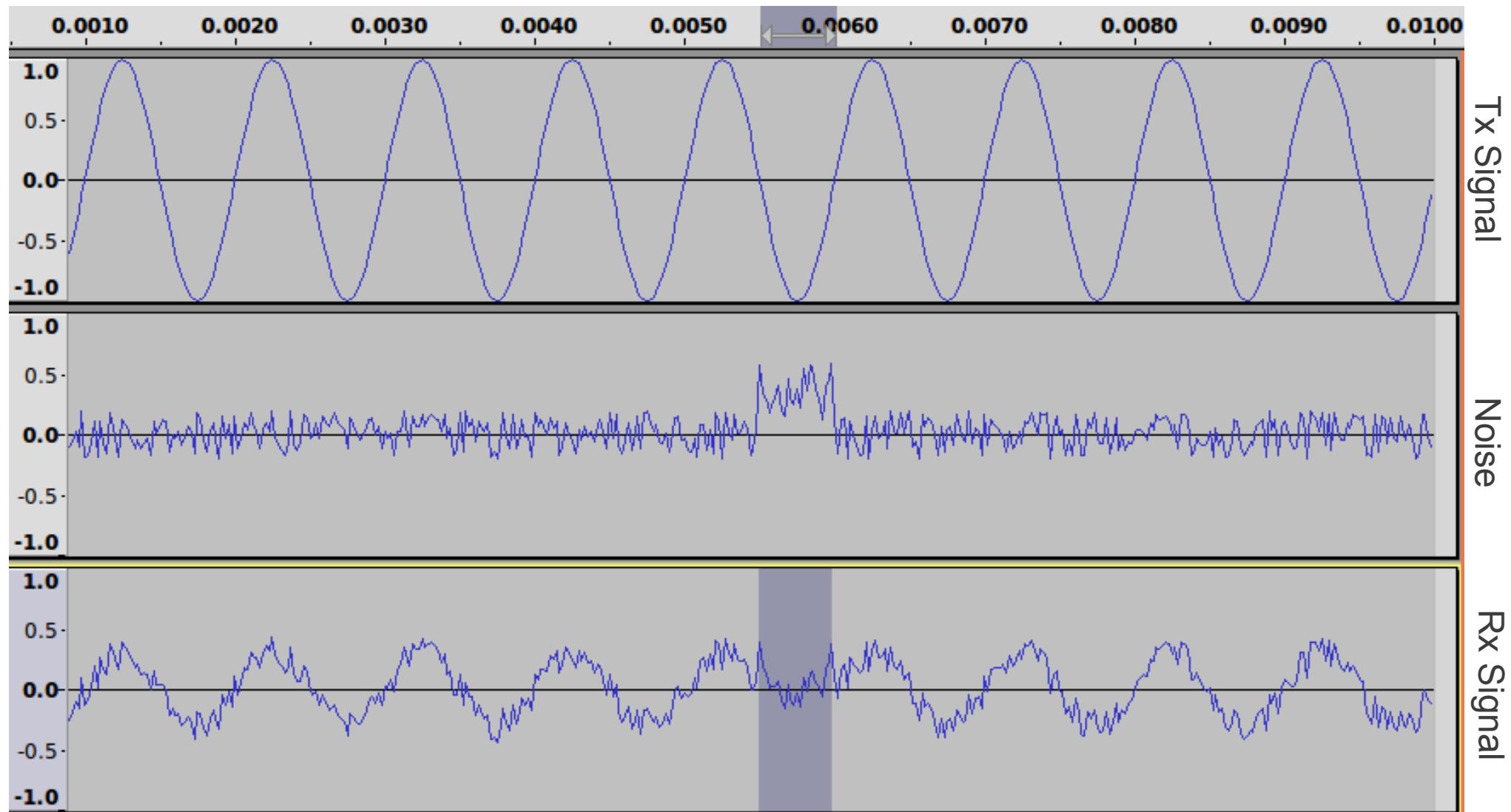
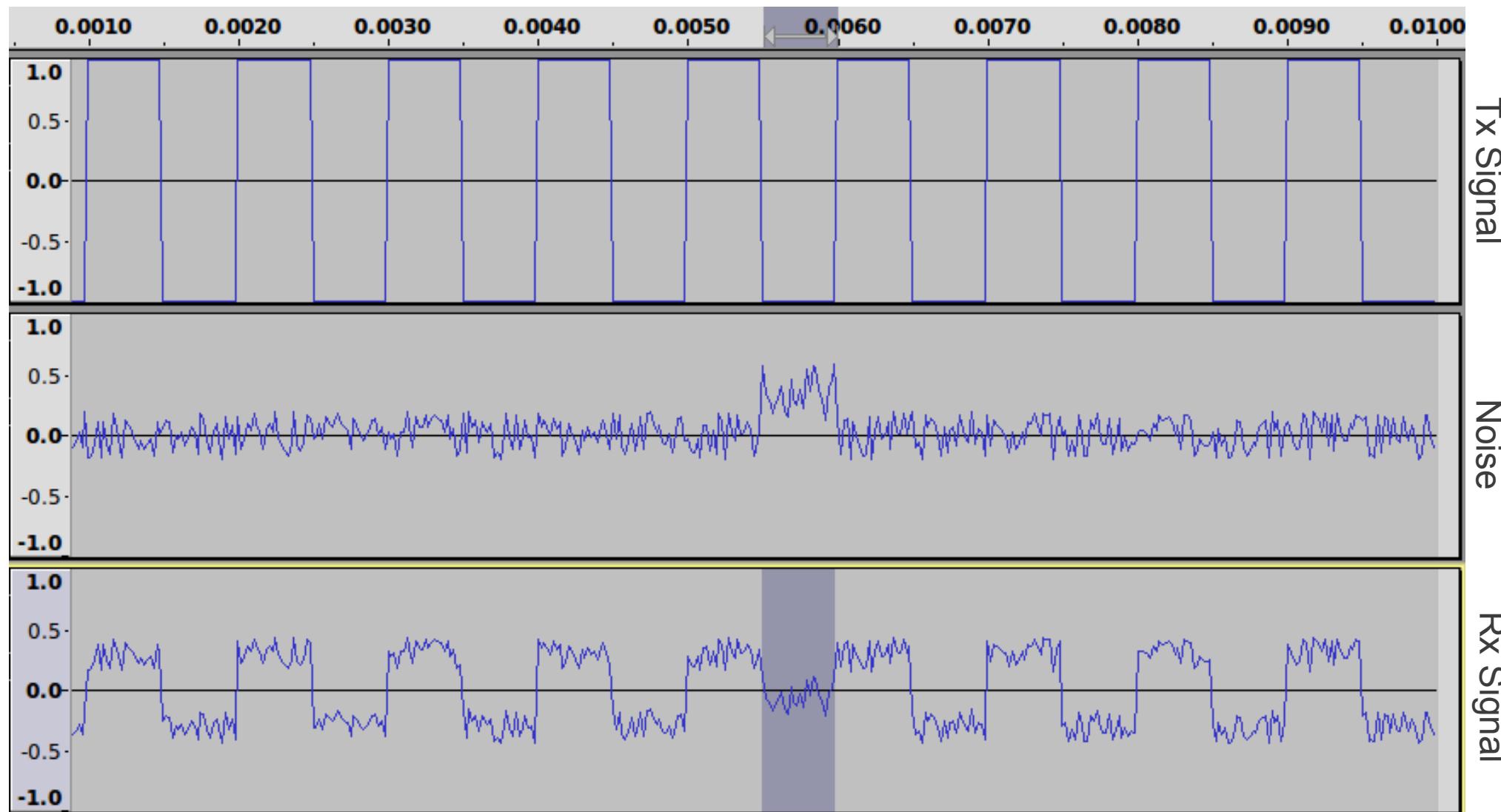


Tx Signal: 1000 Hz **sine** wave; Attenuation; Random noise with 0.5ms spike



Tx Signal: 1000 Hz **square** wave; Attenuation; Random noise with 0.5ms spike

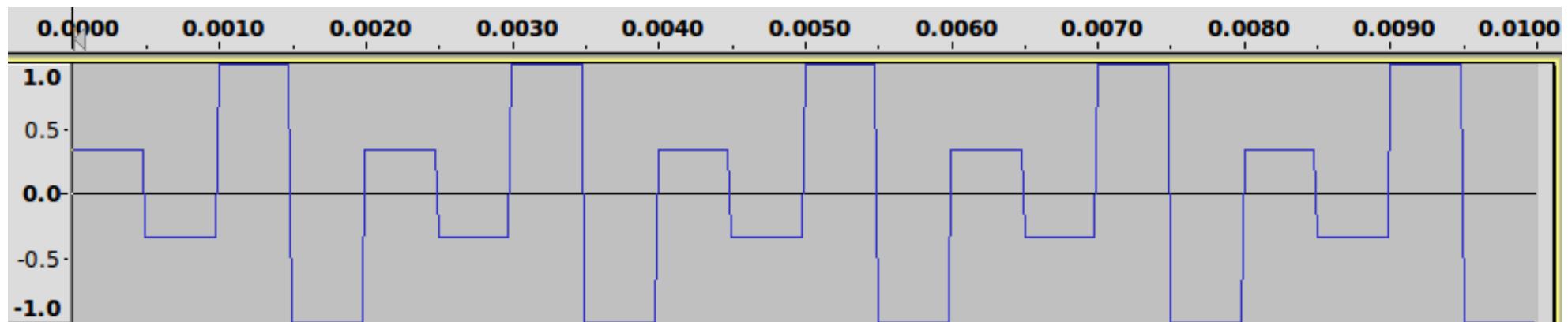


Tx Signal

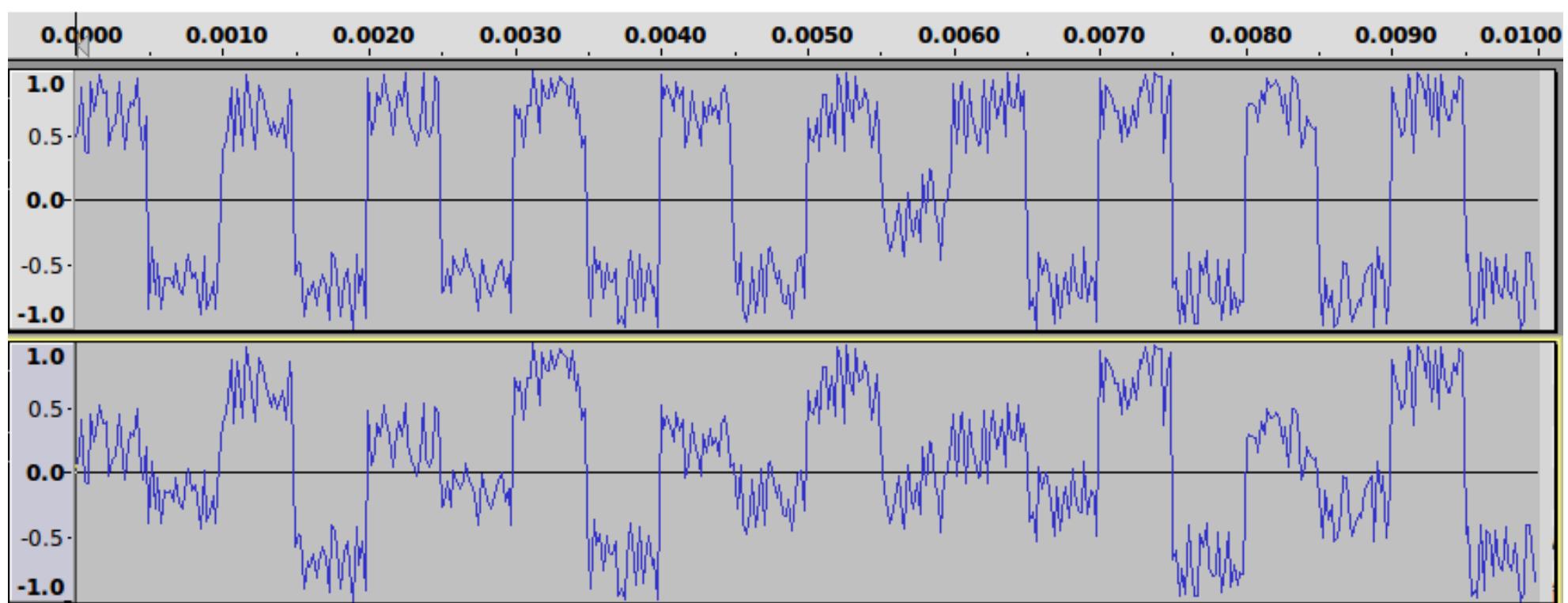
Noise

Rx Signal

What about a signal with 2 levels vs a signal with 4 levels: which one will have more bit errors for some given noise?



Rx (2 levels) Rx (4 levels)



Signal with 4 levels has more chance of bit errors.
Smaller separation between levels; higher chance noise causes signal
at one level to be received at one of the other 3 levels

