

Model 6450 Cartridge Tape System



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Flexible, reliable back-up for your disks

The Kennedy 6450 Cartridge Tape System satisfies the requirements for a low cost yet flexible and reliable backup device. It consists of the Model 640 Cartridge Tape Drive and the Model 650 Embedded Formatter in a very compact package.

Features

Packaging and Power

- **Designed with Floppy mounting dimensions and holes.**
- **Low Power Consumption—The system requires only +5 and +24 volts for a total consumption of under 40 watts.**

Cartridge Tape Drive

- **Serpentine Recording Head—Eliminates time consuming rewinds between tracks during backup process.**
- **6400 BPI Recording Density. Yields up to 17Mbytes of unformatted data capacity on a 450 ft. cartridge.**
- **Group Coded Recording Technique—Provides 100% larger data recovery margins than MFM.**
- **Differential Read Chain—Improves the signal-to-noise ratio and thus the data reliability.**
- **Full Write Pre-compensation—Data written on tape is fully pre-compensated to minimize pulse crowding and phase distortion effects.**
- **Switching Bridge Servo Amplifier—65% more efficient than comparable linear servo designs. Yields lower power dissipation and greater reliability.**
- **Infrared Tape Position Detection—Virtually impervious to ambient light, a major factor in tape position sensing errors.**

Embedded Formatter

- **Microprocessor/Bipolar Sequencer Architecture—The 90 IC formatter condenses large tape system performance into a low power, 8.25" x 9.25" printed circuit board.**

- **Full Command Repertoire—Utilizes the new Pico Bus interface to accept a full compliment of Tape Cartridge commands to exploit the system's full start/stop capabilities.**
- **During a read retry, data block is reread up to three times at three different read thresholds. This feature is usually found only on large 9-track transports.**
- **Sophisticated Data Recovery Circuitry—The 6450 data recovery Phase Lock loop has been optimized through computer and hardware simulation.**

Diagnostics and Fault Isolation

- **Full Signature Analysis Capability—100% fault isolation to the faulty formatter IC. Reduces MTTR to less than thirty minutes for logic faults.**
- **Online Self Test—The 6450 System performs online self test before your backup operation begins.**
- **Offline Test Routines—A full compliment of offline test routines allow adjustment of all analog functions in the cartridge drive and formatter.**

Host Interface

New Common Host Interface—The 6450 employs the Pico Bus Interface. This allows the user to design an inexpensive yet powerful controller capable of interfacing radially with both the 8" Winchester Disk Drive and the 6450 Cartridge system on a single PCBA.

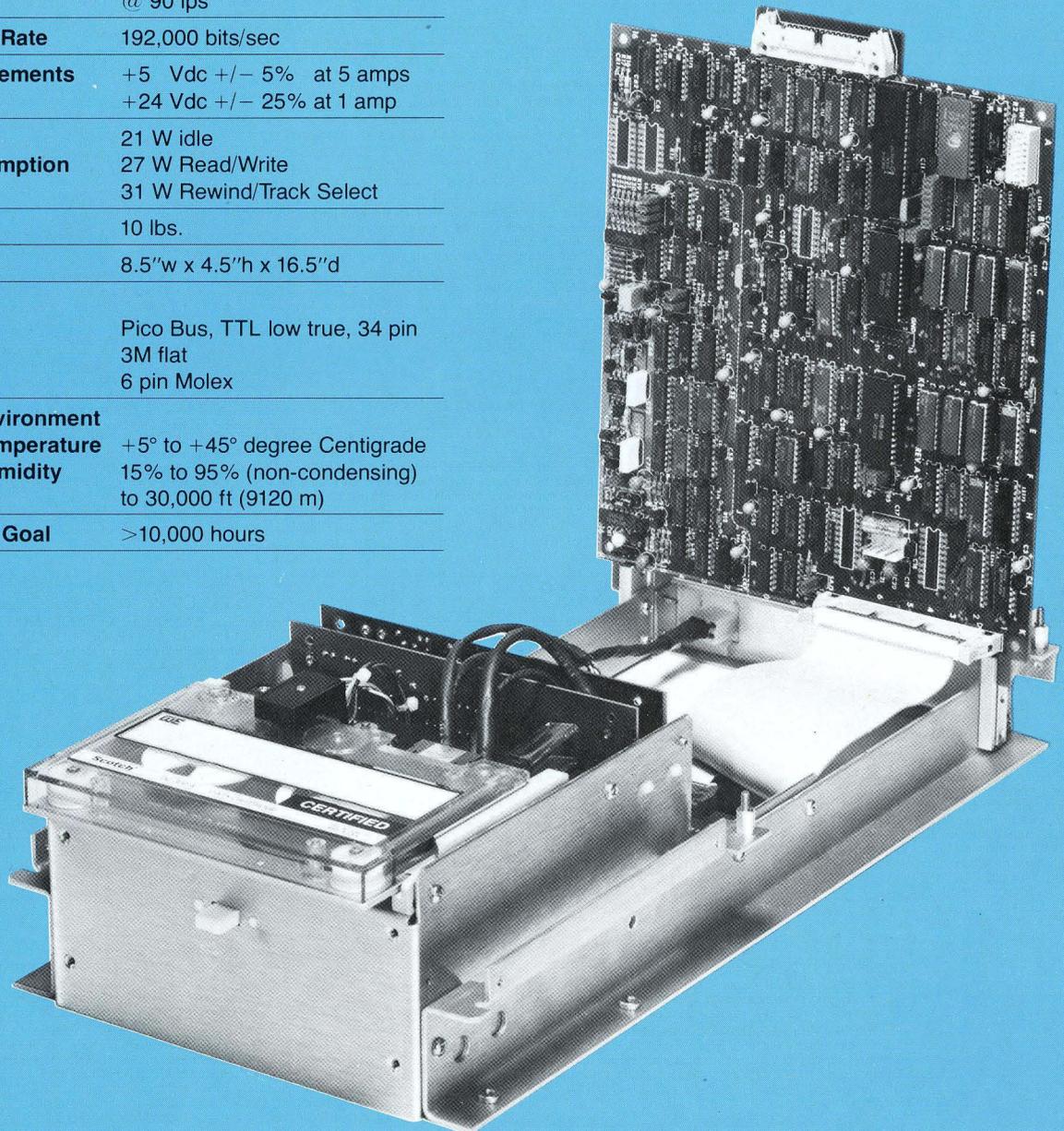
Kennedy has been a leader in tape peripherals for over sixteen years, and recognizes the problems associated with backing up a disk drive. Utilizing the technology from 1/2 inch tape drive and combining this with over five years in the cartridge business, Kennedy has produced the most advanced 1/4 inch cartridge product available. The apparent as well as the hidden cost of adding a cartridge backup device to your system has been greatly reduced. By providing a very intelligent and sophisticated formatter, the burden is taken from the back-up of the host system. With Model 6450's start/stop capability, the need for costly system software is greatly reduced. The simple pico bus interface, common with Kennedy 7000/7800 disks as well as future products, greatly reduces the controller design. With the Kennedy common pico bus interface, future system expansion is insured.

Kennedy provides the smart answer in cartridge products by providing a start/stop device greatly simplifying the controller and software consideration of systems integration. In the Model 6809 Data Streamer 1/2 inch tape transport, the overhead of tape repositioning and format control is handled by the onboard microprocessor. With the ANSI compatible format and position information available, the streaming approach is ideally suited in this type of device. The position information and higher level of intelligence is not generally available in a 1/4 inch cartridge product.

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General Specifications

Cartridge Type	3M DC300A type Isoelastic Data Cartridge
Tape Length	300 or 450 feet
Capacity	11.5 MBytes at 300 ft., 17.3 MBytes at 450 ft.
Recording Density	6400 bpi
Number of Tracks	4 tracks arranged in a serpentine configuration
Recording Head	Serpentine with read after write capability and selective erase
Record Format	Self-clocking Group Coded code
Record Mode	Single track serpentine serial
Tape Speed	30 ips
Fast Tape Motion	90 ips
Start/Stop Time	25 msec @ 30 ips, 75 msec @ 90 ips
Data Transfer Rate	192,000 bits/sec
Power Requirements	+5 Vdc +/- 5% at 5 amps +24 Vdc +/- 25% at 1 amp
Power Consumption	21 W idle 27 W Read/Write 31 W Rewind/Track Select
Weight	10 lbs.
Dimensions	8.5" w x 4.5" h x 16.5" d
Interface	
Host	Pico Bus, TTL low true, 34 pin 3M flat
Power	6 pin Molex
Operating Environment	
Ambient Temperature	+5° to +45° degree Centigrade
Relative Humidity	15% to 95% (non-condensing)
Altitude	to 30,000 ft (9120 m)
MTBF Design Goal	>10,000 hours

Model 6450 provides easy access for service or maintenance.



KENNEDY

Subsidiary, Magnetics & Electronics Inc.

CORPORATE HEADQUARTERS

1600 Shamrock Ave.
Monrovia, CA 91016
(213) 357-8831 TWX 910-585-3249

EUROPEAN HEADQUARTERS KENNEDY INTERNATIONAL

Koningin Elisabethplein, 8
B-2700 Sint-Niklaas
Belgium
Tel: (031) 771962
Telex: 71870 KEN CO