

SOKKIA

GRX5

Integrated GNSS Receiver

Quick Reference Card

Description

The Sokkia GRX5 is a compact, lightweight, and durable GNSS receiver. It includes a GNSS antenna and receiver module, Inertial Measurement Unit (IMU), Wi-Fi and Bluetooth wireless technology, integrated cellular modem, and optional UHF or FH915 radio. The receiver can be used as a real-time kinematic (RTK) base and rover.



Figure 1: GRX5 with Optional Internal Radio Modem

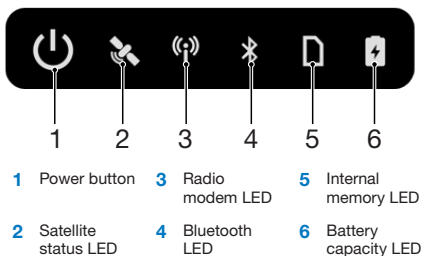


Figure 2: GRX5 Display Panel

Getting Started

Setting the Receiver Power ON and OFF

Push the Power button (7, figure 1) and hold it for 2 seconds to set the power to ON. The satellite status LED changes to solid. The Power button LED flashes yellow until startup is complete. Push the Power button and hold it for at least 3 and not more than 10 seconds. The satellite status LED changes to yellow.

Battery Power

The GRX5 gets power from two internal, non-removable, fast-charging, lithium-ion battery packs. Each battery pack is rated at 7.2 VDC, 3.5 Ah.

The GRX5 draws a small amount of power when it is turned OFF. If it is stored for longer than 3 months, the battery can fully discharge. The battery must then be recharged before use.

Battery Charging

It is important to make sure that the USB port of the receiver is free of moisture before charging. If moisture is detected that exceeds a set point, the internal battery pack is not charged. This is a safety precaution to protect receivers from damage and corrosion.

The optimal charging temperature is between 50 °F (10 °C) and 77 °F (25 °C). The charge terminates automatically if battery temperature rises above 113 °F (45 °C) or falls below 32 °F (0 °C).

Charging with AC Power



1. Connect the supplied USB Type-C cable to the receiver's USB Type-C connector.
2. Connect the power cable to the connector on the power supply.
3. Connect the power cable to an available outlet for approximately five hours to fully charge the battery pack.


Charging with DC Power

The receiver can be connected to an external DC power source, such as a vehicle battery with 9 to 27 VDC, using the supplied SAE cable with alligator clips and an SAE to USB Type-C adapter to operate/charge the receiver.








LED Display

The multi-color LEDs on the display panel show the satellite tracking status, radio modem status, Bluetooth status, data logging and recording status, and battery capacity levels.






LED ICON KEY			
Display	SOLID	FLASHES	OFF
			

POWER BUTTON FUNCTIONS AND LED STATUS			
Function	Power Button	Description	
Set power to ON	Push and hold 2 seconds	Release when the LEDs on the display panel are solid yellow. The power LED flashes yellow until startup is complete. The power LED is solid green if an external power source is connected. The power LED is dark if no external power source is connected.	
Set power to OFF	Push and hold for more than 3 seconds but not more than 10 seconds	Release when the LEDs on the display panel are solid white.	
Start/Stop data logging	Push three consecutive times within 2 seconds	See recording LED.	
Reset parameters	Push and hold for 10 to 15 seconds	Release when the LEDs on the display panel are solid yellow.	
Factory Reset	Push and hold for 30 to 35 seconds	Release when the LEDs on the display panel are solid red.	
Emergency shutdown with no external power source connected	Push and hold for 45 to 70 seconds	Release when all LEDs are dark.	
Update firmware	Flashes green and yellow during the installation		





SATELLITE TRACKING STATUS LED

Display	Status
 Flashes red	No satellite tracking
 Solid red	Satellites tracking in progress, position unavailable
 Solid yellow	Satellite tracking in progress and receiver has position, but no fixed solution
 Solid green	Receiver has fixed solution
   Flashes red, green, yellow	Option Authorization File (OAF) is invalid or expired









RADIO STATUS LED

Display	Status
 Solid green	Radio modem is ON and prepared for operation
  Solid green/ flashes yellow	Modem receives corrections from a base station
  Solid green/ flashes red	Modem transmits corrections







BLUETOOTH COMMUNICATION LED

Function	Bluetooth Status
 Flashes blue	Bluetooth is ON and can be found
 Solid blue	A single Bluetooth connection is made
  Solid blue + flashes blue every N seconds	Multiple (N) valid Bluetooth connections made

RECORDING STATUS LED

Display		Status
	Flashes green	Data logging in progress, memory capacity $\geq 10\%$
	Flashes yellow	Data logging in progress, memory capacity less than 10% but more than 1%
	Flashes red	Data logging in progress, memory capacity $< 1\%$
	Solid red	Memory capacity is full
	Flashes blue	File deletion in progress
	Flashes magenta (2 flashes per second)	Internal memory card format in progress
	Flashes magenta (1 flash per second)	File system check in progress
	Flashes magenta (1 flash per 2 seconds)	File system mount in progress

BATTERY STATUS LED

Display		Status
	Solid green	Battery capacity $\geq 50\%$
	Solid yellow	Battery capacity between 15% and 50%
	Solid red	Battery capacity $\leq 15\%$
	Flashes green	External power connected and in operation/ battery charge in progress, battery capacity $\geq 50\%$
	Flashes yellow	External power connected and in operation/ battery charge in progress, battery capacity between 15% and 50%
	Flashes red	External power connected and in operation/ battery charge in progress, battery capacity $\leq 15\%$

Specifications

PHYSICAL

Dimensions	W: 0.45 ft. x H: 0.32 ft. x D: 0.45 ft. (W: 138.6 mm x H: 97.2 mm x D: 138.6 mm) with antenna 0.29 ft. (87 mm) without antenna
Power connector	USB Type-C

ELECTRICAL

Internal Battery	7.2 VDC, 3.5 Ah
Battery Charge Time	40 minutes to 50% charge when power is OFF 2.5 hours to 100% when power is OFF Ambient temperature 68 °F (20 °C)
Operation Time	STATIC (1 Hz data logging) 15 hours RTK ROVER (UHF) 10.5 hours RTK ROVER (LongLink) 13 hours RTK ROVER (Network) 11 hours RTK BASE STATION (1 W UHF) 7 hours RTK BASE STATION (LongLink) 13 hours RTK BASE STATION (Network) 11 hours
External Power Input	5 to 20 VDC 3 A USB Type-C, normal ambient conditions
Power Consumption	RTK BASE STATION with internal 1 W radio: 7 W RTK ROVER with internal radio: 5 W RTK ROVER (LongLink): 3.5 W
External Power Supply Adapter Rating	Output: USB Type-C PD (Power Delivery) 3.0 compatible 5/9/15/20 VDC/2 A Input: 100 to 240 VAC, 50 to 60 Hz, 1.5 A

ENVIRONMENTAL

Operation Temperature	-4 °F (-20 °C) to 122 °F (50 °C) (Battery power) -40 °F (-40 °C) to 149 °F (65 °C) per MIL-STD 810G (with external power source)
Charge Temperature	32 °F (0 °C) to 104 °F (40 °C)
Storage Temperature	-40 °F (-40 °C) to 185 °F (85 °C)
IP Rating	IP67 (fully dust proof, 1 meter submersion)

Product Conformity

Hereby, Topcon declares that the GRX5 GNSS receiver is in compliance with the essential requirements (radio performance, electromagnetic compatibility, and electrical safety) and other relevant provisions described in Directive 2014/53/EU.

Technical Documentation and Utility Software

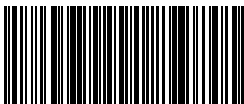
From the myTopcon NOW! web portal (<https://mytopconnow.topconpositioning.com>) or the myTopconNOW! app, manuals, technical documentation, training materials, and various utility software to help set up and use this Topcon product can be downloaded.

For more information, refer to 10691178-01 *GRX5 GNSS Receiver Operator Manual*.



www.topconpositioning.com

Your local authorized dealer is:



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