

AAHHi

Vehicle/Marine Mobile Radio



MA12

User Manual

Welcome!

Congratulations on your purchase of our instant communication equipment. Our products will provide you with high quality, clear voice, reliable and easy to use bidirectional person-to-person voice communication for your safety and improving efficiency.

Our products will keep you in constant touch with your team members for years to come with negligible maintenance down-time.

Please take a few minutes to read this manual carefully. The information presented here will allow you to derive maximum performance from your radio, in case questions arise later on.

PRECAUTIONS

Please observe the following precautions to prevent fire, personal injury, and/or radio damage:

- Do not attempt to configure your radio while driving; it is simply too dangerous.
- Be aware of local laws pertaining to the use of headphones/headsets while driving on public roads. If in doubt, do not wear headphones while mobiling.
- Do not transmit with high output power for extended periods; the radio may overheat.
- Do not modify the radio unless instructed by this manual or other our documentation.
- Do not expose the radio to long periods of direct sunlight nor place it close to heating appliances.
- Do not place the radio in excessively dusty, humid or wet areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the radio, turn OFF the power immediately. Contact your service station or your dealer.
- Please make sure the power is off or disconnected before all devices are fully installed. Only turn on or connect the power after all devices are fully installed.
- This radio is designed for a **13.8 V** power source. **Never** use a 24 V battery to power the radio.

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SUPPLIED ACCESSORIES

After carefully unpacking the radio, identify the items listed in the table below. We recommend you keep the box and packaging for shipping.

Accessories List



Microphone



DC power cable



Mounting bracket



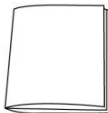
Microphone hanger



Fuse



Screw set



User Manual

PREPARATION

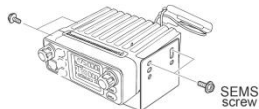
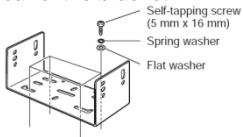
Mobile Radio Installation

To install the radio, select a safe, convenient location inside your vehicle that minimizes danger to your passengers and yourself while the vehicle is in motion.

Consider installing the unit at an appropriate position so that knees or legs will not strike it during sudden braking of your vehicle. Try to pick a well ventilated location that is shielded from direct sunlight.

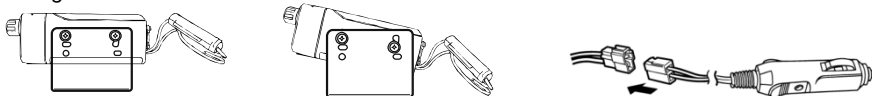
1. Install the mounting bracket in the vehicle using the supplied self-tapping screws, flat washers, and spring washers.

- *The bracket must be installed so that the 3 screw hole positions on the side of the mounting bracket are towards the rear of the bracket.*



2. Position the radio, then insert and tighten the supplied hexagon SEMS screws and flat washers.

- *Double check that all hardware is tightened to prevent vehicle vibration from loosening the bracket or radio.*
- *Determine the appropriate angle of the radio, using the 3 screw hole positions on the side of the mounting bracket.*



DC Power Cable Connection

The vehicle battery must have a nominal rating of 13.8 V. Never connect the radio to over 13.8 V battery. Be sure to use a 13.8 V vehicle battery that has sufficient current capacity. If the current to the radio is insufficient, the display may darken during transmission, or transmit output power may drop excessively.

1. Connect the DC power cable connector on the other end of the car cigarette lighter to the radio's power supply connector.
 - *Press the connectors firmly together until the locking tab clicks.*
2. Plug the cigarette lighter in cigarette sockets.

Replacing Fuses

If the fuse blows, determine the cause, then correct the problem. After the problem is resolved, replace the fuse.

If newly installed fuses continue to blow, disconnect the power cable and contact the authorized dealer or an authorized service center for assistance.



Fuse Location	Fuse Current Rating
Radio	15A
Supplied Accessory DC Power Cable	20A

CAUTION

Only use fuses of the specified type and rating; otherwise the radio could be damaged.

Note: If you use the radio for a long period when the vehicle battery is not fully charged, or when the engine is OFF, the battery may become discharged, and will not have sufficient reserves to start the vehicle. Avoid using the radio under these conditions.

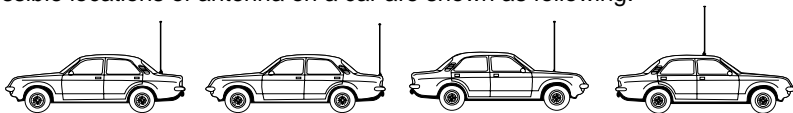
Antenna Connection

Before operating, install an efficient, well-tuned antenna. The success of your installation will depend largely on the type of antenna and its correct installation. The radio can give excellent results if the antenna system and its installation are given careful attention.

Use a 50Ω impedance antenna and low-loss coaxial feed-line that has a characteristic impedance of 50Ω , to match the radio input impedance. Coupling the antenna to the radio via feed-lines having an impedance other than 50Ω reduces the efficiency of the antenna system and can cause interference to nearby broadcast television receivers, radio receivers, and other electronic equipment.

All fixed stations should be equipped with a lightning arrester to reduce the risk of fire, electric shock, and radio damage.

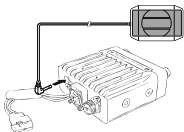
The possible locations of antenna on a car are shown as following:



Accessory Connections

External Speaker

If you plan to use an external speaker, choose a speaker with an impedance of 8 Ω . The external speaker jack accepts a 3.5 mm plug. We recommend using the authorized optional speaker.



Microphone

For voice communications, connect a microphone equipped with a RJ45 modular plug into the modular socket on the front of the main unit. Press firmly on the plug until the locking tab clicks.



Attach the supplied microphone hanger in an appropriate location using the screws included in the screw set.



GETTING ACQUAINTED

Note: This section describes only the main functions of the front panel controls. Explanations for functions not described here are provided in the appropriate sections of this instruction manual.

Front Panel

① Power Switch/Volume Control [**Volume Knob**]

- Press and hold to switch the power on/off.
- Rotate to adjust volume level.

② Switch frequency model (only for VFO mode)

③ Display Screen

④ Channel Tuning Control [**Channel Knob**]

- Rotate to select channel number or value.
- Press to confirm/enter setting.

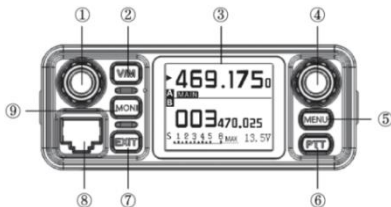
⑤ Menu Button

⑥ PTT

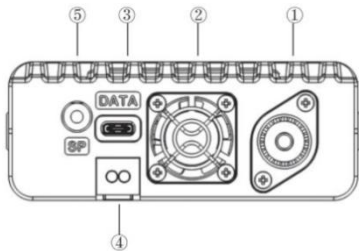
⑦ Exit/Back

⑧ Microphone connector

⑨ Monitor

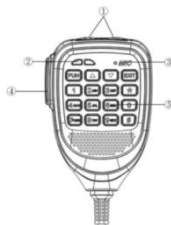


Rear Panel



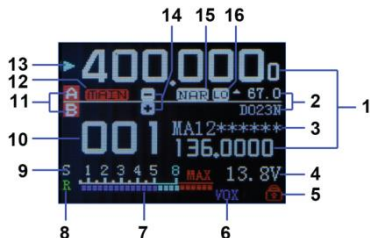
- ① Antenna
- ② Fan
- ③ Program port
- ④ DC port
- ⑤ External speaker port

Microphone



- ① Main//Sub channel switch
- ② TX/RX indicator
 - When received signal, it will light green.
 - When transmit, it will light red.
- ③ Microphone
- ④ Speaker
- ⑤ Keypad

Display Screen Guide




No.	Icon	Explanation	No.	Icon	Explanation
1		Frequency/Channel Name/Menu	9		Scrambler
2		CTCSS/DCS	10		Number of Channel
3		Channel Name	11		A or B Working Band
4		Current Working Voltage	12		Main Working Band
5		Keypad Lock	13		Current Working Band
6		Hands-Free VOX	14		Positive (+) or Negative (-) Offset Direction
7		S-Meter	15		Wide or Narrow Bandwidth
8		Reverse Frequency	16		High or Low Output Power

Note: When in the menu system, it will automatically exit the menu after 10s of no operation.

Shortcut Operation

Keys or Buttons on Radio

Key	Short Press	Long Press	Menu+Key
Vol Knob	/	Power On/Off	/
Ch Knob	Enter Menu	Enter Menu	Enter menu
MENU	Menu/Confirm	Menu/Confirm	Menu/Confirm
P/ 	PTT	PTT	/
V/M	Change Working Mode	Toggle VHF and UHF band(only in VFO mode)	Change between single band or dual band display.
MONI	Monitor	Monitor	Monitor
EXIT	Exit or back to previous menu/delete the number When input the frequency or channel number	/	Exit

Keys or Buttons on Microphone

Key	Short Press	Long Press	Menu+Key
A	Main channel to be A band	/	/
B	Main channel to be B band	/	/
FUN	Short key/menu	Menu/Confirm	Menu/Confirm
EXIT	Exit or back to previous menu/delete the number when input the frequency or channel number	/	Exit
▲	+/-	Repeat Operation	/
▼	+/-	Repeat Operation	/
0	Input the number 0	/	Channel Storage
1	Input the number 1	/	SQL
2	Input the number 2	/	POW
3	Input the number 3	/	Dual Watch
4	Input the number 4	/	Set QT/QDT
5	Input the number 5	/	Set RX QT/DQT
6	Input the number 6	/	Set TX QT/DQT
7	Input the number 7	/	FM Broadcast
8	Input the number 8	/	Shift
9	Input the number 9	/	Scan
★	Favorite channel	/	/
#	/	Keypad lock unlock	/

BASIC OPERATION

Switch the Power On/Off

Press and hold [**Volume Knob**] button for 1S to power on the radio, press and hold again for 2S to power off the radio.

Adjust the Volume

Turn the [**Volume Knob**] clockwise to increase the audio level and counterclockwise to decrease.

Transmitting

To communicate, all radios should be in the same channel/frequency and signaling & encryption (CTCSS tone, DCS code ect.).

- 1.To talk, press and hold the [**PTT**] button and speak.
- 2.Release the [**PTT**] button to standby.

Receiving

Your dealer may have programmed CTCSS/DCS signaling ect. in your radio.

- If your selected channel is programmed with one of these features, you will hear calls only when another party in your system transmits which has the same signaling with yours. All other calls will not be heard.*
- If your selected channel is not set up with a signaling type, you will hear calls made by any party (not just those in your system).*

MENU SETUP

Menu Access

1. In standby mode, press [**Channel Knob**] or [**MENU**] key to access menu system.

• *The menu list appears.*



MENU	
1	RF FUNCTION
2	CTCSS/DCS
3	SET

2. Use [**Channel Knob**] or [^]/[v] key to select the desired main menu.

3. Press [**Channel Knob**] to enter sub menu setting mode.

4. Use [**Channel Knob**] or [^]/[v] key again to select the desired sub menu number.

5. Press [**Channel Knob**] to enter setting mode.

6. Use [**Channel Knob**] or [^]/[v] key to switch ON/OFF or select numeric values.

7. Press [**Channel Knob**] to complete the setting.

• *You can press [EXIT] key to turn back previous menu till exit menu system.*

8. Press [**PTT**] button to exit menu system.

Main Menu	Sub Menu No.	Selectable	Default
RF FUNCTION	SQL	Level 0~9	Level 5
	Power	High/Low	High
	Compandor	Off/On	Off
	Scramble	Off/On(scramble 1~8)	Off
	Bandwidth	Wide/Narrow	Wide
	BCLO	Off/DQT/CAT	Off
	TOT	30S~270S,Off	120s
	TOA	1s~10s,Off	5s
	SFT-D	Off/+/(offset: 0~70MHz/UHF, 0~38MHz/VHF)	Off
	Step	2.5K/5K/6.25K/10K/12.5K/20K/25K/30K/50K	12.5K
CTCSS/DCS	C-CTC/DCS	OFF/CTCSS/DCS/IDCS	OFF
	R-CTC/DCS	OFF/CTCSS/DCS/IDCS	OFF
	T-CTC/DCS	OFF/CTCSS/DCS/IDCS	OFF
	SPECIAL DCS	OFF/Special DCS 1~3	OFF
SET	Work Mode	Frequency/Channel/Memory	Frequency
	ROG Beep	Off/1/2/3	Off
	Home Channel	No channel/Assigned by user	No channel
	A/B Switch	Auto/On/Off	Auto

Main Menu	Sub Menu No.	Selectable	Default
SET	A/B Switch	Auto/On/Off	Auto
	Double Watch	On/Off	On
	VOX Gain	Off/1~9 Level	Off
	VOX Delay	0.3s/0.5s/1s/1.5s/2.0s/3s	1.0s
	Key Tone	On/Off	On
	1750Hz Tone	Off/1s~5s	Off
	MIC	in hand/device host	in hand
	Denoise	On/Off	On
	Key Lock	Manu/Auto	Manu
	Lamp Control	0S/5S/10S/15S/20S	10S
	Language	English/Chinese	English
	APO	Off/10m/30m/1h~10h	Off
	Power on mode	AUTO/ON/OFF	AUTO
	Reset	VFO/ALL	VFO
	Scan Resume	Carrier/Time/Seek	Carrier
	PriScan	No channel/Assigned by user	No channel
	Scan Add	Add/Del	Add

TROUBLESHOOTING GUIDE

Phenomena	Analysis	Solution
You cannot turn on the radio.	The battery may be installed improperly.	Remove and reattach the battery.
	The battery power may run out or died.	Recharge or replace the battery.
	The battery may suffer from poor contact caused by dirty or damaged battery contacts.	Clean the battery contacts or replace the battery.
During receiving, the voice is weak or intermittent.	The battery voltage maybe low.	Recharge or replace the battery.
	The volume level may be low.	Increase the volume.
	The antenna maybe loose or maybe installed incorrectly.	Turnoff the radio, and then remove and reattach the antenna.
	The speaker maybe blocked.	Clean the surface of the speaker.
You cannot communicate with other group members.	The frequency or signaling type maybe inconsistent with that of other members.	Verify that your TX/RX frequency and signaling type are correct.
	You may be too far away from other members.	Move towards other members.
You hear unknown voices or noise.	You may be interrupted by radios using the same frequency.	Change the frequency, or adjust the squelch level.
	The radio in analog mode maybe set with no signaling.	Request your dealer to set signaling for the current channel to avoid interference.
You are unable to hear anyone because of too much noise and hiss.	You may be too far away from other members.	Move towards other members.
	You may be in an unfavorable position. For example, your communication may be blocked by high buildings or blocked in an underground area.	Move to an open and flat area, restart the radio, and try again.
	It may be the result of external disturbance (such as electromagnetic interference).	Stay away from equipment that may cause interference.
The radio keeps transmitting.	VOX may be turned on or the headset is not installed in place.	Turn off the VOX function. Check that the headphones are in place.

EXCLUSIONS FROM WARRANTY COVERAGE

Normal Wear and Tear:

Periodic maintenance, repair and replacement of products or accessories due to normal wear and tear.

Abuse & Misuse:

Defects or damage that results from:

- a. improper operation, storage, misuse or abuse, accident or neglect, such as physical damage (cracks, scratches, etc.) to the surface of the products and accessories resulting from misuse;
- b. contact with liquid, water, rain, extreme humidity or heavy perspiration, sand, dirt or the like, extreme heat, or food;
- c. use of the products or accessories for commercial purposes or subjecting the product or accessory to abnormal usage of conditions;
- d. other acts which are not the fault of us.

Use of non our branded products and accessories:

Defects or damage that result from the use of non our branded or certified products, accessories, software or other peripheral equipment.

Unauthorized Service or Modification:

Defects or damages resulting from service, testing, adjustment, installation, maintenance, alteration, or modification in any way by someone other than us or our authorized party.

Altered Products:

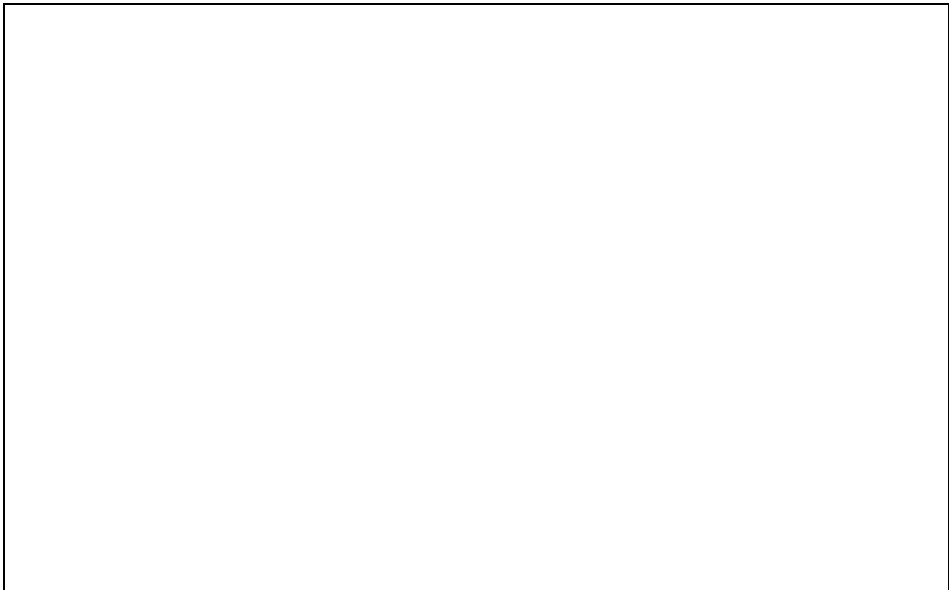
Products or accessories with:

- a. serial numbers or date tags that have been removed, altered or obliterated;
- b. broken seals or that show evidence of tampering;
- c. mismatched board serial numbers;
- d. or nonconforming or non our branded housings, or parts.

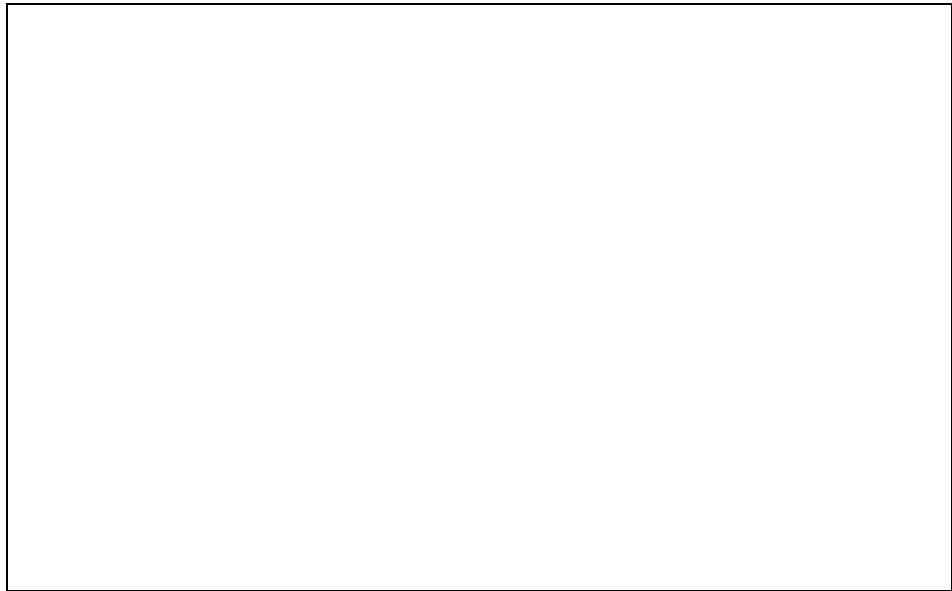
Communication Services:

Defects, damages, or the failure of products or accessories due to any communication service or signal you may subscribe to or use with products or accessories.

NOTES

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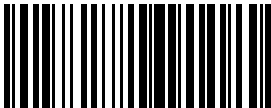
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