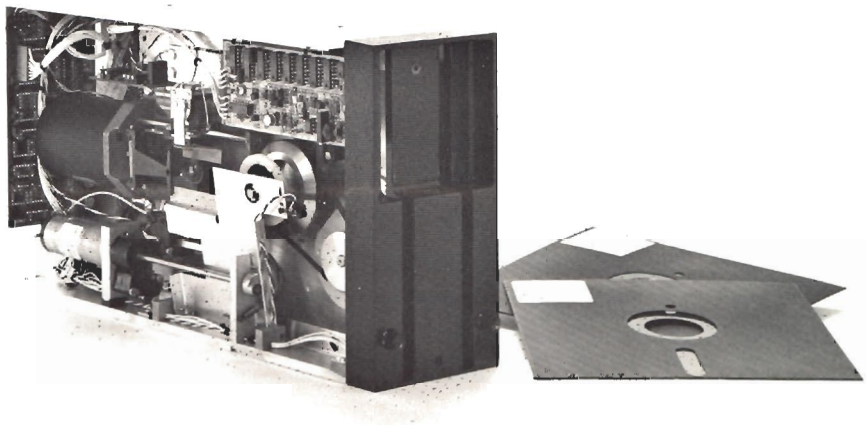
PerSci Model 277 Dual Diskette Drive

The PerSci Model 277 Dual Diskette Drive is a mini size, low cost, random access memory device that records and retrieves data on two removable flexible diskettes, to provide 6.4 Mbits of data storage unformatted, or 3.8 Mbits in IBM 3740 format. The unit also has double density capability increasing total data storage capacity to 12.8 Mbits. The Model 277 design, incorporating many of the features of large disk drives, provides performance and reliability characteristics never before available in a flexible disk drive. At the same time, the Model 277 is fully compatible with existing diskette drive systems.



A Totally Unique Design Concept...

Smaller: 4 Duals in a 19" Rack

The PerSci 277 dual drive is the size of most single diskette drives: 8.6" x 4.4" x 15.0". Two 277's will fit horizontally or four will fit vertically in a 19" rack.

Faster: 33 ms Random Average Seek

PerSci's exclusive voice coil positioning system makes possible a full stroke 76 track seek in 100 ms. Track to track access is 10 ms including head settle time and average seek is 33 ms.

More Reliable: All DC Power

A DC spindle motor with a closed loop feedback servo insures accurate rotational speed of both diskettes. Because no AC power is used in the drive, the 277 requires no modification for use in foreign countries.

More Efficient: 28 Watts Power Consumption

The Model 277 consumes one quarter the power needed by competitive drives. Heat dissipation is only 109 BTU/hr. Elimination of the cooling fan, plus a low ambient noise motor, results in noiseless operation.

Foolproof: Electronic Diskette Load

A fully automatic, electronic diskette load and unload feature assures simple diskette insertion, accurate diskette positioning and eliminates the possibility of diskette damage. The unload function can be engaged and disengaged from the computer permitting remote control operation. Further diskette protection is given by the LED sensors which relay a signal if the diskette has not been correctly loaded.

Designed for Tomorrow: No-obsolescence

The PerSci Model 277 is a fourth generation flexible disk drive. The accuracy of the positioning system and exact tolerances of the drive configuration will allow easy conversion to double track density operation. The fast access time and exclusive PerSci features, such as the "built-in" hard sector capability, anticipate the requirements of changing applications.

Compatible With Existing Systems

IBM Compatibility: Plus Double Density

The read/write/erase head of the PerSci Model 277 is compatible with IBM 3740 systems; therefore, diskettes prepared on an IBM 3740 system can be read by the PerSci 277 and vice versa. In addition to IBM 3740 format, the PerSci 277 will accept expanded capacity hard and soft sectored formats and, with a double density option, the unit will read and write two double density encoded diskettes.

Stepper Motor Compatible: Plus High Performance

The Model 277 is fully compatible with existing systems designed for stepper motor drives while bringing to these systems the advantages of advanced reliability, extra data storage and compact size. In order to achieve the 277's high speed capability in such systems, a high performance option kit is offered.

PERSCI

Peripherals a Generation Ahead

PerSci Model 277
Dual Diskette Drive—Specifications

Capacity
Unformatted
- Per drive: 6.4 Mbits/800 Kbytes
- Per diskette: 3.2 Mbits/400 Kbytes
- Per track: 41.7 Kbits/5 Kbytes

3740 Format
- Per drive: 3.8 Mbits/486 Kbytes
- Per diskette: 1.9 Mbits/243 Kbytes
- Per track: 26.6 Kbits/3.3 Kbytes
- Per sector: 1024 bits/128 bytes

Double Density (optional)
- Per drive: 12.8 Mbits/1600 Kbytes
- Per diskette: 6.4 Mbits/800 Kbytes
- Per track: 83.4 Kbits/10 Kbytes

Track Density
48 tracks per inch
(data track width .012")

Bit Density
Single density 3268 bits per inch
Double density 6536 bits per inch

Rotational Speed
360 RPM ± 7 RPM

Transfer rate
Single density 250 kilobits per second
Double density (optional) 500 kilobits per second

Operating Times
Track to track access (including settle time): 10 msec.
Random average seek: 33 msec.
76 track seek: 100 msec.
Head engage: 40 msec.
Motor start (after DC power applied): 1 sec.

Media
IBM 3740 diskette or PerSci approved equivalent

Physical Dimensions
Height 8.6" x width 4.4" x depth 15.0"
Weight 20 lbs.

Positioning Mechanism
Linear voice coil motor

Operating Environment
50°F to 120°F
8 to 80% relative humidity

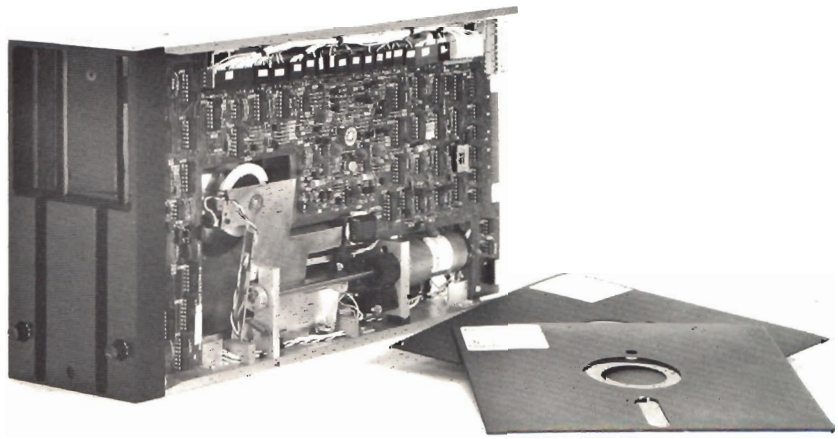
Power Requirements
+5 volts DC 4.0 amps
−5 volts DC .14 amp
+24 volts DC .46 amp

Power Consumption
28 watts DC

Heat Dissipation
109 BTU per hour

Reliability
Read error (soft): less than 1 in 10^9 bits
Read error (hard): less than 1 in 10^{12} bits
Positioning error: less than 1 in 10^6 accesses
MTBF: more than 4000 hours
MTTR: less than 20 minutes
Device life: 5 years or 15,000 hours, whichever occurs first

Available Options
Dual density recording
Remote diskette ejection
Write protect



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