

## General Setting

1. Press and hold **F** key for over 2s to enter general setting menu.
2. Press **P1** or **P2** to select the desired function option.
3. Turn selector knob to select the desired setup.
4. Press **P5** to confirm and exit.

NOTE: In Professional transceiver mode, the functions from No.1 to No.17 will be auto-hidden.

## Frequency Channel Step Setup

Only in frequency (VFO) mode, this function is valid. Turn selector knob to select frequency or frequency scanning which is restricted by frequency step size.

1. Press and hold **F** key for over 2s to enter general setting menu.
2. Press **P1** / **P2** key to choose No.01 menu, LCD displays "STP-- 125"
3. Turn selector knob to select the desired frequency channel step. Channel step: 5K, 6.25K, 8.33K, 10K, 12.5K, 20K, 25K, 30K and 50K, total 9 kinds.
4. Press **P5** key to confirm and exit

NOTE: This function is auto-hidden in channel mode.

## DTMF, DTMF ANI, 2Tone or 5Tone Signaling

DTMF/5Tone/2Tone signalling function is similarly as CTCSS/DCS. Without receiving correspondent tone signalling, the speaker will remain mute. DTMF and 5Tone signalling can be applied for other advanced features such as ANI, PTT ID, group call, remotely stun, remotely kill, waken,...etc. The signalling edition must be done through programming software. Please refer to it in the programming software to know how to operate these features.

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

02 T - DTMF

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

3. Turn selector knob to select the desired setup.

"DTMF": the channel will be muted by a DTMF signal. The speaker won't be open until receiving a correspondent DTMF signal. Hold "PTT" then press **UP** or press **P1** directly to transmit the pre-stored DTMF signaling.

"2TONE": the channel will be muted by a 2-Tone signal. The speaker won't be open until receiving a correspondent 2-Tone signal. Hold "PTT" then press **UP** or press **P1** directly to transmit the pre-stored 2-Tone signaling.

02 T - 2TONE

"5Tone": the channel will be muted by a 5-Tone signal. The speaker won't be open until receiving a correspondent 5-Tone signal. Hold "PTT" then **UP** then press **P1** directly to transmit the pre-stored 5-Tone signaling.

02 T - 5TONE

## Sending 2-Tone Call

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

2. Press **P1** / **P2** key to choose No.03 menu, LCD displays

"2TON XX", "XX" indicates the group in the list.

03 2TON - 00

3. Turn selector knob to select the desired sending 2TONE group,

Press PTT to transmit selected group.

4. Total: 32 groups, 00-31, Default: 00.

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.

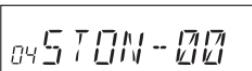
### Sending 5-Tone Call

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.



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

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

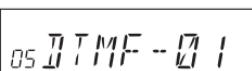
NOTE: Content and name of 5TONE will be software. This radio only query edited group or name. If there is corresponding name for 5TONE, this operation will display 5TONE corresponding name.

### 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.



3. Turn selector knob to select the desired sending DTMF group,

Press PTT to transmit selected group.

4. Total: 16 groups, 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 irrelevant 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".

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.

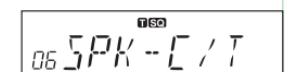
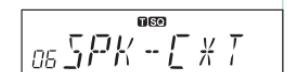
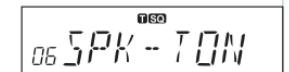
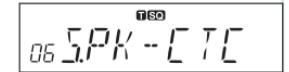
If LCD displays "CTC", it indicates you can hear the calling from caller when receive a matching carrier and CTCSS/DCS signaling.

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

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.

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.

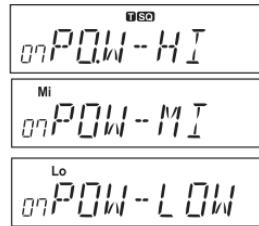
4. Press **P5** key to confirm and exit.



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".
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.



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



### TX OFF SETUP

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

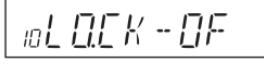
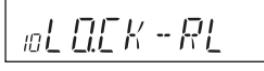
1. Press and hold **F** key for over 2s to enter general setting menu.
2. Press **P1** / **P2** key to choose No.09 menu, LCD displays "TX-ON".
3. Turn selector knob to select the desired setting .  
On:In current channel,Press PTT to transmit  
OFF:In current channel,Press PTT is invalid.
4. Press **P5** 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".
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.

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 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.

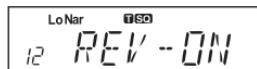
### Reverse TX/RX

TX frequency turns to RX frequency & RX frequency changes to TX frequency. The signaling will also be reversed if CTCSS/DCS signaling existed 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".

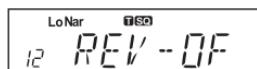
3. Turn selector knob to select the desired setting.



ON:Enable Frequency Reverse

OFF:Disable Frequency Reverse.

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

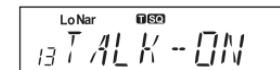


### Talk Around

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".

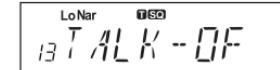


3. Turn selector knob to select the desired setting.

ON:Enable Talk Around

OFF:Disable Talk Around

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

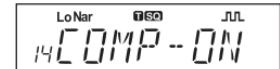


### Voice Comander

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".

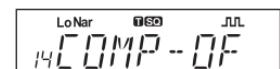


3. Turn selector knob to select the desired setting.

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.

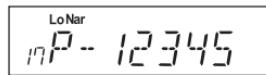
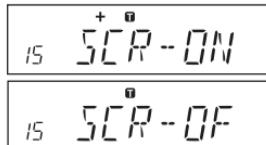
## Radio's 5TONE SELF ID ENQUIRY

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--XXXX", "XXXX" is radio's 5TONE SELF ID.

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



## 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)

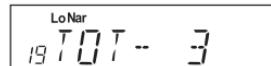
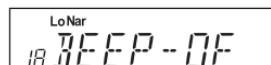
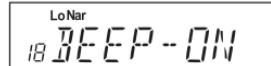
The time-out timer limits the amount of transmitting time. When you reach the time limit which has been programmed by your dealer, your transmission will be cut off. In order to transmit again, you must release PTT button to reset the timer.

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



OFF:Disable TOT

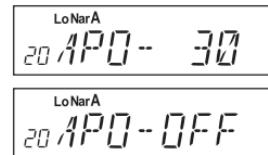
4. Press **P5** key to confirm and exit. Default:3.

### APO (Auto power off)

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

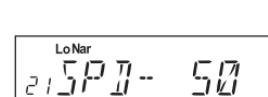
OFF:Disable Auto power off

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.

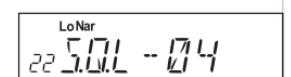
4. Press **P5** key to confirm and exit.Default:50MS.

### 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

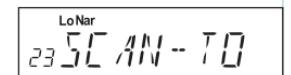
NOTE: Press **P2**, then turn selector knob also can select the desired squelch level. If the transceiver has set at higher squelch level,it may fail to hear the calling.If set at lower squelch level,the radio will be interfered.

### Scan Stop Time Setup

There are 3 kinds of Scan Dwell Time for option.

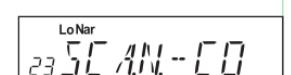
1. Press and hold **F** key for over 2s to enter general setting menu.

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.

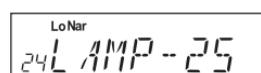


SE:It stops once scanning a matching signal.

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 dispaly modes: Frequency+Channel mode,& Channel mode&Channe  
l+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.

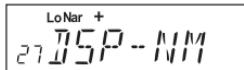
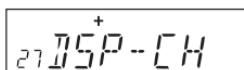
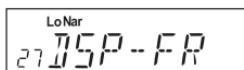
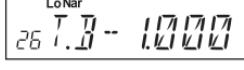
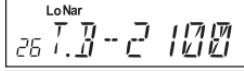
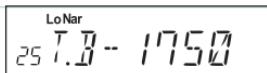
FR:Frequency+Channel mode( Amateur transceiver mode).

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 T 0 135 --

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

127 JHONSON

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

## 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.

29 RESTORE

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

3. Turn selector knob to select the desired operation.

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

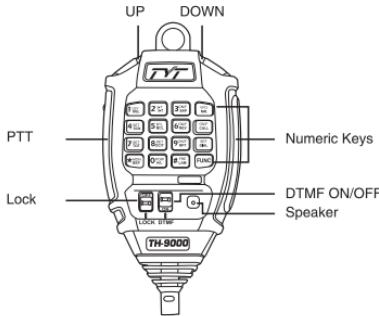
29 FACT

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** ], **ON/CALL** and **SET DIAL** ).

### Keypad Lock

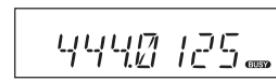
Pull down the slide switch to lock position, The lamp is turned off and all of keypads is not work except PTT switch.

### 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 BEEP** key, the squelch is disabled when **BUSY** icon, flashed in LCD, Press **MON BEEP** 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 **ON/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 EV SQL** to add optional signaling, repeat above operation to set DTMF, 2TONE or 5TONE signaling.