous articles, the data is:-

I=&H7000 J=1 to 39

The data is 20,10,00,54,48,49,53,60,49,53,60,55,50,44,41,54,45,00,BD,BA
77,8E,05,08,10,8E,70,03,A6,A0,81,00,27,04,A7,80,20,F6,39

for the whole routine. A further step forward is to use a string of characters as data instead of single characters, we will look at this next.

CROSSWORD 23 ANSWERS

Across: 1E)Chord 1K)Bee 2D)Rub 2J)Duel 3A)Ash 3F)Assemble 6E)Gwlet 7A)Gnu
7H)Sway 8E)Cove 9A)Rodeo 9I)Loot 11D)Tandy 13A)DAMS 13F)Port 13J)Hive
Down: A1)Grass A7)Gerrard B1)Hessian C5)Thunder D2)Rubiks E1)Curse of Comarc
G3)Still G8)Voodoo H1)Rusty H7)Seedy I1)Diets I6)Twilight J8)load K1)Bubble
K8)Torch L2)Elephantine M1)Electrons M10)Cube
Winner this month was R.Nash of Northampton who wins a Channel8 tape.

6.

DELTA DOS (4) MARTIN LAYLEY

More deltaDOS routines....

CHECK Does the same as FIND FILE but causes an error if the file is not found ENTRY C637
Conditions Same as for FIND FILE

DELETE Deletes an entry in the directory ENTRY C8D9
Conditions Entry 7AA6 must contain the address of the location of the first ' ' in the filename string
Exit Exits via FIRST

ASSIGN Does the same as the BASIC version, rename & set/reset protection ENTRY DA39
Conditions Entry 7AA6 must point to the first ' ' of the control string
Exit Exits via FIRST

HALLO Checks whether the file found is protected ENTRY C7D3
Notes Is only useful when saving a file called after FIND file so that the required information is present

CREATE ENTRY Creates a directory entry ENTRY CAF8
Conditions Entry 7A2A & 7A2B must hold the length of the file in domains (ie INT(no of bytes/256)+1) 'a'a & 7A7B must hold the start of the address of the file (ie the EXEC or RUN address, not needed for
DAT files)
Exit 7A68 & 7A69 hold the first domain on the disc that the code can occupy
Notes It is a good idea to run FIND FILE first to make sure that there is no other file on the disc with the same filename, otherwise problems will occur when trying to read the file back in.

DBASIC AND FLEX DISCS MIKE GANLEY

The usual starting point for Dragon users is a system based on cassette storage and Basic. The options for expansion are either one of the many DragonDOS clones or a full blown OS like OS9 or Flex. These can open up large ranges of advanced software, but what are you going to do with all those old Basic programs you spent hours over which are stored on cassette? Jason Shouler's DDCOPY package which will copy DragonDOS files to OS9 discs and convert Basic to Basic09 is one way. Flex offers another method, not entirely perfect but usable, to recycle those old cassette files and convert them to use Flex file management. Loading up DBASIC from the disc fools the Flex Dragon into being its old self again, giving you access to the old 32 column screen and CLOAD and CSAVE. Piggybacked onto this are the extra CLOADF and CSAVEF commands allowing you to save and load Flex format disc files. Converting cassette based programs is fairly easy, load them in the normal way the CSAVEF and that's about it. If you have programs that need to load and save data (ie databases) then some mods will be needed but they are straightforward. For example, a cassette load routine:-

```
10 MOTORON:OPEN"I"#-1,"DATA":INPUT#-1,RN
Is converted to DBASIC by:-
10 OPEN"I",#-1,"DATA":INPUT#-1,RN
And a cassette save routine :-
20 MOTORON:FORL=1TO80000:OPEN"O",#-1,"DATA":PRINT#-1,RN
Will save to a disc file as :-
20 OPEN"o",#-1,"DATA":PRINT#-1,RN
```

Various options are available, by specifying 'o' in lower case, this automatically deletes the existing file and writes a new one with the extension >DAT. Files can be saved as standard Flex text files or tokenised.

7.

Converting DragonDOS files to Flex is not easy, I don't know of a direct way of reading them into Flex (if anyone does please let us know). So the rather tedious answer is to save the progs to tape and then CLOAD and CSAVEF which gets the file onto disc. Once it's there converting files is an editing job, a typical DDOS load routine:-

```
20 FREAD"DATA";RN:CLOSE
```

Converts as:-

```
20 OPEN"I"#1,"DATA":INPUT#1,RN:CLOSE
```

The open statement not used by FREAD has to be added but this can include the filename which can be a variable. Writing to files is also possible, in DragonDOS:-

```
40 FWRITE"DATA";I
```

Will convert as:-

```
40 OPEN"o"#1,"DATA":PRINT#1,I
```

Which will write to a file DATA.DAT.

Finally DBASIC offers a fairly easy way of upgrading your old basic programs to run to and from Flex discs. If you have the Dragonplus board you can also run 80 column Basic and with the Edit+ editor have access to a very good basic system, but, it's not perfect, a utility to load DDOS (or Delta and CumanaDOS) files directly would be most useful.

<<That's the last of that little series on Flex, thanks Mike ... TL>>

GOING NATIVE CHRIS JOLLY

This should be the first in a short series of articles in which I hope to explain how programs can be developed in 'C' under OS9 and later ported to run under the Dragon's 'native' mode. By native mode I mean the mode in which the Dragon powers up (with or without discs), 32k memory and no operating system (except DragonDOS). To me this is an exciting new way of writing programs, they can be developed using the excellent program development tools available under OS9 and run on a 'bare' Dragon 32. This is really the best of both worlds - programmers can work in OS9 and still share their programs with users who don't have an OS or even discs. This article presents a program which will run under DragonDOS to convert OS9 files to DDOS files. The program called OS92DOS performs a byte for byte copy. It will be needed later as part of the program porting procedure but is not specific to OS9 modules so OS9 users might find some other use for it. The program is presented as a Basic loader and a lot of Hex data (Sorry). Type in the Basic and run it, each time the prompt comes up enter the hex string and short checksum from one line of the data, separated by a comma and press <enter>. When all the data has been entered the program will save OS92DOS to the default drive. The program is extremely simple to use:- run OS92DOS.BIN, you will then be prompted for the input filename (OS9 filename) and the output (DDOS filename). Then you're asked to input the OS9 disc (drive 1) and press a key, after a few moments you are asked to insert the DDOS disc and the file is written. The file is an exact copy of the OS9 file. There are a few restrictions:-

- 1) The OS9 file must be on the root directory, you must not specify a path, just a filename.
- 2) OS92DOS assumes single sided double density discs
- 3) Because the entire OS9 file is copied into memory before copying to DDOS disc, the file size is limited to about 28k

```
860197EB9FEE3410BDD3118DC1043510 42 10 B=&HC00
CC0000ED84CCFFFFED0239338810ED02 E9 20 FOR O=0 TO 559 STEP 16
A3432D04334520F8E343E3411F023410 56 30 INPUT A$,B$
BDD311351033890100DFEEBDC10439EC 17 40 S=0
8410A30B260386FF39E6844F10A30227 BE 50 FORI=0 TO 15
03BDOC1BEE841F303341EF8430890100 49 60 C=VAL("&H"+MID$(A$,1+I*2,2))
3AA6845F39434BDOC3F35342270139A7 DD 70 S=S+C
A05A26F13920494E5055542046494C45 3A 80 POKEB+O+I,C
```

8.

```
3A20004F55545055542046494C453A20 E5 90 NEXT I
00524541445920492F500D0052454144 86 100 IF (S AND &HFF)<>VAL("&H"+B$) THEN
59204F2F500D00444F4E450D00FFFFFF 84 190
FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF F0 120 NEXT O:PRINT "INSERT DISC"
00000000000000000000000000000000 00 130 PRINT "PRESS ANY KEY TO SAVE"
00000000000000000000000000000000 00 150 A$=INKEY$:IF A$="" THEN 150
00000000000000000000000000000000 00 160 SAVE"OS92DDOS",&HCOO,&HE30,&HCE9
B5C63001108E0CAD5AA680BD0E09A7A0 9E 170 PRINT "SAVED":END
5A26F66FA48E0C82BD90E5BDB5C63001 40 190 PRINT "ERROR IN INPUT! ... RETYPE"
108E0CCB5AA680A7A05A26F96FA48E0C 62 :GOTO 30
90BD90E5BD852BBD0D6E8E0C9BBD90E5 CE
BD852BBD0DCE8E0CA6BD90E57E0E1E49 6A
2F50204E4F5420464F554E440D000000 39
00000000000000000000000000000000 00
00000000000000000000000000000000 00
24108E0012BD0C00C6208E0E24108E0D EE
4EBD0C6527098E0D3EBD90E57E0E1EBD 1E
0DB326E48E0E24108E0D6CBD0C008E0E 36
24108E10243430BD0C3F3530270139A7 CF
A020F28E0D4E10820CADA680BD0E09A8 94
A027F7818026026DA43942494E005F8E F7
OCCB6D8027035C20F98E0CCB108E0DCA 3D
AD9FC008AD9FC00AB70DCDAD9FC00CB6 89
ODCD8E1024FE0E2F108200005FAD9FC0 EO
16B60DCDAD9FC012393402847F814125 1D
06815A22028B206DE02A028A8039BD85 AE
2B7EB3B4522028244330313629522005 48
```

REDUNDANT INFORMATION DEPT.

The 'dirty' POKE 359,60 to slow down LIST doesn't work with DOS V1.0, so I use these two routines which take less than 50 bytes.

```
10 FOR I=&H167 TO &H169: POKE I,&H13: NEXT
```

I save this to disc as 'SLOW.BAS' and RUN"SLOW" before I DIR.
To return to normal speed...

```
10 FOR I=&H167 TO &H169: POKE I,&H39: NEXT
```

I save this to each disc as 'FAST.BAS' and RUN"FAST" to return to normal list speed.

As some machine code programs when loaded allow the disc motor to run on, I use a Basic loader with the same name as the machine code program but with BAS instead of BIN...

```
10 LOAD"TITLE.BIN": POKE &HFF48,0: EXEC and RUN"TITLE.BAS"
```

will load the machine code, stop the motor and EXEC the machine code, very quickly. I save this on the same disc as the machine code of course.

Thanks to R.A.Davis for those two.

CRAZY FOOTA BARRY CARUTH

This game is a new product from Computape and sets out to be a football simulation, the unfortunate thing is that it just isn't very playable. At the start of the game you get your men lined up at either end of the pitch and use the joystick to move a pointer up and down to select which player to move. Left and right make the player run and the fire button makes him kick the ball. The game also requires two players which for some is a disadvantage. I feel a little sad in not being able to recommend this program because a lot of work has gone into it, perhaps more work at the design stage would have produced a better result but as it is I'd be pushed to give it more than 40% overall.

MAGBASE REVISITED MIKE STOTT

How many times have you searched through old copies of Update, Dragon User or another magazine for that elusive article on a particular subject or an adventure hint that you can vaguely remember? I've only been a member of NDUG for a short time and wanted some back copies but no-one could trace which issues contained the articles I required. Now at last Pulser software have come out with Magbase to help with these problems. I've been using it for a while now together with a Dragon User file supplied with it. This contains reference to every item contained in D.User since it started. They have also just released a similar file for Update. Primarily I use the search facility to find what I'm looking for. Having entered a search word (eg TANG <for Tanglewood>), it takes about a minute (less if you can use the speed up poke) to find the eight references to Tanglewood and tells me the issue, page and gives me a brief description of the contents. It now takes minutes instead of hours to find what I want and is now the most useful utility that I own. There is a facility to print out what you are looking for and you can add to the records when the next issue arrives. If you are too lazy to do this Pulser will update your records for a small fee. The cost of the package varies depending on which files you require but the basic Magbase costs only 2.99 which must be good value for money. Because it is written in Basic it becomes slower to load records into the file as it gets nearly full but is easy to convert to use as a database for your own purposes. When making two searches I find it easier to break the program and rerun it for the second. The Update files contain 447 records of articles contained in all issues of Update. Having just bought a second drive I was able to quickly find Paul's article about this and get my second drive running. The cost including the Update files is only 3.99 and I believe existing purchasers can return their discs and have Update added for 1.99

At the same time as I got Magbase I got a copy of Discup from the same company. This utility moves the DOS up from the first graphics page so that all programs can now be transferred to disc (I don't know of any that can't but maybe there are some). This also means that all cassette based software can be run with the DOS cartridge still attached, preventing possible damage to this virtually irreplaceable item. The cost of this program is 1.99. I look forward to many more useful utilities from this new (to me) company.

CARTRIDGE HACKING GRAHAM SMITH

Many games and utilities are available on cartridge for the Dragon but sometimes you may find it undesirable to switch off the computer and plug in a new cartridge. Obviously each insertion is going to cause wear to the cartridge port and if you run a disc drive, you are most unlikely to want to keep unplugging the DOS just to play your favourite cartridge based game. There are a few options on how to get over this problem. If the program has been written in position independent code, it will be possible to relocate it, to a lower position and run it from there. If it is position dependant, you have two choices. It is of course possible to disassemble it and alter any position dependant calls to a new lower location, this may be a rather daunting task although it is worth remembering that the program can be a maximum of 8k of code (\$C000-\$DFFF) which is reserved for the cartridge port so that using a utility such as Pammcomms Sourcemaker and taking a chunk at a time it should be a possibility. The third method is only available if you have a 64. This involves saving the program to a lower location and adding a short routine which will switch the 64 to RAM mode and copy the program back to it's normal location. Such a routine was given in Update 27 by John Cox. The key to all these methods is a piece of sellotape <All hi-tech stuff this ... TL> This is used to stop the cartridge auto running on power up. You hold the cartridge in your hand, the right way up with the edge connector towards you. Count along the edge contacts from the left hand side and cover the

10.

fourth one along with a narrow piece of tape. On many game cartridges the first three contacts do not exist but you can see where they would have been by the marks left by the edge connector after the cartridge has been inserted a few times. The contacts are numbered with the evens on one side and the odds on the other so the ones you are covering are actually numbers 7 & 8, doing this will disable the autostart. You can now save the cartridge ROM to cassette using:-

```
CSAVEM"ROM",&HC000,&HE000,&HC000
```

If you now remove the cartridge (after powering down) and reload the program with CLOADM",&H6000 you will find that it is loaded to &H2000 because the negative offset is applied. Now, you can add the routine mentioned above or disassemble the program or just save it to disc as it is, depending on what you want to do with it. I found that the old Dragon Data games Beserk, Starship Chameleon and Cave Hunter all load and run from disc on my 64 using John Cox's RAM routine but Meteroids and Invaders crash for some reason. if anyone has any luck with these two I'd be interested in how they do it.

ADVANCED UTILITIES. . RANDY LONGSHORE

Advanced Utilities is a collection of utilities to make using OS9 much easier and quicker. It contains the following OS9 procedures:-

KSHELL

This is a direct replacement of the OS9 shell (it takes approx 3.5k of memory). One of the most useful features is that it allows wild cards for all commands. For example, instead of typing in a long filename such as 'list BBSdownloads.one', you can just type 'list BBS*' if no other file has the same first three letters. You can delete all files in a directory with one command line if they all start with the same letter. For example, if the directory contains the files; bbsfile.one, bbsfile.two and bbsfile.three, all three files will be deleted with the command 'del b*'. Another feature with KSHELL is that you can customise the prompt characters to some other set of characters, i.e. instead of the OS9 prompt, you can have your initials as a prompt. This can then be incorporated into your OS9BOOT to tag that disc. KSHELL also allows the definition of paths that will be scanned to look for a filename, procedure etc. For example, the path command line would be 'path=/d1/cmds'. Then KSHELL will first check the current execution directory, if the file is not found, it will then look at /d1/cmds. Several paths can be defined if you have additional disc drives and/or hard drives. 'Echo \$path' will tell you what paths have been defined. It has other features such as defining up to four macros and using CD and CX in place of CHD and CHX as in UNIX. This utility alone is worth the price.

CPY

This copies multiple files to a directory with the wild card option.

ARCHIVE

this will backup a hard disc to floppies.

UNLOAD

This completely removes a module from memory

FLINK

This states what file the system is to boot from on the next boot if you have more than one boot on a disc.

Advanced Utilities is written for the CoCo and comes on a DD/SS 35 track disc. As it is it can't be read by the Dragon, I don't know why because a copy made on a CoCo will work, hence if you purchase it you must find someone with a CoCo to copy each file to a disc. This copy will then work on the Dragon.

Advanced Utilities. Computerware, PO Box 668 Encinitas, CA 92024 USA.

11.

PUBLIC DOMAIN SOFTWARE. . ROBIN HAMILTON

About 2 years ago Byte magazine stopped printing programs. As this was my favourite magazine this caused some distress, although Byte did make the programs available either for downloading from Compulink (US) or on disc in certain 'common' formats, notably IBM format. After a couple of months I came across a small note that Fido Compulink in the UK had the listings on line (0483 573 337). It turned out that they did have the Byte listings from March 1986 onwards and also the ones from Nov '85 in archive, this left me with a few problems.

To get access to all but a very few areas of FC you have to join (Basic fee is about 18.00). Is it worth it? I'd say yes, it's intended mainly for IBM PC users but it has a lot of areas of general interest.

Having joined I still couldn't get any Byte programs before March '86 (such as the source code for ARC51 which is needed to unsqueeze archived programs.

Downloading non ASCII files needs special terminal software (supporting XMODEM or KERMIT protocols), not always included in standard comms S/W

Downloading large files at 300 baud is expensive and when you have downloaded it and decide to run it, the problems start...

By this time I was beginning to get obsessed by the vision of a world created for IBM PC users, enter once more the columns of PCW which mentioned a Public Domain SIG, PD SIG, Winscombe House, Beacon Rd, Crowbridge, East Sussex. TN6 1UL. PD SIG has hundreds of discs of public domain software available, in CP/M and IBM format. They also have all the Byte programs from Sept '84 in IBM format, also among the IBM discs are some with source code for C and Pascal with sometimes interesting textfiles and Visicalc templates (which should work on Dynacalc) and Anyway, to join PD SIG costs 21.00, for that you get full access to their bulletin boards, a quarterly magazine and can get any disc which they have for 2.00 + postage (if you supply a blank disc). This wouldn't matter much of course except that Andrew Linley's PCREAD program and the conversion for OS9 works. What does this come down to?. Well, if you're interested in playing with PD conversions for OS9 the 2 obvious places to look are Fido Compulink and PD SIG, either to download or for getting IBM format discs. You can either join or as I've already joined, contact me for details (address at the bottom TL).

I can guarantee absolutely nothing about the discs I've got, all my free time since I got them has been spent trying to copy them across to OS9 or trying to implement one apparently simple C program (Towers of Hanoi), what they do have is either large amounts of C or Pascal source code.

Robin Hamilton, 113 Valley Rd, Loughborough, Leicestershire. LE11 3PY

DELTA/DRAKONDOS DATA EXCHANGE. . R. MERRICK

These two disc systems have their respective merits, but if you use one and you know someone who has the other, you'll know that they are incompatible, you can't load programs on one system from discs configured on the other. What you may not know (well I've not seen it mentioned) is that using DragonDOS you can SREAD a DELTA disc. The idea for this came from John Payne's recent article about reading MSDOS discs on the Dragon.

It should be possible using the information recently published on Delta's directory to do something similar with Delta.

```
Try: CLEAR1000: FOR X=0 TO 39: FOR Y=1 TO 19: SREAD 1,X,Y,A$,B$: PRINT A$,B$:  
NEXT Y,X
```

This also works for OS9 discs examined under DragonDOS.

To make it useful you'll have to DIM A\$(Z),B\$(Z), where Z is a number calculated from examining the Delta disc for a particular file. If you can understand it, the information is in the directory and can be used by the examining program, otherwise You can do it by hand. You can then save the information as a data file. After that you can manipulate the information as required.

Helpline 87.....

If you have queries on any of the subjects mentioned here, write to the appropriate volunteer, enclosing a stamped envelope for reply. If you need help with a subject that isn't included in the list yet, or you aren't satisfied with the reply that you get, then contact Paul Grade as usual.

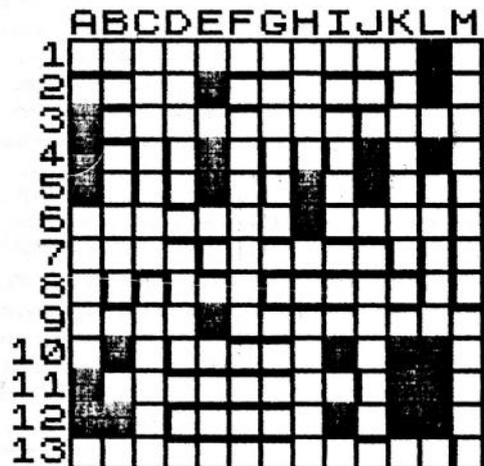
FORTH: John Payne, 3, Sibland Close, Thornbury, Bristol.
 FLEX: Jurgen Mitchell, 62, Victoria Grove, Lupset, Wakefield, Yorks. WF2-8JD.
 PROGRAMMING LANGUAGES AND STRUCTURED PROGRAMMING METHODOLOGY: Stan Davies, 153, Allestree Lane, Derby DE3-2PG.
 GAMES SOFTWARE (MAINLY ARCADE BUT SOME ADVENTURES): Stephen Wood, 52, Downs Way, Springfield, Chelmsford, Essex CM1-5TU.
 W/C (EXCLUDING FLEX & OS9); DRAGON MUSIC; ARTIFICIAL INTELLIGENCE; "C" (UNDER OS9): Chris Jolly, 4, Pinehurst Walk, Orpington, Kent. TAPE TO DISC CONVERSIONS (DRAGONDOS): Graham Smith, 3, Ashton Gate Terrace, Ashton Gate, Bristol BS3-1TA.
 GENERAL HARDWARE AND UPGRADE CONVERSION PROBLEMS: Bob Hall, 22, Cumbria Close, Thornbury, Avon BS12-2YE.
 CGP115 & MCP 40 PRINTER SOFTWARE QUERIES: Philip Beed, 27, Findon Road, Elson, Gosport, Hants. PO12-4EP.
 WORD PROCESSING & GENERAL BASIC PROGRAMMING: F.J. Fisher, 29, Thornham Road, Gillingham, Kent.
 BASIC PROGRAMMING: Ian Rockett, 2, Knowle Road, Burley, Leeds, Yorks. LS4-2PJ.
 RTTY / RADIO; LISTINGS FROM INPUT MAGAZINE; SPRITE MAGIC; AMATEUR RADIO; UPDATE ARTICLES / LISTINGS BY R.A. DAVIS: R.A. Davis, 39, Boxley Drive, West Bridgford, Nottingham NG2-7GU.
 OS9 SYSTEM AND UTILITIES: Jason Shouler, 70, Victoria Road, Parkstone, Poole, Dorset. BH12-3AE.
 MODEMS, BASIC ELECTRONICS, ADD-ONS, and FLEX: Tim Hayton, 36, Laurel Drive, Willaston, South Wirral L64-1TW.
 DELTA PROGRAMMING: Stuart Mills, 49, Templegate Crescent, Leeds, West Yorkshire LS15-0EZ.
 DRAGON HARDWARE PROBLEMS AND MINOR REPAIRS: Alan Butler, 16, Barnston Green, Barnston, Great Dunmow, Essex.
 MODEMS AND BULLETIN BOARDS / GENERAL COMMS. Gary Coxhead, 54, The Sorrels, Corringham, Stamford-le-Hope, Essex.
 COMPOSER PROBLEMS: - Dave Cadman, 32, Breerton Hill Road, Derby DE3-6TG.
 DRAGON/DELTA DOS PROBLEMS; OS9, BASIC, OS9, AND GENERAL BUSINESS SOFTWARE APPLICATIONS: M.A.A. Abba, 55, Longland Court, Rolls Road, London SE1-5BN.
 BMP 110 PRINTER PROBLEMS/SCREEN DUMPS ETC.: Dr. J. Hatton, 48, Wern, Llanfairpwll, Anglesey, N. Wales.
 FLP/COMMS./HARDWARE PROBLEMS & SOME REPAIRS: Steve Tate, 35, Falcon Road, Enfield, Middlesex.
 Next Helpline will be printed in the September issue of Update.

CROSSWORD 24. Compiled by J.D. Bateman.

ACROSS: 1A) Fairly new Drag Mag. 2A) Agitate liquid with a circular motion. 2F) Usually found on top of a church. 3B) They took over Blaby software distribution. 3J) So be it (at the end of prayers etc). 6A) Place (pages of a book) in order. 6I) This ex political leader would make an excellent ruler. 7A) Cavity or gap. 7E) The Great Bear. 8D & A6) Segmented representation of data. 8B) Search through a chronicle to find a large shell. (huge hint, 2 letters are the same). 9A) Ready for harvest. 9F) Recent Quickbeam release. 10B) Run away to Gretna. 11B) Form of carbon used as lubricant. 12D) Last letter of Greek alphabet. 13A) The granddaddy of all adventures.

DOWN: A6) See 8D. B4) Golfers NO.3 wood found on table. C1) Recent Microdeal release. C8) Type of staircase or shape of 8G. D1) Mix up dredge, remove a letter and get a selfish word. D7) Type of sword. F3) Computer driven devices usually found in soup. G2) -----Restate. Dept. where letters are kept for collection. H1) Very small. H9) Part of a flower. I3) Old servant sounding like a washing powder. J8) Type of football sold by Computape. K1) Satire found in LAP round the MOON. L5) Type of computer (brand name). M1) Madness is associated with this in a certain Dragon Adventure. M9) Get milk from this mixed up year book.

This month we can offer a VERY special prize, thanks to Brian O'Conner a MAGBASE disc, containing not only Magbase itself but also the complete Dragon User data files and the new Update data files as well!!
 First all correct entry received wins, as usual.



Programming competition result.

I really am surprised at the low number of members entering the competition, even money doesn't seem to have provided sufficient incentive for many of you!!

Anyway, we DID get some very good entries, and the adjudicator decided that the winning entry was the one sent in by Robert Cameron and I can only agree that it was a very neat solution, certainly the best received. He also decided that the entry sent in by R.A. Davis was a clear choice for second prize, and that the one from Mike Vine deserved a mention as 'third best'.

Well, a Cheque for 10.00 is on its way to the winner, and of Mr. Davis has saved himself the cost of next year's subscription!. Sorry Mike, but there's no prize for third place this time, but it was a very good try.

We'll be printing the three best entries in future Updates I'm sure a lot of people will be able to find interesting uses for them!.

N.W. Dragon Show

As you'll see from the advertisement on page 14, Pulser Software have organised what should be a really good event, and I hope that as many of you as possible will try to attend. The Group WILL be there, and although I may not be able to get there personally this time, Mike Stott has volunteered to run the Group stand for us, so if any of you would care to give him a hand PLEASE let me know as soon as possible. I'll do my best to get there, but the necessity of earning a living could make it difficult for me to do so. Paul Grade.

Classifieds & Special Offers Ads.

DRAGON MUSIC!!!. A selection of music on tape or disc, arranged by Jave Cadman and produced by him on a specially extended version of Composer. The tunes are divided into four categories, "Rags", "Classics", "Standards", and a "Miscellaneous" selection. This month's release is a "classical" selection, "Rags" selection still available.

Prices are TAPE 3.50, DISC 4.00, inclusive of postage. Orders to Dave Cadman at 32, Breendon Hill Road, DERBY DE3-6TG.

Dragon 32, plus very good tape recorder, three inetics, monitor, hundreds of games and other stuff, leads, etc. 110.00 the lot o.n.o. Phone Chris Corker on EASTERGATE 2489.

Two NEW Dragon 64's for sale...75.00 each o.n.o. Upgraded 32/64...50.00. D64 main board, perfect working order...35.00. Phone Alan Butler on 0371-4234 evenings.

WANTED: Dragon disc drive and DOS. Drive must include case/PSU etc. Phone Keith on 021-525-6018.

Shugart 5.25 SS 40 track drive. Uncased and minus PSU. Perfect working order. Full height. Ideal second drive. 30.00. Phone Philip on 0705-504340.

Dragon 32 for sale.....any reasonable offer considered. Phone Keith on 0622-672970.

OKI 1/3 height (ultraslim) disc drive. NEW. 68.00; Mitsubisshi disc drive NEW. 63.00; Mitsubisshi disc drive. Used but perfect. 53.00 (two available). TEAC disc drive. Used but perfect. 53.00. All the above drives except the OKI are half height, and all are 40 track 5.25" double sided units, uncased and without power supply. Prices include postage etc. Large number of NEW 27256 EPROMS available at 2.00 each. Phone Alan Butler on 0371-4234 (evenings only please.).

Basic Programs Listed. 1 Program Listing...75p. up to 4 pages. Additional pages 5p. each. 2 or more Programs...50p. each. ALL tapes and listings will be returned as far as possible the following day... G.W.Hale, 'Rose Cottage, Hungerhill, Coolham, NR.Horsham, W.Sussex. RH13 8QE.

MODEM PACKAGE SPECIAL!!!. Complete package for D64 owners, comprising of a Prism Modem 1000, connecting lead and software to access Viewdata and all scrolling type BB's. The modem will operate on 1200/75 baud for Prestel, and on 1200/1200 for user to user operation. The price for the complete package is ONLY 35.00 to Group Members, 40.00 to non members. Cheque/PO or cash (registered post) to T.Hayton, 36, Laurel Drive, Willaston, South Wirral L64-1TW.

Games to disc transfer...Unprotected game code of any game sent in return for a blank tape and 22p stamp, but you MUST include the inlay card to prove you have bought the original. Contact N.R.Vine, 120,Auriel Avenue, Dagenham, Essex RM10-8BU.

THE BEST ADVENTURE AVAILABLE ANYWHERE!!!. "The 13th Task" from ARC Software. Only 2.50 + 30 pence postage. ARC. 272, Mearns Road, Newton Mearns, Glasgow. G77-5LY.

FORTH OPERATING SYSTEM: Simply the best there is. Written by John Payne, and available for DragonDOS, Superdos, and DD or SD DeltaDOS. Available ONLY through the Group. 8.50 inclusive. Orders/cheques to the Group, 6, Navarino Road, Worthing, Sussex.

Circuit Sheets: Available for D32 (most variants), D64, Dragon DOS controller, and Cumana DOS controller. All the same price 1.00 each. Cheque/orders to the Group, 6, Navarino Road, Worthing, Sussex.

Dragon Upgrade manual: 32/64 conversion method fully explained so that you can update your 32 yourself without difficulty. Written by Bob Hall and available only through the Group. Price 2.00. Cheque/order to the Group, 6, Navarino Road, Worthing, Sussex.

Delta DOS utility: A w/c utility to copy all BASIC and m/c files from disc to tape in one operation. BASIC listing of loader and Hex dump 1.00 or on cassette for 2.50.

J.C.Bussell, 33, Tennyson Avenue, Clevedon, Avon BS21-7UJ. (0272-875528).

PRINTOUT SERVICE.

1 BASIC program listing (up to 5 pages). 50 pence.
2 or more programs 40 pence each (up to 5 pages). All additional pages 5 pence each. (5 pages = app 250 lines).
Screen dumps 30 pence each, 2 or more dumps 20 pence each. (dump size appx. 6" x 4.5").
Text files, data files, DREAM source code files, please enquire.
All tapes or SuperDOS compatible discs (ONLY) must be accompanied by suitable stamped addressed envelope to hold tape/disc and printouts. All enquiries must include SAE. 24 hour return service where possible. Contact Z.Green, Aberllywd, Insh, Kingussie, Inverness-shire. PH21-1NT.

OS9 MODEM PROGRAM: Up and downloading of files. Any Baud rate from 50/50 to 9600/9600 (but not multiple rates). Up/Download buffer from 4k to 32k or program will adapt to largest capacity available. All other 6551 options supported. Price 8.00. Please phone Barry Knapp, 0932-242800 evenings only.

DRANEZEE! A graphics drawing program, on tape, which we think is one of the best!. Written by R.A.Davis, it must be a bargain at 2.50 including postage. Orders to Paul Grade, 6, Navarino Road, Worthing, Sussex.

DRAGONDOS EPROMS: Your DOS 2764 rebloated to "patched" V1.0 specification, or to Eurohard V4.0 or V4.1, or to PETER WILLIAMS TRANSLATED & DEBUGGED ENGLISH VERSION OF V4.1. Price for any version just 3.50. Computil, 24, Jays Mead, Wotton-under-Edge, Glos. GL12-7JF.

BACKDATE UPDATES: Copies of all earlier Updates available from John Cox, 3, St.Peters Road, Portslade, Sussex. (0273-422492). (Chris Channing, is currently having copier problems!).

GRAPHICS SCREENS... The Group Graphics Library, "DRAGONART" has a good selection of screens available now, so why not make use of the service offered?. Why not submit YOUR graphics as well?, you could win a prize!. All you need do is write for details. Dragonart Library, 5, Glen Rd, Parkstone, Poole, Dorset.

NEWCOPY: A w/c tape utility program for the production of backup copies of m/c programs. Capable of loading either headed or headerless programs or sections of programs, and saving these in their original or alternative formats. Also allows easy tape positioning using motor on/off routines. Written by Stuart Mills, and available to Group members at 2.50 plus 25p postage/packing. Orders and cheques to the Group.

Household Accounts program: Written by Grahaa Strong this program is ideal for almost all home accounts purposes. Capable of providing estimates of next years bills!!!, and many more features. Price (DragonDOS disc) 5.00 inclusive. Orders to G.Strong, 78, Coleridge Crescent, Goring, Worthing, Sussex.

Fed up with that grotty black text on a green or white background whenever you use FLEX or OS9 etc.?. You need our INVERSE VIDEO board. This board produces green or white text on a black background when using Hi-Res graphics text. Easily adapted to operate on text screens if required. Suitable for D32 & D64, and simple to fit. Price 15.00 inclusive. Cheques / orders to Alan Butler, 16, Barnston Green, Barnston, St. Dunmow, Essex.

DDCOPY: DragonDOS to OS9 file copy utility. Includes 'Telewriter' & Basic conversion filters...8.00.
COM09: OS9 comms. program. Xmodem (CRC & SUM), multiple upload modes, monitor buffer, function keys and more!. Suitable for any OS9 system (CoCo needs ACIA-Pak) and includes source files...8.00.
PD-PAK: Selection of useful public domain OS9 utilities on one disc...5.00.
Jason Shouler, 70, Victoria Road, Parkstone, Poole. BH12-3AE. (0202-722599).

14.

THE N.W. ENGLAND DRAGON SHOW AND CONVENTION

SATURDAY, 12th SEPTEMBER 1987

at Bishop Henshaw Upper School,
Rochdale, nr. Manchester,

10 a.m. to 4 p.m.

Entrance Fee:- £1.50 for adults, and
£1.00 for children.

On September 12th, Pulser Software will be organising the N.W.England Dragon Show and Convention, at Bishop Henshaw Upper School, Rochdale, Lancs.

Many of the major retailers have been invited to come along to sell or demonstrate their software and hardware, including :-

DRAGON USER MAGAZINE

NATIONAL DRAGON USERS' GROUP

COMPUSENSE

HARRIS MICRO SOFTWARE

COMPUTAPE

MICROVISION

JOHN PENN

QUICKBEAM

PEAKSOFT

P.N.P.COMMUNICATIONS

PAMCOMMS

R & AJ PRESTON

GROSVENOR

OS9 USER GROUP

We also hope to have demonstrations, a computer 'clinic' with a Panel of experts to help with Peoples' Problems, a forum to answer Peoples' queries, and hopefully a Prize draw. Snacks and seating will be available and a licenced bar has been applied for.

Easy access from the M62.

Any retailers or demonstrators interested in booking a stand should contact Pulser Software on (0706) 849189