5.25 inch Half-Height DISK DRIVES
FIELD PROVEN MTBF 140,000 poh

HH-1050, most reliable, high performance disk drive in its class!

MICROSCIENCE gets it all together with greater reliability, more capacity, high speed and lower power consumption.

We designed and manufactured the first Half-Height 5.25 inch Winchester Disk Drive and we still build them to last.

- Voice Coil Technology
- 5ms track to track seek time
- Automatic carriage lock
- Dynamic spindle brake
- Closed loop dedicated servo
- Dedicated head landing zone
- ST506 Interface
- 44 Mbytes-formatted capacity
- 65 Mbytes-RLL
- 28ms average positioning time

NOW BACKED BY A 2 YEAR WARRANTY
## High Performance Winchester Disk Drive Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>HH-1050</th>
<th>HH-1060</th>
<th>Model No.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Capacity Unformatted</strong></td>
<td>53.3 Mbytes</td>
<td>80.0 Mbytes</td>
<td></td>
</tr>
<tr>
<td><strong>Capacity Formatted</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Per sector</td>
<td>44.6 Mbytes</td>
<td>65.5 Mbytes</td>
<td></td>
</tr>
<tr>
<td>Sectors per track</td>
<td>512 bytes</td>
<td>512 bytes</td>
<td></td>
</tr>
<tr>
<td><strong>Data Transfer Rate</strong></td>
<td>5 Mb/s</td>
<td>7.5 Mb/s</td>
<td></td>
</tr>
<tr>
<td><strong>Seek Time (incl. settling)</strong></td>
<td>5 ms</td>
<td>5 ms</td>
<td></td>
</tr>
<tr>
<td>Track to track</td>
<td>28 ms</td>
<td>28 ms</td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>60 ms</td>
<td>60 ms</td>
<td></td>
</tr>
<tr>
<td><strong>Functional Specifications</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recording density</td>
<td>9,957 bpi</td>
<td>14,936 bpi</td>
<td></td>
</tr>
<tr>
<td>Track density</td>
<td>960 tpi</td>
<td>960 tpi</td>
<td></td>
</tr>
<tr>
<td>Cylinders per surface</td>
<td>1,024</td>
<td>1,024</td>
<td></td>
</tr>
<tr>
<td>Platters</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Read write heads</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Servo heads</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Recording code</td>
<td>MFM</td>
<td>RLL (2,7)</td>
<td></td>
</tr>
<tr>
<td>Typical power dissipation</td>
<td>14 watts</td>
<td>14 watts</td>
<td></td>
</tr>
<tr>
<td><strong>Interface</strong></td>
<td>ST506/412</td>
<td>ST506/412</td>
<td></td>
</tr>
</tbody>
</table>

### GENERAL SPECIFICATIONS:

#### Reliability Specifications
- **MTBF (typical usage)**: 140,000 poh
- **Preventive maintenance**: none
- **Component life**: 5 years
- **Error rates**:
  - Soft read errors: 1 in $10^{10}$ bit read
  - Hard read errors: 1 in $10^{12}$ bit read
  - Seek errors: 1 in $10^6$ seeks

#### Environmental limits (operating)
- **Ambient temperature**: 50° to 122°F (10° to 50°C)
- **Relative humidity**: 8% to 80%
- **Wet bulb, maximum**: 78°F non-condensing (25.5°C)
- **Altitude**: 0 to 10,000 ft.
- **Vibration**: 5 to 13.77 Hz, .036 in. p-p
- **Shock**: 10G, 11 ms

#### Power Requirements
- **DC voltage**:
  - +12 volts
  - ±5% at 0.7A typical
  - 2.3A starting
  - +5 volts
  - ±5% at 0.5A typical

#### Average Latency: 8.33 ms

### Environmental Limits (non-operating)
- **Ambient temperature**: 40° to 140°F (-40° to 60°C)
- **Relative humidity**: 8% to 80%
- **Wet bulb, maximum**: 78°F non-condensing (25.5°C)
- **Altitude**: 0 to 10,000 ft.
- **Vibration**: 5 to 14.77 Hz, .047 in. p-p
- **Shock**: 40 G, 11 ms

### Mechanical Dimensions
- **Height**: 1.625 in.
- **Width**: 5.750 in.
- **Length**: 8.000 in.
- **Weight**: 4.6 lb.

### Safety Approvals
- UL, CSA, TUV

### DISTRIBUTOR:

**MICROSCIENCE INTERNATIONAL CORPORATION**

**CORPORATE HEADQUARTERS**
305 N. Mathilda Avenue
Sunnyvale, CA 94086
(408) 730-5965

**EUROPEAN SALES**
Albert-Schweitzer-Str. 66
D-8000, Munchen 83, WEST GERMANY
(49) 89-671062

**ASIA/PACIFIC SALES**
12 FL, No. 51-2, Sec. 4, Nanking East Rd.
Taipei, TAIWAN
(8862) 715-5650