



## NEWSLETTER NO. 20

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Diary

November 21st	(Park Baths)	A Talk by Jim McGregor
December 12th	(The Hornblower)	Social and visit from Steve White
January 2 <sup>nd</sup> th	(The Hornblower)	Social
January 16 <sup>th</sup>	(Park Baths)	Talk on modems by Steve Gold

Unfortunately there was a slight mix-up with the arrangements last month and the visit from Feedback had to be delayed for three weeks. We hope that it will take place as planned tonight and the talk by Jim McGregor will also be on schedule for the next meeting.

The Castle Inn in Hillsborough has proved to be satisfactory as a venue for the social evenings, but is a little far out of town to be convenient for people living on the Rotherham/Chesterfield side of town. We have booked into The Hornblower in Fitzwilliam Street (round the corner from Datron) for our Christmas social and we have an option to use it in the future. Any comments or opinions on this would be appreciated.

Following our appeal for personal reviews of printers a few months ago, we are happy to enclose three contributions for three different types of printers; a traditional dot-matrix, an ink-jet and a thermal printer.

Solidisk Double Density Filing System

Last month I obtained a secondhand disc drive and began the search for a disc filing system. As the disc drive was only 40 track single sided I decided to purchase a double density disc filing system.

The Solidisk DDFS costs only £40 and claims to offer full compatability with the Acorn standard. The interface contains only four chips and two jumpers including the DFS EPROM. The disc controller, a WD1770, is mounted on a small pcb together with another logic chip and plugs into the 8271 socket. Thus installation should be simple, but I had several problems before the DFS worked correctly. Firstly, the manual, a poor photocopy, contained several errors and omissions particularly with reference to issue 3 boards. Secondly the jumpers supplied did not give good connections; these I have now replaced. A further problem is that the DFS assumes that the drives have a fast track to track stepping time. This assumption would appear to be valid for most modern drives: mine however, is not, and does not work. This problem has still not been resolved. The DFS offers all the Acorn commands, except \*DESTROY, together with the ability to operate in double density mode but still only allows 31 files. Once a disc is formatted the DFS will recognise whether it is 40 or 80 track and in single or double density. Double density gives about 60 percent more storage, ie. 160K on a 100K drive.

In conclusion I would recommend that, despite being fifty pounds cheaper than any of the other DFS systems on offer, if you are in no hurry, wait until the new version 2.0 is available. The adverts say that this will be at Christmas.

P. Rubini

STOPPRESS : Solidisk DDFS will not work with BCPL.

As a further comment on the use of double density disc interfaces, it should be noted that they will not run programs which use direct addressing to access the more exotic features of the 8271 controller. The most important culprit here is Acornsoft. In their constant quest for the uncopyable disc they have resorted to using logical track and sector numbers which differ from the physical ones and using false sector i.d. information as well as the usual tricks of scrambling sections of machine code.

The result of this is that Elite, for example, will only run on a standard Acorn specification system, not on double density systems (even when single density is selected) or on single-sided 80-track drives. Admittedly Acorn are doing nothing 'illegal' as all their disc accesses are made using OSWORD & 7F but to eliminate a growing sector of the potential market in this way seems to be somewhat counter-productive, especially since there does not appear to be significantly fewer pirated copies of Elite around compared with the unprotected games. The latest example of this problem is the Micro User 'Mini Office'.

The advice must still be that the benefits associated with double density systems really do not make up for all the disadvantages of incompatibility and unless you desperately need (and can use) the extra disc capacity you would be much better off with Acorn or Watford systems for the time being.

Ed.

{ TAXAN / KAGA KP 810 OF CANON 1080 AZ

This document has been written using VIEW with a my own printer driver and printed in the NLQ (Near letter quality) mode.

The printer is fully compatible with the EPSON FX80 and will support all the software, screen dumps etc. I have used the same screen dump on both the FX 80 and the TAXAN they are identical. In addition to all the FX 80 printing modes the TAXAN also offers the NLQ facility with proportional spacing, underlining and double size if required. It also has a 3K internal printer buffer that can be used in either of two ways :-

1. As a standard spooling printer buffer
2. As an area of RAM to store up to 256 user defined characters.

You cannot use both of these at once and they are DIP switch selected. Extra ROM'S are available to print italic NLQ. The printer manual runs to 182 pages and is very easy to read and understand. The printing speed in draft mode is about the same as the FX 80 but in NLQ mode this is reduced to about 27 CPS. I think that this is a better printer than the FX 80 and is also much cheaper (depends where you go).

Brian Watson

Brother EP44

The EP44 can be used as an electronic typewriter as well as a printer, and it is fitted with a full-size qwerty keyboard. It is a thermal dot matrix printer, but because of its 24 x 18 resolution, the print it produces is of near letter quality. A one-pass cassette ribbon can be fitted to enable it to be used with normal, as well as thermal, paper. Although most types of paper can be used, the best results are obtained from smooth, fairly light-weight paper. As purchased, the printer uses A4 sheets, automatically detecting when a page is completed; printing stops, and the printer waits to be reloaded before resuming. An adaptor can be purchased that will accept rolls of paper, approximately equivalent to 100 A4 sheets. These are available in both thermal and plain paper.

The unit is battery powered (4 D-sized high-power batteries), and a mains adaptor is also available. When used as a typewriter there are around 3.5K bytes of memory available, and editing can be done with the aid of a 15 character LCD display before printing. However, when used as a printer, the buffer size is only 160 bytes. An RS232C interface is fitted, which can be connected to the beeb's RS423 socket by means of a suitable cable. The printer can also be used in conjunction with a modem for connection to, for example, a bulletin board.

The unit is easily portable, measuring only 330 x 262 x 55 mm, and weighing 2.5 kg with the batteries in place. The printing rate is rather slow - 16 cps, but it is very quiet in use. It gives a full 80 characters per line and has a full international character set. It can also be used as a 10 digit calculator.

The recommended retail price of the machine is £250, but by shopping around, it can be obtained for around £200. Thermal paper costs between £4 and £5 for 100 sheets, while plain paper is around £2. Cassette ribbons cost £2 to £2.50 and will print around 40,000 characters. The paper roll adaptor costs around £6, and the mains adaptor £12 to £14.

The main advantages of the machine that we have found are its high quality print, its quietness, its small size and the fact that it can be used as an electronic typewriter. The main disadvantages are its slow speed, its lack of graphics capability and the relatively high cost of special paper and ribbons.

Dave Brown

Olivetti JP-101 Spark Jet Printer

This is a non-impact type printer using "spark-ink jet" type technology. As with most printers the JP-101 uses a dot matrix to build characters. The ink is in solid form held in a glass rod in the print head. The print head operation is not bound by a prefixed matrix either by height or width and is completely programmable. The characters are from the ISO 96-character set, with 8 national variations, printed on a 7 x 7 matrix. Compared to other printers there are few features. Two operation modes are available, text and graphics. In text mode there are three different print sizes depending on the number of columns per line chosen. In addition double height and/or width is available. Underlining is available with either a normal, double or dotted line and horizontal and vertical tab settings are fully programmable. The printer is fast and reasonably quiet with a print speed of about 50 full lines per minute. A Cantronics parallel interface is standard although a serial interface may be obtained if required. There is also an internal 1 KByte line buffer.

To deposit the ink on the paper a large electric potential is created between the ink

and a plate behind the paper. This causes a spot of ink to be detached and fired towards the plate. Anything lying between the ink rod and the plate will have a spot printed on it. Due to the method of printing this spot is not sharply defined having a faint halo of ink around it. This means that adjacent dots merge slightly thus making the characters appear more solid. Unfortunately the characters also have a tendency to look slightly fuzzy at the edges. The characters printed have no true descenders due to the matrix size adopted and this gives the print an odd appearance. Although this is not important for general use it is not to be recommended for serious word processing where a good quality type face is called for. As mentioned previously the print head can only deposit one dot at a time so to print a character or line the head must make seven passes (five for the 140 column per line mode). This means that the printer cannot be used to simulate a typewriter as conventional dot matrix printers can because printing is only initiated on pressing RETURN.

The graphics mode is very good. The resolution of the graphics image is 880 dots horizontally and 216 dots per inch vertically. Vertical resolution can be programmed as a multiple of 1 to 9 of the above value. The image size may be doubled using a zoom facility or printed in inverse using the inverse facility. I have used a program to produce an 8 tone screen dump from a mode 2 screen with a clear image, although this is a bit slow. I have also written a mode 4 screen dump in machine code which takes about 40 seconds.

This is basically a good printer which was released too early. Facilities which are standard on other printers could easily have been incorporated in it. Despite the lack of descenders and the slightly fuzzy characters the print quality is good. The pens are good for about 150k characters. These come in packs of four and cost a bit over £10. One pen lasts me about 4 months. Due to the fact that it didn't catch on as the standard BBC printer there are few off-the-shelf printer driver and screen dump routines available. The current price of about £280 is reasonable although standard dot-matrix printers with more facilities are available for about the same amount.

Jon Fryer

#### Odd items of news

A new shop, Home Video & Computing, has opened in Ecclesall Road (near the junction with Rustlings Road). They recently gave a discount to a member, and we shall try to formalise a discount arrangement with them and put details in the next newsletter.

Following the talk on robotics from Chris Ball of T.A. Education last April, we notice that the digitising camera that was discussed has now appeared on the market. It is being sold by a company called Commotion (who also market the 'Beastie' robot arm) for £130 which is extremely cheap for such a device. If it lives up to its claims this would be a very good buy. We will try and get more details but meanwhile if anyone can lay hands on one we would be very interested in having a look at it.

We draw members' attention to a small item of news in this month's Acorn User. On November 9th at 6pm, on BBC2, there is the third in a monthly series called 'Micro Live'. We don't recall seeing the last two programmes, but the previous individual live micro shows have been very interesting, and so the series might well be worth viewing, especially as it is to heavily feature the Beeb.

Finally, next month we intend to review the facilities available on the various disc filing systems, perhaps compiling an ideal specification for a DFS (for forwarding to Acorn?), and so we ~~would~~ would like ideas by 21st November, in time for the next newsletter.