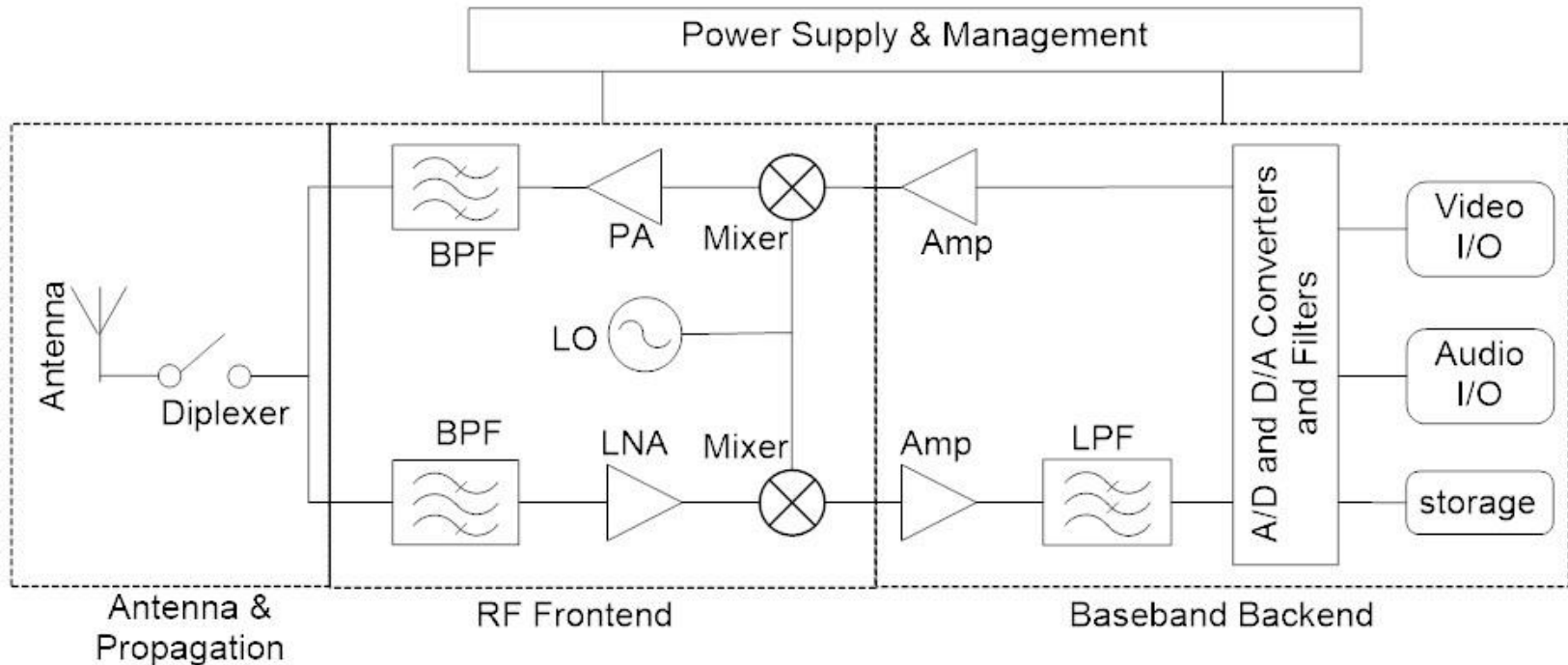
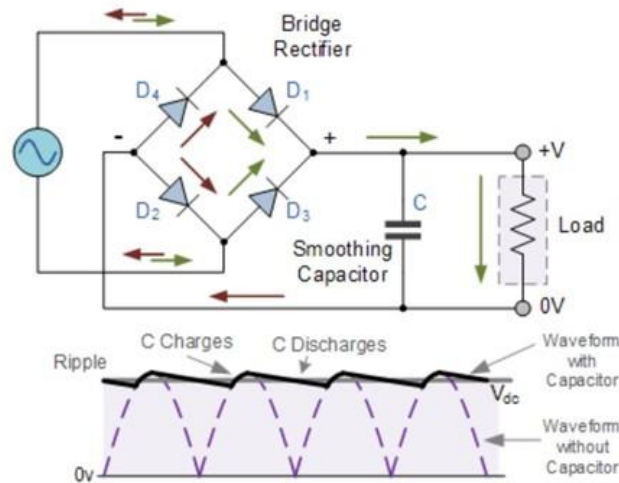


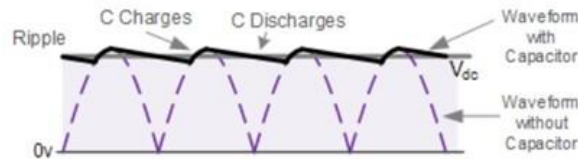
A Cellphone Radio System as a KI Platform



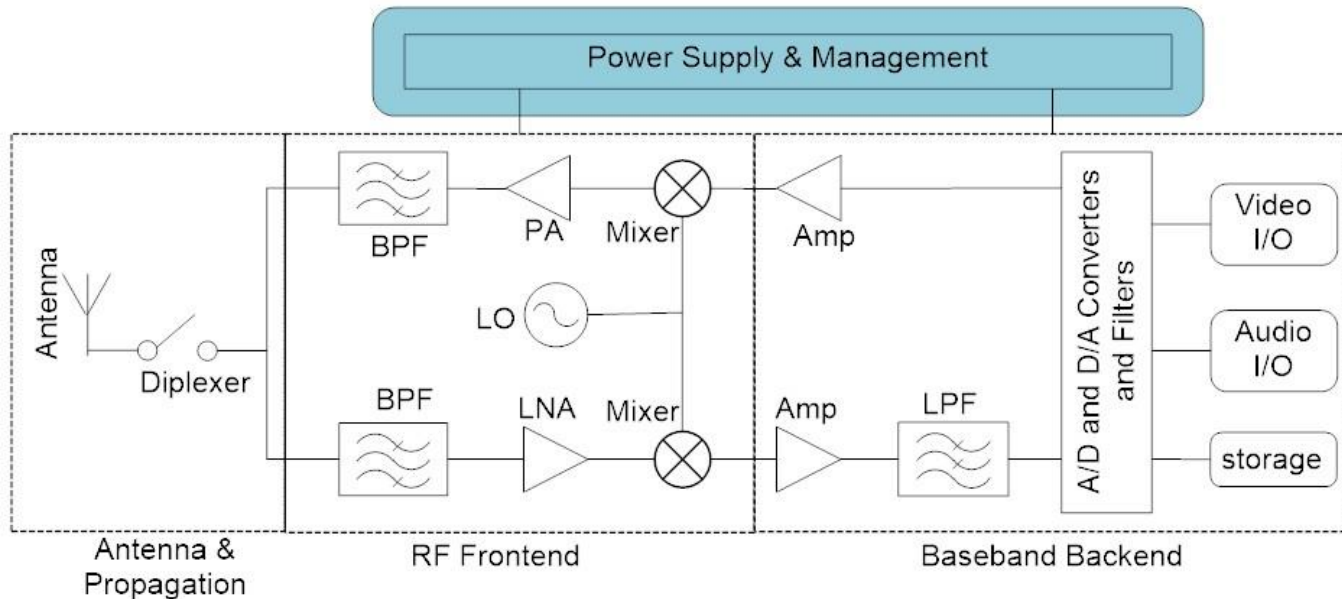
KI #1: Power Supply & Management



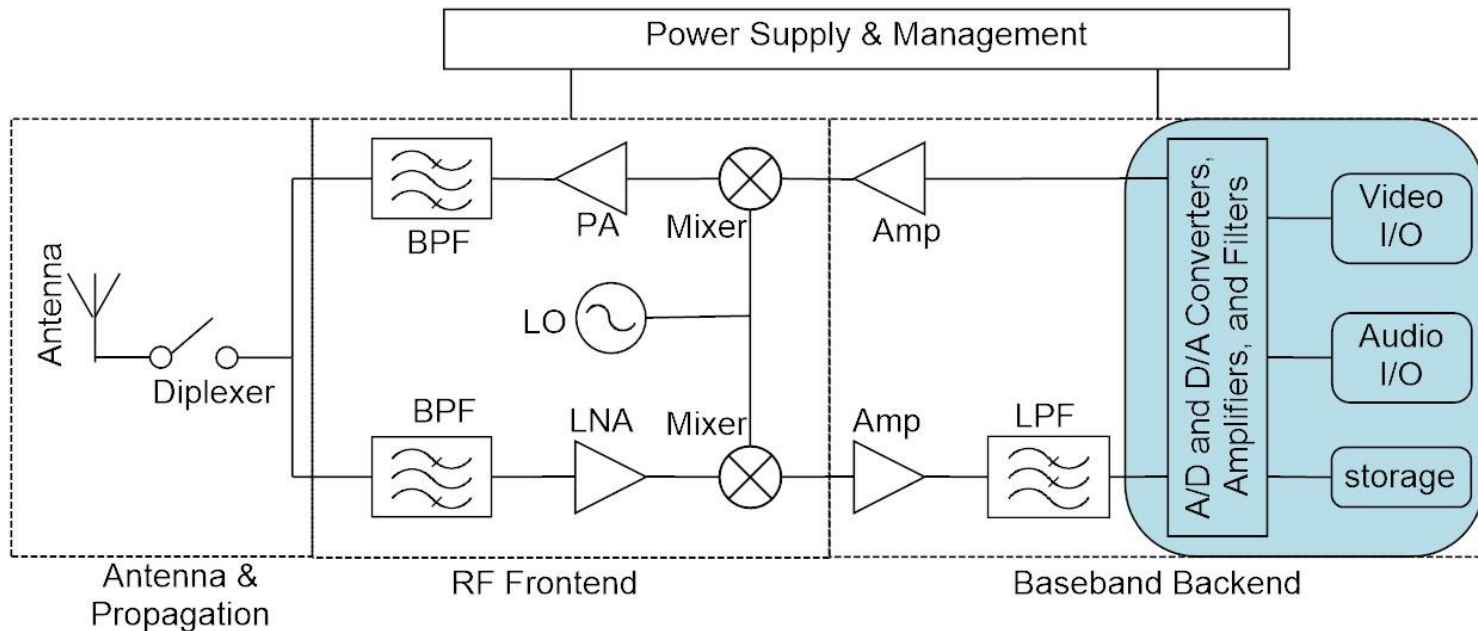
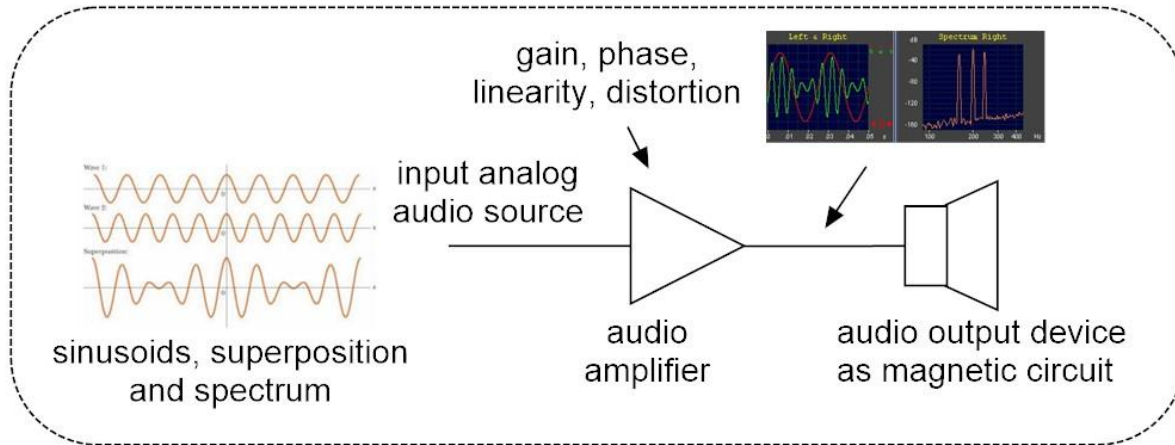
periodic signals
semiconductor physics
pn junctions and diodes
time-invariant systems
electrostatic field
dielectric materials
capacitor



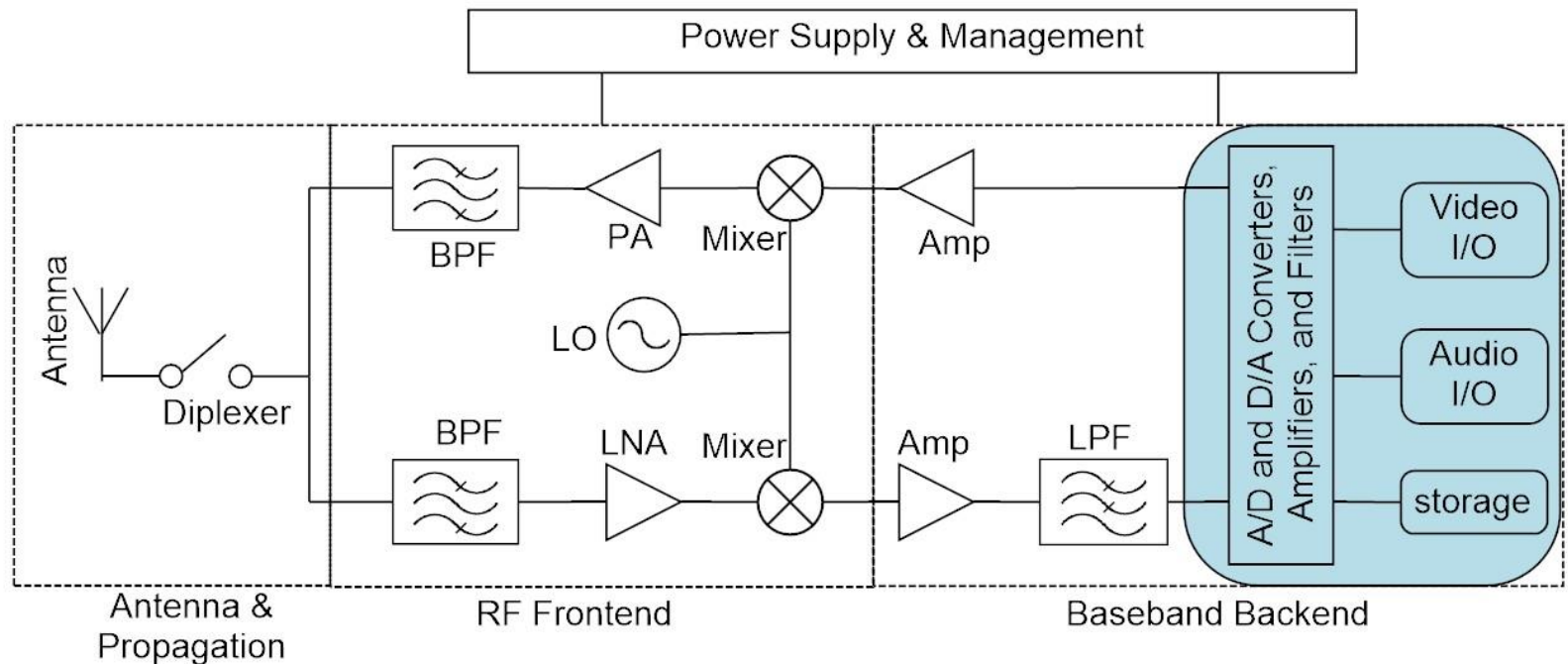
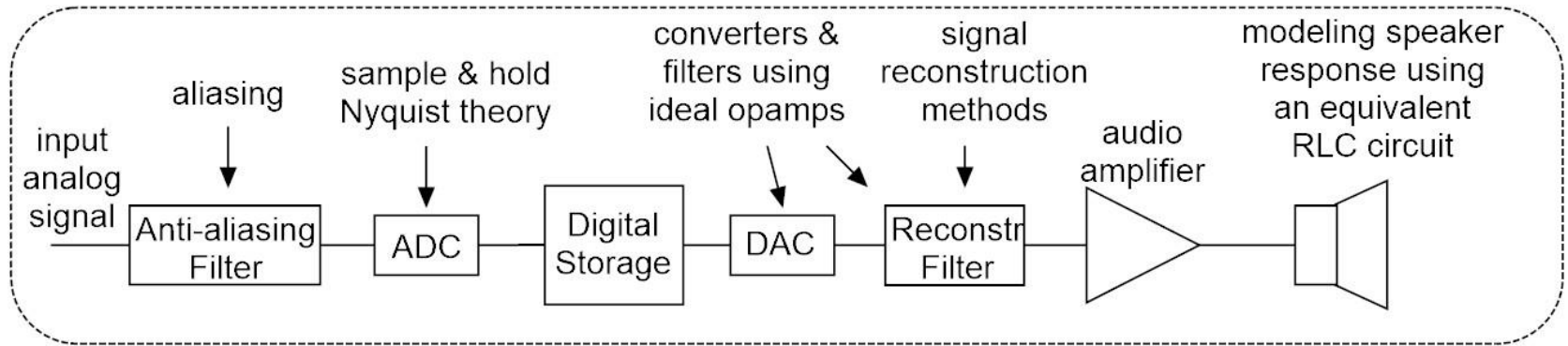
Resultant Output Waveform



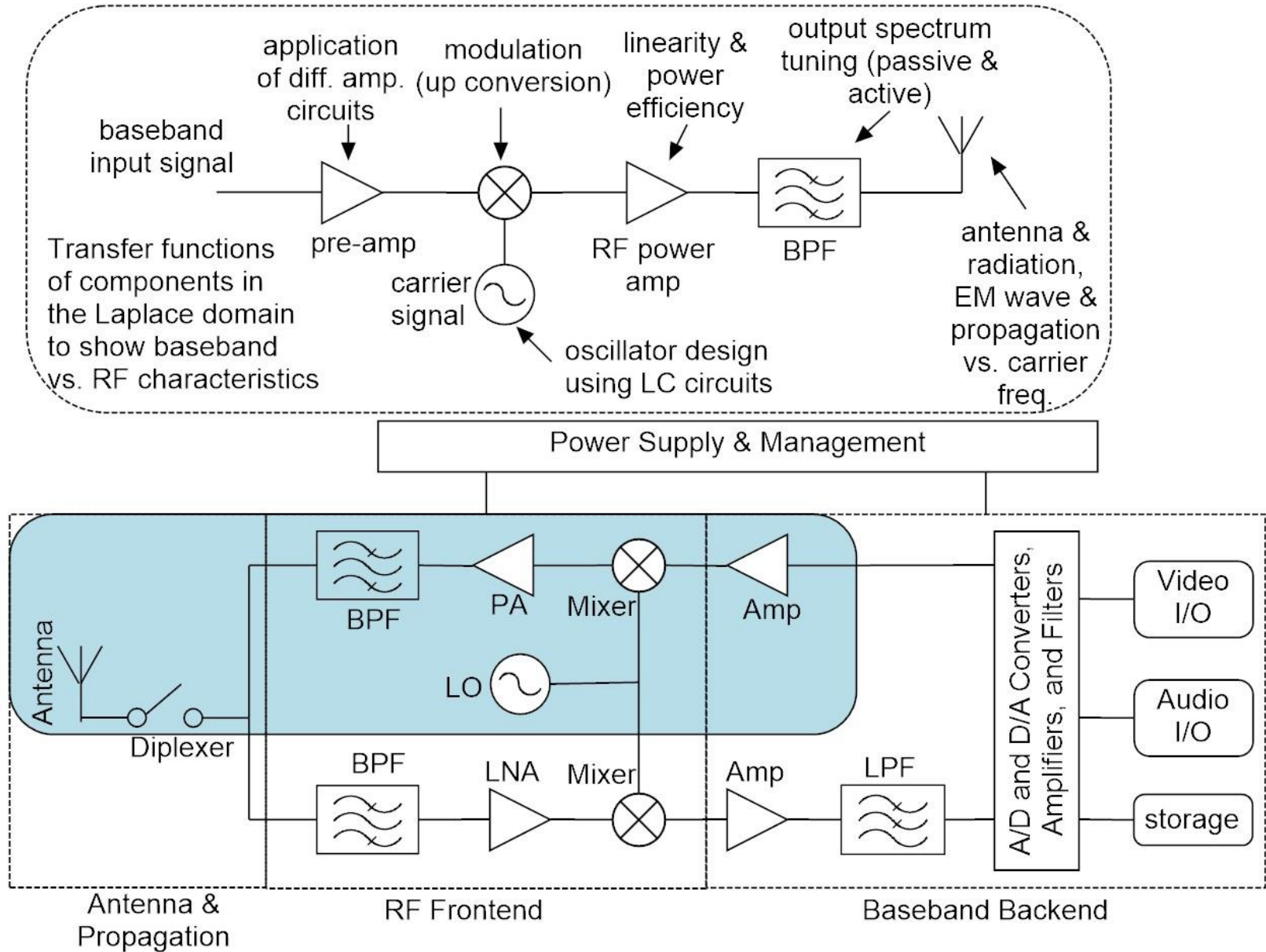
KI #2: Back-end Analog Audio System



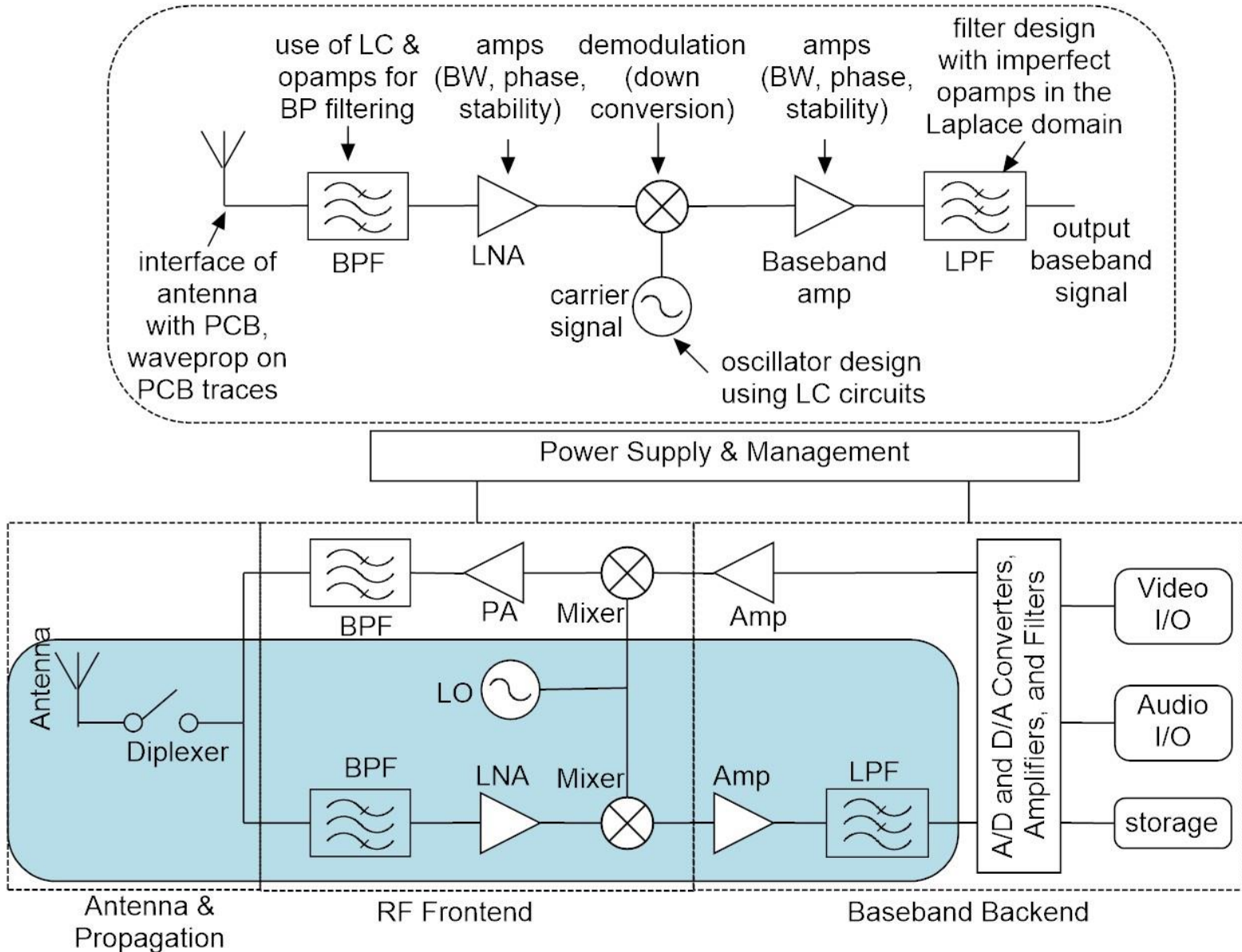
KI #3: Back-end Digital Audio System



KI #4: Radio Signal Transmitter



KI #5: Radio Signal Receiver



KI #6: Overview of the Whole Radio System and Noise

- Putting everything together for system overview
- Radio receiver sensitivity due to noise
- System level handling of noise in radio under the constraint of radio spectrum allocation
- System design tradeoffs
 - Impact of gain and filter designs on SNR
 - Increasing transmitter power
 - Antenna options to increase receiver input power

