

MEMOREX

550 OEM  
Flexible Disc Drive



**Today's big idea in flexible disc drives is a meeting place for a lot of good little ideas.**

**This is the place.**

### **The 550 OEM. An easy way to shop a tough marketplace.**

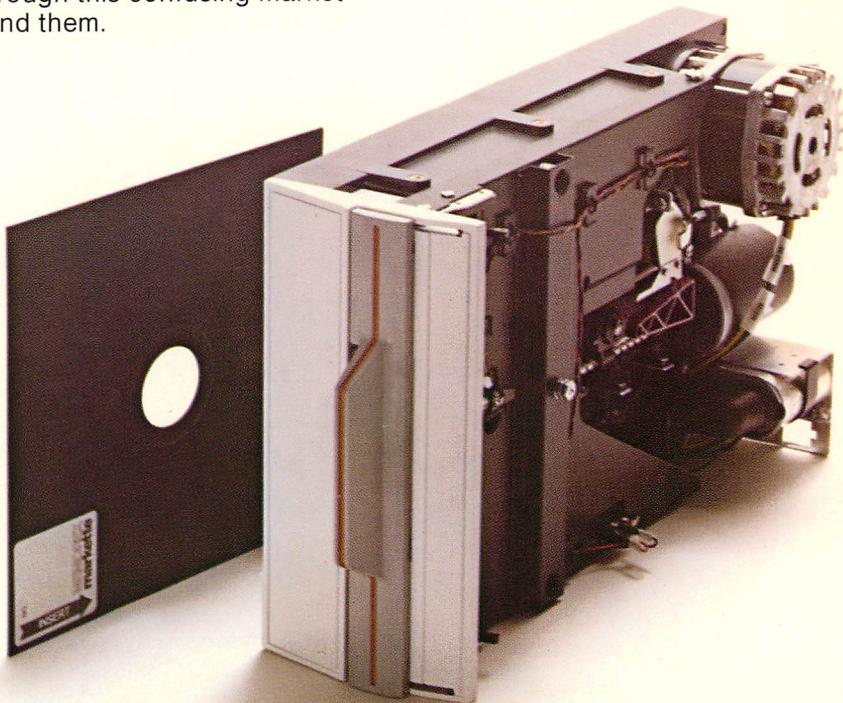
The 550 OEM flexible disc drive is Memorex's latest entry into a very competitive marketplace—that of the compact, direct access, industry standard disc storage unit. It is a marketplace already populated by many similar products, several offered at very attractive prices.

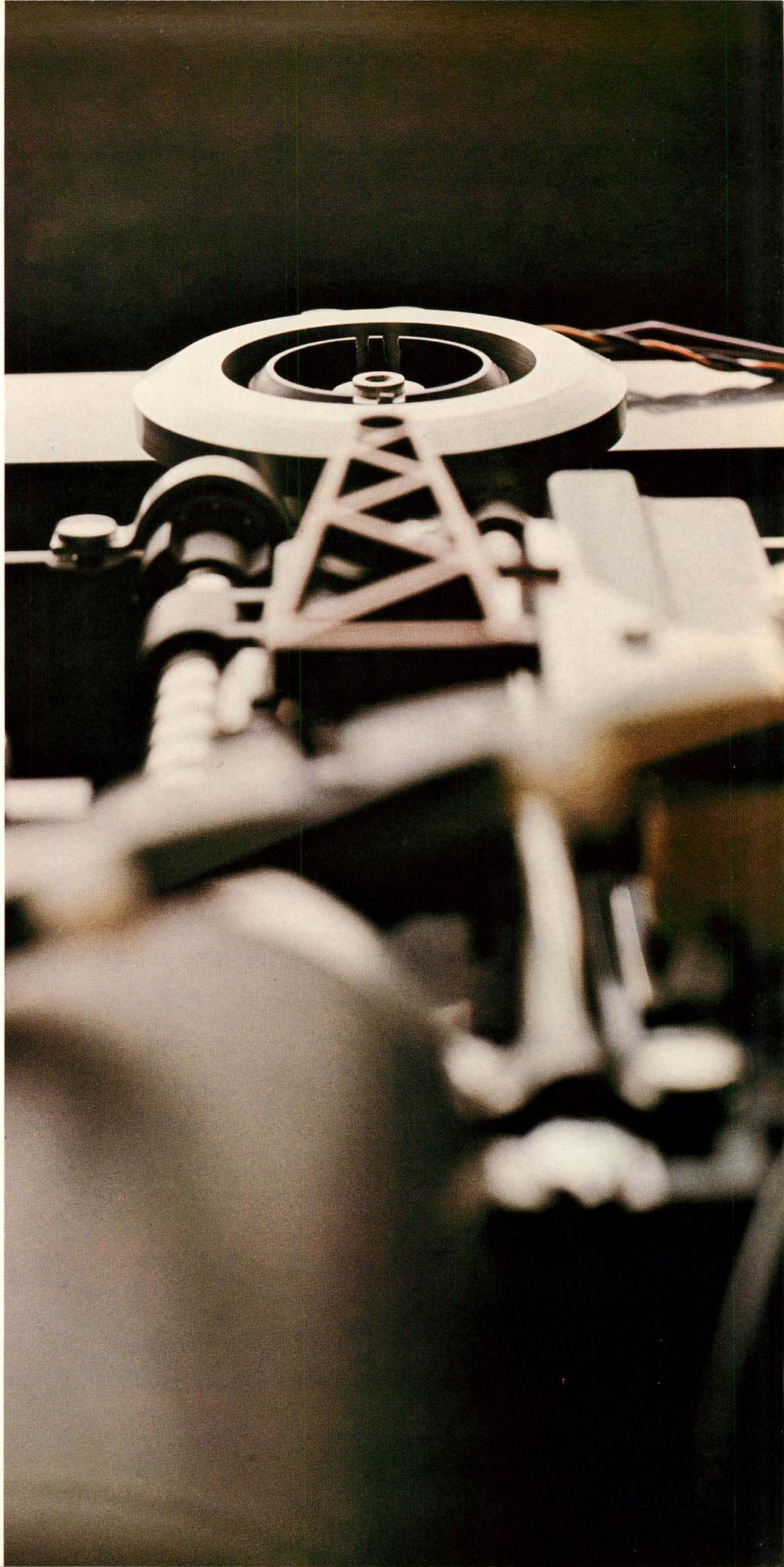
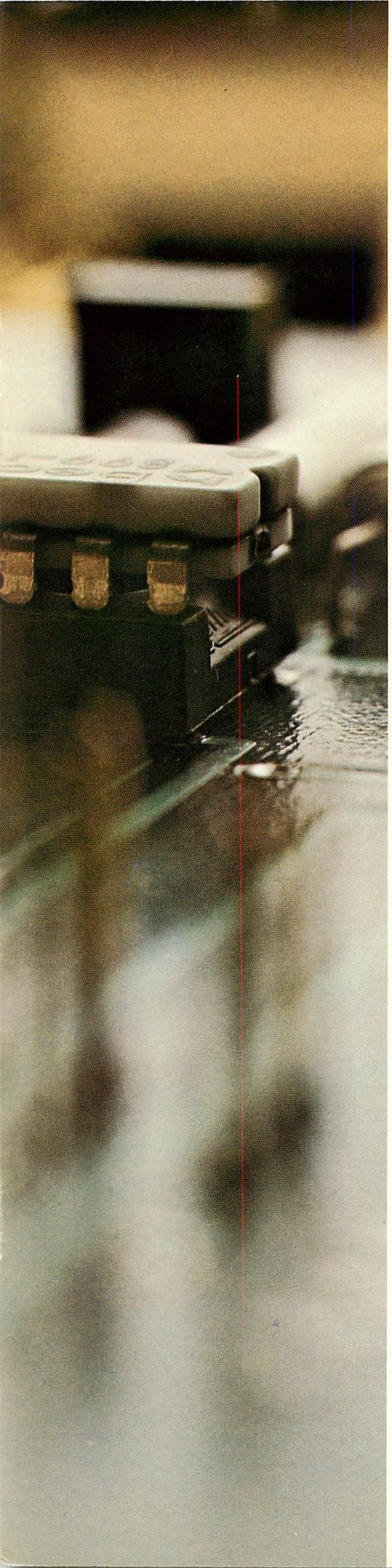
The utility, cost efficiency and ease of operation of a flexible disc drive are becoming more evident to more people in more business situations every day. Situations as diverse as data entry, small business systems, terminals, point of sale, programmable calculators, word processing, control and test systems as well as mini/micro-computers. And as it becomes more accessible to OEM customers, this marketplace is bound to get even more competitive.

It is, for Memorex, a dynamic, demanding, marketplace to share. But for you, it can be a difficult, often maddening marketplace to shop. The claims for superiority and the differences in cost are easy to quantify and almost impossible to qualify. Most important, the differences *do* exist. And making an intelligent buying decision depends on sorting through this confusing marketplace to find them.

The Memorex 550 makes that very tough buying decision a good deal easier. First of all, there is a confidence factor implicit in the name Memorex, a company that has demonstrated exceptional quality, feature by feature, product after product. And secondly, this is not exceptional quality for the few who can afford it. *We want the cost conscious customer.* To get that customer, we must match Memorex quality with attractive prices.

We can. And we will.





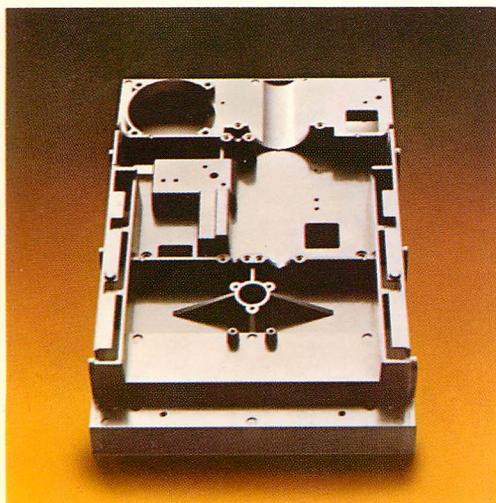
## The Memorex 550 OEM. An accumulation of often obvious, sometimes subtle advantages for you.

Given the marketplace just described, the "big, all-at-once, here-at-last" product idea should be viewed with some suspicion. Memorex suggests a three-step approach in shopping for flexible disc drives: (1) look for the *good little ideas* rather than the single *big one*; (2) isolate as many of those ideas as you can in one product; and (3) buy that product.

Which brings us to the Memorex 550.

### A chassis that makes more sense.

The first good little idea is probably the most dramatic. Memorex has replaced the traditional steel or aluminum chassis with a light and extra-rugged fiber-glass reinforced polyester (FRP) material. Taking a cue from companies like Xerox, Pitney Bowes and IBM (all of whom have employed FRP in applications of comparable severity to ours), we have developed a chassis that is actually *functionally superior* to the metals. Why? Because the tight tolerances we can achieve in the molding process, combined with the material itself, insure part-to-part, time-after-time consistency. And the 550 chassis weighs less. Anywhere from almost two to almost six pounds less than the major competitors.



Memorex 550 chassis is molded of lightweight, heavy-duty FRP, to exacting tolerances that are unachievable with aluminum or steel.

### Packaging that makes more sense.

Weight is what counts when it comes to reduced shipping costs. But when it comes to installation convenience and economies, *only one thing counts*. Size. Measuring a modest 8.75" x 4.38" x 15.7", the Memorex 550 provides the OEM customer with more flexibility. Where many flexible drives are limited to a 2 horizontal/3 vertical rack mounting format, the 550 goes them one better. In a standard 19" RETMA enclosure, our 550's mount not only two horizontally, but a full *four* vertically.

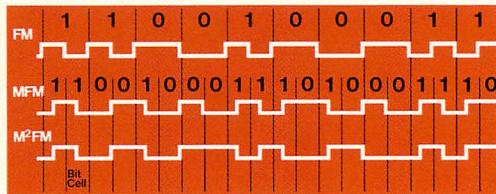
That is one more good little idea that equals one more 550.

### Extra measures of reliability.

Operationally, what counts is a product that is fast and efficient, doesn't make mistakes, isn't temperamental, requires little attention and, if it does, can be quickly repaired. The Memorex 550 is just such a product. First, the 550 boasts faster head load times than most of our competitors. Next, in normal operation, the 550 data transfer reliability is  $10^9$  bits read/soft error and  $10^{12}$  bits read/hard error. Our MTBF rating (Mean Time Between Failures) of 9000 hours outdistances most everyone else in the business. And our 0.5 hours MTTR rating (Mean Time To Repair) is unexcelled in the industry.

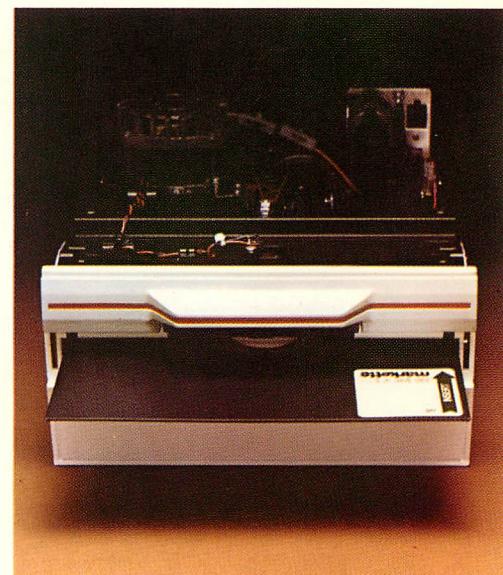
### Double density is standard.

Memorex wanted to make things as easy as possible for customers who are set up for double density recording. So we did the obvious and made it standard on the OEM 550. If your controller is set up for either MFM or M<sup>2</sup>FM recording, the 550 is ready to go to work immediately in that mode, *without costly and time-consuming modification or additional electronics*.



### Eliminating the chances of disc damage.

Disc damage has always been a big problem with flexible disc drives. Not so with the 550. Because Memorex has applied several good little ideas that, for all practical purposes, eliminate the possibility of such damage. *First*, an innovative "balanced velocity" clamping design reduces slippage during engagement on the disc. Media is handled gently and safely. *Second*, we have created an exclusive, *door-controlled latch/eject mechanism* that makes cartridge insertion and removal quite literally a "pop-in/pop-out" operation. And the Memorex "lock/stop" feature makes it impossible to close the door on a cartridge not fully in or out.



Door-controlled latch/eject mechanism and Memorex "lock-stop" feature assure easy, damage-free handling of media.

### Optimizing the hardware/media relationship.

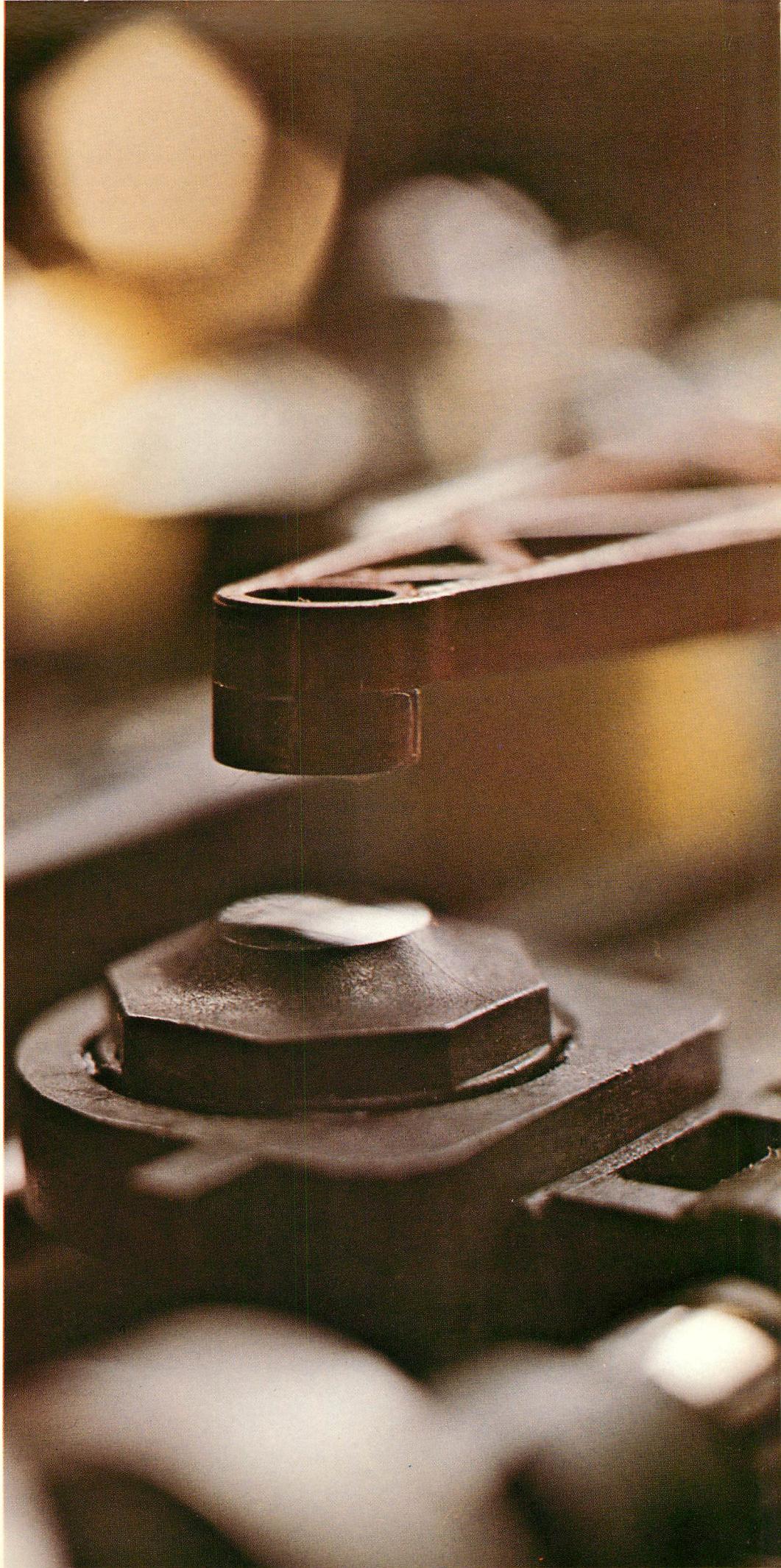
Memorex gives you yet another media advantage with the 550: the full range of industry standard "diskette" media, including our own Markette®. The Markette flexible disc delivers solid recording performance through improved head-to-disc contact while, at the same time, greatly reducing head wear. In fact, *more than 10 million passes per track can be made on Markettes with no significant signal degradation*.

### More built-in features.

The list of good little features keeps getting longer. Ideas like *power-saver* circuitry that reduces head-positioner power by 95% (not 25%, like some) 15 milliseconds after the last stepping command. Track 43 Switching that compensates for the higher bit density on inside tracks by switching to a lower current, automatically and independent of the controller. An *outboard bearing* on the stepping motor that more accurately controls head positioning. State-of-the-art *ceramic heads* for better wear characteristics. *Radial back-lash take-up* that reduces wear on the stepping motor shaft and, so, the chances of head mispositioning. *Drive select circuitry* that allows the units to be connected and operated in either the radial or serial mode. And *plug compatibility* with the popular interfaces.

### Customizing options.

It will come as no surprise that all flexible disc manufacturers offer options. Some offer more. Some offer better. We think Memorex offers both. For instance, we offer *two-sided or flip disc recording*. The same goes for our *file busy indicator* option, a lamp that can be added to the front panel to indicate when the unit is in the write or the read mode. Other options include a *write protect* feature that senses the absence or presence of the ANSI-standard write protect notch and thus prevents accidental writing on the disc. *Hard sector separator* circuitry can be added to the 550, allowing the file to distinguish between the Index hole and up to 32 sector holes when the appropriate disc is used. A *data/clock separator*, a special line containing the separated data or clock information, is also available. Finally, Memorex is one of the few companies featuring a *program-controlled door lock* that prevents the opening of the drive door when so directed by the controller.



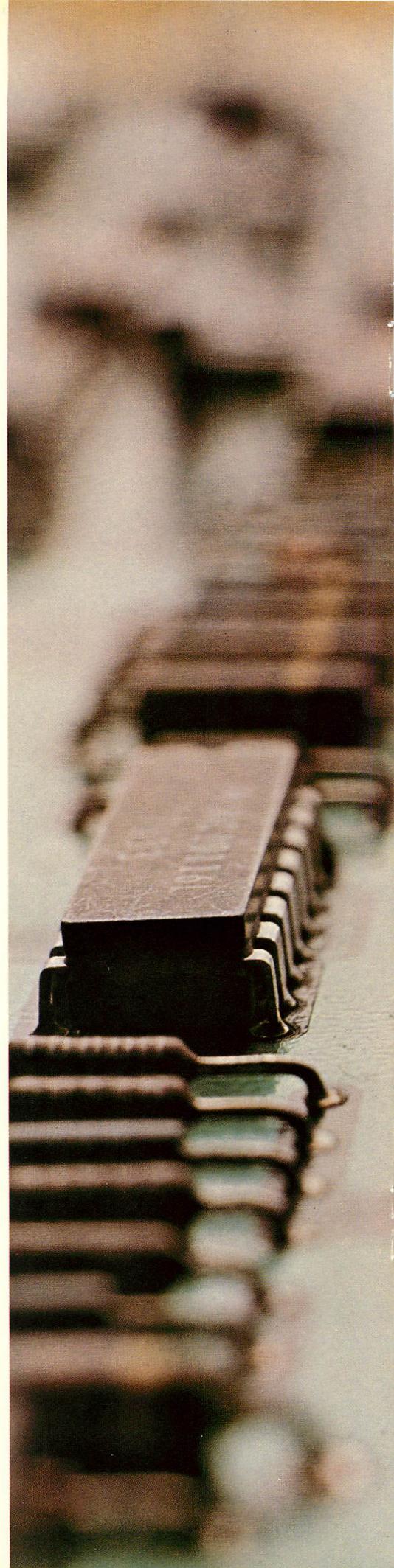
**Whether it's your first floppy. Or  
your next. Whether a few. Or a  
few thousand.**

Memorex makes good business sense. As a matter of fact, we have been making that good business sense since 1961, when memory excellence became the philosophy of Memorex Corporation. And, as we grew, so did our reputation in the field of information storage and retrieval.

Our ability to deliver on that reputation, time and again, has secured our current position as the largest independent supplier of disc drives in the world. So, it was only natural that we became a major force in the floppy marketplace as well. Memorex pioneered that marketplace with the first OEM flexible disc drive. In 1973, Memorex introduced the popular 651 flexible disc file, tens of thousands of which have been put to work for OEM customers. The 550 now expands our OEM commitment, making it the standard of value by which to judge all other flexible disc drives. In the works are other good little ideas sure to make a big difference in the future. Ideas like higher capacities, dual heads, integrated controllers, larger and smaller discs.

It all comes down to this: whether your application is in word processing or small business systems, whether you are considering your first flexible disc drive or simply considering a change in files, the Memorex 550 deserves your critical, first-hand review. *Because of all that we bring to the file itself.* An unparalleled technological base of experience. An engineering and manufacturing edge that comes with fifteen years of involvement with data storage products. *And, because of everything you get out of the 550.* A better product. With more quality. More reliability. Better price/performance. More support in customizing design, in documentation, in a field service and logistics network that link together some 100 offices and 1000 people the world over. All of that and just look: the Memorex 550 is the best looking flexible disc file available today.

The Memorex 550 OEM flexible disc file. A meeting place for a lot of good little ideas that add up to something pretty big for you.



**The Memorex 550 OEM Spec Checklist.**

**Capacity—FM**

IBM Format 243,000 bytes  
Unformatted 401,000 bytes

**Physical Dimensions**

Height: 8.75 inches (22.23 cm)  
Width: 4.38 inches (11.13 cm)  
Depth: 14.0 inches (35.56 cm)  
Weight: 10.7 pounds (4.73 kg)  
Bezel/Door Extension: 1.69 inches (4.29 cm)

**Capacity—MFM or M<sup>2</sup>FM**

IBM Format N/A  
Unformatted 802,000 bytes

**Disc Cartridge**

Type: Memorex Markette  
or equivalent

**Recording Density—FM**

Inner Track: 3268 BPI  
Outer Track: 1836 BPI  
Track Density: 48 TPI

Number of discs: 1  
Tracks per surface: 77  
Diameter: 7.88 inches  
Cartridge

**Recording Density—MFM or M<sup>2</sup>FM**

Inner Track: 6536 BPI  
Outer Track: 3672 BPI  
Track Density: 48 TPI

dimensions: 8 x 8 x 1/16 inches  
Coating: Magnetic Oxide  
Durability: 10 million passes  
per track

**Data Transfer Rate—FM**

250 kb/sec

**Data Transfer Rate—**

**MFM or M<sup>2</sup>FM** 500 kb/sec

**Data Retrieval Times**

Average Latency: 83 msec  
(360 rpm)  
Access Time: 1 Track 8 msec  
Multi-track 6 msec/track  
Settle Time 8 msec  
Head Load Time: 35 msec

**Power Requirements**

**AC**

110 volts (±15%) 50/60 Hz (±1%)  
220 volts (±15%) 50/60 Hz (±1%)

**DC**

+ 24 volts (±5%) 1.5 amps  
+ 5 volts (±4%) 1.0 amps  
- 5 volts (±4%) 0.2 amps

**Operating Environment**

Temperature: 50°F to 100°F  
(10°C to 38°C)  
Humidity: 20% RH to 80% RH, 78°F  
(26°C) max. wet bulb

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