## PREFACE

**Thank you for purchasing GT-5TP mateur Portable Radio, which is a dual band/ display radio. This easy-to-use radio will deliver you secure, instant and reliable communications at peak efficiency. Please read this manual carefully before use. The information presented herein will help you to derive maximum performance from your radio.**

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## 1.- SAFETY INFORMATION:

The following safety precautions shall always be observed during operation, service and repair of this equipment.
· This equipment shall be serviced by qualified technicians only.
· Do not modify the radio for any reason.
· Use only BAOFENG supplied or approved batteries and chargers.
· Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result.
· Turn off your radio prior to entering any area with explosive and flammable materials.
· Do not charge your battery in a location with explosive and flammable materials.
· To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any area where posted notices instruct you to do so.
· Turn off your radio before boarding an aircraft. Any use of a radio must be in accordance with airline regulations or crew instructions.
· Turn off your radio before entering a blasting area.
· For vehicles with an air bag, do not place a radio in the area over an air bag or in the air bag deployment area.
· Do not expose the radio to direct sunlight over a long time, nor place it close to heating source.
· When transmitting with a portable radio, hold the radio in a vertical position with the microphone 3 to 4 centimeters away from your lips. Keep antenna at least 2.5 centimeters away from your body when transmitting.

**WARNING: If you wear a radio on your body, ensure the radio and its antenna are at least 2.5 centimeters away from your body when transmitting.**

## 2.- FEATURES AND FUNCTIONS:

- Dual-band handheld transceiver with display function menu on the display "LCD".
- Commercial FM radio receiver (65 MHz ~ 108 MHz).
- Frequency Mode/Channel Mode
- DTMF encoded.
- Incorporates 105 codes "DCS" and 50 privacy codes "CTCSS" programmable.
- CTCSS & DCS Scanning
- CTCSS & DCS Direct input
- Function "VOX" (voice operated transmission).
- Alarm function.
- Up to 128 memory channels.
- Broadband (Wide) / Narrowband (Narrow), selectable.
- High/Midum/Low power(8 /5 /1W) selectable.
- Display illumination and programmable keyboard.
- Function "beep" on the keyboard.
- Dual Standby/dual reception .
- Crossband reception/transmission
- Selectable Frequency Step 2.5/5/6.25/10/12.5/20/25 kHz.
- Function "OFFSET" (frequency offset for repeater access).
- Frequency reverse
- Battery saving function "SAVE".
- Timer transmission "TOT" programmable.
- Selecting the Scan Mode.
- Function Busy Channel Lock "BCLO".
- Built-in RX CTCSS/DCS scan
- Built-in LED flashlight.
- Programmable by PC.
- Level Threshold "Squelch" adjustable from 0 to 9.
- Tone end of transmission
- Built-in key lock

## 3.- UNPACKING AND CHECKING EQUIPMENTS:

Carefully unpack the transceiver. We recommend that you identify the items listed in the following figures discarding the packing material. If any items are missing or have been damaged during shipment, please contact your dealers immediately.

Adapter Drop-in Charging Tray Battery Pack Belt Clip

Antenna Handstrap

**Note: - Items included in the package, may differ from those listed in the table above depending on the country of purchase. For more information, consult your dealer or vendor.**

## 4.- OPTIONAL ACCESSORIES:

**Note: - Consult the dealer or retailer for information about options available.**

## 5.- INSTALLATION OF ACCESSORIES:

### 5.1.- INSTALLING THE ANTENNA:

Install the antenna as shown in the figure below and turn it clockwise until it stops.

Note:
- When installing the antenna, don't rotate it by its top, holding it by its base and turn.
- If you use an external antenna, make sure the 'SWR' is about 1.5:1 or less, to avoid damage to the transceiver's final transistors.
- Do not hold the antenna with your hand or wrap the outside of it to avoid bad operation of the transceiver.
- Never transmit without an antenna.

### 5.2.- INSTALLING THE BELT CLIP:

If necessary, install the belt clip at the rear of the battery compartment cover as shown inthe figure below.

**Note: - Do not use any kind of glue to fix the screw on the belt clip.**
**The solvents Glue may damage the battery casing.**

### 5.3.- MICRO-HEADSET INSTALLATION OF EXTERNAL:

Plug the external micro-headset connector into the jack of 'SP. & MIC' of the transceiver as shown in the figure below.

### 5.4.- BATTERY INSTALLATION:

- When attaching the battery, make sure the battery is in parallel and in good contact with the aluminum chassis. The battery bottom is about 1 to 2 centimeters below the bottom of the radio's body.
- Align the battery with the guide rails on the aluminum chassis and slide it upwards until a 'click' is heard.
- The battery latch at the bottom locks the battery.



- Turn off the radio before removing the battery.
- Slide the battery latch, at the bottom of the radio's body, in the direction indicated by the arrow.
- Slide down the battery for about 1 to 2 centimeters, and then remove the battery from the radio's body.

## 6.- BATTERY CHARGING:

Use only the charger specified by the manufacturer. The charger's LED indicates the charging progress.

| CHARGING STATUS | LED INDICATION |
|---|---|
| Standby (no-load) | Red LED flashes,while Green LED glows |
| Charging | Red LED solidly glows |
| Fully Charged | Green LED solidly glows |
| Error | Red LED flashes,while Green LED glows |

**Please follow these steps:**

1. Plug the power cord into the adapter.
2. Plug the AC connector of the adapter into the AC outlet socket.
3. Plug the DC connector of the adapter into the DC socket on the back of the charger.
4. Place the radio with the battery attached, or the battery alone, in the charger.
5. Make sure the battery is in good contact with the charging terminals. The charging process initiates when the red LED lights.
6. The green LED lights about 4 hours later indicating the battery is fully charged. Then remove the radio with the battery attached or the battery alone from the charger.

## 7.- BATTERY INFORMATION:

### 7.1.- INITIAL USE:

New batteries are shipped uncharged fully from the factory. Charge a new battery for 5 hours before initial use. The maximum battery capacity and performance is achieved after three full charge/discharge cycles. If you notice the battery power runs low, please recharge the battery.

**WARNING:**
**- To reduce the risk of injury, charge only the battery specified by the manufacturer. Other batteries may burst, causing bodily injury andproperty damage.**
**- To avoid risk of personal injury, do not dispose of batteries in a fire!**
**- Dispose of batteries according to local regulations (e.g. recycling). Do not dispose as household waste.**
**- Never attempt to disassemble the battery.**



### 7.2.- BATTERY TIPS:

1. When charging your battery, keep it at a temperature among 5 C - 40 C . Temperature out of the limit may cause battery leakage or damage.
2. When charging a battery attached to a radio, turn the radio off to ensure a full charge.
3. Do not cut off the power supply or remove the battery when charging a battery.
4. Never charge a battery that is wet. Please dry it with a soft cloth prior to charge.
5. The battery will eventually wear out. When the operating time (talk-time and standby time) is noticeably shorter than normal performance, it is time to buy a new battery.

### 7.3.- PROLONG BATTERY LIFE:

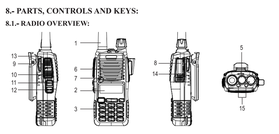
1. Battery performance will be greatly decreased at a temperature below 0 C . A spare battery is necessary in cold weather. The cold battery unable to work in this situation may work under room temperature, so keep it for later use.
2. The dust on the battery contact may cause the battery cannot work or charge. Please use a clean dry cloth to wipe it before attaching the battery to the radio.

### 7.4.- BATTERY STORAGE:

1. Fully charge a battery before you store it for a long time, to avoid battery damage due to over-discharge.
2. Recharge a battery after several months' storage (Li-Ion batteries: 6 months), to avoid battery capacity reduction due to over-discharge.
3. Store your battery in a cool and dry place under room temperature, to reduce self-discharge.

## 8.- PARTS, CONTROLS AND KEYS:

### 8.1.- RADIO OVERVIEW:






1. Antenna
2. LCD
3. Keypad
4. Knob (ON/OFF, volume)
5.Flashlight
6.Speaker
7. Microphone
8.Battery latch
9.PTT-A
10.PTT-B
11. SK-side key1/F
12. SK-side key2/M
13. Strap buckle
14. Accessory jack
15. LED indicator

### 8.2.- COMMAND/KEY DEFINITION:

**- 【PTT-A】 :**
Use for the Transmission of specified channel while dual standby is activated on. ( If the dual standby is not activated on, it is not valid)

**- 【PTT-B】 :**
Use for the Transmission of more specified channels which selected by pressing UP or DOWN key while standby.

**- SK-SIDE KEY1/ 【F】 :**
Press the 【F】 button, to activate the FM Radio on; Press it again to deactivate the FM Radio. Press and hold on the 【F】 button, to activate the alarm function; Press and hold it again, to deactivate the alarm function.

**- SK-SIDE KEY2/ 【M】 :**
Press the 【M】 button, to turn on the flashlight; Press it again to turn off. Press and hold on the 【M】 button, to monitor the signal.

**- COPYING**
Connecting the two radios with special data cable, press and hold SK-SIDE KEY2/ 【M】 (or numerical key 2 or 3), then power on, you will see 'COPYING' on the LCD, that means data is being copied from one radio to another.

**FUNCTION KEYPAD:**

**- 【MENU】 key:**
To enter the menu of the radio and confirm the setting.
Press and hold 【MENU】 button, then power on, to switch the frequency mode and channel mode.

**- 【▲】 【▼】 key:**
Press and hold 【▲】 or 【▼】 key for frequency up or down fast.
Press 【▲】 or 【▼】 key, the scanning will be opposite.

**- 【EXIT/AB】 key:**
To cancel /clear or exit.
While standby, press 【EXIT/AB】 key to switch between Channel A and Channel B.
Under FM radio mode, press 【EXIT/AB】 key to switch the FM radio band 65-75MHz/ 76-108MHz.



| RX Frequency | 440.625MHz |
|---|---|
| TX Frequency | 430.625MHz |
| RX CTCSS | 100.0Hz |
| TX DCS | 250.3Hz |
| RF Power | High |
| Bandwidth | Wide |
| PTT - ID | OFF |

2. Press and hold 【MENU】 key, then power on, come to VFO mode. Press 【EXIT/AB】 key to select frequency A (UP).
3. Enter 440.625MHz.
4. Now through the MENU, you can set other parameters. CTCSS,DCS, RF Power, Bandwidth, etc.
5. After you finish all the other settings, press 【MENU】 key, then come to MENU 27, press 【MENU】 key two times, you will know all the data have been stored into CH106, however now only RX frequency was stored. At the same time, you press 【MENU】 key another two times, you will store the TX frequency, of course the TX and RX frequency are same.

**Note: If you want the TX frequency 430.625 stored into CH106, you should do the same steps after you store the RX frequency into CH106.**

### 12.18.- CTCSS/DCS SCANNING

Before setting the CTCSS/DCS scanning, you should have a RX frequency and cancel the Dual Standby function, ensure the radio is working under VFO mode.
Come to MENU 11, press 【MENU】 one time, then press [*/SCAN] key, at the same time, you should press the PTT of another radio, then you will see the CTCSS scanning automatically. When the scanning stops, that means you find the same CTCSS as that of another radio, now press 【MENU】 to store the CTCSS.

### 12.19.- REPEATER TAIL TONE

We all know that repeaters receive on one frequency and simultaneously retransmit that same information on a different frequency. We hear the courtesy tone almost every time we use the repeater. It's that innocuous beep that lets us know that the repeater is alive and, most importantly, that it has heard us. The MENU 35, 36,37 are very helpful settings while your radio work through repeater. MENU 35 and MENU 36 better be set OFF. The parameter of MENU 37 is from 1-10, better set 5.

### 13.- CTCSS TABLE:

| N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |



### 7.1.- ERSTE BENUTZUNG

Die Batterie verlässt die Fabrik ungeladen. Laden Sie sie erst einmal 5 Stunden, bevor Sie das Gerät erstmalig benutzen. Die maximale Batteriekapazität wird etwa nach drei kompletten Entlade - und Ladezyklen erreicht. Wenn Sie bemerken, dass die Kapazität nachlässt, laden Sie die Batterie.

**ACHTUNG:**
**- um das Verletzungsrisiko zu minimieren, laden Sie nur die Batterie des Herstellers. Andere Batterien könnten Sie verletzen oder zu Schäden führen.**
**- Um körperliche Schäden zu vermeiden, setzen Sie die Batterie keinem Feuer aus!**
**- Entsorgen Sie die Batterie nach den landesüblichen Vorschriften. Batterien gehören nicht in den Haus- oder Restmüll.**
**- Zerlegen Sie die Batterie niemals.**



### 7.2.- BATTERIE TIPS

1. Laden Sie die Batterie bei einer Temperatur von etwa 5 - 40° C. Alles darunter oder darüber könnte die Batterie beschädigen.
2. Wenn Sie die Batterie mit dem Gerät laden, stellen Sie es aus.
3. Unterbrechen Sie nicht die Stromzufuhr oder entfernen die Batterie, während das Gerät lädt.
4. Laden Sie niemals eine feuchte Batterie. Trocknen Sie sie vor dem Laden ab.
5. Die Batterie ist ein Verschleißteil. Wenn Sie bemerken, dass sich die Sprech - oder Funkzeit verkürzt, ist es Zeit für einen Ersatz.

### 7.3.-VERLÄNGERN DER BATTERIENUTZUNG

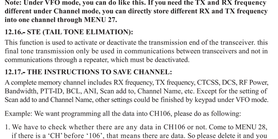
1. Die Batterieleistung vermindert sich bei Temperaturen unter 0° C bedeutend. Bei diesen Temperaturen ist eine Ersatzbatterie von Vorteil oder notwendig. Eine Batterie die hier nicht funktioniert, kann bei Raumtemperatur wieder funktionieren, also heben Sie sie auf für eine spätere Nutzung.
2. Schmutz auf den Kontakten kann dazu führen, dass die Batterie nicht richtig geladen wird oder arbeitet. Nutzen Sie ein sauberes, trockenes Tuch, um den Schmutz abzuwischen, bevor Sie die Batterie einsetzen.

### 7.4.- BATTERIELAGERUNG

1. Laden Sie die Batterie vollständig auf, bevor Sie sie verräumen, um Schäden an der Batterie zu vermeiden.
2. Laden Sie die Batterie nach ca. 6 Monaten erneut auf, um eine Reduzierung der Kapazität zu vermeiden.
3. Lagern Sie die Batterie an einem trockenen Ort bei Raumtemperatur.

## 8.- TEILE; KONTROLLE UND TASTEN:

### 8.1.-GERÄTEÜBERSICHT






1. Antenne
2. LCD Display
3. Tastatur
4. AN/AUS Knopf
5. Taschenlampe
6. Lautsprecher
7. Mikrofon
8. Batteriefach
9. PTT A - Push to talk Funktion
10. PTT B - Push to talk Funktion
11. Seitentaste 1 (F)
12. Seitentaste 2 (M)
13. Schnalle
14. Zubehörbuchse
15. LED Anzeige

### 8.2.- TASTENBELEGUNG

**【PTT-A】 PTT=Push to talk:**
Benutzen Sie diese Taste für die Übertragung in einem speziellen Kanal, während die dual Standby Funktion aktiv ist. Wenn diese Funktion ausgeschaltet ist, funktioniert die Taste nicht.

**【PTT-B】 :**
Diese Taste ist für die Übertragung in mehreren Kanälen, die Sie mittels der [AUP] und [AB] Tasten auswählen können.

**SK-Seitentaste 1 【F】 :**
Drücken Sie die [F] Taste, um den FM Empfänger zu aktivieren; drücken Sie sie erneut, um ihn zu deaktivieren.

**SK-Seitentaste 2 【M】 :**
- Drücken Sie die [M] Taste, um die Taschenlampe zu aktivieren. Drücken Sie sie nochmals, damit die Lampe aus geht. Drücken und halten Sie die Taste [MM, um das Signal zu empfangen.
- Kopieren von Einstellungen: Wenn Sie zwei Funkgeräte mit einem dafür vorgesehenen Kabel verbinden, können Sie deren Einstellungen kopieren. Drücken und halten Sie hierzu die Taste [F], schalten Sie dann die Geräte ein. Sie sehen dann auf dem Display die Anzeige "Copying".

**【MENU】 Taste:**
- Mit ihr gelangen Sie in das Menü und bestätigen Eingaben.
- Drücken und halten Sie die Taste [MENU], schalten Sie dann das Gerät ein, um den Frequenzmodus oder den Kanalmodus mit den Tasten [AUF] und [AB] zu ändern.

**【AUF】 und 【AB】 Tasten:**
- Drücken und halten Sie die [AUF] und [AB] Tasten, um die Frequenz schnell umzuschalten.
- Drücken Sie die Taste in die entgegengesetzte Richtung, um den Suchlauf in die andere Richtung zu starten.

**【EXIT/AB】 Taste:**
- Mit ihr brechen Sie eine Aktion ab oder gelangen zum vorherigen Menü.
- Wenn das Gerät im Standby ist, drücken Sie die Taste [EXIT/AB], um zwischen den Kanälen A und B zu wechseln.
- Im FM Radio-Modus können Sie mit der Taste zwischen den Frequenzen 65-75 MHz und 76-108 MHz wechseln.



**- NUMMERNTASTEN:**
- werden benutzt, um nicht standard CTCSS und Frequenzinformationen einzugeben. Außerdem für Radiosender.
- Im Übertragungsmodus werden die Tasten für das Senden des Signalcodes benutzt. (Diese sollten mit der PC Software eingesetzt werden)

**- ZUBEHÖRBUCHSE:**
Die Buchse wird benutzt, um Zubehör anzuschließen-wie Audiozubehör oder das Programmierkabel.

### 9.- 'LCD' DISPLAY:

Die Displaysymbole erscheinen je nach spezifischer Anwendung. Spezielle Anwendungen lassen ein Symbol erscheinen.

| Symbol | Beschreibung |
|---|---|
| ⌫ | Arbeitskanal |
| ⌫ | Arbeitsfrequenz |
| CT | 'CTCSS' aktiviert |
| DCS | 'DCS' aktiviert |
| + | Frequenzverschiebung + |
| − | Frequenzverschiebung - |
| +− | Richtung der Offset Frequenz für den Verstärker |
| S | Dualanzeige / Dualempfang aktiviert |
| VOX | Funktion 'VOX' aktiviert |
| R | Reversefunktion aktiviert |
| N | Breitband gewählt |
| BAT | Batterieanzeige |
| △ | Tastensperre ein |
| L | Geringe Übertragungsenergie |
| ▲▼ | Frequenz auf / ab |
| Tail | Signalstärkeanzeige |



## 10.- 1750 Hz TONE FOR ACCESS TO REPEATERS:

The user needs to establish long distance communications through an amateur radio repeater which is activated after receiving a 1750 Hz tone. Press and hold on the 【PTT】 ,then press the 【F】 button to transmit a 1750Hz tone.

## 11.- BASIC OPERATION:

### 11.1.-RADIO ON-OFF/VOLUME CONTROL :

- Make sure the antenna and battery are installed correctly and the battery charged.
- Rotate the knob clockwise to turn the radio on, and rotate the knob fully counter-clockwise until a 'click' is heard to turn the radio off. Turn the knob clockwise to increase the volume, or counter-clockwise to decrease the volume.

### 11.2.- SELECTING A FREQUENCY OR CHANNEL:

- Press the key 【▲】 or 【▼】 to select the desired frequency/channel you want. The display shows the frequency / channel selected.
- Press and hold down the key 【▲】 or 【▼】 for frequency up or down fast.

**Note: - You can not select a channel if not previously stored.**

## 12.- ADVANCED OPERATION:

You can program your transceiver operating in the setup menu to suit your needs or preferences.

### 12.1.- SET MENU DESCRIPTION:

| Menu | Function/Description | Available settings |
|---|---|---|
| 0 | SQL (Squelch level) | 0-9 |
| 1 | STEP (Frequenz Schritte) | 2.5/5/6.25/10/12.5/25kHz |
| 2 | TXP (Übertragungsenergie) | HIGH/MITTEL /LOW |
| 3 | SAVE (Batterie sparen,1:1/1:2/1:3/1:4) | AUS/1/2/3/4 |
| 4 | VOX (sprachgesteuerte Übertragung) | AUS/0-10 |
| 5 | W/N (Weitband / Nahband) | WEIT / NAH |
| 6 | ABR (Displaybeleuchtung) | AUS/1/2/3/4/5sek |
| 7 | TDR (Dual Überwachung / dual Empfang) | AUS/AN |
| 8 | BEEP (Tasenton beep) | AUS/AN |
| 9 | TOT (Übertragungstimer) | 15/30/45/60…/585/600Sekunden |
| 10 | R-DCS (R-DCS Code) | AUS/D023N…D754I |
| 11 | R-CTS (Reception Continuous Tone Coded Squelch) | 67.0Hz…254.1Hz |
| 12 | T-DCS (Transmission digital coded squelch) | OFF/D023N…D754I |
| 13 | T-CTS(Transmission Continuous Tone Coded Squelch) | 67.0Hz…254.1Hz |
| 14 | VOICE(Voice prompt) | OFF/ON |
| 15 | ANI(Automatische number identification of the radio,only can be set by PC software.) | |
| 16 | DTMFST (The DTMF tone of transmitting code.) | OFF/D-ST/ANI-ST/DT+ANI |
| 17 | S-CODE(Signal code, only could be set by PC software.) | 1…15 groups |
| 18 | SC-REV(Scan resume method) | TO/CO/SE |
| 19 | PTT-ID (Drücken oder loslassen = Code senden) | AUS/BOT/EOT/BEIDES |
| 20 | PTT-LT (Verzögern der Code-Sendung) | 0…30ms |
| 21 | MDF-A (im Kanalmodus, A zeigt den Kanal an. Achtung: Kanalname nur per PC einsetzbar) | FREQ/CH/NAME |
| 22 | MDF-B (im Kanalmodus, B zeigt den Kanal an, Achtung: Kanalname nur per PC einsetzbar) | FREQ/CH/NAME |
| 23 | BCL (Kanal besetzt Sperre) | AUS/AN |
| 24 | AUTOLK (Tastensperre automatisch) | AUS/AN |
| 25 | SFT-D (Richtung der Frequenzverschiebung) | AUS/+/- |
| 26 | OFFSET (Frequenzverschiebung) | 00.000…69.990 |
| 27 | MEMCH (Kanal speichern) | 000,…127 |
| 28 | DELCH (Kanal im Speicher löschen) | 000,…127 |
| 29 | WFLED (Standby Displaybeleuchtung) | AUS/BLAU/ORANGE/LILA |
| 30 | RX-LED (Empfang Displaybeleuchtung) | AUS/BLAU/ORANGE/LILA |
| 31 | TX-LED (Senden Displaybeleuchtung) | AUS/BLAU/ORANGE/LILA |
| 32 | AL-MOD (Alarmmodus) | SITE/TONE/CODE |
| 33 | BAND (Band wählen) | VHF/UHF |
| 34 | TX-AB (Sendemodus in dual watch / Empfangen) | AUS/A/B |
| 35 | STE (Abschlusston beim Senden) | AUS/AN |
| 36 | RP_STE (Abschlusston deaktivieren beiKommunikation via Verstärker) | AUS/1,2,3…10 |
| 37 | RPT_RL (Verzögerung Abschlusston bei Verstärker) | AUS/1,2,3…10 |
| 38 | PONMSG (BoodDisplay) | FULL/MGS |
| 39 | ROGER (Ton bei Übertragungsende) | AN/AUS |
| 40 | A-B-BP (Ton am Ende des Empfangs) | AUS/A/B |
| 41 | RESET (Werkseinstellung) | VFO/ALL |



### 12.2.- SHORTCUT MENU OPERATION

1.- Press the key MENU,then press the key ^ or ˅ to select the desired menu.
2.- Press the key MENU again, come to the parameter setting.
3.- Press the key ^ or ˅ to select the desired parameter.
4.- Press the key MENU to confirm and save, press the key EXIT to cancel setting or clear the input.




**- Note: Under channel mode,the following menu settings are invalid: CTCSS, DCS, W/N, PTT-ID, BCL, SCAN ADD TO, S-CODE, CHANNEL NAME. Only the H/M/L power could be changed,by pressing "#".**

### 12.3.-"SQL" (SQUELCH)

The squelch mute the speaker of the transceiver in the absence of reception. With the squelch level correctly set, you will hear sound only while actually receiving signals and significantly reduces battery current consumption. It is recommended that you set Level 5.

### 12.4.- FUNCTION "VOX" (VOICE OPERATED TRANSMISSION):

This function is not necessary to push the [PTT] on the transceiver for a transmission. Transmission is activated automatically by detecting the radio voice. When finish speaking, the transmission automatically terminated and the transceiver will automatically receive signal. Be sure to adjust the VOX Gain level to an appropriate sensitivity to allow smooth transmission.

### 12.5.- SELECT WIDEBAND OR NARROW BAND "W/N":

In areas where the RF signals are saturated, you must use the narrow band of transmission to avoid interference in adjacent channels.

### 12.6.- TDR (DUAL WATCH/DUAL RECEPTION):

This feature allows you to operate between frequency A and frequency B. Periodically, the transceiver checks whether a signal is received on another frequency that we have scheduled. If you receive a signal, the unit will remain in the frequency until the received signal disappears.

### 12.7.- TOT(TRANSMISSION TIMER):

This function can automatically control the time we transmit each time you press [PTT] on the transceiver. This feature is very useful to avoid overheating excessive power transistors of the transceiver. The transceiver will be off transmission automatically once the set time.

### 12.8.- CTCSS/DCS:

In some cases only want to establish communications in a closed user group at a particular frequency or channel, for it will use "CTCSS" or code "DCS" for reception.
The "squelch" opens only when receiving a frequency with "CTCSS" or codes "DCS" same as the programmed in your transceiver. If codes of the received signal differs from those programmed in your transceiver, the "squelch" will not open and the received signal can be heard.



### 12.9.- ANI

- ANI (Automatic Number Identification) is also known as PTT ID because an ID is transmitted when the PTT button of the radio is pressed and/or released. This ID tells the dispatcher which field radio was keyed. Only could be set by PC software.

### 12.10.- DTMFST (DTMF TONE OF TRANSMITTING CODE ):

First you should set the PTT-ID as BOT/EOT/BOTH
- "OFF": Under normal working mode, you can't hear the DTMF tone, while you press the key to transmit the code or code automatically transmitted.
- "DT-ST": Under transmitting mode, you can hear the DTMF tone, while you press the key to transmit the code.
- "ANI-ST": under transmitting mode, you can hear the DTMF tone, while the code automatically transmitted.
- "DT-ANI": under transmitting mode, you can hear the DTMF tone, while you press the key to transmit the code or the code automatically transmitted.

### 12.11.- SC-REV(SCAN RESUME METHOD):

This transceiver allows you to scan memory channels, all the bands or part of the bands. When the transceiver detects a communication, the scan will stop automatically.

**Notes:**
- "TO" (Time Operation):
Scanning will stop when it detects an active signal. The scanning will stop on each channel or active frequency for a predetermined time, after that time the scan will resume automatically.
- "CO" (Carrier Operation):
The scanning will stop and remain in the frequency or channel, until the active signal disappears.
- "SE"(Search Operation):
The scanning will stop and remain in the frequency or channel after it detects an active signal.

### 12.12.- PTT-ID(PTT OR RELEASE PTT TO TRANSMIT THE SIGNAL CODE):

-This feature allows you to know who call you.
-"OFF"—Don't transmit the code while push the PTT button.
-"BOT"-Transmit the code while push the PTT button.
(the code only could be set by PC software.)
-"EOT"-Transmit the code while release the PTT button.
-"BOTH"-Transmit the code while push or release the PTT button.



### 12.13.- BCL(BUSY CHANNEL LOCKOUT):

The BCLO feature prevents the radio's transmitter from being activated if a signal strong enough to break through the "noise" squelch is present. On a frequency where stations using different CTCSS or DCS codes may be active, BCLO prevents you from disrupting their communications accidentally (because your radio may be muted by its own tone decoder).

### 12.14.- SFT-D(DIRECTION OF FREQUENCY SHIFT):

The "OFFSET" is the difference or offset between the reception frequency and the frequency of transmission for access to amateur radio repeaters. Set the "OFFSET" according to the "OFFSET" amateur radio repeater through which want to communicate.

### 12.15.- OFFSET(FREQUENCY SHIFT):

When communicating via a repeater, the direction of displacement of frequency should be timed to the displacement of the transmission frequency is higher or lower than the receiving frequency.

**example:**

If we want to make a communication through amateur radio repeater whose frequency input is 145,000 MHz and 145,600 MHz is output, we select the "OFFSET" of the previous section in 0600 and the direction of travel "SHIFT" programmed to [-], so the transceiver will always 145,600 MHz in frequency and when you press [PTT] to transmit transceiver, the frequency will automatically move to 145,000 MHz.

**Note: Under VFO mode, you can do like this. If you need the TX and RX frequency different under Channel mode, you can directly store different RX and TX frequency into one channel through MENU 27.**

### 12.16.- STE (TAIL TONE ELIMATION):

This function is used to activate or deactivate the transmission end of the transceiver. this final tone transmission only be used in communications between transceivers and not in communications through a repeater, which must be deactivated.

### 12.17.- THE INSTRUCTIONS TO SAVE CHANNEL:

A complete memory channel includes RX frequency, TX frequency, CTCSS, DCS, RF Power, Bandwidth, PTT-ID, BCL, ANI, Scan add to, Channel Name, etc. Except for the setting of Scan add to and Channel Name, other settings could be finished by keypad under VFO mode.

Example: We want programming all the data into CH106, please do as following:

1. We have to check whether there are any data in CH106 or not. Come to MENU 28, if there is a 'CH' before '106', that means there are data. So please delete it and you will find there is not a 'CH' before '106', or else you can't have new data in this channel.



| RX Frequency | 440.625MHz |
|---|---|
| TX Frequency | 430.625MHz |
| RX CTCSS | 100.0Hz |
| TX DCS | 250.3Hz |
| RF Power | High |
| Bandwidth | Wide |
| PTT - ID | OFF |

2. Press and hold 【MENU】 key, then power on, come to VFO mode. Press 【EXIT/AB】 key to select frequency A (UP).
3. Enter 440.625MHz.
4. Now through the MENU, you can set other parameters. CTCSS,DCS, RF Power, Bandwidth, etc.
5. After you finish all the other settings, press 【MENU】 key, then come to MENU 27, press 【MENU】 key two times, you will know all the data have been stored into CH106, however now only RX frequency was stored. At the same time, you press 【MENU】 key another two times, you will store the TX frequency, of course the TX and RX frequency are same.

**Note: If you want the TX frequency 430.625 stored into CH106, you should do the same steps after you store the RX frequency into CH106.**

### 12.18.- CTCSS/DCS SCANNING

Before setting the CTCSS/DCS scanning, you should have a RX frequency and cancel the Dual Standby function, ensure the radio is working under VFO mode.
Come to MENU 11, press 【MENU】 one time, then press [*/SCAN] key, at the same time, you should press the PTT of another radio, then you will see the CTCSS scanning automatically. When the scanning stops, that means you find the same CTCSS as that of another radio, now press 【MENU】 to store the CTCSS.

### 12.19.- REPEATER TAIL TONE

We all know that repeaters receive on one frequency and simultaneously retransmit that same information on a different frequency. We hear the courtesy tone almost every time we use the repeater. It's that innocuous beep that lets us know that the repeater is alive and, most importantly, that it has heard us. The MENU 35, 36,37 are very helpful settings while your radio work through repeater. MENU 35 and MENU 36 better be set OFF. The parameter of MENU 37 is from 1-10, better set 5.

### 13.- CTCSS TABLE:

| N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |



| N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) | N° | Tone(Hz) |
|---|---|---|---|---|---|---|---|---|---|
| 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 |

### 14.- DCS TABLE:

| N° | Code | N°