

*AnyTone*<sup>®</sup>

# 900 PRO

## Instruction Manual





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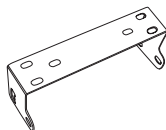
## ■ STANDARD ACCESSORIES



Radio



Microphone



Mounting Bracket



Microphone Hanger



Adhesive Case Protectors



DC Power Cable



Screws for bracket



Pads for bracket



Adjusting screws



Spare Fuses (3A, 250V)



Self-tapping Screws



Pads

## ■ OPTIONAL ACCESSORIES

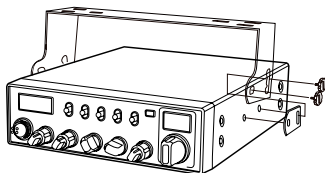
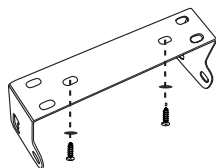


External Speaker

## ■ INSTALLATION

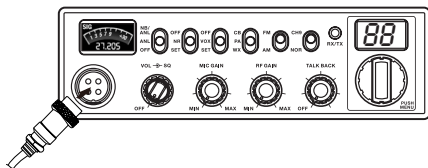
Choose the most appropriate location from a simple and practical point of view. If installed in a vehicle, care should be taken to ensure your radio does not obstruct the driver or passengers.

1. Use the Self-tapping Screws and Pads to fix the Bracket to a suitable location.
2. Attach the Adhesive Case Protectors to the inside ends of the Mounting Bracket and insert the Radio. Fit the Adjusting Screws loosely, and choose a suitable angle by moving the Adjusting Screws to one of the 3 positions on the Mounting Bracket.
3. Tighten the Adjusting Screws firmly by hand. Make sure the radio and all accessories are securely mounted.



## ❏ MICROPHONE CONNECTION

1. Plug microphone connector into the microphone jack.
2. Tighten the retaining ring on the microphone connector by hand.

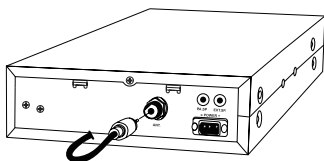


## ❏ ANTENNA INSTALLATION

Before using this radio, please install an efficient and resonant antenna. Using an antenna that is correctly installed and tuned will enable excellent communication performance.

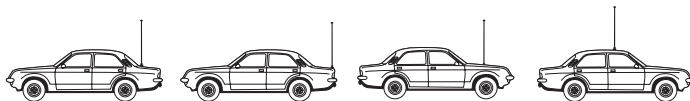
This radio requires an antenna impedance of 50 ohms, unbalanced.

1. Screw the antenna connector into the antenna jack.
2. If required, grounding of the antenna system will ensure best performance.



### WARNING:

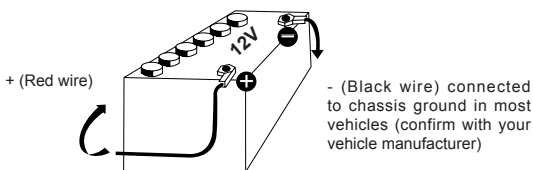
- ▲ NEVER transmit without a connected resonant antenna, or a suitable 50 ohm load being connected. Damage to the radio may result.
  - ▲ To reduce the risk of electric shock, or radio damage, base station installations should include lightning protection devices.
  - ▲ Ask your Anytone dealer for available antenna options.
3. A mobile antenna can be mounted in various locations, for example:



## ❏ POWER CONNECTION

This radio can operate at both 12 or 24 V voltage systems. A switching is not necessary. Please refer to the radio Specifications to ensure your DC power supply can provide enough current (amps), otherwise poor performance may occur.

1. Connect the positive (red) power cable to the + terminal of the battery.
2. Connect the negative (black) power cable to the - terminal of the battery.
3. Connect the DC power cable to the transceiver's power supply connector.
  - ▲ Locate the power cable away from high temperature, moisture, and other electrical systems. Ensure it is installed where it cannot be damaged.
  - ▲ It is not recommended to use a vehicle cigar/cigarette lighter socket to power the radio, as it may not supply the correct voltage or current.
  - ▲ Do not remove the fuse holder from the cable.



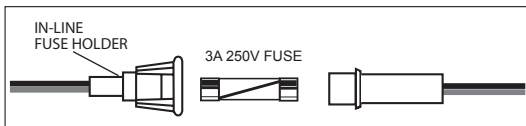
## ✦ REPLACING FUSES

This radio requires a 3A, 250V fuse.

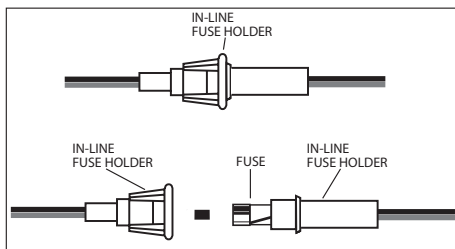
If the fuse blows, determine the reason, then correct the problem.

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

1. Twist the two fuse covers in opposite directions, and open it.

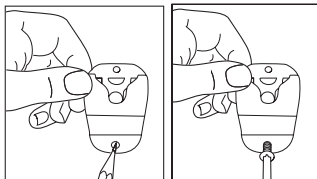


2. Replace the blown fuse with new one, and close the fuse holder.
3. Be sure to only use the correct fuse type, otherwise damage may occur.



### ❖ INSTALL MICROPHONE HANGER

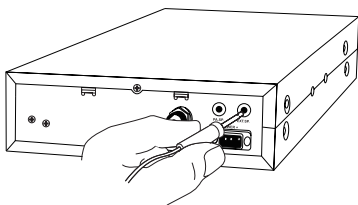
Choose a location which will not interfere with the driver. Use the supplied self-tapping screws and pads to install the hanger.



### ❖ INSTALL EXTERNAL SPEAKER (Optional)

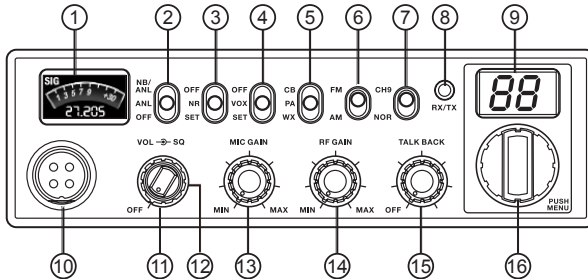
If using an external speaker, please choose an 8 ohm speaker with a 3.5mm mono (double cable) TS type plug.

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



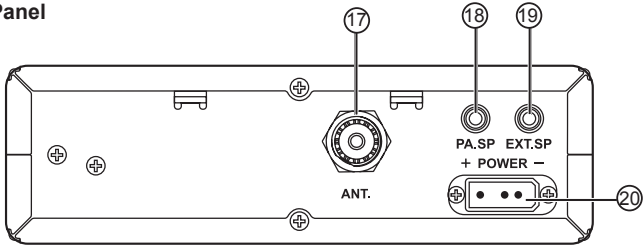
## ■ GETTING ACQUAINTED

### ✦ Front Panel



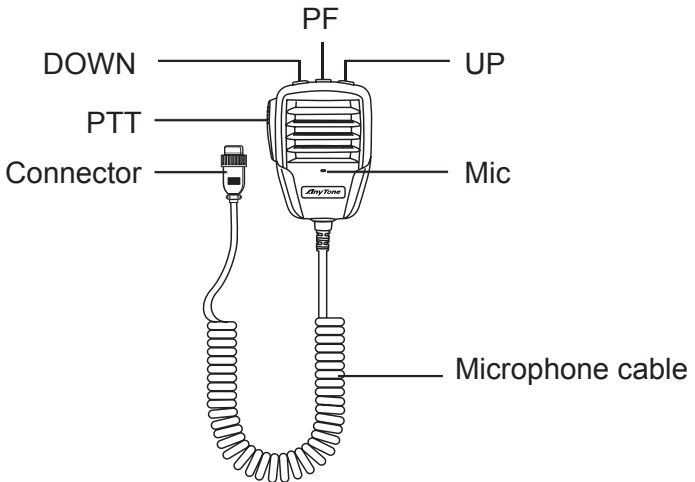
No.	Functions
1	TFT LCD
2	NB/ANL Function On / Off Switch
3	NR Function On/Off / NR Setting Switch
4	VOX Function On/Off / VOX Setting Switch
5	Mode Switch: CB / PA / WX
6	Modulation Mode Switch: FM / AM
7	Channel 9 / Normal Switch
8	RX(Receive) / TX(Transmit) LED Indicator
9	Channel Display: CH and Scrolling Frequency Display
10	4-Pin Microphone Connector
11	Automatic Squelch / Manual Squelch Control
12	Power On/Off / Volume Control
13	Microphone Gain Control
14	RF Gain Control
15	Talk Back On/Off / Talk Back Volume Level Control
16	Channel Selector / PUSH

## ❏ Rear Panel



No.	Functions
17	Antenna Connector
18	Public Address Speaker Jack
19	External Speaker Jack
20	Power Jack

## ❏ Microphone



## ■ HOW TO USE YOUR RADIO

### ✘ Power OFF/ON

1. Turn the **VOL** knob clockwise to switch the radio ON, the radio may emit a beep (if the beep function is enabled). The LED display will show a channel number.
2. Turn the **VOL** knob anti-clockwise, until hear Ka Ta, the radio is powered off.

### ✘ Volume Control

Turn the **VOL** knob clockwise to increase the Volume, Turn it anti-clockwise to decrease the Volume.

*Note: Adjust the Volume during communication to obtain a suitable level.*

### ✘ Automatic Squelch Control (ASQ)

Turn the **SQ** knob anti-clockwise to the leftmost position enables the **ASQ** function.

"**ASQ**" appears on the LED. No repetitive manual adjustment and a permanent improvement between the sensitivity and the listening comfort when **ASQ** is active. This function can be disconnected by turning the switch clockwise. In this case the squelch adjustment becomes manual.

### ✘ Manual Squelch Control (SQ)

Turn the **SQ** knob clockwise to the exact point where all background noise disappear. This adjustment should be done with precision as, if set to maximum (fully clockwise), only the strongest signals will be received.

### ✘ Mic Gain Control

In **POWER ON** status, turn the **MIG GAIN** knob to adjust the Microphone Gain. Clockwise to increase, and anti-clockwise to decrease.

### ✘ RF Gain Control

In **RX**, turn the **RF GAIN** knob to set the reception sensitivity. Clockwise to increase, and anti-clockwise to decrease. Maximum position in the case of long-distance call reception. You can decrease the **RF GAIN**, to avoid distortions, when the interlocutor is near.

### ✘ TALK BACK

This function allows you to hear your own modulation in the optional internal or external speaker connected to the **EXT.SP** jack.

Turn the **TALK BACK** knob anti-clockwise to the leftmost position disable the **TALK BACK** function.

Turn the **TALK BACK** knob to increase (clockwise) / decrease (anti-clockwise) the volume level of the **TALK BACK**.

### ✘ Rotary "PUSH" Knob

In normal operation, turn rotary **PUSH** knob to change the channel. Clockwise to increase, and anti-clockwise to decrease the channel.

### ✘ UP / DN Buttons On Microphone

In normal operation, press **UP** / **DN** buttons on the microphone to change the channel. **UP** to increase, and **DN** to decrease the channel.

In MENU mode (press the **PUSH** knob for about 3 seconds to activate this mode), the **UP** or **DN** buttons allows to select the mune to be set.

### ✘ SCAN

Press and hold **UP** or **DN** buttons on the microphone for 7 seconds or until a beep sounds activate the 40 channels scan function. The scanning stops as soon as there is a busy channel.







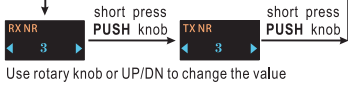



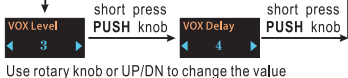
In scanning mode, turn rotary **PUSH** knob on the unit or press **UP** or **DN** buttons on the microphone to change scan direction.








Press **PTT** button to exit channels scan.

### ✘ PF Buttons On Microphone

Press **PF** button on the microphone to select the feature to be displayed in TX. LCD alternates with: the emitted power level or Standing Wave Ratio (SWR)

## ■ SLIDE SWITCHES

No.	Function	Position	Description
1	NB/ANL filters		Turn on NB/ANL function
			Turn on ANL function
			Turn off NB/ANL function
2	Noise Reduction (NR)		Turn off NR function
			Turn on NR function
			NR parameters setting: 
3	VOX		Turn off VOX function
			Turn on VOX function
			VOX parameters setting: 

4	Mode		Select the CB mode
			Select the Public Address (PA) mode
			Select the WX mode
5	Modulation Mode		Select the Frequency Modulation (FM) mode
			Select the Amplitude Modulation (AM) mode
6	Instant Channel		To access Instant channel 9
			Return to the original channel selected

## ■ FUNCTION MENU

1. Press and hold the **PUSH** knob to enter menu.
2. Turn the rotary **PUSH** knob or press the **UP / DN** buttons on the microphone to select the menu.
3. Press the **PUSH** knob to validate. The parameter of the chosen function blinks on the display.
4. Turn the rotary **PUSH** knob or press the **UP / DN** buttons on the microphone to modify the value of the parameter.
5. New press **PUSH** knob to validate the chosen value. The parameter stops blinking.
6. If no key is pressed, the unit exits MENU after 10 seconds. Press and hold the **PUSH** knob or press PTT button to validates the last setting and exists MENU.

No.	Function	LCD Display	Description
1	Beep sound setting	Key Beep	ON : turn on beep sound OFF : turn off beep sound Default : ON
2	Roger beep sound setting	Roger Beep	OFF (default), 1 ~ 6 OFF: turn off RB sound function.
3	Backlight brigthless setting	Dimmer	Bright (default) Dimmed
4	Signal strengt meter type setting	Display Type	S-Meter (default) Bargraph
5	Select the feature to be displayed in TX	Display Mode	RF (default) SWR <b>NOTE:</b> Use the PF button on the microphone for quick selection.

6	Microphone type setting	Mic Type	Electret (default) Dynamic
7	Scan type setting	Scan Type	Squelch (default) Time
8	ECHO function setting	ECHO	ON : turn on ECHO function OFF : turn off ECHO function (default)
9	ECHO volume level setting	ECHO Volume	1 ~ 32 Default : 28
10	ECHO delay time setting	ECHO Delay	1 ~ 32 Default : 28
11	ALERT function setting	WX Alert	ON : turn on ALERT function OFF : turn off ALERT function (default)
12	Time out timer	Time Out Timer	OFF, 1Min ~ 10Min Default : 3Min
13	SWR warning setting	SWR Warning	OFF, 2:1 ~ 10:1 Default : 2:1 This function can set the threshold for antenna warning. When it is detected that the SWR of your antenna system exceeds the set threshold, the emitted red indicator light will flash and the LCD will display "SWRH" to alerts you to trouble in the antenna system.
14	PA-RX path setting	PA-RX Path	PA (default): The modulation of the microphone and the received signal are transmitted to the PA loudspeaker connected to jack PA.SP. IN/EXT : The modulation of the microphone is transmitted to the PA loudspeaker connected to jack PA.SP; the received signal is transmitted to the internal loudspeaker (or external optional loudspeaker connected to jack EXT.SP). OFF : The reception is no more functional. Only the modulation of the microphone is transmitted to the PA loudspeaker connected to jack PA.SP.

#### ✘ Resume Factory Default

Press and hold the **PUSH** knob to enter menu.

Turn the rotary **PUSH** knob or press the **UP / DN** buttons on the microphone to select the **Reset** function.

Press the **PUSH** knob to validate. The option blinks on the display (YES or NO).

Turn the rotary **PUSH** knob or press the **UP / DN** buttons on the microphone to select the option.

NO : stop reset operation.

YES : continue reset operation.

Press the **PUSH** knob to confirm, the unit automatically reseted.

## 5. SPECIFICATION

GENERAL		
Modulation Mode	AM/FM	
Frequency Range	FM 26.565-27.405MHz(EU) AM /FM 26.965-27.405MHz(EU / US /CA)	
Weather Channles	162.400-162.550MHz	
Frequency Tolerance	±5.0ppm	
Input Voltage	12/24V	
Dimensions	210(L)x185(W)x56(H)mm	
Weight	1.02kg	
Operating Temperature Range	-10°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	
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	

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

## Warning Statement

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 including received interference that may cause undesired operation.

The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

**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.

**CAUTION: RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.**

Hereby, We, declare that the radio is compliance with Radio equipment Directive (RED)2014/53/EU. The device in the environment with the temperature between -10 to 50°C and operating under 2000m, otherwise, it may damage your radio.

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

## **RF Exposure Statement**

This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 51.5cm between the radiator & your body.

This radio transmitter has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

External Antenna:

Maximum Antenna Gain: 3 dBi

Antenna Impedance: 50 Ohms