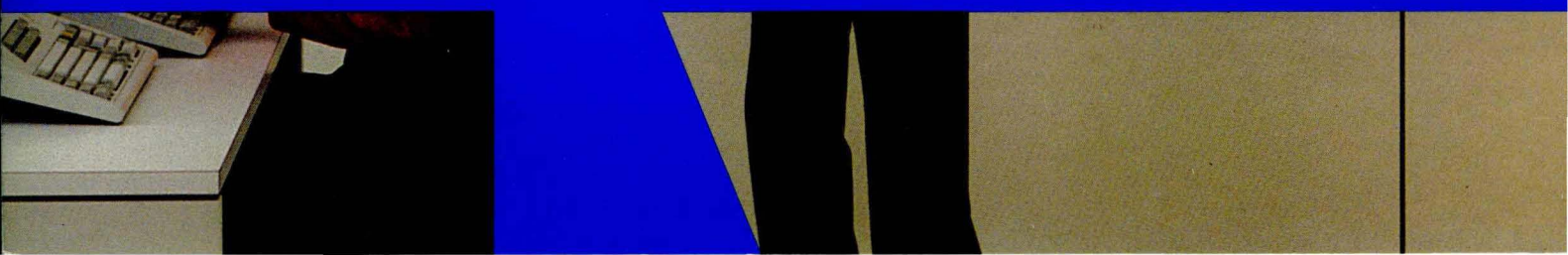
IBM

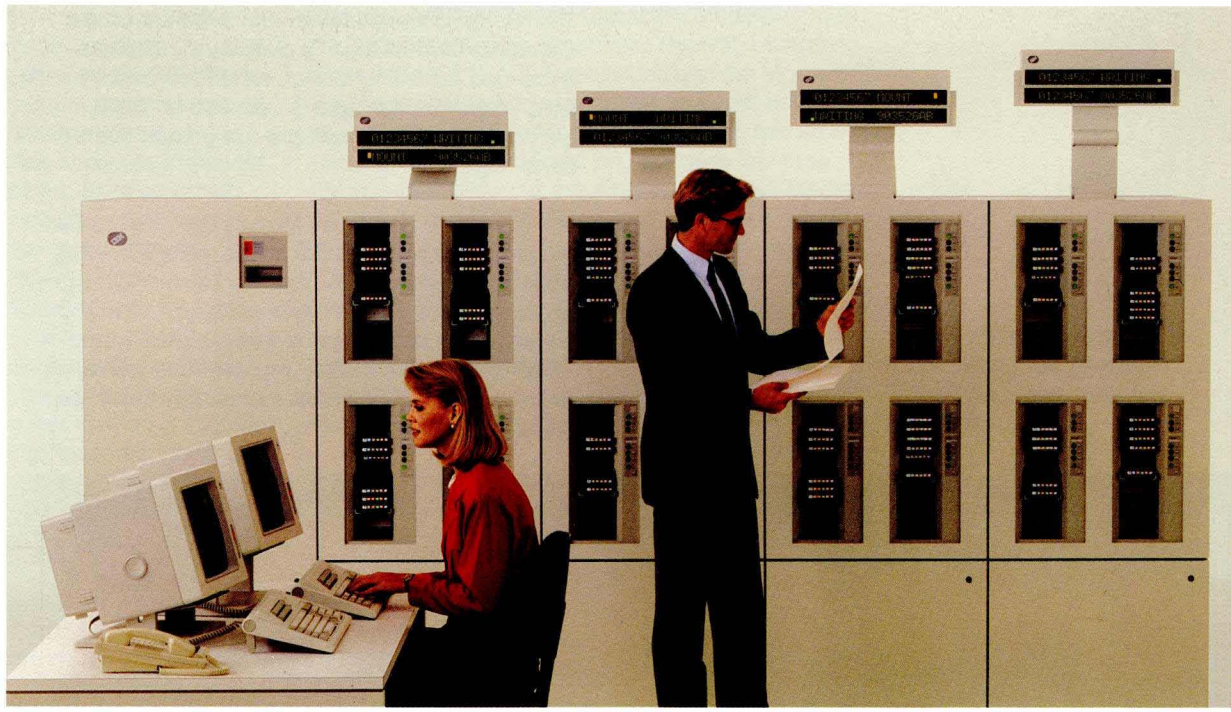
3490 Magnetic Tape Subsystem

A new standard of excellence in tape technology, performance, availability, productivity and connectivity



Enhanced Capability Models, a new range of cost-saving benefits

The IBM 3490 Enhanced Capability Models set new performance standards and exploit ESCON™ environments.



The new family of IBM 3490 Magnetic Tape Subsystem Enhanced Capability Models are designed to meet the challenge of today's expanding performance, availability, productivity and connectivity requirements. The 3490 Enhanced Capability Models deliver significant benefits when compared to all previous 3490 and 3480 models.

The 3490 Enhanced Capability Models A10/A20/B20/B40 offer notably higher levels of cost-savings to satisfy today's information systems requirements. The list of innovative improvements includes better performance, greater cartridge capacity, improved data recording capabilities, faster data transfer rates, and extended attachment for remote tape operations.

These cost-saving advantages extend to the IBM 3490 Enhanced Capability Models D41 and D42 as well – models which have been designed especially for use with mid-range and intermediate systems including the IBM Enterprise System/9000™ (ES/9000™).

The Enhanced Capability recording format utilizes a 36-track thin film head, which doubles the cartridge data capacity on the Enhanced Capability Models when compared to previous 3480 and 3490 A01/A02/B02/B04/D31/D32 Base Models. Improved Data Recording Capability (IDRC), a function which allows more data to be stored on a cartridge, is always enabled on the Enhanced Capability Models. With this combination, cartridge capacity can increase up to 10 times (depending on the data characteristics) when compared to uncompacted cartridges created on 3480 or 3490 Base Models.

So whether your tape requirements fall into the large, intermediate or mid-range category, the IBM 3490 Enhanced Capability Models set new performance standards for what you can expect from sophisticated magnetic tape subsystems in the years ahead.

The Enhanced Capability recording format virtually eliminates the rewind time on full cartridges.

Both subsystems provide new levels of performance for virtually every tape task, including backup, disaster recovery, archiving, batch processing and interchange. They can provide measurable improvements in capacity, performance, availability and connectivity.

Enhanced performance by dynamically controlled tape handling

The basic element of the 3490 Enhanced Capability Models is an intelligent control unit incorporating multiple microprocessors and a dynamic buffer for enhanced performance. In addition, the performance of IDRC has been significantly enhanced as well, which allows an instantaneous data transfer rate of up to nine megabytes (MB) per second when attached to ESCON channels.

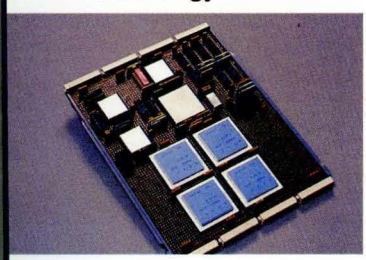
Enhancements to channel performance and connectivity are also provided with the 3490 Enhanced Capability Models. Up to four ESCON channels can be attached on the Model A10 and up to eight ESCON channels can be attached on the Model A20. Similarly, 3490 D Models can attach up to two ESCON channels. Doubling the number of ESCON channels compared to 3490 Base Models provides new opportunities in floor-space planning, configurability and connectivity. The 3490 Enhanced Capability Models allow coexistence of parallel and ESCON channels. The channel adapters for both are field installable. ESCON channel-connected 3490 tape subsystems can be installed up to nine kilometers away from the processor, allowing remote tape operations.

Greater tape drive efficiency

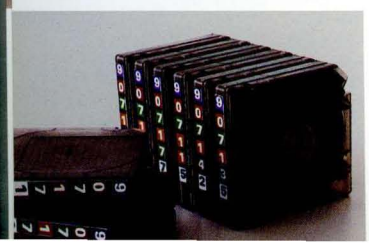
The IBM 3490 Enhanced Capability tape drives continue to offer a range of advanced features and functions. Each transport can move tape at high speeds while searching for a particular block of data. The tape drive microprocessor simplifies cartridge loading by automatically threading the tape, attaching it to the take-up reel and positioning it accurately for processing. And the Enhanced Capability format using 36-track recording can virtually eliminate the tape rewind time when writing or reading full cartridges.

In addition, each tape transport features an eight-character message display that identifies to the operator which cartridge to mount or demount. The display can inform operators about drive status, as well as the need for operator intervention and repair actions. These messages can help reduce mounting errors and improve operator productivity.

Improved Data Recording Capability utilizes sophisticated hardware and microcode technology.



Enhanced Capability Models can back up today's DASD volume on two cartridges.



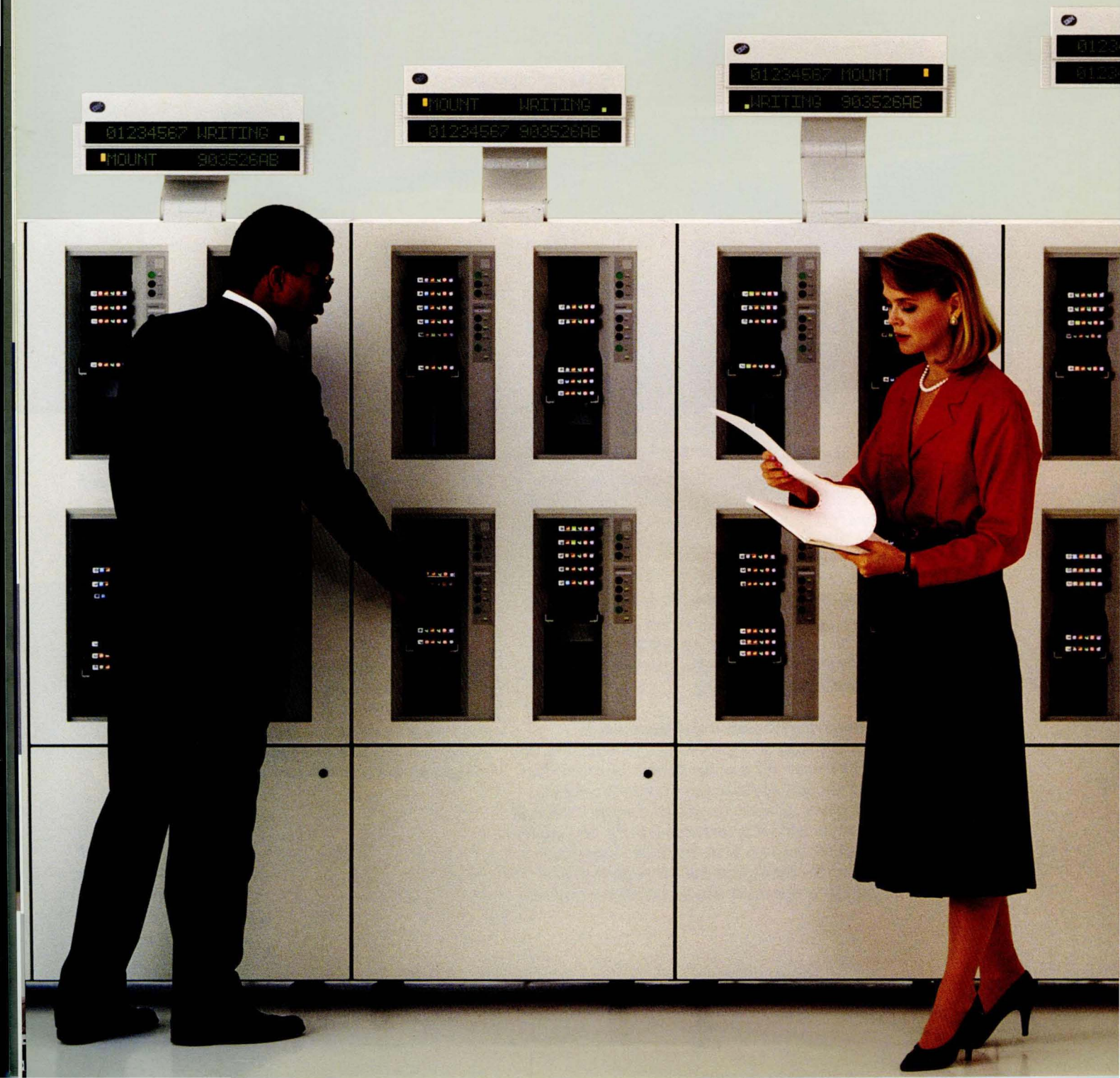
Proven reliability
The IBM 3490's proven hardware design provides a continuing level of reliability. The 36-track thin film head and the proven 3490 tape path together provide a stable and controlled media/head interface for precise and positive tracking.

Add to this the benefits of a new error correction technique with up to a 50 percent reduction in logic cards, and you can easily see why the IBM 3490 Enhanced Capability Models advance the standard for subsystem reliability and availability.

Exceptional performance and throughput
High performance and fast throughput, hallmarks of IBM 3490 operations, also have been improved. The 3490 Enhanced Capability Control Units contain a dynamic buffer for each control unit function. Through the implementation of an enhanced buffer and sophisticated microcode, the 3490 Enhanced Capability Models can read data from the cartridge to the dynamic buffer and transfer it to an ESCON channel at instantaneous data rates up to nine MB per second, a significant improvement over 3490 Base subsystem performance. This is also true for write operations. The enhanced buffer also contributes to improved parallel channel performance. If one control unit function in a Model A20 is significantly busier than the other control unit function, work can be shifted to improve throughput by balancing the tape subsystem workload.

Furthermore, with performance-enhanced IDRC and ESCON channels, the effective data rate can be improved up to 70 percent compared to 3490 Base subsystems without these capabilities, a significant step forward. Impressive reductions in the time required for important data backup operations also may result.

Cartridge loaders increase operational productivity.



Automated for operator productivity
For increased operational productivity, a cartridge loader is integrated with each Model B20/B40 tape drive. On the Models D41 and D42, the Automatic Cartridge Loader is an optional feature.

This device can automatically mount, demount and stack up to six cartridges. It can demount one cartridge and mount another in seven seconds. The result is significantly reduced tape-handling time and faster job execution.

Furthermore, when you combine enhanced recording format with IDRC, the potential of a two- to ten-fold increase in effective cartridge capacity lets you use fewer cartridges to process the same amount of data.

Also, there is now an improved balance between the effective cartridge capacity and the capacity of a full volume of a Direct Access Storage Device (DASD). Only twelve 3490 Enhanced Capability Model transports may be required in order to "dump" the entire capacity of a full string of DASD – automating operator productivity. A single transport with cartridge loader may contain up to seven gigabytes, allowing mid-range installations to achieve unattended backup of their critical disk-stored data.

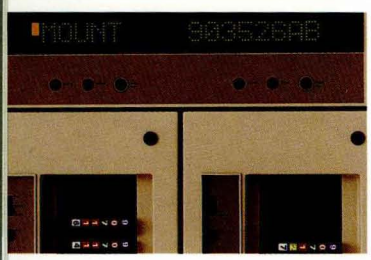
Economical to operate
For all their added speed, power and function, the IBM 3490 Enhanced Capability Models continue to offer dramatic savings in power and cooling costs – about 25 percent less than you would pay for an IBM 3480 Tape Subsystem and 85 percent less than an IBM 3420 Tape Subsystem with an equivalent number of tape transports. Savings of this magnitude speak for themselves. The message is better overall performance at significantly lower cost.

Enhanced Capability Models offer dramatic savings in power and cooling costs.

Furthermore, if your data processing operation is like most, floor space is at a premium. That's why you'll be pleased to find that the IBM 3490 Models A20 and B40 take up 80 percent less space than a similarly configured IBM 3420, and up to 50 percent less space than a similarly configured 3480 subsystem.

Tape storage, which can take up more floor space than the tape drives themselves, offers similar savings. A cartridge created by 3490 Enhanced Capability Models offers over 12 times the equivalent data capacity of a standard tape reel, while needing only about half the storage room.

IBM 3490 Enhanced Capability Models: Innovations that offer proven performance, reliability, productivity, connectivity and serviceability

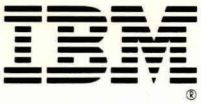


Innovative in design, mechanized and miniaturized to give you more with less, and now improved, the IBM 3490 Enhanced Capability Models are truly land mark systems. For mid-range, intermediate and large system users across the entire user enterprise, the Enhanced Capability Models offer a choice designed to satisfy the most exacting tape processing demand – with higher levels of performance, proven reliability, operational productivity, increased connectivity and non-disruptive serviceability.

For these reasons and many more, including enhanced recording format . . . performance-enhanced IDRC . . . attachment up to nine kilometers distant . . . up to nine MB per second instantaneous data rate . . . low power cooling and space requirements . . . and highly reliable compact data storage . . . the IBM 3490 Enhanced Capability Models can:

- Back up today's DASD volume on two cartridges
- Balance your tape performance with your high-speed processors, channels and DASD
- Extend configuration flexibility
- Offer significantly higher levels of cost-savings
- Satisfy today's information systems data storage requirements.

If you'd like to find out more about the IBM 3490 Magnetic Tape Subsystem Enhanced Capability Models and the many ways they can help you meet your data storage challenges, contact your IBM marketing representative.



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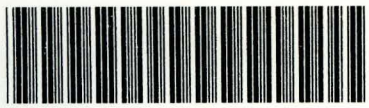

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