

PREFACE

Thank you for purchasing our Amateur

Portable Radio, which is a dual

band/dual display radio. This

easy-to-use radio will deliver you

secure, instant and reliable

communications at peak efficiency.

Please read this manual carefully

before use. The information presented

herein will help you to derive maximum

performance from your radio.

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1.-SAFETY INFORMATION

The following safety precautions shall always be observed during operation, service and repair of this equipment. This equipment shall be serviced by qualified technicians only. Do not modify the radio for any reason. Use only BAOFENG supplied or approved batteries and chargers. Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result. Turn off your radio prior to entering any area with explosive and flammable materials. Do not charge your battery in a location with explosive and flammable materials. To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any area where posted notices instruct you to do so. Turn off your radio before boarding an aircraft. Any use of a radio must be in accordance with airline regulations or crew instructions. Turn off your radio before entering a blasting area. For vehicles with an air bag, do not place a radio in the area over an air bag or in the air bag deployment area. Do not expose the radio to direct sunlight over a long time, nor place it close to heating source. When transmitting with a portable radio, hold the radio in a vertical position with the microphone 3 to 4 centimeters away from your lips. Keep antenna at least 2.5 centimeters away from your body when transmitting.

WARNING: If you wear a radio on your body, ensure the radio and its antenna are at least 2.5 centimeters away from your body when transmitting.

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2.-FEATURES AND FUNCTIONS

Dual-band handheld transceiver with display function menu on the display "LCD".
-DTMF encoded.
-Do not modify the radio for any reason.
-Commercial FM radio receiver (65 MHz - 108 MHz).
-Incorporates 105 codes "DCS" and 50 privacy codes "CTCSS" programmable.
-Function "VOX" (voice operated transmission).
-Alarm function.
-Up to 128 memory channels.
-Broadband (Wide) / Narrowband (Narrow), selectable.
-High power / low (5 W/1 W) selectable.
-Display illumination and/or backlighting.
-Function "beep" on the keyboard.
-Dual Watch/dual reception.
-Turn off your radio before entering a blasting area.
-Function "OFFSET" (frequency offset for repeater access).
-Battery saving function "SAVE".
-Timer transmission "TOT" programmable.
-Selecting the Scan Mode.
-Function Busy Channel Lock "BCL".
-Built-in RX CTCSS/DCS scan.
-Built-in LED flashlight.
-Programmable by PC.
-Level Threshold "Squelch" adjustable from 0 to 9.
-Do not hold the antenna with your hand or wrap the outside of it to avoid bad operation of the transceiver.
-Never transmit without an antenna.
-Built-in key lock

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3.-UNPACKING AND CHECKING EQUIPMENTS

Carefully unpack the transceiver. We recommend that you identify the items listed in the following before discarding the packing material. If any items are missing or have been damaged during shipment, please contact your dealers immediately.



Note:
- Items included in the package may differ from those listed in the table above depending on the country of purchase. For more information, consult your dealer or vendor.

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4.-OPTIONAL ACCESSORIES



Note:
- Consult the dealer or retailer for information about options available.

5.-INSTALLATION OF ACCESSORIES

5.1.-INSTALLING THE ANTENNA

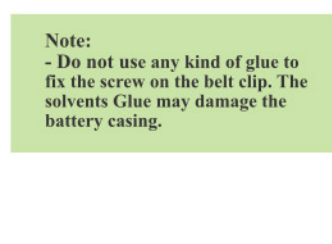
Install the antenna as shown in the figure below and turn it clockwise until it stops.

Note:
- When installing the antenna, don't rotate it by its top, holding it by its base and turn.
- If you use an external antenna, make sure the SWR is about 1.5:1 or less, to avoid damage to the transceiver's final transistors.
- Do not hold the antenna with your hand or wrap the outside of it to avoid bad operation of the transceiver.
- Never transmit without an antenna.

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5.2.-INSTALLING THE BELT CLIP

If necessary, install the belt clip at the rear of the battery compartment cover as shown in the figure below.



Note:
- Do not use any kind of glue to fix the screw on the belt clip. The solvents Glue may damage the battery casing.

5.3.-MICRO-HEADSET INSTALLATION OF EXTERNAL

Plug the external micro-headset connector into the jack of "SP & MIC" of the transceiver as shown in the figure below.

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5.4.-BATTERY INSTALLATION

-When attaching the battery, make sure the battery is in parallel and in good contact with the aluminum chassis. The battery holder is about 1 to 2 centimeters below the bottom of the radio's body.
-Slide the battery latch, at the bottom of the aluminum chassis and slide it upwards until a "click" is heard.
-The battery latch at the bottom locks the battery.

-Turn off the radio before removing the battery.
-Slide the battery latch, at the bottom of the radio's body, in the direction indicated by the arrow.
-Slide down the battery for about 1 to 2 centimeters, and then remove the battery from the radio's body.

6.-BATTERY CHARGING

Use only the charger specified by the manufacturer. The charger's LED indicates the charging progress.

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CHARGING STATUS	LED INDICATION
Standby (no-load)	Red LED flashes, while Green LED glows
Charging	Red LED solidly glows
Fully Charged	Green LED solidly glows
Error	Red LED flashes, while Green LED glows



Please follow these steps:

1. Plug the power cord into the adapter.
2. Plug the AC connector of the adapter into the AC outlet socket.
3. Plug the DC connector of the adapter into the DC socket on the back of the charger.
4. Place the radio with the battery attached, or the battery alone, in the charger.
5. Make sure the battery is in good contact with the charging terminals. The charging process initiates when the red LED lights.
6. The green LED lights about 4 hours later indicating the battery is fully charged. Then remove the radio with the battery attached or the battery alone from the charger.

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7.-BATTERY INFORMATION

7.1.-INITIAL USE

New batteries are shipped uncharged fully from the factory. Charge a new battery for 5 hours before initial use. The maximum battery capacity and performance is achieved after three full charge/discharge cycles. If you notice the battery power runs low, please recharge the battery.

WARNING: -To reduce the risk of injury, charge only the battery specified by the manufacturer. Other batteries may burst, causing bodily injury and property damage.
-To avoid risk of personal injury, do not dispose of batteries in a fire!
-Dispose of batteries according to local regulations (e.g., recycling). Do not dispose as household waste.
-Never attempt to disassemble the battery.

7.2.-BATTERY TIPS

1. When charging your battery, keep it at a temperature around 5°C-40°C. Temperature out of the limit may cause battery leakage or damage.
2. When charging a battery attached to a radio, turn the radio off to ensure a full charge.
3. Do not cut off the power supply or remove the battery when charging a battery.
4. Never charge a battery that is wet. Please dry it with a soft cloth prior to charge.
5. The battery will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal performance, it is time to buy a new battery.

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7.3.-PROLONG BATTERY LIFE

Battery performance will be greatly decreased at a temperature below 0°C. A spare battery is necessary in cold weather. The cold battery unable to work in this situation may work under room temperature, so keep it for later use.

2. The dust on the battery contact may cause the battery cannot work or charge. Please use a clean dry cloth to wipe it before attaching the battery to the radio.

7.4.-BATTERY STORAGE

1. Fully charge a battery before you store it for a long time, to avoid battery damage due to over-discharge.
2. Recharge a battery after several months' storage (1-10n batteries: 6 months), to avoid battery capacity reduction due to over-discharge.
3. Store your battery in a cool and dry place under room temperature, to reduce self-discharge.

8.-PARTS, CONTROLS AND KEYS

8.1.-RADIO OVERVIEW



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1. antenna	10. strap buckle
2. flashlight	11. accessory jack
3. knob (ON/OFF/volume)	12. A/B key (frequency display switches)
4. LCD	13. BAND key (band switches)
5. SK-SIDE key 1/CALL (radio, alarm)	14. keypad
6. SK-SIDE key 2/MONI (flashlight, monitor)	15. SP&MIC.
7. PTT key (push-to-talk)	16. battery pack
8. VFO/MR (frequency mode/channel mode)	17. battery contacts
9. LED indicator	18. battery remove button

8.2.-COMMAND/KEY DEFINITION

► [PTT] (PUSH-TO-TALK): Press and hold down the [PTT] button to transmit; release it to receive.

► SK-SIDE KEY1 [CALL]: Press the [CALL] button, to activate the FM Radio; Press it again to deactivate the FM Radio.

- Press and hold on the [CALL] button, to activate the alarm function; Press and hold it again, to deactivate the alarm function.

► SK-SIDE KEY2 [MONI]:

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-Press the [MONI] button, to turn on the flashlight; Press it again to turn off. Press and hold on the [MONI] button, to monitor the signal.

► [VFO/MR] BUTTON: -Press the [VFO/MR] button, to switch the frequency mode and channel mode.

► [A/B] BUTTON: -Press the [A/B] button, to switch frequency display.

► [BAND] BUTTON: -Press the [BAND] button, to switch band display.

-While FM radio being activated, press the [BAND] button to switch the band of FM radio (band 65-75MHz/76-108MHz).

► [SCAN] KEY: -Press the [SCAN] key to activate the Reverse function; it will exchange a separate reception and transmission frequency.

-Press the [SCAN] key for 2 seconds to start scanning (frequency/channel).

-While FM radio being activated, press the [SCAN] key to search FM radio.

-While setting the RX CTCSS/DCS, press the [SCAN] key to scan the RX CTCSS/DCS.

► [#+#] KEY: -Under channel mode, press [#+#] key to switch High/Low transmit power.

-Press [#+#] key for 2 seconds to lock/unlock the keypad.

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► FUNCTION KEYPAD:

-To enter the menu of the radio and confirm the setting.

-[a/b] key: -Press and hold [a/b] key for frequency up or down fast.

-Press [a/b] key, the scanning will be opposite.

-EXIT key: -To cancel /clear or exit.

► NUMERIC KEYPAD:

-Used to enter information for programming the radio's lists and the non-standard CTCSS

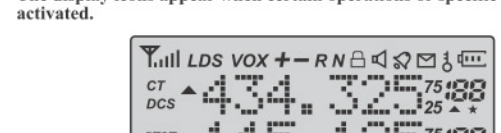
-Under transmission mode, press the numeric key to send the signal code through the band of FM radio (band 65-75MHz/76-108MHz).

► ACCESSORY JACK:

-The jack is used to connect audio accessories, or other accessories such as programming cable.

9.-"LCD" DISPLAY:

The display icons appear when certain operations or specific features are activated.



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Icon	Description
	Operating channel.
	Operating frequency.
	'CTCSS' activated.
	'DCS' activated.
	Frequency offset direction for accessing repeaters.
	Dual Watch/Dual Reception functions activated.
	Function "VOX" enabled.
	Reverse function activated.
	Wide Band selected.
	Battery Level Indicator
	Key lock function activated.
	Low transmit power.
	Operation frequency.
	Signal Strength Level.

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10.-1750 Hz TONE FOR ACCESS TO REPEATERS

The user needs to establish long distance communications through an amateur radio repeater which is activated after receiving a 1750 Hz tone. Press and hold on the [PTT], then press the [BAND] button to transmit a 1750Hz tone.

11.-BASIC OPERATION

11.1.-RADIO ON-OFF/VOLUME CONTROL

-Make sure the antenna and battery are installed correctly and the battery charged.

-Rotate the knob clockwise to turn the radio on, and rotate the knob fully counter-clockwise until a 'click' is heard to turn the radio off. Turn the knob clockwise to increase the volume, or counter-clockwise to decrease the volume.

11.2.-SELECTING A FREQUENCY OR CHANNEL

-Press the key [a/b] to select the desired frequency/channel you want.

The display shows the frequency / channel frequency.

-Press and hold down the key [a/b] key for frequency up or down fast.

Note:
- You can not select a channel if not previously stored.

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12.-ADVANCED OPERATION

You can program your transceiver operating in the setup menu to suit your needs or preferences.

12.1.-SET MENU DESCRIPTION:

Menu	Function/Description	Available settings
0	SQL (Squelch level)	0-9
1	STEP (Frequency step)	2.5/5/6.25/10/12.5/25kHz
2	TXP (Transmit power)	HIGH/LOW
3	SAVE (Battery save: 1/12/13/14)	OFF/1/2/3/4
4	VOX (Voice operated transmission)	OFF/B-10
5	W/N (Wideband/narrowband)	WIDE/NARR
6	ABR (Display illumination)	OFF/1/2/3/4/5
7	TDR (Dual watch/dual reception)	OFF/ON
8	BEEP (Keypad beep)	OFF/ON
9	TOT (Transmission timer)	15/30/45/60...999/60seconds
10	R-DCS (Reception digital coded squelch)	OFF/D023N...D754I
11	R-CT (Reception Continuous Tone Coded Squelch)	67.0Hz...254.1Hz
12	T-DCS (Transmission digital coded squelch)	OFF/D023N...D754I
13	T-CT (Transmission Continuous Tone Coded Squelch)	67.0Hz...254.1Hz

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14	VOICE (Voice prompt)	OFF/ON
15	ANI (Automatic number identification of the radio; only can be set by PC software.)	
16	DTMFST (The DTMF tone of transmitting code.)	OFF/DT-ST/ANI-ST/DT-ANI
17	S-CODE (Signal code, only could be set by PC software.)	1...15 groups
18	SC-REV (Scan resume method)	TO/CO/SE
19	PTT-ID (press or release the PTT button to transmit the signal code)	OFF/BOT/EOT/BOTH
20	PTT-LT (delay the signal code sending)	0...30ms
21	MDP-A (under channel mode, a channel displays. Note: name display only can be set by PC software.)	FREQ/CH/NAME
22	MDP-B (under channel mode, a channel displays. Note: name display only can be set by PC software.)	FREQ/CH/NAME
23	BCL (busy channel lockout)	OFF/ON
24	AUTOL (keypad locked automatically)	OFF/ON
25	SFT-D (direction of frequency shift)	OFF/+/-
26	OFFSET (frequency shift)	00.000...69.990
27	MEMCH (stored in memory channels)	000...127
28	DELCH (delete the memory channels)	000...127

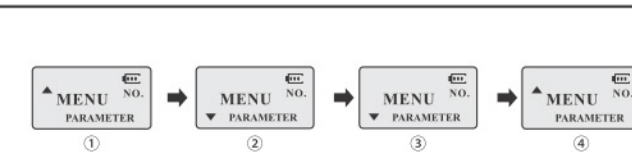
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29	WT-LED (illumination display color of standby)	OFF/BLUE /ORANGE/PURPLE
30	RX-LED (illumination display color of reception)	OFF/BLUE /ORANGE/PURPLE
31	TX-LED (illumination display color of transmitting)	OFF/BLUE /ORANGE/PURPLE
32	AL-MOD (alarm mode)	SITE/TONE/CODE
33	BAND (band selection)	VHF/UHF
34	TX-A (transmitting selection while in dual watch/reception)	OFF/A/B
35	STE (Tail Tone Elimination)	OFF/ON
36	RP-STE (tail tone elimination in communication through repeater)	OFF/1,2,3...10
37	RPT-RL (delay the tail tone of repeater)	OFF/1,2,3...10
38	PONMGS (Boss display)	FULL/MGS
39	ROGER (tone end of transmission)	ON/OFF
40	RESET (Restore to default setting)	VFO/ALL

12.2.-SHORTCUT MENU OPERATION

- 1.-Press the key MENU, then press the key ▲ or ▼ to select the desired menu.
- 2.-Press the key MENU again, come to the parameter setting.
- 3.-Press the key ▲ or ▼ to select the desired parameter.
- 4.-Press the key MENU to confirm and save, press the key EXIT to cancel setting or clear the input.

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-Note:
-Under channel mode, the following menu settings are invalid: CTCSS, DCS, W/N, PTT-ID, BCL, SCAN ADD, TOS-CODE, CHANNEL NAME. Only the H/L power could be changed.

12.3.-"SQL" (SQUELCH)

This function can automatically control the time the transceiver each time you press [PTT] on the transceiver. This feature is very useful to avoid overheating excessive power transistors of the transceiver. The transceiver will be off transmission automatically once the set time.

12.4.-FUNCTION "VOX" (VOICE OPERATED TRANSMISSION)

This function is not necessary to push the [PTT] on the transceiver for a transmission. Transmission is activated automatically by detecting the radio voice. When finish speaking, the transmission automatically terminated and the transceiver will automatically receive signal. Be sure to adjust the VOX Gain level to an appropriate sensitivity to allow smooth transmission.

12.5.-SELECT WIDEBAND OR NARROW BAND "W/N"

In areas where the RF signals are saturated, you must use the narrow band of transmission to avoid interference in adjacent channels.

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12.6.-TDR (DUAL WATCH/DUAL RECEPTION)
This feature allows you to operate between frequency A and frequency B. Periodically, the transceiver checks whether a signal is received on another frequency that we have scheduled. If you receive a signal, the unit will remain in the frequency until the received signal disappears.

12.7.-TOT (TRANSMISSION TIMER)

This function can automatically control the time the transceiver each time you press [PTT] on the transceiver. This feature is very useful to avoid overheating excessive power transistors of the transceiver. The transceiver will be off transmission automatically once the set time.

12.8.-CTCSS/DCS

In some cases only want to establish communications in a closed user group at a particular frequency or channel, for it will use "CTCSS" or code "DCS" for reception and transmission.

The "squelch" opens only when receiving a frequency with "CTCSS" or codes "DCS" same as the programmed in your transceiver. If codes of the received signal differs from those programmed in your transceiver, the "squelch" will not open and the received signal can be heard.

Note:
- The use of "CTCSS" or "DCS" in a communication, does not guarantee complete confidentiality communication.

12.9.-ANI

-ANI (Automatic Number Identification) is also known as PTT ID because an ID is transmitted when the PTT button of the radio is pressed and/or released. This ID tells the dispatcher which field radio was keyed. Only could be set by PC software.

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12.10.-DTMFST (DTMF TONE OF TRANSMITTING CODE)
First you should set the PTT-ID as BOT/EOT/BOTH.
- "OFF": Under transmitting mode, you can't hear the DTMF tone, while you press the key to transmit the code or code automatically transmitted.

- "DTST": Under transmitting mode, you can hear the DTMF tone, while you press the key to transmit the code.

- "ANI-ST": Under transmitting mode, you can hear the DTMF tone, while you press the key to transmit the code or the code automatically transmitted.

12.11.-SC-REV (SCAN RESUME METHOD)
This function allows you to scan memory channels, all the bands or part of the bands.

When the transceiver detects a communication, the scan will stop automatically.

Notes:
- "TO" (Time Operation): Scanning will stop when it detects an active signal. The scanning will stop on each channel active frequency for a predetermined time, after that time the scan will resume automatically.

- "CO" (Carrier Operation): The scanning will stop and remain in the