

RETEKESS

TR508

FM TRANSMITTER



Instruction Manual

Before use, please read it carefully and properly keep

CAUTION:

Never operate the transmitter without connecting a suitable antenna or dummy 50Ohm load to the output otherwise there is a serious danger of destruction of the output stage of the transmitter.

Copyright of

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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, 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

Warranty 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. Warranty is not transferable and is limited to the original purchaser. If product is found to be defective then, as your sole remedy and as the manufacturer's only obligation, we 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 arising from this warranty and sale shall be limited to a refund of the purchase price. In no event shall 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 TR508 FM Transmitter

Thank you for purchasing our transmitter. This stereo FM transmitter can easily built a wonderful FM radio station. And it has 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 micro controller 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 be much more in countryside.

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

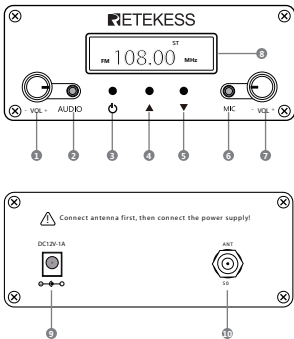
TR508 FM Transmitter, it's owners, and employees accept no responsibility whatever for any consequences arising from the use or misuse of unlicensed or unapproved equipment. We suggest that you check local laws before operating or purchasing transmitting equipment. Again, it is your responsibility not to break the law

NO.	project	
1	working voltage	11~13V DC (Rated voltage 12 v)
2	working current	<300mA
3	frequency domain	76~108Mhz
4	frequency stability	±10PPM
5	stepped frequency	100KHZ
6	The operating temperature of the environment	-10℃~50℃
7	output impedance	50Ω
8	Rf power output range	H:500mW (L:100mW)
9	Harmonic and noise radiation	≤-60dB
10	audio distortion	<0.30%
11	frequency response	20HZ~15000HZ
12	Preemphasis delay	50us
13	degree of separation	≥40 dB
14	input level	≤-10 dBV
15	Modulation frequency deviation	±75KHZ
16	SNR(Signal to Noise Ratio)	≥65 dB
17	Machine Size	L:113mm;W:88mm;H:39mm
18	Machine weight	269g

Package Contents

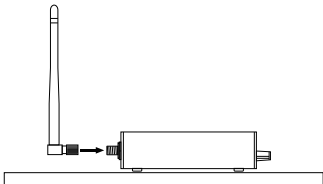
- 1xTR508 FM Transmitter
- 1x100~240V Power Supply
- 1x 3.5mm Audio Cable
- 1x Rubber Antenna

Hardware Basics



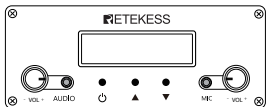
- 1、 Audio volume
- 2、 MIC volume
- 3、 3.5mm Jack for Audio Cable input
- 4、 3.5mm Jack for electret microphone (And the computer use the same microphone) input
- 5、 Power Button (On/Off)
- 6、 "+"Frequency Up Button (To increase the radio frequency)
- 7、 "-"Frequency Down Button (To decrease the radio frequency)
- 8、 LCD Digital Display for the Radio Frequency
- 9、 Jack for DC 11-13V
- 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 76.0MHz~108.0MHz.)

3. Press Frequency Up/Down Button to increase/decrease 0.1MHz radio frequency channels on the 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.

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 previous 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.

4. If music output from the radio have current acoustic interference,

- Try to change the location of the transmitter, or change the location of the power supply, or change the location of the audio line. Power supply must be away from the transmitter at work.

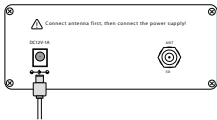
Setting and adjustment of special functions

Power adjustment and frequency adjustment

2010 V1.2 version with two level power adjustment: High power (H):> 500mW; low-power (L): <100mW

Step 1:

First press and hold the power switch "⏻", and then insert the power plug to the Power jack "⊖ — ⊕".



Step 2:

Release the power switch "⏻" after 3 seconds, LCD screen shows the "H" or "L".

Through the "▲/▼" switch "H/L". Press "▲", LCD screen display "H", Press "▼" LCD screen display "L". "H" is the output power > 500mW; "L" is the output power <100mW.



Step 3:

Press the power switch "⏻" confirm settings. The LCD screen display 108.00MHz. This is the highest frequency of use. Through the "▲/▼" can be changed it, adjustable range:76-108Mhz.

Again press the power switch "⏻" confirm settings, The LCD screen display "87.00MHz". This is the lowest frequency of use, Through the "▲/▼" can be changed it, adjustable range: 76-108Mhz..

Warning: lowest frequency high-end can not be even higher than the highest frequency.

For example, To set the transmitting frequency range is 90MHz to 100MHz, Through the "▲/▼" changed to 100Mhz, press the power switch "⏻" confirm settings, follow Through the "▲/▼" changed to 90Mhz.



Step 4:

Press the power switch "⏻" confirm settings, after 3 seconds , The LCD screen display "OFF".

Again press the power switch "⏻" , The transmitter Start working.

Transmitter covering Distance (Reference/kilometer)

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

RF ENERGY EXPOSURE AND PRODUCT SAFETY GUIDE



ATTENTION!

Before using this radio, read this guide which contains important operating instructions for safe usage and RF energy awareness and control for compliance with applicable standards and regulations.

This radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. RF energy, which when used improperly, can cause biological damage. All Reteless radios are designed, manufactured, and tested to ensure they meet government-established RF exposure levels. In addition, manufacturers also recommend specific operating instructions to users of the radios. These instructions are important because they inform users about RF energy exposure and provide simple procedures on how to control it. Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits: <http://www.who.int/en/>

Local Government Regulations

When radios are used as a consequence of employment, the Local Government Regulations requires users to be fully aware of and able to control their exposure to meet occupational requirements. Exposure awareness can be facilitated by the use of a product label directing users to specific user awareness information. Your Reteless radio has a RF Exposure Product Label. Also, your Reteless user manual, or separate safety booklet includes information and operating instructions required to control your RF exposure and to satisfy compliance requirements.

Radio License (if appropriate)

Governments keep the radios in classification, business radios operate on radio frequencies that are regulated by the local radio management departments (FCC, ISED, OFCOM, ANFR, BFTK, Bundesnetzagentur...). To transmit on these frequencies, you are required to have a license issued by them. The detailed classification and the use of your radios, please contact the local government radio management departments.

Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Unauthorized modification and adjustment

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

FCC Requirements:

- 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.
- 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.

CE Requirements:

- (Simple EU declaration of conformity) Henan Eshow Electronic Commerce Co.,Ltd declares that the radio equipment type is in compliance with the essential requirements and other relevant provisions of RED Directive 2014/

53/EU and the ROHS Directive 2011/65/EU and the WEEE Directive 2012/19/EU; the full text of the EU declaration of conformity is available at the following internet address: www.retekess.com.

•Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that in the European Union, all electrical and electronic products, batteries, and accumulators (rechargeable batteries) must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws in your area.



IC Requirements:

Licence-exempt radio apparatus

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage;
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

RF Exposure Information

- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio, and the antenna gain shall not exceed the specified gain by the manufacturer declared.
- DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.
- During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.
- The device complies with RF specifications when the device used at 5mm from your body. Third-party belt-clips, holsters, and similar accessories used by this

device should not contain any metallic components. Body-worn accessories that do not meet these requirements may not comply with RF exposure requirements and should be avoided.

•DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Avoid Choking Hazard



Small Parts. Not for children under 3 years.

Protect your hearing:



WARNING

- Use the lowest volume necessary to do your job.
- Turn up the volume only if you are in noisy surroundings.
- Turn down the volume before adding headset or earpiece.
- Limit the amount of time you use headsets or earpieces at high volume.
- When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear
- Use careful with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss

Note: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing. The louder the radio's volume, the less time is required before your hearing could be affected. Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.



Avoid Burns



WARNING

Antennas

- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a minor burn can result.

Batteries (If appropriate)

•When the conductive material such as jewelry, keys or chains touch exposed terminals of the batteries, may complete an electrical circuit (short circuit the battery) and become hot to cause bodily injury such as burns. Exercise care in handling any battery, particularly when placing it inside a pocket, purse or other container with metal objects

Long transmission

•When the transceiver is used for long transmissions, the radiator and chassis will become hot.

Safety Operation



WARNING

Forbid

- Do not use charger outdoors or in moist environments, use only in dry locations/conditions.
- Do not disassemble the charger, that may result in risk of electrical shock or fire.
- Do not operate the charger if it has been broken or damaged in any way.
- Do not place a portable radio in the area over an air bag or in the air bag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the air bag inflates.

To reduce risk

- Pull by the plug rather than the cord when disconnecting the charger.
- Unplug the charger from the AC outlet before attempting any maintenance or cleaning.
- Contact Reteless for assistance regarding repairs and service.
- The adapter shall be installed near the equipment and shall be easily accessible
- Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
- Adapter shall be installed near the equipment and shall be easily accessible.
- The plug considered as disconnect device of adapter.

- The operating temperature of the EUT can't exceed the specified range.

Approved Accessories



WARNING

- This radio meets the RF exposure guidelines when used with the Reteless accessories supplied or designated for the product. Use of other accessories may not ensure compliance with the RF exposure guidelines and may violate regulations.
- For a list of Reteless-approved accessories for your radio model, visit the following website: <http://www.Reteless.com>

EU Importer

Name: Germany Retevis Technology GmbH

Address: Uetzenacker 29,38176 wendeburg

Warranty Card

Product model: _____ Date of purchase: _____

Serial Number: _____

Seller: _____ contact number: _____

Username: _____ contact number: _____

Address: _____

Zip code: _____

Remarks:

1. This guarantee card should be kept by the user, no replacement if lost.
2. Most new products carry a two-year manufacturer's warranty from the date of purchase.
3. The user can get warranty and after-sales service as below:
 - Contact the seller where you buy.
 - Products Repaired by Our Local Repair Center
4. For warranty service, you will need to provide a receipt proof of purchase from the actual seller for verification

Exclusions from Warranty Coverage:

1. To any product damaged by accident.
2. In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
3. If the serial number has been altered, defaced, or removed.



CE FC RoHS



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MADE IN CHINA