PAPER TAPE TRANSMITTER

TO RC 3000 CONVERTER

rc3200
PAPER TAPE
TRANSMITTER ®

3200
PAPER TAPE ®
TRANSMITTER
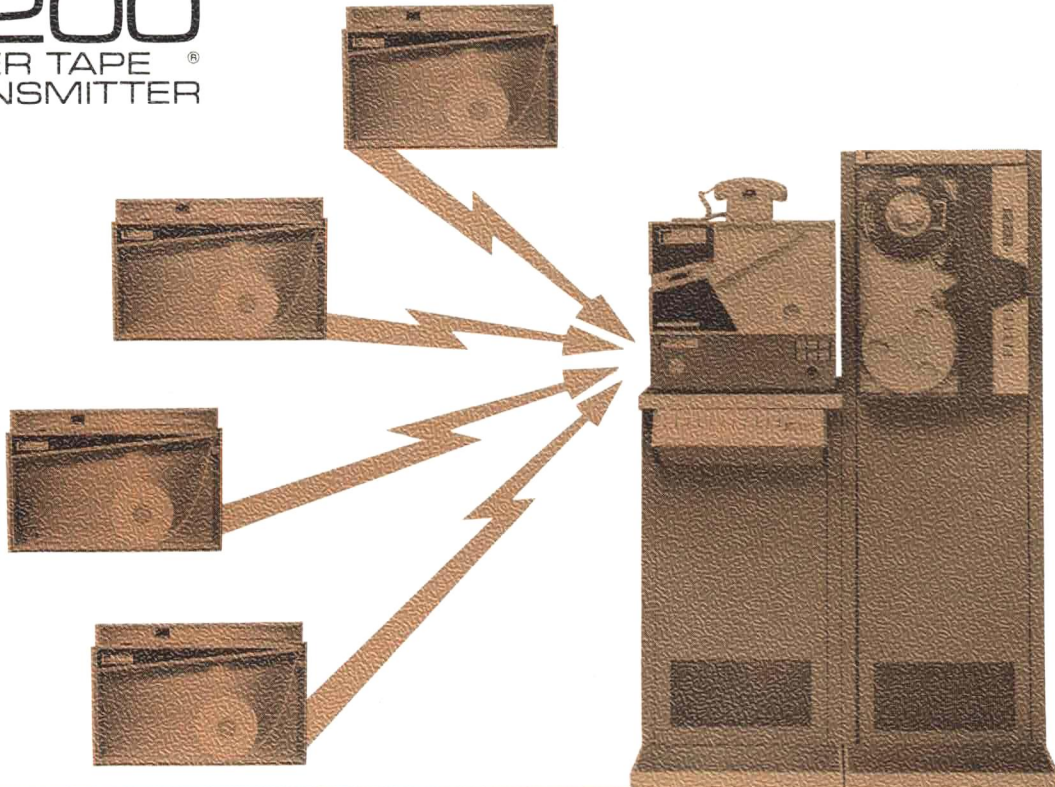
The RC 3200 permits transmission of paper tape data to an RC 3000 Converter System equipped with the RC 3100 Data Transmission Controller without restricting off-line conversion in conjunction with local data processing. A single RC 3000 can receive data from several RC 3200 transmitters, though not simultaneously.

The RC 3200 reader can accommodate 5, 7, and 8 track standard tapes and 6 track Olivetti tapes at the turn of a single selector knob. The RC 3200 transmitter interfaces directly to standard modems complying with CCITT Recommendation V. 24.

The RC 3200, designed for leased as well as dialed telephone connections, operates on a two-way alternate basis with the following channel combinations:

SYSTEM OUTLINE

RC 3200
PAPER TAPE
TRANSMITTER

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MODEM ⟷ MODEM

TWO-WIRE
CONNECTION
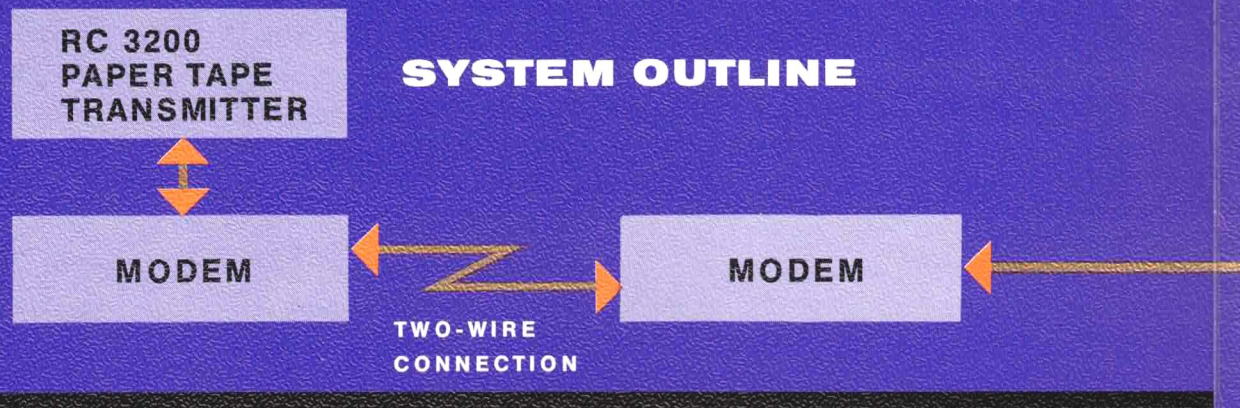
Data Channel	Supervisory Channel
600/1200 bauds	75 bauds
1200/2400 bauds	75 bauds
2400 bauds	75 bauds
1200/2400 bauds	1200/2400 bauds
2400 bauds	2400 bauds
4800 bauds	4800 bauds

The actual transmission speed at 1200 bauds, for example, with a block length of 128 10-bit characters is approximately 110 characters/second. During transmission a parity check is generated for each character and a longitudinal redundancy check for each block.

Transmission Procedure

The RC 3200 converts paper tape characters of up to 8 bits in parallel to characters of 10 bits in series for transmission according to a start/stop principle. Thus the converted character consists of: a start bit, seven data bits, a parity bit, and a stop bit.

The 10-bit characters are transmitted in blocks, the normal length of which is 128 characters. The last block transmitted can contain from 1 to 128 characters. Three characters are added to each block for transmission: STX (start of text), ETX (end of text), and LCR (longitudinal redundancy check). STX and ETX are used at both the transmitting and receiving ends to indicate the start and end of each block.

At the end of each block, a waiting period ensues to provide response time for the receiver. The duration of this period is normally 35 milliseconds, roughly equivalent to the time required to transmit 4 characters at 1200 bauds.

If the block has been correctly received, a response is received on the supervisory channel at the transmitting end before the elapse of the waiting period. This causes the next block to be transmitted.

If the block has been erroneously received, there is no response. When the waiting period has elapsed without a response, the block is retransmitted, as the RC 3100 controller will not transfer erroneously received blocks to the RC 3000 output device.

Retransmission will be attempted up to three times, after which the RC 3200 automatically indicates an alarm condition by means of visible and audible signals. Transmission can be restarted after an alarm condition without loss of data.

Programming

The RC 3200 is programmed prior to transmission of a data tape by means of an 8 track tape with five characters containing the following:

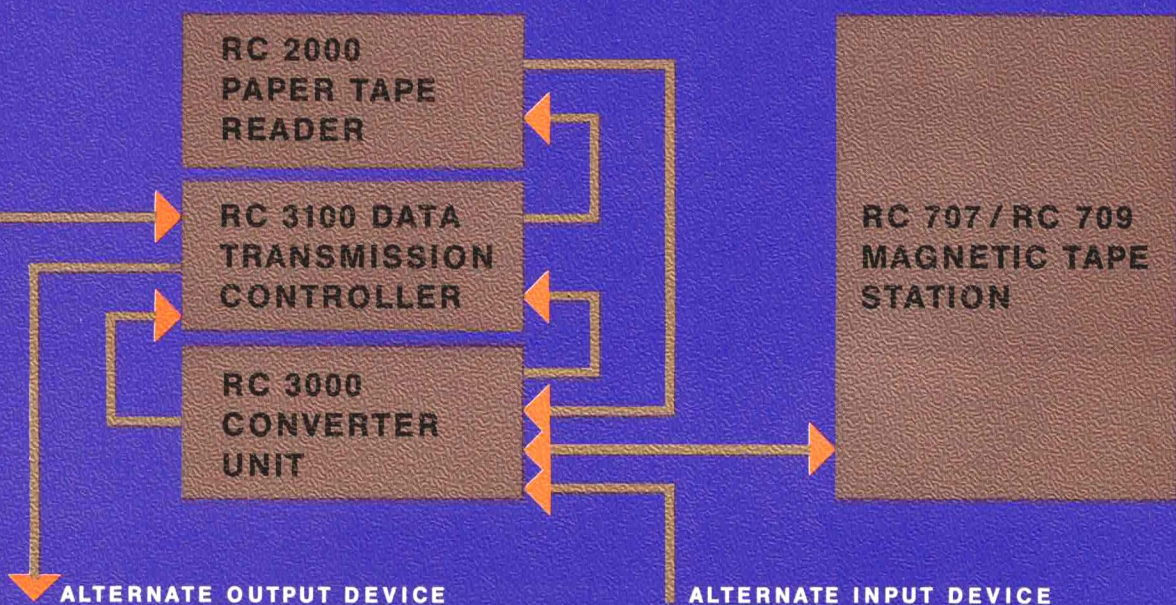**1st Character:** selection of parity track, parity mode, and feed hole reading.
2nd Character: substitute for STX character.
3rd Character: substitute for ETX character.
4th Character: substitute for EOT (end of transmission) character.
5th Character: substitute for parity error.

The substitutes are selected by the user. When combinations corresponding to the STX, ETX, or EOT characters are read from the data tape, the RC 3200 transmits the respective substitutes found as the second, third, or fourth characters of the program tape; similarly, the transmitter replaces an erroneous character with the substitute found as the fifth character of the program tape, if a parity error is detected.

RC 2000
PAPER TAPE
READER

RC 3100 DATA
TRANSMISSION
CONTROLLER

RC 3000
CONVERTER
UNIT

RC 707 / RC 709
MAGNETIC TAPE
STATION

ALTERNATE OUTPUT DEVICE

ALTERNATE INPUT DEVICE

A/S REGNECENTRALEN

SCANDINAVIAN INFORMATION PROCESSING SYSTEMS

AUSTRIA

BENELUX

DENMARK

GERMANY

NORWAY

SWEDEN