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Station Master light will come on, and the files
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This is an SJ Research FDFS (Floppy Disc File Server), the first Econet server box that SJ produced. It's long since obsolete, but has sentimental value (and is probably virtually the only surviving specimen), so be careful with the poor thing!

I can't find a proper manual for it, so this explanation will have to suffice. The "User Manual" that I've enclosed is just that.. a user manual; it doesn't explain how to set up the fileserver from your point of view. There are two 5.25" discs containing the software for it, wrapped in cardboard inside the box.

It takes (up to) four drives, in the form of two dual units. These plug into the "Disc Signal Connectors" on the back, and must be 80-track. It has two BBC-style power connectors, so the drives don't need to have their own PSUs (this is handy for powering a clock box, too). You can connect a parallel or serial printer (or both).. these have a dual use. Firstly, the unit includes a printer server, so other stations can share the printers. Secondly, it sends distress messages to one of the printers when something goes wrong. I usually connect the serial port to a BBC running as a terminal.

Obviously, you need to connect it to the Econet. It uses old-style circuitry, like the BBC, which requires the data lines to be terminated before it'll work at all, except on a very small network. More or less any clock speed within reason ought to be OK.

Once everything is connected, make sure there are no discs in the drives and power on. The *Power* and *Utility Mode* lights should come on (if *No Clock* lights, you've got a problem), and after a brief pause, *Disc Free* will start to flash. The server is now in Utility Mode, running a program in ROM. In this mode, you can perform basic operations like formatting and copying discs; it won't respond to normal access requests from other stations.

To use the server properly, it needs to be put into on-line mode. Put the copy of the boot disc into drive A, and push the *Remove Disc* button. *Disc Free* will go out and the drive will chug for a while as it loads the server program, then the *Utility Mode* light will go out and *Disc Free* will start to flash again.

You can now put in any fileserver discs you like; you haven't got any apart from the two master discs yet, though. If you were to boot off the serial gateway disc, the server would run as a GP server, allowing other stations access to its serial port.

Make sure there is at least one disc in the drive. Push *Remove Disc* again; *Disc Free* will go out. This time, each disc will be scanned in turn while the server builds the free-space maps and checks for directory inconsistencies. Once this is finished, the

Station Ready light will come on, and the fileserver is ready to talk to another computer.

You must never put discs in or take them out while the server is switched on, unless *Disc Free* is flashing or it's in Utility Mode; there is an internal disc cache, and changing discs without telling the system can have unpleasant consequences. If you want to change discs while the server is online, push the *Remove Disc* button; obviously, you should do this before powering off as well, except in an emergency. Pushing the button with no discs in the drive will put the server back into Utility Mode.

Okay, that's basically how it works. Its station number ought to be 254, though it may have forgotten if it's been switched off for a while (it's stored in battery-backed RAM with the rest of the configuration parameters). You can reset the NVRAM by switching on while holding down the *Remove Disc* button. The battery is just a nicad, and will charge up in a couple of hours if you leave it switched on.

If the *Station Ready* light flashes at any time, that means the serial or parallel buffer is full. The system will hang until it empties. If the data isn't going to go away, you can sometimes flush it by pushing *Remove Disc* a few times.

If *Station Ready*, *Disc Free* and *Utility Mode* are all flashing at once, that means there was a fatal problem at boot-up; probably a disc error in the fileserver program. Usually, you need to power off/on afterwards.

To use the Utility Mode operations, you first need to have the server online and the master disc in the drive. Log on from a BBC and type *FAST. When the program has loaded and it asks for a station number, drop the fileserver into Utility Mode. Then, type in the fileserver station number. The *Station Ready* light will come on; *Utility Mode* will also be on. The BBC is now effectively acting as a serial terminal to the FDFS; whatever you type is sent to it, and your screen displays its responses. Everything ought to be pretty self-explanatory in this mode; you can use it to format, copy and rename discs and change the serial baud rate and the station number. To go back to on-line mode, press the *Remove Disc* button (you will need a boot disc in the drive). That's more or less all there is to it; the FDFS is quite a simple beast. It's a little primitive by comparison with its big brothers, but ought to be adequate for you (no offence intended!). It supports most of the file- and printer-server protocols OK, though not some of the extensions that the Arc uses.

Playing around with the programs in the Library directory is probably the best thing to do once you have it going. You have the final release of both ROM firmware (0.22) and disc software (0.92).

Feel free to ring me on [REDACTED] if you hit trouble, or want something explained.

Yours, etc.

[REDACTED]