

CONTROL DATA® 844-21 MASS STORAGE SUBSYSTEM

CONTROL DATA
CORPORATION



The CONTROL DATA Model 844-21 Mass Storage Subsystem consists of up to eight 844-21 Disk Storage Units with associated single or dual 7054 or 7654 Storage Controllers. This provides a large-capacity, multi-access storage subsystem, using removable disk packs. Each drive has a usable capacity of 708 million bits; a full subsystem with eight on-line drives has a capacity of 5.7 billion bits. Additional data may be stored off-line using Model 881 Disk Packs.

Each 844-21 cabinet contains a single drive mechanism and thus permits the addition of one disk-storage unit at a time.

A bit-packing method, providing 4,000 bits per inch, coupled with a track density of 200 tracks per inch, yields the total usable capacity of 708 million bits per drive. Head positioning is controlled by a voice-coil positioner, with an average positioning time of 30 milliseconds. The disk rotates at 3600 RPM, providing an average latency time of 8.3 milliseconds. The high bit density and rotational speed combine to provide a transfer rate of 6.8 million bits per second.

The 7054 Disk Controller is used with the CDC® CYBER 170; CDC CYBER 70 Models 72, 73, and 74; or with the CDC 6000 Series. The 7654 Disk Controller is used with the CDC CYBER 70 Model 76 or the 7600. Using a single controller, it is possible to perform multiple-overlapped seek operations concurrently with one read or write operation. Two controllers in a subsystem provide two simultaneous data transfers (read and/or write) to any two drives, while retaining the multiple-seek feature.

The disk controller includes a small, programmable processor. The ability to program the processor enhances the normal operation of the subsystem and provides for more diagnostic and recovery capability.

CDC Model 881 Disk Packs are used with the 844-21 Disk Storage Units. The 881 consists of a stack of eleven, 14-inch diameter, magnetic recording disks. Nineteen surfaces are used for data recording and one is used for permanently-recorded positioning information.

SPECIFICATIONS

Capacity (per drive)

Sector Sizes:

7054 controller: 644 characters (3,864 bits)

7654 controller: 5160 characters (30,960 bits)

Track Capacity:

7054 controller: 24 Sectors

7654 controller: 3 Sectors

Tracks per Surface: 404

Number of Data Surfaces: 19

Capacity (8 drives): 5.7 billion bits
(708 million bits/drive)

Transfer rate: 6.8 million bits per second

Positioning time

Minimum: 10 milliseconds

Maximum: 55 milliseconds

Average: 30 milliseconds

Rotational Speed: 3600 RPM

Average Latency Time: 8.3 milliseconds

Disk Pack: Type CDC 881 or equivalent

Physical Dimensions and Weight

Height: 39.5 inches

Depth: 44.5 inches

Width: 22 inches

Weight: 660 pounds

Power Requirements

Power Source: 208 VAC, 3 phase 60 Hz or 220 VAC 50
Hz

Operating Current: 6.5 amps

Specifications subject to change without notice.