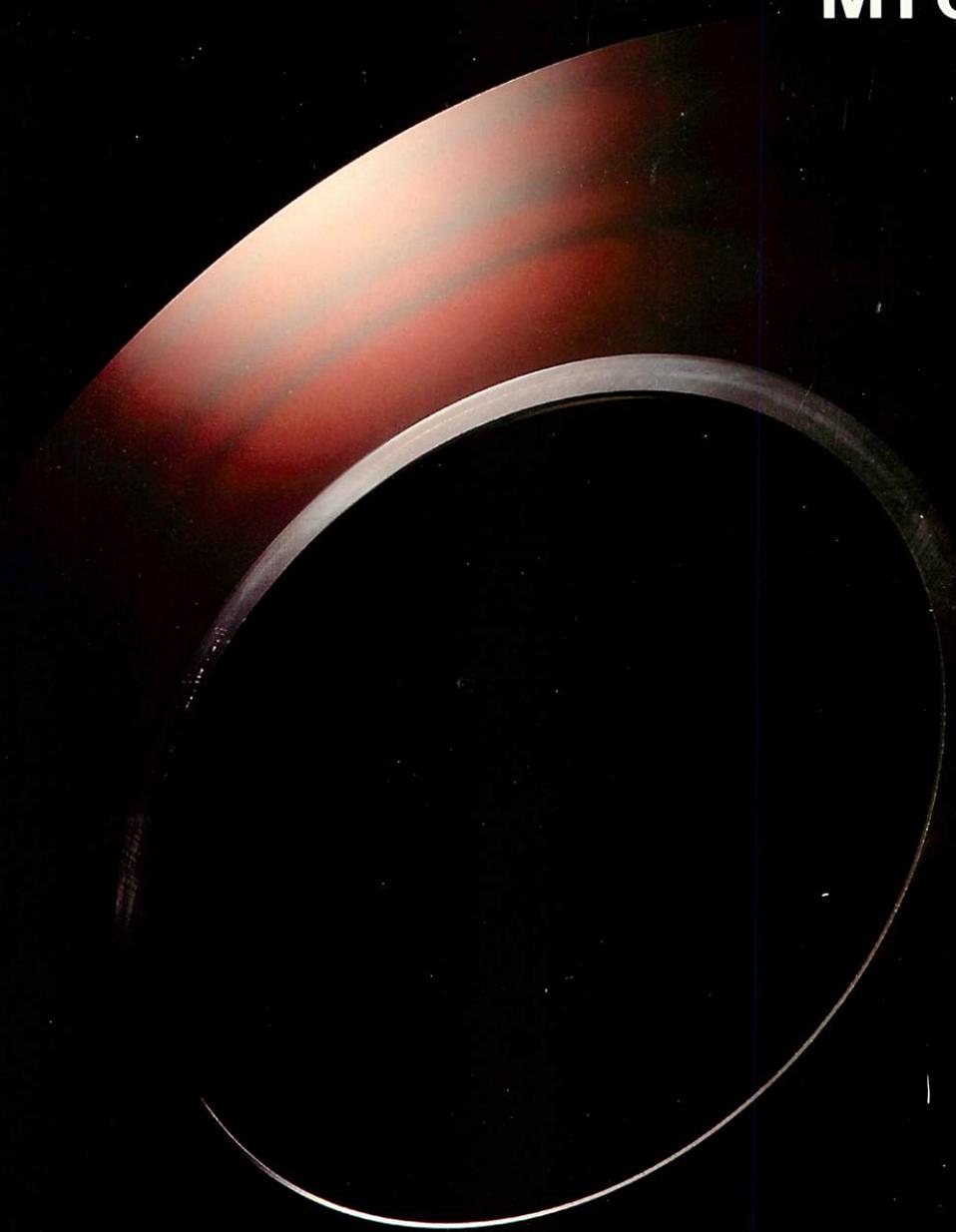


MEMOREX

M Formula



Trouble-Free Performance

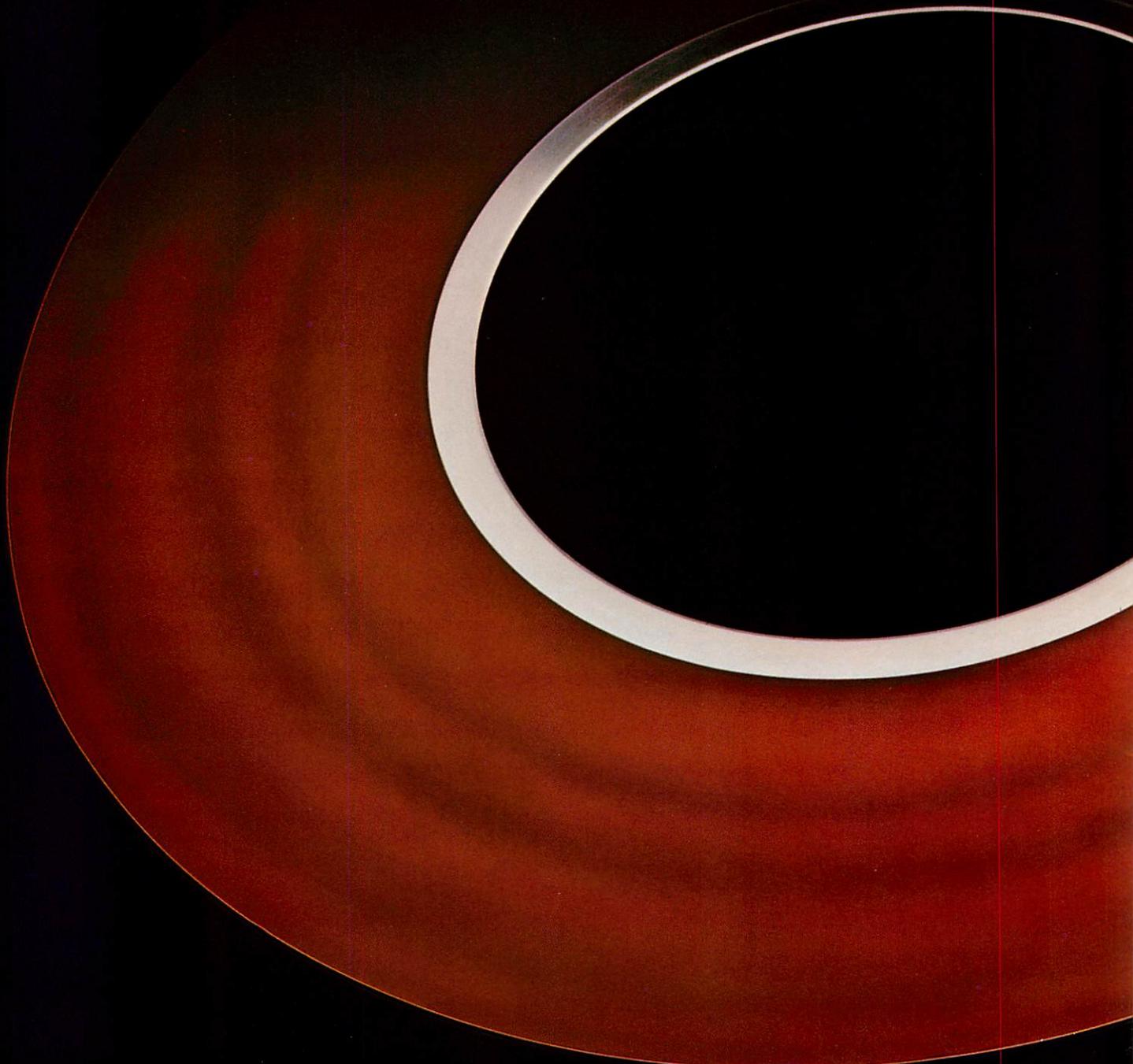
Every Memorex™ disc pack and cartridge is designed to surpass industry standards for *trouble-free* performance and long term reliability. Memorex rigid media products are coated with our exclusive M Formula. Containing one of the Hi/Oxide™ or Oxide II™ formulations, M Formula combines greater recording integrity with durability to improve drive performance and system efficiency.

Data Integrity Redefined

M Formula is establishing new performance standards for rigid media. Most important is the signal to noise ratio M Formula offers—up to 30dB at 10,000 flux changes per inch. Another advantage of M Formula is its optimum coercivity level with magnetic properties much stronger, more consistent and less likely to experience degradation. Both of these factors result in an output amplitude which is larger, stronger and more reliable over time.

M Formula coated discs are also setting new standards for

smoothness and durability. While the industry standard for smoothness is measured in microinches, Memorex's unique multi-step polishing process produces a surface profile measured in half-microinches. M Formula's extraordinary smoothness allows *closer head flying heights* and greater stability. These characteristics are crucial in newer technology drives because more information is packed into smaller areas, and more precise and accurate read/write capabilities are required.



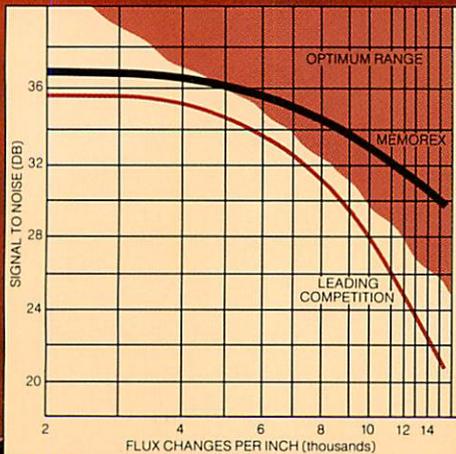
Longer Disc Life

Data integrity isn't the only advantage M Formula's smooth surface provides. Smoothness and hardness together contribute to unsurpassed durability that resists more than 15,000 head loads in Winchester type drives and more than 75,000 in removable media. Both figures represent a 50% improvement over industry standards.

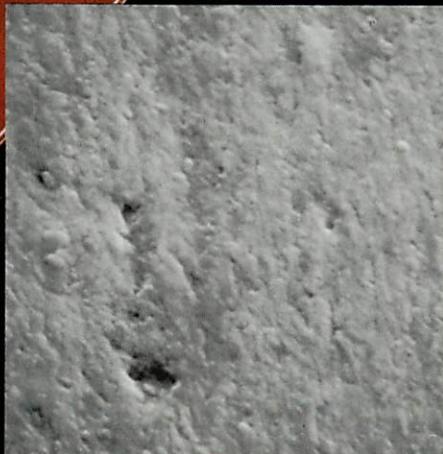
Longer Head Life

Superior durability begins with our aluminum substrate, selected for its structural properties, tensile strength, purity and machinability. Secondly, the oxide particles—Hi/Oxide and Oxide II—in M Formula are extremely uniform in size and shape and lend themselves to precise orientation and proper fusion with the epoxy binder system to create an exceptionally strong coating resistant to both head and media degradation. The special binding material provides

a cohesive foundation for the M Formula coating under extreme temperature and operating conditions. Recorded information can be maintained and protected in a durable, magnetically active media for as long as required. The result is trouble-free data handling, whether the application is archival or on-line. In all types of operations, the probabilities of a head crash and subsequent equipment maintenance are virtually eliminated.



Sample Signal To Noise Ratios



M Formula Class Coated Disc Surface
(Magnified 10,000 X)



Conventionally Coated Disc Surface
(Magnified 10,000 X)

Designed, Manufactured and Tested for the Future

Using revolutionary oxide formulations and advanced manufacturing techniques, M Formula was originally developed for a new generation of double density fixed media drives. With refinements, all the benefits of M Formula have been integrated into Memorex removable media.

M Formula remains virtually 100% free of contamination through every step in the manufacturing process. The coating has a unique balance between inert material and ferric oxide. The oxide particles themselves are smaller and more uniform. The binding system is cross-linked for maximum dispersion and orientation. As a result, the coating is highly continuous.

Combining the particles of ferric oxide, alumina and binder is a precise, sophisticated and intensely controlled process. Each batch of M Formula coating undergoes environmental and sample testing to analyze its magnetic, electrical and mechanical qualities. For example, a portion of each coating batch is cooled to -40°C in order to isolate its magnetic properties and test them for compliance with our strict standards.

Our manufacturing process is unique as well. Advanced machining and preparation procedures provide a stress-free aluminum substrate with a completely stable and extremely smooth foundation for the M Formula coating.

Using a process called spin coating, identical layers of

M Formula are applied to both sides of the substrate simultaneously. Next, Memorex uses an innovative curing method to achieve an optimum balance of surface hardness and coating adhesion. Then, to give the coated disc an ultra smooth finish, it is polished in repeated steps utilizing equipment custom-made by Memorex.

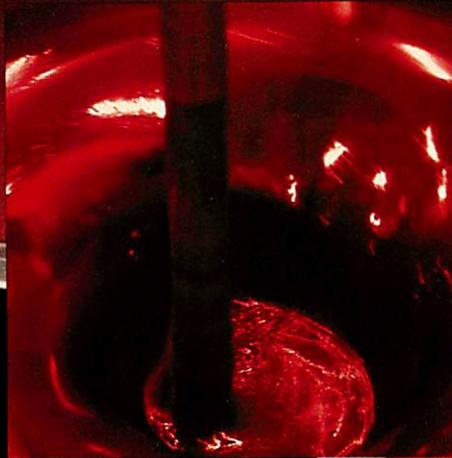
Because of the critical tolerances involved in the head to disc interface, we further ensure surface smoothness by flying special ceramic heads closer to the surface than any head will be flown in actual use. During this process, asperities of microscopic size are burished off the surface area of each disc.

Memorex certifies each disc—track by track—by writing data and reading it back sequentially through multiple heads. This stringent and unique testing guarantees that only superior quality discs will be assembled into Memorex disc packs and cartridges. The assembly process takes place in environmentally controlled areas where highly skilled personnel perform constant quality checks.

After assembly, all disc packs and cartridges are thoroughly tested on drives similar to those on which the products will operate in the customer's facilities. This continuous quality testing of all components and the assembled product, assures that Memorex disc packs and cartridges are completely dependable and will continue to provide outstanding performance to our customers' systems.



Aircraft tempered aluminum provides ideal structural properties, strength and the foundation for M Formula oxide coating.



Substrates are machined using a unique process that adds no stress to the substrate.

The revolutionary M Formula coating is applied simultaneously to both sides of the disc as it spins at a high speed.

A proprietary curing process "sets" the binder within the oxide formulation to produce an exceptionally durable coating.

M Formula discs are polished in repeated steps to achieve an ultra smooth finish, then burnished, tested and certified.

The Memorex Commitment

Our commitment to delivering high performance and on-going reliability is evident in all M Formula rigid disc products. Memorex has made major investments in the research, development and manufacture of advanced media—M Formula fits that technology. These investments include expanding our manufacturing and testing facilities, selecting and/or designing the equipment necessary to produce M Formula coated discs, and dedicating our highly qualified Memorex research personnel to the production of M Formula. In addition, we control the quality of M Formula products by strictly monitoring procurement standards of raw materials and the production of each component in our manufacturing process.

But M Formula represents only one aspect of our commitment. Throughout the past 20 years, our customers have come to depend on the Memorex commitment to leadership in the highly competitive and dynamic computer media industry. They rely on Memorex media and components to optimize performance and assure reliability. All Memorex products are backed by a comprehensive warranty and Technical Assistance Program

as well as intensive ongoing research and development programs. Through our well staffed, well equipped Recording Technology Center, the most sophisticated recording techniques are developed and carefully evaluated for use on our advanced drive and media products. For example, *thin film* heads will be incorporated into future Memorex drives which will utilize rigid media of the M Formula class.

The Memorex Commitment to Excellence: Provide reliable, high performance products which enhance the value and extend the life of our customer's data processing systems. M Formula rigid media fulfills that commitment.





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