**Manuals+**

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**Contents** [ hide ]

# Hytera S1 Business Two Way Radio

## Specifications

| Item | Description |
|---|---|
| Model | HYT-S31 |
| Dimension (H x W x D) (without antenna and belt clip) | 108 mm x 53 mm x 20 mm |
| Weight (with stand ard battery, antenna , and bet clip) | 145 g |
| Battery | 2,200 mAh |
| Operating Voltage | 3.8 V |

| | |
|---|---|
| Operating Temperature | –20°C to 55°C |
| Storage Temperature | –30°C to 70°C |
| Charging Port | USB Type-C |
| Audio Jack | 3.5 mm |
| BT | l   BLE<br><br>l   LE |
| Channel | 48 |

## Product Usage Instructions

**Power On / Off and Volume Adjustment:**

To power on, press and hold the Power Button until the LED lights up. To power off, repeat the same process until the LED fades. Adjust the volume by tapping the Volume Up or Volume Down Buttons.

**Changing Channels and Transmitting:**

Rotate the Channel Selector knob to change channels or use programmable keys via the app. To transmit, hold the PTT (Push-to-Talk) Button and speak 2.5 to 5 cm from the microphone. Release the PTT button to switch to receiving mode.

**Receiving Calls and Private Communications:**

Use the earpiece supplied by plugging it into the audio jack for private communications. Receive calls by being in receiving mode after releasing the PTT button.

**Charging and Battery Information:**

Charge the device via the USB C port. The orange LED will flash during charging and turn steady green when fully charged. The battery can last up to 18 hours of continuous

use or up to 100 hours on standby.

**Additional Features:**

- Headset Audio
- Battery Charge LED Indicators
- Voice Notifications for channel and battery info
- Radio Clone & Channel Copy for fleet setup
- Coloured labels for visual radio distinction

**Preface**

- Welcome to the world of Hytera and thank you for purchasing this product. This manual includes a description of the functions and step-by-step procedures for use.
- To avoid bodily injury or property loss caused by incorrect operation, please carefully read the Safety Information Booklet before use.
- This manual is applicable to the following product:
- S1 Two-way Radio

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**ISED Compliance Statement**

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

IC SAR Statement

- Transmit no more than the rated duty factor of 50% of the time. To transmit (talk), push the Push-To-Talk (PTT) key.
- To receive calls, release the PTT key. Transmitting 50% of the time or less, is important because the radio generates measurable RF energy only when transmitting (in terms of measuring for standard compliance).
- Keep the radio unit at least 2.5 cm away from the face. Keeping the radio at the proper distance is important as RF exposure decreases with distance from the antenna. The antenna should be kept away from the face and eyes.
- When worn on the body, always place the radio in a Hytera-approved holder, holster, case, or body harness or by use of the correct clip for this product. Use of non-approved accessories may result in exposure levels which exceed the ISED's

occupational/controlled environmental RF exposure limits.

- Use of non-approved antennas, batteries, and accessories causes the radio to exceed the ISED RF exposure guidelines.
- Contact your local dealer for the optional accessories of the product.

⚠️ CAUTION Device must be restricted to occupational use to satisfy ISEDC RF exposure compliance. See User Manual for specific operating requirements.

**Documentation Information**

Documentation Conventions Instruction Conventions

| Icon | Description |
|---|---|
| 💡 TIP | Indicates information that can help you make better use of your product. |
| ✏️ NOTE | Indicates references that can further describe the related topics. |
| ⚠️ CAUTION | Indicates situations that could cause data loss or equipment damage. |
| ⚠️ WARNING | Indicates situations that could cause minor personal injury. |
| ⚠️ DANGER | Indicates situations that could cause major personal injury or even death. |

**Notation Conventions**

| Item | Description | Example |
|---|---|---|
| **Boldface** | Denotes menus, tabs, parameter names, window names, dialogue names, and hardware buttons. | To save the configuration, click **Apply**. |
| | | The **Log Level Settings** dialogue box appears. |
| | | Press the **PTT** key. |
| | | The screen displays "Invalid Battery!". |

| " " | Denotes messages, directories, file names, folder names, and parameter values. | Open "PSS.exe". |
|---|---|---|
| | | Go to "D:/opt/local". |
| | | In the **Port** text box, enter "22". |
| > | Directs you to access a multi-level menu. | Go to **File** > **New**. |
| *Italic* | Denotes document titles. | For details about using the DWS, refer to *Dispatch Workstation User Guide*. |
| Courier New | Denotes results. | commands and their execution | To set the IP address, run the following command:<br><br>vos-cmd – m name IP |

**Key Operations**

| Operation | Description |
|---|---|
| Press | Press and release quickly. |
| Long press | Press and hold for preset time. |
| Press and hold | Keep the key pressed. |

**Packing List**

Unpack carefully and check that you have received the following items. If any item is missing or damaged, contact your dealer.
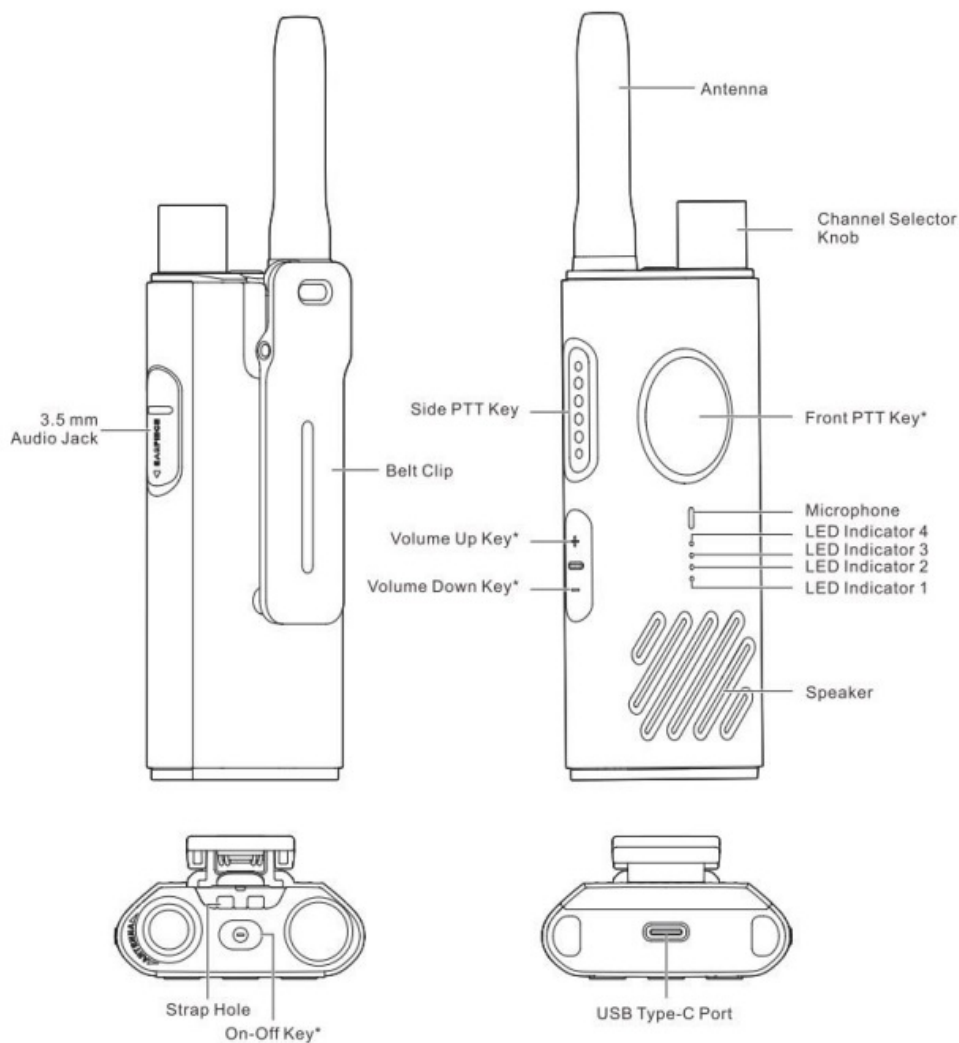
| Item | Quantity (PCS) | Item | Quantity (PCS) |
|---|---|---|---|
| Radio | 1 | Battery | 1 |
| Antenna | 1 | Strap | 1 |
| Power Adapter | 1 | USB Type-C Cable | 1 |
| Documentation Kit | 1 | / | / |

**NOTE**

- Figures in this manual are only for reference.
- Check that the radio label in the battery slot matches the product you bought. If not, contact your dealer.

## Product Overview

### Product Layout

## Programmable Keys

For convenience, you can assign the On-Off key, Volume Up key, Volume Down key, and Front PTT key as shortcuts to radio features through the Hytera Radio app.

| Feature | Description |
| --- | --- |
| Power Level Adjustment | Allows you to set the TX power level to high or low. |
| Monitor | Allows you to switch between Monitor Squelch Mode and Receive Squelch Mode. |

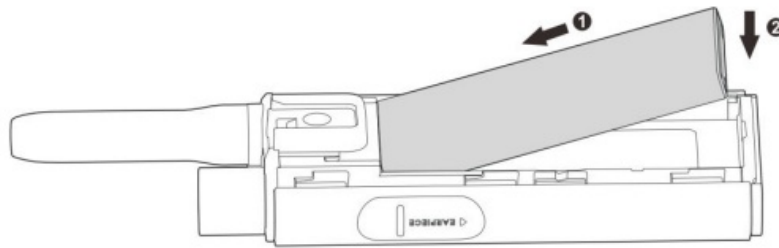| Feature | Description |
| --- | --- |
| Scan | Allows you to enable or disable Scan. |

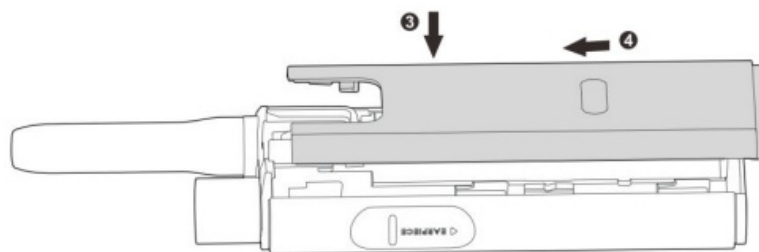| Squelch Off | Allows you to enable or disable Squelch Off. |
|---|---|
| VOX | Allows you to enable or disable VOX. |
| Channel List Switch | Allows you to switch the channel list. |
| Talkaround | Allows you to switch between Direct Mode and Repeater Mode |
| One-Touch Ultrahigh Power | Allows you to enable or disable Ultrahigh Power. |
| CH and Battery Voice Notification | Allows the radio to audibly convey channel and battery level. |
| Mute Mode | Allows you to enable or disable Mute Mode. |
| Super Power Saver | Allows you to enable or disable Super Battery Saver. |
| Follow PTT | Allow the **Front PTT** key to mirror the function of the **Side PTT** key. |
| C-N, H-N, L-N, Z1-N, Z2-N, and Z3-N | Allows you to initiate a call to specific channel by pressing the **Front PTT** key. |

# Before Use

## Attach the Battery

### CAUTION

1. Use the approved battery to avoid the risk of explosion.
2. Dispose of the used battery according to "Precautions for Disposal" in the Safety
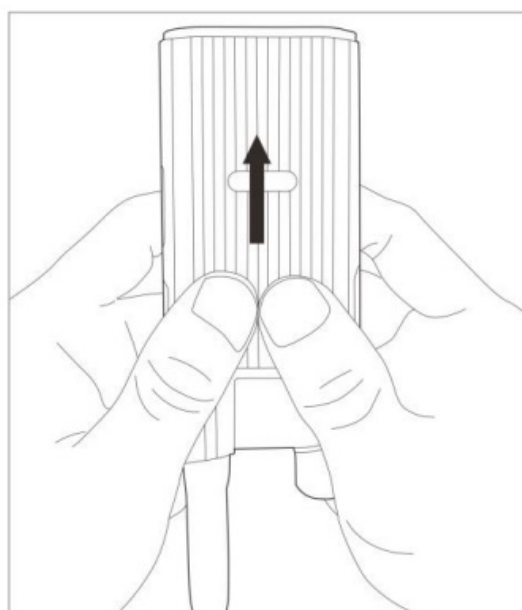
Information Booklet.



1. Press the battery cover backwards to remove the cover.
2. Align the battery contacts with the tabs in the battery compartment, and then press the bottom of the battery downwards.
3. Place the hooks of battery cover to the slots, and then push the battery cover upwards until you hear a click.



**Remove the Battery**

1. Turn off the radio.
2. Push the battery cover downwards to remove the cover.
3. Remove the battery.

## Charge the Battery



- Use the adapter approved only by the Company.
- Read the Safety Information Booklet before charging.
- The remaining lithium-ion battery power is limited to 30% pursuant to the new lithium battery shipment regulation approved by the International Air Transport Association (IATA).

Use the USB Type-C cable to connect the radio with battery attached to the power adapter, power bank, or PC. You can learn about the charging status through the LED indicators.

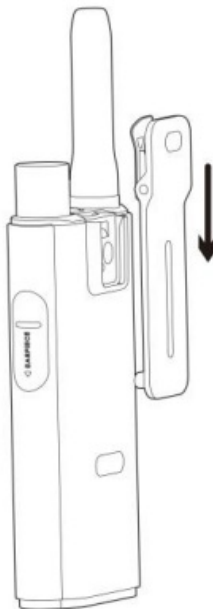| LED Indicator | Charging Status |
|---|---|
| Four LED indicators glow red | The battery is being charged. |
| Four LED indicators flash red rapidly | The battery fails to be charged. |
| Four LED indicators glow green | The battery is fully charged. |

## Install the Antenna

CAUTIONDo not hold the radio by the antenna and swing it; otherwise, the antenna may perform improperly or have a shorter life span.

## Attach the Belt Clip

1. Align the belt clip tab with the groove on the back of the radio.
2. Press the belt clip downwards into place.



**NOTE**

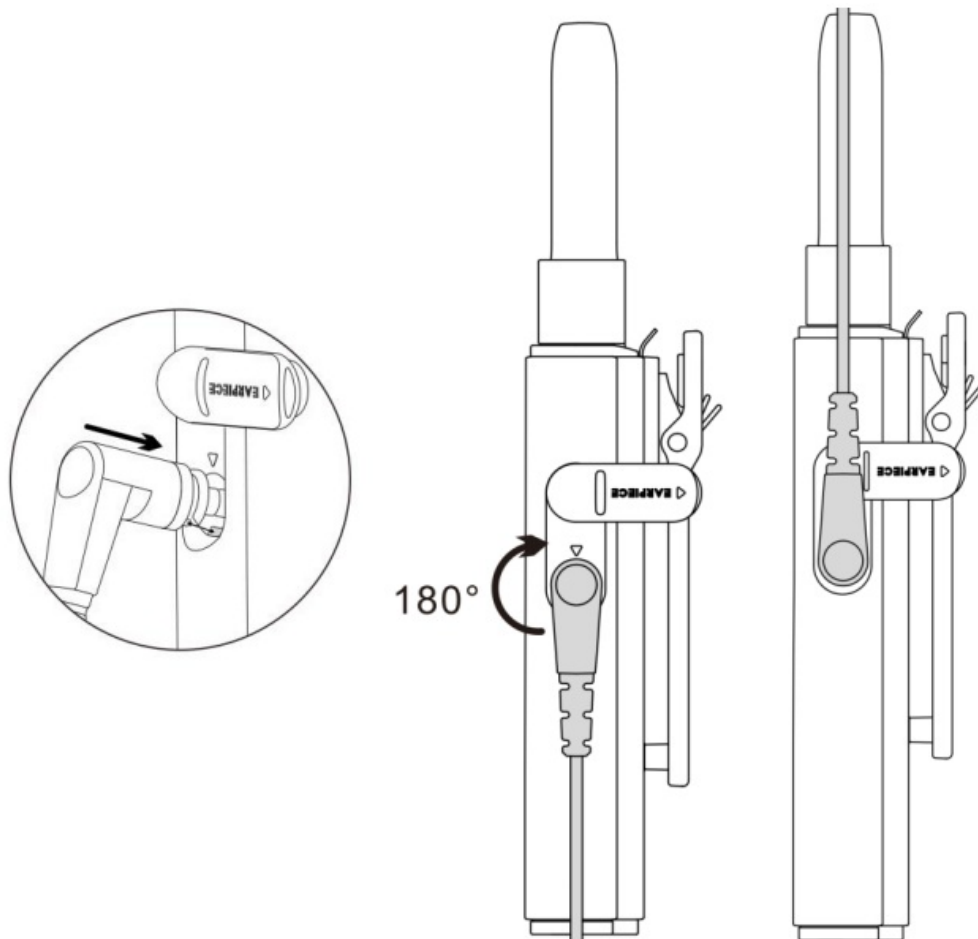- You can press and hold the spring plate of the belt clip and push the belt clip upwards to remove it.
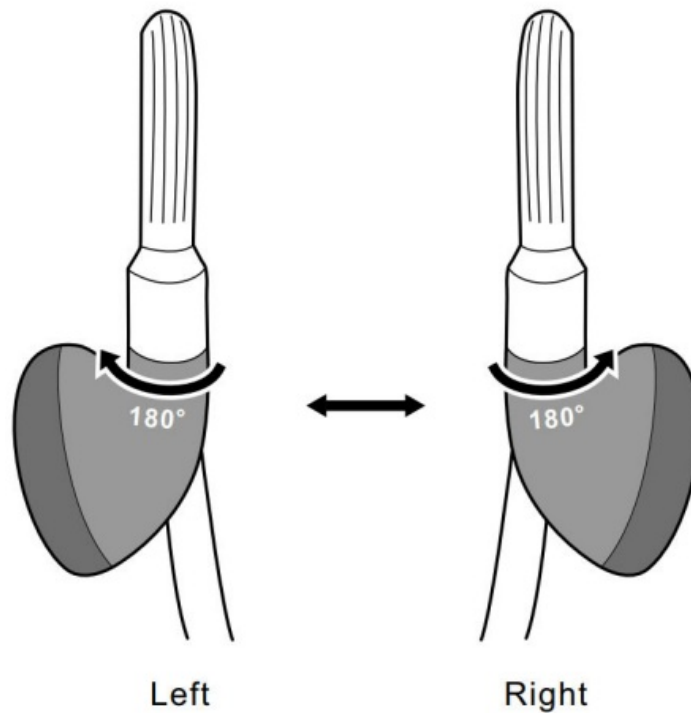
**Wear the Earpiece**

1. Insert the earpiece plug into the audio jack, and then rotate the plug clockwise by 180°.



2. Rotate the earbud to fit to your left or right ear.

Left          Right

## Basic Operations

### Turn On or Off the Radio

Long press the On-Off key.

### Adjust the Volume

Press the Volume Up key to increase the volume, or Volume Down key to decrease the volume.

### Switch the Channel List

To switch the channel list, press the preprogrammed Channel List Switch key.

### NOTE

You can add, modify, or delete channel through the Hytera Radio app.

### Make a Call

To ensure optimal voice quality on the receiving radio, keep the microphone about 2.5 cm to 5 cm away from your mouth during speaking.

- Rotate the Channel Selector knob to select a channel, and then press and hold the Side PTT key.
- If you assigned a channel to the Front PTT key, press and hold the Front PTT key to

initiate a call on the assigned channel.

**NOTE**

If no channel is assigned to the Front PTT key, the Front PTT key works in the same way as the Side PTT key.

**Check the Battery Power**

- Press the preprogrammed CH and Battery Voice Notification key.
- You can learn about the remaining battery power through the LED indicators and Text To Speech (TTS).

| LED Indicator | TTS | Battery Level |
|---|---|---|
| Four LED indicators glow green | High battery power | High |
| l  LED indicators 1, 2, and 3 glow green<br><br>l  LED indicators 1 and 2 | Medium battery power | Medium |

| LED Indicator | TTS | Battery Level |
|---|---|---|
| glow green | | |
| LED indicator 1 glows green | Low battery power | Low |

**Operating Status**

You can learn about the radio status through the LED indicators.

| LED Indicator | Radio Status |
|---|---|

| | | |
|---|---|---|
| Four LED indicators | Flash green once every 0.2s for three times | The radio is being turned on. |
| | Flash red once every 0.2s | l The radio is being programmed.<br><br>l The radio is being written clone data. |
| LED indicator 1 to indicator 4 in turn | Flashes red | l The radio is transmitting.<br><br>l The radio is ready to send clone data. |
| LED indicator 4 to indicator 1 in turn | Flashes green | l The radio is receiving.<br><br>l The radio is ready to receive clone data. |
| LED indicator 4 | Flashes orange once every 3s | l The radio is scanning.<br><br>l The radio fails to clone from other radios. |
| | Flashes orange once every 0.2s for 5s | The radio receives connection request from the Hytera Radio app. |

| | Flashes red once every 0.2s for 5s | The radio is being searched by the Hytera Radio app. |
|---|---|---|
| LED indicator 1 | Flashes red once every 0.5s for 1 min | The battery power is low. |

**Supplementary Services**

**Mute Mode**

Mute Mode allows the radio to remain completely silent, muting all sounds including voice during a call. In this mode, the radio only output sound through the earpiece.

To enable or disable Mute Mode, press the preprogrammed Mute Mode key.

**Power Level**

- Power Level allows you to set the TX power level to high or low. High power enables communication with radios far away from you but consumes more battery power. Low power enables communication with radios close to you and saves battery power.
- To adjust the power level, press the preprogrammed Power Level Adjustment key.

**NOTE**

- The TX power of license-free channel is 0.5 W, and cannot be adjusted.

**One-Touch Ultrahigh Power**

- One-Touch Ultrahigh Power allows you to adjust the TX power of licensed channel to ultra-high (3.5 W), which enhances signal strength and extends communication range.
- To adjust the power level to ultra-high, press the preprogrammed One-Touch Ultrahigh Power key.

**The power level is adjusted to original level in any of the following cases:**

- The preprogrammed One-Touch Ultrahigh Power key is pressed again.
- The current call ends.
- The radio is restarted.

**VOX**

- Voice Activated Transmit (VOX) allows the voice to trigger transmission. When the voice detected by the microphone reaches the value to trigger the transmission, the radio automatically transmits the voice without the Side PTT key pressed. VOX Gain preprogrammed through the Hytera Radio app is used to control the sensitivity of microphone transmission.
- To enable or disable VOX, press the preprogrammed VOX key.

**Radio Clone**

Radio Clone allows you to copy configuration data of a radio to another radio. The cloning data do not include radio ID, BT alias, and voice notification files.

**NOTE**

Radios in low battery power cannot enter Radio Clone mode.

**Before Clone**

**NOTE**

It is recommended that only one radio is cloned at a time.

- Prepare radio A (to be cloned) and radio B (to receive the cloned data).
- Make sure the two radios have enough battery power.
- Switch the radio A and the radio B to Radio Clone mode.

| Radio | Operation |
| --- | --- |

| | |
|---|---|
| Radio A | 1.      Turn off the radio.<br><br>2.      Press the key combination **Volume Up** and **On-Off** until the radio turns on and the LED indicators flash red.<br><br>The radio A enters Radio Clone mode. If no radio clones data from the<br><br>radio A in five minutes, it automatically exits Radio Clone mode. |
| Radio B | 1.      Turn off the radio.<br><br>2.      Press the key combination **Volume Down** and **On-Off** until the radio turns on and the LED indicators flash green.<br><br>The radio B enters Radio Clone mode. |

**During Clone**

When the radio B receives configurations from the radio A, the radio B audibly notifies "Receiving Data", and the LED indicator flashes red rapidly.

**After Clone**

- When the radio B successfully clones configuration from the radio A, the radio B audibly notifies "Succeeded". Long press the On-Off key to turn off the radio B.
- When the radio B fails to clone configuration from the radio A, the radio B audibly notifies "Failed". Long press the On-Off key to turn off the radio B. When the radio B restarts, it recovers to the original configuration.

**Channel Copy**

Channel Copy allows you to copy channel information from any radio in the same frequency to the S1 quickly.

**NOTE**

- Do not copy information of an empty channel.
- To avoid interference, make sure only one radio can be copied at a time.
- During channel copy, keep the distance between two radios within one meter.

1. **Set the S1.**
    - a. On the S1, select a channel, and then turn off the S1.
    - b. Press the key combination Side PTT and On-Off until the S1 turns on and the LED indicators flash green. The S1 enters Channel Copy mode.
2. **Set the other radio.**
    - a. Turn on the radio.
    - b. Select a channel, and then press the PTT key.
    - The S1 searches the other radio, and copies channel information from that radio. When channel copy is complete, the S1 dings.
3. (Optional) To copy other channel information:
    - a. On the S1, select a new channel.
    - b. On the other radio, press the Side PTT key.
4. To exit Channel Copy mode, restart the S1.

**Scan**

- Scan allows you to listen to activities on other channels, keeping track of your team members.
- To enable or disable Scan, press the preprogrammed Scan key.
- With Scan enabled, the radio scans according to the scan list preset for the current channel, during which the LED indicator 4 flashes orange slowly. When detecting activities on a channel, the radio stays on the channel and the LED indicator 4 glows green.

**Monitor**

Monitor allows the radio to receive more signals including weak signals, and helps you

to recognize weak voices in the speaker.

To switch between Monitor Squelch Mode and Receive Squelch Mode, press the preprogrammed Monitor key.

**Squelch Off**

- Squelch Off keeps the speaker unmuted regardless of whether carrier exists, during which the radio sounds background noise.
- To enable or disable Squelch Off, press the preprogrammed Squelch Off key.

**Talk Around**

- Talk Around allows you to continue communication in direct mode when the repeater malfunctions or your radio is out of the coverage of the repeater.
- To switch between Direct Mode and Repeater Mode, press the preprogrammed Talkaround key.

**Super Power Saver**

- Super Power Saver allows you to prolong the battery life significantly.
- To enable or disable Super Power Saver, press the preprogrammed Super Power Saver key.

**NOTE**

Super Power Saver mode may increase delay for call initiation and establishment.

**Hytera Radio App**

- You can program the radio through the Hytera Radio app.
- To download and install the Hytera Radio app on your Android phone, scan the QR code.

**NOTE**

It is recommended that you install the Hytera Radio app on the phone running Android 9.0 or later.

## Troubleshooting

| Phenomena | Analysis | | | | Solution |
|---|---|---|---|---|---|
| The radio cannot be turned on. | The battery may be installed improperly. | | | | Remove and reattach the battery. |
| | The battery power may have run out. | | | | Recharge or replace the battery. |
| | The battery may suffer from poor contact caused by dirtied or damaged battery contacts. | | | | Clean the battery contacts. |
| The keys do not work. | The keys may temporarily. | fail | to | function | Restart the radio. |
| | The keys may be damaged. | | | | Contact your dealer or technicians of the Company for maintenance. |
| The indicators abnormal. | LED are | The indication may be abnormal. | | | Restart the radio. |
| | | The LED indicators may be damaged. | | | Contact your dealer or technicians of the Company for maintenance. |

| | | |
|---|---|---|
| During receiving, the voice is weak, discontinuous, or totally inactive. | The signal may be weak. | l  Make sure that the radio is within the signal coverage.<br><br>l   Make sure that the antenna is installed. |
| | The volume may be low. | Increase the volume. |
| | The speaker may be blocked or damaged. | Clean the surface of the speaker. |
| The battery fails to be charged. | The power adapter plug may be inserted into the socket improperly. | Reinsert the power adapter to the socket. |
| | The USB Type-C connected. · cable · may · be poorly | | Reconnect the USB Type-C cable. |

If the above solutions cannot fix your problems, or you may have some other queries, please contact us or your local dealer for more technical support.

**Radio Care**

To guarantee optimal performance as well as a long service life of the radio, follow the tips below.

**Care**

**Radio**

- Do not disassemble the radio.
- Do not throw, crack, or hammer the radio.
- Do not pierce or scrape the radio, espeically the interfaces.

- Do not expose the radio to the extreme temperature (lower than–20°C or higher than 55°C).
- Keep the radio away from substances that can corrode it.
- Close the audio jack cover when no accessory is in use.

**To avoid liquid penetration into the radio, follow the tips below:**

- Do not expose the radio to the environment with high humidity.
- Keep the radio away from salty water, ionized water, alcoholic beverage, lotion, or other impure water.
- Before connecting the accessory or power adapter to the radio, ensure the radio and the interface are dry.

**If the radio has been wet, follow the tips below:**

- Do not turn on the radio.
- Do not connect the accesory or power adapter to the radio.
- Do not dry the radio by microwave, hair dry, or other external heat sources.
- Do not insert the cotton buds or tissue into the interface.
- Use the clean and soft cloth to dry the water on the radio surface, and then put the radio to the well-ventilated place until it is dry.

**Battery**

To guarantee optimum performance as well as a long service life of the battery, follow the tips below:

- Use the approved power adapter to charge the battery.
- Keep the radio turned off during charging.
- Do not use the radio during charging.
- Charge the battery under temperatures from 0°C to 45°C.
- When the low battery alert occurs, replace or charge the battery in time.
- When the battery is fully charged, disconnect the power adapter in time.
- Do not drop the battery by force.
- Do not make the battery wet.
- To avoid short circuit, do not use the conductive substance such as iron wire to touch

the anode and cathode of the battery.

**Cleaning**

**CAUTION**

- Turn off the radio and remove the battery before cleaning.
- Ensure no peripheral devices are connected to the radio.
- Do not use chemical preparations such as stain removers, alcohol, sprays or oil preparations.
- Do not directly spray the neutral cleanser on the radio.
- Do not use the radio before it is fully dry.
- After cleaning the audio jack, put the cover back in place.

It is recommended to clean the radio regularly. During cleaning, you can check whether the components are damaged. If damages exist, contact the local dealer or the Company.

1. Use the non-metal brush to clean up the dust or dirt on the radio surface.
2. Use the lint-free cloth with proper neutral cleanser to clean the surface, screen, knob, keys, and interfaces.
3. Use another lint-free cloth with proper pure water to clean up the cleanser or residue.
4. When cleaning the battery slot, use the non-metal brush to clean up the dust and dirt in the slot, and then use the dry and soft lint-free cloth to clean the contacts.

**Sterilizing**

**CAUTION**

- Turn off the radio and remove the battery before sterilizing.
- Ensure no peripheral devices are connected to the radio.
- Do not directly spray the alcohol on the radio.
- Keep the radio away from the power supply and fire.
- Do not use the radio before it is fully dry.
- After sterilizing the audio jack, put the cover back in place.

It is recommended to sterilize the radio regularly. You can sterilize the radio by the following tips: Use the lint-free cloth with proper rubbing alcohol (density ≥ 70%) to clean the radio surface, keys, knob, and interfaces.

**Storing**

**Radio**

**CAUTION**

- Turn off the radio and remove the battery before storage.
- Ensure no peripheral devices are connected to the radio.

**When storing the radio, follow the tips below:**

- Keep the radio in the well-ventilated place with the temperature from −30°C to +80°C and the humidity no more than 75%.
- Keep the radio away from the acidic and corrosive substances.
- Keep the radio away from the fire or other heat sources.
- Do not store the radio in direct sunlight.

**Battery**

**CAUTION**

The capacity and performance of the battery may degrade if the battery is not used for long time.

**When storing the battery, follow the tips below:**

- Keep the battery in the well-ventilated place with the temperature from −5°C to +30°C and the humidity no more than 75%.
- Keep the battery away from the acidic and corrosive substances.
- Keep the battery away from the fire or other heat sources.
- Do not store the battery in direct sunlight.
- Store the battery in the package box or bag.

- During storing, charge the battery once every three months, and care the battery once every six months.

**Optional Accessories**

**CAUTION**

Use the accessories approved by the Company only. Otherwise, we will not be liable for any loss or damage arising out of the use of unauthorized accessories.

Contact your local dealer for the optional accessories used with the product.

**Abbreviations**

| Abbreviation | Full Name |
|---|---|
| IATA | International Air Transport Association |
| LED | Light-Emitting Diode |
| PTT | Push-to-Talk |
| TTS | Text To Speech |

**FAQs**

Q: How do I clone settings from one device to another?

A: You can use key combinations or a Bluetooth app to clone settings, making fleet setup easier.

Q: How do I know the charging status of the device?

A: The orange LED flashes during charging and turns steady green when fully charged. Additionally, a flashing red light indicates transmit mode, while a flashing green light indicates receiving mode.

Q: How can I identify different radios easily?

A: You can use the coloured labels provided with each radio to visually distinguish them, making it easy to identify radios by users or teams.

## Documents / Resources

| | |
|---|---|
|  | [Hytera S1 Business Two Way Radio](#) [[pdf](#)] User Guide<br>S1 Business Two Way Radio, S1, Business Two Way Radio, Two Way Radio, Way Radio |

## References

- [User Manual](#)

🏷 Business Two-way Radio, Hytera, S1, S1 Business Two Way Radio, Two-Way Radio, Way
📁 Hytera    Radio

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## Search:

e.g. whirlpool wrf535swhz

**Search**