Texas Instruments
model 979 magnetic tape transport
New low-cost unit offers "computer-room quality" for OEM applications

The Texas Instruments Model 979 is a small computer-room-quality transport loaded with performance features and designed specifically for the OEM market.

Vacuum column buffering and permanent tape-path alignment provide superior data reliability and extra long tape life, yet the price is competitive with tension-arm transports.

Features
- Vacuum column buffering
- Any single speed 15 — 45 IPS*
- Read-after-write dual gap head with edge relief slots
- Fits standard 19" rack
- 9-track NRZI 800 BPI*
- 9-track PE 1600 BPI*
- 7-track NRZI 200/556/800 BPI*
- Automatic complete unload
- 10\(\frac{1}{2}\)-inch reel
- Quick release hubs*
- TTL compatible interface
- High speed rewind in the vacuum columns

* Choice or optional features.
Rugged performance
Whatever your application, you can operate the Model 979 24 hours a day under intensive tape activity. The Model 979 is designed and built to take it. Rugged mechanical design and exceptionally low component stress provide MTBF greater than 2000 hours.

The TI Model 979 incorporates the latest technologies developed by TI for its line of high-performance and plug-compatible transport products.

Operation and maintenance ease
Vacuum column buffering and single capstan drive provide gentle handling of your most valuable tapes. The TI Model 979 is built on solid precision tooling plate to insure long-term tape path stability. The tape path is arranged so that the tape oxide contacts only the head, thus reducing wear and contamination of the data surface. IBM compatible head/guide geometry means low dynamic skew and provides an extra margin of data reliability when reading or writing IBM-compatible tapes. The 979 uses no belts, gears, clutches, brakes or pinch rollers.

Wave forms shown are typical and unretouched, 37.5 IPS.

Forward/reverse program
Heavy trace—tach output
Light trace—data envelope 10 ms/cm

Amplified head output
(before peak detection and digitizing 2v/cm; 50 μs/cm)

Dynamic skew read after rewind.
Outside channels 62.5 microinches/cm.
Interfacing simplicity
TTL logic levels and simple control and timing requirements make the 979 easy to interface with your present controller. The operation manual provides complete interface information.

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</table>
FRONT
- 10%-inch reels
- Solid tooling plate foundation
- Operator controls and indicators
- IBM compatible head/guide geometry
- Vacuum column with easy-off cover

REAR
- 5 data boards for 9 channel systems
- 3 motion control and P/S regulator boards
- All power transistors identical and socket mounted
- Only 12 inches behind rear of front panel

EASY ACCESS
- Swing-out rear panel
- Ready access to all wiring and components
- Long life induction vacuum motor (no brushes)
Specifications

Tape:
- Width: .498 = .602, thickness 1.5 mil nominal

Speed:
- Any single speed 15-45 ips

Speed Variation:
- Long term: ± 2%
- Short term: ± 3%

Reel Size:
- 10½ inch

Rewind Time:
- 200 seconds max. for 2400 ft.

Start/Stop Characteristics:
- Shown for 45 ips speed:
  - Start time: 10 milliseconds
  - Start distance: .225 inches
  - Stop time: 10 milliseconds
  - Stop distance: .225 inches

Program Restrictions:
- None

Head:
- Read-after-write dual gap with edge relief slots, 7 or 9 track
- Edge relief slots are provided to greatly extend head life and to prevent tape edge damage.

Data Electronics:
- 9 channel 1600 bpi phase encoded* (but does not include data converter).
- 9 channel 800 bpi NRZI*
- 7 channel 200, 556 and 800 bpi NRZI* (all 3 densities programmable).

Static Skew:
- Less than ± 75 microinches relative to the outside tracks of the read head.

Static Skew Adjustment:
- Read: Azimuth adjusting head plate.
- Write: Electrical adjustment for each individual channel.

Dynamic Skew:
- Less than 125 microinches peak-to-peak typical.
- Less than 200 microinches peak-to-peak max.

Reel Jogging:
- Zero for all combinations of tape footage in absence of a tape drive command.

Interface Logic Levels:
- True: 0.0 v min, 0.4 v max
- False: 2.4 v min, 5.0 max

Power Supplies:
- All regulated power supplies have a current foldback characteristic to prevent component stress in event of a failure.

Tape Tension:
- 8 oz. nominal

Unload:
- Automatic complete unload

MTBF:
- Greater than 2000 hours

Mounting Dimensions:
- 19-inch rack mount, 24.5 inches high (includes ½ inch mounting bar), 12 inches deep

Power:
- 115 VAC, 47-63 Hz
- 10A service (typical running current 3A)

Weight:
- 135 lb.

Environment:
- Air Temperature: 50°F - 90°F
- Relative Humidity: 20% - 80%

Altitude:
- 9000 ft. for 60 Hz power

Shock Acceleration:
- 10G

Multiple Installation:
- Standard transport is equipped for daisy chain operation. Up to 5 units can be accommodated.

File Protect:
- BOT, EOT Detection:
  - Photosensing. Built-in command sequence to assure accurate positioning of BOT regardless of approach direction.

*Indicates choices or options. Features shown without asterisk are standard.

Texas Instruments reserves the right to make changes at any time in order to improve design and supply the best product possible.

Sales and Service Offices of Texas Instruments are located throughout the United States and in major countries overseas as well. Contact the Digital Systems Division, Texas Instruments Incorporated, P.O. Box 66027, Houston, Texas 7706, or call 713-526-1411, for the location of the nearest office to you.