

Edge 820 New Feature FAQs:

1. GroupTrack

- What do I need to use GroupTrack?
 - o An Edge 820
 - o A compatible smartphone with Garmin Connect Mobile. (Android / iOS / Windows)
 - o Garmin Connect connections!
 - o An active LiveTrack / GroupTrack session running on Garmin Connect Mobile.
 - o Good cellular network connection for participants.
 - o A timed activity needs to be running on your Edge for your position to be shared.
- Who can take part in a GroupTrack session?
 - o Edge 820 users will be able to see Garmin Connect connections who have opted in to a LiveTrack / GroupTrack session.
 - o Any LiveTrack compatible device user will be able to participate in a GroupTrack session (Edge 510 / 810 / 520 / Forerunner 620 / 920 / 735 etc.). These riders will be seen by their connections with Edge 820s, they just won't be able to see participants on their own device.
- How frequently will GroupTrack positions be updated?
 - o Rider positions will be sent from their Livetrack device to the network approximately every 15-30 seconds.
 - o There may be a slight lag to the rider positions on the Edge 820 map page due to the time taken for information to get to and from the network
 - o For a rider position to be updated, riders will need good cellular network coverage. If a rider is out of network coverage, their position will be updated when they regain network coverage.
- What will Edge 820 users see on their map?
 - o Rider positions will show up as coloured dots on the map screen:
 - Blue means a rider is moving.
 - Red means a rider is stationary.
 - Grey means that there is no new information for a rider (e.g. they may be out of network coverage.)
 - o Information available for each dot will be the rider's username, their speed and their distance from you at the last data point.
- Miscellaneous GroupTrack info:
 - o How much data is used during a GroupTrack session? Each update for one user will around 60 bytes of data.
 - o Is there a participant limit? Up to 50 riders.
 - o GroupTrack will track your connections within a 10 mile / 16km radius of your current location.
 - o GroupTrack can be disabled at any point during your ride either directly on your Edge or in Garmin Connect Mobile.
- Will GroupTrack be expanded to other devices?
 - o All LiveTrack compatible devices will be able to take part in GroupTrack sessions and be visible to Edge 820 users.
 - o We plan to extend the ability to view GroupTrack participants to the Edge 1000 only. This is expected to be in Q4 2016.

2. Incident Detection:

- What is needed to use Incident Detection?
 - o Edge 820
 - o Compatible Smartphone with Garmin Connect Mobile.
 - o Specified Emergency Connections set up in Garmin Connect Mobile.
- How does Incident Detection work?
 - o We use an accelerometer inside the Edge 820 to determine if there is an impact and to check the orientation of the unit/bike.
 - o GPS, Cadence and Speed sensor data (if available) are then used to determine a false positive. We combine all the information to compute the probability of an incident and trigger the screen notification.
 - o If the rider is ok and not in need of assistance, or if an incident was falsely detected, the rider then has 30 seconds to cancel the message by touching and holding the display.
 - o If the message is not cancelled, then a text message and email is sent from Garmin Connect Mobile to the rider's emergency contacts containing the user's location.
 - o If the rider is OK or was not able to cancel the message in time, they can send a follow up 'I'm OK' message from their Edge.
- What happens to my message if there is no network connection?
 - o Garmin Connect Mobile will try 6 times to communicate the message. The gap between attempts is 30 seconds.
 - o If the message is not able to be sent, a prompt appears on the Edge as follows: 'No message can be sent. Try calling for help directly from your phone.'
- Can Incident Detection be disabled?
 - o Yes. It is switched off by default and can be disabled at any point directly on the Edge after it has been turned on.
 - o Incident detection is primarily designed for road cycling use because the terrain, lower speeds and higher impacts seen in mountain biking are likely to lead to more frequent incidents being detected.

3. Battery save mode:

- How does new battery save mode work?
 - o The new battery save mode is intended to extend the battery life of your Edge.
 - o It does this by clever management of the display and by reducing the power consumption of the GPS, while still tracking the detail of your ride (including location data and all sensor data).
 - o In Battery Save Mode, the display is turned off unless prompted by user interaction or triggered by on-device alerts.
 - o The rider can choose which alerts will wake the screen (e.g. activity alerts, turn guidance, segments, smart notifications etc.)
 - o Battery save mode can be enabled or disabled at any time directly on your Edge.
 - o When riding in normal mode, and the battery gets low, the rider will be prompted to see if they want to move to Battery Save mode.
 - o It is expected that Battery Save mode can extend the battery life by up to 50% (dependent on the level of rider interaction with the display.)

4. General Battery Life information:

- Headline Battery Life communication is as follows:
 - o Battery life: Up to 15 hours
 - o Battery Save mode will extend the battery by up to 50% while still tracking the detail of your ride.

- This information is what should be quoted in brochures, online etc.
- More detailed supporting information:
 - Headline quoted battery life: GPS only / Data Page / Smart Recording)
 - Up to 15 hours
 - Typical usage (quoted in the operating manual): 3 sensors / GPS + GLONASS / Smart Recording / Phone Connection / Navigation / Daytime riding)
 - Up to 12 hours
 - High usage: 4 sensors, incl. Power / GPS + GLONASS / Every second recording / Phone Connection / Navigation / daytime riding)
 - Up to 10 hours.
- Depending on usage, Battery Save mode will extend the battery by up to 50% while still tracking ride detail. User interaction, backlight setting, or alerts and notifications that regularly activate the display while riding in Battery Save mode will have an impact on battery life.

5. New Performance Features:

- The Edge 820 has several new performance measurement features to help the rider understand and track their performance and their progress. All of the features will learn the rider's capacity and improve accuracy over time.
- Most of the features require both HR and Power data. Power data acts in the same way as Pace does for running: Power is the effort a rider is putting in, the Heart Rate is their body's response to that level of effort.
 - VO2 Max:
 - Uses HR and Power data to calculate a cycling specific VO2 Max for the rider. This value is compared to others within the rider's demographic on a simple rainbow gauge.
 - Requires a minimum of 2 minutes of effort above 90% Max HR to generate a value.
 - Performance Condition:
 - This is aimed to give the rider a clear view on whether they are on a good or a bad day after the first few minutes of a ride.
 - It is designed to help a rider understand whether they are well-recovered or whether they need to take it easy.
 - It uses HR and Power data to display an alert after the first few minutes of a ride, once a rider has reached a Heart Rate value above 70% of their max. E.g. A figure of +10 would indicate that the rider is on a very good day.
 - It is also available as an ongoing data field throughout the ride.
 - FTP Tracking:
 - There are 2 ways we calculate a riders FTP on the Edge 820:
 - Guided Test:
 - Using HR and Power data, the rider is taken through a warm up, followed by a gradual increase of targeted effort in 3-4 minute increments over a period of 15 – 20 minutes.
 - Based on the HR response to the increasing Power effort, we calculate a rider's FTP value.
 - The rider is given the option to Accept or Reject this value. If they Accept, then their power zones, will automatically recalculate based on the new value.
 - It is recommended that this test is performed on a road with constant gradient or on a Turbo Trainer.

- Auto FTP Detection:
 - If a rider sets a personal 20 minute average Power record, and if 95% of this value exceeds their current FTP estimate, we will prompt the rider to accept a new FTP value.
 - Again, they have the option to accept or reject this value.
- Auto Lactate Threshold:
 - When a cyclist receives a new Auto FTP detection during a ride, we will give them a Lactate Threshold HR value.
 - This is expressed in BPM and is the Heart Rate at which we estimate the rider's threshold (the point at which a rider's fatigue is likely to increase.)
- Stress Score
 - This value is calculated outside of an activity and is designed to give a rider insight into their recovery state and stress values before they ride.
 - It is a standing 3 minute test, with HR belt connected, that monitors the rider's heart rate variability.
 - The test is best performed at a consistent time of day each time to build up a consistent understanding of the rider.
 - The result is given in a value of 0 – 100, with 0 being the lowest stress state.