

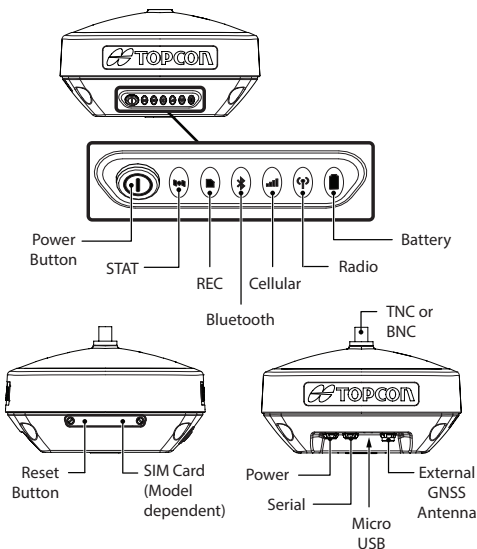


HiPer VR

GNSS Receiver

Quick Reference Card

Features



Getting Started

Turning the Receiver On and Off

To turn on the receiver, press and hold the power button until the LEDs briefly flash. The receiver is turning on when: the Power LED blinks green, the receiver channels initialize and start tracking all visible satellites at any time and location, and the serial port is available. When the startup is complete, the Power LED is solid green only when external power is used; otherwise the Power LED is off. After startup, the integrated wireless devices in the receiver are ready to use, and the receiver is available to obtain the correction data from reference station and to measure ground point coordinates with high accuracy. Also the receiver is ready to start data recording to the internal memory.

To turn-off the receiver, press and hold the power button for more than 3 but less than 10 seconds. Release the power button when the Power LED blinks yellow. This delay prevents the receiver from being turned off by mistake. Allow the receiver to complete the power off cycle, which is approximately 15 seconds.

Powering the Receiver

The receiver is powered by an internal battery or an external valid power source connected to the power port. If an external power source is connected, the receiver draws power from it instead of the battery. You can connect the receiver to an external power source, such as a vehicle battery, with 9 – 27 VDC to operate the receiver.

**CAUTION**

A power input greater than 27 VDC could damage the receiver.

Charging the internal battery

1. Connect the supplied power cable to the receiver's power port.
2. Connect the SAE connector of the power cable to the SAE connector of the power adapter.
3. Plug the power adapter into an available outlet for approximately five hours to fully charge the battery.

**POWER BUTTON FUNCTIONS**

FUNCTION	PRESS BUTTON	LED DESCRIPTION
Power On	1+ seconds	Power LED blinks until startup completes. After that the LED light is solid green, if the external power source is connected to the receiver. If the external power source is not connected to the receiver, the LED is off.
Power Off	3-10 seconds	Release the Power button when the STAT LED turns yellow.
Start/Stop Data Logging	Press three times in a row within 2 seconds	Refer to the REC (Recording) LED description.
Toggling between Static and Kinematic post-processing modes	Press three times in a row within 1 second	Refer to the REC (Recording) LED description. This function is available for "Occupation mode switch" only. See Topcon Receiver Utility (TRU) Help.
Performing factory reset	10-15 seconds	Release Power button when STAT LED blinks magenta.
Emergency Power Off	60 seconds	Release the Power button when all of the LEDs are off.

**NOTE**

A delay of several seconds occurs between the last clicking of the Power button and first blinking/last blinking of the REC LED.









**NOTE**

When using external power, the Power LED is solid green except for startup and shutdown procedures.



LED Display Panel

LED ICON KEY		
SOLID	BLINKING	OFF




STATUS LED

	Green Blink	One blink per tracked GPS satellite.
	Yellow Blink	One blink per tracked GLONASS satellite.
	Cyan Blink	One blink per tracked Galileo satellite.
	Magenta Blink	One blink per tracked BeiDou satellite.
	Blue Blink	One blink per tracked QZSS satellite.
	White Blink	One blink per tracked L-band Satellite.
	Red Blink	One blink when there are no tracked satellites or solutions. Two blinks per second when the receiver is in exception mode. Otherwise, the LED is off.
	Red Solid + Green Solid + Yellow Solid	OAF is expired.




RECORDING (REC) LED**LED blink mode switch enabled**

	Green Blink	File logging is in progress.
	Red Solid	File logging is in progress. The Static mode is the current post-processing mode.

Occupation mode switch enabled


	Green Blink	File logging is in progress. Static mode is the current post-processing mode.
	Yellow Blink	File logging is in progress. Kinematic mode is the current post-processing mode.
	Red Solid	File logging problem. No free memory, or hardware problem with data recording. LED is off when file is not logging data.

BLUETOOTH LED



	Blue Blink	Bluetooth is on and waiting for a connection.
	Blue Solid	A single Bluetooth connection has been established.
	Blue Solid + Blue Blink *N every 10 seconds	Multiple (N) valid Bluetooth connections have been established.

RADIO LED - UHF GNSS RECEIVER



Command mode (rover and base)

	Red Blink + Green Blink + No light	MAGNET Field or TRU sends commands to configure the GNSS receiver.
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Receiver mode (rover)

	Green Solid	Modem is not receiving correction data.
	Yellow Blink	Modem is receiving correction data from a base.

Transmitter mode (base)


	Green Solid	Modem is not transmitting correction data.
	Red Blink	Modem is transmitting correction data.

Retranslator mode (base)




	Yellow Blink + Red Blink	Modem is receiving and transmitting correction data.
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RADIO LED - FH915+ GNSS RECEIVER

Command Mode (rover and base)

	Red Blink + Green Blink	MAGNET Field or TRU sends commands to configure the modem.
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Receiver mode (rover)




	Green Blink	Modem is not synchronized with a base.
	Green Solid	Modem is synchronized with a base and ready to receive correction data.
	Yellow Solid	Modem receives correction data from a base.









Transmitter mode (base)

	Red Solid	Modem transmits correction data.
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BATTERY LED

The receiver is on—and the internal battery is in use

	Green Solid	The charge is greater than 50%.
	Yellow Solid	The charge is between 10% and 50%.
	Red Solid	The charge is less than 10%.

BATTERY LED		
The receiver is on—and the external power source is in use		
	Green Solid	The internal battery is fully charged.
	Green Blink	The internal battery is at greater than 50% capacity; the battery is charging.
	Yellow Blink	The internal battery is at greater than 10% capacity; the battery is charging.
	Red Blink	The internal battery is at less than 10% capacity; the battery is charging.
The receiver is off		
	Green Solid	The receiver is connected to an external power source, and the battery is fully charged.
	Green Blink	The receiver is connected to an external power source, and the battery is at greater than 50% capacity; the battery is charging.
	Yellow Blink	The receiver is connected to an external power source, and the battery is at less than 50% capacity; the battery is charging.
	No Light	The receiver is not connected to an external power source.

Regulatory and Safety Warnings

Product Conformity

Hereby, Topcon declares that the HiPer VR radio modem is in compliance with the essential requirements (radio performance, electromagnetic compatibility, and electrical safety) and other relevant provisions described in Directive 2014/53/EU. The full text of the EU declaration is available at the following internet address:

<https://www.topconpositioning.com/support/products/hiper-vr>

Therefore, the equipment is labeled with the CE-marking. The operating frequency range of the device is not harmonized throughout the market area and the local spectrum authority should be contacted prior to use.

Class A Digital Device Statement

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

If this equipment does cause interference to radio or television equipment 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.
- Move the equipment away from the receiver.
- Plug the equipment into an outlet on a circuit different from that to which the receiver is powered.
- Consult the dealer or an experienced radio/television technician for additional suggestions.

Restrictions on Use

The HiPer VR UHF radio modem has been designed to operate only at specific frequencies. The exact frequency in use differs from one region and/or country to another. The user of a radio modem must take care that the said device is not operated without the permission of the local authorities on frequencies other than those specifically reserved and intended for use without a specific permit.

The HiPer VR UHF (406-470 MHz) is allowed to be used in the following countries, either on license free channels or on channels where the operation requires a license. Additional detailed information is available at the local frequency management authority.

Countries*: AT, BE, BG, CY, DK, FI, FR, DE, GR, IS, IE, IT, LU, MT, NL, NO, ES, SE, CH, GB, AU, CA, CZ, EE, HU, LV, LT, PL, PT, RO, SI, SK, ZA and US.

* codes of the countries follow the ISO 3166-1-Alpha-2 standard

RF Exposure Warning



WARNING

To comply with RF exposure requirements, maintain at least 37 cm between the user and the GNSS receiver.

Battery Warning



WARNING

Do not attempt to open the battery pack or replace it.
Do not disassemble the battery pack.
Do not charge in conditions different than specified.
Do not use other than the specified battery charger.
Do not short circuit.
Do not crush or modify.
Dispose of batteries according to your local regulations.

Technical Documentation and Utility Software

On the Topcon Support website (www.topconpositioning.com/support), you can download manuals, technical documentation, training material, and various utility software to help you set up and use your Topcon product. The website also offers registration resources, training, and technical assistance.

Register for a free account at <https://www.topconpositioning.com/support> today to download this material.

Your local authorized dealer is:

SYNERGY
POSITIONING SYSTEMS

For more information contact Synergy Positioning Systems or visit the Synergy Positioning Systems website at www.synergypositioning.co.nz
All branches: Phone 0800 867 266 Email: info@synergypositioning.co.nz



www.topconpositioning.com

HiPer VR Quick Reference Card

Specifications subject to change without notice.

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