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**THANK YOU FOR YOUR PURCHASE OF THE UV-2501 / UV-5001.
THIS DUAL BAND RADIO WILL DELIVER TO YOU SECURE
INSTANT RELIABLE COMMUNICATION.**

PLEASE READ THIS MANUAL CAREFULLY BEFORE USE

Table of Contents

| | |
|--|-----------|
| Part I. Getting started | 1 |
| Chapter 1. – Getting Started | 2 |
| Unpacking and Inspecting | 3 |
| Overview of the Transceiver | 4 |
| Chapter 2. - Basic Use | 6 |
| Menu Function Settings | 6 |
| Frequency Mode vs. Channel Mode | 12 |
| Programming Repeater with Offset | 13 |
| Programming a Simplex Channel | 14 |
| Other Basic Features | 15 |
| Storing an FM Radio Station and Scanning | 15 |
| Keypad Lock-out | 15 |
| PTT ID Setting | 15 |
| DTMF signal | 16 |
| DTMF | 16 |
| Inspect function | 17 |
| Monitor function | 17 |

| | |
|---|-----------|
| Remote stun | 17 |
| Remote Kill | 18 |
| Turn on function | 18 |
| Alarm function | 18 |
| DTMF Transmit by Call Key Setting: | 19 |
| 2TONE Transmit by Call Key Setting | 19 |
| 5TONE Signal Setting | 20 |
| Hand Held Mic Function Keys and Description | 21 |
| Appendix A. - Menu definitions | 22 |
| Appendix B. - Technical specifications | 28 |
| General | 28 |
| Receiver | 29 |
| Transmit | 29 |

Part I. Getting started

Part one covers the basic setup and use of your mobile two-way transceiver.

CHAPTER 1 GETTING STARTED

CHAPTER 2 BASIC USE

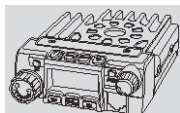
Chapter 1. – Getting Started

BEFORE PROCEEDING INSURE:

- Qualified technicians shall service this equipment only. Do not modify the radio for any reason.
- Use only BTECH supplied or approved accessories.
- **Turn off your radio prior to entering any area with explosive and flammable materials. Do NOT USE your transceiver at a gas/fuel station**
- For vehicles with an air bag, do not mount your radio in the area over an air bag or in the air bag deployment area.
- Do not expose the radio to direct sunlight over a long time, nor place it close to a heating source.
- If the unit emits smoke or an odor, you should immediately cut off the power supply. Then send the radio to the nearest service center or dealer
- Do not operate the mobile transceiver on high power unless it is necessary. Do not transmit for long periods of time, as it may overheat the transceiver.
- Keep the unit away from dusty, damp and wet environments
- Use the correct power supply (~13.8V); do not use incorrect or higher voltage (e.g. 24V)

Unpacking and Inspecting

- Please check the packaging of your radio for any signs of damage.
- Carefully open the box, and confirm you received the items listed below.
- If you find the radio or the included accessories are damaged or lost, immediately contact your dealer.

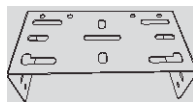


UV-2501 Pictured
Mobile Radio

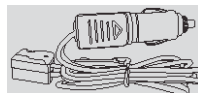


Microphone

What's in the Box



Mounting Bracket



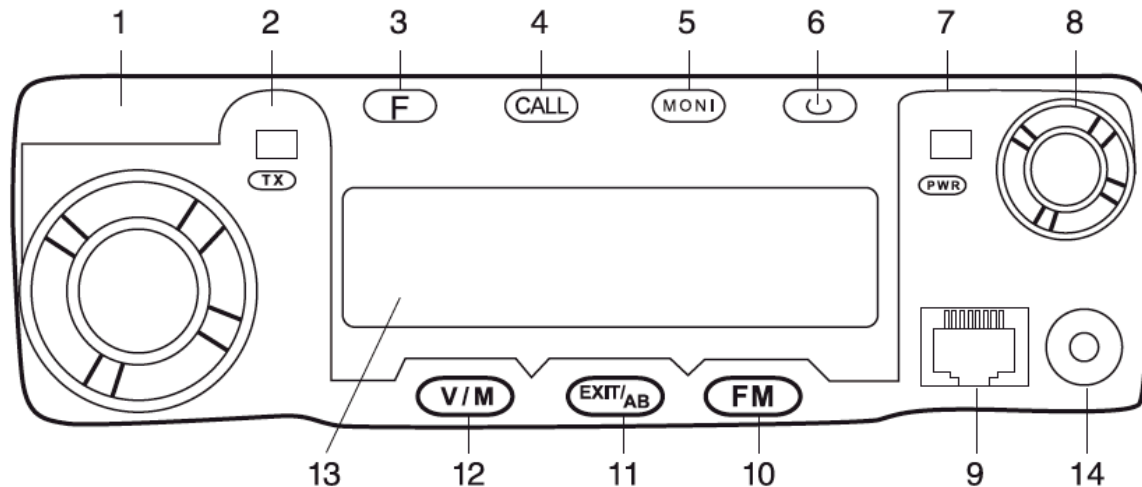
Power Cable



Mounting Screws and Fuse

Overview of the Transceiver

UV-5001 Pictured



1. Selector, Main Knob
2. Transmit indicator
3. Function key
4. Call key
5. Monitor function
6. Power key
7. Power Indicator
8. Volume Knob
9. Microphone Connector
10. FM radio function key
11. Exit the AB signal switching, alarm function
12. Channel switching
13. Display screen
14. PC port ***

*****NOTE: The USB Programming slot is above the power cord on the back of the radio on the UV-2501**

*****An audio out Jack is above the power cord on the UV-5001**

F: click to enter the function menu

CALL: when in standby, press to send caller ID (ANI) in the selected signaling mode; while transmitting, press to send activate signaling.

MONI: press to turn on the squelch, repeat to turn off the squelch.

⏻: hold the key to turn radio power On or Off.

V/M: press to switch between channel mode and frequency mode.

EXIT/AB: press to choose between A and B frequencies --- Or exit function mode.

FM: press to enter and exit FM radio

Chapter 2. - Basic Use

Menu Function Settings

*Can be set by microphone keypad.
After selecting the desired option below,
pressing the (F Key) will save the setting.*

0. **[F Key] + [0]** : TDR – ON enables to monitor both A/B frequencies at the same time. When off, only the selected A or B frequency is selected.
1. **[F Key] + [1]** : STEP – set step increment in frequency mode. 2.5kHz, 5kHz, 6.25kHz, 10kHz, 12.5kHz, 25kHz available.
2. **[F Key] + [2]** : SQL – Sets receiver squelch level. 0=OFF, 1=Lowest setting. 9=highest.
3. **[F Key] + [3]** : TXP - Transmit output power setting. HIGH/LOW.
4. **[F Key] + [4]** : SCR - Scrambler setting. Activating voice scrambling avoids the user's speech from being overheard by others no using the scrambler function.
5. **[F Key] + [5]** : TOT - transmission time-out timer. Sets maximum transmit time from 15 to 600 seconds (15 second steps).
6. **[F Key] + [6]** : APO – Auto Power Off powers off the radio after a predetermined time

with no receiver activity. (30 > 300 minutes)

7. **[F Key] + [7]** : WN - WIDE / NARR band width setting.
8. **[F Key] + [8]** : ABR - LCD backlight time setting. OFF / 1-50 seconds.
9. **[F Key] + [9]** : BEEP - turns key beep OFF/ON.
10. **[F Key] + [1] + [0]** : R-DCS - DCS receive setting. D023N-D754N positive sequence, D023I-D754I reversed sequence.
11. **[F Key] + [1] + [1]** : R-CTCS - CTCS receive setting. 67.0HZ-254.1HZ or can use keypad to enter your target CTCS.
12. **[F Key] + [1] + [2]** : T-DCS - transmit DCS setting. D023N-D754N positive sequence. D023I- D754I reversed sequence.
13. **[F Key] + [1] + [3]** : T-CTCS transmit CTCS setting. 67.0HZ-254.1HZ or can use keypad to enter your target CTCS.
14. **[F Key] + [1] + [4]** : DTMFST - DTMF side tone setting.
OFF: No tones heard through the speaker when transmitted. **KEY**: Only manually keyed DTMF codes are heard. **ANI**: Only automatically keyed DTMF codes are heard. **BOTH**: All DTMF codes are heard.
15. **[F Key] + [1] + [5]** : BCL - busy channel lock- out. When ON, transmitter is locked out if receiver is active.
16. **[F Key] + [1] + [6]** : SC-ADD - scan add setting. OFF: removes channel from scan list. ON: adds channel to scan channel list.

17. **[F Key] + [1] + [7]** : PRI-SC - priority scan setting. ON/OFF turn on/off the function.
18. **[F Key] + [1] + [8]** : PRI-CH - priority channel scan setting. Select 000 -199 channels mark with CH at front to priority scan.
19. **[F Key] + [1] + [9]** : SC-REV - Scan recovery setting. TO: time scan, after receive carrier signal will stop scan and rescan after a while. CO: after receive carrier signal will stop scan. SE: Search scan mode. Scan will stop after receive according signal with radio.
20. **[F Key] + [2] + [0]** : OPTSIG - Signal option setting. OFF turn off the function. DTMF: dual channel signal selected mode. 2TONE: 2 tone signal mode. 5TONE: 5 tone signal mode.
21. **[F Key] + [2] + [1]** : SPMUTE - speaker mute setting. QT: turns on the speaker when receive setting is DCS. If no setting DCS, then will turn on the speaker when receive carrier signal. AND: speaker turns on only DCS and option signaling both meet radio setting. OR: speaker turn on either DCS or option signaling meet with radio setting.
22. **[F Key] + [2] + [2]** : PTT-ID - PTT-ID transmit setting. OFF: no ID code sent when transmitting. BOT: send ID code at Beginning of Transmit. EOT: send ID code at End of Transmit. BOTH: send ID code at both beginning and end of transmit. (ID code information is set by PC software setting, from menu 24 to select ID code)
23. **[F Key] + [2] + [3]** : PTT-LT - PTT-ID transmit delay setting. (Delay Time range is 0-30 seconds.)
24. **[F Key] + [2] + [4]** : S-INFO - Signal information and automatic dialing memory. 1-15

- group signal code/decode memory. Only set by PC software.
25. **[F Key] + [2] + [5]** : EMC-TP - alarm mode setting. ALARM: turn on the alarm sound. ANI: send alarm code and ID code. BOTH: both above.
 26. **[F Key] + [2] + [6]** : EMC-CH - alarm channel setting. CH will appear in front of the designated channel.
 27. **[F Key] + [2] + [7]** : RING-T - Ring time setting. OFF: close function. Choose 1-10 seconds to set ring time when radio Signal Code is received.
 28. **[F Key] + [2] + [8]** : CHNAME - channel name edit.
 29. **[F Key] + [2] + [9]** : CA-MDF - Display Mode (upper) - FREQ: displays Frequency. CH: displays channel number. NAME: displays assigned channel name.
 30. **[F Key] + [3] + [0]** : CB-MDF - Display Mode (lower) - FREQ: displays Frequency. CH: displays channel number. NAME: displays assigned channel name.
 31. **[F Key] + [3] + [1]** : SYNC – When ON, upper and lower display are synced to the same channel.
 32. **[F Key] + [3] + [2]** : PONMSG - PowerOn message. Display mode setting. FULL: Full display when turn on the radio. MSG: displays assigned PowerOn message. BATT-V displays battery voltage at PowerOn.
 33. **[F Key] + [3] + [3]** : WT-LED - standby backlight setting. OFF: no backlight. Color options are BLUE, ORANGE and PURPLE.
 34. **[F Key] + [3] + [4]** : RX-LED - receive backlight setting. OFF: no backlight. Color options

- are BLUE, ORANGE and PURPLE.
35. **[F Key] + [3] + [5]** : TX-LED - transmit backlight setting. OFF: no backlight. Color options are BLUE, ORANGE and PURPLE.
 36. **[F Key] + [3] + [6]** : MEM-CH - saves the selected channel.
 37. **[F Key] + [3] + [7]** : DEL-CH - deletes the channel selected.
 38. **[F Key] + [3] + [8]** : SFT-D - Frequency difference direction setting. OFF: no frequency difference. (+): Transmit offset amount will higher than the receive frequency. (-): Transmit offset amount will lower than the receive frequency.
 39. **[F Key] + [3] + [9]** : OFFSET - difference between the transmit and receive frequency. (00.000 - 69.990 MHz)
 40. **[F Key] + [4] + [0]** : ANI - radio ID code. Code only can set by PC software.
 41. **[F Key] + [4] + [1]** : ANI-L - ID code length. Length = 3, 4, 5.
 42. **[F Key] + [4] + [2]** : REP-S - repeater activate setting. Pressing CALL will send a predetermined tone. Options are 1000 Hz, 1450 Hz, 1750 Hz, 2100 Hz.
 43. **[F Key] + [4] + [3]** : REP-M - repeater forwarding mode setting. **OFF**: close function. **CARRI**: forwarding after receive carrier. **CTDCS**: forwarding after receive correct CTDCS. **TONE**: forwarding after receive correct mono audio. **DTMF**: forwarding after receive assigned DTMF code.
 44. **[F Key] + [4] + [4]** : TDR-AB - TDR return time. Delay time before returning to the primary channel after secondary signal is clear.

45. **[F Key] + [4] + [5]** : STE - Squelch Tail Elimination at the end of a received signal.
Requires both radios to have the option ON.
46. **[F Key] + [4] + [6]** : RP-STE - Repeater STE requires a repeater with this function ON.
47. **[F Key] + [4] + [7]** : RPT-DL - RP-STE Delay time.
48. **[F Key] + [4] + [8]** : RESET – VFO or ALL

Frequency Mode vs. Channel Mode

These two modes have different functions and often confused.

Frequency Mode (VFO) - Used for a temporary frequency assignment, such as a test frequency or quick field programming if permitted.

Channel Mode (MR) - Used for selecting preprogrammed channels.

All programming MUST be initially done in the Frequency Mode only. From there you have the option of assigning the entered data to a specific channel for later access in the Channel Mode if desired.

Programming Repeater with Offset

EXAMPLE New memory in Channel 99:

RX = 146.850 MHz

TX = 146.250 MHz

CTCSS tone 123.0

1. Change from Menu to Menu by pressing the [EXIT/AB] button.
2. Set radio to VFO Mode by pressing [V/M]
Channel number at the right will disappear.
3. Menu 37 [M] 99 [M] **Delete Prior Data in channel (Ex. 99)**
4. Menu 13 [M] 123.0 [M] **Select desired TX encode tone (Ex 123 CTCSS)**
 - a. Use [A/B] to select Upper display -> **Enter RX frequency (Ex. 146850)**
 - b. Use [A/B] to select Lower display -> **Enter TX frequency (Ex. 146250)**
5. **Select Upper Display** Use [A/B] key
6. Menu 36 [M] 99 [M] **Enter the desired channel (Ex 99)**
 - a. [EXIT] **RX has been added**
7. **Select Lower Display** Use [A/B] key
8. Menu 36 [M] 99 **Enter the same channel (Ex 99)**
 - a. [EXIT] **TX has been added**

9. [V/M] Return to MR Mode. **Channel number will re-appear.**

Programming a Simplex Channel

EXAMPLE New memory in Channel 99:

RX = 446.000 MHz

CTCSS tone 123.0

1. Change from Menu to Menu by pressing the [EXIT/AB] button.
2. Set radio to VFO Mode by pressing [V/M]
Channel number at the right will disappear.
3. Menu 37 [M] 99 [M] **Delete Prior Data in channel (Ex. 99)**
4. Menu 13 [M] 123.0 [M] **Select desired TX encode tone (Ex 123 CTCSS)**
 - a. Use [A/B] to select Upper display -> **Enter RX frequency (Ex. 446000)**
5. Menu 36 [M] 99 [M] **Enter the desired channel (Ex 99)**
 - a. [EXIT] **Channel has been added**
6. [V/M] Return to MR Mode. **Channel number will re-appear.**

Other Basic Features

Storing an FM Radio Station and Scanning

Use PC software to edit FM radio channels. (*software* FM option) Press microphone [*] Key to search FM channels under FM mode.

Keypad Lock-out

Hold the microphone [# key] for 2 seconds at standby to turn on/off the keypad lock-out function.

PTT ID Setting

1. Use PC software to edit PTT-ID code.
2. See manual 20, select signal, Press [F] Key + [2] Key + [0] Key + [F] Key + [UP] (DOWN) select signal+ [F] Key save the setting.
3. See manual 22, setting PTT launch. Press [F] Key + [2] Key + [2] Key + [F] Key + [UP] (DOWN) select PTT-ID transmit time + [F] Key save setting.
4. See manual 23 setting PTT transmit delay time. Press [F] Key + [2] Key + [3] Key + [F] Key + [UP] (DOWN) select delay time + [F] Key save setting.
5. Press [PTT] to send setting ID code.

Optional signal setting





DTMF signal

This radio has DTMF coding/decode function. Use PC software to input code information DTMF signal setting receive DTMF signal first. After receiving the same code as your setting, radio will show the code by display and ring. Then can speak during effective time. (ID code setting by PC software)

DTMF

In two-way radio systems, DTMF is most commonly used for automation systems and remote control. A common example would be in amateur radio repeaters where some repeaters are activated by sending out a DTMF sequence (usually a simple single-digit sequence).

Table 7.1. DTMF frequencies and corresponding codes

| | 1209 Hz | 1336 Hz | 1477 Hz | 1633 Hz |
|--------|---------|---------|---------|---|
| 697 Hz | 1 | 2 | 3 | A -  |
| 770 Hz | 4 | 5 | 6 | B -  |
| 852 Hz | 7 | 8 | 9 | C -  |
| 941 Hz | * | 0 | # | D -  |

The BTECH UV-2501 / UV-5001 have a full implementation of DTMF, including the A, B, C and D

codes.

The numerical keys, as well as the ***SCAN**, and **#r●**, keys correspond to the matching DTMF codes as you would expect. The A, B, C and D codes are located in the **MENU**, **▲**, **▼** and **EXIT** keys respectively (†).

To send DTMF codes, press the key(s) corresponding to the message you want to send while holding down the PTT key.

Inspect function

When the receive DTMF code is the same as the setting inspect code, the receiver will send an ID code. The screen can display this code. This function's settings are controlled by the master ID, and not the receiving station. (inspect code is set by PC software)

Monitor function

When receive DTMF signal is the same as the setting code, receiver will turn on the monitor function for nearby signal. This function's settings are controlled by the master ID, and not the receiving station. (monitor code is set by PC software)

Remote stun

When receive DTMF signal is same as pre-set remote stun code, the receiver will turn off

transmit function, only the receiver (LCD will display remote stun information). Only after receiving the ON code will the transmit function return. This function's settings are controlled by the master ID, and not the receiving station. (remote stun code is set by PC software)

Remote Kill

When receive DTMF signal is same as pre-set remote kill code, receiver will turn off all functions, and LCD will display remote kill information. Only after receiving the ON code will the radio's function return. This function's settings are controlled by the master ID, and not the receiving station. (remote kill code is set by PC software)

Turn on function

When receive DTMF signal matches the pre-set turn on code, the remote stun or remote kill will be cancelled. This function's settings are controlled by the master ID, and not the receiving station. (remote kill code is set by PC software)

Alarm function

When receive DTMF signal matched the pre-set alarm code, the receiver's alarm function will be turned on. Alarm mode and alarm channel are set by PC software. This function is controlled by the master ID and not the receiving station. (Alarm code is set by PC software). Signal control by

master ID means the function only works by signal code and master ID both confirm. No control by master ID coding format: signal code + #(patch code) + information code. Control by master ID coding format: signal+#(patch code)+ master ID code+#(patch code)+information code

DTMF Transmit by Call Key Setting:

1. Select DTMF signal, press [F] Key + [2] Key + [O] Key + [F] Key + UP(DOWN) select DTMF signal + [F] Key save setting.
2. Select signal Information code. Press [F] Key + [2] Key + [4] Key + [F] Key + UP(DOWN) select decode signal information code group (1-15) + [F] Key save the setting.(Can use PC software set DTMF code).
3. Press [Call] Key transmit selected DTMF code group at standby.

2TONE Transmit by Call Key Setting

1. Press [MENU] Key select 20 OPTSIG, press [F] Key select 2TONE function.
2. Press [MENU] Key select 24 S-INFO, press [F] Key select pre-code signal group (1-16). (Can use PC software setting 2TONE)
3. Corresponding function will turn on when receive 2TONE signal is same as pre-set 2TONE code
4. Press [Call] Key to send 2TONE group code at standby.

5TONE Signal Setting

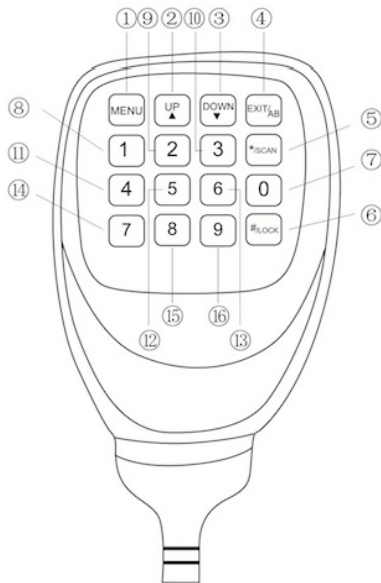
This radio has a 5TONE coding/decode function. You can use PC software to input signal information code. Set 5TONE signal, then after receive same 5TONE signal code receive and turn on the ring function and display the information code. Speech at effective time is available. (ID code can use PC software to setting)

Press [CALL] Key to transmit 5TONE

1. Press [MENU] Key, select 20 OPTSIG press [F] Key select 5TONE function.
2. Press [MENU] Key, select 24 S-INFO press [F] Key select pre-code signal group 1-16. (Can use PC software setting 5TONE information code, each group can transmit 3 group 5TONE code for optional).
3. Press [CALL] Key transmit pre-set 5TONE code group at standby.

Hand Held Mic Function Keys and Description

- 1 "MENU": Function key
- 2 "UP": Higher frequency
- 3 "DOWN": Lower frequency
- 4 "EXIT": Exit the AB channel switch, alarm function
- 5 "* /SCAN": Scanning function
- 6 "#/LOCK": Keyboard lock function
- 7 "0": Number 0
- 8 "1": Number 1
- 9 "2": Number 2
- 10 "3": Number 3
- 11 "4": Number 4
- 12 "5": Number 5
- 13 "6": Number 6
- 14 "7": Number 7
- 15 "8": Number 7
- 16 "9": Number 9



Scanning Receiver Mode

Press "*" /SCAN" key shortly. then press it for a long time to enter the scanning receiver mode.

Appendix A. - Menu definitions

| | | | | |
|---|------|---------------------------|-------------------------|--|
| 0 | TDR | Transmit Dual Receive | ON | Allows monitoring of 2 channels. Toggles between Freq A and B. If signal received, RX stays on Freq. |
| | | | OFF | Receives on selected channel |
| 1 | STEP | Frequency Step Size Setup | 5.0 to 25. kHz | 5, 6.25, 10, 12.5, 15, 25 kHz |
| 2 | SQL | Squelch Level | 00 > 09 | 10 squelch levels 00 = minimum / normally open |
| 3 | TXP | Transmit Power | High | Full Power |
| | | | Low | Reduced Power |
| 4 | SCR | Voice Scrambler | ON | Activate Scrambler Function |
| | | | OFF | Deactivate Scrambler Function |
| 5 | TOT | Time Out Timer | 15 > 600 secs | 15 second steps |
| | | | OFF | Turn of Time out Timer |
| 6 | APO | Auto Power Off | 30, 60 > 300 Minutes | Time set that radio will power off after the last signal has been received. |
| | | | OFF | Turn off APO |
| 7 | WN | Bandwidth | Wideband | 25.0 kHz |
| | | | Narrowband | 12.5 kHz |

| | | | | |
|----|--------|---------------------------------|-----------------|---|
| 8 | ABR | LCD Backlight Timer | 1 > 50 secs | Backlight duration = 1 > 50 |
| | | | OFF | Backlight remains ON. |
| 9 | BEEP | Keypad Voice Prompt | ON / OFF | Turn ON / OFF keypad voice prompt |
| 10 | R-DCS | Receive - Digital Coded Squelch | D023N > D754I | Squelch opens when proper DCS code is detected |
| | | | OFF | No DCS code required |
| 11 | R-CTCS | Receive - Analog Tone Squelch | 67.0 > 254.1 Hz | Squelch opens when proper CTCSS tone detected |
| | | | OFF | No CTCSS tone required |
| 12 | T-DCS | Transmit - DCS Code | D023N > D754I | Transmits specified code |
| | | | OFF | No DCS code transmitted |
| 13 | T-CTCS | Transmit - CTCSS Code | 67.0 > 254.1 Hz | Transmits specified tone |
| | | | OFF | No CTCSS tone transmitted |
| 14 | DTMFST | DTMF Side Tone | OFF | No tones are heard through the speaker when transmitted |
| | | | KEY | Only manually keyed DTMF codes are heard |
| | | | ANI | Only automatically keyed DTMF codes are heard |
| | | | BOTH | All DTMF codes are heard |
| 15 | BCL | Busy Channel Lockout | ON | Prevents transmit if active signal on the channel |
| | | | OFF | No lockout |
| 16 | SC-ADD | Add Scan Channel | ON | Add channel to scan list |
| | | | OFF | Remove channel from scan list |
| 17 | PRI-SC | Priority Scan | ON | Activate Priority Scan |
| | | | OFF | Deactivate Priority Scan |

| | | | | |
|----|--------|-------------------------|-----------|--|
| 18 | PRI-CH | Priority Channel | 000 > 199 | Channel selected for Priority Scan |
| 19 | SC-REV | Scan Resume Method | TO | (Time Operation) Scan stops when signal detected. Scan resumes after a predetermined time. |
| | | | CO | (Carrier Operation) Scan stops when signal detected. Scan resumes when signal disappears. |
| | | | SE | (Search Operation) Scan stops when signal detected. Scanning will not resume. |
| 20 | OPTSIG | Optional Signaling | OFF | No optional signaling |
| | | | DTMF | DTMF signaling selected |
| | | | 2TONE | 2TONE signaling selected |
| | | | 5TONE | 5TONE signaling selected |
| 21 | SPMUTE | Speaker Mute Settings | QT | Squelch opens when any non-OptSig activity is present. |
| | | | AND | Squelch opens when CTCSS/DCS tone is recognized along with the optional signaling. |
| | | | OR | Squelch opens when either the CTCSS/DCS tone OR the optional signaling is recognized. |
| 22 | PTT-ID | PTT ID - When to send | OFF | Do not send |
| | | | BOT | Send at Beginning of Transmission |
| | | | EOT | Send at the End of Transmission |
| | | | BOTH | Send at both Beginning and End |
| 23 | PTT-LT | PTT ID - Transmit Delay | 0 > 30 | Set Delay Time |

| | | | | |
|----|--------|---------------------------|--------------------------|--|
| 24 | S-INFO | Auto Group Dialing | Group Signal Code Memory | 1 > 15 Can only be set with software |
| 25 | EMC-TP | Alarm Mode | ALARM | Turn on Alarm sound |
| | | | ANI | Send Alarm code and ID code |
| | | | BOTH | Both of the above |
| 26 | EMC-CH | Alarm Channel | 000 > 199 | Specified Alarm Channel |
| 27 | RING-T | Ring Time | OFF, 1 > 10 | OFF - No Ring Time |
| | | | | 1 > 10 seconds ring time when signal code received |
| 28 | CHNAME | Channel Name | Channel Name Edit | In Channel Mode, edit the Current Name |
| 29 | CA-MDF | A Channel Display Mode | FREQ | In Channel Mode, display the selected format in display A |
| | | | CH | |
| | | | NAME | |
| 30 | CB-MDF | B Channel Display Mode | FREQ | In Channel Mode, display the selected format in display B |
| | | | CH | |
| | | | NAME | |
| 31 | SYNC | Sync Displays | OFF | Separate A/B channel display. |
| | | | ON | Display A and B are synced. This allows the upper display to show channel Name while the lower shows the Frequency. |
| 32 | PONMSG | Power On Message | FULL | Full Screen Display |
| | | | MSG | Show Power On Message |
| | | | BATT-V | Display Battery Voltage |

| | | | | |
|----|--------|--------------------------------------|---------------|---|
| 33 | WT-LED | Standby - Backlight Color Selection | OFF | Select desired color |
| | | | BLUE | |
| | | | ORANGE | |
| | | | PURPLE | |
| 34 | RX-LED | Receive - Backlight Color Selection | OFF | Select desired color |
| | | | BLUE | |
| | | | ORANGE | |
| | | | PURPLE | |
| 35 | TX-LED | Transmit - Backlight Color Selection | OFF | Select desired color |
| | | | Blue | |
| | | | ORANGE | |
| | | | PURPLE | |
| 36 | MEMCH | Memory Channel | 000 > 199 | Indicates channel number to be stored. "CH" will appear after channel is stored. |
| 37 | DELCH | Delete Channel | 000 > 199 | Indicates channel number to be deleted. "CH" will disappear after channel is deleted. |
| 38 | SFT-D | Frequency Shift Direction | OFF | No Offset (simplex) |
| | | | + | Plus frequency shift |
| | | | - | Minus frequency shift |
| 39 | OFFSET | Frequency Shift Offset Amount | 00.00 > 69.99 | Frequency shift in MHz |
| 40 | ANI | | ANI ID Code | Can only be set with software |

| | | | | |
|----|--------|---|--------------------------------|---|
| 41 | ANI-L | ANI Length | 3, 4, 5 | Length of ANI ID code |
| 42 | REP-S | Repeater Activation Tone | 1000Hz 1450Hz 1750Hz 2100Hz | Audible tone for repeater activation |
| 43 | REP-M | Repeater Forwarding Mode | OFF | Function OFF |
| | | | CARRI | Forward after receiving Carrier |
| | | | CTDCS | Forward after receiving correct CTDCS |
| | | | TONE | Forward after receiving correct mono audio (Menu 42) |
| | | | DTMF | Forward after receiving assigned DTMF code. (ANI) |
| 44 | TDR-AB | TDR Return Time Delay | OFF | Function OFF |
| | | | 1 > 50 seconds | This is the delay time before returning to the primary channel after secondary signal is clear. |
| 45 | STE | Squelch Tail Elimination Requires both radios have function ON. | OFF | Function OFF |
| | | | ON | Eliminates squelch tail at end of transmission. |
| 46 | RP-STE | Repeater Squelch Tail Elimination Requires a repeater using this function. | OFF | Function OFF |
| | | | 1 > 10 | Delay Time |
| 47 | RPT-DL | Repeater squelch tail delay. | OFF | Function OFF |
| | | | 1 > 10 | Delay Time |
| 48 | RESET | Initialize to Factory Defaults | VFO | Menu Initialization |
| | | | ALL | Menu and Channel Initialization |

Appendix B. - Technical specifications

General

General specifications

| Specification | Value |
|-----------------------|--|
| Frequency Range (MHz) | 136-174 (Rx) 400-520 (Rx) |
| Memory channels | 200 |
| Frequency stability | 2.5ppm |
| Frequency step (kHz) | 5.0K/6.25k /10.0K/12.5K/15K/25.0K |
| Squelch Setup | CTCSS / DCS / 5Tone / 2TONE / DTMF |
| Antenna impedance | 50 Ohm |
| Operating temperature | -20°C to +60°C |
| Supply voltage | 13.8V DC±15% |
| Dimension | UV-2501: 98(w) x 35 (H) x 118 (D)mm; 408g UV-5001: 145(w) x 47 (H) x 190 (D)mm; 1.2kg |
| Operating Temperature | -5°F - +140°F |

Receiver

Receiver specifications

| | Broadband | Narrow band |
|-----------------------|---------------------------------|------------------------|
| Sensitivity | $\leq 0.25\mu\text{V}$ | $\leq 0.35\mu\text{V}$ |
| Channel choice | $\geq 70\text{dB}$ | $\geq 60\text{dB}$ |
| Intermodulation | $\geq 65\text{dB}$ | $\geq 60\text{dB}$ |
| Spurious Rejection | $\geq 70\text{dB}$ | $\geq 70\text{dB}$ |
| Audio response | +1~-3dB (0.3-3KHz) | +1~-3dB (0.3~2.55KHz) |
| Signal to noise ratio | $\geq 45\text{dB}$ | $\geq 40\text{dB}$ |
| Audio Distortion | $\leq 5\%$ | |
| Audio output power | $\geq 2\text{W}@10\% \text{Yo}$ | |

Transmit

| | Broadband | Narrow band |
|-----------------------|---------------------|--|
| Output power | 25W / 10W (VHF/UHF) | UV-2501 50W / 10W (VHF/UHF) UV-5001 |
| Modulation Mode | 16K Φ F3E | 11K Φ F3E |
| Channel Power | $\geq 70\text{dB}$ | $\geq 60\text{B}$ |
| Signal to noise ratio | $\geq 40\text{dB}$ | $\geq 36\text{dB}$ |
| Parasitic harmonic | $\geq 60\text{dB}$ | $\geq 60\text{dB}$ |
| Audio response | +1~-3dB(0.3-3KHz) | +1~-3dB (0.3-2.55KHz) |
| Audio distortion | $\leq 5\%$ | |