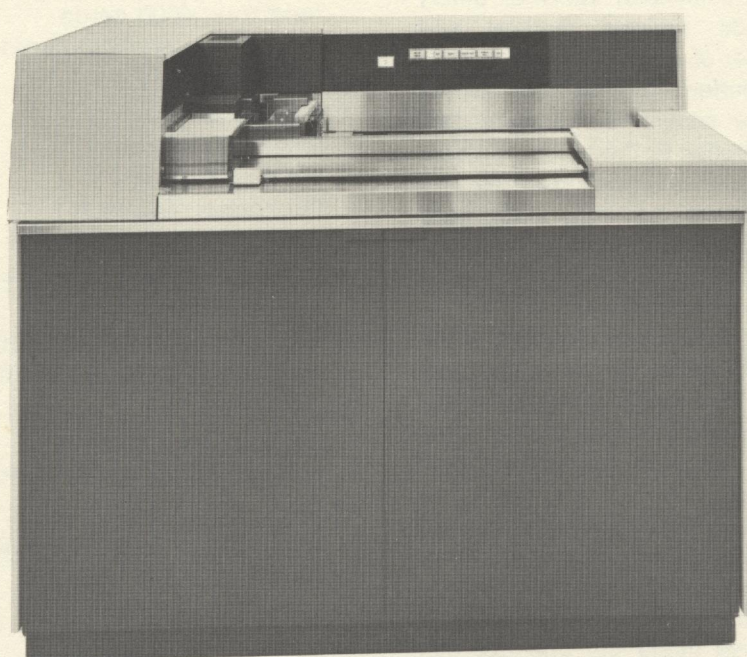


RC 405 PUNCHED CARD READER AND RC 4317 PUNCHED CARD READER CONTROLLER



The punched card reader handles 12-row cards with 80 and 51 columns. Data can be transferred either via the low-speed data channel (column-by-column reading) by a sequence of standard input/output instructions, or via the high-speed data channel (card-by-card input) to the internal store.

The transfer rate from card to buffer is 2510 columns/second, providing a reading speed of 1200 80-column and 1620 51-column cards/minute.

The reader employs asynchronous card feed, a photo-electric dual-read station with pre-read check, and column-by-column reading. It has vibrating trays for low-friction card handling, and pneumatic card separation at the capstan. The cards are propelled by a pneumatic capstan and a series of pinch rollers from the feed tray past the read sta-

tion to the receiving tray. Beveled corners in the card throat permit the reading of cards with bent or frayed corners. Cards are stacked with original sequence and deck orientation intact.

The reader is housed in a separate cabinet on castors. The cabinet has removable end panels and hinged front and rear doors. The controller is placed in an input/output controller cabinet along with other controllers. The reader and controller are connected by means of a cable, maximum 12 m long.

Operation

The reader is operated by the standard input/output instruction, which initiates card input and data transfer operations. The controller executes an operation without engaging the

computer and generates an interrupt signal when the operation is completed.

The reader can be operated as a block-reading device, connected to the high-speed data channel, and as a character-reading device, using the low-speed data channel only. When utilizing the high-speed data channel, the reader transfers data from one card (up to 40 words) directly to the internal store. Block reading is initiated by a sequence of input/output instructions, which also select binary or decimal reading mode. When column-by-column reading is performed via the low-speed data channel, an input/output instruction (read command) specifies binary or decimal mode, initiates reading, and causes the transfer of a column from the card to the device buffer. Another input/output instruction (sense command) transfers data from the device buffer to the central processor. Column-by-column reading must be performed synchronously, i.e. card input, once initiated, requires the computer to serve the reader every 0.4 millisecond until the card has been input.

An input/output instruction (control command) can direct cards to the reject tray during reading. The reader provides status bits indicating errors detected during reading, end-of-card, or data lost (during synchronous reading).

An operator's panel on the reader allows the operator to monitor and control card operations. A local/remote switch can be set manually. In remote mode the reader is program controlled. In local mode the operator can insert or remove card decks without disturbing program execution.

Data Formats

Each 12-row column on the card defines a data word of 12 bits. The card can have 80 or 51 columns. Conversion from the 12-bit word to an 8-bit word can be done automatically by decimal reading. This internal decimal 8-bit code allows programmed conversion of practically all Hollerith codes to

the ISO 7-bit code by a single table reference. Error status can be sensed from the program if the reader fails to pick a card, if the dual-read station detects a read error, or if a non-existent word is read.

CHARACTERISTICS

Reading Speeds

80 columns: 1200 cards/min

51 columns: 1620 cards/min

Character Transfer Rate

2510 char/sec

Capacity

feed tray: 4000 cards

receiving tray: 4000 cards

reject tray: 240 cards

Card Format

length: $7\frac{3}{8}$ inch

width: $3\frac{1}{4}$ inch

thickness: $\frac{7}{1000}$ inch

Power

3 x 380 V $\pm 10\%$, 50 Hz $\pm 4\%$

max. 8 A/phase

The controller is supplied from the power supply in a controller cabinet.

Ambient Air

temperature: 16 to 30°C

relative humidity: 30 to 70 %

Cooling Air

850 m³/hour from ambient

2200 kcal/hour

Size and Weight

width: 145.0 cm

depth: 84.0 cm¹

height: 117.5 cm²

weight: 481.0 kg

¹ with all access doors extended:
215.1 cm

² to card trays: 91.5 cm

The controller is placed in a controller cabinet.

Operating Level

The card tray surfaces must be level within 0.5° for operation.

4000
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