



a conventional floppy disk system. However, limitations are imposed by the dubious long-term reliability of the tape cartridges and the lack of a true random access file facility. This affects the viability of the Microdrive as a storage system for serious business applications, for most commercial software demands the location, storage and retrieval of small amounts of data many times during use. Moreover, little software recorded on Microdrive cartridge is available at present, although this is likely to change dramatically in the near future. The advent of the Sinclair QL business computer, supplied with two built-in Microdrives, may well bring about an extension of the capabilities of the system. If Microdrives prove their reliability they will be of enormous value to the Spectrum owner who requires simply the facility to store large amounts of data and retrieve it quickly.



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Microdrive Commands

Commands that are relevant to the Microdrive are:

```
FORMAT CAT SAVE* VERIFY* LOAD*
MERGE* ERASE OPEN# PRINT# INPUT#
INKEYS# CLOSE# MOVE
```

In each case M selects Microdrive, N is the number of the Microdrive to be accessed (1-3) and S is the stream number allocated (4-15).

Format

Formats the tape data layout, names the cartridge and erases all data previously stored. It can be constructed as follows:

```
FORMAT "M";N;"NAME" or
FORMAT MS;N;CS
```

where NAME is the name selected for cartridge (1-10 characters), MS (either M or m) is as for M, and CS (1-10 characters) is as for NAME.

Cat

This command loads to screen or specified stream a catalogue of all the files contained on cartridge in a specified drive. This is achieved with:

```
CAT N or
CAT#S;N
```

The catalogue contains the cartridge name, up to 50 filenames and free space on cartridge in Kbytes.

Save*

This creates program files that can be programs, named strings or data, and is constructed in one of the following ways:

1. SAVE*"M";N;"FILENAME"
2. SAVE*"M";N;"FILENAME"SCREENS
3. SAVE*"M";N;"FILENAME"DATA A()
4. SAVE*"M";N;"FILENAME"LINE X

creating the following:

1. A file
2. A file consisting of SCREENS
3. A file consisting of data A()
4. A file that will RUN from line X on LOADING.

Verify*, Merge* And Erase*

These commands are constructed in the same manner as 1. SAVE* above. VERIFY* compares the file "FILENAME" with the current contents of user memory and generates an error message if they are different. MERGE* merges "FILENAME" with the current contents of user memory, and ERASE* erases "FILENAME".

Load*

LOAD* can be constructed in the same manner as 1. SAVE* and 2. SAVE*. When executed, LOAD* copies the contents of the specified file into user memory.

Open#, Print#, INPUT#, InkeyS#, Close# And Move

These commands are concerned with the handling of data files. Data files are stored sequentially but can be manipulated to mimic some of the properties of random access files by allowing a data file to be read in its entirety and extracting the required data after loading. In the same manner, the data file, then in user memory, can be modified and re-stored. Data file handling is organised by OPENing and CLOSEing streams to establish data channels that can be accessed by reference to the specified stream number. For example:

```
OPEN#S;"M";N;"FILENAME"
```

connects stream S to file "FILENAME" on Microdrive N. "FILENAME" can then be written to by using PRINT#S and read from by using INPUT#S or INKEYS#S. MOVE can be used to transfer data files within a cartridge, from one Microdrive to another, or to any device that can be accessed via a stream number. When stream channels are no longer required, they should be disconnected with CLOSE#S.

Stringy Floppy

Combining the cheapness and simplicity of tape storage with the speed of the disk, the Microdrive has become known as a stringy floppy. It connects to the Spectrum via the Interface 1. Phono sockets for cassette access and an RS232 port are also features of the Interface 1.

HEAD PRESSURE PAD

GUIDE WHEEL

WRITE PROTECT TAB



TAPE SPOOL

TAPE

Microdrive Wafer

The tape in the wafer is a 2mm video tape, used for its strength, and high storage density. The tape forms an 8-metre loop and is coated so that it slips easily from between the metal tape spool and the wound tape. The read/write head presses the tape against the head pressure pad. When in place, a write-protect tab enables data to be read from or written to the wafer; if the tab is removed, the wafer can be read only, thus protecting the information stored.