

CAI-269-LED FM Radio

Soldering Method: LED-Ver

1

Preheating Pad

2

Melting Tin Wire

3

Remove Soldering Iron

4

Complete Soldering

✓

Pad

Passed

✗

Tin

Excessive

✗

Tin

Deficiency

✗

Low

Temp.

✗

High

Temperature

✗

Pad

Short Circuit

Component Listing:

47Ω Resistor ×7

100uF Electrolytic capacitor ×5

Button Cap ×4

6\*6\*10 Button ×4

32768Hz Oscillator ×1

AUX Socket ×1

STC8G1K17 MCU ×1

16Pin IC Socket ×1

Switch ×1

MICRO USB Socket ×1

Battery Metal Connector ×4

1.7mm Self-tapping Screw ×4

3mm Screw ×1

3mm Nut ×1

Long Wire (10cm) ×2

Short Wire (5cm) ×2

FM Radio Antenna ×1

0.36in 4Bit LED Digital Tube ×1

RDA5807 Receiver ×1

Sponge ×1

8002 Amplifier ×1

Speaker ×1

PCB Circuit Board ×1

Transparent Top Case ×1

Transparent Bottom Case ×1

1

47ohm Metal Film Resistor at R1-R7

2

2Pin SMD Micro USB Socket at Micro USB

3

DIP-16 IC Socket at U1. PCB silk and socket gap to corresponding installation direction.

4

Toggle Switch at S5. Avoid prolonged contact with high temperatures and soldering iron, as it may damage switch.

5

3.5mm AUX Audio Socket at PJ1. Avoid prolonged contact with high temperatures and soldering iron, as it may damage switch.

6

32768Hz Crystal Oscillator with horizontal placement on RDA5807M FM Receiver

7

Place some tin on any pad.

8

Align all pads at M1 between RDA5807M FM Receiver and red PCB and then fix one pad connect point.

9

Fix all remaining pads.

10

0.36in 4Bit Red Digital Tube at LED1.

11

5pcs 100uF Electrolytic Capacitor at C1-C5

12

8002D Amplifier Module at M2 and align each pad. Pay special attention to direction. Fix pads on back side.

13

4pcs 6\*6\*10mm Black Button at S1-S4 with button cap.

14

DIP-16 STC8G1K17 MCU at U1.

15

ON/OFF Display Screen Sleep Function by two pads on PCB. Pads Connected and screen will keep ON all the time.

16

Fix FM Radio Antenna by M3\*20mm Screw

17

Cut only one pin from the bigger Battery Metal Connector. Then Insert 4pcs into Battery Socket on Transparent Shell

18

Bend Battery Metal Connector pins and melting tin on pins as shown.

19

Connect 10cm Red and Black wire to curved pins(Just for 2 Pin)

20

Red wire connect to ' + ' pad and black wire connect to ' - ' pad. Then install 3pcs AAA battery (NOT included in package)

21

Place Black Sponge on batteries to prevent battery loosening

22

Adjust PCB position and fix FM Antenna on PCB by M3 Nut.

23

Connect 5cm wire to Speaker. Red wire connect to ' + ' pad, black wire to ' - ' pad.

24

Connect wires from speaker to PCB. Red wire connect to ' VO+ ' pad and black wire to ' VO- ' pad.

25

Place speaker on mounting hole.

26

Align the last Transparent Shell. Fix another Shell by 4pcs M1.7mm Self-Tapping Screw.

21

Place Black Sponge on batteries to prevent battery loosening

22

Adjust PCB position and fix FM Antenna on PCB by M3 Nut.

23

Connect 5cm wire to Speaker. Red wire connect to ' + ' pad, black wire to ' - ' pad.

24

Connect wires from speaker to PCB. Red wire connect to ' VO+ ' pad and black wire to ' VO- ' pad.

25

Place speaker on mounting hole.

26

Align the last Transparent Shell. Fix another Shell by 4pcs M1.7mm Self-Tapping Screw.

Parameters :

1. Work Voltage:DC 4.5V

2. Output power:3W

3. Output channel:Mono

4. Sensitivity:<10uV

5. Signal to Noise Ratio:>60dB

6. Receiver Frequency:76.0MHz~108.0MHz

7. Response Frequency:150Hz~20KHz

8. Frequency Accuracy:0.1MHz

9. Size(Installed):115\*70\*28mm

Note:

1. Power ON/OFF : Turn ON by select switch to the UP position.

2. Search Stations : Keep press ' CH+ ' button 2-3 second and then release to search and save FM radio stations automatically

3. Switch FM Stations : Press ' CH- ' button to select the previous station and press ' CH+ ' button to the next station. LED screen display its work frequency.

4. Adjust Volume : Press ' V- ' butont to decrease palying volume and press ' V+ ' button to increase playing volume from L00 to L16. Note: L00 is mute. L01-L16 means the volume increases gradually. Maximum volume at L16.

5. Headphone : Headphone can be inserted into 3.5mm AUX audio socket.

6. Pull out FM antenna and switch antenna direction when search stations and playing.

7. Micro USB is not available, it can not get work voltage from USB.

Tips :

1. User needs to prepare the welding tool at first.

1.1. Soldering iron (<50 Watt)

1.2. Rosin core ("radio") solder

1.3. Wire cutters

1.4. Wire strippers

1.5. ' + ' screwdriver

2. Please be patient until the installation is complete.

3. The package is DIY kit.It need finish install by user.

4. Soldering iron can't touch components for a long time(1.0 second), otherwise it will damage the components.

5. Pay attention to the positive and negative of the components.

Main PCB Schematic

RDA5807M FM Receiver Schematic

8002D Amplifier Module Schematic

FM Antenna

Amplifier

FM Receiver

To Headphone

3W Speaker

0.36in 4Bit Screen

Power Switch

MCU

FM RADIO KIT

Micro USB

Unavailable

VOL- VOL+ CH- CH+ & Search for Radio Stations

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: 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.