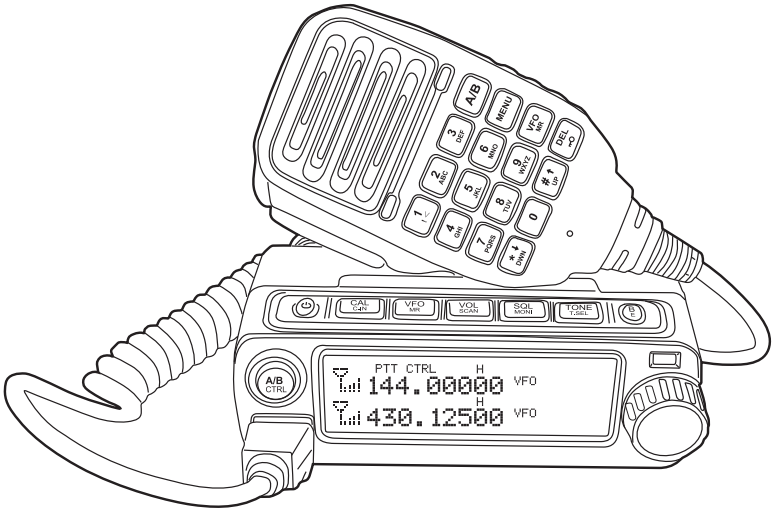
maas®

Amateur Mobile Radio

User Manual



AMT-200-UV

144-146MHz 430-440MHz

Dual band mobile radio

To User

Thank you for purchasing our FM serial radio. We appreciate your trust in our products and believe that its easy operation function would well serve your diverse communication needs.

User Instructions

● Explosive environments (gas, dust and smoke, etc)

Please turn off the radio while refueling or parking in the gas station. If your radio is installed in the car's rear luggage compartment, please don't put the spare fuels in the trunk.

● Radio signal transmission damage

Please do not operate your radio when you are located near the antenna in order to avoid the radio frequencies that may cause damage or related physical damage

● Gunpowder, Detonators / Exploders

For 150 meter (500 feet) of the detonators can lead to explosion. Please turn off your radio within the blasting or bidirectional area. If you want to full the gunpowder, please make sure it is installed in the black sealed metal box with the internal padding. Do not transmit the signals when the exploders are placed in or out the box.

Note:

Please observe the following precautions to prevent the occurrence of fire, physical injury or damage to the radio.

● Please do not try to set the radio while driving otherwise it will lead to dangerous consequences.

● Please do not transmit the radio at high power output for a long time otherwise it may overheat.

● Please do not disassemble or refit the radio for no any reason except which is written in the manual or instruction.

● Please do not put the radio directly to sunlight for a long time and do not put it near the heating apparatus

● Please do not put the radio on the extreme, moisture and water splashing places or unstable surfaces.

● If you find unusual smell or smoke from the radio, you should immediately turn off the radio and contact with the local repair store or distributor.

● Please check and follow the local traffic regulations before using the radio.

● Please do not use other optional accessories instead of our company'S accessories.

● Please use DC 13.8V (15%) power supply ! Do not use 24V battery power to operate the radio. Please check the battery polarity and voltage on the car before installing the radio on the car.

- Please use the DC power cable or purchase a DC power supply.
- Please do not insert metal objects into cooling fans.
- Please do not cut off or remove the fuse holder on the DC line. Error/wrong connection and/or surge current may cause fire.
- In order to protect your safety, please use the solid mounting bracket and screw sets to install the radio to prevent the slips when the car is in collision condition.
- When transmitting the radio, the unprotected of the radio frequency energy to various electronic devices may cause damages to them, such as electronic fuel injector, skid brakes and navigation control systems. If your car is equipped with these devices, please consult with the car dealers and make sure if these devices need to be protected while the radio is transmitting.

CONTENT

CONTENT

PREPARATION FOR OPERATING THE RADIO

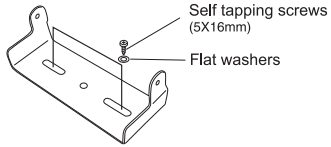
Radio installation

For sake of your own and passengers safeties, please find a safe and convenient position in order to prevent the damage caused by moving car. - You can consider installing the radio in front of the front passenger seat below the panel section or the car trunk. This will prevent your knees and legs crashing the radio in emergency brake. You should install it with good ventilation and avoiding the direct sunlight.

1. Install the mounting bracket to the car with using the self taping screws and flat washers (2 pcs screws each kind).

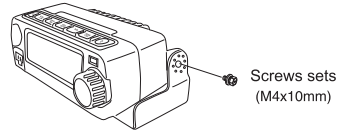
● Screws can be put upside down (under the dashboard mounting) or upwards the mounting bracket.

● When installing the mounting bracket, please make sure the screw side edge with slots on the bracket are backwards.

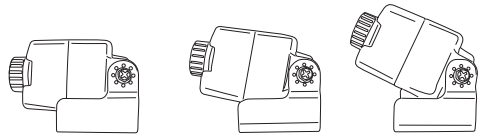


2. Fixed the radio and then insert the equipped with six angles combination screw and flat washers (each equipped with 2 sides and each side of 1 screw set) and tighten them.

● Please make sure all the screws are tightened to prevent the stent and radio loosing caused by car vibration.



● With the rotatable fixed point on the left and right sides of the vehicle rear bracket, the rotating bracket can tilt the main body at an appropriate angle.



Connecting Cable Power

■ Radio Operation

Make sure to use 12V car batteries. If the radio's power

is not enough during transmitting the screen will grow dark and the output power may be significantly decreased. Please do not connect the radio to the 24V power battery.

Note: If the battery is not fully charged or when the engine is switched off but the battery is still not fully charged, the battery may discharge and there will not be enough power to start the car.In this case, please avoid using the radio in following situation:

1. Use the radio with the DC power cord to directly connect to the car battery and radio within shortest area.

● If you use a noise filter, the metal parts of the car shall be fitted with an insulator to prevent it from touching the car.

● We do not recommend you to use the cigarette lighter socket because some of the cigarette lighter socket will cause big substantial voltage.

● If you have to connect the power cord through a car chassis or a hole on the car (such as a firewall in front of the passenger compartment), please use the rubber ring to prevent the power cord and remove the fuse holder to pass the power cord through the firewall.

● The entire power cord must be wrapped in order to keep the heat insulated and insulation from the engine (high pressure) system.

2. After the power cord is already installed, wrap around the fuse holder to make it moisture-proof, including the whole power cord.

3. Please cut off all wire connections on the negative battery terminal before connecting the radio to prevent the short circuit.

4. To confirm the connection is correct then connect the power cord to the power supply; red connection to the positive (+) , black connection to the negative(-)

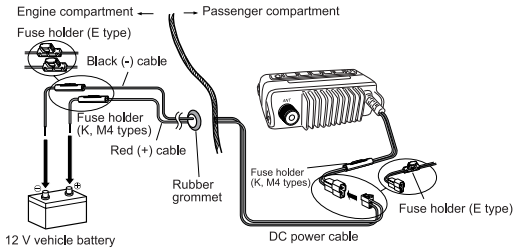
● To use the whole power line, please do not cut off excessive parts of power line even if it is longer than desired length. Remember, do not remove the fuse holder from the power cord.

5. Reconnect all wiring connections that were previously disconnected on the negative terminal.

6. Connect the DC power supply to radio.

● Connect the plug into the socket until you hear a click sound.

PREPARATION FOR OPERATING THE RADIO



■ Base Station Operation

To use it as a base station, you need a separate 13.8V DC power supply. This power supply is recommended for current capacity above 12A.

Note: Do not connect the DC power to the AC power socket before completing all connections.

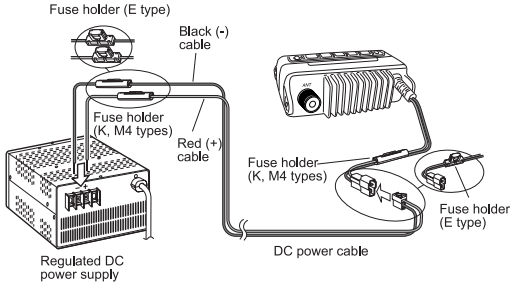
1. Make sure that both radios and DC power are off.
2. Connect the DC power supply to the regulated DC power supply and make sure that the polarity is correct. (Red: positive, black: negative).

● Use the DC power cord to connect the radio to the regulated power supply. Don't connect the radio directly to the AC power socket.

● Do not use the smaller size of the power cord to make a replacement.

3. Connect the DC power cord to the radio.

● Connect and press the socket together until you hear a click sound.



Replace fuse

If the fuse is blown, please find out the cause and then solve the problem. After the problem is fixed then replace the fuse. But if after re-installation the fuse is still blown, please disconnect the power cord and contact the local authorized dealer or authorized service center for assistance.

Fuse position	Fuse rated current
Radio (in DC connector)	10A
Equipped with DC power cord	10A

Note: Please use only the specified type and the rated value of the fuse; otherwise it might damage the radio.

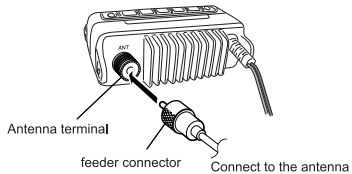
Antenna connection

Before operation, you must first install and adjust well the antenna. Success installation depends mainly on the antenna type and a correct installation. The radio will have best performance if the appropriate antenna is properly installed.

A low loss coaxial feeder line with 50Ω impedance is used to match the input impedance of the radio. If the transmission impedance of the feeder line is less than 50Ω the antenna connection will reduce the effectiveness of the antenna system, and will cause interference to the nearby radio and television receivers, radio receivers and other electronic devices, and even damage the radio.

Note:

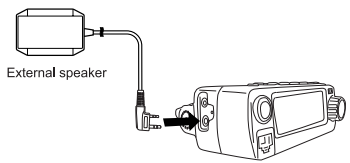
- If transmitting without an antenna or other matched load line, it could damage the radio. The antenna must connect to the radio before transmitting
- All base stations should be equipped with lightning arrester to reduce the risk of fire, electric shock or radio damage.



Accessories connection

■ Speaker Microphone or headset + MIC

1. Please insert a select a speaker with 8Ω impedance or a suitable headset. External speaker socket can be connected with 2.5MM mono plug and 3.5MM MIC plug.

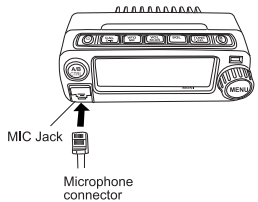


The left side of the walkie-talkie has two jacks for SP

and MIC. Please refer to the instructions to determine how to use an external speaker or headset + MIC accessory.

■ Microphone

Please insert the provided speaker microphone (with built-in speaker) to the RJ45 jack on left side of the radio to make voice communication. Press the connector until you hear a click sound from the locating plate in place.



■ Keypad operations

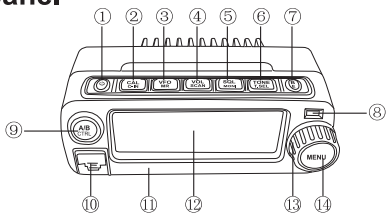
Please follow the key operation described below to simplify the instructions and avoid unnecessary duplication.

Instruction	Operation
Press [XXX] button	Means briefly press the button and release it.
Press and hold [XXX] button	Means holding down the button for 3 seconds or more
Press [MENU] tuning knob (button 1)+ [XXX] button 2	Means briefly press the [MENU] tuning knob button (button1), release it, then press button 2 and release it to enter into function menu
Rotate [MENU] tuning knob	Select set options
Press and hold power switch	Press and hold the power switch for more than 3s to turn ON/OFF the radio.

Knowing more about the radio controls set

■ Radio controls

Front panel



1. [⏻] Power ON/OFF button

Press and hold for 3 seconds to turn ON/OFF the radio

2. [CALL/C.IN] button

● Press the button to call up the call channel of the currently operable (CTRL) band.

● At VFO mode, press and hold this button for more than 3 seconds to store the frequency of the currently operable band (CTRL) as the calling channel.

● At VFO mode, press [MENU] button, then [CALL / C.IN] button to turn on / off the reverse function of currently operable (CTRL) band.

★ The Reverse function is valid only when offset frequency is set and offset direction (+, -) is on.

● At Channel (CH) mode, press [MENU] button, then the [CALL/C.IN] button, the current channel is locked. Repeat the steps again to unlock the current channel.

3. [VFO/MR]

● Press the [VFO / MR] button to select the display and working mode for the currently operable (CTRL) band.

★ Every time when [VFO / MR] button is pressed, the display and working mode is switched in Channel→ Channel + Frequency → Channel + Name → VFO mode.

● At VFO mode, press and hold this button for more than 3 seconds to store the frequency of the currently operable band (CTRL) as the calling channel.

● At Channel / Channel + Frequency / Channel + Name mode, press and hold this button for more than 3 seconds to edit the channel name of the currently operable (CTRL) band.

4. [VOL/SCAN]

● Press this button to set the volume level of the currently operable (CTRL) band.

● Press the [VOL / SCAN] button twice, the radio will be silent. Press the button again to turn off the silent mode.

● Press and hold the button for 3 seconds to turn on the scan mode of the currently operable (CTRL) band. Repeat above steps to turn off the scan mode.

● At standby mode, press the [MENU] button and this

button to select the scan mode for the current operation (CTRL) band.

★ Search (SE)

★ Carrier (CO)

★Time (TO)

5. [SQL/MONI] button

● Press the button to set the squelch (SQ) level of the currently operable (CTRL) band.

● Press and hold the button for 3 seconds to turn off the SQ circuit of the currently operable (CTRL) band and be in monitor mode.

● Press the [MENU] button, then this button to disable or enable RX/TX of the currently operable (CTRL) band.

6. [TONE / T.SEL]

● At VFO mode, press the button to turn ON /OFF CTCSS/DCS code of the current operation (CTRL) band.

★ Set options: QT → DQT → Close.

● If CTCSS/DCS is on, press and hold the button for more than 3 seconds to set the CTCSS/DCS code of the current operation (CTRL) band. RX, TX and RX+TX CTCSS/DCS code can be set separately.

● At VFO mode, press the [MENU] button, then this button, the currently operable (CTRL) band is switched between VHF and UHF.

7. [B/E]

● In menu operation, press this button to return to the previous operation.

● In any sub menu operation, press and hold the button for more than 3 seconds to exit the operation mode and return to standby mode.

● At Standby mode, press and hold the button for more than 3 seconds to lock the key, and repeat the steps again to unlock the key.

8. [LED] indicator

● Receiving: lights green; transmitting: lights red.

● When the speaker microphone is operated, the LED flashes red.

9. [AB / CTRL]

● Press this button to select the band that can be transmitted at present, where the band is displayed with "PTT" character.

● Press and hold the [AB / CTRL] key for more than 3 seconds to select the currently operable (CTRL) band for any operation, including SQ level, volume, signaling, menu, etc, where the band is displayed "CTRL" character.

● Press the [MENU] button, and then this button to turn on or off the display and working mode of the non-

operation band. The display screen switches between single band and dual band.

10. RJ45 (Connector for MIC and PC)

- It is used for connecting microphone + speaker.
- Connect the PC cable to this jack to program on the computer.

11. The front panel unit

- It is made of ABS material.

12. Graphic LCD display screen

- For displaying the operating frequency, instructions status, menus and other related visual information for the radio.

13. 360-degree rotate knob (ENC)

- Rotate this button to select the operating frequency or memory channel, change scanning mode, select audio, etc. When in menu mode operation, it can be used for selecting set options.

14. [MENU] knob (Menu button / Confirmation key)

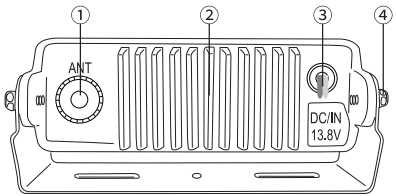
- Press it to adjust the control knob to enter menu mode.
- Press the button, and then press other button to set function options quickly.
- After set, press it to confirm.

Table for graphic LCD display character or icon instructions

Graphics or Icon	Function Instructions
PTT	Indicating the band can be transmitted
CTRL	Indicating the band can be operate and set
QT	Indicating CTCSS is on
DQT	Indicating DCS is on
+	Indicating TX frequency shift to be "+"
–	Indicating TX frequency shift to be "-"
R	Indicating the reverse function is on
N	Indicating working at narrow band
M	Indicating working at wide band
▲	Indicating the selected channel No is saved as memory channel
🔒	Indicating the lock function for the memory channel is on
CH 888	Indicating the memory channel No
H	Indicating High power is on
L	Indicating Low power is on
	Indicating the signal strength at RX and power level at TX
SQL 0-9	Indicating the set SQ level
VOL 00-20	Indicating the set volume level
VFO	Indicating working at VFO mode
	Indicating the keypad lock is on
	Indicating current band is prohibit to TX & RX

Knowing more about the radio controls set

Rear Panel



1. ANT

External antenna connected to this terminal. During the transmitting test please connect the load to replace the antenna. Antenna system or the load should be with 50Ω Impedance

2. Heat Sink

Cool the internal power tube, to avoid too high temperature to damage the related components.

3. External power plug

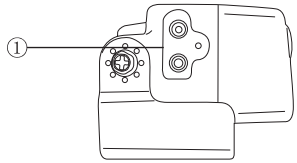
When you connect to the external power, you should carefully check the polarity of the power supply. (Red line: + , black line: -) and the power ratings (DC13.8V / 15%).

4. Rack mounting screws

Release the left and right screws to adjust a proper fuselage angle, and re-fasten.

SP/MIC jack on side panel

If necessary, connect a suitable headset or an external speaker for better sound. These jacks can only be connected to an external speaker with 2.5mm diameter socket (SP) and a dedicated SP + MIC headset.



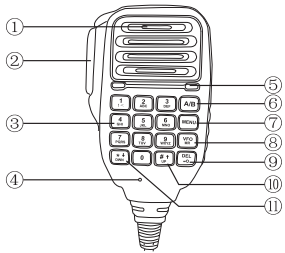
① **SP+MIC accessory with K type connector**

● Insert the headset with standard K type connector to this jack.

Note: There is no speaker assembled in the radio body, the accessories used must be equipped with speaker and microphone.

Knowing more about the radio controls set

Speaker Microphone + speaker



1. Speaker

● An audio is issued when a signal is received.

2. PTT button

● Press and then speak into the microphone to transmit. Release it to receive.

3. Keypad

● Press these buttons to input frequency or characters.

4. **Microphone (MIC)**

● **Clearly audio can be transmitted thru the microphone.**

5. LED indicator

● When transmit, LED lights red.

● If operating on speaker microphone keypad, LED lights red, once release, LED is off.

6. A/B / MICPF1

● Same function as [AB/CTRL] button on front panel of the radio. It is also definable MICPF1 key, function can be set thru programming.

7. MENU / MICPF2

● For selecting menu mode. It is also definable MICPF2 key, whose function can be set thru programming.

8. VFO / MICPF3

● For selecting VFO mode. It is also definable MICPF3 key, whose function can be set thru programming.

9. DEL / MICPF4

● Same function as [B / E] button on front panel of the radio. It is also definable MICPF4 key, whose function can be set thru programming.

10. UP

● Increase the value.

11. DWN

● Decrease the value.

Knowing more about the radio controls set

■ Definable keys on speaker microphone

There are 4 PF (definable functions) buttons: [MICPF1], [MICPF2], [MICPF3] and [MICPF4], whose functions can be programmed by following steps.

Processes:

1. Press the [MENU] button to enter the menu options.
2. Rotate the [MENU] knob to "Set"ption. Then press the [MENU] button to confirm.
3. Rotate the [MENU] knob to select "Definable set"option. Then press the [MENU] button to confirm.
4. Rotate the [MENU] knob to select the intended definable keys. Then press the [MENU] button to confirm.
5. Rotate the [MENU] knob to assign the function for the selected definable key. Then press the [MENU] button to confirm.
   - The "Set Completed" is displayed on the screen.
6. The screen returns to the previous interface.

Available functions for definable keys are as follows:

- AB/CTRL
- CAL/C-IN
- VFO/MR
- VOL/SCAN
- SQL/MONI
- TONE/T.SEL
- BACK/DEL/LOCK
- MENU

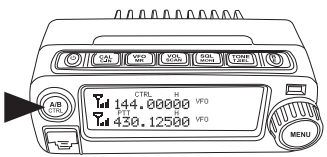
■ Select the operating band

The band with "CTRL" character displaying above is the operable band.

Processes:

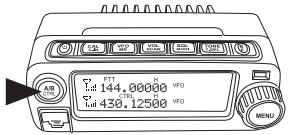
1. At standby mode, press and hold the [AB/CTRL] for more than 3 seconds, "CTRL" character switches between the upper and lower band, the band with "CTRL" character displaying above is the currently operable band.

The upper operable band:



The lower operable band:

Knowing more about the radio controls set



■ Frequency Input Mode

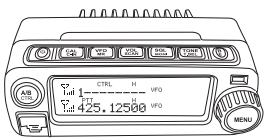
If the desired operating frequency is far away from the current frequency, it is quicker to input the desired frequency with speaker microphone keypad. Or use the shift input mode to quickly change the frequency.

■ Speaker microphone input mode

Processes:

1. Press and hold the [AB / CTRL] key for more than 3 seconds to select the operable (CTRL) band.
2. Press the [VFO / MR] button to switch to VFO mode.
3. Enter the desired frequency by using the numbers (0~9) on speaker microphone keypad.

LCD Display for direct frequency entry showing:



Note: If the [PTT] or [MENU] buttons is pressed before all the digits are entered, the remaining digits are set to "0".

◆ Shift Input Mode

Processes:

1. Press and hold the [AB / CTRL] key for more than 3 seconds to select the operable (CTRL) band.
2. Press the [VFO / MR] button to switch to VFO mode.
3. Press the [MENU] button, then press the [VFO / MR] button.

● The "Hundred digit MHZ"of the currently selected operational band (CTRL) flashes.

4. Rotate the 360-degree knob to select the input digit, or input the number through the speaker microphone keypad.

● Press the [← SQL / MONI] key to move cursor to the left by one digit, or the [TONE / T.SET →] key to the right by one digit. When the shift is selected, the previous digit is automatically confirmed.

5. After selecting, press [MENU] key to confirm.

● The set will be confirmed automatically if in 5 seconds without any operation,

OR

Press [B/E] key to confirm the set and exit the operation mode.

BASIC OPERATIONS

Switching the Power ON/OFF

Processes:

1. Press and hold [⏻] key for more than 3s to turn on the radio

● Power on message displays briefly on the screen.

2. Press and hold [⏻] key for more than 3s to turn off the radio

Adjusting the volume

Processes:

1. Press and hold the [AB / CTRL] button for more than 3 seconds to select the operable (CTRL) band.
2. Press the [VOL / SCAN] button.

● The "VOL"character displays on the right side of the band.

3. Rotate the 360-degree knob to select the volume output level from 00 to 20.

● If set to "00", the current band volume output is minimum.

● If set to "20", the current band volume output is maximum.

4. After selecting, press the [MENU] button to confirm.

OR

Press the [B / E] button to cancel the setting.

5. The screen returns to standby interface.

Silent Mode set

Processes:

Press the [VOL / SCAN] button twice to turn on silent mode, and press it one time again to turn OFF silent mode.

● If the silent mode is on, the speaker icon displays on the right side of the band.

● If the silent mode is OFF, the speaker icon disappears from the screen.

Adjust the Squelch Level

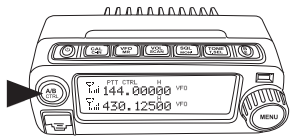
Squelch is used to turn off the speaker volume when there is no signal. With squelch level setting correctly, the audio can be heard only when a signal is received. The higher the squelch level is, the stronger the signal strength must be to receive audio.

Processes:

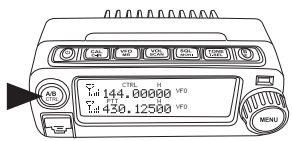
1. Press and hold the [AB / CTRL] key for more than 3 seconds to select the operable (CTRL) band.
2. Press the [SQL / MONI] key.
● The "SQL" character blinks on the right side of the band.
3. Rotate the 360-degree knob to select the squelch level from 0 to 9.
● If set to "0", the squelch of current band is off.
● If set to "9", the squelch level of current band is maximum, and the signal strength must be stronger before the audio can be heard. (Note: set the SQ level depending on actual communication distance, the higher the level is, the closer the distance will be).
4. After selecting, press the [MENU] button to confirm.
OR
Press the [B/E] button to cancel the setting.
5. The screen returns to standby interface.

Select the TX band

The selected band with "PTT" character displaying above is the transmitting band.
Processes:
1. At standby mode, press the [AB / CTRL] button.
● The "PTT" character switches between the upper / lower band.
Upper band to transmit:



Lower band to transmit:

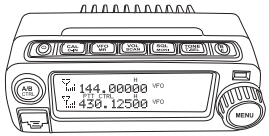


Select dual band / single band mode

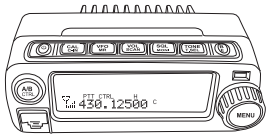
For turning off non-operating band, the radio can switch between dual band and single band.
Processes:
1. Press and hold the [AB / CTRL] button for more than 3 seconds to select the "CTRL" character to the desired band.

2. Press the [MENU] button, and then re-press the [AB / CTRL] button, the current non-operating band is switched between off or on.

Dual band mode:



Single band



Note: Only when "CTRL"character displays on the desired band, then can the un-desired band be turned off by pressing [MENU] + [AB/CTRL] button.

Select the operating band/ display mode

After saving the memory name, the radio can switch between the memory channel and the stored frequency. This is useful for confirming the frequency stored in the memory channel.

Processes:

1. Press and hold the [AB / CTRL] button for more than 3 seconds to select the currently operable (CTRL) band.
2. Press the [VFO / MR] button to select the displaying mode from the following four modes.

- VFO(Full frequency display) Mode.
- Memory Channel & Frequency Mode.
- Memory Channel Mode.
- Memory Channel & Name Mode.

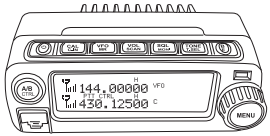
Calling Channel Mode

Calling channel mode allows selecting a preset channel to call immediately. It can be easily used as an emergency channel.

Processes:

1. Press and hold the [AB / CTRL] button for more than 3 seconds to select the currently operable (CTRL) band.
2. Press the [CALL / C.IN] button to callout the saved calling channel.

● The "C" character appears on the screen of the current band.



● Press the PTT and then speak into the microphone to transmit.

3. Press the [CALL / C.IN] button again to exit the calling channel mode and return to the previous operating interface.

Transmitting

Processes:

1. Press the [AB / CTRL] button to select the desired transmitting band.

● The band with "PTT" character appearing above can be transmitted.

2. Press the PTT and then speak into the microphone to transmit.

● The icon " " displaying on the transmitting band indicates the relative transmitting power.

● L or H letter will display in the upper screen of the band depending on the selected output power.

● Speak into the microphone with normal voice, and keep the microphone about 5cm far away from your mouth. Speak too loud or keep too close to the Mic will increase the signal distortion and decrease intelligibility.

3. After speaking, release the [PTT] button to receive.

MENU OPERATION

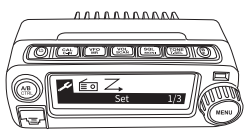
Many functions of the radio are selected or set via menu, rather than thru the physical controls knob. It is believed that its versatility and convenience will satisfy user after being familiar with the menu system.

MENU ACCESS

Processes:

1. Radio is at standby mode.
2. Press and hold the [AB / CTRL] button for 3 seconds to select the currently operable (CTRL) band.
3. Press the [MENU] button to enter the menu options interface.

As shown below:



4. Rotate the [MENU] knob to select the desired function list.

- Set
- Radio
- Scan

5. After selecting, press the [MENU] button to enter the current menu options.

- For detailed set items, refer to the following "Function Set Index Table" options for operating and selecting.

6. Rotate the [MENU] knob to select the desired value or configuration for the selected menu.
7. After selecting, press the [MENU] button to confirm the desired value.

OR

Press the [B/E] button to cancel the setting and return to the previous menu option.

- Press and hold the [B/E] button for 3 seconds to exit the menu operating mode and return to the standby mode.

8. Repeat the above 4 to 6 operation steps to continue to set the other desired functions.

- In any menu operation, press and hold the [B/E] button for 3 seconds to exit the menu operation mode.
- In setting menu options, press the [B/E] key to cancel the current menu set and return to the previous menu option.

MENU OPERATION

Function Set Index Table

Main Menu	Menu No.	First-class menu	Second class menu	Third class menu	Selections	Default
Set	1	Parameter	TOT	Time Set	30S~500S	60S
				ON/OFF	ON/OFF	ON
			Power	–	High power	H
				–	Low power	
	2	Audio Mode	Speaker MIC	–	–	
			Headset	–	–	
			MIC & Headset	–	–	MIC & Headset
	3	PromptTone	Profiles	–	Standard	Standard
				–	Silent	
			Keytone	ON/OFF	ON/OFF	ON
				Volume	01~13	10
			Call Tone	ON/OFF	TX Begin Tone	OFF
					TX End Tone	OFF
	4	Others	Language	Chinese	–	
				English	–	English
			Keylock	Auto	–	
				Manual	–	Manual lock
			Backlight	ON/OFF	ON	
					OFF	
					Auto	Auto

Function Set Index Table

Main Menu	Menu No.	First-class menu	Second class menu	Third class menu	Selections	Default
Set	4	Others	Version	Version No.	–	
				Version Freq	–	
				Version Date	–	
				Version Time	–	
			Disp Mode	CH No & Name	–	
				CH No & Freq	–	
				CH No	–	
				VFO	–	VFO
				S/D Mode	Single Mode	Dual Mode
					Dual Mode	
			ENC	–	ON	ON
				–	OFF	
			VOX	ON/OFF	ON/OFF	OFF
				Level	1~12	10
	5	Smart Boot	Factory Reset?	–	–	
	6	Function	SQ level	–	0~10	5
			Freq Step	–	5.0/6.25/10/12.5/25/50/100KHz	5.0KHz
			BCL	ON/OFF	–	OFF

MENU OPERATION

Function Set Index Table

Main Menu	Menu No.	First-class menu	Second class menu	Third class menu	Selections	Default
Set	6	Function	Band	Narrow/Wide	–	Wide
			SFT Direction	+	–	
				-	–	
				OFF	–	OFF
			SFT Range	–	0.00~70.00	0.00
			Signal Tone	–	1750Hz/500Hz/ 1000Hz/1500Hz/ 2000Hz/2500Hz/ 3000Hz/Self-defined	1750Hz
			Call Alert	–	Ring 1/2/3/4/5	
	7	Signaling	CTCSS	R&T CTCSS	62.5-254.1	
				RX CTCSS	62.5-254.1	
				TX CTCSS	62.5-254.1	
			DCS	R&T DCS	017-754N/I	
				RX DCS	017-754N/I	
				TX DCS	017-754N/I	
			OFF	–	–	
	8	PF Keys	PF1	A/B Band		A/B Band
				Call Channel		
				VFO/MR		
				VOL/SCAN		
				SQL/MONI		
				TONE/T.SEL		
				B/E		
				Menu/OK		
				Signal Tone / Call Alert		

Function Set Index Table

Main Menu	Menu No.	First-class menu	Second class menu	Third class menu	Selections	Default
Set	8	PF Keys	PF2	A/B Band		
				Call Channel		
				VFO/MR		
				VOL/SCAN		
				SQL/MONI		
				TONE/T.SEL		
				B/E		
				MENU/OK		MENU/OK
				Signal Tone / Call Alert		
			PF3	A/B Band		
				Call Channel		
				VFO/MR		VFO/MR
				VOL/SCAN		
				SQL/MONI		
				TONE/T.SEL		
				B/E		
				MENU/OK		
				Signal Tone / Call Alert		
			PF4	A/B Band		
				Call Channel		
				VFO/MR		
				VOL/SCAN		

MENU OPERATION

Function Set Index Table

Main Menu	Menu No.	First-class menu	Second class menu	Third class menu	Selections	Default
Set	8	PF Keys	PF4	SQL/MONI		
				TONE/T.SEL		
				B/E		B/E
				MENU/OK		
				Signal Tone / Call Alert		
FM Radio	1	FM radio freq	-	-		
Scan	1	List Check	Scan List	Set PrioCH		
				Disable PrioCH		
				Delete CH		
				Add CH		
	2	Scan Mode	CO	-		
			TO	-	5/10/15/20S	
			SE	-		
	3	List Scan	Start scan			
	4	Freq Scan	Start scan			
	5	Scan Off	Disable Scan			

Channel Naming

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.
2. Press [VFO/MR] to select current band to channel mode.
3. Press and hold [VFO/MR] for 3s to access to channel naming mode.

- Press [#] on microphone to switch character input type.
- Character input type icon will displayed on the right of the current editable band.
- AB (for capital letter)/ab (for lowercase letter)/12 (for numeric 0~9)

4. Rotate [Menu] knob to select the desired character input type.

- The following character are allowed to input.

Memory channel name: 0~9, A~ Z, a ~ z, ...

- Press [SQL/MONI] to move left the cursor; and move right by press [TONE/T.SET] .
- If to delete a prior character, please press [B/E] .

5. Once program completed, press[MENU]knob to confirm and exit the current editing mode.
6. Or press [B/E] to cancel the program and exit the editing mode.

Character input from Microphone keypad

User also allow to input character from microphone keypad. Character detail is as below:

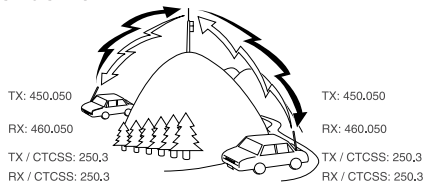
Keypad	Character display (for every press)				
1	.	,	'	...	1
2	A	B	C		2
3	D	E	F		3
4	G	H	I		4
5	J	K	L		5
6	M	N	O		6
7	P	Q	R	S	7
8	T	U	V		8
9	W	X	Y	Z	9
0	blank space				0
*	blank space	down			*
#	up	To switch character input type			#

Note: The keypads [A/B] to [Del] on microphone are with default preset features as below:
[A/B] : A/B-PF1
[MENU] : MENU-PF2
[VFO] : VFO/MR-PF3
[DEL] : DEL/PF4

OPERATION VIA REPEATER

The repeater is usually installed and maintained by radio clubs, and sometimes they will co-work with local communication corporations. Compared with semi-duplexer radio, to work with repeater could ensure farther distance communication. Repeater is mostly installed on mountain tops or other elevated locations.

Repeater demo:



Note° Most repeaters use a receive and transmit frequency pair with a standard or non-standard offset (odd-split).

Offset programming

1. Press [AB/CTRL] for 3s to select operable (CTRL) band.
2. Press [MENU] knob to access the current band MENU.
3. Rotate [Menu] knob to select Settings, then press [MENU] for confirmation.
4. Rotate [Menu] knob to select FUNCTION, then press [MENU] for confirmation.
5. Rotate [MENU] knob to select OFFSET direction or offset step options, then press [MENU] for confirmation.

Offset direction

- To select the offset direction, could make your TX frequency higher (+) or less (-) than your RX frequency.
- Once selection done, please press [MENU] for confirmation.
  - ★ Screen will pop up "Saved".

Offset step range

- Offset step refers to the offset value for TX frequency to RX frequency.
- Rotate [MENU] knob to select offset step or input the offset value from microphone.
- Once selection done, please press [MENU] for confirmation.
  - ★ Screen will pop up "Saved".

6. Press [B/E] to back to prior menu.

Note: If the offset step frequency beyond the allowable frequency band range, the transmission will be prohibited. To solve it, you could try the following methods:

- Increase the RX frequency under frequency band.
- Change the offset direction.

Note: Users fail to change the offset direction if to use the memory RX or TX frequency.

SENIOR FUNCTION

Keypad operation and description

Keypad name	Operation	Function performance
[⏻]	Press and hold for 3s	Power ON or OFF
[AB/CTRL]	Press	To select the current available transmitting (PTT) band.
	Press and hold for 3s	To select the currently operable (CTRL) and transmissible (PTT) band.
[CALL/C.IN]	Press	To retrieve the call channel from the currently operable (CTRL) band.
	Press	To exit the call channel mode from currently operable (CTRL) band.
	Press and hold for 3s	Under VFO mode, it can save the currently operable (CTRL) frequency as call channel frequency.
[VFO/MR]	Press	To the working display mode for currently operable (CTRL) band (VFO /Channel number + frequency /Channel number +channel name)
	Press and hold for 3s	Be able to save channel number under VFO mode
	Press and hold for 3s	Be cable to channel naming under VFO mode.
[VOL/SCAN]	Press	To adjust the volume output for currently operable (CTRL) band.
	Press 2 times	Activate the silent mode for radio, to unmute it by press it again.
	Press and hold for 3s	Turn ON or OFF the scan for currently operable (CTRL) band

Keypad operation and description

Keypad name	Operation	Function performance
[SQL/MONI]	Press	To adjust the Squelch (SQ) level for currently operable (CTRL) band.
	Press	Could be used as left cursor under channel naming or quick-adjusting frequency mode.
	Press and hold for 3s	Turn on or off the squelch circuit of currently operable (CTRL) band. (Monitoring)
[TONE/ T.SET]	Press	Under VFO mode, turn on the CTCSS/DCS, select signaling type and turn off signaling for currently operable (CTRL) band.
	Press	Could be used as right cursor under channel naming or quick adjusting frequency.
	Press and hold for 3s	Under VFO mode, and CTCSS/DCS is activated, it could enter to tone or encode setting.
[B/E]	Press	To select menu item or parameter settings etc., used as [Cancel] and [Back].
	Press and hold for 3s	Quick exit from current operation and back to standby interface, under function mode.
	Press and hold for 3s	To lock or unlock keypads under standby mode.
[MENU/ KNOB]	Press	Enter to menu list when on standby mode.
	Press	To select item and confirm parameter or other values, used as [CONFIRM] key.
	Rotate	To select items, frequency, parameter and other related options etc operations.

SENIOR FUNCTION

Keypads combined operation and description

Main keypad name		Function keypad	Function performance
[MENU / KNOB]	+	[AB/CTRL]	Turn on or off the inoperable band. (Single band/dual band)
		[CALL/C.IN]	Under VFO, turn on or off the reverse (REV) function of the currently operable (CTRL) band. Note: Only it is in effect when offset direction (+-) is activated.
		[VFO/MR]	Under VFO mode, it can quick change the currently operable (CTRL) frequency.
			Under channel mode, it is to lock or unlock the currently operable (CTRL) band. Once channel locked, an icon" 🔒 "will displayed next to channel number.
		[VOL/SCAN]	To select scan mode (SE/TO/CO) for the currently operable (CTRL) band.
		[SQL/MONI]	To allow or forbid the RX and TX of the currently operable (CTRL) band.
		[TONE/T.SET]	To quick adjust the working frequency of the currently operable (CTRL) band. (VHF/UHF)

To delete the memory channel

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable "CTRL" band.
2. Press [VFO/MR] to select channel mode.
3. Rotate [MENU] knob to select your desired channel for deletion
4. Press and hold [⏻] for 3s at least to power off the radio.
5. Press and hold [VFO/MR] and [⏻] to power on the radio.
6. Press [MENU] knob to confirm the deletion.

Or press [B/E] to cancel and back to standby interface.

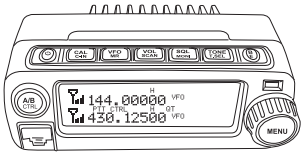
Turn ON or OFF CTCSS/DCS

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable "CTRL" band.
2. Press [VFO/MR] to select VFO mode.
3. Press [TONE/T.SET] to cycle select the tone type or turn off the tone.

● Every press [Tone/T.SET] the options will be changed as below: →QT→DOT→OFF→ON.

● When the CTCSS/DCS is activated, "QT" will be displayed on the screen.

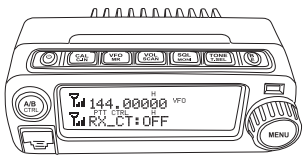


To choose CTCSS/DCS frequency or code.

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable "CTRL" band.
2. Press [VFO/MR] to select VFO mode.
3. Press [TONE/T.SET] to select the tone type.(CTCSS / DCS)
4. Press and hold [Tone/T.SET] for 3s to access CTCSS / DCS frequency or code.

● Once CTCSS/DCS is activated, settings can be operable.



5. Rotate [MENU] knob to select the CTCSS/ DCS frequency or code.

Or

Press [TONE/T.SET] to choose CTCSS/DCS frequency or code for RX or TX or RX+TX.

● Every press [Tone/T.SET] the options will be changed as below:

★ CTCSS: R&TX_CT(RX+TX) → RX_CT → TX_CT.

★DCS: R&TX_CDS(RX+TX) → RX_CDS → TX_CDS.

6. Press [MENU] knob to confirm the current operation.

Or

Press [B/E] to cancel and back to standby interface.

Note: If the memory channels to be programmed with CTCSS/DCS, then just need to call the memory channel, rather than to program the CTCSS / DCS everytime.

CTCSS frequency table°

FREQ(HZ)	FREQ(HZ)	FREQ(HZ)	FREQ(HZ)	FREQ(HZ)	FREQ(HZ)
OFF	88.5	123.0	165.5	196.6	250.3
62.5	91.5	127.3	167.9	199.5	254.1
67.0	94.8	131.8	171.3	203.5	61
69.3	97.4	136.5	173.8	206.5	63
71.9	100.0	141.3	177.3	210.7	
74.4	103.5	146.2	179.9	218.1	
77.0	107.2	151.4	183.5	225.7	
79.7	110.9	156.7	186.2	229.1	
82.5	114.8	159.8	189.9	233.6	
85.4	118.8	162.2	192.8	241.8	

CDCSS code:

CDCSS code								
OFF	054N/I	134 N/I	225 N/I	271 N/I	365 N/I	462 N/I	612 N/I	731 N/I
017N/I	065N/I	143 N/I	226 N/I	274 N/I	371 N/I	464 N/I	624 N/I	732 N/I
023N/I	071N/I	145 N/I	243 N/I	306 N/I	411 N/I	465 N/I	627 N/I	734 N/I
025N/I	072N/I	152 N/I	244 N/I	311 N/I	412 N/I	466 N/I	631 N/I	743 N/I
026N/I	073N/I	155 N/I	245 N/I	315 N/I	413 N/I	503 N/I	632 N/I	754 N/I
031N/I	074N/I	156 N/I	246 N/I	325 N/I	423 N/I	506 N/I	645 N/I	
032N/I	114N/I	162 N/I	251 N/I	331 N/I	431 N/I	516 N/I	646 N/I	
036N/I	115N/I	165 N/I	252 N/I	332 N/I	432 N/I	523 N/I	654 N/I	
043N/I	116N/I	172 N/I	255 N/I	343 N/I	445 N/I	526 N/I	662 N/I	
047N/I	122N/I	174 N/I	261 N/I	346 N/I	446 N/I	532 N/I	664 N/I	
050N/I	125N/I	205 N/I	263 N/I	351 N/I	452 N/I	546 N/I	703 N/I	
051N/I	131N/I	212 N/I	265 N/I	356 N/I	454 N/I	565 N/I	712 N/I	
053N/I	132N/I	223 N/I	266 N/I	364 N/I	455 N/I	606 N/I	723 N/I	

Reverse function

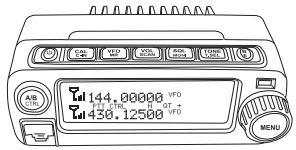
If the radio was performed under offset working mode, you could swap the TX and RX frequency by activate the Reverse function. Thus you could manually check the receiving signal strength from other stations, while using a repeater.

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable "CTRL" band.
2. Press [VFO/MR] to select VFO mode.
3. Press [MENU] knob, and then press [CALL/C.IN]

● Every press [MENU] knob and then press [CALL/C.IN], the reverse function will be switch between ON and OFF.

● If the reverse function is activated, "+" "-"will show up on screen.



● If the reverse function is activated, "R" will show up at the right of band.

Note:

● While using reverse function, if the TX frequency exceeds the allowable transmitting frequency, press PTT will result in transmitting prohibited.

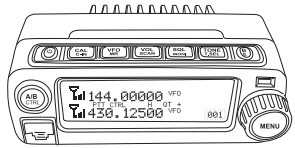
● While using reverse function, if the RX frequency exceeds the allowable receiving frequency, the reverse function will fail to use.

● While using reverse function, if there is no offset frequency, reverse function will fail to use.

SENIOR FUNCTION

● While using reverse function, if there is no offset direction, reverse function will fail to use.

● While on transmitting, the reverse function will fail to turn ON or OFF.



To store frequency on Memory channel

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable "CTRL" band.
2. Press [VFO/MR] to select VFO mode.
3. Totate [MENU] knob, or input the desired frequency through microphone.

● Besides, users could change the frequency with preset step frequency by press [UP] / [DOWN] on microphone.

● If required, you could preset the below mentioned data for the frequency channel.

Offset direction (+-), CTCSS /DCS ON or OFF, CTCSS/DCS frequency/code.

4. Once program completed, press [VFO/MR] for 3s.

● The memory channel number will be popped up and flashed at the right of the currently operable (CTRL) band.

5. Rotate [MENU] knob to choose the desired channel number for storage.
6. After selection, press [MENU] knob to confirm the selected frequency and data saved on the memory channel.

● "Saved" will pop up on screen once program completed. Or press [B/E] to cancel the storage, and back to standby interface.

Note:

● If the selected channel number has been stored with other data, "▲" will pop up under channel number.

● If the stored channel to be stored again, the previous data will be replaced by the new data.

● If the selected channel already is memory channel, " 🔒 " will pop up under channel number. Until users to unlock it first, or it fail to store.

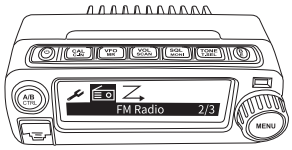
SENIOR FUNCTION

FM radio operation

Procedure:

1. Press [MENU] knob to access into menu list
2. Rotate [MENU] knob to select FM item.

- Screen will display FM radio.



3. Press [MENU] knob to access into FM radio option.
4. Rotate [MENU] knob to select what your need FM frequency. (Auto/Manual)

Or

- Press [MENU] knob to access to FM list options.
- Rotate [MENU] knob to select the below desired option.

■ Storing channel

- Storing the current FM frequency
- Press [MENU] to confirm.
- "Saved" pops up on screen.

Or

press [B/E] to cancel and back to prior interface.

■ Stored channel

- Press [MENU] knob to access to stored channel option.
- Rotate [MENU] knob to check stored channels.

Or

- Press [MENU] to access to stored channel list.
- Rotate [MENU] knob to select "Delete"or "Play"option
- Press [MENU] knob to confirm option

Or

press [B/E] to cancel and back to prior interface.

■ FM mode (Manual / Auto)

- Press [MENU] to access to option list.
- Rotate [MENU] knob to select "Manual"or "Auto" option
- Press [MENU] knob to confirm option
- "Saved" pops up on screen.

Or

press [B/E] to cancel and back to prior interface.

SENIOR FUNCTION

■ Audio output mode

● Press [MENU] to access to option list.

● Rotate [MENU] knob to select below desired audio output options.

- ◆ PRE out (Front output) (microphone)
- ◆ Side output (earset)
- ◆ PRE & Side (microphone+earset)

● Press [MENU] knob to confirm option

● "Saved" pops up on screen.

Or

press [B/E] to cancel and back to prior interface.

5. Press [B/E] to exit FM mode and back to main screen.

■ FM volume adjustment

Procedure:

1. Press [MENU] knob to access into menu list
2. Rotate [MENU] knob to select FM list and then press [MENU] to confirm
3. Press [VOL/SCAN] to access to volume adjustment mode.

● "VOLxx" will pop up on screen

Rotate [MENU] to select desired volume level.

Or

Double press [VOL/SCAN] to access FM silent mode.

"🔇"will pop up.

Press [VOL/SCAN] to cancel the silent mode.

4. Press [B/E] to exit the FM mode, and back to main screen,

Note:

● Select "Manual" is to manually select FM frequency (Setp: 100KHz)

● Select "Auto" is to auto scan FM frequency, once receiving signal, it will stop scanning and stay on the frequency

● When you are listening FM radio, pressing [PTT] to transmit or receiving signal, radio will exit the FM mode temporarily, but in a preset time after signal disappear or no more press [PTT] , it will back to FM mode auto matically.

SENIOR FUNCTION

Scan

Scan is to monitor your favorite channels/ frequencies. To familiar with all scan types will improve your operation.

● VFO scan --- To scan all frequency of the currently operable (CTRL) band.

● Memory channel scan --- To scan all stored frequencies on memory channels.

● Channel list scan --- To scan all channels of memory channel list.

Note:

● If to adjust SQ level or press other keypads except [TONE/T.SET] and [B/E] during scanning, it will stop scanning.

● When using CTCSS/DCS, radio will stop scanning when receive any signal from the frequency, but only with same CTCSS/DCS, signal could be heard.

● If to select scan mode during scanning, it will stop scanning.

Scan ON/OFF

Once scan is enabled, the radio will start scan cyclically to check if there is any activities on the channel of preset scan list . Once the scan is ON, the LED will flash, and scan icon [ ] will be displayed at the right on scanning band.

Procedure:

● Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.

● Press and hold [VOL/SCAN] for 3s to start scanning.

Or

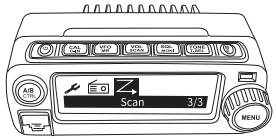
● Press and hold [VOL/SCAN] for 3s to close scanning.

Or

To program as below items:

1. Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.
2. Press [MENU] knob to access the items.
3. Rotate [MENU] knob to select scan item, and press [MENU] to confirm.

● Scan will be displayed on screen.



4. Rotate [MENU] knob to scan options：VFO scan

● Press [MENU] to confirm option.

● "start scanning" pops up on screen, and back to main interface.

● Scanning icon "( )" pops up at the right of scanning band.

Or

Channel list scan

● Press [MENU] to confirm option.

● "start scanning" pops up on screen, and back to main interface.

● Scanning icon "( )" pops up at the right of scanning band.

Or

Scan OFF

● Press [MENU] to confirm option.

● Screen will back to main interface.

● Scanning icon "( )" will be disappeared.

5. Press [B/E] to back to prior menu.

Or

press and hold [B/E] for 3s to exit the menu mode, and back to main interface.

Scan mode

Once receives a scanned signal, radio will stop scanning and resume scanning according the preset scan mode. You select on of the below options.

● TO (Time) — Once the radio receives a scanned signal over the air, it will stay on that channel for a preset time. Once time is out, it will continue to scanning.

● CO (carrier) — Once radio receives a scanned signal over the air, it will stay on that channel until signal disappears for 3s, and then continue to scanning.

● SE (Seek) — Once the radio receives a scanned signal over the air, it will stay on that channel and stop scanning until you re-activate to scanning

Procedure:

● Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.

● Press [MENU] knob, then press [VOL/SCAN]

Or to program via menu as below:

1. Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.

2. Press [MENU] to access the menu list.

3. Rotate [MENU] knob to select scan option, and then press it again for confirmation.

4. Rotate [MENU] to select scan mode and the press it again for confirmation.
5. Rotate [MENU] knob to select TO/SE/CO, and then press it again for confirmation.
6. "Saved" pops up on screen, and back to prior menu.
7. Press [B/E] to back to prior menu.

Or

Press and hold [B/E] for 3s to exit the menu mode and back to main interface.

Scan list

Users can preset scan lists. Radio will scan cyclically to check if there is voice signal on scan list channel. Your radio can contain a maximum of 255 channels.
If it is permitted by your dealer or system administrator, users can edit, add, delete channel or choose priority channels through menu display.

■ Scan list operation

Procedure:

1. Press and hold [AB/CTRL] for 3s to select the currently operable (CTRL) band.
2. Press [MENU] to access into the menu list.
3. Rotate [MENU] knob to select scan option, and then press it again for confirmation.
4. Rotate [MENU] to select "Check scan list" and the press it again for confirmation.
Screen will show up the total channel number for current scan list.
5. Rotate [MENU] knob to check the current list.

Or

Press [MENU] knob to access channel list, and then rotate it to select desired channel options.

- Priority channel — Press [MENU] to confirm the current channel as priority channel.
- Disable priority — Press [MENU] to disable the current priority channel
- Delete channel — Press [MENU] to delete a channel from current channel list.
- Add channel — Press [MENU] to select the memory channel number, and then press [MENU] again to add the channel to the scan list.

6. "Saved" pops up on screen, and back to prior menu.
7. Press [B/E] to back to prior menu.

Or

Press and hold [B/E] for 3s to exit the menu mode and back to main interface.

MAINTENANCE

General information

The radio has been well tested and tuned by manufacturer. To repair or adjust the radio without grant from manufacturer may void its warranty.

Maintenance

Please send back the radio with relevant detail malfunction description and contact information to your dealer or service centre for repair, so that technician could contact you in time.

Note: If you require technical or operation data support, please describe the relevant problem clearly, simply but completely.

Clean

Please clean your device with mild detergent (Please do not use high concentration chemical) or wet cloths.

Trouble shooting

The problem mentioned below is regular malfunction during your operation, but not caused by radio circuit.

Malfunction	Analysis of causes	Handling method
After connect to 13.8V DC power supply and press [⏻], radio fail to power ON, and none display on screen.	1.The power cable to be connected in reverse. 2.One or more power fuse is blew.	1.To connect the power cable correctly. (Red line connect to "+" Black line connect to "-") 2. To find out the cause of fuse blew. Once checked and fixed out, please install same rated value of new fuse.
Fail to change frequency by rotating knob or press microphone key [UP]/ [DWN]	Under call channel mode	Press [VFO]
Most keypads and knob fail to work	1. One lockout feature is activated. 2. Radio under channel display mode.	1. Unlock keypad 2. Under channel mode, users can input channel number, but input frequency under VFO mode.
Fail to select memory channel by rotating knob or press microphone key [UP] / [DWN]	None stored on memory channel	To store some data on memory channel.
Fail to transmit even press [PTT]	1. Microphone did not connect to radio well. 2. Users can select to transmit deviation to transmit frequency out of range. 3. Busy channel lockout to be activated, sometime signal will be prohibited transmitting.	1. Power off radio, then plug the microphone jack to radio until a lock sound heard. 2. Turn off the deviation repeater function. 3. Turn off the busy channel lockout.

TECHNICAL PARAMETERS

Specifications

Model	AMT-200-UV	
Frequency Range	VHF	UHF
	144-146MHz	430-440MHz
PLL Channel Spacing	5/6.25/10/12.5/25/50/100	
Battery Voltage	13.8V ±10%	
Antenna Impedance	50Ω	
Operating Temperature	-20℃~ +60℃	
Frequency Stability	±2.5PPM	
Dimensions	121.5X65.5X42.5mm	

Compatible With American Military Standard(MIL-STD-810C/D/E)

Transmitter

RF Power Output	20W
Modulation Type	F3E
Maximum Deviation	≤±5.0KHz(Wide)/≤±2.5KHz (Narrow)
Spurious Emission	≤65dB Below Carrier
Modulation Distortion	≤5%(300-3000Hz)
FM Noise	≤-42dB (Wide)/≤-38dB (Narrow)

Receiver

IFs	49.950MHz & 450KHz
Sensitivity(12dB SINAD)	0.2μV (Wide)/0.25μV (Narrow)
Squelch Selectivity	0.15μV (Wide)/0.2μV (Narrow)
Adjacent Channel Selectivity	≥70dB (Wide)/≥65dB (Narrow)
Intermodulation	≥70dB
Spurious Rejection	≥65dB
Image Rejection	≥70dB
FM Ham And Noise	≤-45dB (Wide)/≤-40dB (Narrow)
Modulation Type	16KOF3E/11KOF3E
Operating Bandwidth	≤±7KHz/≤±5KHz
AF Output @ 4 Ohms	≥2W(8Ω,5% distortion)
Audio Distortion	≤5%

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