

# CZH-T251 FM Transmitter User Manual

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## Important

1. Maintenance can only be operated by authorized professionals.
2. Get lightening protection measures ready in thunderstorm weather.
3. Do not touch the antenna when the transmitter is powered on.
4. Do not power on the transmitter if the antenna is not well connected.
5. Do not use the transmitter under the explosive environment, such as gas/refueling station, etc.
6. Do not use the transmitter in the extreme dusty, damp or high temperature environment.
7. Be sure to comply with the rules released by the local radio administrations.

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## Features

CZH-T251 is the product which possesses of multiple functions, reliable and steady performance, fast operations and well-structured in heat dissipation. Main features are as follows,

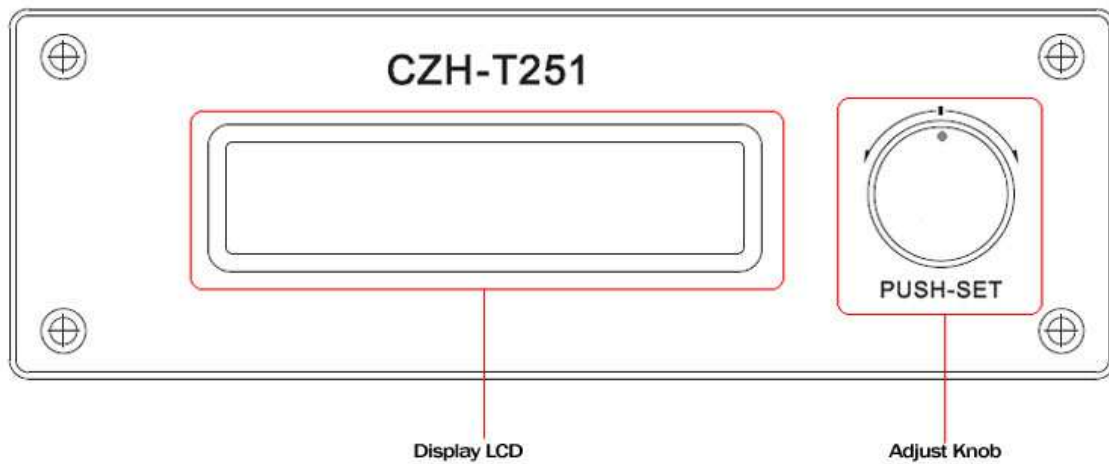
1. Mono/Stereo mode Optional.
2. Power adjustable from 0 to 25 Watts.
3. Single Knob operation, simple and convenient to use.
4. LCD displays operating frequency, temperature, power and SWR.
5. SWR & Temperature protection. Goes automatic into protection state when antenna is not well connected/matched or excessive operating temperature.

## Configuration List

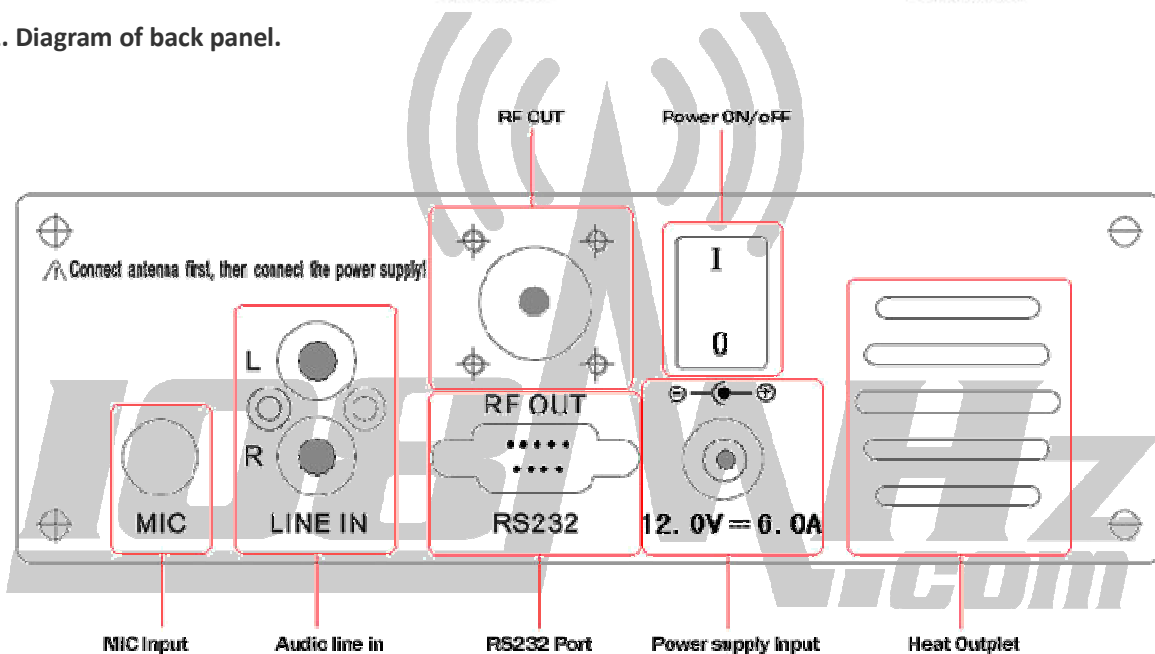
No.	Product Name	Specification	Qty	To be connected
1	FM Transmitter	CZH-T251	1	/
2	GP antenna	1/4 or 1/2 wavelength	1	RF OUT
3	Power supply/adapter	DC12V/6A	1	12V/6A
4	Audio line	3.5mm to RCA	1	LINE IN
5	User Manual (PDF)	Download available	1	/

## Diagrams of front and back panel

### 1. Diagram of front panel

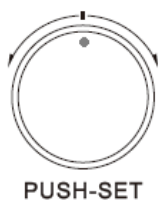


### 2. Diagram of back panel.



## Knob Definition

### 1. Adjust Knob



Operation	Definition	Function comments
Rotate	To adjust/switch	To adjust/switch in the configuration menu.
Short Press	To confirm	To enter into or exit the configuration menu.
Long Press	To standby	To standby status.

### 2. Power ON/OFF

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Check and confirm the antenna is well connected. Then switch the power button to 'I' to power on the transmitter, and 'O' means to power it off.

The transmitter goes into working status after it is powered on. The main interface is as,



FM93.3MHz	Working frequency
41°C	Temperature
PO:25.1W	Output power
SWR:1.0	SWR value
61	Stereo ( means mono)
61	Audio Volume 60 (0~79)
M60	Microphone Volume (0~79)

### Operating Instructions

At operating status, press briefly the adjusting knob, enter into the first menu option as *frequency set*, you can switch to other menu options by turning the adjusting knob left or right. All configuration menu options are as follows,

1 MENU FREQUENCY SET	2 MENU AUDIO VOLUME
3 MENU MIC VOLUME	4 MENU RF POWER SET
5 MENU STEREO OR MONO	6 MENU TEMP SET
7 MENU SWR SET	8 MENU MUTE
9 MENU EXIT	FM93.3MHz 61 M60 PO:25.1W SWR:1.0 41°C

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The following is the detailed instructions of how to configure each menu option.

### 1. Set Frequency

- (1) Press adjust knob to enter into 'MENU FREQUENCY SET'.
- (2) The frequency can be adjusted by turning knob left/right from 87MHz to 108MHz, and the step is 100KHz.
- (3) Press adjust knob to confirm when you determined to operate at a certain frequency.

**FREQ**  
**93.30MHz**

### 2. Set Audio Volume

- (1) Press adjust knob and turn left/right to enter into 'MENU AUDIO VOLUME'.
- (2) The audio volume can be adjusted by turning the knob left/right from 0~79.
- (3) Press the knob to confirm when you determined to operate a certain volume.

**AUDIO VOLUME**  
**61**

### 3. Set Microphone volume

- (1) Press adjust knob and turn left/right to enter into 'MENU MIC VOLUME'.
- (2) The microphone volume can be adjusted by turning the knob left/right from 0~79.
- (3) Press the knob to confirm when you determined to operate at a certain volume.

**MIC VOLUME**  
**60**

### 5. Set RF Power

- (1) Press adjust knob and turn left/right to enter into 'MENU RF POWER SET'.
- (2) The RF power can be set by turning the knob left/right from 0~25 Watts, the step is 0.1W.
- (3) Press the knob to confirm when you determined to operate at a certain power.

**POWER SET**  
**DET:25.1W SET:25.0W**

### 6. Stereo/Mono set

- (1) Press adjust knob and turn left/right to enter into 'MENU ST <OR> MO'.
- (2) The audio can be set by turning the knob left/right..
- (3) Press the knob to confirm.



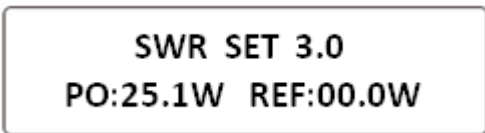
## 7. Temperature protection Set

- (1) Press adjust knob and turn left/right to enter into 'MENU TMPE SET'.
- (2) Turn the knob left/right to set the temperature, the range is 30~80°C.
- (3) Press the knob to confirm.



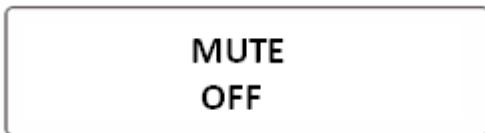
## 8. SWR protection Set

- (1) Press adjust knob and turn left/right to enter into 'MENU SWR SET'.
- (2) Turn the knob left/right to set SWR value from 1.0-5.0.
- (3) Press the knob to confirm.



## 9. Line Mute

- (1) Press adjust knob and turn left/right to enter into 'MENU MUTE'.
- (2) Turn the knob to set the line ON/OFF, which 'OFF' means normal, 'ON' means mute.
- (3) Press the knob to confirm.



## 10. Back to Main interface

While setting the transmitter in the menu, if you want to go back to working status, turn the knob to 'MENU EXIT' and press it to confirm, the transmitter will be back to working status.



## Technical Specifications

No.	Item	Technical specifications
1	Operating voltage	DC12V
2	Operating current	< 5A

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3	Frequency range	87~108MHz
4	Frequency stability	±10PPM
5	Frequency step	100KHz
6	Environment temperature	-10℃~45℃
7	Output Impedance	50Ω
8	Output RF power	0~25W
9	Harmonic & Clutter radiation	≤-60dB
10	Audio Distortion	0.2%
11	Frequency response	50Hz~15000Hz
12	Stereo Separation	≥35 dB
13	Input level	≤15 dBV
14	Frequency deviation	±75KHZ
15	SNR	≥70 dB
16	Dimensions	210 mm (L) *174 mm (W) *59 mm (H)
17	Weight	About 1500g

### General Troubleshooting

No.	Fault	Failure Source
1	Can not power on.	1) The socket is not electrify galvanized. 2) The adapter is not well connected. 3) The adapter does not meet the requirements.
2	SWR Alert	1) The antenna is not well connected. 2) The antenna is not matched. 3) Too many reflection objections near the antenna.
3	Temperature Alert	1) The cooling fan does not work. 2) The temperature rises resulted from unmatched antenna. 3) A blockage at in/outlet.
4	High SWR	1) The antenna is not well connected. 2) The antenna is not matched. 3) Too many reflection objections near the antenna.

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5	Short transmission range	<ol style="list-style-type: none"><li>1) Too much loss on the coaxial cable.</li><li>2) Operating in extreme surroundings.</li><li>3) Operating at low power.</li><li>4) The antenna is set not higher enough.</li><li>5) The antenna is not matched.</li><li>6) The receiver is not sensitive.</li></ol>
6	No power out	<ol style="list-style-type: none"><li>1) The transmitter is set at low power</li><li>2) The transmitter is on standby.</li></ol>
7	Audio silent	<ol style="list-style-type: none"><li>1) The transmitter is set mute.</li><li>2) Audio in is not normal.</li></ol>
8	Microphone silent	<ol style="list-style-type: none"><li>1) Microphone is not normal.</li><li>2) Microphone is set mute.</li><li>3) Microphone is not electret condenser.</li></ol>
9	Poor sound quality	<ol style="list-style-type: none"><li>1) Poor quality of microphone.</li><li>2) Poor quality of audio source.</li><li>3) The antenna is not set correctly.</li><li>4) Audio line in or volume is not set rightly.</li></ol>

### About Us

We are a professional company focus on RF technology research and development, specialized in professional fm transmitter! Our fm transmitters are ideal equipments to build your own broadcast station, especially used in campus, factories, farms etc. Please be assured, we provide you after-all services and technical supports! Any questions can be sent to: [littleshirely@gmail.com](mailto:littleshirely@gmail.com).