

***AnyTone***<sup>®</sup>

Qixiang Electron Science & Technology Co., Ltd.

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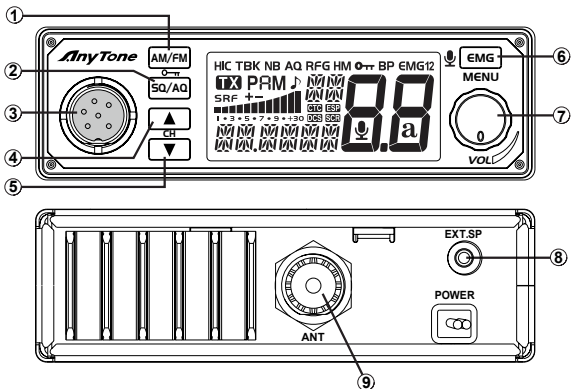
## **AT-500M**

### 10 METER RADIO

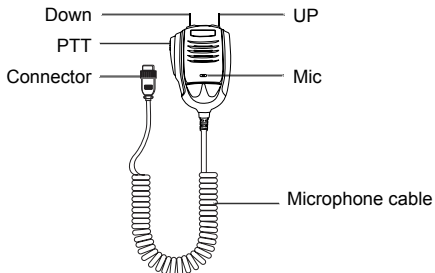
### Instruction Manual



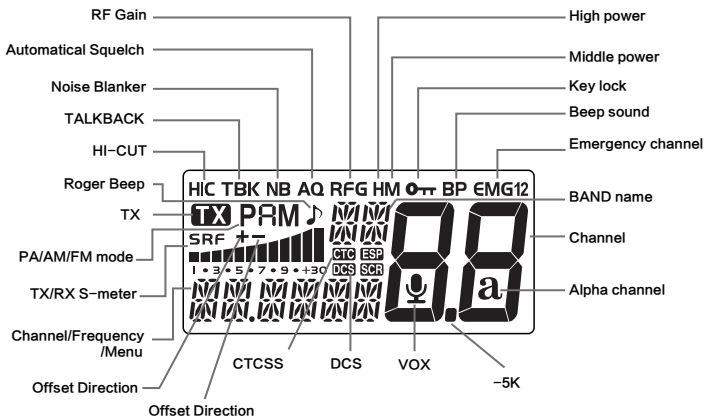
# 1. KNOW ABOUT THIS RADIO



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



## 2. LCD



### Function and Features

1. AM/FM/PA MODE
2. 7 COLOR DISPLAY
3. VOX FUNCTIONS( TRANSMIT WITHOUT PRESS PTT)
4. SQ, ASQ FUNCTION
5. RF GAIN FUNCTION
6. SCAN FUNCTION
7. RB FUNCTION
8. NB FUNCTION
9. DUAL-WATCH FUNCTION
10. BEEP SOUND
11. TOT FUNCTION
12. HI-CUT FUNCTION
13. EMG CALL
14. SUIT DYMATIC AND ELECTRONIC MICROPHONE
15. BACKLIGHT BRIGHTLESS ADJUSTABLE
16. -5KHZ FUNCTION
17. OFFSET FUNCTION
18. KEY LOCK FUNCTION
19. CTCSS/DCS CODE ( OPTIONAL)
20. BUILT IN 12/24V CONVERTOR (OPTIONAL)

## 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.

**Note:** The standard version support 12V DC power supply. optional version support 12+24V check your version before connect power supply.

### 3.2 Volume Control .....

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

### 3.3 Channel Control .....

- (1) Short press [UP]/[DN] key to change channel by one step.
- (2) Hold [UP]/[DN] can fast changed channel.

### 3.4 SQ/AQ .....

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

- (1) Short press SQ/AQ , until LCD displays "SQLSET 00", "00" stands for SQ/AQ level, the bigger value stands for high squelch level.
- (2) Short press microphone [ UP ] or [ DN ] to change SQ/AQ level.
- (3) Long press microphone [ UP ] or [ DN ] can fast change SQ/AQ level.
- (4) Short press SQ/AQ 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 "ASQSET 06", "06" stands for ASQ level, the bigger value stands for high squelch level.
- (3) Short press [UP]/[DN] to change ASQ level.
- (4) Hold [UP]/[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 **AM/FM** .....

#### ※Mode Control (short press)

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

#### ※Keypad Lock (long press)

- (1) Long press **AM/FM** key for over 2 seconds to lock the keys, LCD displays **0TT**.
- (2) Long press **AM/FM** key for over 2 seconds again to unlock the keys **0TT** disappears from LCD.

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

### 3.6 **EMG** .....

#### ※Emergency Channel (short press)

- (1) First press **EMG**, key to choose the first programmed emergency channel, LCD displays **EMG1**.
- (2) Second press **EMG**, key to choose the second programmed emergency channel.
- (3) Third press **EMG**, key to return to last normal channel, LCD displays **EMG2**.

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

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

#### ※Functions (long press)

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

### 3.7 Scan Function.....

- (1) Hold **[UP ]/[DN]** for over 5 seconds, when you hear **/di di/**, scan started.
- (2) Short press **[UP ]/[DN]** key to change scan direction.
- (3) Short press **[AM]/[FM]** to change mode, 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] + [EMG] key to activate VOX function, LCD displays microphone icon, and then press [PTT] + [EMG] key to disable VOX function. The microphone icon disappeared.

**Note:** When turn on VOX, the mic icon flashes, VOX sensitivity and time setting refer to page 6.

### 3.9 PA Function.....

This function allows you to select the mode of operation for public broadcasting.




Turn on PA mode: "PA" and modulation mode (AM/FM) flicker alternately. The volume switch knob is used to adjust the audio level of mode PA.

### 3.10 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 [up] key increases or the [down] key decreases the Talkback Level
- (3) Release PTT switch and save Talkback Level.







### 3.11 Norms Control .....

- (1) Hold  to power on radio, until LCD displays the norms.
- (2) Short press  or  or microphone [UP ]/[DN].
- (3) Power off and power on again.

### 3.12 Install External Speaker .....

Choose a 8Ω external speaker with 3.5 mm mono connector.

### 3.13 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 **[EMG]** key to validate the mode and exit setting.

(6) Long press **[EMG]** key or wait 10 seconds to store exit MENU.

NO.	LCD display	Function detail	Setting details
1	CAT SET	CTCSS/DCS encode/decode	<b>OFF</b> : CTCSS/DCS is OFF; CT: 67.0Hz~250.3Hz; DT: D023N~D754N; <b>Note</b> : This function is optional.
2	KEY BFP	Beep sound	<b>ON</b> : turn on beep sound <b>OFF</b> : turn off beep sound Default: <b>ON</b>
3	RF POW	RF power setting	LO: low power nl: middle power HI: high power Default: LO <b>Note</b> : This function is valid only when the radio work in HF model or HAM model.
4	SCM	Scan type setting	Sq: squelch scan tl: time scan Default: <b>SQ</b>
5	HI CUT	HI-CUT setting	<b>OFF</b> : turn off HI-CUT function <b>ON</b> : turn on HI-CUT function Default: <b>OFF</b>
6	MIC SET	Microphone gain	1~9, Total 9 levels Default: 6
7	MIC TP	Microphone type	EL: Electronic dy: Dynamic Default: EL Note: Speak into microphone and watch the S-meter to choose wanted mic gain .
8	VOX L	VOX Sensitivity	1~9: total 9 levels Default: 3
9	VOX T	VOX Time	1~9: Total 9 levels Default: 4
10	TALK BCK	Talkback level control	<b>OFF</b> , 1~9 Default: <b>OFF</b>



NO.	LCD display	Function detail	Setting details
11	ANL/NB	Noise blanker	<p>oF: turn off ANL/NB function</p> <p>oN: turn on ANL/NB function</p> <p>Default: oF</p>
12	RE PSET	Offset direction	<p>oF: Turn off offset;</p> <p>-: negative offset, TX frequency low than RX frequency;</p> <p>+: minus offset, TX frequency high than RX frequency;</p> <p>Note: Valid only in HF or HAM mode.</p>
13	RF.GAIN	RF gain level control	<p>Level AU 03,06,09~48</p> <p>Default: oF</p> <p>Note: If the AUTO RFG function is on, the radio will turn on the automatic RFG function.</p>
14	RB.SND	RB sound setting	<p>oF, 1-5</p> <p>oF: turn off RB sound function.</p> <p>Default: oF</p>
15	COLOR	Backlight color setting	<p>OR: Orange</p> <p>gr: Green</p> <p>bL: Blue</p> <p>Cy: Cyan</p> <p>yE: Yellow</p> <p>PU: Purple</p> <p>CL: White</p> <p>Default: OR</p>
16	BRIGHT	Backlight brightness	<p>Level 1~6</p> <p>Default: 4</p>
17	TO.TSET	Time out timer	<p>oF, 1~10Min</p> <p>Default: 1</p>
18	RL-5K	Frequency -5KHz function	<p>oN: turn on -5KHz function</p> <p>oF: turn off -5KHz function</p> <p>Default: oF</p> <p>Note: This function is only valid for radio operating in HAM mode.</p>

### 3.14 Band Name Setting .....

- (1) Choose a band to be modified.
- (2) Long press **[EMG]** key to enter menu list.
- (3) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose BAND name function menu, LCD displays **BAND NAME**.
- (4) Short press **[EMG]** key, the first digit blinks on LCD.
- (5) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose the character of the first digit.
- (6) Short press **[EMG]** key to validate the first digit. The second digit blinks on LCD.
- (7) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose the character of the second digit.
- (8) Short press **[EMG]** key to validate the second digit and exit setting.
- (9) Long press **[EMG]** key or wait 10 seconds to store exit MENU.

### 3.15 Emergency Channel Setting .....

- (1) Long press **[EMG]** key to enter menu list.
- (2) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose EMG function menu, LCD displays **EMG1--09 on** or **EMG2--19 on**.
- (3) Short press EMG key, the character "on" or character "oF" blinks on LCD.
- (4) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose the emergency channel is valid.  
*OFF*: stands for turn off current emergency channel.
- (5) Short press **[EMG]** key, the band name blinks on LCD.
- (6) Short press microphone **[ UP ]** or **[ DN ]** or **[▲]** or **[▼]** to choose the frequency band.

**Note:** This frequency band selection is valid only when the radio work in HF model or HAM model.

- (7) Short press **[EMG]** key to validate the frequency band, and the channel blinks on LCD.
- (8) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose the channel.
- (9) Short press **[EMG]** key to validate the channel, and the mode blinks on LCD.
- (10) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose the mode AM or FM.
- (11) Short press **[EMG]** key to validate the mode and exit setting.
- (12) Long press **[EMG]** key or wait 10 seconds to store exit MENU.

**Note:** Choose the frequency band is valid only when the radio work in HF model or HAM model.

### 3.16 Resume Factory Default .....

- (1) Long press **[EMG]** key to enter menu list.
- (2) Short press microphone [ **UP** ] or [ **DN** ] or **[▲]** or **[▼]** to choose reset function menu, LCD displays *RE SET*.
- (3) Short press **[EMG]** key to enter menu selection, *RE SET* flashes in the LCD.
- (4) Long press **[EMG]** key until LCD only displays *RE SET*.
- (5) Release **[EMG]** key, the radio automatically reseted.

## 4. SPECIFICATION

GENERAL		
Modulation Mode	AM/FM	
Frequency Range	28–29.7MHz	
Frequency Tolerance	± 5.0ppm	
Input Voltage	13.8V	
Dimensions	185x124x38mm	
Weight	620g	
Operating Temperature Range	–20°C to +50°C	
Current Drain	Transmit	5A MAX
	Receive	Squelched 0.3A
	VOL Max	0.7A
Antenna Connector	UHF, SO–239	
TRANSMITTER		
Power Output	AM 7W, FM15W	
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	
Image Rejection	70dB	
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	2Watts at 8Ω less than 10% distortion	
Frequency Response	300–3000Hz	

## WARNING

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device does not cause any harmful interference; and (2) this radio must accept any interference that may cause undesired operations.

**Note:** 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.

## Licensing Information

Use our radio in USA is subject to the rules & regulations of FCC. Changes or modifications not expressly approved by our may void the user authority granted by the FCC to operate this radio and should not be made. To comply with FCC 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 FCC equipment authorization for this radio could violate FCC rules.

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

**Important:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this device. Your radio is set up to transmit a regulated signal on an assigned frequency. It is against the law to alter or adjust the settings inside the radio to exceed those limitations. Any adjustments to your radio must be made by qualified technicians.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.