



RT74

series Singles frequency repeater

Dear users

Thanks for choosing RT74 Single Frequency Repeater, we believe it is a wise choice to choose us because we have the latest technology, the most stable components, the most advanced production technology. RT74 Single Frequency Repeater will provide you with a reliable performance and high quality you demand.

This manual is for RT74 series Singles Frequency Repeater.

This manual introduces to user the basic operation of the repeater. However, your dealer or administrator may have customized the repeater for your specific needs, please consult your dealer administrator for details.

Unpacking and device check

Please take the repeater out of the package carefully and before disposing the packing materials, check the accessories according the following list, if any part is lost or damaged please contact with your dealer

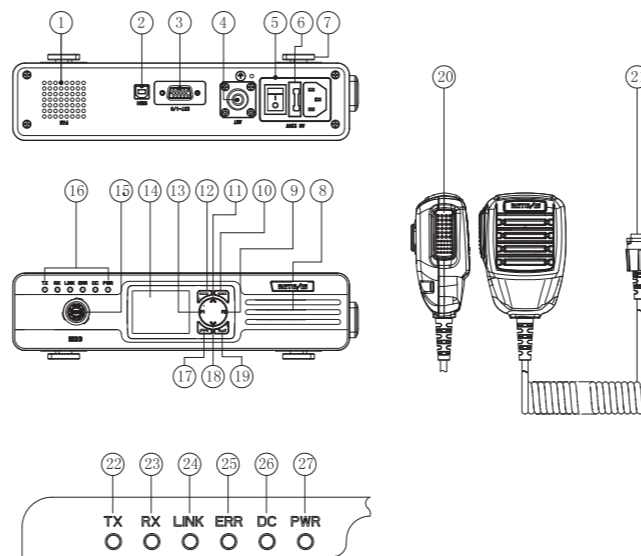
The package includes the following materials.

Items	Quantity
Singl Frequency Repeater	1
AC power supply cable	1
Wall panel	1
Screws	1 set
Fuse	1
User manual	1

optional: Remote microphone、Antenna

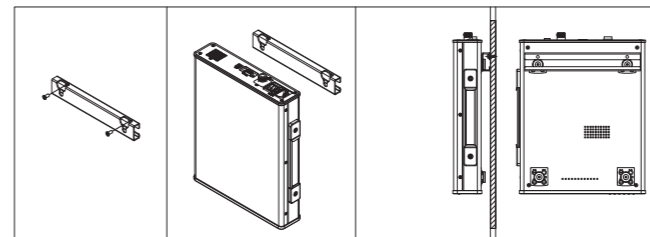
Product view

RT74 Parts Introduction



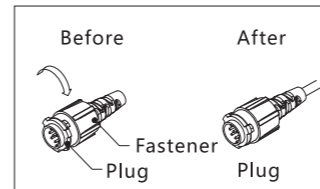
NO.	Part Name	NO.	Part Name
1	Heat Dissipation Hole	15	Microphone Connector
2	Programming Software USB Port	16	LED Indicator
3	DB-15	17	Call Key (programmable)
4	Antenna Interface	18	Volume/ChannelDownKey(MenuDownKey)
5	Power Switch	19	Home Key
6	AC Fuse	20	Remote Microphone PTT
7	Repeater Base	21	Remote Microphone Connector
8	Speaker	22	TX LED Indicator
9	Programmable Key P2	23	RX LED Indicator
10	Return Key	24	IP or POC External Module Indicator
11	Volume/ChannelUpKey(MenuUpKey)	25	Error Remind Indicator
12	OK Key	26	Battery Capacity Indicator
13	Programmable Key P1	27	Power Indicator
14	LCD Display		

Wall-mounted installation

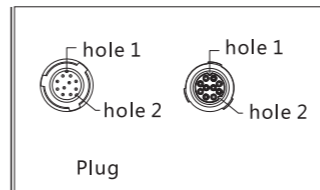


Fix the Wall Panel on the Wall with two screws.
The two supporting feet at the rear are aligned with the hole in the Wall Panel.
Side view after installed
Back view after installed

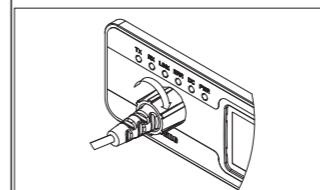
Aviation plug instructions



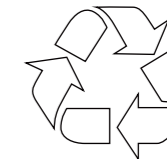
1. Rotate the Fastener so that the three positioning angles of the Fastener are consistent with the orientation angle of the plug.



2. Insert the plug into the socket properly.



3. After Inserting the plug into the socket properly, rotate the fastener to lock the plug.



CE FC RoHS

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MADE IN CHINA

RT74 Repeater Quality warranty and Liability

The warranty period of this product starts from the day when the customer receive the product.

- 12-month warranty on the repeater , 6-month warranty on the accessories.
- In the warranty period, the related labels cannot be teared up.

The warranty policy does not include the following conditions:

- Defects or damages caused by working in abnormal or unusual situations.
- Defects or damages caused by misuse, accident or water submersion.
- Defects or damages caused by unauthorized installation, repair tempering or adjustment.
- Warranty does not extend to cosmetic scratches or damages as a result of normal use or misuse.
- Defects or damages caused by force majeure.
- This warranty is void if :

The production information label on the back case is removed or if the serial number is tempered with, changed or cannot identified.

Product Function Instructions

Programmable Keys

There are 3 programmable keys P1, P2 and Call, the following table shows the programming functions available. Each key can be programmed for a short and long press function as noted in the programming software.

Note:

Short press: press then release quickly

Long press: press and hold for a second (the hold time can be set in the programming software)

NO.	Key Parameter function	Application
1	No Function	The repeater will not respond to any function, but a prompt tone of the key.
2	Power Switch	Allow toggling of the RF out put power between High (H) and Low (L) settings.
3	Zone Up	Selects next logic zone up from current.
4	Zone Down	Selects next logic zone down from current.
5	Talk Around	Direct communications on repeater out put
6	One Touch Access 1-4	Short-cut operation for selected features, press One-touch key to start pre-programmed function by PTT.
7	Local ID Report	Announces programmed DMR Unit ID.
8	CH ID Announce	Announces currently selected Channel.
9	Power Announce	Announces selected out put power.
10	Battery Announce	Announces currently battery capacity .
11	CH Type Announce	Announce whether channel is Digital or Analog.

Power on / Power off

Power on: long-press the power button, start-up screen will show the LOGO. If you have set the power-on prompt tone, the prompt tone will be heard while power on. The repeater will enter to the standby receiving interface, the repeater is turned on. Power off: a long press of the power button turn off the repeater.

Switching Channel/ Volume Control

In the standby interface, long-press the Programmable Key 'CALL', the 'Up' and , 'Down' keys can be configured to whether '+' or '-' of Channel Switch or Volume Control. (if not in the standby interface, the 'Up' and , 'Down' is only used for Menu Key.)

Zone Selection

A zone is a grouping of channels that may be assigned to that zone. The repeater supports up to 100 zones with 32 channels per zone, totally there are 1600 channels.

Following is the way to select zone.

1 Menu- A zone may be selected by using the Menu structure of the repeater (if the keypad is locked, press the Menu Key to unlock then short press the Menu). After entering the Menu, press the Up or Down key to navigate to the zone item on the display. Press the select key (Menu) to enter the Zone selection and use the Up or Down Key to select the desired Zone, press the select key for the Zone. After the operation is completed the repeater's interface will back to where you have started to check whether the zone has been switched.

Single Frequency Transmission

Using the CPS to enable to this function.

A. Configuration method

In Channel Information of the CPS, select the channel which is desired to be enabled as Single Frequency Transmits, configure the desired channel to be DMR then select the 'SFR Open'

Note: this function is only available in the DMR mode.

Warning: After selecting the SFR Open, the transmit authority of the portable radio must be color code free.

Call Types

When the repeater itself is making a call the TX LED will light up and the LCD scree lights up as well, meantime the called contact name and the icon will be displayed on the screen. User can make calls through following ways.

A Making a Call to the Default RX Group

Add the current Digital Channel to a certain default RX group by the programming software. Contacts who are in the same group can communicate mutually. When users need to make a call, press the PTT to call the contacts included in the group.

A Select Contact to Make a Call (Digital)

Common contact (Frequently contact)


Choose whether you can access the contact list through the menu, you can access the frequently used contact list via Menu-Contacts. Contact List

Allows access to all programmed contacts via Contact--Contact list. Press PTT to directly call the selected contact.

Manual Dialing

Access via Contact-Manual dialing, enter the ID of the targeted from a Digital Palm Microphone and press the PTT to make a call .

SMS (Digital Only, R5010B Portable design)

Text messaging is available under the SMS  Sub-menu. This allows user to send and respond to text messages from this sub-menu.

Programming dictates what is available for selection such as generating a New Message, Selection of Short Cut Text, accessing the In Box or Out Box or accessing a draft message in the Draft Box. There are additional selections under each of these items.

Generating a New Message:

After editing a new message, users can send it to a targeted contact which is added in the contact list.

Short Cut Text

Can send directly without editing.

In Box

The repeater will save the incoming message automatically in the In Box While receiving a message from a certain contact

Out Box









The repeater will automatically save the message which is sent out successfully in the Out Box, thus user can re-check whether the message is sent successfully.

Draft Box

When sending a message unsuccessfully, the message will be automatically saved in the Draft Box, user can re-send it.

Status Indication

LCD Icon

Icon Name	Icon	Status Description
Signal Indicator		No signal
		Receiving signal
Battery Power		Displaying remaining battery power
Transmitting Indicator		The radio is transmitting
Transmit Power	L	Current power channel is low -power
	H	Current power channel is high-power
Lock Icon		Keyboard locked, long-press to unlock
Missing Call Icon		When there is a missing call
SMS Icon		There is a unread message in the In Box
Attachment Icon		USB connected Icon
Call long-press Key Switch Icon	VL	Up and Down to switch the volume
	CH	Up and Down to switch the channel

Troubleshooting Guide

Fault Description	Possible Reason	Solution
Cannot be turned on	AC power cable is not connected or the plug is loose	Connect the AC power correctly and make sure the good contact.
	Low battery (when the battery supplies power)	Please charge to the battery or contact with your dealer to change a new one.
	Output voltage of power adapter within the case is abnormal	Please charge to the battery or contact with your dealer to change a new one. Check the value of the out put voltage of the power adapter (12V+/-0.8V), if the value is not in the range please change the power adapter.
Cannot communicate with other contacts in the group	Fuse has been broken	Check the broken fuse and change a new fuse
	The TX and RX frequency of the repeater is not match with the RX and TX frequency of the terminal device	Check the RX and TX frequency, if necessary, set a new frequency.
The terminal device gets RX indicator but teammate can not communicate mutually	The working frequency is jammed by a stronger signal.	Find the source of the jam, if unable to turn off the jam or keep away from it, apply for a new frequency. Based on the authentication version, user can block the other device which is not belong to the repeater.
	The contact of the group is out of the covered area	Confirm it, if so, back to the covered area.
Short distance, unclear audio voice	The ID number of the terminal device is different with others. Set a same ID with other contacts from the group.	Set a same ID with other contacts from the group.
	The colour code of the terminal device is not matchable.	Check the colour code whether is matcable, if not set a new one
The cable connected with the antenna is broken, the signal has been leaked out.	The cable connected with the antenna is broken, the signal has been leaked out.	Check the cable, if necessary change a new one
	The cable connector with the antenna port is loose or falling off	Check the port make sure they are well-connected, if necessary change a new one.

Note: if above solutions cannot help you to solve the issues the repeater may have or the other issues you might meet, please contact with your local distributor Retevis to get more technical support.

Maintenance and Cleanliness

In order to ensure that this product exerts its good performance and prolongs its service life, please read the following contents to better carry out daily maintenance and cleaning of this product

Maintenance

- Please ensure that this product is in a well ventilated and easy to dissipate heat position, so that all parts can work normally.
- Do not place irrelevant items on the top cover or radiator of this product to ensure the effective heat dissipation. Do not puncture or scratch the product with hard objects.
- Do not immerse the product in various corrosives, water and solutions.
- Regularly check whether the cooling fan in the unit has good heat dissipation. If there is any non rotating problem, please replace it in time.

Cleanliness

- Please use regularly a clean and dry cloth or brush to wipe the dust from the product to ensure that it is clean and prevent dust from causing short circuit or poor contact.
- If the buttons, screens and interfaces are dirty, do not use any strong corrosive chemicals such as decontamination agents, alcohol, spray, petroleum preparation, etc., If it is used accidentally, please keep this product completely dry, otherwise do not use.