

# UHF FM REPEATER BJ-851 INSTRUCTION MANUAL

## Gratitude!

Thanks a lot for choosing **BAOJIE** Duplex Repeater. It adopts advanced technology and we believe that the exquisite designation will make it service your lives better and easier. To use the repeater correctly, please read the instruction carefully before using it.

### PRECAUTIONS

- Do not expose the repeater to rain or moisture; to prevent fire or electric shock.
- Do not take apart the repeater under any circumstances; to avoid risk of electric shock.
- Do not put the repeater in the sun too long time or near the heated device .
- Do not place the repeater in excessively dusty and/or humid areas, nor on unstable surfaces.
- If you detect an abnormal odor or smoke coming from the repeater, disconnect the power from the repeater immediately, and to contact Baojie service center or dealer.

### ! Safety Notice

- ◆ GOVERNMENT LAW PROHIBITS THE OPERATION OF UNLICENSED WIRELESS TRANSMITTERS WITHIN THE TERRITORIES UNDER GOVERNMENT CONTROL.
- ◆ ILLEGAL OPERATION IS PUNISHABLE BY FORFEIT OR IMPRISONMENT OR BOTH.
- ◆ MAINTENANCE SERVICE OF REPEATER TO QUALIFIED TECHNICIANS ONLY.

## Packing Inspection

Welcome to use BJ-851 Repeater. Before using it , we advise you:

1. Please check whether there is a damage on the pack.
2. Please open the pack carefully and make sure if there are the things listed on the following chart. If you find the product and the accessories were lost or damaged, please contact with our authorized dealers at once.

Item	Quantity
Mounting bracket	1
Screw set	1
AC/DC power	1
Programming cable	1
Instruction manual	1

## FEATURES

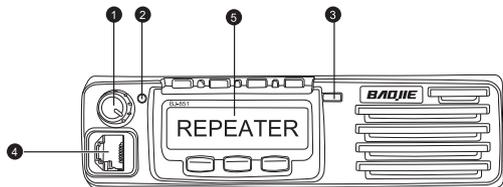
- You can easily program channel data using the programming software on a PC.
- You can recall one of the 16 preset channels using a PF key or the external control wire. (using BJ-851B mode)
- CTCSS/DCS signaling can be programmed on each channel by programming software. The same time it can be decode up to 16 different CTCSS/DCS tone
- The repeater Bandwidth: Wide: 25kHz /Narrow: 12.5kHz (using BJ-851B mode)
- Adjust the following functions by programming software:  
Setting RX frequency  
Setting TX frequency  
Setting CTCSS/DCS

**Basic Operation**

Please operate mounting bracket to the front panel of repeater.  
Match each holes on the mounting bracket, then use the screws set to fix them.

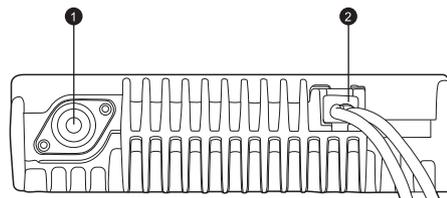
Please contact **BAOJIE** dealer for operating antenna.

■ FRONT PANEL



- ① **Power ON/OFF knob:**  
Turn on/off power switch
- ② **Power indicator:**  
Lights red when power is applied from the DC 13.8V jack.
- ③ **Recive indicator:**  
the light green while receiving signal.
- ④ **Programming cable port**
- ⑤ **"REPEATER" indicator:**  
the "REPEATER" green while receiving signal,the "REPEATER" red while transmitting signal.

■ REAR PANEL



- ① **TX OUT port**  
Connect a TX antenna or a duplexer to this receptacle.
- ② **DC 13.8V port**  
Connect a 13.8V DC power supply to this port.

## REPEATER OPERATION

Note:

Please contact Baojie dealer for programming the repeater.

When power is applied to the repeater, the power indicator lights when you press power knob for 1 second. The repeater mode when press power knob again, and "REPEATER" light green.

## TECHNICAL SPECIFICATIONS

## General

Frequency Range:	400-470 MHZ
Frequency Spacing:	10MHZ
Duplex Band Width:	1MHZ
Modulation Type:	FM 16F3
Operating Voltage:	12-14V
standby Current:0.3A/ Rx current : 0.8A /Tx current: ≤3.0A	
Frequency Stability:	± 2.5 PPM
Channel Spacing:	12.5KHZ/25KHZ
Weight:	Approx 2kg
Max Output Power (W):	10W
Receiving End Insertion loss (dB):	≤2dB
Transmitting End Insertion loss(dB):	<1.5dB
Transmitting-Receiving End Isolation (dB)	≥65dB

Max VSWR:	1.5
Operating Temperature:	-30-----+60℃
Frequency Stability:	Approx 2.5ppm/℃
Matched Impedance:	50Ω
Receiver	
Simplex Sensitivity:	≥0.3uv(12dB SINAD)
Duplex Sensitivity:	<3dB
Squelch Sensitivity	≥0.2uv
Adjacent channel selectivity:	75dB
Inter-modulation Rejection:	72dB
Residual Noise:	-45dB
DEMP FO:	6 ± 3dB
Audio Output Power:	2.0W
Audio Distortion:	<5%
Working Mode:	receiving mode
Transmitter	
Output Power:	5-10W
Spurious Radiation:	75dB
Residual Modulation:	-45dB
Audio Distortion:	<5%
Max Modulation:	5KHZ
Pre-emphasis Frequencies:	6 ± 3dB
Working Mode:	Transmitting Mode

**CPU controller**

Receiving-Transmitting Frequency Setting

Automatic Repeater Setting

PC Programming

CTCSS and DCS