

The Centronics RS-232 interface is designed to interface a type 202 Dataphone or equivalent directly to any Centronics printer. This interface uses a single character parity check with a choice of even, odd, or no parity. Reverse channel is used to control the interaction between the printer and the Dataphone. The interface is supplied with a connecting cable that is pin for pin compatible with a type 202 Dataphone. Baud rates for the Centronics RS-232 interface can be selected from a range of 110 to 9600 bps.

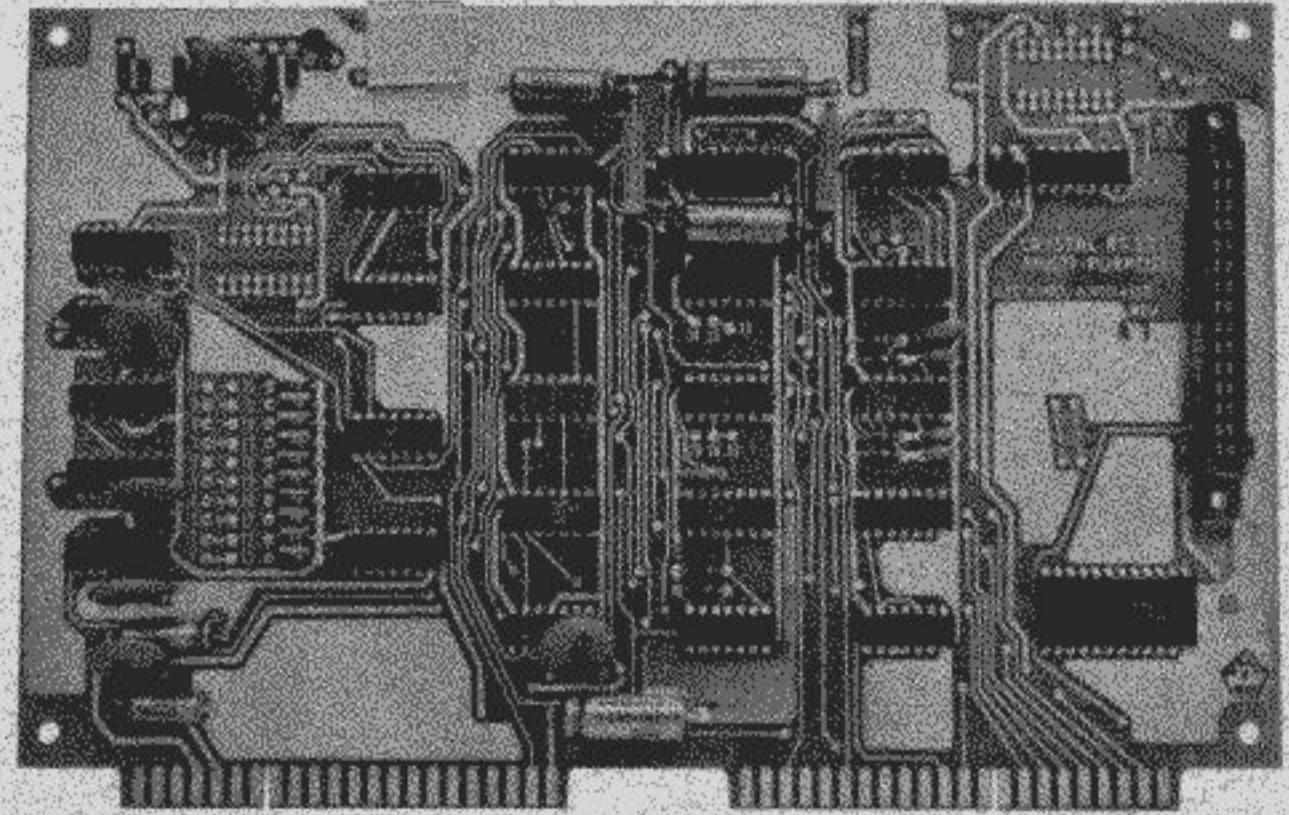
Transmitting Sequence

Once the call has been established, either manually or with the automatic calling unit, the transmitter starts the data transmission with a Start of Message (SOM) code. An SOM must precede every line of data or every command that is transmitted. Next, the data is transmitted serially using one start bit, seven data bits, one parity bit, and one or more stop bits. If the data is to be printed, the line is terminated with a carriage return (CR). After the carriage return or control function is transmitted, an End of Message (EOM) code is transmitted. The transmitter must then wait for the reverse channel to go high indicating an acknowledge from the printer. If the acknowledge level is not received by the transmitter, within four seconds after EOM has been transmitted, a parity error may be assumed and the line or function may be retransmitted. If the acknowledge level is received, the transmitter waits until the reverse channel line goes low and then transmits the next line of data.

Receiving Sequence

The interface accepts serial input data from the data set, assembles the received data into 8-bit characters (seven data bits and one parity bit), checks the parity of the received data and transfers the assembled character in parallel to the printer. Signal levels between the interface and the data set conform to RS-232 standards. Signal levels between the interface and printer are TTL compatible.

A reverse channel indication to the data set, controlled by the received data (EOM code) and



the status of the printer, prohibits data transmission whenever the printer is not able to accept new data. The absence of a reverse channel response to a data transmission indicates that a parity error was detected in the received data.

Programming Notes

When the RS-232 interface is used, any transmitted control character which could cause a busy condition (e.g., LF, FF, CR, etc.) must be immediately followed by an EOM. The reason for this is a BUSY signal from the printer does not activate Reverse Channel, but only extends Reverse Channel, if it was previously activated.

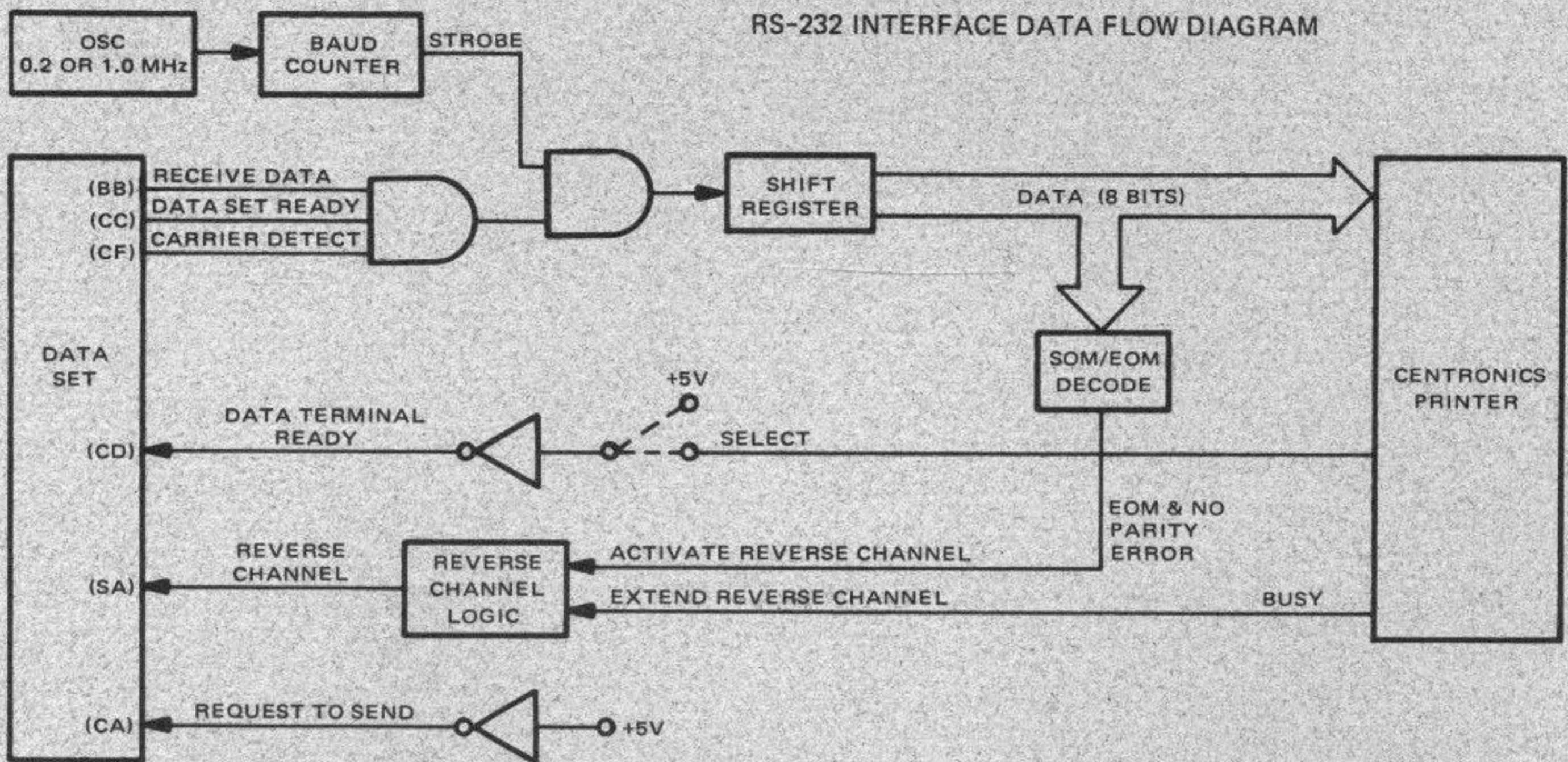
Without a Reverse Channel response, the data set receives no indication that the printer has gone busy and further data transmissions could result in a loss of data.

An EOM (with no parity errors in the preceding message) will activate Reverse Channel.

In the model 102A printer, a busy condition can also be caused by an Elongated Character code (octal 016), because the carriage must return to the left margin before printing elongated characters. As a result, in a 102A with a RS-232 interface, each octal 016 code must also be followed by an EOM.

The Reverse Channel signal to the data set is at least 200 milliseconds long and remains active as long as the printer busy condition exists. After going inactive, Reverse Channel cannot be a

continued



activated by a new EOM for another 200 milliseconds. This delay is generated on the interface board. As a result, new data should not be transmitted for at least 200 milliseconds after Reverse Channel goes inactive.

Physical Description

The RS-232 interface consists of a single printed circuit board and cable assembly contained in the printer enclosure. The printed circuit board plugs into the interface slot at the rear of the printer. The cable assembly consists of a 10-foot cable with a small etched card (fingerboard)

connector at one end and a 25-pin connector at the other end. The fingerboard plugs into a connector on the right side of the interface card, and the 25-pin connector plugs into the data set. A connector plate and strain relief bushing is also included which allows the cable to attach to the speaker bracket at the rear of the printer.

NOTE: When ordering a Centronics RS-232 interface, specify baud rate and odd, even or no parity. Any baud rate from 110 to 9600 is available.

Specifications subject to change without notice.
Patents pending in U.S.A. and other countries.

Printed in U.S.A. 8/73

centronics data computer corporation

Headquarters and Eastern Regional Office
One Wall Street
Hudson, New Hampshire 03051
Tel: (603) 883-0111
TWX: 710-228-6505

Central Regional Office
Executive East Bldg., Suite 200
1563 East Dorothy Lane
Kettering, Ohio 45429
Tel: (513) 294-0070
TWX: 810-459-1784

Chicago District Office
1132 Gail Lane
Sleepy Hollow, Illinois 60118
Tel: (312) 426-5533

Western Regional Office
2800 South Main Street
Santa Ana, California 92707
Tel: (714) 979-6650

