

BridgeCom Systems D-500 DMR Radio
by Tekk

BridgeCom Systems, Inc
D-500 DMR Radio
by Tekk



BridgeCom Systems D-500 DMR Radio

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Safety and Overview

Product safety and RF Exposure for handheld two way radio.

| | |
|---|--|
|  | <p>Before using this two way radio, please read the manual which contains important operating instructions for safe usage, RF Energy Awareness, control information and operational instructions for compliance with RF Energy Exposure limits in applicable national and international standards Also read the operational instructions for safe use.</p> |
|---|--|

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TEKK D-500 Specifications

| General Specifications | |
|--|--|
| Frequency Range | 400-470MHz/136-174MHz |
| Working Frequency | 400-520 /136-174MHz |
| Channel Capacity | 1000 |
| Working Voltage | 7.4 V |
| Working Temperature | -30°C~+60°C |
| Storing Temperature | -40°C~+85°C |
| Battery Lifespan Standard Battery Capacity 2000mAh Li-ion | Analog: 10h ; Digital: 14h |
| Receiver | |
| Frequency Range | 400~470MHz/136-174MHz |
| Channel Spacing | 12.5kHz / 25kHz (Amateur Only) |
| Frequency Stability | +/-1.0ppm |
| Analog Sensitivity | 0.35u V/-116dBm(20dB SINAD) |
| | 0.22u V/-120dBm(Typical) |
| Digital Sensitivity | 0.3u V/-117.4dBm(BER 5%) |
| | 0.7u V/-110dBm(BER 1%) |
| Inter-modulation | T I A 603 C : 65dB E T S I : 65dB |
| Channel Selectivity | T I A 603 C : 6 0 d B @ 1 2 . 5 K H z E T S I : 6 0 d B @ 1 2 . 5 K H z |
| Co-channel Rejection | 12d B @ 1 2 . 5 K H z |
| Spurious Response Rejection | T I A 603 C : 70d B E T S I : 70d B |
| Spurious Response Radiation | ≤-57d B m@1G H z , ≥-47dBm@ |
| Block | 84dB |
| Rated Audio Power | 1 W |
| Transmitter | |
| Channel Spacing | 12.5KHz |
| Frequency Stability | +/-1.5ppm |
| TX Power | Low: 1 W High: 5 W |
| Modulation Noise | -40d B @ 1 2 . 5 K H z |
| TX Spurious Radiation | < -36d B m@1 G H z , > -30d B m@1G H z |
| Adjacent Power | -60d B @ 1 2 . 5 K H z |
| FM Modulation | 12.5 K H z : 1 1 F 0 F 3 E |
| 4 F S K Digital Modulation | 12.5 K H z (data only): 7K60FXD |
| | 12.5KHz(data+voice): 7K60FXE |
| Modulation Limit | 2.5 K H z @ 1 2 . 5 K H z |
| Audio Response | +1d B ~-3d B |

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| | |
|-----------------------|----------------|
| Digital Voice Vocoder | A M B E +2 T M |
|-----------------------|----------------|

Unpacking

Welcome to the *Tekk D-500* radio, before using we suggest you:

- Please check the packing box of this product and see if there are signs of damage.
- Please open the packing box carefully. We recommend that you identify the items listed in the following packing list. If you find that our product and its accessories are lost or damaged in shipment, please immediately contact BridgeCom.

Parts List

| Item | Quantity |
|---------------------|--------------------------------|
| Radio | 1 |
| Rubber Antenna | 1 |
| Li-ion Battery Pack | 1 |
| Desktop Charger | 1 |
| Power Adapter | 1 |
| Belt Clip | 1 |
| Hand-Strap | 1 |
| User's Manual | Online: BridgeCom Support Page |

Charging the Battery

1. Using the battery

The battery is not completely charged at the factory, please charge it before using.

To extend the battery life time, please power off the battery when you are not using the two way radio, and save the battery in a cool (temperature less than 25°C) and dry place.

2. Precautions for Charging Equipment

1. Do not expose the charger to rain or snow.
2. Do not operate the charger if it has received a sharp blow, or has been dropped or damaged in any way.
3. Do not disassemble the charger if it has received a sharp blow, or has been dropped or damaged in any way.
4. Never alter the AC cord or plug provided with the unit. If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician. An improper condition can result in a risk of electric shock.
5. To reduce the risk of damage to the cord or plug, pull the plug rather than the cord when disconnecting the charger from the AC receptacle.
6. To reduce the risk of electric shock, unplug the charger from the outlet before attempting any

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maintenance or cleaning.

7. Use of an attachment not recommended or sold by **BridgeCom or Tekk** it may result in a risk of fire, electric shock, or personal injury.
8. Make sure the cord is located so it will not be stepped on, tripped over, or subjected to damage or stress.
9. An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and/or electric shock. If an extension cord must be used, make sure that:
 - The pins on the plug of the extension cord are the same number, size, and shape as those on the plug of the charger.
 - The extension cord is properly wired and in good electrical condition.
 - The cord size is 18 AWG for lengths up to 100 feet, and 16 AWG for lengths up to 150feet.
10. Do not replace charger's power cord. If the power cord damages, you must stop using charger immediately.

3. Charging the Battery

Please use the battery charger designated by **Tekk** to charge battery. After purchase or extended storage (more than two months), the first charge will not make the battery reach its normal operating capacity. After repeating charge/discharge two or three times, the operating capacity will increase to its full normal capacity.

4. Please Charge the Radio According to Operation Steps as Follows:

1. Insert power adapter into power supply socket.
2. Insert output terminal of power adapter into DC jack behind the charging kit, now the charging orange indicator lights about 2 seconds then goes out.
3. Insert the battery or radio equipped with battery into the charging kit.
4. Confirm the battery and charging kit terminal contact reliably, when charging indicator light turns into red and charging starts.
5. After completion of charge (charging time about 5 hours), light turns to green.

5. Indicators Display As Following:

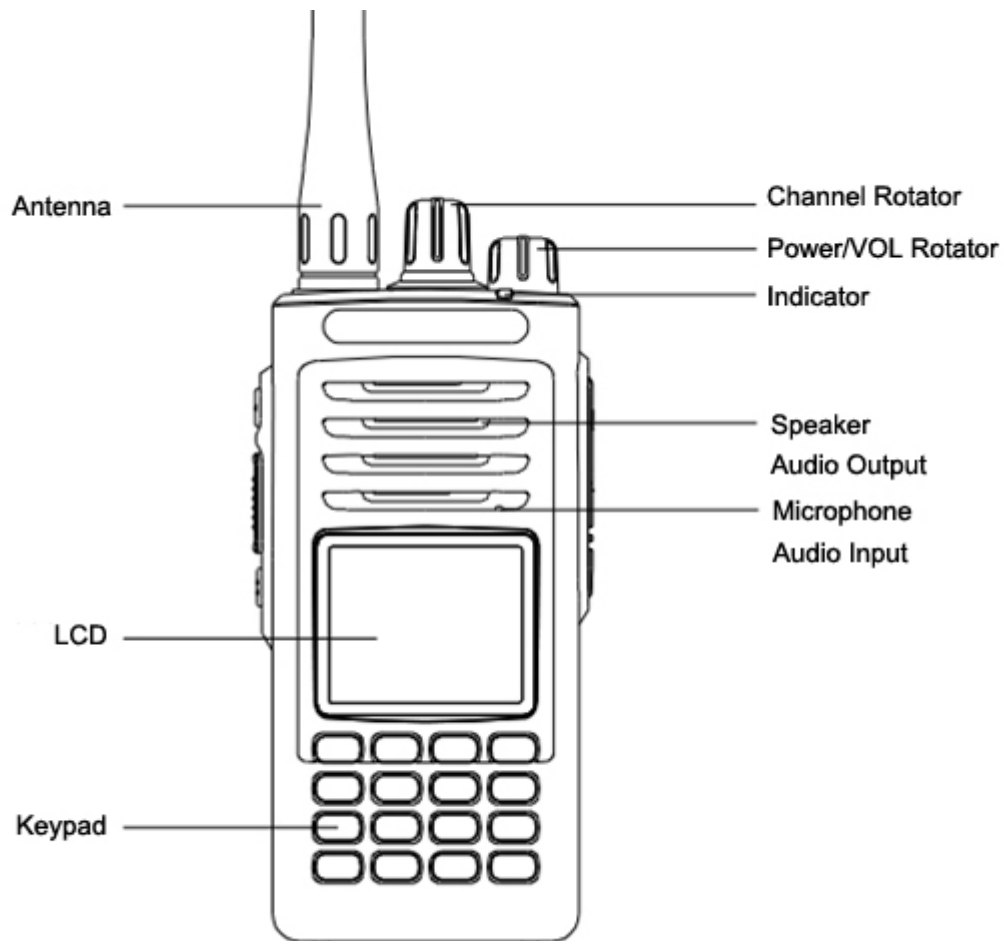
| Status | Indicator |
|---|--|
| Power Connected | Orange light is on about 2 seconds then goes out |
| No battery(temperature end judges) | All go out |
| Charge normally | Red light is on |
| The battery is fully charged | Green light is on |
| Fault (over temperature, battery short circuit or over discharge state) | Red light flashes |

Note: Before charging, please turn off radio power equipped with battery. When charging, using radio will interfere with normal charge of battery and transceiver effect.

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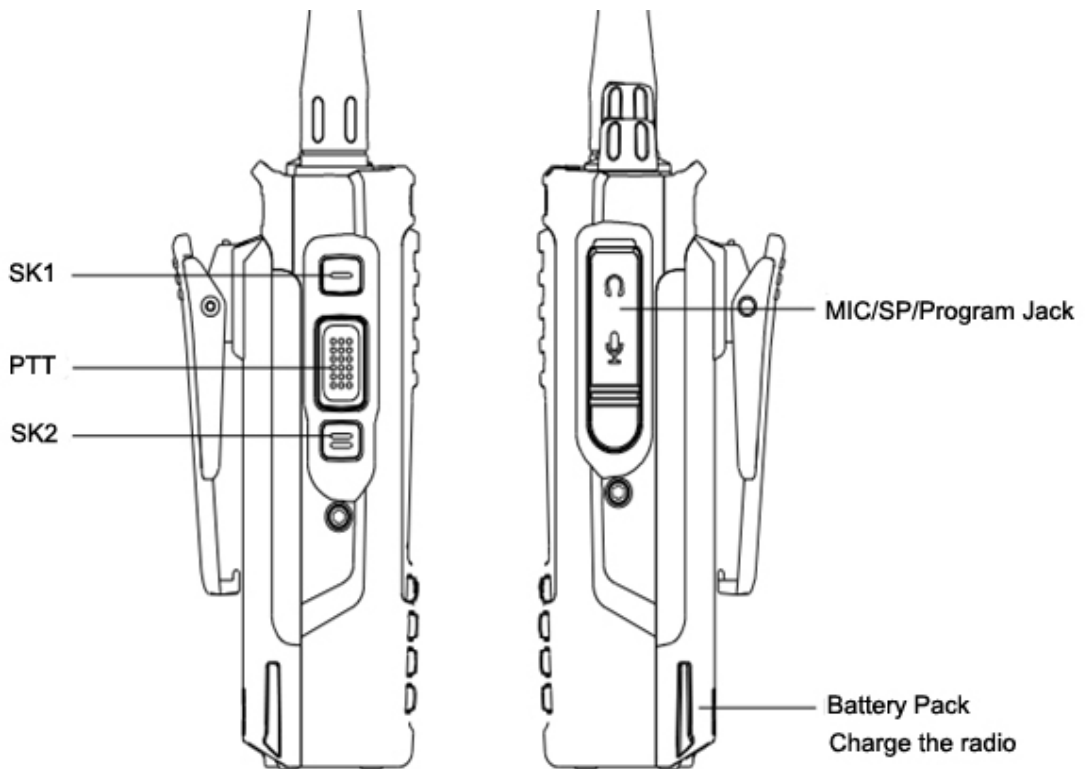
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Getting Acquainted



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Notice: Either Long-press or Short-press of Side-key 1/ Side-key 2/ Side-key 3 can be set by program software for the following functions:

| | |
|---------------------------|---------------------------|
| 1.None-function | 12.Scan on/off |
| 2.All warning tone on/off | 13.Tight/Normal SQL |
| 3.High/Low power | 14.Encryption on/off |
| 4.Monitor | 15.VOX on/off |
| 5.PTT 1 | 16.Private Call By Manual |
| 6. PTT 2 | 17. Lone Worker |
| 7. PTT 3 | |
| 8. PTT 4 | |
| 9. PTT 5 | |
| 10. PTT 6 | |
| 11.Repeater/Talk Around | |

Basic Operation

Power On

Turn on the radio volume knob clockwise, there will be a “KADA” sound, message sound and the screen will show up “Welcome”, while the LED indicator lights up and becomes Green color if the battery is full charged.

Notice: if all LED indicators are forbidden, the screen will not light up when switch on, but with a message sound.

Notice: if the volume function is forbidden, there will not be any sound when power on. Here, need to power off the radio and turn the knob counter-clockwise until a “KADA” sound.

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Volume Control

Turn the volume knob Clockwise to raise the volume or counter-clockwise to lower; The radio shows a volume line on the screen.

Launch And Receive Call

1) Zone Selection

Zones is a channel group. Each radio can set at most 250 zones and each zone with 16 channels (Maximum).

Operation:

1. Press [Top Left Button-OK] to enter the menu.
2. Press [Δ/∇] to choose, and [OK] to confirm.
3. Screen shows the chosen zone and named.
4. Press [Δ/∇] to chose, and [OK] to confirm.
5. Screen shows the chosen zone.

2) Selection Of Channels, User ID Or Group ID

Select desired zone, rotate channel knob to select the desired channel, user name or ID, group name or ID

3) Receive And Reply Group Call

To receive group calling, radio should be allocated under the group.

When receiving:

1. LED indicator lights green.
2. Show RSSI mark on the top screen: First line shows the group name, incoming call ID is in the middle, group call ICON will be the last (only displayed in digital mode).
3. Hold the radio and place it within 0.5 and 2 inch from your lip. Active the alert tone when channel free. You will hear the tone when release the PTT and waiting for your answer.
4. Press [PTT] to answer the call, LED indicator light changes to red.
5. Release [PTT] to receive the next call.
6. If there are not any transmitters within the time limited, the call will fail.

4) Receive And Reply The Single Call

Single call is one to one calling. Only two types: 1) Radio self detect before calling; 2) Ready to call

When receiving:

1. LED indicator lights green.
2. Show RSSI mark on the top screen. First line shows the single call, user name or ID in the middle, single call mark at the end (Only analog mode).
3. Hold the radio and place it within 0.5 and 2 inch from your lip. Active the alert tone when channel free. You will hear the tone when you release the PTT and waiting for your answer.
4. Press [PTT] to answer the call. LED indicator changes to red.
5. Release [PTT] to receive.

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5)Receive All Call

All call means communicate with all members on the same channel and to public

When receiving:

1. LED indicator lights green.
2. Show RSSI mark on the top screen. First line show the all call, user name or ID in the middle, all call mark at the end (Only analog mode).
3. Back to previous interface after finishing all call. If under the “free channel message sound” function, when release the PTT key, you will hear alert tone which means channel is free but can not answer.

Notice: when receive the all call, if you turn over to another channel, the radio will stop receiving all call. During the all call, You can use any re-programmed key until the call finished.

6)Launch A Radio Call

You can choose a channel, user ID or group call with following methods

- Channel Knob
- Pre-programmed key
- Contacts
- Manual dialing (only for single call)

7) Using Channel Knob To Make A Call

Group Call

The radio should be under the group then can have the group call.

1. Turn over channel knob, use group name or ID to choose channel.
2. Hold the radio and place it between your lip with 2.5~3cm.
3. Press [PTT] key to call, LED indicator changes to red. Screen shows group name or ID with group mark.
4. Release [PTT] key to receive, when target radio is replying, LED indicator becomes green. Screen shows group mark or name or ID.
5. If on the “free channel message sound” function, release [PTT] key, you can hear a message sound, means it channel is free for you to answer.

If there are not any transmitter within the time limited, the call failed.

 When the radio goes back to the home screen, you can make a group call with contacts.

Private Call

1. Turn over channel knob, use the name or user ID to choose channel.
2. Hold the radio and place it between your lip with 2.5~3cm.
3. On the top of the middle screen will show RSSI mark, follows shows single call, User name or ID in the middle, single call mark at the end (Only for analogue mode).
4. Let go [PTT] key to receive, when target radio is replying, LED indicator becomes green.
5. If on the “free channel message sound” function, let go [PTT] key, you can hear a message sound, means it channel is free for you to answer.

If there are not any transmitter within the time limited, the call failed.

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6. you will receive a message sound and screen shows call finished.

You can make a single call with contacts or use keyboard to search the target Radio to make a call.

All Call

Radio must be programmed with this function, so that you can send information to every user who are under the channel.

1. Turn over channel knob, use the name or user ID to choose channel.
2. Hold the radio and place it between your lip with 2.5~3cm.
3. Press [PTT] key to release a call, LED indicator becomes to red color. Screen shows Group name or ID with all call mark.

User under the channel can not reply the call.

8) Use A Key To Make A Group Call Or Single Call

Single key call function is convenient for you to set a name or ID for group call or single call with long-press or short-press the program key

Set a name or ID for a key

1. Press pre-programmed call key.
2. Hold the radio and place it between your lip with 2.5~3cm
3. Press [PTT] key to call, LED indicator becomes to red color. Screen shows name or ID with a mark.
4. Let go [PTT] key to receive, when target radio is replying, LED indicator changes to green.
5. If on the "free channel message sound" function, let go [PTT] key, you can hear a message sound, means it channel is free for you to answer.

If there are not any transmitter within the time limited, the call failed.

6. radio back to before call screen.

Emergency Function

Emergency alarm only use to transfer emergency situations, you can release a emergency call at anytime and anywhere. Even the radio is busy in transferring or receiving

Radio support 3 types of emergency call:

- Emergency Call
- Call the emergency alarm
- A voice follow emergency alert

Moreover, alarm has the following types:

- Prohibit: radio can not send emergency call but can receive.
- Local + Remote: An emergency call with voice or notice.
- Remote: an emergency call without any voice or notice. Before press [PTT] key to call, local radios will not receive any voice or notice.
- Remote + Voice: radio sending an emergency call while accept to receive calls. Before press the [PTT] key to transmitter or reply, there are not any notice

Only part of above emergency situations can be set as pre-programmed key.

1) Receive Emergency Call

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1. While receiving emergency calling, number of emergency calls and alarms received, exchange the sender name or ID.
2. With a message sound and LED indicator becomes red
3. If the radio have activated, then will confirm the emergency alarm automatically. When the radio receive the emergency alarm, screen shows the emergency alarm warning mark, until send with a confirm message then can logout. While, you will not receive any calls and notices from other radios during this situation.
Notice: short-press [back] key, then with the pre-programmed off key, detect all received emergency call and logout the emergency mode.

2) Reply the Emergency Call

When received the emergency call:

1. Press any key to stop the emergency call alarm
2. Hold the radio and place it between your lip with 2.5~3cm. If on the "free channel message sound" function, let go [PTT] key, you can hear a message sound, means it channel is free for you to answer.
If there are not any transmitter within the limited time, the call failed.
3. Press [PTT] key to have a call. LED indicator becomes red. radio under the emergency call mode.
4. Let go [PTT] key to receive, when reply the emergency call, LED indicator becomes green. The screen shows group mark or ID and call ID
5. After the call, short-press [back] key, then press pre-programmed emergency key to off, detect all the emergency call and logout.
6. Radio back to home screen.

3) Emergency Alarm

This function called speech signal and allows to send emergency alarm and will trigger on another radio.

1. Press pre-programmed power on key.
2. Screen shows sending emergency call, exchange ID with other radio. LED indicator changes to red and emergency call mark will down on the home screen.
3. When receive the emergency call, the radio issues the emergency call and LED indicator changes to green, screen shows emergency call send out successfully.

Or, if the radio does not receive any confirm with the emergency call and out of the sending times, the radio will with a message sound and screen shows the emergency call failed.

4. Radio logout the emergency mode and back to home screen. If the radio under silence mode, there will not any sounds or reminder during the emergency mode.

4) Emergency Alarm Call

This function allows you to send emergency call to other radio. After confirmed by the radio, the two radios can contact by a pre-programmed channel.

1. Press pre-programmed key to switch on
2. Screen shows sending emergency alarm call, exchange ID with other radio. LED indicator becomes red, emergency call mark will down on screen.
3. when the radio confirm with the sending emergency, screen will show emergency call successful and LED indicator change to green.
4. Hold the radio and place it between your lip with 2.5~3cm.

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5. Press [PTT] key to call, LED indicator light changes to red, screen shows the group mark.
6. Let go [PTT] key to receive.
7. If on the “free channel message sound” function, let go [PTT] key, you can hear a message sound, means it channel is free for you to answer.
If there are not any transmitter within the limited time, the call failed.
Or press pre-programmed emergency call to off and logout the mode.
8. Radio back to home screen. If the radio is under the silence mode, there are not any sounds or notices during the emergency mode, not receive calls from target radio, until press the [PTT] key. If the radio under “with voice mute” mode, there are not any sounds or notices during the emergency mode, not receive calls from target radio. Until press the [PTT] key to call or receive, then the screen will show up.

5) Voice Emergency Alarm

This function allows you to send emergency call to others, after confirm with you, your radio microphone activate, allows you to call other radios with press the [PTT] key. This called “Emergency microphone.” If press [PTT] key during pre-programmed emergency microphone, radio will ignore the [PTT] and stay on emergency mode.

Notice: If press [PTT] key during the emergency microphone, hold the key before duration within limits, let go [PTT] key to transfer.

1. Press the pre-programmed emergency start key.
 2. Screen shows sending emergency call, LED indicator becomes red color and emergency call Mark will show on Screen.
 3. Screen will show emergency call successful, then speak clearly. When under activated emergency microphone, radio transfer automatically without press [PTT] key before duration within limits
 4. During transfer, LED indicator becomes red and emergency alarm mark will show on screen.
 5. After the time of emergency microphone, radio stop to transmit. Press [PTT] key to transmit again
- If the radio under the “Silence” mode, there are not any sounds or notices during the emergency mode, not receive calls from target radio, until pass the pre-programmed emergency microphone limited time and press with [PTT] key. If the radio under “with voice mute” mode, there are not any sounds or notices during the emergency mode, not receive calls from target radio. Until press the [PTT] key to call or receive, then the screen will show up.

Notice: If the emergency call failed, then the radio will back to home screen.

6) Restart Emergency Mode

Two situations will be happen:

- It will logout the emergency mode, if the radio change the channel under the emergency mode. While, reset the emergency mode under the new channel, the radio restart the emergency call.
- If press the Pre-programmed emergency key during the emergency call, the radio will be stop the emergency call but restart later.

7) Logout Emergency Mode

The radio will logout emergency mode when any of the following situations happen:

- Confirm with the received emergency call, or
- Meet with the max emergency call, or
- press the pre-programmed emergency off key, or

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- Press [PTT] key.

Notice: Emergency mode will be logout when power off the radio. Radio will not under emergency mode when the radio is power on next time.

Menu Operations

1)Characters Input

Users can use the 3 x4 alphanumeric keypad to access the radio's function. When you're Using the keypad to input a user alias or text messages, radio input contains two modes: 1. English letters mode, 2. digital input mode. When using the keypad input ID, you can only select the digital mode.

Letter Input Mode

Users have to press a button several times for getting some characters. The following table shows how many times needed to press a button to get the required character.

| Key | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
|-----|-------------------------------|
| 1 | 1 . , ? ! @ & ' % - : * # |
| 2 | a b c 2 A B C |
| 3 | d e f 3 D E F |
| 4 | g h i 4 G H I |
| 5 | j k l 5 J K L |
| 6 | m n o 6 M N O |
| 7 | p q r s 7 P Q R S |
| 8 | t u v 8 T U V |
| 9 | w x y z 9 W X Y Z |
| 0 | 0 Space |
| * | * |
| # | Press # to switch mode |

Text Input Mode

When in the Text input mode, press the number keys to display the corresponding number, press the *key to display * on the screen, press # to switch input mode.

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Numbers Input Mode

When in the Numbers input mode, press the number keys to display the corresponding number, press the *key to display * on the screen, press # to switch input mode.

Note: When users Enter a user alias, ID, or text messages, if editing area without any content, then the [back] button is used for returning to the higher level menu, or else if there is any content on the editor area, pressing [back] will delete one character before the cursor at one time, until the editing area has no content, then press the [back] button to return to the higher level menu.

2)Menu Operation

- 1.Press [OK] to enter Menu, then press left or right [◀or▶] to access the menu function
2. Press [OK], select a function or go into a sub menu
3. Press [back] to return the higher level menu

Note: After a period of no activity the radio will automatically exit and return to the main menu screen (hang time is set by the programming software).

3)Radio Testing

If there are any activation, this feature allows you to determine whether there is other two way radio active inside the system, and does not disturb the radio users, none-voice or visual notice appears on the target two way radio

Sending A Radio Detection

Using menu function:

- 1, Press OK to enter menu mode
- 2, Press [◀or▶] to select contacts, then press [OK] to select
- 3, Press [◀or▶] to the required user alias or ID, and then press [OK] button to choose.

Sending the Radio's Detection

Using Menu:

- 1.Press [OK] to enter Menu mode
2. Press [◀or▶] button to select Contacts, then press [OK] to select.
3. Press [◀or▶] to The required user alias or ID, then press [OK] to select
Or press [◀or▶] key to manual dialing, and then press [OK] key to select. If there are before calling ID, show ID and along with the flashing cursor, using the keyboard editing ID, press [OK] .
4. Press [◀or▶] to radio detection, and then press [OK] to select
5. When Screen displays radio detection: < user alias or ID >, it is indicating the ongoing of radio detection. The LED indicator light is red.
- 6.Waiting for confirmation
- 7If the target radio is active in the system, then it makes a prompt sound, screen will show that target two way radio has responded shortly.
Or if the target radio in the system is not active, then it makes a prompt sound, screen will show that target two way radio has no answer shortly.
- 8.Two way radio returns to user alias or ID screen. If you press [back] when waiting for confirmation, made a prompt sound, two way radio will end all retry and exit the two way radio detection mode.

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4)Monitoring

Using monitoring function to open the target two way radio's microphone (only the user alias or ID). You can use the function to monitor any sound around target two way radio.

Your must allow your two way radio to use this function by programming it.

Starting Monitor

Using the Menu:

1. Press [OK] to enter the Menu
2. Press [◀or▶] to Contacts, then press [OK] to select
3. Press [◀or▶] to The required user alias or ID, then press [OK] to select
Or press [◀or▶] key to manual dialing, and then press [OK] key to select

If there are any calling ID remains before, radio shows the ID and along with the flashing cursor, using the keyboard to edit the ID, press [OK] key to choose.

Or press [◀or▶] key to manual dialing, and then press [OK] key to select. Inputting the user alias or ID, and then press [OK] key to select.

4. Press [◀or▶] to select Monitor, then press [OK] to select
5. When two way radio makes a prompt sound, LED light turns green.
6. Waiting for confirmation.
7. Screen displays Monitor success,
Or screen displays Monitor failed

If success: two way radio began to receive voice signals from the radios which are being monitored voice and screen displays two way radio are monitoring, until the end of the duration of the pre-programmed, two way radio made a prompt sound, and the LED light puts out, screen display that monitoring ends.

If failed: two way radio Repeats until reach the pre-programmed attempts.

5)Contacts Setting

Contacts is "address book" for handheld two way radio. Each entry corresponds to an alias or ID used to start the call. In addition, each item, according to the different content setting, relate to three types of call: group calling, single call, all call. Your radio support digital address book.

The Contacts' entries display in the following information

- call type
- Call the alias
- Call the ID

Note: you can add, delete, edit Contacts person in the digital address book(contacts)

Group Call with Contacts

1. Press [OK] to enter Menu
2. Press [◀or▶] to contacts, then press [OK] to choose, entries arrange in alphabetical order.
- 3 . Press [◀or▶] to required calling group's alias or ID.

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4. Holding the radio and let it in a vertical position and keep mouth 1 to 2 inches (2.5 to 5.0 cm) with radio.
- 5 . Press [PTT] to start calling, the LED turns red. The screen displays the calling group's alias or ID, as well as icon of group call.
- 6 Releasing (PTT) button to receive, when any user response within the group, the LED light turns green. You will see on the screen group call icon of user's ID
- 7 if you enable the "channel Free prompt" function: when the target radio release the (PTT) button, you will hear a short beep, said this channel is idle, waiting for your answer. Press the call key (PTT) to answer. If in a pre-programmed group called hang time without voice activity, the call is ended.

Private Call with Contacts

1. Press [OK] to enter Menu
- 2 Press [<or>] to Contact, then press [OK] to choose, entries arrange in alphabetical order.
3. Press [<or>] to required calling group's alias or ID.
Or press [<or>] key to manual dialing, and then press [OK] key to choose. If there is a user alias or ID called before, radio shows ID and along with the flashing cursor, using the keyboard editing this ID.
Or press [<or>] key to manual dialing, and then press [OK] key to choose, using the keyboard to enter a new ID
- 4 Holding the radio and let it in a vertical position and keep mouth 1 to 2 inches (2.5 to 5.0 cm) with radio.
5. Press [PTT] to start calling, the LED turns red. The screen displays the calling group's alias or ID, as well as icon of group call.
6. Releasing (PTT) button to receive, when any user response within the group, the LED light turns green. You will see on the screen group call icon of user's ID
7. if you enable the "channel Free prompt " function: when the target radio release the (PTT) button, you will hear a short beep, said this channel is idle, waiting for your answer. Press the call key (PTT) to answer. If in a pre-programmed group called hang time without voice activity, the call is ended.
8. You will hear a sound short, screen shows the call ended

Note:

If you release (PTT) button when you are setting up the call, and when it will exit and return to the previous screen without any remind. Radio can be pre-programmed executive two way radio are testing before establishing single call. If the target radio did not reply, you will hear a short beep, and screen shows the other radios did not reply. Two way radio return to menu before starting the radios around test..

6) Calling Log

Your radio can record all the recent dialed, received, and not answered call. Use the calling record function view and manage the recent calls.

To view the Latest Call Number

Menu items can show the not answer call, received calls and dialed call.

1. Press [OK] key to enter the menu mode.

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1. Press the [◀or▶] key to the call history, and then press [OK] key to choose.
2. Press [◀or▶] to the required list, and then press [OK] key too choose.
3. The screen on the top of the list shows the recent entries.
4. Press [◀or▶] check list, press (PTT) at the current selected aliases or ID to start a call.

Missed Call Screen

Whenever you miss a call, the radio will display a missed call, select view or view later.

Note:

If you press (PTT), when you're viewing missing call number, radios will exit the missing call screen and establishing a single call again.

1. The screen shows the missing call, and the missing call's number and view.
2. Press [OK] view missing call's ID, missing call's record list displayed on the screen. Press [OK] to store or delete this entry; Or press [◀or▶] key to view later, and then press [OK] key choice, return to the main screen.

Storing Missed Call List's Aliases or ID

1. Press [OK] key to enter the menu mode.
2. Press the [◀or▶] key to call history, and then press [OK] key to choose.
3. Press the [◀or▶] key to missed call, and then press [OK] key to choose.
4. Press [◀or▶] key to missed call's alias or ID, and then press [OK] key to choose
5. Press the [◀or▶] key to store, and then press [OK] key to choose
6. Radio Shows flashing cursor, if needed, enter the ID alias, and then press [OK] key.
7. The screen contacts have been saved.

You can also enter ID without alias.

Deleting Calls from the Calling Log

1. Press [OK] key to enter the menu mode.
2. Press the [◀or▶] key to call history, and then press [OK] key to choose.
3. Press the [◀or▶] key to missed call, and then press [OK] key to choose.
4. Press [◀or▶] key to missed call's alias or ID, and then press [OK] key to choose
- 5 Press [◀or▶] key to delete the entries, then press [OK] key to select if you need to delete this entry.
- 6 Select "yes", then press [OK] key to delete the entries, screen appears entry deleted; Or select "no", press [OK] key to return to previous screen.

When you select a call list but there is no entry, the screen will display the list is empty, if the keyboard is open at this time, will be a low tone hint sound.

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7)Call Reminder

Call instruction makes you can suggest a specific radio users in the possible time to call you back.

This feature applies only to the user alias or ID, and can be used through the menu by address book or manual dialing.

Receiving and Confirming the Call Reminder

When you receive a call reminder, screen shows call prompt, alternating transmit radio's alias or ID

1. YOU will hear sound of repeat, LED light turn and shine red.
2. Then press and release [PTT] to confirm the prompt, or press [OK] to select "neglect" to exit the call reminder.

Starting a Call Reminder by Communication List

1. Press [OK] key to enter the menu mode.
2. Press the [◀or▶] key to call history, and then press [OK] key to choose.
3. Press [◀or▶] key to missed call's alias or ID, and then press [OK] key to choose
Or press [◀or▶] key to manual dialing, and then press [OK] key to choose, a flashing cursor appears, then enter the user ID you want to call, and then press [OK] key.
- 5 When the radio send call reminder, LED light turns red..
- 6 If received calls prompt confirmation, issued a prompt, and display the call indicate success.
Or prompt confirmation if not received a call, send a hint sound, and the screen call failure.

Message Function

Your radio can receive data, such as from another radio sent text messages, message of a maximum length of 144 characters, whole message is not longer than 50 lines.

Editing and Sending Message

Using the Menu

1. Press [OK] key to enter the menu mode.
2. Press the [◀or▶] key to call history, and then press [OK] key to choose.
3. Press [◀or▶] key to missed call's alias or ID, and then press [OK] key to choose
4. A flashing cursor appears, using the keyboard to input messages, press [◀] key to move to the left one, press [▶] button to the right one, when editing area have content, press the [back] key to delete any useless character, otherwise when editing area without content to return to the higher level menu.
5. After writing the text, press [OK] to choose to send or save.
6. When on the process of editing, user can choose by pressing the [OK] key to empty option to empty all the content of the editor, quickly return to the higher level menu.
7. Choose the [◀or▶] key to the alias name or ID, and then press [OK] key to select.

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Or press [◀or▶] or spending] key to manual dialing, and then press [OK] button, enter your user ID and press [OK] key.

8. The screen shows message: < user/group name or ID > call, sending message are being confirmed

9. If the messages sent successfully, issued a prompt sound, and the screen displays text message has been sent.

Or if the message was not sent, issued a high tone hint sound, and screen displays text message sent failure. If message sent failure, radio will return to chance to return to the re-transmission selection screen

Sending Prefabricated Text

Two way radio support maximum 50 programming of prefabricated text messages by the agent:

When a predefined text message, you can edit every message before you can send each message

Using the Menu

1. Press [OK] key to enter the menu mode.

2. Press the [◀or▶] key to call history, and then press [OK] key to choose.

3. Press [◀or▶] key to missed call's alias or ID, and then press [OK] key to choose

4. Press [◀or▶] to the prefabricated text messages, and then press [OK] key to choose.

5. A flashing cursor appears, using the keyboard to input messages, press [◀] key to move to the left one, press [▶] button to the right one, when editing area have content, press the [back] key to delete any useless character, otherwise when editing area without content to return to the higher level menu.

6. After writing the text message, press [OK] to choose to send or save.

7. If the messages sent successfully, issued a prompt sound, and the screen displays text message has been sent.

Or if the message was not sent, issued a high tone hint sound, and screen displays text message sent failure. If message sent failure, radio will return to chance to return to the re-transmission selection screen

Using a Single Bond to Send Call Button Prefabricated Messages

1, Press pre-programmed, single bond calls to a predefined alias or ID sends a prefabricated text messages.

2. The screen displays a text message: < user/group name or ID > call, to confirm text messages were being sent

3. If the messages sent successfully, issued a prompt sound, and the screen display text message has been sent.

Or if you cannot send text messages, screen display text message sent failure. If message sent failure, intercom chance to return to the re-transmission selection screen.

Managing Sending Failed Message

In re-transmission selection screen, you can choose the following options:

Resend,

Forward,

Edit

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Resending Message

1. Press [OK] to resend same message to same user/group name or ID.
2. If the messages sent successfully, issued a prompt sound, and display messages sent or if you cannot send text messages, screen display text message sent failure.

Forwarding Message

Choose to forward message to another User/group name or ID.

- 1 Press the [◀or▶] key to forward, and then press [OK] key choose.
2. Press [◀or▶] to the alias name or ID, and then press [OK] key to choose.
Or press [◀or▶] key to manual dialing, and then press [OK] button to choose, enter your user ID and press [OK] key.
3. The screen display a text message: < user/group name or ID > call, to confirm text messages were being sent
4. If the messages sent successfully, issued a prompt sound, and the screen display text message has been sent.
Or if the message was not sent, issued a high tone hint sound, and screen displays text message sent failure.

Editing Messages

Choosing edit to edit message before you edit.

Note: if you have a subject line (receive text messages from from email program), you can't edit the subject line.

- 1, Press [◀or▶] key to edit, then press [OK] key to choose
- 2 A flashing cursor appears, using the keyboard to input messages, press [◀] key to move to the left one, press [▶] button to the right one, when editing area have content, press the [back] key to delete any useless character, otherwise when editing area without content to return to the higher level menu.
- 3, After writing the text, press [OK] choose to send or save
- 4 When in the process of editing, can choose by pressing the [OK] key to empty option to empty all the content of the editor, quickly return to the higher level menu
- 5, Choose after [◀or▶] button to send the required alias or ID, and then press [OK] key to choose
Or press [◀or▶] key to manual dialing, and then press [OK] button, enter your user ID and press [OK] key
- 6 Screen displays message: < user/group name or ID > call, to confirm text messages were being sent
7. If the messages sent successfully, issued a prompt sound, and the screen display text message has been sent.
Or if the message was not sent, issued a high tone hint sound, and screen displays text message sent failure.

Managing the Sent Messages

Once a message is sent to another radio, it will be saved in the "sent items". Send after sending a text message has always been to "sent items" at the top of the list. The sent items folder can store up to 50 recently send text messages. After the folder is full, the next send text messages will automatically replace the earlier messages in this folder.

Note: at any time pressing the [back] key can return to the previous screen.

Check the Sent Messages

Using the menu function:

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1. Press [OK] button to enter the menu mode.
2. Press the [◀or▶] key to information, and then press [OK] key to choose
3. Press [◀or▶] to sent project, and then press [OK] key to choose
4. Press the [◀or▶] key to the SMS, and then press [OK] key choose. If the message from the email program, a subject lines, will appear in the top right corner of the screen icon indicates state of SMS.

Sending the Sent Messages

When the view sent messages, you can choose the following options:

Resend

Forward

Edit

Delete

1. Check the message, press [OK] key again
2. Press the [◀or▶] key to resend, then press [OK] key to choose.
3. The screen displays: < user/group name or ID > call, confirm that it is preparing to send the same message to the same target radio
4. If the messages sent successfully, issued a prompt sound, and the screen display text message has been sent.

Or if the message was not sent, issued a high tone hint sound, and screen displays text message sent failure. If message sent failure, intercom chance to return to the re-transmission options screen. Press the [OK] key to send SMS weight to the same user/group name or ID.

Note: Except for pressing the [OK], [◀or▶] key, if you change the volume and the press any other key, will return to this message. When you press [PTT] for a single call or group call, or as a response to the group calling, radio will exit the re-transmission selection screen. If received text messages or remote sensing remote sensing information, emergency call, or call the police, or call reminder, radio will exit the re-transmission selection screen. If you press [PTT] in response to a single call (in addition to the radio in the show did not answer the call screen), or at the end of all call, the screen will return to resend selection screen. Press [◀or▶] key, enter the forwarding, edit, or delete selection screen.

1. Choose forward, will choose the SMS sent to speak to other groups/user alias or ID.
2. Choose to edit, to edit the selected text messages before sending
3. Choose delete, delete the selected text.

Note: if you screen out SMS messages when send text messages, so radios will be in the "sent items" folder for SMS status updates, not the tip or by voice prompt. If the messages in the sent items folder state before update, radio pattern changed or blackout, radio will not be able to complete the ongoing message processing, and automatically start tag to the icon of failure. This radio can handle 5 text messages at the same time. At this stage, the radio can't send a new message, and automatically start tag icon to send failure.

Deleting All Sent Text Messages In the "Sent Items"

Using the Menu Function

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1 Press the [OK] button to enter the menu mode.

2. Press the [◀or▶] key to information, and then press [OK] key choice.

3. Press [◀or▶] to sent project, and then press [OK] key choice.

4. Press the [◀or▶] key to delete all, and then press [OK] key choice.

5. When it appears to delete messages, press [OK] button, select "yes" project has clear screen display has been sent.

Or delete the text, press [◀or▶] to no, and click [OK] key to return to the previous screen. When you select the "sent items" but not one of them text messages, the screen will display the list is empty, if the keyboard is open at this time, will be a low tone hint sound.

Receiving Messages

When your radio are receiving SMS, the left of the screen shows the sender alias or ID ICONS and text messages.

When receive text messages, you can choose the following options:

- Read
- Read longer
- Delete

Note: when the radio shows tip on the screen, please press (PTT), two way will exit and to establish a single call or text message screen group call.

Check the SMS

1. Press the [◀or▶] key to Read, And then press [OK] key to choose

2. the selected text messages on the inbox opened, if the message is from the email program, it will appear a subject line.

3. Click [OK] key to return to your inbox.

Or press [OK] to reply, forward or delete messages.

Press [◀or▶] key to enter later view or delete selection screen:

Later, select view screen before returning to receive messages.

Choose delete, delete receive text messages.

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Manage Received Messages

Use your inbox to manage messages. inbox can store up to 50 text messages at Most.

Two way radio supports the following text options:

Reply

Forward



Delete

Delete All

store the message in the inbox in the order received. **Note:** at any time according to the [back] key can return to the previous screen.

Check and View the Inbox Messages

1. Press the [OK] button to enter the menu mode.
2. Press the [◀or▶] key to Message, and then press [OK] key to choose
3. Press [◀or▶] to the inbox, and then press [OK] key to choose.
4. Press the [◀or▶] key to check the message. If the messages are from the email program, it will appear a subject line.
5. Press the [OK] key to choose the current text, then press [OK] key again to reply, delete, or forward this message.

Unread messages:  . Already read message:  .

Replying Inbox's Messages

Use the menu function:

1. Press [OK] button to enter the menu mode.
2. Press the [◀or▶] key to message, and then press [OK] key to choose
3. Press [◀or▶] to the inbox, and then press [OK] key to choose
4. Press the [◀or▶] key to the SMS, and then press [OK] key to choose. If the messages are from the email program, it will appear a subject line.
5. Press again [OK] button to enter sub menu.
6. Press [◀or▶] to reply, and then press [OK] key to choose.
7. Press [◀or▶] to write messages, and then press [OK] key choice, a flashing cursor, using a keyboard editing text messages.

Or press [◀or▶] key to prefabricated text messages, and then press [OK] key to choose. Choose the required message after press [OK] a flashing cursor, if needed, with the keyboard editing your message.

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8 After Writing the text, press [OK] .

9. The screen displays message: < user/ call group name or ID >, to confirm. text messages were being sent

10. If the messages sent successfully, issued a prompt sound, and screen display text message has been sent.

Or if you cannot send text messages, screen display text message sent failure. If message sent failure, radio return to the re-transmission selection screen.

Deleting the Inbox Messages

Use the menu function:

1. Press the [OK] button to enter the menu mode.

2. Press the [◀or▶] key to message, and then press [OK] key to choose

3. Press [◀or▶] to the inbox, and then press [OK] key to choose

4. Press the [◀or▶] key to the SMS, and then press [OK] key choice. If the messages are from the email program, it will appear a subject line.

5. Press again [OK] button to enter submenu.

6. Press the [◀or▶] key to delete, and then press [OK] key to choose.

7. Delete messages, press [◀or▶] key to "yes", then press [OK] key to choose.

8. Screen appears short message has been deleted.

9. The screen back to inbox.

Deleting All Messages Inbox

Use the menu function:

1. Press the [OK] button to enter the menu mode.

2. Press the [◀or▶] to the Message, and then press [OK] key to choose.

3. Press [◀or▶] to the inbox, and then press [OK] key to choose.

4. Press the [◀or▶] key to delete all, and then press [OK] key to choose.

5. When it appears Deleting the messages, press [◀or▶] select yes, and then press [OK] key to choose

6. Then The screen inbox was empty already.

When you select the "inbox" but not one of them text messages, the screen will display the list is empty, if the keyboard is open at this time, will be a low tone hint sound.

Encryption

If you enable this feature, which is beneficial to prevent other users on the channel by using the method of software encryption for unauthorized eavesdropping. The launch of signaling and user identification part unencrypted. Your radio must be enabled on the channel encryption function, can send encrypted, even if the receiving transmission is

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not must request to do so.

Basic Encryption

Two way radio can only be assigned more than one type of encryption. If users Call for encryption or decryption of data transmission, must make to be pre-programmed radios and launch radio has the same "encryption keys" (suitable for basic encryption).

If your radio to receive different encryption keys or key values and key encryption call ID, you will hear the sound of the transport chaos encryption (basic).

Press the preliminary programming encryption keys on or off.

DTMF

Dual Tone Multi-Frequency (DTMF) function allows to operate radio when there is interference in the radio system.

To initiate a DTMF call

1. Press and hold [PTT] key.
2. Enter number you need.

You can disable DTMF tone by turning off all radio tone and prompts.

Secrecy

You can activate or kill any radio in the system. For example, you might want to disable a stolen radio, to prevent thieves use it, and enable it when you get it back.

Note: radio kill or activation is limited to activate the radios with these functions.

Radio Kill

Use menu mode

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Contacts, and then press [OK] key to select, entries are in alphabetical order.
3. Press [◀or▶] key to the required alias or ID, and press [OK] key to select.
Or press [◀or▶] key to dial manually, then press twice [OK] key to enter a user alias or ID, and press [OK] key to select.
4. Press [◀or▶] key to radio kill, and then press [OK] key to select.
5. The display shows the radio kill: <user alias or ID> and the LED indicator light is red.
6. Wait for confirmation.
7. If successful, emit a beep and the screen displays radio kill successfully.
Or if it fails, emit a beep and the screen displays radio fail to kill.

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During radio kill operation, do not press the [back] key, because you will not get a confirmation message.

Radio Activate

Use menu function:

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Contacts, and then press [OK] key to select, entries are in alphabetical order.
3. Press [◀or▶] key to the required alias or ID, and press [OK] key to select.
Or press [◀or▶] key to dial manually, then press twice [OK] key to enter a user alias or ID, and press [OK] key to select.
4. Press [◀or▶] key to radio kill, and then press [OK] key to select.
5. The display shows the radio activate: <user alias or ID> and the LED indicator light is red.
6. Wait for confirmation.
7. If successful, emit a beep and the screen displays radio activate successfully.

Or if it fails, emit a beep and the screen displays radio fail to activate.

During radio activate operation, do not press the [back] key, because you will not get a confirmation message.




Scan List

Create a scan list and assign to a single channel/talkgroup, your radio can support up to 250 scan lists, each up to 16 members. Each scan list support mixed analog and digital channels. You can edit the scan list to add / delete channels or set the priority channel.


View Scan List Members

1. Use the channel knob to select a channel with pre-programmed scan list;
2. Press the [OK] key to enter the menu mode;
3. Press [◀or▶] key to scan, and then press the [OK] key to select;
4. Press [◀or▶] key to view / edit the list, and then press the [OK] button to select;
5. Use [◀or▶] key to see members of list.

If you set the priority, the priority icon is displayed in the left of member alias, indicating that the member is the Priority

1  or Priority 2  channel; if the priority is set to None  , no priority icon. In a scan list, you can not have more than one Priority 1 or Priority 2 channel.

Scanning instructions and methods

When scanning, your radio can view if there is a voice activity in current channel through circulating pre-programmed scan list. LED lights flashing for a red light, and the scan icon  appears on the screen.

When scanning in dual mode, if you're in a digital channel and your radio locking an analog channel, radio will switch automatically from digital mode to analog mode throughout the duration of the call. And vice versa.

There are two scanning methods

- Manual Scan:** According to a pre-programmed scan on / off key or menu function to start the scan, when you


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start scanning, radio will detect all channels / contact groups on pre-programmed scan list.

• **Auto Scan:** When you select an already activated auto scan channels / contact groups, radio scans from the activated auto scan channel.

Start and Stop Scanning

Press Pre-programmed scan on / off key or enter the scan menu function

1. Using the channel knob to select a channel of pre-programmed scan list;
2. Press [OK] to enter menu mode;
3. Press [←or→] to scan, and then press [OK] to select;
4. If the scan is disabled, the screen displays on or if the scan is activated, the screen displays off.
5. Press [OK] to select
6. When the scan is activated, LED indicator flashes red and displays scan icon ; or when scanning is disabled, LED light goes out and does not display the scan icon.

Scanning Reply

Radio detect active channel/contact group when scanning, at this time radio will stay in the channel/ contact group, which is called "Scan hang time" pre-programmed time.

Procedure:

1. Hold the radio in a vertical position and keep one to two inches (2.5 to 3.0 cm) distance from the mouth. If you enable the "channel idle tone" function, when transmitting radio release [PTT] key, you will hear a short beep, indicating that the channel is idle, waiting for your respond.
2. Within the hang time by pressing [PTT] button, LED indicator light is red.
3. Release [PTT] key to respond.
4. If you do not respond within the hang time, radio will continue down the scan.

Settings

Settings includes the following contents:

- Radio settings
- Radio information
- Radio configuration

Radio Settings

Radio settings includes:

- Talk Around
- Tone/Prompt
- Transmit power
- Backlight
- Squelch boot interface

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Keyboard lock
Language selection
LED indicator
VOX
Power-on password
Clock
Mode

Talk Around

When the transponder does not work, or when the radio located outside the range of the transponder but located within the range of other radios call, you can continue to communicate. This is called "talk around."

Press Pre-programmed repeater / talk around button, you can switch between repeater / talk around mode.

Use the menu function

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to talk around, and then press [OK] key to select.
5. If radio is currently in repeater mode, you can see the open, or if radio is currently in talk around you can see the close.
6. Press [OK] key to select.
7. Screen showing turn on talk around  or turn off talk around.
8. The screen automatically returns to the previous menu.

Even after the shutdown, still remains talk around.

Radio Tone/Prompt

including the following contents:

All quiet
keyboard tone

All Quiet

If desired, you can enable or disable all radio tone and prompts (except emergency incoming tone).

Press pre-programmed all Beep ON / OFF to turn on or off all radio tones.

Use the menu function:

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to tone / prompts, and then press [OK] key to select.
5. Press [◀or▶] key to all tone, and then press [OK] key to select.
6. Press [OK] key to select Open, then enable all tone and prompts, screen displays all tone is open.
Or press [OK] key to select Off, then turn off all tones and prompts, screen displays all tone is off.

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Turn On or Turn Off Keyboard Tone

If desired, you can activate and deactivate call admission tone.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to tone / prompts, and then press [OK] key to select.
5. Press [◀or▶] key to keyboard tone, then press [OK] key to select.
6. Press [OK] key to select Open, then enable the keyboard tone, the screen shows keyboard tone is turned on. Press [OK] key to select off, then turn off the keyboard sound, the screen shows keyboard tone is turned off.

Set the Power Level

You can set each channel power level to high or low.

Setting: High-power radio implement communications with relatively far distance radios. Low-power radio implement communications with relatively close distance radios.

Press pre-programmed high / low power selection key, you can switch high / low transmit power.

Using the menu function:

1. Press the [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to power, and then press [OK] key to select.
5. Follow the on-screen instructions to change the current settings.
6. Press [OK] key to select the new power level.
7. Return to the previous menu screen.

Press [back] to return to the main screen, the screen displays the power level icon.

Control Screen Backlight

You can turn on or off the screen back-light according to the need. This setting also affects the menu button and the keyboard back-light.

Press a pre-programmed automatic back-light key to switch back-light settings

Using the menu function:

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Setting, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to back-light, and then press [OK] key to select.
5. The screen displays always open, 5S, 10S, 15S options, press [OK] key to select always open, the screen will remain lit and won't turn off, or if you choose 5S, 10S, 15S, the screen back-light will be off in the corresponding time under users without any operations.

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Setting Squelch Level

You can adjust radio squelch level, thus filtering low signal intensity useless call or channel higher than normal value. Setting: Normal is the default, strict filtering (useless) call or background noise. However, a call from a remote location may also be filtered out.

Press pre-programmed strict / normal squelch button to switch between normal and strict squelch level.

Using the menu function:

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to squelch, and then press [OK] key to select.
5. Select strict or normal, and then press [OK] key to select.
6. The screen returns to the previous menu.

Turn On or Off the Boot Home Page

If desired, you can enable and disable the boot interface display.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to boot interface, then press [OK] key to select.
5. The screen is on, press [OK] key to enable the boot interface display, the screen displays the boot screen display on.

Or the screen is off, press [OK] key to close the boot interface display, the screen displays the boot screen display off.

Lock the Keypad and Unlock the Keypad

You can lock the keypad to prevent accidental key input. Ways include manual and automatic keypad lock, which includes 5S, 10S, 15S three options.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to keypad lock, then press [OK] key to select.
5. Press [◀or▶] key to manual, and then press [OK] key to select, screen show to select Manual, you need to long press [*] key to lock keypad on the main interface.
6. Press [◀or▶] key 5S, 10S, 15S, the screen shows to select the corresponding time, then keypad will be locked and return to the main screen if user have not any keypad operation after corresponding period of time.
7. To unlock the keypad, press [OK] key, then press [*] key.
8. Screen shows unlock keyboard, and then return to the main screen.

Language Selection

Radio supports the following languages:

- English

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•Chinese

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to the language selection, then press [OK] key.
5. Press [◀or▶] key to the corresponding language option, then press [OK] key.
6. Screen displays to select corresponding language, and then jump back to the main interface.

Turn on or off LED Indicator

If desired, you can activate and deactivate the LED.

1. Press [OK] key to enter the menu mode.
 2. Press [◀or▶] key to Settings, and then press [OK] key to select.
 3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
 4. Press [◀or▶] key to LED indicator, and press [OK] key to select.
 5. The screen displays open, press [OK] button to enable LED light, screen shows to turn on the LED light.
Or The screen displays off, press [OK] button to turn off the LED light, screen shows to turn off the LED light.
- If you disable the LED light, buttons and keyboard backlight automatically turns off.

Turn On or Off VOX Function

This function allows you to initiate voice-activated hands-free calls on pre-programmed channels. Whenever a microphone with VOX function detect voice, radio will automatically transmit signals within pre-programmed period of time.

During radio operation press [PTT] key will disable VOX function, to re-enable the VOX function, do one of the following:

- Turn off and return on radio
- through the channel knob to change the channel, or
- Perform the following procedure:

Note: Enabling or disabling this function is limited to activate radios of these function.

Press pre-programmed VOX on / off key, to turn on or off this function.

Using the menu function:

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press the [OK] key to select.
4. Press [◀or▶] key to VOX, and then press [OK] key to select.
5. Screen shows VOX off and VOX level 1-10S, if you choose to turn off, press [OK] key to disable the VOX function, emitting a beep and the screen displays VOX off. If you choose 1-10S, VOX function is enabled, and the voice transmit sensitivity is on the corresponding level. If you activate the call allowing sound, you can initiate a call using a trigger word. Waiting sound end (if activated), and then speak clearly into the microphone.

Power-on Password

1. Press [OK] key to enter the menu mode.

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2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to power-on password, and then press [OK] key.
5. Use the keypad to enter the correct 8 digits password (You can pre-set by software), and then press the [OK] key.
6. If the password is incorrect, the screen displays an error code. If the password is correct, the screen displays options.
7. If the first line shows open, press [OK] key to display the power-on password application. Next time you need to enter the correct password to turn on radio. If the first line shows off, press [OK] key to display the power-on password cancellation, next time you can directly turn on radio.
8. Press [◀or▶] key to change power-on password, and then press [OK] key to select.
9. Enter 8 digits new password, and then press [OK] key to select.
10. Once again, enter 8 digits new password, and then press [OK] key to select.
11. Screen displays that password was successfully changed.

Note: The power-on password must be set to eight digits.

Clock

Clock settings are divided into:

- Time
- Date

Time

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to clock, and then press [OK] key.
5. Press [◀or▶] key to time, and then press [OK] key to display the current time.
6. Press [OK] key to enter time setting interface.
7. Press [◀or▶] key to move left and right to select the desired number, the selected number will reverse video display, then enter the corresponding numbers to change the time via the numeric keypad.
8. Press [OK] key to save, the screen displays the time has been saved.

Date

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to clock, and then press [OK] key.
5. Press [◀or▶] key to date, and then press [OK] key to display the current date.
6. Press [OK] key to enter the time setting interface.
7. Press [◀or▶] key to move left and right to select the desired numbers, the selected numbers will reverse video display, then enter the corresponding number to change the date via the numeric keypad.

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8. Press [OK] key to save, the screen displays the date has been saved.

Mode

Mode settings are divided into:

- CH Mode
- VFO Mode

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio settings, and then press [OK] key to select.
4. Press [◀or▶] key to mode and then press [OK] key.
5. Press [◀or▶] key to select CH mode or VFO mode, then press [OK] key to select the corresponding mode, the screen displays this mode is selected.
6. The main screen will show channel name or frequency (receiving frequency) according to the selected mode.

View General Two Way Radio Information

Radio contains the following information:

- Radio number
- Radio version{software version, Codeplug version}

Note: At any time you can return to the previous screen by pressing the [back] key.

Check Radio ID

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio information, and press [OK] key to select.
4. Press [◀or▶] key to radio number, then press [OK] key.
5. The display shows radio ID and name.

Radio Version

Display radio firmware version.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio information, and press [OK] key to select.
4. Press [◀or▶] key to radio version, and then press [OK] key.
5. The screen will display the current firmware version, Codeplug version.

Radio Configuration

Radio configuration mainly includes editing the channel contents

Channel contents can be edited include:

- Receiving frequency

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- Transmitting frequency
- Channel name
- Transmitting time
- CTCSS/DCS
- Color code
- Repeater slot

Receiving Frequency

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to receiving frequency, and then press [OK] key to select.
6. The screen displays receiving frequency of the current channel, and then press [OK] key to select.
7. Press the number keys to enter the corresponding number, press [◀] key to delete the last number, press [back] to return to the previous menu.
8. After finish the change, press [OK] key, the screen displays receiving frequency has been saved.

Note: Editing frequency will be limited within the frequency range set by programming software, if less than the write frequency range set by software, the final change result will be the minimum frequency of frequency range set on software, otherwise it is maximum.

Transmitting Frequency

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to transmitting frequency, and then press [OK] key to select.
6. The screen displays transmitting frequency of the current channel, and then press [OK] key to select.
7. Press the number keys to enter the corresponding number, press [◀] key to delete the last number, press [back] to return to the previous menu.
8. After finish the change, press [OK] key, the screen displays transmitting frequency has been saved.

Note: Editing frequency will be limited within the frequency range set by programming software, if less than the write frequency range set by software, the final change result will be the minimum frequency of frequency range set on software, otherwise it is maximum.

Channel Name

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.

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4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to the channel name and press [OK] key to select.
6. The screen displays the current channel name, press the [#] key to switch the input method to enter the relevant letters, numbers or characters, the same as the input method and text editing.
7. After the change is complete, press [OK] key, the screen displays channel name has been saved.

Time Out Timer

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to transmitting time, and then press [OK] key to select.
6. The screen displays infinite, 15S, 30S. .. 555S and other options (increasing 15S each time), press [◀or▶] key to the corresponding option, then press [OK] key to select; if you choose infinite, the screen displays transmit time close, if you select others, the screen display corresponding time selected.

CTCSS/DCS

CTCSS/DCS can only be set on analog mode, including:

- CTCSS/DCS encoding
- CTCSS/DCS decoding

CTCSS/DCS Encoding

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to CTCSS/DCS, and then press [OK] key to select.
6. Press [◀or▶] key to CTCSS/DCS encoding, and then press [OK] key to select.
7. Screen display off and a set of CTCSS/DCS encoding value, press [◀or▶] key to off, and then press [OK] key to select, and there will be no CTCSS/DCS encoding value, screen displays CTCSS/DCS encoding value off; press [◀or▶] key to CTCSS/DCS encoding value, and then press [OK] key to select, then set the corresponding value, screen displays the corresponding CTCSS/DCS encoding value.

CTCSS/DCS Decoding

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.

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4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to CTCSS/DCS, and then press [OK] key to select.
6. Press [◀or▶] key to CTCSS/DCS decoding, and then press [OK] key to select.
7. Screen display off and a set of CTCSS/DCS decoding value, press [◀or▶] key to off, and then press [OK] key to select, and there will be no CTCSS/DCS decoding value, screen displays CTCSS/DCS decoding value off; press [◀or▶] key to CTCSS/DCS decoding value, and then press [OK] key to select, then set the corresponding value, screen displays the corresponding CTCSS/DCS decoding value.

Color Code

Color code only can be set on digital channels.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to color code, then press [OK] key to select.
6. Press [◀or▶] key to select color code values, and then press [OK] key to select. Screen shows X (the selected color code value) is selected.

Repeater Slot

Repeater slot only can be set on digital channels.

1. Press [OK] key to enter the menu mode.
2. Press [◀or▶] key to Settings, and then press [OK] key to select.
3. Press [◀or▶] key to radio configuration, and then press [OK] key to select.
4. Use the keypad to enter the correct radio configuration password (programmed by software), and then press [OK] key to select.
5. Press [◀or▶] key to repeater slot, and then press [OK] key to select.
6. Press [◀or▶] key to select repeater slot values, and then press [OK] key to select. Screen shows X (the selected repeater slot value) is selected.

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Troubleshooting

| Symptom | Try This |
|--|--|
| No power | <ul style="list-style-type: none"> Battery power may have run out, please update battery or recharge it. Battery may not be properly installed, please take it off and re-install. |
| Battery lasts a short time after charge | <ul style="list-style-type: none"> The battery life is over, please replace new battery. |
| Can not talk to other members of your group. | <ul style="list-style-type: none"> Verify transmitting is within effective operating range. Verify channel, frequency and code settings are correct. |
| Hearing other conversation on a channel (not group members') | <ul style="list-style-type: none"> Please change code settings, including all two way radio settings of your group. |

CTCSS(Hz)

| | | | |
|----------|----------|----------|----------|
| 1-67.0 | 14-103.5 | 27-159.8 | 40-199.5 |
| 2-69.3 | 15-107.5 | 28-162.2 | 41-203.5 |
| 3-71.9 | 16-110.9 | 29-165.5 | 42-206.5 |
| 4-74.4 | 17-114.8 | 30-167.9 | 43-210.7 |
| 5-77.0 | 18-118.8 | 31-171.3 | 44-218.1 |
| 6-79.7 | 19-123.0 | 32-173.8 | 45-225.7 |
| 7-82.5 | 20-127.3 | 33-177.3 | 46-229.1 |
| 8-85.4 | 21-131.8 | 34-179.9 | 47-233.6 |
| 9-88.5 | 22-136.5 | 35-183.5 | 48-241.8 |
| 10-91.5 | 23-141.3 | 36-186.2 | 49-250.3 |
| 11-94.8 | 24-146.2 | 37-189.9 | 50-254.1 |
| 12-97.4 | 25-151.4 | 38-192.8 | |
| 13-100.0 | 26-156.7 | 39-196.6 | |

DCS

| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 023 | 071 | 143 | 225 | 266 | 356 | 452 | 532 | 664 |
| 025 | 072 | 145 | 226 | 271 | 364 | 454 | 546 | 703 |
| 026 | 073 | 152 | 243 | 274 | 365 | 455 | 565 | 712 |
| 031 | 074 | 155 | 244 | 306 | 371 | 462 | 606 | 723 |
| 032 | 114 | 156 | 246 | 311 | 411 | 464 | 612 | 731 |

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| | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 036 | 115 | 162 | 245 | 315 | 412 | 465 | 624 | 732 |
| 043 | 116 | 165 | 251 | 325 | 413 | 466 | 627 | 734 |
| 047 | 122 | 172 | 252 | 331 | 423 | 503 | 631 | 743 |
| 051 | 125 | 174 | 255 | 332 | 431 | 506 | 632 | 754 |
| 053 | 131 | 205 | 261 | 343 | 432 | 516 | 645 | |
| 054 | 132 | 212 | 263 | 346 | 445 | 523 | 654 | |
| 065 | 134 | 223 | 265 | 351 | 443 | 526 | 662 | |

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Warranty Card

Contact: _____
Company Name: _____
ADD: _____ **Post Code:** _____
Tel: _____ **Mob.:** _____
Fax: _____ **Email:** _____
Ordered: _____ **Model:** _____
Ordered No.: _____ **Purchased Date:** _____
S/N) : _____ **(EAN) :** _____
Warranty Card No.: _____
Trouble Description: _____

Terms and Conditions

- 1) This warranty is provided only for product purchased from authorized dealer of Tekk-Radios, Inc. (hereinafter called Dealer).
- 2) Warrants this product to be free from manufacturer's defects for a specified period.
- 3) Within the specified warranty period, will repair or replace non consumable parts (excluding casing, accessories, batteries, cable and consumable) that are damaged under normal use (by judgement of) at no additional charge.
- 4) The warranty will not be covered under the following conditions.
 - A, Out-of-warranty products.
 - B, The product is modified without approval.
 - C, Obvious attack of appearance whatever it is.
 - D, The product is subjected to unusual physical or electrical stress, including physical damage, burnt components and broken connectors, and watered radio.
 - E, The serial number label is removed or altered.
- 5) This warranty card must be presented together with dealer's invoice when the defective product is returned for repair. Otherwise, reserve the right of not providing free warranty during the warranty period.
- 6) The customer is responsible for returning the defective product at his own expense.
- 7) Your warrant period is calculated from the date of invoice of this product.