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D2-300U

Digital Two-way Radio

User Manual

FCC Statement

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.
NOTE 1: 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, 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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This radio is designed for and classified as “Occupational/Controlled Use Only”, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards; NOT intended for use in an General population /uncontrolled environment.
- DO NOT operate the radio without a proper antenna attached, as this may damage the radio and may also cause you to exceed RF exposure limits. A proper antenna is the antenna supplied with this radio by the manufacturer or an antenna specifically authorized by the manufacturer for use with this radio.
- DO NOT transmit for more than 50% of total radio use time, more than 50% of the time can cause RF exposure compliance requirements to be exceeded.
- This transmitter may operate with the antenna(s) documented in this filing in Push-to-Talk and body-worn configurations. RF exposure compliance is limited to the specific belt-clip and accessory configurations as documented in this filing and the separation distance between user and the device or its antenna shall be at least 2.5 cm.

Welcome

Thank you for your purchase and welcome to the Diga-Talk family of products. We proudly offer a 1 year warranty on the radio section to insure that you are confident with your purchase for years to come.

As a product built to the Digital Mobile Radio (DMR) standards, the D2-300U series of radios provide the latest in digital technology with user-friendly ergonomics and the highest in production standards to provide you stable and reliable communications.

Please read this manual and familiarize yourself with the radio before use.

Safety Information

Please read the following safety guidelines. Nonobservance of these guidelines may cause danger or violation of law.

Warning

Don't transmit with antenna detached from the radio or don't damage or change antenna type. Strong electronic waves are emitted from the radio and damages or changes to the antenna may effect the performance of the radio, and it may cause the radio to be defective and not covered under warranty.

Warning

Don't use other manufacturers' accessories. Unknown or unauthorized accessories may cause the radio to be defective and void the warranty.

Warning

Don't disassemble the radio. Disassembly of the radio may cause a serious defect or malfunction and void the warranty.

Warning

Avoid an excessive shock to the radio.
Don't place the radio where the direct sunlight or high temperature occurs.
Avoid damage to the battery pack by sharp object or an excessive shock.

Warning

Turn off the radio before boarding on an airplane.
Don't use the radio in the hospital without any pre-approval.
Don't use the radio at the place of where computer of other electronic devices are being used.

Warning

- Please keep the radio at least 1 inch away from the human body.
- Don't give any damage to antenna.
- When using earphone, please reduce the volume to a low level. If not, unexpected high sound may have harmful effect to your ear.
- Don't touch the conductive metal of the battery radio with wet hands. It may cause damage on your hands.
- Please be careful when putting the battery in a pocket or a bag.

- FCC RF EXPOSURE COMPLIANCE REQUIREMENTS FOR OCCUPATIONAL USE ONLY

  The Federal Communications Commission (FCC), with its action in General Docket 93-62, November 7, 1997, has adopted a safety standard for human exposure to Radio Frequency (RF) electromagnetic energy emitted by FCC regulated equipment. Proper operation of this radio will result in user exposure far below the Occupational Safety and Health Act (OSHA) and Federal Communications Commission limits.

- DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded.
- This radio is NOT approved for use by the general population in an uncontrolled environment. This radio is restricted to occupational use, work related operations only where radio operator must have the knowledge to control the user's exposure conditions for satisfying the higher exposure limit allowed for occupational use.
- When transmitting, hold the radio in a vertical position with its microphone 1 inch (2.5cm) away from your mouth.
- The radio is transmitting when the red LED on the front of the radio is illuminated. You can cause the radio to transmit by pressing the PTT bar on the radio.
- These are required operating configurations for meeting FCC RF exposure compliance. Failure to observe these restrictions mean violation.

FCC Notice

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.

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Safety Matters

Please read the following safety guidelines.
Nonobservance of these rules may cause danger or violation of law.

- The use of this radio must comply with regulations of local government.
- Turn off the radio before you enter places of flammable or explosive environments.
- Do not replace or charge battery pack in places of flammable or explosive environments.
- Turn off the radio before you approach blast area and /or detonator area.
- Do not use if the antenna is broken as it may cause minor burn to skin.
- Only qualified technicians are allowed to maintain this two-way radio. Do not disassemble the radio by yourself as it will void the warranty.
- To avoid problems caused by electromagnetic interference or electromagnetic compatibility, please turn off the radio in places with “Wireless Communication Transmit Equipment Prohibited” posted, such as hospitals or other health care places. When taking a plane, turn off the radio if required.
- In a car with an air bag, do not place the radio within area where air bag expands.
- Do not expose the radio to direct sunlight or near heating devices for a long period of time.
- Keep the radio vertical and speak near the microphone during transmitting.
- Make sure that the antenna is 1” (2.5 cm) away from the body if you carry the radio on your body.

Product Inspection

Thanks for choosing the Diga-Talk D2-300U Series radio. Before use, please check that the following contents are included.

If any item is missing or damaged, please contact your Authorized Diga-Talk Dealer.

Items

Radio D2-300U
Qty: 1

Antenna
Qty: 1

Li-Ion Battery
Qty: 1

Charger
Qty: 1

Adapter
Qty: 1

Lanyard Strap
Qty: 1

Belt Clip
Qty: 1

User Manual
Qty: 1

Note: For antenna identification, the frequency is marked on the color circle at the bottom of the antenna.

Getting Started

Battery Information

Please operate with Diga-Talk approved battery only; Using other batteries may cause personal damage and void the warranty.

Note:

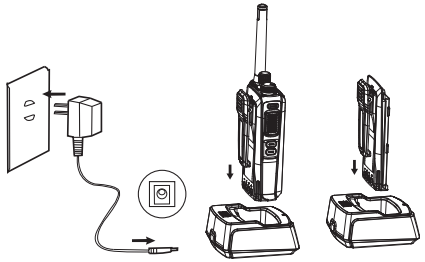
1. Do not short-circuit the battery terminals or dispose the battery in fire. Never attempt to disassemble the battery pack.
2. Charge the battery in 32 - 90 F (0-45℃) temperature. Otherwise the battery may not obtain full charge.
3. Turn off the radio for optimum charging.
4. Do not charge if the battery or radio is wet. Both battery and radio should be dry to avoid danger.

Warning:

Treat any battery carefully when placing into pocket, wallet, or any metal container. Conductive metals such as jewelry, keys, or decorating lace can create a short circuit when coming in contact with battery electrodes causing a large amount of heat.

Charge Operation

Please charge as follows:



1. Turn off the radio. Plug the DC connector of adapter into the DC jack on the rear of the charger.
2. Plug the AC connector of adapter into an AC outlet.
3. After the charger is powered, the LED glows red for 1 second and then goes out. This indicates the charger is ready for normal charging. If the LED flashes red continuously, the charger has encountered an error and will need servicing.
4. Insert the battery or radio equipped with battery into the charger. Make sure the battery has a proper connection with the charger electrodes.
5. LED glows red during normal charging; if LED flashes red this indicates trickle charging because of very low battery condition. After the battery reaches a certain amount of capacity from trickle charge, the charger automatically turns to normal charge mode.
6. The battery is fully charged when LED glows green.

Battery Charging Notes

1. The battery is not charged at the factory. Please charge the battery before initial use or after extended period of storage.
2. For new batteries, repeat the charging process 2 to 3 times to obtain the best capacity.
3. Batteries will eventually need replacement, if low battery is indicated quickly after if it has been fully and correctly charged, this normally means the battery needs to be replaced. Please contact your Authorized Maxon Dealer for information.

Antenna Information

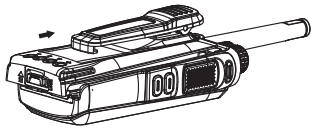
- Antenna length has a factor on distance of communication.
- The communication range can be shortened based on environmental or weather related issues such as rainy days or dense forest.

Attaching and Removing

Attaching the Battery

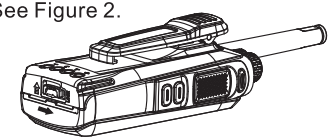
Match the two grooves of battery with corresponding guides on the back of the radio. Make sure that full contact is made between the battery and radio chassis.

Push the battery up along the guide until the battery latch locks. See Figure 1.



(Figure 1)

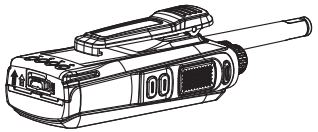
Push the battery latch towards the word “Lock” to lock it. See Figure 2.



(Figure 2)

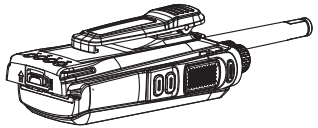
Removing the Battery

To remove the battery, first make sure the radio is turned off, then push the battery latch in the opposite direction of the word “LOCK” to unlock it, and push the battery latch downwards. See Figure 3.



(Figure 3)

Slide the battery down and away from the radio. See Figure 4.



(Figure 4)

Attaching the Antenna

Insert the antenna into the connector on the top of radio by holding the antenna at its base.

Rotate the antenna clockwise to fasten it. See Figure 5.

IMPORTANT: Do not over tighten antenna as it will cause damage to the radio.

(Figure 5)

Removing the Antenna

Rotate the antenna counter clockwise until you can remove it. See Figure 6.

(Figure 6)

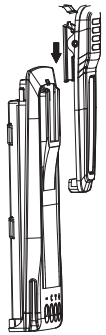
Attaching Belt Clip

Match the grooves of belt clip with those on the rear of radio and press the belt clip downwards until it is locked. See Figure 7.

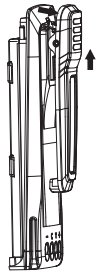
Removing Belt Clip

Lift the metal spring piece in the belt clip from topside and pull the belt clip upward from the battery pack. See Figure 8.

Note: For ease of installation and removal of belt clip, remove the battery from the radio.



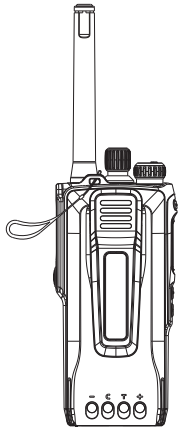
(Figure 7)



(Figure 8)

Attaching Hand Strap

Thread the strap into the hole at the back of the radio and fasten it.

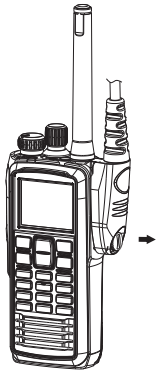


Attaching the Audio Accessory

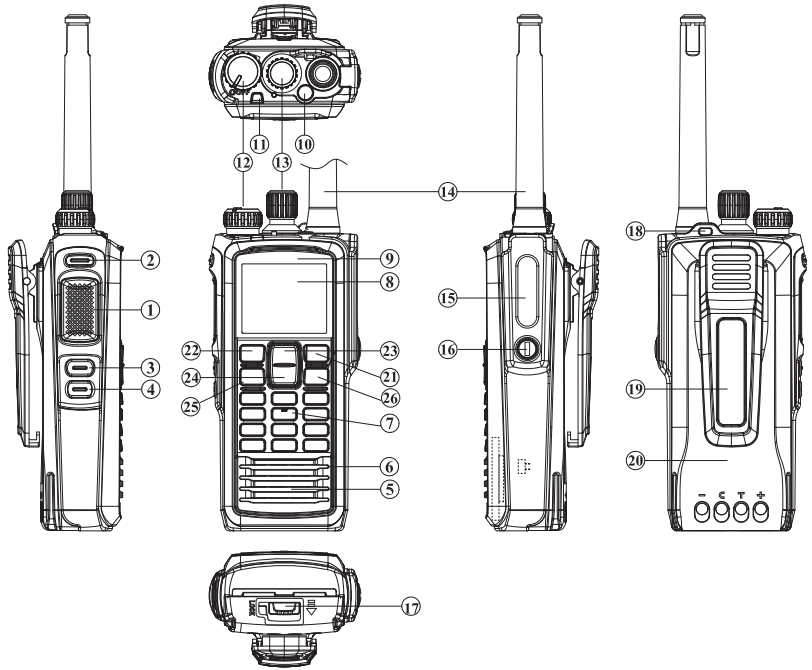
1. Remove the screw on the accessory jack cover, open the accessory jack cover as show below.
2. Align the plug with the accessory jack.
3. Tighten the screw on the plug.

Removing the Accessory

To remove accessories, loosen the screw as figure shown below.



Radio Overview



1. Push-To-Talk (PTT Key)
2. Side Key 1 (SK1)
3. Side Key 2 (SK2)
4. Side Key 3 (SK3)
5. Speaker
6. Microphone
7. Alphanumeric Keypad
8. LCD Display
9. Nameplate
10. Top Key (TK)
11. LED Indicator
12. Radio On-Off/Volume Control Knob
13. Channel Selector Knob
14. Antenna
15. Accessory Jack
16. Accessory Screw
17. Battery Latch
18. Strap Hole
19. Belt Clip
20. Battery
21. Back/Option Key
22. Select/Menu Key
23. Up Key
24. Down Key
25. Programmable Key 1 (P1)
26. Programmable Key 2 (P2)

Status Indicators

LCD Icons

Icon Name	Icon	Radio Status
RSSI		No signal;
		More bars indicate better signal strength;
Message Icons		New Message/Unread Message;
		InBox is full;
Scan Icons		Scanning is in progress;
		Scanning paused on Non-Priority Channel;
		Scanning paused on Priority Channel 1;
		Scanning paused on Priority Channel 2;
Tx Power Icons		Low Tx power for the current channel;
		High Tx power for the current channel;
Battery Level Icons		More bars indicate more battery power;
Monitor Icon		The feature “Monitor” is active;
Speaker Icon		The speaker is unmuted;
Emergency Icon		The Emergency mode (other than secret emergency) is active or an emergency message is received；
Accessory Icon		An accessory is connected;

LED Indicator

The top LED indicator will help you easily identify current radio status.

LED Indicator	Radio Status
LED flashes green.	Powering on
LED flashes red.	Transmitting
LED flashes green.	Receiving
LED flashes orange.	Scanning

Operation Mode Icons

Icon Name	Icon	Operation Mode
Operation Mode Icons	DM	Direct Mode Operation: Under this mode, radios communicate with each other directly.
	RM	Repeater Mode Operation: Under this mode, radios communicate with each other other via repeater

Programmable Keys

For enhanced convenience, you may request your dealer to program the keys SK1, SK2, SK3, P1, P2, and TK as shortcuts to the functions listed below:

No.	Shortcut Keys	Description
1	None	No feature will be assigned.
2	Zone Down	To select a desired zone quickly
3	Zone Up	To select a desired zone quickly
4	Scan	To receive signals on other channels
5	Nuisance Temporary Delete	To temporarily ignore unwanted channel activity
6	Emergency On	To summon help in emergency situations
7	Emergency Off	Emergency function is off
8	Adjust Power Level	To adjust power level
9	Keypad Lock	To lock or unlock the keypad
10	Contact List	To access the Menu “contact list” quickly
11	Message	To access the Menu“Message” quickly
12	Call Logs	To access the Menu“Call logs” quickly
13	Adjust Squelch Level	To adjust the squelch threshold required for the speaker to unmute
14	One Touch Call 1	To transmit a call, short message or other service to a preset contact quickly
15	One Touch Call 2	To transmit a call, short message or other service to a preset contact quickly
16	One Touch Call 3	To transmit a call, short message or other service to a preset contact quickly
17	One Touch Call 4	To transmit a call, short message or other service to a preset contact quickly

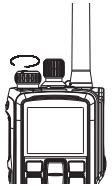
No.	Shortcut Keys	Description
18	One Touch Call	To transmit a call, short message or other service to a preset contact quickly
19	Squelch Off Momentary	To momentary open the speaker
20	Squelch Off	To always open the speaker
21	Monitor	To adjust the condition for incoming signal match
22	Talk Around	To directly communicate with other radios
23	Home Screen	To quickly return to the previous menu or home screen
24	Scramble/Encrypt	Scramble: To encrypt your voice so as to guarantee privacy of your communication Encrypt: To encrypt your voice and message so as to guarantee privacy of your communication
25	VOX	To enable or disable the VOX function

Note: (1) Long and short press of a key can be assigned with different functions by your dealer.
(2) The TK key is programmed as the Emergency Key by default, and is programmable by your dealer.

Basic Operations

Turning the Radio On/Off

Rotate the On-Off/Volume Control knob clockwise/ counter-clockwise until a click is heard to turn the radio on/off.



Adjusting the Volume

After turning the radio on, rotate the Radio On-Off/Volume Control knob clockwise to increase the volume, or counter-clockwise to decrease the volume.

Selecting a Zone

A zone is a group of channels exhibiting the same property, and is programmed by your dealer. The radio supports up to 64 zones, each with a maximum of 16 channels. You may select a zone through any of the following methods:

1. Through menu selection - Go to the menu “Zone”, and use the Up/Down keys to select your desired zone.
2. Through the function keys - You may quickly toggle to your desired zone by pressing the programmed Zone Up or Zone Down key.

Selecting a Channel

Rotate the Channel Selector knob to select a channel from CH01-CH16 according to the number shown at the bottom of the channel selector.

Digital/Analog Switch

Each channel can be programmed as either analog or digital channel. If the current zone includes both analog and digital channels, you may quickly switch between digital and analog through the Channel Selector knob.

Locking/Unlocking the Keypad

When the keypad is not in use, you can lock the keypad to prevent accidental keypad operation. Three methods are available for you to lock or unlock the keypad:

1. Through key combination
   Go to Option->Manual Lock, and then select to enable;
   Press [Menu]+[*] to unlock the keypad.

2. Through the function key
   Press the programmed Keypad Lock key to lock or unlock the keypad.

3. Through menu selection
   Go to Settings -> Radio Setting -> Keypad Lock, and then select Enable or Disable.

Enable: The keypad will be locked automatically if no operation is made for the preset time period.

Disable: The keypad will not be locked automatically. However, you can lock or unlock the keypad via the key combination or Keypad Lock key mentioned above.

Private Call

Transmitting a Private Call

You may transmit a Private Call through any of the following methods. When transmitting a Private Call, the icon will appear.

Transmitting a call to the preset contact

In standby mode, pressing PTT key will transmit an individual call to the contact (a Private Call number) preset for the current channel.

Note: Your dealer may preset a contact for each digital channel. The preset contact could be a Private Call number, a Group Call number or an All Call number.

Transmitting a call through Contact List or Call Logs

1) Go to Contact -> Contact List, or go to Call Logs ->Call List.
2) Use the Up/Down key to select the Private Call number you want to call.
3) Hold down PTT key to transmit a Private Call to the selected contact.

Transmitting a call through Manual Dial

1) Go to Contact -> Manual Dial.
2) Input a Private Call number you want to call.
3) Press PTT key to transmit a call.