General Feature

        14 Channel 38 CTCSS
        16 Step Digital Up/Down Volume Control with Level Display with Beep
        Channel Select Up/Down Button with Beep
        4 Digit LCD Display for Channel
        Audible Low Battery Warning beep with LCD blinking
        Battery level
        Key Lock
        TX LED (RED) indicator
        AAA x 4 Battery operation
        Over 2 Miles
        500mW output power
        Over 30hours operation
        Channel Scan operation
Tone Scan operation
Light operation
Vox

Key Assignment

1.   PTT
2.   Monitor
3.   Menu
4.   Single Audible Beep Call
5.   Power On/Off
6.   Up for Volume & Channel change
7.   Down for Volume & Channel change
8.   Light / Key Lock
9.   Scan

Feature Description

Power On

The radio begins operation with beep tone by pressing and holding button for 1000msec and LED back light is illuminated for 6 second simultaneously and the LCD displays all ICONs to check the screen for 100msec

Power OFF

Press and hold the Power Key for 2000msec. Then the units is off with long audible Beep(800Hz)

PTT

PTT Button company following functions.
- Get user to talk by the button.
   Return to basic mode from Programmable CH/Tone change mode

External PTT

The set could transmit by External PTT key

PTT Transmission

Press the PTT key for transmission, speak slowly and clearly in a normal voice about 2 ~ 3 inchs away from microphone the radio transmits the signal and TX LED (RED) is on at the moment. If release the PTT key, it stops transmitting and returns to stand-by condition in order to receive signal

Call Function

Press and release the Call key to transmit an audible Call Tone. The unit rings for 1200msec. The unit automatically returns to receive/stand-by mode when the Call transmission is over.

Receive

The unit begins message reception with speaker open when correct signal is received.

Channel Select

Channel digits are firstly blinking when menu button is pressed once. Then Press up or down key to a desired key to a desired channel, while in channel selection mode back light is on and channel digits keep blinking
The release of channel selecting mode is operated by one of following key function.
1. Menu ,2. PTT, 3. Call,4. Time out (after 4sec) ,5. Lamp/key Lock. LCD back light is on in channel select mode, then it return to stand-by condition.
   The selected channel is retained and recalled when the unit is turned off and on even battery is replaced. Pressing Up/Down key for 200msec, it checks existence of carrier as repeat mode

Channel list

Channel	Frequency	Channel	Frequency
1	462.5625MHz	8	467.5625MHz
2	462.5875MHz	9	467.5775MHz
3	462.6125MHz	10	467.6125MHz
4	462.6375MHz	11	467.6375MHz
5	462.6625MHz	12	467.6625MHz
6	462.6875MHz	13	467.6875MHz
7	462.7125MHz	14	467.7125MHz

Tone select

Press the Menu button two times. The tone digits are blinking and then press up and down key to a wanted tone. The release of tone selecting mode is to press one of following.
1. Menu, 2. PTT, 3. Call, 4. Time out (after 4sec), 5.Lamp/Key Lock. It returns to stand-by condition.
When the radio is power off and on again , the selected tone is recalled. If press and hold Up/Down key for 200msec, tone changes upward or downward repeatedly.

Volume control

The volume of radio is controlled by Up/Down button on normal mode
The Up button increases the volume from level 1 to level 16, and Down button decreases from level 16 to level 1. Other functions of the volume button is following.
- Pressing the Up/Down button for 200msec more, it operates as Repeat mode.
- The volume level is recalled even after replacing battery of power off.

VOX function

The function is replacing for PTT key to transmit by the voice signal through Mic
Press the menu button three times. The VOX icon is blinking on LCD.and then OFF digits appears.
Press the Up/Down button to control the VOX level from off to 3. VOX OFF means VOX release
Press the Menu key to set the VOX , and then VOX icon appears on LCD.
If press and hold Up/Down button for 1sec more, it operates as Repeat mode
The VOX mode is recalled even after replacing battery of power off.

The release of VOX is to press the Menu Key for above 2 sec

Monitor/Light Key function

The Monitor Key operates as followings
- turns the monitor On/Off
- continuous monitor mode on

Normal Monitor Mode

Pressing Monitor key, the channel status is checked and audio is always open whether existence of carrier or not. To release the Key, audio is muted and it turns to stand-by mode.

Continuous Monitor Mode.

Pressing Monitor Button for 3 sec, the set begins to be continuous monitor mode with Single Beep
Pressing Monitor Button again or call/PTT key to release continuous monitor mode.

Back light ON/Off

Pressing Light ⁄Key lock Button for 3sec, the LCD light is on 6 sec and then off automatically. It turns to off (on) in on (off) status.

Key Lock On/Off

If press Light⁄Key lock button above 3sec, Key icon on LCD is displayed and set up Lock key on Option. And if press Light⁄key lock button above 3sec, Key icon on LCD is disappeared and set up Lock Key On Option. It is stored also in replacing Battery.

Channel Scan

Channel icon is blinking as a result of pressing the Menu Button one time, then press Scan button, channel scan is set up. It is released by pressing Scan in that situation.

Channel Scan function
1. Check the receiving carrier at intervals of 200ms. with the increase of channel
2. Tone is not operated in Scanning
3. As receive the channel, bar is blinking in 500msec steps.
4. As soon as completion receiving, go back to 1 item after waiting for 4 sec
5. Pressing PTT while operating 1 item, the channel, which set up before scan option, transmit. After waiting the transmitted channel for 4sec, go back to 1 item.
6. If transmit within 4sec after completion receiving, the received channel is transmitted and Channel Scan option is released.

Tone Scan
Tone icon is blinking by pressing the Menu Button two times, then press Scan Button,Tone Scan is
set up. It is released by pressing Tone status in that situation.

Tone Scan function
1. Check the receiving carrier at intervals of 200ms with the increase of Tone.
2. As receive the channel, Bar is blinking in 500msec intervals.
3. As soon as completion receiving, go back to 1 item after waiting for 4sec.
4. Pressing PTT while operating 1 item, The tone, which set up scan option, transmit before. After waiting the transmitted Tone for 4sec, go back to 1 item.
5. If transmit within 4 sec after completion receiving, the received tone is transmitted and Tone Scan Option is released.

Low battery Detect
The radio is displaying the level after reading the battery status regularly in operating.
When indicate Low battery ,limit the part of operation with warning beep simultaneously and turn to emergency mode like following contents prohibit the transmission in case of level1. Battery icon is blinking in 0.5sec steps, but even then it is possible to receive
LEVEL 0 : below 4.0V   be to transmit after Blinking & Beep
LEVEL 2 : 6~4.8V

Power Saving

So as to maximize battery life, Power Saving Mode is automatically activated in 3sec after every transmission and reception like following operation

The beginning of power saving is following.
The 3sec process of Power On
The 3sec process of stopping transmission.
The 3sec process of stopping receiving

The release of Power Saving is following
Transmission
Receiving (Carrier Detect)
Monitor Operation

Error Indication

If it should occur error situation which impossible of TX/RX, the radio make beep tone of 1 sec intervals.

NOTICE TO USERS

The users manual or instruction manual shall include the following statement:

Warning: Adjustment to this unit or replacement of any transmitter component(crystal,

semiconductor, etc.) to this unit that could result in a violation of the rules.

NOTE; This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful Interference in a residential installation. This equipment generates, users and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.
Increase the separation between the equipment and receiver.
Connect the equipment into an outlet on a circuit different from that to which the receiver is needed.
Consult the dealer or an experienced radio/TV technician for help.

If shielded cables or special accessories are required for compliance, a statement must be included which instructs the user to employ them, eg.

Shielded cables must be used with this unit to ensure compliance with the Class B FCC limits.

TELSON