

3490-B04 IBM Magnetic Tape Subsystem Model B04

IBM Japan Sales Manual
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Product Life Cycle Dates

Type Model	Announced	Available	Marketing Withdrawn	Service Discontinued
3490-B04	1989/10/24	1989/11/01	1994/12/27	2018/03/31

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Abstract

The IBM 3490 is a family of Magnetic Tape Subsystems designed to provide significant tape subsystem performance and cartridge capacity improvements.

Model abstract 3490-B04

The 3490-B04 is a 18-track, 4-drive component for an IBM 3490 tape subsystem. The subsystem will occupy approximately 50 percent less floor space than a comparable 3480 configuration by incorporating four-drive packaging and by placing up to two control unit functions in one box. Standard features include: Improved Data Recording Capability, cartridge loaders on every drive, and a 2Mb buffer. The moveable message display is improved in readability and character size. The Model B04 can be field upgraded to a Model B40 providing granularity from a minimum two drive 18-track configuration to a four drive 36-track configuration. Components are serviced from the rear to minimize operational interference.

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Highlights

- Significant Tape Subsystem Performance Improvement
- Significant Cartridge Capacity Improvement

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Description

Business Solutions

The 3490 Magnetic Tape Subsystem family offers solutions to business requirements in the areas of adaptability, maintenance, reliability and availability, usability, and exploitation. All 3490 Magnetic Tape Subsystems can attach to multiple processors and are supported by MVS, VM, VSE, AIX/370, and TPF.

The IBM 3490 family's innovative packaging provides environmental characteristics that are far superior to those of previous tape technologies.

Model description 3490-B04

The 3490 Model B04 contains four 18-track tape drives. Its design and standard features combine to provide significant environmental savings, enhanced performance, and operational efficiency. The enhanced packaging can provide up to 50 percent floorspace savings when compared to similar 3480 configurations. The smaller floorspace reduces operator travel time and contributes to improved operational efficiency. Components are serviced from the rear to minimize operational interference.

Improved Data Recording Capability (IDRC), which is standard, can increase effective cartridge capacity by up to five times and in conjunction with 4.5 Mb/Sec. channels, can improve subsystem performance by up to 70 percent when compared to 3480 attached to 3.0 Mb/Sec channels. The 3490 B04 can read and write 3480 recording format providing complete data interchange with the 3480.

Each 3490 drive is equipped with a newly-packaged, integrated cartridge loader and has a single message display unit containing four readouts. This message display is improved in readability, character size, and height, further contributing to operational efficiency. In addition the display is mounted on a moveable arm that can be positioned to accommodate a wide variety of customer configurations. Messages are available in one of five languages: English, German, French, Spanish, and Italian.

The IBM 3490 Magnetic Tape Subsystem is based on the proven IBM 3480 cartridge tape technology and provides performance, capacity, floorspace, and operational efficiencies to satisfy tape processing requirements.

Business Solutions

The 3490 B04 subsystem requires up to 50 percent less space than is required for an equivalent number of 3480 tape drives.

The IBM 3490 requires no scheduled preventive maintenance. IBM customer engineers use a microprocessor-based maintenance device to perform diagnostics and repairs. Service is accomplished from the rear of the Model B04, improving user operations and drive availability.

User Productivity

IBM technology, featuring thin film heads, improved error correction capability, and enclosed tape cartridges, offers high availability. This technology is included in all IBM 3490 product family members. The proven IBM error correction capability has been implemented through error recovery programs in the control unit's microcode.

Operator productivity can be improved by utilizing the enhanced operator message display and the integrated cartridge loaders. The larger message display allows the operator to view system messages from a far greater distance than was previously possible with the 3480. The enhanced display is movable on the Model B04 and provides individual message panels for each drive.

The integrated cartridge loader is standard on Model B04. This cartridge loader allows premounting of up to six cartridges per drive.

During read operations, the 2Mb buffer permits the control unit to respond rapidly to host read commands by prereading multiple data records from drives into the buffer. Similarly, during write mode operations, multiple data records can be transferred from a host to a control unit's buffer at channel speeds.

Growth Enablement

The 3490 Model B04 tape drive unit is upgradable to the Model B40 tape drive unit in the same footprint.

In general, the ability to upgrade and to add additional channel adapters provides the user with the availability and adaptability needed to have his or her equipment expand as the need arises, and not to incur additional cost until required.

Investment Protection

The IBM 3490 Magnetic Tape Subsystem, with its innovative design and proven cartridge technology, continues IBM's commitment to improved performance, capacity, reliability, and operational productivity over previous tape

technologies.

Since the introduction of the IBM 3480 Magnetic Tape Subsystem in 1985, IBM has enhanced its cartridge tape products with additional models and significant capabilities to address the changing role of tape usage in today's information processing installations. The introduction of the IBM 3490 family continues that evolution and provides full data compatibility across the range of IBM cartridge tape products.

Systems Management and Systems Handling

The IBM 3490 family's innovative packaging allows for significant space savings and other environmental characteristics far superior to those of previous tape technologies. Operational productivity is improved by saving steps since the operator must move only half the distance to access the same number of drives, compared to the 3480 Magnetic Tape Subsystem. Add to this the standard features of Improved Data Recording Capability and the integrated cartridge loaders, and operator intervention will be greatly reduced. This can result in fewer tape mounts required for the same operation.

The Model B04 has four tape drives in a single enclosure (B-Box).

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Models

Model summary matrix

Model s	Control Uni ts	Drives	Channel s Avai lable	Tracks	Data Rate MB/sec	Data Capacity /Enhanced Tape
B04	-	4	-	18	3.0	200MB

Maximum

Two Model B04 Magnetic Tape Drive Units (8 Drives) can be attached to one A01 control unit or four model B04 Magnetic Tape Drive Units (sixteen drives) can be attached to one A02 control unit.

Customer setup (CSU)

No.

Devices supported

None.

Model conversions

A 3490 Model B04 can be upgraded to a 3490 Model B40. (For IBM US, No Longer Available as of October 18, 1996)

Estimated CE hours: B04 to B40 - 9.0 to 22.0 hrs/B unit. Note: The above hours are person hours only (using one CE). For estimated system down time and recommended number of CEs per configuration see the 3490 System Assurance Product Review (SAPR) Guide.

Parts removed as a result of a model change become the property of IBM.

National language support

Message display is available in 5 languages: English, French/French Canadian, German, Spanish, or Italian. If none is specified English will be supplied.

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Technical description

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Physical specifications

Model B04
Width: 724 mm (28.5 inches)
Depth: 863 mm (34.0 inches)
Height: 1770 mm (69.65 inches)
Weight: 403 kg (890 lb)
Heat Output: 4450 BTU/hr
Power: 1.40 kVA

Operating environment

Temperature: 15.6 to 32.2C (60 to 90F)
Relative Humidity: 20 to 80 percent
Wet Bulb: 25.6C (78F)

Limitations

The Model B04 may be attached to 3490 Control units Model A01 or A02. In any configuration where Models B04 and B02 are included in the same string, the Model B02 must be positioned after all Model B04s in that string.

Hardware requirements

The 3490 Model B04 must be attached to a 3490 Control Unit Model A01 or A02.

Software requirements

Programming support for 3490 Model B04 is provided by the following:

- Read and Write (Full) Support by:
 - OS/400 V2 R1
 - MVS/XA DFP V2 (5665-XA2) R4 (with MVS/SP V2 + APARs as required)
 - MVS/DFP V3 (5665-XA3) R1.1 (with MVS/SP V2 R2.3 + APARs or MVS/SP V3 + APARs as required)
 - DFHSM V2 (5665-329) R4 + APAR
 - DFDSS V2 (5665-327) R4 + APAR
 - DFSORT (5740-SM1) R11.0 + APAR # PL41272
 - VM/XA SP (5664-308) R2.1 (CP and CMS)
 - VMTAPE-MS (5664-292)
 - VMBACKUP-MS (5664-291)
 - VSE V4 (5750-ABF) R1.1
 - TPF V2 (5748-T12) R3 + APAR
 - TPF V3 (5748-T13) R1 + APAR
 - EREP V3 (5654-260) R4 (for use on VM/SP including HPO)
 - EREP V3 (5656-260) R4 (for use on VSE/SP)
 - EREP V3 (5658-260) R4 (for use on MVS including MVS/ESA)
- IDRC Read Only (Toleration) Support by:
 - MVS/370 DFP V1 (5665-295) R1.2 + APAR (with MVS System Product V1 R3.5 + APAR)
 - VM/SP (5664-167) R5 + APAR
 - VM/SP (5664-167) R6 + APAR
 - VM/SP HPO (5664-173) R5.0 + APAR
 - VM/SP HPO (5664-173) R6.0 + APAR
 - VMTAPE-MS (5664-292)
 - VMBACKUP-MS (5664-291)
 - OS/400 V1 R3

Note 1: VM systems must have at a minimum read only (toleration) level support in order for a guest to utilize full support.

Note 2: The 3490 B04 appears as an existing 3480 tape drive to the VM operating systems and is genned in the xxxRIO definition as a 3480 tape drive.

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Publications

The following publication is shipped with the product.

- GA32-0126 3490 Magnetic Tape Subsystem Model B04 Operator's Guide
- GA32-0047 Care and Handling of the IBM Magnetic Tape Cartridge

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Features

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Features - No charge

(For IBM US, No Longer Available as of June 28, 2002)

- Power Group:
- Cover Group:
 - #9066 Pearl White (Default)
 - #9060 Willow Green
 - #9061 Garnet Rose
 - #9062 Sunrise Yellow
 - #9063 Classic Blue
 - #9064 Charcoal Brown
 - #9065 Pebble Gray
 If no Cover Group is specified, Pearl White (#9066) is supplied.
- Machine Nomenclature:
 - #2927 English (Default)
 - #2928 French/French Canadian
 - #2929 German
 - #2931 Spanish
 - #2932 Italian
 - #2930 Japanese
 - #2938 Brazilian Portuguese
 If no Language is specified, English (#2927) is supplied.

The above specify features are only available at time of manufacture.

The drive unit message display nomenclature will match the machine nomenclature if one of the following five Machine Nomenclature languages is specified: English, French, German, Spanish, or Italian. If a match is not possible English will be set. The installing Customer Engineer can select any of these five languages or numeric symbols to be displayed in the drive unit message display.

- Library Attachment Facility Feature
 - #9495 Library Drive Attachment Feature - should be specified on each 3490 Model B04/B40 being installed in a 3495 Automated Tape Library. This feature provides current level engineering instructions necessary for installation of a 3490 B04/B40 in a 3495 Automated Tape Library.

Features - Chargeable

None.

Feature exchanges

None.

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Accessories

None.

Customer replacement parts

Not available.

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Machine elements

Not available.

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Supplies

Product Description	Part No.	UPC Code
3480 Cartridge Storage Tape, 200MB	4770150	0-87944-21119-8
Conductive Cleaning Cartridge	05H3917	0-87944-21181-5
3490E Cartridge Storage Tape, 800MB	09G4494	0-87944-21117-4

For additional media supplies refer to:

<http://www.storage.ibm.com/media>

or contact the appropriate distributor for your location as given below:

Supplemental media

None.

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