

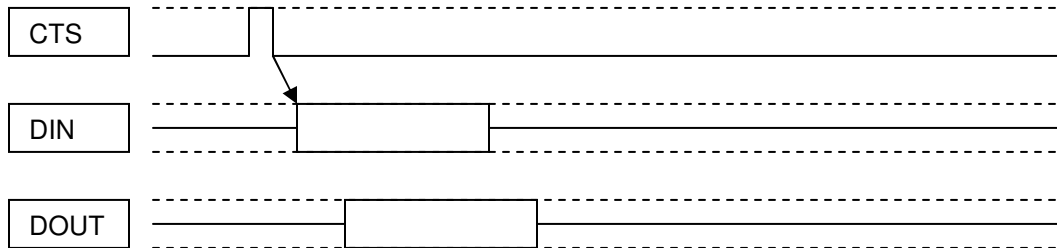


Half-Duplex Operation for entraNET 220 Packaged Radio Module COM2 Port

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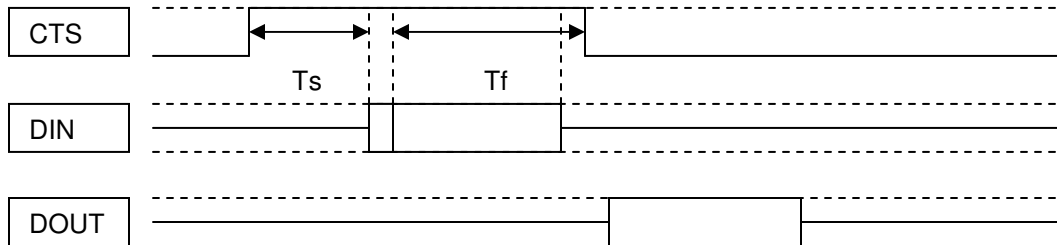
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With the MDS equipment, data can flow into or out of the radio module simultaneously. The attached RCL vendor equipment is triggered to send data into the radio by assertion of the CTS signal.



For half-duplex RCL vendor equipment, this can lead to problems in the case shown above because the radio is sending data out of the serial port at the same time data is coming in.

To solve this issue, MDS has implemented the following feature as of firmware version 2.3.3.



The MDS radio supports a half-duplex mode as follows. This mode is enabled with the command `COM2 DUPLEX=HALF`.

When CTS is asserted, data flows into the radio. When CTS is cleared, data flows out of the radio.

Upon assertion of CTS, the external equipment has T_s ms to begin sending data into the radio or the CTS signal will be deasserted and data may flow out of the radio again.

Upon completely sending the first message character into the radio, the external equipment has T_f ms to completely send the message into the radio or the CTS signal will be deasserted and data may flow out of the radio again.

If the message is completely received within these parameters, the CTS signal is deasserted 1 to 2 ms after the last expected character is received. Pending data to be sent out of the radio is held until CTS is deasserted. It is then immediately delivered to the RCL vendor equipment.

$T_s = 100$ ms

$T_f = 100$ ms