

# MEMOREX

**Mark XI**  
**Double Capacity Disc Pack**





# Mark XI Double Capacity Disc Pack



## The Product

The Memorex Mark XI is a double capacity, high performance disc pack containing its own electronic track controllers (servo tracks) which the disc uses to properly position the read/write heads. The Mark XI is compatible with the Memorex 3675 and the IBM 3330 Model II disc drives and can be used interchangeably with the IBM 3336 Model II disc pack. It also features a mechanical interlock to prevent accidental mounting of the disc pack on non-compatible, single capacity drives.

Due to its greater resolution, the Mark XI generates far less residual noise than other conventional disc packs. Signals are also cleanly erased when rewriting on any specific track or when a variety of compatible drives are used by the same disc pack.

The Mark XI contains 19 data surfaces and has a maximum data storage capacity in excess of 200 million bytes. Each Mark XI is pre-initialized with home address and record zeros, saving programming and computer time.

## Proven Expertise

The Mark XI is not just another disc pack. It is the result of proven expertise in disc pack, disc drive and head development and production. This expertise enables Memorex to design and manufacture products of unmatched performance and reliability.



The Oxide particles are deposited and oriented on both sides of the disc during a proprietary spin-coating process. Particle orientation increases signal output and provides greater data integrity. The patented coating is "armour" tough and bonded with the adhesive technologies used in NASA space flight programs.

Oxide particles after orientation.

Oxide particles prior to orientation.



### Precise Substrate Preparation

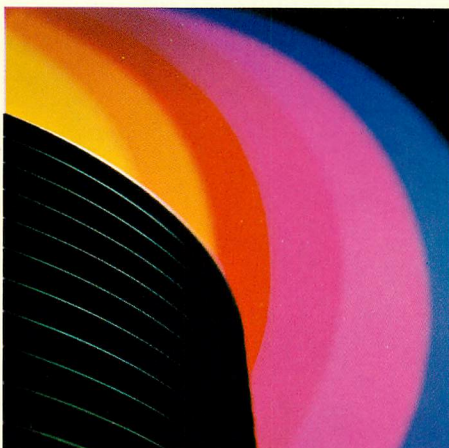
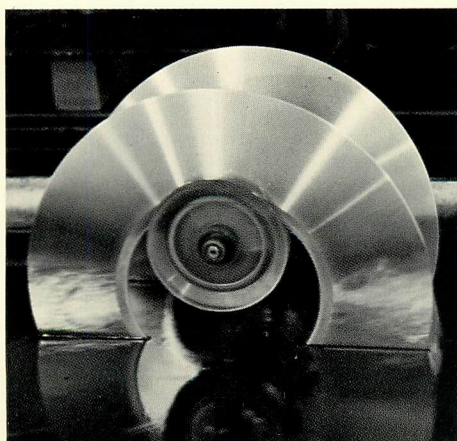
The Mark XI disc pack substrates are machined and polished to the smoothness of optically ground glass using the strictest of tolerances. Prior to coating, these substrates undergo proprietary processing to enhance surface adhesiveness.

The quality of any product is dependent upon the quality of its components. For this reason, each substrate is subjected to nine separate quality control checks prior to final acceptance for coating.

### Armour/Oriented Coating

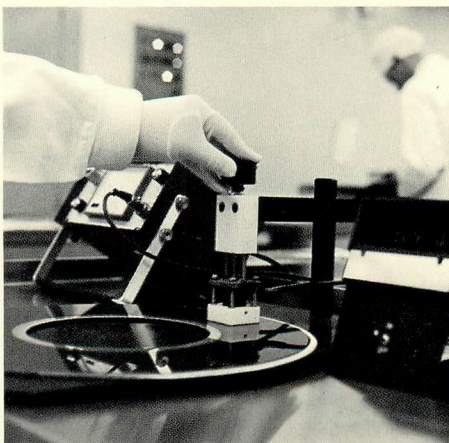
Years of experience in developing disc packs and other magnetically coated products has resulted in a proprietary formulation and process for the coating of the Mark XI disc pack. This "armoured," coating extends disc durability and withstands head loading strains. It also optimizes signal output and minimizes the number of soft errors, drop-outs and data checks.

In environmentally controlled clean rooms, the special formulation is applied to micro-inch accuracy using advanced spin coating techniques. The coated surfaces are then cured to exacting temperatures and polished to precise standards.



### Advanced Testing and Final Assembly

Prior to final assembly, each Mark XI disc receives 200% surface testing. By tracking special test heads in overlapping paths, each disc is checked for minute flaws or potential irregularities. The Mark XI disc packs are then hand assembled by skilled technicians using specially designed assembly and test equipment. The completed disc packs are then dynamically dual-plane balanced to eliminate disc wobble.



### Servo Track Writing and Final Testing

The read/write tracks on the Mark XI disc pack are so narrow and close together that two of them could be contained on one edge of a page from this brochure. It is for this reason that the special servo-writer is kept in a thermally controlled isolated room and mounted on a vibration resistant base. Writing servo-tracks on the disc is a highly critical operation that is continually monitored to assure total accuracy. The end result is that true track alignment and precise cylinder location is achieved regardless of the number of different compatible spindles used to drive the Mark XI. Disc packs are then tested on a specially designed drive to simulate marginal signal conditions under worst-case data combinations and are then formatted for immediate use. Finally, the disc packs are specially packaged for storage and shipment.

### Specifications

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Number of Discs per Pack:

- 10 recording discs
  - 1 top protective disc
  - 1 bottom protective disc
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Number of Recording Surfaces:

19 plus servo

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Number of Cylinders:

808 plus 7 alternates

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Number of Tracks:

15,352 plus 133 alternates

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Storage per Pack:

200,036,000 Bytes

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Storage per Cylinder:

247,570 Bytes

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Storage per Track:

13,030 Bytes

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Shipping Weight: 26.5 pounds

Warranty: 1 year

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