

## JBL 6 button Remote Operational Description

The JBL 6 button remote is a separate 2.4 GHz RF device to be used in conjunction with the JBL Radial high performance loudspeaker dock for Apple iPods. The remote control has a operating range of approximately 20 feet. The 6 buttons on the remote control the music control functions of the Apple iPod when it's docked in the Radial system.

With regards to the remote control transmit operations. The 2.4 GHz carrier frequency is generated by the internal PLL of the Nordic transceiver, which takes a 16 MHz clock input (crystal). Every time a button is pressed and released, the remote sends out a single RF packet. If the button is held down, a packet is transmitted every 1/2 second. The transmissions are made in short bursts meaning there is no constant output carrier on the RF front. After processing a button press, the entire remote system goes into a sleep mode in order to minimize battery drain. In this state, the radio functionality of the transceiver chip is completely powered down and the crystal does not oscillate.