

LearnOSM

Mapping with a Smartphone, GPS or Paper

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To really create a detailed & accurate map, you need to carry out a survey in the area you are updating. The guides in this section deal with carrying out a survey using either a;

- GPS which will probably be more accurate than your mobile phone,
- Field Papers, a method of taking a printed map you can write on, then upload & trace from, or
- Your mobile phone. There are many apps available for navigating using OSM data, and many apps to help you carry out your survey. Just a few are listed here but this list is growing daily, and some Aid Organisations are designing their own apps to gather specific data.

More and more smartphones today include a radio chip that allows them to receive signals from satellite navigation systems and determine their location. The most common chips receive signals from the U.S. GPS frequencies, while higher end models may include chips that can read frequencies from the Russian GLONASS satellites at the same time.

The quality of the chips used in smartphones may vary, and data accuracy and performance could vary as well.

Devices with GPS chips can work autonomously, off the grid, and without an Internet connection, while devices marked with “A-GPS only” (Assisted GPS) require a network data connection (and a mobile signal from a telecommunications company) to work correctly. A-GPS data can help autonomous GPS chips perform better by pre-caching data for better performance.

For most mapping applications to work as expected, the user is assumed to have a smartphone with an autonomous GPS chip. Check your device specifications to confirm whether your device uses an autonomous chip, or is A-GPS only device.

There are a lot of mapping applications available (for free or paid) for most smartphones in the market. Each app has its own advantages and disadvantages.

In choosing a mapping application for mapping in OpenStreetMap, you need to consider the following features.

- Easy to learn; immediately usable
- With GPX support (create waypoints, customizable log intervals)
- Allows OSM contribution (add, edit, upload data)
- Able to load OSM data offline
- Able to geo-tag multimedia files (notes, photos, videos)
- In active development

Try several applications that are compatible with your phone to get familiar with the interface

and choose the best app based on your personal preference and mapping approach.

The next sections will guide you through the installation and use of specific applications for you to contribute to OpenStreetMap using your smartphones.

Note: Before proceeding any further, verify that GPS is available and active for the device. In Android, go to **Settings > Location** and enable it. Remember, GPS doesn't work inside buildings!

Get started

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