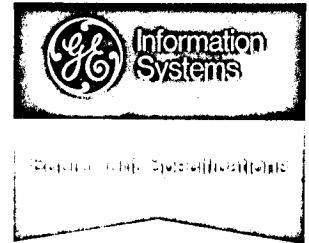
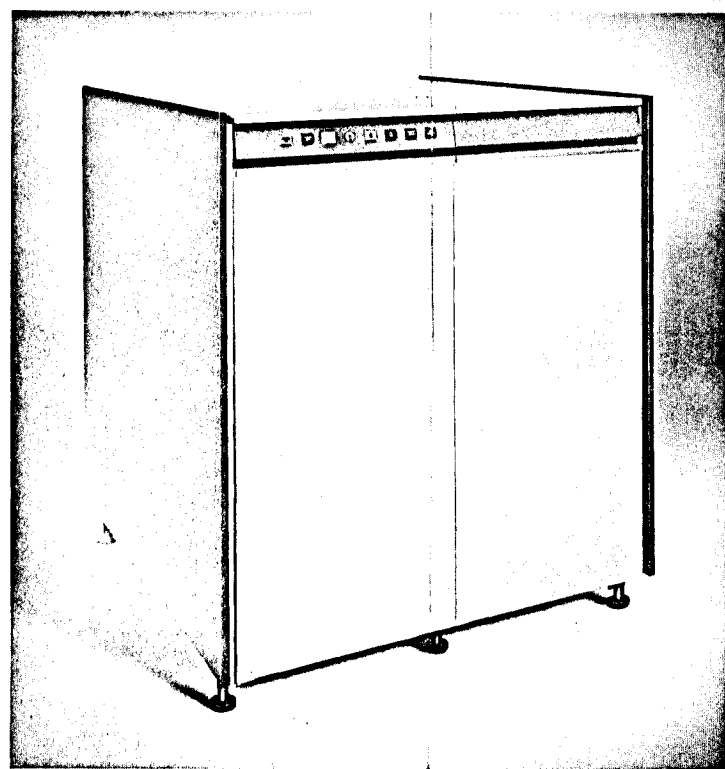


GENERAL ELECTRIC DSS270 Disc Storage Subsystem



The large capacity DSS270 Disc Storage Subsystem provides very fast access to over 15 million data characters per Storage Unit through a service-proven fixed head-per-track design. The subsystem can control 20 Storage Units to provide over 307 million characters of random access storage. A Dual-Channel option permits simultaneous access to the subsystem by two processors or simultaneous dual-channel access by a single processor.



STORAGE CAPACITY

DSU270 Disc Storage Unit capacity is 15.3 million 6-bit characters. Up to 20 Storage Units can be connected to one Controller to provide over 307 million characters of storage.

TRANSFER RATE

Maximum transfer rate is ⁶⁵⁵⁰⁰333,000 6-bit characters per second. This rate may be doubled through dual-channel simultaneity.

ACCESS TIME

Since the read/write mechanism on the DSU270 is of fixed head-per-track design, access time to all disc locations is relatively constant and very fast. Average record access time is 26 milliseconds. Maximum is 50.3 milliseconds.

DISC AND RECORD LAYOUT

Data is grouped in a total of 40,000 continuously addressable sectors of 384 characters each per Disc Storage Unit. A maximum subsystem thus can address up to 800,000 data sectors.

CONTROLLER

The Disc Storage Controller (DSC270) handles up to four File Electronics units. Each File Electronics Unit (DFE270) controls up to five Disc Storage Units, providing a total subsystem capacity of 20 DSU270's. The controller communicates with the processor via one high-speed channel, or two channels when the Dual-Channel Option is installed.

DUAL CHANNEL SIMULTANEITY

An option is provided in the controller for an additional data channel. With this option, independent and simultaneous data transfer and command communication is allowed between the controller and one or two processors, with the restriction that data transfer simultaneity cannot occur within the same file electronics unit (DFE270). The option can be used with one processor to increase the effective data transfer rate or used to allow two separate processors to access the same data base.

In the construction of the equipment described, General Electric Company reserves the right to modify the design for reasons of improved performance and operational flexibility.

DS 10
100M;
up to
8 files/
Controller
122 KC
250ms

To prevent access interference in dual-channel configurations, a file electronics device is automatically reserved for a particular channel after that channel has established communication with a successful select command.

SECTOR COUNT CONTROL

A hardware sector count feature provides file protection by allowing the software to limit the number of continuous data sectors which can be read or written with a single data transfer command. The sector count limit can vary from 1 to 4,096.

CONTROL CHECKS

Nine checks are performed on control information and data in the subsystem. These checks consist of data parity and timing, and control information parity and validity. Additionally, nine hardware conditions are continually monitored.

ERROR DETECTION

Incorporated in the hardware is an error detection feature that enables the subsystem to identify an error condition on reading a record. Determination of correctability and correction itself may be performed under software control.

A minimum subsystem configuration is one DSC270 Controller, one DFE270 File Electronics Unit and one DSU270 Storage Unit. The illustration below represents a maximum configuration, with over 307 million characters of data being shared by two separate data processing systems via the Controller's Dual-Channel Option.

PHYSICAL DIMENSIONS

Disc Unit
53 inches high, 23 inches wide.
45 inches deep. Weight 575 lbs.

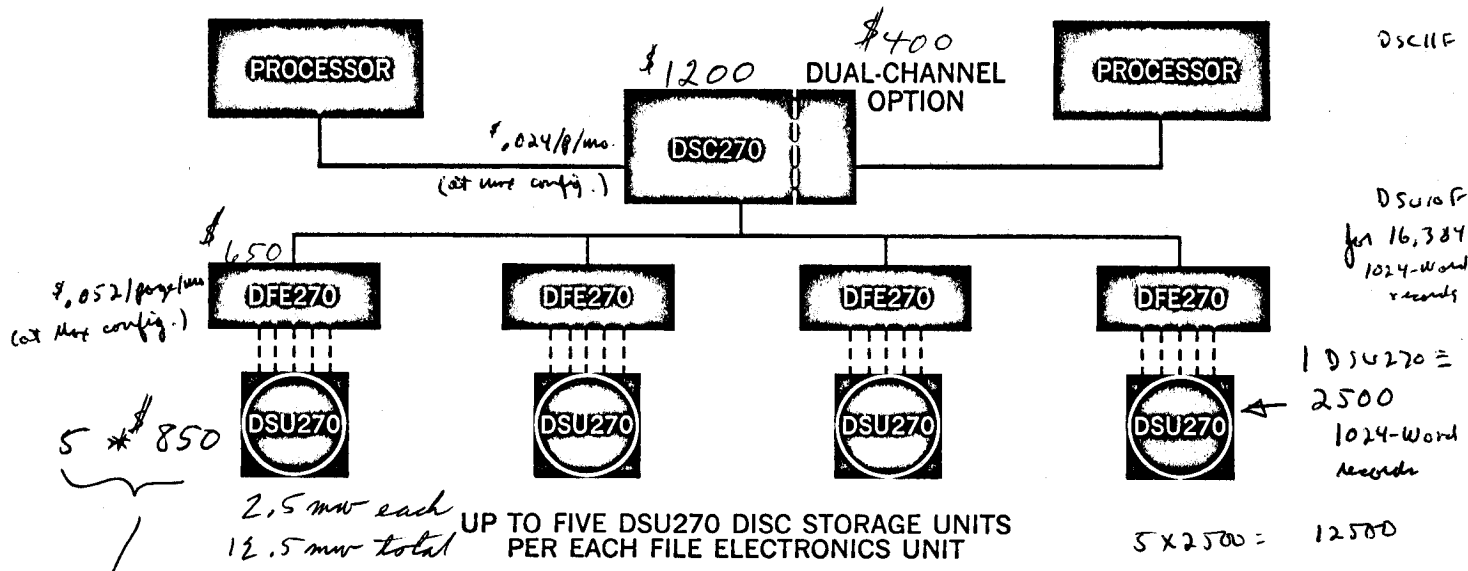
Electronics
53 inches high, 23 inches wide.
45 inches deep. Weight 450 lbs.

POWER REQUIREMENTS

Disc Unit 1.46 KVA
Electronics 0.6 KVA

HEATING REQUIREMENTS

Disc Unit 3800 BTU/Hr.
Operating environment 65-85 degrees F.
Electronics 1700 BTU/Hr.
Operating environment 65-85 degrees F.



$\$0.34/page/mo.$
Compare with $\$0.25/page/mo$ on DSU10
+ $\$0.256/page/mo$ for electronics
at max configuration

INFORMATION SYSTEMS
GENERAL ELECTRIC

Phase B
CAC
type

DSU10
3400
68 1/2 x
70 high
Control
+ elec
36 1/2 x
70 high
445

DSU10F
for 16,384
1024-word
records
File
\$410

1 DSU270 =
2500
1024-word
records
5 x 2500 = 12500