

ToooAir

USER'S MANUAL

WIDE AREA IP 2WAY RADIO
MODEL: TA-990



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READ ALL INSTRUCTIONS carefully and completely before operating your radio and retain this manual for future reference.

NEVER connect the radio to a power source other than the supplied cable and 12-24 volt DC.

DO NOT place your radio in front of a vehicle airbag.

DO NOT attempt to modify your radio in any way.

DO NOT allow children to operate the radio unsupervised.

ALWAYS charge your radio at normal room temperature.

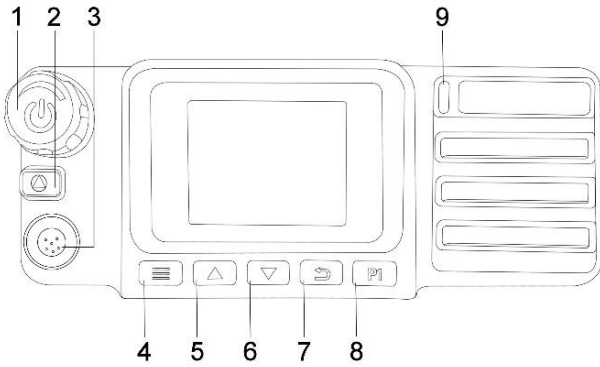
ALWAYS mount the radio on the supplied bracket and more than 20cm from the user.

ALWAYS switch off your radio where notices restrict the use of two-way radio or mobile telephones.

ALWAYS keep the antenna more than 25 mm from any part of the head or body when transmitting.

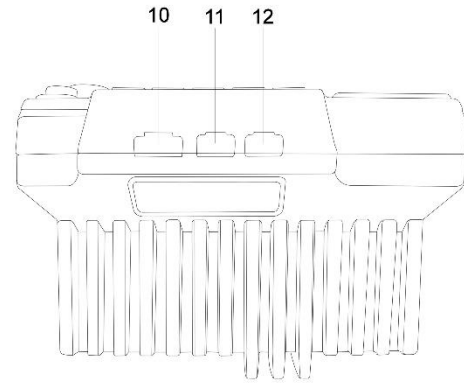
NOTE People with pacemakers are recommended to maintain at least 20cm separation between the radio and their pacemaker.

TA-990 DIAGRAM



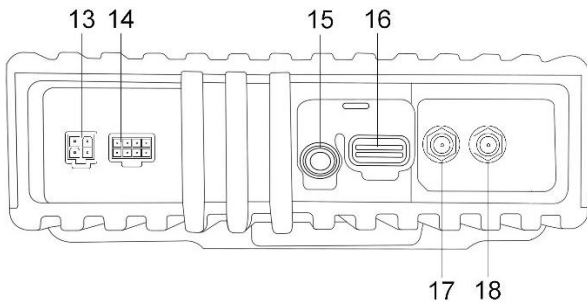
Front

1. Switch knob
 - Short Press to power on
 - Rotate clockwise to increase volume
 - Rotate anti-clockwise to decrease volume
 - Press and hold to power off
2. SOS key - Press and hold for 3 seconds or until SOS message broadcast
3. Aviation Connector
4. Menu key - Select and confirm key
5. Up key - Move selection up
6. Down key - Move selection down
7. Back key - Returns to previous screen
8. P1 key - On group select screen monitor group
9. Status LED



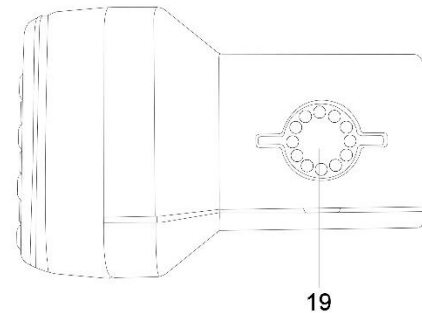
Underneath

10. SIM card slot 1 (Push-in-Push out lock)
11. SD card slot (Push-in-Push out lock)
12. SIM card slot 2 (Push-in-Push out lock)



Rear

13. 12-24v DC Power input
14. Accessory Connector
15. 3.5mm External Speaker Jack
16. USB 2.0 input
17. LTE Antenna
18. GPS Antenna



Side

19. Bracket connector

Status LED

OPERATING STATE	INDICATION
Logging in	Blue (Rapid blinking)
Idle	Blue (Slow blinking)
Receiving	Blue (Steady)
Transmitting	Red (Steady)
Powering off	Red (Steady)

RADIO DISPLAY

Taskbar Icon Display

Icon	Name	Status
	Signal	More bars indicate stronger signal strength
	Network Availability	Network Acquired
	GPS	GPS Available, but not located
	GPS	GPS Positioning successful
	Key Lock	Keypad Locked
	SOS	Transmit SOS or Receive SOS
	Records	PTT Recordings is enabled
	Monitor	Indicates group monitor enabled

Menu Icon Display

Icons	Name	Icons	Name
	Groups List		Phone Contacts
	Friends List		Phone Records
	User List		Audio Settings
	Dispatcher Messages		Advanced Settings
	PTT Records		Settings

SPECIFICATIONS

Model Number:	TA-990
Dimensions:	199mm x 135mm x 72mm
Weight:	880g
Working temp:	-30°C to +75°C
Working Voltage:	12V ~ 24V (Standard 13.6V)
Working Current:	500mA @ LTE 220mA @ WCDMA
Peak Current:	2A
Audio Output:	3W
LTE FDD:	Band 1/2/3/5/7/8/28A/28B/40
WCDMA:	Band 1/2/5/8
Maximum Output power:	LTE:23±2.7 dBm (Power Class 3) WCDMA:24 +1/-3dBm (Power Class 3)
Receiving Sensitivity:	LTE FDD ≤-100 dBm; WCDMA 850:≤-108 dBm; WCDMA 1900:≤-109 dBm;
GPS:	GPS Positioning, 1.57542GHz;
Sensitivity:	Catch -144dBm, Track -159dBm;
Data Speed Rate:	LTE FDD -Uplink 50 Mbps / Downlink 150 Mbps WCDMA -Uplink 5.76 Mbps / Downlink 42 Mbps
Protocol:	Support embedded TCP& UDP Protocols Support Protocols PAP and CHAP used for PPP connection 3GPP TS27.005,27.007

BASIC OPERATIONS

Power On

Short press the switch knob, the status LED will begin to flash blue. The radio will connect to the network this can take up to 20 seconds, once connected the radio will login, the status LED will begin to flash blue rapidly.

Power Off

Press and hold the switch knob to power off. The LED will illuminate red and the LCD will display 'Power Off' during the shutting down process. (this can take up to 10 seconds)

Transmitting

While pressing the PTT, the status LED will illuminate red indicating the radio is in transmit mode.

Receiving

When receiving a transmission, the status LED will illuminate blue. The second line on the LCD will indicate *Listening*: and the third line on the LCD will indicate the calling name.

Quick Access

From the home display the front keys also act as quick access keys.

▲ Short press the up arrow for Group List

▼ Short press the down arrow for User List

In The Box

Please carefully unpack the radio and check if all items listed below are received. If any items are missing or damaged, please contact your dealer.

Item	Quantity
Mobile Radio	1
Microphone	1
Antenna (LTE & GPS)	1
Power Cord (with fuse)	1
Mounting Bracket	1
Locking Knob	2
Screw	6
Fuse	1
User's Manual	1

ADVANCED OPERATIONS

Keypad

Press ≡ (menu) key to enter menu

Press ▲ or ▼ keys to select items

Press ↶ (back) key to return to previous menu

Press ≡ key to confirm selection

P1 – Display GPS information

Choose Group

The unit can change between groups to communicate with different users.

1. Press the ≡ (menu) key
2. Short press ≡ key to choose the group list
3. Short press ▲ or ▼ keys to choose desired group
4. Short press ≡ key to enter the group

Friends List

The unit can access a friends list for quick communication to create temporary individual or group calls.

1. Press the ≡ (menu) key
2. Short press ▼ key and short press ≡ key to display Friends list
3. Short press ▲ or ▼ keys to change between desired users
4. Short press ≡ key to select desired user
5. Once all desired users are selected press PTT to begin temporary Call

Individual User Call

The unit can display all the users currently in the group and can use the user list to create temporary individual or group calls.

1. Press the ≡ (menu) key
2. Short press ▼ key twice and short press ≡ key to display User list
3. Short press ▲ or ▼ keys to change between desired users
4. Short press ≡ key to select desired user
5. Once all desired users are selected press PTT to begin temporary call

Text Messages

The unit can receive text messages. On receiving of a text message an icon (Envelope) will display in the top black status line of the LCD.

1. Short press ≡ (menu) key
2. Short press ▼ key three times and short press ≡ key to display Message list
3. Short press ▲ or ▼ keys to change between desired messages
4. Short press ≡ key to view desired message

Once all of the messages have been viewed the icon (Envelope) will be removed from display indicating no new un-read messages.

Monitor Groups

The radio can listen to multiple groups at once, to enable monitoring; From the home screen

1. Press the ≡ (menu) key
2. Short press ≡ key to choose the group list
3. Short press ▲ or ▼ keys to choose desired group
4. Short press P1 key to enable/disable monitoring on selected group

A headset icon will appear next to the group signalling group monitor is enabled. If the radio is powered off the groups will no longer be monitored when radio is powered on.

Lock/Unlock Volume

1. Rotate the switch knob
2. LCD display will now display volume control
3. Short press ▲ or ▼ keys to lock/unlock
4. Short press ≡ key to save configuration

While the volume control is locked the switch knob will not adjust the volume. Saving the volume at the level desired will set the volume for next radio power on volume level.

AUDIO SETTINGS

Sound Quality

The unit can use either 4K or 8K voice quality to change between the levels;

1. Short press ≡ (menu) key
2. Short press ▲ key three times and short press ≡ key to display Audio Settings
3. Short press ≡ key to display Sound Quality settings
4. Short press ▲ or ▼ keys to change between desired setting
 - a. STD Mode = 4K
 - b. HQ Mode = 8K
5. Short press ≡ key to save configuration

Note. The sound quality must be set to the same across all devices for communication compatibility.

Speaker Level

The speaker level for the unit can be adjusted, these settings can be found under Audio Settings > SPK Level.

Microphone Level

The Microphone level for the unit can be adjusted, these settings can be found under Audio Settings > MIC Level.

Roger Beep

The unit can have the roger beep disabled/enabled; this function can be accessed via Audio Settings > Roger Beep.

SETTINGS

Backlight Mode

The display can be turned off after idle time or left on there is three modes; Auto: Backlight will turn on automatically when any key is pressed or if radio receives a transmission. If there is no operation for 10 seconds, Backlight will turn off automatically.

Keys: Backlight will not turn on when the PTT is pressed or radio receives a transmission. Backlight will turn on if a keypad key is pressed and will remain on for 10 seconds.

Open: LCD backlight will remain on.

1. Short press ≡ (menu) key
2. Short press ▲ key once and short press ≡ key to display Settings
3. Short press ≡ key to display Backlight Mode settings
4. Short press ▲ or ▼ keys to change between desired setting
5. Short press ≡ key to save configuration

AutoLock

The unit comes with a keypad auto lock feature that prevents the keypad from being accidentally pressed.

1. Short press ≡ (menu) key
2. Short press ▲ key once and short press ≡ key to display Settings
3. Short press ▼ key twice and short press ≡ key to display AutoLock settings
4. Short press ▲ or ▼ keys to change between desired setting
5. Short press ≡ key to save configuration

After 5 seconds of idle time the keypad will lock and a lock symbol will appear in the top black status display bar indicating the keypad is locked. To unlock the keypad press and hold the back key. Ref. 7 until display prompts with 'Unlocked'. Keypad will lock again after 5 seconds of idle time.

Key Tone

The unit has a tone every time a button is pressed; this function can be enabled/disabled via Setting > Key Tone.

Brightness

The brightness of the display can be adjusted. These settings can be found under Settings > Brightness.

ADVANCED SETTINGS

SOS Mode

The unit has an SOS alert feature that if held for 3 seconds will send an alert message to all other users. This feature can be disabled/enabled;

1. Short press ≡ (menu) key
2. Short press ▲ key twice and short press ≡ key to display ADV Settings
3. Short press ▼ key five times and short press ≡ key to display SOS Settings
4. Short press ▲ or ▼ keys to change between desired setting
5. Short press ≡ key to save configuration

Note. Even with this feature disabled the unit will still receive SOS alerts, if you would like this feature completely removed please contact your local dealer.

PTT Records

The unit can record all the audio the unit is receiving. To listen to these recordings;

1. Short press ≡ (menu) key
2. Short press ▼ key four times and short press ≡ to display PTT Records list
3. Short press ▲ or ▼ keys to change between desired recording
4. Short press ≡ key to play recording

Note. The recording function needs to be enabled to listen to recordings this function can be enabled/disabled under Advanced Settings > Record Control

LCD Display Reversal

The LCD display can be inverted if the unit is mounted upside down to change LCD display;

1. Short press ≡ key
2. Short press ▲ key twice to select ADV Settings
3. Short press ≡ key to enter ADV Settings
4. Short press ▼ key four times to select Rotate
5. Short press ≡ key to enter Rotate settings
6. Short press ▲ or ▼ keys to select desired configuration
7. Short press ≡ key to save configuration

Once inverse setting is selected and saved, the LCD display will reverse the display. This setting can be undone by following above steps and selecting the normal setting and saving.

Time Zone

The radio can have the time displayed on the LCD adjusted to match local time zone. These settings can be found under ADV Settings > Time Zone.

Power On Mode

The unit can turn on via the accessory line or the power knob. These settings can be found under ADV Settings > PWR ON MODE.

Power Off Mode

The unit can turn off via the accessory line or the power knob. These settings can be found under ADV Settings > PWR OFF MODE.

Dual SIM

The unit can operate with two sim cards, adjusting the active sim card settings can be found under ADV Settings > Dual SIM.

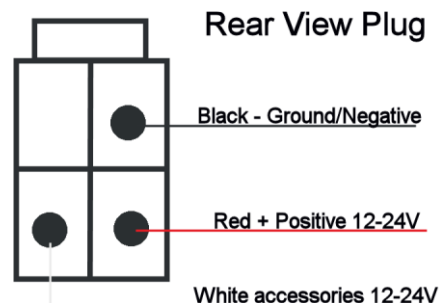
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READ ALL INSTRUCTIONS carefully and completely before operating your radio and retain this manual for future reference.

- NEVER connect the radio to a power source other than via supplied power cable and 12-24 volts DC.
- DO NOT place your radio in front of a vehicle airbag.
- DO NOT attempt to modify your radio in any way.
- ALWAYS mount the radio on the supplied bracket and more than 20cm from the user.
- ALWAYS switch off your radio where notices are displayed that restrict the use of two-way radio or mobile telephones.
- DO NOT hold radio / speaker to ear.

Wiring Diagram

The TA-990 can handle power input of 12-24V and a peak current of 2A the wiring diagram follows;



Please ensure installation follows above wiring diagram and installation requirements to avoid damage or abnormal functionality of the radio.

WARRANTY

This warranty against defects is given by Too Air Pty Ltd ABN 58 615 252 536

1. Consumer guarantees

1.1 Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

1.2 To the extent we are able, we exclude all other conditions, warranties and obligations which would otherwise be implied.

2. Warranty against defects

2.1 This warranty is in addition to and does not limit, exclude or restrict your rights under the Competition and Consumer Act 2010 (Australia) or any other mandatory protection laws that may apply.

2.2 We warrant our goods to be free from defects in materials and workmanship for the warranty period of 12 months from the date of original sale. Subject to our obligations under clause 1.2, we will at our option, either repair or replace goods which we are satisfied are defective. We warrant any replacement parts for the remainder of the period of warranty for the goods into which they are incorporated.

2.3 To the extent permitted by law, our sole liability for breach of a condition, warranty or other obligation implied by law is limited

- (a) in the case of goods we supply, to any one of the following as we decide –
 - (i) the replacement of the goods or the supply of equivalent goods;
 - (ii) the repair of the goods;
 - (iii) the cost of repairing the goods or of acquiring equivalent goods;
- (b) in the case of services we supply, to any one of the following as we decide –
 - (i) the supplying of the services again;
 - (ii) the cost of having the services supplied again.

2.4 For repairs outside the warranty period, we warrant our repairs to be free from defects in materials and workmanship for three months from the date of the original repair. We agree to re-repair or replace (at our option) any materials or workmanship which we are satisfied are defective.

2.5 We warrant that we will perform services with reasonable care and skill and agree to investigate any complaint regarding our services made in good faith. If we are satisfied that the complaint is justified, and as our sole liability to you under this warranty (to the extent permitted at law), we agree to supply those services again at no extra charge to you.

2.6 To make a warranty claim you must before the end of the applicable warranty period, return the goods you allege are defective, provide written details of the defect, and give us an original or copy of the sales invoice or some other evidence showing details of the transaction.

2.7 Send your claim to:

Too Air Pty Ltd. Suite 1103, 1 Newland Street, Bondi Junction NSW 2022.

Tel: (02) 9157 0540

Email: info@toooair.com.au

3. This warranty does not cover

This warranty will not apply in relation to:

- (a) goods modified or altered in any way;
- (b) repairs performed other than by our authorised representative;
- (c) defects or damage resulting from misuse, accident, impact or neglect;
- (d) goods improperly installed or used in a manner contrary to the relevant instruction manual; or
- (e) goods where the serial number has been removed or made illegal
- (f) goods connected to an incorrect power source

4. Warranty period

The warranty on the TooAir TA-990 Wide Area IP 2 Way Radio and Power Adapter is 12 Months. No repair or replacement during the warranty period will renew or extend the warranty period past the period from the original date of purchase.

ToooAir

ToooAir Pty. Ltd.

Address: Suite 1103, 1 Newland Street Bondi Junction, NSW 2022

Phone: +61 (02) 9157 0540

Website: www.toooair.com.au

Email: info@toooair.com.au

