

Battery Optimization Tips

1. Fully charge your phone's battery prior to the race start

Tip: Use car chargers or portable battery charging devices right up to the race start. Wait to turn the tracking on until about 10 minutes before the race starts.

2. Do NOT use Wi-Fi

Most people will connect to Wi-Fi to save on data and to overcome their provider's limited service for a given area. This is fine when you are stationary or indoors, but it doesn't work well with GPS tracking across race courses.

Using Wi-Fi can cause your tracking to turn off as you move away from the Wi-Fi area. Plus, your battery will drain at a much faster rate as your phone attempts to make new connections as you move along the course.

You may receive a prompt from Apple saying Wi-Fi will improve your location services. Disregard this prompt, and make sure to use your cellular service provider when you turn your tracking on.

3. Consider a new phone, or a replacement battery

Clearly, this wouldn't just be for RaceJoy, but it is something we recommend when people are experiencing difficulties with battery life in general. The newer phones and software are designed to make more optimal use of the phone's battery.

4. Turn phone off in poor cell zones

Some race courses have poor to no cell service due to the geographic terrain. Your phone will continue trying to get a connection in poor cell areas and this will drain your battery at a much faster rate. We suggest you temporarily turn your phone off in known trouble areas.

5. Use a portable battery charger

These can be purchased online and are ideal for both participants and spectators. They are lightweight and a good option for those who expect to be out on the course for a longer period of time or who wish to keep other apps running during the event. We've tested many different portable battery chargers and prefer the Anker Mini.

6. Avoid or limit phone camera and video taking when using Live Tracking

Participants and spectators should avoid using the device's camera and, especially, video functions. These significantly utilize the device's battery and should be avoided unless you have a battery backup plan.

7. Turn off other tracking apps

Some tracking apps have come a long way with optimizing your phone's battery. However, if you are using a training app that you know drains your battery, it will drain your phone battery that much faster on race day. We suggest you either use RaceJoy or your preferred tracking app.

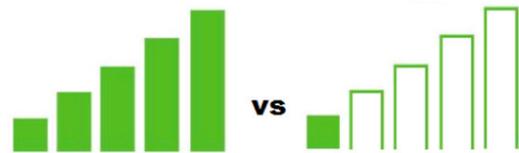
8. Turn off non-essential applications

RaceJoy works well with other mobile apps. However, many applications continually pull on your phone's resources behind the scenes and should be temporarily shut down to prolong your phone's battery life on race day.

Battery Drainers

Poor cell provider coverage - Each cell provider's coverage is different for a given region and race - some provide strong coverage while others have weaker coverage (AT&T is stronger than Verizon or vice versa).

If you are at a race and your cell provider's service is weak as shown with the number of bars on the top of your screen, then this is going to drain your battery at a much faster rate as the phone re-attempts to make connections. There really isn't anything you can do to get around this other than maybe turn off your phone or tracking temporarily if you see the battery is depleting fast.



Limited data bandwidth - Some providers may offer strong cell connections, but have limited data bandwidth in a given region. When this happens you will see pages not loading fully or time outs. You may experience this at larger venues where your cell provider is not able to handle the load of phones. This will also drain your battery as your phone re-attempts to transmit and receive data.

To preserve battery, you can close apps that use data (Internet Browser, email, social sharing apps, etc.) and open them when you see the connection is strong again. For large venues, this typically clears up once people get further on the course and away from the start congestion.

Poor weather conditions - When there are significantly poor weather conditions this can affect GPS technology and will cause your phone to attempt to make connections with GPS satellites - further depleting your battery. Though, for most weather conditions, this isn't an issue as GPS technology has improved over the years.

Viewing the screen - The more you view your screen, the more your battery will get used. We suggest supporting family and friends have a backup battery plan if they are going to be at the race site.

Shorter distances drain faster - RaceJoy is programmed to provide highly accurate positioning for shorter distance events, such as 10Ks and 5Ks. For these events, frequent location updates are transmitted, which will drain the battery at a faster rate.

What's Using Your Battery?

Many people will have a significant number of applications running on their phones in the background and not realize these open apps are pulling on the phone's resources and its battery.

You can check to see how much each used app is pulling on your battery by looking at your phone's Settings area.

For both Android and Apple devices, you can find this under Settings > Battery.

App	Battery Usage
Mail	21%
Background Activity	
Facebook	16%
Safari	12%
Messages	11%
Phone	8%
Camera	6%
Pages	4%
Home & Lock Screen	4%
RaceJoy	3%
Maps	3%
Twitter	3%

How To Close Apps

You can help to extend your battery life and improve your phone's performance by closing down apps you aren't using as shown below.

Apple iOS6 devices:

Double-click the Home button and you will see the icons of your open apps on the bottom of the screen. To close apps, select and hold down the icon until you see the red dot; click the red circle to close.

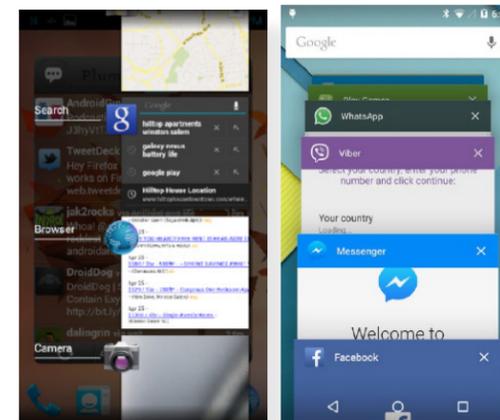
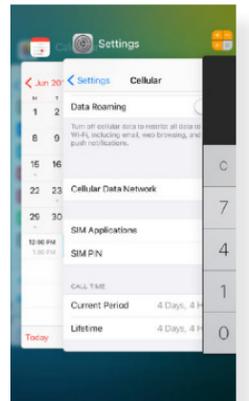


Apple iOS7 & 8 devices:

Double-click the Home button and you will see previews of your open apps to the right of the screen. To close apps, swipe up.

Apple iOS9 devices:

- Double-click the Home button and you will see previews of your open apps to the left of the screen. To close apps, swipe up.



Android devices:

- Double-click the Home button and you will see previews of your open apps to the right of the screen. To close apps, swipe right.
- OR
- Double-click the Home button and you will see previews of your open apps to the top of the screen. To close apps, click the little X on the screens.
- All Android phones have an Applications Manager under Settings where you can see all currently "Running" apps.

If your device closes apps differently than depicted here, you can search your phone model and operating system on Google for how to easily close apps that are open and using your battery.