

一. Main parameters:

Power adaptor: 3.7V 900mAh built-in lithium battery

Charging voltage: DC 5V

Speaker resistor: 4Ohm

Power consumption output: 1.5W*2

二. Circuit declaration

1. ISP245 is a 2.0(stereo) portable Bluetooth speaker.
2. ISP245 can support both AUX and Bluetooth music.

2.1. When play AUX music, sound frequency L&R signal enter into 15(R IN)&6(L IN) of IC TX2012

(U2) through JK1(earphone dock), after amplifying, transferring into L&R speaker from amplifier IC 3(LO+), 5(LO-) and 16(R-) 18(R+).

2.2. The shift between AUX and Bluetooth can be controlled by JK1(earphone dock). When AUX signal is input, JK1(earphone dock) switch outputs L electrical level, counter wisely, JK1(earphone dock) switch outputs H level.

2.3. While playing AUX music, the Bluetooth module power will be cut off to stop working through JK1(earphone dock) switch to control triode Q2(3904) and Q3(3906).

2.4. Under Bluetooth working status, due to no AUX signal input, it can use JK1(earphone dock) switch to control triode Q2(3904) and Q3(3906) to make it pass, then the Bluetooth can be charged by power adaptor which will help Bluetooth work.

三. Power charging

Electricity of ISP245 is supplied by 3.7V 900mAh built-in lithium battery. When the power is limited, it can be charged by outer DC 5V adaptor, which connected with mini USB cable, using charging management IC EUP8054(U2) to transfer the power to device.

This device by built-in 3.7V 500MAH lithium battery power, when battery power is insufficient , external DC 5V power by MICRO USB interface entered, DC5V by charging management IC HX6001 (U4) of 4th feet entered, and 3rd feet output 4.2V/360 mA to battery charging, at this time charging lamp (LED1) light red; if full electric, HX6001 (U4) of 1st feet output high level 4.2V, at this time charging lamp power off.

The mini usb of this device contains five pins. Only two pins which are used for charging is ability to function. Other three pins are suspended. There is no address information confirmation.

For Bluetooth module

This Bluetooth module F=3088 is regulated to Bluetooth V2.1.

The working procedures are:

- a. When power on, the monitor will loop scan the whole frequency until a connection

command from the camera is received.

- b. The monitor transmit a response signal.
- c. The camera receive the response signal and recognize it, then send a connection command to establish the connection.
- d. After the connection establish successfully, the data transmission is beginning. At the same time, the camera and monitor will shift frequencies in synchronization per a same pseudo randomly ordered list of hopping frequencies, the hopping rate is 1600 times per second. each new transmission event begins on the next channel in the hopping sequence after the final channel used in the previous transmission event
- e. The bandwidth of the receiver, which is set to a fixed width by the software, match the hopping channel bandwidth of their corresponding transmitter.