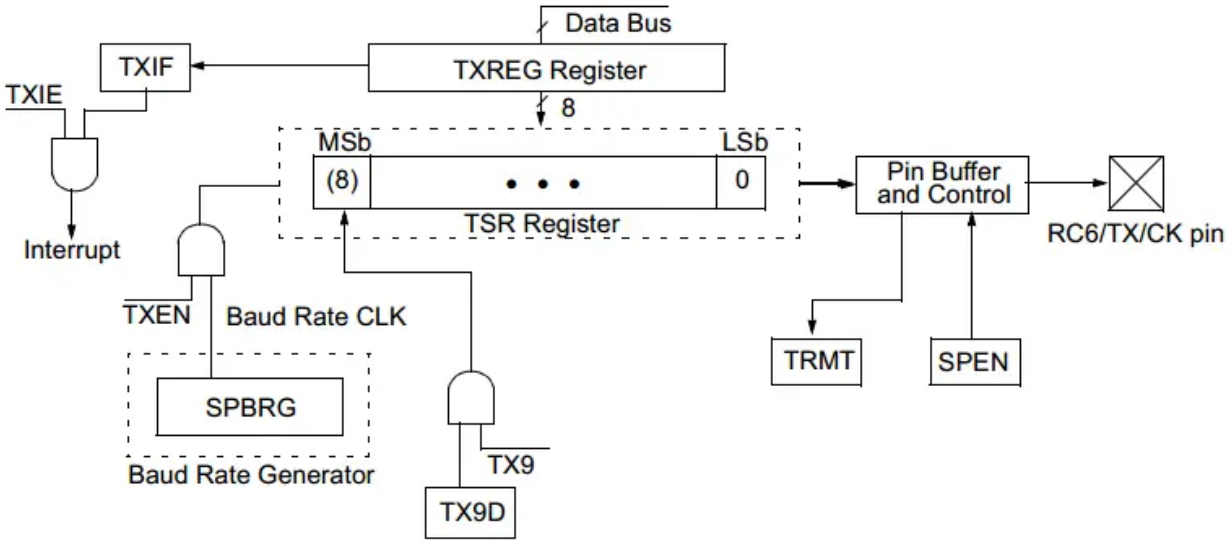
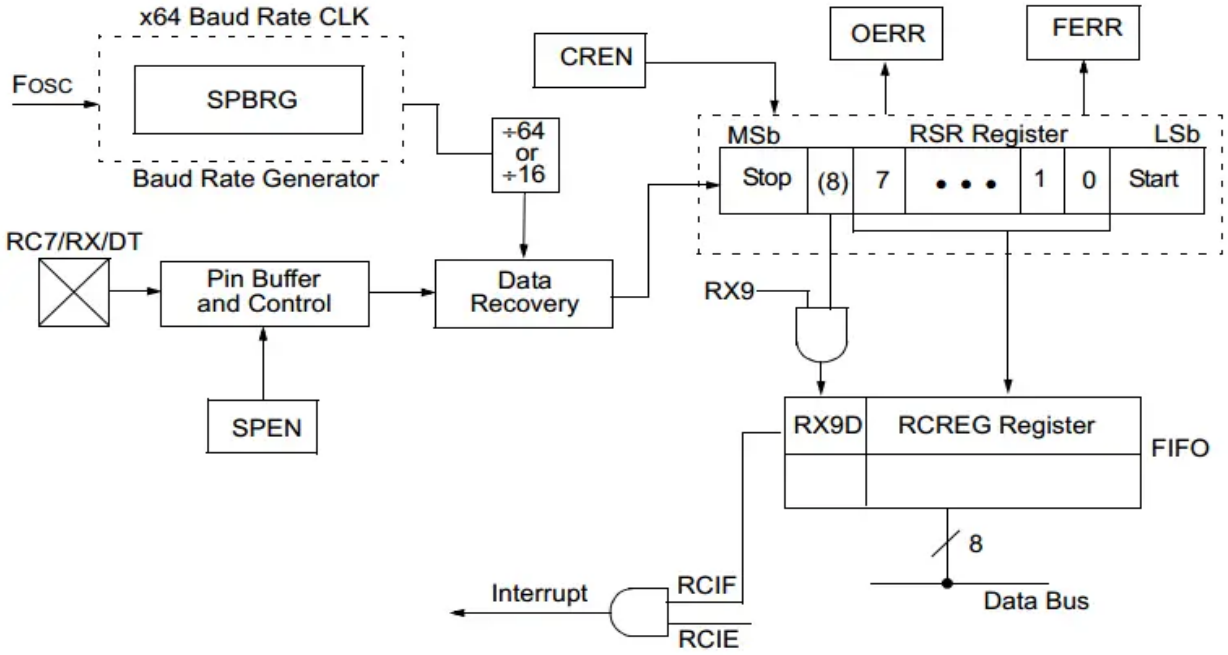
The Mechanics Of UART Transmission



Steps For Configuring The UART Transmitter

1. Initialize the SPBRG register for the appropriate baud rate. If a high-speed baud rate is desired, set the bit BRGH.
2. Enable the asynchronous serial port by clearing bit SYNC and setting bit SPEN.
3. Bits TRISC<7:6> have to be set in order to configure pins RC6/TX/CK and RC7/RX/DT as the Universal Synchronous Asynchronous Receiver Transmitter.
4. If interrupts are desired, then set the enable bit TXIE.
5. If the 9-bit transmission is desired, then set transmit bit TX9.
6. Enable the transmission by setting bit TXEN, which will also set bit TXIF.
7. If the 9-bit transmission is selected, the 9th bit should be loaded in bit TX9D.
8. Load data to the TXREG register (this step automatically starts the transmission).
9. If using interrupts, ensure that GIE and PEIE (bits 7 and 6) of the INTCON register are set.

The Mechanics Of UART Reception



Steps For Configuring The UART Receiver

1. Initialize the SPBRG register for the appropriate baud rate. If a high-speed baud rate is desired, set bit BRGH.
2. Enable the asynchronous serial port by clearing bit SYNC and setting bit SPEN.
3. Bits TRISC<7:6> have to be set in order to configure pins RC6/TX/CK and RC7/RX/DT as the Universal Synchronous Asynchronous Receiver Transmitter.
4. If interrupts are desired, then set enable bit RCIE.
5. If a 9-Bit reception is desired, then set bit RX9.
6. Enable the reception by setting bit CREN.
7. Flag bit RCIF will be set when reception is complete and an interrupt will be generated if enable bit RCIE is set.
8. Read the RCSTA register to get the ninth bit (if enabled) and determine if any error occurred during reception.
9. Read the 8-bit received data by reading the RCREG register.
10. If any error occurred, clear the error by clearing enable bit CREN.
11. If using interrupts, ensure that GIE and PEIE (bits 7 and 6) of the INTCON register are set.