

DISCIPLE

John Wase plugs in a new multi-purpose interface.

Disciple
Rockford Products
£73.70 (+ VAT)

For several weeks I had been anticipating its arrival. At last a cryptic message came — "a disciple will shortly arrive at your house". It was on its way.

My delay in receiving this interface was due to a technical problem: the NEC ROM version of the Spectrum gave trouble with their first issue, and the ROM in the Disciple had to be re-written. Advantage was therefore taken of this to incorporate several improvements into the system, and it is this version, version 2, which I tested. Disciple comes complete with instruction manual, guarantee and a cassette. As the picture shows, the interface itself is a long, flat plastic box on which your Spectrum sits, a bit Interface One-ish in shape, with an edge connector on top to connect the Spectrum and the customary through-port on the back. To the right of this are the joystick port and network connector, with the printer interface on the end of the box. To the left are a

standard BEEB-type disc interface connector, a second joystick port and network connector, and on the left-hand end, the inhibit and snapshot buttons.

I approached the system with some trepidation, being prejudiced through long familiarity with the Opus system. So at first I didn't like the rather creaky plastic box; a 128K Spectrum+2 overhung this rather a lot, and I was glad I had left on the big feet which I need with the Discovery, for they just supported in the right places the overhang from the Disciple. A standard 48K Spectrum was less lucky and needed a cassette temporarily wedged in front of it. The first two Disciples had rough handling in the mail and the snapshot switch was damaged in each case; Rockford tell me that more robust switches are now being used, and that the packaging is being modified. Whilst none of this improved my confidence, as I used it and gradually got used to it, I began to like it and appreciate its many virtues.

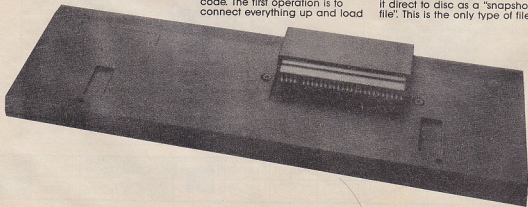
Hooked

The manual contains a lot of useful basic information, but lacks anything detailed on machine code, although it mentions that the hook codes are the same as those for micro-drives. I am told that by the time you read this, there will be a new, ring-bound version of the instructions which will have provision for containing comprehensive information on machine code. The first operation is to connect everything up and load

the utilities program supplied on cassette. After answering various prompts, you are ready to format a disc. Two surprises: firstly the disc is not named; you have to name it on the label; secondly a small code program called "systems" is also saved on the disc at the same time. A cold start involves switching on computer, inserting disc and typing RUN, when the systems program is loaded. This can be a bit irritating but does ensure that the system can be updated to cope with alterations in other systems. There is provision for one further auto-running program on any one disc.

Disciple comes with a truly comprehensive array of commands. **LOAD D1"program"**, for instance, works, as well as micro-drive commands. So does **SAVE D1"program"**. **SAVE D1"program"** saves and then also gives you the short directory or catalogue, which numbers each file, tells you what it is and the start address and length if it is code. This allows you to use the very short syntax **LOAD p6**, when number 6 in the list is loaded from the last disc in use. All the commands one would expect are there, including wild card files (to ERASE numbers1, numbers2, numbers 3 etc., enter **ERASE D1"n"**). A well thought out system.

In addition to the disc interface itself, one or two other little gizmos are incorporated. Clearly aimed at the games player is a snapshot button; this takes a copy of what is in memory, and, in this case, saves it direct to disc as a "snapshot file". This is the only type of file



which will not copy from one disc to another on a two disc system; thus piracy is minimised. The two joystick ports can be configured either as Sinclair or (left hand only) as Kempston.

A great deal of thought has been given to networking. Disciple has two network ports, each taking inexpensive standard 3.5mm jack plugs and standard cable. In this way, a shared access network can be set up with a master station and pupil stations; the master can transmit programs to the pupils and even call up their screens to check their work; they, in turn can call up programs from a central disc or print on a central printer.

Centronics

The centronics interface is fairly unremarkable. The answers to the initial utility program involve information about the printer in use if it is not an Epson compatible. The answers are incorporated in the systems program which has to be used to boost up the system; a nuisance if you are using dot matrix for rough copy and daisy wheel for the finished document. LIST and LPRINT are supported, together with COPY SCREENS which copies the screen. Any control codes that you want to send to

the printer are preceded by CHR\$27, even if you wish to send CHR\$27 itself; tortuous but effective. This can, however, be changed (it has to be for Tasword, for instance, for version 2 will transmit only four control codes at any one time).

Now for the meaty bits. I took one of my son's games and converted it onto disc. This consisted of a basic loader, a screen and a piece of machine code 38351 bytes long (virtually a full 48K Spectrum).

Loading this from tape took just short of five minutes. The same thing took a spectacular seven seconds from the Disciple! I loaded the game again and took a snapshot. Taking it took between eight and nine seconds. Reloading took five. When times get as short as this it is impossible to be very accurate; all you can say is that they are impressively fast. Saving is equally fast — I used the SAVE D1 "name" version for the picture and for the code; in each case the bulk of the seven or eight seconds was the time required to display the directory. Indeed, the only operation which took longer was formatting.

Talking of formatting, I found that there were one or two interesting comparisons to be made. Discovery has a directory length (110 files) which is

independent of the disc type, and which can be extended if necessary. Disciple allows only 40 entries in single density and 80 in double. The sector length is similarly interesting. Discovery and Disciple (80 track) has 512 byte sectors. Although these bigger sectors and the lack of a compacting facility on Disciple could mean more wasteful use of the disc, this is made up for a larger formatted capacity, although do remember that you have to put the "systems" program on the disc.

My overall impressions and comments? Well, first the bad news. It's going to cost quite a lot for a complete system, for you've got the cost of a drive on top of the £79 odd for Disciple. I felt it was a bit plasticky, a bit flimsy, and I managed to get the disc connector in the wrong way round. Much of this was when, all thumbs, I was trying to connect up and get it going. Having got used to it, well, it's great. There are all sorts of additions: the snapshot, the comprehensive networking, the availability of two Sinclair or one Kempston joystick ports, the ability to run microdrive software and to have it transferred by means of the inhibit button, and above all, the incredible speed of transfer. You know, I rather fancy one myself...

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