

# Elecsky PLL FM Transmitter User's Guide

**Mode: RF-FM-05B**



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## FCC Information

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.

Operation of this equipment in a residential area is likely to cause interference in which case the user at his or her own risk and expense will be required to correct the interference.

Declaration of Conformity Electron-Sky(elecsky), declares that the POD-FM conforms to the following standards, in accordance with the provisions of the EC Directive 89/366/EEC: EN 55022 (CISPR 22:1985), Class A.

## Warranty

Electron-Sky(elecsky) warrants that this product will be free from defects in materials and workmanship for period of time specified on the product packaging. This limited warranty shall commence from the date of purchase. Electron-Sky(elecsky) warranty is not transferable and is limited to the original purchaser. If the product is found to be defective then, as your sole remedy and as the manufacturer's only obligation, Electron-Sky(elecsky) will repair or replace the product. This warranty shall not apply to products that have been subjected to abuse, misuse, abnormal electrical or environmental conditions, normal wear and tear or any condition other than what can be considered normal use.

## Limitation of Liability

The liability of Electron-Sky(elecsky) arising from this warranty and sale shall be limited to a refund of the purchase price. In no event shall Electron-Sky(elecsky) be liable for costs of procurement of substitute products or services, or for any lost profits, or for any consequential, incidental, direct or indirect damages, however caused and on any theory of liability, arising from this warranty and sale.

These limitations shall apply not with standing any failure of essential purpose of any limited remedy.

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**Introducing the Elecsky FM Transmitter**

Thank you for purchasing our transmitter, This stereo FM transmitter can easily build a wonderful FM radio station. This one have a beautiful aluminum alloy cover.

We presents a brand new 500mW PLL FM Stereo Transmitter for FM stereo broadcasting. built in LCD display with blue backlight,Built in microcontroller for frequency control and display. Built in FM stereo transmitter IC with PLL technology,surface-mount tech, reliable working condition. the transmission frequency is highly stable. Compact design with aluminum enclosure. **transmission distance more than 300 meters (In the line of sight, field, open land)**. This transmitter is ideal for all stereo audio broadcasting, MP3, PC, TV, wireless speakers, game device, etc.

The FM Transmitter will not drift between stations because of our advanced stereo PLL Digital Tuner Technology. The FM Transmitter use the control panel buttons to control the frequency that it broadcasts on so if the power is lost and then restored it will begin broadcasting back on that exact same frequency. This avoids any need to reset the FM Transmitter back to the frequency you originally wanted.

We use a switch to turn the transmitter on and off. This allows the transmitter to automatically turn back if power were to be lost and then restored.

The FM Transmitter is designed to operate non-stop 24/7.

The higher you place the antenna the farther you will transmit.

Complete easy to follow plug & play instructions are included plus tips on getting the best distance possible.

If you can match a good antenna to the FM transmitter, the effect will be better. The transmission range depends on many factors. The true distance is based on the sensitivity of the receiver, antenna of the receiver, and the building and other obstructions, which are between the transmitter and receiver. And the distance will much more in countryside.

**Technical target:**

Power Output:	500mW ±20%
FM Transmitter Frequencies:	87-108Mhz
Tuning Step:	100Khz/0.1Mhz
Power Supply:	9-12V DC (The current load of power supply should over 1A)
Stability of Frequency:	±0ppm (-10℃~+50℃)
Frequency Response:	100 - 15000Hz
Signal to Noise Ratio:	>70dB
Distortion:	< 0.5%
Operation Time:	True 24/7
Antenna Design:	Rubber Antenna
Antenna Connector:	BNC type
Output Impedance:	50 ohm
Audio Input Connector:	3.5mm headphone connector
Mic Input Connector:	3.5mm headphone connector
Tuning Design:	Stable PLL Technology
Size of Transmitter Unit:	L:113mm, W:88mm, H:39mm
Weight of Transmitter Unit:	150g
Transmission Signal:	FM Stereo

**Package Contents**

- 1x FM Transmitter
- 1x AC Adapter
- 1x 3.5mm Audio Cable
- 1x Antenna

## About Elecsky Products and Services

More information about Our products and services is available through the following sources:

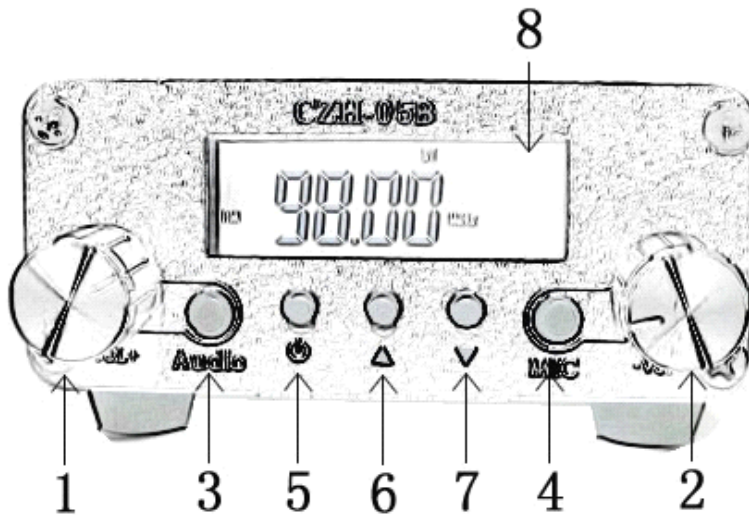
<http://www.elecsky.com> or <http://www.elecsky.net>

Elecsky Technical Support:

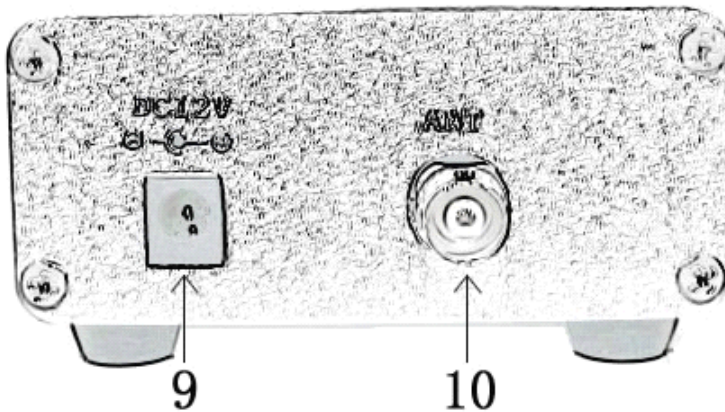
In China, please call QQ 45034448

In other areas, E-mail us at [rechuen@163.com](mailto:rechuen@163.com)

## Hardware Basics

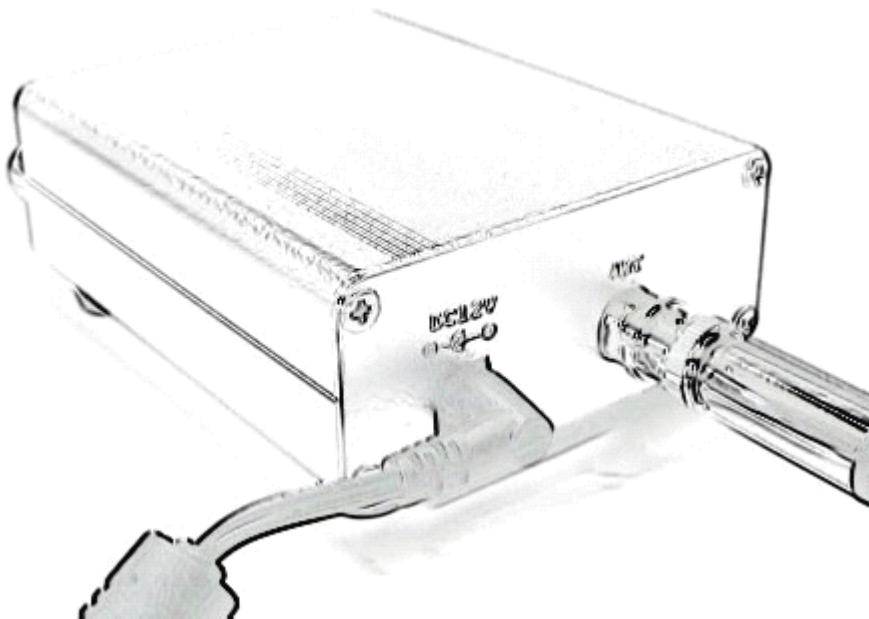


- 1、 Audio volume
- 2、 MIC volume
- 3、 3.5mm Jack for Audio Cable
- 4、 3.5mm Jack for **electret microphone**
- 5、 Power Button (On/Off)
- 6、 "-" Frequency Down Button (To decrease the radio frequency)
- 7、 "+" Frequency Up Button (To increase the radio frequency)
- 8、 LCD Digital Display for the Radio Frequency



- 9、 Jack for DC 9-12V
- 10、 Antenna socket

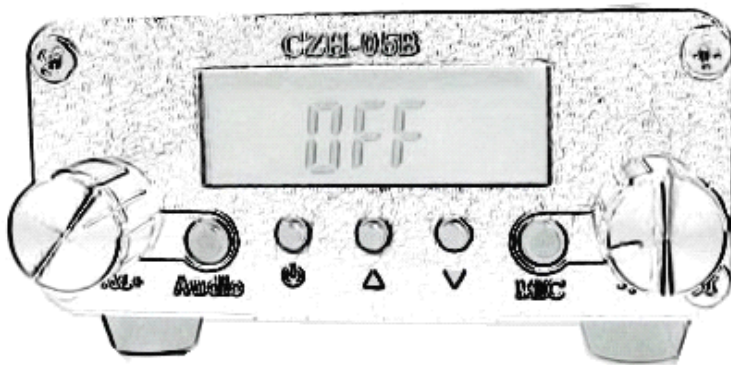
## Installation Instruction



Connect the Antenna to FM Transmitter.

Connect the FM Transmitter to AC Adapter, then plug AC adapter to power outlet.

**\* Note: When the Power supply is connected, the "OFF" signal will be show on LCD Digital Display.**



Connect the iPod, MP3 or CD Player to FM Transmitter with the audio cable.

## Using the FM Transmitter

- 1 Press **Power Button** to turn on the Digital Transmitter. The **LCD Digital Display** shows the pre-set radio frequency channel (For example, 98.0MHz).
2. Turn on your radio and switch to FM channel, adjust the radio frequency channel to desired channel. Now the radio will output as "zzz" sound or radio music now.
3. Then adjust the radio frequency channel of the Digital Transmitter to the same radio frequency channel of the radio. (For example, if the radio frequency channel is set to 98.0MHz then the FM Transmitter should also be set to 98.0MHz). When the radio frequency channel of the Digital Transmitter and the radio are same, the "zzz" sound will stop. Adjust the volume to medium level in iPod or audio player, and start playing music. Now you will hear the music playing from the mp3 or audio player will output from the radio. **Note: If volume level from mp3 or audio player is high, the music output from the radio will sound distorted.**

5. Adjust the volume in your radio until the satisfactory output is reached.
6. When interference occurs, the music from radio will not sound clear. In this case, please switch to different channels by repeating Step 2 and 3 until the music sound quality is clear again.

### Adjustment of Radio Frequency Channels:

1. Press **Power Button** to turn on the FM Transmitter
2. Adjust the FM frequency channels: (Radio frequency channels adjustment range is 87.0MHz~108.0MHz.)
3. Press **Frequency Up/Down Button** to increase/decrease 0.1MHz radio frequency channels on the Digital Transmitter.
4. Press and hold the **Frequency Up/Down Button** to continuously increase/decrease radio frequency channels on the Digital Transmitter.

### Power On/Off and Power

Press **Power Button** turn off the FM Transmitter.

### Important Notice

- This product should be kept in dry condition and away from water.
- Keep the product off direct sunlight or high temperature environment.
- Please unplug the power plug when it is not in use.

### Troubleshooting

- 1) If the FM Transmitter does not function normally,
  - Please check whether all wires/ cables being connected tight and correct.
  - If the product cannot be powered on, check whether the AC adapter works and connects properly.(When AC Adapter is used)
- 2) If music output from the radio is distorted (not clear),
  - First, reduce volume from iPod or audio player to medium or lower volume range, and then turn up volume from radio to desired level. The music sound quality should improve.
  - If the pervious method does not improve the music sound quality, it means the problem may be due to frequency interference. Then you need to switch to other channel.
- 3) If the volume output from the radio is too loud when the FM Transmitter is not being in use,
  - When FM Transmitter is in used, desired volume output level from the radio is typically higher than without using FM Transmitter. To prevent the volume output too loud when the FM Transmitter is not being in use, you can decrease the radio volume and increase the iPod or audio player volume as long as the sound from the radio remains clear.

### Appendix

#### Transmitter covering Distance (Reference: kilometer) :

Receive sensitivity	Transmit power	Transmit power	Transmit power	Transmit power	Transmit power
0.2uV/12dB	0.1~0.5W	1~2W	3~5W	10~30W	30~50W
City	0.1~0.5	0.5~1	1~2	3~5	5~8
Town	0.2~0.6	1~2	2~3	5~8	8~10
Environs	0.3~1	2~3	3~5	8~15	10~30
Widen Plain	0.5~2	3~5	8~20	10~30	20~40
Sea communication	1~3	5~15	10~30	20~40	20~50

★Only for reference, also the covering distance is concern with the antenna and environment.