



Radioddity **GD-77S** Side Keys and Voice Prompts

Emergency button



Configure your side keys 1, 2 and Emergency button using our simple CPS software to change functionality from changing zones to speaking power level, see documentation for more button features.

ZONE Setting



To enter zone setting press side key 1 very long first. Now you may use side key 1 for UP and side key 2 for DOWN to select the wanted zone. Voice prompts **MODE 1**, **MODE 2**, **MODE 3**, ...

Exit Zone selection



When you are finished with zone selection, please long-press side key 1 or 2 to exit. Voice prompts as **SET OFF**

Voice Prompt



All user interaction will be voice prompted. A side key may be assigned for 'Channel Information' causing voice prompt with all relevant information for the current channel.

To Customers

Thank you very much for using our dual-band two-way radio. This product has a newly developed function menu and operation design, making it easy to use. It will meet your requirements with a compact size and reasonable price.

Welcome to our dual band two-way radio users guide

Professional FM Transceiver

Frequency range: 136-174 & 400-470MHz

1024 Channels

Monitor

Emergency alarm

High/low power selectable

Nuisance delete

One touch access

Scan

Encryption

VOX

Battery power indicate

Zone selectable

Battery saving/low battery alarm

Lone worker

Programmable side keys

Talkaround

Dual time slot for point to point and for repeater

Voice prompt Online update

CTCSS/DCS

Wide/narrow bandwidth selectable

Single/group/all call

Digital and analog combined



CONTENTS

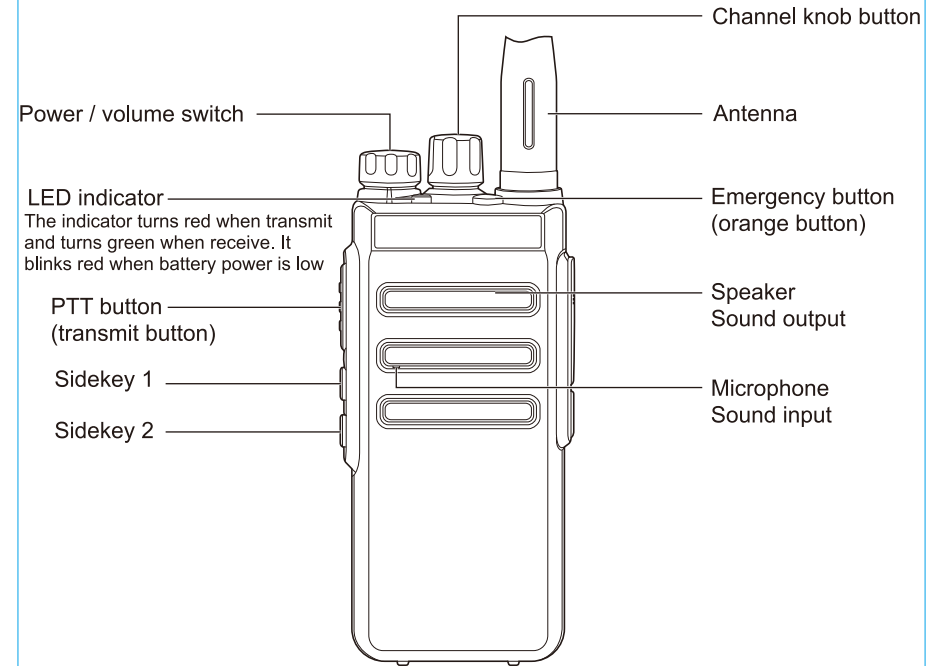
1. Getting familiar	01
Safty and overview	04
Overview	05
2. Keys	06
3. Operation	12
3.1 Digital call	13
3.1.1 Group call	13
3.1.2 All call	13
3.1.3 Single call	14
3.2 Emergency alarm	14
Digital alarm	15
3.3 Data DMR command	15
3.3.1 short message(optional function)	15
3.3.2 DTMF (optional function)	16
DTMF call	16
PTTID	16
3.4 Scan	16
Scan on/off	16
3.5 Online update	17
4. Specification	18

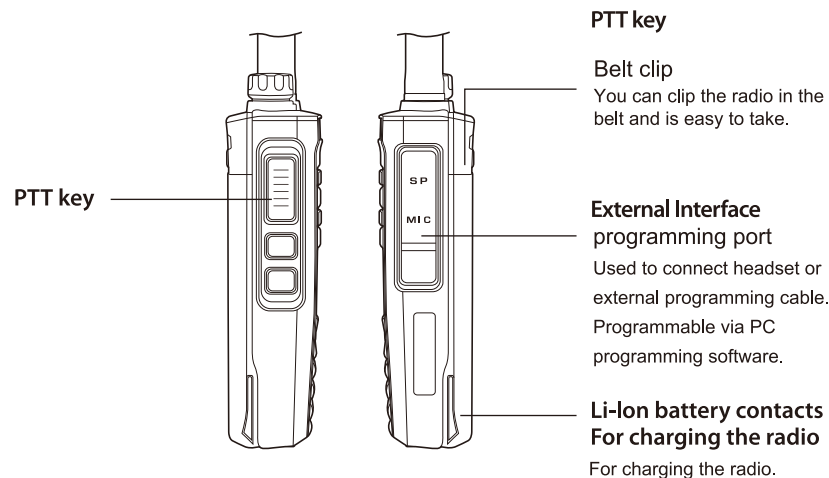
1

Getting Familiar Safety And Overview

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Getting familiar





Note: Long-press or short-press of Side Key 1/Side Key 2/Side Key 3 (Emergency alarm key) can be programmed by software for following functions: 1, unassigned 2, all Alert Tone on 3, Emergency On 4, Emergency Off 5, High/Low Power 6, Monitor 7, Nuisance Delete 8, One Touch Access 1 9, One Touch Access 2 10, One Touch Access 3 11, One Touch Access 4 12, One Touch Access 5 13, One Touch Access 6 14, Repeater/Talkaround 15, Scan On/Off 16, Privacy On/Off 17, Vox On/Off 18, Zone Select 19, Battery Indication 20, Lone Work On/Off 21, Phone Exit

Safety and Overview

Product safety and RF Exposure for handheld two way radio .



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 standard. Also read the operational instructions for safe use.

Overview

Turn on radio

Turn the volume control knob clockwise until you hear a "click" sound with a brief start-up tone. You will see a picture or the custom characters. The LED will blink green while the radio is starting up. Customer characters can be set in software.

Note: If the radio tone / prompt is disabled, there is no power on tone. To turn off the radio, turn the knob counterclockwise until you hear a "click" sound. Custom characters can be set in software.

Adjust the volume

Turn the volume control knob clockwise to increase the volume of radio. To decrease the volume, turn the knob counterclockwise.

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KEY

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Emergency Key (Orange button)

A. Software default configuration (programmable TK button: Short Press for emergency mode off, Long Press for emergency mode on), long press this button to enter emergency mode, short press to exit emergency mode. If the current channel is configured for digital mode and there is no emergency system configured in the radio, emergency system functionality will not work on this radio.

B. In addition this side key can also be configured into other side key functions in software, at this time long and short press this key according to the corresponding function.

Channel knob button

Turn the knob counterclockwise to decrease the channel number; a clockwise turn will increase the channel number by one. All the way counterclockwise will put the channel to one; all the way clockwise will be channel 16. Voice prompts will tell you what channel you are on.

Power / volume switch

Turn clockwise to turn radio on when the "click" is heard, and broadcast "power on 1 (current channel number)"; turn counterclockwise to the end, hear "click" to turn radio off; turn clockwise to increase the volume

Led Indicator

Transmit - red light

Receive - green light

And vice versa.

PTT button (transmit button)

Transmit and receive button, press this button while transmitting, and speak into the microphone; when receiving, release this button.

Side key 1 (near PTT button)

Software configure SK1 functions by long and short press.

A. Short press this key and release, start short press corresponding function;

B. long press this key to hear double tone 1 and release, start long press corresponding function.

C. Ultra long press this button the second time you hear double tone 2 and release, start zone setting.

Side key 2

Software configure SK2 functions by long and short press.

A. Short press this key and release, start short press corresponding function;

B. long press this key to hear double tone 1 and release, start long press corresponding function.

External interface

The external interface is used for microphone, ear phone, programming and to upgrade the radio.

Note: side keys can be configured for all following functions

Users can configure all following functions by long or short press sidekey, support for voice broadcast

No.	Function	Voice broadcast content	Description
1	All alert tone on/off	Function On broadcast content: tone on Function Off broadcast content: tone off	Allows users to disable all alert tones (key beep, call permit, and channel idle tone), except for an incoming emergency tone
2	Emergency on	Broadcast content: None	Allow users to set up emergency calls. This is the suggested option for the orange button. If the current digital channel is not equipped with emergency alarm system, emergency alarm can not be enabled
3	Emergency off	Broadcast content: None	Allow users to end emergency calls
4	High/low power	Power high or low	Switch current channel transmit power
5	Monitor	Function On broadcast content: squelch on Function Off broadcast content: squelch off	Allow users to turn on/off monitor
6	Nuisance delete	Broadcast content: None	Allows users to temporarily delete unwanted channels from scan list (except for the selected channel).
7	One Touch Access 1	Broadcast content: None	Allows users to make a call or send a message (for digital mode only) or make a DTMF call (for analog mode only)

8	One Touch Access 2-6	Broadcast content: None	Allows users to make a call or send a message (for digital mode only) or make a DTMF call (for analog mode only)
9	Repeater/Talkaround		Allow users to switch between repeater and talkaround
10	Scan on/off	Function On broadcast content: scan on Function Off broadcast content: scan off	Start or exit scan. If no scan list is configured for the current channel, the scan function can not be enabled
11	Privacy on/off	Function On broadcast content: privacy on Function Off broadcast content: privacy off	Allows users to turn on/off encryption
12	Vox on/off	Function On broadcast content: vox on Function Off broadcast content: vox off	Allows users to turn on/off vox function. Sound sensitivity is set by software
13	Zone select	Function On broadcast content: set on mode X Function Off broadcast content: Set off (to exit mode set)	Allow users to switch between zones. Switching method: A, ultra long press sidekey 1 to start zone switch (default setting); B, preset Zone Select by short/long press sidekey 1/2 in software and short/long press sidekey 1/2 to start zone switch, and at this moment, it broadcasts "set on mode x" (mode x is zone x and x is zone number). Short press side key 1: zone increase, and short press side key 2: zone decrease. Long press sidekey 1/2 to exit zone switch. Zone is temporary zone if without exit zone switch

14	Battery indicator	7.8V Broadcast content: PLEASE CHARGE THE BATTERY (on startup of radio in case battery is empty)	Check battery status. Broadcast current voltage and LED indicate, green indicates the battery is high, yellow indicates that the battery is OK, flashing red indicates the battery is low.
15	Lone worker on/off	Broadcast content: None	Allow users to turn of/off lone worker function
16	Phone exit	Broadcast content: None	Allow users to end phone call
17	Channel information	Broadcast content: channel x, Rx frequency 144.025, Tx frequency 144.025, block (slot) 1, color (color code) 0, ID code (radio ID) 1, high power (high or low)	Check the current channel information

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3

Operation

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3.1 digital call

A digital call channel can be configured for privacy by software, or fixed switch. Privacy can be turned on/off by side key.

3.1.1 Group call

Transmit: contact list of current channel configured by software sets group call number or side key one touch access to select group call contact, and press PTT to initiate the group call.

Receive: To receive a call from a user group, the radio must have the current channel configured to belonging to the talk group. When receiving a group call, the LED indicator is green. Hold the walkie talkie in a vertical position and keep it 1 to 2 inches (2.5 to 5.0 cm) from the mouth. Press [PTT] key to reply the call, the LED indicator is red. Release [PTT] key to answer. If there is no voice activity for a predetermined period of time, the call is terminated. If the "Channel Idle Tone" feature is enabled, the receiver will hear a short beep when radio releases [PTT] key, indicating that the channel is in use but unable to reply to group call.

3.1.2 All call

All call is a individual radio call to all radio on the channel. It is used to publish important notices that require special attention from users.

Transmit: contact list of current channel configured by software sets all call number or side key one touch access to select all call contact, and press PTT to initiate all call.

Receive: the LED indicator is green. If the "Channel Idle Tone" feature is enabled, the receiver will hear a short beep when radio releases [PTT] key, indicating that the channel is in use but unable to reply to all call.

3.1.3 Single call

Single call is an individual radio call to another individual radio.

Transmit: contact list of current channel configured by software sets single call number or side key one touch access to select single call contact, and press PTT to initiate single call.

NOTE: If software configure radio with "Confirmed Single Call" function of current channel, after press PTT first handshake communication with the other party. After handshake communication succeeds, single call can be initiated normally.

Receive: the LED indicator is green. Hold the walkie talkie in a vertical position and keep it 1 to 2 inches (2.5 to 5.0 cm) from the mouth. If the "Channel Idle Tone" feature is enabled, the receiver will hear a short beep when radio releases [PTT] key, indicating that the channel is free and waiting for a reply. Press [PTT] button to reply to the call, the LED is red. Release [PTT] key to answer.

3.2 Emergency alarm

Emergency alarm is used to indicate an emergency and you can initiate an emergency call at any time (even with activity on the current channel). Only digital mode support emergency alarm function.

Digital alarm

Initiate: press and hold the emergency key (orange key) for a long time to enter the alarm mode. Local alarm and wireless alarm command. The alarm mode (emergency alarm / emergency alarm with call / emergency alarm with voice) can be set.

Note:

Only when software equip radio with "emergency system" of current channel and contact of the reply channel of emergency alarm system is group call, the alarm system can work.

Receiving: After receiving the alarm command, the local alarm sound, press PTT key to exit to reply to the alarm.

3.3 Data DMR command

3.3.1 Short Message (Only GD-77 has, GD-77 does not have this function)

Initiate: In digital mode, the side key sets One Touch Access (set default message) function, enabling One Touch Access to send the message.

3.3.2 DTMF (optional function) DTMF call

Initiate: In digital mode, the side key sets One Touch Access (set DTMF call) function, enabling One Touch Access to send DTMF preset code.

Receiving: When software has configured DTMF for Rx signaling system of current channel, when the decoded codeword is DTMF personal ID code, the decoding is successful. During the resetting time, it can talk to the other party. The resetting time is up, it needs to be re-decoded. When codeword is for remote kill or wake, radio will be killed or waked.

PTT ID

Initiate: In analog mode, up code and down code can be configured by software, and up and down code can be enabled on analog channel. When up and down code is enabled, up code is sent each time when press PTT, and down code is sent when release PTT.

3.4 Scan

Scan on/off

Mode 1: Auto scan is enabled by software on current channel, radio will scan automatically when switch to this channel.

Mode 2: software configures current channel scan list valid, you can press side key (the side key set scan on/off) to start scan.

3.5 Firmware update (Warning: need operation Guide)

1. Turn off radio, insert programming cable;
2. Press side key 1 and side key 2 at the same time to turn on radio, the indicator light green, indicating that radio has entered the upgrade mode;
3. Start upgrade software "Update.exe"; select the corresponding serial port;
4. Click "Browse" to select the file to be upgraded (provided by the manufacturer), for example: XX_V1.0.0.sgl;
5. Click "Download" until download is successful.

WARNING: turning power off during firmware upgrade may result in making your radio inoperable. This may not be recoverable.

6. Unplug programming cable, turn off radio or reboot radio

Note: Firmware upgrade is only for experienced users and if not correctly operated it may lead to unrecoverable results.



Specification

Specification

General

Frequency range	136–174/400–470MHz
Channel	1024
Frequency stability	± 1ppm
Operating temperature	–30°C ~ + 60°C
Voltage	7.4V DC

Receiver

Analog sensibility	0.2 μ V @ 12dB SINAD
Digital sensibility	0.25uV(BER:5%)
Adjacent channel selectivity	≤ –60dB@12.5KHz
Co-channel rejection	≥ 65dB
Spurious response	≥ 70dB
Audio response	+1 ~ –3dB
Rated audio distortion	<5%
Audio power	1W
Modulation noise	≥ 45dB@25KHz / ≥ 40dB @12.5KHz

Transmitter

Power	High:5W Low:1W
Transmit current	Analog≤1.6A Digital≤0.9A
Standby current	0.15A
FM modulation mode	11K0F3E @ 12.5KHz 14K0F3E @ 20KHz 16K0F3E @ 25KHz
4FSK digital mode	12.5KHz Data only; 7K60FXD 12.5kHz Data and voice; 7K60FXW
Modulation distortion	<5%
Hum and noise	≥ 45dB@25KHz / ≥ 40dB@12.5KHz
Adjacent channel power	≤ –60dB@12.5KHz
Audio response	+1 ~ –3dB
Antenna port spurious	9KHz–1GHz: ≤ –36dBm 1GHz– 12.75GHz: ≤ –30dBm
Digital protocol	ETSI–TS102 361–1,–2,–3