

NINE-CHANNEL TAPE PROCESSING CAPABILITY

Honeywell's one-half-inch, nine-channel magnetic tape equipment and related software enable Series 200 central processors to handle tape whose recording format and associated tape reels are compatible with IBM one-half-inch, nine-channel (nonreturn-to-zero recording) magnetic tape equipment.

HARDWARE

Honeywell's Type 204C-13 Magnetic Tape Units read and write nine-channel tape at a density of 800 bits per inch and transport tape at a read/write speed of 36 inches per second. Data is processed at a rate of 28,800 tape frames per second.

The Type 203C-7 Tape Control, which directs the operation of one or two Type 204C-13 tape units, regulates data transfer between the tape unit(s) and the central processor so as to reconcile mechanical tape unit speeds with electronic central processor speeds. In addition, the tape control performs all checks on data-transfer operations, thus freeing the central processor for other activities.

Tape Compatibility

Tapes written by IBM half-inch, nine-channel (NRZ) tape equipment at 800 bpi density may be read on the Honeywell 204C-13; and, conversely, tapes written by the 204C-13 may be read by the IBM units. This capability includes end-of-file mark recognition (tape-mark sensing).

Data Protection

The nine-channel tape units also incorporate the vacuum techniques that have earned Honeywell Series 200 tape equipment an outstanding reputation for error-free operation. Vacuum is used to drive and to stop the tape so as to avoid tape damage; the recording surface of the tape has physical contact only with the read/write head.

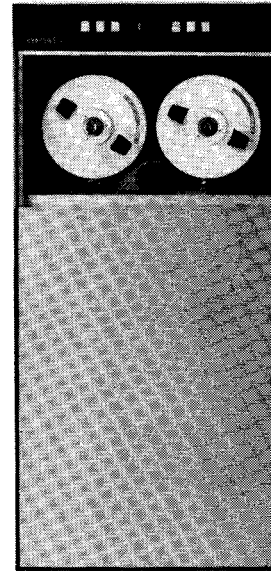
Accidental destruction of information by an unintentional write operation is prevented by two safeguards: to permit recording, a write-enable ring must be in place and a switch on the tape unit must be set to a certain position.

All information written is immediately read and checked. Odd parity of tape frames is computed on writing and checked on reading. Each tape record has an extra longitudinal check frame appended to it by the tape control to ensure that the number of "one" bits in each frame is even. This frame is generated by the tape control on writing and checked on reading.

A special character called a cyclic redundancy check (CRC) frame is computed by the tape control during writing and is recorded at the end of each tape record im-

Specifications remain subject to change in order to allow the introduction of design improvements.

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mediately preceding the longitudinal check frame. During a tape read operation, the CRC character is recomputed and compared. Under control of a software error routine, the CRC character permits correction by the hardware of single-track errors.

SOFTWARE

An associated software package that complements the hardware provides data-interchange compatibility between the Honeywell and IBM nine-channel tape equipment. Control of input/output operations and other tape file-handling functions is provided by the software.

HARDWARE SPECIFICATIONS

- TAPE SIZE: Half-inch, nine-channel.
- COMPATIBILITY: Tape reels and recording format compatible with IBM half-inch, nine-channel 800-bpi tape equipment.
- READ/WRITE SPEED: 36 inches per second.
- REWIND SPEED: 108 inches per second.
- RECORDING DENSITY: 800 bits per inch.
- INTERRECORD GAP: 0.6 inch.
- DATA TRANSFER RATE: 28,800 tape frames per second.
- MAXIMUM NUMBER OF UNITS IN SYSTEM: Two tape units per tape control.
- ADDRESS ASSIGNMENTS: Two.

Honeywell
ELECTRONIC DATA PROCESSING