



# *Dual Band Two Way Radio*

## ***USER'S MANUAL***



UVL-15W

### User Instruction

Please read the manual carefully before using this product. So that you can easily operate the radio. When you are using this product, we think that you have read the manual

- Please keep the manual, in order to offer reference or user of this product
- This product relates to upgrade or improve. the company reserves without prior notice to change this manual at any time above the rights of software and hardware specifications

All specifications mentioned product specifications and information is only for reference

- Although all words carefully check, it is hard to avoid errors, the company reserves the final interpretation



*Welcome to use Dual Band Two way radio*

### **Main Features**

- APRS
- DTMF
- 2 Tone/5 Tone
- Programmable
- 1000 channels
- One key copy
- Frequency copy
- CTCSS/DCS
- Compander
- Scrambler
- TOT
- NOAA function
- ANI
- PTT ID
- 1750Hz
- Emergency alarm
- Backlight brightness setting
- Multiple types for keys lock setting
- Multi-Display mode
- Battery saving
- Remote stun/ kill/ activate
- Busy channel lock

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## Basic Operations

### Turn on and turn off

Rotate the volume knob clockwise to turn on the radio.

Rotate the volume knob fully counterclockwise to turn off the radio.

### Volume Adjustment

Rotate the knob clockwise to increase the volume and counterclockwise to decrease it.

During a call, rotating the VOL (volume) knob allows for more precise volume adjustment.

### Channel Switching

Memory/WX Mode/VFO Mode:

Rotate the channel knob or press up and down key to switch to the channel. Enter the channel number directly by keypad to quickly jump to the target stored channel.

Call Mode:

Call channels are quick-call channels, with one each for Band A and Band B. Channel switching is not supported.

FM Radio Mode:

In FM radio mode, rotate the channel knob or press up and down key to increase or decrease the frequency (or switch to the next radio channel).

In channel mode, enter the channel number directly to quickly jump to the target stored channel.

In VFO mode, enter the frequency directly to quickly switch to the target frequency.

Channel Mode Switching (Memory, VFO, CALL, WX)

In standby, press the "#" key to switch channel modes.

## AB Band Switching (Main Band)

In standby, press the key to switch the current main band.

### FM Radio On/Off

Long-press the key to turn on the FM radio.

If FM is selected ( displayed), long-press the key to turn off the radio.

If FM is not selected (no display), first long-press the key to select the radio, then long-press again to turn it off.

### Keypad Lock

Manual Keypad Lock On/Off:

Long-press the "\*" key to manually lock or unlock the keypad

Auto Keypad Lock On/Off:

You can set auto keypad lock on/off by [Main Menu] → [Radio Set] → [Keyboard] → [Keyboard Locker] → [Auto Locker] → [on/off]

Enable or disable auto keypad lock. When enabled, the device will automatically lock if there is no operation within the specified time.

Auto Keypad Lock Delay:

Set the delay time via:

[Main Menu] → [Radio Set] → [Keyboard] → [Keyboard Locker] → [Locker Delay].

Auto Keypad Lock Type (PTT, Keypad, knob):

Configure via:

[Main Menu] → [Radio Set] → [Keyboard] → [Keyboard Locker] → [Locker Type].



### Transmit Power

Adjust via: [Main Menu] → [Channel Set] → [TX Power].

Options: Low/Medium/High/Ultra High.

Transmit power adjustment can also be assigned to a programmable key (see shortcut settings).

## Menu Operations

Press the key  to enter the menu settings. This key also confirms selections.

a) In any menu, briefly press  to return to the previous setting or long-press  to return to Home screen.

b) Use the up/down keys or the channel selector knob to switch menu options.

### Channel Set

This menu is used to set the current main channel.

Note: In channel mode, any changes are temporary and will reset when switching channels or restarting. To save changes, use [CH Operations] → [Save].

Channel Settings Include:

[CH Operations]:

CH operations is to save, copy, move, or delete on current channels.

Adding a New Stored Channel:

In VFO mode, set parameters (frequency, power, Scrambler, etc.), then go to [CH Operation] → [Copy to MR], select a channel slot, and confirm.

Deleting a Stored Channel:

In Channel mode, select the channel, go to [CH Operation] → [Delete], and confirm.

Moving a Stored Channel:

In Channel mode, select the channel, go to [CH Operation] → [Copy to MR], choose the target channel, and confirm.

Copying Between [VFO]/[Memory]/[Call] Channels:

Copy the current channel to another mode (e.g., Memory → VFO A).

TRX Freq:

[RX Freq]: Enter the receive frequency by up and down key selection or input the numbers by keypad.

[TX Freq]: Enter the transmit frequency (in split mode).

[DUP Mode]: Set offset (Simplex/Minus/Plus/split).

[DUP Freq]: Set the offset frequency.

TX Power:

Options: Low/Med/High/Ultra High.

CH Model:

Options: FM (Wide)/FM-N(Narrow).

CH Name:

Name the channel. Use "#" to switch input methods and "\*" to delete.

T-Around/Rev:

Options: Off/Talk Around/Reverse.

Talk Around: Direct communication without a repeater.

Reverse: Swaps TX/RX frequencies.

Step:



Frequency step options (2.5K–100K).

RX Only:

Disable transmit on the channel.

Busy Lockout:

Options: Off/repeater/Carrier (prevents TX if channel is busy).

[Scan Flag]:

Options: Off/Skip/Priority (controls scan behavior).

Scrambler:

Enable voice scrambling (off/2700–3400Hz).

SqI Control:

Configure squelch types (carrier, tone, option signal, Tone & signal, Tone or signal).

1.Carrier: Receive as long as there is a single on the current channel

2.Tone: Receive as long as there is same CTCSS/DCS tone

3.Optional signal: receive according to optional signal

4.Tone & Signal: receive only when both CTCSS/DCSS tone and signal are same

5.Tone or Signal: receive when CTCSS/DCSS tone or signal is same

APRS RX:

Enable APRS reception (off/on/mute).

## Radio Set

Radio function settings divided into:

A. Function: Mode, squelch, power save, etc.

B. Display: Backlight, language, etc.

C. Sounds: Beeps, mic gain, etc.

D. Keyboard: Key assignments, lock settings.

E.Other: Reset options.

## A. Function setting function: function type setting.

### ■ [TRX Mode]

Set the current walkie-talkie transmit mode.

Optional: signal TRX /dual standby/dual RX/C-B repeater.

Single TRX: Receive and transmit only

Dual Standby: dual standby single transmission mode, only one channel receiving at the same time.

Dual RX: dual reception mode, which can receive two channel calls at the same time.

C-B Repeater: Cross band repeater mode, AB channel must in different frequency bands to work with repeater.

For example, channel A is set to 145.025MHz and channel B is set to 435.025MHz.

### ■ [C-B RPT Mode]

Set the repeater type in cross-band repeater mode.

Optional: Unidirectional/Bidirectional

Unidirectional mode: one-way transmission, which can only be received by RT-R channel and transmitted by RT-T channel.

Bidirectional mode: Any signal received on channel A or B is forwarded to the opposite channel for transmission

### ■ [C-B RPT Moni]

In corss-band repeater status, whether the radio monitoring signals.

Optional: off/on

Off: in repeater state, the speaker of this radio is mute. Do not listen to the repeater call.

On: in repeater state, the speaker of this radio is turned on. Monitor the repeater call.

#### ■ [Squelch Level]

Function: Adjust squelch level

Options: Level 1...Level 9

#### ■ [Time-Out Timer]

Function: Sets maximum allowed single transmission duration

Options: OFF / 1Min...30Min

#### ■ [Tx Channel]

Function: Sets default transmission channel

Options: Main CH / Last Call CH

Note:

Main CH: PTT always transmits on Main Channel.

Last Call CH: PTT checks if last call is expired. If not, transmits on last call channel; if expired, uses Main CH. Expiration time is set in [Call Hold Time].

#### ■ [Call Hold Time]

Function: transmit hold up time (works with [Tx Channel])

Options: 3S...300S

#### ■ [A Band Mode]

A Band operating mode

Options: Memory CH / VFO CH / Call CH / WX CH

#### ■ [B Band Mode]

B Band operating mode

Options: Memory CH / VFO CH / Call CH / WX CH

#### ■ [STE]

Squelch Tail Elimination options

Note:

[CTCSS STE]: Analog tone squelch tail elimination.

[DTCS STE]: Digital tone squelch tail elimination.

[No Signal STE]: No-signal squelch tail elimination.

[STE Timer]: Sets duration of squelch tail transmission

This function resolves decoder speed variations between manufacturers. When squelch tail persists, extend the Tail Duration parameter. Default 300ms

#### ■ [TONE Burst]

Tone burst encoding primarily for activating repeater relay

Sub-menus:

[TBST Side Tone]: Sets side tone during encoding

[TBST Freq]: Tone frequency selection (1000Hz/1450Hz/1750Hz/2100Hz)

[TBST Timer]: Duration setting (1sec or continuous)

Notes:

Requires shortcut key configuration via [Keyboard]→[Program Key] (set as [TBST TX])

#### ■ [SCAN]

Function: Scanning configuration

[Scan Mode]:

TO (Time Operation): Continues scanning after 5sec signal detection

CO (Carrier Operation): Resumes scanning when signal drops  
 SE (Search): Stops on detected signal  
**[MR Scan Type]:**  
 Normal: Skips channels marked "Skip"  
 TAG: Only scans channels marked "PSkip"  
 ■ **[Power Save]**  
 Function: Power management  
**[Switch]:** Enable/disable power saving  
**[Delay Timer]:** Inactivity period before activation  
 ■ **[WX Channel]**  
 Weather channel operation  
 Sub-menus: [SQL Mode]/[RX Mode]/[Scan List]/[Decoder Reset]  
**[SQL Mode]:** Set the squelch opening method for the weather channel  
 Normal: Activates reception upon carrier detection  
 1050Hz Decode: Only activates reception upon 1050Hz signaling  
**[RX Mode]:**  
 Single CH: Monitors single channel  
 Multi CH SCAN: Multi-channel simultaneous monitoring  
**[Scan List]:** Only when multiple channels are monitored at the same time, you can set the air band scan list  
**[Decoder Reset]:** Set the reset time of 1050Hz signaling decoding. During the reset time, the decoding result is always valid, and it will be received when a carrier comes.

## B.Display setting:

### ■ [Backlight]

Function: Backlight setting

Sub-menu: [level] [auto dimmer] [dimmer delay]

[Level]: standby backlight level setting.

[Auto Dimmer]: automatic dimmer setting.

OFF: Turn off the automatic dimmer, backlight display at [level] level.

Auto-OFF: the automatic dimmer is turned on, and the backlight will be automatically turned off if there is no reception or operation within [Dimmer Delay] time.

Auto-1...Auto-8: The automatic dimmer is turned on, and if there is no reception or operation within [Dimmer Delay] time, the backlight is lowered to the corresponding level (Level 1-8).

Note: The automatic dimmer Level must be lower than the normal level setting, otherwise the automatic dimmer is invalid. For example, normal standby backlight level 4, automatic dimmer can only be set to

OFF, Auto-OFF, Auto-1, Auto-2, Auto-3.

[Power On Display]: [Background PIC] [Message] [Firmware Version] [Voltage]

[Language]: English + region-specific options

### ■ [Menu Exit Timer]

Function: Menu auto-exit timer

Options: OFF / 5S...10MIN

Notes:

OFF: Menu will not auto-exit due to inactivity.

5S...10MIN: If no operation is performed within 5 seconds to 10 minutes, the menu will auto-exit.

#### ■ [MR Display Mode]

Function: Channel mode display setting

Options: Frequency / CH NO. / CH Name

Notes:

Frequency: Displays channel frequency.

CH NO.: Displays channel number.

CH Name: Displays channel name.

#### **C.Sounds: Audio-related settings**

##### ■ [Beep]

Function: Beep tone settings

Sub-menus: [Key Beep], [BAT Low Beep], [Call Beep], [Power On Beep], [TOT Beep]

Notes:

[Key Beep]: Toggle key press beep on/off.

[BAT Low Beep]: Toggle low battery alert beep on/off.

[Call Beep]: Transmission alert beep settings.

OFF: Disable call alert beep.

Call Start: Enable transmission start beep.

Call End: Enable transmission end beep.

Call Start & End: Enable both start and end beeps.

[Power On Beep]: Toggle power-on beep on/off.

[TOT Beep]: Toggle transmitting timeout alert beep on/off.

Must be used with [Function] → [Time-Out Timer].

##### ■ [ANC]

Function: Active Noise Cancellation toggle

Options: Off / On

##### [AI VOX]

Function: AI Voice-Activated (VOX) settings

Sub-menus: [AI VOX Switch], [AI VOX SENS], [AI VOX Delay]

Notes:

[AI VOX Switch]: Toggle AI VOX on/off.

[AI VOX SENS]: Adjust AI VOX sensitivity level.

[AI VOX Delay]: Set delay time for auto-ending after transmit (how long before transmission stops, is to avoid immediately deactivating transmission during short speech pauses).

##### ■ [MIC Gain]

Function: Microphone gain adjustment

Options: Low / Mid / High

#### **D. Keyboard: Keypad Settings**

##### ■ [Keyboard Locker]

Function: Keypad lock settings

Sub-menus:

[Auto Locker]: Toggle automatic keypad lock.

[Locker Type]: Select lock mode:

Key: Locks all keys except PTT.

Knob: Locks the knobs.



Knob+Key: Locks both the knob and all keys except PTT.

PTT: Locks only the PTT button.

PTT+Key: Locks all keys, including PTT.

PTT+Knob: Locks PTT and the knob.

PTT+Knob+Key: Locks all keys and the knob.

[Locker Delay]: Sets the idle time (delay) before auto-lock activates (requires [Auto Locker] enabled).

#### ■ [Program Key]

Function: Programmable key assignments

Sub-menus:

[PF1 Press] / [PF1 Hold]

[PF2 Press] / [PF2 Hold]

[Top Key Press] / [Top Key Hold]

Options (PF1 PF2 Short Press/Hold):

None: No function.

VOX: Toggle voice-operated transmission.

Beacon TX: Transmit APRS beacon.

Moni: Monitor TX channel (switches to transmit frequency if using split or offset).

Scan: Toggle scanning.

Scrambler: Toggle audio scrambling.

Talk Around: Toggle repeater bypass (direct mode).

Noise Cancel: Toggle noise suppression.

Freq Scan: Auto-scan for nearby radios (hold target radio 1 meter away; device will detect

its TX frequency and CTCSS/DCS).

Tx Power: Cycle transmit power levels.

Dup Reverse: Toggle frequency offset inversion.

FM Radio Switch: FM Radio function switch.

CH Type Switch: Switch the channel type between VF0, Memory wx, and Call.

Emerg Alarm: Emergency alarm activated, closed

APRS Station: Quickly enter the APRS Station list.

Squelch Level: Adjust the squelch level. "

Tone Scan: Scan the CTCSS or CDCSS of the current channel.

[PF1 Hold] [PF2 Hold] [Top Key Hold]: PF1/PF2/Top Key long-press function settings.

In addition to all short-press functions, an extra TBST TX feature is added.

TBST TX: Activates tone burst transmission. Must be used in conjunction with [Function] →[Tone Burst] settings.

#### **E. Other: Additional Settings**

##### ■ [Set Menu Init]

Function: Resets all menu settings to factory defaults.

Note: Initializes all menu configurations to their default state.

##### ■ [VFO Init]

Function: VFO channel reset.

Note: Restores VFO channels (including VFO A and VFO B) to factory defaults.

##### ■ [MR Init]

Function: Memory channel reset.

Note: Initializes all stored memory channels to default.

#### ■ [ALL Init]

Function: Full radio reset.

Note: Restores all settings (including VFO and Memory) to factory defaults.

In case of unexpected Flash data corruption, hold PTT + PF1 while powering on to force a full reset.

### FM Radio

#### ■ [FM Radio Switch]

Function: Toggles FM radio on/off.

#### ■ [FM RADIO Mode]

Function: Sets FM radio operation mode.

Options: VFO Mode / Memory Mode

#### ■ [Station List]

Function: FM station list management. Supports adding, editing, copying, moving, and deleting stored channels.

### APRS

#### ■ [My CallSign]

Function: Sets the local call sign.

Note: Press **【#】** to switch input methods, press **【\*】** to delete.

#### ■ [My SSID]

Function: Sets the local SSID.

Options: 0...15

#### ■ [My Symbol]

Function: Sets the local symbol.

Note:

Use up/down keys to toggle between Table or Symbol settings.

Press the menu key to enter Edit mode.

Use up/down keys to select the target Table or Symbol.

Press Enter to confirm the setting.

#### ■ [Encoder Set]

Function: APRS transmission-related settings.

Sub-menus: [DST CallSign] [DST SSID] [Comment] [TX Channel]

[Repeater] [TX Beacon Type] [Manual TX Mode]

[Manual TX Timer] [Auto TX Timer] [Fixed Info]

[Pre-carrier] [TX End Delay] [TX Local Tone]

Note:

\*APRS transmission will switch to a dedicated APRS transmit channel. Ensure the transmit channel settings (e.g., frequency, power, bandwidth) are configured beforehand.

\*Transmission modes:

1. Manual TX: Follows PTT start/end. The manual TX interval setting prevents APRS transmission with every PTT press.

2. Hotkey TX: Can be set for beacon transmission.

3. Auto TX: Sends beacons at fixed intervals. If the device is busy (e.g., in a call or menu), transmission will be delayed.

[DST CallSign]: Sets the destination call sign.



[DST SSID]: Sets the destination SSID.

[Comment]: Edits additional descriptive text for APRS transmission.

[TX Channel]: Sets the APRS transmit channel. Transmission automatically switches to the preset APRS channel. Includes 8 editable preset channel lists.

[Repeater]: Edits the APRS digipeater path.

[TX Beacon Type]: Sets the beacon type (Fixed or GPS).

Fixed Beacon: Uses fixed latitude, longitude, and altitude from [Fixed Info].

GPS Beacon: Uses real-time GPS data for coordinates and altitude. If GPS not located, the APRS data will not be transferred

#### ■ [Manual TX Mode]

Function: Manual transmission mode settings.

Options:

Off: Disables manual transmission.

PTT Start: APRS data transmits when PTT is pressed.

PTT Stop: APRS data transmits when PTT is released.

Note:

When set to PTT Start or PTT Stop, pressing/releasing PTT switches to the APRS channel for transmission.

#### ■ [Manual TX Timer]

Function: Sets the interval for manual transmissions to avoid sending APRS data with every PTT press.

#### ■ [Auto TX Timer]

Function: Enables periodic APRS beacon transmission at fixed intervals.

Note:

Transmissions may be delayed if the device is busy (e.g., in a call or menu).

#### ■ [Fixed Info]

Function: Edits fixed beacon data (latitude, longitude, altitude).

Note:

Only effective when [TX Beacon Type] is set to Fixed Beacon.

#### ■ [Pre-carrier]

Function: Sets the RF pre-carrier duration before APRS transmission.

Note:

Longer pre-carrier times improve receiver wake-up but increase total transmission time.

Recommended: 300 ms. Increase if the receiver fails to decode (e.g., due to power-saving mode).

If the receiver is unable to decode the APRS signal due to power saving, increasing the pre-carrier time can solve the problem.

#### ■ [TX End Delay]

Function: Sets the delay time after transmission ends.

#### ■ [TX Local Tone]

Function: Toggles the local transmission side tone.

#### ■ [Decoder Set]

Function: APRS decoding settings.

Note:

Enable the APRS RX Switch in channel settings to activate decoding.

Sub-menus: [Report Filter], [Report Popup], [Report Ringer], [CRC Check]

#### ■ [Report Filter]

Function: Toggles decoding for specific APRS message types.

Options:

MIC-E: Yaesu's proprietary format (disable to ignore Yaesu transmissions).

Position: Standard position format (disable to ignore all position reports).

#### ■ [Report Popup]

Function: Sets auto-close time for received message pop-ups.

Note:

\*If disabled, manually check messages in [Station List].

#### ■ [Report Ringer]

Function: Toggles audible alerts for received messages.

#### ■ [CRC Check]

Function: Enables/disables CRC validation for incoming data.

Note:

If enabled, only error-free data is displayed.

If disabled, corrupted data may appear (useful in noisy environments).

#### ■ [Station List]

Function: View or delete received APRS messages.

#### Beacon Interface Diagram



♦NOCALL is the call sign set by the transmitter -0 is the SSID

♦The G icon is the symbol corresponding to the transmitter settings

♦25/03/20 14:15:19 is the time of beacon reception

♦3m is the distance between the transmitter and the local device

♦LAT LON is the latitude and longitude of the transmitter

♦Altitude: It is the altitude of the transmitter

♦Speed: transmitter speed

♦Course: The heading of the transmitter (consistent with the blue arrow, the red arrow is the heading of the aircraft)

## GPS

### ■ [GPS Switch]

Function: GPS switch setting.

### ■ [GPS Mode]

Function: GPS positioning mode setting

Optional: GPS/BDS/GPS+BDS/GLONASS/GPS+GLONASS/BDS+GLONASS/GPS+BDS+GLONASS

GPS: GPS positioning only.

BeiDou: Beidou positioning only.

GNSS: GNSS multi-mode combined positioning mode.

### ■ [Time Zone Set]

Function: GPS time zone setting.

### ■ [Position INFO]

Function: GPS positioning status display.

### ■ [Satellite INFO]

Function: GPS positioning satellite status information.

Note: The up and down keys can switch between the satellite distribution map and the satellite detailed signal status map.

## Bluetooth

### ■ [BT Switch]

Function: Bluetooth function switch setting.

### ■ [Inside SP Ctrl]

Function: When connected via Bluetooth, set the speaker switch of this radio.

Off: When in Bluetooth connection, the local speaker is muted.

On: When in Bluetooth connection, the speaker of this device does not mute.

### ■ [Inside MIC Ctrl]

Function: Set the microphone switch of this device in Bluetooth connection state.

Off: When in Bluetooth connection, the microphone on this device is muted.

On: When connected via Bluetooth, the microphone of this device does not mute.

### ■ [BT Speaker Gain]

Function: Bluetooth earphone gain control, the higher the level, the louder the volume.

### ■ [BT MIC Gain]

Function: Bluetooth microphone gain control, the higher the level, the louder the volume.

### ■ [BT Headset Pair]

Function: Bluetooth earphone pairing.

Please turn on and off the headphones to enter pairing mode, and then start the pairing process.

### ■ [BT PTT Pair]

Function: Bluetooth PTT pairing.

■ [BT Device List]

Function: Bluetooth earphone connection record list, which can be used to quickly connect paired earphones.

If the headphones cannot be connected, please turn on and off the headphones again to enter pairing mode before connecting.

■ [BT Information]

Function: Bluetooth module status information, read-only.

### Signal System

This page contains settings related to [DTMF], [2-TONE], and [5-TONE].

The signaling system needs to be used in conjunction with [Channel Set] → [Sql Control].

■ [DTMF]

DTMF call format: [Target ID][Separator][Local ID]

Example:

Local ID is 123456, calling 654321, separator is '#', group call symbol is '\*'.

DTMF individual call sequence: "654321#123456". You can also initiate a call without local ID identification by directly dialing "654321" or "654321#".

DTMF group call sequence: "65432#123456" or "65431#123456" or "65432" or "65432#". The group call symbol "\*" can replace any digit in "654321". For example, "65432" will initiate a group call to all numbers from 654320 to 654329.

■ [My ID]

Function: Set the local DTMF ID.

■ [Splitter Symbol]

Function: Set the DTMF separator.

■ [Group Symbol]

Function: Set the DTMF group call symbol.

■ [Dialer Type]

Function: Set the DTMF dialer type.

Options: Manual / Automatic

Notes:

Manual: Manual dialing. After pressing PTT, you can manually dial any number on the keypad.

Automatic: Automatic dialing. After pressing PTT, any number input on the keypad will send the corresponding [DTMF Memory] sequence.

【MENU】 key represents DTMF-dA,

【MENU】 key represents DTMF-dB,

【UP】 key represents DTMF-dC,

【DOWN】 key represents DTMF-dD,

【\*】 key represents DTMF-dE,

【#】 key represents DTMF-dF.

■ [Encoder]

Function: DTMF encoder settings.

Sub-menus: [Side Tone], [Transmit Time], [1st Digit Time], [Pre-Tx Time], [Tx-End Delay], [D Code Delay], [PTT ID P-Time]

Notes:

[Side Tone]: Turn the DTMF side tone on/off.

[Transmit Time]: Set the duration of a single character in the DTMF sequence.

[1st Digit Time]: Set the duration of the first character in the DTMF sequence.

[Pre-Tx Time]: Set the pre-carrier time for the DTMF sequence. Increasing this time makes it easier to wake up a receiver in power-saving mode.

[Tx-End Delay]: Set the delay time after transmitting the sequence.

[D Code Delay]: Set the pause time for the 'D' code. If not set to OFF, the 'D' character in the DTMF sequence will be replaced with silence, with the duration set here.

[PTT ID P-Time]: Set the PTT ID pause time. Within this pause time, pressing PTT again will not transfer PTT ID.

■ [Decoder]

Function: DTMF decoder settings.

Submenus:

[Respond]: Decode response type settings.

None: No response upon successful decoding.

Beep: Audible beep upon successful decoding.

Beep & Respond: Audible beep and transmit a response signal upon successful decoding.

[Auto Reset Time]: Decoder reset time.

After successful decoding, all calls within this period will directly open squelch without re-decoding.

After the reset time expires, incoming calls require re-decoding to open squelch.

[ANI Display]: ANI display type settings.

OFF: Disable ANI display.

Match ID: Only display ID for successfully decoded calls.

Any ID: Display ID for any call.

■ [PTT ID List]

Function: PTT ID list settings.

Notes:

Supports 8 preset PTT IDs.

Must be used with [Channel Set]→[Sql Control]→[PTT ID].

Type: Set PTT ID type (Off / TX Start / TX End / TX Start & End).

Tx Start: Set the transmission sequence for TX Start.

Tx End: Set the transmission sequence for TX End.

■ [DTMF Memory]

Function: DTMF memory list settings (edit, add, delete entries).

Usage: Must be used with [Dialer Type]→Auto Dial.

■ [2-TONE]

2-tone signaling includes two sequences: a single long tone or two short tones.

The transmission sequence must match the decoder settings ([Channel Set]→[Sql Control]→[2Tone Decoder]) to open the receiver squelch.

■ [2Tone Codec]

Function: 2Tone encoding/decoding settings.

Sub-menus:

[1st Tone DUR]: First tone duration.

[2nd Tone DUR]: Second tone duration.

[Long Tone DUR]: Long tone duration (for single long-tone signaling).

[Tone Gap Time]: Interval between two tones.

[Side Tone]: Transmission side tone settings.

[Auto Reset Time]: Decoder reset time (same function as in DTMF).

#### ■ [Enc Memory]

Function: 2Tone encoding list settings (edit or delete).

Notes:

Activated when channel signaling is set to 2Tone ([Channel Set]→[Sql Control]→[OPT-Signal]).

Pressing PTT and entering any number sends the corresponding 2Tone sequence.

Key mappings:

[MENU] = 10, [BACK] = 11, [UP] = 12, [DOWN] = 13, [\*] = 14\*, [#] = 15.

#### ■ [Dec Memory]

Function: 2Tone decoding list settings (edit or delete).

Notes:

[Tone1]: First tone frequency.

[Tone2]: Second tone frequency.

[Respond Type]: Decode response settings (same as DTMF).

[Name]: Name setting.

[Channel Set]→[Sql Control]→[2Tone Decoder].

#### ■ [5-TONE]

Call format: [Target ID][Self ID] (Self ID and Target ID must be the same length).

The calling and receiving sequences must follow the same standard to open squelch. Refer to the programming software's 5-TONE Standard.

Function codes (set via programming software only):

Selective call, group call, all call.

Remote disable/activate functions (stun, kill, wake).

#### ■ [My ID]

Function: Set the device's 5TONE ID.

#### ■ [Encoder]

Function: 5TONE encoder settings.

Sub-menus:

[Side Tone]: Enable/disable 5tone.

[Pre-Tx Time]: 5Tone Pre-carrier time (longer times wake power-saving receivers more easily).

[Tx-End Delay]: Transmission end delay.

[1st Digit Time]: 5Tone First digit duration.

[Pause Code]: Pause code in sequence.

[Pause Time]: Pause duration.

[P-1st Tone Time]: First tone duration after pause.

[PTT ID P-Time]: PTT ID pause time (prevents repeated PTT ID transmission if PTT is pressed again within this time).

#### ■ [Decoder]

Function: 5TONE decoder settings.

Sub-menus:

[Standard]: Decoding standard selection.

[Decode Bits]: Bitmask for decoding (unselected bits are wildcards).

[Respond]: Response type (same as DTMF/2TONE).

[Auto Reset Time]: Same as DTMF/2TONE.

[ANI Display]: Same as DTMF.

[Encode List]: 5TONE encoding list (similar to 2Tone, with key mappings).

Remote Functions (programming software only):

Stun: Disables transmission when the radio receive the corresponding DTMF or 5TONE.

Wake: Re-enables transmission.

Kill: Forces shutdown (requires factory reset/reprogramming to recover).

[Channel INFO]: Read-only channel settings display.

[Radio INFO]: Read-only device information.

## Specification

| General                     |                                                                                                           |
|-----------------------------|-----------------------------------------------------------------------------------------------------------|
| Frequency range             | FM:64-108MHz (Receive only)<br>AM: 108-136MHz(Receive only)<br>EU 144-146&430-440 /FCC 144-148&420-450Mhz |
| Channel capacity            | 1000 channels                                                                                             |
| Working voltage             | 11.1VDC                                                                                                   |
| Working temperature         | 0℃~+40℃                                                                                                   |
| Weight                      | 156g (Including battery and antenna)                                                                      |
| Receiver                    |                                                                                                           |
| Sensitivity                 | ≤0.2μV                                                                                                    |
| Occupied bandwidth          | ≤16KHz                                                                                                    |
| Channel selectivity         | ≥65dB                                                                                                     |
| Intermodulation             | ≥55dB                                                                                                     |
| Audio power                 | >500m W                                                                                                   |
| Audio distortion            | ≤10%                                                                                                      |
| Frequency stability         | 5ppm                                                                                                      |
| Current                     | standby: 100mA;working :250mA                                                                             |
| Audio response (300-3400Hz) | +7~-12.5dB                                                                                                |
| Transmitter                 |                                                                                                           |
| Output power                | 15W                                                                                                       |
| Modulation type             | FM                                                                                                        |
| Spurious power              | ≤-16db                                                                                                    |
| Modulation noise            | <-40dB                                                                                                    |
| Frequency stability         | 5ppm                                                                                                      |
| Max Frequency deviation     | ≤±5KHz                                                                                                    |



|                             |            |
|-----------------------------|------------|
| Current                     | ≤2700mA    |
| Audio response (300-3400Hz) | +7~-12.5dB |
| Adjacent channel power      | ≤-65dB     |

Use Two Way Radio in the environment with the temperature between 0°C and 40°C, otherwise, it may damage your two way radio. It can be operating under 2000m. Hereby, we declare that the radio equipment type is compliance with Directive 2014/53/EU. The full text of the EU declaration of conformity is available at the following internet address:XXXXX

For this decide, head SAR and Body SAR were performed with the device configured in the positions according to EN IEC 62209-1528 and face-up SAR was performed with the device 25mm from the phantom, and Body SAR was performed with the device 0mm from the Phantom, Body SAR was also performed with the headset and belt clip attached and without.

**CAUTION :**  
RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

## Guarantee

Model Number: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Purchasing Date: \_\_\_\_\_

Dealer: \_\_\_\_\_ Telephone: \_\_\_\_\_

User's Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Address: \_\_\_\_\_ Post Code: \_\_\_\_\_

### Remarks:

- 1 This guarantee card to be kept by the user, no replenishment if lost.
- 2 This guarantee card to be filled & chopped by the dealer, or it is invalid.
- 3 Don't alter the guarantee card, please confirm the serial number on the guarantee card is same as that on the machine.
- 4 One-year guarantee, charger, battery, ear-phone, antenna and cable are not under guarantee.
- 5 The user can get repairing service from the following ways:
  - Go to the shop where you buy the machine.
  - Our local repairing agents.
  - Send back to our company.

Please cut along with this line





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.

Changes or modifications not expressly approved by the party responsible for compliance could void the use's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

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

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority granted by the local government radio management departments to operate this radio and should not be made. To comply with the corresponding requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the local government radio management departments equipment authorization for this radio could violate the rules.