

# TYT UVF1 Information

Some of the features listed below are only available through the software provided with the UVF-1 radio. These features are denoted by the use of the [\*]

Some of the features listed below are available only through the radio itself. These features are denoted by the use of two [\*\*]

Some of the features listed below are available through both the radio and the software. These features are denoted by the use of three [\*\*\*]

## **1. SCAN\*\***

Allows operator to scan through all channels that were chosen for the scan group by software program: See #19 below.

## **2. TX-SEL\***

Busy= the radio receives both channels listed on the screen. When you transmit, you will transmit on the channel where the last incoming transmission was received.

Edit = the radio receives both channels listed on the screen. The radio will only transmit on the channel chosen. This channel is denoted by the small [^] to the left of the frequency.

## **3. VOX/Voice Operated Transmit \*\***

Numbers determine the amount of modulation required in order for the microphone to activate for "hands-free" transmission. 8= requires the least amount of volume to activate.

## **4. POW /Power \*\*\***

High = 4.5 watts output transmission power

Low = 0.5 watts output transmission power.

## **5. SQL Squelch \*\*\***

Numbers determine the amount of received signal required before the radio will provide audio for you to hear the signal.

## **6. SCR. No\*\*\***

This is the Scramble code used for APRO listed above. Allows the operator to make the transmission unintelligible to anyone that is not using the same code.

## **7. LED / Light Emitting Diode. Lamp \*\*\***

On = remains on at all times

Auto = remains on for a limited time after transmitting or receiving a signal

Off = remains off at all times.

## **8. LIGHT /Color\*\*= allows operator to choose the most pleasant LED color.**

Purple

Blue

Orange

## **9. BEEP\*\*\***

On = produces a loud "beep" when a button is pressed.

Off = OFF

## **10. ANI\*\*\***

The radio is capable of transmitting a digital signal that identifies your radio to other radio. Turning this feature off turns off the Automatic Numeric Identification.

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## **11. D.Wait (Dual Receive)\*\***

Off = the radio will only receive the channel with the [^] to the left of the frequency.

On = the radio will receive transmissions from the first channel to receive a carrier. The radio will not receive transmissions from both channels at the same time.

## **12. APRO\*\*\***

Off = standard transmissions received

SCR = Scramble code that is listed under (#6. SCR.No) will be used to scramble your transmission and reception.

Comp = Compresses your transmission. Used only with other radios that use the same mode.

## **13. TOT\*\*\* [time out timer]**

When set, this will limit the amount of time that the transmitter will continue to transmit without "unkeying" the microphone. Prevents excessive transmissions when the transmit key is accidentally activated. Best used when the VOX is actively being used.

## **14. BCLO/ Busy Channel Lock OUT/BCL\*\*\***

Off = Standard Transmissions received

Carry or Wave = The radio will not transmit if a carrier is present on the channel being used.

QT/DQT = The radio will not transmit when a CTCSS or DCS signal is present on the channel.

## **15.VOX. SW\*\* Voice Operated Relay Switch.**

Turns on the Voice Operated Relay feature for hands free use: see VOX above.. Be sure to use the TOT for this function.

## **16. ROGER\*\*\***

ON = Provides an audible tone at the end of your transmission to indicate that you have completed transmitting. Same as saying, "Over".

## **17. DW or Dual Watch \*\***

Continues to listen for transmissions on the VHF/UHF channels while the radio is being used to listen to FM radio. The radio will immediately return to the VHF/UHF monitoring when a carrier is present and will go back to the FM Radio when carrier stops. FM radio can be access by pressing the orange [MENU] button and then the black button between the transmit key and orange call button on the left side of the radio.

## **18. RX SAV/ Battery Save \*\*\*.**

On = Will turn off receive function for approximately 1 second. Periodically checks to see if there is a carrier. Saves and increases battery life.. Could cause a failure to receive the beginning of a transmission.

Off = Decreased battery life.

## **19. SCANS\*\*\***

Time = Scanning will stop for a period of time when a carrier is received.. Then will return to scanning.

Seek = Scanning will cease when a signal is found.

Carry = Scanning will stop when a signal is found. Scanning will resume when the signal stops.

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## **20. AUTOLK\*\* / Auto lock**

Radio can be locked manually by pressing and holding the [\*LOCK] button. With Autolk, the radio is automatically locked to prevent accidental changing of the frequency or menu functions during operation. Transmission keys are not affected by Autolk.

## **21. VOICE\*\*\*:**

ON= This feature is used for visually impaired operator. Allows for a digital voice to announce the key that is being activated.

## **22. OPN. SET\*\*\* – sets screen message when radio is turned on.**

Off = no screen message displayed when radio is turned on.

MSG = Screen message displayed that is chosen by software or manual input.. Can be set to display license number or unit number

DC = Screen message displays current battery voltage available.

## **23. VLT\*\* – Voltage**

Displays the current battery voltage.

## **24. PON. MSG\*\*\***

Message to be displayed when radio is turned on. Can be input manually or with software. See OPN.SET above.

## **25. DIS.NM \*\*\* Displays only in memory function.**

OFF = Channels are displayed by the frequency of that channel.

ON = Channels are displayed by the name input by software or manual input..

## **25a. OFFSET\*\*\***

When the radio is place in "Field Programmable" setting and Manual is "on", #25 displays as OFFSET allowing the operator to set the frequency offset for the repeater operations.

## **26. CH.NAME\*\*\***

The name input for the channel. i.e. Fire, Rescue, Police. If left blank, only the frequency will be displayed. If input, but the DIS.NM is set to off, only the frequency will be displayed.

**27. C-CDC\*\*** = The CTCSS or Digital code squelch used to isolate the transmitted channel from users that are not apart of the group. When set, this activates both the Transmit and Receive codes used. When activated, this will set both the R-CDC and T-CDC listed below.

**28. R-CDC\*\*\*** = This activates only the Receive CTCSS or Digital squelch codes for groups. When activated, and the C-CDC is off, the radio will not transmit the code to activate other radios, but must receive the code in order for you to hear other radios.

**29. T-CDC\*\*\*** = This activates only the Transmission of the CTCSS or Digital squelch codes for groups. When activated, and the C-CDC is off, the radio will receive all transmissions, but can only be heard by radios that are set to the appropriate code or are not set to any code.

**30. S-D\*\*\*** Identifies the offset of the Transmit Frequency from the Receive Frequency. Used for repeaters. This menu item does not display in memory function.

Off = Simplex or direct transmission between radios.

[+ ]= indicates that the Transmitted frequency is offset higher than the received frequency.

[- ]= indicates that the Transmitted frequency is offset lower than the received frequency.

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## **31. STEP\*\*\***

Indicates the Frequency spacing of frequencies chosen. This is automatically chosen when frequencies are input by software. VHF are usually 5khz while UHF are usually 10mhz. When using modified software for Part 90 approved radios, this feature defaults to the next higher level. (i.e. 7.5k is actually 10k and 12.5k is actually 25k... 5k is 5k). This is an error in the software programming and may be corrected in future additions.

## **32. N/W \*\*\***

Narrow = Narrow Band radio operations.

Wide = Wide Band Radio Operations.

## **33. SEEK 67.0\*\***

When this feature is chosen the radio will continually seek an unknown CTCSS tone squelch for a frequency in use. When the correct tone is found, the display will continually display the number for that tone for reference. If none is found, see SEEK D023N below.

## **34. SEEK D023N\*\***

When this feature is chosen the radio will continually seek an unknown Digital tone squelch for a frequency in use. When the correct tone is found, the display will continually display the number for that tone for reference. If none is found, press the [#T-R] button in the lower right to change from D023N to D023I digital tone squelch search.

## **Software Features:**

The TH UVF1 radio is designed to be "Field Programmable". First, turn the radio off and then press – and continuously hold the [^] key while turning the radio on. This sets the radio to either the fixed or the manual "Field Programmable" mode; repeating the process above changes the radio back to the previous mode.

The radio is capable of storing up to 128 memory channels. You do not have to fill all 128 memories. The "Field Programmable" mode should only be used by more advanced/experience radio operators. When in the "Field Programmable" mode, the operator may press and hold the [U/V] key for 2 seconds to change the radio to a temporary "Fixed" mode. When in the field programmable mode, you first enter the frequency that you desire, then press the MENU key followed by the [U/V] button. This will then cause the small channel number in the upper right corner to blink. Use the upper or lower arrow to select a channel that does not blink and press the [U/V] a second time to select. The blinking indicates that the channel is already programmed.

When using the software to program DATA into the radio, the programmer can choose to deactivate the "Manual" feature for the radio. This deactivates the "Field Programmable" mode. This is recommended for when the radio is to be issued to a radio operator that should not have access to Programming features. This does not prevent the operator from using the standard MENU features to change power levels, squelch, or other basic functions. It only prevents the operator from adding, deleting, or modifying the frequencies that are put into the memory functions. No frequency can be manually input into the radio when the "Manual" is unchecked.

The radio is designed to be used so that the upper displayed channel/frequency is for VHF and the lower is for UHF. However, this is not mandatory and the operator can display VHF in both places or UHF... as necessary.

Power on Message Mode is designed only to allow the display of the Unit or License when the radio is initially turned on. This can also be used to check the battery or can be shut off completely.

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"Cancel code squelch when press PTT" Selecting this feature allows the operator to set a CTCSS, Digital tone Squelch, or one of the call tones (DTMF, MSK, 2-tone, or 5-tone) for receiving only transmissions from approved radios, but turns the feature off after the Transmission key is activated... even if activated for only a short time.

PTT ID Setting allows the operator to transmit a digital code identifying the source of transmission by number of choice. BOT sets the transmission of this ID code at the beginning of the transmission. EOT sets the Transmission of the ID code at the end of the transmission. Both BOT and EOT can be used if desired.

When inputting frequencies through the software using the "Use Alternate GUI", the operator can input a separate RX (receive) frequency and TX (transmit) frequency. This will automatically set the Offset Frequency. However, the operator may also choose a specific Offset displacement in this box. When manually setting the Offset Freq, be sure to choose the appropriate "Duplex".

The operator may choose to enter either Decode or Encode. If choosing both, the C-CDC is activated on the radio menu functions. The operator may choose to activate only the Encode to access the repeater and leave the Decode set to "none" in order to hear transmissions from other groups. This is useful when there are more than one set of groups using the same repeater. It is possible that an organization will use the input frequency of a repeater for simplex operations, but will set their radios so that the CTCSS tone is not transmitted and will not activate the repeater.

Choose the "Scan Add" to put the frequency/channel into the scan group for scanning. If [Del] is selected, the radio will not include this channel/frequency during scanning operations. This feature is only activated with the software.

Pressing and holding the [#T-R] button will reverse the Transmit/Receive function in order to allow the operator to listen to the repeater input frequency. This helps the operator to decide whether to change to simplex/direct mode. It is also useful when units are close by each other, but too far from the repeater to provide accurate communications.

When installing information from the Software to the radio, there are some functions that are not accessible from both the radio and the software. After uploading the information from the software to the radio, the operator will need to accurately input some information directly to the radio. After this has been completed, you must then download the information from the radio to the software. This added information will then be saved in the software program. You may wish to save these two as different files denoting the difference. Failing to do so will require that the operator will need to input these changes each time the software is uploaded to the radio.

When downloading the information from the radio to the software, data that can only be input manually to the radio will be saved and uploaded the next time it is uploaded.

Be careful when using the radio where the [Pri] or [TX.SEL] is set to "Busy". It is possible that you may be transmitting on the wrong frequency. In this mode, you will be transmitting on the frequency where the last transmission was received. It is best to leave this set to "Edit" and use the [U/V] button to change to the frequency/channel that you wish to transmit on.

Make sure that the "Setup", "Communications Port" is set to the appropriate port when transferring data from or to the radio. At times, an error message will be received when transferring data.. If the error continues after several attempts, consider looking for a possible malfunction with the connection to the radio or the wrong communication port selected.

I have found that I can use both the TH-UVF1(US) [or the TYT1000v3.01] software and the LT-UV [or the TH-UVF(US)FRP] software for program this radio. I can also use both programs for modifying the same data

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file for use with the radio. First, I use the TH-UVF1(US) [or the TYT1000v3.01] to set the channels that are to be used for a particular mission. Using the Program called LT-UV [or the TH-UVF(US)FRP], this radio can be changed so that the frequencies are limited or expanded in usage. The TH-UVF(US)FRP software does not require a password to access. The TH-UVF radio can be set so that it can only be used in the US Amateur Radio bands. I was able to set the radio so that it could not transmit or receive beyond the Amateur bands. I was also able to set it so that the radio could be used to receive and scan everything from 136 to 174 Mhz while limiting the transmit to only that of the Amateur Bands. Similarly, I was able to set the radio so that it could only transmit or receive on low power on the MURS radio frequencies. I have plans for using it with the volunteer fire department and locking down the "Issued" radios so that they are limited only to VFD frequencies that are necessary for communications within our county.

Under the Options Signal:

- MainSet
- o Functions Settings:
  - ♣ Squelch Level: normal level is about 4. User preference.
  - ♣ Time Out Timer: Used with VOX.
  - ♣ Scan Modes: See #19
  - ♣ Chord: Same as Voice #21.
  - ♣ Battery Save
  - ♣ Roger Tone (some software calls it Roger Time)
  - ♣ Lamp: on or off.
  - ♣ Channel Display
  - ♣ VOX Gain Level
  - ♣ VOX Delay after transmission is activated.
  - ♣ Scramble on or off
  - ♣ Manual: sets radio into Field Programmable or not.
  - ♣ Relay Transfer
  - ♣ Inhibit Receiver When Radio Working (See #17)
  - ♣ Cancel Code squelch when press PTT: This removes any 2-tone or 5-tone setting when the Push to talk key is activated. You must reset the radio by changing channel or turn off/on.
- o PTT ID Setting
  - ♣ Sets the Automated Number Identification.
  - ♣ Choose from MSK or DTMF
  - BOT is Beginning of Transmission
  - EOT is End of Transmission
  - Both can be set on or off.
  - Option Signal
- o Common Set
  - ♣ Digit Delay(ms). Sets the amount of time after transmission starts before 2-tone or 5-tone signaling starts. Gives time for the receiving radio to activate and prepare for the tone reception.
  - ♣ Auto Reset Timer [s]. Sets the amount of time before the radio resets after receiving a signal tone. Allows for reception of a message before resetting.
- o DTMF:
  - o MSK: Digital transmission of set numbers for activating other radios.
  - o 2-Tone: Allows for transmission of two separate tones for activating other radios.
    - ♣ Sets A tone and B tone with appropriate gap for transmission to other radios. 8 or 9 separate sets depending on software.
    - ♣ Sets A tone and B tone for reception from other radios to activate your radio.
    - ♣ "A" tone is set for a standard 1 second transmission
    - ♣ "B" tone is set for a standard 3 second transmission
    - ♣ "C" tone is set for [unknown]
  - o 5-tone See attached guide.

To limit transmission of the TH -UVF1 radio: Use the LT-UV software. Open the program and choose the

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data program that you are modifying. If you don't have a data file for your business or department, make one appropriate for your operations and then save it. Now click on "Edit" and choose "Advanced".

#1 Denotes TX limitations VHF

#2 Denotes TX limitations UHF

(Tx Unable) #2 Denotes RX limitations VHF

(Tx Unable) #2 Denotes RX limitations UHF

In Band #1, you insert the limitations of the frequencies that you want the radio to be able to transmit on within the VHF bands.

In Band #2, you insert the limitations of the frequencies that you want the radio to be able to transmit on within the UHF bands.

Bands #3 and #4 set the receivable frequencies that you want the radio to be able to receive on, but not transmit.

Notice: Choosing a frequency for transmission that the radio is not designed for will cause an audible "Beep" to be heard continuously. It is unknown what will happen if you continue to transmit on that frequency.

The following is an example of how to set the radio for legal transmission within the "License Free Multi-Use Radio Service". LOW POWER ONLY!

Notice in the last example that the #1 and #3 have the same frequency ranges listed. #1 limiting transmissions from 144 to 148 and #3 limiting reception from 136 to 174. This does not conflict. #1 and #2 set the transmit range, #3 and #4 set the receive range. When they are not the same, #1 and #2 set the receive and transmit range.

Remember that you are liable for any radio that is programmed to transmit on a frequency that you are not licensed or certified to transmit on. However, the only problem you may have is when you are caught committing a crime while using your radio; then this will be the least of your problems. If you can't do the time, don't do the crime!

Some advanced items that can be adjusted without a computer or the software are mentioned below. Remember that programming this radio without the software can be time consuming and difficult. In fact, programming with the PC and software can be time consuming. However, after saving all information to a computer in the form of a data file, this information is much easier to recover.

This following procedures are only possible if the radio has been set to allow for Manual programming with the software. If the Manual setting has not been allowed, the following procedures are not possible. This is the function of the Part 90 program. This radio can be set so that the operator does not have access to manipulation of the programming... a stipulation of the Part 90 rule.

Warning: The following procedures should only be completed after careful review and after saving all information to your computer.

Turn the radio off. Press and hold the red "Menu" button continuously while turning the radio on. This places

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the radio into "Reset" mode. Press the red "Menu" button again and you will see "VFO ?". Using the up arrow, you can scroll through the following:

VFO? This turns off the Name Display for each channel and resets the Voice and Beep for each Key press. It does not remove any channels or change any of the set up.

FULL? This allows for the operator to reset the radio to the manufactures setting. All information is lost when you press the "Menu" button while the "FULL?" is being displayed.

BAND? When this menu item is displayed, pressing the red "Menu" button will ask for a Password to be input. The password is 5858. This allows the operator to set the upper and lower limits of the VHF band, UHF band, and both Limited Receive groups. This allows the operator to establish boundaries for the transmission limits.

Turn the radio off. Press and hold the "[U/V]" button continuously while turning the radio on. This places the radio into "Delete" mode. The small number to the far right will blink indicating the channel number. Use the up or down arrow to indicate the channel to be deleted and press the red Menu button to delete.

## Memory channel storage

Under Field Programmable mode, input frequency and other parameters (such as CTCSS/DCS, offset frequency, offset direction, etc).

Press [MENU] first, then press [U/V] key, the channel No. for storage will be displayed at the right of the screen. Press [UP] or [DOWN] key to select the desired channel for storage, and then press [U/V] key to finish the storage.

If the channel is blinking, means radio has stored frequency, if isn't blinking, the current channel is null, without any frequency message.

Example; input frequency: 465.025 T/R CDCSS 71.9 store in CH 10.

Operation:

- 1) Input the NO. like : [4] [6] [5] [0] [2] [5]
- 2) Press [MENU] and [\*LOCK] keys again.
- 3) Press [MENU] key to confirm, use [\*LOCK] key to choose 67.0, Press [UP] or [DOWN] key to select 71.9, confirm by [MENU] key. "CT" is displaying at the right of LCD
- 4) Re-press [U/V] key to exit. Use [MENU] and [U/V] key, then input 010 directly and confirm by [U/V] key to complete channel store. Also you can press [UP] or [DOWN] key to select No. 10 and confirm by [U/V] key to complete channel storage.

Unpack and check all equipment: Carefully unpack the transceiver. TYT recommends that you check all times listed in the following table before discarding the packing materials. If any item is missing or have been damaged during shipment, contact TYT as soon as possible.

## Supplied Accessories:

Antenna: Dual Band Battery Pack: Lithium Ion

Belt Clip: AC Charger Adapter

Desktop Charger Users Manual

User Tips: Your Two-Way Radio is a precision electronic device and should be treated with care. The suggestions below will help you fulfill all warranty obligations and keep the radio in good working order for many years.

- Do not attempt to disassemble the unit. There are no user serviceable parts.
- Desk Chargers and Automotive chargers should not permit more than 6 to 8 VDC to avoid damage to the radio.
- Do not store this radio in direct sunlight or on hot surfaces. High temperatures can damage and shorten the life of the radio. High temps can warp or melt casing.

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- Do not store radio in dusty or dirty areas.
- Keep radio dry. Moisture can damage internal components.
- If radio appears to smoke or displays smoky order, shut off immediately and remove battery. Return to TYT for repairs.
- Do not transmit without antenna. Damage to internal components is possible.