General description

Product description

The Equipment Under Test (EUT) is a 900MHz Transmitter operating at 913-915MHz. The EUT is powered by 120V AC to 12V DC adaptor. On the panel of EUT, there are a channel select switch to select the optimum channel and an audio cable for feeding audio signal. The audio signal is frequency modulated to a RF signal and then transmits to the receiver.

System operation

Initial conditionsption

1. Turn off the power supply then set up all connections to transmitter.
2. The transmitter can be connected to audio source such as CD player, MD player, LD player, Tuner, Cassette player or Pre-amplifier.

Operation

1. Put an audio source to the input terminal (L/R) and adjust the input sensitivity by VR305 to get a suitable listening level. The signal will be enhanced by pre-emphasis network then to Pin 14 for L-channel and Pin 1 for R-channel of NJM2035 stereo modulator with the desired VCO voltage.
2. Channel A (913.5M) and Channel B (914.5MHz) will be selected for desired VCO. And we accept 500KHz frequency drift for each channel.
3. Two signals mixed through the modulator to Q6 buffer AMP. For RF transmission.
4. The transmitting frequency is carried out through a mono-poled antenna after Q7 for the transmission.
5. The modulation indicator is presented by a sensitive amplifier (Q1, Q2), voltage doubler (D1-D4), hysteresis network (Q3, Q4) and emitter follower Q10 when input level is overdue modulation.

1. Product Description

This document lists the major features and specifications of the target product, of the RF wireless speaker model No. JW250. The product has a transmitter and two receiver speakers operating in the 900 MHz frequency range. The transmitter can be connected to any audio source like from stereo music system, TV or any such system with stereo/ mono audio output available. Speakers operate with four C cells and can be placed anywhere within the radius of 150 feet from the transmitter. There is no need to use any wire and hence user can place the speakers anywhere without any restrictions imposed by the wires.

Transmitter can be operated at two frequencies 913.5 MHz and 914.5 MHz selectable by a two position switch on the transmitter. A continuous manual tuning on the speaker is used to tune to the selected channel.

2. Product Feature

i) Operating Range 150 ft.

ii) Input Audio level Control, Over modulation Indicator

iii) Speaker operation with 4 C cells, 2.5Watts output with 6Volt

iv) Two frequency (913.5 and 914.5 MHz) operation (channel switch at the transmitter)

v) 3 " full range speaker (3 Ohms)

vi) Individual Fine Frequency Tuning (Back Face)

vii) Integrated Individual Power ON-OFF/ Volume Control (Front Face)

3. Software - NOT REQUIRED FOR THIS PRODUCT

4. Functional Description

i) Transmitter : The transmitter needs a AC/DC power adaptor of 12 V, 150 mA for its operation. Input stereo audio level can be controlled to get the right level of audio

output. The transmission frequency can be selected using the switch to Channel A at 913.5 and Channel B at 914.5 MHz. Frequency modulation is used for transmission.

5. Packaging

5.1 .**Accessories :** 3.5/6mm Stereo Jack

Y Cable, AC/DC Power Adaptors, 3 Nos.
Two for Receiver and one for Transmitter

5.2 Packing information

Each pack contains one Transmitter and two Receiver units

6. Electronic Specification

i) **Transmitter :**

a) Operating Frequencies : 913.5 MHz and 914.5 MHz

b) Power Requirement : 12 Volts DC, approx.55 mA.

c) Operating Range : 150 ft

d) Maximum Audio Input Level : 0.8 V rms

e) Output Power : -10dBm **(max) ?**

7. Mechanical Specification

a) Product Dimensions and weight

i) TRANSMITTER : Approx. 112 mm (L) x 100 mm (W) x 29.5 mm (H)

ii) RECEIVER : Approx. 109.3 mm(W) x 123.8 mm (L) x 203.2 mm (H)

WEIGHT - To be determined.

8. Environmental Specification

8.1 Temperature

Operating temperature

- From 5 to 40 degree Celsius.

Storage temperature

- From –20 to 65 degree Celsius

8.2 Relative Humidity

- From 20% to 85%.

9. Target Reliability Specification

9.1 Electronics -TBD

9.2 Mechanical - TBD

10. Approval Requirement

Transmitter - FCC Certification Part 15 Class B

Receiver - FCC Certification or FCC DOC

11. Appendix

a) Product Drawing/Mechanical Outline drawing for Transmitter.