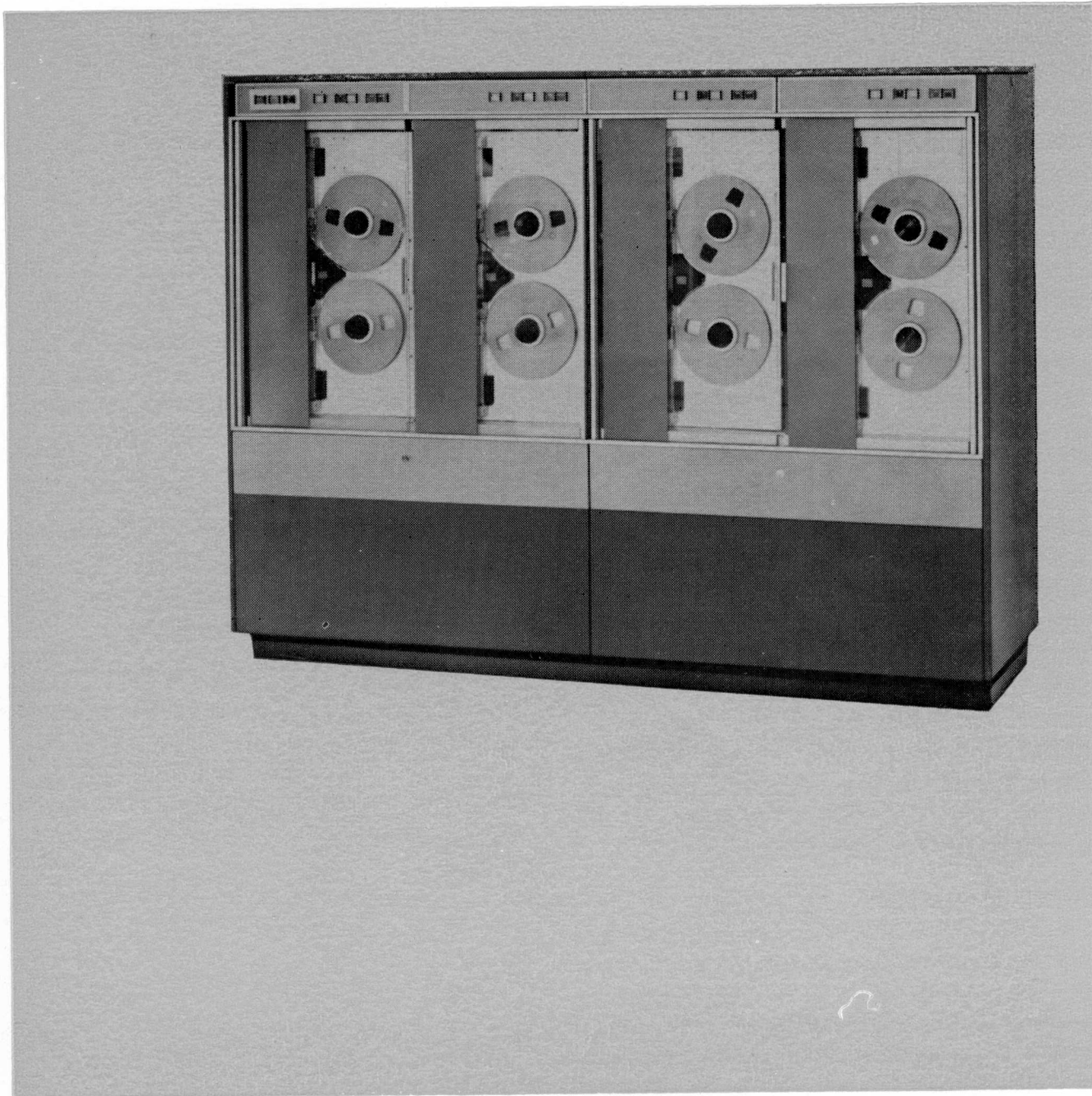




I.C.T 1900 SERIES

MAGNETIC TAPE SYSTEM 1971



DESCRIPTION

Magnetic tape units type 1971 may be specified to include two, four or six decks, with associated control circuits for the groups. Each group is connected to the Central Processor via I.C.T Standard Interface. Groups may be extended on site.

The system uses seven track, half-inch wide tape to international standards including the European Computer Manufacturers' Association. The form is compatible with that of most other modern computers.

- Choice of transfer rates—7.5 or 20.8 k ch/s
- Groups of two, four or six decks
- Groups connected to Central Processor via I.C.T Standard Interface
- Tape and reel compatible with international systems

MAGNETIC TAPE SYSTEM 1971

Recording

Standard 2,400 feet reels of tape are employed and recording is at a packing density of either 200 or 556 bits to the inch. The density is selectable by the program.

The tape feed speed is 37.5 inches a second and at the different densities give data transfer rates of 7,500 or 20,800 characters a second. Newly written characters are read back into the control unit where they are checked for the chosen parity, odd or even. During a reading operation an automatic parity check is carried out on each character and a longitudinal check on a parity character written at the end of each block. Checks are also carried out on signal amplitude and timing during check reading at the level specified in the ECMA standard. A write or erase instruction will be rejected unless a 'write permit' ring is fitted to the relevant tape spool.

Functions

The following tape functions are available to the programmer:—

- Read
- Write
- Write tape mark
- Skip forward to tape mark
- Backspace
- Rewind

One read or write operation may be in progress at any one time on a single deck of a group. However rewind may take place on other decks concurrently.

Operation

Tape loading is a straightforward simple operation which is facilitated by illuminated indicator signals and operator controlled switches.

Reel Identification System

The first block of recorded information on any tape reel utilized in the system is normally a label block. A program uses a special instruction to request a tape reel. It calls for an input reel by the file name and reel number which appear in the label block. The Executive program will determine which deck contains the required reel and will then allocate that deck to the program. When a program calls for a reel to receive output, Executive finds an unallocated deck on which is mounted a reel with a write-permit ring. Provided that the validity date in the label does not indicate that the reel contains information which must be preserved, Executive writes on the reel the new label specified by the program and allocates the deck to the program. Thus the operator can mount reels on any convenient deck in anticipation of their being required. The operator is notified if an input or output reel is not available when requested by a program.

Error Recovery

If a parity error occurs during a reading operation Executive automatically attempts to repeat the operation up to a predetermined number of times before requesting operator attention. If a check-read parity error occurs during a writing operation Executive arranges that the faulty block is erased and rewritten correctly a few inches further along the tape.

SPECIFICATION

Transfer rate 7,500 or 20,800 characters a second

Packing density 200 or 556 bits per inch

Tape speed 37.5 inches a second

Rewind time Less than four and a half minutes

Reel dimensions 10½ inches outside diameter, 3.7 inches centre hole diameter, 0.9 inches depth

Tape dimensions 2,400 feet length : ½ inch width : 0.0015 inch thickness

Interblock gap 0.75 inches nominal

Distance between heads 0.15 inches

Gap times (reading and writing)

short 18.4 milli-seconds

long 25.4 milli-seconds

PHYSICAL CHARACTERISTICS

Unit dimensions, including control electronics

	Height	Depth	Length
Two deck	66"	30"	64"
Four deck	66"	30"	85"
Six deck	66"	30"	127"

This specification is subject to modification

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