

Theory of Operation

The transmitter of the wireless laser mouse is powered by 2 AAA batteries at 3V. The antenna used is a loop antenna. The antenna has effectively a close to omni directional radiation pattern on the azimuth plane. The transmit harmonics are pre-filtered before entering the antenna. The laser mouse also has a receiver capability. The receiver is used for pairing function. The mouse and the PC receiver are paired to each other by exchanging unique IDs. There are 2 unique ID elements which form the communications unique ID. One is the hardware specific ID element and the other is software ID element. Both ID elements are concatenated to form the over-the-air unique ID used by the paired devices. The ID generation is controlled by the transceiver. A new ID will be generated for every successful pairing operation.