The Gaffer's Bit. . . . .

Anyone good at logic?...How do I write "positively" about the Dragon
commercial scene?. Reason for asking is that one or two people write in and
complain that my attitude to "those firms which support the Dragon" is "too
negative". Well, the way I see it, the commercial scene is pretty dead,
especially on the hardware side, and with a machine as old as the Dragon
there's not a lot of incentive for any company to invest money in producing
new products for it, especially as there are no retail shops who want to know,
so that side of things is hardly likely to improve. So this is
"negative"?..what am I supposed to say?, that everything is fine, sales are
booming, and new peripherals for the Dragon are being released daily?. I write
about the scene as it looks to me, and if anyone disagrees, that's their
privelege, but if anyone wants a work of fiction they had better go back to
reading Noddy in Toyland. As to firms "supporting" a machine, that's inversion
of fact!...the machines support the firms. Any firm is there to make a profit,
and rightly so, but to claim that selling a product is supporting it is
rubbish of the first order. If there was still a profit to be made selling
Dragon peripherals (or even Dragons) there would be no shortage of firms doing
so....they stopped because the Dragon was no longer supporting THEM, not the
other way around. Those that can still make a profit out of it, do so, and as
a Dragon owner I'm very grateful to them, but don't you think it time that we
got the horse at the right end of the cart?. I do.
OK, enough of that for now. I have to compliment Ted and Stan yet again!!>..I
ordered a couple of components from them by phone at 4.15p.m.....they arrived
in the first post the next morning!. Now THAT is good service by any standard.
Other companies please copy!. What else is there?..well, Bob Harris is
releasing a new disc program for 64 owners that promises to be REALLY
something, there's still no news about the November Show, the copier fund is
now just over the 100.00 mark, we're now listed on Ceefax (page 703), I'm
working on a couple of "special offers" that ought to have you reaching for
your wallets if they turn out as hoped, and it's nearly midnight and I need a
drink!, so that's the lot from me for this month. I'll be back with more
whines in Issue 26, so watch this space!.

The Editorial Bit . . . .

Well, I seem to be short of space on the front page this month so my usual
plea for articles will be missing, cheers ring around the country. Anyone got
any useful M/C routines for me to print, I don't seem to have had many
recently, I also seem to be short of useful tips for the Redundant Info
section, send them in. This is the bit of the mag where we like to publish
short bits (1 or 2 lines or so) giving useful tricks and info which others may
have missed or may not have been published before, like the bit on printer
locations last issue. T.L.

"Short of space" he says!!!...When I leave him half the page for his Editorial
he complains that there's nothing to write about!!!.....Paul.

BAUD WALK . . . . GARY COXHEAD

This month on to packet radio. Bulletin boards could soon be taking to the airwaves with the interest that is now growing in packet radio - the way to go networking without huge phone bills! In fact I am aware of one Spanish bulletin board already on the air. The technique of hitching your Dragon to the radio waves has already been discussed, it is possible in the future that you could abandon your telephone and modem in favour of the cassette port. The software is already available, we have had radio software before, such as the BBC Basicode experiment, packet radio from amateur radio rigs is a more advanced and probably better method of transmitting data. It just requires some error correcting sofware and a way to avoid airtime collisions between transmissions. The biggest hold up as far as this country is concerned is BT. If you have an amateur radio licence there is nothing to stop you transmitting and receiving voice & data, but the licence needs some work to obtain. For things to take off, what is needed is a sort of CB allocation of a specific channel. BT did previously allocate certain frequencies for use at certain times, more freedom is required if things are to take off. In America where telecommunications have been de-regulated, there has been a rapid growth in packet radio networks. So, what is it? Basically it is an extension of something amateur radio enthusiasts have been doing for years. They communicate using a simple technique and a simple keyboard known as radio teletype (RTTY for short). Data is exchanged using the Baudot 5 bit code at a snails pace of 50 baud, mainly because the old mechanical teletypes couldn't go any faster. With the micro on the scene, that could all change because most micros cassette ports can handle speeds from 300 baud up to 1200 baud. However, the same problem occurs as in telephone networking, that is the problem of a 300 baud system trying to communicate with a 1200 baud system. This can be solved by the software which would manage both the network and data transmission. Also as the data needs to to be wizzed round the airwaves with the destination address and error correction intact, packet switching concepts can be used as with the telephone networks. Suffice to say that at this time the amateur radio enthusiasts have adopted a packet format called AX25, which is similar to the standard X25 protocol. Many micros have a cassette port interface known as CUTS. This encodes the computer's serial output into audio tones so that a tape recorder can store the information on tape. Already there is software for the Dragon to utilise this facility. (See my previous article on RTTY) So, should the climate change for the better, we could soon see a proliferation of bulletin boards accessible over the airwaves. Anyone interested can contact the Radio Society of Great Britain or contact them on Prestel Mailbox number 070759015, another useful address is: British Amateur Radio Telecomunications Group, Membership secretary, John Beedie, 161 Tudor Rd, Hayes, Middlesex. _____

This will probably be the last of Gary's series on communications, the reson being that he has run out of things to write about and no-one has come up with suggestions for future articles. If you want to hear more from Gary then contact him and tell him what he hasn't done on the subject that you would like to read about. Thank you Gary ...... TL___

A REVIEW OF A REVIEW . . . . .

I was reading the July '86 Dragon Update when to my horror I spotted the review by Chris Parkinson of Rommel 3D by Microdeal. Unfortunately, it seems that Chris didn't read the instructions as he would then have known that the game is not just in black and white but has various colour settings altered by pressing 'c'. Therefore it must be in PMODE3.
I don't like picking straws but I feel that keeping quiet does not do the author or Microdeal justice...Sorry Chris.
.......R.J.Morgan

DRAGON DIARY ... NEIL SCRIMGEOUR

Well, I have to admit that I'm a bit short of material this month for 2
reasons. The GPO have contrived to delay a package so long that it's missed my
copy date, more of which anon, the second reason is that there isn't really
anything new on the Dragon market that I've heard of to comment on. 'Er Royal
Majesty's postal service has once more decided to go slow as regards my post.
I was informed by that veritable hex cruncher Roy Coates that he has sent me a
follow up patch program for his Beanstalker. The program allows you to access
the screen designed more easily, well lets face it, it couldn't be much
harder, and also allows you to save and load your own screen designs. If you
have a friend who's got Beanstalker then you're in for a lovely time devising
devious screens for each other. This was the thing I harped on about in the
review and will surely extend the game life. The program's so new that it
hasn't even got a name, so if you want a copy write to Microvision, enclosing
a 2.00 cheque of PO and ask for the patch program for Beanstalker. Hopefully,
by the next issue, my copy will have returned from Bombay or wherever it went
and a full review will be forthcoming. One of the great hobby horses within
the computer press recently has been the licenced games, Rambo, Knight Rider
etc. Some of them have turned out to be really naff and I MEAN really naff.
The James Bond game, A View to a Kill was one of the worse games ever written,
luckily, Dragon owners have not been subjected to this trauma. Recently, 2
more of these so called games have been available for the Amstrad, Monopoly
and 'V', from the TV series of the same name. Now as it happens the Dragon
also has versions of these same games and in both cases, the Dragon version is
better than the 'official' version. Everyone knows monopoly, it's one of the
world's great wonders and the Amstrad has pretty colours, lovely graphics and
smart sounds. When you compare it to Datacom's version, Hotel on Mayfair,
there doesn't seem to be a contest but if you look further into the game, the
quality of the latter shows up. The graphics layout is much easier to get to
grips with and, as far as I know, no bugs have surfaced. You also don't have
to wait 5 minutes to watch the dice roll across the board, it also has a
better one man against the computer option, although it loads seperately. The
price of Hotel on Mayfair was 3.95 if my memory serves me right, whereas
Waddingtons official version for the Amstrad costs 9.95 or 13.95 on disc.
Comparing Microdeal's Shocktrooper to Oceans 'V' is like chalk and cheese. The
gameplay, the graphics, the addictiveness and especially the sound of
Shocktrooper is superb and I cannot fault the program. It's what a licenced
deal should turn out to be, yet the official, Ocean version lacks all these
qualities and is just plain BAD. Also, thanks to the recent price drop of
Microdeal's range, Shocktrooper is only 5.95, Oceans price is the same as
Waddington's Monopoly. Somewhere in there is a lesson to be learned, it would
do the big companies no harm at all to keep and eye on minority computer
software as many of the best ideas come from there. Fellow owners, you are
missing nothing as far as licenced deals go, in fact you are gaining. The next
time you have a smart Spectrum or Amstrad owner around, just load a copy of
Shocktrooper in and ask to see their computer's version. Talking of
Shocktrooper, I've been informed by Mike Vine that there is a cheat mode
hidden. When on the first screen, pause the game, press <shift><o>, press <r>
and then press <shift><s>. A message at the top should then say 'Cheat mode
activated', then all the bullets will be harmless and you can explore all the
screens in complete safety. Lastly, 3 small bits of information, J. Morrisons
have apparently stopped trading and no one can get an answer from Wintersoft,
it seems they're dropping like flies at the moment! I rang up Microdeal's
Jenny Pope and we will have a stand at the next show but as the floor plan
hasn't been arranged I can't tell you where we'll be.

TV MONITOR TROUBLE? ..... R.A.DAVIS.

Assuming that you have tuned the TV monitor to the correct channel and adjusted the contrast control of the TV to avoid overload by the Dragons Video output, if you are still dissatisfied with the screen display, it could be too much colour, which can cause wavy patterns -- reduce the colour control on the TV -- or sound on vision. Inside the Dragon you will see the Modulator box, which is situated at the left of the rear board, and has the cable from the TV plugged into it. Counting from the back of the Dragon to the front, the adjustment for sound on vision is made by inserting a small INSULATED trimmer tool into the second small hole. A suitable tool can be made from an old PLASTIC knitting needle by filing a short 'flat' like a screwdriver at one end. If you can see the present position of the engaging slot inside the hole, mark this on the case with a lead pencil, so that if necessary you can reset it back to that position (Heed the voice of experience!). Turn up the volume of the TV and make tiny, tiny, tiny adjustments of the modulator for minimum noise and best picture. You will find that this alters when you remove the tool, so some experimenting is neccesary to find the exact spot. On the main board you should see two variable resistors, skeleton type, shown as VR1 and VR2. VR1 is near the small crystal at the rear of the main board and VR2 to the right of that, both standing vertically. Taking the precautions mentioned earlier, especially about marking the present positions, slight (very slight) adjustments of either can improve some colours, but beware, as the clock timing can be altered with peculiar results. Don't fiddle for the sake of it. If you are happy with what you have, leave well alone. If you are not happy with a straight (no TV) monitor, this may be due to the fact that the impedance output from the Dragon is about 300 ohms, whilst most monitors have an input impedance of 75 ohms. the mismatch can result in a disappointing display. Radio shops used to sell, and some may stiil do so, a small 300 to 75 ohm transformer for matching some of the Japanese FM radios to normal 75 ohm co axial cable, quite inexpensive. This can be connected between the monitor port and the cable to the monitor to produce a good match.
NOTE: Not all Dragons have VR's 1&2 fitted, having fixed value resistors instead. If you have one of these it's really best NOT to experiment by trying to substitute other values as the results are usually far from good.

ASCI CORNER ...... PAULINE HAMPSON

I must admit that I'm addicted to adventures to the extent that when completely stuck, I cheat to solve the problem. So, here we go - hints for cheats.
Dragoneers with high principles should stop reading now. Adventure games in machine code will be dealt with at a later date, for now I'll deal with Basic. Many games written by amateurs (ie not Microdeal etc) which CLOADM are in fact in Basic. Try SKIPF on the short parts before the main program, this is often vital as the short parts may contain protection which stops you listing or breaking the program.
The first things you need to know are the words used, the locations and the objects which you should have found. This information is often in DATA statements and is normally enough to put you on the right track, all you might need is the right word to use. A careful scan of the listing helps to clear up other problems, PRINT statements like 'The red lion gobbles up the yellow sweets and gives you a cabbage' can be very revealing. Also on pressing break, you can ask lots of useful questions, in many games the locations are called L or N and even an amateur can find this letter by looking at the listing. Try pressing <break> and PRINT L or PRINT N. Then if L was equal to 5, put L=6 and GOTO the line at which the break occurred.
Using TRON can also help (if you can read quickly enough). After you become an accomplished cheat, the possibilities are endless, you can award yourself points and items and go where you will. It is such fun!! I don't believe those who say they don't cheat, unless they just don't know how!.
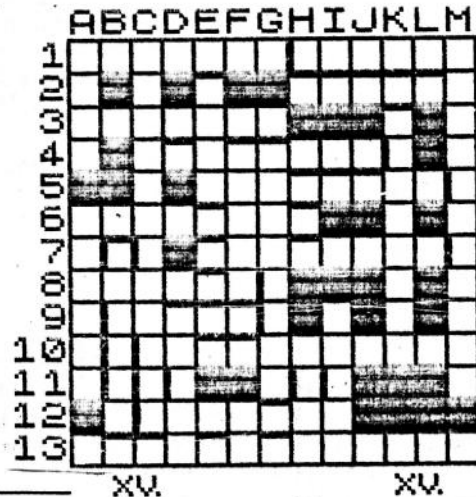

CROSSWORD No.14 ANSWERS

Across: 1A)Touchmaster 3E)Maradona 4H)Bennet 5A)Arid 5F)Akyrz 7H)Tomato
8A)Measles 8H)Gordon 9A)Easter 10E)Snooze 13A)DRAGONS RULE OK
Down: A1)Trojan A7)Emerald C1)Utility D8)String E4)Nettles F5)Afternoon
G2)Brake H1)Stab H8)Ghost I10)Zulu J2)Gonzo K10)Isle L7)Town M1)Smithson
M10)Beak

The winner of crossword no 14 was Martin Denman from Somerset.
This months prize is Cable's "Draon Datatank".

CROSSWORD No. 15

Across:- 1A) Dozy fishes? 1H&9B) Salamander
program 2H) End of Hareraiser 3A) Meat with a
knighthood 4C) Less than one 5E) Reasoned &
logical ideas. 6A&8A) Rolling stock comes back
with CHR$(13) 7E) Sectioned graph 8A) see 6A
9B) see 1H 10C) Set to music 12C) Ancient time
piece 13A) Orifice on the Dragon amongst others.
Down:- A1) You might find weirdos here. A6)
Dragon adventure B7) Ball game C1) Useful on
listing paper, essential in tea bags D9) Fill
in the cracks between tiles E2) Castle defense
F4) There are ten of these in a furlong G4) In
unison H10) waste from a blast furnace I9) Steps
over a fence K3) Chip designer and producer M1)
The BBC use one for football results etc.

MICROLINE CORRECTION ... ALAN JOHNSON

Re my routine for a text screen dump to Microline printer. The routine was
used to print labels from a CLS0 screen, no numbers being used, to a 32
character printer.
Having run this routine, I find that from a normal green screen, spaces and
numbers give the wrong ASCII code, the following program is a replacement.

```
10 POKE 328,0:POKE155,32: SETS CHARS TO 32 PER LINE (From redundant info #24)
20 FOR Q=1024 TO 1534:P=PEEK(Q)
30 IF P=96 THEN P=32:'CORRECT CODE FOR SPACE
40 IF P>96 THEN P=P-64:'GIVE CORRECT CODE FOR NUMBERS
50 PRINT #-2,CHR$(P);
60 NEXT Q
70 POKE 328,0:POKE155,132:'RESET CHARS PER LINE TO DEFAULT
```

REDUNDANT INFORMATION DEPARTMENT

The following is a super cheat for Shocktrooper, it enables your trooper to be
immune from laser fire and he can merrily tramp through the screens.
Firstly get the game running, then press <P> to pause, if the game doesn't
pause, press <shift><0> then <P>.
Press <shift><R>, press <R> then <shift><S>
Thanks to Paul Nugent for that one.....
EXEC 34091.The well known "Wait for Keypress", but did you know that the key
character is apparently loaded into the "A" Reg. and can be read? E.G. 10 EXEC
34091:I$=INKEY$:PRINT I$,or get the value of I$ with X= ASC(I$)-48 for Numbers
1-9.You can't do this with EXEC41194.
To find the Low Resolution Location of the Cursor,PEEK(136)*256+PEEK(137).
(R.A.Davis).

Anyone else got any useful hints, tips, etc they think might be useful to
others?.....Come on, we aren't all as clever as you, so why not share your
genius with us lesser mortals?!.

THE PLIGHT OF THE DRAGON   P.Beed.

Please don't stop reading this just because of the title, it is not another article about how hard done by we Dragon users are, but an insight into the facilities still available to us.

Dragon User - Once a glossy magazine filled to the brim with useful information, Dragon User has now been hit by the economies of publishing a magazine with low readership and minimal advertising. It is now available by subscription only at 12.00 a year. the glossy cover has gone, a handful of firms still advertise and articles are often of low interest and value.

Microdeal - Although no longer able to publish Cuthbert's Chronicles, they do place all customers on a mailing list and have frequent sales. They are also still producing software. They have recently introduced a policy whereby all software will be priced at no more than 5.95, and have introduced a software club, membership of which entitles you to all the new titles at almost half price The only stipulation is that you must have a credit card and purchase at least six titles. Incidentally, they are organising a 6809 show in London on 22nd November.

Dragon Monthly - Published by Smithson Computing. It costs 7.50 a year. Issue one was mainly written by Wayne Smithson, it was a little thin on the ground and had a commercial bias, however, it is intended to be written by it's readers, so future issues could be poor or great, depending on the support it receives. It must be said that Wayne has lots of enthusiasm for the Dragon and has written the excellent Electronic Author. I hope this is succesful.

Dragon and Coco User Society - Another newly started newsletter. This is to be published quarterly and be written by its readers. It will cost you 1.80 for a year, issue one consisted of a couple of sheets of paper giving little more than information about what will be in future editions. A free tape containing an autorun and screen designer is included, I can't comment on this as I can't get mine to load.

John Penn - John is one of the people still supporting us commercially, he sells a large stock of discount software. He has also organised several small shows consisting of commercial stalls and items of general interest to Dragon users. He also puts together a list of all those who visit the show and mails it out free of charge, and will try to obtain any item of software not easily available, on request.

Dragon Amateur Radio Group - A specialist group for those who use their Dragons with amateur radio equipment (licenced and listeners). Newsletters are published and subscription is 3.00 per year. this is a fast growing field amongst Dragon owners and could be one way in which a future for the Dragon could be assured.

Penpals - Another way in which many users are sticking together is by swapping information etc through the post. There are plenty of ways of getting in touch with other users and it is a most rewarding way of keeping the Dragon alive.

Update - Need I say more, definitely the best newsletter available, backed by top class advice on any Dragon Topic or problem.

Addresses:- Dragon & Coco Soc. 164 Elms Vale Rd, Dover, Kent CT17 9PN
Dragon Amateur Radio Group, Roger Woods, GW8XAN, 20 Heol-ap-pryce, Yorkdale, Beddau, Pontypridd, Mid Glamorgan CF38 25H

You can stick 'em!.

After demands from several membrs, we decided to get some Group stickers printed. Neil Scrimgeour designed them, and we got them photo-printed (at VAST expense, of course!), and advertised them in the last issue. Were we trampled to death in the rush to buy them?...hardly, so far the total sold is precisely NONE. Thank you for your custom, at least sales can't decrease.

OS9 PAGE . . . . JASON SHOULER

This month I thought I'd make some comment on the new version 2.0 update of OS9 which Euroinde SA have been kind enough to supply. I think the first point that should be made is that this is an update for existing OS9 licence holders (those who own the original Dragon Data package) and is not a NEW release of OS9 to all & sundry who might want it. The principal improvements in V2.0 are:-

1) Improved disk driver (see Update #20)

2) Improvements to the display capabilities:
This is the area where the biggest changes have been made. The default display is now 51x24 (which has itself been improved with scrolling codes) with the 32x16 display existing as an option. One major feature is the abiltlity to switch between these two modes without having to reboot (C enthusiasts take note). A graphics package is also included wich is basically a subset of the GFX package and allows fairly simple graphics to be drawn on the text screen (Line, Bar graphs, Pie charts etc.). The package also has a hard copy mode which can generate a printer dump of the screen. This package is quite seperate to the GFX package which can still be used from the 32x16 mode. A completely new 40x24 display may also be selected but I have yet to find a use for this new mode. I originally concluded that this was some sort of Prestel compatible display but I've been told it isn't.
NOTE- It is these changes which make the V2.0 incompatible with the Compusense Plus Board.

3) Improved ACIA driver:
A replacement ACIA51 driver is included which is basically a debugged version of the old driver. This allows any operating mode to be set on the 6551 via the device descriptor or XMODE. Note that XMODE has no effect once a path to the ACIA has been opened.

Apart from a small selection of utilities, that just about covers it. If anyone would like the V2.0 package, they should send me their original Dragon Data OS9 disc, together with ample return postage and I will return the upgraded disc to them. If you don't want your original disc overwritten then you should enclose a second disc. It must be made very clear that neither I or the Group are able to supply this upgrade to anyone but OS9 licence holders. However, anyone who can provide an original Coco OS9 disc will be considered a licence holder.

Now for some light hearted matters: Did you know that the GFX package (under Basic09) draws lines about 3 times faster than Microsoft extended Basic? Bearing in mind that the arithmetic of Basic09 is even faster, the GFX is the obvious choice for line drawings etc. What may surprise you even further is that if you access the 32x16 graphics codes directly (using PUT#1 etc - fairly easy from Basic09), then drawing times are reduced even further (about 20%) Continuing on the graphics front. The other day I decided to give the ACIA driver a real test by running a graphics demo as a background task (the one supplied on the V2 disc). I had this clock face ticking the seconds away, on the screen while I was on the local BBS. No characters were lost but what I found most interesting was the way you could see the timeslicing in action. Characters were displayed in neat blocks of three which at 300 baud works out at one tenth of a second time slice.
Now, my address if you want that update (don't forget to keep a backup copy and to include return postage).
J S Shouler, 70 Victoria Rd., Parkstone, POOLE BH12 3AE.
Please note that ALL enquiries concerning the above should be addressed to Jason and NOT to the Group.

Message to Microdeal...

Dear Mr Symes, I KNOW you said we could have a stand at the London Show in November, but we've still heard nothing officially, and after the next Issue it will be too late for us to tell anyone, so let us have some definite details VERY soon please.   Paul G.

Magbase is a database formatted for magazine data input. First a slight
hiccup, Pulser had compressed the listing for maximum memory but overdid it
(creating a syntax error in line 94 by ommitting vital spaces in a FOR NEXT
loop, this affects the print routine). This 'base comes in a tape or disc
format and Pulser will upgrade the tape version. The tape version has about
19K of memory, which will allow about 160 records, if more than this is
required then for faster access, you can't beat the disc version, assuming you
have a drive.
On running, you are presented with a title screen and invited to press a key,
you then get an impressive menu. At many points in the program you get prompts
which can bring you back to this menu. The printer routines are also
impressive, no less than 4 choices, Seikosha, Tandy, Use inbuilt codes and
define your own codes. On entering records, you are asked for the magazine
title, the article (17 chars), the month or date (9 chars) then page numbers
(4 chars) and last, a brief resume (47 chars). On the print routine, the
headings will be printed on one line and the four fields printed on the next
line. This means that up to 50+ records can be printed on one A4 sheet.
The tape and disc are supplied with the complete records of Dragon User
articles, from issue one to date, (on tape this is 4*150 records). A hard copy
of this is also available if you do not wish to print this out for yourself.
There is no search facility, except for the load/search pattern, viewing is by
tabbing the keys forward and backward or jumping 10. the actual screen layout
is the standard 32*15 and well laid out. Conclusions? This is a well thought
out base (pity about that SN error), but if you want something that is not
dedicated perhaps you should try something else.
ADDITIONAL NOTES FROM PAUL GRADE........
I don't usually comment on reviews, but in this case I think it is only fair
to mention that the copy reviewed above is an early version of Magbase, and
both the tape and disc versions have now been greatly improved. We'll be
printing a review of the latest disc version in the near future, but briefly
both it and the current tape versions now have a greatly improved search
facility (and no SN errors!!), and the disc has a new VIEW DISC FILE option
which enables the user to view the contents of any file without loading into
memory, and screen display speed can be controlled by use of the cursor keys,
or paused at any time.
Pulsar tell me that they will upgrade any earlier tape or disc in return for
the original plus 50p to cover postage....you can't get a fairer offer than
that!....and will update the files for 1.00 plus the original, which ought to
save a lot of typing!. They are also considering adding an UPDATE file,
similar to their existing Dragon User one, which seems like a good idea to me.
Also on release from Pulsar are two new programs, DISCUP, which is a utility
for the D64 only, which moves the disc workspace out of the first graphics
page area and allows you to run most m/c graphics (including most commercial
games) from disc without alteration and without disconnecting the DOS. The
second is ZAPPER, which I haven't seen yet, but which is designed to allow the
D64 user to explore and alter data both in memory and on disc, and allow the
moving and copying of sections of memory, plus investigate discs from other
machines......It sounds useful, and I'll let you know more when I've seen it.
Prices are 1.99 for Magbase on tape, 2.99 on disc (plus 1.00 if the D.User
files are included), Discup is 1.99 and Zapper 5.99, all prices plus 50 pence
postage.
Pulser's address is:-36,Foxhill, High Crompton, Shaw, Oldham OL2-7NQ.
Apologies for cutting in on a review, but I thought the updated information
might be useful.

If you have entered parts one & two, you are ready for the front and back
views:-

```
620 FORD=1 TO 200:NEXTD
630 PUT(13,0)-(24,32),A,PSET:'Original is placed ready to copy half of it
640 F=0
650 FORY=0 TO 32:FORX=12 TO 17
660 IF F=6 THEN F=0
670 P=PPOINT(X,Y)
680 PSET(X,Y,P)
690 F=F+1
700 NEXT X,Y:' and now a copy of one half of the image drawing
710 PUT(13,0)-(24,32),R,PSET
720 F=0
730 FOR Y=0 TO 32:FORX=18 TO 23
740 IF F=12 THEN F=6
750 P=PPOINT(X,Y)
760 PSET(F,Y,P)
770 F=F+1
780 NEXT X,Y
790 PSET(3,6,3):PSET(8,6,3):' the eyes in blue
800 PSET(1,32,3):PSET(10,32,3):' and the feet
810 FOR X=3 TO 8:PSET(X,20,3):PSET(X,21,3):PSET(X,22,3):PSET(X,24,3):
NEXTX:' and split the legs
820 PSET(1,23,2):PSET(11,23,2):' for hands
830 FORY=25 TO 31:X=5:PSET(X,Y,1):NEXT:' for legs
840 GET(0,0)-(11,32),F,G:' Get the front view
```

Next issue, with a few PSETs we can make this into a back view and go on to a
little animation.

PRINTER CONTROL . . . . E.FREESTONE

When I ordered my first 'Printer Control' in early 1985, I knew that my
Seikosha GP100A printer was an odd ball, but a very reliable and efficient one.
The supplier then tuned the original 'Printer Control' cassette to suit the
GP100A and the 32. This has worked efficiently for the past eighteen months.
He has just supplied me with a Mk14 variation of 'PC', also tuned to the
Seikosha and Dragon 32.
Printer Control operates in two modes:
Main Mode:- In this mode you are able to load, save verify, merge, edit and
print text files. The edit and print facilities allow you to enter printer
control codes for individual letters, to mix text and graphic characters and
enlarge print up to eight times normal. You may also print all or a selected
part of the working screen and magnify it if required.
Other features include left & right justify, block transfer delete & copy,
automatic address block positioning, automatic signing off block centering,
automatic centering of headings page numbers etc., user defined graphics, user
defined strings, search/repeat search and variable page and line spacing. Skip
perforation page length and right/left margins are easily set and most of the
program commands are single key entry.
Picture Mode:- This allows you to create a picture or load in a picture you
have saved from the hi res screen. You can then add to it, text, graphics,
invert all or part of it, duplicate parts of it, print all or part up to eight
times magnification, horizontally or vertically. Any picture changed can be
saved, verified, loaded or loaded back into your own program.

FLOATING POINT ARITHMETIC .. CHRIS JOLLY

This article describes some of the floating point routines in the Basic ROM
and how they can be used from machine code programs. Floating point numbers
are represented in the Dragon as five byte structures. The first byte contains
the binary exponent and the other four contain the mantissa. The details of
the representation are not of much concern here since routines exist in the
ROM for converting between floating point and other formats. Floating point
arithmetic is performed in the floating point accumulator, which is an area of
page zero, starting at $4F, which contains a floating point number/ The
representation of a floating point number in this accumulator is slightly
different from the normal five byte representation. This number can be
operated on by addition, multiplication or division. The accumulator can be
loaded from memory, saved to memory or used in a conversion operation.
There are two subroutines in ROM for conversion between text and floating
point representation. These are used by the Basic interpreter for input and
output and in functions such as STR$ and VAL. The text representation of a
floating point number is as an 'ASCIZ' string (that is a string of ASCII
characters, terminated by a null [Ø] byte).
The floating point routines are :-
ASCIZ to floating point: $94BD
Use: U register points to ASCIZ string. The routine is initialised by a call
to the subroutine at $A5. The ASCIZ string is converted to floating point
representation in the FP accumulator.
Floating point to ASCIZ: $958A
Use: U points to buffer area to receive ASCIZ string representation of number
in FP accumulator. This routine corrupts the FP accumulator.
Integer to floating point: $8C37
Use: D contains a signed integer which is converted into floating point
representation in the FP accumulator.
Floating point to integer: $8B2D
Use: X points to FP accumulator ($4F) which contains a floating point number
which is converted to a signed integer in D
Add: $910B
Use: X points to a five byte floating point number which is added to the FP
accumulator, the result being left in the accumulator.
Subtract: $9102
Use: X points to a five byte floating point number from which the FP
accumulator is subtracted, the result being left in the accumulator.
Multiply: $9273
Use: X points to a five byte floating point number which is multiplied by the
FP accumulator, the result being left in the sccumulator.
Divide: $933A
Use: X points to a five byte floating point number which is diviided by the FP
accumulator, the result being left in the accumulator.
Save: $93EØ
Use: X points to a five byte area to receive the content of the FP accumulator.
Load: $93BF
Use: X points to a five byte area containing a floating point number to be
loaded into the FP accumulator.

To determine the five byte FP representation of any given number, use the
following program.
10 INPUTX:I=VARPTR(X):FORJ=Ø TO 4:PRINT PEEK(I+J):NEXTJ:GOTO1Ø

ANALOG TO DIGITAL .... BARRY CARUTH

As demonstrated in several articles in past issues of Dragon User, the Dragon has a vast untapped ability to synthesize sounds. The listing (which will follow later .. TL) is a simple M/C program to digitalize your voice, or any other sound, via the cassette port, then store this data as bytes in memory. These bytes can then be used to recreate the sound.

Sounds in any form are vibrations in air pressure. Pure notes like those from a tuning fork have a sine waveform (fig 1). Most common sounds, like those of a piano, are not pure and are of varying frequencies (fig 2). The variations in air pressure can be seen as crests and troughs, how closely these are spaced determines the frequency and the height determines the amplitude (volume). These 2 factors define the nature of a sound.
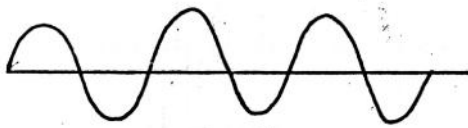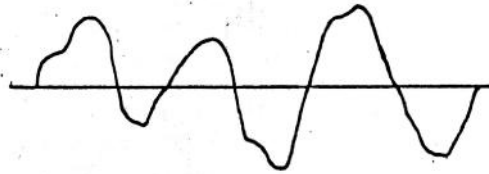
FIG.1.

FIG.2.

In a loudspeaker, varying electric currents which correspond with the sound are passed into an electromagnet. The coil of this electromagnet moves and as it is attached to a paper, it moves the cone. The movement of this cone produces variation in air pressure which creates sound. These vibrations are very fast, but the good old 6809 is even faster. The speed of the 6809 allows the Dragon to change the voltage output to the loudspeaker as fast as the original sound vibrated. The crests can be considered as ones and the troughs as zeros. With the right combination of ones and zeros, you can make any noise you want. the process of converting analogue (continuous) sound into digital data is called digitising and is done by an analogue to digital converter. This samples the sound at regular intervals and stores the data in memory. Basic is not fast enough so machine code must be used to get an accurate representation of the sound.

To use A to D, enter listing 1 (next month .. TL) and save it. Next, prepare a tape for digitising by recording a sound ie your voice (clearly). If you are using your voice, speak loudly, and ennunciate clearly. Run the program and select option 1 from the menu and press play. Adjust the volume on the recorder to get a clear sound with as little background noise as possible through the TV speaker. To exit from this section, press <reset> and then RUN again. Rewind the tape to the exact start of the sound and press play. Select option 2 from the menu and press <enter> when prompted. After about 13 seconds the motor will stop and the menu will be displayed.

To replay the sound, select option 3 and input a speed (default is 6). This varies the speed and pitch (some amusing effects are obtainable). The sound can be played again & again by selecting option 3. Quality is affected by the volume of the cassette recorder so try varying the volume to improve the quality.

The second half of this article and the listing will appear in the next issue of Update ....TL

CASSETTE TO DISC GAMES TRANSFER

PINBALL (MICRODEAL)
Switch off, plug in the DOS cartridge & switch on again. Place the tape in the
cassette and CLOADM"",2000: SAVE"P1.BIN",5072,18675,16384: LOAD"P1.BIN",3072:
SAVE"PINBALL.BIN",3072,16675,16384.
The game will now run from disc

PEDRO (IMAGINE)
Switch off and unplug the DOS cartridge (you must do this as the title page
will overwrite the first graphics page and corrupt the DOS). Place the tape in
the cassette and: CLOADM"LOGO": CLOADM: POKE7674,127: POKE7675,255:
POKE7676,72: POKE7677,126: POKE7678,54: POKE7679,0.
Put a blank tape in the recorder and : CSAVEM"PEDRODSK",7674,30977,7674
Switch off, plug in the DOS cartridge then: CLOADM"PEDRODSK":
SAVE"PEDRO.BIN",7674,30977,7674
You may now run Pedro from disc, the POKEs will stop the disc drive running on

KATERPILLAR ATTACK (MICRODEAL)
Switch off, plug in the DOS cartridge, switch on, insert cassette then:
CLOADM"",2000: POKE12493,127: POKE12494,255: POKE12495,72:
SAVE"K1.BIN",12493,19812,10493: LOAD"K1.BIN",10493:
SAVE"KATER.BIN",10493,17812,10493
You may now run it from disc, the pokes stop the disc running on.

That's the last of the conversions from Graham Smith which have been running
for the last few months. T.L.

The late, late bit.........

Thought you'd heard the last of me for this issue, didn't you?!, but you can't
escape that easily!. Actually, you can blame Malcolm Cowan for this bit.....
he said he wanted to run a half page ad, so I saved the space for him, but the
copy never arrived, and as there's rather a shortage of material at the moment
you had a choice of half a page of nothing, or half a page of additional
rambling from me. Yes, I KNOW you'd have prefered the blank paper, but that's
one of the few advantages of running this Group, it allows ME to make the
decisions!!!!!. Power at last! Today Update, tomorrow the World!!.' (Horrible
thought, that reads just like an extract from a Thatcher speech!). Anyway, one
good thing about having a bit of spare space is that it gives me a chance to
ask a question....Will anyone running other Groups PLEASE explain to me why
they insist on claiming "Copyright" on all the material they print?. Our
policy, and I would have thought that of ALL groups, is to invite any
individual, group, or publication, to make whatever use they wish of any
material printed in Update. All we ask in return is that they acknowledge the
source if they publish any of it. So why are so many groups suffering from
paranoia?....do they think their material will be pirated by Pravda or
something?. Personally, I think they're sick...either that or on the biggest
ego trip ever, and I would suggest that anyone belonging to such a group
should demand a change of policy.....Dragon owners need information, not
restriction.
OK, I've asked my question:...how about some answers?...or are the reasons
covered by the Official Secrets Act?.
Well, that's about it, you can relax now, I'll go away until Issue 26. Be
good, or don't get caught, whichever you prefer.
                                                    Paul G.

Don't forget to buy those stickers!!!.

Classified and Special Offers Page.

DragonDOS to OS9 copy utility (DCOPY): Includes Telewriter and BASIC conversion filters. 8.00 (usual price 9.95).
OS9 comms. program (COM#9): Dual buffers, Xmodem, prompted and unprompted message upload and more!. All direct to/from disc with no missing characters!. Includes source files. Suitable for any OS9 system. 8.00.
J.Shouler, 70, Victoria Road, Parkstone, Poole. BH12-3AE. (0202-722599).

EXCHANGE my Premier (Delta) DOS cartridge for your DragonDOS or equivilant. ALSO Dragon 32 for sale, as new, takes double speed poke.45.00.
Telephone Roger Merrick on 021-384-6885.

Dragon 64: boxed & complete with manuals and leads. 75.00 also Dragon Data disc drive, complete 75.00. and DragonDOS cartridge 50.00. Also collection of OS9 programs including system disc, all originals but with photocopied manuals.25.00 the lot!.
Phone Jason on 0903-4509 during normal office hours.

WANTED:Copy of OS9 Editor/Assembler manual...URGENT!.
Phone Chris on 091-416-5415.

Quickshot2's: two available at 8.00 each. Also software including many top titles and cartridges.
Wanted: Swap my Edit+ cartridge for Alldream cartridge.
Write to Ian Rockett, 2, Knowle Road, Burley, Leeds, Yorks.LS4-2PJ.

Edit+ cartridge for sale 6.50. Also Advanced Sound & Graphics book 2.00, and Rainbow Writer tape and manual 4.00.
Wanted: DragonDOS version of Sprite Magic.
John Davies, 061-485-3478.

Absolute Bargain!.EPSON P40 thermal dot matrix printer. New, never used. 60.00 inclusive.
Paul Grade, Worthing 207585.

WANTED!!!. Manual for Rainbow Writer, please. Maarten Van Wamelen. 3,Lijnmeestraat, Oedelem 8330. Belgium.

Tandy TP10 thermal dot matrix printer. 40.00. This is serial input, but a Centronics converter is available for 5.00 extra.
Alan Johnson, 23, Ashmole Road, Abingdon, Oxon. (0235-23661).

Touchmaster Touchpad: complete with PSU and interface etc. 30.00 plus postage.
Barry Caruth, 132, Donaghadee Road, Bangor, County Down, N.Ireland.

WANTED: Dragon User Magazine July 1983. Also any issues prior to October 1983. Please state dates and price.
Eddie Freeman, 80B, Main Road, Old Duston, Northampton NN5-6RA.

Contacts wanted to exchange programs and information. Please write to Meir Zisu, PO Box 5307, Holon, ISRAEL, as soon as possible.

Shugart 5.25" 40 track S/S disc drives. Full Height uncased. 30.00 plus 3.00 postage.
Qume 5.25" 40 track D/S disc drives. Full height uncased. 45.00 plus 3.00 postage.
MPI 5.25" 40/80 track D/S. Cased. 70.00 plus 3.00 postage.
All the above drives are used but working. Some manuals available.
Dual 8" disc drives plus PSU. Cased. Untested, condition unknown but probably good hence 25.00 BUYER COLLECTS.
Alan Butler, 16, Barnston Green, Barnston, Great Dunmow, Essex. (0376-4234, evenings after 6. only.).

WANT A CHEAP MODEM???....I've managed to get a few NEW PRISM1000units, complete with mains and phone leads. 1200/1200, 1200/75, at 20.00 each plus postage (2.00). Only a few at the moment so please phone me before ordering!.
Cheques to the Group, orders to Paul Grade, 6,Navarino Road, Worthing Sussex.

MCP40 Printer/Plotter for sale, Excellent condition. Bargain at only 30.00.
Phone Chris Jobson on 091-416-5415.

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

STICK IT!!!...Dragon User Group self-adhesive stickers available in two sizes, 2.25"x1.5" or 3.25"x2". Price 10p and 18p each. Include a stamp with your order please.
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Circuit Sheets: Available for D32 (most variants), D64, Dragon DOS controler, and Cumana DOS controler. All the same proce 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 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.

DRAGONDOS DISC EDITOR: Easy to use. Two oprational modes, examine and edit. Will read and edit ANY disc including those written on other systems. Reclaims KILLed files. Accesses and changes files directly on disc. Includes DISCMENU which can be used with any of your own discs. Written by John Cox. Price 6.50 inclusive.
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DRAWEZEE! A graphics drawing program, on tape, which we think is one of tthe 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.

5.25" 40 track SS/DD discs available at 14.50 per box, plus 15% VAT. DS/DD 15.50 plus VAT. 80 track also available. Not the cheapest...we CAN get cheaper ones if you want them...but these ARE good quality, reliable discs. Post free.
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Self Adhesive Labels: The ones we use on these envelopes. Single column tractor feed. 3.25 per 500 or 6.00 per 1000. Please add 50p towards postage and packing.
Orders/cheque to the Group, 6, Navarino Road, Worthing, Sussex.

Printer Prompt II: Write your letters quickly and easily with this new program. Please send your printer control codes for double and normal width print with your order. Price 4.50 to Group Members.
Andrew Hill, 13, Parry Jones Close, Blaina, Gwent NP3-3NH.

DRAGON CLAW INTERFACE: Lucidata are still keeping open their offer to Members. ONLY 20.00 COMPLETE.
Lucidata Ltd. PO Box 120, Cambridge CB1-1DG.

DRAGONDOS EPROMS: Your DOS 2764 reblown to 'patched' V1.0 specificaton, 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, 22, Grove Park, Burbage, Hinckley, Leics.LE10-2BJ.

BACKDATE UPDATES: Copies of all earlier Updates available from either John Cox, 3, St.Peters Road, Portslade, Sussex. (0273-422492) or Chris Channing, 63, Churchfield Way, Whittlesey, Peterborough. (0733-208409).

BASIC 42 - An Extended BASIC for the Dragon 64

from

HARRIS MICRO SOFTWARE, 49, Alexandra Road, Hounslow, Middlesex. TW3 4HP.

Run your Dragon in 64K mode, while retaining BASIC and DOS. Print on the hi-res screen, using all the standard PRINT commands, and a screen layout of 42 rows by 24 columns. Other features include:-

* Full upper/lower case/graphics character set
* REDEFINABLE characters
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* True UNDERLINING
* Extra PRINT commands and functions
* ROW and COLUMN commands for easier printing
* LIBRARY lists commands and functions
* Automatic startup of BASIC program
* TEXT command for software compatibility
* Takes no memory from BASIC
* Patches for DragonDos 1.0
* Can load in extra UTILITIES from disk:-

HELP UTILITY - Extensions to BASIC 42 include:-

* Change CURSOR character
* SCROLL disable
* PAUSE: single step listing
* Enable/disable repeating keys
* Enable/disable BREAK KEY
* Prevent/allow disabling of BREAK key
* Improved TRON (including single stepping)
* Detailed HELP messages
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SPOOL UTILITY- Use computer whilst printing'.

* 3.5K print buffer
* TYPIST program turns Dragon into a typewriter

MORE TO COME: You ain't seen nothing yet!

PRICES: (DragonDos disk version)

BASIC 42	£14.95
HELP Utility	£5.00
SPOOL Utility	£5.00
Modification for CUMANA DOS	£5.00