

HYT by Hytera

OWNER'S MANUAL

TC-518 OBR

www.hytera.us

Preface

Thank you for purchasing Hytera's HYT TC-518 On-Site Business Radio. With its stable output power, clear audio quality and its unique form, the TC-518 OBR was designed with reliability and productivity in mind. Hytera's engineers have cleverly combined the **PTT** button and volume knob, allowing retail employees, restaurant workers, manufacturing and other small to mid-sized personnel to handle this radio model with a single hand, making the other hand always available to continue operations while increasing productivity.




Note: Read this user guide carefully to ensure you know how to properly operate the radio before use. The information presented herein can help you to derive optimum performance from your radio.


MODELS COVERED BY THIS MANUAL:

TC-518 OBR LP UHF Two-Way Radio
TC-518 OBR HP UHF Two-Way Radio
TC-518 OBR LP VHF Two-Way Radio
TC-518 OBR HP VHF Two-Way Radio

Icon Information

The following icons are available through this manual:

 **Warning/Caution:** represents important safety information, to make users aware of misoperations that may cause malfunction of the radio, personal injury or property damage.

 **Note:** indicates important information which helps you make better use of your radio.

Copyright Information

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Disclaimer

Hytera endeavors to achieve the accuracy and completeness of this manual, but no warranty of accuracy or reliability is given. All the above specifications and designs are subject to change without notice due to continuous development. No part of this manual may be copied, reproduced, translated, and stored in a retrievable system, distributed, or transmitted in any form or by any means, electronic or mechanical, for any purpose without the express written permission of Hytera.

FCC Regulations

Federal Communication Commission (FCC) requires that all radio communication products should meet the requirements set forth in the above standards before they can be marketed in the U.S, and the manufacturer shall post a RF label on the product to inform users of operational instructions, so as to enhance their occupational health against exposure to RF energy.

Operational Instructions and Training Guidelines

To ensure optimal performance and compliance with the occupational/controlled environment RF energy exposure limits in the above standards and guidelines, users should transmit not more than 50% of the time and always adhere to the following procedures:

- RF energy will be generated only when the radio is transmitting.
- The radio must be at least 2.5 centimeters away from human body when transmitting.

FCC License Information

This device complies with Part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference.

On-Site business two-way radios operate on radio frequencies that are regulated by the FCC. To transmit on these frequencies, you are required to have a license issued by the FCC. Application is made available on FCC Form 601 and Schedules D, H, and Remittance Form 159. To obtain these FCC forms, request document **000601** which includes all forms and instructions. If you wish to have the document faxed, mailed or have questions, use the following contact information.

Faxed contact the Fax-On-Demand system at:	1-202-418-0177
Mailed call the FCC forms hotline at:	1-800-418-FORM 1-800-418-3676
Questions regarding FCC license contact the FCC at:	1-888-CALL-FCC 1-888-225-5322 Or: http://www.fcc.gov

Before filling out your application, you must decide which frequency (ies) you can operate on. For questions on determining the radio frequency, please contact us or your local dealer for more technical support.

Changes or modifications not expressly approved by Hytera may void the user's authority granted by the FCC to operate this radio and should not be made. To comply with FCC requirements, transmitter adjustments should be made only by or under the supervision of a person certified as technically qualified to perform transmitter maintenance and repairs in the private land mobile and fixed services as certified by an organization representative of the user of those services.

Replacement of any transmitter component (crystal, semiconductor, etc.) not authorized by the FCC equipment authorization for this radio could violate FCC rules.

Usage of this radio outside the country where it was intended to be distributed is subject to government regulations and may be prohibited.

Contents

Safety Information	2
Product Inspection	3
Radio Overview	4
Battery Information	6
Antenna Information	9
Assembly and Disassembly	10
Attaching/Removing the Battery	10
Attaching/Removing the Antenna	11
Attaching/Removing the Belt Clip	11
Attaching/Removing the Earpiece or Microphone	11
Basic Operations	12
Turning the Radio On/Off	12
Adjusting the Volume	12
Selecting a Channel	13
Transmitting	13
Receiving	13
Programmable Auxiliary Functions	14
Advanced Operations	14
CTCSS/CDCSS	14
Battery Save	14
Time-out Timer (TOT)	15
Battery Strength Indicator	15
Monitor/Squelch off	15
Scan	16
Busy Channel Lockout (BCL)	18
Low Battery Alert	18
Voice-Operated Transmit (VOX)	18
Compandor	20
Scrambler	20
Channel Lock	20
Troubleshooting	21
Care and Cleaning	22
Optional Accessories	22
Default Frequency List	24
Frequency and Codes Chart	25
CTCSS and CDCSS CODES	26
Default Factory Feature List	28
Hytera's Limited Warranty for the United States and Canada	29

Safety Information

The following safety precautions shall always be observed during operation, service and repair of this equipment.

- This equipment shall be serviced by qualified technicians only.
- Do not modify the radio for any reason.
- Use only Hytera supplied or approved batteries and chargers.
- To avoid electromagnetic interference and/or compatibility conflicts, turn off your radio in any area where posted notices instruct you to do so.
- Turn off your radio before boarding an aircraft. Any use of a radio must be in accordance with airline regulations or crew instructions.
- For vehicles with an air bag, do not place a radio in the area over an air bag or in the air bag deployment area.
- Turn off your radio prior to entering any area with explosive and flammable materials.
- Do not charge your battery in a location with explosive and flammable materials.
- Turn off your radio before entering a blasting area.
- Do not use any portable radio that has a damaged antenna. If a damaged antenna comes into contact with your skin, a minor burn can result.
- Do not expose the radio to direct sunlight over a long time, nor place it close to heating source.
- When transmitting with a portable radio, hold the radio in a vertical position with the microphone 3 to 4 centimeters away from your lips. Keep antenna at least 2.5 centimeters away from your body when transmitting.



WARNING: If you wear a radio on your body, ensure the radio and its antenna are at least 2.5 centimeters away from your body when transmitting.

Product Inspection

Please unpack the package box carefully and check that all shipped items are received; report any missing or damaged items to your reseller.

Accessories Supplied with the Radio

Item	Qty. (PCS)
Antenna	1
Belt Clip	1
Strap	1
Battery	1
Rapid-Rate Charger	1
Switching Power	1
Owner's Manual	1



Li-ion Battery



Rapid-Rate Charger
(for Li-ion Battery)



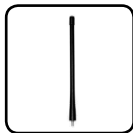
Switching Power (different P/N for
different countries and areas)



Belt Clip



Strap



Antenna (VHF)



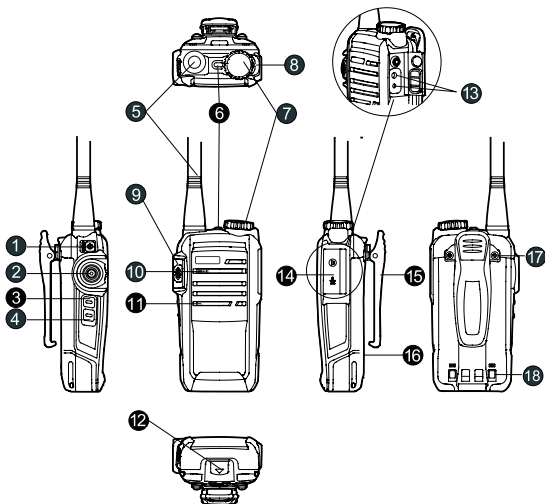
Antenna (UHF)



Note:

1. Frequency band is marked on the label of antenna; if not, please refer to the label on the radio unit for detailed frequency band information.
2. The radio unit is shipped with the screws of belt clip mounted from the factory.

Radio Overview



(1) Power On/Off Key	(10) Microphone
(2) PTT (Push-to-Talk) Key	(11) Speaker
(3) SK1 (Side Key 1)	(12) Battery Latch
(4) SK2 (Side Key 2)	(13) Accessory Jack
(5) Antenna	(14) Accessory Jack Cover
(6) LED Indicator	(15) Belt Clip
(7) Channel Selector Knob	(16) Battery
(8) Channel Indicator	(17) Screw (Belt Clip)
(9) Volume Control Knob	(18) Charging Piece

*PTT (Push-to-Talk) Key

Hold down the **PTT** key and speak into the microphone to transmit, and release it to receive.

*SK1 (Side Key 1) / SK2 (Side Key 2)

SK1 and **SK2** are programmable keys that can be assigned with long/short press functions via CPS software and programming cable.



Note:

Short Press	Key press no longer than 1 second.
Long Press	Key press longer than 1 second.

*LED Indicator

LED indications and alert tones are shown in the table below (see Advanced Operations for details):

Status	LED Indication and Alert Tone
Power On	<ol style="list-style-type: none">1. The power-on alert tone is heard when the radio is powered on.2. When the current channel is a blank channel, beeps are heard.
Radio Standby	The LED flashes blue if no operation is made or no carrier is present within 2s. You can enable/disable this LED indication via CPS software and programming cable.
Low Battery Alert	The LED flashes red and a low pitched tone is heard every ten seconds.
Transmitting	<ol style="list-style-type: none">1. Red LED glows while the radio is transmitting.2. When transmission times out, continuous beeps are heard.3. TOT Pre-alert: one beep is heard.4. Transmitting PTT ID: continuous beeps (programmable via CPS software and programming cable) are heard.5. Transmitting PTT ID is completed: a short beep (programmable via CPS software and programming cable) is heard.
Receiving	The LED glows green when carrier presents.
Scanning	<ol style="list-style-type: none">1. The LED flashes green every 1 second when scanning is in process.2. Scan Start Tone (programmable via CPS software with programming cable): one beep is heard.3. Green LED solidly glows when signal is received.4. Scan Stop Tone (programmable via CPS software with programming cable): one beep is heard. Two beeps sound when the feature is disabled.

Radio Overview

VOX/Compador/ Scrambler/Channel Lock	Enable functions: one beep is heard. Disable functions: two continuous beeps are heard.
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*Channel Indicator

Used to indicate the currently selected channel.

*Battery Latch

Used to secure or remove the battery.

*Earpiece Jack & Programming Port

Used to connect accessories such as speaker/microphone, earpiece, programming cable and cloning cable.

Battery Information

Initial Use

New batteries are shipped uncharged from the factory. Charge a new battery for 5 hours before initial use. The maximum battery capacity and performance is achieved after three full charge/discharge cycles. If you notice the battery power runs low, please recharge the battery.

Applicable Battery Packs

To reduce the risk of injury, charge only the battery specified by Hytera. Other batteries may burst, causing bodily injury and property damage.



Caution:

1. Do not dispose of the battery in fire!
2. Recycling and disposal of the battery shall comply with your local regulations.
3. Never attempt to dismantle the battery.



Note:

1. Charge the battery at a temperature among 5°C -40°C . Violation of the said limit may cause battery leakage or even damage.
2. When charging the battery that is attached to a radio, turn the radio off to ensure a full charge.
3. Never charge a wet battery or a wet radio with battery attached. Please dry it with a soft cloth prior to charge.

Battery Information

4. The battery will eventually wear out. When the operating time of a fully charged battery is noticeably shorter than its normal performance, you need to buy a new one. Please replace it ASAP.
5. If the product shuts off automatically due to low battery, please charge the battery soon, or the battery could suffer damage.
6. If you plan not to use the radio for a long time, please remove the battery from it to avoid any unexpected damage.
7. Do not charge fully charged batteries for an "extra boost". This action will significantly reduce battery life.
8. Do not insert the radio or battery into the charger when it doesn't need to be charged, because continuous charging will shorten the battery life.

To Prolong Battery Life

1. Battery performance will be greatly decreased at a temperature below 0°C . A spare battery is necessary in cold weather. The cold battery unable to work in this situation may work under room temperature, so keep it for later use.
2. The dust on the battery contact may cause the battery cannot work or charge. Please use clean dry cloth to wipe it before attaching the battery to the radio.

Battery Storage

1. Fully charge a battery before you store it for a long time, to avoid battery damage due to over-discharge.
2. Recharge a battery after several months' storage (Li-Ion & Li-polymer batteries: 6 months), to avoid battery capacity reduction due to over-discharge.
3. Store your battery in a cool, dry place under room temperature, to reduce self-discharge.

Charging the Battery

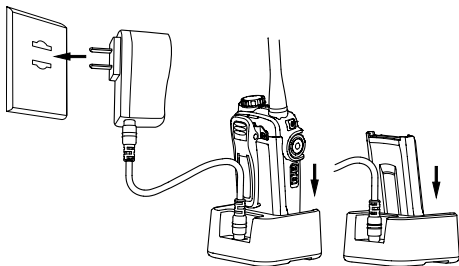
Use only the charger specified by Hytera. The charger's LED indicates the charging progress.

Battery Information

Status	Charge Indicator of the Radio
Charging	Solidly glows red
Fully charged Or Ready to charge	Solidly glows green

Charging Method 1

Please follow the steps below:



1. Plug the AC connector of the adapter into the AC outlet socket.
2. Plug the DC connector of the adapter into the DC socket on the back of the charger. Then charger LED glows green.
3. Place the radio with the battery attached, or the battery alone, in the charger.
4. Make sure the battery is in good contact with the charging terminals. The charging process initiates when the red LED lights.
5. The green LED lights when the battery is fully charged (orange LED lights when the battery is almost fully charged). Then remove the radio with the battery attached or the battery alone from the charger.

Charging Method 2

You may connect several single-unit chargers so the combination can be used as a multi-unit charger. To connect single-unit chargers, slide the latch on a charger into the slot on the bottom of another one, as shown in figure 1.

Battery Information

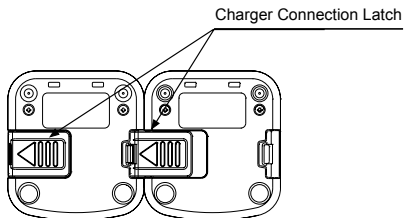


Figure 1 Assembly Diagram of Multi-unit Charger

The assembled multi-unit charger can work with HYT Six-Unit Switching Power, to charge up to six batteries simultaneously, as shown in figure 2. Please refer to Owner's Manual for Six-Unit Switching Power for detailed operation procedures.

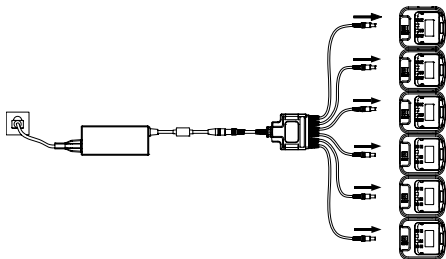


Figure 2 Schematic Diagram of Six-Unit Charger


Antenna Information

- Stubby antenna is ideal for communication within limited range. Thin and long antenna optimizes communication coverage, and its flexible and soft characteristic makes it ideal for wearing your radio on the belt.
- Communication range may vary with terrain and your operating conditions. Rainy days or forest locations may narrow your communication range. Please make preparation in advance to avoid potential inconvenience.


Attaching/Removing the Battery

Attaching the Battery

1. Slightly press the belt clip, and insert the tab at the top of the battery into the slots at the top of the radio's body, as shown in figure 1.

 **Note:** Make sure the battery tab is fully inserted into the radio's slot.

2. Slightly press the bottom of the battery until a click is heard. By then, the battery latch locks with the main unit and assembly is finished. See figure 2 below.

 **Note:** If the battery is loose or unsecured, please take it down and attach it again.

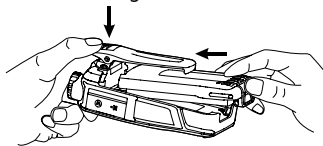


Figure 1

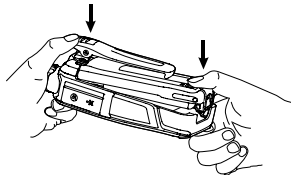



Figure 2

Removing the Battery

1. Please turn off the radio first. Then hold the top of radio unit and press the belt clip to make its bottom up. Lift the battery latch, as shown in figure 3.
2. When the bottom of battery is lifted, release the battery latch and remove the battery from the radio's body, as shown in figure 4.

 **Note:** To avoid serious abrasion between the top tap and the slot, do not tilt the battery to a large angle.

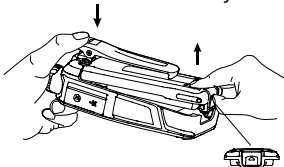


Figure 3

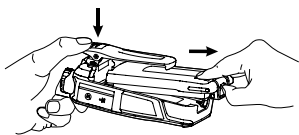


Figure 4

Attaching/Removing the Antenna

Attaching the Antenna

1. Align the threaded end of the antenna with the radio's antenna connector.
2. Turn the antenna clockwise until it is screwed down, shown as figure 5.

Removing the Antenna

Turn the antenna counter-clockwise until it is loosened and screwed out.

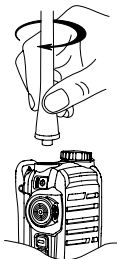


Figure 5

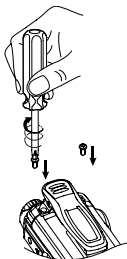


Figure 6


Attaching/Removing the Belt Clip

Attaching the Belt Clip

Loosen the screws of belt clip from the main unit; fasten the belt clip to the main unit (make sure the screw holes of belt clip are aligned with those of aluminum chassis); and clockwise screw down the belt clip. See figure 6 above.

Removing the Belt Clip

Turn the screwdriver counter-clockwise to loosen the screw. Please refer to the operations for attaching the belt clip.

 **Note:** Please be careful to avoid missing of screws.

Attaching/Removing the Earpiece or Microphone

Attaching the Earpiece/Microphone

1. Open (not remove) the accessory jack cover.
2. Plug the audio accessory firmly into the accessory jack, and then secure the screw, shown as figure 7.

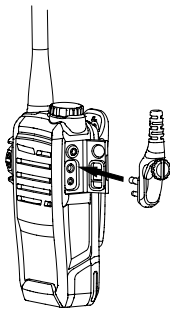



Figure 7

Removing the External Earpiece

Loosen the screw and then remove the audio accessories.

 **Note:** Use of audio accessory may affect the waterproof performance of the radio.

Basic Operations

Turning the Radio On/Off

To turn on the radio, hold down the **Power On/Off** key for about 1 second, and then the radio sounds power-on alert tone.

To turn off the radio, hold down the **Power On/Off** key for about 2 second, and then the radio sounds power-off alert tone.

Adjusting the Volume

You may adjust the volume through any of the following two methods:

1. Turn the **Volume Control Knob** upwards to increase the volume, and downwards to decrease the volume. The radio will give you audible indications accordingly.
2. Hold down the programmed **Squelch Off** key to listen to background noise, and then turn the **Volume Control Knob** upwards/downwards to

Basic Operations

increase/decrease the volume. You will hear higher background noise when you increase the volume.

Selecting a Channel

Turn the **Channel Selector Knob** to select a channel; the channel No. pointed by the channel indicator is the currently selected channel.

Transmitting

To transmit, press and hold down the **PTT**, speak into the microphone. Ensure the radio is 2.5 to 5 centimeters away from your lips.

Receiving

To receive signal, release the **PTT**.

Typical Coverage Area

TC-518 OBR 2W Low Power UHF

Office Space	Multi-Level
Inside steel/concrete office space buildings	Inside multi-level buildings
Up to 250,000 sq ft	Up to 20 Floors

TC-518 OBR 4W High Power UHF

Office Space	Multi-Level
Inside steel/concrete office space buildings	Inside multi-level buildings
Up to 350,000 sq ft	Up to 30 Floors

TC-518 OBR 2W Low Power VHF

Office Space	Multi-Level
Inside steel/concrete office space buildings	Inside multi-level buildings
Up to 220,000 sq ft	Up to 13 Floors

TC-518 OBR 5W High Power VHF

Office Space	Multi-Level
Inside steel/concrete office space buildings	Inside multi-level buildings
Up to 300,000 sq ft	Up to 18 Floors



Note : The talk ranges herein are site tested in maximum radio power. Radio's status may vary from your specific use environment and radio model.

Programmable Auxiliary Functions

Auxiliary functions to the programmable key (with long/short press) can be programmed via programming cable and CPS software.

- None
- Compandor
- Monitor
- Monitor Momentary
- Scan
- Scrambler
- Squelch Off
- Squelch Off Momentary
- VOX
- Battery Strength Indicator
- Channel Lock

Advanced Operations

The following functions can be programmed via programming cable and CPS software. Contact your retailer for additional information.

CTCSS/CDCSS

Set up talkgroups with unique CDCSS/CTCSS to prevent unwanted conversations on the same frequency.

If CTCSS/CDCSS is set on the current channel, CTCSS/CDCSS match is required for the radio to unmute to an incoming signal. If CTCSS/CDCSS is not set, the radio can receive calls from all users operating on the same frequency. This feature does not mean that your conversation will not be heard by others. Radios that set with the same CTCSS/CDCSS, or no CTCSS/CDCSS, can receive from you.

Battery Save

This feature, when no signal is received or no operation is made, can lower battery consumption.

Once the radio detects no activity on the channel and no operation performed (no key press and no knob selection) during radio standby time, it shall automatically enter sleep mode ten seconds later.

Pressing any key or receiving a signal will cause the radio to exit from Battery Save and restore it to normal operation.

Time-out Timer (TOT)

Limits the amount of time the radio user can continuously transmit on a channel. If the user holds down the **PTT** longer than the preprogrammed time period, the radio will automatically stop transmitting and generate a warning tone. To stop the warning tone, release the **PTT**.

A pre-alert function to warn you of the TOT expiration in advance can be programmed via programming cable and CPS software.

Battery Strength Indicator

TC-518 allows you to simply press the programmed **Battery Strength Indicator** key to illuminate the LED battery gauge, which gives different indications representing battery strength levels. To exit the indications, release the key.

Battery Strength	LED Indication
70% - 100%	Green
50% - 70%	Orange
30% - 50%	Red
10% - 30%	No LED indication is shown when the function key is pressed; while the radio is in standby mode, LED flashes red and a low-pitched tone sounds at intervals of preset time.
Less than 10%	No LED indication is shown when the function key is pressed; the radio can only receive or keep standby, and transmit is disallowed. While the radio is in standby mode, LED flashes red and a low-pitched tone sounds at intervals of preset time. If the PTT is held down, transmit inhibit tone would sound.

Monitor / Squelch Off

- **Squelch Off**

Causes the radio to forcibly unmute speaker to hear activities on the current channel, whatever the receive condition is. The radio speaker outputs audio when audio signal is present, or background noise will be heard if no audio signal is detected.

Press the function key to enter the **Squelch Off** mode, and press it again to exit.

- **Squelch Off Momentary**

Causes the radio to forcibly unmute speaker to hear activities on the current channel, whatever the receive condition is. The radio speaker outputs audio when audio signal is present, or background noise will be heard if no audio signal is detected.

Holds down the function key to enter the **Squelch Off Momentary** mode, and release it to exit.

- **Monitor**

Carrier condition must be satisfied for the radio to unmute to an incoming call, regardless of CTCSS/CDCSS condition.

Press the function key to enter **Monitor** mode, and press it again to exit.

- **Monitor Momentary**

Carrier condition must be satisfied for the radio to unmute to an incoming call, regardless of CTCSS/CDCSS condition.

Holds down the function key to enter **Monitor Momentary** mode, and release it to exit.

Scan

Press the programmed **Scan** key to initiate scanning ascending through the channel numbers in scan list. Green LED flashes during the scan process, and solidly glows when activity is detected on a channel and signaling condition is satisfied. Press the key again to exit scanning.

When scanning is active, the radio continuously scans for activity on scan list members. Once activity is detected on a channel, scanning pauses on the active channel for you to receive activity. You can choose channels that you wish to scan and list them in a scan list via CPS software and programming cable.

No Priority Channel

Assuming a scan list with 6 channels, if all the channels are non-prioritized, the normal scan operation would proceed in the following sequence, as shown in figure 1.

Priority Channel Scan

If you prioritize Channel 2 as Priority 1, the scan operation would proceed in the following sequence, as shown in figure 2.

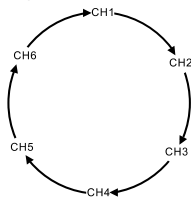


Figure 1

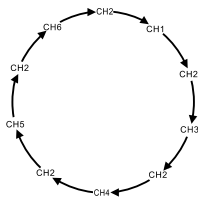


Figure 2

• Scan On/Off

You can enter scan mode through the following two methods:

a. Key operation

Press the programmed **Scan** key to enter scan mode, provided that there're no less than 2 members in the scan list.

b. Auto

When Auto Scan is enabled for a channel, the radio shall automatically enter scan mode when it is switched to the channel.

You can exit scan mode through any of the following methods:

a. Key operation

Press the programmed **Scan** key to exit scan mode.

b. Auto

The radio automatically exits from scan mode when it is switched to another channel.

c. Turn the radio off.

• Talk Back

Defines whether the user is able to PTT the radio and talk back on the channel on which the radio currently stops.

When checked, if the radio stops on a channel, the radio user is able to PTT the radio and talk back on that channel. If the radio does not stop on any channel, the user is able to PTT the radio and talk back on the predefined channel.

When unchecked, the radio shall always use the predefined channel to transmit.

- **Priority Channel Scan**

Enable you to constantly monitor & keep an update on the activities on the most commonly used channel so that messages will not be missed. Check with your retailer for details.

When scanning remains on a non-priority channel, the radio continues to monitor activities on the priority channel, and jumps to the priority channel if activity is detected.

- **Available Keys in Scan Mode**

Valid keys in Scan mode include **PTT** key, volume adjustment keys + / -, and 4 programmable keys of Squelch Off, Squelch Off Momentary, Monitor and Monitor Momentary.



Note : Never add a blank channel to a Scan List or designate it as the Tx Channel.

Busy Channel Lockout (BCL)

Avoid interference with the users using the same channel by preventing transmission if another talk group is already on the air. The radio will generate a continuous tone upon **PTT** press if a transmission is not allowed. Release the **PTT** to cancel the tone.

Low Battery Alert

For extra convenience, LED flashes red and a low-pitched tone sounds every ten seconds should the battery level run low, to alert users to recharge the battery.

Voice-Operated Transmit (VOX)

You can transmit hands free with the use of optional accessories. The radio will automatically begin transmitting when you speak, and terminate transmitting when you stop talking.

You can enable/disable the VOX feature, and set the VOX sensitivity via CPS software and programming cable.

When the feature is enabled, you can follow these steps to transmit hands free:

1. Select the PTT/VOX switch on the earpiece to VOX.
2. Plug the earpiece into the accessory jack on your radio.
3. Press the programmed **VOX** key to activate the VOX feature.
4. Speaker into the earpiece microphone and your voice will be transmitted.

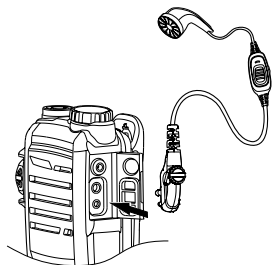
Function Description:

1. Press the programmed **VOX** key to enable/disable the VOX function. The radio sounds one beep when the feature is enabled, and two continuous beeps when the feature is disabled.
2. After the radio is powered off or programmed, the VOX function is automatically disabled.
3. The VOX function needs to work with a compatible VOX earpiece.
4. Your dealer can set VOX sensitivity level or disable the VOX function via programming software.



Note :

1. When the PTT/VOX switch on the earpiece is set to PTT, no matter whether VOX is enabled, the user can transmit only when holding down external PTT key.
2. When the switch is set to PTT, do not push it from PTT to VOX, or a continuous transmission would be resulted. When continuous transmission occurs, the user can revive the radio to normal operation by pushing the switch from VOX to PTT, or turn the radio off and back on.
3. User can select the VOX level according to your specific working environment. If there is very high surrounding noise, a continuous transmission would be resulted when the VOX function is enabled.



Note: To order accessories, please contact your reseller.

Compandor

This feature secures high quality communication even in high noise environment. It can be enabled/disabled through the programmed key, or set on a definite channel via programming cable and CPS software. The radio sounds one beep when the feature is enabled, and two continuous beeps when the feature is disabled.

Scrambler

This feature can encrypt your voice and make any radio without the function receive no real audio, so that any private communication of users can be highly protected.

It can enable/disable through the programmed keys, or set on a definite channel via programming cable and CPS software. The radio sounds one beep when the feature is enabled, and two continuous beeps when the feature is disabled.

Channel Lock

Prevents accidental change of channel, so that the user won't miss calls on his often used channel. When Channel Lock is enabled, rotating **Channel Selector Knob** won't change the current channel. This function won't be disabled unless you press the **Channel Lock** key again, or power off the radio and back on. The radio sounds one beep when the feature is enabled, and two continuous beeps when the feature is disabled.

Troubleshooting

Symptom	Solution
Cannot power on the radio.	<ul style="list-style-type: none"> The battery has run out. Please recharge the battery or replace it with a new one. The battery is not properly installed. Please remove the battery and attach it again.
The operating time is noticeably shorter than normal performance, even though the battery is properly charged.	<ul style="list-style-type: none"> The battery has worn out, and it is time to buy a new battery. The battery is not fully charged. Be sure to remove the battery from charger after the charger LED glows green.
Cannot talk to or hear group members.	<ul style="list-style-type: none"> Make sure you are on the same channel with your group members. Check whether the Channel Lock feature is enabled. And if so, rotating the Channel Selector Knob won't change the current channel. Make sure radios have the same channel and the same CTCSS/CDCSS settings. Make sure you are within their communication range.
Hear non-group members.	<ul style="list-style-type: none"> The CTCSS/CDCSS settings should be changed for all radios in your group via programming cable and CPS software.
No voice or low voice while transmitting.	<ul style="list-style-type: none"> Make sure the volume control knob is positioned properly. Contact your retailer for RMA (Return Merchandise Authorization) and warranty information.
Noises always on.	<ul style="list-style-type: none"> Group members are too far away to receive their call. Please go within the communication range and re-power on the radio.

Care and Cleaning

- Do not hold the radio by its antenna or external earpiece directly.
- Do not place the radio in a dusty or dirty environment.
- Clean the radio with a lint-free cloth to remove dirt or grease, to avoid poor contact due to excessive dust.
- Clean the radio using a lint-free cloth moistened with clean water and a mild dishwashing liquid.
- Avoid subjecting the radio to corrosives, solvents or spirits.

Optional Accessories



Antenna VHF SMA
Connector 146-174
MHz AN0160H14



UHF Stubby Antenna
- SMA Connector 420-
470 MHz AN0445H03



Sprint Belt Clip
(Screws not
included) BC12



Battery Li-
Ion 1650 mAh
BL1719



Rapid-rate Charger
(for Li-ion Battery)
CH10L19



US-standard
Switching Power
Adapter PS1014



Vehicle Power
Adapter CHV09



Surveillance Earpiece with
On-Mic PTT and Transparent
Acoustic Tube VOX EAM12



D-earset with in-
Line MIC & VOX
EHM15



Surveillance Earpiece
2-Wire with Transparent
Tube, PPT and VOX EAM13



Receive-Only Earbud
for Remote Speaker
Mic Use Only ESS07



Earbud with on-MIC
PTT & VOX ESM12

Optional Accessories



Leather Carrying Case
(Non-Swivel) Belt Clip
Black HY1015-30C KIT



Multi-unit Rapid-rate
Charger (for Li-ion
Battery) MCL15



Li-ion Battery
Adapter POA51



Nylon Carrying Case
(non-swivel) NCN001



Programming Cable
PL2303 USB PC26



Six-unit Switching
Power PS7002



Universal Nylon Chest
Pack for Portable-
Black LCBN13



Nylon Hand Strap
RO03



Note: Pictures above are for reference only and may vary from actual product. However, featuring functions shall be held.

The above items are the main optional accessories of this radio, and please contact your retailer for more other accessories.

Default Frequency List

TC-518V OBR Radio Channel	Frequency Number	Frequency (MHz)	Code (Hz)
1	20	154.4900	67.0
2	21	154.5150	67.0
3	1	151.6250	67.0
4	2	151.9550	67.0
5	10	151.5125	67.0
6	12	151.6850	67.0
7	15	151.7750	67.0
8	26	158.4000	67.0
9	1	151.6250	77.0
10	1	151.6250	88.5
11	1	151.6250	179.9
12	2	151.9550	82.5
13	2	151.9550	94.8
14	2	151.9550	179.9
15	5	151.7000	67.0
16	6	151.7600	67.0

TC-518U OBR Radio Channel	Frequency Number	Frequency (MHz)	Code (Hz)
1	2	464.5500	67.0
2	8	467.9250	67.0
3	5	467.8500	67.0
4	6	467.8750	67.0
5	10	461.0625	67.0
6	12	461.1125	67.0
7	14	461.1625	67.0
8	9	461.0375	67.0
9	11	461.0875	67.0
10	13	461.1375	67.0
11	1	464.5000	67.0
12	3	467.7625	67.0
13	4	467.8125	67.0
14	7	467.9000	67.0
15	15	461.1875	67.0
16	16	461.2125	67.0

**Based on Factory Default Settings*

Frequency and Codes Chart

If the default frequencies are not adequate for communication needs, you can re-program your device using the following optional business frequencies via a Customer Programming Cable and Software.

Contact your point of purchase for additional re-programming information.

VHF Frequency Chart

Frequency #	Frequency (MHz)	Bandwidth
1	151.6250	12.5 kHz
2	151.9550	12.5 kHz
3	152.8850	12.5 kHz
4	152.9150	12.5 kHz
5	151.7000	12.5 kHz
6	151.7600	12.5 kHz
7	152.9450	12.5 kHz
8	151.8350	12.5 kHz
9	151.8050	12.5 kHz
10	151.5125	12.5 kHz
11	151.6550	12.5 kHz
12	151.6850	12.5 kHz
13	151.7150	12.5 kHz
14	151.7450	12.5 kHz
15	151.7750	12.5 kHz
16	151.8650	12.5 kHz
17	151.8950	12.5 kHz
18	151.9250	12.5 kHz
19	152.9000	12.5 kHz
20	154.4900	12.5 kHz
21	154.5150	12.5 kHz
22	154.5275	12.5 kHz
23	154.5400	12.5 kHz
24	153.0050	12.5 kHz
25	154.5475	12.5 kHz
26	158.4000	12.5 kHz
27	158.4075	12.5 kHz

UHF Frequency Chart

Table No.	Frequency (MHz)	Table No.	Frequency (MHz)
1	464.5000	46	466.3375
2	464.5500	47	466.3625
3	467.7625	48	467.7875
4	467.8125	49	467.8375
5	467.8500	50	467.8625
6	467.8750	51	467.8875
7	467.9000	52	467.9125
8	467.9250	53	469.4875
9	461.0375	54	469.5125
10	461.0625	55	469.5375
11	461.0875	56	469.5625
12	461.1125	57	462.1875

Frequency and Codes Chart

Table No.	Frequency (MHz)	Table No.	Frequency (MHz)
13	461.1375	58	462.4625
14	461.1625	59	462.4875
15	461.1875	60	462.5125
16	461.2125	61	467.1875
17	461.2375	62	467.4625
18	461.2625	63	467.4875
19	461.2875	64	467.5125
20	461.3125	65	451.1875
21	461.3375	66	451.2375
22	461.3625	67	451.2875
23	462.7625	68	451.3375
24	462.7875	69	451.4375
25	462.8125	70	451.5375
26	462.8375	71	451.6375
27	462.8625	72	452.3125
28	462.8875	73	452.5375
29	462.9125	74	452.4125
30	464.4875	75	452.5125
31	464.5125	76	452.7625
32	464.5375	77	452.8625
33	464.5625	78	456.1875
34	466.0375	79	456.2375
35	466.0625	80	456.2875
36	466.0875	81	468.2125
37	466.1125	82	468.2625
38	466.1375	83	468.3125
39	466.1625	84	468.3625
40	466.1875	85	468.4125
41	466.2125	86	468.4625
42	466.2375	87	468.5125
43	466.2625	88	468.5625
44	466.2875	89	468.6125
45	466.3125	90	468.6625

CTCSS and CDCSS Codes

CTCSS Codes

CTCSS	Hz	CTCSS	Hz
1	67.0	21	131.8
2	69.3	22	136.5
3	71.9	23	141.3
4	74.4	24	146.2
5	77.0	25	151.4
6	79.7	26	156.7
7	82.5	27	162.2

CTCSS and CDCSS Codes

CTCSS	Hz	CTCSS	Hz
8	85.4	28	167.9
9	88.5	29	173.8
10	91.5	30	179.9
11	94.8	31	186.2
12	97.4	32	192.8
13	100.0	33	203.5
14	103.5	34	210.7
15	107.2	35	218.1
16	110.9	36	225.7
17	114.8	37	233.6
18	118.8	38	241.8
19	123.0	39	250.3
20	127.3		

CDCSS Codes

CDCSS	Hz	CDCSS	Hz
1	23	54	311
2	25	55	315
3	26	56	325
4	31	57	331
5	32	58	332
6	36	59	343
7	43	60	346
8	47	61	351
9	50	62	356
10	51	63	364
11	53	64	365
12	54	65	371
13	65	66	411
14	71	67	412
15	72	68	413
16	73	69	423
17	74	70	431
18	114	71	432
19	115	72	445
20	116	73	446
21	122	74	452
22	125	75	454
23	131	76	455
24	132	77	462
25	134	78	464
26	143	79	465
27	145	80	466
28	152	81	503
29	155	82	506
30	156	83	516
31	162	84	523
32	165	85	526
33	172	86	532

CTCSS and CDCSS Codes

CDCSS	Hz	CDCSS	Hz
34	174	87	546
35	205	88	565
36	212	89	606
37	223	90	612
38	225	91	624
39	226	92	627
40	243	93	631
41	244	94	632
42	245	95	645
43	246	96	654
44	251	97	662
45	252	98	664
46	255	99	703
47	261	100	712
48	263	101	723
49	265	102	731
50	266	103	732
51	271	104	734
52	274	105	743
53	306	106	754

Hytera offers free download CPS software to modify/configure OBR radios per user specific requirements. The software is available on www.hytera.us.

Default Factory Feature List

Key	Default Feature	Note
SK1 (Long Press)	Monitor Momentary	Please refer to Monitor Momentary for detailed feature description.
SK2 (Long Press)	Scan	Please refer to Scan for detailed feature description.

*Programmable Function Key

The side key can be programmed with long/short press functions via programming cable and CPS Software.



Note: Short Press means key press shorter than 1 second, while Long Press means key press longer than 1 second.

Hytera's Limited Warranty for the United States and Canada

HYTERA AMERICA, INC. warrants its manufactured Communication Products against defects in material and workman-ship under normal use and service for a period of time from the date of purchase by end-user as scheduled below:

HYT Brand: TC-518 - OBR

One (1) year

Warranty Exclusions:

Defects or damage resulting from use of the Product other than its normal and customary manner. Defects or damage from misuse, accident, water, or neglect Defects or damage from improper testing, operation, maintenance, installation, alteration, modification, or adjustment. Breakage or damage to antennas unless caused directly by defects in material workmanship of HYTERA AMERICA, INC. or its direct affiliates. A Product subjected to unauthorized Product modifications, disassembles, or repairs (including, without limitation, the addition to the Product of non-HYTERA AMERICA, INC. supplied equipment) which adversely affect performance of the Product or Interfere with HYTERA AMERICA, INC.'s normal warranty inspection and testing of the Product to verify any warranty claim. A Product which has had the serial number removed or made illegible is not covered by this Warranty either. A Product which, due to illegal or unauthorized alteration of the software/firmware in the Product, does not function in accordance with HYTERA AMERICA, INC.'s published specifications or the FCC type acceptance labeling in effect for the Product at the time the Product was initially distributed from HYTERA AMERICA, INC.

Rechargeable batteries are likewise not covered by this Warranty if:

- i) Any of the seals on the battery enclosure of cells are broken or show evidence of tampering.
- ii) The damage or defect is caused by charging or using the battery in equipment or service other than the Product for which it is specified. Freight costs to the repair depot.
- iii) Unapproved upgrades or modifications.

Who's Covered

This warranty is not transferable and it only extends to the first consumer purchaser.

For Warranty Service or any additional information please contact your Hytera / HYT point of purchase.

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