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

I'm bored!......there's nothing new happening anywhere on the Dragon scene, is
there?. Everyone seems to have written the poor old beast off, and other than
those of us who own 'em, no o   seems to even know that the Dragon still
exists. Why, I ask myself...and I tell myself to stop asking such damned
stupid questions!... The Dragon is as good as ever it was, but it has been
overtaken by bigger machines at lower prices, and unless THAT changes, nothing
else will. The Compusense view appears to be that only a new machine will
solve the problem, which may be so where THEIR problem is concerned...making a
profit....but will do nothing for those of us who like the machine we have,
the Dragon. "Upgrades" that turn it into a FLEX or OS9 machine aren't the
answer either......if that was what we'd wanted we could have bought a
different machine to start with'. The Dragons, 32 and 64, are still very good
machines, far better than a lot of the later stuff, but if ever a computer was
cursed with consistant lousy marketing it has been the poor old Dragon.....the
only difference over the past four years has been to exchange incompetence for
greed, and it says much for the design of the Dragon that it has managed to
survive at all.
People are changing to other machines...NOT because they are bigger or even
better, but because the Dragon has so little commercial support. Other than
Update or Dragon User, when was the last time you saw a Dragon mentioned in a
magazine?.....with the same exceptions, when did you last see Dragon software
advertised? .....How many shops in YOUR town stock Dragon stuff?, and how many
even know that the machine is still in production?!.....When did YOU see a
Dragon on Micro Live?!. If your answers are the same as mine, can you really
blame anyone for changing machines?...I can't. So what can we do about
it?...try writing to the Editor of EVERY computer related publication you can
think of, and make them understand that the Dragon is NOT a "Minority interest
machine". Write, phone, and generally pester every software and hardware firm
that doesn't support Dragons, and make life Hell for them until they do. Write
to manufacturers and suppliers (Eurohard especially!), and let them have YOUR
opinion of their pricing and marketing policies. You have a lot of money tied
up in your Dragon, and if you don't make a fight of it, you'll lose the lot. I
can't afford to lose money...can YOU?!.
Well, don't just sit there, get writing!.   Paul G.

THE EDITORIAL BIT

Well, in this little bit, I will comment on a couple of letters I got
recently, both suggesting that I have been indulging in knocking Compusense
for the sake of it. Firstly, it wasn't for the sake of it, I still feel the
same about their pricing policy, and secondly, I have said just about all
there is to say and as you will have noticed, I have left them alone since
issue 14, that's 5 months so sorry if it offended any of you, that was and is
my opinion but I shall leave them alone for a bit longer anyway.

BAUD WALK . . . . GARY COXHEAD

So, whats new? This month, there's a hotch potch of things to cover so I'll get on with it. Firstly a question, is anyone out there? If so, why haven't you written or phoned me? I write this column for you lot but unless I get some feedback, I havn't got a clue whether what I write is interesting or just plain garbage! So, how about it, if you have any particular questions to ask about communications in general or a specific problem, why not write to me. I will answer by phone and cover the problem in the column so that everyone can benefit, OK? Enough of my moaning. When the first Bulletin boards started appearing in the UK, about 1977 the 2 main 300 baud systems were TBBS and CBBS. Since then many of the sysops have gotten together and formed themselves into the Association of Free Public Access Systems. This group was no doubt formed to pool information and advice in the initial stages, but it eventually went on to adopt various standards for bulletin board systems. This happened in 1983 and was a good step for both the sysops and users alike. Firstly they adopted the CCITT V21 (300 baud) option as standard (which stipulates the frequencies to be used) and then adopted the V23 (1200/75) standard as a second option. These 2 formats now account for some 98% of all the UK systems. This certainly made life easier for the software writers because as there are only 2 or 3 popular standard ACIA chips, it was not difficult to modify the available S/W for a range of micros. At this time they also adopted a common word format of 1 start bit, 7 data bits 1 even parity bit and 1 stop bit However, they had the foresight to say that the Christiansen Modem Protocols of 8 data no parity should also be allowed on the proviso that the 7 data bits could also be used. This had the effect of allowing virtually anyone to access their boards no matter the pedigree of their S/W, most of which at this time came from abroad. I am sure that this helped in fuelling the ensuing, and still growing communications boom. Many many systems have now been born out of this initial impetus, and whereas most early boards were run on TRS 80 machines with imported TBBS software, many boards are now run on a variety of machines with home-grown software. Unfortunately some people have not heard of these standards, I recently heard of a 1200/75 board using 8 data bits instead of the usual 7. I digress, back to AFPAS. These clever people then went on to agree standard formats and control codes for up and downloading software, opting for simplicity rather than sophistication. This has given rise to a proliferation of upload/download selections on most bulletin boards. Next time you access a TBBS or a system which displays it's membership on the front page, have a look at the info section and you'll see what I mean. We have a ot to thank them for. If others were so generous of their time and thought .... Changing the subject, how many of you have been tempted and bought a cheap Prestel modem package? At the recent 6809 convention they were as cheap as 49.00!! So what's on Prestel for us? Well telesoftware wise at the moment, naff all, although there are moves afoot to change this but when is anyone's guess. However, if you are good at programming, perhaps you could download a BBC program and covert it. But there is more to Prestel than this, apart from the 300000 pages of travel news, what's on, holidays, teleshopping and the like, there are 50000 odd microcomputing pages, consisting of Prestel's own pages and of course Micronet. If you enjoy reading and talking about computers and hacking, then Prestel is worth it, bearing in mind that for most people it's a local phone call which only costs 40p an hour. Speaking of Prestel and the Dragon, software house Peaksoft have been sponsoring several Dragon pages in the microm section, and for the last couple of Sundays, Harry Whitehouse has conducted a 'chatline' for Dragoneers. This is where several people from all over the country can access the same page and join in a live chat at local call rates. Harry has also published a directory of Dragon/Prestel users which has proved very useful. Soon he and a friend are launching a new Dragon BB which will support the Dragon's colour graphics blocks, (a la Prestel). However a new concept will be used, where instead of reading the BB on line, (and running up your phone bill) each user will use a program which will

download the whole BB in minutes, allowing you to view it offline. A very neat
idea, I'll report here as to where when and how, as soon as I can. Finally, a
plea. How about some of you out there sharing your secrets/problems/views
about BBs that you may have hacked. Write to me or phone and you will see your
name in print. For anyone interested in further hacking help and info, I can
reccomend 'The New Hackers handbook' by Hugo Cornwall. You won't find out how
to break into the Bank of England (aaah, shame ..TL) but you will certainly
pick up lots of helpful hints and tips. Next month, hacking the radio waves.
Till then bye for now.
Gary Coxhead, 54 The Sorrells, Corringham, Essex. Tel 0375 672137

DRAGON DIARY ...... NEIL SCRIMGEOUR

Odds and sods this month. First off, Alan Cook has written to me asking about
two word processors on the market. Although he's read the separate reviews of
Electronic Author (Smithson) and Printer Control (MacGowan), he'd like to hear
from anyone who's been able to compare them and could tell him which is the
better buy as he wants to get his hands on a sophisticated cassette based WP.
Even if you've only had experience of one of them, why not drop him a line
giving your views. Now I always get his address wrong so I shall try again, it
is : 272 Mearns Rd, Newton Mearns, Glasgow G77 5LY, I hope that's right this
time.
If anyone out there still gets Popular Computing Weekly on a regular basis,
they may have noticed that a firm called Canvas were on the lookout for 6809
machine code programmers and had advertised the fact in the same mag in March.
A guy I know contacted them to find out what was going on and whether it would
be worth his while getting involved. Apparently US Gold, that megacompany want
to move into the European market and as some of you may know, that market is
well populated with the French Thompson/CSF 6809 based computer. US Gold
intend to convert some of its range. Wouldn't it be a nice thought that some
of their conversions would find their way onto the Dragon. A nice thought
maybe but I bet it doesn't happen. It might not even be worth their while if
you've seen some of their stuff.
Talking of major software houses, Software Projects have for some unexplained
reason decided to drop Loderunner (which I mentioned some time back in the
newsletter). Now I can't quite follow all this all the work of converting it
was done a while ago, or so I had heard. It must have cost them a fair bit to
get it all done so surely they wouldn't lose much by launching it. The only
reason I can think of is that it was licensed from someone and that someone
now objects. I for one was looking forward to having a go at this game, which
was a JSW clone but with a built in screen designer. If you're as narked about
this as I am then write to Software Projects and ask them when Loderunner is
coming out. If enough of us write we may force them into releasing it. Well
you never know, pigs MIGHT fly (or Dragons).
One other thing, what with the chairman being busy feeding the cat, counting
the membership money and generally keeping the vodka industry solvent (no pun
intended) he's forgotten to mention something. A couple of months back (issue
17 TL) some names were published to obtain help in specific areas. Since then
Roy Coates has volunteered to help anyone with disc software problems,
specifically Flex but he's willing to have a go at DragonDOS or Cumana etc.
His address is 25 Cleveley Rd, Calderstones, Liverpool 051-427-4949 (after 7pm)

```
0 REM R.A.DAVIS (63RLC)
10 CLS0:X=1023
20 A$=" THIS IS AN EASY WAY OF GETTING  INVERSE TEXT POKED ON SCREEN   USING A SMALL SUBROUTINE.%$X# 1234567890+;(),:=?/!()0^[]....."
30 GOSUB9000
40 GOTO30
9000 FORN=1 TO LEN(A$)
9010 POKEX+N,ASC(MID$(A$,N,1))AND63:NEXT
9020 SCREEN0,1:RETURN
```

X-WORD No. 10 ANSWERS

Across:- 1A)Bulletin board 3A)Unwrap 4A)Daisy 5F)Dolby 6A)Antelope 6I)Lasso
7F)Cohesion 9I)Delta 10B)Dreary 11G)Bubble 13A)Chrysanthemum
Down:- A1)Baud rate A10)Ram B10)Dash C3)Winter D9)Perky F1)Tape doctor
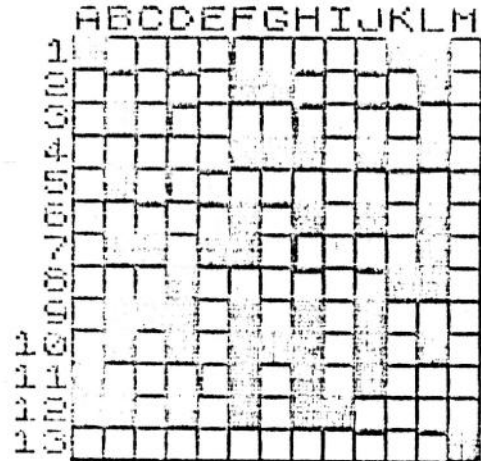H10)Rust I1)Bramble J6)Assemble L6)Soft M1)Dungeon Raid

So many correct entries that I had to awward TWO prizes!..Martin Denman &
F.J.Fisher were the winners. This month's first correct entry wins Scott Adams
"Sorcerer of Claymorgue Castle.

CROSSWORD No. 11

Across:-
1B)Used by fishermen 1F & 6G)Scratch on a table
(perhaps). Provides a comparison of computer
performance 2A)A small devil 2H)A piece of
(computer) footware 3D)Special message
used to avoid detection 3H)A chess piece
4A)Not left 5D & M1)Not real knowledge
6A)A computer language 7H)568.25 cubic
centimeters 8A)Wise bird 8E)Blinking dot
on the screen 9K)You could be snookered
without one of these 11B)Mode of transport
11K)Micro associated with 8A 12J)Primary
colour 13A)Collective name for all of a
computers letters and symbols

Down:-
A2)A list of files on a disc perhaps
C1)Last letter of the greek alphabet
C18)Facts and figures D3)Utter confusion
E1)One nautical MPH E8)Disc drive producer
6G)see 1F G11)A small point I1)A jump in machine
code K3)Remove a vowel from tingle to
reflect light K9)Connecting wire M1)see 5D

DYNAMIC C.P.U.?

There is a device which has been badly neglected for at least twenty years in
computer design and development. When you consider the varying attributes of
this processor,it is surprising. It can operate in binary,denary,hexadecimal -
in fact in any base - has built-in peripheral interface adapters which can
handle a wide range of add-ons,and has virtually infinite storage capacity.
Twin video and aural inputs can handle data from virtually any
source,including via an analogue speech decoder,for those who like to talk to
their computers. Similarly,output can be hard copy,or onto disc or tape
or,again,as analogue sound. A range of languages is catered for,to which a
wider vocabulary can be added, and it supports BASIC. Data retrieval is very
fast,over a wide range of subjects,and data from files can be cross-referenced
- even between those of non-compatible format. However,due to neglect,the
device is deteriorating.It needs constant use to maintain efficiency.As the
industry has concentrated on the more conventional I.C.'s in the last ten
years,the effectiveness of this system has declined. So much so,that it is
becoming dependent on the inferior processors,which of course is encouraged by
manufacturer's. Without a constant flow of data in and out,it quickly
deteriorates to the point where people are persuaded that the latest range in
16 or 32-bit computers is the correct substitute.
Indulge in a fantasy for a bit.Try using the old-style processor for a week
without any reference to even a calculator....Worrying,isn't it?
By R.A.Bin.

Apology.

Sorry about the fact that the last part of the CTS articles aren't in this
Issue. Tim managed to mislay the originals, and by the time they were found it
was too late to include them this month, but they WILL be in the next
Issue...Honest!!. Paul.

When OS9 was first released, all sorts of rumours circulated about the problem of using double sided disc drives. Some of these ranged from 'it's only necessary to change the device descriptors' to 'the whole system's a cobbled mess. (I started a few myself). The truth was that the original disc driver 'ddisk' was never written to take account of all the capabilities of the WD2797 controller chip. Both Euroinde (ddisk2) and H C Anderson of Denmark (disk) supply revised disc drivers with improved capabilities. The following table summerises the differences.

FUNCTION	ddisk	ddisk2	disk	function	ddisk	ddisk2	disk
80 track	yes	yes	yes	step rate select	no	yes	yes
Verify select	yes	yes	yes	stand/drag format	drag	drag	both
Double sided	no	yes	yes	sing/doub density	doub	doub	both

Performance wise, there is no significant difference between the 3 drivers (which according to the Bagshaw benchmark, are faster than the BBC, not quite as fast as the IBM PC). Andersons 'disk' driver package also includes a full version of the OS9 format command and remains the most impressive although it is also by far the largest in code size.

DEVICE DESCRIPTORS

Before any attempt is made to use a disc driver other than the default 40 track single drive config. supplied with the system, a new device descriptor must be generated. This is because a device descriptor must describe the hardware of your system as it is when you use it. It's also the means by which the 'format' command will know how to format a new disc (some OS9 format commands can override the information in the old descriptor , but since you won't be able to use the disc after it's been formatted, there isn't much advantage to this.) Provided you have the OS9 Programmers manual and 'debug', generating a new device descriptor is a fairly straightforward operation. However, a much neater way of doing this is to generate a new device decripter from source with the OS9 assembler. You'll notice that all of the drivers are able to select verify on/off. For the past 6 months I've been using verify off on my top drive (data drive). In that time I've experienced only 2 write errors, both of which were due to trying to write to a severely fragmented, nearly full disk. Although I wouldn't reccomend turning off the verify if you do a lot of work with Dynacalc (which doesn't make a back up file), it will make C compilations significantely faster. If anyone wants the device descriptor source for changing their drive configuration, I'll be happy to help provided they cover the cost of the disc and postage.

CHANGING THE BOOTFILE

Having generated new device descriptors, the next stage is to add them to your OS9boot file. There are principally 2 methods of doing this, by repairing the old boot or by generating a completely new one. If you find that you often want to rearrange the contents of the OS9boot, it is a good idea to make a specific directory which contains everything in the boot together with a list of modules which you may wish to add to it at any time (use 'save' - see last month). It is now only necessary to produce a file containing a list of every module you wish to be included in the new boot. Assuming you've called this file 'bootlist' and all the modules reside in a directory called 'modules' then to generate a new boot:- chd /d0/modules; os9gen /d# <bootlist [#=0 or 1] A slightly easier method is to use OS9's auto repair feature. The idea is to increment the revision number of the modified modules and then add them to the old os9boot. When you boot from the fresh disc, OS9 will automatically load the module with the highest revision number and ignore the old one. It is then a good idea to use the cobbler to save the repaired boot back to disc, otherwise you'll keep loading both the old and new modules everytime you boot. Next month, using the serial port.

There are 3 main problems in copying your game to disc, 1) the copyright prevents you 2)The game autoruns on loading 3)The game can be copied but crashes when run.

The answer to the copyright is to read the small print and make up your own mind. On most of the games, the small print allows you to make copies for your own use. (Actually, you are legally able to make copies for you OWN use whatever it says TL)

The games which can be copied to disc but crash on running, can be split into 2 groups. The first are Basic games which run out of memory because the DOS has pinched some of it. These can usually be reduced in size by deleting REM statements and fancy title pages. If you are deleting REM statements, it is best to delete them one at a time and renumber the program. This will tell you if any of the deleted lines are called from other parts of the program with GOTO, GOSUB or THEN. The second group are M/C games which access the DOS area and corrupt it. You have 2 options for this kind of game. The simple solution is to use a utility which tells the Dragon that the DOS is not there (Dragon User, Dragon answers, March 85). if you run this utility then load the game (before pressing reset), you will find after pressing the reset button that the game is still in memory and can be EXECuted as normal. if you know the EXEC address. The other method involves disassembling the program and altering the parts that point to the offending area. There is one other type of game that comes to mind which gives problems. This is the game that is a mixture of Basic and M/C. In this case, I have found that there is no choice but to disassemble the M/C routines and alter them. The usual problem being that graphic pages called from Basic with the DOS plugged in will be one page out compared with the M/C routines used to access them. With these awkward games, it may just be easier to use the disc as a master backup copy and resort to cassette when playing (although this would be admitting defeat). One other reason for not copying to disc would be if the games were available on disc to begin with (at a sensible price).

Now, the auto run games. There is a whole range of methods used by S/W houses to make the games auto run on loading. Some simply load, starting low in memory so that the first thing the processor does when the prog is loaded is to find a JMP instruction has been patched into the vector table and takes it straight into the game. The other methods are variations on this theme.

The program on cassette may be split into several parts. The first may just be used to load the second part, which could be headerless and may just be a fancy title screen. One of the parts may be used to set up the graphics screen. I usually load a game for the first time with AUDIOON just to listen and find out how many parts are involved and which is the title screen etc. The next step is to load the individual bits and dissemble them to see what their purpose is. Hopefully you can then find out which bits are needed for the game and which are not. Another quick check is to type FOR I=0 TO &H7FFF:? CHR$(PEEK(I));:NEXT This will show where any text is located and is a handy way to find the colour set routine in Microdeal programs. If something interesting flashes up on the screen, press the <break> key and type ?I this will give you the approx. location to look at. Finally I establish where the code is located in memory and save it to disc.

To help me crack some of these games, I have produced several short M/C utilities which I will list and describe later (next issue ...TTL). A disassembler is very useful when tackling the job (although not imperative), I can reccomend the one published in Dragon User, June '85 (by Pam D'arcy) as this is relocatable which can be most useful.
Graham Smith

QUERY.....

Give your Dragon a Claw!.......

Over the past twenty months or so, a lot of you have complained about the lack of hardware add-ons available for the Dragons, compared with those for other machines such as the BBC and Commodore, but not many of you seem to have considered the obvious step of interfacing these goodies to your own machine. You don't really need to be an electronics engineer to do so, or even a professional m/c programmer.....Lucidata Ltd produce the interface, and in the case of the Snap Camera and the Beasty Arms, the necessary software as well, and at a price that makes construction of a "home-brew" interface an uneconomic waste of time and effort.

So why is it that so few of you have bought a Claw?.......It can't be lack of interest, because many of you say you would like to use the Dragon to control various things, so I can only assume that it is simply lack of information. I've no intention of giving a full technical rundown on this unit, but very briefly it is based on the Rockwell 6522 VIA chip, which is more usually found in 6502 machines but which matches up very nicely with the 6809E. The Claw has two connectors, one being a duplicate of the standard BBC User Port, the other being a Centronics type Parallel i/o port. Additionally, the Dragon's own cartridge edge connector is duplicated, so that those of you using disc drives can leave the DOS connected and in full use.

I don't think I can improve on the description given in the manual.....the 6522 contains sixteen eight bit registers, and these are individually addressable through four address lines on the chip. Address decoding is provided in the Claw to enable the placing of these sixteen registers at four different places within the Dragon's address space.......". I don't think it takes a great deal of imagination to see that the above makes the Claw capable of controlling almost anything you care to attach to a Dragon, whether ready-built add-on or your own home-brew experimental system, in fact it ought to be possible to operate several different devices virtually simultaneously.....the only limits are those of your imagination and to a certain extent your programming ability, although the Claw is certainly no more difficult to program than the "bit mode" on many printers!!.

In my opinion, the Claw is probably THE most useful addition to a Dragon available,(although I accept that certain firms may dispute this), and I don't think that anyone could argue with the claim that it is exceptional value for money....... something all too rare in the computer scene!.

This isn't really a review in the usual sense, I know, but an interface is difficult to review without ending up writing more about the device being interfaced than about the interface itself!, so I hope that you'll forgive any omissions.

One point that is certainly worthy of mention is the manual supplied with the Claw.......it is one of the most useful and comprehensive I have seen, and includes a copy of the Rockwell data sheet for the 6522, which ought to make life easier for even the most dedicated experimenter!.

I am not going to give details here of the two most common "add-ons"....the Snap Dragon camera and the two Beasty arms.....these have been reviewed elsewhere, and in any event represent only a small sample of the uses posible for the Claw.

For those of you interested, the Snap camera retails at 149.95 inclusive, and the Beasty arms at 69.95 and 115.00, all from Lucidata Limited.

The Claw interface usually retails at 29.95, but Lucidata have agreed to make a very generous discount offer to Group Members, for a limited period, which makes the price to you only 20.00 inclusive, and this has GOT to be the bargain of the year!!, and it's an offer that you surely can't afford to refuse.

The Claw Interface is available direct from Lucidata Limited, PO Box 128, Cambridge CB2-5EZ. but don't forget to mention that you are a member of the Group if you want to buy at the discount price.................Paul Grade.

Achtung!!!!!.

The Siegfried Computer Gruppe in West Germany urgently need more Dragon Software to review, so if you run a Software Company, or have any contacts who do, please do your best to help them. After all, it's hard enough trying to find out about new releases HERE, let alone in Germany, and I reckon anyone running a Dragon Group deserves all the support they can get.
If you can help the address is: Bernd Neuner, Dina-Ernstbergerstr. 23, D-8524 Neunkirchen am Brand 1, West Germany.

PRESTEL MODEM PACKAGE (Modem House)

As many of you know from my recent comms articles and column, I am a keen bulletin board user. During the last year I have called up many and varied boards with equally varied facilities, and I am sure many of you have done the same. I suppose you could say that Prestel, which was launched in 1979 was THE original on line database, predictions abounding that users would flock in their thousands to use it. At this time there are some 60000 subscribers, about 3/4 of which are business users, so you could say that the predictions were a little over optimistic I had read a lot about Prestel, and in particular Micronet, an information provider on Prestel for computer enthusiasts. Some time ago, in the heyday of the Dragon, there was even talk about Telesoftware for the beast, this never came off. So this became one board that I never accessed except to view a few demonstration pages via the London 300 baud number. Apart from those pages, my knowledge of Prestel offerings was snippets picked up in various magazines. That was until Jan '85 when a publication called 'Telelink' appeared. This mag, dedicated to online databases and viewdata facilities (as Prestel type systems are known) whetted my appetite for Prestel and the seed was sown. Unfortunately 1200/75 modems weren't cheap so the matter was forgotten, until recently. At the last 6809 show, one of the companies was Modem House, a modem and comms specialist company, demonstrating a Prestel package for the Dragon. I had heard of such a package by Microcomputer Resources costing 49.95, was this the same adaptor for 29.95? Yes I was told. I resisted the temptation to buy then and left resolving to save my pennies. Then recently I saw an ad. from Microdeal and Cotswold for 69.95. This was too good to miss so I set out to get hold of one and my enquiries led me back to Modem House where Mr. Keith Rose kindly agreed to part with one so that I might pass on my comments to you. this review will be split (due to space), first covering the equipment then Prestel itself. The package arrived well protected in its parcel; a Prism 1000 modem, cartridge adapter and a poorly printed instruction leaflet. (due to an old ink jet printer). My initial reaction to this sheet was that it was cheap and nasty and that the information would be the same, that couldn't have been futher from the truth. For those of you unfamiliar with these items, the modem is a sleek black box about the size of a half height disc drive. It offers 1200/75 baud (viewdata standard) full duplex and 1200 half duplex (one way) user to user, selected with a 3 way switch. This front panel also has 3 lights for power, signal (host) and line (to show you are connected). the rear has a 6 pin DIN socket for connection to your computer, a BT jack socket to plug in the phone and a lead with a BT jack plug to plug into your phone socket. All in all, a very neat bit of equipment. The modem has been around for some time and by modern standards is not very smart, having no autodial or auto logon but this simplicity could be its best feature. Dare I say that even a novice could use it ? (yes Gary, I could TL), but by far its biggest attraction is the price. originally it was 100.00 for the modem alone with an RRP of 149.95, now at S/O for 29.95 it must be a bargain. As a unit, the modem comes with an instruction booklet containing specifications and info which should enable anyone to connect to their own interfaces and S/W if required. My only criticism is why not so cheap a few years ago ? The Prestel adapter is a cartridge for the expansion port with a 5 pin DIN socket and lead to the modem. Inside is a 6850 ACIA and relevant components to act as an RS232 port, alongside a 2764 EPROM with the terminal software. All the equipment is well made and nicely finished. However I particularly liked the idea of having the S/W on ROM available on power up. (Next issue the package in action TL)

68 MICROGROUP   (Advert).

FANTASY FLIGHT ...... ANDREW HILL

Although released over a year ago, Fantasy Flight has not received as much
publicity as it should have in its time. Probably due to the demise of Cable
Software on the Dragon market. The object of the game is to wander around the
35 rooms collecting all the keys. The keys are in 3 different colours, to open
the coloured doors. Also in these rooms are monsters, guards, wasps etc. to
hinder you, but as in all good games, you are armed, having 9 weapons to
choose from (once you have collected them!
The graphics are reasonable although a little jerky in places, the sound could
have been a lot better. A nice but unecessary addition is the number of
directions you can move, 16 with your joystick and there is also a high score
table.
Graphics 73% Sound 52% Playability 55% Value 65%

WOMEN IN COMPUTING

Those of you who read Neil's bits may remember his recent article on women and
computers, in response to this, he recieved a letter from Jane Cresswell which
may interest others. As this letter is a bit long, here is an extract from
it....
Girls mature at an earlier age than boys and are already becoming interested
in social activities when boys are likely to be glued to their VDUs mostly
zapping aliens (which is not so likely to appeal to girls even in this age of
supposedly equalled out gender roles) but probably also learning about
programming and what a computer can do.
If she has a family, then she is unlikely to have any time or energy for
computing. Dad can dissociate himself from the demands of the family (don't
disturb your father dear, he's busy), but unless she is carrying out a
specific project such as studying for an open university degree and lays down
set times when she is not available, a woman is expected, nay assumed, to be
at the beck and call of everyone in the family, from the husband to the pet
gerbil. These demands take priority, and only if no one wants her attention
does she get time to herself, even then she is considered to be 'on call' and
the time is unlikely to be long enough to get stuck into anything requiring
concentration.
Editorial query: Well, does anyone disagree with Jane's views that married
women are expected to be the Family Slave, and not be permitted time to follow
such butch activities as keyboard bashing???!. Let's have YOUR opinion on
this. OK?.

M/C GRAPHICS FOR BEGINNERS..JOHN MARTIN

You should all now be able to produce something on the hi res screen in PMODE4 by poking a number into an address. Using colours in PMODE 3 however means changing the binary values to be poked to the screen.

Although PMODE 3 uses the same addresses as PMODE4 (1024-7167d, 0600-1800h), each pixel is now 2 bits wide, not one as for PMODE4. This means that not as much detail can be shown but there is the advantage of using 4 colours instead of 2. As 2 bits represent one pixel, 1 byte (8 bit binary number) can produce 4 pixels on the screen.

    Bits 7 & 8   First pixel
    Bits 5 & 6   Second pixel
    Bits 3 & 4   Third pixel
    Bits 1 & 2   Fourth pixel

The binary number in the 2 bits represents the colour. There are 4 possible values ; 00, 01, 10, 11; representing the colours green, yellow, blue and red for screen 1,0 and buff, cyan, magenta and orange for screen 1,1. So if in screen 1,0 the four top left pixels are to be set to red, yellow, green and blue ;

```
        LDA #%11010010
        STA 1024
```

This should give you the basic idea, but i'll continue on the same theme next month.

DRAGONDOS UTILITIES...STEPHEN COTTERELL

DISC EDITOR/MENU/FILE COPIER (John Cox)

It never ceases to amaze me, the difference in price between similar products. In the March 1986 edition of Dragon User, Brian Cadge awarded three drgaons (stars ??) to the Disc utilities from Ian Elkington. That package costs 10.00. I am sure that people will buy this even though this suite of programmes from John Cox is over 30% cheaper.

Booting the disc gives a full 5 screens of instructions which explain the use of the 2 main programmes, Disc Editor and Disc Menu. Using the Disc Editor in examine mode is an education in itself. The four cursor keys are used to browse through the contents of the disc, sector by sector, track by track. Importantly, for those of you with corrupt discs, or killed files, it is a simple task to enter the edit mode. Pressing the <clear> key allows free movement of the cursor to correct or change the disc character. The current character is displayed and the hex value appears below it. This is vital to identify non-printable characters. Once you are happy with the changes, pressing the break key calls up the save routine. Should you forget what to do at any time, pressing the space bar calls up the help screens.

The remaining programmes make this package exceptional value. Discmenu cures the headache of trying to DIR your disc and stop the scroll by rapid use of <shift> & <@>. The directory is sensibly printed to the screen in 2 adjacent columns without losing the file extensions. Any programme can be loaded and run with a single keypress. John reccomends that you copy this program onto all of your DragonDOS discs.

The 3rd programme is called Filecopy and uses the same screen display as Disc Menu, so using the same single key press to copy files. The programme assumes that you are using double drives but this can be changed to allow single drive operation. If nothing else, you can banish forever the protracted <COPY "1:PROGRAM.BIN"TO"2:PROGRAM.BIN"> and replace it with a single keypress without error.

All in all, if you do not own any disc utilities, at 6.50 you can't go wrong. Why pay 10.00 for the Elkington utilities or even more for Domino's Disc Doctor ? The programmes can be obtained throuygh the group via Paul. I think Brian Cadge may well award this package 4 dragons.

Memories of previous home computer shows depressed me as I approached UMIST,
too many cases of wading through packs of ill mannered juveniles bent on
getting free goes on as many space invader clones as possible. I was wrong,
the room was busy, but orderly. A good mixture of ages, mostly student to
thirties, in fact, all the signs of a well run show. A quick check through a
brief but useful (and free) guide, and of the stalls shows a little more of
the picture as the show begins to divide up into several categories.
First, Microdeal, PO Box 68, St. Austell, well that's fair enough, it's their
show. Then a list of suppliers I had thought dead and buried, alive and all
selling masses of cheap games I remember from reviews last year. Salamander,
Snards, Pocket Money Software, all of PO Box 68 St Austell, so that's where
they went ! Then a selection of specialist stalls, selling modems, discs,
light pens, Touchmaster tablets, etc. Generally not so crowded, but probably
making more sales per contact.
Upstairs there is a lecture on programming techniques, a young man discusses
the various entry points, or vectors as they call them now, that are common to
the Tandy, Dragon and some other machine I never heard of. He knows his stuff
but seems unused to speaking to an audience, but, they look satisfied and ask
a few questions. I do notice that a surprising number of the audience don't
have discs. Once the lecture is over, we all troop downstairs again
Several stalls have obviously new S/W for sale, usually 3 or 4 titles only
with glossy posters put out to attract the customers to come and buy. Mostly
arcade style games, very good too, some of them. Names like Incentive,
Eclipse, and Microvision stand out for their arcade stuff but there are a few
others with interesting looking items as well as a few whose like I've seen so
many times before, it's hard to see how the title can really be different.
Design Design aren't there, although they're in the catalogue, Tandy are
looking pleased - it's gone better than they expected. In the opposite corner
the TRS-80 User group fresh from Barton Aerodrome are dishing out their usual
thing, looking at the Advance IBM PC clone and thinking about putting a 6809
board on it.
Various people gossip about what is next for our beloved beasts, Eurohard are
definitely going for a 68000 machine ? or is it Euroinde (and how do you
pronounce it anyway ? It's going to be an MSX2 machine ? or a souped up
Dragon ? or well take your pick of the rumours, there's plenty of choice. I
wag my ears a bit more, 'it's a waste of time coming', 'well I enjoyed it any
way'. It was fun, I'll leave it at that.

THE END BIT

OK, the end of another issue, not a lot left to moan about at the moment
except that no one is sending me anything for the redundant info dept. This is
the bit people seem to cmplain about when it is missing so get your pens to
paper and dig me up some bits and bobs for it OK.
The only other thing is that I have gone and bought myself a modem (wonder if
Gary will pay my phone bill) and have finally found a couple of BB's I like so
if any of you are on line and want to drop me a line but can't be bothered to
write, you can leave me a message on Airtel (01 200 3439) or Staines BB
(Staines 65794), I login to these every couple of days so I'll see them fairly
rapidly.
Tim Lomas London April 1986

And so, as the sun sets slowly behind the sewage works, and the blue smoke drifts gently around the Dragon's power supply, it is time once
again to stagger blearily through the pile of empty bottles, secure in the thought that yet another Issue of this great literary epic
ready for photocopying, and that in another five days, assuming the copier doesn't break down or burn out, I'll be able to forget the
bloody thing for almost a week before we have to make a start on the NEXT Issue!!!.
Is all this selfless dedication recognised? did HRH invite me round to Buck house for a bit if birthday cake?, did Juan Carlos suggest I
might like a weekend in Madrid? Did Eurohard send me a free Dragon?....did they hell!. I dunno why I bother typing all this stuff... I
must be almost as daft as you are! (well, you're reading it, aren't you?). Oh well, not to worry, I suppose as long as you are prepared to
pay for this rubish I ought to be prepared to churn it out. More next month. You have been warned!...Paul.

Classifieds & Special Offers.

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

UPDATES: Back issues are now available either from John Cox or Chris Channing. You can contact John at 3,St.Peters Road, Portslade, Sussex (0273-422492), or Chris at 63,Churchfield Way, Whittlesey, Peterborough.(0733-208449).

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

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

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

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

OS9 SYSTEM PROGRAMMER'S MANUAL: We have the offer of a limited number of these manuals, usual price 19.50, at the VERY special price to Members of 6.90 each, inclusive of post and packing!!!. Order direct from the Publisher..CLEGLEN PUBLISHING LIMITED, 4,Garth Street, Cardiff CF1-2FQ, but don't forget to mention that you are a Group Member!.

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

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

FOR SALE or SWAP: Cassettes and a few cartridges (Hi-res, Skiing etc @ 5.00 each). Cassettes include Robin Hood, Fearless Freddie, Athletix, Kung Fu, etc. Also disc software wanted to swap for other titles from a collection of well over 200, including Zaxxon, Abdabs, Willy, Rommel's Revenge, Speed racer, Dark Star, M.Miner, etc. SPECIALLY WANTED...any NEW Microdeal games except Trekboer and Shocktrooper.
Phone Steve on 0460-73723. for further details.

MAPLIN 232 INTERFACE: Maplin interface for Dragon 32, giving two 8 bit i/o ports, two relays, and two Opto ports, plus instructions and software. PRICE ONLY 15.00.
Contact Ken Grant, 10,Low Ash Grove, Wrose, Shipley, West Yorkshire.

DELTA DOS UTILITY: A machine code utility to copy all BASIC and m/c files from disc to tape in one operation. BASIC listing of loader and Hex dump 1.00, or m/c cassette 2.50
Contact J.C.Bussell, 33,Tennyson Avenue, Clevedon, Avon BS21-7UJ. (0272-875528).

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

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

BANK MANAGER PROGRAM: Holds details of bank current accounts.Options include add, edit, view,print, save(disc), load. Monthly statements can be produced of all credits and debits. Disc version ONLY. Price 5.00 or 4.00 to Group Members.
DISC DIARY PROGRAM: Holds data for every day of the year on a 48k disc file. Each day has four lines. Output to screen or printer. Daily steps back or foreward, and jumps to any particular date. Price 5.00 or 4.00 to Group Members.
Orders and Cheque to R.Watts, 6/105, Brighton Road, Worthing, Sussex.

DUCKWORTH BOOKS: All discounted 50% to Group Members.
Pocket Handbook for the Dragon...now 1.50.
Exploring Adventures on the Dragon...now 3.50.
Dragon Programs...now 3.50.
Cassette of Adventures for the Dragon...now 4.00.
Order direct from Gerald Duckworth & Co.Ltd. 43,Gloucester Crescent, London NW1. Please add 30 pence per item post/packing.

TRACTOR FEED LABELS: As used on the envelope this newsletter arrived in!. 3.25 per 500 or 6.00 per 1000. Please add 50 pence towards postage/packing.
Orders to Paul Grade. Cheques payable to the Group.

OS9 PROGRAMS: OS9 Utilities...a set of eight routines available from Jason Shouler. For further details please phone Jason on 0202-722599.

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

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

DRAGON CLAW!!!!: A very special offer to Members ONLY from Lucidata Ltd. The CLAW interface, complete with manual, for only 20.00.....This offer is for a limited period ONLY, and surely you can't afford to miss it.
Order direct from: Lucidata Ltd, PO Box 128, Cambridge CB1-1DD, but don't forget to state that you are a Group Member!!. Price includes VAT, Postage & Packing!.

DRAGON 64 for sale...85.00
DELTA DOS CARTRIDGE, fitted with additional ENCODER 09 chip....35.00.
DELTA DOS FLEX DISC...25.00; DELTA Dynastar / Dynaspell / Dynaform w/processor package...35.00, DBASIC and GRAPHDRAWER 10.00 each.
Inside the Dragon...3.00; Leventhal's 6809 Assembly Language...5.00; Sinclair's Introducing Machine Code...2.00; James's Language of the Dragon...1.50...plus misc. other books.
If you're interested phone Mr.H.McDonald on 04243-4500 or write to 9,Loxwood Close, Little Common, Bexhill-on-Sea, Sussex.

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