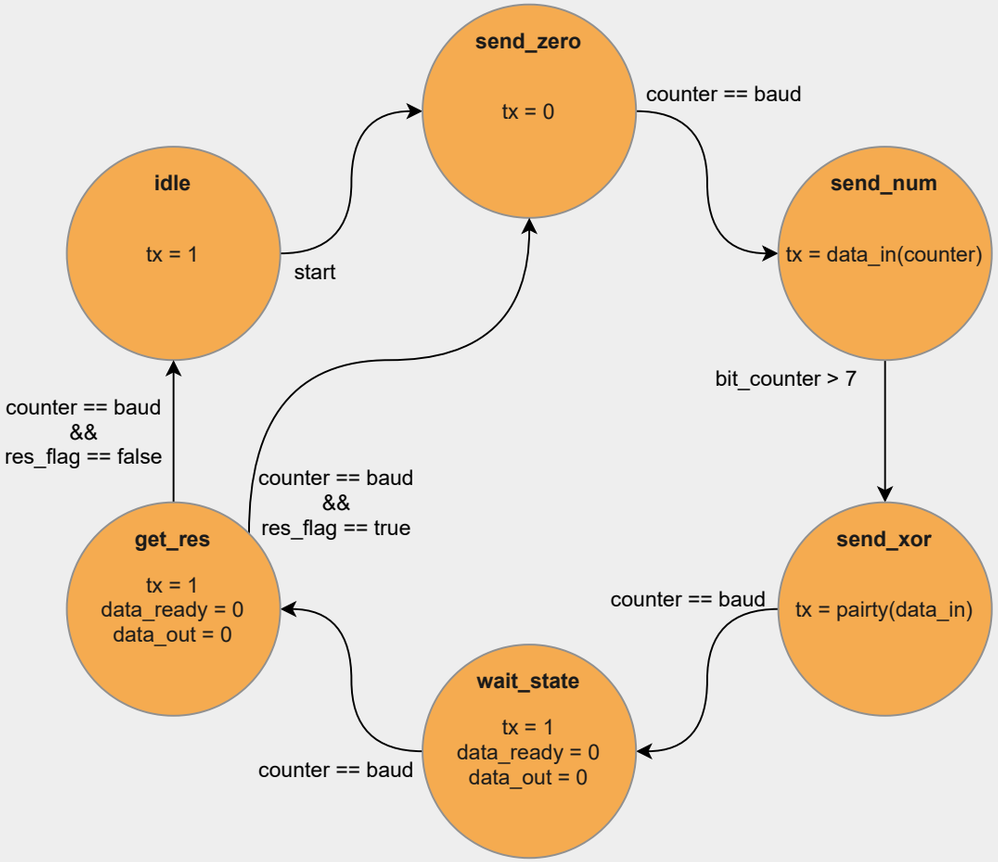
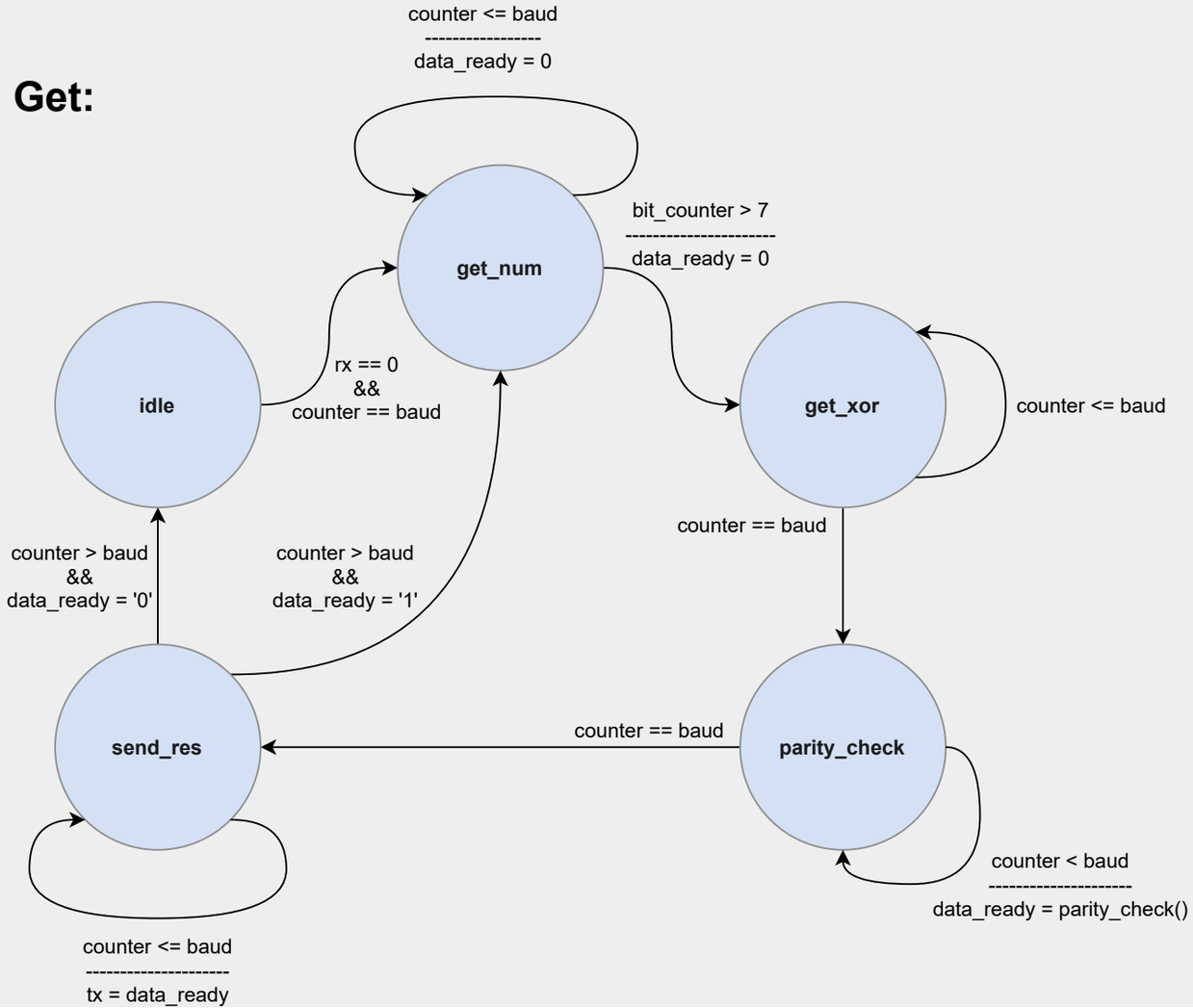
Send:


send_zero
tx = 0
counter == baud
idle
tx = 1
start
send_num
tx = data_in(counter)
bit_counter > 7
counter == baud
&&
res_flag == false
counter == baud
&&
res_flag == true
get_res
tx = 1
data_ready = 0
data_out = 0
send_xor
tx = pairty(data_in)
counter == baud
wait_state
tx = 1
data_ready = 0
data_out = 0
counter == baud

Get:


counter <= baud
---
data_ready = 0
get_num
bit_counter > 7
---
data_ready = 0
idle
rx == 0
&&
counter == baud
get_xor
counter <= baud
counter == baud
counter > baud
&&
data_ready = '0'
counter > baud
&&
data_ready = '1'
send_res
counter == baud
parity_check
counter < baud
---
data_ready = parity_check()
counter <= baud
---
tx = data_ready