Apple Tape Backup 40SC Description, Compatibility (Discontinued)

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Security: Everyone

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TOPIC ----------

This article describes the Apple Tape Backup 40SC.

DISCUSSION ----------

The Tape Backup 40SC is a block-type device: data is written to, and read from, the tape cartridge in blocks. The controller module provides all data handling functions for SCSI bus transfers and tape cartridge Read/Write module controls, Read-Write head positioning, end sense, and analog-to- digital, digital-to-analog (ADC/DAC) signal conversion for the tape cartridge. The drive and Read-Write modules perform their functions under the direction of the controller module.

Writing to the tape unit begins with the user's command to back up a storage device such as a hard disk. Backup utility software loaded into the Macintosh receives this command and begins transferring data from the storage device to a range of Macintosh main memory. The software then passes control and the address in main memory of the data being transferred (buffer address) to the Macintosh SCSI firmware.

Using standard SCSI commands, the SCSI firmware gives the controller module the logical address to write the incoming block to the tape unit. The controller module translates the logical address to a physical address on the tape, and sends the Read-Write and drive modules commands to position the Read-Write head and activate the tape transport. The incoming data blocks are buffered in the controller module during this translation, but then are passed to the Read-Write module for writing through the control module interface. The Read-Write module then performs the actual write operation according to the commands sent to it by the controller module. The controller module uses the standard SCSI protocol to tell whether the write was successful.

Reading from the tape backup unit begins when the user issues a command to

recover a backup file. The backup utility software receives this command and sets up a range of Macintosh main memory (a buffer) to receive the incoming file. The software then passes control (and the buffer address in main memory) to the Macintosh SCSI firmware.

To read from the tape unit, the Macintosh SCSI firmware sends the controller module the logical address of the target block, using the standard SCSI commands. The controller module translates the logical address to a physical address on the tape cartridge and sends the Read-Write and drive modules the commands to position the Read-Write head and activate the tape transport. The outgoing data blocks are passed to the controller module through the control module interface. They are buffered in the controller module and then passed to the SCSI controller for output onto the SCSI bus. The controller module acknowledges correct (or faulty) execution of the read operation to the Macintosh software through the standard SCSI protocol.

The SCSI firmware in the Macintosh receives the data sent by the controller module and writes it to the previously allocated buffer. The controller module, however, acknowledges correct operation as soon as it has passed the data blocks on to the SCSI bus, regardless of the success or failure of the SCSI firmware's side of the exchange.

IMPORTANT COMPATIBILITY NOTES:

- The Tape Backup 40sc is compatible with type DC 2000 tape cartridges.
- The bundled software included with the Tape Backup 40SC is Tape Backup 40SC 2.0.1, which is INCOMPATIBLE with System 7 and later.
- Apple recommends using third-party backup software with the Tape Backup 40SC. Some products that work with the Tape Backup 40SC are Retrospect and Retrospect Remote from Dantz Development Corp., and FastBack Plus from Fifth Generation Systems.

To locate a vendor's address and phone numbers, use the vendor name as a search string.

Article Change History:

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       3 May 1994 - Revised article, added information regarding the type
                    of backup tapes which can be used.
27 September 1993 - Revised article, adding current compatibility
                    information.
23 September 1987 - Reviewed for technical accuracy.
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