

*Thanks for buying the  **Wouxun** KG-UV920P-E mobile radio.*

*This mobile radio offers latest design, enhanced features, solid performances and easy accessibility. We believe you will be pleased with the high quality and reliable features for all your communication needs.*

Read this important information on the safe and efficient operation before using mobile radio. This manual is suitable for KG-UV920P-E.

## Safety information

### EU Regulatory Conformance

As certified by the qualified laboratory, the product is in compliance with the essential requirements and other relevant provisions of the Directive 1999/5/EC. Please note that the above information is applicable to EU countries only.

**CE 0678** 

### Operational Instructions and Training Guidelines

- To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit no more than 50% of the time and always adhere to the following procedures:
- Gain of antenna must not exceed 5.00dBi for UHF and 2.15dBi for VHF
- Antenna Installation: Install the mobile antenna at least 250 cm away from your body, in accordance with the requirements of the antenna manufacturer/supplier.
- The radio is not intended for use by general population in an uncontrolled environment. It is only for occupational use and only applied to work-related conditions. The radio must be only used by users, who are fully aware of the hazards of the exposure and who are able to exercise control over their RF exposure to qualify for the higher exposure limits.

## Safety information



Twin Band FM Transceiver

The KG-UV920P-E is an electrical apparatus, as well as a generator of RF(Radio Frequency) energy, and you should exercise all safety precautions as are appropriate of this type of device. These safety tips apply to any device installed in a well-desi-gned amateur radio station.

- ⚠ Explosive atmospheres(gases, dust, fumes, etc.).Turn OFF your mobile radio while taking on fuel or while parked in gasoline service stations. Do not carry spare fuel containers in the trunk of your vehicle if your mobile radio is mounted in the trunk area.
- ⚠ Injury from radio frequency transmissions. Do not operate your mobile radio when somebody is either standing near to or touching the antenna, to avoid the possibility of radio frequency burns or related physical injury.
- ⚠ Dynamite blasting caps. Operating the mobile radio within 150m(500 feet) of dynamite blasting caps may cause them to explode. Turn OFF your mobile radio when in a area where blasting is in progress, or where "TURN OFF TWO-WAY RADIO" signs have been posted. If you are transporting blasting caps in your vehicle, make sure they are carried in a closed metal box with a padded interior. Do not transmit while the caps are being placed into or removed from the container.
- ⚠ Never allow unsupervised children to play in the vicinity of your mobile radio or antenna installation.
- ⚠ Be certain to wrap any wire or cable splices thoroughly with insulating electrical tape, to prevent short circuits.
- ⚠ Do not route cables or wires through door jambs or other locations where, through wear and tear, they may become frayed and shorted to ground or to each other.
- ⚠ Do not stand in front of a directional antenna while you are transmitting into that antenna. Do not install a directional antenna in any location where humans or pets may be walking in the main directional lobe of the antenna's radiation pattern.

## Safety information

- ⚠ In mobile installations, it is preferable to mount your antenna on top of the roof of the vehicle, if feasible, so as to utilize the car body as a counterpoise for the antenna and raise the radiation pattern as far away from passengers as possible.
- ⚠ During vehicular operation when stopped(in a parking lot, for example), make it a practice to switch to Low power if there are people walking nearby.
- ⚠ Never wear dual-earmuff headphones while driving a vehicle.
- ⚠ Do not attempt to drive your vehicle while making a telephone call on an autopatch using the DTMF microphone. Pull over to the side of the road, whether dialing manually or using the auto-dial feature.

## Notice

- » All of the above advice is suited to the use of your **Wouxun** mobile radio and its accessories. If they do not function normally, please get in touch with the **Wouxun** dealer immediately.
- » If you use components or accessories not sold by Wouxun Company, Wouxun will not guarantee the safety and usability of the transceiver.

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Twin Band FM Transceiver

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## Checking the equipment



Twin Band FM Transceiver

Carefully unpack the transceiver. We recommend that you identify the items in the following table before discarding the packing material.

If any item is missing or has been damaged during shipment, please notify your **Wouxun** dealer.

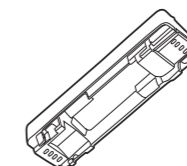
### Standard Accessories



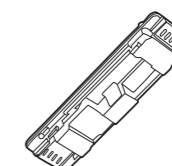
Mobile/Base  
Transceiver



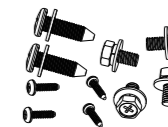
Hand  
Microphone



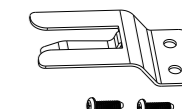
Inclined Switchboard  
Panel (Already Installed  
on Mobile Transceiver)



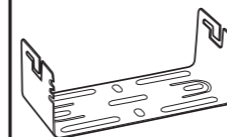
Flat Switchboard  
Panel



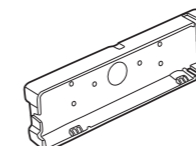
Screw Sets



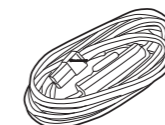
Hand  
Microphone  
Hook



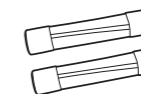
Mobile Mounting  
Bracket



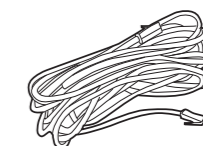
Remote Front  
Panel Bracket



Mobile Power  
Cord



Fuse



Extension  
Cable



User's manual

Description of functions

1. Frequency Range Suitable for any

Region of any Country:

(RX / TX) 136-174MHz & 400-470MHz  
136-174MHz & 400-480MHz  
136-174MHz & 216-280MHz  
136-174MHz & 420-520MHz  
144-146MHz & 430-440MHz  
144-148MHz & 222-225MHz  
144-148MHz & 420-450MHz

(RX) FM: 65MHz~108MHz ( 100K Frequency Spacing )

2. Band can be Set Freely

V/U U/V V/V U/U

3. Dual Reception

Twin Band Simultaneous Reception

4. Dual Display

Large LCD Dual Frequency Display,  
Two Completely Independent Operating Systems

5. Over 999 Memory Channels

Area Scanning Management Capability

6. Remote-head Mounting Capability

Multiple Installation Types, Convenient Usage

7. Full Duplex Cross-Band

Offset Frequency & Frequency Shift Direction  
Programmable

UHF / VHF or VHF / UHF Cross-band Repeater Function

8. Both Stations can Form Combined Same

Band or Different Band Repeat

9. High Output Power ( VHF:50W / UHF:40W )

10. CTCSS / DCS Encode / Decode

11. Multiple Speaker Channel Settings

12. DTMF Hand Microphone

with Speaker, TX / RX Indicator and Volume Controller

13. Incoming Message Display

Caller ID display

14. DTMF Encoding and Decoding

15. Group Calls, All Calls and Selective Calls

16. 8 Group Scrambler

17. Priority Channel Scanning

18. APO Power Management

19. English Voice Guide

20. Minimum Operating Voltage Alarm

21. Stun and Kill Function

22. Single Tone Pulse Frequency

2100Hz / 1750Hz / 1450Hz / 1000Hz

( Used when Activating Repeater Signal )

23. Selectable Three Color Backlight

24. Reduced Noise Settings

25. Remote Control Setting

26. Frequency / Channel Scanning with CTCSS / DCS  
Detection

27. Multiple Cooling Paths Fan

Technical specifications



Twin Band FM Transceiver

General		Receiver	Wide bandwidth	Narrow bandwidth
Frequency Range	Frequency Range Suitable for any Region of any Country: (RX / TX) 136-174MHz & 400-470MHz 136-174MHz & 400-480MHz 136-174MHz & 216-280MHz 136-174MHz & 420-520MHz 144-146MHz & 430-440MHz 144-148MHz & 222-225MHz 144-148MHz & 420-450MHz 66-88MHz & 136-174MHz 66-88MHz & 400-480MHz (RX) FM: 65MHz~108MHz (100K Frequency Spacing)	Adjacent Channel Selectivity	• 70dB	• 60dB
		Intermodulation	• 65dB	• 60dB
		Spurious Response	• 70dB	• 70dB
Step Frequency	5KHz / 6.25KHz / 10KHz / 12.5KHz / 20KHz / 25KHz / 30KHz / 50KHz / 100KHz	Audio Response	+1~3dB(0.3~3KHz)	+1~3dB(0.3~2.55KHz)
		Signal to Noise Ratio	≥45dB	≥40dB
Memory Channels	999	Audio Distortion	≤ 5%	
Work Mode	F2D / F3E	Audio Power	Transceiver ≤ 3W Hand Microphone ≤ 1W	
Operating Temperature	-20℃~+60℃			
Antenna Impedance	50Ω	Audio distortion	Transceiver ≤ 3W Hand Microphone ≤ 1W	
Power Requirement	13.8VDC ± 15% (Negative Grounded)	Sensitivity	UHF/VHF:0.25μV	
Weight	1437.8g (including microphone)			
Dimensions	140 x 44 x 207 (mm)			

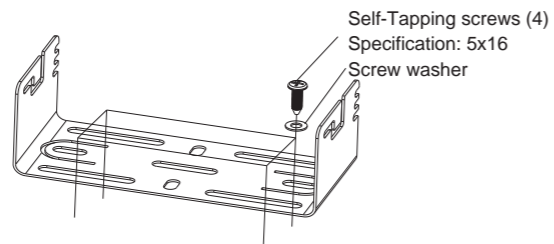
Transmitter	Wide bandwidth	Narrow bandwidth	Transmitter	Wide bandwidth	Narrow bandwidth
Type of Modulation	16K F3E	11K F3E	Max. Frequency Deviation	± 5KHz	± 2.5KHz
Adjacent Channel Power	≥ 70dB	≥ 60dB	Frequency Stability	± 2.5ppm	
Signal to Noise Ratio	≥ 40dB	≥ 36dB	Audio Distortion	≤ 5%	
Spurious	≥ 60dB	≥ 60dB	Output Power	50W/20W/10W/5W(VHF)	
Audio Response	+1~3dB(0.3~3KHz)	+1~3dB(0.3~2.55KHz)		40W/20W/10W/5W(UHF)	

## Pre-use installation

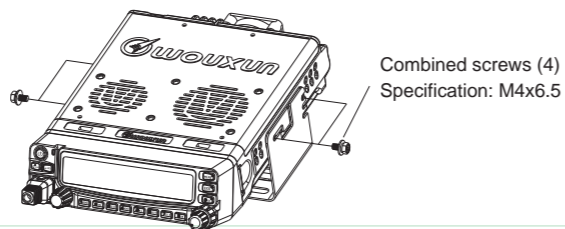
### Transceiver installation

Choose a safe place inside your vehicle, one which would to the greatest extent reduce possible harm to passengers inside the car while the car is moving. It is recommended to install the transceiver on the lower part of the front meter gauge, it will prevent the transceiver from colliding with the driver in the instance of emergency or sudden braking. Install the transceiver in an area with good ventilation and avoid installing in a place with direct contact with the sun.

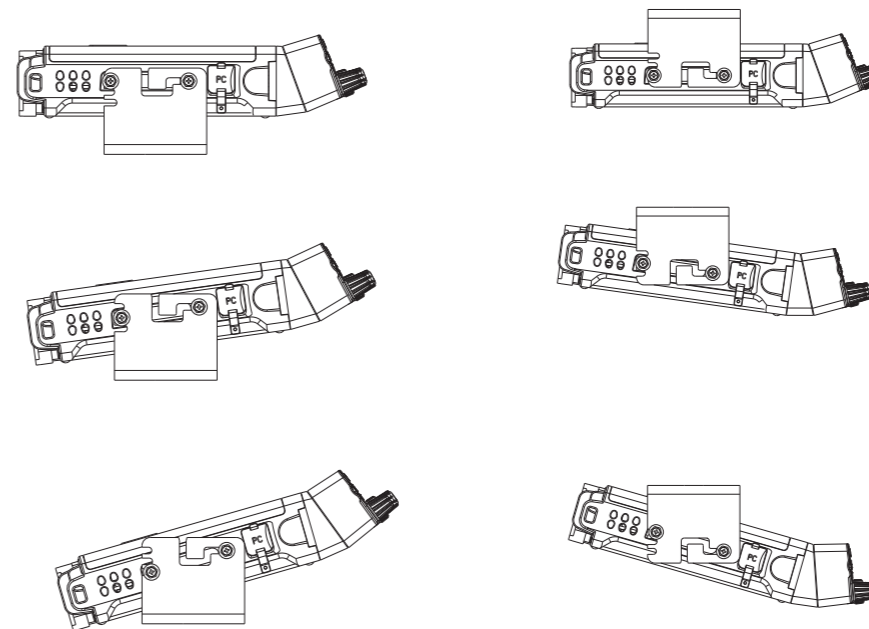
1. Use the supplied self-tapping screws to install the support bracket to the vehicle.



2. Set the transceiver in the bracket, then insert the supplied combined screws and tighten, insure that the screws are fastened tightly. This will insure the support bracket and the transceiver do not get bumped lose when the vehicle hits bumps or shakes.

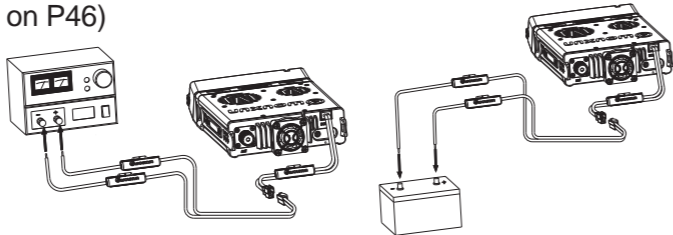


3. Use every screw slot along the side of the support bracket, you can set the transceiver to be installed at a different angle.



## Connecting power source

The transceiver power source usage ranges from  $13.8V \pm 15\%$ . When your power source (or vehicle power source) reaches levels up to 16V, TX will be forbidden, however RX will operate as normal. When your power source (or vehicle power source) reaches levels as low as 11.5V, the transceiver will automatically shut off. So the transceiver does not exhaust the vehicles battery and affect the vehicles normal operation. (This feature is set by the Menu 38, see instruction on P46)



## Special Reminder

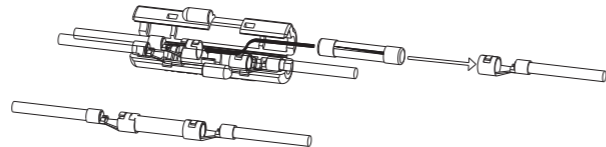
» This transceiver's working voltage is  $13.8V \pm 15\%$  DC.

### ■ Replacing the fuse

In the instance that the transceiver blows a fuse, first find out the reason, then solve the malfunction. If after installing the new fuse it once again blows a fuse, please sever the power source and immediately contact a local authorized **Wouxun** dealer or service center for assistance.

The specified fuse current is 15A, The specified power source current is 20A and above.

See the Fuse installation diagram on the right, after installation the fuse should be firmly secured to the copper set!



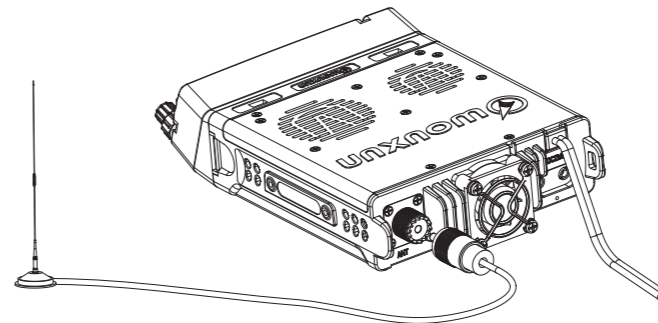
## Antenna connection



Twin Band FM Transceiver

Before operation, you must effectively install and adjust the antenna, installation success depends upon the type of antenna and whether or not the antenna is set up correctly. If you use the most suitable antenna and the antenna is installed correctly, the transceiver will attain the greatest results.

The transceiver antenna's impedance is 50 ohms, if the impedance is not at 50 ohms it will reduce the performance of the transceiver and possibly interfere with nearby broadcasting stations as well as other antenna's receivers, it could even harm the transceiver.

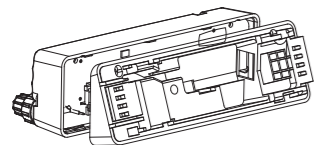


## Front panel installation

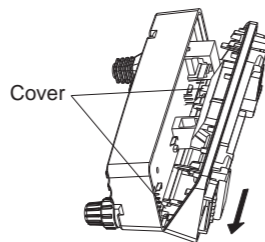
The transceiver is supplied with two kinds of switchboard panels • Inclined switchboard panel and a flat switchboard panel.

### ■ Install inclined switchboard panel

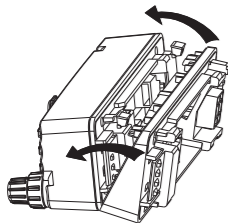
•1•Lower alignment



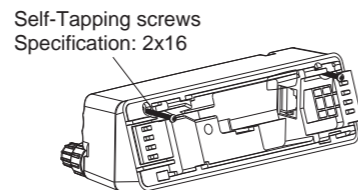
•2•Cover alignment



•3•Close in the direction shown by the arrows

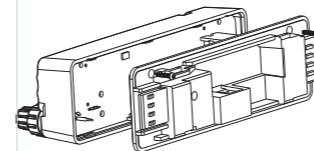


•4•Use the supplied screws to fasten

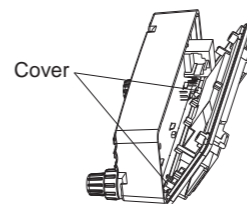


### ■ Install flat switchboard panel

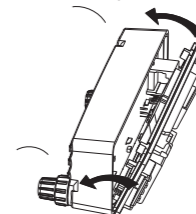
•1•Lower alignment



•2•Cover alignment

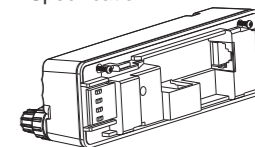


•3•Close in the direction shown by arrows



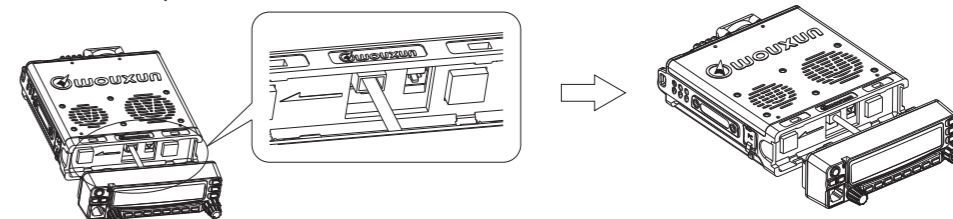
•4•Use the supplied screws to fasten

to fasten  
Self-Tapping screws (2)  
Specification: 2x11

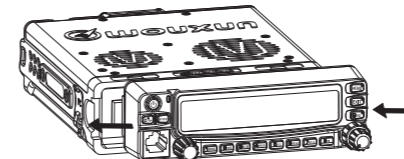


### ■ Front panel and main station installation

•1•Connect the cable to the transceiver's 8 point socket.



•2•Proceed according to the arrow shown.



## Front panel installation

### Connection method for transceiver station to operating front panel

The vehicle transceiver connection line uses 8 facets and 8 lead conducting wires (diagram 1),

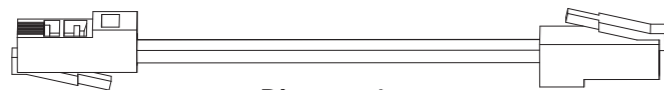
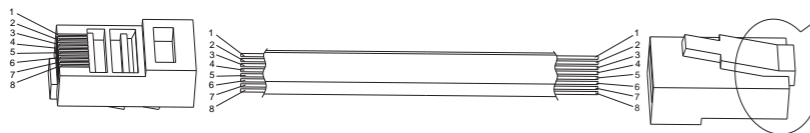


Diagram 1

The two ends of the facets connect to the corresponding line: (Take note that direction of the connection lines on the left and right sides of the facet are not the same)



- Left facet connection point 1
- Left facet connection point 2
- Left facet connection point 3
- Left facet connection point 4
- Left facet connection point 5
- Left facet connection point 6
- Left facet connection point 7
- Left facet connection point 8

- Connect through the conducting wire to right facet 1
- Connect through the conducting wire to right facet 4
- Connect through the conducting wire to right facet 3
- Connect through the conducting wire to right facet 2
- Connect through the conducting wire to right facet 5
- Connect through the conducting wire to right facet 6
- Connect through the conducting wire to right facet 7
- Connect through the conducting wire to right facet 8

Therefore the conducting wires connection to the left facet is corresponding and the connection to the right facets 2 and 4 are swapped.

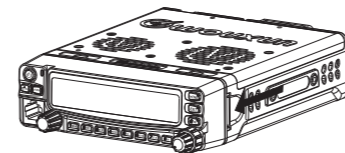
### Special Reminder ⚠

» If the connection wires are not Wouxun Company supplied or dealer approved, Wouxun Company does not guarantee its safety and operational effectiveness!

#### ■ Dismantling the front panel and transceiver

•1• Disconnect cover in the direction of the arrow

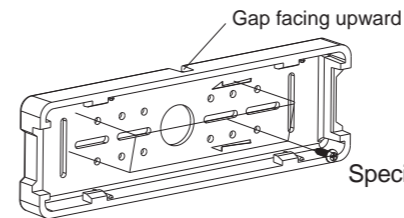
•2• Remove in the direction shown by the arrow



#### ■ Installation of front panel support bracket

When the transceivers front panel is installed separately from the main platform, there is a supplied front panel support bracket designed especially for installation.

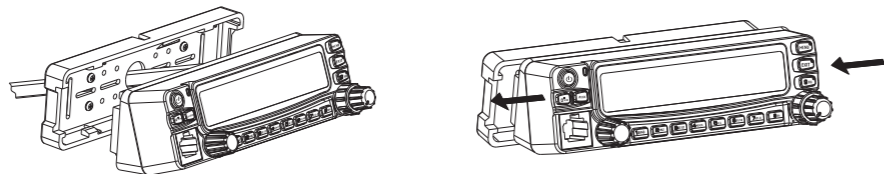
•1) First secure the support bracket with the supplied screws



Specification: 2.3X8 (4pcs)

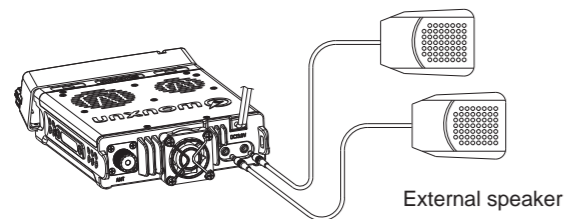
## Accessories installation

•2•First string the connection line through opening in the center of the support bracket•then close the bracket cover directly as shown by the arrows.



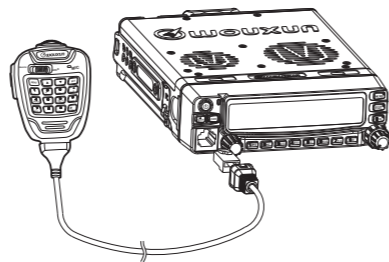
### Outer speakers

The external speaker jacks can be connected to a 3.5mm single outlet. There are two speaker outlets located on the back of the transceiver.



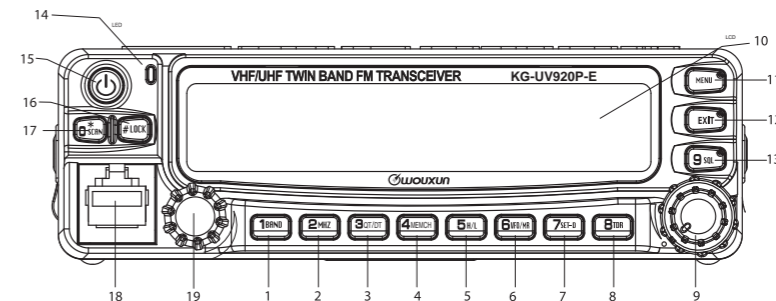
### Hand microphone installation

The transceiver comes supplied with two different types of hand microphone • Encoded hand microphone and unencoded hand microphone. Plug the connection cable into the 8 point socket located on the front panel.



## Getting started

### Front panel



- |   |   |
|---|---|
| 1 Master frequency set up hot key (See hot key operation 1)<br>•Single-tone pulse key (see Menu 36) | 10 LCD  |
| 2 Frequency or channel selection. (See hot key operation 2)   | 11 Function keys / enters keys  |
| 3 CTCSS / DCS encoding and decoding set up, CTCSS / DCS scanning (see hot key operation 3)          | 12 Exit / Cancel keys   |
| 4 Save channel hot key (see hot key operation 4)  | 13 Squelch level adjustment hot key (See hot key operations 9)  |
| 5 Power output settings hot key   | 14 Status indicator light<br>Orange standby indicator light<br>Green RX indicator light<br>Red TX indicator light |
| 6 VFO/MR switch over hot key (see hot key operation 6)  | 15 Power switch button  |
| 7 Frequency shift direction hot key (See hot key operation 7)                                       | 16 Keyboard lock key (See keyboard lock)  |
| 8 TDR Single and dual display switch hot key<br>(See hot key operation 8)                           | 17 Scanning key (See scanner function)  |
| 9 Volume control (See volume control)   | 18 Hand microphone outlet   |
|   | 19 Channel encoder  |