

RF10K Theory of Operation.

1) Transciever

The transmitter portion of the transceiver is primarily a TX VCO tuned for the 902-928 MHz band. The analog data stream is fed directly into the VCO for frequency modulation. The receiver is of a traditional Superheterodyne design. The first LO operates at the receiving frequency, plus 14.32 MHz. The second mixer combines the 14.32 MHz IF with 13.865 MHz to generate a 455KHz IF. The 455 KHz IF filter has a 30 KHz bandwidth, and the output is fed to a standard detection circuit, comprised of a MC3361 Motorola IC. The fundamental transmit frequency, and the first LO frequency for the RX circuit are generated with a M64084 Mitsubishi dual PLL chip.