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IBM Series/1

BSC COD Disable

Recognition RPQ D02198

Custom Feature

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RPQ D02198 provides a modified BSC (binary synchronous communications) 8-line control feature card that gives the Series/1 the ability to ignore the change-of-direction (COD) function of control characters that appear in the data stream. Figure 1 below shows the control characters that cause a change of direction.

ETB	End of transmission block
ETX	End of text
EOT	End of transmission
ENQ	Enquiry
NAK	Negative acknowledge
ACK 0	Even acknowledge
ACK 1	Odd acknowledge
WACK	Wait before transmit (pos. ack)
DISC	Mandatory disconnect
RVI	Reverse interrupt

Figure 1. Control characters that cause a change of direction

When bit 15 of word zero (control word) in the DCB is set to zero, RPQ D02198 functions as a standard 8-line BSC control feature as described in the *IBM Series/1 Communications Features Description*, GA34-0028.

When DCB word zero bit 15 is set to one, RPQ D02198 permits a read or write operation to continue until a specified number of bytes has been transferred to main storage (for a read operation) or from main storage (for a write operation). Any COD characters that appear in the data stream will be treated as ordinary data characters, and no change of direction will occur.

The user, through programming, is responsible for the entire message content, including LRC (longitudinal redundancy checking) characters and any necessary control characters. VRC (vertical redundancy checking) is not affected by this RPQ and operates as described in the *Communications Features Description* manual.

Transmit Operation

The BSC control hardware generates the leading pad followed by the initial synchronizing pattern of two SYN characters. The user is then responsible for the remainder of the data to be transmitted, including error checking and control characters. See Figure 2.

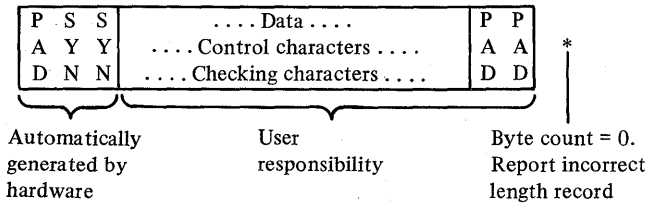


Figure 2. Transmitted message

When the specified number of bytes has been transmitted (byte count specified in DCB word 6 has decremented to zero) RPQ D02198 presents an interrupt to the processor with bit 2 (incorrect length record) of the interrupt status byte (ISB) set to one.

Receive Operation

Synchronization is established when two consecutive SYN characters (followed by any non-SYN character) are received and decoded. After synchronization is established, all subsequent received data is transferred to main storage until the specified number of bytes has been received (byte count specified in DCB word 6 has decremented to zero). The COD function of any control character that may appear in the data stream is ignored. When the byte count equals zero, RPQ D02198 presents an interrupt to the processor with the ISB bit 2 (incorrect length record) set to one. See Figure 3.

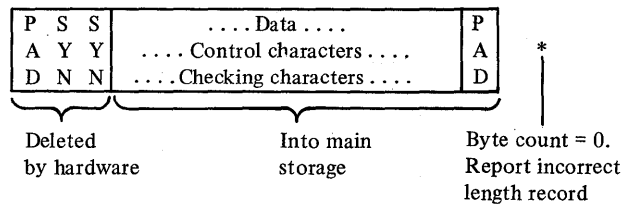


Figure 3. Received message



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