UV-5118PLUS

Amateur Radio User Manual

For User

Do not charge the radio or battery in an explosive environment, such as gas, dust, smoke area etc. Please turn off the radio when nearby gas station. Do not disassemble or modify the radio. Do not leave the radio under dusty or wet environment. It's very important for users to understand all instruction knowledge before using the radio, please obey the local legal rules.
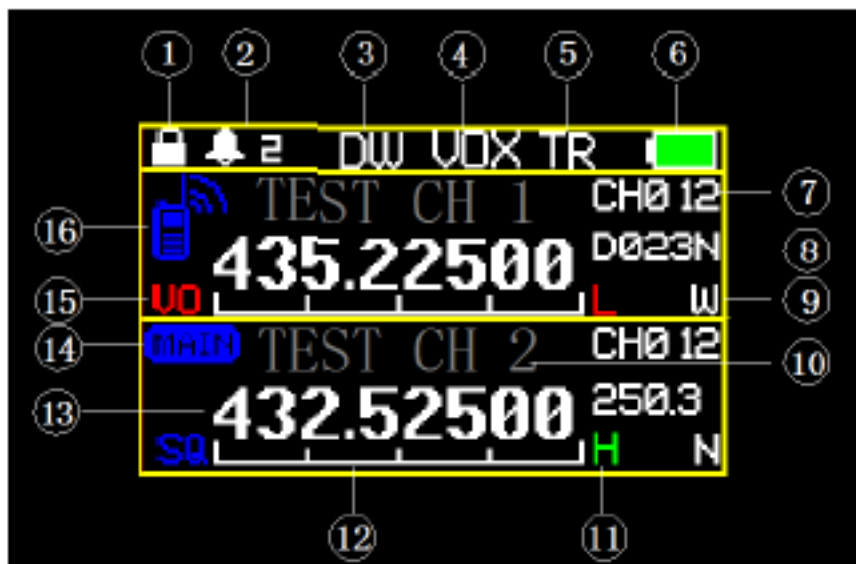
Product Checking

Thanks for choosing our radio. please unbox and check whether the following accessories are included and well-packed. If there's anything missing or damaging after unboxed, please contact your local distributor.

NO	Item	QTY
1	Device	1
2	Antenna	1
3	Li-ion Battery	1
4	Charger	1
5	Belt Clip	1
6	User Manual	1
7	Guarantee Card	1

Familiar with Radio

Antenna

PT

Side-key 1

Side-key 2

Power/
Volume
Knob

LCD

Mic

Speaker

Keypad

Programming
& Earphone
Jack

Type C
Charging
Port

Battery

LCD Icon Display

①Lock key: icon shows up, keypads are not allowed to operate; if the icon is red, which means the radio is in Remotely Stun status.
②end sound types, digits 1 and 2 means end sound 1 and 2, ID means to send out local ID when transmit ends.

③Dual Standby
④VOX
⑤Talk around/Reverse Frequency:TR-reverse frequency;RR-talk around
⑥Battery Level
⑦Channel Number:Frequency mode shows up as VFO,channel mode shows up as CHXXX
⑧CTCSS/DCS:MUTE means non-standard sub-tones,ENC means sub-tone is encrypted
⑨Channel Bandwidth:W means Wide Band,N means Narrow Band
⑩Channel Name
⑪TX Power:H means high power,L means low power
⑫To show MIC sound strength while transmitting, to show signal strength will receiving
⑬Working Mode
⑭Main Working Area
⑮FM/AM VO-MIC: Voice Prompt SQ-RX Squelch
⑯TX/RX Icon: Color blue means under RX status, color red means under TX status.

Function and Operation

4.1 Transmitting Signal

Press [PTT]key, the device will transmit signal at main standby channel,and the signal icon ⑯ shows up in red, and indicator light turns red.

4.2 Receiving Signal

When the device receives same frequency signal with current working channel and the CTCSS matches with each other's, the indicator light turns green, signal icon ⑯ shows up in blue.

4.3 Working Mode Switching

Short press # button to change the working mode to VFO frequency mode or Channel MODE. When it is changed to VFO frequency mode, the icon ⑦ will show up as VHF; When it is changed to channel mode,the icon ⑦ will show up as CHXXX.

4.4 Frequency Changing and Repeater Frequency Setting

While under VFO mode, input frequencies manually via keypads, input 6 digits, the inputting is done. After this, the input frequencies will be set to receiving and transmitting frequencies.

If need to use repeater to relay the signals, set the TX frequencies according to the repeater frequency

table. Operation: Under VFO mode, long press 【*】 button, icon ⑬ turns red, the input function actives, and input 6 digits, so the inputting is done automatically. The input frequencies will set to TX frequencies. Short press 【EXIT】 or long press 【*】 to confirm and exit TX frequency setting.

Short press 【▲】/【▼】can switch preset working frequencies. Long press 【▲】/【▼】is fast switching function.

4.5 Channel Switching

Under channel mode status, input channel number via keypads to switch to appointed channel. Short press 【▲】/【▼】to switch to working channels one by one. Long press 【▲】/【▼】is fast switching function.

4.6 Air Band Receiving

When the working frequency is set within the range of 108-136MHz, the icon ⑮ shows up AM, which means the device is under air band receiving status. The device is not allowed to transmit signals under air band status.

4.7 Frequency Detecting and Decoding(One-click Decoding)

Side-key is set to **Frequency Detect**, and press side-key button while it is under standby status. Then the device begins to detecting and decoding. This function cannot detect CTCSS of anti-decoded radios. Press 【#】button to switch detective frequency from VHF to UHF. Short press 【#】to shift decoding mode to remote CTCSS/DCS scanning mode, and working frequency is limited to local current working frequency, if receiving signal, it will decode CTCSS/DCS of this frequency. It will re-start to scan, if it doesn't receive any signal within 3 seconds after previous scanning.

If the result of decoding or scanning is standard CTSS/DCS, which will be shown up as standard CTCSS/DCS. If the result is non-standard CTCSS/DCS, it will show up as "23b" OR "24b" or a series of numbers. After saving, if you want to check the result, please check under Mute Code.

press【MENU】to save frequency and CTCSS/DCS to VFO channels, and switch working mode to VFO frequency mode. Press 【EXIT】to re-start decoding and CTCSS/DCS scanning. Press 【PTT】to exit decoding mode.

4.8 FM function

Long press 【0】 to come into FM radio mode. Long press 【▲】/【▼】 to searching for signals, or input frequencies manually via keypads. And short press 【▲】/【▼】 to stop scanning.

If you want to receive signals while under FM radio mode, please operate the following steps accordingly: FM Standby - ON.

4.9 NOAA

Side-key is set to NOAA CH and press the side-key to NOAA weather report channels under standby status. Press 【▲】/【▼】 to switch NOAA channels. If not to operate for 2 seconds,the device will scan NOAA channels automatically.

NOAA function is available in countries and areas that are supported only. The followings are 11 NOAA working frequencies.

1	162.55000M	7	162.52500M
2	162.40000M	8	161.65000M
3	162.47500M	9	161.77500M
4	162.42500M	10	161.75000M
5	162.45000M	11	162.00000M
6	162.50000M		

4.10 Inputting Method

You can change relative characters via inputting method both in **Personal ID** and **CH Name**.

4.10 .1 Delete Character

when in **Person ID**, the display content will be added blank characters automatically to 16 bytes(2 bytes per Chinese character,1 byte per Digit/English letter/symbol). while in CH Name, the display content will be added blank characters automatically to 10 bytes. You can move the cursor via 【▲】 or【▼】 to certain place, then press 【*】 to delete the characters before it.

4.10 .2 Inputting of Digit/Symbol/English Letter

When in Personal ID or CH Name status, input numeric keys directly to finish the numeric inputting.

Press 【#】button to input English letter, press relative keys to complete the inputting.

Steps to input characters

1. press【#】key to start inputting

2. Press【1】key, open ASCII code table(the table consists of digits/symbols/English letters , and the initial character is blank character)

3. press【▲】or【▼】key to find the needed characters.

4. press the digit key which holds the characters to complete the inputting.

The match-up relationship of digit keys and letters

【1 Characters】 【2 ABC】 【3 DEF】

【4 GHI】 【5 JKL】 【6 MNO】

【7 PQRS】 【8 TUV】 【9 WXYZ】

4.11 DTMF Function

4.11 .1 DTMF Encode

When under transmitting status, press keyboard to send relative **DTMF** codes.Buttons【0】-【9】,【*】,【#】 correspond to 0-9, *, # codes of DTMF. 【MENU】key corresponds to Code A, 【▲】key corresponds to Code B,【▼】key corresponds to Code C,【EXIT】key corresponds to Code D.

While under standby status, long press 【MENU】to start inputting of DTMF encode, press PTT to send DTMF code after inputting DTMF code manually. Under inputting status, long press 【MENU】again to exit inputting of DTMF encode.

4.11 .2 DTMF Decode

When radio receives DTMF encodes, it will decode this code automatically. If DTMF Display opens up, this code will show on the screen.

4.11 .3 Remotely Stun

Set a DTMF remotely stun code via programmable software to radio. If radio receives DTMF code same with stun code, the radio will under **Stun** status and the radio can do nothing but transmitting and receiving signals. And the icon ① will show up as red lock key.

4.11 .4 Remotely Kill

Set a DTMF remotely kill code via programmable software to radio. If radio receives DTMF code same with kill code, the radio will under **Kill** status and the radio stops working and keep the startup of RF receiving part to receive wake-up code. The indicator light flashes for every 5 seconds to show that the radio is under Kill status, instead of being in broken-up status. Please remember the working frequency before entering into remotely kill status.

4.11 .5 Wake-up

Set a DTMF wake-up code to radio via programmable software. The radio will lift Kill or Stun status and restore to regular working mode, if it receives DTMF code same with wake-up code under Kill or Stun status.

Remember to set a wake-up code for radio, or it will not be able to wake up after Kill or Stun.

5. Functions of shortcuts

5.1 Keys' Functions of short-press

【0】-【9】: To input the digits.

【*】: To switch the sub-tone modes under CTCSS/DCS list. To switch from decoding to remote scanning under detecting mode.

【#】: Shift working mode from VFO frequency mode to channel mode. Or to input character while in character inputting status. To switch from UHF to VHF under detecting mode.

【▲】: To shift to upward frequencies or channel numbers. To switch to upward scanning direction under scanning mode. While in FM radio scanning status, the scan stops.

【▼】: To shift to downward frequencies or channel numbers. To switch to downward scanning direction under scanning mode. While in FM radio scanning status, the scan stops.

【MENU】 to come into menu and confirm. To save detecting result and switch to VFO frequency mode while under detecting mode.

【EXIT】: to exit or cancel setting, to switch main frequency band while in standby status. To detect

again while under detecting mode.

5.2 Keys' Functions of long-press

【1】: long press to turn on /off scanning function. Under channel mode,turn on scan function to scan signals one by one. Under frequency mode,turn on scan function to change working frequency according to upward step space direction and scanning direction .

【2】: switch **TX Priority** to**Busy** or **Edit**.

【3】: to turn on/off VOX function.

【4】: to switch TX power.

【5】: to shift to SQ Level.

【6】: to turn on/off dual-standby function.

【7】: to turn on/off backlight.

【8】: to shift to Freq Step.

【9】: to turn on/off key Beep.

【*】: to enter/exit TX/RX inputting status the keypads.

【0】: to enter/Exit FM .

【#】: to lock/unlock the keypads.

【▲】: fast increasing of frequency or channels when press upward button.To start upward searching while under FM mode.

【▼】: fast decreasing of frequency or channels when press upward button.To start downward searching while under FM mode.

【MENU】: To turn ON/OFF inputting of DTMF encode.

【EXIT】: To turn ON/OFF dual-band display.

5.3 Side-key functions

To define the long-press and short-press function of side-keys in the list "K1 Long" "K1 Short"

"K2 Long" "K2 Short", as following:

1. Off：press side-key, and nothing happen.

2. Monit：to monitor the signal of working frequency ,and ignore the TX/RX sub-tone setting, force to turn on squelch.

3. Freq Detect：to detect frequencies and CTCSS/DCS of nearby radios.

4. Repeat Mode：to switch from talk around to reverse frequency. Receiving frequencies is the main status while under talk around mode. The frequencies of TX and RX are reversed while under reverse frequency.

5. Preset CH：press this button to shift to relative preset channels while under channel mode.

6. Local Alarm：the device gives out alarm sound to report to the surrounding.

7. Remote Alarm：the device gives out alarm sound and transmits the alarm sound at main working frequencies.

8. NOAA CH：to enter NOAA whether report mode.

9. Send Tone：to transmit a preset audio under current frequency.

10. Roger Beep：to switch from TX end tone to whether send local ID while TX ends.

11. Freq Inverse：to reverse the TX/RX frequencies.

12. Weather CH：to enter NOAA weather report mode.

Instruction of MENU

【Startup Logo】 to open /close the startup picture.

【Voltage】 to open/close the battery level indication.

【Ringtone】 to turn on/off the startup tone.

【Prompt Text】 to turn on/off the welcome words.

【Voice Prompt】 to turn on/off menu and channel voice prompt.

【Key Beep】 to turn on/off keypads voice prompt.

【Roger Beep】 to set TX tone or send local ID while TX ends.

【Dual Display】 to show working frequency of sub-area while turn on the radio, to show battery level on sub-area while turn off the radio.

【TX Priority】 When choose Edit,transmitting via main frequencies. When choose Busy, receive signals, and main frequency will switch to frequency of received signal.

【Save Mode】 to turn on/off power saving mode.

【Freq Step】 to set the number of frequency switching and scanning.

【SQ Level】 to set squelch threshold level when receiving.

【LED Timer】 to set shutdown time of backlight.

【Lock Timer】 to set auto lock time of the keypads.

【TOT】 to set the maximum time of continuous transmitting.

【VOX Level】 to set voice threshold level of turning on VOX.

【VOX Delay】 to set delay time when VOX transmitting ends.

【NOAA Monitor】 to turn on/of NOAA monitor.

【FM Standby】 to turn on/off main frequency receiving function while in FM status.

【Dual Display】 to turn on/off dual-band display.

【Tail Tone】 to turn off/on tail tone while transmitting ends.

【Scan DIR】 to set scanning upward or downward.

【Personal ID】 To set personal ID

【Repeater Mode】 To set talk around or reverse frequency status.

【CTCSS/DCS】 to set the sub-tones of TX/RX frequency,switching sub-tone mode via 【*】key,press【▲】or【▼】to switch sub-tones.

【RX CTCSS/DCS】 to set RX CTCSS/DCS of main frequency.

【TX CTCSS/DCS】 to set TX CTCSS/DCS of main frequency.

【TX Power】 To set High/Low power of transmitting.

【Band Width】 To set Narrow/Wide band .

【Busy Lock】To forbid transmitting while receiving. Carrier wave matches, which means the device is forbidden to transmitting,no matter the CTCSS/DCS matches or not.CTCSS/DCS matches means when main frequencies receive signals, only sub-tone matches successfully , the transmitting is forbidden.

【Scrambler】To set voice scrambler number on main frequencies, if the number is 0, the scrambler is turned off.

【DCS Encrypt】When there is digital sub-tones on main frequencies,turn on encryption function will re-encrypt to digital sub-tones. Only supported to digital sub-tones.

【Mute Code】This is non-standard DCS, can be defined to 23 or 24 digits. Press the 【▲】or【▼】to choose CTCSS mode, input digits to become non-standard DCS code. The saved non-standard DCS code can be checked in this list.

【AM Receive】To switch receive mode from AM to FM, the initial setting is AM mode. Turn on this list to receive air band signals.

【CH Name】 to set channel name of main frequency

【Save CH】Copy and save information of current channel to appointed channels. The CH-XXX N/Yshows up when enter the list. N means empty channel. Y means not empty channel.

【Delete CH】To delete information of appointed channels.

【K1 Long】【K1 Short】【K2 Long】【K2 Short】set long press and short press function of two side-keys,as following:Monit、Freq Detect、Repeat Mode、Preset CH、Local Alarm、Remote Alarm、NOAA CH、Send Tone、Roger Beep etc.

【DTMF Delay】set a time to send DTMF code after transmitting.

【DTMF Interval】to set time interval of two consecutive DTMF encode.

【DTMF Mode】to set fixed DTMF encode mode. TX Start means once press sending button it will send fixed DTMF encode at one;TX End means send fixed DTMF encode while transmitting ends. TX Start and End means send fixed DTMF encode when transmitting begins or ends.

【DTMF Select】to preset 16 groups fixed DTMF encode, select one group code in DTMF Select,then it will be sent out while transmitting.

【DTMF Display】the code can be decoded at once and show up sender's DTMF encode while receiving.Regualar talking may trigger DTMF encode due to more sensitive DTMF encode. If you want the DTMF encode,

you can turn off this list.

【Initialize】will initialize all the data to the last setting.

【Version】To check the version number and upgrade time.

【Instruction】scan the QR code by phone to check the user manual

7. Specifications

General Part	
Frequency Range	RX : 66-108MHz(FM band) 　　　　136-174MHz 　　　　400-480MHz TX : 144-148MHz 　　　　420-450MHz
Channel Spacing（W/N）	25kHz/12.5kHz
Voltage	7.4V DC
Working Mode	Same frequency simplex,different frequency simplex
Antenna	Removable Antenna
Frequency Stability	±2.5ppm
Working Temperature	－20～＋60℃
Dimension	108 X 59 X 38　about 189g
Transmitting Part	
Output Power	4W/2W(full charged8.4V)
Modulation Mode	F3E
Maximum deviation（W/N）	≤5KHz /≤2.5KHz
SNR（W/N）	-45dB/ -40dB
TX Current	≤1500mA
Transmitting Part	
Sensitivity（W/N）	0.22μV/ 0.25μV　　　12dB SINAD
Inter modulation（W/N）	65dB/ 60dB
Audio Distortion	＜5％
Audio Output Power	≤1W（16Ω）
RX Current	≤350mA
Standby Current	≤70mA

Note: The above parameters are subject to change without prior notice!

SAR tests are conducted using standard operating positions accepted by FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value. Before a new model is a available for sale to the public, it must be tested and certified to the FCC that is does not exceed the exposure limit established by the FCC/ISEDC. Tests for each product are performed in positions and locations as required by the FCC.

For body worn operation, this device has been tested and meets the FCC RF exposure guidelines when used with and accessory designated for this product or when used with and accessory that contains no metal.

To maintain compliance with FCC RF exposure guidelines hold the transmitter and antenna at least 1 inch (2.5 centimeters) from your face and speak in a normal voice, with the antenna pointed up and away from the face.

The equipment complies with FCC radiation exposure limits set forth for and uncontrolled environment. In order to comply with the FCC RF exposure requirement, the antenna installation must comply with following:

Users must be fully aware of the hazards of the exposure and able to exercise control over their RF exposure to qualify for the higher exposure limits.

Your wireless hand-held portable transceiver contains a low power transmitter. This product sends out radio frequency (RF) signals when the Push-to-Talk(PTT) button is pressed.

The device is authorized to operate at a duty factor not to exceed 50%.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. 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.