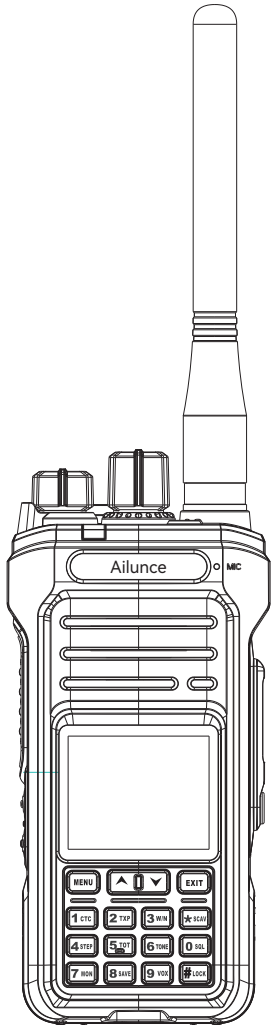
Ailunce



HA1UV

Two Way Radio
User's Manual

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For downloading further resources:
Brochures, Software/Firmware, Manual etc, Please contact your direct reseller first OR go to website retevis.com and check “support” in the each product link to download it.

Important Attentions

Before using the Ailunce HA1UV,please read the manual which contains important operating instructions for safe usage,RF Energy Awareness,control information,and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards.

Overview

The HA1UV is exclusively crafted for radio enthusiasts. It is an Ailunce UV band two-way radio that features an IP67 waterproof rating, dual-band scanning receiver (UHF/VHF), repeater capabilities,
Type-C charging, and a long standby time with a 2800mAh battery.

Unpacking and Checking Equipment

We kindly request you to inspect the packaging of this product for any visible signs of damage. Proceeding with caution, open the packaging and ensure that the contents align with the
accompanying packing list. If you discover any discrepancy, loss, or damage to the product or its
accessories during transit, it is imperative to contact our dealers immediately.

What's in the Box?

The radio is packaged with the following components: the radio unit, a 2800mAh Lithium-ion battery pack, a TYPE-C USB charging cable, a belt clip, removable antenna, a charging base, and a user manual.

Battery Attentions

The performance of the battery pack may be compromised, or the lifespan of the battery cells may be shortened, if the following safety instructions are not followed.

1. The battery packs must be stored and handled with care to prevent any physical damage. Dropping or crushing the battery packs may lead to internal damage, which could result in a fire or explosion.

2. Ensure that the battery packs are charged using the specified charger and following the recommended charging procedures. Using incompatible chargers or incorrect charging methods may damage the battery cells and pose a safety hazard.

3. Do not attempt to repair or modify the battery packs in any way. This includes disassembling, soldering, or modifying the terminals. These actions may cause internal damage, heat generation, and potentially lead to a fire, explosion, or leakage of harmful chemicals.

4. Keep the battery packs away from any sources of fire or heat. Exposure to high temperatures may cause the battery cells to rupture or explode. Dispose of used battery packs in accordance with local regulations to ensure safe and environmentally responsible disposal.

5. Never let the battery packs come into contact with water or any other liquids. If the battery packs become wet, they must be dried immediately using a clean cloth. Do not use or charge a wet battery pack as it may cause damage or a safety hazard.

6. If the battery packs emit an abnormal odor, heat up, or show any signs of discoloration or deformation, stop using them immediately. Contact your Ailunce dealer or distributor for further assistance and replacement options.

7. The battery packs should only be used within the specified temperature range of -10℃ to +30℃. Operating the battery packs outside of this range may reduce their performance and shorten the lifespan of the battery cells.

8. Avoid leaving the battery packs fully charged, completely discharged, or exposed to excessive temperatures (above 30℃) for extended periods of time. This may reduce the service life of the battery. If the battery packs are not in use for a long time, they should be discharged and removed from the transceiver.

By following these safety instructions, you can ensure the safe and effective use of your battery packs while

minimizing the risk of accidents or damage. Always prioritize safety when handling and using batteries to protect yourself and others.

Charging Instructions

1. WARNING: It is strictly prohibited to charge the battery pack in areas with extremely high temperatures, such as near open fires or stoves, inside a vehicle exposed to direct sunlight, or in any other environment that may elevate the temperature significantly. In such conditions, the safety/protection circuit within the battery pack will activate, resulting in the termination of charging.

2. It is imperative not to charge the transceiver during a thunderstorm. This could lead to electric shock, fire, or damage to the transceiver. It is advisable to disconnect the power adapter before the onset of a storm.

3. It is crucial not to charge or leave the battery in the charger for more than 8 hours. If the battery pack is not fully charged within the specified time frame, it is recommended to stop charging and remove it from the charger. Continuing to charge beyond the recommended duration could potentially cause a fire, overheating, or even battery rupture. Additionally, it is advisable to monitor the battery pack's condition during charging. If any abnormalities are observed, it is essential to stop using the battery pack immediately.

4. It is strictly prohibited to insert a wet or dirty transceiver with an attached battery pack into the charger. This could lead to corrosion of the charger terminal or potential damage to the charger. The charger is not designed to be waterproof.

5. It is crucial to adhere to the specified temperature range of 10℃ to 30℃ when charging the battery pack. Ailunce recommends charging the pack at 25℃ (77℉). Charging the battery pack outside of this temperature range may lead to overheating, rupture, or reduced battery performance and lifespan.

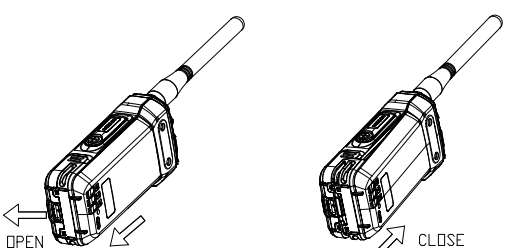
Charging Procedure

1. Ensure the power adapter is securely plugged into the designated power supply socket.
2. Carefully insert the power adapter's output terminal into the DC jack located at the rear of the charging unit.
3. Gently place the battery or radio unit, equipped with the battery, into the charging kit.
4. Verify that the battery and the charging kit's terminal are firmly in contact. This is indicated by the charging indicator turning red, signifying the commencement of the charging process.
5. Upon completion of charging, which typically takes approximately 7 hours, the indicator will turn green.

Attachment Installment

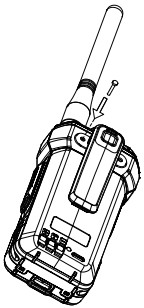
1.Installation of the Battery

Align the grooves of the battery pack with the designated guides located on the rear of the transceiver. Apply gentle pressure to seat the battery securely. Ensure a firm connection between the battery and the transceiver until the release latch on the transceiver's top locks into position. A distinct "click" sound will indicate that the battery is securely locked in place. To remove the battery, ensure that the transceiver is powered off. Subsequently, slide the release latch upward and gently detach the battery pack from the transceiver.



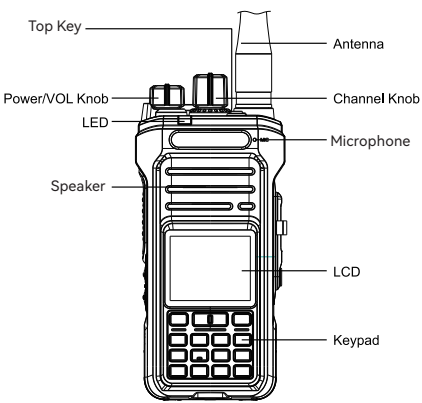
2.Installation/Uninstallation of Belt Clip

To install the belt clip, align it with the designated grooves located on the rear of the radio. Secure the clip by screwing it in place if necessary. For removal, turn the screws in an anticlockwise direction.



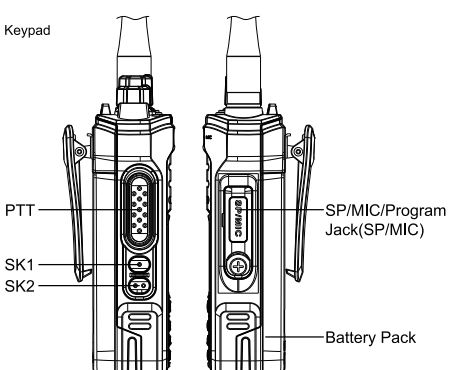
Familiar with Radio

1.Parts of the radio



2.Custom Side-Key Functions

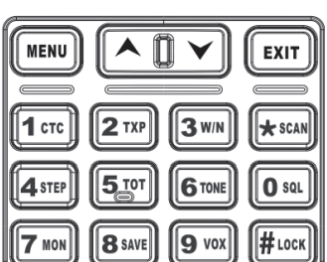
You can custom set below functions on the radio:High/Low power,turn on/off scan,FM radio,VOX,Zone +/-, Sub PTT;Squelch,Monitor,FM Radio,Inverse Frequency/Talk Around,Emergency,DTMF Code;



Menu Icon	Description
	Signal bar;
	Speaker
	Radio Lock;
	Earpiece Plug in;
	Scan function
	Monitor
	Emergency system
	FM broadcast radio
	Charging
	Remaining battery display
C51	Current channel number in the zone;
Z1	Current zone number;
CH-1	Current channel number
V	VOX ON;
CTC	RX CTC/DCS
L	TX Power
+/-	Shift Direction +/-
W	Bandwidth

Key Function Instruction

【Menu】	Menu/Confirm button.
【Exit】	Short press: Return to previous menu or Exit menu;
【▲▼】	Long press: Switch MRVFO mode. Up/down through channels and menu settings
【*scan】	When scanning change the scan direction. Short press:Switch Band A/B;Long press:Start scan;
【0 SQL】	Long press:Quickly enter squelch level setting. Short press:Switch Single/Dual band.
【#Lock】	Long press:Lock or unlock.



Feature Summary

- 256 Channels
- Standard CTCSS/DCS Tones
- Support Splitting CTCSS/DCS Tone
- Selectable High/Middle/Low TX Power
- Channel Scan/Priority Scan
- Wide/Narrow Bandwidth
- 1.77 inch Color LCD
- Channel Name, Number or Frequency Display;
- Backlight Keypad
- Busy Channel Lockout
- Low Battery Alert
- 3 Programmable Function Keys
- IP67 Waterproof
- 2800mAhType-C Charging battery
- FM Radio
- Emergency Alarm Function
- DTMF Signaling
- Dual Standby
- Sub-PTT customized key
- Three key lock modes.
- CTCSS/DCS scanning
- NOAA Receiving / NOAA Alarm;

Menu Operations

Radio Setting

1.Display Mode

You are provided with the option to select and display the channel frequency, channel name, or CH number. To proceed with this selection, please follow the steps below:

1. Press the [MENU] button to access the settings interface.
2. Utilize the [▲] or [▼] buttons to choose between options: frequency, name, or channel.
3. Once you confirm the selection, press the [MENU] button again to save the changes and exit the settings menu.

2.Band Setting

Please select the desired display mode, either single band or dual band. To proceed, follow the steps below:

1. Press the [MENU] key to access the Band Setting menu.
2. Utilize the "▲" or "▼" keys to select Band A or Band B.
3. Confirm or cancel your selection by pressing the 【MENU】 key.

3.Back light

Adjust the screen brightness level and backlight duration, with a maximum backlight duration of 60 minutes.

The backlight remains constantly illuminated when the backlight time is set to 0.

(1) To adjust the brightness level, please rotate the channel knob. Rotating the knob counterclockwise will darken the screen, while rotating clockwise will brighten the screen.

(2) To adjust the bright time, please press either the "▲" or "▼" key.

4.Key Function

(1)Key Lock mode.Choose Auto or manually to lock the radio.

(2)Key Lock Setting.In order to prevent accidental frequency change or inadvertent transmission.Various aspects of the radio's keys and switches may be locked out.You can choose to lock keyboard,channel knob,or side-key,or to lock all of them.

(3)Side Key Function

Long/Short custom side-key function of the TK key,SK1,SK2.

The selective custom function is a comprehensive suite of features, encompassing the following capabilities: power switch, squelch, monitor, scan, zone+/-, FM radio, talk around, reverse frequency, activation/deactivation of emergency alarm, programmable PTT, and optional signaling code. To choose a custom function, press the "▲" or "▼" key. Subsequently, press the 【Menu】 key to select the desired function.

5.Audio

1)Audio Enable.

Here choose Transmit permit tone,key beep and Voice broadcast,Roger Beep.

Press "▲" or "▼" key to choose tones,press the 【Menu】 key to confirm.

f voice broadcast is enabled,and the radio is low power,it will broadcast "Low voltage".

(2)Mic Gain.

Press the【Menu】 key to enter mic gain setting,press"▲" or "▼" key to choose Normal,Strengthen,and low mic gain.

6.VOX

The VOX function enables automatic transmit-receive switching, triggered by voice input detected by the microphone. When the VOX switch is activated, there is no need to manually press the PTT switch for transmission. To configure the VOX settings, follow these steps:

1. Rotate the channel knob to adjust the VOX threshold level from 1 to 15.
2. Utilize the up or down key to modify the VOX delay time setting.
3. Rotate the channel knob again to finalize the VOX delay time. The maximum delay time that can be set is 2000ms.

By following these instructions, you can effectively configure the VOX function to suit your communication needs.

7.Power Save

This feature effectively mitigates battery drainage during idle periods, however, it may result in incomplete data transmission. To configure the power saving settings, you may utilize the following methods: (1) Press the up and down keys to select the desired power saving mode or delay time setting. (2) Rotate the channel knob to choose the power saving mode and delay time. The default power saving mode is set to 1:4. Additionally, the radio offers menu settings. If no operations are performed within the designated time, the radio will exit the menu automatically and revert to the standby interface. To adjust the exit time, switch the channel. The maximum set time allowed is 255 seconds, with 'O' indicating no limit.

8.Radio Information

It will display the radio Model,software or H/W version.

Zone Setting

The radio is capable of supporting 16 zones, with each zone encompassing 16 channels.

①The term "All channels" refers to the comprehensive listing of all channels established on this radio.

②To choose a specific zone displayed on the radio, utilize the "Select Zone" option.

③Alternatively, to modify the name of a zone, utilize the "Edit Name" feature.

④For assigning channels to a specific zone, employ the "Edit Channel" function.

⑤Lastly, press the "+Add Zone" button to add a fresh zone to the radio.

Channel setting

(1)Channels Alias

To designate a channel name, follow the keyboard settings outlined below. For instance, press the 【2TXP】 key repeatedly to select from the options 2, A, BC, a, b, and c. To finalize the channel name, press the menu key. If the cursor reaches the last character and you wish to delete it, press 【EXIT】.

(2)Bandwidth

Select Narrow and Wide bandwidth.

(3/4) TX frequency operates similarly to RX frequency, but transmission outside the designated GMRS frequency range is prohibited.

(5)CTCSS/DCS: Receiving and transmitting CTCSS/DCS can be set independently.

① Use the up and down keys to select the desired RX or TX CTCSS/DCS setting.
② To quickly choose a CTCSS/DCS type, press [#lock] briefly.
③ To adjust the CTCSS/DCS values, turn the channel knob.
④ Please refer to the CTCSS/DCS tones table below for reference.

CTCSS TOE FREQUECY (Hz)					
67	69.3	71.9	74.4	77	79.7
82.5	85.4	88.5	91.5	94.8	97.4
100	103.5	107.2	110.9	114.8	118.8
123.0	127.3	131.8	136.5	141.3	146.2
151.4	156.7	159.8	162.2	165.5	167.9
171.3	173.8	177.3	179.9	183.5	186.2
189.9	192.8	196.6	199.5	203.5	206.5
210.7	218.1	225.7	229.1	233.6	241.8
250.3	254.1				

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

(6)Squelch level

When the Squelch level is adjusted to a higher setting, the background hiss noise will be effectively suppressed, resulting in the reception of only stronger signals. Conversely, setting the Squelch level to a lower setting will permit the reception of weaker signals; however, this may increase the occurrence of intermittent background hiss noise.

(7)TX Power.

There are three power level on HA1UV: Low, Middle, High.

(8)TX Permission Set

Configure the transmission permissions, transmission time, and timer settings. Within this menu, rotate the channel knob to fine-tune the TOT (Time on Transmission) duration. Press the up and down keys to select from the available transmission permission options: CTC/CDC Match, Channel Free, Receive Only, and Always Allow.

(9)Signaling System

Select a signaling list for the present channel. The contents of the signaling list can be customized within the signaling menu.

(10)Scan List

Select a scan list for the current channel and configure it in the scan menu. Ensure that the scan list is appropriate for the current channel and meets the scanning requirements.

(11)Emergency List

Select an emergency list that is suitable for the current channel and configure it in the Emergency menu. Ensure that the chosen list meets the necessary requirements and standards.

(12)Talk Around & Inverse
Enable this feature, which allows communication around the repeater frequency.

(13)VOX Enable
Enable the VOX function for the current channel by pressing the menu button to select VOX and confirm your selection.

Scan

To enter the scan setting menu, press the [Menu] key. The following options are available:
1. Scan List Alias: To delete a character when the cursor is behind it, press [EXIT].

2. Scan Condition: Select either carrier or CTCSS/DCS match as the scan condition. Choosing carrier means scanning will occur regardless of whether the scanned channel has a CTCSS tone. Selecting CTCSS/DCS means scanning will only occur for signals with the same frequency and CTCSS tone.

3. Scan Mode: Choose from Carrier, Time, or Search scan modes. In Carrier mode, scanning stops when a signal is detected and resumes immediately after the signal is lost. In Time mode, scanning stops when a signal is detected and pauses to wait for further activity, resuming if no operation is carried out within 5 seconds. In Search mode, scanning stops when a signal is detected. The default mode is CO.

4. TX Mode Set: Select from Selected, Last Active Channel, or Designated Channel.

5. Designated Channel Select: If a signal is scanned, transmission will occur from this designated channel.

6. Priority Channel 1: Choose a priority scan channel.

7. Priority Channel 2: Choose the second priority scan channel.

8. Channel List: Add scanned channels to the list, and scanning will occur according to these channels.

9. Hang Time: Set the hang time if the scan carrier disappears. Adjust the time by rotating the channel knob.

Signaling

(1) Common Setting
PTT ID Setting: Use the up and down keys to configure the PTT ID type, Side tone, BOT, and EOT.
①Type: Rotate the channel knob to select from the following PTT ID types: Both, BOT, EOT. Rotate the knob to choose the desired type.

PTT ID type	Description
Off	The PTT ID is not transmitted.
BOT	You can transmit the PTT ID when pressing the PTT begin of transmit.
EOT	You can transmit the PTT ID when pressing the PTT end of the transmit.
Both	You can transmit the PTT ID when pressing/releasing the PTT.

②BOT and EOT: Transmits the PTT ID at the beginning or end of transmission. Edit the PTT ID using the number keys.
Decode Setting:
①Use the up and down keys to select from the following options: Disable ID, Revive ID, Call ID, Stun type, Show ANI.
②Edit the decode ID using the number keys. Accepted characters are: 0-9, A-D, *, #.
(2) DTMF Signal
DTMF System:

①System Alias: Operate similarly to the channel Alias. Press 【EXIT】 when the cursor is behind a character to delete it.
②"DTMF Signaling": Default code squelch is enabled.
③DTMF Group Code: Rotate the channel knob to select the group code (0FF, A, B, C, D, *, #).
④DTMF Code Length: Rotate the channel knob to set the code time length.
⑤Fast Call Lists: DTMF signaling codes in this list can be transmitted directly. Configure the fast call list in the CPS.
⑥Encode & Decode: Enable or disable encoding and decoding options. Press 【MENU】 to toggle encoding or decoding on/off.
⑦Default: 1 DTMF system is listed on the radio.

Emergency

System Alias: The emergency system alias operates similarly to the channel alias. To delete a character when the cursor is behind it, press the 【EXIT】 key.
Alarm Type: Choose the appropriate emergency call type using the up and down keys. Confirm your choice with the Menu key:
① Siren Only: Generates alarm sound without transmission.
② Regular: Sends an alarm signal via radio and provides audio indication of emergency mode.
③ Silent: Transmits an alarm signal silently without audio indication.
④ Silent w/Voice: Sends an alarm signal without explicitly indicating emergency mode audio.

Alarm Modes:Use the up and down keys to select the desired emergency mode, and confirm with the Menu key:
① Emergency Alarm**: Activates the alarm sound only on the radio.
② Emergency with Call**: MIC is activated for transmission without an alarm tone.
③ Emergency Alarm w/Call: Sends an emergency call accompanied by an alarm sound upon activation.
Alarm Revert Channel: Select the appropriate channel for transmitting the emergency call.
Attribute Setting: The default setting enables local TX alarm functionality.

Call Tone

There are ten call tones available for selection. To initiate an automatic call to the receiver while in standby mode, please press and hold the "6TONE" button.

FM Radio

The FM radio has a receiving frequency range of 76 to 108 MHz. To turn the FM radio on or off, briefly press the "MENU" button. Pressing the "Up" or "Down" button briefly will increase the receiving frequency by 2 MHz. Rotating the Channel knob will adjust the receiving frequency by increments of 0.1 MHz. For automatic channel searching, press and hold the "Up" or "Down" button. Once a channel is detected, the radio will automatically switch to the corresponding receiving frequency.

Weather Setting

1.Weather Alarm.Press【MENU】 to enter the menu to turn on or off Weather Alarm.
2.NOAA Channel List.
Press【▲】【▼】 to choose the NOAA channel,and press [MENU】 to confirm select this channel,and check the NOAA channel info.
Factory Reset
A factory data reset erases your data from the radio to the default factory setting.

Channel No.	Frequency（MHz）
NOAA1	162.5500
NOAA2	162.4000
NOAA3	162.4750
NOAA4	162.4250
NOAA5	162.4500
NOAA6	162.5000
NOAA7	162.5250
NOAA8	161.6500
NOAA9	161.7500
NOAA10	161.7750
NOAA11	162.0000
NOAA12	163.2750

DETAILED FUNCTION DESCRIPTIONS

1. Power-On Password Configuration

Configure the power-on or read/write password via the CPS.
If forget the password,please contact the dealer to reset the data.

2.Scan Function Use

① Configure Scan Settings.
Based on the scan list settings, establish the scan criteria, select the scan mode, and designate the transmit channel.
② Channel Creation and Saving.
Create and subsequently save the channels within the scan list.
③ Channel Configuration
Navigate to Channel Setting >> Scan List >> select the desired scan list for the current channel.
④ Scanning in CH Mode. In CH mode, initiate a scan of the channels in the current scan list by pressing and holding the 'SCAN' button. However, these channels must first be added to the scan list within the channel settings.
⑤ Scanning in VFO Mode. In VFO mode, pressing and holding the 'SCAN' button will commence scanning based on the frequency step. Utilize the up and down keys to alter the scanning direction.

3.CTCSS/DCS scanning

Under the VFO and CH mode without a CTCSS tone,long press the [1CTC]button enter the RX CTCSS/DCS setting menu,short press ['scan]will begin scanning the transmitting radio CTCSS/DCS.Press [MENU]key to save the scanned receiving CTCSS/DCS.

4. Emergency System Configuration

To configure the emergency settings, proceed as follows:
① Access the emergency system menu. Here, you will be able to set the following parameters: emergency system name, emergency type, emergency mode, and alarm revert channel.
② Navigate to the channel setting menu and select "Emergency List". Here, you can add the current channel to the emergency list. If no emergency list is added for this channel, no alarm sound will be transmitted.

③ Move to the "Radio Setting" menu and select "Key Function". Here, you can assign a custom key to start or stop the emergency alarm.
④ By default, a short press of the TK key will initiate the emergency alarm, while a long press of the TK key will deactivate it.

5. Dual Standby

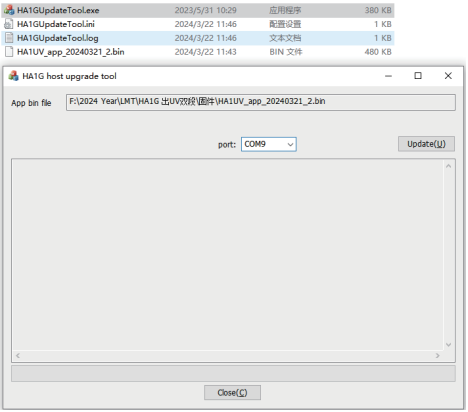
① Press [#LOCK] briefly to toggle between single-band and dual-band modes.
② Navigate to "Radio Setting" >> "Band Setting" and select either Band A or Band B.

6. DTMF

① DTMF Decoding
To enter Signal Decode settings, press the [MENU] button.
Under Stun Type, selecting Stun TX authorizes others to disable your radio's transmission using the Stun ID, while you retain receiving capabilities. Choosing Stun TX/RX permits others to disable both transmission and reception with the Stun ID, rendering your radio unable to communicate.
The Revive ID enables others to restore your radio's functionality if it has been disabled by another radio.
The Call ID serves as the radio's identification code. Transmitters require this code to initiate DTMF signaling.
To toggle the display of the ANI ID, rotate the channel knob.
② DTMF Encoding
To access DTMF System settings, press [MENU].
Utilize programming software to establish the Fast Call List.
Select the desired fast call list and press [MENU] to initiate the DTMF call.
③ PTT ID
The PTT ID function transmits an identification code during a call. When Show ANI ID is enabled, recipients can view the caller's ID using the received PTT ID.
Select the appropriate PTT ID Type.

7.Firmware update operation

The firmware can fix bugs found when used, and new features can be added.



To upgrade the firmware of your HA1UV device, please follow these instructions carefully. Visit either the Retevis or Ailunce website to download the latest firmware application.

① Once downloaded, open the "upgrade tool" and ensure that the current firmware file is selected for automatic upload.

② Proceed by clicking on the [Update] button.

③ To enter the DFU mode, press and hold the PTT+SK1 buttons simultaneously and then turn on the radio. The indicator will turn red, indicating that the radio is in the correct mode for the upgrade.

④ If all the above steps are correctly followed, the upgrade operation will commence and should be completed successfully within a few seconds.

Specifications

General	
Frequency Range	TX: 144-148Mhz / 420-450Mhz; RX: 136-174Mhz,/400-480Mhz; FM Radio 76-108Mhz (only receive)
Channel Capacity	256
Working Voltage	DC 7.4V
Working Temperature	10℃~+30℃
Battery Capacity	2800mAh
Antenna Impedance	50Ω
Band Width	12.5KHz/25KHz;
Transmitter	
Output Power	≤5W
Adjacent Channel Power	Wide band:S-65dBc;Narrowband:S-62dBc;
CTCSS/CDCSS Modulation	Wide band:0.75KHz±0.1KHz Narrowband:0.4KHz±0.1KHz
Audio Distortion	≤5%
Modulation Sensitivity	8-12mV
Maximum Frequency Deviation	Wide-band:≤5KHz;Narrowband:≤2.5KHz
Spurious Power	≤-20dBm;
Modulation Mode	Wide band:16KφF3E;Narrowband:11KφF3E
Transmit Current	≤1.70A
Pr-emphasis Character	6dB/every time the frequency will increase

Receiver	
Sensitivity	Wide band;-123dBm;Narrowband;-124dBm;
Voice Output Power	2500mW
Audio Distortion	≤5%
Obstruct	≥85dB
Inter-modulation	Wide band;65dBc;Narrowband:60dBc
Adjacent Channel Selection	Wide band;65dBc;Narrowband;60dBc
Spurious Power	RX≤-57dBm
Spurious Rejection	≥65dBc
Receiving Current	≤400mA

Troubleshooting

The transceiver does not turn ON	The battery is exhausted.	Charge the battery pack,or replace the batteries.
	Loose the connection of a battery pack（case).	Clean the battery terminals
No sound comes from the speaker	The volume level is too low	Rotate Volume Knob to adjust the level.
	The squelch level is too high	Adjust the squelch level
	An external speaker is connected to the [SP]jack	Check the external speaker connection.
	The CTCSS tone is not compatible	Disable CTCSS/DCS or be sure setting matches incoming transmission.
Keypad is unresponsive	Keyboard locked or not	Check if the keypad has been locked.
		Check if other keys are currently pressed
Battery life lower than expected	Be sure the charger indicates the battery is fully charged. The battery pack capacity will naturally diminish over a number of charge cycles.This s the case with all lithium batteries	
Transmitting is impossible	Set the transmit power level to High.	
	The PTT Lock function is activated.	Turn OFF the PTT Lock function on the MENU screen.
	The Busy Lockout function is activated.	Turn OFF the Busy Lockout function on the MENU screen.
	The transmit frequency is out of the amateur radio band.	Set the transmit frequency within the amateur radio band.

The list aims at helping you correct the problems that don't belong to the device's fault.If you can't find out the reason for problems or can't work them out,please contact your seller or customer service.As follow email address:hams@ailunce.com.

CAUTION

User' instructions should accompany the device when transferred to other users.

Unauthorized modification and adjustment Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services. Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.

Radio License

Governments keep the radios in classification. Two-way radios are only operated on authorized radio frequencies that are regulated by the local radio regulatory authorities (such as FCC, ISED, OFCOM, ANFR, BFTK, ComReg, Bundesnetzagentur, and so on.). For detailed classification and the use of your two-way radios, please contact the local government radio management departments. Use of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

FCC

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is

encouraged to try to correct the interference by one or more of the following measures:

—Reorient or relocate the receiving antenna.

—Increase the separation between the equipment and receiver.

—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

—Consult the dealer or an experienced radio/TV technician for help.

Disposal

The crossed-out wheeled-bin symbol on your product, literature, or packaging reminds you that all electrical and electronic products, batteries, or accumulators must be taken to designated collection locations at the end of their working life. Do not dispose of these products as unsorted municipal waste. Dispose of them according to the laws and rules in your area.

RF Safety

This two-way radio uses electromagnetic energy in the radio frequency (RF) spectrum to provide communications between two or more users over a distance. RF energy, which when used improperly, can cause biological damage. Please refer to the following websites for more information on what RF energy exposure is and how to control your exposure to assure compliance with established RF exposure limits: http://www.who.int/en/

Transmit no more than the rated duty factor 50% of the time. Transmitting necessary information or less, is important because the radio generates measurable RF energy exposure only when transmitting in terms

of measuring for standards compliance. For users who wish to further reduce their exposure, some effective measures to reduce RF exposure include:

• Reduce the amount of time spent using your wireless device.

• Use a speakerphone, earpiece, headset, or other hands-free accessory to reduce proximity to the head (and thus head exposure).

While wired earpieces may conduct some energy to the head and wireless earpieces also emit a small amount of RF energy, both wired and wireless earpieces remove the greatest source of RF energy (handheld device) from proximity to the head and thus can greatly reduce total exposure to the head.

• Increase the distance between wireless devices and your body.

• This radio is designed for and classified as "Occupational/Controlled Use Only".

Occupational/Controlled environments are defined as locations where there is exposure that may be incurred by people who are aware of the potential of exposure, for example, as a result of employment or occupation. It means a radio must be used only by individuals aware of the hazards, and the ways to minimize such hazards; Not intended for use in a General population/uncontrolled environment.

• Hand-held Mode

To control your exposure and ensure compliance with the controlled environment exposure limits, always adhere to the following procedure:

-To receive calls, release the PTT button.

-To transmit (talk), press the Push-to-Talk (PTT) button in front of the face.

-Hold the radio in a vertical position with the microphone (and other parts of the radio including the antenna) at least one inch (2.5 centimeters) away from the nose or lips.

Electromagnetic Interference/Compatibility

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

During transmissions, your radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so, such as hospitals or healthcare facilities.

• Persons with pacemakers, implantable cardioverter defibrillators (ICDs) or other active implantable medical devices should

• Consult with their physicians regarding the potential risk of interference from radio frequency transmitters, such as portable radios (poorly shielded medical devices may be more susceptible to interference).

• Turn the radio OFF immediately if there is any reason to suspect that interference is taking place.

• Do not carry the radio in a chest pocket or near the implantation site, and carry or use the radio on the opposite side of the body from the implantable device to minimize the potential for interference. 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.

WARNING: MODIFICATION OF THIS DEVICE TO RECEIVE CELLULAR RADIOTELEPHONE SERVICE SIGNALS IS PROHIBITED UNDER FCC RULES AND FEDERAL LAW.

Turn off your radio in the following conditions:

• Turn off your radio prior to entering any area with a potentially hazardous or explosive atmosphere. Only radio types that are especially qualified should be used in such areas as "Intrinsically Safe". Note: the areas with potentially explosive atmosphere referred to above include blasting caps, blasting areas, inflammable gas, dust particles, metallic powders, grain powders, 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 atmospheres are often – but not always posted.

Use of Communication Devices While Driving

• Always check the laws and regulations on the use of radios in the areas where you drive. Use of Communication Devices, for example, mobile radio, may not be allowed.

• 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 or regulations so require.

• Do not place a portable radio in the area over an air bag or in the airbag deployment area.

The radio may be propelled with great force and cause serious injury to occupants of the vehicle when the airbag inflates.

Protect your hearing

• Use the lowest volume necessary to do your job. Turn up the volume only if you are in noisy surroundings.

• Limit the amount of time you use headsets or earpieces at high volume.

• When using the radio without a headset or earpiece, do not place the radio's speaker directly against your ear.

• Use carefully with the earphone maybe possible excessive sound pressure from earphones and headphones can cause hearing loss.

CAUTION: Exposure to loud noises from any source for extended periods of time may temporarily or permanently affect your hearing.

The louder the radio's volume, the less time is required before your hearing could be affected.

Hearing damage from loud noise is sometimes undetectable at first and can have a cumulative effect.

Batteries Safety

• WARNING: KEEP NEW OR OLD USED BATTERIES OUT OF REACH OF CHILDREN.

• In the event of a battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek
medical advice immediately.

• If a radio or a battery has been submerged in water, please dry and clean it before use. Do not dry the radio or battery with an appliance or heat source, such as a hair dryer or microwave
oven. If the radio has been submersed in a corrosive substance (e.g. saltwater), rinse the radio and battery in fresh water, then dry them.

Since batteries are sensitive to high temperatures when storing them, keep them in a cool and dry place. The recommended temperature should be between +10 ℃and +30℃and never exceed
+30℃. Batteries should therefore not be stored next to radiators or boilers nor in direct sunlight.

Extremes of humidity (below 35% and above 95% relative humidity for sustained periods should be avoided since they are detrimental to both batteries and packing. Although the storage life of batteries at room temperature is good, storage is improved at lower temperatures provided special precautions are taken. Also, accelerated warming is harmful.

Leaving a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas;

A battery subjected to extremely low air pressure may result in an explosion or the leakage of flammable liquid or gas.

• The plug of the adapter is considered a disconnect device. The socket-outlet shall be installed near the equipment and shall be easily accessible..

Guarantee

Model Number:_____
Serial Number:_____
Purchasing Date:_____
Dealer:_____ Telephone: _____
User's Name:_____ Telephone:_____
Country:_____ Address:_____
Post Code:_____ Email: _____

Remarks:

1.This guarantee card should be kept by the user, no replacement if lost.
2.Most new products carry a two-year manufacturer's warranty from the date of purchase.
3.The user can get warranty and after-sales service as below:
- Contact the seller where you buy.
- Products Repaired by Our Local Repair Center

4.For warranty service, you will need to provide a receipt proof of purchase from the actual seller for verification
Exclusions from Warranty Coverage:
1.To any product damaged by accident.

2.In the event of misuse or abuse of the product or as a result of unauthorized alterations or repairs.
3.If the serial number has been altered, defaced, or removed.

MADE IN CHINA