

## Klipsch iFi 2.1 Audio System Operational Description

The iFi system consist of a base unit to cradle an iPod, satellite speakers, and a subwoofer/amplifier that contains additional power supply circuitry. The dock/controller unit of the iFi system contains a system processor operating at a crystal frequency of 9.8304Mhz. This microcontroller is responsible for overall control of the iFi system including communicating to the iPod via a serial-like connection at 19.2K baud, and to an internal integrated FSK based RF transceiver device. The RF transceiver section uses FSK to send and receive data, incorporates a PLL and VCO, and operates with a 16.0Mhz reference crystal for a final transmit/receive frequency of 916.7Mhz. When in transmit mode, data is sent via FSK at a carrier of 916.7Mhz with the deviation set at 170Khz. And as data is transmitted, a "1" corresponds to 916.78Mhz, and a "0" corresponds to 916.61Mhz.