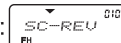


Menu operations

Scan mode settings (SC-REV) - Menu 10

When the transceiver is standby, press the **MENU** + **1 BAND** + **SCRAM** keys and the screen will display:



Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required setting, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has 3 scan modes: TO, CO, and SE:

TO: after finding a carrier wave signal, scanning will continue if no operations are carried out within 5 seconds.

CO: scanning will stop when a carrier wave signal has been found, and scanning will continue if the carrier wave signal is lost for 3 seconds.

SE: scanning will stop when a carrier wave signal is found.

Transmission time-out timer (TOT) - Menu 11

When the transceiver is standby, press the **MENU** + **1 BAND** + **1 BAND** keys and the screen will display:

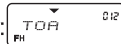


Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required time, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The TOT can be set for up to 60 minutes, 1 level of the setting corresponding to 1 minute.

Transmission overtime alarm (TOA) - Menu 12

When the transceiver is standby, press the **MENU** + **1 BAND** + **2 MHz** keys and the screen will display:



Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required time, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

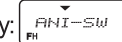
The TOA has a maximum length of 10 seconds, each level corresponding to 1 second. OFF: Deactivate TOA.

Special Reminder

- >> When the transmission time exceeds the "Time-out timer" set time, a continuous error tone will prompt, release the [PTT] key to stop it. The transmission function will be stopped for 10 seconds and it can not transmit by pressing the [PTT] key, simultaneously a double tone will prompt. After 10 seconds, the transmission function will be restored (Transmission time-out punishment).

Caller ID transmission settings (ANI-SW) - Menu 13

When the transceiver is standby, press the **MENU** + **1 BAND** + **3 0/1** keys and the screen will display:



Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required setting, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

Caller ID transmission: ON activate, OFF deactivate.

Ring time (RING) - Menu 14

When the transceiver is standby, press the **MENU** + **1 BAND** + **4 RING** keys and the screen will display:



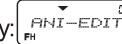
Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required time, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has 10 levels of ring time, each corresponding to 1 second. OFF: ring deactivated.

Editing caller ID (ANI-EDIT) - Menu 15

The transceiver's caller ID is composed of the Arabic numerals 0-9: the first digit cannot be 0, and ID numbers can be as short as 3 digits and as long as 6.

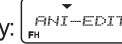
When the transceiver is standby, press the **MENU** + **1 BAND** + **5 ANI-EDIT** keys and the screen will display:



Press the **MENU** key to access the settings menu, and after inputting the required digits, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

Example 1: editing a 6-digit caller ID number (901285)

When the transceiver is standby, press the **MENU** + **1 BAND** + **5 ANI-EDIT** keys and the screen will display:

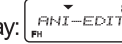


After pressing the **MENU** key, the first digit will flash, then input the required value **9 SOL** **SCRAM** **1 BAND** **2 MHz** **8 TOR** **5 H/L**

Press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

Example 2: editing a 3-digit caller ID number (901)

When the transceiver is standby, press the **MENU** + **1 BAND** + **5 ANI-EDIT** keys and the screen will display:



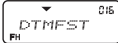
Menu operations

After pressing **MENU** the key, if a caller ID number has already been input, it will be displayed, and the first digit will flash. If no caller ID number has been input, 101 will be displayed, and the first digit will flash, input **9** **SCR** **1** **BAND**, and after the third digit has been input, the symbol "<" will flash in the 4th digit, press the **MENU** key to confirm, and the **EXIT** to return to standby.

Special Reminder

>> Each transceiver can have only one caller ID number, which is shared by Areas A and B.

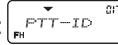
DTMF sidetone settings (DTMFST) - Menu 16

When the transceiver is standby, press the **MENU** + **1** **BAND** + **6** **W/WH** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required setting, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has the following DTMF modes; 1. DT-ST: Keypad sidetone will be activated when transmitting ; 2. ANI-ST: caller ID sidetone will be activated when transmitting ; 3. DT+ANI: keypad and caller ID sidetone are both activated when transmitting.

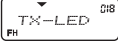
Caller ID transmission mode (PTT-ID)- Menu 17

When the transceiver is standby, press the **MENU** + **1** **BAND** + **7** **SET-ID** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required setting, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver features 3 kinds of ID transmission: BOT (beginning of transmission), EOT (end of transmission), BOTH (beginning and end of transmission).

Transmission backlight (TX-LED)- Menu 18

When the transceiver is standby, press the **MENU** + **1** **BAND** + **8** **TOR** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required backlight color, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has 3 backlight colors: BLUE; GREEN; WHITE; OFF: Deactivate.

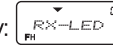
Standby backlight (WT-LED) - Menu 19

When the transceiver is standby, press the **MENU** + **1** **BAND** + **9** **SLE** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required backlight color, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has 3 backlight colors: BLUE; GREEN; WHITE; OFF: Deactivate.

Receiving backlight (RX-LED) - Menu 20

When the transceiver is standby, press the **MENU** + **2** **MRZ** + **0** **SPRAM** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required backlight color, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

The transceiver has 3 backlight colors: BLUE; GREEN; WHITE; OFF: Deactivate.

Deleting a channel (DEL-CH) - Menu 21

When the transceiver is standby, press the **MENU** + **2** **MRZ** + **1** **BAND** keys and the screen will display: 

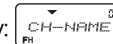
Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** to select the channel you wish to delete or manually inputting the channel code, press the **MENU** key to confirm and the **EXIT** key to return to standby.

Special Reminder

>> The 1st, 2nd and the Priority Channels are fixed channels and cannot be deleted.

Editing a channel name (CH-NAME) - Menu 22

Channel names can only be edited in channel mode, and only the name of the present channel can be edited- this operation is ineffective in frequency mode.

When the transceiver is standby, press the **MENU** + **2** **MRZ** + **2** **MRZ** keys and the screen will display: 

Press the **MENU** key to access the menu, and the first digit will flash (which indicates that this digit is being edited)

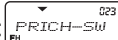
Menu operations

Press the **#** key to switch character sets (this switches between special characters, upper-case letters, lower-case letters, and numbers), press the **▲** key to choose the required character, press **▼** to edit the next character, and press **✕/SCAN** to clear the character you are currently editing. When you have finished editing the name, press **MENU** to confirm, and press **EXIT** to exit the editing screen.

Note: 1.Channel names can be a maximum of 8 characters long, and the first character may not be 0.

2.When all 8 characters are empty, the channel will be displayed on the screen as CH-*** (** being the current channel number).

Priority channel switch (PRICH-SW) - Menu 23

When the transceiver is standby, press the **MENU** + **2 MRZ** + **3 0/01** keys and the screen will display: 

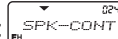
Press the **MENU** key to access the settings, and after pressing the **▲** / **▼** key to activate or deactivate the speaker, press the **MENU** to confirm, and press the **EXIT** key to return to standby

The priority channel switch can be set to ON or OFF.

Special Reminder

» While in frequency mode or channel mode, you only need to turn on the priority channel, and the priority channel will scan in 3 second intervals. The priority channel is only used for receiving, if you need to transmit, please set the priority channel as the present channel.

Speaker settings (SPK-CONT) - Menu 24

When the transceiver is standby, press the **MENU** + **2 MRZ** + **4 0/02** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the desired setting, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

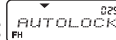
There are 3 speakers on the transceiver, 2 are for the transceiver that is separated by Area A/B and 1 is for hand microphone. You can activate the hand microphone as the only one speaker.You can also both activate the transceiver and hand microphone.

SPK1: only the transceiver unit speaker is activate.

SPK2: only the hand microphone is activate.

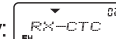
SPK1+2: the transceiver-mounted speaker and the hand microphone are both activate.

Keypad autolock (AUTOLOCK) - Menu 25

When the transceiver is standby, press the **MENU** + **2 MRZ** + **5 0/03** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the desired setting, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

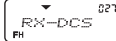
Receiving CTCSS settings (RX-CTC) - Menu 26

When the transceiver is standby, press the **MENU** + **2 MRZ** + **6 0/04** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** key to select the CTCSS you desire, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

The CTCSS has a total of 50 groups , OFF: Deactivate.

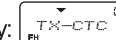
Receiving DCS settings (RX-DCS) - Menu 27

When the transceiver is standby, press the **MENU** + **2 MRZ** + **7 0/05** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** key to select the DCS you desire, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

DCS: 105 groups of positive code, 105 groups of negative code; OFF: Deactivate.

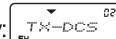
Transmitting CTCSS settings (TX-CTC) - Menu 28

When the transceiver is standby, press the **MENU** + **2 MRZ** + **8 0/06** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** key to select the CTCSS you desire, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

CTCSS has a total of 5 groups; OFF: Deactivate.

Transmitting DCS settings (TX-DCS) - Menu 29

When the transceiver is standby, press the **MENU** + **2 MRZ** + **9 0/07** keys and the screen will display: 

Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** key to select the DCS you desire, press the **MENU** key to confirm, and press the **EXIT** key to return to standby.

Menu operations

CTCSS									
1	67.0	11	94.8	21	131.8	31	171.3	41	203.5
2	69.3	12	97.4	22	136.5	32	173.8	42	206.5
3	71.9	13	100.0	23	141.3	33	177.3	43	210.7
4	74.4	14	103.5	24	146.2	34	179.9	44	218.1
5	77.0	15	107.2	25	151.4	35	183.5	45	225.7
6	79.7	16	110.9	26	156.7	36	186.2	46	229.1
7	82.5	17	114.8	27	159.8	37	189.9	47	233.6
8	85.4	18	118.8	28	162.2	38	192.8	48	241.8
9	88.5	19	123.0	29	165.5	39	196.6	49	250.3
10	91.5	20	127.3	30	167.9	40	199.5	50	254.1

DCS (positive code)											
1	D023N	16	D074N	31	D165N	46	D261N	61	D356N	76	D462N
2	D025N	17	D114N	32	D172N	47	D263N	62	D364N	77	D464N
3	D026N	18	D115N	33	D174N	48	D265N	63	D365N	78	D465N
4	D031N	19	D116N	34	D205N	49	D266N	64	D371N	79	D466N
5	D032N	20	D122N	35	D212N	50	D271N	65	D411N	80	D503N
6	D036N	21	D125N	36	D223N	51	D274N	66	D412N	81	D506N
7	D043N	22	D131N	37	D225N	52	D306N	67	D413N	82	D516N
8	D047N	23	D132N	38	D226N	53	D311N	68	D423N	83	D523N
9	D051N	24	D134N	39	D243N	54	D315N	69	D431N	84	D526N
10	D053N	25	D143N	40	D244N	55	D325N	70	D432N	85	D532N
11	D054N	26	D145N	41	D245N	56	D331N	71	D445N	86	D546N
12	D065N	27	D152N	42	D246N	57	D332N	72	D446N	87	D565N
13	D071N	28	D155N	43	D251N	58	D343N	73	D452N	88	D606N
14	D072N	29	D156N	44	D252N	59	D346N	74	D454N	89	D612N
15	D073N	30	D162N	45	D255N	60	D351N	75	D455N	90	D624N

NOTE

» There are 105 groups DCS code (negative and positive). The difference of the negative and positive code is the last letter (I for negative, N for positive). E.g.: D023N, D025N... is the positive code, see the upper right chart, while D023I, D025I... is the negative code.

Repeater speaker switch (RPT-SPK) - Menu 30

When the transceiver is standby, press the **MENU** + **3** (UHF) + **SCRAM** keys and the screen will display:

Press the **MENU** key to access the settings, and after pressing the **▲** / **▼** key to activate (ON) or deactivate (OFF) the speaker, press the **MENU** to confirm, and press the **EXIT** key to return to standby.

Repeater PTT switch (RPT-PTT)- Menu 31

When the transceiver is standby, press the **MENU** + **3** (UHF) + **1** (BAND) keys and the screen will display:

Press the **MENU** key to access the settings, and after pressing the **▲** / **▼** key to activate (ON) or deactivate (OFF) the PTT transmission, press the **MENU** to confirm, and press the **EXIT** key to return to standby.

Repeater settings (RPT-SET) - Menu 32

This transceiver has 5 repeater settings available.

1. RADIO: Normal transceiver's communication mode
2. X-DIRPT: Directional cross-band repeater mode
3. X-TWRPT: Two way cross-band repeater mode

In cross-band repeater mode, the two channels/frequencies must be two different bands (UV or VU). E.g. the receiving frequency is UHF in VFO A, while transmitting frequency must be VHF in VFO B, vice verse.

Special Reminder

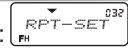
- » In Cross-band repeater mode, if the channel or frequency set the reverse frequency, offset frequency, or offset direction, its transmitting frequency would out of the transceiver's frequency range, then it will not transmit.
- » Directional cross-band repeater: The master VFO's receiving frequency is the cross-band receiver's receiving frequency, and the secondary VFO's transmitting frequency is the cross-band transmitter's transmitting frequency.
- » Two way cross-band repeater: In standby, both the master and secondary VFOs are receiver, whichever VFO receives an effective carrier wave signal, the other VFO will be the transmitter and start transmitting. The transmitter and receiver is unfixed under two way cross-band repeater model. The first received VFO is receiver and relatively the other one is transmitter. This is the only difference between directional and two-way cross-band repeater mode.

4. CRPT-RX: Repeater receiving mode (receiver)
5. CPRT-TX: Repeater transmitting mode (transmitter)

You can select whether the speaker will be on or not, and whether the PTT is available for transmitting during the Cross-band repeater or repeater RX/TX mode via MENU 30 (RPT-SPK) and MENU 31 (RPT-PTT) respectively. But, if activated the RPT-PTT, the signal will be temporarily interrupted if press PTT during these cross-band repeater modes.

Menu operations

When the transceiver is standby, press the **MENU** + **3** (07/01) + **2** (MRZ) keys and the screen will display:



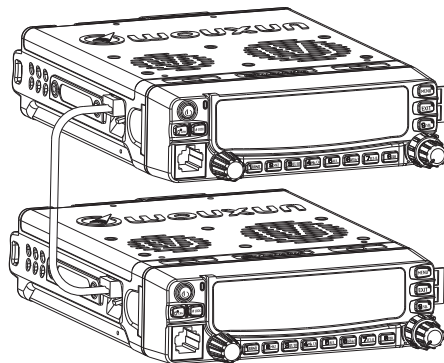
Press the **MENU** key to enter settings, press the **▲** / **▼** key to select the required type, and press the **EXIT** key to confirm.

Special Reminder

- » In cross-band repeater mode, the middle of the screen will display . When in repeater transmitting / receiving mode, the screen will display .

Connecting the repeating receiver and transmitter

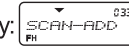
Through MENU 30 (RPT-SET), you can set two transceivers as the repeating receiver and transmitter, and then connect these two transceivers as a repeter by the 8 pin cable. The connecting interface is on the side of the transceiver where with a rubber cover marked PC. This 8 pin cable can be the supplied 5m extension cable (SCO-002) on the transceiver package, or the connection cable of the microphone.



Scan add (SCAN-ADD) - Menu 33

Scan add determines whether a given channel is added to scan. As a result, this function can only be used in channel mode, can only be used with the present channel, and is ineffective in frequency mode.

When the transceiver is in channel mode, press the **MENU** + **3** (07/01) + **3** (07/01) keys and the screen will display:

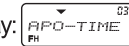


Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the required parameter, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

Scan Add has 2 parameters: ON (add), OFF (cancel).

Automatic power-off (APO-TIME) - Menu 34

When the transceiver is standby, press the **MENU** + **3** (07/01) + **4** (MEMO) keys and the screen will display:



Press the **MENU** key to access the settings menu, and after pressing the **▲** / **▼** keys to select the desired parameters, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

If the transceiver undertakes no operations, and does not receive or transmit any signals within a set period of time, the Automatic Power off function will automatically power the transceiver off.

There are 5 kinds of automatic power off in total: 30 minutes, 60 minutes, 90 minutes, 120 minutes, and 150 minutes. OFF: Turning off the automatic power off function, it is prohibited in repeater or relay mode.

Single-tone pulse frequency (ALERT) - Menu 35

Some of the relay systems used for single-tone pulse transmission need a single-tone pulse signal to activate, if a repeater is already active, however, this signal is not needed. The following pulse signal frequencies can be selected: 1750Hz, 2100Hz, 1000Hz, 1450Hz.

When the transceiver is standby, press the **MENU** + **3** (07/01) + **5** (INT) keys and the screen will display:



Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the desired parameter, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

Special Reminder

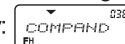
- » When in transmitting mode, you can send the single-tone pulse frequency you've selected by pressing key "1" on the panel.

Menu operations

Compand (COMPAND) - Menu 36

The compand function effectively minimizes noise, and its results are especially evident when transmitting over long distances.

When the transceiver is standby, press the **MENU** + **3** **07/01** + **6** **WD/MI** keys and the screen will display:



Press the **MENU** key to access the menu, and after pressing the **▲** / **▼** keys to select the desired parameter, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

There are two kinds of compand: ON (activate), OFF (deactivate).

Overheating detection (FAN-SET) - Menu 37

The transceiver has a built-in temperature detection system that will activate a cooling fan if required.

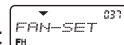
There are three ways to activate the cooling fan;

TX: In transmitting mode, it will activate the cooling fan.

HI-TE/TX: When the transceiver's temperature reaches a pre-set value or in transmitting mode, it will activate the cooling fan.

ALWAYS: When turn on the transceiver, the fan will always in cooling mode.

When the transceiver is standby, press the **MENU** + **3** **07/01** + **7** **SET/D** keys and the screen will display:



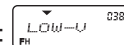
Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select the required parameters, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

Voltage testing (LOW -V) - Menu 38

When the transceiver is installed in a car or another unstable power source (such as a car battery, etc), please activate this function in order to prevent the transceiver from consuming electricity over an extended period, rendering the equipment unable to supply electricity for regular work.

The lowest voltage can be set internally by the transceiver

When the transceiver is standby, press the **MENU** + **3** **07/01** + **8** **TOR** keys and the screen will display:



Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select the required parameters, press the **MENU** key to confirm, and the **EXIT** key to return to standby. ON (activate) or OFF (deactivate)

Special Reminder

>> When the voltage is too low, a voice prompt will sound every 10 seconds, and if Voltage Testing is active, the transceiver will automatically power off when the voltage is insufficient. If the voltage is found to be too high, transmission will be blocked.

Voice scrambler (SCRAM) - Menu 39

This function is a kind of special speech handling, activating voice scrambling avoids the user's speech being overheard by users of transceivers who are not using the scrambling function.

Press the **MENU** + **3** **07/01** + **9** **SOL** keys, and the screen will display:



Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select the desired setting, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

There are 8 voice scrambling groups (1-8) selectable, and OFF deactivates.

Special Reminder

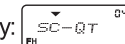
>> The voice scrambler is optional!

Saving scanned CTCSS / DCS (SC-QT) - Menu 40

When the transceiver is in CTCSS/DCS scanning, there are 3 saving types to save the detected CTCSS/DCS from the others to your transceiver:

1. Save as your transceivers decoder and encoder (ALL).
2. Save as your transceivers encoder (ENCODER).
3. Save as your transceivers decoder (DECODER).

When the transceiver is standby, press the **MENU** + **4** **MEMCH** + **0** **SCRAM** keys and the screen will display:



Press **▲** or **▼** to select, press the **MENU** to confirm, and press the **EXIT** key to exit.

Menu operations

NOTE

» Saving scanned CTCSS/DCS is ineffective in cross-band repeat or repeater or reception/transmission mode.

Noise reduction settings (ANS) - Menu 41

When there is an environmental noise, using this function can effectively reduce the environmental noise interference and clearly receive transmission.

There are 3 selections to reduce the noise: the normal noise reduction (NORMAL), the strong noise reduction (STRONG), and OFF.

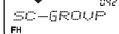
When the transceiver is standby, press the **MENU** + **4** **MCH** + **1** **BAND** keys and the screen will display: 

Press **▲** or **▼** to choose, press **MENU** to confirm and press the **EXIT** key to exit.

Scan group settings (SC-GROUP) - Menu 42

The scan group settings are the way that a transceiver can divide the programmed channels into different scan groups. It will scan all channels in this group.

Scan group settings have: ALL channel, as well as 1-4 individual scanning groups.

When the transceiver is standby, press the **MENU** + **4** **MCH** + **2** **D-SCAN** keys and the screen will display: 

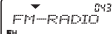
Press **▲** or **▼** to select, press to confirm, and press **MENU** the **EXIT** key to return.

NOTE

» The Scan group setting is ineffective in Cross-band repeat or repeater reception mode / transmission mode.

FM radio function (FM-RADIO) - Menu 43

You can enter the FM radio by using this function.

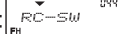
When the transceiver is standby, press the **MENU** + **4** **MCH** + **3** **07/01** keys and the screen will display: 

Press the **▲** or **▼** keys to select, when select ON, press the **MENU** key to enter FM radio, when select OFF, press **MENU** to return to standby mode.

NOTE

» The FM-Radio function is ineffective in Cross-band repeat or repeater reception mode / transmission mode.

Remote control (RC-SW) - Menu 44

When the transceiver is standby, press the **MENU** + **4** **MCH** + **4** **RC-SW** keys and the screen display: 

Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select the required settings, press the **MENU** key to confirm, and the transceiver will reboot automatically.

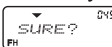
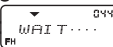
There are two settings of remote control setting: ON(activate), OFF(deactivate)

Reset settings (Reset)- Menu 45

Functional Parameter Reset (VFO): resets all functional settings to factory default values, but channel parameters are not reset.

Total Parameter Reset (ALL): resets all of the transceiver's functional settings and channel parameters to factory values.

When the transceiver is standby, press the **MENU** + **4** **MCH** + **5** **RI** keys and the screen will display: 

Press the **MENU** key to access the settings menu, and after pressing the **▲** or **▼** keys to select the desired parameter, press **MENU**, the screen will display:  , then press **MENU** and the screen will display: 

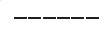
After the transceiver resets (VFO / ALL) , it will restart and return to standby mode.

How to Operate the FM Radio

1.Turning ON

When the transceiver is standby, press the **MENU** + **4** **MCH** + **3** **07/01** key, select "on", and press **MENU** to enter FM Radio.

2.Tuning Radio Stations

When in FM radio mode, press the **2** **MHz** key to enter frequency settings, at this time the screen will display: 

Now, input the desired frequency (4 digits), and if the input frequency is within the scope of the transceiver's range, it will be successfully established.

If the input frequency is beyond the transceiver's range, the setup will fail and the transceiver will revert to the last set frequency.

Example 1:Setting FM Waveband 105.9MHz

When the transceiver is standby, press the **MENU** + **4** **MCH** + **3** **07/01** keys to access the FM radio function, (at this point the screen will display the default frequency or the one previously used, and the screen will display "FM" on the top-right of the screen).

Menu Operations

Press the **2 MHz** key to access frequency settings, and the screen will display 8 horizontal lines; press **1 BAND** **3 D.SCAN** **5 MHz** **9 SOK** in order, and the screen will display 105.9MHz, and frequency setup is complete.

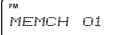
Example 2: Setting FM Waveband 90.4MHz

When the transceiver is standby, press the **MENU** + **4 MEMCH** + **9 01/01** keys to access the FM radio function, press **2 MHz** to access FM settings, and 8 horizontal lines will be displayed on the screen; press **9 SOK** **3 D.SCAN** **4 MEMCH** in order, and the screen will display 90.4MHz, and frequency setup will complete.

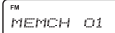
3. Storing and calling out FM radio stations

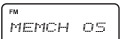
The transceiver can store 20 FM radio channels.

Saving an FM Reception Channel:

When in FM Waveband mode, press the **MENU** key, and the screen will display: 

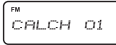
After pressing the **▲** / **▼** key, select the channel number you wish to save, press **MENU** to confirm, and the transceiver will automatically return to the FM waveband frequency display interface.

Example: when in FM waveband mode, save the displayed frequency to channel “5” while in FM waveband mode, press the **MENU** key, and the screen will display: 

Press **▲** / **▼** or the **5 MHz** key, and the LCD screen will display: 

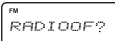
Press the **MENU** key to confirm, and the transceiver will automatically return to the FM waveband frequency display interface.

Calling out the FM memory channel:

When in FM waveband mode, press the **#** key, and the screen will display: 

Press **▲** / **▼** key to select the desired FM memory channel, and then press **MENU** to confirm, the transceiver will automatically enter the selected FM channel and display the FM radio frequency.

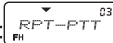
4. Exiting the FM Radio Mode

When in receiver mode, press the **EXIT** key, and the screen will display: 

Press the **MENU** key to exit the FM radio mode.

Repeater usage

1. “RPT-PTT” repeater PTT selection

When the transceiver is standby, press the **MENU** + **3 D.SCAN** + **1 BAND** keys and the screen will display: 

Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select ON, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

When two-way cross-band repeater “RPT-PTT” is ON, you only need to press the [PTT] to stop repeater transmission and reception. When this happens you can directly transmit through the directional frequency using the transmitter to transmit, Release the [PTT] key to switch to two-way cross-band repeater mode.

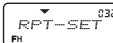
2. “RPT-SPK” Repeater SPK selection

When the transceiver is standby, press the **MENU** + **3 D.SCAN** + **0 8** keys and the screen will display: 

Press the **MENU** key to access the settings menu, and after pressing **▲** / **▼** keys to select ON, press the **MENU** key to confirm, and the **EXIT** key to return to standby.

When the two-way cross-band repeater “RPT-SPK” is ON, if it receives an effective carrier wave signal, the speakers will emit a tone, and simultaneously send out the received signal out into space on another frequency.

3. Cross-band repeater entry and exiting

When the transceiver is standby, press the **MENU** + **9 D.SCAN** + **2 MHz** keys and the screen will display: 

Press the **MENU** key to access, press **▲** / **▼** to select the directional cross-band repeater (X-DIRPT) or two-way cross-band repeater (X-TWRPT), and then press **MENU** to confirm.

At this time the transceiver will restart and enter the directional cross-band or two-way cross-band repeater mode.

NOTE

>> If select radio (RADIO), it will exit the cross-band repeater mode and return to the regular radio communication mode.

Hand microphone encoding function

DTMF Encoding (Hand Microphone)

This device features DTMF encoding; press the number pad or other keys on the handset when transmitting to activate dual-tone multifrequency encoding.

The number pad corresponds to DTMF encoding code as follows:

MENU	▲	▼	EXIT	→	A	B	C	D
1 BAND	2 MHz	3 BT/OT	* SCAN	→	1	2	3	*
4 MEME	5 HL	6 BT/MR	0 SCAM	→	4	5	6	0
7 SEND	8 TDR	9 SCL	# LOCK	→	7	8	9	#

The transceiver encoding function usage:

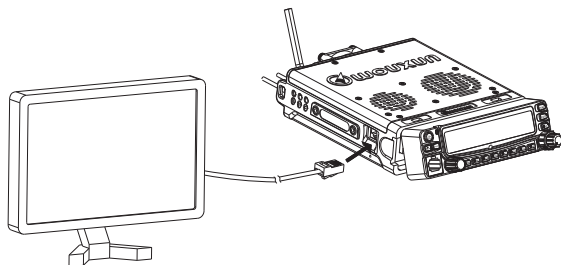
When pressing the [PTT] key under transmission mode press the key on the hand microphone and it will transmit dual tone multi-frequency (DTMF) encoding.

Remote Control Function

To use the remote control function you must first activate it, at the same time you must set the transceivers ID number, and master control number.

These settings can only be set using the programming software.

- 1.Open the KG-UV920P programming software.
- 2.Connect the transceiver to your PC (Computer)



Remote control function



Twin Band FM Transceiver

I. How to activate the remote control function

The precondition to activate the remote control function is set the transceiver's ANI ID code (Default ID:101), and different controlling functions need to be set different controlled code or other settings. For example:

- 1.If the transceiver is the controlled one, it should set a controlled ID (SCC-EDIT).
- 2.If the transceiver is the master controller, then it should also set a master controlled ID (MCC-EDIT).
- 3.If activate the remote power on/off function, then is should be also select the RC POWER options as to -
RC OPEN:It allows remote control to power on or off the transceiver.
RC STOP:Deactivate the remote control function (see the following detailed instructions).
- 4.If activate the remote change settings, then it should be also set the control code.

All the above code can be set from 3-6 digits, and the first digit cannot be 0, if the code set 000 or 000000, means this function is inactivate!

All the above code can be programmed ONLY via our company's programming software.

ANI-EDIT	123456	RC POWER	☐ RC STOP ☒ RC OPEN		
MCC-EDIT	654321				
SCC-EDIT	654321				
CONTR CODE	654321				
Kill	AB	Monitor	DA	RC SW-CO	BB
Stun	CB	Inspection	DB	RC-CO CO	AC
TYP-SW CO	AA				
RESET CO	AD				

Remote control function

Set the control code of the master controller and the controlled code of the controlled transceiver as 654321. If the master controller only control the other transceiver and not be controlled by the others, then it must set the controlled code as 000000, vice verse, if the controlled transceiver only be controlled by the others and not control the other transceiver, then it should set the master control code as 000000. The following remote stun, kill, monitoring and inspection function with the same principle.

(1) Stun

Press PTT+  (front panel) of the master controller, it will send out its controller ID+CB(Stun code) +ANI ID code (123456).

If the controlled ID sent by the master controller is same with the controlled transceiver's controlled ID, and the ANI ID of the two transceivers is the same, it will activate the Stun function.

(2) Kill

Press PTT+  (front panel) of the master controller, it will send out its controller ID+AB(Kill code) +ANI ID code (123456).

If the controlled ID sent by the master controller is same with the controlled transceiver's controlled ID, and the ANI ID of the two transceivers is the same, it will activate the Kill function.

(3) Monitoring

Press PTT+  (front panel) of the master controller, it will send out its controller ID+DA(Monitoring code)+ANI ID code (123456).

If the controlled ID sent by the master controller is same with the controlled transceiver's controlled ID, and the ANI ID of the two transceivers is the same, it will activate the Monitoring function (The monitoring time is 15 seconds).

(4) Inspection

Press PTT+  (front panel) of the master controller, it will send out its controller ID+DB(Inspection code) +ANI ID code (123456).

If the controlled ID sent by the master controller is same with the controlled transceiver's controlled ID, and the ANI ID of the two transceivers is the same, it will activate the Inspection function.

NOTE

>> The remote stun, kill, monitoring and inspection function of the controlled transceiver will not be controlled while in repeater mode.

II. Remote control power on/off

Controlled transceiver setting:

The controlled transceiver's ANI ID code is 654321, and click the remote control power (RC POWER) as RC OPEN.

Special Reminder

>> When manually sending code, if the ANI ID/Master controller ID/Controlled transceiver ID is less than 6 digits, the last digit will be #, otherwise, it will show the complete ID number. For example: 654#+BB+123#

(1) Remote Power OFF

The Controlled Transceiver can be turned OFF by manually sending 654321 (the controlled transceiver Controlled ID) + BB (Remote control power on/off code) + 123456 (the controlled transceiver ANI ID code) on the Master controller transceiver

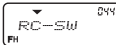
Note :After remote powered OFF by the master controller, the standby orange indicator of the controlled transceiver is ON.

(2) Remote Power ON

The Controlled transceiver can be turned OFF by manually sending 654321 (the controlled transceiver Controlled ID) + BB (Remote control power on/off code) + 123456 (the controlled transceiver ANI ID code) on the Master controller transceiver

Note :After remote powered OFF by the master controller, if you want to manually turn on the controlled transceiver, you can press the front panel  key twice.

III. Remote changing settings

In standby, press the  +  +  keys of the controlled transceiver, the screen will display: 

Press the  /  keys to select ON, and press  key to confirm, then the transceiver will reboot with keypad locking.

Hold the PTT of the handheld or mobile transceiver (the controller) and sending out the controlled transceiver's controlled code (CONTR CODE) + AC (Remote control code), and then release the PTT.

If heard a beep prompt from the controller (means the remote control changing function is activated), then you can remote control on the master

Remote control function

VFO and change the secondary VFO's frequency, output power, CTCSS setting, etc. See the following detailed instructions:

1.Change frequency (01 + 8 digits frequency)

It will only change the secondary VFO's frequency, the transmitting and receiving frequency will be the same after changed.

NOTE

- » The two frequencies must be two different bands (UV or VU), otherwise it cannot be changed. E.g. the master VFO A is UHF, while the desired changing frequency of secondary VFO B must be VHF, vice verse.
Remote change frequency will cancel the offset shift direction of the changed secondary VFO.

After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + Frequencies (total 8 digits), and then release the PTT.

The controller will have a beep prompt, and the controlled transceiver will reboot with the updated frequency on the secondary VFO display which you've just set remotely. If heard none beep prompt from the controller, the setting was failed, please repeat the above settings and try again.

2.Change channel number (02 + 3 digits channel number)

It will change the repeating channel number in cross-band mode, while in radio communication mode, it will change the secondary VFO's channel.

NOTE

- » The two channels must be two different bands (UV or VU), otherwise it cannot be changed. E.g. the master VFO A is UHF, while the desired changing channel of secondary VFO B must be VHF, vice verse.

After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + Channel number (total 3 digits), and then release the PTT.

The controller will have a beep prompt, and the controlled transceiver will reboot with the updated channel number on the secondary VFO display which you've just set remotely. If heard none beep prompt from the controller, the setting was failed, please repeat the above settings and try again.

3.Change repeater mode (03 + matching mode code)

It will change the transceiver to normal Radio communication mode (code 1: RADIO), Directional cross-band repeater mode (code 2: X-DIRPT) or two way cross-band repeater mode (code 3: X-TWRPT).

NOTE

- » If changed to Directional cross-band repeater mode, the receiving VFO will be defined as the master VFO, it will be also defined by the none DTMF microphone if used.

After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + 1 (RADIO) / 2 (X-DIRPT) / 3 (X-TWRPT), and then release the PTT.

The controller will have a beep prompt, and display the controlled transceiver's ANI ID code, after that, the controlled transceiver will reboot with the updated repeating mode which you've just set remotely. If heard none beep prompt from the controller, the setting was failed, please repeat the above settings and try again.

4.Change transmitting power (04 + matching power code)

It will change the transceiver's transmitting power temporarily (both VFOs). After reboot the transceiver, it will return to the transceiver's original power setting.

(1). After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + 1 (Low power) / 2 (Middle power) / 3 (High power) of the controller, and then release the PTT. There is a beep prompt from the controller, which means the setting is succeed, if heard nothing, please repeat the above settings and try again.

(2). After changed, hold the controller's PTT and pressing  + , and then release the PTT, at this time the controller will beep and show the ANI ID code of the controlled transceiver, which means exit the remote changing mode.

(3). If you want to cancel the changed power level, you can turn off and then turn on the transceiver, it will be back to the previous setting.

5.Change receiving CTCSS tone (05 + 4 digits CTCSS tone)

Remote control function

It will change the transceiver's receiving CTCSS tone temporarily (both VFOs). After reboot the transceiver, it will return to the transceiver's original CTCSS setting.

(1). After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + 4 digits CTCSS tone (if only 3 digits should add a 0 at the beginning), and then release the PTT. There is a beep prompt from the controller, which means the setting is succeed, if heard nothing, please repeat the above settings and try again.

(2). After changed, hold the controller's PTT and pressing  +  , and then release the PTT, at this time the controller will beep and show the ANI ID code of the controlled transceiver, which means exit the remote changing mode.

(3). If you want to cancel the changed CTCSS tone, you can turn off and then turn on the transceiver, it will be back to the previous setting.

6.Change receiving DCS tone (06 + DCS tone)

It will change the transceiver's receiving DCS tone temporarily (both VFOs). After reboot the transceiver, it will return to the transceiver's original DCS setting.

(1). After activated the remote changing function of the controlled transceiver, hold the controller's PTT and pressing the  +  + 4 digits DCS tone (first digit 0 for positive code, e.g. 0023 for D023N, while 1 for negative code, e.g. 1023 for D023I), and then release the PTT. There is a beep prompt from the controller, which means the setting is succeed, if heard nothing, please repeat the above settings and try again.

(2). After changed, hold the controller's PTT and pressing  +  , and then release the PTT, at this time the controller will beep and show the ANI ID code of the controlled transceiver, which means exit the remote changing mode.

(3). If you want to cancel the changed DCS tone, you can turn off and then turn on the transceiver, it will be back to the previous setting.

Special Reminder

» In remote changing mode, if the controlled transceiver doesn't receive any DTMF tone from the controller after 30 seconds, it will automatically exit the remote connection. Also, you can input   to exit.

» In remote control mode, the priority functions are prohibited.

Special Reminder

» In remote control mode, after got a beep prompt, the speaker will turn off, and the other VFO cannot receive.

» If the transceiver is low voltage, excessive voltage, or in repeating transmitter/receiver mode, it will not activate the remote control connection function.

» After activated the remote control setting, the PTT and all keypads will not work except the  ,  and  keys.

E.g.: The original settings of the controlled transceiver are,

VFO A: RX Freq.: 440.02500MHz, TX Freq.: 445.02500MHz,

VFO B: RX Freq.: 140.02500MHz, TX Freq.: 145.02500MHz

VFO A and B: TX/RX CTCSS Tone: 67Hz, Control code (CONTR CODE): 654321

1. Change the VFO A's working frequency to 443.02500MHz (same transmitting and receiving frequency).

(1). Set the controller handheld or mobile transceiver:

TX Freq.: 140.02500MHz, RX Freq.: 145.02500MHz.

(2). After activated the remote changing function (MENU 44), hold the PTT, and pressing 654321 + AC , then release the PTT, with the beep prompt heard, the transceiver enters the remote control mode, meanwhile, it will reboot, and then,

(3). Hold the PTT again, and pressing  +  +  +  +  +  +  +  +  +  , then release the PTT. With a beep prompt heard, the controlled transceiver will reboot and show the new TX and RX frequency 443.02500MHz on VFO A, there is no change on VFO B.

2. Change the VFO A's receiving CTCSS tone to 151.4Hz (But it will change the two VFO'S CTCSS tone simultaneously).

(1). Set the controller handheld or mobile transceiver:

TX Freq.: 440.02500MHz, RX Freq.: 445.02500MHz.

(2). Hold the PTT, and pressing 654321 + AC , then release the PTT, with the beep prompt heard, the transceiver enters the remote control mode, meanwhile, it will reboot, and then,

Remote control function

(3). Hold the PTT again, and pressing **5** **300M** + **5** **REL** + **1** **BAND** + **5** **REL** + **1** **BAND** + **4** **MEMBER** then release the PTT. With a beep prompt heard. At this time, the new RX CTCSS of both VFOs is 151.4Hz, but the TX CTCSS is still 67Hz, which will not be changed.

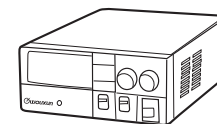
(4). Exit remote changing mode: Hold PTT and pressing **9** **SQL** + **9** **SQL**, and then release the PTT. The controller will show the controlled transceiver's ANI ID and then return to standby.

■ P52 Wire-clone Function

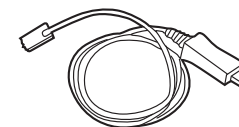
Connect the two transceivers with the connection cable on the PC jack, press **5** **300M** key of the source transceiver, the two transceivers' screen will display CommUtaio Data, it starts copying.

After finishing the copying, the two transceivers will reboot, if failed copying, they will return to standby mode.

Optional accessories



Switching Power
Supply (30A)



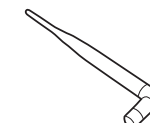
USB Programming
Cable



Mobile
Speaker / Mic



Omni-antenna



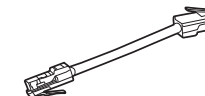
Omni-antenna



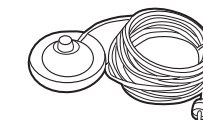
Directional-Antenna



Clamps Install
Mount



Connection Cable



Strong Magnetic Mount

Troubleshooting

Before assuming your transceiver is broken, please check your transceiver according to the following table; if the problem persists, you can reset the transceiver, which sometimes resolves problems with settings.

Fault	Solution
Reception prompt remains but speaker is silent	» Check that the volume knob has been set to maximum. » Please reset sub-audio settings to check whether different channels from other group members have been set. » Check whether squelch settings are correct.
Keypad is unresponsive	» Check whether keypad has been locked. » Check whether other keys have been pressed.
Other voices (not from group members) appear in the channel.	» Please change the CTCSS / DCS code.
Receive regular voice pause (About 3 second intervals)	» Please see if the "PRICH-SW" (Priority scanning switch) is turned on.
Can not enter scanning mode	» Please see if the scan group channel, Scan Add function is turned on.
Transceiver automated activation/deactivation switch	» Please make sure all used power sources are under 11.5V, or if the "APO" switch is on.
When pressing the transceiver PTT key to transmit, there is no output power and no reception	» See if it has been stunned or killed.
Cannot set up the cross-band repeater	» Please make sure A/B area is on the cross-band repeaters operating frequency.
Cannot transmit in repeat mode	» Please check to see if the receivers squelch and CTCSS / DCS settings are correct.

Announcement



Twin Band FM Transceiver

 endeavors to achieve the accuracy and completeness of this manual, but it is still not perfect for any possible omissions or printing errors. All the above is subject to be updated without prior notice.

Edition:KG-UV920P-1211-V1