

Lec 26 -- IQ demodulation, Mixers Specifications, Communication System Analysis

How does IQ demodulation work? Draw a picture of an IQ demodulator and annotate nodes with the spectra of signals received at them.

How does the phase of an IQ demodulator relate to the phase of the transmitter.

Draw a phase detector and a slope detector.

What are the two types of mixers

What is conversion gain? What sign does it usually have?

What is isolation in a mixer? What mischief can it cause?

How do you express the linearity of a mixer? What linearity quantity is particularly important?

Why is the noise figure for mixers tricky to define? How do you calculate the noise temperature of a mixer?

Draw a table that is helpful for the analysis of a direct downconversion mixer.