



7970E Digital Magnetic Tape Subsystem (Phase Encoded)

Features

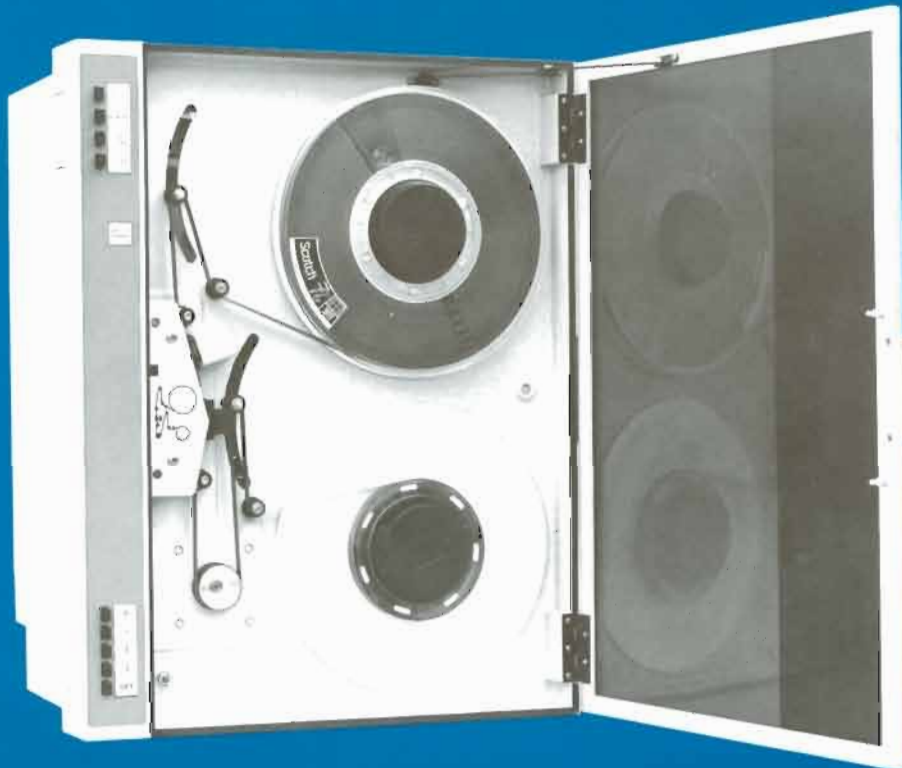
- Fast data transfer—up to 72KHz
- 1600 cpi, phase encoded data electronics
- Up to 45 ips read/write, 160 ips rewind
- Dynamic braking
- Up to 10½ inch reels
- IBM/ANSI compatible
- Completely integrated with HP Computer Systems

The 7970E Series Digital Magnetic Tape Units serve as high performance and reliable tape drives for use in HP computer systems. High packing density and data transfer rates are achieved by using 1600 cpi phase encoded data electronics. Data written on any IBM or ANSI compatible phase mode equipment can be read on the 7970E.

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 7970E Tape Unit is recognized under the component program of Underwriters Laboratories.

All 7970E 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.



Specifications

NUMBER OF TRACKS

Nine

READ/WRITE SPEED

2100-Based Systems: 25, 37.5 or 45 ips

3000 Computer Systems: 45 ips

DENSITY

1600 cpi (phase encoded electronics)

DATA TRANSFER RATE

72,000 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

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 Switch: Initiates loadpoint (BOT) search.

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

POWER REQUIREMENTS

115 or 230 VAC±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)

DIMENSIONS

Height: 24 inches (609,6mm)

Width: 19 inches (482,6mm)

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

Overall Depth: 15¼ inches (400,05mm)

WEIGHT

130 lbs (59,02 Kg) maximum

TRANSPORT MOUNTING

Standard 19-inch (482,6mm) RETMA rack. Hardware supplied for mounting in standard HP rack.

ORDERING INFORMATION

2100-Based Systems

- A. 12972A: Digital Magnetic Tape Subsystem for 2100-based systems. IBM compatible 9-track PE, read-after-write, 1600 cpi, 45 ips (first drive). Order 13183A-003 Interface Controller*; includes two interface cards, interconnecting cables and software for use with 2100-series computers.
- B. 12972A-001: Same as A (first drive) except order 13183A (37.5 ips) Interface Controller*.
- C. 12972A-002: Same as A (first drive) except order 13183A-001 (25 ips) Interface Controller**.
- D. 12972A-010: Same as A (2nd, 3rd, or 4th drive) Order 13194A Multiunit cable**.
- E. 12972A-011: Same as B (2nd, 3rd, or 4th drive) Order 13194A Multiunit Cable**.
- F. 12972A-012: Same as C (2nd, 3rd, or 4th drive) Order 13194A Multiunit Cable**.

Interface Power Requirements for 2100-Series Computers

Interface No.	+4.5V	-2V
13183A;-001;-003	2.6A	0.080A

*Up to 4 drives of the same type and speed can be operated from one interface controller. All 2100 controllers use two I/O slots.

**Order one 13194A multiunit cable for each additional drive specified (13194A provides 20 foot cable).

HP 3000 Computer System

- 30115A-100: Digital Magnetic Tape Subsystem for 3000 Computer System. Includes the 7970E Magnetic Tape Unit (9-Track 1600 cpi, 45 ips PE electronics); interface controller 2400 feet (720m) reel of tape and necessary connecting cables. Up to 4 drives can be operated from one interface controller. This controller can control a mixture of 1600 cpi (7970E) and 9-channel, 800 cpi (7970B) tape units.
- 30115A-300: Additional 7970E (Master) (9-track, 45 ips, 1600 cpi, PE electronics) drive on same controller. 2400 ft (720m) reel of tape.
- 30115A-400: Additional 7970E (slave) (9-track, 1600 cpi, 45 ips, PE electronics) drive, 2400 ft (720m) reel of tape, on same controller. Up to 4 drives can be operated from interface controller.
- Option—015: Provides 230V; 50 Hz Operation Certified Magnetic Tape for Above Drives.
- 9162-025: 2400 foot roll of 0.5 inch, 800 cpi certified blank tape.
- 9162-026: 1200 foot roll of 0.5 inch, 800 cpi certified blank tape.



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.

Printed in U.S.A. 10/72

5952-4440(22)