51.3 MByte 3½"
Winchester Disk Drive

8051A

- **42.0 MBytes formatted storage**
- **28 msec. average access time.**
- **Automatic power down to shipping zone and head lock.**
- **Embedded servo system increases data reliability.**
- **Rotary voice coil positioning.**
- **Integrated drive and AT electronics on a single printed circuit board.**
- **40 pin host interface connector.**
- **1:1 interleave support maximizes system throughput.**
- **Full track buffer with look-ahead cacheing allows zero latency accesses.**

The MiniScribe model 8051A is MiniScribe's solution for the new generation of AT* compatible, portable and desk top computer systems.

The 8051A is a 3½-inch 42 MByte drive with an on-board AT controller. The integration of the controller onto the drive increases system reliability and lowers overall system cost.
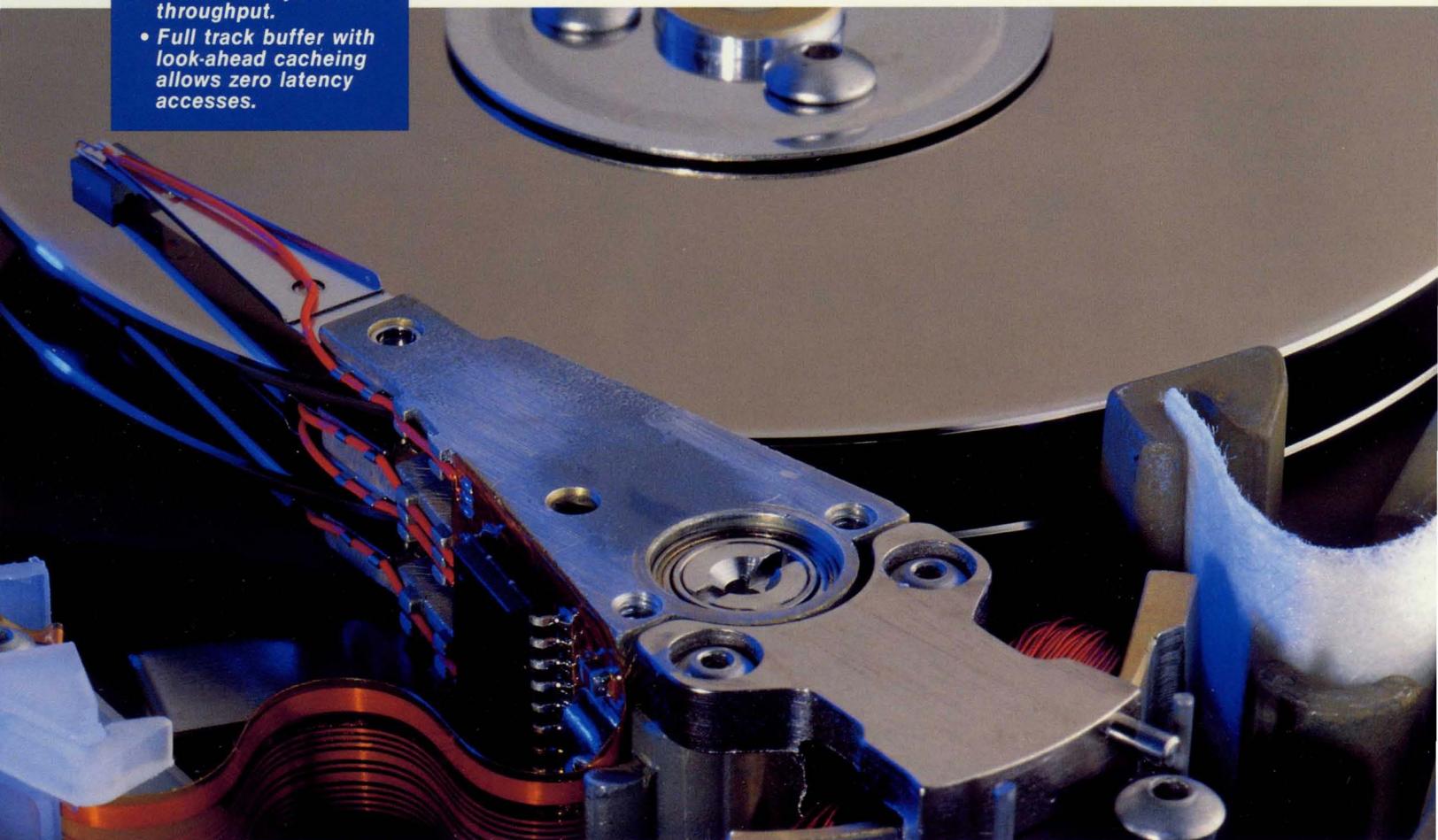
A rotary voice coil is utilized to achieve a fast 28 msec. average access time reliably. An embedded servo system is used to maximize data reliability. The embedded servo system significantly reduces mispositioning due to thermal off track.

The 8051A features automatic park and lockdown at a dedicated landing zone.

Like all MiniScribe products, the 8051A undergoes a rigorous testing and burn in process to insure the highest reliability.

The MiniScribe line of 3½-inch and 5¼-inch Winchester disk drives begin at 12.75 MBytes and extend to high capacity/high performance models.

* AT is a trademark of IBM Corp.

MiniScribe
Solutions for Data Storage

3½" AT Winchester Disk Drive Specifications

Capacity Unformatted

Per Drive (MBytes)	51.3
Per Track (Bytes)	17,220

Capacity Formatted

Per Drive (MBytes)	42.0
Per Track (Bytes)	14,336
Per Sector (Bytes)	512
Sectors Per Track	28

Functional

Disks	2
R/W Heads	4
Cylinders	745
Total Data Tracks	2,980
Track Density (tpi)	1,109
Recording Density (bpi)	23,202
Areal Density (Mbits/sq.in.)	25.73
Rotational Speed (RPM)	3,484

Data Transfer Rate

Device (Mbits per second)	8.0
Host (MBytes per second)	up to 4.0

Access Time

(including settling)

Average (msec.)	28
Track-to-track (msec.)	5
Maximum (msec.)	60
Latency (average, msec.)	8.61

Interface

AT

Reliability

MTBF	30,000 hours
PM	None
MTTR	30 minutes
Component Design Life	5 years

Error Rates

Soft Read Errors	1 per 10^{10} bits
Hard Read Errors	1 per 10^{12} bits
Seek Errors	1 per 10^{6} seeks

DC Power Requirements

+ 5 VDC ±5%	0.5 amps typical
+12 VDC ±5%	0.5 amps typical
Max. Starting (5 sec.)	2.0 amps

Power Dissipation

8.0 watts avg.

Environmental Limits

Ambient Temperature	40°F to 122°F (5°C to 50°C)
Relative Humidity	8% to 80%
Maximum Wet Bulb	78°F (26°C)

Physical

Height	1.625 in. (41.3 mm)
Width	4.00 in. (101.6 mm)
Depth	5.75 in. (164 mm)
Weight	1.43 lbs. (.65 kg)

Features and specifications subject to change without notice.
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