

## **Single Frequency Repeater (SFR) Setting**

### **Processes:**

1. Access the menu and rotate the [ENC] knob to select Radio setting, and press [MENU] key to enter.

2. Rotate the [ENC] knob key to select the Single Frequency Repeater (SFR) setting, and press [MENU] key to enter.

3. Rotate the [ENC] knob to select the desired item, and press [MENU] key to enter the following options and procedures:

①. **SFR ON OFF set** → Press (Menu)key, On or off the SFR.

②. **Voice landing** → Press (Menu)key, On or off the SFR.

◇ **On:** When the Voice landing switch is on and the intercom transfer function is enabled, the speaker of the hand-microphone can hear the voice of the intercom to be transferred

◇ **Off:** When the Voice landing switch is off and the intercom is enabled with the transfer function, the local device only plays the transfer function, and the hand-microphone speaker cannot hear the voice of the intercom to be transferred.

③. **Same frequency main band and secondary band selection** → press (Menu) key, rotate (ENC) knob to select, close, main band A, secondary band B, → Press (MENU) key to confirm → screen prompt setting complete → return to menu.

◇ **OFF:** Off all same-frequency transfer functions.

◇ **Main band A:** The relay function is enabled for the channel in the current main band A.

◇ **Secondary B:** The relay function is enabled for the channel in the current secondary band B.

④. **Receiving RSSI Thresholds** → Press (MENU) key → Rotate (ENC) knob to set desired Receiving RSSI thresholds: -125dBm, -123dBm, -121dBm, -119dBm, ..... -90dBm. → Press (Menu) → follows the remind from screen to complete the setting → Back to previous menu.

⑤. **U band transfer power** → Press (MENU) key → Rotate (ENC) knob to set desired transfer power: 1.0W, 2.0W, 3.0W, 4.0W, ..... 40.0W → Press (menu) key → screen shows the setting is complete → Return to the previous menu

⑥. **V band transfer power** → Press (MENU) key → Rotate (ENC) knob to set desired transfer power: 1.0W, 2.0W, 3.0W, 4.0W, ..... 60.0W → Press (menu) key → screen shows the setting is complete → Return to the previous menu.

**Note:** The greater the transfer power setting, the longer the transmission distance.

## **AB Repeat**

The local A/B band Repeat Mode can be set by CPS or menu. Processes:

1. Press the preset [AB Repeat] key.

### **OR**

1. Access the menu, rotate the [ENC] knob to choose **Local Set**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to choose **AB Repeat**, press [Select] key to make the following options and processes:

- ①. **A/B RepeatSw** → press [Select] key to turn A/B band Repeat On or Off.
- ②. **A/B MonitorSw** → press [Select] key to turn monitor on / off;
- ③. **A RepeatMode** → press [Select] key → choose operation of **OFF, Tran\_Rx, Tran\_Tx, Tran\_RXTX** rotate the [ENC] knob → press [Select] key to confirm → "Set ok" pops up on the screen → return to the previous level;
- ④. **B-RepeatMode** → press [Select] key → choose operation of **OFF, Tran\_Rx, Tran\_Tx, Tran\_RXTX** rotate the [ENC] knob → press [Select] key to confirm → "Set ok" pops up on the screen → return to the previous level;

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 **Notes:**

- ◇ If AB Repeat is on, the radio will work based on the preset mode;
  - ◇ If AB Monitoring is on, the radio can hear the audio of other users during the repeater process;
  - ◇ Please refer to "AB Repeat Application" on page 50.
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## Parameters

If it is allowed by software, set and check TOT, High / Low Power, Time Slot / Repeat setting, Power Saving mode, Encryption Level and etc. can be made thru **Parameters** menu.

## TOT

### **Processes:**

1. Access the menu, rotate the [ENC] knob to choose Parameters, and then press [Select] key to enter.
  2. Rotate the [ENC] knob to choose TOT and press [Select] key to enter.
  3. Rotate the [ENC] knob to choose the Call Time(S) and press the [OK] key to confirm.
  - 4."Calltime is set" pops up on the screen and the radio returns to the previous level.
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### **Notes:**

- ◇ Range of Call Time: Off, 20S, 30S, 40S, 50S ~ 500S;
  - ◇ The Call Time is for limiting the time of each call, which can be used to avoid affecting the normal communication of other users due to the long-term transmission of the radio.
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## Power

### **Processes:**

1. Press the preset [Power] key to switch the power between high and low.

### **OR**

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Power** and press [Select] key to choose High or Low Power and press [Select] to confirm.
3. "Power is set" pops up on the screen and the radio returns to the previous level.

## Slot / Repeat Setting

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Slot/Repeat Setting**, and then press [Select] key make following options and processes:
  - ①. **RX DirectSlot** → press [Select] key → choose operation of **OFF, Slot 1, Slot 2** rotate the [ENC] knob → press [Select] key to confirm → "Set OK!" pops up on the screen → return to the previous level;
  - ②. **TX DirectSlot** → press [Select] key → choose operation of **OFF, Slot 1, Slot 2** rotate the [ENC] knob → press [Select] key to confirm → "Set OK!" pops up on the screen → return to the previous level;

### Notes:

- ◇ Slot / Repeat setting is set according to the channel type that currently accesses the menu (Repeat with different TX/RX frequency or RX/TX with same frequency).

## Sleep Mode

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **SleepMode** and press [Select] key to make the following options and procedures:
  - ①. **SlpMode SW** → press [Select] key to turn Sleep mode on/off;

- ②. **Delay Time** → press [Select] key → rotate the [ENC] knob to select the time → press [OK] key to confirm → "Set OK!" pops up on the screen → return to the previous level;
- ③. **Duty cycle** → press [Select] key → choose operation of **1: 1, 1: 2, 1: 4** rotate the [ENC] knob → press [Select] key to confirm → "Set OK!" pops up on the screen → return to the previous level;

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### Notes:

- ◇ If it is allowed by the CPS software, set a reasonable sleep ratio according to the actual use requirements. The larger ratio, the more power is saved, but it may cause slower access.

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## Squelch Level (SQ level )

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **SQ Level** and press [Select] key to enter.
3. Rotate the [ENC] knob to select the desired level or normally open(Level 0), and press [Select] key to confirm.
4. "Sq level is set" pops up on the screen and the radio returns to the previous level.

## Wide/ Narrow Band

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters Setting**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to choose **Band** and press [Select] key to enter.
3. Rotate the [ENC] knob to select the desired narrow /wide band and press [Select] key to confirm.
4. "Set Ok" pops up on the screen and the radio returns to the previous level.

## **Busy Channel Lockout (BCLO)**

### **Processes:**

1. Access the menu, rotate the [ENC] knob to choose **Parameters Setting**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **BCLO** and press [Select] key to turn Busy On or OFF
3. Press [Back] key to return to the previous level.

## **Signaling**

### **Processes:**

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Signaling** and press [Select] key to enter.
3. Rotate the [ENC] knob to select the desired item and press [Select] key to make the following options and procedures:
  - ①. **RX Subaudio** → press [Select] key to make the following options and processes:
    - ◇ **Signaling off** → press [Select] key to turn off the CTCSS/DCS code → "Set Ok" pops up on the screen and returns to the previous level;

- ◇ **CTCSS** → press [Select] key → choose the CTCSS code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;
  - ◇ **DCS** → press [Select] key → choose the DCS code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;
  - ◇ **DCS Reverse** → press [Select] key → choose the DCS Reverse code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;
- ②. **TX Subaudio** → Press [Select] key to make the following options and procedures:
    - ◇ **Signaling off** → press [Select] key to turn off the CTCSS/DCS code → "Set is ok" pops up on the screen and returns to the previous level;
    - ◇ **CTCSS** → press [Select] key → choose the CTCSS code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;
    - ◇ **DCS** → press [Select] key → choose the DCS code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;
    - ◇ **DCS Reverse** → press [Select] key → choose the DCS Reverse code rotate the [ENC] knob → press [Select] key to confirm → "Set Ok" pops up on the screen and returns to the previous level;

## ENC Level (Encryption)

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **EncLevel** and press [Select] key to enter.
3. Rotate the [ENC] knob to choose the desired encryption level or turn it off and press [Select] key to confirm.
4. "Set Ok!" pops up on the screen and returns to the previous level;

### Notes:

- ◇ If it is allowed by CPS software, enable this function will help to prevent other users from eavesdropping without authorization.
- ◇ Although encryption is not a necessary requirement for receiving and transmitting. But the receiver radio must have same encryption method, level, alias and value as the transmitter radio to decrypt the encrypted voices from each other.

## CTCSS Phase Reverse (CTCSSTail)

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Parameters**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **CTCSSTail** and press [Select] key to enter.
3. Choose operation of **55HZ, 120, 180, 240** rotate the [ENC] knob and press [Select] key to confirm.
4. "Set Ok" pops up on the screen and returns to the previous level;

## Tone Set

If it is allowed by CPS software, set and check the prompt tones by accessing the Tone Set menu.

## Profiles

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Profiles** and press [Select] key to enter.
3. Rotate the [ENC] knob to choose **General** or **Silent**, and press [Select] key to confirm the selection.
4. "Profile is set" pops up on the screen and returns to the previous level.

## Key Tone

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **KeyTone** and press [Select] key to make following options and procedures:
  - ①. **KeyRingSW** → press [Select] key to turn it on / off;
  - ②. **KeyRingStat** → press [Select] key → rotate the [ENC] knob to choose the keytone level → press [Ok key to confirm → "Keytone is set" pops up on the screen and returns to the previous level.

## Power tone

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Power tone** and press [Select] key to make following options and procedures:
  - ①. **CouloToneSW** → press [Select] key to turn the power tone on / off;
  - ②. **CouloToneStat** → press [Select] key → rotate the [ENC] knob to select desired volume → press [Ok] key to confirm → "Tone is set" pops up on the screen and returns to the previous level.

## Message Tone (Msg Tone)

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Msg tone** and press [Select] key to enter.
3. Rotate the [ENC] knob to choose the desired ringtone type or turn it off and press [Select] key to confirm.
4. "RingTone is set" pops up on the screen and returns to the previous level.

## Private Call Tone (PCallTone)

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to choose **PCallTone** and press [Select] key to make following options and procedures:

- ①. **PCallSW** → press [Select] key → choose operation of **Rx Begin Tone, Rx End Tone, Tx Begin Tone, Tx End Tone** rotate the [ENC] knob → press [Select] key to tick or cancel it → press [Back] key to return to the previous level;
- ②. **PCallTone** → press [Select] key → choose the desired ringtone type or turn it Off rotate the [ENC] knob → press [Select] key to confirm → "Tone is set" pops up on the screen and returns to the previous level.

## Group Call Tone(GCallTone)

### Processes:

1. Access the menu, Rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **GCallTone** and press [Select] key to make following options and procedures:
  - ①. **GCallSW** → Press [Select] key → choose operation of **Rx Begin Tone, Rx End Tone, Tx Begin Tone, Tx End Tone** rotate the [ENC] knob → press [Select] key to tick or cancel it → press [Back] key to return to the previous level;
  - ②. **GCallTone** → press [Select] key → choose the desired ringtone type or turn it Off rotate the [ENC] knob → press [Select] key to confirm → "Tone is set" pops up on the screen and returns to the previous level.

## Alert Tone

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Call Alert tone** and press [Select] key to enter.
3. Rotate the [ENC] knob to select the desired ringtone type or turn it off and press [Select] key to confirm.
4. "Tone is set" pops up on the screen and returns to the previous level.

## Power On Tone

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Tone Set**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Power on tone SW** and press [Select] key turn it on or off.
3. Press [Back] key to return to the previous level.

## Appendix

If it is allowed by CPS software, set and check GPS, FM radio, time, DTMF, HeadSet+Speaker etc. by accessing the **Appendix** menu.

## GPS

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Appendix**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to choose **GPS** and press [Select] key to make following options and procedures:

- ①. **GPS switch** → press [Select] key to turn GPS On or Off;
- ②. **Upload SW** → press [Select] key → choose operation of **GPGGA, GPGSA, GPGSV, GPRMC** rotate the [ENC] knob → press [Select] key to tick or cancel → press [Back] key to return to the previous level;
- ③. **Group Info** → press [Select] key to enter the following options and procedures:
  - ◇ **GPS map** → press [Select] key to display the rough distance between the radio and other members → Rotate the [ENC] knob to choose the calculation unit → press [Back] key to return to the previous level;
  - ◇ **GPS RXMsgs** → press [Select] key to display the received message list from others → Rotate the [ENC] knob to check the location information of others → press [Back] key to exit → press [Back] key to return to the previous level;
  - ◇ **GPS location** → press [Select] key to display the location information of the radio → Rotate the [ENC] knob to check GPS / GL received satellites information and signal strength (white: empty signal, red: weak signal, light blue: available signal) → Press [Select] key to return to the previous level;
  - ◇ **Clear RXMsgs** → press [Select] key to delete the received messages and return to the previous level;
- ④. **GPS Report Chn** → press [Select] key to check **Zone, Chn, Send interval on / off** information → press [Back] key to return to the previous level;

⑤. **Calibrator** → press [Select] key to make following options and processes:

- ◇ **Auto** → press [Select] key to confirm;
- ◇ **Manual** → Press [Select] key → Display Time zone and difference list → rotate the [ENC] knob to choose the desired time zone → Press [Select] key to confirm → return to the previous level;

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 **Note:**

- ◇ GPS is allowed by software;
- ◇ Some GPS functions must be pre-set by software before use;
- ◇ Some GPS functions must be positioned successfully before use normally;
- ◇ Some GPS functions require other users to have GPS function and successfully positioned also before use normally;
- ◇ The GPS Distance Calculation or the use of some functions is for reference only, which may cause errors due to some unexpected or environmental reasons;
- ◇ GPS function is optional.

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 **FM Radio**

**Processes:**

1. Access the menu, rotate the [ENC] knob to choose **Appendix**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **FM radio** and press [Select] key to display the FM radio frequency information.
3. Rotate the [ENC] knob to manually select the FM radio frequency

or seek the FM radio frequency automatically.

4. Press the [Back] key to exit the FM radio mode and return to the previous level. Or press [OK] key to make the following options and procedures:

- ①. **Save** → press [Select] key to save the current FM radio channel;
- ②. **FM List** → press [Select] key to display the list of saved FM radio frequencies → choose the desired frequency rotate the [ENC] knob → press [Select] key to Delete or Play the frequency
- ③. **TuneMode** → press [Select] key → choose operation of **Manual, Auto** rotate the [ENC] knob → press [Select] key to confirm and return to the previous level.

 **Time**

**Processes:**

1. Access the menu, rotate the [ENC] knob to choose **Appendix**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Time** and press [Select] key to make following options and procedures:
  - ①. **Date** → Press [Select] key to display the date and year → rotate the [ENC] knob or input the desired date and year via numeric keyboard → press [OK] key to confirm → "Date is set" pops up on the screen and returns to the previous level;
  - ②. **Time** → Press [Select] key to display the time → rotate the [ENC] knob or input the desired time via numeric keyboard → press [OK] key to confirm → "Time is set" pops up on the screen and returns to the previous level;



or seek the FM radio frequency automatically.

4. Press the [Back] key to exit the FM radio mode and return to the previous level. Or press [OK] key to make the following options and procedures:

- ①. **Save** → press [Select] key to save the current FM radio channel;
- ②. **FM List** → press [Select] key to display the list of saved FM radio frequencies → choose the desired frequency rotate the [ENC] knob → press [Select] key to Delete or Play the frequency
- ③. **TuneMode** → press [Select] key → choose operation of **Manual, Auto** rotate the [ENC] knob → press [Select] key to confirm and return to the previous level.

## Time

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Appendix**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **Time** and press [Select] key to make following options and procedures:
  - ①. **Date** → Press [Select] key to display the date and year → rotate the [ENC] knob or input the desired date and year via numeric keyboard → press [Ok] key to confirm → "Date is set" pops up on the screen and returns to the previous level;
  - ②. **Time** → Press [Select] key to display the time → rotate the [ENC] knob or input the desired time via numeric keyboard → press [Ok] key to confirm → "Time is set" pops up on the screen and returns to the previous level;

- ③. **DateForm** → press [Select] key → choose the desired date form rotate the [ENC] knob → press [Select] key to confirm → "Date is set" pops up on the screen and returns to the previous level; → Use GPS Datetime → press [Select] key to turn it on or off;

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### Note:

- ◇ **Use GPS Datetime** is effective only when GPS function is on and successfully positioned.
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## DTMF

### Processes:

1. Access the menu, rotate the [ENC] knob to choose **Appendix**, and then press [Select] key to enter.
2. Rotate the [ENC] knob to choose **DTMF** and press [Select] key to make following options and procedures:
  - ①. **DTMF Switch** → press [Select] key to turn it on or off;
  - ②. **DTMF LocVolume** → press [Select] key to display current local volume → rotate the [ENC] knob to adjust the volume → press [OK] key to confirm → "Save Ok" pops up screen and returns to the previous level;

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### Note:

- ◇ DTMF code Tone is only used as a alert tone to the local radio and remind the recipient user to receive the call;
  - ◇ DTMF code must be preset by CPS software.
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## **Speaker, Hand-microphone**

### **The process:**

1. Access the MENU, rotate the (ENC) knob, select to , and press the Menu key to enter
2. Rotate (ENC) knob, select to Speaker or Hand-microphone and press MENU
3. A message is displayed indicating that the Settings are complete, Return to the previous menu

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### **Remarks:**

Hand microphone is one of the audio output mode of the intercom. When you select Hand microphone Mode, there is no audio output from the speaker of the radio. when the hand microphone plug in radio, there is audio output. When you select "horn" mode, the speaker of the radio has audio output, but there is no audio output when you plug in the hand microphone.

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## **Record**

If it is allowed by CPS software, set and check record set, recording list, clear record, space info about recording by accessing Record menu.

### **Processes:**

1. Press the preset [Record On/Off] key to turn it on / off.

**OR**

1. Access the menu, Rotate the [ENC] knob to choose **Record**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to make following options and processes:

- ①. **Record Set** → press [Select] key → **RX record SW, TX record SW** → Rotate the [ENC] knob to select desired operation → press [Select] key to turn it on or off → press [Back] key to return to the previous level;

- ②. **Record List** → press [Select] key to display the recording list → Rotate the [ENC] knob to choose the desired record and press [Select] key to make following options and processes:

- ◇ **Play** → press [Select] to play the selected recording \*return to the previous level after finishing playing;

- ◇ **Delete** → press [Select] key → "Are you sure?" pops up on the screen → press [Ok] key to confirm deletion or press [Back] key to cancel deletion and return to the previous level;

- ◇ **Information** → press [Select] key to display the detailed information of the recording.

- ③. **Clear record** → press [Select] key → "Are you sure?" pops up on the screen → press [Ok] key to confirm deletion or press [Back] key to cancel deletion and return to the previous level;

- ④. **Space Info** → press [Select] key to display the recorded time and total recordable time information → press [Back] key to return to the previous level

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## Notes

◇ The total recording time supported is more than 50 hours. It is supported to purchase additional recording time according to the actual requirement.

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## Device Info

If it is allowed by CPS software, set and check Radio ID, Rx Group List, CH Contact (channel contact), Version and other information by accessing **Device Info** menu.

Processes:

1. Access the menu, rotate the [ENC] knob to choose **Record**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to make following options and processes:

①. **Radio ID** → press [Select] key to display the Radio ID → press [Back] key or any number key to modify the desired number → press [OK] key to save → "Set ok" pops up on the screen and returns to the previous level.

②. **RXGroupList** → press [Select] key to display the receiving group list → rotate the [ENC] knob to check details → press [back] key to return to the previous level;

③. **CH contact** → press [Select] key to display the default channel contact information → press [Back] key to return to the previous level;

④. **Version** → press [Select] key to display the local version information → press [Back] key to return to the previous level;

## User\_defined Mode

If it is allowed by CPS software, it is supported to check and modify the parameters of Channel or VFO mode by accessing User\_defined Mode menu.

**Processes:**

1. In standby mode, press and hold the [A/ B] key for 3 seconds to enter the User-defined mode.

**OR**

1. Access the menu, rotate the [ENC] knob to choose **Record**, and then press [Select] key to enter.

2. Rotate the [ENC] knob to select the following options (refer to **User\_defined table**).

3. Press [Select] key to light up the cursor and enter to the editing mode.

4. Rotate the [ENC] knob to choose the desired value and press [Select] to confirm and save.

5. Press [Back] key to return to the previous level.

## User-defined table


In order	Operation	Options	Confirm	Remarks
Channel Attribution (Working Mode)	Press [Select] key	Digital/Analog/RX:D/A-TX:A/TX:D/A-RX:D	Press [Select] key	For both Analog and Digital mode
Steps		5/6.25/10/12.5/25/50/100kHz		
RX Frequency		In the available range of the radio		
TX Frequency		In the available range of the radio		
Power		High/Low		For Digital Mode
RX BS (Slot)		Off / Slot 1/Slot 2		
TX BS (Slot)		Off / Slot 1/Slot 2		
RX Color Code		0~15		
TX Color Code		0~15		
Alarm		On/Off		Not available for digital VFO mode
Call Alert		On/Off		
Private Call Type		PATCS /OACSU		
Meg Type		PATCS /OACSU		For Digital Mode
Permission (TX Policy)		Impolite/ Polite to CC/ Polite to All		
RX Group List		Off / Self-defined		
Encryption		Off / Defined by software		
Default Contacts		Off / Contact List		Not available for digital VFO mode
Emergency		Off / self-defined		
Scan List		Off / self-defined		
Save2SelChn (Save to current channel)				For Digital Mode
Save2SelChn (Save to selected channel)		All available channels		
Save VFO				For Digital VFO Mode
Bandwidth		Narrow/Wide		For Analog Mode only
TX Subtone Type		Signaling Off/CTCSS/DCS/ DCS Reverse		
TX Subtone(TX Sub Item)		The signal codes of DCS/CTCSS		
RX Subtone Type		Signaling Off/CTCSS/DCS/ DCS Reverse		
RX Subtone (TX Sub Item)		The signal codes of DCS/CTCSS		
Scan List				Not available for analog VFO mode

## User-defined table

In order	Operation	Options	Confirm	Remarks
Save VFO				For Analog Mode only
Save to specified channel		All available channels		

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### Notes

- ◇ When accessing any sub menu, press the [Back] key to return to the previous level.
  - ◇ No matter in any sub menu or menu operation, press [  ] key to forcibly exit the operation and return to home screen for standby mode.
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## Function Applications

### Modes of TX and RX in scanning

Set TX and RX call modes in scan list by CPS software.

### Scan TX Mode

In scanning, when there is detected active channel or talk group, the radio will stay at the channel for a period of time, which is called "idle time".

① The scan TX modes of the scan list can be set as below:

#### ● Talkback

①. If it is "On", when a carrier signal of any channel in the scan list is received in scanning, press the [PTT] key to transmit to the channel within 3S after the received signal disappears.

②. If it is "OFF", the reply is based on the "Scan TX Mode" preset by the programming software.

### Notes:

#### Scan TX Mode:

◇ **Current Channel** — reply on the channel that starts the scanning.

◇ **Last Operated Channel** — reply on the channel where the radio stays at last time.

◇ **Appointed Channel** — specify the only channel to reply.

#### Appointed Channel:

After selecting the channel for replying, if there is carrier signal of any channel in the scan list received in scanning, after the received signal disappears, press the [PTT] key, it will reply on the preset appointed channel.

### A/B Repeat

Preset by CPS software or access the "A/B Repeat" menu to set the A/B band repeat function and application.

#### 1. A/B Band Repeat Modes:

①. In digital mode, the same frequency band (VHF + VHF / UHF + UHF) to same frequency or cross band (VHF / UHF) can be transferred.

②. In analog mode, cross bands (VHF / UHF) can be transferred.

③. In cross band (VHF / UHF), "digital to analog" or "analog to digital" can be transferred.

#### 2. A/B Monitor:

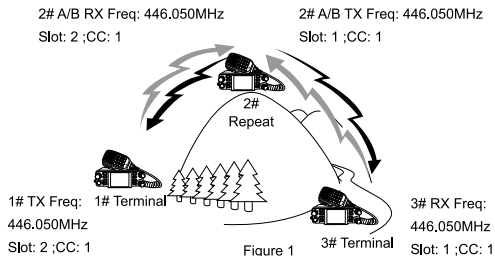
Press the preset [AB Monitor] key or access "AB repeat" menu to turn on/off the A/B band monitor function.

#### 3.A/B Repeat Interruption:

①. If the A/B Repeat function is ON, this radio will be used to extend the communication coverage of other radios.

②. When your radio is working in repeat mode, you can press the [PTT] key and speak clearly into the microphone (MIC) to interrupt and make a three-party call.

#### Digital to Digital Mode with same frequency:



### Cross Band Digital to Analog / Analog to Digital Mode:

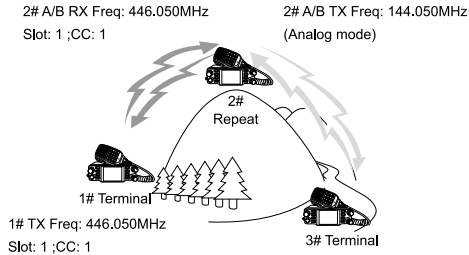


Figure 2

### Cross Band Analog to Analog Mode:

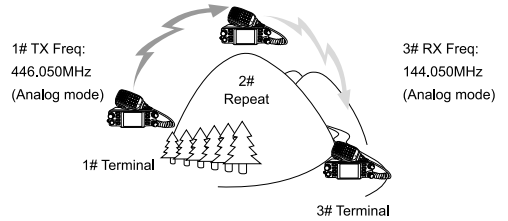


Figure 4

### Digital to Analog / Analog to Digital at same frequency & Extending the Communication Coverage:

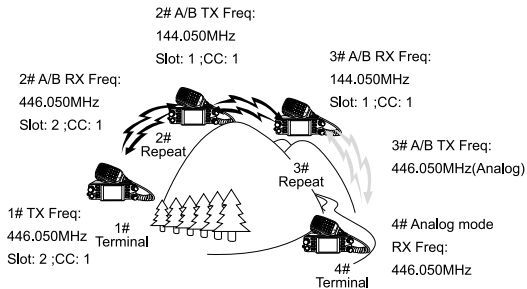


Figure 3

## Repeat Modes Samples

Repeat Mode	Radio No.	End user	2# DR-880UV/as a Repeater	Band (Repeat)	Remarks
Digital to Digital with same frequency	1#	TX Freq: 446.050MHZ Slot: 2; CC: 1	RX Freq: 446.050MHZ Slot: 2; CC: 1	A/B	1.Time slots for RX/TX are settable based on needed; But can't set same slot for RX/TX in Repeat Mode with same frequency.
	3#	RX Freq: 446.050MHZ Slot: 1; CC: 1	TX Freq: 446.050MHZ Slot: 1; CC: 1	A/B	
Cross Band Digital to Analog Mode	1#	TX Freq: 446.050MHZ Slot: 2; CC: 1	RX Freq: 446.050MHZ Slot: 2; CC: 1	A/B	2. CC for RX/TX are settable based on needed, and can set same CC for RX/TX.
		RX Freq: 446.050MHZ Slot: 1; CC: 1	TX Freq: 446.050MHZ Slot: 1; CC: 1		
	3#	Analog TX/RX Freq: 144.050MHZ	TX Freq: 144.050MHZ (Analog Mode)	A/B	Analog Mode can set with CTCSS/ DCS code
Cross Band Analog to Analog	1#	Analog TX/RX Freq: 446.050MHZ	RX/TX Freq: 446.050MHZ	A/B	
	3#	Analog TX/RX Freq: 144.050MHZ	RX/TX Freq: 144.050MHZ	A/B	



### Digital to Analog Mode with same frequency:

Raido No.	End user	2# DR-880UV/as a Repeater	3# DR-880UV/as a Repeater	Band (Repeat)	Remarks
1#	RX Freq: 446.050MHZ Slot: 1; CC: 1	RX Freq: 446.050MHZ Slot: 1; CC: 1	RX Freq: 144.050MHZ Slot: 2; CC: 1	A/B	
	TX Freq: 446.050MHZ Slot: 2; CC: 1	TX Freq: 446.050MHZ Slot: 2; CC: 1	TX Freq: 144.050MHZ Slot: 1; CC: 1	A/B	
4#	Analog TX/RX Freq: 446.050MHZ	RX Freq: 144.050MHZ Slot: 1; CC: 1 TX Freq: 144.050MHZ Slot: 2; CC: 1	Analog TX/RX Freq: 446.050MHZ	A/B	Analog Mode can set with CTCSS/ DCS code

#### Notes:

- ◇ The above Repeat Modes examples are for reference only;
- ◇ If necessary, multi-mode, multi-band, multi-frequency and other ways can be combined and applied together to extend the communication coverage in end users. Such combination application of different Repeat modes can be used in scene field needed.

## General guide for fault handling

Malfunction	Analysis of causes	Handling method
Radio fails to power on	Battery is installed incorrectly	Re-install battery
	Battery power lower than preset value	Please change or charge battery.
	Bad battery contacts or contacts in dirty.	Check and clear the battery contacts.
Receive signal decreases, is unclear or is interrupted.	Battery power gets lower.	Please change or charge battery.
	Volume control at low value.	Adjust the volume to be higher.
	Antenna gets loose or antenna frequency is incorrect.	Power off radio, and re-install antenna, or change antenna with right frequency.
	Speaker is blocked or damaged.	Try to clear the outer speaker or contact your dealer.
	Using the radio under poor working environment or electromagnetic interference	Change working environment or shift antenna direction.
Unable to communicate with group members	The current working channel frequency or signaling value is different.	Change channel or reset signaling and frequency to be same as the group members
	The setting of Digital or Analog channel is incorrect.	Reprogram the current digital or analog channel.
	Out of range of group members	Move back within range
Noise or unrelated communications on current channel	Co-channel user interference	Change frequency or channel.
	Channel not programmed with correct signaling	Reprogram radio to correct signaling or change signaling to prevent interference.
Weak voice traffic with noise during communications	The communication distance is too great	Reduce range between users.
	Signals are blocked during to environment such as buildings and terrain.	Reduce range between users or move to unimpeded line of sight.

Malfunction	Analysis of causes	Handling method
Weak voice traffic with noise during communications	Strong local environmental interference.	Move away from interference source.
Failure to obtain GPS position (Optional)	Radio lacks optional GPS feature or satellite view blocked by environment.	Add GPS feature; move to open site with clear view of sky.

 **Note:**

If the above methods fail to solve your problem, or you confront different malfunctions, please contact your local dealer or appointed maintenance station.

## Maintenance and Clean

To ensure the best performance and prolong working life, please acquaint yourself with the following for maintenance and cleaning.

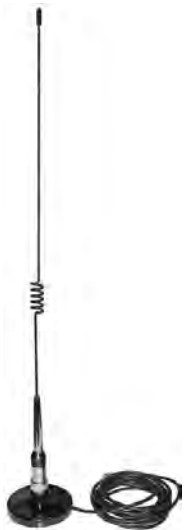
### Maintenance

- Ⓞ Please do not scratch or puncture the device with hard or sharp object.
- Ⓞ Please do not place the device in an environment which can corrode electronic circuits or under direct solar radiation.
- Ⓞ Please do not carry the device by its antenna or headset.
- Ⓞ Please make sure the SP-MIC plug is covered when not in use.

### Clean

- Ⓞ Please clean your device regularly by using a dry clean cloth or soft brush to wipe the dust on the surface and on the charger contacts;
- Ⓞ The keypads, control knob and housing of the device may be dirty from use. Please use nonwoven wipes to clean them. Do not use chemicals to clean it such as detergent, alcohol, spray or petroleum products, on the device surface or printed labels. Chemicals can damage the housing, display and remove the printing on the labels. Before power on the radio, please make sure the device is dry completely.

## Optional accessories



Magenetic vehicle antenna



Clip-on vehicle antenna

## WARNING STATEMENT

The device is compliance with Radio Equipment Directive (RED) 2014/53/EU.

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 including received interference that may cause undesired operation.

The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment. 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

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.

This device complies with RF exposure limits set forth for an uncontrolled environment. This device shall be installed and operated with minimum distance 143 cm between the radiator&body.

### **WARNING:**

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

# Kydera®

PROFESSIONAL DIGITAL TWO-WAY RADIO

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