



KAROO

Getting Started



Welcome to Karoo

A new generation of cycling computer

First and foremost, we want to thank you for joining us on this ride.

Hammerhead's mission is to reimagine the intersection of
cycling and technology.

Your support not only means a lot to us;
it fans the flames of a revolution that is long overdue.

Now, let's get you rolling.

Installing Karoo on your bike:

1. Install the included Barfly mount. The clamp of the mount should be placed on the handlebar, to the left of the stem.
2. To attach your Karoo to the mount, align the tabs on Karoo's bracket foot with the mount's notches, then press down slightly and twist. The device should click into place after a quarter of a turn.
3. To release your Karoo from the mount, make another quarter turn of the device, and it should pop out.

Setting up Karoo:

1. Power up your Karoo by pressing and holding the non-textured power button for a few seconds. (Note: The first time you do this, powering up the unit will take longer than usual.)
2. After powering up, you will be prompted with a few setup steps, like connecting to a WiFi network, and creating a Hammerhead account.
3. Take some time to familiarize yourself with Karoo's interface: pair your sensors, create a rider profile, and try making a route or two.
4. Get out there and ride!

Also, check out Karoo's web-based dashboard, at dashboard.hammerhead.io. It's a powerful tool that allows you to create, import, and modify routes from your computer, which automatically and immediately sync with your Karoo.

Visit our website to learn more about it.

IMPORTANT SAFETY AND PRODUCT INFORMATION

Karoo Manual V1.2

Download the most recent version of the Karoo Manual at Hammerhead.io

Connecting the Device to Your Computer or Charger

NOTICE

To prevent corrosion or short circuit, thoroughly dry the USB port and the surrounding area before charging or connecting to a computer.

Device Care

- Use air to blow out dust that may accumulate in the USB port.
- Do not direct a spray of water at the device.
- Intermittently check that the bracket foot bolt on the bottom of the device is tightened to 1N.M.
- After muddy or rainy rides, remove the back cover and clean the Karoo and cover under cool running water. Do not use strong detergents or solvents. Ensure that the buttons and ports are free of debris.
- Only use a fingernail to gently remove the bottom cover. Do not use a tool, as this may damage the device.
- Do not store the device where prolonged exposure to extreme temperatures can occur, because it can cause permanent damage.
- Never use a hard or sharp object to operate the touchscreen, or damage may result.
- Avoid chemical cleaners, solvents, and insect repellents that can damage plastic components and finishes.

About the Battery

A lithium-ion battery can be used in this device. If these guidelines are not followed, batteries may experience a shortened life span or may present a risk of damage to the device, fire, chemical burn, electrolyte leak, and/or injury.

- Do not disassemble, modify, remanufacture, puncture, or damage the device or batteries.
- Do not remove or attempt to remove the non-user-replaceable battery.
- Do not expose the device or batteries to fire, explosion, or other hazard.
- Do not use a sharp object to remove the removable batteries.
- Do not leave the device exposed to a heat source or in a high-temperature location, such as in the sun in an unattended vehicle. To prevent the possibility of damage, remove the device from the vehicle or store it out of direct sunlight, such as in the glove box.
- Do not operate the device outside of the temperature ranges -10°C to 50°C.
- When storing the device for an extended time period, store within the temperature ranges of 5°C to 25°C.
- Do not use a power adapter that exceeds an output of 2.5A.
- Contact your local waste disposal department to dispose of the device/batteries in accordance with applicable local laws and regulations.
- KEEP BATTERIES AWAY FROM CHILDREN.
- NEVER PUT BATTERIES IN MOUTH. Swallowing can lead to chemical burns, perforation of soft tissue, and

death. Severe burns can occur within 2 hours of ingestion. Seek medical attention immediately.

WARNING

Failure to heed the following warnings could result in an accident or collision resulting in death or serious injury.

- Always consult your physician before beginning or modifying any exercise program.
- If you have a pacemaker or other internal electronic device, consult your physician before using a heart rate monitor.
- The Hammerhead device, accessories, heart rate monitor, and related data are intended to be used only for recreational purposes and not for medical purposes, and are not intended to diagnose, monitor, treat, cure, or prevent any disease or condition.
- The heart rate readings are for reference only, and no responsibility is accepted for the consequences of any erroneous readings.

Bicycle Warnings

- Always use your best judgement, and operate the bicycle in a safe manner.
- Make sure your bicycle and hardware are properly maintained and that all parts are correctly installed.

Off-Road Navigation Warnings

If your Hammerhead device is able to suggest off-road routes for various outdoor activities, such as biking, follow these guidelines to ensure safe off-road navigation.

- Always use your best judgment and exercise common sense when making off-road navigational decisions. The Hammerhead device is designed to provide route suggestions only. It is not a replacement for attentiveness and proper preparation for outdoor activities. Do not follow the route suggestions if they suggest an illegal course or would put you in an unsafe situation.
- Always carefully compare information displayed on the device to all available navigation sources, including trail signs, trail conditions, weather conditions, and other factors that may affect safety while navigating. For safety, always resolve any discrepancies before continuing navigation, and defer to posted signs and conditions.
- Always be mindful of the effects of the environment and the inherent risks of the activity before embarking on off-road activities, especially the impact that weather and weather-related trail conditions can have on the safety of your activity. Ensure that you have the proper gear and supplies for your activity before navigating along unfamiliar paths and trails.

GPS Notice

The navigation device may experience degraded performance if you use it in proximity to any device that uses a terrestrial broadband network operating close to the frequencies used by any Global Navigation Satellite System (GNSS), such as the Global Positioning Service (GPS). Use of such devices may impair reception of GNSS signals.

Radio Frequency Radiation Exposure

This device is a mobile transmitter and receiver that uses an internal antenna to send and receive low levels of radio frequency (RF) energy for data communications. The device emits RF energy below the published limits when operating in its maximum output power mode and when used with Hammerhead authorized accessories. The device should not be used in other configurations. This device must not be co-located or operated in conjunction

with any other transmitter or antenna.

Operating Frequency Band (RF):

TX:

EGSM900/WCDMA900: 880-915 MHz

DCS1800: 1710 -1785 MHz

WCDMA2100:1920-1980MHz

Bluetooth: 2402-2480 MHz

Wi-Fi: 2412-2472MHz/2422-2462MHz

ANT+: 2457MHz

RX:

EGSM900/WCDMA900: 925-960 MHz

DCS1800: 1805-1880 MHz

WCDMA2100: 2110-2170MHz

Bluetooth: 2402-2480 MHz

Wi-Fi: 2412-2472MHz/2422-2462MHz

ANT+: 2457MHz

GPS: 1575.42 MHz

Max. Of Transmit power:

EGSM900: 33dBm(GMSK)

DCS1800: 31dBm(GMSK)

WCDMA Band1/8: 23dBm

Wi-Fi:

16.66dBm(802.11b),

13.59dBm (802.11g),

13.50dBm(802.11n20),

13.39dBm(802.11n40)

Bluetooth: 6.65dBm,

BLE: -0.47dBm

ANT+: -7.96dBm

Regulatory Labeling

This device uses e-labeling to display regulatory information. To access regulatory information on the device follow these steps:

1. Tap "Settings"
2. Tap "About"
3. Tap "Regulatory Information"

All regulatory and certification information for the device will be displayed.

FCC Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two 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.

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 may cause harmful interference to radio communications if not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. 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 of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet that is on a different circuit from the GPS device.
- Use of a shielded cable is required to comply with Class B limits in Subpart B of Part 15 of the FCC Rules.

SAR tests are conducted using standard operating positions accepted by the FCC with the device transmitting at its highest certified power level in all tested frequency bands, although the SAR is determined at the highest certified power level, the actual SAR level of the device while operating can be well below the maximum value, in general, the closer you are to a wireless base station antenna, the lower the power output.

Before a new model device is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the exposure limit established by the FCC. Tests for each device are performed in positions and locations (e.g. at the ear and worn on the body) as required by the FCC.

For body worn operation, this model device has been tested and meets the FCC RF exposure guidelines when used with an accessory designated for this product or when used with an accessory that contains a minimum of 10mm from the body.

Non-compliance with the above restrictions may result in violation of RF exposure guidelines. Do not make any changes or modifications to the equipment unless otherwise specified in the manual. Changes or modifications not expressly approved by Hammerhead Navigation Inc. could void the user's authority to operate the equipment.

This product does not contain any user-serviceable parts. Any and all repairs or modifications must be conducted exclusively by Hammerhead. Unauthorized repairs or modifications could result in permanent damage to the equipment, and void your warranty and your authority to operate this device under Part 15 regulations.

Users in Canada

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 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 should be installed and operated keeping the radiator at least 0cm or more away from person's body.

Pour les usagers résidant au Canada

Le présent appareil est conforme aux CNR d'Industrie Canada applicables 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'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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 doit être installé et utilisé en gardant une distance de 0cm ou plus entre le dispositif rayonnant et le corps.

Software License Agreement

BY USING THE DEVICE, YOU AGREE TO BE BOUND BY THE TERMS AND CONDITIONS OF THE FOLLOWING SOFTWARE LICENSE AGREEMENT. PLEASE READ THIS AGREEMENT CAREFULLY.

Hammerhead Navigation Inc. and its subsidiaries ("Hammerhead") grant you a limited license to use the software embedded in this device (the "Software") in binary executable form in the normal operation of the product. Title, ownership rights, and intellectual property rights in and to the Software remain in Hammerhead and/or its third-party providers.

You acknowledge that the Software is the property of Hammerhead and/or its third-party providers and is protected under the United States of America copyright laws and international copyright treaties. You further acknowledge that the structure, organization, and code of the Software, for which source code is not provided, are valuable trade secrets of Hammerhead and/or its third-party providers and that the Software in source code form remains a valuable trade secret of Hammerhead and/or its third-party providers. You agree not to decompile, disassemble, modify, reverse assemble, reverse engineer, or reduce to human readable form the Software or any part thereof or create any derivative works based on the Software. You agree not to export or re-export the Software to any country in violation of the export control laws of the United States of America or the export control laws of any other applicable country.

Map Data Information

Hammerhead uses a combination of governmental and private data sources. Virtually all data sources contain some inaccurate or incomplete data. In some countries, complete and accurate map information is either not available or is prohibitively expensive.

Limited Warranty

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER LEGAL RIGHTS, WHICH VARY FROM STATE TO STATE (OR BY COUNTRY OR PROVINCE). HAMMERHEAD DOES NOT EXCLUDE, LIMIT OR SUSPEND OTHER LEGAL RIGHTS YOU MAY HAVE UNDER THE LAWS OF YOUR STATE (OR COUNTRY OR PROVINCE). FOR A FULL UNDERSTANDING OF YOUR RIGHTS YOU SHOULD CONSULT THE LAWS OF YOUR STATE, COUNTRY OR PROVINCE.

This device is warranted to be free from defects in materials or workmanship, for one year from the date of purchase. For purchases exclusively within the European Union, the warranty period is extended to two years. Within these respective periods, Hammerhead will, at its sole option, repair or replace any components that fail

in normal use. Such repairs or replacement will be made at no charge to the customer for parts or labor, provided that the customer shall be responsible for complying with all applicable import and export laws and regulations and for paying all custom duties, V.A.T., shipping fees and other associated taxes and charges. This Limited Warranty does not apply to: (i) cosmetic damage, such as scratches, nicks and dents; (ii) consumable parts, such as batteries, unless product damage has occurred due to a defect in materials or workmanship; (iii) damage caused by accident, abuse, misuse, water, flood, fire, or other acts of nature or external causes; (iv) damage caused by service performed by anyone who is not an authorized by Hammerhead; (v) damage to a product that has been modified or altered without the written permission of Hammerhead, or (vi) damage to a product that has been connected to power and/or data cables that are not supplied by Hammerhead. In addition, Hammerhead reserves the right to refuse warranty claims against products or services that are obtained and/or used in contravention of the laws of any country. Hammerhead reserves the right to refuse warranty claims against products or services that are obtained through unauthorized dealers or resellers. Hammerhead products are intended to be used only as a travel aid and must not be used for any purpose requiring precise measurement of direction, distance, location or topography. Hammerhead makes no warranty as to the accuracy or completeness of map data.

This Limited Warranty also does not apply to, and Hammerhead is not responsible for, any degradation in the performance of any Hammerhead product resulting from its use in proximity to any handset or other device that utilizes a terrestrial broadband network operating on frequencies that are close to the frequencies used by any Global Navigation Satellite System (GNSS) such as the Global Positioning Service (GPS). Use of such devices may impair reception of GNSS signals.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE WARRANTIES AND REMEDIES CONTAINED IN THIS LIMITED WARRANTY ARE EXCLUSIVE AND IN LIEU OF, AND HAMMERHEAD EXPRESSLY DISCLAIMS, ALL OTHER WARRANTIES AND REMEDIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, STATUTORY REMEDY OR OTHERWISE. THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY HAVE OTHER LEGAL RIGHTS, WHICH VARY FROM STATE TO STATE AND FROM COUNTRY TO COUNTRY. IF IMPLIED WARRANTIES CANNOT BE DISCLAIMED UNDER THE LAWS OF YOUR STATE OR COUNTRY, THEN SUCH WARRANTIES ARE LIMITED IN DURATION TO THE DURATION OF THIS LIMITED WARRANTY. SOME STATES (AND COUNTRIES AND PROVINCES) DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

IN NO EVENT SHALL HAMMERHEAD BE LIABLE IN A CLAIM FOR BREACH OF WARRANTY FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, WHETHER RESULTING FROM THE USE, MISUSE OR INABILITY TO USE THIS PRODUCT OR FROM DEFECTS IN THE PRODUCT. SOME STATES (AND COUNTRIES AND PROVINCES) DO NOT ALLOW THE EXCLUSION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

If during the warranty period you submit a claim for warranty service in accordance with this Limited Warranty, then Hammerhead will, at its option: (i) repair the device using new parts or previously used parts that satisfy Hammerhead's quality standards, (ii) replace the device with a new device or a refurbished device that meets Hammerhead's quality standards, or (iii) exchange the device for a full refund of your purchase price. Repaired or replaced devices have a 60 day warranty. If the unit sent in is still under its original warranty, then the new warranty is 60 days or to the end of the original 1 year warranty, or 2 year warranty respectively for the European Union, whichever is longer. Before seeking warranty service, please access and review the online help resources available on www.hammerhead.io If your device is still not functioning properly after making use of these resources, contact Hammerhead at support@hammerhead.io to process your warranty claim.

