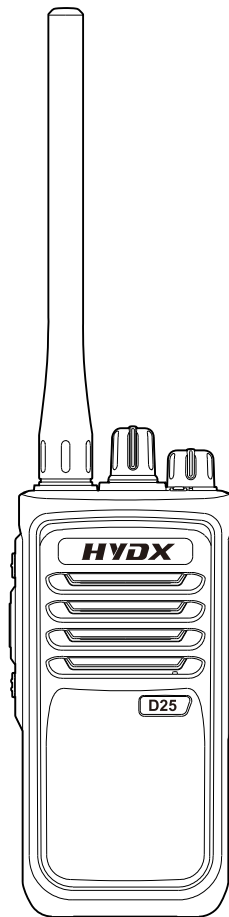


HYDAX

HYDAX

DMR
DIGITAL MOBILE RADIO ASSOCIATION



D25
User`s Manual

Brief Introduction

Thank you for buying portable digital two way radio DMR. The goal of DMR is to provide cost-effective communication equipment for a variety of business sites and the amateur and supply all fast-paced walks of life with perfect communication solutions. It has GPS and Recorder functions which is optional before your purchase.

This product uses professional and commercial or amateur frequency, you need to apply for use to radio management institution of your cities.

please read this manual carefully in order to know how to properly operate the radio before use.

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Main Features

High/Low Power	Monitor
Channel Scanning/Priority Scanning	32 Channels
Chinese/English Voice Prompts	Tail Elimination
Emergency Alarm	Battery Indicator
Power Save/Low Power Alarm	Program Key
Normal/ High SQ	TOT
VOX/Sensitivity	Encryption
Wide/Narrow Selection	Repeater/ Talk Around
Lone Worker	Message
DTMF Encode& Decode	

Unpacking and Checking Equipment

Welcome to use radios, 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 in handling are lost or damaged during the shipment. Please immediately contact dealers.

Parts List

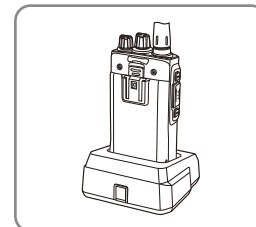
Item	Quantity
Radio	1
Rubber Antenna	1
Li-ion Battery Pack	1
Desktop Charger	1
Power Adapter	1
Belt Clip	1
User's Manual	1
Hand-Strap	1

Preparation

■ Charging the Battery

Please use the battery charger designated to charge battery, and follow the steps:

- 1.Insert DC jack of power adapter into DC jack behind the charging kit.
- 2.Insert power adapter into AC power supply socket, now the charging red and green indicator lights, successfully connect the power supply.
- 3.Insert the battery to radio equipped with battery into the charging kit.



- 4.Confirm the battery is fully charged, when red indicator goes out.
 - 5.Please take off the adapter and battery.
- Red indicator keeps lighting means radio is under charging.
Red indicator flashes means battery not be used for long time and over-discharged. And will Turn to normal charge when red indicator keeps lighting.

■ Using the battery

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

After purchase or extended storage (more than two months), the first time to charge battery cannot make battery reach its normal operating capacity. After repeating charge/discharge it two or three times, the operating capacity will increase to its normal capacity.

Preparation



After fully charge the battery, please do not charge it again and should take it off from the charger. If not, it will short or damage the battery life for over charge.

Note:

- The temperature for charging should be from 5 °C to 40°C. Battery can not be over fully charged out of this temperature range. Please prepare a spare battery for the cooler weather and do not discard the defect battery. Because it may be used under the normal temperature.
- Please clean the battery terminal when it covers with some dust or dirty.
- To make sure the battery can be normal use and charge.
- Please turn off the radio power before charging.
- Do not charge the battery before radio or the battery being wet.
- Please change another new battery if battery can not be recover normal capacity after fully charged.

Battery Type

Please use the assigned battery to charge. It maybe explode and harm to human body if use other batteries.

Safety Tips

Do not discard the battery into fire.

Do not unfold the battery case by yourself.

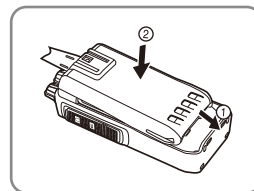
Preparation

Battery Storage

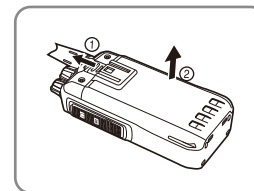
1. Please fully charged battery first to store before long time no use it. To avoid the battery self over discharge and being damage.
2. To avoid short the battery capacity, please fully charged the battery after long time no use. Recommend charge the battery again after six months.
3. Please take care the temperature and humidity for storing battery. Make sure the battery store under the normal temperature, cool and dry to reduce battery discharge.

■ Installing/Removing the Battery

To install the battery into the battery positioning hole of radio bottom, then press the battery, make the button completely to lock battery. To remove the battery, please turn off the radio, and then push up the battery button of radio top, finally take off the battery.



(Install the battery)

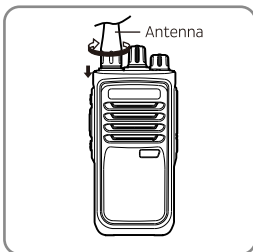


(Remove the battery)

Preparation

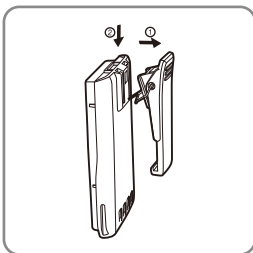
■ Installing/Removing the Antenna

Screw the antenna into the connector on the top of the radio by holding the antenna at its base and turning it clockwise until secure. To turn the antenna counter-clockwise until you can remove it.



■ Installing the belt clip

If necessary, attach the belt clip to the back of battery with the screws supplied carry conveniently.



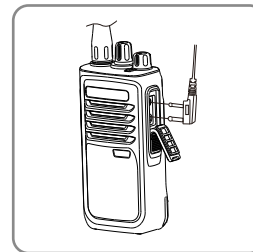
Preparation

■ Installing Earphone /Programming Jack

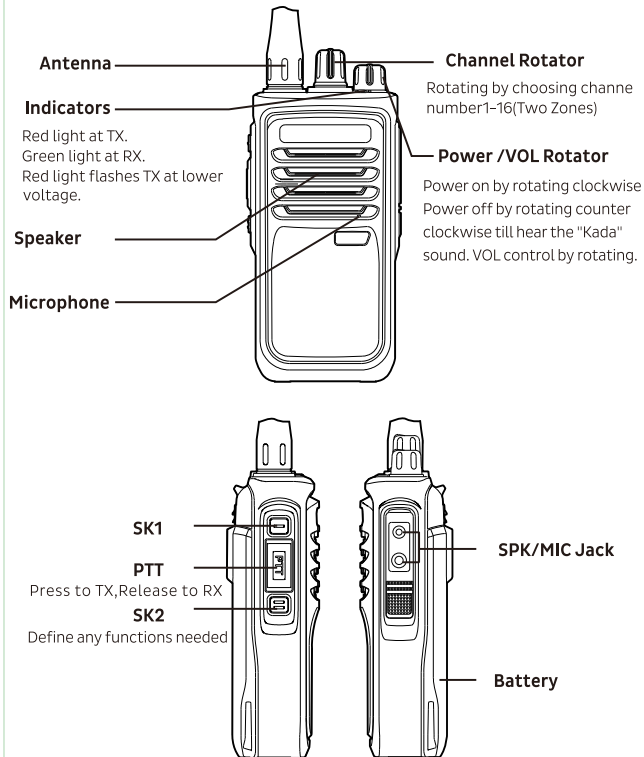
Uncover earphone lid, directly insert earphones into earphone holes (earphones need to be additionally purchased).

You can use computer programming software to operate (consult with local dealers about computer programming software).

Note: If your radio developed with VOX function, you should re-turn on radio power once to active VOX function.



Getting Acquainted



Getting Acquainted

Note: Program Key 1/2 can be defined the following functions by short/long press.

SK:

Item	Function
1	No Set
2	High/Low Power
3	Repeater /Talk Around
4	Switch Zone
5	One Key 1 (Private or Group Call, or Calling Alert or Sending Preset Message)
6	One Key 2 (Private or Group Call, or Calling Alert or Sending Preset Message)
7	One Key 3 (Private or Group Call, or Calling Alert or Sending Preset Message)
8	One Key 4 (Private or Group Call, or Calling Alert or Sending Preset Message)
9	One Key 5 (Private or Group Call, or Calling Alert or Sending Preset Message)
10	One Key 6 (Private or Group Call, or Calling Alert or Sending Preset Message)
11	VOX

Basic Operations

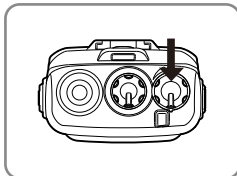
■ Power On/Off

Turn the power switch knob clockwise to turn on radio power; to turn it off, turn the power switch knob counter-clockwise.

Note: No beeper indication when power on if unable the radio tone/beeper indication.

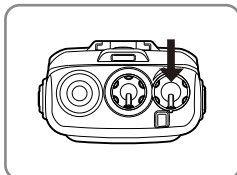
If you cannot turn on the radio, please check the battery pack, make sure charging the battery and correctly install battery.

If you can not turn on the radio, please contact the dealer.



■ Volume Control

Turn the volume switch knob clockwise to increase volume; to decrease the volume, rotate the volume switch knob counter-clockwise. You can check the volume level by pressing the programmed key of monitor.



Note: Please refer to program software to set the programming key 1 or 2.

■ Channel Selection

Turn the channel switch to desired channel number (32 Channels).

Note: There are two zones, 16 channels for each zone for this radio.

Zone 1 and Zone 2 are switchable by programming setting (Details refer to “Zone Selection).

Basic Operations

■ TX

Press PTT and face to microphone talking.

Please make the distance between your lip and microphone at 3-4 cm, and talk as usual to get the best voice quality.

■ RX

Release PTT to receive information and adjust desired volume level to get good voice quality.

Functions Instructions

■ LED Indicator

The LED indicator is to show the radio working status.

Red light: radio is transmitting signal.

Green light: radio is powering on or receiving non-encrypted calling or message, or detecting airing activity.

■ Beeper

Beeper function is for checking radio working status or signal receiving. Continuous tone: simple, radio sounds until user over it.

Period tone: programmed desired setting time as a period. Automatically turn on/Stop/Repeat.

Repeat tone: simple and repeat by itself ,until user over it.

Instant tone: sound once by shortly and programmed the time by radio software.

■ PTT

You can set each channel to be digital channel.

1.When calling, PTT button can enable radio to transmit information to the another calling radios. Press PTT to communicate, release to receive. It will active the microphone when pressing PTT.

2.When no calling on the radio, PTT button is used to new calling (refer to make a radio communication). According to program software, the allowed calling tone will be active until over beeper sound before communication.

Functions Instructions

■ Receiving and Making a Call

● Zone Selection

The Zone is a channel group. This radio support 2 Zones and 16 channels for each Zone.

1.Press programmed Zone key.

2.You will hear “Yes ” tone to switch radio from Zone 1 to 2.

Or “ No” tone to switch radio from Zone 2 to 1.

● Select Radió Channel, User ID and Talking Group ID

After choosing the zone you need, rotating the channel switch to corresponding channel, user ID or contact ID.

● Receiving And Answering a Calling

After setting the channel number, user ID or contact ID ,directly to receive information or answer the calling.

Red light: Transmitting.

Green light: Receiving.

● Receiving And Answering Group Calling

Program the radio as a group member to receive any information from this group calling.

1.LED green lights.

2.Keep the radio 1-2 feet (2.5-5.0cm) away from mouth.

If the radio program the “Free Channel Indication”, release PTT to get a short tone, that means it is free channel and wait for your answer.

3.Press PTT to answer, LED light red.

4.Talk to microphone after active the tone of allowing calling tone.

5.Release PTT to receive information.

Functions Instructions

6. Automatically over the calling if there is no operation with permitted period.

● Receiving and Answering a Private Calling

A private calling is from single radio to another single radio. There are two types.

First, detecting radio before calling; Second, ready to make a call. The LED light green for the chosen radio. You only can program the using radio with one type.

■ Private Call

● Receiving a private calling

1. LED light green.
2. Keep the radio 1-2 feet (2.5-5.0cm) away from mouth. If the radio program the “Free Channel Indication”, release PTT to get a short tone, that means it is free channel and wait for your answer.
3. Press PTT to answer, LED light red.
4. Talk to microphone after active the tone of allowing calling tone.
5. Release PTT to receive information.
6. Automatically over the calling if there is no operation with permitted period.
7. Radio sound a short tone.

● Receiving All call

All call is transmitting information to all the radios. Especially for releasing special notice.

When receiving:

Functions Instructions

1. Radio sound a tone and LED light green.
2. Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication”, release PTT to get a short tone, that means it is free channel and wait for your answer.

Note: When receiving all call, you change to another channel, then will stop receiving the all calling. And during receiving, you can not use any programmed keys until calling is over.

● Make Radio Call

Choose desired channel number, user ID or contact ID by the following: channel rotator, pre-programmed key to make a calling.

● Making Group Call

Program the radio as a group member to transmit any information to this group.

1. Rotate channel switch to desired contact ID or channel.
2. Keep the radio 1-2 feet (2.5-5.0cm) away from mouth.
3. Press PTT to call and LED light red.
4. Talk to microphone after active the tone of allowing calling tone.
5. Release PTT to receive information and reply, LED light green.
6. Radio automatically over the calling if there is no operation with permitted period.

If the radio program the “Free Channel Indication”, release PTT to get a short tone, that means it is free channel and wait for your answer.

Automatically over the calling if there is no operation with permitted period.

Functions Instructions

● Making Private Call

1. Rotate channel switch to desired channel from user ID.
2. Keep the radio 1-2 feet (2.5-5.0cm) away from mouth.
If the radio program the "Free Channel Indication", release PTT to get a short tone, that means it is free channel and wait for your answer.
3. Press PTT to answer, LED light red.
4. Talk to microphone after active the tone of allowing calling tone.
5. Release PTT to receive information.
6. Radio automatically over the calling if there is no operation with permitted period.
If the radio program the "Free Channel Indication", release PTT to get a short tone, that means it is free channel and wait for your answer. Automatically over the calling if there is no operation with permitted period.
7. Radio sound a short tone.

● Making All Call

Program the radio with this function and transmit information to all users.

1. Rotate channel switch to desired channel from contact ID.
2. Keep the radio 1-2 feet (2.5-5.0cm) away from mouth.
If the radio program the "Free Channel Indication", release PTT to get a short tone, that means it is free channel and wait for your answer.
3. Press PTT to answer, LED light red.
4. Talk to microphone after active the tone of allowing calling tone.
All the users on this channel can not answer the calling.

Functions Instructions

■ Message

● Send Pre-set Message

You can at most pre-set 16 pieces message.

1. Choose desired contact to send a pre-set message.
2. LED light red.
3. One tones of "DiDi" means sending message successfully. Four tones of "Di Di" means receiving the message successfully.

Settings

■ Encryption

This function is only available for digital channel.

You can at most preset 10 lists encryption, encrypted code (10 bytes) by program software and enable/disable this function (Lower case letter and numbers only).

■ SQL

You can adjust the SQL to filter lower signal calling or channels with background noise is higher than normal value.

Squelch level: 0-9.

■ High/Low Power

High power enable communication with long distance radio. Low power enable communication with short distance radio.

■ VOX

This function enable your radio to make a call with a programmed channel. No matter when the accessories with VOX function detect the signal, radio will transmit the information within programmed period.

Press PTT to disable VOX function

Operate follow step to re-start the VOX:

Turn off the radio and power on again. Or rotate channel switch to another one. Or operate the below.

Note: Enable or disable this function to those active radios.

1)Program the key with VOX function and can turn on/off.

Settings

2)Talk to microphone after active the tone of allowing tone.

■ Password for Reading/Writing Programing

This function enable your radio program with password when reading/writing the settings.

Please take care the setted password. Do contact your dealers when forget the password.

■ Tail Elimination

This function enable your radio with programming the tail in reverse code or 57.4Hz.

Please enable this function by program software first.

■ End-of-Transmission Tone

Turn End-of-Transmission tone on/off. If enabled, your two way radio will transmit a tone when you finish transmitting.

■ Power Save

The battery saver function decreases the amount of power used when a signal is not being received and no operations are being performed (no keys are being and no switches are being turned). But when your radio receives information first time, the delay time will be longer.

Please program your radio with power save function in below items:

Power save mode (OFF/1:1/1:2/1:3/1:4).

Power save active time (1-10 seconds).

Settings

■ Radio Information

This function allow radio input and store at most 16 letters or numbers. It also can be used to store SN-code, identification for Program ID, ID and so on.

■ TOT

This function can prevent someone to occupy the present channel for long time and limit TX time, meanwhile prevent radio from damage by long time transmitting.

Set the time from 15 seconds to 600 seconds as desired.

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.

Appendix I 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	

Appendix II CDCSS(code)

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	245	311	411	464	612	731
036	115	162	246	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	

Specification

General Specifications	
Frequency Range	400-470MHz
Channel	32 (2 ZONE)
Channel Spacing	12.5KHz
Battery Type	Li-ion, 1600mA
Frequency stability (-20°C, +60°C, +25°C Ref)	±1.5 ppm
Operating Temperature	-20°C+50°C
Antenna type	SMA-K
Antenna Impedence	50Ω
Audio Output Power	≤1000mW@16Ω
Dimension(H*W*D)	132*62*38mm
Weight	250g

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 hereinafter called.

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 judge 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.

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, 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.

RF Radiation Information

RF Exposure Compliance and Control Guidelines and Operating Instructions

To control your exposure and ensure compliance with the occupational/controlled environment exposure limits always adhere to the following procedures.

Guidelines:

- Do not remove the RF Exposure Label from the device.
- User awareness instructions should accompany device when transferred to other users.
- Do not use this device if the operational requirements described herein are not met.

Operating Instructions:

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) button. To receive calls, release the PTT button. Transmitting 50 % of the time, or less, is important because this radio generates measurable RF energy exposure only when transmitting (in terms of measuring for standards compliance).
- Hold the radio in a vertical position in front of face with the microphone (and the other parts of the radio, including the antenna) at least one inch (2.5 cm) away from the nose. Keeping the radio at the proper distance is important because RF exposures decrease with distance from the antenna. Antenna should be kept away from eyes.
- When worn on the body, always place the radio in a JUSTON's approved clip, holder, holster, case, or body harness for this product. Using approved body-worn accessories is important because the use of JUSTON's or other manufacturer's non-approved accessories may result in exposure levels, which exceed the FCC's occupational/controlled environment RF exposure limits.
- If you are not using a body-worn accessory and are not using the radio in the intended use position in front of the face, then ensure the antenna and the radio are kept at least 2.5 cm (one inch) from the body when transmitting. Keeping the radio at the proper distance is important because RF exposures decrease with increasing distance from the antenna.
- Use only manufacturer's name approved supplied or replacement antennas, batteries, and accessories. Use of non-manufacturer-name approved antennas, batteries, and accessories may exceed the FCC RF exposure guidelines.
- For a list of JUSTON's approved accessories (see the user manual), or (visit the following website which lists approved accessories: [http: add website address](http://add website address)), or (The manufacturer should include the appropriate bracketed item{s} in the manual.)
-