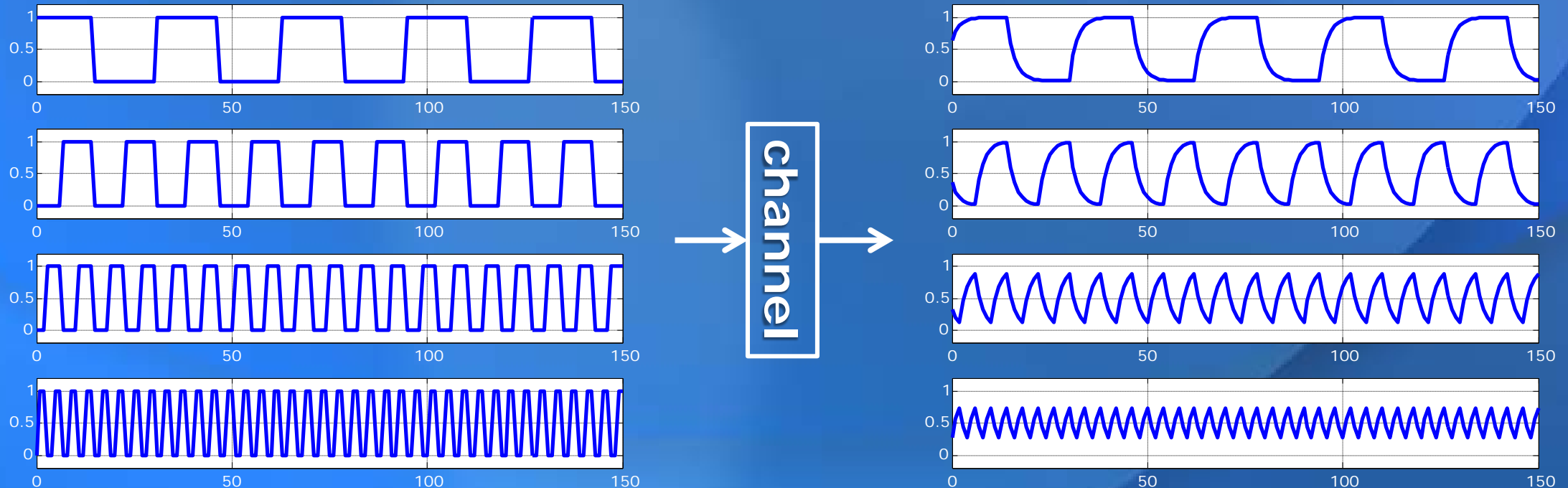


Frequency Response of the IR Channel

The IR Channel

The long flat parts (low frequencies) pass through the IR channel in the lab, but the sharp transitions (high frequencies) do not.

Thus, we expect the IR channel to have a “low pass” characteristic.



Step/ Frequency Response

The step response and the frequency response are equivalent

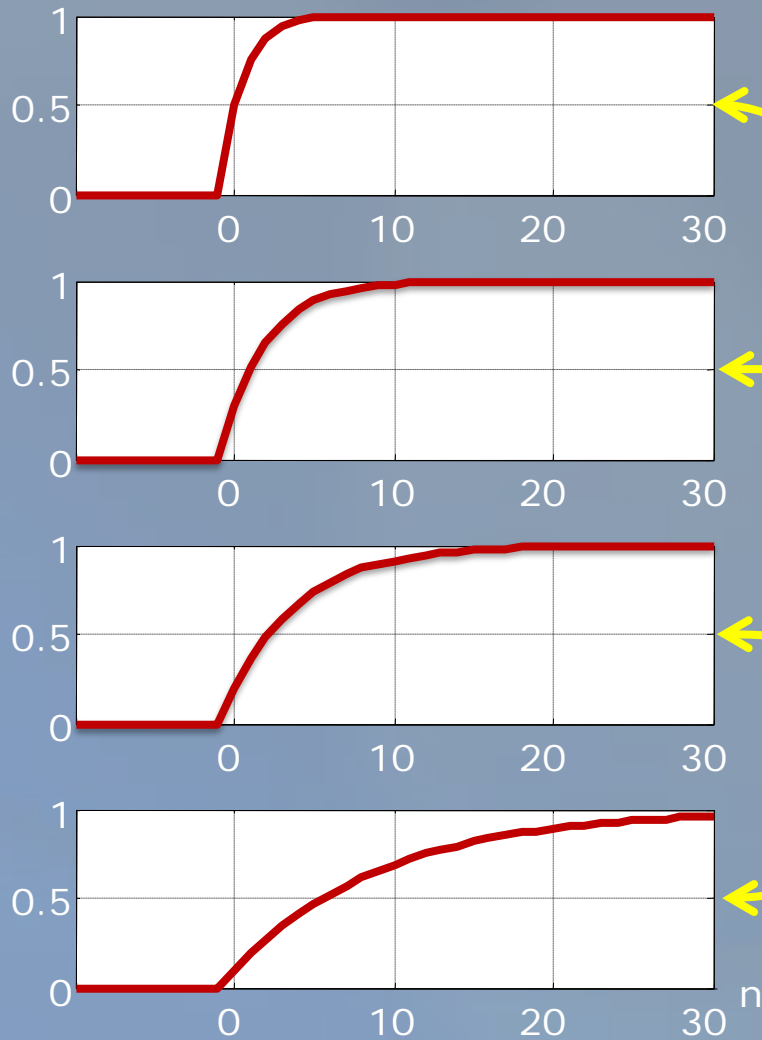
- Both provide enough information to compute the output of a channel in response to any input.
- One can be computed from the other

Like the signal and its Fourier Series expansion, they are just different ways of looking at the same information

- Step response shows how the channel output changes in time.
 - Useful for predicting the eye diagram and responses to bit waveforms.
- Frequency response shows how the channel output responds to different frequencies.
 - Useful to understand the response to more complex signals.

Match Step to Frequency

Step Responses



Amplitude Responses

