

5. Press **P5** key to confirm and exit.

NOTE: Content and name of 2TONE will be edited by programming software.

This radio only query edited group or name.If there is corresponding name for 2TONE,this operation will display 2TONE corresponding name.

Sending 5-Tone Call

1. Press and hold **F** key for over 2s to enter general setting menu

2.Press **P1** / **P2** key to choose No.04 menu, LCD displays

"5TON XX","XX"indicates the group in the list.

3. Turn selector knob to select the desired sending 5TONE group,Press PTT to transmit selected group.

04 5TON-00

4. Total:100groups,00-99,Default:00.

5. Press **P5** key to confirm and exit.

NOTE: Content and name of 5TONE will be software.This radio only query edited group or name.If there is corresponding name for 5TONE,this operation will display 5TONEcorresponding name.

Sending DTMF call

1. Press and hold **F** key for over 2s to enter general setting menu.

2.Press **P1** / **P2** key to choose No.05 menu, LCD displays "DTMF XX","XX"indicates the group in the list.

05 DTMF-01

3. Turn selector knob to select the desired sending DTMF group, Press PTT to transmit selected group.

4. Total:16groups,00-16,Default:00.

5. Press **P5** key to confirm and exit.

Signaling Combination setup

This function is to improve the level of protecting the radio against receiving irrelative signal.

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.06 menu, LCD displays

"SPK--SQ".

06 SPK-SQ

3. Turn selector knob to select the desired combination

If select "SQ",it indicates you can hear the calling from caller when receive a matching carrier.

If LCD displays "CTC",it indicates you can hear the calling from caller when receive a matching carrier and CTCSS/DCS signaling .

06 SPK-CTC

If LCD displays "TON",it indicates you can hear the calling from caller when receive a matching carrier and DTMF/2TONE/5TONE signaling .

06 SPK-TON

If LCD displays "C*T",it indicates you can hear the calling from caller when receive a matching carrier and CTCSS/DCS and DTMF/2TONE/5TONE signaling .

06 SPK-C*T

If LCD displays "C/T",it indicates you can hear the calling from caller when receive a matching carrier and either CTCSS/DCS DTMF/2TONE/5TONE signaling.

06 SPK-C/T

4. Press **P5** key to confirm and exit.

NOTE: This setting will be set together with adding optional signaling and CTCSS/DCS.

HIGH/MID/LOW Power Selection

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.07 menu, LCD displays "POW-HI".

07 POW-HI

3. Turn selector knob to select the desired setting.

HI: High TX Power MI : Middle TX Power LOW: Low TX Power

4. Press **[P5]** key to confirm and exit.

MI POW-MI

Lo POW-LOW

Band-width Selection

Select suitable bandwidth in accordance with different local conditions.

1. Press and hold **[F]** key for over 2s to enter general setting menu.

Lo BAND-25

2. Press **[P1]** / **[P2]** key to choose No.08 menu, LCD displays "BAND--25".

Lo BAND-20

3. Turn selector knob to select the desired setting.

25: band width is 25k(Wide band)

20: band width is 20k(Middle band)

12:band width is 12.5k(Narrow band)

4. Press **[P5]** key to confirm and exit.

5. Default:25(Wide Band).

LoNar BAND-12

TX OFF SETUP

Disable this function,it is invalid to press PTT,current channel only works in RX mode.

1. Press and hold **[F]** key for over 2s to enter general setting menu.

09 TX-ON

2. Press **[P1]** / **[P2]** key to choose No.09 menu, LCD displays "TX-ON".

09 TX-OFF

3. Turn selector knob to select the desired setting .

On:In current channel,Press PTT to transmit

OFF:In current channel,Press PTT is invalid.

4. Press **[P5]** key to confirm and exit. Default: ON.

Busy Channel Lockout

BCLO is to disable transmitting while RX signal is received. Once the channel is busy and you press PTT, the radio will beep as warning and get back to receiving.

1. Press and hold **[F]** key for over 2s to enter general setting menu

2. Press **[P1]** / **[P2]** key to choose No.10 menu, LCD displays "LOCK--OFF".

10 LOCK-BU

3. Turn selector knob to select the desired setting.

BU: Enable BCLO, Carrier lockout, transmitting is inhibited when current channel receives a matching carrier;press [PTT] to emit error voice prompt and back to receiving status.

10 LOCK-RL

RL: Enable BTLO, transmitting is inhibited when current channel receives a matching carrier

10 LOCK-OF

but dis-matching CTCSS/DCS,press [PTT] to emit error voice prompt and back to receiving status.

OFF: Busy channel lockout is disabled.It can transmit in any receiving status.

4. Press **P5** key to confirm and exit.

Editing Channel NAME

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.11 menu, LCD displays cursor and flashing.



3. Turn selector knob to select the desired letter,press **P5** key to confirm selected letter and enter into next edition,Press **P3** to return forward edition.

4. After edition,press **P4** key to exit.

NOTE: In Frequency (VFO) mode ,this function will be auto-hidden.

Reverse TX/RX

TX frequency turns to RX frequency & RX frequency changes to TX frequency. The signaling will also be reversed if CTCSS/DCS signaling exited in this channel.

1. Press and hold **F** key for over 2s to enter general setting menu

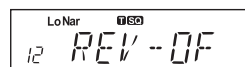
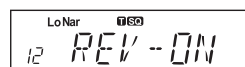
2. Press **P1** / **P2** key to choose No.12 menu, LCD displays "REV--OF".

3. Turn selector knob to select the desired setting.

ON:Enable Frequency Reverse

OFF:Disable Frequency Reverse.

4. After edition,press **P5** key to exit.

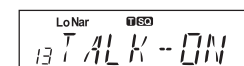


Talk Around

By Talk Around function,you can directly communicate with other radios in your group in case the repeater is not activated or when you are out of the repeater range. The transceiver will transmit by RX frequency with its CTCSS/DCS signaling.

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.13 menu, LCD displays "TALK--OF".



3. Turn selector knob to select the desired setting.

ON:Enable Talk Around

OFF:Disable Talk Around

4. After edition,press **P5** key to exit.

Voice Compander

Enable this function to reduce background noise and enhance audio clarity, especially in long range communication.

1. Press and hold **F** key for over 2s to enter general setting menu

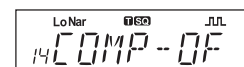
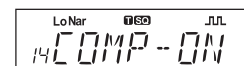
11. Press **P1** / **P2** key to choose No.14 menu, LCD displays "COMP--OFF".

3. Turn selector knob to select the desired setting.

ON:Enable compander

OFF:Disable compander

4. Press **P5** key to confirm and exit. Default: OFF



Scrambler setup (Encryption)

An analog voice inversion scrambler can be equipped as optional. This special audio process can offer a more confidential communication. Other radios at same frequency will receive only disordered noises.

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.15 menu, LCD displays "SCR-OF".
3. Turn selector knob to select the desired setting.

ON:Enable Scrambler

OF:Disable Scrambler

4. Press **[P5]** key to confirm and exit. Default: OFF

NOTE: This function is optional

Radio's DTMF SELF ID ENQUIRY

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.16 menu, LCD displays "D-XXX" XXX is radio's DTMF SELF ID.
3. Press **[P5]** key to confirm and exit.

Radio's 5TONE SELF ID ENQUIRY

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.17 menu, LCD displays "F-XXXXX", "XXXXX" is radio's 5TONE SELF ID.
3. Press **[P5]** key to confirm and exit.

LoNar
15 ⁺ SCR-ON

LoNar
15 ⁺ SCR-OFF

LoNar
16 D-001

LoNar
17 F-12345

Voice Prompt

The prompting tone provides confirmation of entry, error status or malfunctions of the transceiver. You can enable or disable this function.

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.18 menu, LCD displays "BEEP-ON".
3. Turn selector knob to select the desired setting.

ON:Enable voice prompt

OFF:Disable voice prompt

4. Press **[P5]** key to confirm and exit. Default: ON.

NOTE: Suggestion: Enable this function to check incorrect operation and malfunctions.

TOT (Time-out timer)

The time-out timer limits the amount of transmitting time. When you reach the time limit which has been programmed by your dealer, your transmission will be cut off. In order to transmit again, you must release PTT button to reset the timer.

1. Press and hold **[F]** key for over 2s to enter general setting menu.
2. Press **[P1]** / **[P2]** key to choose No.19 menu, LCD displays "TOT--3"
3. Turn selector knob to select the desired setting.

Timer: 1-30min, each level 1min

LoNar
18 BEEP-ON

LoNar
18 BEEP-OFF

LoNar
19 TOT- 3

OFF:Disable TOT

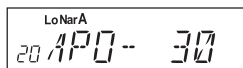
4. Press **P5** key to confirm and exit. Default:3.

APO (Auto power off)

Once APO is activated, the radio will be automatically switched off when the pre-set timer is running to the end.

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.20 menu, LCD displays "APO--OFF".



3. Turn selector knob to select the desired setting.

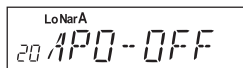
30MIN:Auto power off after 30m

1HOUR:Auto power off after 1h

2HOUR:Auto power off after 2h

OFF:Disable Auto power off

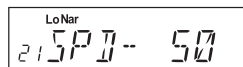
4. Press **P5** key to confirm and exit.Default:OFF



DTMF Transmitting Time

1. Press and hold **F** key for over 2s to enter general setting.

2. Press **P1** / **P2** key to choose No.21 menu, LCD displays "SPD--50".



3. Turn selector knob to select the desired setting.

30/50/100/200/300/500, which indicates the time for sending each DTMF signal & the interval between each DTMF being sent.

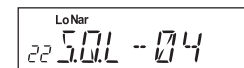
4. Press **P5** key to confirm and exit.Default:50MS.

Squelch level Setup

Setting the radio to a tight squelch level, you can avoid unwanted signals or noise, but you may not receive a weak signal. Therefore, it will be better for you to select the normal squelch level

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.22 menu, LCD displays "SQL--04".



3. Turn selector knob to select the desired squelch level.

OF-20 total 21,OF is min setting value(ON)

4. Press **P5** key to confirm and exit.Default:04

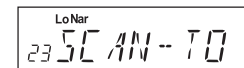
NOTE: Press **P2**, then turn selector knob also can select the desired squelch level. If the transceiver has set at higher squelch level, it may fail to hear the calling. If set at lower squelch level, the radio will be interfered.

Scan Stop Time Setup

There are 3 kinds of Scan Dwell Time for option.

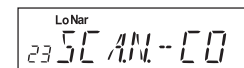
1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.23 menu, LCD displays "SCAN--TO".



3. Turn selector knob to select the desired Scan Dwell Time.

TO:it pauses 15s once scanning a matching signal, then resume scan.



CO:it pauses once scanning a matching signal,signal disappeared then resume scan.

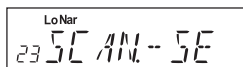
SE:It stops once scanning a matching signal.

4. Press **P5** key to confirm the selection and exit.Default:TO.

LCD Backlight

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.24 menu, LCD displays "LAMP--25"



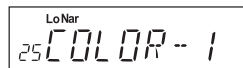
3. Turn selector knob to select the desired LCD backlight brightness1-32 total 32 level backlight brightness.

4. Press **P5** key to confirm and exit.Default:25.

Background Light Color

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.25 menu, LCD displays "COLOR--1"



3. Turn selector knob to select the desired light color, total 3 color for choice.

4. Press **P5** key to confirm and exit.Default:1.

Pilot Frequency

This function uses to start repeater .It needs a certain intensity Pilot Frequency to start dormant repeater.As usual,no need to send pilot frequency again once repeater started.

1. Press and hold **F** key for over 2s to enter general setting.

2. Press **P1** / **P2** key to choose No.26 menu, LCD displays"TB--1750".

3. Turn selector knob to select the desired pilot frequency.

1750HZ:Pilot frequency 1750HZ

2100HZ:Pilot frequency 2100HZ

1000HZ:Pilot frequency 1000HZ

1450HZ:Pilot frequency 1450HZ

4. Press **P5** key to confirm the selection and exit.

Default: 1750HZ

Display Mode Setup

There are 3 different display modes: Frequency+Channel mode,& Channel mode&Channel+Name Tag mode, .

1. Press and hold **F** key for over 2s to enter general setting menu.

2. Press **P1** / **P2** key to choose No.27 menu, LCD displays"DSP-- FR".

3. Turn selector knob to select the desired mode.

FR:Frequency+Channel mode(Amateur transceiver mode).

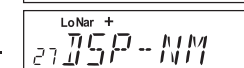
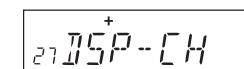
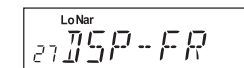
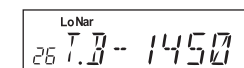
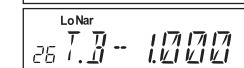
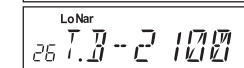
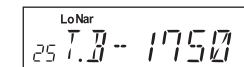
CH:Channel mode(Professional transceiver mode).

NM:Channel+Name Tag mode(Amateur transceiver mode),if channel not named,it displays Frequency+Channel mode.

4. Press **P5** key to confirm and exit.

NOTE: This function will be auto-hidden if channel mode locked.

(Refer to programme software)



Power On Password Setup

Enable this function, you have to insert a matching PIN to enter into normal status when radio is turned on. (Pin setup by programme software).

1. Press and hold **[F]** key for over 2s to enter general setting menu.

28 ⁺CODE--OF

2. Press **[P1]** / **[P2]** key to choose No.28 menu, LCD displays "CODE-OF".

28 ⁺CODE--OF

3. Turn selector knob to enable/disable password setup.

ON: Turn on Pin setup

OFF: Turn off Pin setup

4. Press **[P5]** key to confirm and exit. Default: OFF

Address list

You store desired ID and corresponding ID name in address list. The LCD displays ID corresponding name if radio received ANI calling and find matching ID in address list.

1. Press and hold **[F]** key for over 2s to enter general setting menu.

29 ⁺BOOK

2. Press **[P1]** / **[P2]** key to choose No.29 menu, LCD displays "BOOK".

127 ⁺11135--

3. Turn selector knob to select the desired group [00-127], total is 128 group ID.

4. Press **[F]** key to confirm and exit.

127 ⁺JHONSON

Factory Default

If your radio seems to be malfunctioning, resetting the microprocessor may solve the problem. When performing the reset, you may lose memory data and stored information. Back up or write down important data before performing the reset.

1. Press and hold **[F]** key for over 2s to enter general setting menu.

2. Press **[P1]** / **[P2]** key to choose No.30 menu, LCD displays "RESTORE".

28 ⁺RESTORE

3. Turn selector knob to select the desired operation.

FACT: Resume factory default for channel, signaling and general setting.

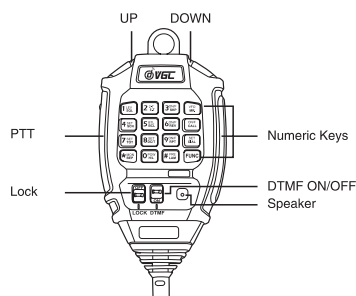
29 ⁺FACT

SETUP: Return initial setup for No.18- No 28 general setting menu.

30 ⁺SETUP

4. Press **[P4]** key to confirm.

Microphone Operation



You can operate the transceiver by keypad or input desired frequency or channel through the microphone (Note: In professional transceiver mode, other keys are invalid except PTT, [**UP** / **DOWN**], **ONF CALL** and **SET DIAL**).

Keypad Lock

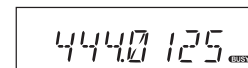
Pull down the slide switch to lock position, The lamp is turned off and all of keypads is not work except PTT switch.

Transmitting DTMF By Microphone Keypad

Slide DTMF key to DTMF position, press and hold the [PTT] key, transmitting the desired DTMF signaling by the numeric key directly. (Note: Slide DTMF key to DTMF position, the keyboard is invalid in standby).

Function Setup By Microphone Keypad

squelch off : In standby, press **MON BEP** key, the squelch is disabled when **BUSY** icon , flashed in LCD, Press **MON BEP** again to enable squelch and the **BUSY** icon disappears.



Switches between VFO and channel mode

In standby, press **VFO MR.** key to switch between channel mode and Frequency mode (VFO).

Short Calling

In standby, press **ONF CALL** to transmit the selected DTMF/2TONE/5TONE in current channel. Transmitting DTMF Code: In standby, press **SET DIAL** , LCD displays DTMF data and group. Press [**UP** / **DOWN**] key to select the desired transmitting DTMF group, then Press PTT to transmit.

If no DTMF data in current group, LCD displays "EMPTY", press **SET DIAL** key again and input desired DTMF code by keypad, press PTT to transmit and store DTMF data.

Squelch Level

1. In standby, press **FUNC** , then press **1 LEV SQL** , LCD displays "SQL" and current squelch level.
2. Press **UP** / **DOWN** to adjust the desired squelch level. (press **FUNC** , then press **1 LEV SQL** , turn selector knob also can adjust the desired squelch level.
3. Press number key to confirm and exit.

Optional signaling

In standby, press **FUNC** , then press **1 LEV SQL** to add optional signaling, repeat above operation to set DTMF, 2TONE or 5TONE signaling.

When first bit of Exa byte in frequency displays "D",it indicates
DTMF function enable.

0440 125

When first bit of Exa byte in frequency displays "T",it indicates
2Tone function enable.

7440 125

When first bit of Exa byte in frequency displays " F ",it indicates
5Tone function enable.

F440 125

This function can be temporarily used in channel mode. Once the radio is turned off or
switched to another channel, the temporary setting will be erased and back to initial settings.

Scan Skip

In Channel mode,press **[FUNC]** then press **[3 ONF SKP]** ,decimal point displayed between frequency's
ten digit and unit digit,it means current channel is scan skip. Repeat above operation to set
scan or scan skip in currentchannel.

1. decimal point displayed between frequency's ten digit and unit digit,it means current
channel is scanned skip.
2. decimal point is not displayed between frequency's ten digit and unit digit,it means current
channel is scanned.

Frequency/Channel scan

In corresponding mode,press **[FUNC]** then press **[4 SET SCN]** key to enter into scanning.

In scanning mode,press **[UP]** / **[DOWN]** to change scan direction.

Busy Channel Lockout

BCLO is to disable transmitting while RX signal is received. Once the channel is busy
and you press PTT, the radio will beep as warning and get back to receiving.

1. In standby,press **[FUNC]** ,then press **[5 BTL BCL]** to enter into Busy Channel Lockout.
2. Press [**[UP]** / **[DOWN]**] to select the desired value.

BU: Enable BCLO, Carrier lockout, transmitting is inhibited when current channel receives
a matching carrier;press [PTT] to emit error voice prompt.

RL: Enable BTLO, transmitting is inhibited when current channel
receives a matching carrier but dis-matching CTCSS/DCS.press [PTT] to emit error voice
prompt It can transmit in any receiving status.

OFF: Busy channel lockout is disabled.

3. Press number keys to confirm and exit.

NOTE: This function can be temporarily used in Channel mode . Once the radio is turned
off or switched to another channel, the temporary setting will be erased and back to initial
settings.

Reverse TX/RX

TX frequency turns to RX frequency & RX frequency changes
to TX frequency. The signaling will also be reversed if CTCSS/DCS
signaling exited in this channel.

DCS
025M

1. In standby,press **[FUNC]** ,then press **[6 ONF REV]** ,LCD displays "REV-OF".
2. Press [**[UP]** / **[DOWN]**] to select the desired value.

ON:Enable Frequency Reverse

OFF:Disable Frequency Reverse

3. Press number keys to confirm and exit.

NOTE: This function can be temporarily used in Channel mode . Once the radio is turned off or switched to another channel, the temporary setting will be erased and back to initial settings.

TOT (Time-out timer)

The time-out timer limits the amount of transmitting time. When you reach the time limit which has been programmed by your dealer, your transmission will be cut off. In order to transmit again, you must release PTT button to reset the timer.

1. In standby,press **[FUNC]** ,then press **[7^{SET TOT}]** iLCD displays "TOT-X".

2. Press [**UP** / **DOWN**] to select the desired value.

3. Press number keys to confirm and exit.

CTCSS/DCS Encode and Decode

1. In standby,press **[FUNC]** ,then press **[8^{SET DCT}]** to enter into CTCSS/DCS Encode and Decode.

2. Repeat above operation to set as below:

LCD displays T icon,it indicates CTCSS encode set in current channel.

LCD displays T and SQ icon,it indicates CTCSS encode and decode set in current channel.

LCD displays DCS icon,it indicates DCS encode and decode set in current channel.

3. In corresponding icon,press [**UP** / **DOWN**] to select the desired CTCSS/DCS encode and decode.

4. Press **[★MON BEP]** , **[P3]** or **[8^{SET DCT}]** to confirm and exit.

NOTE:This function can be temporarily used in Channel mode. Once the radio is turned off or switched to another channel, the temporary setting will be erased and back to initial settings.

Talk Around

By Talk Around function,you can directly communicate with other radios in your group in case the repeater is not activated or when you are out of the repeater range. The transceiver will transmit by RX frequency with its CTCSS/DCS signaling.

1. In standby,press **[FUNC]** ,then press **[9^{QWIF RPT}]** key,LCD displays "TALK--OF".

2. Press [**UP** / **DOWN**] to select the desired setting .

ON:Enable Talk Around

OFF:Disable Talk Around

3. Press number keys to confirm and exit.

NOTE: This function can be temporarily used in Channel mode . Once the radio is turned off or switched to another channel, the temporary setting will be erased and back to initial settings.

Voice Prompt

The prompting tone provides confirmation of entry, error status or malfunctions of the transceiver. You can enable or disable this function.

1. In standby,press **[FUNC]** ,then press **[★MON BEP]** ,LCD displays "BEEP--XX".

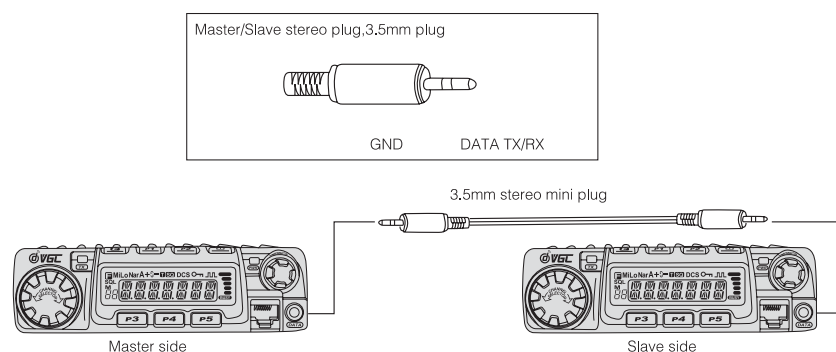
2. Press [**UP** / **DOWN**] to turn on/off BEEP voice prompt.

4. When the alarm cable is removed from the DATA jack or cut by improper sequence, the alarm function enable and will alarm as programmed. In alarming, the transceiver will stop alarm once receiving a matching signal. And alarm again when a matching signal disappeared.
5. Restart radio to cancel anti-theft alarming. Reconnect with alarm cable and turn off radio, the system will return to alarm mode.

Cable Clone

This feature will copy the programmed data and parameters in the master unit to slave units. It copies the parameters and memory program settings.

1. Use optional cloning cable, connect the cable between the data jacks on both master and slave.
2. Press and hold **[F]** key, then press **[P1]** key to enter into cloning mode, LCD displays "CLONE".



3. Press master unit's [PTT] key, LCD displays "SD XXX", "XXX" indicates data volume in transmitting. Slave unit displays "LD XXX", "XXX" indicates received data volume. When the transmission is successfully finished, the master and slave unit both display "PASS". Turn off the power, disconnect the cable and repeat step 2 to step 3 operations to clone the next slave unit.

NOTE: If the data is not successfully transmitted, turn off both units, make sure the cable connection is correct and repeat the entire operation from the beginning.

BEEP—OF :turn off voice prompt

BEEP—ON :turn on voice prompt

3. Press number key to exit and store.

HIGH/MID/LOW Power Selection

1. In standby,press **FUNC** ,then press **Q POW HIL** LCD displays"POW-XX".

2. Press [**UP** / **DOWN**] to select the desired power.

HI:High Power

MI:Middle Power

LOW:Low Power

3. Press number keys to exit and store.

LCD Backlight

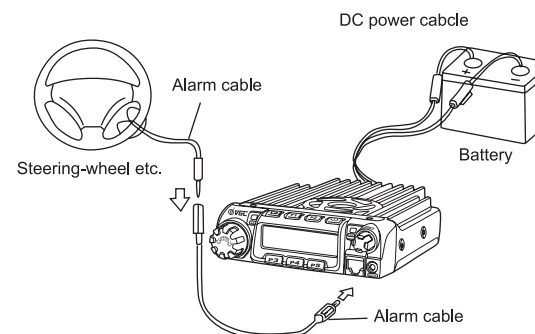
1. In standby status,press **FUNC** , then press **# FREQ LAM** LCD displays"LAMP- XX" .

2. Press [**UP** / **DOWN**] to select desired backlight brightness(1-32 levels).

3. Press number keys to confirm and exit.

Long-distance Anti-theft Alarm

This function is mainly use for simple anti-theft alarm device in vehicles. When the transceiver be removed in an improper manner,the transceiver will emit and transmit alarming and background voice to system and other transceiver of the same frequency.



Connect DC power cable with car battery.

1. Connect the optional alarm cable to the data jack on the front panel as shown. Secure the other end of the cable to an object that stays fixed in vehicle.(Note: if alarm cable is not enough long, you can choose optional alarm cable to extend).
2. When transceiver power off by press **POWER** key ,the long-distance anti-theft alarm enable.
3. Note:The long-distance anti-theft alarm only available when transceiver power off .

Programming Software Installing and Starting (in windows XP system)

Double click "VGC VR-2200", then follow the installing instruction.

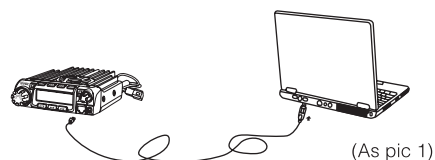
Install USB Cable Driver Programme

1. Click start menu in computer, under "ALL PROGRAMS" menu, choose and click "USB To Com port" in VR-2200 program, install "USB To Com port" driver by indication.

2. Connect the optional USB Programming cable to USB port in PC with transceiver.
(As pic 1)

3. Double click VR-2200 shortcut or click VR-2200 in procedure index of start menu, choose serial com port as indicated then click OK to start programming software.

4. According to instruction,select correct"COM Port",then click "OK" to start programming software.



NOTE: Even in same computer,the selective COM Port is different when USB cable connects with different USB port.

You shall install software before connecting the USB cable line. Switch on transceiver before writing frequency.You had better not switch on or off the power supply of transceiver when it is connected with computer, otherwise, it will make transceiver unable to read or write frequency. In this case, you have to turn off programming software, pull out USB cable. then reinsert USB cable and open software, then rechoose COM Port, it will turn into normal operation. Therefore, please connect transceiver with computer after switching on the transceiver. Don't restart transceiver power when it is connected with computer.

NOTE: This software has productidentify system, so when firstly installing the software, you have to connect the products, otherwise you can not start the software.

Maintenance

Default Setting after Resetting(VHF)

	VR-2200	DCS encode and decode	–
VFO frequency	145.00MHz	DCS code	023N
Memory channel 0–199	–	Output power	HI
Offset direction	–	Key–lock setting	OFF
Offset frequency	600KHz	TOT	OFF
Channel step	12.5KHz	APO	OFF
CTCSS encode and decode	–	Squelch Level	4
CTCSS frequency	88.5Hz		

Default Setting after Resetting(UHF)

	VR-2200	DCS encode and decode	–
VFO frequency	435.00MHz	DCS code	023N
Memory channel 0–199	–	Output power	HI
Offset direction	–	Key–lock setting	OFF
Offset frequency	600KHz	TOT	OFF
Channel step	12.5KHz	APO	OFF
CTCSS encode and decode	–	Squelch Level	4
CTCSS tone frequency	88.5Hz		

Trouble Shooting

Problem	Possible Causes and Potential Solutions
(a) Power is on, nothing appears on Display.	+ and – polarities of power connection are reversed. Connect red lead to plus terminal and black lead to minus terminal of DC power supply.
(b) Fuse is blown.	Check and solve problem resulting in blown fuse and replace fuse with new fuse.
(c) Display is too dim.	Dimmer setting is "LAMP–L". Please make the dimmer setting "LAMP–H".
(d) No sound comes from speaker.	Squelch is muted. Decrease squelch level. Tone or CTCSS/DCS squelch is active. Turn CTCSS or DCS squelch off.
(e) Key and Dial do not function.	Key–lock function is activated. Cancel Key–lock function.
(i) Rotating Dial will not change memory channel.	Transceiver is in CALL mode. Press the VFO or memory mode.
(g) PTT key is pressed but transmission does not occur.	Microphone connection is poor. Connect microphone properly. Antenna connection is poor. Connect antenna properly.

Specifications

■ General

Frequency Range	VHF:136 ~ 174MHz 245 ~ 245.9875MHz(220 ~ 260MHz) UHF:400 ~ 490MHz
Number of Channels	200 channels
Channel Spacing	25K (Wide Band) 20K(Middle Band) 12.5K (Narrow band)
Phase-locked Step	5KHz、6.25KHz、8.33KHz、10KHz、12.5KHz、15KHz、20KHz、25KHz、30KHz、50KHz
Operating Voltage	13.8V DC ± 15%
Squelch	Carrier/CTCSS/DCS/5Tone/2Tone/DTMF
Frequency Stability	± 2.5ppm
Operating Temperature	-20 ~ +60°C
Dimensions(WxHxD)	145(W)x47(H)x190(D)mm
Weight	about 1.2kg

NOTE: Specifications are subject to change without notice due to advancements in technology.

■ Receiver (ETSI EN 300 086 standard testing)

	Wide band	Narrow band
Sensitivity (12dB Sinad)	≤0.25μV	≤0.35μV
Adjacent Channel Selectivity	≥ 70dB	≥ 60dB
Intermodulation	≥ 65dB	≥ 60dB
Spurious Rejection	≥ 70dB	≥ 70dB
Audio Response	+1 ~ -3dB(0.3 ~ 3KHz)	+1 ~ -3dB(0.3 ~ 2.55KHz)
Hum & Noise	≥ 45dB	≥ 40dB
Audio distortion	≤5%	
Audio power output	> 2W@10%	

■ Transmitter (ETSI EN 300 086 standard testing)

	Wide band	Narrow band
Power Output	60W/25W/10W(VHF)	45W/25W/10W(UHF)
Modulation	16K Φ F3E	8 K Φ F3E
Adjacent Channel Power	≥ 70dB	≥ 60dB
Hum & Noise	≥ 40dB	≥ 36dB
Spurious Emission	≥ 60dB	≥ 60dB
Audio Response	+1 ~ -3dB(0.3 ~ 3KHz)	+1 ~ -3dB(0.3 ~ 2.55KHz)
Audio Distortion	≤5%	