

TWO WAY RADIO

User Manual

Brand: VGC

FCC ID : ZVMUV-E5

Model : UV-E5, UV-E6

Frequency Range:

136-174MHz&400-480MHz

GENERAL DESCRIPTION

The transceiver is a micro-miniature multiband FM transceiver with extensive receive frequency coverage, providing local-area two-way amateur communications along with unmatched monitoring capability.

We appreciate your purchase of our transceiver, and encourage you to read this manual thoroughly, then learn about many exciting features.

SAFETY TRAINING INFORMATION



warning

Your radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as "Occupational Use Only", meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is NOT intended for use by the "General Population" in an uncontrolled environment.

This radio has been tested and complies with the FCC RF exposure limits for "Occupational Use Only". In addition, your two way radio complies with the following Standards and Guidelines with regard to RF energy and electromagnetic energy levels and evaluation of such levels for exposure to humans:

- FCC OET Bulletin 65 Edition 97-01 Supplement C, Evaluating Compliance with FCC Guidelines for human Exposure to Radio Frequency Electromagnetic Fields.
- American National Standards Institute (C95.1-1992), IEEE Standard for Safely Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300GHz.
- American National Standards Institute (C95.3-1992), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields-RF and Microwave.
- The following accessories are authorized for use with this product.. Use of accessories other than those (listed in the instruction) specified



caution

may result in RF exposure levels exceeding the FCC requirements for wireless RF exposure.

To ensure that you expose to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- **DO NOT** operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed FCC RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or antenna specifically authorized by the manufacturer for use with this radio.
- **DO NOT** transmit for more than 50% of total radio use time ("50% duty cycle"). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. The radio is transmitting when the "TX indicator" lights red. You can cause the radio to transmit by pressing the "PTT" switch.
- **ALWAYS** keep the antenna at least 60cm away from the body when transmitting.

The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates within the FCC RF exposure limits of this radio.

Electromagnetic Interference/Compatibility

During Transmissions, your two way 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. DO NOT operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, aircraft, and blasting sites.

Occupational/Controlled Use

The radio transmitter is used in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure.

PRECAUTIONS

- ◆ Refer service to qualified technicians only.
- ◆ Do not disassemble or modify the transceiver for any reason.
- ◆ Do not expose the transceiver under direct sunlight long or to extremely hot condition.
- ◆ Do not place the transceiver on the unstable surface.
- ◆ Keep the transceiver out of dust, moisture, water.
- ◆ Do not operate the transceiver or charge the battery pack under explosive conditions.

SAFETY

It is important that the operator is aware of and understands hazards common to the operation of any transceiver.



WARNING

Please turn the transceiver off at the following locations:

- ▶ In explosive atmospheres (flammable gas, dust particles, metallic powders, grain powders, etc.).
- ▶ While taking on fuel or while parking at gasoline service stations.
- ▶ Near explosives or blasting sites.
- ▶ In medical institutes or aircrafts.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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MAIN FUNCTIONS

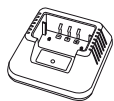
- Dual Band (136-174MHz & 400-480MHz)
- Dual Display and Dual Watch
- High 5W Power
- Up to 128 memory channels
- DTMF Signaling / (PTT ID Encode)
- 1800mAh Li-ion Battery
- FM Radio (65-108MHz)
- CTCSS & DCS
- RX CTCSS & DCS Scan
- Voice Operated Transmission (VOX)
- Emergency Alarm / SOS
- Narrow Bandwidth
- Illumination Display & Programmable Keyboard
- Beep Function
- Frequency Step 2.5 /6.25 /10/12.5/25kHz
- "OFFSET" Function
- Battery Save (SAVE)
- Time-out Timer (TOT)
- Multi Scan Mode
- Busy Channel Lockout (BCLO)
- Built-in LED Flashlight
- Programmable by PC
- Squelch Level (0-9)
- Crossband Reception
- Tone end of Transmission .

UNPACKING AND CHECKING EQUIPMENTS

Carefully unpack the transceiver. We recommend that you identify the items listed in the following before discarding the packing material. If any items are missing or have been damaged during shipment, please contact your dealers immediately.



Transceiver



Charger



Li-ion Battery



AC Adapter



Antenna



Belt Clip&Hand Strap

Note: Items included in the package, may differ from those listed in the table above depending on the country of purchase. For more information, Consult with the dealer or retailer for more information.

OPTIONAL ACCESSORIES



Cigarette Charger



Speaker mic.



Programming Cable



Headset

Note:

Consult the dealer or retailer for information about available options.

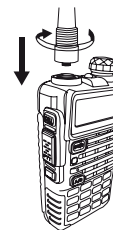
INSTALLATION OF ACCESSORIES

INSTALLING THE ANTENNA

Install the antenna as shown in the figure below and turn it clockwise until it stops.

Note:

- When installing the antenna, don't rotate it by its top, holding it by its base and turn.
- If you use an external antenna, make sure the 'SWR' is about 1.5:1 or less, to avoid damage to the transceiver's final transistors.
- Do not hold the antenna with your hand or wrap the outside of it to avoid bad operation of the transceiver.
- Never transmit without an antenna.

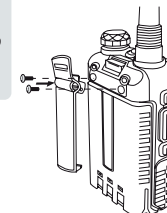


INSTALLING THE BELT CLIP

If necessary, install the belt clip at the rear of the battery compartment cover as shown in the figure below.

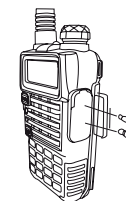
Note:

- Do not use any kind of glue to fix the screw on the belt clip. The solvents Glue may damage the battery casing.



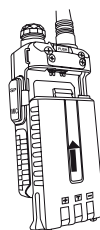
MICRO-HEADSET INSTALLATION OF EXTERNAL

Plug the external micro-headset connector into the jack of 'SP. & MIC' of the transceiver as shown in the figure below.



BATTERY INSTALLATION

- When attaching the battery, make sure the battery is in parallel and in good contact with the aluminum chassis. The battery bottom is about 1 to 2 centimeters below the bottom of the radio's body.
- Align the battery with the guide rails on the aluminum chassis and slide it upwards until a 'click' is heard.
- The battery latch at the bottom locks the battery.
- Turn off the radio before removing the battery.
- Slide the battery latch, at the bottom of the radio's body, in the direction indicated by the arrow.
- Slide down the battery for about 1 to 2 centimeters, and then remove the battery from the radio's body.



CHARGING

Use only the charger specified by the manufacturer. The charger's LED indicates the charging progress.

Charging Status	LED Indication
Standby(no-load)	Red LED flashes,while Green LED glows
Charging	Red LED solidly glows
Fully Charged	Green LED solidly glows
Error	Red LED flashes,while Green LED glows

Please follow these steps:

1. Plug the power cord into the adapter.
2. Plug the AC connector of the adapter into the AC outlet socket.
3. Plug the DC connector of the adapter into the DC socket on the back of the charger.
4. Place the radio with the battery attached, or the battery alone, in the charger.
5. Make sure the battery is in good contact with the charging terminals. The charging process initiate when the red LED lights.
6. After 4 hours ,the green LED lights which indicates the battery is fully charged. Then remove the radio with the battery attached or the battery alone from the charger.



BATTERY INFORMATION

INITIAL USE

New batteries are shipped uncharged fully from the factory. Charge a new batter for 5 hours before initial use. The maximum battery capacity and performance is achieved after three full charge/discharge cycles. If you notice the battery power runs low, please recharge the battery.



WARNING: To reduce the risk of injury,charge only the battery specified by the manufacturer. Other batteries may burst,causing bodily injury and property damage.Dispose of batteries according to local regulations(e.g.recycling).Do not dispose as household waste.Never attempt to disassemble the battery.

BATTERY TIPS

- 1. When charging your battery, keep it at a temperature among 5℃ - 40℃. Temperature out of the limit may cause battery leakage or damage.
- 2. When charging a battery attached to a radio, turn the radio off to ensure a full charge.
- 3. Do not cut off the power supply or remove the battery when charging a battery.
- 4. Never charge a battery that is wet. Please dry it with a soft cloth prior to charge.
- 5. The battery will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal performance, it is time to buy a new battery.

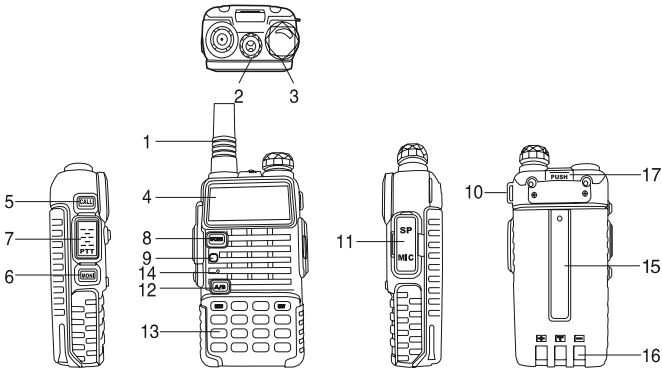
PROTECT BATTERY LIFE

- 1. Battery performance will be greatly decreased at a temperature below 0℃. A spare battery is necessary in cold weather. The cold battery unable to work in this situation may work under room temperature, so keep it for later use.
- 2. The dust on the battery contact may cause the battery cannot work or charge. Please use a clean dry cloth to wipe it before attaching the battery to the radio.

BATTERY STORAGE

- 1. Fully charge a battery before you store it for a long time,to avoid battery damage due to over-discharge.
- 2. Recharge a battery after several month's storage(Li-ion) batteries : (6 months),to avoid battery capacity reduction due to over-discharge.
- 3. Store your battery in a cool and dry place under room temperature,to reduce self-discharge.

PARTS, CONTROLS AND KEYS



1. Antenna (dual-band)	2. Flashlight	3. Knob (ON/OFF,Volume)
4. LCD	5. CALL (FM Radio /Alarm)	6. Flashlight /Monitor
7. PTT Key (Push-to-talk)	8. VFO/MR Mode	9. LED Indicator
10. Strap Buckle	11. Accessory Jack	12 .A/B
13. Keypad	14. PC.& MIC.	15. Battery Pack
16. Battery Contacts	17. Battery Remove Button	

COMMAND/KEY DEFINITION

► [PTT] (PUSH-TO-TALK):

Press and hold down the [PTT] button to transmit; release it to receive.

► SK-SIDE KEY1/ [CALL]:

- * Press the [CALL] button, to activate the FM Radio; Press it again to deactivate the FM Radio.
- * While FM radio being activated, press the [A/B] button to switch the band of FM radio (band 65-75MHz and 76-108MHz).
- * In FM Radio status, press [▲] or [▼] key to adjust the required frequency, user also can direct to input the numeric key to set the desired frequency.
- * Press and hold on the [CALL] button, to activate the alarm function; Press and hold it again, to deactivate the alarm function.

► SK-SIDE KEY2/ [MONI]:

- * Press the [MONI] button, to turn on the flashlight; press it again to turn on "SOS", press third time to exit. Press and hold on the [MONI] button to monitor the signal.
- * Press the [MONI] button + PTT key + turn on the radio that will be into cloning mode. User can clone this transceiver of channel parameter to the other one.
- * When clone the parameter we need clone cable which connect the two transceivers.

► [VFO/MR] BUTTON:

Press the [VFO/MR] button, to switch the frequency mode and channel mode.

► [A/B] BUTTON:

In the frequency mode. Press the [A/B] button, to switch frequency display. Press [▲] or [▼] key to select the desired frequency or direct to input the numeric key to set the desired frequency.

► [★SCAN]KEY:

- * Press the [★SCAN] key to activate the Reverse function, it will exchange a separate reception and transmission frequency.
- * Press the [★SCAN] key for 2 seconds to start scanning (frequency channel).
- * While FM radio being activated, press the [★SCAN] key to search FM radio station.
- * While setting the RX CTCSS[MENU 10]/RX DCS[MENU 11], press the key [★SCAN] to scan the RX CTCSS/DCS.

►[#↔] KEY:

- * Under channel mode, press [#↔] key to switch High/Low transmit power.

Note : This setting is not available to operate after activated TDR (Dual watch /dual reception) function.

- * Press [#↔] key for 2 seconds to lock/unlock the keypad.

►FUNCTION KEYPAD:

- * [MENU]key: To enter the menu of the radio and confirm the setting.

- * [▲] and [▼] key:

-Press and hold [▲] or [▼] key for frequency up or down fast.

-Press [▲] or [▼] key, the scanning will be opposite.

- * [EXIT]key: To cancel /clear or exit.



►NUMERIC KEYPAD:

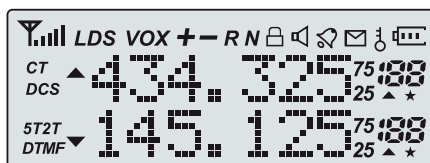
- * Used to enter information for programming the radio's lists and the non-standard CTCSS
- * Under transmission mode, press the numeric key to send the signal code (the code should be set by PC software).

► ACCESSORY JACK:

The jack is used to connect audio accessories, or other accessories such as programming cable.

LCD DISPLAY

The display icons appear when certain operations or specific features are activated.



Icon	Description
	Operating channel.
	Operating frequency.
	'CTCSS' activated.
	'DCS' activated.
	Frequency offset direction for accessing repeaters.
	Dual Watch/Dual Reception functions activated.
	Function 'VOX' enabled.
	Reverse function activated.
	Narrow Band selected.
	Battery Level indicator
	Keypad lock function activated.
	Low transmit power.
	Operation frequency.
	Signal Strength Level.

1750 Hz TONE FOR ACCESS TO REPEATERS

The user needs to establish long distance communications through an amateur radio repeater which is activated after receiving a 1750 Hz tone. Press the [PTT] key + [A/B] button to transmit a 1750Hz tone.

BASIC OPERATION

1.RADIO ON-OFF/VOLUME CONTROL :

- Make sure the antenna and battery are installed correctly and the battery charged.
- Rotate the knob clockwise to turn the radio on, and rotate the knob fully counter-clockwise until a 'click' is heard to turn the radio off. Turn the knob clockwise to increase the volume, or counter-clockwise to decrease the volume.

2. SELECTING A FREQUENCY OR CHANNEL:

- Press the key [▲] or [▼] to select the desired frequency/channel .
The display shows the frequency / channel selected.
- Press and hold down the key [▲] or [▼] for frequency up or down fast.

Note:

You can not select a channel if not previously stored.



ADVANCED OPERATION

You can program your transceiver operating in the setup menu to suit your needs or preferences.

1).MENU DESCRIPTION

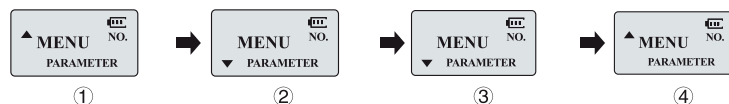
Menu	Function/Description	Available settings
0	SQL (Squelch level)	0-9
1	STEP(Frequency step)	2.5/5/6.25/10/12.5/25kHz
2	TXP(Transmit power)	HIGH/LOW
3	SAVE(Battery save,1:1/1:2/1:3/1:4)	OFF/1/2/3/4
4	VOX(Voice operated transmission)	OFF/0-10
5	W/N(Wideband/narrowband)	WIDE/NARROW
6	ABR(Display illumination)	OFF/1/2/3/4/5s
7	TDR(Dual watch/dual reception)	OFF/ON
8	Beep(Keypad beep)	OFF/ON
9	TOT (Transmission timer)	15/30/45/60.../585/600 seconds
10	R-DCS(Reception digital coded squelch)	OFF/D023N...D754I
11	R-CTS(Reception continuous tone coded squelch)	67.0Hz...254.1Hz
12	T-DCS(Transmission digital coded squelch)	OFF/D023N..D754I
13	T-CTS(Transmission continuous tone coded squelch)	67.0Hz...254.1Hz
14	VOICE (Voice Prompt)	OFF/ON
15	ANI(Automatic number identification of the radio, only can be set by PC software)	
16	DTMFST(The DTMF Tone of Transmitting Code)	OFF/DT-ST/ANI-ST/DT+ANI
17	S-CODE(Signal code,only could be set by PC software)	ANI 1,...15 groups
18	SC-REV(Scan resume method)	TO/CO/SE

Menu	Function/Description	Available Settings
19	PTT-ID(press or release the PTT button to transmit the signal code)	OFF/BOT/EOT/BOTH
20	PTT-LT(Delay the signal code sending)	0,...30ms
21	MDF-A(Under channel mode,a channel displays. Note : name display only can be set by PC software)	FREQ/CH/NAME
22	MDF-B (under channel mode, A channel displays. Note :name display only can be set by PC software)	FREQ/CH/NAME
23	BCL (Busy Channel Lockout)	OFF/ON
24	AUTOLK (Keypad Locked Automatically)	OFF/ON
25	SFT-D(Direction of Frequency Shift)	OFF/+/-
26	OFFSET(Frequency Shift)	000,...69.9990
27	MEMCH(Stored In Memory Channels)	000,...127
28	DELCH>Delete The Memory Channels)	000,...127
29	WT-LED(illumination display color of standby)	OFF/BLUE/ORANGRE/PURPLE
30	RX-LED(illumination display color of reception)	OFF/BLUE/ORANGRE/PURPLE
31	TX-LED(illumination display color of transmitting)	OFF/BLUE/ORANGRE/PURPLE
32	AL-MOD (alarm mode)	SITE/TONE/CODE
33	BAND (band selection)	VHF / UHF
34	TDR-AB (transmitting selection while in dual watch / reception)	

Menu	Function/Description	Available settings
35	STE (Tail Tone Elimination)	OFF/ON
36	PR_STE(Tail tone elimination in communication through repeater)	OFF/1,2,3...10
37	RPT_RL(delay the tail tone of repeater)	OFF/1,2,3...10
38	PONMGS(Boot display)	FULL/MGS
39	ROGER(Tone end of transmission)	ON/OFF
40	RESET (Restore to default setting)	VFO/ALL

2).SHORTCUT MENU OPERATION

- 1.Press the key MENU,then press the key ▲ or ▼ to select the desired menu.
- 2.Press the key MENU again, come to the parameter setting.
- 3.Press the key ▲ or ▼ to select the desired parameter.
- 4.Press the key MENU to confirm and save, press the key EXIT to cancel setting or clear the input.



Note:

Under channel mode,the following menu settings are invalid:CTCSS,DCS,W/N,PTT-ID,BCL,SCAN ADD TO,S-CODE,CHANNEL NAME.Only the H/L power could be changed.

0."SQL" (Setting Squelch Level) (Menu+0)

- The squelch mute the speaker of the transceiver in the absence of reception. With the squelch level correctly set, you will hear sound only while actually receiving signals and significantly reduces battery current consumption.
- In standby,press [MENU] ,the screen will display "SQL".Press [MENU] enter, press [▲] or [▼] to select the desired level.Press [MENU] to confirm ,then press [EXIT] to return to standby.

Note :

This transceiver has steps from 0-9,which step 0 is always open squelch. From 1 to 9 gives different levels of noise reduction. We recommend setting squelch level to 5

1. STEP (Channel Step Selection)(Menu+1)

- In frequency mode, Press [MENU] +[1STEP]the screen will display STEP,press [MENU] enter, press [▲] or [▼] to change frequency step, Press [MENU] to confirm, then press [EXIT] to return to standby.
- This transceiver has the option of 2.5KHz, 5KHz, 6.25KHz, 10KHz, 12.5KHz, 25KHz steps.

Note:

In channel mode the settings are not available to change.

2. TXP (High/ Low Power Selection)(Menu+2)

In standby, Press [MENU]+[2TXP] and the screen will display TXP,press [MENU] enter, then press [▲] or [▼] to select the desired power level. Press [MENU] to confirm, then press [EXIT] to return to standby.