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2009.7

Aulong Technology Company Limited

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FCC Statement:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

- Consult the dealer or an experienced radio/TV technician for help

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MODEL: 09GH001

Please read the below information carefully.

1. The maximum ambient temperature should not exceed 35℃.

2. The 2.4G wireless speaker shall be installed according to specification.

   The rating shall be not over the specified as following value.

   Input: 230Vac, 50Hz, 50W

3. The 2.4G wireless speaker is used for Audio and Video equipment only.

4. For indoor use only.

5. Polarity of output plug: Center is anode.

6. This 2.4G wireless speaker is not intended to be repaired by service personal in case of failure or component defect.

7. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquid shall be placed on the apparatus.

8. The main plug of this adaptor is used as disconnect device, the disconnect device shall remain readily operable.

9. This product must not be disposed together with the domestic waste. This product has to be disposed at an authorized place for recycling of electrical and electronic appliances. By collecting and recycling waste, you help save natural resources, and make sure the product is disposed in an environmental friendly and healthy way.

Warning:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment
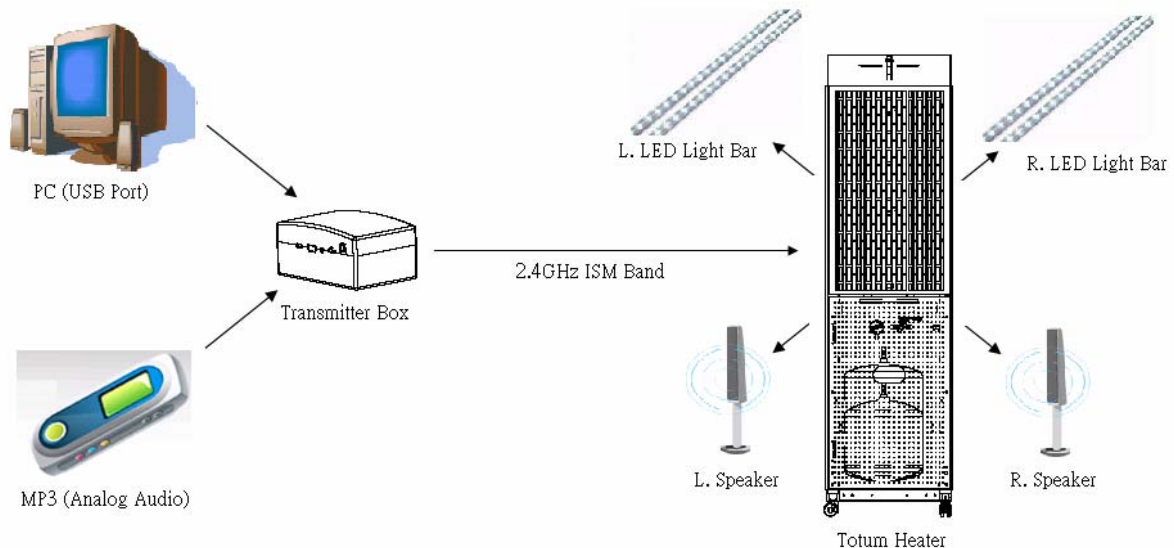
Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type.

1. Description

Totum 2.4G Wireless Audio System (with LED Light Bar) can transmit the PC Audio (USB port) or Analog Audio (MP3) to the Speakers through 2.4GHz ISM band in a broadcasting mode.


Features:

- Plug and play USB 2.0 audio transmitter
    - Compatible with Win98SE/WinME/Win2000/WinXP and MacOS 9.2.1/MacOS 10.2 without additional driver
- Support direct line in playback via 3.5mm audio jack
- 2.4GHz GFSK transmission
- RF frequency hopping in 34 channels
- Broadcasting mode
- Long distance < 50m (Line of sight)
- Support no audio detection function
- Programmable delay time 20ms / 55ms
- Audio format 16bit , 48KHz sampling rate
- Power ON/OFF pop noise reduction
- Robust packet error correction
- Low power consumption
- No RF induced audio noise
- LED Light Bar (Flash according to the Audio signal)
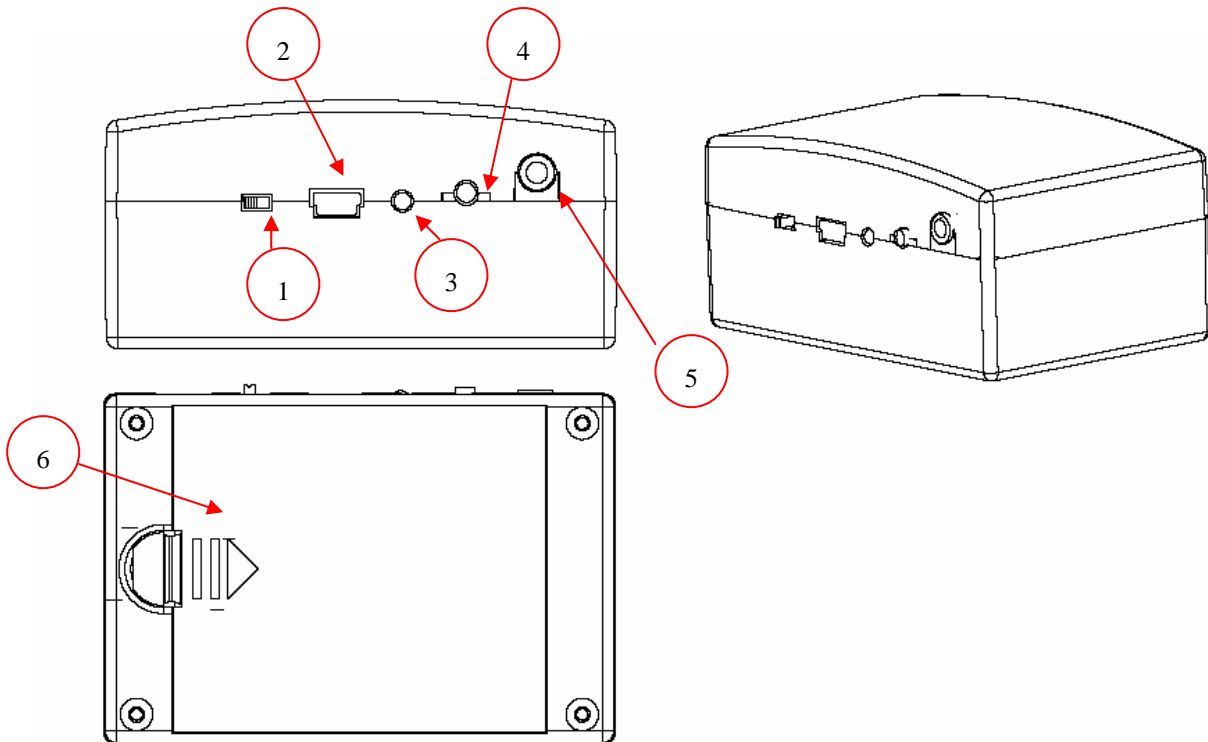
Broadcasting mode:
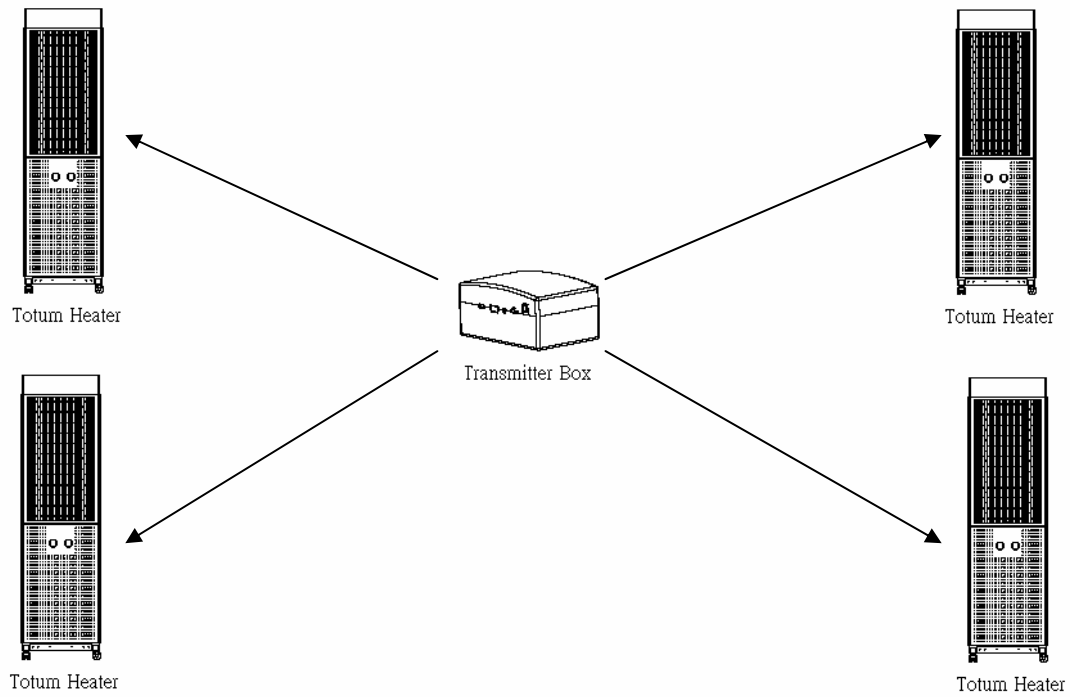
In the broadcasting mode, one Transmitter Box can be connected to 50 Heaters.
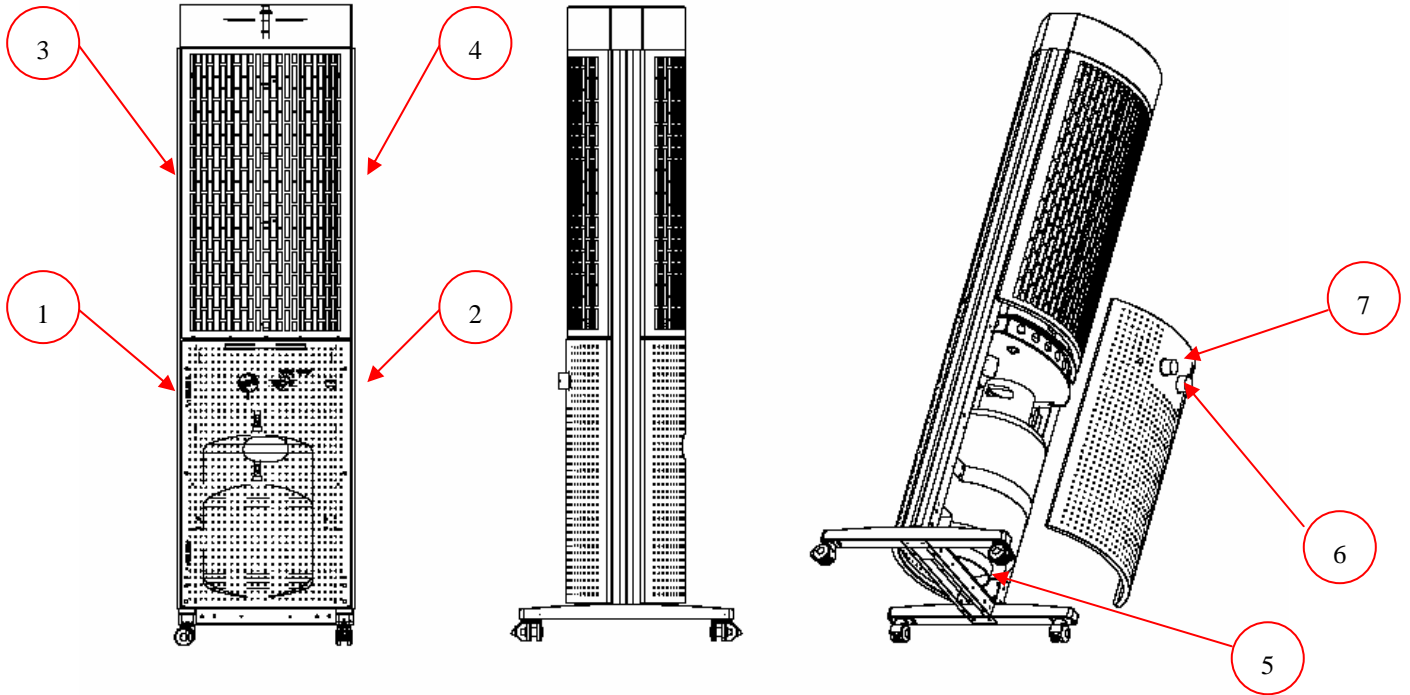
2. Product Overview

a) Transmitter Box

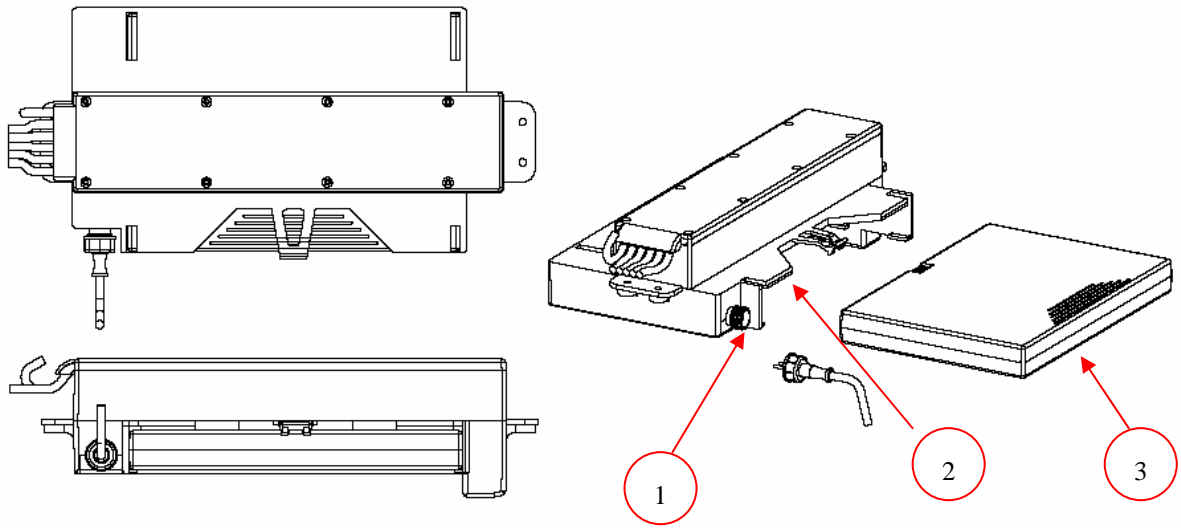| Item	Name	Description
1	Battery RWR switch	Battery Power Switch
2	USB port	USB Port (support USB 2.0 high speed)
3	LED indicator	a) always on: normal operation (audio is transmitting) b) flash (1sec): no audio source c) flash (0.25sec): ID Leaning operation
4	ID button	When simultaneously press the ID button on Transmitter box and the control Knob on the Heater longer than 5 seconds, the ID learning process will be enabled
5	Line in jack	Direct line in playback via 3.5mm audio jack
6	Battery compartment	4 x AA battery

b) Totum Heater (Receiver)

Item	Name	Description
1	L. Speaker	Left Speaker
2	R. Speaker	Right Speaker
3	L. LED Light Bar	Left LED Light Bar
4	R. LED Light Bar	Right LED Light Bar
5	Control Box	Control board (with 2.4GHz Receiver Module)
6	Control Knob	a) Push 0.5sec: turn on the audio system - LED Light Bar will Flash in Green colour (about 5sec) b) Push 5sec: the ID learning process will be enabled c) Push 0.5sec: turn off the audio system - LED Light Bar will Flash in Blue colour (about 5sec) d) Turn left/right: change the LED Light Bar colour
7	Gas Knob	Switch On/Off the gas

I)   Control Box (Receiver)

Item	Name	Description
1	Power Receptor	Receptor for the supplied power adapter
2	Battery compartment	Battery compartment
3	Battery	LiFePO4 Rechargeable Battery Pack

II)   Speaker (Receiver)
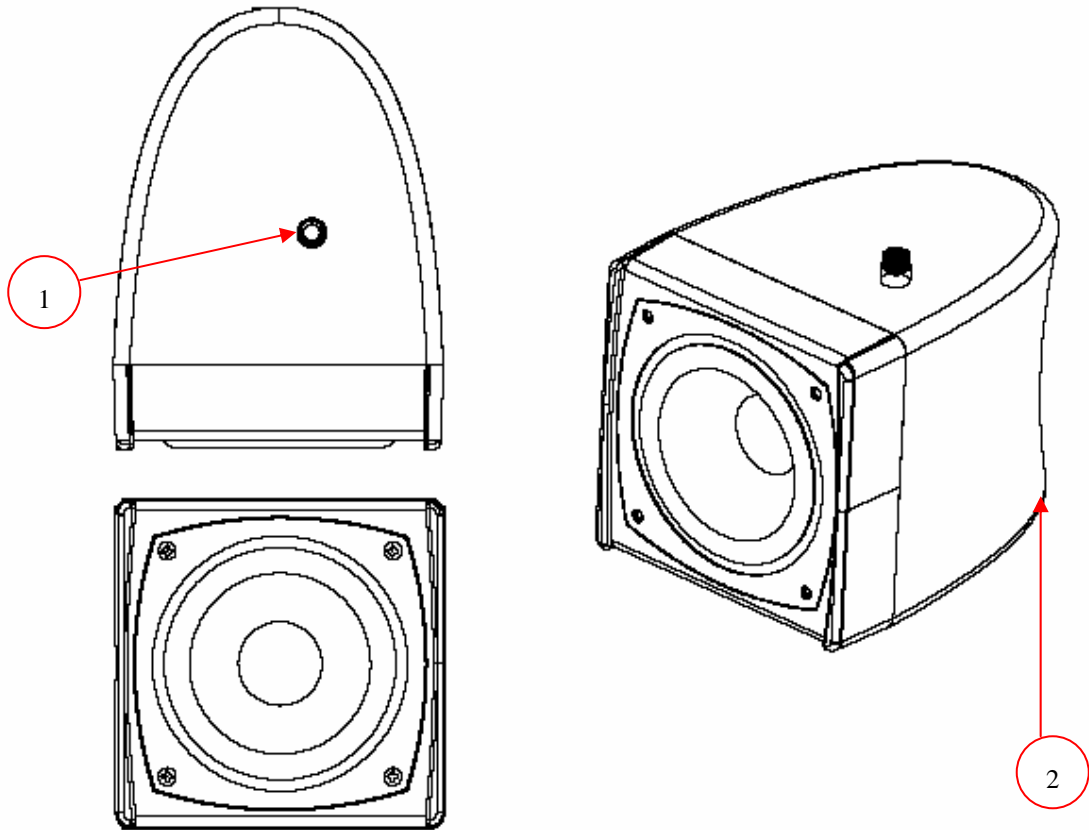
Item	Name	Description
1	Rigging Points	Rigging Points used to fix the speaker in the Heater
2	Speaker cable	24 AWG cable

III)   LED Light Bar (Receiver)
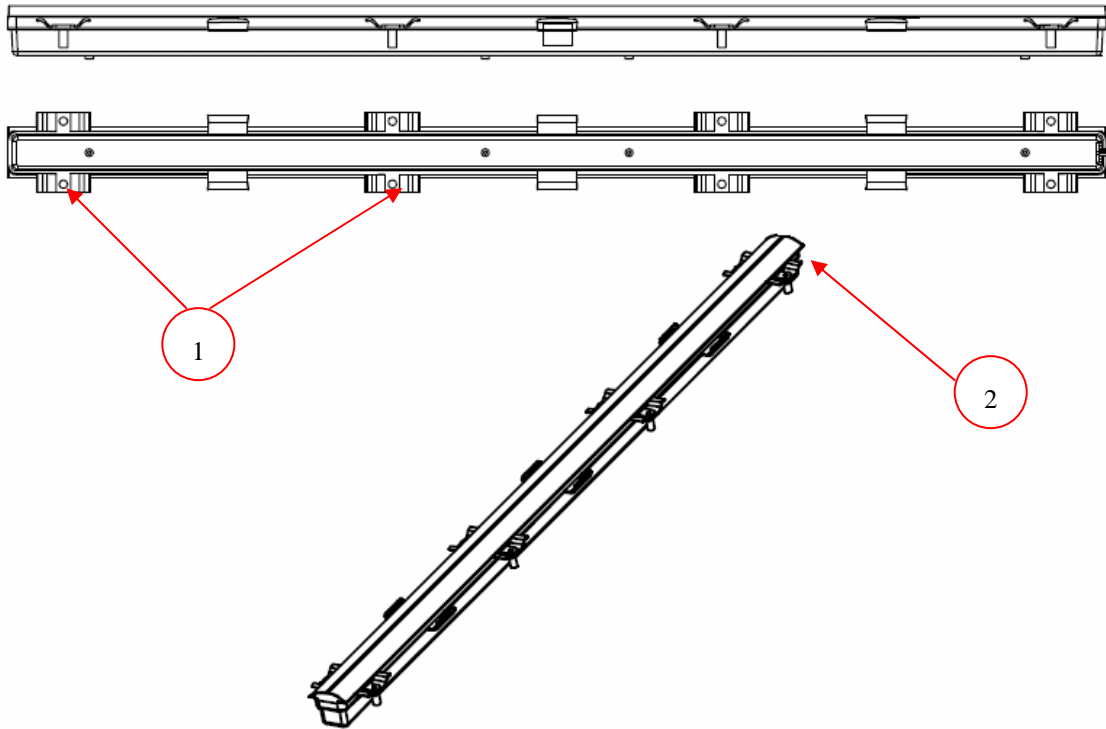
Item	Name	Description
1	LED	Each Light Bar has 30pcs LED (RGB colour)
2	Light Bar cable	24 AWG cable

3. Operation

3.1   Transmitter Box Operation

    a)   For direct line in playback, please use the battery power
- open the battery compartment on the bottom, put in 4 x AA battery and close the compartment
- Turn on the battery power switch
- connect the Audio cable provided to the audio source and the 3.5mm audio jack
- start playing songs in the music sources (e.g. MP3 Player)

    b)   For USB input, please use the USB bus power
- Turn off the battery power switch
- Connect the USB cable provided to your PC and the USB port of the Transmitter Box
- start playing songs in your PC

3.2   Receiver (Control Box) Operation

    a)   For Adaptor power, connect the Adaptor provided to the Power Receptor

    b)   For battery power, insert the Li-FePO4 Rechargeable Battery Pack into the battery compartment

    c)   Turn on the Control box by push the Control Knob (about 0.5Sec)

    d)   The Speaker will output the songs automatically

    e)   You can change the LED Light Bar colour by adjust the control Knob

4. Accessories

4.1   Transmitter box

I)   USB Cable (Aulong Technology)

II)   Audio Cable (Aulong Technology)

III)   4 x AA battery (Grand Hall)

4.2   Receiver (Totum Heater)

I)   LiFePO4 Rechargeable Battery Pack (Grand Hall)

II)   Adaptor (Vin = 120V (AC Power), Vout = 10V/5AH (AC Power)) (Grand Hall)

5. Specification

5.1 RF Specification

Item	Specification	Unit	Note
Frequency Range	2406 ~ 2472	MHz	
Channel	34		
Modulation	GFSK		
RF TX Power	16±2 (typ)	dBm	Radiation Power
RX Sensitivity	-79 (typ)	dBm	

5.2 Audio Specification

Item	Specification	Unit	Note
SNR	79 (typ)	dBr	Audio Amp output @1KHz
THD + N	-70 (typ)	dB	Audio Amp output @1KHz
Frequency Response	+0.5 / +0.5	dB	20 ~ 20KHz
Crosstalk	-96 (typ)	dB	Audio Amp output @1KHz
FSIV	2	Vrms	
FSOV	2	Vrms	

5.3 Electrical Specification

Item	Specification	Unit	Note
Transmitter Box	6	V	DC Power (250mA)
Control Box (Receiver)	10	V	AC Power (5AH) (Grand Hall)
Speaker (Receiver)	12	V	DC Power (900mA)
LED Driver (Receiver)	12	V	DC Power (500mA)

5.4 LED Light Bar Specification

Item	Type	Note		
Colour	12	01 – No colour	05 – Orange	09 – Light Blue
		02 – White	06 – Yellow	10 – Light Purple
		03 – Red	07 – Bright Green	11 – Purple
		04 – Pink	08 – Dark Blue	12 – Grass Green

6. Troubleshooting

Transmitter (No sound output from the speaker):

    (a)   Direct Line In

- Battery compartment with battery?
- Turn on the Battery Power Switch?
- Direct Line in connect to the 3.5mm Audio jack properly?
- Analog Audio Player (e.g. MP3) playing Music? or adjust sound level of the music player?

    (b)   USB Audio

- USB cable connected to USB port properly?
- Disconnect the audio cable from the 3.5mm Audio jack?
- Computer playing Music? or adjust sound level of the music player?

Receiver (No sound output from the speaker):

    (a)   Battery compartment with battery?

    (b)   Connect the adaptor properly?

    (c)   Can you switch on the Control Box?

Transmitter & Receiver (No sound output from the speaker):

    (a)   Both the Transmitter and the Receiver have the same ID?

Warning: the ID of both the Transmitter and the Receiver are 0000 (by default), if you do the ID learning process, the ID of the Transmitter and the Receiver will change to a random number