

AnyTone[®]

Qixiang Electron Science & Technology Co.,Ltd.

www.anytone.net

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ARES II

Instruction Manual



FCC Compliance Statements:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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.

WARNING:

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

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FUNCTIONS & FEATURES

- ◆ PA/FM/AM/USB/LSB mode
- ◆ Weather Channel 150-170MHz programmable(Optional)
- ◆ CTCSS/DCS Code
- ◆ PWR, RX RSSI S-Meter
- ◆ PC programmable
- ◆ Echo Function
- ◆ SQ, ASQ Function
- ◆ RF Gain Adjustment
- ◆ Mike Gain Adjustment
- ◆ RF PWR Adjustment
- ◆ Programmable RB
- ◆ NB/ANL Function
- ◆ Offset Function
- ◆ Beep Voice Prompt
- ◆ +10KHz Function
- ◆ TOT Function
- ◆ HI-CUT Function
- ◆ Busy channel lock
- ◆ Monitor
- ◆ LED Brightness Adjustment
- ◆ SWR Protection
- ◆ Voltage Protection
- ◆ VOX Function
- ◆ RX noise reduction
- ◆ TX noise reduction
- ◆ NPC function
- ◆ SCAN function

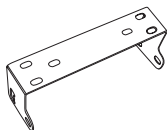
■ STANDARD ACCESSORIES



Radio



Microphone



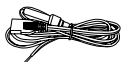
Mounting Bracket



Microphone Hanger



Non-slip Mat



DC Power Cable



Screws for bracket



Pads for bracket



Adjusting screws



Spare Fuses (10A, 250V)



Self-tapping Screws



Pads

■ OPTIONAL ACCESSORIE



USB Programming Cable

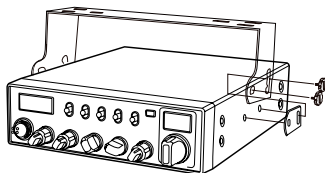
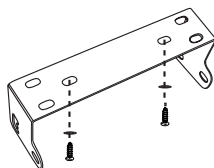


External Speaker

■ INSTALLATION

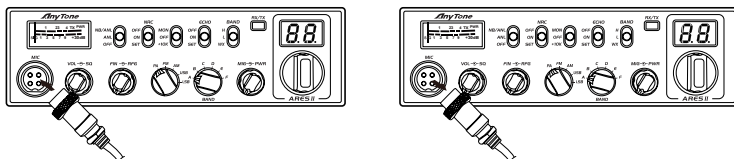
Choose the most appropriate setting from a simple and practical point of view. Your radio should not interfere with the driver or crash the driver's knee or leg when rush brake.

1. Using the self-tapping screws and pads(2 sets) to fix the bracket.
2. Put the Non-slip mat on the 2 ends of the bracket and put in the radio. Then insert the adjusting screws and check careful each screw, make sure the screws and machine will not loose when the car shaking.
3. Choose suitable angle by the 3 screw holes in the two ends of bracket.



❖ Microphone connection

1. Plug microphone connector into jack.
2. Pull on the screw for microphone connector.

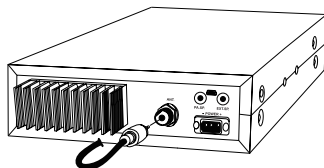


❖ ANTENNA INSTALLATION

Before using this radio, please install a high efficient and harmonious adjusted CB antenna, suitable antenna type and correct installation will bring excellent communication.

To match with the radio, the antenna and cable shall with characteristic impedance of 50ohm, or the antenna system will not efficient enough and will disturb TV, radio or other electronics.

1. Screw the antenna connector into the antenna jack.
2. Grounding the antenna system to ensure best performance of this radio.



WARNING:

- ▲ Connect antenna firstly before transmitting, or it might damage the radio.
- ▲ To avoid the risk of fire, electric shock, radio damage, all base station shall equip of lightning protector
- ▲ Be sure choose a matching antenna, you may enquiry our dealers.

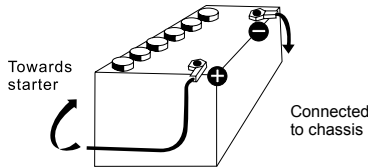
3. The position of antenna can be put as following example:



❖ POWER CONNECTION

This radio adopt 13.8V power supply, never connect it to 24V battery, And the 13.8V car battery shall with sufficient current, or the LCD will become dark and Transmit power will drop down.

1. Connect positive red power cable with the + terminal of the battery.
2. Connect negative black power cable with the - terminal of the battery.
3. Connect the DC power cable to the transceiver's power supply connector.
 - ▲ We suggest not use cigar lighter as it often bring down the voltage.
 - ▲ Locate the power cable away from high temperature, moisture, portfire and cable insulator.
 - ▲ Use a full power cable even it is longer than need, do not take off the fuse holder from the cable.



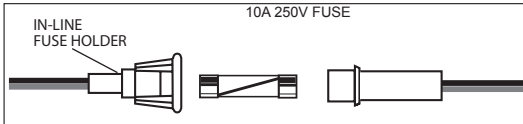
✦ Replacing Fuse

This radio adopt 10A, 250V fuse.

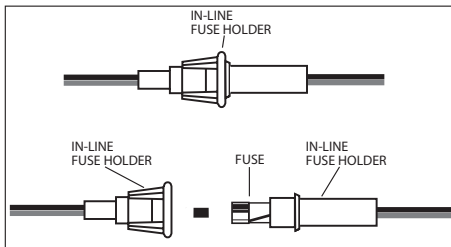
If the fuse blows, determine the reason, then correct the problem.

After the problem is resolved, replace the fuse. If newly installed fuses continue to blow, disconnect the power cable and contact your autho-rized dealer or an authorized servicecenter:

1. Pull the two fuse cover in difference direction and open it.

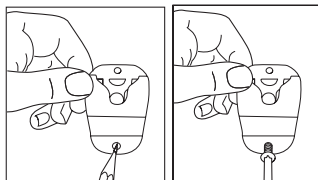


2. Replace the broke fuse with good one, and close the fuse holder.
3. Be sure to use suggested fuse, or it might damage the radio.



❖ Install Microphone Hanger

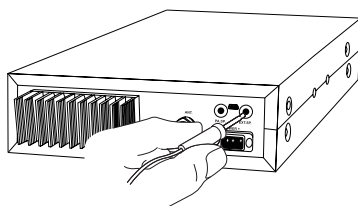
Choose a ideal location which will not interfere the driver. Using supplied self-tapping screws and pads(2 sets) to fix the hanger.



❖ Install External Speaker

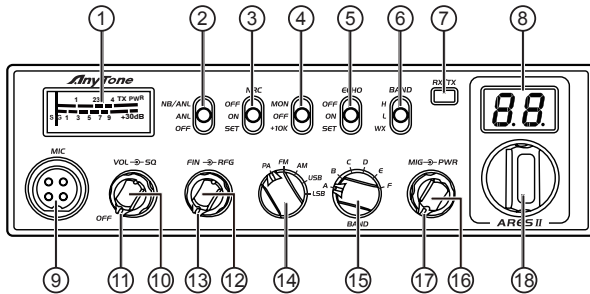
If use an external speaker, please choose 8ohm speaker with 3.50mm mono band (doulbe cable) plug.

1. Locate the external speaker in a suitable place.
2. Plug into the speaker jack.



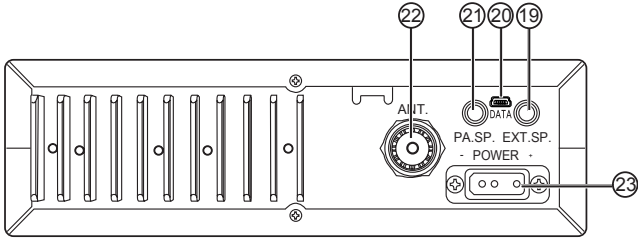
■ GETTING ACQUAINTED

✦ Front Panel



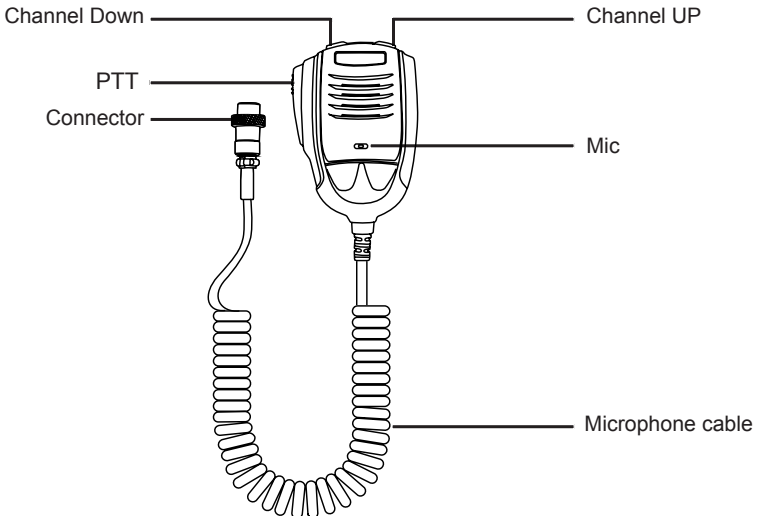
No.	Functions
1	S-Meter
2	Control NB/ANL function on/off
3	NRC function on/off /set
4	Control Monitor/10K on/off
5	ECHO function on/off /set
6	Choose H and L band group
7	TX/RX indicator
8	Channel display
9	Mike connector
10	Power on/off volume level control
11	Squelch level control
12	SSB frequency FINE function
13	Control RF gain level
14	Choose PA/FM/AM/USB/LSB mode
15	Choose working band
16	Control Mike gain level
17	Control power level
18	Channel Switch

❏ Rear Panel



No.	Functions
19	External SP Jack
20	PC programming port
21	External PA Jack
22	Antenna Jack
23	Power Supply Jack

❏ Microphone



■ HOW TO USE YOUR RADIO

✘ OFF/ON Radio

1. Turn VOL clockwise to switch on the radio, the radio emit a beep. When the LED displays frequency or channel, the radio is on.
2. Turn VOL anti-clockwise to switch off the radio, the radio is OFF when hear Ka Ta from the switch.

✘ Volume Control

When the radio is turned on, turn VOL clockwise will increase the volume, turn VOL anti-clockwise will reduce the volume.

Note: Adjust the volume during communication to get suitable level.

✘ Squelch Control

When the radio is standby, turn SQ outer shaft clockwise to adjust squelch level.

✘ Mic Gain Control

When the radio is transmitting, turn MIG inner shaft to adjust Mic gain. Turn it clockwise to increase gain, anti-clockwise to reduce gain.

✘ RF Gain Control

When the radio is receiving, turn RFG outer shaft to adjust RF gain. Turn it clockwise to increase gain, anti-clockwise to reduce gain.

✘ RF POWER Concentric

Valid for AM and FM mode only. Reducing the power for communication with a radio without RF gain, default set to maximum for normal use.

✘ Scan Function

CB Channels Scan (long press 7 seconds)

(1) In CB mode, press and hold [UP/DN] keys in the microphone for 7 seconds until hear a beep sound, the CB scan function starts.

The dot between the two channel digits flashes to indicate that the scanning is active.

(2) Rotary channel switch or [UP/DN] keys in the microphone to change scan direction.

(3) short press [PTT] to exit scan.

WX Channels Scan (long press 3 seconds)

(1) In WX mode, press and hold [UP/DN] keys in the microphone for 3 seconds until hear a beep sounds to start WX scan function.

The dot between the two channel digits flashes to indicate that the scanning is active.

(2) Rotary channel switch or [UP/DN] keys in the microphone to change scan direction.

(3) Short press [PTT] to exit scan.

✘ Working Mode Control

Turn the mode switch to choose PA/FM/AM/USB/LSB mode.

✘ Working Band Control
















Turn the band switch to choose A/B/C/D/E/F band.

✘ Channel Selection

Turn the channel knob to select desired channel.

Clockwise to increase, anti-clockwise to reduce channel.

■ SLIDE SWITCH

No.	Function	Position	Description
1	NB/ANL		Trun on NB and ANL function
			Turn on ANL fucntion
			Turn off NB/ANL fucntion
2	NRC		Turn off NRC fucntion
			Turn on NRC fucntion
			NRC level set: rr for RX noise reduction level tr for TX noise reduction level.
3	MON + 10K		Turn on MON, 32 levels available by programming
			No function
			Turn on +10KHz function
4	ECHO		Turn off ECHO fucntion
			Turn on ECHO fucntion
			Echo volume and delay level set: EL for volume lvl set, Et for echo delay level set.
5	BAND		Choose higher frequency band group
			Choose lower frequency band group
			Turn on Weather channel function(Optional)

■ FUNCTION MENU

1. Press the [UP] key of the microphone to enter into the radio function menu.
2. Rotate the channel switch or press the [UP/DN] key of the microphone to select the menu function options.
3. Press the [PTT] key of the microphone to enter into the menu setting.
4. Rotate the channel switch to select the desired setting.
5. Turn off to save and exit the function settings.

No.	Function	LCD Display	Description
1	BEEP	<i>bp</i>	Available setting: oF, 01-09 levels Default: oF
2	Roger Beep	<i>rb</i>	Available setting: oF, 01-05 levels Default: oF
3	WX alarm	<i>AL</i>	Available setting: oF, on Default: on
4	Dimmer	<i>d1</i>	Available setting: 1-3 Default: 3
5	NPC	<i>np</i>	Available setting: oF, on Default: on (It is valid for AM/SSB mode only, adjust MIC to control microphone gain)
6	VOX level	<i>ul</i>	Available setting: oF, 01-09 levels Default: oF
7	VOX delay	<i>ut</i>	Available setting: 01-09 levels Default: 3
8	Scan type	<i>Sn</i>	Available setting: ti(timne scan), Sq(squelch scan) Default: Sq
9	Microphone type	<i>nt</i>	Available setting: EL(condenser), dy(dynamic) Default: EL
10	Fine adjust	<i>Fn</i>	oF: turn on frequency fine adjustment. r: turn on fine adjustment for RX frequency t: turn on fine adjustment for TX frequency rt: turn on fine adjustment for TX /RX frequency Default: rt (± 500Hz)
11	SWR display	<i>Sr</i>	on: turn on SWR display oF: turn off SWR display Default: oF
12	Reset	<i>rt</i>	NB/ANL slide switch to OFF, press PTT to reset all radio data to factory default NB/ANL slide switch to NB/ANL, press PTT to reset all channel data to factory default

■ ERROR CODE

When the RX/TX indicator light on yellow,LED displays code,means the radio meet problem.

E1: Voltage too low

E2: Voltage too high

E3: WX function invalid

E4: Current BAND invalid

E5: TX SWR too high

■ SPECIFICATIONS

GENERAL	
Frequency Range	28.000-29.695MHz(Programmable)
Frequency Band	L band: A/B/C/D/E/F H band : A/B/C/D/E/F
Channel	40channels(programmable)in each band
Frequency Control	Phase-Locked-Loop Synthesizer
Frequency Tolerance	± 5.0 ppm
Temperature Range	-20°Cto +50°C
Microphone	with push-to-talk /UP/DN and coiled cord
Input Voltage	13.8V
Dimensions (in mm)	287(L)x200(W)x61(H)
Weight	1.5kg
Antenna Connector	UHF, SO239

TRANSMITTER	
Power Output	AM:1-12W(adjustable) FM:1-40W(adjustable) USB/LSB:1-35W(adjustable)
Drain	8A(with modulation)
Modulation	FM/AM/SSB
Inter-modulation Distortion	SSB: 3rd order, more than -25dB; 5th order, more than -35dB
SSB Carrier Suppression	55dB
Unwanted Sideband	50dB
Frequency Response	AM/FM: 450 to 2500Hz
Output Impedance	50ohms, unbalanced
RECEPTION	
Sensitivity	AM:1.0 μ V for 10 dB(S+N)/N at greater than 1/2watt of audio output. FM: 1.0 μ V for 20 dB (S+N)/N at greater than 1/2 watt of audio output. SSB: 0.25 μ V for 10dB(S+N)/N at greater than 1/2-watt of audio output.
Selectivity	AM/FM:6dB@3KHz,50dB @9KHz SSB: 6 dB@2.1KHz,60dB @3.3KHz
Adjacent-Channel Selectivity	60dB AM/FM &70 dB SSB
Image Rejection	More than 65dB
IF Frequency	AM/FM: 10.695 MHz 1st IF, 455 KHz 2nd IF SSB: 10.695 MHz
RF Gain Control	45dB adjustable for optimum signal reception
Automatic Gain Control(AGC)	Less than 10dB change in audio output for inputs from 10 to 100,000 microvolt
Squelch	Adjustable; threshold less than 0.5 μ V. Automatic Squelch Control(only AM/FM)0.5 μ V
ANL	Switchable
Noise Blanker	RF type, effective on AM/FM and SSB
Audio Output Power	3 watts into 8 ohms
Frequency Response	AM/FM: 300 to 2800Hz
Built-in Speaker	8 ohms, round
External Speaker(Not Supplied)	8 ohms, disables internal speaker when connected

Note: Specifications are subject to change without notice due to advancements in technology.