

ZTE

PH400 U(1)

QUICK START GUIDE

DIGITAL HAND-HELD TERMINAL

Legal Information

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Caution

Output power listed is rated conducted. This device must be restricted to work-related operations only in an Occupational/Controlled RF exposure environment and must operate with a duty factor not exceeding 50%. 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. All qualified end-users of this device must have the knowledge to control their exposure conditions and/or duration to comply with occupational/controlled Exposure limit and requirements. The highest reported SAR values for Face-held, body-worn and simultaneous transmission conditions are 1.18 W/Kg, 2.18 W/Kg

1. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
2. Adapter shall be installed near the equipment and shall be easily accessible.
3. The device operating temperature range is -20~40°.
4. The plug considered as disconnect device of adapter.
5. The device complies with RF specifications when the device used at 25mm form your front face and 0mm form your body to antenna.

6. Declaration of Conformity
Hereby,ZTE TRUNKING TECHNOLOGY CORPORATION declares that this UHF Digital Portable Radio product is in compliance with essential requirements and other relevant provisions of Directive 2014/53/EU.



Get Started

Please read the following information before your operation:

How to use this manual?

What will your agent/system administrator tell you?

How to use this manual?

For details, refer to the descriptions provided in the following sections.

What will your agent/system administrator tell you?

You can consult your agent or system administrator about the following:

- Is your PH400 configured with a preset channel?
- Which buttons can access other functions?
- Which optional accessories are applicable to your demand?

This manual describes the basic operations of the PH400. However, your agent or system administrator may customize your PH400 based on your application. For details, contact your agent or system administrator.

Ready to Use the HT

Perform the following steps to assemble your HT:

Charge the battery.

Install the battery.

Install the antenna.

Install the belt clip.

Power on.

Adjust the volume.

Charge the Battery

The PH400 is powered by a Li-ion battery. To avoid damage and comply with the warranty terms, you can charge the battery only with the charger included with the PH400.

Install the Battery

Align the battery with the battery seat on the back of the PH400 and forcibly press the battery into the PH400 until the locker properly locks. To remove the battery, power off the PH400 and press the locker of the battery until the battery separates from the battery seat.

Install the Antenna

Power off the PH400, insert the antenna into the mounting hole, and turn it clockwise. To remove the antenna, turn the antenna counterclockwise. Make sure that the PH400 is powered off before removing its antenna.

Install the Belt Clip

Align the screw hole in the belt clip with that on the back of the PH400 and tighten the belt clip with the screw.

Power on

Turn the **On/Off/Vol** knob clockwise until a click and then a prompt tone are heard, indicating that the power-on test is successful.

Note:

If the tone/prompt function of the PH400 is disabled, no power-on prompt tone can be heard. You can enable/disable the prompt tone on the programming software. If the PH400 fails to be powered on, check the battery. Make sure that the battery is properly charged and correctly installed.

If the problem persists, contact your agent. To power off your PH400, turn the knob counterclockwise until a click is heard.

Adjust the Volume

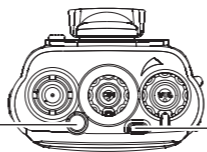
To turn up the volume, turn the **On/Off/Vol** knob clockwise. To turn down the volume, turn the **On/Off/Vol** knob counterclockwise.

HT Control

Please read the following carefully:

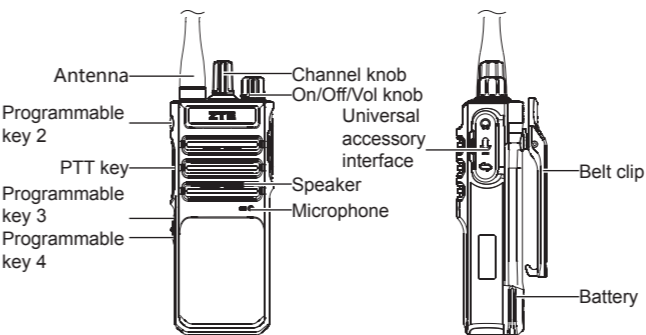
- HT control options
- Programmable buttons
- PTT button

HT Control Options



Programmable key 1 LED indicator

Front and Side Views of the HT



Programmable Keys

Your agent can set the programmable keys as the shortcut keys or preset channel or call groups.

Functions That Can Be Allocated

- Emergency call: initiates an emergency alarm or call in accordance with programming.
- PTT call: initiates a portable radio call.
- Voice control: enables or disables the VOX function.
- Power switchover: switches over the transmit power level between the high and low power.
- Squelch: enables or disables the squelch function.
- Remote kill: remotely powers off the PH400.
- Remote activation: remotely powers on the PH400.
- Area switchover: changes the current area of the PH400. There are two areas available for the PH400.
- Remote listening: remotely listens to the activities of the PH400.
- Talkaround switch: enables or disables the Talkaround mode.
- Remote detection: checks whether the peer device is operating.
- Scanning on/off: enables or disables scanning.
- Shortcut call key 1~5: initiates a group call or a private call and sends preset short messages with a shortcut key.

PTT Key

Each channel in the PH400 can be individually configured as a digital/analog channel.

- During a call, the PTT key can allow the PH400 to transmit signals to other portable radios in the call. You can press and hold the PTT key to transmit a call and release the PTT key to receive a call. When the PTT key is pressed, the microphone is activated.
- When a call is terminated, the PTT key can initiate a new call. For details, refer to the "Initiating a Portable Radio Call" section on Page 7.
- When you release the PTT key to terminate a call, you can hear a beep. You can switch off the channel idle prompt by disabling all PH400 tones and prompts. You can enable/disable the prompt tone on the programming software.
- Channels can be switched over by the channel selection knob.

Status Indicators

The PH400 indicates its operational status in the following ways:

LED indicators

Prompt tones

LED Indicators

The LED indicators show the operational status of the PH400.

- Red on: The PH400 is transmitting signals, sending short messages, and encrypting calls or data.
- Green on: The PH400 is powering on, receiving signals or short messages, and encrypting calls or data.
- Flashing orange: The PH400 is scanning.

Note:

You can enable or disable the following indicators on the programming software: transmission indicator, receiving indicator, scanning indicator, channel switchover indicator, power-on indicator, and carrier indicator.

Prompt Tones

The prompt tones provide voice prompts of the device status or data reception responses. You can enable or disable the related prompt tones on the programming software.

- Digital single-call tone: A beep can be heard when the PTT key is pressed.
- Digital group-call tone: A beep can be heard when the PTT key is pressed.
- Analog call tone: No beep can be heard when the PTT key is pressed.
- Call end tone: A toot can be heard.
- Key pressing tone: A beep can be heard.
- Power-on tone: A continuous tone can be heard.
- Transmission termination tone: Repeated thuds can be heard until you release the PTT key.
- Low-battery alarm tone: Repeated tones can be heard when the battery voltage is low. You can set the duration on the programming software.

Receiving and Initiating a Call

After configuring the following function, you can use your PH400.

Selecting a Zone

A zone is a channel group. The PH400 supports up to two zones. One zone supports up to 16 channels. (The PH400 supports up to 32 channels.)

Procedure:

1. Press the pre-programmed zone conversion key.
2. The LED indicator flashes green once, indicating that the current zone is zone 1. If the LED indicator flashes red once, it indicates that the current zone is zone 2. The PH400 reports the current channel ID.

Selecting the PH400 Channel, User ID, or Call Group ID

Procedure:

Turn the channel selection knob to select the PH400 channel ID and user ID or call group ID.

Accessories

Your PH400 is compatible with the accessories listed in the following table. For details, contact your agent.

Antenna

Battery

Smart charger

Power adapter

Belt clip

Earphone (optional)

ZTE Parking List		
Name	Model/Specification	Quantity
Portable radio	PH400 U(1)	1
Antenna	AF512	1
Li-ion battery	AB400	1
Smart charger		1
Power adapter		1
Belt clip		1
Quick start guide		1

Receiving and Answering Calls

Receive or answer calls after the PH400 channel ID and user ID or call group ID are selected.

When the PH400 transmits a call, the LED indicator is red on. When the PH400 receives a call, the LED indicator is green on.

Receiving and Answering a Group Call

To receive a call from a user group, the PH400 must be configured to be a member of the group.

1. When the PH400 receives a group call, the LED indicator flashes green.
2. Hold the PH400 vertically and one to two inches (2.5 cm to 5.0 cm) away from your mouth. Press and hold the **PTT** key and talk to the microphone after the LED indicator is red on.
3. Release the **PTT** key to receive the call.
4. If no voice is transmitted and received in a specified time, the call is terminated.

Receiving and Answering a Private Call

A private call is the call from an individual portable radio to another portable radio.

When you receive a private call:

1. The LED indicator flashes green.
2. Hold the PH400 vertically and one to two inches (2.5 cm to 5.0 cm) away from your mouth. Press and hold the **PTT** key and talk to the microphone after the LED indicator is red on.
3. Release the **PTT** key to receive the call.
4. If no voice is transmitted and received in a specified time, the call is terminated.

Receiving a General Call

An all-call is the call from an individual portable radio to all portable radios on the channel. It is used to release the important notices that need users' special concern.

When you receive an all-call:

1. The PH400 beeps (if the prompt tone is turned on) and the LED indicator flashes green.
2. If no voice is transmitted and received in a specified time, the call is terminated.

Notes:

- You cannot answer an all-call.
- If you are handed over to another channel when you are receiving an all-call, the PH400 stops receiving this all-call. During an all-call, you cannot use any pre-programmed key until the call is terminated.

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Restrictions are valid for the European country

Restrictions are valid for the following countries:

France (FR) , United Kingdom (UK) , Italy(IT) , Ireland (IE) , Portugal (PT) , Luxembourg (LU) ,Bulgaria(BG) ,Latvia (LV),Czech Republic (CZ) , Denmark(DK) ,Estonia(EE) ,Lithuania(LT) , Hungary(HU) ,Netherlands(NL) ,Austria(AT) , Poland(PL) ,Romania (RO) ,Slovakia(SK) , Finland(FI) , Sweden(SE).

Technical Specification

Digital protocol: ETSI TS 102 361-1, -2, -3

Frequency Range: UHF:400-470MHz

Channel capacity: 32

Channel spacing: 12.5KHz/25KHz

Frequency stability: ±1.0ppm

Operating Voltage: 7.4V

Sensitivity (Analog) : 0.22uV (12dB SINAD)

Sensitivity (Digital) : 0.22uV (5% BER)

FM modulation: 12.5KHz (11K0F3E)/ 25KHz (16K0F3E)

4FSK digital modulation: 12.5KHz for Data (7K60F1D&7K60FXD)
12.5KHz for Voice (7K60F1E&7K60FXE)
12.5KHz Voice and Data (7K60FXW)

Engineering personnel setting up those frequency ranges whit Customer Programming Software(CSP), the mechanism implemented in the product to avoid the end user to managing changes in the definition of operating frequency ranges in order to avoid usage of un-allowed frequency ranges.

Country	Frequency Range(MHz)	Max. Transm. power (W)
Germany(DE)	406.1-430 ,440-470	4
France (FR)	406.1-430,444.5-447, 451.5-460, 461.5-470	4
United Kingdom (UK)	410-430 ,440-470	4
Italy(IT)	440-443,445-470	4
Greece(EL)	406.1-430 ,440-470	4
Spain(ES)	406.1-430 ,440-470	4
Ireland (IE)	410 - 430,440 - 455, 456 - 459,460 - 470	4
Belgium(BE)	406.1-430 ,440-470	4
Croatia (HR)	406.1-430 ,440-470	4
Cyprus (CY)	406.1-430 ,440-470	4
Portugal (PT)	440-470	4
Malta(MT)	406.1-430 ,440-470	4
Luxembourg (LU)	410-430,440- 470	4
Bulgaria(BG)	410 -430,440-470	4

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Technical Specification

Latvia (LV)	406.1-430,440-450,456 -470	4
Slovenia(SI)	406.1-430 ,440-470	4
Czech Republic (CZ)	448 - 451.3 ,457.38 - 461.3 ,467.38 - 470	4
Denmark(DK)	406.1-430 , 450 - 470	4
Estonia(EE)	406.1 - 410,412.5 - 420 , 422.5-430 ,440 - 442.5, 443 - 450,446 -446.2,450 -453 ,457.575 - 463,467.575 - 470	4
Lithuania(LT)	406.1 - 410 , 413 - 418.6 ,423- 428.6 ,440 - 450 , 450 - 452.9875 ,458.1125 - 462.9875 ,467.4875 - 467.5875	4
Hungary(HU)	417 - 420,442 - 445,456 - 460, 461.3 - 470	4
Netherlands(NL)	410 -430,440-470	4
Austria(AT)	444.9 - 444.900001, 450 - 456, 457.33 - 457.330001, 457.45 - 458.3,460 -470	4
Poland(PL)	448 - 449.5,457 - 460,467 - 470	4
Romania (RO)	408 - 410.8,415 - 420.8,425 - 429.8, 440 - 450.55, 457.5 - 458.2, 460 - 460.55,467.5 - 468.2	4
Slovakia(SK)	441.025 - 451.31,455.73 - 461.31,465.73- 470	4
Finland(FI)	407.525 - 408.55,410.0125 - 410.8875,417.525 - 417.9, 420.8875,426.35 - 427.5,427.525 - 427.9, 429.15 - 419.15 - 419.525,419.55625 - 419.71875,420.0125 - 429.525,429.55625- 429.71875,440.0125 - 440.5875, 440.60625 - 440.89375,442.775 - 443, 443.025 - 444, 444.025 - 444.525,444.55 - 444.975,445 - 446, 447.00625 - 447.29375,447.30625 - 447.70625, 449.025 - 449.525,449.55 - 449.975, 450.325 - 452.475, 452.525 - 452.975,453.0125 - 453.6625,469.725 - 469.975	4
Sweden(SE)	406.1 -430, 442 - 444,444.5875 - 452.5, 457.5 - 462.5,467.5 - 470	4

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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.

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