

# RETEVIS



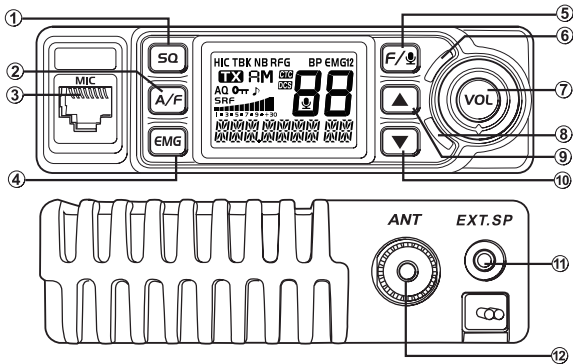
**MB1**  
CB Radio  
USER'S MANUAL



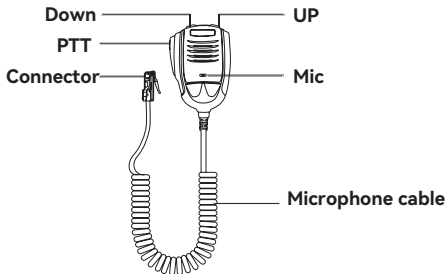
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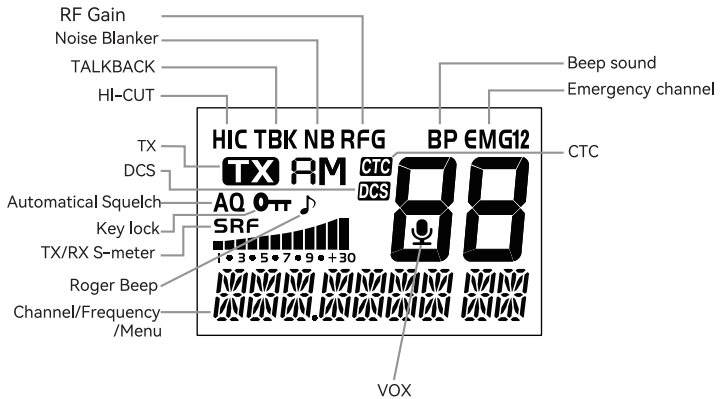
# 1. KNOW ABOUT THIS RADIO



1	Squelch control, SQ, ASQ switch key
2	Mode/Keypad lock
3	Microphone Jack
4	Emergency channel
5	Functions
6	TX indicator
7	Power On/Off Volume control
8	RX indicator
9	Channel up selector
10	Channel down selector
11	External speaker Jack
12	Antenna Jack



## 2. LCD



### Function and Features

1. AM/FM MODE
2. 7 COLOR DISPLAY
3. VOX FUNCTIONS
4. SQ, ASQ FUNCTION
5. RF GAIN FUNCTION
6. SCAN FUNCTION
7. RB FUNCTION
8. NB FUNCTION
9. BEEP SOUND
10. TOT FUNCTION
11. HI-CUT FUNCTION
12. EMG CALL
13. BACKLIGHT BRIGHTLESS ADJUSTABLE
14. KEY LOCK FUNCTION
15. CTCSS/DCS CODE
16. BUILT IN 12/24V CONVERTOR

## 3. HOW TO USE THIS RADIO

### 3.1 Power On/Off the Radio .....

- (1) Turn VOL switch clockwise to power on the radio, the LCD displays the Norms and then displays channel number.
- (2) Turn VOL switch anti-clockwise, until hear Ka Ta, the radio is powered off.

### 3.2 Volume Control .....

Turn clockwise to increase volume, anti-clockwise to decrease volume.

### 3.3 Channel Control .....

- (1) Short press microphone [ UP ] or [ DN ] to change working channel.
- (2) Long press microphone [ UP ] or [ DN ] can fast change working channel.

### 3.4 **SQ** .....

#### ※**Squelch level Control (short press)**

- (1) Short press **SQ**, until LCD displays " **SQ**...SET 00", "00" stands for SQ level, the bigger value stands for high squelch level.
- (2) Short press microphone [ UP ] or [ DN ] to change SQ level.
- (3) Long press microphone [ UP ] or [ DN ] can fast change SQ level.
- (4) Short press **SQ** or wait for 10 seconds to store and exit.

**Note:** The higher SQ level selected, the stronger signal required to open speaker and hear the calling.


#### ※**ASQ Control (long press)**

- (1) Long press **SQ**, until LCD displays " **AQ**", the ASQ function turned on.
- (2) Short press **SQ**, until LCD displays " **ASQ**...SET 00", "00" stands for ASQ level, the bigger value stands for high squelch level.
- (3) Short press microphone [ UP ] or [ DN ] to change ASQ level.
- (4) Long press microphone [ UP ] or [ DN ] can fast change ASQ level.
- (5) Short press **SQ** or wait for 10 seconds to store and exit.
- (6) Long press **SQ** key again to turn on SQL function.





**Note:** The higher ASQ level selected, the stronger signal required to open speaker and hear the calling.

### 3.5 .....

#### ※Mode Control (short press)

- (1) Short press , key to switch between **AM/FM** mode.
- (2) The LCD displays the selected mode.




#### ※Keypad Lock (long press)

- (1) Long press  key for over 2 seconds to lock the keys, LCD displays .
- (2) Long press  key for over 2 seconds again to unlock the keys  disappears from LCD.

**Note:** In lock Mode all keys except PTT is valid.

### 3.6 .....

#### ※Emergency Channel (short press)

- (1) First press , key to choose the first programmed emergency channel, LCD displays **EMG**.
- (2) Second press , key to choose the second programmed emergency channel.
- (3) Third press , key to return to last normal channel, EMG disappears from LCD.

**Note:** The default emergency channel are channel 9 and channel 19.

See menus Emergency Channel Set page 8 for the emergency channel configuration.

### 3.7 .....



#### ※Scan Function (short press)

- (1) Hold UP or Down key for over 5 seconds and release the key when hear "Di" beep sound to start scan, "SCAN" flashes in the LCD.
- (2) Short press UP or Down key to change scan direction .
- (3) Short press [EMG] or [PTT] to exit scan.

### 3.8

#### ※VOX function

The VOX function allows transmitting by speaking into the original microphone without pressing the [ PTT ] switch.



Press [ PTT ] +  key to activate VOX function, LCD displays microphone icon " key to disable VOX function. The microphone icon disappeared.

**Note:** *When VOX is turned on, the microphone symbol flashes in LCD .*

#### ※Talkback Level


This function allows you to adjust the volume of your walkie-talkie.

(1) Start the intercom function (see "intercom" on page 8).


(2) Hold down the [PTT] switch, then the  key increases or the  key decreases the Talkback Level .

(3) Release [ PTT ] switch and save Talkback Level.

#### ※Functions (long press)

Long press  key to enter in menu and set different function.

#### ※Norms Control

(1) Hold  to power on radio, until LCD displays the norms.

(2) Short press microphone [ UP ] or [ DN ] to choose wanted norms .

(3) Power off and power on again.



### 3.9 Install External Speaker


Choose a 8Ω external speaker with 3.5mm connector.

**Note:** *This radio is BTL output, the two pins of external speaker must NOT connect to ground or the radio case. Otherwise it will break the radio .*

### 3.10 Menu Operations

(1) Long press  key to enter menu list.

(2) Short press microphone [ UP ] or [ DN ] or  or  to choose menu to be.

(3) Short press  key to enter function setting parameter of the chosen function, the parameter blinks on LCD.

(4) Short press microphone [ UP ] or [ DN ] or  or  to choose wanted setting.



(5) Short press  key to validate the mode and exit setting .

(6) Long press  key or wait 20 seconds to store exit MENU .

NO.	LCD display	Function detail	Setting details
1	CTCSS/DCS OFF	CTCSS/DCS encode/decode	OF: CTCSS/DCS is OFF; CT: 67.0Hz~250.3Hz; DT: D023N~D754N;
2	BELOFF ON	Beep sound	ON: turn on beep sound OF: turn off beep sound
3	MICSET 06	Microphone gain	1~9, Total 9 levels Default: 6
4	MICTP EL	Microphone type	EL: Electronic dy: Dynamic Default: EL <b>Note:</b> Speak into microphone and watch the S-meter to choose wanted mic gain.
5	VOXL 03	VOX Sensitivity	1~9: total 9 levels Default: 3
6	VOXT 04	VOX Time	1~9: Total 9 levels Default: 4
7	SQLEVEL 08	Squelch level control	OF: 1~34 Default: 8
8	AUTOSET 06	Auto squelch level control	Level 1~9 Default: 6
9	SCANTYPE TI	Scan type setting	SQ: squelch scan TI: time scan Default: SQ
10	HI-CUT OFF	HI-CUT setting	OF: turn off HI-CUT function ON: turn on HI-CUT function Default: OF

NO.	LCD display	Function detail	Setting details
11	TALKBACK OF	Talkback level control	OF, 1~9 Default: OF
12	NBLANK OF	Noise blanker	OF: turn off NBLANK function ON: turn on NBLANK function Default: OF
13	RF AUTO ON	Auto RF gain setting	OF: turn off AUTO RF GAIN function ON: turn on AUTO RF GAIN function Default: ON
14	RF GAIN OF	RF gain level control	Level 3、6、9~48 Default: OF
15	RB SWP OF	RB sound setting	OF, 1-5 OF: turn off RB sound function. Default: OF
16	COLOR RE	Backlight color setting	RE: Red GR: Green BL: Blue CY: Cyan YE: Yellow PU: Purple WH: White Default: RE
17	BRIGHT 06	Backlight brightness	Level 1~6 Default: 6
18	TOT.SET 02	Time out timer	OF, 1~10Min Default: 2
19	EMG.1 03	EMG channel 1	Please check Emergency Channel setting in page XX
20	EMG.2 03	EMG channel 2	Please check Emergency Channel setting in page XX
21	RESET	Resume default	Please check Resume factory default In page XX

### 3.11 Emergency Channel Setting .....

- (1) Long press **[F/Ⓜ]** key to enter menu list.
- (2) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose NO.19 function memu or NO.20 function memu, LCD displays *EMG, 1 c09* or *EMG, 2 c 19*.
- (3) Short press **[F/Ⓜ]** key, the number " 1 " or number " 2 " blinks on LCD .
- (4) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose the emergency channel from OF to valid.  
( default channel 9 for EMG1, defalt channel for EMG is 19.
- (5) Short press **[F/Ⓜ]** key, the channel number flahses.
- (6) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose the channel.
- (7) Short press **[F/Ⓜ]** key to validate the channel, AM or FM blinks on LCD.
- (8) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose the mdoe AM or FM.
- (9) Short press **[F/Ⓜ]** key to validate the mode and exit setting.
- (10) Long press **[F/Ⓜ]** key or wait 20 seconds to store exit MENU.

### 3.12 Resume Factory Default .....

- (1) Long press **[F/Ⓜ]** key to enter menu list.
- (2) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose NO.21 function memu, LCD displays *RESET*.
- (3) Short press **[F/Ⓜ]** key to enter menu selection, *RESET* falshes in the LCD .
- (4) Long press **[F/Ⓜ]** key key until LCD only displays *RESET*.
- (5) Release **[F/Ⓜ]** key, the radio automatically reseted.

## 4. SPECIFICATION

GENERAL		
Modulation Mode	AM/FM	
Frequency Range	26.965-27.405MHz	
Frequency Tolerance	±5.0ppm	
Input Voltage	12/24V	
Dimensions	124x101x36mm	
Weight	428g	
Operating Temperature Range	-20°C to +50°C	
Current Drain	Transmit	3A MAX
	Receive	Squelched 0.3A
	VOL Max	0.7A
Antenna Connector	UHF, SO-239	
TRANSMITTER		
Power Output	4 Watts FM/AM	
Transmission interference	inferior to 4nW	
Frequency Response	300-3000Hz	
Modulated signal distortion	inferior to 5%	
Output Impedance	50 ohms	
RECEIVER		
Sensitivity	Less than 1uV for 10dB(S+N)/N	
Adjacent Channel Rejection	60dB	
IF Frequencies	1st 10.695MHz	
	2nd 455KHz	
Automatic Gain Control(AGC)	Less than 10dB change in audio	
	Output for inputs from 10 to 50000uV	
Squelch	less than 1uV	
Audio Output Power	1Watts at 8Ω less than 10% distortion	
Frequency Response	300-3000Hz	

### FREQUENCY LIST

CH.NO.	Freq.(MHz)	CH.NO.	Freq.(MHz)
1	26.965	21	27.215
2	26.975	22	27.225
3	26.985	23	27.255
4	27.005	24	27.235
5	27.015	25	27.245
6	27.025	26	27.265
7	27.035	27	27.275
8	27.055	28	27.285
9	27.065	29	27.295
10	27.075	30	27.305
11	27.085	31	27.315
12	27.105	32	27.325
13	27.115	33	27.335
14	27.125	34	27.345
15	27.135	35	27.355
16	27.155	36	27.365
17	27.165	37	27.375
18	27.175	38	27.385
19	27.185	39	27.395
20	27.205	40	27.405

### CTCSS CODE LIST

No.	Freq. (Hz)	No.	Freq. (Hz)	No.	Freq. (Hz)	No.	Freq. (Hz)
01	67.0	11	97.4	21	136.5	31	192.8
02	71.9	12	100.0	22	141.3	32	203.5
03	74.4	13	103.5	23	146.2	33	210.7
04	77.0	14	107.2	24	151.4	34	218.1
05	79.7	15	110.9	25	156.7	35	225.7
06	82.5	16	114.8	26	162.2	36	233.6
07	85.4	17	118.8	27	167.9	37	241.8
08	88.5	18	123.0	28	173.8	38	250.3
09	91.5	19	127.3	29	179.9		
10	94.8	20	131.8	30	186.2		

### DCS CODE LIST

Code No.	DCS (Octal)	Code No.	DCS (Octal)	Code No.	DCS (Octal)	Code No.	DCS (Octal)
1	023	27	152	53	311	79	466
2	025	28	155	54	315	80	503
3	026	29	156	55	325	81	506
4	031	30	162	56	331	82	516
5	032	31	165	57	332	83	523
6	036	32	172	58	343	84	526
7	043	33	174	59	346	85	532
8	047	34	205	60	351	86	546
9	051	35	212	61	356	87	565
10	053	36	223	62	364	88	606
11	054	37	225	63	365	89	612
12	065	38	226	64	371	90	624
13	071	39	243	65	411	91	627
14	072	40	244	66	412	92	631
15	073	41	245	67	413	93	632
16	074	42	246	68	423	94	654
17	114	43	251	69	431	95	662
18	115	44	252	70	432	96	664
19	116	45	255	71	445	97	703
20	122	46	261	72	446	98	712
21	125	47	263	73	452	99	723
22	131	48	265	74	454	100	731
23	132	49	266	75	455	101	732
24	134	50	271	76	462	102	734
25	143	51	274	77	464	103	743
26	145	52	306	78	465	104	754

## CAUTION

EN:User' instructions should accompany the device when transferred to other users.

## 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.

## Radio License

Governments keep the radios in classification. Two-way radios are only operated on authorized radio frequencies that are regulated by the local radio management departments (such as FCC, ISED, OFCOM, ANFR, BFTK, Bundesnetzagentur, and so on.). The detailed classification and the use of your two-way 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.

## FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (Other devices are applicable)

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

Note: This equipment has been tested and found to comply with the limits for a Class B digital device. 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.

## IC

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.

## CE:

• (Simple EU declaration of conformity) Shenzhen Retevis Technology 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.retevis.com](http://www.retevis.com). For the intended country of use, please refer to the package.

## Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, or accumulators 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 and rules in your area.lug

#### **(2) Getrennte Erfassung von Altgeräten**

Elektro- und Elektronikgeräte, die zu Abfall geworden sind, werden als Altgeräte bezeichnet. Besitzer von Altgeräten haben diese einer vom unsortierten Siedlungsabfall getrennten Erfassung zuzuführen. Altgeräte gehören insbesondere nicht in den Hausmüll, sondern in spezielle Sammel- und Rückgabesysteme.

(3) Möglichkeiten der Rückgabe von Altgeräten: Besitzer von Altgeräten aus privaten Haushalten können diese bei den Sammelstellen der öffentlich-rechtlichen Entsorgungsträger oder bei den von Herstellern oder Vertriebern im Sinne des ElektroG eingerichteten Rücknahmestellen abgeben. Ein Onlineverzeichnis der Sammel- und Rücknahmestellen finden Sie hier:

<https://www.ear-system.de/ear-verzeichnis/sammel-und-ruecknahmestellen.jsf>

#### **(4) Hersteller-Registrierungsnummer**

Als Hersteller im Sinne des ElektroG sind wir bei der zuständigen Stiftung Elektro-Altgeräte Register (BennoStrauß-Str. 1, 90763 Fürth) unter der folgenden Registrierungsnummer registriert: DE 83916430

#### **RF Safety**

This two-way 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. 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/>

Transmit no more than the rated duty factor 75% of the time. Transmitting necessary information or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms of measuring for standards compliance. For users who wish to further reduce their exposure, some effective measures to reduce RF exposure include:

- Reduce the amount of time spent using your wireless device.
- Use a speakerphone, earpiece, headset, or other hands-free accessory to reduce proximity to the head (and thus head exposure). While wired earpieces may conduct some energy to the head and wireless earpieces also emit a small amount of RF energy, both wired and wireless earpieces remove the greatest source of RF energy (handheld device) from proximity to the head and thus can greatly reduce total exposure to the head.
- Increase the distance between wireless devices and your body.

This radio is designed for and classified as "General population/uncontrolled use". General population/uncontrolled environments are defined as locations where there is exposure of individuals who have no knowledge or control of RF exposure level.

#### **RF Safety distance**

Speak directly into the microphone. During operation, the separation distance (1.2 m, Safe distance) between the user and the antenna subject to actual regulations. This separation distance will ensure that there is sufficient distance from a properly installed externally-mounted antenna to satisfy the RF exposure requirements. Transmit only when people are the recommended minimum lateral distance away from a properly installed externally mounted antenna according to installation instructions.

#### **Electromagnetic Interference/Compatibility**

Nearly every electronic device is susceptible to electromagnetic interference (EMI) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility. 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, such as hospitals or healthcare facilities.

Persons with pacemakers, implantable cardioverter defibrillators (ICDs) or other active implantable medical devices should:

- Consult with their physicians regarding the potential risk of interference from radio frequency transmitters, such as portable radios (poorly shielded medical devices may be more susceptible to interference).



- Turn the radio OFF immediately if there is any reason to suspect that interference is taking place.
- Do not carry the radio in a chest pocket or near the implantation site, and carry or use the radio on the opposite side of the body from the implantable device to minimize the potential for interference.
- Hearing Aids: Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.
- Other Medical Devices: If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

#### Turn off your radio in the following conditions:

- Turn off your radio prior to entering any area with a potentially hazardous or explosive atmosphere. Only radio types that are especially qualified should be used in such areas as "Intrinsically Safe". Note: the areas with potentially explosive atmosphere referred to above include blasting caps, blasting areas, inflammable gas, dust particles, metallic powders, grain powders, fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles (such as grain, dust or metal powders) and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmospheres are often – but not always posted.
- Turn off your Radiocommunication device when taking on fuel or parked at gasoline service stations.
- Do not use any radio that has a damaged antenna. If a damaged antenna comes into contact with the skin when the radio is in use, a burn can result.
- Turn off your radio before removing or installing accessories.
- When the transceiver is used for long transmissions, the radiator and chassis will become hot.

#### Use of Communication Devices While Driving

• Always check the laws and regulations on the use of radios in the areas where you drive. Use of Communication Devices, for example, mobile radio, may not be allowed.

- Give full attention to driving and to the road.
- Use hands-free operation, if available.
- Pull off the road and park before making or answering a call, if driving conditions or regulations so require.
- Do not place a portable radio in the area over an air bag or in the airbag deployment area. The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the airbag inflates.



#### Protect your hearing

- Use the lowest volume necessary to do your job. Turn up the volume only if you are in noisy surroundings.
- Limit the amount of time you use headsets or earpieces at high volume.
- Use carefully with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss.

CAUTION: 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.



WARNING:CHOKING HAZARD–Small Parts. Not suitable for children under 3 years old.

## Guarantee

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchasing Date: \_\_\_\_\_

Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_

User's Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Country: \_\_\_\_\_ Address: \_\_\_\_\_

Post Code: \_\_\_\_\_ Email: \_\_\_\_\_

### 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. Further details, pls read <http://www.retevis.com/after-sale/>
- 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.





## Shenzhen Retevis Technology Co.,Ltd.

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Facebook:facebook.com/retevis



MADE IN CHINA

# 说明书要求

尺寸：120\*160mm

印刷：黑白印刷

装订：胶黏订

纸张材质：双胶纸

**本页无需印刷**

保证页与封底不在同一页

装订未胶粘订 自行调整页边距