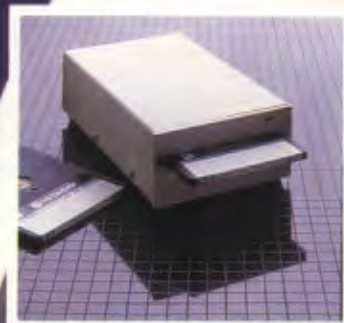# Advance with AMS
3" Disc Drives – The Ultimate Choice

Hitachi - in a word reliability

- The complete AMS disc drive package, tailored to your BBC micro, is compatible with all disc interfaces and includes cables, a comprehensive manual and utilities on disc and EPROM. Housed in a steel case, matching the BBC micro, these reliable and robust Hitachi 3" disc drives are the ultimate for home, office and classroom.

- The 3" disc is totally enclosed in rigid plastic and a unique automatic steel shutter protects the delicate disc surface from dust and finger marks. For the first time discs can be used in industrial, educational and commercial environments without the worry of corrupting precious programs and data.

- The disc is "flippable" like a cassette tape and has a storage capacity of 100K on each side in single density mode (twice as much when used with a double density interface). A neat plastic switch can be flicked back and forth to write-protect valuable discs.

- The AMS disc drives are completely hardware and software compatible with 5¼" drives which can be used in parallel so allowing easy transfer of software. Consequently the 3" drives will operate with all the standard floppy disc interfaces. They take their power from the outlet provided by the BBC micro – there's no onboard power supply to corrupt data.

- The AMS package includes utilities on both a disc and an EPROM for formatting and verifying discs. The EPROM, which is easily fitted, offers a simple to use and permanent alternative to using the utilities disc.

- The impressively engineered Hitachi 3" drives feature an eject button allowing single handed operation, a multi-colour LED indicating the disc side in use, and a brushless direct-drive motor for reliable operation. The super fast track-to-track access time of 3ms is at the forefront of disc drive technology. The longest of programs are loaded in a flash.

Disc Drive Specifications for the Hitachi HFD 305S & HFD 305D

	Item	Unit	Single-sided density recording			Double-sided density recording		
	Unformatted							
	Disc capacity (double sided)	Bytes	250K			500K		
	Surface capacity	Bytes	125K			250K		
	Track capacity	Bytes	3125			6250		
	Formatted							
	Byte/sector		128	256	512	256	512	1024
Storage capacity	Sector/track		16	9	5	16	9	5
	Disc capacity (double sided)	Bytes	164K	184K	205K	328K	369K	410K
	Surface capacity	Bytes	82K	92K	102K	164K	184K	205K
	Track capacity	Bytes	2048	2304	2560	4096	4608	5120
Disc	No. of memory blocks		2			2		
	No. of cylinders		40			40		
	Total No. of tracks		80			80		
Recording system	System		FM			MFM		
	Max. recording density	BPI	4915			9830		
	Track density	TPI	100			100		
	Data transfer speed	bits/sec	125K			250K		
Process time	Average access time	msec	70					
	Between tracks	msec	3					
	Settling time	msec	30					
	Average rotation stand-by time	msec	100					
	Motor start time	sec	1 max					
Media RPM		rpm	300					
Dimensions & Weight	W x H x D	mm	90 x 40 x 150					
	Weight	kg	0.7					
Power source	DC 12V		12V ±5% 0.6A max					
	DC 5V		5V ±5% 0.4A max					
Media used			3" compact floppy disc					
Drive interface			Plug compatible with 5.25" FDD					

Formatting and verification utilities

Before any disc system can be used the discs have to be formatted. This is done using a program which is supplied with the disc drives and is not included with B.B.C. micro disc interface. Usually the formatting program is provided on a disc. A.M.S. supply just such a disc with the micro drives. We also supply a utilities EPROM which can be used instead – if you want to. It simply plugs into a spare socket in the B.B.C. micro logic board, in a painless two minute operation.

Using the EPROM utilities – a verify utility is also included – has major advantages over disc based methods. It is quicker and simple to use – just type *FORMAT and away you go – no hassle with loading in your utilities disc (and then swapping discs around on a single drive). And because the format program is in EPROM it doesn't take up valuable memory space. So if you've just typed in a long program you won't lose it when you format a disc to store it on.

The EPROM utilities are of course compatible with 5¼" drives so if you've already committed yourself to them, or if you're using one 3" microdrive and one 5¼" drive, you can still take advantage of this new product.

Disc operating upgrade kit required.

Address Enquiries and orders to: Advanced Memory Systems Ltd, Woodside Technology Centre, Green Lane, Appleton, Warrington, WA4 5NG, England. Tel: 0925 62907. Telex: 665449 SEDOL G.