

AAHHi

Portable Two Way Radio



A73

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.

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SAFETY AND GENERAL INFORMATION

Important Information on Safe and Efficient Operation, Read This Information Before Using Your Radio.

The information provided in this document supersedes the general safety information contained in user guides published before.

Transmit and Receive Procedure

Your two-way radio contains a transmitter and a receiver .To control your exposure and ensures compliance with the occupational/controlled environment exposure limits, always adhere to the following procedure:

- ◆ Transmit no more than 50% of the time,
- ◆ To transmit, please press the Push to Talk (PTT) button.
- ◆ To receive calls, release the PTT button.

Transmitting 50% of the time, or less, is important because the radio generates measurable RF energy exposure only when transmitting (in terms of measuring standards compliance) .

Portable Radio Operation and EME Exposure

Antenna Care

Use only the supplied or the approved antenna for replacement. **DO NOT** hold the antenna when the radio is "IN USE". Holding the antenna affects the effective range.

Two-Way Radio Operation

When using your radio as a traditional two way radio, hold the radio in a vertical position with the microphone 1 to 2 inches (2.5 to 5 cm) away from the lips.

Body-Worn Operation

If you wear a radio on your body when transmitting, always place the radio in our supplied or approved clip, holder, holster, case, or body harness for this product.

If you do not use our supplied or approved body-worn accessories, and are not using the radio held in the normal use position, ensure the radio and its antenna are at least 1 inch (2.5 cm) from your body when transmitting.

Data Operation

If applicable, when using any data feature of the radio with or without an accessory cable, position the radio and its antenna at least 1 inch (2.5cm) from the body.

Electromagnetic interference/Compatibility

NOTE:Nearly every electronic device is susceptible to electromagnetic interference (EM) if inadequately shielded, designed, or otherwise configured for electromagnetic compatibility.

Facilities

To avoid electromagnetic interference and /or compatibility conflicts, turn off your radio in any facility where posted notices instruct you to do so. Hospitals or health care facilities may be using equipment that is sensitive to external RF energy.

Aircraft

When instructed to do so, turn off your radio when on board an aircraft .Any use of a radio must be in accordance with applicable regulations per airline crew instructions.

Medical Devices

Pacemakers

The Advanced Medical Technology Association recommends that a minimum separation of 6 inches (15 cm) be maintained between a handheld wireless radio and pacemaker .These recommendations are consistent with the independent research by and recommendations of the U.S. Food and Drug Administration.

Persons with pacemakers should:

- ◆ **ALWAYS** keep the radio more than six inches (15cm) from their pacemaker when the radio is turned ON.
- ◆ Not carry the radio in the breast pocket.
- ◆ Use the ear opposite the pacemaker to minimize the potentiality for interference.
- ◆ Turn the radio OFF immediately if you have any reason to suspect that interference is

taking place.

Hearing Aids

Some digital wireless radios may interfere with some hearing aids. In the event of such interference, you may want to consult your hearing aid manufacturer to discuss alternatives.

Other Medical Devices

If you use any other personal medical device, consult the manufacturer of your device to determine if it is adequately shielded from RF energy. Your physician may be able to assist you in obtaining this information.

Safety and General Use While Driving

Check the laws and regulations on the use of radios in the area where you drive. Always obey them. When using your radio while driving, please:

- ◆ Give full attention to driving and to the road,
- ◆ Use hands-free operation, if available.
- ◆ Pull off the road and park before making or answering a call if driving conditions so required.

Operational Warnings



Warnings

◆ For Vehicles with an Air Bag

Do not place a portable radio in the area over an air bag or in the air bag deployment area. Air bags inflate with great forces. If a portable radio is placed in the air bag deployment area and the air bag inflates, the radio may be propelled with great force and cause serious injury to occupants of the vehicle.

◆ Potentially Explosive Atmospheres

Turn off your radio prior to entering any area with a potentially explosive atmosphere, unless it is a radio type especially qualified for use in such areas as “Intrinsically Safe”. Do not remove, install, or charge batteries in such areas. Sparks in a potentially explosive atmosphere can cause an explosion or fire resulting in bodily injury or even death.

Note: The areas with potentially explosive atmosphere referred above include fueling areas such as below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine. Areas with potentially explosive atmosphere are often but not always posted.

◆ Blasting caps and Areas

To avoid possible interference with blasting operations, turn off your radio when you are near electrical blasting caps, in a blasting area, or in area posted;”Turn off two-way radio. Obey all signs and instructions.

Operational Cautions

Antenna

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.

Batteries

All batteries can cause property damage and/or bodily injury such as burns if a conductive material such as jewelry, keys, or beaded chains touches exposed terminals. The conductive material may complete an electrical circle (short circuit) and become quite hot. Exercise care in handling any charge battery, particularly when placing it inside a pocket, purse, or other container with meal objects.

Battery Charger Safety Instructions

1. Do not expose the charger to rain or snow.
2. Do not operate or disassemble the charger if it has received a sharp blow, or has been dropped or damage in any way.
3. Never after the AC cord or plug provide with the unit .If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician. An improper condition can result in a risk of electric shock.
4. To reduce the risk of damage to the cord or plug, pull the plug rather than the cord when disconnecting the charger from the AC receptacle.
5. To reduce the risk of electric shock, unplug the charger from the outlet before attempting any maintenance or cleaning.

6. Use of an attachment not recommended or sold by us may result in a risk of fire, electric shock ,or personal injury.
7. Make sure the cord is located so it will not be stepped on, tripped over ,or subjected to damage or stress.
8. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and /or electric shock. If an extension cord must be used, make sure that:
 - ◆ The pins on the plug of the extension cord are the same number, size, and shape as those on the plug of the charger.
 - ◆ The extension cord is properly wired and in good electrical condition.
9. The supply cord of this charger can not be replaced.

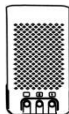
UNPACKING AND CHECKING EQUIPMENT

Carefully unpack the radio. We recommend that you identify the items listed in the following table before discarding the packing material. If any items are missing or have been damaged during shipment, file a claim with the carrier immediately.

Accessories List



Antenna



Li-ion Battery



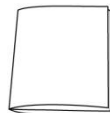
Belt Clip



Charger



Adapter



User Manual

PREPARATION

Charging the Battery Pack

1. Place the charger on a flat surface.
2. Insert the plug of the power cord into the jack on the charger.
3. Plug the cord into an AC outlet.
4. Insert the radio which with battery installed (Make sure turn the radio off before charging.) or individual battery pack into the charging slot.
5. It takes around 5 hours to charge till the battery is fully charged.

Note: Please charge the battery only with the approved charger, power supply, charging cable ect.. Initially charging the battery pack after purchase or extended storage (greater than 2 months) will not bring the battery pack to its normal operating capacity. After repeating the charge/discharge cycle two or three times, the operating capacity will increase to normal level.

Installing/Removing the Battery Pack

1. Align the convex part on the top of the battery with the groove of the chassis and insert it to fasten it.
2. Turn off the power, lift the battery latch upward and then remove the battery pack.



Installing/Removing the Antenna

1. Put the antenna on the connector and rotate the antenna clockwise till hand tight.
2. Rotate the antenna counter clockwise till you can remove it.



Attaching/Removing the Belt Clip

1. Screw the belt clip on the battery.
2. To remove the belt clip, unscrew the clip to remove it.



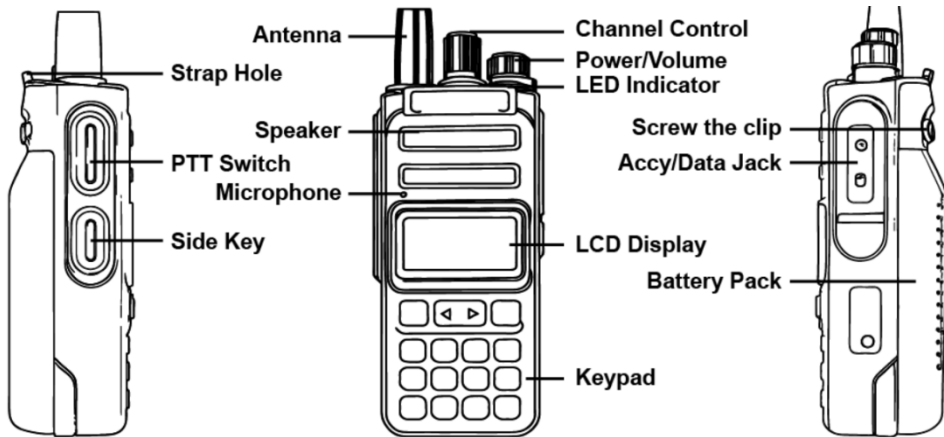
Attaching/Removing the Optional Accessory

1. Open(no remove) the accessory jack cover, then plug the accessory firmly into the jack.
2. To remove, pull the accessory and put the cover back in right position.

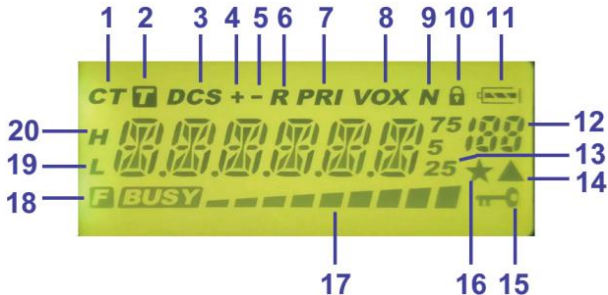


GETTING ACQUAINTED










Orientation



Display Screen Guide



No.	Icon	Explanation
1	CT	CTCSS
2	T	DTMF
3	DCS	DCS
4	+	Plus Offset Direction
5	-	Minus Offset Direction
6	R	Reverse Frequency
7	PRI	Priority Scanning
8	VOX	Hands-Free VOX

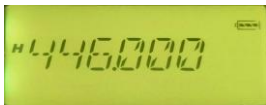
No.	Icon	Explanation
9	N	Wide or Narrow Bandwidth
10		Keypad Lock
11		Battery Meter
12		Display the current memory channel or menu No.
13		Display various alphanumeric information, such as: frequency, an operating channel or menu selection.
14	▲	Memory Channel
15		Keypad Lockout
16	★	FM Radio
17		<ul style="list-style-type: none"> •While transmitting, show the relative power output level: :HI :LOW •While receiving, show the relative strength of received signal.
18		Second Function, Select Mode
19	L	Low Output Power
20	H	High Output Power

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

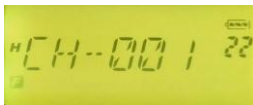
Basic Working Modes

There are three working modes, to choose the correct working mode is essential in order to operate smoothly.

1. In standby mode, press [**MENU**] key to access menu system.
2. Use [◀]/[▶] key to select the Menu No.21(MDF).
3. Press [**MENU**] key to enter sub menu setting mode.
4. Then use [◀]/[▶] key again to select the desired working mode from FREQ/CH/NAME.



VFO mode



CH mode



NM mode

5. Press [**MENU**] key to complete the setting.
6. Press [**BACK**] key till to exit menu system.

Note: You can also use programming software to select working mode.

Keypad Description

Key	What You Operate
[MENU]	<ol style="list-style-type: none">1) In standby mode, press [MENU] key to access menu system.2) In menu system, press [MENU] key to confirm your selection.3) Turn off the power, then press and hold [MENU] key, meanwhile, turn on the power, you can change working mode between VFO and CH/NM modes.
[◀]/[▶]	In standby mode, press [◀]/[▶] key to select an operating channel, menu value or others.
[BACK]	In menu system, press [BACK] key to exit the current menu and return to the superior menu until exiting the menu system.
[*]	<ol style="list-style-type: none">1) Short press: turn ON/OFF Reverse feature.2) Long press at least 2 seconds: start scanning and short press [◀]/[▶] key to select the scanning direction, press any keys except [◀]/[▶] key to exit scanning.
[#]	<ol style="list-style-type: none">1) Short press: turn ON/OFF FM radio feature(76.00-108.00MHz).2) Long press at least 2 seconds: lock or unlock the keypad.
[0]-[9]	In standby mode, press the corresponding number key to input frequencies or memory channel number.

LED Indicator



LED Indicator	Radio Status
Glows red	Transmitting
Flashes red	Low Battery Alert
Glows green	Receiving
Flashes green	Scanning



LED Indicator	Charging Status
Glows red	The battery is being charged.
Glows green	The battery has been charged completely.
The indicator is off.	The battery fails to be charged.

BASIC OPERATIONS

Turn the Power On or Off

Turn the [**Power/Volume Knob**] clockwise to turn the radio ON.

- *The display screen then shows the current channels, code and all features that are enabled. The radio is in standby mode.*

Turn the [**Power/Volume Knob**] counter clockwise to turn the radio OFF.



Adjusting the Volume

Rotate the [**Power/Volume Knob**] to adjust the volume.

Clockwise increases the volume and counter clockwise decreases it. You may need to adjust the volume more precisely while communicating with other parties.

- *Do not hold the radio close to your ear. If the volume is set to an uncomfortable level, it could hurt your ear.*



Selecting a Channel

Rotate the [**Tuning Control**] or use [**◀**]/[**▶**] key to select your desired channel.

- *When a non-programmed channel is selected, an alert tone sounds will be heard.*



Transmitting

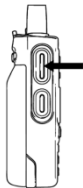
To communicate, all radios should be in the same channel/frequency and signaling & encryption (CTCSS tone, DCS code, AEC ect.).

- *An analog channel can't communicate with a digital channel.*

1. To talk, press and hold **[PTT]** button and speak

- *For best sound quality at the receiving station, hold the microphone approximately 1.5 inches (3~6 cm) from your mouth.*

2. Release the **[PTT]** button to standby.



Receiving

Your dealer may have programmed CTCSS/DCS, Scrambler 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.

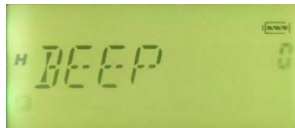
If your selected channel is not set up with a signaling type, you will hear calls made by any party (not just those in your system).

MENU

Menu Access

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

- *The menu list appears.*



2. Use [◀]/[▶] key to select the desired main menu.

3. Press [**MENU**] key to enter sub menu setting mode.

4. Then use [◀]/[▶] key again to select the desired sub menu number.

5. Press [**MENU**] key to enter setting mode.

6. Use [◀]/[▶] key to switch ON/OFF or select numeric values.

7. Press [**MENU**] key to complete the setting.

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

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

Note:

*In this manual, when you enter and use menu system to select, Please make sure the operation in 10 seconds after pressing [**MENU**] key. Otherwise, the radio will turn back to original working mode.*

No.	Menu	Selectable	Default
0	BEEP	ON/OFF	ON
1	STEP	5K/6.25K/10K/12.5K/25K	5K
2	SQL	0-9	5
3	SAVE	1/2/3/4/OFF	3
4	TXP	HIGH/LOW	HIGH
5	ROGER	OFF/ON	OFF
6	TOT	15~600S(step:15S)	90
7	VOX	OFF/1~10	OFF
8	W/N	NARR/WIDE	NARR
9	SC-REV	TO/CO/SE	TO
10	R-DCS	OFF/D023N~D754I	OFF
11	R-CTCS	OFF/67.0~254.1	OFF
12	T-DCS	OFF/D023N~D754I	OFF
13	T-CTCS	OFF/67.0~254.1	OFF
14	ABR	1S-5S/OFF	5
15	S-ANI	OFF/ON	OFF
16	ANI-ID	Set through programming software	Set by user

No.	Menu	Selectable	Default
17	PTT-ID	OFF/BOT/EOT/BOTH	OFF
18	PTT-LT	0~30	10
19	DTMFST	DT-ST/ANI-ST/DT+ANI/OFF	DT-ST
20	S-CODE	1~8	1
21	MDF	FREQ/CH/NAME	FREQ
22	BCL	OFF/ON	OFF
23	AUTOLK	OFF/ON	OFF
24	SFT-D	OFF/+/-	OFF
25	OFFSET	00.000-70.000	05.500
26	MEMCH	CH-000~CH127	CH-000
27	DEL-CH	CH-000~CH127	CH-000
28	WT-LED	YELLOW/GREEN/RED/OFF	YELLOW
29	RX-LED	GREEN/RED/YELLOW/OFF	GREEN
30	TX-LED	RED/YELLOW/GREEN/OFF	RED
31	RESET	ALL/VFO	ALL

Table 1 - 50 CTCSS Tones Table(Hz)

67.0	79.7	94.8	110.9	131.8	156.7	171.3	186.2	203.5	229.1
69.3	82.5	97.4	114.8	136.5	159.8	173.8	189.9	206.5	233.6
71.9	85.4	100.0	118.8	141.3	162.2	177.3	192.8	210.7	241.8
74.4	88.5	103.5	123	146.2	165.5	179.9	196.6	218.1	250.3
77.0	91.5	107.2	127.3	151.4	167.9	183.5	199.5	225.7	254.1

Table 2 - 105 DCS Codes Table

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

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:

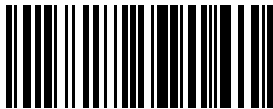
Defects, damages, or the failure of products or accessories due to any communication service or signal you may subscribe to or use with products or accessories.

For more relevant information, please visit our website (www.aahhi.com) or contact us (E-mail:info@aahhi.com).

AAHHi



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www.aahhi.com



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