FU-50B 50W FM Transmitter USER MANUAL

1. Attention before use:

1) Make sure the supplied voltage is within the acceptable range.
2) Only professionals can do the maintenance.
3) Please make sure the antenna has lightening protection.
4) Please don't touch the antenna when the machine is connected with power supply.
5) Please don't power on the machine without connecting antenna.
6) Please don't use the transmitter in explosive environment(e.g. gas station, places with gas or steam)
7) Please don't use the transmitter in extreme dusty, damp, hot environment.
8) Please use the transmitter under the regulations by local wireless administration institutions.

2. Menu

1) Product features
2) Product configuration
3) Product user guide
4) Product specification
5) Troubleshoot

3. Product Features

FU-50B is a multi-functional FM transmitter. It has stable structure, excellent performance , super good sound quality and is very easy to use.

*Main Features:
  -Stereo/Mono optional
  - RF output power is continuously adjustable from 0~50watt.
  -One button controls all functions.
  -Auto volume control function. It can detect and adjust volume automatically and ensure the best modulation.
  -SWR protection. When antenna is not well connected, the transmitter will turn to protection mode automatically.
  -Temperature protection. When the temperature of transmitter is too high, it will turn to protection mode automatically.
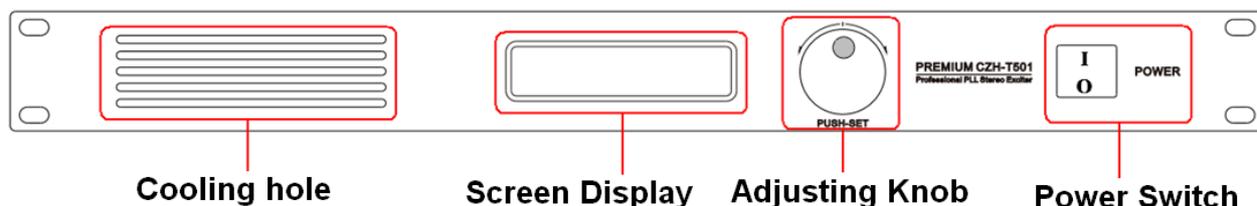 - External encoder input interface (available for SCA or RDS encoder)

4. Product configuration

NO	NAME	DESCRIPTION	QTY	UNIT	PORT
1	FM transmitter	FU-50B	1	PCS	NO
2	ALLUMINUM ANTENNA	1/4 OR 1/2 WAVE	1	SET	RF OUT
3	AC POWER CORD	THREE PHASE DC	1	PCS	AC INPUT
4	AUDIO CABLE	1 TO 2 - 3.5mm TO RCA	1	PCS	LINE IN
5	USER MANUAL	ELECTRONIC VERSION	1	PCS	NO

5. User Guide

1) Front and Back Panel description

Front Panel

Cooling hole   Screen Display   Adjusting Knob   Power Switch

Back Panel

RS232 Communication port   Line-in   Microphone input   External encoder port   ADJ adjusting hole   Power Supply Jack   RF output base   FAN holes
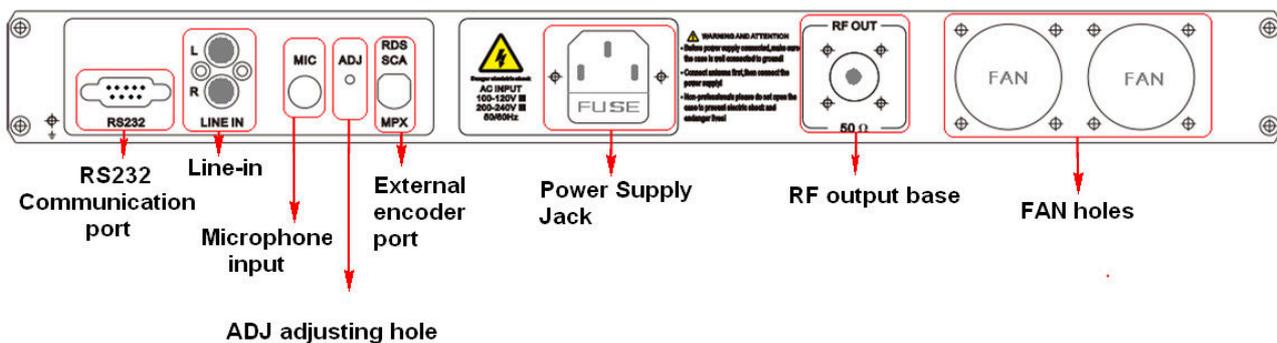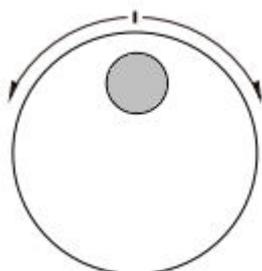
2) Knob description

PUSH-SET

Action	Definition	Description
Turn left/right	Adjust,shift	Main page, adjusting page, shift（turn clockwise to increase, turn Counterclockwise to reduce）
Short press	Confirm	Enter/Exit Menu page
Press and hold	Confirm	On Main page, press and hold to enter Menu

3) Operation Instruction

a). Turn ON

Check the antenna first, make sure it's well connected. Then connect the power cord to home socket, press the power button to I position to turn ON the transmitter. O position means OFF. See picture on the right.

After power on, the transmitter goes into working status. The screen will show working status which has 2 pages, turn the knob to shift between the two pages. See picture below:

Display Page 1:

Display page 2:

Page 1 description:

- Real-time working frequency:

- Real-time internal working temperature：

- RF output power:

- Reflecting power：

- SWR：

Page 2 description:

- Sound Mode： ,   ST means Stereo，MO means Mono.

- Line-in Volume： , Volume is 0~13，AUTO means automatic control.

- Microphone Volume： ,   Volume range is 0~79。

- Volume indicator： , it shows real time display of the volume.

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b). Function and Parameter setting

Press the knob to enter Menu page. Turn the knob to shift pages. There are 8 pages altogether.

| 1 MENU FREQUENCY SET	2 MENU LINE VOLUME
3 MENU RF POWER SET	4 MENU STEREO OR MONO
5 MENU TEMP SET	6 MENU SWR SET
7 MENU MIC VOLUME	8 MENU EXIT

● **Frequency setting**

On the Menu page, turn the knob to page 1 FERQ setting, press the knob to enter setting. Turn the knob to adjust the frequency by stepping of 0.1MHz, then press the knob to confirm setting and exit.

```
FREQ
98.30MHz
```
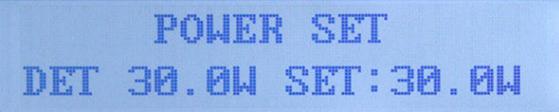
● **Line-in Volume setting**

On the Menu page, turn the knob to page 2 LINE VOLUME setting, press the knob to enter setting. Turn the knob to adjust the volume within the range of 0~79, then press the knob to confirm setting and exit.
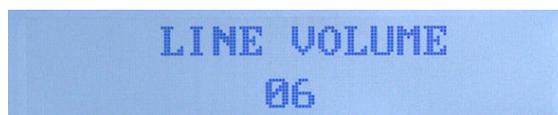
```
LINE VOLUME
06
```

● **RF output power setting**

On the Menu page, turn the knob to page 3 RF POWER setting, press the knob to enter setting. Turn the knob to adjust the output power within the range of 0~50w, then press the knob to confirm setting and exit.

```
        POWER SET
DET 30.0W SET:30.0W
```
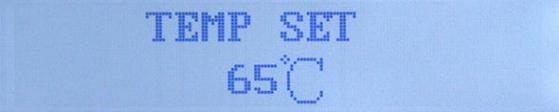
● **Sound mode setting**

On the Menu page, turn the knob to page 4 ST<OR>MO setting, press the knob to enter setting. Turn the knob to shift the sound mode between Stereo and Mono, then press the knob to confirm setting and exit.

```
     ST<OR>MO
      STEREO
```

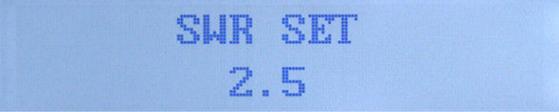● **Temperature Protection Setting**

On the Menu page, turn the knob to page 5 TEMP setting, press the knob to enter setting. Turn the knob to adjust the protection temperature point within the range of 50~70℃, then press the knob to confirm setting and exit.

```
     TEMP SET
      65℃
```

● **SWR protection setting**

On the Menu page, turn the knob to page 6 SWR SET setting, press the knob to enter setting. Turn the knob to adjust the SWR protection point within the range of 2.0~3.5, then press the knob to confirm setting and exit.

```
      SWR SET
       2.5
```

● **MIC volume setting**

On the Menu page, turn the knob to page 7 MIC VOLUME setting, press the knob to enter setting. Turn the knob to adjust the microphone volume within the range of 0~79, then press the knob to confirm setting and exit.
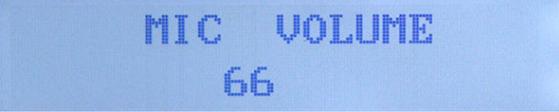
```
    MIC  VOLUME
       66
```

- **Exit setting**

    On the Menu page, turn the knob to page 8 MENU EXIT, press the knob to exit setting and return to main page.

6. Technical Specification

NO	Item	Specification
1	Working Voltage	AC110V/50Hz/60Hz（choose Manually） AC220V/50Hz/60Hz（choose Manually）
2	Working Current	＜1A
3	Frequency Range	87~108MHz
4	Frequency Stability	±10PPM
5	Frequency Stepping	100KHz
6	Environment temperature	-10℃~45℃
7	Output Impedance	50Ω
8	RF output power	0W~50W
9	Harmonic, clutter radiation	≤－60dB
10	Audio distortion	0.2%
11	Frequency Response	50Hz~15000Hz
12	Separation	≥35 dB
13	Input level	≤15 dBV
14	Frequency Modulation	±75KHZ
15	SNR	≥70dB
16	Size	21cm（L）*48 cm（W）*4.5 cm（H）
17	Net Weight	About 2800g

7. Troubleshooting

NO	Problem description	Possible Reasons
1	Unable to Power ON	1）Socket is not connected with electricity 2）Power cord is not well plugged. 3）The fuse is not working properly in socket.
2	SWR Alarm	1）Antenna is not well connected. 2）SWR value is too high because antenna doesn't match transmitter 3) There are too many reflecting objects close to antenna.
3	Temperature Alarm	1）Fan is not working； 2）Antenna doesn't match transmitter, the SWR value is too high, thus temperature rises up. 3）The fan holes are jammed.
4	SWR value is too high	1）Antenna not well connected. 2）SWR value is too high because antenna doesn't match transmitter 3) There are too many reflecting objects close to antenna.
5	Short transmitting distance	1）High loss of feeder cable. 2）Poor broadcasting environment. 3）Output power is low. 4）Antenna is not placed high enough. 5）Antenna and transmitter doesn't match. 6）Radio receiver has low sensitivity.
6	No power output	1) RF output power needs to be adjust higher 2) Transmitter is powered OFF.
7	No audio output	1）Transmitter line-in volume is too low. 2）Line-in audio signal is abnormal.
8	No microphone output	1）Microphone is not working well. 2）Microphone volume is too low. 3）Microphone is dynamic type. 4）Microphone is not well plugged.
9	Poor sound quality	1）Microphone quality is low. 2）Audio source quality is low. 3）Antenna is not well assembled and connected. 4）Audio signal or transmitter line-in volume is not adjusted well.