

# Description of Operation Principle

## I. Bluetooth Technology:

The term “Bluetooth” refers to a worldwide standard for the wireless transfers of audio between two devices. In order to transfers audio, two Bluetooth devices must establish a connection. Before a connection is established, one device must request a connection with another. The second device accepts (or rejects) the connection.

The originator of the request is known as the client. The device that accepts (or rejects) the request is known as the server. Many Bluetooth devices can act as both client and server.

A client Bluetooth device runs a software program that requests a connection to another device as part of its normal operation. For example, the

program may request a connection to a remote computer, a mobilephone, or becoming a Bluetooth client normally requires an action by the device operator, such as an attempt to transfer audio to a remote computer, or Every Bluetooth device that provides a service must be prepared to respond to a connection request. Bluetooth software is always running in the background on the server, ready to respond to connection requests.

## II. bluetooth headset:

The Class 2 bluetooth headset is a fully Bluetooth V1.1/V1.2/ V2.0 compliant product that can be desktop or notebook PC or mobilephone to wirelessly connect and synchronize with other Bluetooth-enabled devices. (Version 1.2 devices will be backwards compatible with Version 1.1 devices) The device is designed to communicate with PC or other mobilephone equipments, and

propagates microwave of Bluetooth signals from a remote computer or mobilephone through the antenna on the PCB.

The Bluetooth signals traveling in the air are received by the antenna of the and delivered to the bluetooth module. The bluetooth module includes band-pass filter which filters the noises out of the operation frequency,

and balun which transfers single signal to the balance ones. Then the received signals pass to the bluetooth chip, down-convert to the frequency compatible with the base-band. Finally, the singles are transferred to headset signals by base-band controller and communicate the with host devices.

Transmitting the microphone signals enter bluetooth single chip through digital signals are converted into analog I,Q signals by the baseband circuit, then modulated and up-converted to 2.4GHz RF signals by

the RF transceiver. Finally , the RF signals are amplified by the power amplifier and transmitted into the air through the antenna.

The crystal provides the whole circuit the standard reference frequency of 16MHz.

There is no external ground connection. the ground is only that of the printed circuit board.

The input voltage of this 3.6V supplied by a Li-ion BATTERY.