Instruction Manual

CS800D
Mobile Radio

Instruction Manual

CS800D

Mobile Radio

Thank you for purchasing a COVALUE mobile radio.

This simple to use radio adopts the latest advances in technology, providing

reliable communication in today's demanding communication environment.

Notices to the User:

When condensation occurs inside the transceiver:

- Condensation may occur inside the transceiver when the room is warmed using a heater on a cold day or when the transceiver is quickly moved from a cold location to a warm location.
- When condensation occurs,the microcomputer and /or the transmit/receive circuits may become unstable,resulting in transceiver malfunction.
- If this happens,turn OFF the transceiver and wait for a while.
- When the condensed droplets disappear,the transceiver will function normally.

⚠ CAUTION

Do not touch the metal surface of the transceiver while it is in use.

Do not mount the transceiver such that the chassis can come in contact with skin.

High temperatures may burn your skin.

PRECAUTIONS

Please observe the following precautions to prevent fire, personal injury, and/or transceiver damage:

- Do not attempt to configure your transceiver while driving; it is simply too dangerous.
- Be aware of local laws pertaining to the use of headphones/headsets while driving on public roads.
  If in doubt, do not wear headphones while mobiling.
- Do not transmit with high output power for extended periods; the transceiver may overheat.
- Do not modify the transceiver unless instructed by this manual or other **COVALUE** documentation.
- Do not expose the transceiver to long periods of direct sunlight nor place it close to heating appliances.
- Do not place the transceiver in excessively dusty,humid or wet areas, nor on unstable surfaces.
- If an abnormal odor or smoke is detected coming from the transceiver, turn OFF the power immediately. Contact a **COVALUE** service station or your dealer.
- This transceiver is designed for a 13.8 V power source. Never use a 24 V battery to power the transceiver.

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, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. 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 connected.

—Consult the dealer or an experienced radio/TV technician for help.

Any Changes expressly or modifications not approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference,and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Radiation Exposure Statement:

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit not more than 50% of the time and always adhere to the following procedures:

Antenna gain must not exceed 0dBi.

The antenna must be installed complying with the requirements of manufacturer or supplier, and it must be at least 20cm away from human body.

ISEDC:

This device must be restricted to work related operations in an Occupational/Controlled RF exposure Environment.
This equipment should be installed and operated with minimum distance 20cm *between the radiator & your body.*

Ce dispositif doit être limité aux opérations liées au travail dans un environnement d'exposition RF professionnel/contrôlé.
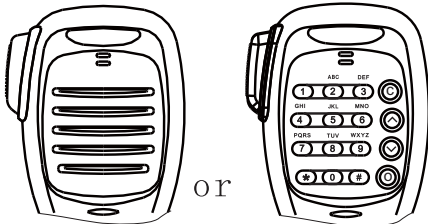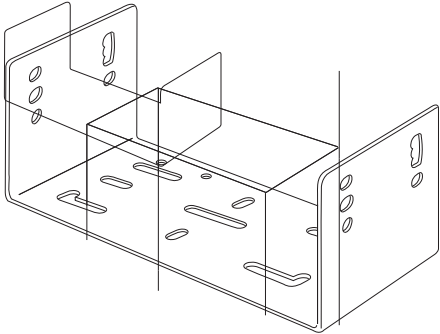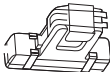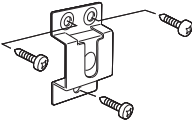*Cet équipement doit être installé et utilisé avec un minimum de* 20cm *de distance entre le radiateur et votre corps.*
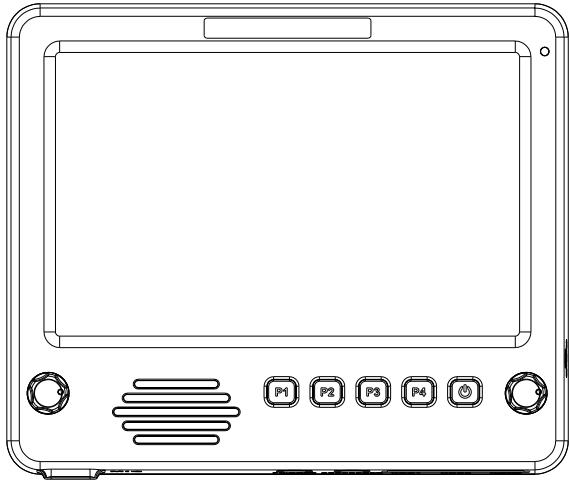
CONTENTS

SUPPLIED ACCESSORIES

After carefully unpacking the transceiver, identify the
items listed in the table below. We recommend you keep
The box and packaging for shipping.

| Accessory	Qty	Reference photo
Microphone(DTMF Mic)	1	or
Mounting bracket	1	
Fuse(Blade)	1	
Microphone hanger	1	

LCD (Optional)

■PREPARATION

▲MOBILE INSTALLATION

To install the transceiver, select a safe, convenient location inside your vehicle that minimizes danger to your passengers and yourself while the vehicle is in motion. Consider installing the unit at an appropriate position so that knees or legs will not strike it during sudden braking of your vehicle. Try to pick a well ventilated location that Is shielded from direct sunlight.

1 Install the mounting bracket in the vehicle using the supplied self-tapping screws (4), flat washers (4), and Spring washers (4).

The bracket must be installed so that the 3 screw long hole positions on the side of the mounting bracket are towards
The rear of the bracket.

Self-tapping screw
(5mmx16mm)

Spring washer
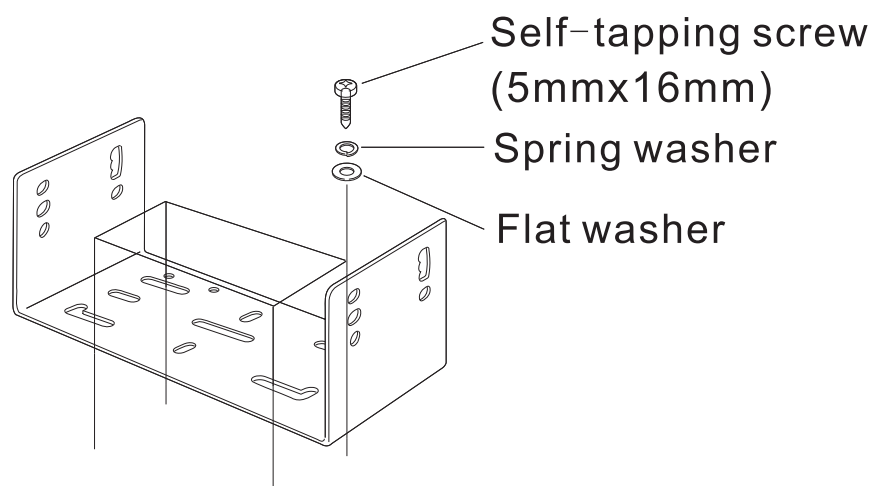
Flat washer

2 Position the transceiver, then insert and tighten the supplied hexagon SEMS screws (4) and flat washers (4).
 Double check that all hardware is tightened to prevent vehicle vibration from loosening the bracket or transceiver.

SEMS screw
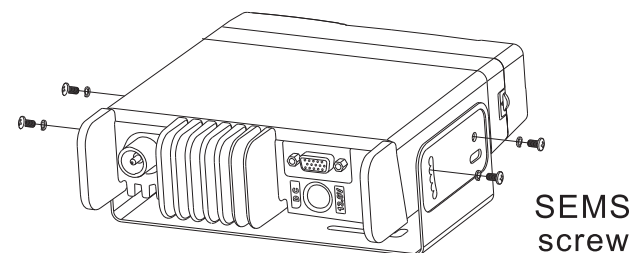
 Determine the appropriate angle of the transceiver, using the 3 screw hole positions on the side of the mounting bracket.

M4*6MAX

M4*6MAX

▲ DC POWER CABLE CONNECTION

▲MOBILE OPERATION

The vehicle battery must have a nominal rating of 12 V. Never connect the transceiver to a 24 V battery. Be sure to use a 12 V vehicle battery that has sufficient current capacity. If th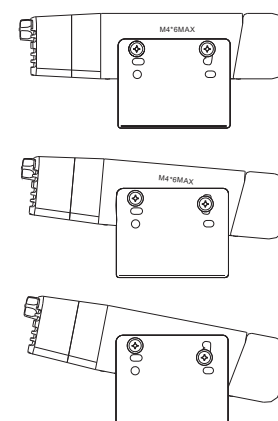e current to the transceiver is insufficient, the display may darken during transmission, or transmit output power may drop excessively.

1 Route the DC power cable supplied with the transceiver directly to the vehicle's battery terminals using the shortest path from the transceiver.

 If using a noise filter, it should be installed with an insulator to prevent it from touching metal on the vehicle.

 We recommend you do not use the cigarette lighter socket as some cigarette lighter sockets introduce an unacceptable voltage drop.

 The entire length of the cable must be dressed so it is isolated from heat, moisture, and the engine secondary (high voltage) ignition system/ cables.

2 After the cable is in place, wrap heat-resistant tape around the fuse holder to protect it from moisture and tie down the full run of cable.

3 To prevent the risk of short circuits, disconnect other wiring from the negative (–) battery terminal before Connecting the transceiver.

4 Confirm the correct polarity of the connections, then attach the power cable to the battery terminals; red connects to the positive (+) terminal and black connects to the negative (–) terminal.

 Use the full length of the cable without cutting off excess even if the cable is longer than required. In particular,never remove the fuse holders from the Cable.
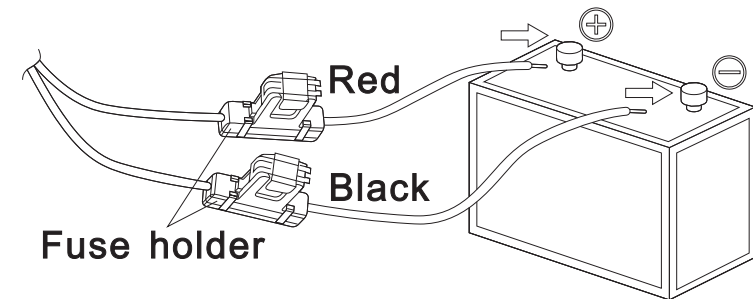
5 Reconnect any wiring removed from the negative terminal.

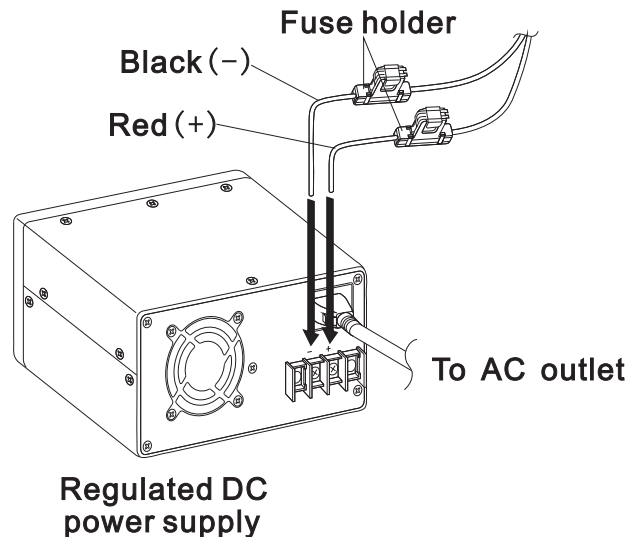**6** Connect the DC power cable to the transceiver's power supply connector.

 Press the connectors firmly together until the locking tab connectors firmly together until the locking tab clicks
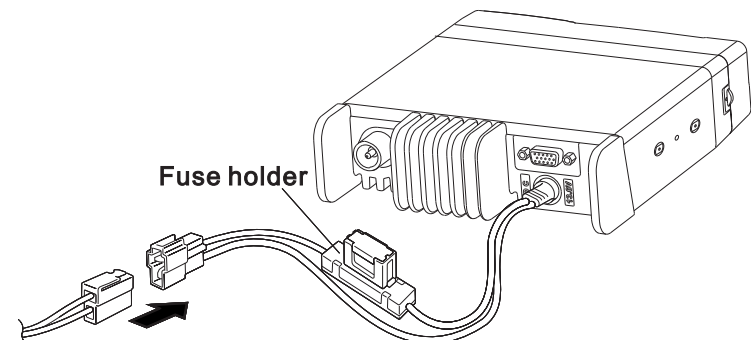
▲FIXED STATION OPERATION

In order to use this transceiver for fixed station operation, you will need a separate 13.8 V DC power supply (not included). The recommended current capacity of your power supply is 14 A or more.

1 Connect the DC power cable to the regulated DC power supply and ensure that the polarities are correct (Red: positive, Black: negative).

• Do not directly connect the transceiver to an AC outlet.

• Use the supplied DC power cable to connect the transceiver to a regulated power supply.

• Do not substitute a cable with smaller gauge wires.

Fuse holder

Black (−)

Red (+)

To AC outlet

Regulated DC power supply

2 Connect the transceiver's DC power connector to the connector on the DC power cable.

Press the connectors firmly together until the locking tab Clicks

Fuse holder
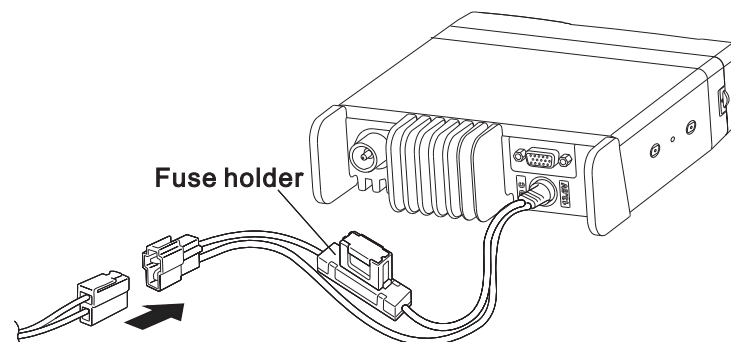
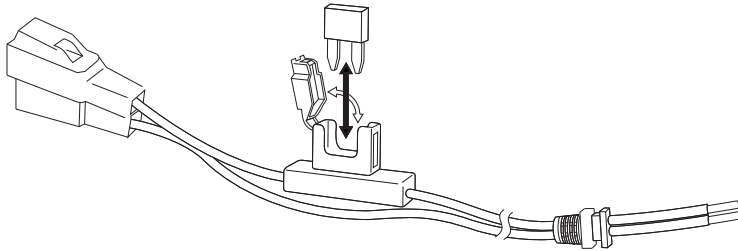**Note:**

◆ For your transceiver to fully exhibit its performance capabilities,we recommend using the power supply could output more than 23 A, 25% duty cycle.

◆ Before connecting the DC power supply to the transceiver, be sure to switch the transceiver and the DC power supply OFF.

◆ Do not plug the DC power supply into an AC outlet until you make all connections.

▲REPLACING FUSES

If the fuse blows, determine the cause, then correct the problem. After the problem is resolved, replace the fuse. If newly installed fuses continue to blow, disconnect the power cable and contact your authorized CSI Dealer or an authorized CSI service center for assistance.

Fuse Location	Fuse Current Rating
Transceiver	15 A
Supplied Accessory DC Power Cable	20 A

⚠ CAUTION

Only use fuses of the specified type and rating; otherwise the transceiver could be damaged.

Note:
If you use the transceiver for a long period when the vehicle battery is not fully charged, or when the engine is OFF, the battery may become discharged, and will not have sufficient reserves to start the vehicle. Avoid using the transceiver under these conditions.

▲ANTENNA CONNECTION

Before operating, install an efficient, well-tuned antenna. The success of your installation will depend largely on the type of antenna and its correct installation. The transceiver can give excellent results if the antenna system and its installation are given careful attention.

Use a 50 Ω impedance antenna and low-loss coaxial feed Line that has a characteristic impedance of 50 Ω , to match the transceiver input impedance. Coupling the antenna to the transceiver via feed lines having an impedance other than 50 Ω reduces the efficiency of the antenna system and can cause interference to nearby broadcast television receivers, radio receivers, and other electronic equipment.

⚠ CAUTION

◆ Transmitting without first connecting an antenna or other matched load may damage the transceiver. Always connect the antenna to the transceiver before transmitting.
◆ All fixed stations should be equipped with a lightning arrester to
reduce the risk of fire, electric shock, and transceiver damage.

Antenna connector

To antenna

Feed line connector
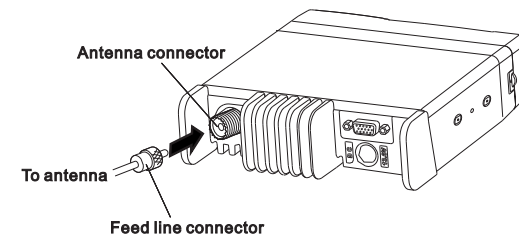
▲ ACCESSORY CONNECTIONS

▲EXTERNAL SPEAKER

If you plan to use an external speaker, choose a speaker with an impedance of 8 Ω. The external speaker jack accepts a 3.5 mm (1/8") mono (2-conductor) plug.
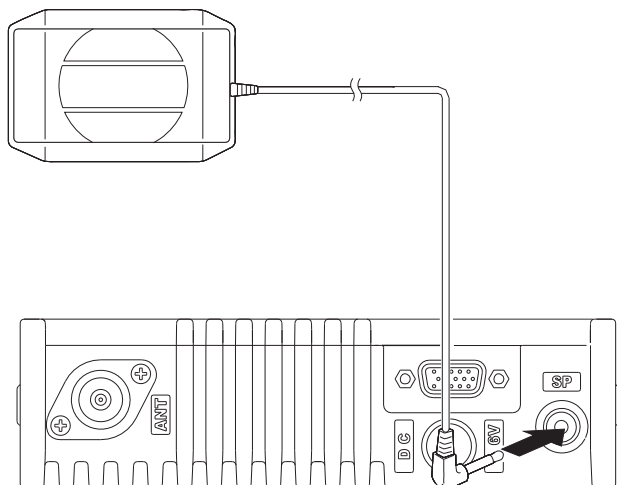
▲MICROPHONE

For voice communications, connect a 600 Ω microphone equipped with an 8-pin modular plug into the modular socket on the front of the main unit. Press firmly on the plug until the locking tab clicks.
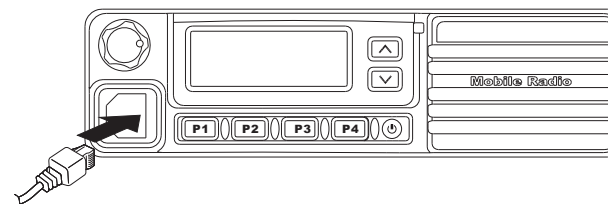
Attach the supplied microphone hanger in an appropriate location using the screws included in the screw set.

Microphone hanger
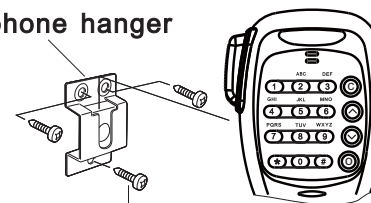
Microphone hanger screw
(3mm x 10mm)

⑧ Keypad serial data
⑦ No Connection
⑥ MIC,600 Ω impedance
⑤ GND (MIC)
④ PTT
③ GND
② DC 8V, 100mA max
① No Connection
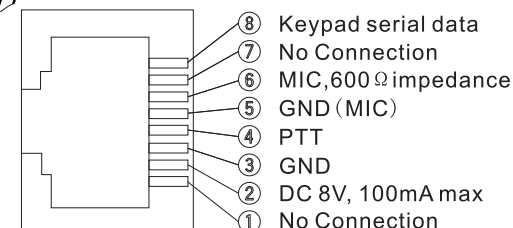
▲PC CONNECTION

To utilize the optional PC programming software, you must first connect the transceiver to your PC using an optional Programming Cable (via the rear DB15 connector).

Note: Ask your dealer about purchasing a Programming Cable.

■ YOUR FIRST QSO

Are you ready to give your transceiver a quick try? Reading this section should get your voice on the air right away. The instructions below are intended only as a quick guide. If you encounter problems or there is something you would like to know more, read the detailed explanations given later in this manual.

or

1. **Press** [◎] (Power) briefly to switch the transceiver power ON.
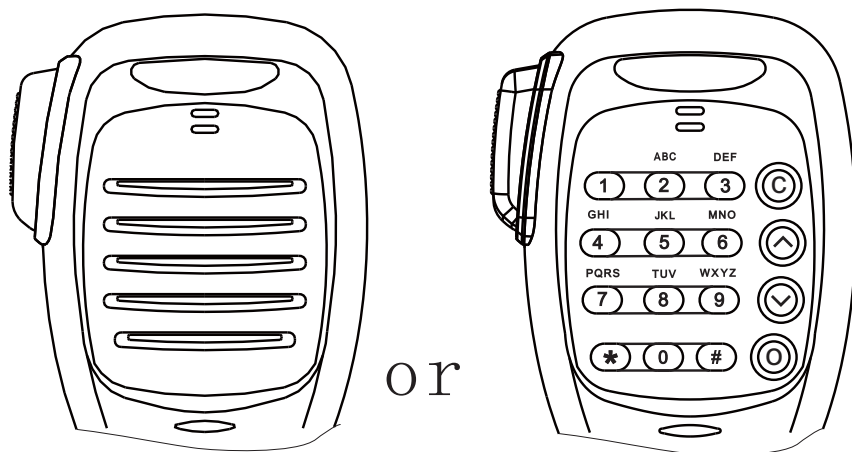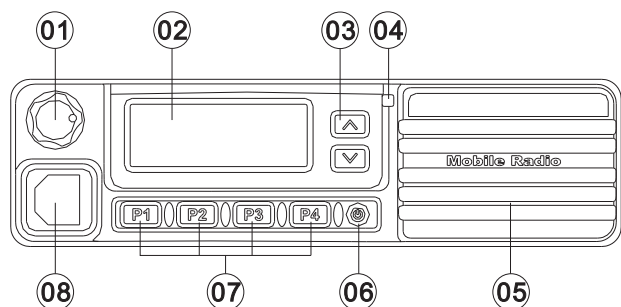 A power on beep sounds and a Power-on message appears momentarily. The various indicators and the current operating channel alias appear on the LCD.
 The transceiver stores the current parameters when it is turned OFF and automatically recalls those parameters the next time you turn the transceiver ON.
2. Turn the **Volume** ◎ control clockwise to increase the volume or reverse.
The transceiver stores the current parameters when it is turned OFF and automatically recalls those parameters the next time you turn the transceiver ON.
3. Turn the **Up/Down** control to select a reception channel.
 You may further turn the Volume control to adjust the volume level of the signal.
4. To transmit, hold the microphone approximately 5 cm (2 inches) from your mouth.
5. Press and hold Mic [PTT], then speak in your normal tone of voice.
6. Release Mic [PTT] to receive.
7. Repeat steps 4, 5, and 6 to continue communication.

■ GETTING ACQUAINTED

▲FRONT PANEL

Note: This section describes only the main functions of the front panel controls. Explanations for functions not described here are provided in the appropriate sections of this instruction manual.

▲ REAR PANEL
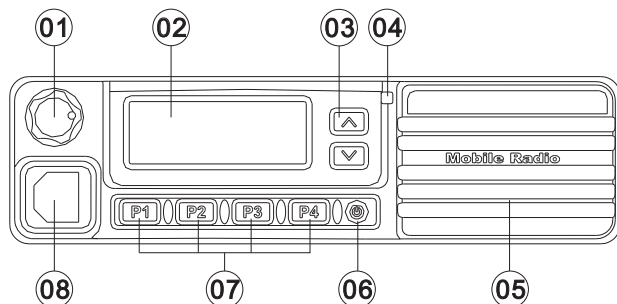
1. 🔘 **(Power) switch**
Press to switch the transceiver power ON or OFF

2.MENU key could be programmed to press 🔘 or P4 by your dealer
Note: To brief, this manual just uses P4 as the MENU/OK key later

3.Navigation Key could be programmed to turn 🔘 or press P2 P3 or ∧ ∨ in menu mode
Note: To brief, this manual just uses ∧ ∨ as the navigation key in menu later

4.Cancel Key only could be programmed to press P1 , if Menu key enabled.

5.Channel UP/DOWN or Zone UP/DOWN or volume UP/DOWN could be programmed to turn 🔘 or press ∧ ∨
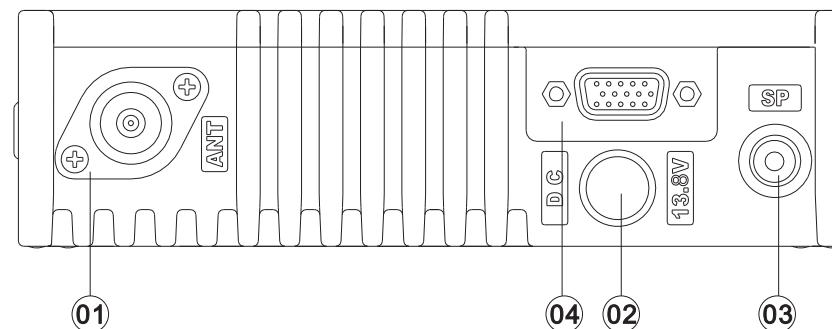
1. Antenna connector
Connect an external antenna here. When making test transmissions, connect a dummy load in place of the antenna. The antenna system or load should have an impedance of 50 Ω.

2. Power Input 13.8 V DC cable
Connect a 13.8 V DC power source here. Use the supplied DC power cable.

3. SP (speaker) jack
If desired, connect an optional external speaker for clearer audio. This jack accepts a 3.5 mm (1/8") mono (2-conductor) plug.

4. DB15 Connector
This connector is used for an extension feature, such as GPS, control line etc.

or
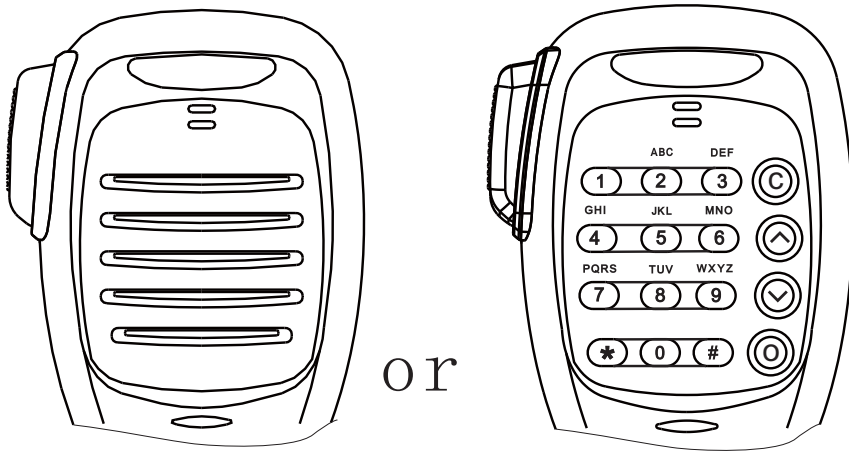
1. PTT(Push-to-Talk) Switch

Press and hold to transmit. Release to receive.

2. D key (Menu/OK key)

3. A key(Cancel Key)

4. B,C(Navigation Key)

5. 1,2,3,4,5,6,7,8,9,*,0,#(Number Key)

■ Basic Operations

▲ Make a Call

(Selecting a Zone)

A zone is a group of channels. Your radio supports up to 250 zones, with a maximum of 16 channels per zone.

Use the following procedure to select a zone.

Procedure:

Press the programmed Zone button and proceed to step 2.

OR Follow the procedure below.

1. Press P4 to enter menu, and press ⊼/⊻ to Zone and press P4 to select.

2. The current zone is displayed an indicated by a √.

3. Press⊼/⊻ to the required zone and press P4 to select.

4. The display shows <Zone> Selected momentarily.

▲ Selecting a Radio Channel, Subscriber ID, or Group IDProcedure:

Once the required zone is displayed, if you have multiple zones in your radio, turn the programmed channel Selector Knob to select the channel, subscriber alias or ID, or group alias or ID.

▲ Receiving and Responding to a Radio Call

Once the channel, subscriber ID or group ID is displayed, you can proceed to receive and respond to calls.

To unscramble a privacy-enabled call, your radio must have the same Privacy Key, OR the same Key Value and Key ID (programmed by your dealer), as the transmitting radio (the radio you are receiving the call from)

▲ Receiving and Responding to a Group Call

To receive a call from a group of users, your radio must be configured as part of that group.

Procedure:

When you receive a Group Call (while on the Home screen);

1. The green LED lights.

2. The first line of the display shows the caller alias and the RSSI icon. The second line displays the group alias and the Group Call icon (in Digital mode only).

3. Hold the radio vertically 1 to 2 inches(2.5 to 5.0 cm) from your mouth.

If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
4. Press the PTT button to respond to the call and the RED LED turns on.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
6. Release the PTT button to listen.
7. If there is no voice activity for a predetermined period of time, the call ends.

▲ Receiving and Responding to a Private Call

A Private Call is a call from an individual radio to another individual radio.
There are two types of Private Calls. The first type is where a radio presence check is performed prior to setting up the call. The other type sets up the call immediately.
Procedure:
1. The green LED turns on.
2. The first line of the display shows the subscriber alias or ID, and the RSSI icon. The second line displays Private Call and the Private Call icon.
3. Hold the radio vertically 1 to 2 inches(2.5 to 5.0 cm) from your mouth. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
4. Press the PTT button to respond to the call. The RED LED turns on.
5. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

6. Release the PTT button to listen.
7. If there is no voice activity for a predetermined period of time, the call ends.
8. You hear a short tone. The display shows Call Ended.

▲ Receiving an All Call

An All Call is a call from an individual radio to every radio on the channel. It is used to make important announcements requiring the user's full attention.
Procedure:
When you receive an All Call:
1. A Tone sounds and the Green LED turns on.
2. The first line of the display shows the caller alias and the RSSI icon. The second line displays All Call and the All Call icon.
3. Once the All Call ends, the radio returns to the previous screen before receiving the call.
If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is now available for use.
You cannot respond to an All Call.
NOTE: the radio stops receiving the All Call if you switch to a different channel while receiving the call.
During an All Call, you will not be able to use any programmed button functions until the call ends.

▲ Making a Radio Call

You can select a channel, subscriber ID, or group by using:
·The Channel Selector Knob
·A programmed One Touch Call button

·The Contacts list

· Manual Dial (Via Contacts) —This method is for Private Calls only and is dialed using the keypad.

NOTE: Your radio must have the Privacy feature enabled on the channel to send a privacy-enabled transmission. Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.

▲ Making a Call with the Channel Selector Knob

□ *Making a Group Call*

To make a call to a group of users, your radio must be configured as part of that group.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active group alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The display shows the group alias or ID and the Group Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the LED blinks green. You see the Group Call icon, the group alias or ID, and transmitting radio alias or ID on your display.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

7. Radio returns to the previous screen you were on prior to receiving the call.

You can also make a Group Call via Contacts.

□ *Making a Private Call*

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active subscriber alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The first line displays the subscriber alias or ID. The second line displays Private Call and the Private Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the Green LED turns on.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

If there is no voice activity for a predetermined period of time, the call ends.

7. You hear a short tone. The display shows Call Ended.

You can also make a Private Call via Contacts or perform a quick alphanumeric search for the required alias via a keypad entry.

□ *Making a All Call*

This feature allows you to transmit to all users on the channel. Your radio must be programmed to allow you to use this feature.

Procedure:

1. Turn the Channel Selector Knob to select the channel with the active All Call group alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
3. Press the PTT button to make the call. The RED LED turns on. The display shows the All Call group alias or ID and the All Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.

NOTE: Users on the channel cannot respond to an All Call.

▲ Making a Group or Private Call with the One Touch Call Button

The One Touch Call feature allows you to make a Group or Private Call to a predefined alias or ID easily. This feature can be assigned to a short or long programmable button press.

You can ONLY have one alias or ID assigned to a One Touch Call button. Your radio can have multiple One Touch Call buttons programmed.

Procedure:

1. Press the programmed One Touch Call button to make a Group or Private Call to the predefined alias or ID.
2. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.

3. Press the PTT button to make the call. The RED LED turns on. The display show the group/subscriber alias or ID, and the Group/Private Call icon.
4. Wait for the Talk Permit Tone to finish (if enabled) and speak clearly into the microphone.
5. Release the PTT button to listen. When the target radio responds, the Green LED turns on.
6. If the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the target radio releases the PTT button, indicating the channel is free for you to respond. Press the PTT button to respond.

OR

12If there is no voice activity for a predetermined period of time, the call ends.

▲ Talkaround

You can continue to communicate when your repeater is not operating, or when your radio is out of the repeater's range but within talking range of other radios. This is called "talkaround".

Procedure:

Press the programmed Repeater/Talkaround button to toggle between talkaround and repeater modes.

OR

Follow the procedure below.

1. Press 〔P4〕 to access the menu.
2. Press 〔∧〕/〔∨〕 to Utilities and press 〔P4〕 to select
3. Press 〔∧〕/〔∨〕 to Radio Settings and press 〔P4〕 to select
4. Press〔∧〕/〔∨〕 to Talkaround and press〔P4〕to confirm or press
5. After confirmation, the display shows "Talkaround On" OR
   To cancel.

"Talkaround Off"

6.Press ⌷P4⌷ or wait the presetting time to exit the menu state. The Talkaround setting is retained even after powering down.

▲ Monitoring Features (Analog)

□ *Monitoring a Channel*
Use the Monitor feature to make sure a channel is clear before transmitting by listening for activity on the channel.
Procedure:
1. Press the programmed Monitor button and listen for activity. The monitor icon appears on the display.
2. If you hear activity on the channel the channel is busy. If you hear "white noise" on the channel the channel is free.

▲ Advanced Features

Radio Check
If enabled, this feature allows you to determine if another radio is active in a system without disturbing the user of that radio. No audible or visual notification is shown on the target radio.
This feature is only applicable for subscriber aliases or Ids.

□ *Sending a Radio Check*
Procedure:
Use the menu.
1.Press ⌷P4⌷ to access the menu.
2.Press ⌷∧⌷/⌷∨⌷ to Contacts and press ⌷P4⌷ to select
3. Press ⌷∧⌷/⌷∨⌷ to the required subscriber alias or ID and press ⌷P4⌷ to select
OR
Press ⌷∧⌷/⌷∨⌷ to Manual Dial and press ⌷P4⌷ to select. Key in

the subscriber alias or ID and Press.
4. Press ⌷∧⌷/⌷∨⌷ to Radio Check and press ⌷P4⌷ to select.
5. Wait for acknowledgement
6. If the target radio is active in the system, a tone sounds and the display briefly shows Target Radio Available.
OR
If the target radio is not active in the system, a tone sounds to show Target Radio Not Available.
7. Radio returns to the subscriber alias or ID screen.

▲ Remote Monitor

Use the Remote Monitor feature to turn on the microphone of a target radio(subscriber alias or IDs only). No audible or visual indication is given to the target radio. You can use this feature to monitor, remotely, any audible activity surrounding the target radio.
Your radio must be programmed to allow you to use this feature.

□ *Initiating Remote Monitor*
Procedure:
Use the programmed Remote Monitor button.
Use the menu.
1. Press ⌷P4⌷ to access the menu.
2. Press ⌷∧⌷/⌷∨⌷ to Contacts and press ⌷P4⌷ to select
3. Press ⌷∧⌷/⌷∨⌷ to the required subscriber alias or ID and press ⌷P4⌷ to select
OR
Press ⌷∧⌷/⌷∨⌷ to Manual Dial and press ⌷P4⌷ to select. Key in the subscriber alias or ID and Press ⌷P4⌷ to select.
4. Press ⌷∧⌷/⌷∨⌷ to Remote Mon. and press ⌷P4⌷ to select.

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5. Wait for acknowledgement
6. The display shows Remote Monitor Successful.
OR
The display shows Remote Monitor Failed.
7. If successful:
The radio starts receiving audio from the monitored radio for a programmed duration.
Once the timer expires, the radio sounds an alert tone. The display shows Remote Monitor Ended.
OR
If unsuccessful:
The radio repeats the attempt until the programmed number of tries expires.

▲ Scan Lists

Scan lists are created and assigned to individual channels/groups. Your radio scans for voice activity by cycling through the channel/group sequence specified in the scan list for the current channel/group.
Your radio can support up to 250 scan lists, with a maximum of 16 members in a list. Each scan list supports a mixture of both analog and digital entries.
You can add, delete, or prioritize channels by editing a scan list.
Procedure:
1. Press [P4] to access the menu.
2. Press [▲] /[▼] to Scan and press [P4] to select
3. Press [▲] /[▼] to View/Edit List and press [P4] to select
4. Press [▲] /[▼] to view each member on the list.

▲ Scan

When you start a scan, your radio cycles through the programmed scan list looking for voice activity. The LED blinks Orange while in scan mode. During a dual mode scan, if you are on a digital channel, and your radio locks onto an analog channel, it automatically switches from digital mode to analog mode for the duration of the call. This is also true for the reverse.
There are two ways of initiating scan:
· Main Channel Scan (Manual): Your radio scans all the channels/groups in your scan list. On entering scan, your radio may, depending on the settings, automatically start on the last scanned "active" channel/group or on the channel where scan was initiated.
· Auto Scan(Automatic): Your radio automatically starts scanning when you select a channel/group that has Auto Scan enabled.

□ *Starting and Stopping Scan*
Procedure:
Press the programmed Scan button to start or stop Scan.
OR
Follow the procedure below.
1. Use the Channel Selector Knob to select a channel programmed with a scan list.
2. Press [P4] to access the menu.
3. Press [▲]/[▼] to Scan and press [P4] to select
4. The display shows Turn On if scan is disabled.
OR
The display shows Turn Off if scan is enabled.
5. Press [P4] to select. The LED blinks orange when Scan is

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enabled. Or the LED turns off when Scan is disabled.

Responding to a Transmission During a Scan

During scanning, your radio stops on a channel/group where activity is detected. The radio stays on that channel for a programmed time period known as "hang time"
Procedure:
1. Hold the radio vertically 1 to 2 inches (2.5 to 5.0 cm) from your mouth.
If digital channel and the Channel Free Indication feature is enabled, you will hear a short alert tone the moment the transmitting radio releases the PTT button, indicating the channel is free for you to respond.
2. Press the PTT button during hang time. The RED LED turns on.
3. Wait for the Talk Permit Tone to finish if enabled and speak clearly into the microphone.
4. Release the PTT button to listen.
5. If you do not respond within the hang time, the radio returns to scanning other channels/groups.O
□ Deleting a Nuisance Channel

If a channel continually generates unwanted calls or noise (termed a "nuisance" channel), you can temporarily remove the unwanted channel from the scan list.
This capability does not apply to the channel designated as the Selected Channel.
Procedure:
1. When your radio locks on to an unwanted or nuisance channel, press the programmed Nuisance Channel Delete button until you hear a tone.
2. Release the Nuisance Channel Delete button. The nuisance channel is deleted.

Deleting a "nuisance" channel is only possible through the programmed Nuisance Channel Delete button. This feature is not accessible through the menu.

□ *Restoring a Nuisance Channel*
Procedure:
To restore the deleted nuisance channel, do ONE of the following:
· Turn the radio off and then powering it on again.
· Stop and restart a scan via the programmed Scan button or menu.
· Change the channel via the Channel Selector Knob.

▲ Contacts Settings

Contacts provides "address-book" capabilities on your radio. Each entry corresponds to an alias or ID that you use to initiate a call.
Additionally, each entry, depending on context, associates with ONE of five types of calls: Group Call, Private Call, All Call, PC Call or Dispatch Call.
PC Call and Dispatch Call are data-related. They are only available with the applications. Refer to the data applications documentation for more information.
NOTE: If the Privacy feature is enabled on a channel, you can make privacy-enabled Group Call, Private Call, and All Call on that channel. Only target radios with the same Privacy Key OR the same Key Value and Key ID as your radio will be able to unscramble the transmission.
Each entry within Contacts displays the following information:

· Call Type

· Call Alias

· Call ID

NOTE: You can add, delete, or edit subscriber IDs for the Digital Contacts list.

▢ *Making a Group Call from Contacts*
Procedure:
1. Press P4 to access the menu.
2. Press ⌃/⌄ to Contacts and press P4 to select. The entries are alphabetically sorted.
3. Press ⌃/⌄ to the required group alias or ID.
4. Press the PTT button to make the call.

▢ *Making a Private Call from Contacts*
Procedure:
1. Press P4 to access the menu.
2. Press ⌃/⌄ to Contacts and press P4 to select. The entries are alphabetically sorted.
3. Press ⌃/⌄ to the required subscriber alias or ID.
OR
Press ⌃/⌄ to Manual Dial and press P4 to select. Use the keypad to enter a new subscriber alias or ID.
Press the PTT button to make the call

▲ Call Indicator Settings

▢ *Activating and Deactivating Call Ringers for Private Calls*
You can turn on or off the ringing tones for a received Private Call.
Procedure:

1. Press P4 to access the menu.
2. Press ⌃/⌄ to Utilities and press P4 to select.
3. Press ⌃/⌄ to Radio Settings and press P4 to select.
4. Press ⌃/⌄ to Tone/Alerts and press P4 to select.
5. Press ⌃/⌄ to Call Ringers and press P4 to select.
6. Press ⌃/⌄ to Private Call and press P4 to select.
7. The display shows Turn On. Press P4 to enable Call Ringers for Private Calls. The display shows Private Call Ringer On.
OR
The display shows Turn Off. Press P4 to disable Call Ringers for Private Calls. The display shows Private Call Ringer Off.

▢ Activating and Deactivating Call Ringers for Text Message
You can turn on or off the ringing tones for a received Text Message.
Procedure:
1. Press P4 to access the menu.
2. Press ⌃/⌄ to Utilities and press P4 to select.
3. Press ⌃/⌄ to Radio Settings and press P4 to select.
4. Press ⌃/⌄ to Tone/Alerts and press P4 to select.
5. Press ⌃/⌄ to Call Ringers and press P4 to select.
6. Press ⌃/⌄ to Text Message and press P4 to select.
7. The current tone is indicated by a √.
8. Press ⌃/⌄ to the preferred tone and press P4 to select. The display shows Tone <Number> Selected and a √ appears left of the selected tone.
OR
Press ⌃/⌄ to Turn Off and press P4 to select. The display shows Text Message Ringer Off and a √ appears left or Turn Off.