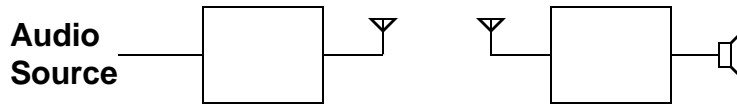


Introduction to Communications Circuits

The objective is to transmit a signal from source to destination. If part of the path is in air, then a transmitting antenna and receiving antenna will be required, as shown below.



Such transmission should be accomplished with minimal degradation and noise added. Another objective is to minimize power dissipation which is important for long battery life for hand-held personal communications devices. Other objectives might be low weight and small size.

If part of the path is through air, then modulated radio signals will be required.

The first block above, the transmitter, could represent an AM or FM radio station, TV broadcaster, transmitter in cellular phone, etc...

Second block is receiver which could be an AM or FM radio receiver, a television receiver or another cell phone.

Issues are functionality in the presence of noise for small signals and distortion for large signals. Other issues are power dissipation, spurious emissions, manufacturability, ...

Block Diagram of Communications Transceiver

