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

So what's new?....not a lot, or at least if there IS anything interesting it's
being kept a very well guarded secret. So what are you going to do about
it?.....that's right, I said YOU. You see the problem is that I can only
preach to the converted, the Dragon owners who have already joined the Group,
a bit like Maggie Thatcher at a Conservative Party Conference (except that
no-one has bothered to try blowing me up recently), but unlike La Thatcher I
don't get much media coverage, so all my words of wisdom are confined to the
group of dedicated masochists who read Update.
There is still a good market for Dragon software and hardware, but no one
wants to produce it or retail it because they read in the computer press that
only the ST and the Amstrad are "popular computers", and because they never
hear the Dragon mentioned they assume that it's as dead as the ZX80. Well, YOU
are the only ones who can correct this assumption, phone 'em, write to 'em,
pester the life out of them until they are all, retailers, hardware firms,
software firms, magazines, the BBC, thoroughly sick and tired of hearing from
angry Dragon owners demanding attention and products. MAKE YOURSELF HEARD,
MAKE YOURSELF HATED IF YOU MUST, BUT GET ATTENTION!!!. The alternative is
resign yourself to even less commercial support than you have at the moment,
and an effectively dead machine.
Aren't you tired of being the doormat of the computer industry?, do you really
LIKE being ripped-off and dumped?, if not, why not DO something about it?.
Think nasty, BE nasty, if that's what it takes to get results..... if asking
politely doesn't work then try the other way. You don't need to be apologetic
for owning a Dragon, it's a damned good machine, and if firms are too ignorant
to realise that, then TELL them they're ignorant!. Make yourself heard, go and
picket the next Commodore Show or something...ANYTHING!. Try making a new
reputation for the Dragon as the computer whose owners refuse to allow it to
be killed off. Go on, do it NOW.   *Paul G.*

THE EDITORIAL BIT ....

Hmmmm, this month seems to be nag the members into writing letters to everyone
in sight who might possibly have something to do with computers month! Paul's
just had a go, there's another article later on having a go and Helen
Armstrong is saying the same thing in Dragon User (Page 4 in the news bit
about us). If you ask me, you'd all save yourselves a lot of hassle if you
just go ahead and do as they say!
So, what is new in the editorial office (oops, spare bedroom), absolutely
nothing at all, except that I'm suffering from a postal strike (I see from the
papers that we are being threatened with a national one), hopefully this won't
materialise but if it does, please be patient, the group is very dependant on
the post both for articles coming in, copy being passed between me and Paul
and of course the newsletter getting to you.   *T.L.*

FLEX AND DRAGONPLUS ..... MIKE GANLEY

Compusense's Dragonplus board seems to offer two main improvements over the standard Dragon 64. Firstly it gives a much better 80x24 text screen and an extra block of RAM. Using the text screen for word processing and similar tasks is a huge improvement, no sideways scrolling! The extra block of RAM is not so easily accessible because the 64 can't access it directly. The way chosen around this is to configure it as a 'virtual disc' which operates exactly like a disc drive except that it's in RAM. This can be read, written to and addressed exactly like a disc drive, but how do you use it to the full? A careful study of the Flex manual reveals a simple facility to help you. When the system boots up it initially prompts for the date. After this has been entered it looks for a file called 'STARTUP', if this is not present then the usual +++ prompt appears. If the file is found however it can be used to automatically configure your system. A typical startup file might look like this:

        EXEC,START,TXT

Startup is restricted to a single line but by using the above format a much larger file can be executed. This will be a simple text file which can be made up using the BUILD command, the TSC editor supplied with Flex or the SE word processor. A typical 'Start' file might look like:-

        Y VINIT
        DRIVES 2
        ASN 3=VO
        COPY ASN,COPY,ERRORS,SYS,DIR,EXEC,PRINT.SYS
        COPY P.CMD,LIST,SPE.CMD
        ASN S=A,W=2,O=VO,1=FO,2=F1,3=VO
        ASN
        P,HECHO 1B 45
        SPE

By executing this file, all the lines in it are executed exactly as if they had been typed from the keyboard. As you can see the routine starts off by formatting the RAM disc, it then configures the system to accept 2 floppies. The various commands are copied to the virtual disc, these effectively become instant memory resident commands. The ASN routine configures the drives so that the floppies become drives i and 2, number 2 being the work disc. The HECHO command (from the Flex utilities package, more later) sends a control code to the printer, in this case to put it into emphasised mode, finally the SE word processor is loaded from the RAM disc. So, if you have the later DOS ROMs fitted to your system, it is quite possible to automatically boot into Flex, load commands into memory, set up a printer and load the word processor; all you will have done is turned the computer on, loaded the disc and entered the date! Later we'll look at some of the extra commands and facilities the Flex Utilities Package has to offer.

Micronet Gallery change...

I've just had a phone call from Tim Hayton, who runs the Group's Micronet pages, and he asked me to tell you that we WILL be continuing them...provided we get enough support...and that the new page number is 811220142....that's effective as of now. *Paul*.

ADVENTURES .... P.C.ASBURY SMITH

'Cheatin' seems to be topical lately, whether you indulge or not is of course
a personal thing. Normally I don't. So, I'll never encourage or discourage the
practice. However I thought I'd test the value of the procedures which have
recently been published in Update.Pauline says she uses the routine to load a
headerless program to crack open Tanglewood,I've tried four times with
glorious failure.Are there various versions or is this a routine that works on
a 32 but not a 64? They don't always work on both.The weakness of Mike Vine's
routines is that they require you to be able to use <break>,or that the
program is left intact after <reset>.Hence they are useless to break the
Underbeings of Croth which disables the <break> key and clears the RAM on
<reset>.It seems that the learned folk will have to do some midnight oil
burning.
Tanglewood by Microdeal is well known and has been frequently reviewed.I find
it obscure and the graphics muddle me,but then I've never had a strong visual
sense. I'm relying on you to solve it for me.On the other hand,Underbeing of
Croth by Maridian (Birchmore Cottage, Nairwood Lane, Prestwood, Great
Missenden Bucks HP16 OQQ - 3.95) is a good classical style adventure. You're
imprisoned in a cage in an underground village and have to make your way to
freedom.The presentation is good, the text is easily legible,although
hi-res,and replies are easy to follow. My only criticism is that the response
time is sometimes too long for comfort but you can't have everything. I
haven't completed it yet but I have done enough to discover that interest
doesn't flag. An excellent four pounds worth.
One last point.The routine for autorun was given in Dragon User and is very
well known.However it can only be used for tape to tape or disc to disc.It
cannot be used to get an autorun on tape of a program which is stored on disc.
Could any of our MC experts come up with the answer? I'm sure it would be much
appreciated.

<<I'd better stick my oar in before anyone starts writing to me to complain,
while the comments about Pauline and Mike's routines may or may not be
correct, as far a I'm aware, they didn't say that these always worked, just
that they tended to use them.As for the Tanglewood problem,as Pauline has used
the routine,I'm sure it works and I assume that there is more than one version
around.....TL>>

FREE MONEY! ....(well, almost).

I had a letter t'other week from one of our Members, asking for a
routine/program which would help him to win some of those fabulous prizes that
are on offer in various newspaper competitions....you know the sort of thing,
the ones that ask you to make as many words as possible from another word or
short phrase. Well, this seemed too much like work for my liking, so I decided
to turn it into a competition for YOU to solve!. What we want is a short
program which will accept a word of, say, ten letters, and then produce a list
of all possible combinations of those letters, starting with two letter
combinations and working through to the maximum. Of course, this still leaves
the problem that a lot of the combinations will not be valid words, but that's
something which is outside the scope of the program, and I'm not suggesting
that you should include a dictionary check!. Where does the free money come
into it?....best entry gets a tenner, and second best gets a free subscription
renewal!. I won't be judging the entries, I'm leaving that to the original
questioner, and his decision will be final. OK?. Closing date is June 28th,
and the winner will be named in the July Update. All entries to me as
usual....Paul Grade.

THE DRAGON ... THE FUTURE ???

How often do you think about changing your beloved Dragon for a more popular micro such as a Commodore or Amstrad? For myself this has become a common predicament, arising mainly from my gloating friends; fortunately such a predicament is not prolonged, partly due to the lack of money but mainly due to the Dragon itself. How often do you walk into a computer shop, looking enviously at the vast ammount of software wallpapering the surroundings, all of which is available at a delve into the pocket.... except of course if you own a Dragon, when such software is limited to the endless wait of mailorder or a shoebox in the corner of the shop with games like Invaders Revenge accompanied by a great deal of dust and an untidy piece of cardboard with the hurriedly written words 'CHEAP GAMES! 25p !! unguaranteed'.

Yes, the Dragon is indeed in a sorry state with a small contingent of avid users dreaming of how things could have been. Yet, such a dream was once a reality with s/w companies Mastertronic, Ocean, Imagine etc. all producing quality software. Although such software houses soon vanished from the Dragon scene, it was not for lack of support but the five words which have plagued the Dragon since: The demise of Dragon Data! From this demise, the Dragon has been branded 'dead' which in turn caused the 6809 world to unite (although you would not think this, reflecting on recent editions of Update), with a small army of Loyal supporters. Ironically such commitment has never ventured past the Dragon community. For example, when was the last time we saw a letter or an article in Popular Computing Weekly stating that the Dragon is still here? The Dragon is now limited to a rare mention in the classified area, but whom do we blame for this? Not the Demise of DD (of course they played a large part), but US! Dragon users have always been a shy breed (He's obviously never met Paul! ...TL) and indeed this has not changed. Surely it's time WE voiced OUR opinions, informing ALL computer orientated magazines that WE'RE still here!

In the introductory sheet of NDUG, the opening sentence claims it was set up 'To counteract the persistant Dragon obituaries...' In my view they, or we, have not achieved this. I for one only heard of NDUG recently in Dragon User. The sheet continues, '.. the general idea was that if a sufficiently large number of Dragon owners could get together and make themselves heard, it would eventually become impossible for the press, and more importantly the software and hardware companies, to persist with the myth that the Dragon was dead...' It is true that NDUG have attracted a large support but such support has NOT 'made itself heard'.

Perhaps it's time we did. Time to let everyone know WE'RE STILL HERE! If we don't then I'm afraid the Dragon will continue it's slow death. ACT NOW BEFORE IT'S TOO LATE!..... Simon Jones (Drag Mag)

<<Just a small suggestion from me, wherever you live you must have a local radio station. They will probably do phone-ins and may at times have some sort of 'Computer Expert' on such a phone-in, if this is the case why not phone them and let vent to your feelings there. If they don't then why not write to the station and suggest they have such a phone in so you can ring and tell them that the Dragon is still here? I've spoken to quite a few such 'experts' on the local London stations and put them right about the Dragon, it's all good publicity.... TL>>

Dragonart Library.....

What's the matter with you lot?!....You ask for something to be set up, and then when someone goes to a lot of time, trouble, and expense to do it for you, you don't make use of it!. Honestly, there are times when I wonder why anyone bothers at all! The Dragonart Library was something a lot of people suggested that we ought to have, and it's a good one, with a very extensive range of good quality graphics screens available at a VERY reasonable price....in fact for virtually the cost of the tape or disc plus postage....so why aren't you giving it more support and making more use of it?, and for that matter why aren't you contributing YOUR graphics work to it?. If you aren't going to use the facilities, then don't ask for them, and save a lot of work and expense. If you DO want to use the Library, the address is on the ads page.

OSSETT SHOW REPORT ..... MIKE STOTT

Although we arrived soon after the 10am start our tickets were 63-65 so we
were not the first there. We had a quick look round and noticed that most
stalls didn't have signs up showing who they were. Then it was down to
business, first to Quickbeam to try Superkid, a bit pricey at 8.50 but I
prefer it to Frankie, they were also showing DAMS, their music generator. To
John Penn where I found a printer cover for 1.50 and also North Sea Oil for
1.00, then the NW TRS80 User Group where I grabbed a handful of their old
magazines for 75p and then to Pulsar where I saw Magbase in action. They have
Dragon User articles from start to present as an optional extra.The next for
release is Update.Many people were trying to buy but Pulsar were only
demonstrating.Later,Neil O'Connor showed us Rally, not yet finished but it's a
car race where you search for clues,if the price is right it could be a best
seller.There were many book bargains to be had and Richard Read and Jurgen
Mitchell were busy plugging their free mag for games addicts called'News from
the Dragon'. The OS9 User Group were there and Computape, selling Crazy Foota
as well as their usual stuff.Harris were showing their normal software.PNP had
keyboards and D32s for 48.00.Other stalls had no identification.
The biggest disappointment was that Microvision didn't have Talisman ready.In
my opinion Beanstalker is the best game for the Dragon.I handed out some
leaflets about the Group but a stand would have been easier.Hopefully some of
those who seemed interested will join us.Many of those I spoke to had
differing problems with computers but were frightened to seek advice in case
people thought they were stupid.I tried to stress how the Group could be of
assistance to them.
Was Ossett a success? Yes. Most people compared it favourably with the London
show. My own view? 5+ hours talking to friendly people and seeing what was on
offer. To me the future of the Dragon is assured with new software writers
joining those who are already with us.

LONDON SHOW REPORT .... P.BEED

There isn't a lot to say really, is there? It was a bit of a disappointment
I'm afraid. Every time we have a show,the Horticultural hall seems to have got
bigger,or perhaps it might just be the stands and the crowds getting smaller.
This time it was a bit on the ridiculous side.All the usual companies and
groups were there,with the addition of Broomsoft and Dragon User.Notable
absences were Grosvenor and PNP,although other companies were selling their
goods for them. Aside from Harris software,who had some interesting extensions
to Basic 42 on sale,and a new budget game from Computape,there was nothing new.
There was good sense in shopping around,prices of various items varied wildly
between the stands.Microdeal had just the one table and appeared to be selling
up on the Dragon side,it looked as if they had their entire remaining stock
and just wanted to clear it,a good deal must have been selling at cost or
below.It was at Microdeal's stand that I picked up a pile of used discs at 25p
each and 2 arcade joysticks from a junk bin at 1.00 each.I was pleasantly
surprised when I got home to find they had been converted to the Dragon and
worked perfectly.Attendance had not been staggering to start with and by 2
o'clock the place was decidedly empty,an hour later most of the stall owners
had had enough and started to pack up. We must thank Jenny Pope for being
brave enough to give it a go. But was it a sucess?The answer I think lies with
the organiser and stall holders, did they make a profit? Was it worth their
while? and will there be another one? I have an idea what the answer will be
but it would be nice to know for sure one way or the other.

OS9 TO DRAGONDOS .... CHRIS JOLLY

This is a simple routine which enables files to be copied from OS9 to
DragonDOS. A byte for byte copy is made of the file.This can be used to run
programs written in 'C' under DragonDOS,or,indeed,if they are copied to
tape,without discs or OS. The size of file which can be copied is limited as
the OS9 file is loaded into memory before being saved to DragonDOS disc. Only
one drive is used so the program can be used on single disc systems.To create
the OS9 copy utility, type in and run the Basic and then SAVE"OS9COPY.BIN"
,&HOC00,&HE20,&HCDC.
The program sits in page one of the graphics screens.The OS9 file to be copied
MUST be in the root directory.At the READY I/P, insert the OS9 disc, replace
it with the DragonDOS disc at the READY O/P prompt. The program is not case
sensitive, thus "MYPROG" will match "myprog".

```
 10 FOR I=&HC00 TO &HE20:READ A:POKE I,A:NEXT I
 20 DATA 134,1,151,235,173,159,192,38,204,0,0,237,132,204,255,255
 30 DATA 237,2,57,51,136,16,237,2,163,67,45,4,51,69,32,248
 40 DATA 227,67,227,65,31,2,52,16,48,137,1,0,173,159,192,38
 50 DATA 54,144,236,132,16,163,11,38,3,134,255,57,230,132,79,16
 60 DATA 163,2,39,3,189,12,19,238,132,31,48,51,65,239,132,48
 70 DATA 137,1,0,58,166,132,95,57,52,52,189,12,50,53,52,39
 80 DATA 1,57,167,160,90,38,241,57,32,73,78,80,85,84,32,70
 90 DATA 73,76,69,58,32,0,79,85,84,80,85,84,32,70,73,76
100 DATA 69,58,32,0,82,69,65,68,89,32,73,47,80,13,0,82
110 DATA 69,65,68,89,32,79,47,80,13,0,68,79,78,69,13,0
120 DATA 99,104,101,115,115,46,98,105,110,0,255,255,255,255,255,255
130 DATA 255,255,255,255,255,255,255,255,255,255,255,255,255,67,72
140 DATA 69,83,83,46,66,73,78,0,0,0,0,0,0,0,0,0
150 DATA 0,0,0,0,0,0,0,0,0,0,0,0,16,206,4,0
160 DATA 142,12,103,189,144,229,1889,181,198,48,1,16,142,12,160,90
170 DATA 166,128,189,13,253,167,160,90,38,246,111,164,142,12,117,189
180 DATA 144,229,189,181,198,48,1,16,142,12,190,90,166,128,167,160
190 DATA 90,38,249,111,164,142,12,131,189,144,229,189,133,43,189,13
200 DATA 101,142,12,142,189,144,229,189,133,43,189,13,197,142,12,153
210 DATA 189,144,229,126,14,18,73,47,80,32,78,79,84,32,70,79
220 DATA 85,78,68,13,0,67,72,69,83,83,46,66,73,206,0,0
230 DATA 0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0
240 DATA 0,0,0,0,162,142,14,24,16,142,0,18,189,12,0,198
250 DATA 32,142,14,24,16,142,13,69,189,12,88,39,9,142,13,53
260 DATA 189,144,229,126,14,18,189,13,170,38,228,142,14,24,16,190
270 DATA 13,99,189,12,0,1542,14,24,16,142,16,24,52,48,189,12
280 DATA 50,53,48,39,1,57,167,160,32,242,142,13,69,16,142,12
290 DATA 160,166,128,189,13,253,168,160,39,247,129,128,38,2,109,164
300 DATA 57,66,73,78,1,95,142,12,190,109,128,39,3,92,32,249
310 DATA 142,12,190,16,142,13,193,173,159,192,8,173,159,192,10,183
320 DATA 13,196,173,159,192,12,182,13,196,142,16,24,254,14,35,16
330 DATA 142,0,0,95,173,159,192,22,173,159,192,16,57,52,2,132
340 DATA 127,129,65,37,6,129,90,34,2,139,32,109,224,42,2,138
350 DATA 128,57,189,133,43,126,179,180,126,255,255,255,255,255,255,255
360 DATA 255,255,255,255,255,255,255,255,255,255,255,255,255,255,255,255
```

MAGBASE . . . . BARRY CARUTH

This review may have a couple of inaccuracies in it, as I didn't seem to get
any instructions with the review copy, (my fault..sorry!.P.G.) but I hope it
gives a general impression of the program. The program's purpose is to store a
list of all articles published in any magazine for easy reference. How many of
you have been programming and have to dig through all the old magazines to
find a poke or routine only to find out an hour later that you lent it to a
friend?. If that includes you, this program could be useful. The program can be
bought on tape or disc, with or without a file for Dragon User. A file for
Update will be available shortly. Features of the program include load, save
and print all or specified entries. A view file feature is included with a
search facility. You can rewrite all or part of an entry and can sort the
file. Other options are delete entry, merge files and kill all entries which is
just a RUN statement. The remaining commands include disc directory and view
file on disc without actually loading the file.
The only real way to illustrate the use of this program is to give an example
using the D User file. Say I want all references to sprites:-
Firstly I take a directory and find the file I want is P-S.DAT. I use the load
facility and then go to View and search for SPRITE. The program tells me that
SPRITE appears in entries 116 and 133. I move to these entries and get the
relevant information on Article subject, Magazine edition, Page and further
details. This illustrates the programs use well, but it's really up to you. If
you need something like this there's nothing better available and it does a
good job.
Pulsar 36 Foxhill, High Crompton, Oldham, Lancs OL2 7NQ.

EASY MACHINE CODE (8) . . . . R.A.DAVIS

There are now two questions which should have arisen in your mind from part 7.
Firstly, how did the 6809 know that the contents of the A register were to be
stored at the ADDRESS pointed to by the X register and not in the X register
itself? The opcode A7 is one of the INDIRECT methods of addressing. Indirect
addressing means - use the data at the address mentioned in the register, or -
put the data at the address in the register referred to in the operand which
follows the opcode. You will see by studying the opcodes that there are
special ones for indirect adressing, also special ones for immediate
addressing and all the other forms of addressing. Immediate addressing was
used to load the A register and the X register to begin the program. Immediate
addressing followed by the hash (#) symbol will indicate that this number is
to be used as a number and not an address. The $ symbol denotes a hexadecimal
number. Without this, the number is assumed to be in decimal. The operand
80, which follows A7, indicates the X register and that it is to be incremented
by 1 after the operation. The other question should have been - How does the
Hex F7 cause the program to go back to STA ,X+ ? Here F7 is taken as a signed
number and is negative. The numbers &HFF to &H81 represent -1 to -127. The
remaining Hex numbers represent their positive decimal equivalents; so these
are used to jump or branch either forwards or backwards in the program.
Fortunately an assembler will work out the number for you if you use what are
known as LABELS to denote the various routines to be used, as we shall see in
due course. Meanwhile, having got a clear screen, the next thing to do, I
suppose, is to print something on it.

NUMERIC VARIABLES WITH DRAW & PLAY

Remember the old days when you used to spend huge amounts of time complaining about the bad quality of the Dragon manual?Sometimes even writing to Dragon User to moan about it? Remember that you used to buy books from Tandy to learn what the Dragon was capable of?Well,that wasn't quite the whole story either.This article is about a powerful feature of the DRAW and PLAY commands which I have never seen documented in this country.We all know how to incorporate substrings into a string to be played or drawn,using the X subcommand.Most of us have used this at some time or other to create a loop in combination with STR$ such as playing a musical scale,or for effects such as rotation in hi-res text. This enables a substantial reduction in time and memory to be made but it is still an unnecessary and inelegant method.It is unnecessary because numeric variables can be used directly with less effort and using less memory.Suppose you want (for no apparent reason) to draw a square spiral to fill the screen. It's not that difficult (it is also trivial,for which I apologise),just use a loop with a few STR$s and some string slicing or substrings. To use the numeric variables directly,replace the X's with '=' signs and the string names with your numeric variables.Then remove all the number to string conversion.You must also use a semi colon after each one,as with substrings. The only limit is that you must use a simple variable,not an expression, rather than have 'X+1' as the value, you use 'W=X+1' and use W instead.This then gives you something like DRAW"U=X;" to draw up X pixels.In other words,X is the number of pixels to be drawn.You could use U as the variable, giving DRAW"U=U;" but this is confusing in a long string.

As an illustration here's that square spiral in one line:-

```
PMODE4,1:SCREEN1,0:PCLS:DRAW"BM128,96":FORW=1 TO 189 STEP 8:X=W+2:Y=W+4:Z=W+6:
DRAW"U=W;L=X;D=Y;R=Z;":NEXT:EXEC41194
```

For anyone who doesn't know, EXEC 41194 waits for a keypress, it also quite usefully disables the <break> key.
This example is,as I said,trivial and insignificant.Despite that it shows a slight improvement in memory usage and certainly in readability.This improvement will get bigger as the program grows.
.......Eddie Freeman

DELTA DOS (3) .... MARTIN LAYLEY

More from the Delta disc direct page:

FILE STRUCTURE

For Basic (BAS) files, bytes:-
            0 & 1 point to the Basic start address
            2 & 3 point to the end address
            4 is the null (00) which marks the beginning
            of the Basic code
      and   5 is the first byte of the code.

For machine code (CMD) files, the sectors are a straight copy of memory

For data files, the entries are stored in sequential form, separated by the <linefeed> character (13 Dec, OD Hex)

Next month we start on the routines within Delta.

OS9 FOR BEGINNERS .. ROBERT SCHOFIELD

This month I'm going to have a look at the start-up process the Dragon goes
through to boot OS9 from disc. A common element in each Dragon computer DOS is
the BOOT command for the startup of disc based operating systems. On the D64
this is a real plus as the machine becomes completely 'soft' (i.e. all RAM),
allowing the use of any suitable DOS or new OS or language interpreter
suitable for the 6809 such as Flex, NDUG Forth and of course OS9. However,in
the case of OS9 there is a bit of a problem because of the disc layout and
loading method employed; to explain let's look at the BOOT command.
During initialisation, the Dragon interpreter has a look at the 1st 2 bytes of
the cartridge address space at $C000. If these bytes are 'DK' the Basic then
jumps to the next byte ($C002) and hands over the execution. This is why when
the DOS installs itself it is done in different ways with different DOS's. At
this point the screen shows the DOS startup message and the 'OK' prompt; the
Basic interpreter is now running. Typing BOOT causes a seek to track 0 on side
1 of drive 0 (drive 1 according to DragonDOS numbering...TL) to load sectors
3-18 to address $2600 in RAM. If the first 2 bytes loaded are 'OS' then
execution is handed over to address $2602 in this loaded area.The disc sectors
are 256 bytes long,so this means that a 4K block is loaded and 'autorun'.You
can guess that this is when your new system or game starts to run after
loading.OS9 is a system designed to have a standard disc format with various
storage capacities according to the capabilities of the machine hardware.The
type of hardware is identified by the software from small data files called
Device Descriptors which are loaded into memory during the BOOT routine,and
the type of disc and its format by the identification sector (sector 0) on the
disc. The common denominator to every disc is that the first track is a fixed
format,in single density; thus the software should ALWAYS be able to read ANY
OS9 disc regardless of hardware setup. That's where the problem lies.You can
see that there is a clash between the loading method of the Dragon and the
disc format of OS9, so the Dragon designers opted for a non-standard disc
format and implementation to alow more flexibility (it's still inexcusable to
abuse a standard in the interests of simplicity!). So, part of the OS9 disc ID
track is sacrificed to make room for the 'boot up' data block which the Dragon
can load.
The first part of the block is a little routine that takes charge of what
becomes the second stage of the boot up; it is passed execution control from
DOS, copies the rest of the loaded data block into high memory then passes
control to the normal entry point for OS9 for 'power up' startup as if from
reset.The rest of the data block is the OS9 kernel (central control software)
made up of 2 modules,OS9 and OS9P2.OS9 is a block of absolute code (can only
work at a specific address), OS9P2 is relocatable and is itself composed of 2
parts.Both modules normally reside in high memory and initialise themselves
before performing their first task,loading the rest of the system components
from disc to construct the whole system. For this,a module called BOOT (part
of OS9P2) pulls the system components such as the clock, device managers and
descriptors and drivers from the disc.These building blocks are the limbs of
the kernel.At this point OS9 is like a brain cut off from its body and is
unable to use its normal method of reading discs,having to rely on BOOT.Since
I/O Intelligence is in a system module called IOMan (on the disc),until this
is read and becomes part of the system OS9 cannot read files from disc except
in a limited form.
OK, that's the startup and loading, next time ... construction.

DRAGON USER THIS MONTH......

The new Dragon User has arrivedin my letter box so I've had a quick glance
through it and... what do I see? A nice bit about us (page 4), including
another exhortation for you all to write to everyone, good idea. As well as
this they've got the normal letters and news items, a version of Simon,
reviews, an article on searching techniques, an introduction to
wordprocessing, an article on the DragonDOS directory, writing your own
adventues, another bit about us, the competition, problem page, adventure
trail and a thingy about shuffling cards, along with all the usual ads and
suchlike. Unfortunately for you arcade addicts, the Expert seems to have got
lost in the post, I'm glad it's not just me has problems with the PO, I was
starting to get paranoid!

DIY DISC DRIVE CASES .... EDDIE FREEMAN

I have just managed to acquire an uncased full height disc drive and decided
to cover it in some way.This I managed to do at a very small cost. I had some
pieces of 1/4" plywood lying around and having just built an additional
cupboard in my caravan,I had some iron on veneer.I was therefore able to make
a case for the drive as follows:- Cut the plywood: 1 off 12"x 61/4" Top, 2
off 12"x4" Sides, 1 off 41/4"x 61/4"Back
Iron on the veneer and trim with a stanley knife after at least 24 hours have
elapsed.Make a cut out in the back piece for the ribbon cable.Drill a hole to
take the electric cable. On my drive there were 2 screw holes on each side and
one each side of the power unit.The plywood sides are screwed to the disc
drive side (using brass screws) and the PSU. Using suitable screws,the top and
back are then screwed to the sides.The cost to me was nothing as I already had
the bits lying around.If you have to buy them,the wood will cost you no more
than 50p and the screws a few pence.The main cost will be the veneer.I bought
an 8'x10" roll for 4.50,but this was for my caravan.
<<In that case why not use sticky back plastic? Yes, I used to watch Blue
Peter too, now, I've got this case in the oven that I prepared earlier ....
TL>>

Helpline 87..............

SCROLLING GRAPHICS SCREEN..R .A.DAVIS

The method listed is slightly faster than that described in part 1 because
only the screen in pages 5-8 is moved, while that on pages 1-4 is overwritten.
The X and Y registers are again used to point to the screen addresses,but this
time the X register points to the end of the 1st screen(pages 1-4) less 31
bytes. Both addresses are decremented by 32 as the end of each line of bytes
is reached,using the LEA command.The U register is used to keep track of the
end of the screen from pages 5-8,as it moves upwards and the address gets
lower.This is stored each time for comparing with the Y register,to start the
next scan,until the X register contains the address of the byte one below that
of the start of screen 1.By increasing that address, in line 100 of the
listing (&H5FFF), you can obtain a partial scroll instead, i.e. pages 5&6 onto
pages 3&4. The Basic version pokes in the machine code and provides a short
demonstration of how it works.By changing line 180 to CLS:GOTO 120 you can
have a continuing performance!DOS users will need to change the screen
addresses as described in part 1.These are in lines 70,80,90 & 100 of the
assembly listing,and in the Basic DATA;Line 20 ...1D,E0   Line 30 ... 1E,00
...36,00 ..05 Line 40 ...FF ... (1st one)

```
 10 CLEAR200,&H6FFF              10 PCLEAR8:CLS
 20 EXEC &HCFFA                  20 DATA 20,02,1E,20,8E,1D,E0,10
 30 ALL                         30 DATA 8E,1E,00,CE,36,00,8C,05
 40 @BEGIN EQU*                  40 DATA FF,25,22,FF,70,02,34,10
 50 BRA @START                   50 DATA 34,20,A6,A0,A7,80,10,BC
 60 @STORE RMB 2                 60 DATA 70,02,24,02,20,F4,35,20
 70 @START LDX #$1DE0            70 DATA 35,10,30,88,E0,31,A8,E0
 80 LDY #$1E00                   80 DATA 33,C8,E0,20,D9,39
 90 LDU #$3600                   90 FOR I=&H7000 TO &H7035
100 @PUSH CMPX #$5FF            100 READ A$:A=VAL("&H"+A$)
110 BLO @DONE                   110 POKE I,A:NEXT
120 STU @STORE                  120 PMODE3,5:PCLS
130 PSHS X                      130 CIRCLE(128,96),50,2
140 PSHS Y                      140 LINE(0,0)-(255,191),PRESET
150 @GO LDA ,Y+                 150 PMODE3,1:PCLS2
160 STA ,X+                     160 LINE(40,40)-(210,150),PSET,B
170 CMPY @STORE                 170 SCREEN 1,0
180 BHS @NEXT                   180 EXEC &H7000
190 BRA @GO                     190 GOTO 190
200 @NEXT PULS Y
210 PULS X
220 LEAX -32,X
230 LEAY -32,Y
240 LEAU -32,U
250 BRA @PUSH
260 @DONE RTS
270 END
```

Using the D register instead of the A register will give a further slight
increase in speed.Line 150 of the Assembly..@GO LDD ,Y+ or Line 50 of the
Basic listing,change A6 to EC.

REDUNDANT INFORMATION DEPARTMENT....

From Phil Beed, a note on recovering after a crash with Electronic Author...
...1) EXEC 10259
...2) Press <break>
...3) Use the OLD command to recover text
...4) Save the text straight away, reload EA and start again.
...5) Don't forget to replace the '?' which will have replaced the
       first character of the text.

Plug time!!!!!.

Now believe it or not, this heading has nothing at all to with the thing you pull!...it's just that I've been asked to say a few things, preferably nice, about some other Dragon groups and publications.
First is a proposed new group for DELTA owners. Dave Martin is setting up "DUDE" (Delta Users Data Exchange), with the intention of publishing a Newsdisc in D.density Delta format. The idea is to assist with solving problems, developing software, etc, and all the usual User Group activities. He obviously is going to need all the help and cooperation he can get (as I know only too well!!), so if you use Delta, PLEASE contact him. Personally I think it's a VERY good idea, as Delta owners have been rather neglected recently.
Second mention is another proposed group. This one is being set up by Richard Ball, and to quote "...is aimed at those Dragon users who use their Dragon mainly for games, but who although not experts would like to use the machine for purposes other than games playing". In other words, a group aimed fairly specifically at the beginner who would like to learn more without getting swamped in technicalities. It sounds like a group that is well worth supporting, so why not get in touch and get more information?. The membership fee will be 7.50 a year or 4.00 for six months, so surely you can afford to give them a try?.
Right, that's the new ones, so now to a couple of established publications. Simon Jones wants to apologise for Drag MAg having gone missing recently, and says that it will be be back on Micronet Gallery very shortly (as soon as he's managed to get his software problems sorted out). Not only that, but he will also be introducing a new monthly newsletter to accompany the Drag Mag pages and summarise the news and features shown. This newsletter will be available for the cost of the postage, and you can't get a better price than that!.
Last on the list is Dragon Magazine, run by Andrew Hill. I eventually got a copy, and I have to admit that it's not bad at all, although aimed more at the games enthusiasts than we are. (Well someone has to cater for them!).Anyway, as Andrew says, it contains news, reviews, hints, tips, competitions etc...all the usual things, and at 6.50 for a year's subscription, it cant be bad value, can it?. Sample copies are available at 50 pence each plus a large stamped envelope, so why not get one and see for yourself?.
Well, that's all the mentions I was asked to make, but please don't forget the one and only surviving COMMERCIAL Dragon publication. Dragon User is a lot better than it used to be, even if the glossy covers have gone, and far more in touch with the Dragon scene than in pre-subscription days. How they manage to keep going in the face of the overwhelming apathy displayed by the computer industry/retailers I simply don't know, (there is no truth at all in the rumour that the person seen on the corner of Little Newport Street, wearing fishnet tights and a leather mini dress, and offering passers by a 'good time', was a member of the Editorial Staff.....I think!), but anyway, however they manage it, they need you as much as you need them, so why haven't you sent your subscription yet?.
I almost forgot....that "NDUG" lot aren't too bad either, even if they are always nagging their members about something or other. Still, one good thing, have you ever thought how unfortunate it would have been if the NDUG had been named "Dragon Users National Group" instead?!. Paul.
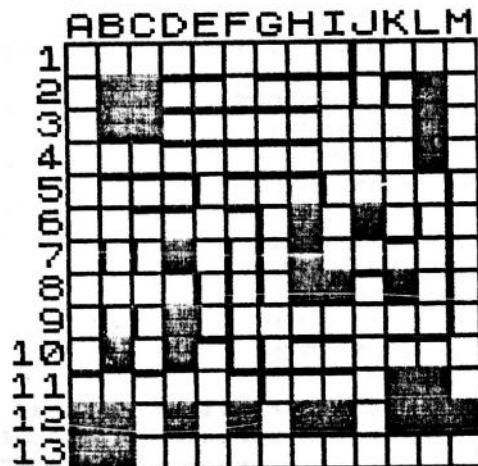For further details on the groups/publications mentioned contact:-
(1).Dave Martin, 44,Firgrove Road, Southampton, Hants.SO1-3EN.
(2).Richard Ball, 75,Sunnybank Road, Pontypool, Gwent.NP4-5LN.
(3).Simon Jones, 37,Collins Meadow, Harlow, Essex.CM19-4EN.
(4).Andrew Hill, 13,Parry Jones Close, Blaina, Gwent.NP3-3NH.
(5).Dragon User Magazine, 12/13,Little Newport Street, London WC2H-7PP.

PaulG.

Crossword 22.....

Across: 1A)Dog breed. 1J)Photo of a ginger biscuit. 2D)Computer seen in the sky.3D)Oriental transport. 4A)Type of bird. 5A)In music there is a base and treble. 5E)European city. 5I)Take a hasty look at a nursery rhyme shepherdess. 6A)Producer of Basic42. 7I)Wander round 5E. 8A)They have a bottom at the top. 9F)Famous racecourse. 10G)People born in particular place or country. 11A)Hydrophobia. 11G)Looking sad or depressed. 13C)This group sound as if they are in dreadful difficulties.

Down: A1)Rabbit breed. B5)A bell used in m/c. C6)A cheating elephant. C11)Not good. E4)Testing times for Mr.Blackwood. E10)Type of fruit. F1)Before noon. F6)To do with the sun. G5)Magician to the round table. G11)Step on this in the US to go faster. I2)Excellent Dragon sound utility. J1)Not fresh. J8)War ending in 1856 where you could have found 4A. K2)Scottish cloth associated with 6A. L5)French fruit. M1)Race with a close ending.

Crossword 21 Answers.

Across: 1A)Metamorphosis. 2H)Angle. 3A)Contours. 3I)Show. 4H)Trove. 5H)Elsa. 6A)Vidipix. 7B)Angiograms. 8E)Vial. 8K)Tip. 9D)Complement. 10J)Yeti. 11A)Numerology. 11K)Two. 12B)Nelson. 12K)Hen. 13A)Biorhythms.

Down: A1)Microvision. B5)Diary. B11)Uni. C1)Tenor. D1)Anti. E1)Neo. E6)Pivot. F4)Ohio. G1)Rare. G7)Gape. H1)Pasteur. I6)Gale. J2)Ghost. K1)Slovak. K8)Teeth. L5)Sprint. M1)Subscriptions.

Winner was Richard Nash of Northampton who gets a Microdeal Lightpen. We're back to games tapes again this month...which ones?....win and see!.

Yes, 'tis I, your beloved Chairman yet again!.......Alright, no need to salute, just stand to attention and cheer quietly.....Not THAT quietly!!!!. I have bad news for you all, you will NOT be able to vote for me at the General Election next month after all. I may stand for a lot of things, but Parliament never!, so you'll just have to put up with the usual bunch of power crazed morons again as usual.

Anyway, to more important matters. Firstly, what are you all playing at out there?......has someone started a letter writing marathon or something?......the Group mail is getting ridiculous...over 100 letters a week is something I just can't hope to keep up with, especially when I'm trying to get the newsletter copied and ready at the same time, so whatever the cause, some of you are going to find that my replies wont be as prompt as usual. I'll probably catch up eventually, but at the moment there are about three dozen letters on the desk here waiting to be answered, a dozen or so membership applications, several hardware repair jobs, and a stack of discs and tapes I haven't even had a chance to look at yet, so if you don't get an immediate reply, that's the reason. I always knew this education idea was a bad thing....teaching the peasants to write always causes problems!!. It isn't that I don't like hearing from you, I DO, it's just that there is a limit to how fast I can type and how many hours I can afford to put in on Group matters without going broke!.

OK, having explained that, (I hope), on to the next bit of news....remember those Proops Dragon 64's?....well, I got a letter from one of our members today, and he informs me that on the relevant weekend he was attending an RSGB rally at Birmingham, and that a firm called Proops was also there, selling....guess what....D32's and 64's, new ones, and the person doing the selling had a badge (and card) with the name GARY printed on it. Do you think this could mean that friend Gary has been telling us naughty untrue things about the deal?.......If I had a nasty suspicious mind I might well think he was less than honest about things, but that would be an uncharitable interpretation, wouldn't it?!. Oh well, form your own conclusions.

Anyway, there's certainly no shortage of VERY good hardware available THIS month.....I don't think we've ever advertised so many Dragons and disc drives....even DOS cartridges!, so hopefully those of you who missed out over Gary's games could well end up with an even better deal. I hope so.

Paul G.

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Classified and Special Offers Page.

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.

In Germany this month?....then why not call in on the Siegfried
Computer Gruppe Dragon show?. It will be held on May 30th, at 6057
Dietzenbach, Gasthof zur Linde, and entrance will cost you 2DM.
For further information contact Bernd Neuner,
Gina-Ernstberger-Strasse 23, D-8524 Neunkirchen am Brand 1, West
Germany.

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 L64-1TV.

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 M.R.Vine, 120,Auriel Avenue, Dagenham, Essex RM10-8JU.

Sale of the Century!!.
1 Upgraded D32, fitted with Compusense 128 "plus" board. 100.00. 4
64's, all fitted with Compusense "plus" boards. 110.00 each. 4
double disc drives, 40 track single sided units (total 8 drives), all
cased with PSU's and Dragon DOS cartridges. 130.00 each. 1 double
disc drive, 40 track double sided, cased with PSU and Dragon DOS
cartridge. 135.00. 3 b/w Yanjen monitors (no sound). 45.00 each. 2
Philips b/w monitors 50.00 each. Delta DOS cartridge. 25.00. Delta
DOS cartridge fitted with Toolkit ROM, with manual. 30.00. Single
double sided disc drive, cased with PSU. 50.00. Wyvern Multipack
extention board (4 sockets) 25.00. Prism 1000 1200/75 Modem, with
cartridge. 20.00.
FLEX SOFTWARE:- 6809 Diagnostics. 30.00. Utilities (Compusense).
30.00. SP-Edit. 30.00. Dragon Basic. 30.00. Sort/Merge. 30.00. RMS
Database. 30.00. Dynacalc. 30.00. Graph Drawer. 10.00. Flex Advanced
Programmers Guide. 20.0.
OS9 SOFTWARE:- Cash/VAT 15.00. Stock Recording 15.00. Sales Ledger
15.00. Purchase Ledger 15.00.
Rainbow magazine...all issues to date 40.00. 14 issues CoCo News
7.00. International CoCo Club newsletters (12) 6.00. Dragon User 83
to 87. 7.00. 11 issues Color Micro Journal 5.00. 68 Micro. 83 to 87.
25.00. CoCo MAgazine 83/84 10.00. Dragon World etc, and a large
selection of misc. Dragon/CoCo books.....phone fpr details.
All large units (drives, computers, etc.) plus 5.00 post and packing.
Phone L.Peters on 01-794-5743 during normal office hours, or evenings
on 01-204-47869.

12" greenscreen monitor 40.00. Dragon 32 35.00. double Shugart
single sided disc drives, cased but with no PSU. 60.00. Dragon 64,
complete and perfect working order. 70.00. Single double sided disc
drive, cased with PSU and Dragon DOS cartridge. 120.00. Might accept
reasonable near offer on any items. All prices plus postage.
Phone Dave Fletcher on 0279-441066.

Dragon 32 complete. 45.00 o.n.o. and Dragon DOS cartridge 50.00.
Phone 0274-599959.

Prism accoustic modem plus PSU. (1200/75?). 20.00 Filemaster and
Teleforth tapes, originals, 5.00 each or near offer.
Phone Richard Hibbler on 0603-619768.

Shugart single sided full height disc drive, 35 track, NOT suitable
for Dragons but perfect for CoCo / BBC. Not cased. 15.00 plus 3.00
postage.
Mitsubishi half height 40 track double sided drive, NEW. 63.00
including postage.
OKI double sided third height drive (ultra slim) 40 track, NEW. 68.00
including postage.
All drives uncased and without PSU. Open to sensible offers on
all/any items.
Phone Alan Butler on 0371-4234 evenings.

PRINTER FOR SALE. OKI Microline 92. dot matrix. 160 cps draft, 60 cps
NLQ. Usual character sets and graphics. Complete with all manuals,
spare ribbon, and optional serial interface board. As new condition.
This is a heavy duty professional printer. 145.00 or very near offer.
Contact Mike Ganley on 0272-731729 during normal office hours.

WANTED!. DOS, dead or alive!. Any DOS cartridge at a reasonable
price, working or not.
Details to Roger Perris on 0606-45445.

WANTED!. DELTA format FLEX system disc and manual. Reasonable price
offered.
Details to John Gilbertson on 0524-412848.

WANTED!. Single sided double density 40 track disc drive, must be
complete with PSU (220v,50Hz.?). Reasonable price paid.
Details to Maarten Van Vamelen, 3,Lynmetestraat, Oedelem 6330,
Belgium.

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 s
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.

THE ADVENTURE RELEASE OF THE YEAR!. "13th Task" from ARC Software.
Only 2.50 + 30 pence postage.
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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
controler, and Cumana DOS controler. 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 uprate 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 m/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).

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
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TRANSLATED & DEBUGGED ENGLISH VERSION OF V4.1. Price for any version
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BACKDATE UPDATES: Copies of all earlier Updates available from J'
Cox, 3, St.Peters Road, Portslade, Sussex. (0273-422492). (Chris
Channing, is currently having copier problems!).