

- **Audio amplification unit**

MP3 music is input to audio amplification unit via audio cable. Signals are divided into two channels, one is output to earphone socket for listening with an earphone, and the other is input to audio amplifier for signal amplification so as to satisfy requirements of signal demodulation.

- **Vibration adjustment knob**

- Mains ON/OFF. When the product is not in use, cut off power supply to prevent battery energy from consumption.
- When MP3 music is adjusted to low volume, increase the amplification factor of audio amplification circuit by adjusting the adjustment knob of the transmitter so as to ensure the receiving vibrator can obtain maximal vibration strength.
- When MP3 music is adjusted to high volume, decrease the amplification factor of audio amplification circuit by adjusting the adjustment knob of the transmitter so as to ensure the receiving vibrator can obtain optimal vibration rhythm and a wide range of strength adjustment.

- **Signal demodulation**

Convert amplified audio signals to pulsatory DC voltage so as to meet the recognition requirements of MCU. DC voltage varies with the rhythm and intensity of audio signals.

- **MCU (Micro Control Unit) (coding)**

MCU conducts data collection and analysis based on detected signals. Analog signals are converted to digital signals by the A/D converter inside MCU, and corresponding coding signals are output after operation.

Different coding signals are output as per demodulation signals, which vary with music, so coding signals vary with music.

- **Signal modulation**

Load coding signals on HF local oscillation signals by frequency mixing so as to form RF signals for meeting requirements on transmission.

- **HF local oscillation signal**

According to the working principle of LC (L: Coil, C: Capacitor) oscillation, stabilize frequency by using Surface Acoustic Wave Filters so as to obtain a stabilized fundamental frequency signal (such as 315MHZ and 433MH), ensuring that requirements of signal modulation are met.

- **RF signal**

Further amplify modulation signals at driving level through capacity coupling so as to raise transmission frequency. Amplified RF signals are transmitted via antenna

so as to ensure reliable data communications can be conducted within a valid distance.

- **Mains**

- a) Mains of voltage 3.0V, with two 7# (AAA) batteries in series for power supply.
- b) Mains are divided into two channels. One is directly supplied to signal transmission unit (including local oscillator and modulation circuit) and the other is supplied to signal processing unit (including MCU) after filtering.