CarBack Radar
Owner's manual

About this product

The CarBack is a Bluetooth & ANT+ compatible radar system with an integrated light to help increase a rider's situational awareness on the road. The radar can communicate with select bike computers and smartphones. For detailed instructions on setting up your device, please refer to the user manual provided by the respective brand's bike computer.

⚠ WARNINGS:

- Do not use if the battery is impacted. Also do not puncture, crush, deform, disassemble, or heat a lithium-ion battery above 140° F (60° C). Damage to the battery may result in a fire, explosion, and/or exposure to specks of lithium or lithium dust.
- The light is very bright. Do not stare at an operating light. Staring may be harmful to the eyes.
- Proper use of the device can enhance your riding experience, but improper use can lead to distractions and severe injury or even death. Exercise caution and use the device appropriately and attentively.
  - Proper use: Quickly check the radar device information while maintaining focus on your surroundings (when making turns, passing, changing lanes, etc.). Avoid prolonged staring or getting distracted by the device's display.
  - Improper use: Overly focusing on the display may cause you to overlook obstacles or dangers, putting you at risk of serious consequences.

IMPORTANT: Check your local lighting laws. Flashing lights and full brightness may not be allowed in all locations. The CarBack radar light does not conform to the German road traffic regulation StVZO.

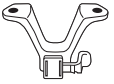
Specifications

- **Battery information:** 154mA (typical), 3.7 Vdc, 2000mAh
- **Battery charging temperature:** 50°F to 113°F (10°C to 45°C)*
- **Battery operating temperature:** 14°F to 140°F (-10°C to 60°C)*
- **Battery storage temperature:** 14°F to 113°F (-10°C to 45°C)*
- **Light lumens:** 90
- **Water ingress rating:** IPX7
- **Weight:** 70g (2.5oz)
- **Charge port:** USB-C
- **Dimensions:** 70 x 50 x 30mm
- **Detection:** Up to 7 vehicles
- **Detection range:** 1-240m
- **Runtime:** 7 hours (dependent on traffic, may exceed 7 hours)
- **Chargetime:** 4 hours

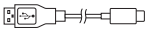
Parts list

CarBack unit
5313794

Quick Connect Plus Mount Rear
W5314368



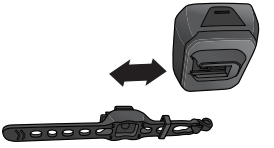
Optional Blendr Saddle Mount
5283888
Compatible with most Bontrager saddles



USB-C Cable
W5268686

Phone or ANT+ radar-compatible computer needed to pair

Installation



NOTE:
To operate correctly, the unit must:

- Be between 70-120cm (27.5-47in) from the ground,
- Point straight backwards (up/down, left/right),
- Not be blocked by your wheel, saddle bag, fender, etc.

⚠ WARNING:

A bicycle without correct lights and reflectors might be difficult for other people to see, and you might not be able to see them. If you cannot see, or other people cannot see you, you could have an accident. Make sure your lights are set up, operating correctly, and that batteries are charged.

⚠ WARNING:

There are various factors that will obstruct the performance of the device, resulting in reduced efficiency and effectiveness. Riders directly behind you and mud or ice on the device may block the radar. Hilly or curvy roads may give you intermittent signals, and vehicles driving at the same speed right behind you may be less recognizable. Failure .to understand and be aware of these factors can lead to serious injury or death

Light Modes

Press the button to cycle through the modes

Day steady
Max output: 25 lumens

Day Flash
Max output: 90 lumen bursts

Night steady
Max output: 5 lumens

Night Flash
Max output: 5 lumen bursts

Basic operation

Download the Trek mobile app and follow the prompts to connect with the CarBack.

See also the CarBack supplement for more instructions.

First time use

Turn the CarBack on and pair it to your smartphone or compatible bike computer.
The process will vary between smartphones and bike computers, but typically:

1. Search for new sensor.
2. Pair sensor/radar.

NOTE: Most bike computers will recognize the device as both a light and a radar. Check your bike computer. It may be set up to automatically power up and power down the light network when you start/stop your ride or start/stop/pause your timer.

With the CarBack paired to your bike computer

Power up sequence

1. Turn on your bike computer.
2. The computer will turn on the light.

NOTE: Make sure your CarBack light is on. Not all computers work the same. Check your bike computer's manual for details.

3. Check to make sure the CarBack turns on.
4. The computer will connect to the CarBack.

Power down sequence

1. Bike computer is powered off.
2. Light and CarBack will turn off.

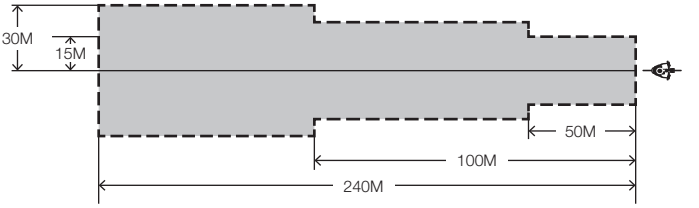
If the bike computer is disconnected from the CarBack, the radar and light may stay on which may deplete the battery. For example this may happen if the bike computer is removed from the bicycle and taken away from the CarBack. The fuel gauge lights will remain on anytime the radar is active (on). The CarBack unit will automatically turn on/off when it has been previously paired with a compatible bike computer.

Reset

To reset the CarBack to factory default settings:

- With the CarBack on, press and hold the power button for 15 seconds.
  The main LED will flash once at 8 seconds and again at 15 seconds.
- Release the button after the second flash.
- Once reset, the wireless broadcast will be disabled until the first time the CarBack is powered on.

Radar detection zone=



Charging the battery

The CarBack was charged prior to packaging, but we recommend you charge it before first use.

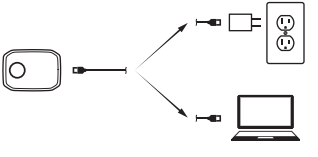
IMPORTANT: For best results, charge at room temperature in a dry place. Use an approved (ex. UL certified) USB-C charger rated for 500mA or greater. Avoid extreme conditions including wet, cold, or extreme heat.

1. Open the USB port cover.
2. Plug the USB-C charger cable into the USB port on the unit.
3. Plug the cable into a computer or wall adapter.
4. When all lights are off, the charge is complete. Unplug the charger cable and close the USB port cover.
5. If you charge your computer at the same time as your CarBack it may keep your CarBack on after unplugging. When unplugging the CarBack after charging, turn the CarBack off if the fuel gauge is still on. Press and hold the power button for 1 second to power down.

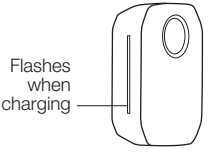
IMPORTANT: Ensure the USB cover is latched before riding in rain or wet conditions. If the USB cover is not closed, damage to the unit may occur. Do not leave the unit outdoors when not in use.

NOTE: If the main button indicator is flashing red while plugged in, the light is either too hot or too cold to charge. Charging will begin when the light is between 32˚F (0˚C) and 104˚F (40˚C).

To charge



When charging

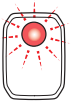


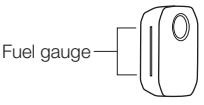
CarBack battery charging and care

Low battery mode

At 5% battery life, the display indicator will flash red. The radar does not operate in this low battery mode but the light will continue to operate.

NOTE: Your bike computer will notify that the radar has been disconnected.





Fuel Gauge	Charge, %	Charge Duration
Four lights green	75% – 100%	3.5-4 hours from dead battery to full
Three lights green	50% – 75%	
Two lights amber	25% – 50%	
One light red	5% – 25%	
One light red flashing	0% – 5%	

Caring for the battery

- Store the CarBack at room temperature in a dry place. Avoid moisture, or extreme hot or cold.
- Store the CarBack in a charged condition. Battery life will decrease if the battery is stored in a fully discharged condition.
- Over time, the runtime of the battery will diminish. Expect about 500 full charges, depending on care. After a full life, the battery will continue to charge but with a lower runtime. When the runtime is unsatisfactory, do not open the case of the light or incinerate; please recycle.

Traveling with the battery

Make sure the CarBack is turned off during travel. When traveling by air, verify with your carrier how lithium ion batteries of this capacity must be treated. Often these devices need to be packed in carry-on luggage.

Protection

The CarBack has been designed and tested for use in all riding conditions and has an ingress rating of IPX7. The CarBack is not intended to be stored outdoors and should be stored and charged indoors after use.

Recycling

Please recycle the CarBack with the battery. In the US you can find out where to do this at www.call2recycle.org.

European and International consumers, please contact your bike shop. This symbol on the product(s) and/or accompanying documents means that used electrical and electronic products should not be mixed with general household waste.

For proper treatment, recovery, and recycling outside the US, please take this product(s) to designated collection points. Alternatively, in some countries you may be able to return your products to your local retailer upon purchase of an equivalent new product. Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling. Please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

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Milton Keynes, MK7 8HX
TEL: +44 1908 360 140

For more information

If you need help not offered by this manual, talk to your Trek retailer or visit trekbikes.com.

⚠ WARNING:

If you or someone you are riding with has photosensitivity to flashing lights, ensure this light does not trigger an episode prior to use on the road. While the flash pattern is designed to be outside of the frequency range most associated with causing a photosensitive reaction (5-60Hz), each individual's response may vary, and having an episode while riding may result in serious injury or death.

Statements of Regulatory Compliance

FCC Compliance

Carback - FCC ID: 2AHXD-5313794

This device complies with part 15 of the FCC Rules. Operation is subject to the following 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: 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, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz. 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 your bike shop or an experienced radio / TV technician for help.

NOTES: TREK BICYCLE CORPORATION IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY TREK BICYCLE CORPORATION OF THIS DEVICE COULD VOID THE USER'S AUTHORITY TO OPERATE THE DEVICE.

Exposure to radio frequency energy.

The radiated output power of this device meets the limits of FCC/IC radio frequency exposure limits. This device should be operated with a minimum separation distance of 5mm (1/4 inches) between the equipment and a person's body.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

Industry Canada Compliance

Carback - IC ID: 21334-5313794

CAN ICES-3(B)/NMB-3(B)

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device

This Trek equipment complies with FCC and IC radiation exposure limits set forth for an uncontrolled environment. The radiated output power of the CarBack Radar Wireless Device is below the Industry Canada (IC) radio frequency exposure limits, when used as directed in this manual. This equipment is in direct contact with the body of the user under normal operating conditions. This transmitter must not be colocated or operating in conjunction with any other antenna or transmitter. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address: http://www.ic.gc.ca

Additional Canadian information on RF exposure also can be found at the following web address: http://www.ic.gc.ca

Leprésent appareil est conforme aux CNR d'Industrie Canada applicable aux appareils radio. Exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilsateur de l'appareil doit accepter tout brouillage radioélectrque subi, meme si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil est conforme aux limites d'exposition à la fréquence radio (FR) d'IC et de FCC. La puissance de sortie émise par l'appareil de sans fil CarBack Radar est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Cet appareil est en contact direct avec l'utilisateur dans des conditions normales d'utilisation. L'émetteur ne doit pas être co-implémenté ou utilisé conjointement avec une autre antenne ou un autre émetteur. Ce périphérique est homologué pour l'utilisation au Canada. Pour consulter l'entrée correspondant à l'appareil dans la liste d'équipement radio (REL - Radio Equipment List)d'Industry Canada rendez-vous sur: http://www.ic.gc.ca

Pour des informations supplémentaires concernant l'exposition aux RF au Canada rendezvous sur: http://www.ic.gc.ca

Pour des informations supplémentaires concernant l'exposition aux RF au Canada rendezvous sur: http://www.ic.gc.ca/eic/site/smt-gst.nsf/fra/sf08792.html

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment and meets RSS-102 of the IC radio frequency (RF) Exposure rules. This equipment has very low levels of RF energy that is deemed to comply without testing of specific absorption rate (SAR).

Cet équipement est conforme aux limites d'exposition aux rayonnements énoncées pour un environnement non contrôlé et respecte les règles d'exposition aux fréquences radioélectriques (RF) CNR-102 de l'IC. Cet équipement émet une énergie RF très faible qui est considérée comme conforme sans évaluation du débit d'absorption spécifique (DAS).

European Union Compliance

Trek Bicycle Corporation hereby declares that the wireless device identified as 'CarBack Radar' is in compliance with the following European Directives:

- Radio Equipment Directive 2014/53/EU
- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS Directive 2011/65/EU
- The frequency and the maximum transmitted power in EU are listed below: 2.4GHz ANT+ Plus: EIRP 1.81 dBm , 2.4GHz BT(LE): EIRP 3.37 dBm , 76-81GHz: EIRP -11.81 dBm

The full text of the EU declaration of conformity is available from your dealer, or at the following internet address: https://www.trekbikes.com/us/en_US/coc-doc/

CarBack does not comply with German StVZO regulations.

UK Compliance

Trek Bicycle Corporation hereby declares that the device identified as 'CarBack Radar' is in compliance with the following UK legislation:

- The Electromagnetic Compatibility Regulations 2016
- Electrical Equipment (Safety) Regulations 2016
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Full text of the UK declaration of conformity is available from your dealer, or at the following internet address: https://www.trekbikes.com/us/en_US/coc-doc/

Taiwan Compliance

NCC ID: CCAF23LP196AT7

取得審驗證明之低功率射頻器材，非經核准，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。低功率射頻器材之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應 立即停用，並改善至無干擾時方得繼續使用。前述合法通信，指依電信管理法規定作業之無線電通信。低功率射頻器材須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

trekbikes.com

PN5316869

5313794

CarBack supplement to Owner's manual

Basic operation

First time use

To turn the CarBack on, press and hold the power button for 1 second.

- To turn the CarBack off, press and hold for 1 second.
- When the CarBack is off, you can check battery status with a single click and the fuel gauge will light up.
- Turn the CarBack on prior to pairing to a bike computer or smartphone for the first time. Below are instructions for compatible Garmin and Wahoo computers.

NOTE: Instructions may vary depending on your bike computer and model. Trek recommends reviewing the pairing instructions that came with your bike computer or smartphone prior to use.

The two examples are on the opposite side of this page.

Garmin:

1. Make sure both the Garmin computer and the CarBack are charged and the Garmin is powered on.
2. Turn on the CarBack with a 1 second hold. You are now in pairing mode.
3. Make sure your CarBack is within range (check your Garmin manual for appropriate distance).
4. On the Garmin, navigate to the main menu ⇨ Settings ⇨ Sensors & Accessories ⇨ Add Sensor or Search to initiate a search for available sensors.
5. Once the Trek CarBack is detected, select it from the list of available options.
6. Follow any on-screen prompts to complete the pairing process.

- Once the devices find each other, a successful pairing message should appear on the Garmin screen.
- Once paired with the CarBack, the Garmin will control when the light is on and what mode it is in. Trek recommends Auto mode.
- The CarBack light has two settings for turning on and off. You can change this setting on compatible Garmin computers.
- Option 1: When you power on your Garmin, your light on the CarBack turns on. When you power off your Garmin, your CarBack light will power off.
- Option 2: When you press start for your Garmin timer, the light will turn on. When you save your ride, the light will turn off.

Wahoo:

1. Make sure both the Wahoo computer and the CarBack are charged and your Wahoo is powered on.
2. Turn on the CarBack with a 1 second hold. You are now in pairing mode.
3. Make sure your CarBack is within range (check your Wahoo manual for appropriate distance).
4. On the Wahoo, navigate to: Settings ⇨ Radar Pairing ⇨ Add new sensor ⇨ select Radar from the list of available sensors to initiate a search for available options.
   - Once the devices find each other, a successful pairing message should appear on the Wahoo screen.
5. Verify connection: Before riding, ensure your Wahoo display shows relevant information from the CarBack.

NOTE: The Wahoo computer does not control the CarBack light mode; you will need to use the button on the CarBack to cycle through light modes to pick your desired setting.

For more information, check out the FAQ section on the Trek CarBack Radar product page on trekbikes.com.