# USER'S MANUAL

### **User Instruction**

Please read the manual carefully before using this product, so that you can more easily operate the repeater. When you are using this product, we think that you have read the manual.

- Please keep the manual, in order to offer reference or user of this product
- In order to safeguard the legitimate rights and interests of you from infringement,
  please seriously truthfully fill in when buying the company's products (with door repair service card), and ask for the purchase vouchers of real and effective.
- This product relates to upgrade or improve, the company reserves without prior notice to change this manual at any time bove the rights of software and hardware specifications.

All specifications mentioned product specifications and information is only for reference.

Although all words carefully check, it is hard to avoid errors, the company reserves the final interpretation.

# **Safety Tips**

For your safe and efficient use of the repeater, please read the information below.

- Maintenance work must be carried out by professionals, do not disassemble.
- Set up and installation must be approved by the local radio management department.
- User must do a good job when installing repeater antenna to protect from the lightning, or it may lead to serious loss of life and property.
- Be sure to use qualified power, duplexers, antennas, lightning protection devices, feeders, splitters and other appropriate accessories and proper installation, as this may cause broken to repeater

# **Contents**

The term to illustrate	02
Open-package inspection	03
Get familiar with the repeater	03
Basic operation	06
The term to illustrate	07
The technical parameters & specifications	08

- Short press:
  - After press the button and quick release button.
- Long press:

Press and hold the button after 2 seconds then release the button.

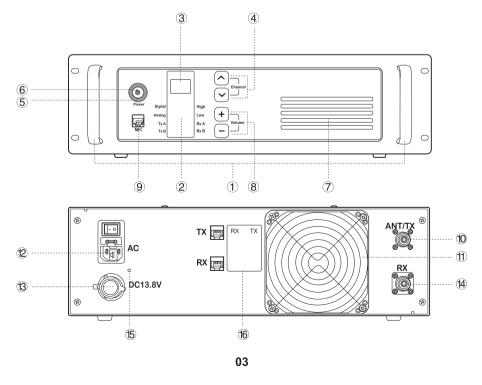
# **Open-package inspection**

Before use, please open the packing box, carefully check the repeater in the packaging carton and attached accessories, If you have any items lost or damaged in handling, please immediately contact the deliveryman or dealer.

### **Accessories**

Model name	Quantity
Repeater	1
Power cable	1
Programming cable	1
Software	1
Manual	1
Warranty card	1

# Get familiar with the repeater



Number	Instruction
1	Handle
2	Front panel function
3	Digital display tube
4	Channel
5	Power (indictor light)
6	Power( on/off)
7	Speaker
8	Volume
9	Microphone jack
10	TX signals jack
11)	Radiator fan
12	Power socket jack
13	DC 13.8V
14)	RX signals jack
15	Earthing screw
16	Frequency sticker

### Panel button functions are as follows

Power (on/off): press this button to turn on/off the repeater

Channel : press this botton to change the channels up

Channel **☑**: press this button to change the channel down

Volume : press this button shortly to turn down the volume, the speaker will show the indictor sound of volume change

Volume 

 : press this button shortly to turn up the volume, the speaker will show the indictor sound of volume change

04

• Panel LED indicator light are as follows:

### ANALOG:

Channel for analog channel, the indicator light is on when the repeater forward the analog singal.

HIGH:

When TX, the indictor light when the channel is in high power.

LOW:

When RX, the indictor light when the channel is in low power

TxA:

Analog TX instructions.

Rx A:

Analog RX instructions.

• Also panel has the following parts:

External interface:

When repeater is equipped with inside duplexer, you will only need one antenna, and please install this antenna to ANT TX jack ®,

while when it is not equipped with inside duplexer, you need to install two antennas, one is for transmitting and the other is for receiving,

and please place these two antennas in right jack. TX one to  ${\scriptsize \textcircled{1}\!\!0}$  and RX one to  ${\scriptsize \textcircled{4}\!\!4}$  .

TX8 crystal joint is TX device's programming interface

RX8 crystal joint is RX device's programming interface

# **Basic Operation**

### • Turn on/off the repeater :

When repeater is off, press "Power(on/off)" shortly to turn on the repeater, the light turns green after the repeater on, when repeater is on, press Power(on/off) for 3 seconds to turn off the repeater, the light turns yellow

### • Select Channel:

This repeater can be programed 100 channels,press ⋀ or ☒ to change the channel number. Press ⋀ or ☒ for long time can change the channel quickly.

### • Transit :

Repeater's TX frequency and RX frequency are different, repeater will TX the signal which they RX in current channel, and repeater will gain the weak signal to high signal, so that enlarge the communication range, meanwhile will play the sound received with the speaker.

Note:If the repeater have duplexer inside,frequency must be within duplexer s frequency range1MHZ

If the repeater doesn't have duplexer inside, frequency range is only restricted by software.

### • Adjust volume :

Press volume • or • Volume to adjust the volume(volume is only available for analog channel)

### Programming Settings :

Some parameters of the repeater can be set up through dealers'programming, in order to meet your requirements better, these parameters include channel TX frequency, TX power, RX frequency, noise level, CTCSS/DCS, channel and other working parameters, etc. Users can ask the local dealer for details.

### Program the frequency:

Circuits in this repeater, TX and RX are independent, so when programming the frequency ,it also should be programmed separately. User should connect programming cable with repeater's ctystal interface TX8 at the back of repeater when program the TX device's frequency. User should connect programming cable with repeater's ctystal interface RX8 at the back of repeater when program the RX device's frequency .

06 07

# **Technical parameters**

# Specification

Model name	Repeater
Channel capacity	100
Frequency stability	2.5ppm
Working temperature	-30℃-+60℃
Working voltage	220V/110V AC ± 15% / 13.8V DC ± 15%
Dimension(HxWxD)	133mm x483mm x330mm
Weight	11kg

### Receiver

Reference sensitivity	0.25uV@12dB SINAD
Adjacent channel selectivety ETSI	60dB@12.5KHz/70dB@25KHz
Spurious response rejection	≥70dB
Rated audio output	+1 ~ -3dB
Rated audio distortin	<5%
FM noise	≥45dB@25KHz/≥40KHz@12.5KHz

### Transmitter

RF power output	25W/50W(Two kinds of duplexer available,
	before purchasing, please let us know which
	kind you need)
Transmitting current	≤11A@13.8V
Standby current	≤0.8A@13.8V
Modulation mode	11kΦF3E / 16kΦF3E
Modulation distortion	<5%
FM Noise	≥40dB@25KHz/≥35dB@12.5KHz
Adjacent channel power	≥60dB@12.5KHz/≥70KHz @25KHz
Audio response	+1 ~ -3dB