Communication Systems

University Electrical Engineering · Vocabulary in context

Word	Example
communication systems	**Communication systems** send signals across real channels.
bandwidth /ˈbændwɪdθ/	A fast connection has a high **bandwidth**.
sideband	In conventional AM, **sideband**s lie on either side of the carrier. AM
amplitude modulation	In **amplitude modulation**, the message changes the height of the carrier wave.
modulation index	For conventional AM without overmodulation, keep the **modulation index** ≤ 1. AM ≤ 1
envelope detector	A simple **envelope detector** uses a diode and an RC network. RC
instantaneous frequency	In FM, **instantaneous frequency** varies with the message signal. FM
frequency deviation	**Frequency deviation** is the largest frequency shift from the unmodulated carrier.
Carson's rule	**Carson's rule** estimates the bandwidth of an FM signal. FM
noise figure	With high first-stage gain, its **noise figure** strongly influences the cascade.
quantisation /ˌkwɒntaɪˈzeɪʃn/	**Quantisation** rounds each sample to the nearest level.

exercises.lol exercises.com.cn

Word	Example
raised-cosine	At fixed symbol rate, increasing roll-off widens **raised-cosine** bandwidth.
constellation	A **constellation** is the map of symbol points on the I-Q plane. I-Q
entropy /ˈentrəpi/	A file with high **entropy** is hard to compress.
channel capacity	**Channel capacity** bounds the rate of reliable communication for a channel.
Hamming code	A **Hamming code** points at any single flipped bit.