



7970B Digital Magnetic Tape Subsystem

Features

- Fast data transfer—up to 36KB
- 7-track or 9-track configurations
- 200, 556 and 800 cpi NRZI electronics
- Up to 45 ips read/write, 160 ips rewind
- Dynamic braking
- Up to 10½ inch reels
- IBM/ANSI compatible
- Completely integrated with HP computer systems

Hewlett-Packard 7970B Digital Magnetic Tape Units serve as reliable low to medium-speed magnetic tape drives for use in HP computer systems. IBM compatible NRZI recording mode is used at densities of 200, 556, or 800 cpi. Density select is standard on seven-track units. Operation of all nine-track units is specified at 800 cpi. Data written on any IBM or ANSI compatible machine can be read on the 7970B.

Both seven and nine channel units are equipped with NRZI electronics and read or write at speeds up to 45 inches-per-second. Controllers are available for operation at 25, 37.5 or 45 ips with HP 2100-series computers. HP 3000 computer system controllers use 45 ips tape units exclusively. From one to four tape drives (of the same speed) can be operated from a single controller.

Reel motors provide direct drive, eliminating troublesome belts and pulleys. Tape tensioning is performed by photo-resistive controlled tension arms, eliminating the need for vacuum system components. Head assemblies consist of read stack, write stack and full width erase head. The 7970B Tape Unit is recognized under the component program of Underwriters Laboratories. All 7970 Digital Magnetic Tape Subsystems are supplied complete and include the magnetic tape unit, interface controller and all software required for operation with the appropriate HP computer system.



HEWLETT  PACKARD

Specifications

Except as noted these specifications apply to both 7-track and 9-track tape units.

NUMBER OF TRACKS

Seven or nine

READ/WRITE SPEED

2100-Based Systems: 25, 37.5 or 45 ips

3000-Based Systems: 45 ips

DENSITY

7-Track: 200, 556, 800 cpi (NRZI electronics)

DATA TRANSFER RATE

7-Track: 36,000 characters per second maximum
(at 800 cpi)

9-Track: 36,000 characters per second maximum

WRITE ENABLE

Supply reel write enable ring and switch.

Ring removal precludes writing.

REEL DIAMETER

Up to 10½ inches (266,7mm)

TAPE (Computer Grade)

Width: 0.5 inches (12,7mm)

Thickness: 1.5 mils

REWIND SPEED

160 ips (Local mode only)

START/STOP TIMES

8.33 ms (read-after-write) at 45 ips

EOT and BOT REFLECTIVE STRIP DETECTION

IBM compatible

OPERATOR CONTROL PANEL

Reset Switch: Stops tape travel in any mode and returns unit to local control

Rewind Switch: Rewinds tape at 160 ips

On-Line Switch: Places unit under remote control.

Load: Initiates load point (BOT) search.

Write Enable Indicator: Illuminated when write enable ring is installed on the supply reel.

POWER REQUIREMENTS

115 or 230 VAC $\pm 10\%$

50 to 60 Hz single phase

400 VA maximum

ENVIRONMENTAL (Hardware)

Ambient Temperature: 32° to 131° F (0° to 55°C)

Relative Humidity: 20 to 80% (non-condensing)

Heat Dissipation: 1400 BTU.

DIMENSIONS

Height: 24 inches (609,6 mm)

Width: 19 inches (482,6 mm)

Depth: 12 inches (304,8 mm) from mounting surface

Overall Depth: 15¾ inches (400,05 mm)

WEIGHT

140 lbs (63,56 kg) maximum

TRANSPORT MOUNTING

Standard 19-inch (482,6 mm) RETMA rack.

Hardware supplied for mounting in standard HP rack.



ORDERING INFORMATION

2100-Based Systems

Exact speed must be noted on the order for model and option selected.

7-TRACK

- A. 12971A—Digital Magnetic Tape Subsystem for 2100-based systems. IBM compatible, 7-track NRZI read-after-write 200/556/800 cpi; 45 ips (first drive). Includes Interface Controller*; two interface cards, interconnecting cables and software for use with 2100 series computers.
- B. 12971A-001—(37.5 ips); Same as A (first drive).
- C. 12971A-002—(25 ips); Same as A (first drive).
- D. 12971A-010—Same as A (2nd, 3rd or 4th drive). Includes 13190A Multiunit Cable.**
- E. 12971A-011—Same as B (2nd, 3rd or 4th drive). Includes 13190A Multiunit Cable. **
- F. 12971A-012—Same as C (2nd, 3rd or 4th drive). Includes 13190A Multiunit Cable.**

9-TRACK

- A. 12970A—Digital Magnetic Tape Subsystem for 2100-based systems. IBM compatible, 9-track NRZI read-after-write, 800 cpi, 45 ips (first drive). Includes Interface Controller*; two interface cards, interconnecting cables and software for use with 2100-series computers.
- B. 12970A-001—(37.5 ips); Same as A (first drive)
- C. 12970A-002—(25 ips); Same as A (first drive)
- D. 12970A-010—Same as A (2nd, 3rd or 4th drive). Includes 13190A Multiunit Cable.**
- E. 12970A-011—Same as B (2nd, 3rd or 4th drive). Includes 13190A Multiunit Cable.**
- F. 12970A-012—Same as C (2nd, 3rd, or 4th drive). Includes 13190A Multiunit Cable.**

Interface Power Requirements for 2100 Series Computers

Interface No.	+4.5V	-2V
13181A,001,003	2.9A	0.8A
13182A,001,003	2.8A	0.085A

*Up to 4 drives of the same type and speed can be operated from one interface controller. All Controllers use two I/O slots.

**Order one 13190A interface kit for each additional drive specified (13190A provides 12.5 foot cable; 13190B provides 20 foot cable.).

HP 3000 Computer System

30115A: Digital Magnetic Tape Subsystem for 3000 Computer System. Includes the 7970B Digital Magnetic Tape Unit (9-Track, 800 cpi, 45 ips, NRZI electronics), interface controller 2400 ft (720 m) reel of tape and necessary connecting cables. Up to 4 drives can be operated from one interface controller.

30115A-200: Additional 7970B (9-track, 2nd, 3rd, or 4th drive).

30117A: Digital Magnetic Tape Subsystem for 3000 Computer System. Includes the 7970B Digital Magnetic Tape Unit (7-track, 200, 556 or 800 cpi, 45 ips, NRZI electronics) interface controller, 2400 ft (720m) reel of tape and necessary connecting cables. Up to 4 drives can be operated from one interface controller.

30117A-010: Additional 7970B (7-track, 2nd, 3rd, or 4th drive)

Option-015: Provides 230V; 50 Hz operation.

For more information, call your local HP Sales Office or East (201) 265-5000; Midwest (312) 677-0400; South (404) 436-6181; West (213) 877-1282.

Or write: Hewlett-Packard, 1501 Page Mill Road, Palo Alto, California 94304.

In Europe: Post Office Box 85, CH-1217 Meyrin 2, Geneva, Switzerland.

In Japan: YHP, 1-59-1, Yoyogi, Shibuya-Ku, Tokyo, 151.

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