EVERY now and then something comes into the Electron User offices and there's a scramble for it.

Having used and been impressed with Cumana disc drives on my BBC Micro (in the dark old days when I used to work for *The Micro User*) I made sure that I won the latest tussle.

My prize? The Cumana floppy disc system for the Electron.

It consists of an interface cartridge, lead and either a $5\frac{1}{4}$ or $3\frac{1}{2}$ inch disc drive with its own power supply.

A second drive can be added if required, again of either size.

The cartridge, which contains among other things, the interface software, fits snugly into one of the slots on the Electron's Plus 1.

The lead, which, unlike on other micro products, is of adequate length, goes from this to the chosen disc drive.

Setting the system up was easy. Even if it hadn't been obvious what went where, the user guide supplied with the system gives more than adequate instructions.

So five minutes after receiving it I had a working disc system for my Electron. On the screen was not only the
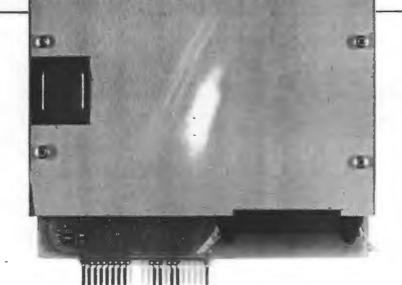
Cumana DISK System

message, there was also the date!

The next few hours were spent exploring the commands available under the system. The more I saw of it, the more I liked it.

Using the Cumana DFS, the familiar LOAD and SAVE still work, except now programs are saved to disc, not tape. The increase in speed and reliability this brings has to be experienced to be believed.

It's more than just a

super-fast cassette, however. Because the saved programs or files are on a disc, not a tape, you can access a file you've saved without having to read all the previous programs.

This gives the system enormous flexibility and with it come a whole host of commands and utilities to take advantage of this.

Files can be copied, renamed, and deleted with ease, while *CAT gives you the name of all the files on the disc, instantly.

One whole category of commands is given over to organising and analysing these files, allowing operations that would be impossible or impractical on tape.

Also the system supports random access files, vital for more advanced and flexible databases.

Before a disc can be used by a disc system it has to be formatted. All this means is that the disc is magnetically organised so that data is stored on it in the way that the DFS expects.

The trouble is that there is no standard format, discs that work on one DFS not working on another.

The Cumana DFS has what is known as a double density format, but it's not the same as the Plus 3's double density format. Nor is it compatible with the Acorn DFS for the

BBC Micro.

This could be a problem, but supplied with the system comes a disc full of utilities to deal with the situation.

It's these utilities that give the flexibility that makes it a winner, allowing it to use discs written on both the BBC Micro and on the Plus 3.

With them you can copy files from a Plus 3 or BBC disc onto your Cumana discs.

Not only that, but you can format and write to discs that can be used on the BBC Micro. No other DFS has this adaptability and compatibility.

As if that wasn't enough, the utilities disc also has a verify program – to check discs – and a disc editor for more advanced users.

Even with the above features, to think of the Cumana Floppy Disc System as just a DFS would be to underrate it.

Not only does it have all the facilities you'd expect of a DFS, it also has a built-in real time clock and ROM socket for an additional ROM such as Addcom or Starmon.

Add to this that the maximum length of files is a massive 64k and the fact that the Cumana DFS doesn't use the Electron's memory (allowing easy tape to disc conversion) and the system becomes even more impressive.

It's a splendid, thoroughly professional piece of work.

The manual is comprehensive, if a little formal in parts, and the system does what it sets out to do and does it well. The obvious question is how it compares with the Plus 3.

The answer is, very well indeed. While not having the complexity of the Plus 3's directories and pathways, the filing system, with its 10 letter filenames and use of wildcards, is more than adequate for the home user.

When you throw in the real time clock, the ROM ability and the flexibility in the disc formats that can be read, then it comes out a clear winner.

There are only two drawbacks that I can think of. The first is that you have to have a Plus 1. I'm not sure if this is a drawback, as I think most people who want to expand to discs will already have one of these excellent bits of kit.

The second is that there is no utility that allows you to copy from your Cumana formatted discs to discs that will work on a Plus 3.

So as things stand, you could use your mate's Plus 3 discs but you couldn't copy your masterpieces on to a disc he can use.

Having said that, I don't think it will be long until someone does just that.

To sum up, it's a versatile, powerful piece of equipment that I recommend wholeheartedly. **Nigel Peters**

The Cumana floppy disc system for the Electron:

It's an impressive piece of work