



GPS troubleshooting

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Mobile phones have extremely low-powered and low-tech GPS receivers and do not compare to dedicated commercial GPS devices. Apps that use assisted technology or force the user to wait such as Google Maps have set a consumer expectation of instant location accuracy.

Why do other time tracking apps struggle less?

Often they have background processes that keep asking the GPS receiver for updates in the background regardless of whether the user is using the phone or not. This 'solution' causes abnormal battery consumption, and in some cases violates the terms set out by Google and Apple.

Other apps are also slower for the user to get the job done and therefore are open longer, allowing greater time for the GPS receiver to wake up. Others implement work-blocking behaviour, refusing to let the user clock in until a reading is found. For TimeDock the quickness of clocking your crew into work is a 'catch-22' in this regard.

Isn't it as easy as programming it correctly?

For security reasons only system apps have access to the GPS hardware. For downloaded apps to get a GPS reading, they have to *ask* the mobile operating system for a reading. This presents a number of challenges in the form of:

1. Battery-saving

To save battery the OS turns off the GPS receiver when it isn't used. It can take minutes for the receiver to warm up and give an accurate reading. In the meantime the OS might deliver an aged or approximated reading. If the reading is older than 3 minutes, or has an inaccuracy radius of more than 2km, TimeDock does not treat the reading as accurate and will not record it.

2. Shielding

Buildings, vehicles, hills, rural locations and more can cause interference with the GPS. Some apps work around this by using various techniques to guess your location. We do not publish 'estimated' locations.

3. Too quick!

TimeDock is extremely quick to use. Often users will open the app, clock five staff in, and close the app within a matter of seconds. We have a very strong preference of making the process as fast as possible and we refuse to hold up your managers from clocking their staff while they wait for an abnormally slow GPS signal.

4. Tampered with

Mobile devices are not secure. Anyone with enough knowledge can block or fake the GPS receiver. This is especially easy to do on Android and is not a flaw in TimeDock in any way, rather a flaw in the mobile operating system.

5. Cheap devices

The general rule of thumb is the cheaper the mobile phone, the longer it takes for the GPS to get a reading. iPhone however seems to be significantly less capable than their Android-equivalent counterparts.

6. Increasing restraint on apps

Manufacturers are continuously focusing on consumer-preference and restricting what can be achieved by most mobile apps in the background. In the past it was easy to continue running in the background when the user exited the app, until a reading was found. Newer OS versions give only a few seconds to complete background work, and often decide not to especially if the screen is turned off.

7. Device flaws

Consumer complaints of GPS-affecting iOS upgrades, iPhone models, and likewise for Android, are extremely numerous when you look online. This is indicative of the nature of mobile phones. Some devices work better than others and often upgrades cause degrading experiences for users. This is not something we can control.

8. Continuous effort

We do our best to ensure we are doing all we can to get an accurate reading. There are over ten thousand models of phone on the market and every single device has its own hidden flaws. We are simply not capable of testing every conceivable scenario on every single device model, everywhere on the planet, at all times!

Why do we bother?

We like to use the GPS to create a deterrent for misbehaviour. If you have serious misconduct concerns for employees that you are unable to verify, we recommend engaging with an expert consultant in this matter.

If you require accurate GPS for business operations then we recommend engaging with a commercial-grade GPS tracking provider.

Could TimeDock be broken?

Glad you asked! If you believe we've introduced a flaw, or you have discovered a specific way that the GPS will never work, please let us know so we can look into it further.