



**APPLIED**STREETVIEW

# Remote Control Manual

v2.6.13



**Android App**

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# Tablet

To run the Remote Control Android App we recommend the following tablet:

## **Huawei MediaPad M3, 8.4", WiFi**

The Remote Control App connects to the **Camera** by **WiFi**.

The Remote Control App connects to the optional **Battery Monitor** by **Bluetooth**.

## Maintenance

Please connect the tablet from time to time to the internet to check for Android updates.

How to check for Android updates:

**Settings** → **About Device** → **Software Update: Update now**.

## Optional RTK positioning device

This manual covers the camera with the AN Spatial GNSS receiver and leveling device only.

### **RTK for Spatial Manual**

<http://updates.applied-streetview.com/RTK4Spatial/newest.php?file=manual>

RTK module instead of Spatial:

Starting with release 2.5.x, the Remote Control also supports our **RTK Module** positioning device:

### **RTK module manual**

[http://updates.applied-streetview.com/RTK\\_module/RTK\\_Module\\_Manual\\_en.pdf](http://updates.applied-streetview.com/RTK_module/RTK_Module_Manual_en.pdf)

# Set up

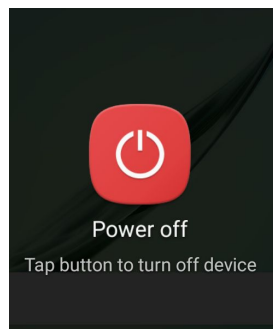
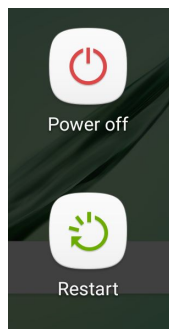
## Switch ON/OFF

### On

Press the power button for 5 seconds, to switch the tablet on.

### Off

Press the power button for a few seconds, then tap **Power off** and then **Power off** again to switch the tablet off:



Otherwise the tablet will stay in standby mode only, and the battery will be drained quickly.

If the battery is empty, it may need up to 20 minutes of charging before you can switch the tablet on.

## Power supply

For long recording time, it is recommended to power the tablet using the car's cigarette lighter.

For this, it will need an **extra USB power adapter**.

Use the original Huawei or Samsung adapters:



Depending on the arrangement of the tablet and the size of your car, you might **need an extra USB power extension cable** to reach your car's cigarette lighter.

For recording on foot or by bicycle, a **20Ah USB power bank** is recommended. Make sure it provides at least 2 Ampere.

## Tablet Holder

The tablet should be used in portrait orientation.  
Experience has shown that a **diagonal style** holder works best.

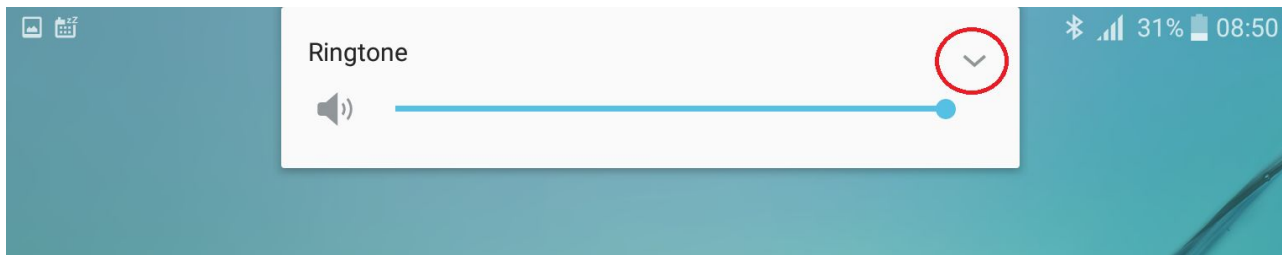


### Hint:

Be aware that a lot of cheap "one-size-fits-it-all" tablet-holders only work in landscape-mode. Avoid them.

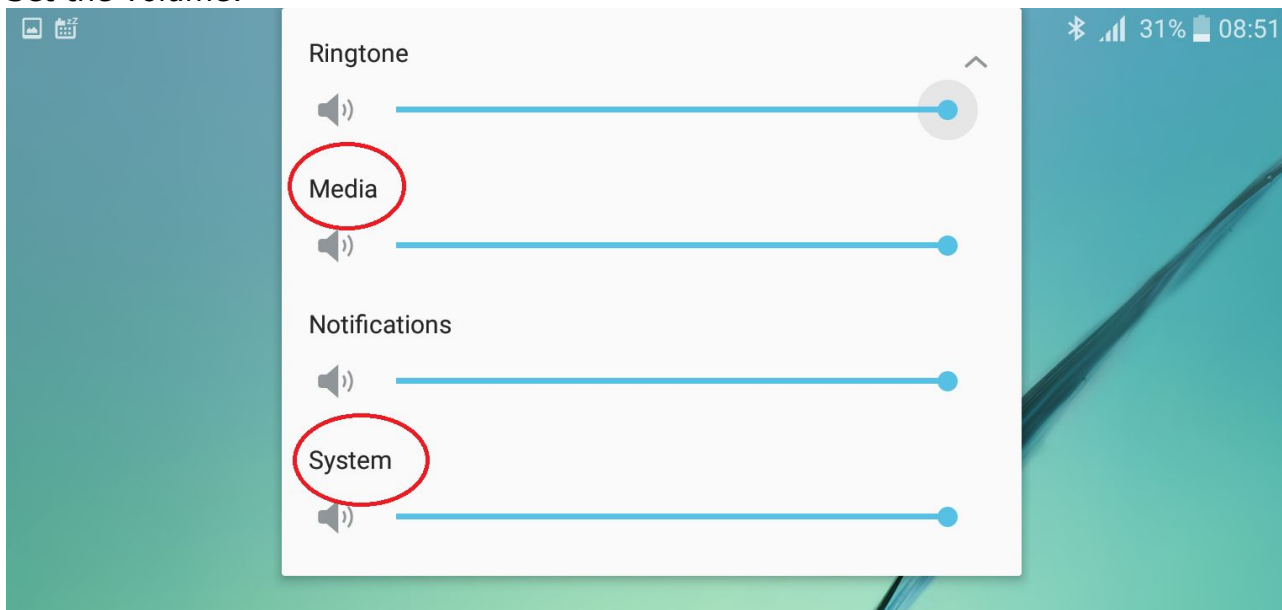
# Sound Settings

Click the Volume key to adjust the volume of the sound and audio playback:



Then tap the "arrow down".

Set the volume:



**Media** for the Battery Alert.  
**System** is for tapping.

## Remote Control installation

The Remote Control app will already be installed on the tablet.  
The app installation file has a name like **AS-2.6.6.apk** and is provided on the tablet.  
The tablet also has been operated during Quality Assurance before delivery.

For updates check our website at

<http://www.applied-streetview.com/products/apps/remote-control/>

On the tablet you will also find the Langen folder with the map-tiles we used.  
It covers our office location in Germany.

It also has map-tiles for your office's location.  
By default, all new projects will use the **example** folder.

When installing the App on a different Android device, you might have to allow this first.

In **Settings, Lock screen and Security**, tick this option:  
**Unknown Sources**

Unknown sources

Allow installation of apps from unknown sources



Android 7 or newer is needed.

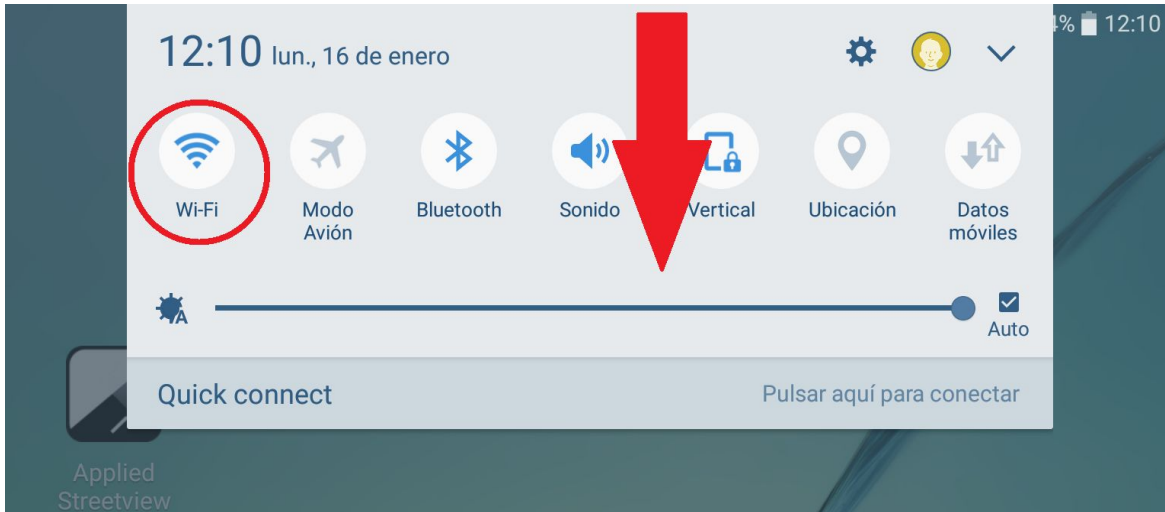


# WiFi connection

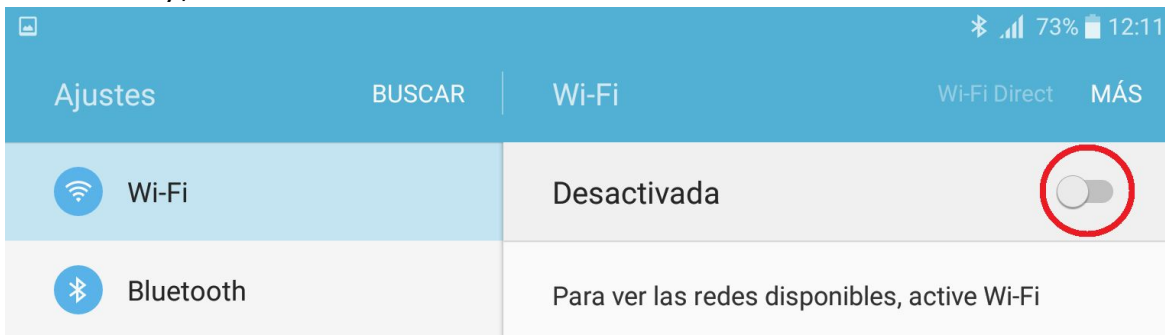
We assume the camera is running.  
Press the power button for 5 seconds to switch the tablet on.

**Wait 60 seconds.**

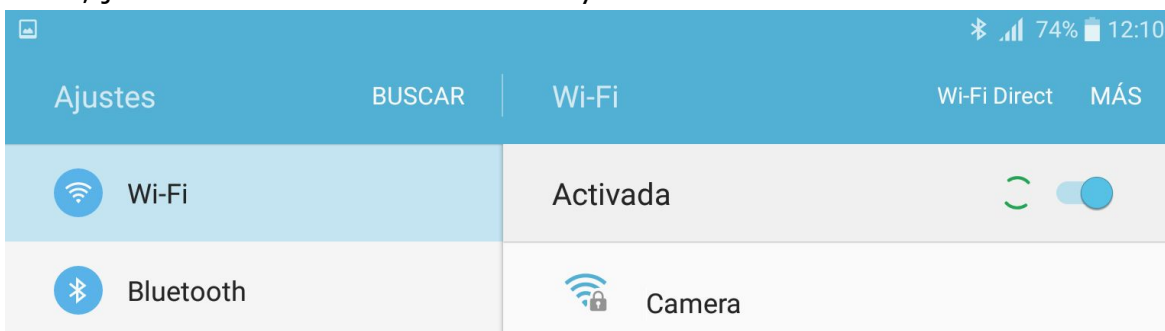
On the tablet's home screen swipe to open the settings screen.  
Then tap the **Wi-Fi** button for 3 seconds to open the Wi-Fi settings.



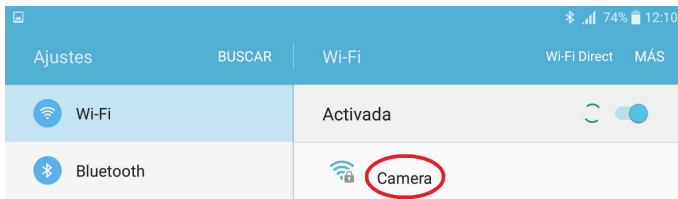
If necessary, activate Wi-Fi:



After 10 seconds you should see the **Camera** listed.  
If not, just wait. The Wi-Fi scan is always on and will show it in a moment.



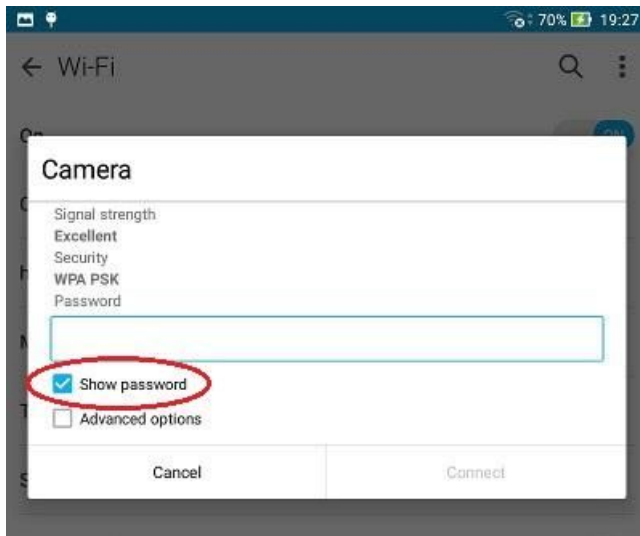
Tap the **Camera** entry to connect.

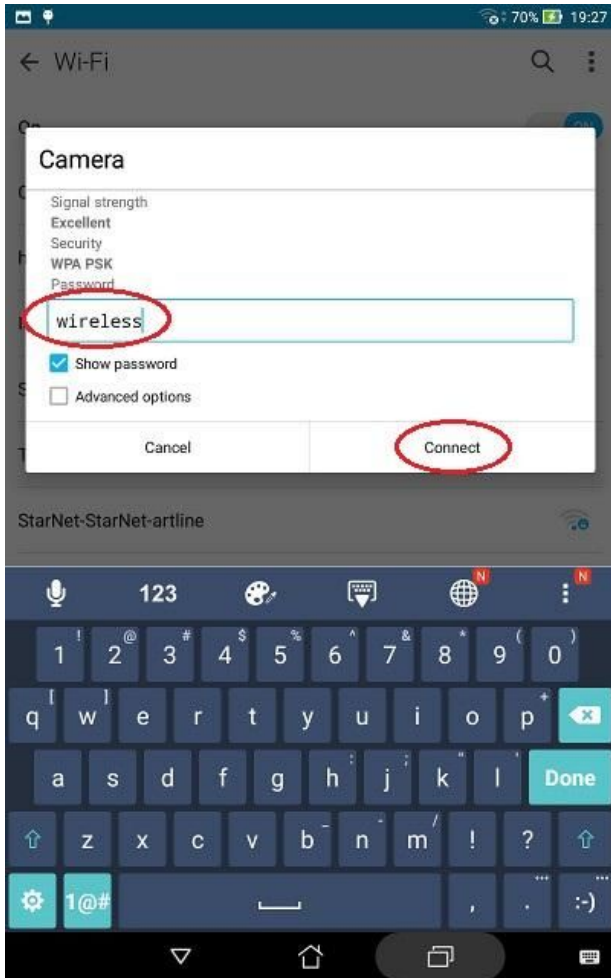


**Hint:**

You can change the camera's WiFi name with the Remote Control. **Camera** is just the default name.

Tick **Show password:**





Enter the WiFi password:  
It always is **wireless** and can not be changed.

Click **Connect**.

You should see:



Followed by:



And finally:



If you renamed the Camera, you will have to enter the WiFi password again to connect.

The camera's WiFi password is **wireless**. It can not be changed.

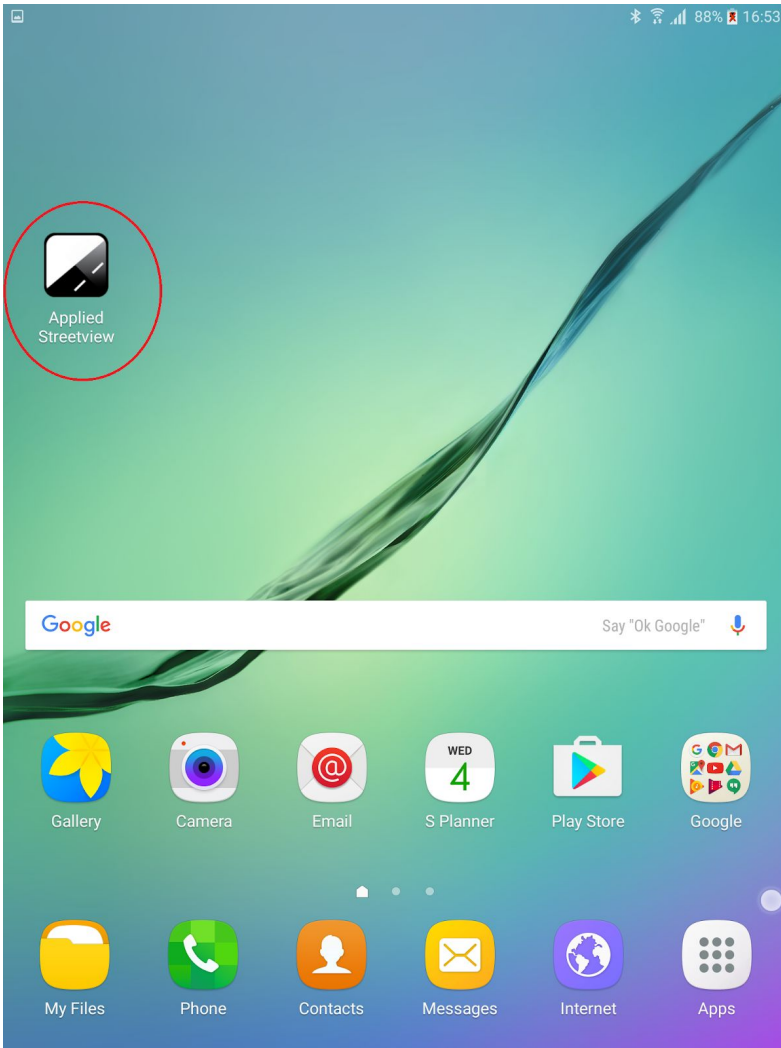
**Hint:**

Please close all Windows/Apps **except the Remote Control App**.  
Otherwise you might experience performance issues.

# Recording

## Launch the App

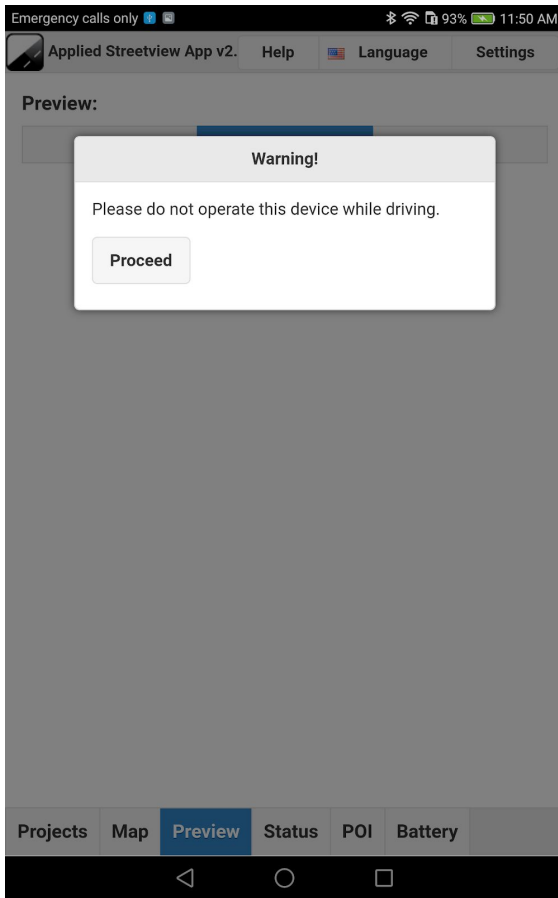
Open the App from the tablet's home screen:



# Splash screen

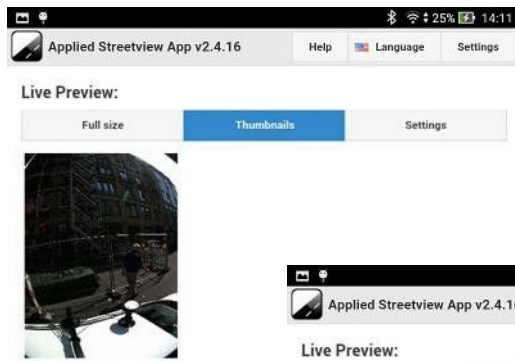


# Safety Notice



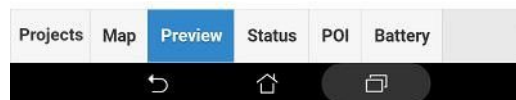
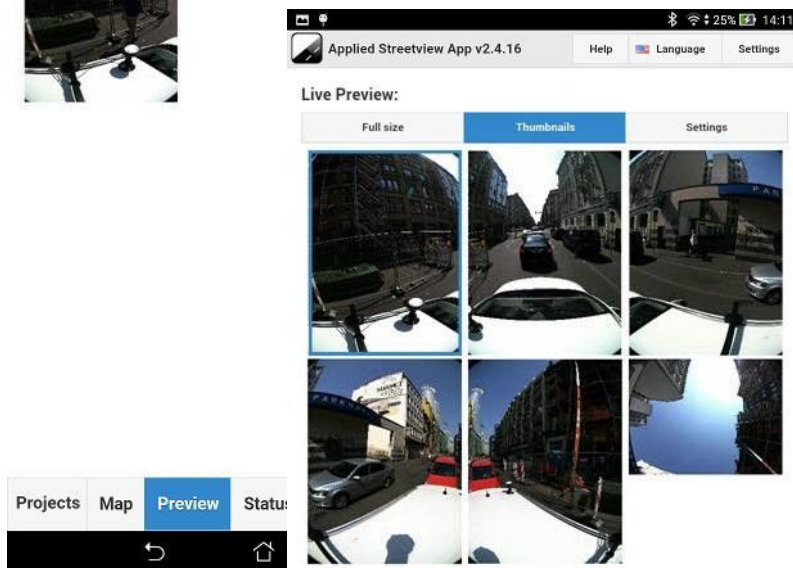
Do not operate the Remote Control while driving the car.

# Start tab



The default Start Tab is **Preview ->Thumbnails**.  
It automatically shows six thumbnails from the camera. It updates continuously.

**The camera is NOT yet recording.**

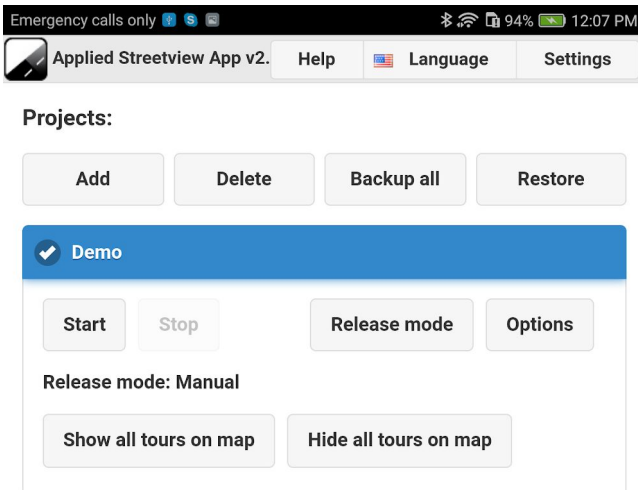


You can change the **Start Tab** in Settings.



# Record

To start recording, go to the Record tab.



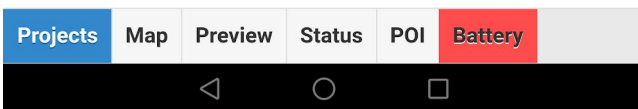
A default project named **Demo** already has been created.

The release mode is set to **Distance with 5 meters**. Change the release mode, or tap the **Start** button to start recording.

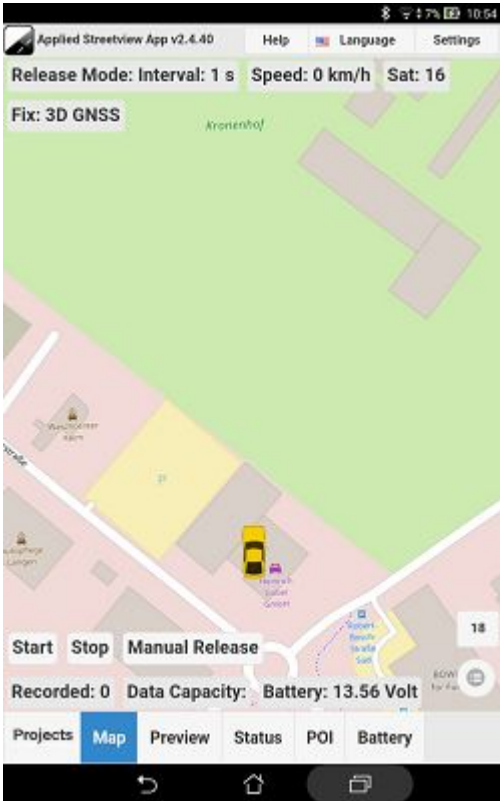
You can have many projects at the same time. E.g. to work for 2 different customers, or to record 2 different towns at the same time.

**Hint:**  
**Deleting a project or deleting a tour will not delete the footage on the cameras SSD.**

The only way to delete the SSD is to format it.  
See [Settings -> Format SSD](#).



# Map



## Standby Not recording.

Check the position on the map.

### Top status bar displays:

One of 3 recording modes: Interval, set to 1s.  
Vehicle Speed: 0 km/h  
Number of satellites: 16  
Satellite fix: 3D GNSS

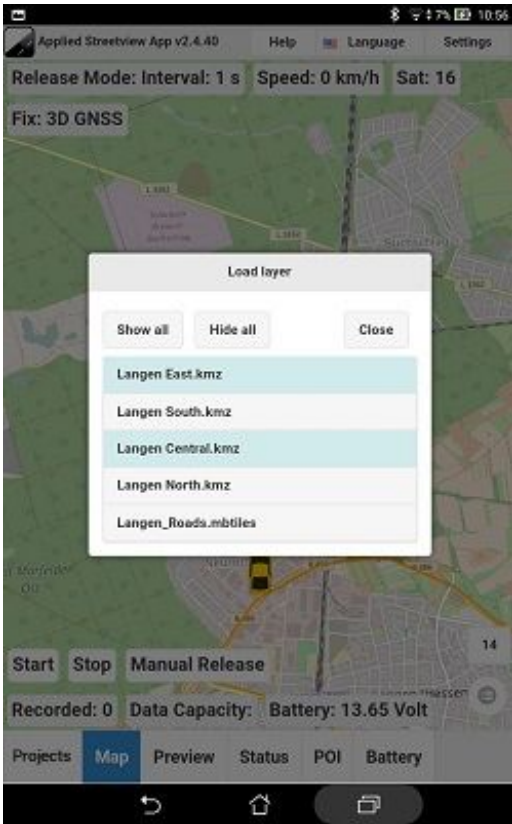
### Bottom status bar displays:

- Start button
- Stop button
- Manual Release button
- Recorded data-sets of this tour
- Remaining SSD capacity
- Battery Voltage



## Started recording.

The camera is recording.



## Overlays:

Displays a list of all the overlay files (kmz, kml, MBtiles) found in the **Overlays files** directory specified in the **Record – Options – Map tab**.

Click on a list entry to display the overlay on the map. Click on a selected list entry to remove the overlay from the map.

Click on the **Show all** button to display all the overlays on the map. Click on the **Hide all** button to remove all the selected overlays from the map.

Click on the **Close** button to close the pop-up.

4 recording areas defined by kml/kmz files:





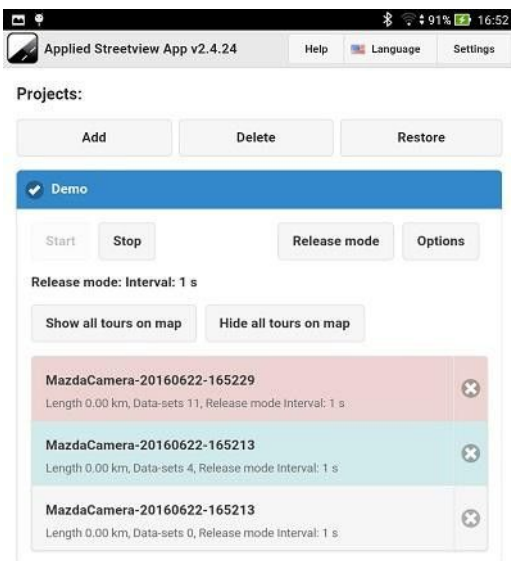
## Tours:

With the click of the **Start** button, a new tour will be created.

Previous tours can be shown on the map to help avoid recording the roads twice.

Red: Tour is being recorded right now.

Blue: A previous tour recorded.



The tours of a project can have 3 statuses:

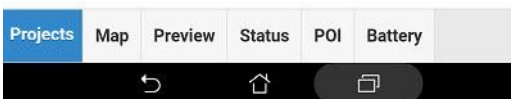
Red: Tour is being recorded right now.

Blue: Previous tour is shown on the Map tab, and the map is zoomed to all the blue tours.

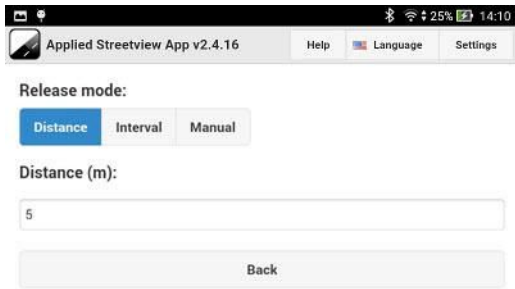
Grey: Previous tour is hidden on the Map tab.

Click on **Show all tours on map** button to show all the tours on the Map tab and zoom to their extent.

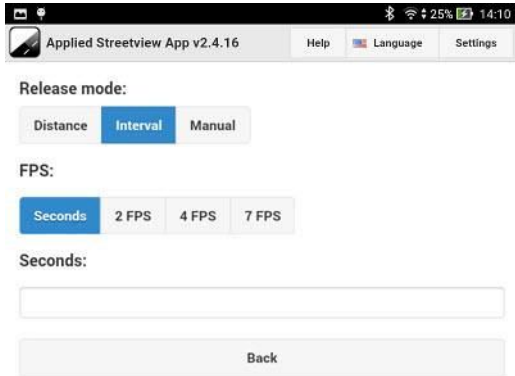
Click on **Hide all tours on map** button to hide all the tours from the Map tab.



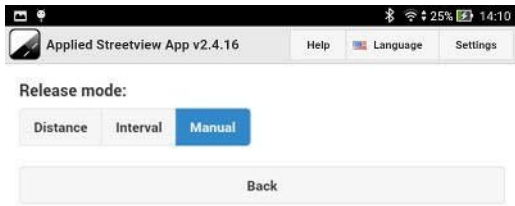
# Project: Release modes



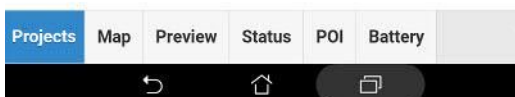
**Distance mode**  
Set to 5 meters.



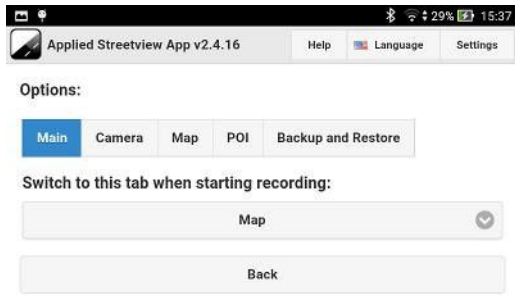
**Interval mode**  
In addition to 2, 4 and 7 fps (recordings per second) you can enter a custom 1-second to 30-second interval.



**Manual mode**  
Release on the POI (Point of Interest) tab.



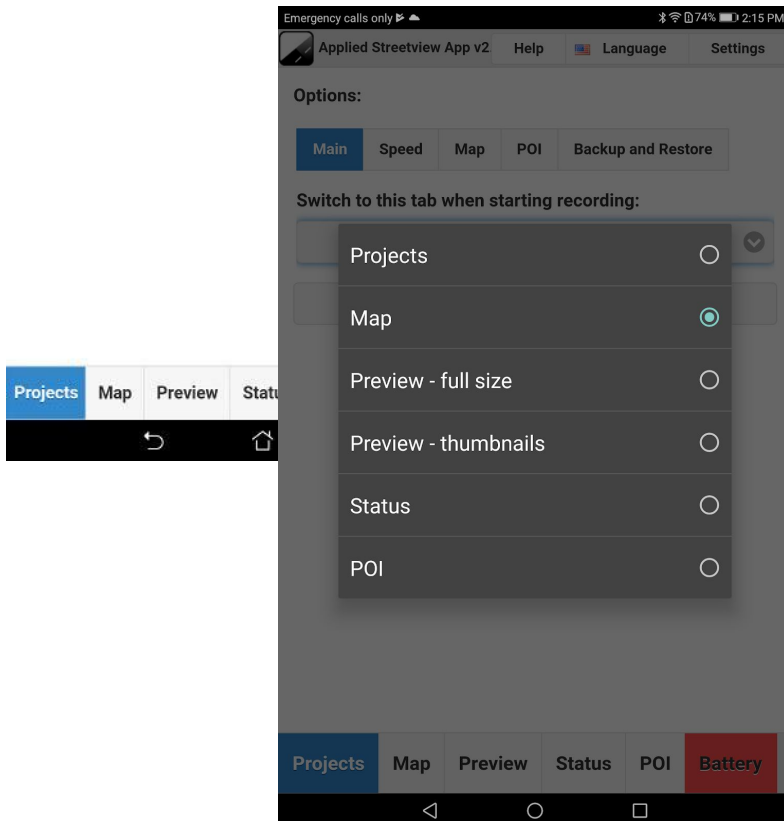
## Project Options: Main



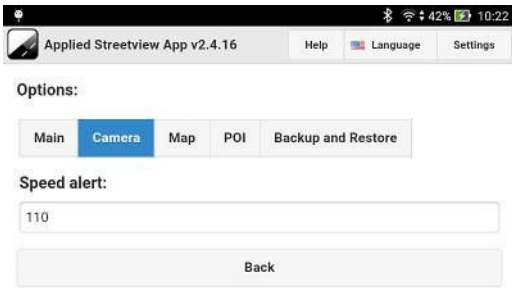
### Start recording tab

Set which tab to open when the recording starts.

The default tab is the **map** tab.



## Project Options: Camera

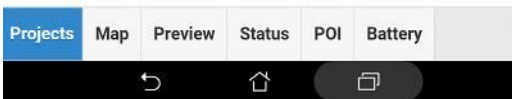


Enter a value for the audible speed alert, in km/h.

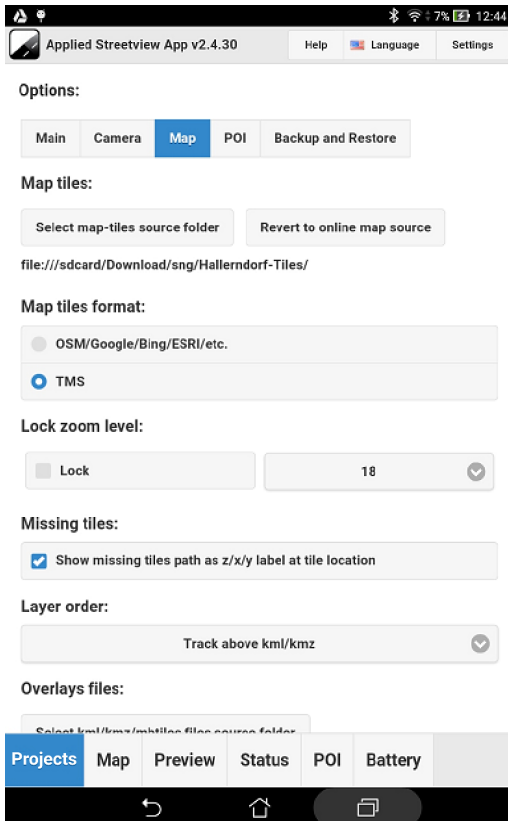
An alert will sound when going faster.

Default is 110 km/h as the max speed for the release mode when Distance is set to 5 meters.

**Recording continues.**



## Project Options: Map



Set which folder to load the map-tiles from. The Remote Control also works well without map-tiles.

The map-tiles can also be tiles made from aerial images.

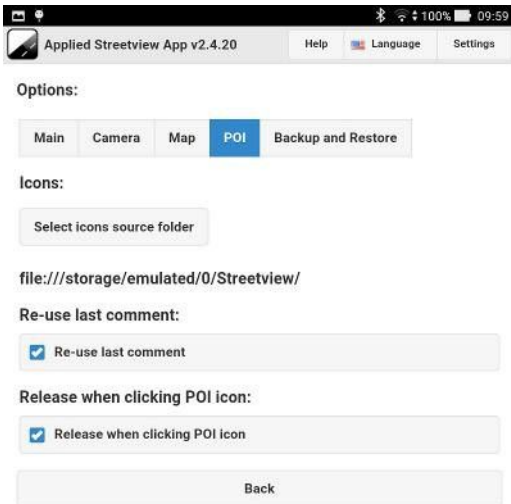
The format of the map-tiles can be changed to TMS if the application which created the tiles does not support OSM/Google/Bing/ESRI tile format.

Select a directory with all the **Overlays files**. Currently KML, KMZ, MBTILES are supported.

Note that the directory must be on the **internal SD card** for motiles, not the removable SD card!



## Project Options: POI



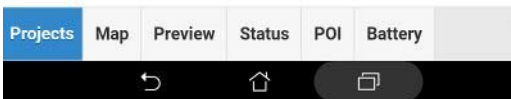
Select a folder with custom-made POI (Point of Interest) icons.

The POI icons will be displayed on the [POI tab](#).

See the [POI tab](#) for how to make custom icons.

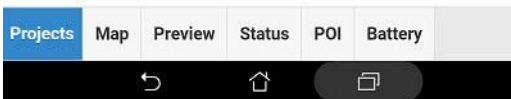
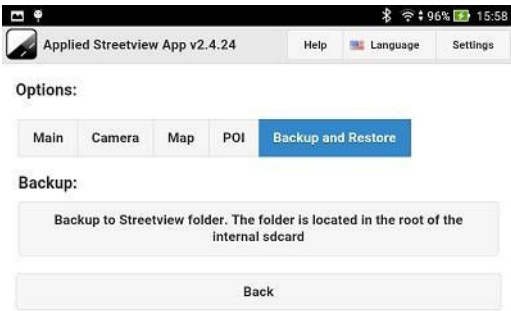
**Re-use last comment** will display the last comment for the selected POI.

**Release when clicking POI icon** will automatically release the camera when the POI icon is selected.



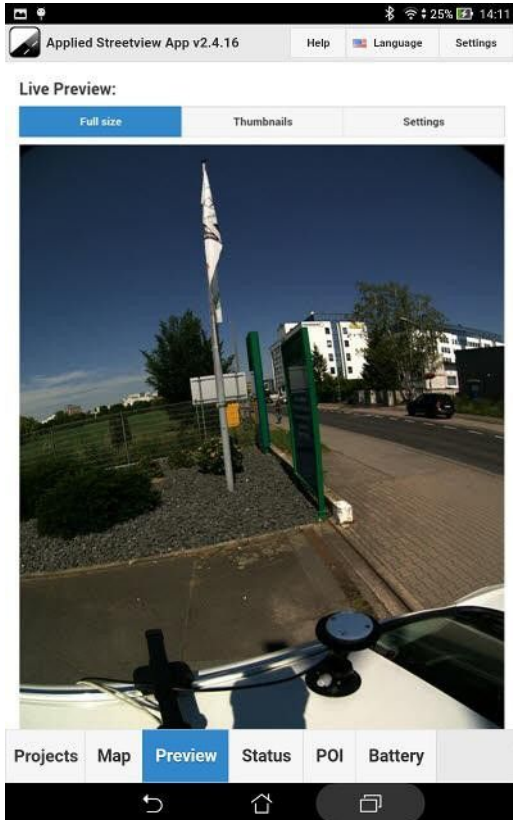
## Project Options: Backup and restore

Backup the project.  
So you can restore it if needed in 3 months or a year.

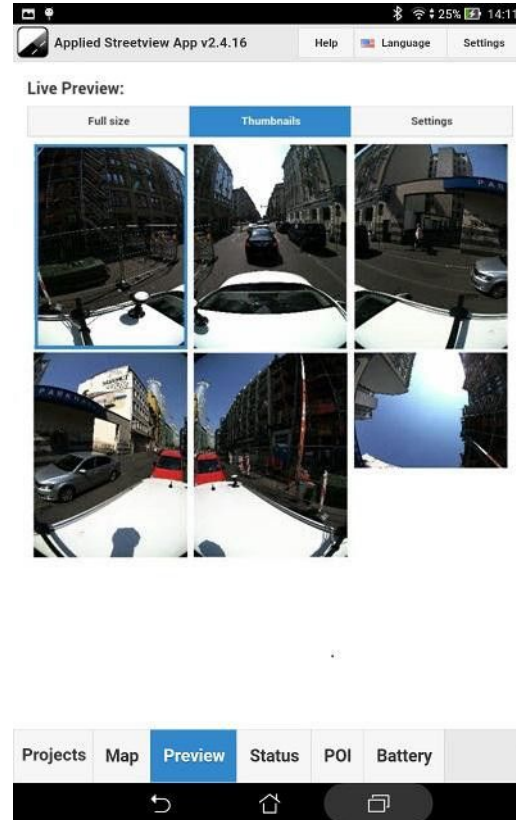


# Preview

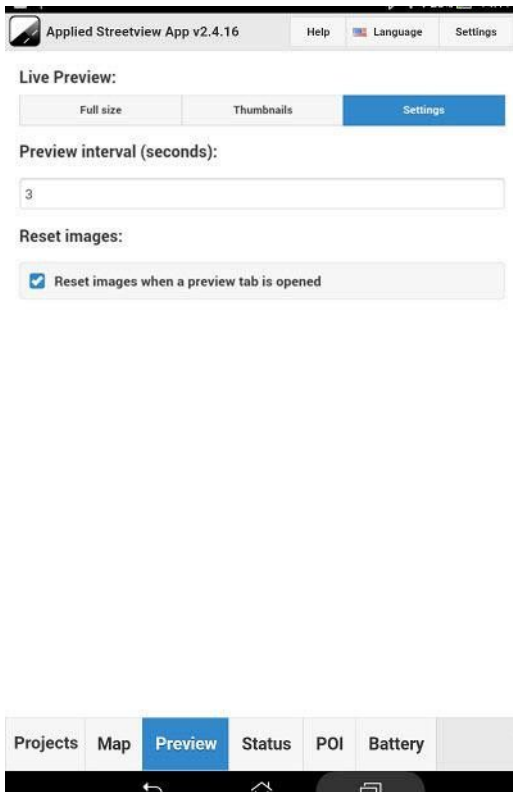
## Full-size



## Thumbnails



## Settings



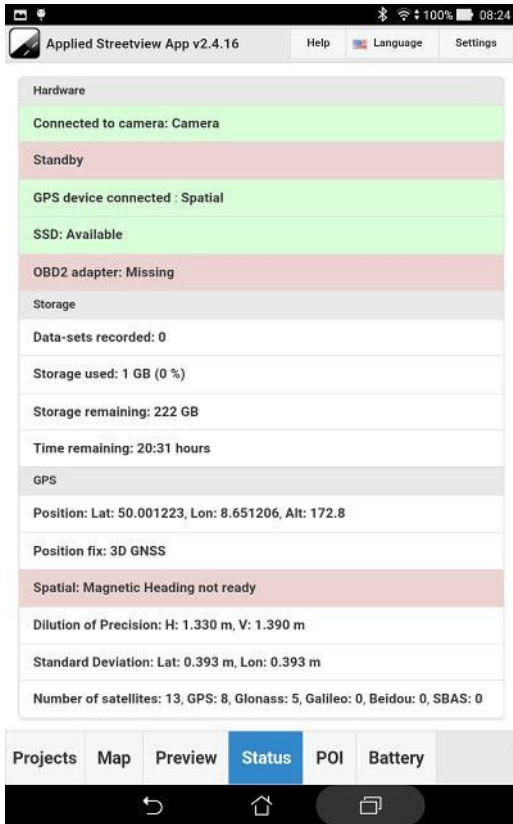
Enter the update interval for the Preview. The default is set to 3 seconds.

When opening the Preview tab, the images from the previous preview are not shown.

# Status

Some of the fields change depending on

- the release mode
- whether the Spatial or Spatial Dual is connected.



## Hardware

Connected to camera: *Camera name*

Recording in release mode:

Distance: *5m*

Interval: *1-30s*

Manual

GPS device connected:

Spatial

Spatial Dual

SSD:

Available

Missing

OBD2 adapter:

Connected

Missing

## Storage

Data-sets recorded:

Storage used:

Storage remaining:

Distance remaining:

Images remaining:

## GPS

Position:

Position fix:

2D GNSS

3D GNSS

SBAS GNSS

Differential GNSS

Omnistar/Starfire GNSS

RTK Float GNSS

RTK Fixed GNSS

Spatial: Magnetic heading status

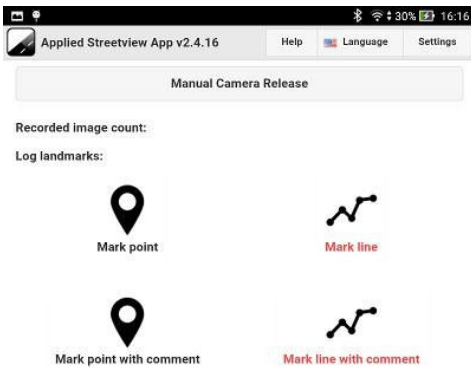
Spatial Dual: Dual Antenna heading status

Dilution of Precision:

Standard Deviation:

Number of Satellites:

# POI (Point of Interest)



Manually release the camera by tapping the **Manual Camera Release** button.

Logging POIs works for the Manual release mode and the Distance release mode, but not the Interval release mode.

Log Points of Interest (POI) by clicking on the icons.

## Examples:

### Mark Point

Logs the icon name for the next recording.

### Mark Point with comment

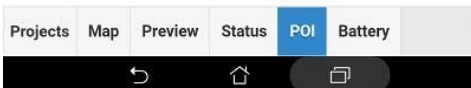
Logs the icon name for the next recording. You can enter an extra comment.

### Mark Line

Logs the icon name for all following recordings.

### Mark Line with comment

Logs the icon name for all following recordings. You can enter an extra comment.



You can import a folder with your own icons:

**Record tab → Options → POI: Select icons Source folder.**

The 4 default icons are available for download as an example to create customized icons:

[http://updates.applied-streetview.com/Remote-Control/PoI\\_icons.zip](http://updates.applied-streetview.com/Remote-Control/PoI_icons.zip)

## Naming schema:

Row, Column, **one** time, **sticky**, **comment**, name

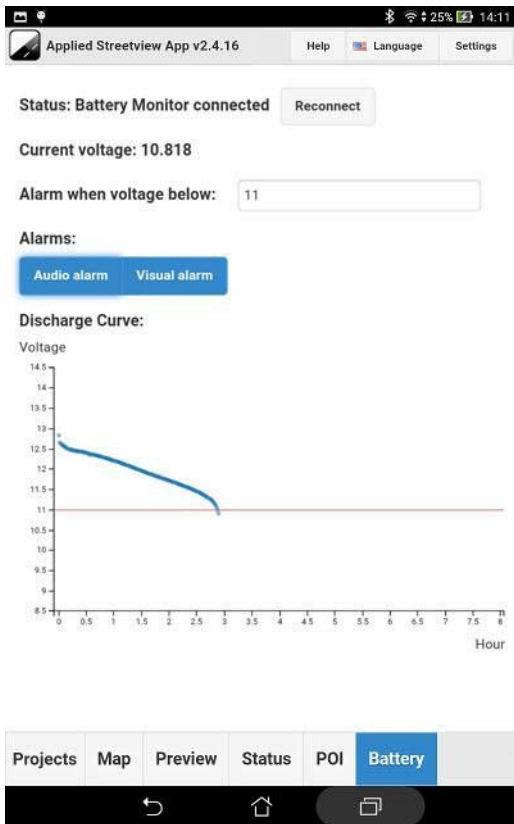
1\_1\_o\_Mark point.png

1\_2\_s\_Mark line.png

2\_1\_o\_c\_Mark point with comment.png

2\_2\_s\_c\_Mark line with comment.png

# Battery Monitor



The optional Battery Monitor cable measures the battery voltage and sends it to the Remote Control by Bluetooth.

You can set the alert for the minimum voltage so you know when the battery is nearly empty.

The default is set to 11.5 Volt for the 7 Ah battery from the camera case and the large 24 Ah battery. Change it to 12.5 Volt for the Backpack Battery Box.

Disconnecting the battery before it is totally discharged protects the camera from an unwanted shutdown.

It also maximizes the number of charge/discharge cycles the battery can do before it is worn out and needs to be replaced.



Battery Monitor cable.

[Contact](#) Applied Streetview to purchase it.

All other functions of the Remote Control App will still work if it is not present.

**Bluetooth PIN: 1234**

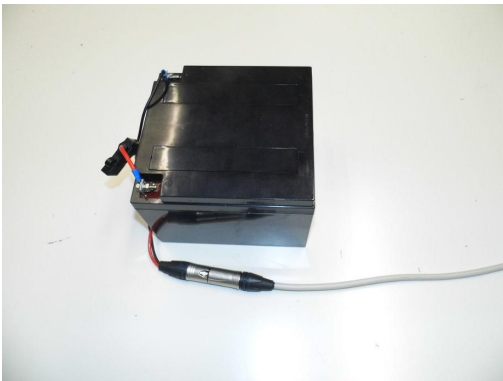
## Wiring

Just plug the Battery Monitor Cable in between the battery and the camera's power cable. It works with all batteries types we provide, even the Backpack Battery Box.

Battery Monitor cable:



Without:



Battery Monitor added:



## Bluetooth

You will need to pair the Battery Monitor Cable to the Android tablet on first use.

**Bluetooth device name:** **BLE-VoltageCheck**

**Bluetooth PIN:** **1234**

After that, the Remote Control will automatically connect to the Battery Monitor by Bluetooth.

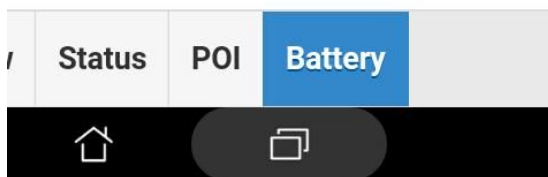
For this, at least Android 5.0 is needed. Update your tablet if necessary.

When installing the App, allow for Bluetooth.

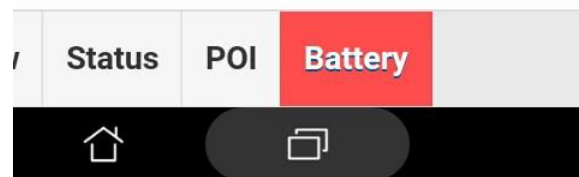
If Bluetooth is deactivated, you will be asked to activate Bluetooth when the App is launched.

## Bluetooth status

Connected:



**NOT** connected (non-blinking):



If the Battery Monitor is not connected by Bluetooth, you can still use the App and camera as usual.

The Bluetooth connection works up a 15 meter distance.

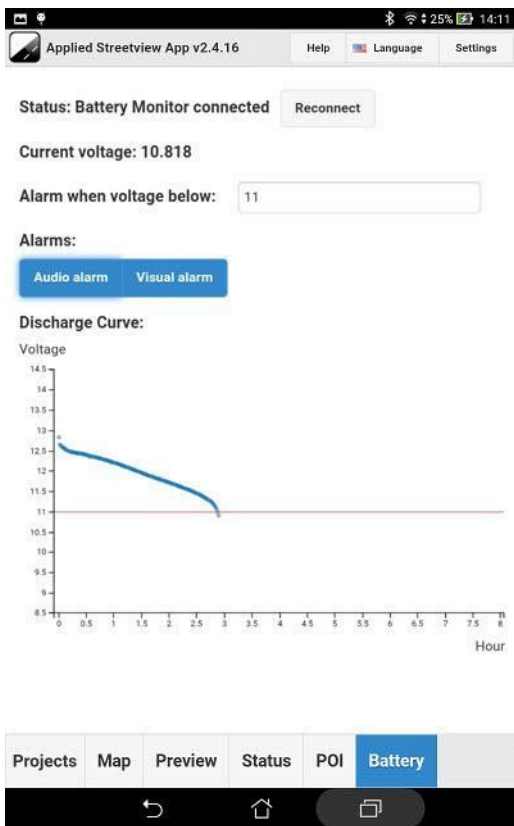
It automatically reconnects if the Bluetooth connection is lost.

You can also click the **Reconnect** button.

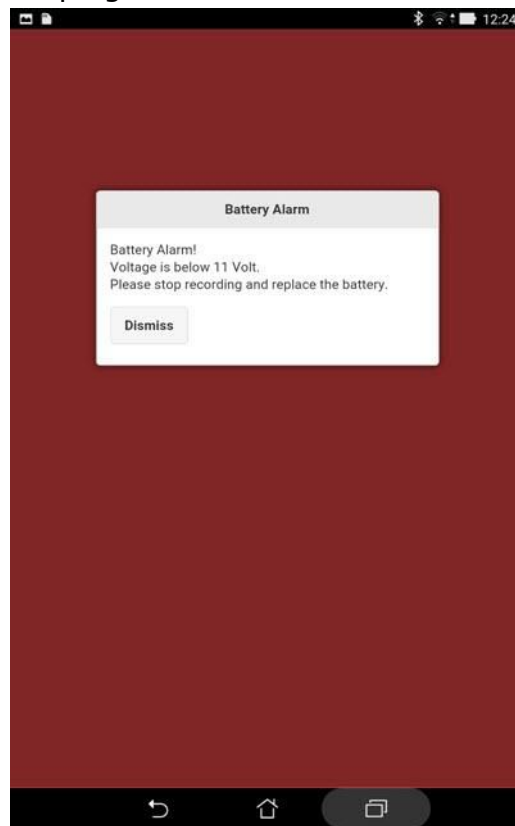


# Alarms

Alarm set to 11 Volt:



The alarm is a flashing red screen and beeping.



You can switch off the Audio and Visual alarms individually by clicking the buttons.

Both alarms ON:

**Alarms:**

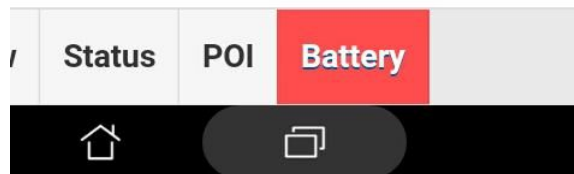


Both alarms OFF:

**Alarms:**



The Battery menu entry will also blink red. This can not be deactivated.



## Test

To test the alarms, change the minimum voltage to 14 Volt.

The Alarm will go off after a few seconds.

This is a good way to make sure the loudspeaker of the tablet is set to the maximum Volume.

## Voltage logging

The battery voltage is sent to the camera and logged with all the other data.

See column **44:custLog9** of the **panoramas.csv** file in tours folder **7**.

Logging the voltage can not be deactivated.

When there is no Battery Monitor cable, there is no voltage log.

In case of the voltage alarm, the word **Alarm** is added to the voltage.

..../7/**panoramas.csv**:

	AJ	AK	AL	AM	AN	AO	AP	AQ	AR	AS	AT
	35:custLog	36:custLog	37:custLog	38:custLog	39:custLog	40:custLog	41:custLog	42:custLog	43:custLog	44:custLog	
		Start								12.59	
		Mark point								12.59	
										12.60	
										12.59	
										12.58	
		Mark point	Road blocked							12.58	
			Road blocked							12.58	
			Road blocked							12.57	
										12.57	
			Mark line							12.56	
			Mark line							12.55	
			Mark line							12.56	
		End								11.48 Alarm	

### Explanations:

- Start** created by the **Mark Point with comment** POI icon
- Mark Point** created by the **Mark Point** POI icon
- Road blocked** created by the **Mark Line with comment** POI icon
- Mark Line** created by the **Mark Line** POI icon
- End** created by the **Mark Point with comment** POI icon

**12.59 to 12.56** and **11.48 Alarm** automatically logged by the Battery Monitor.

## How many hours does a battery last?

This depends on the battery type and varies with the age and wear of each specific battery.

### For brand new batteries you can expect:

3.0 hours for the 7 Ah battery from the Camera case

11.5 hours for the large 24 Ah battery for cars.

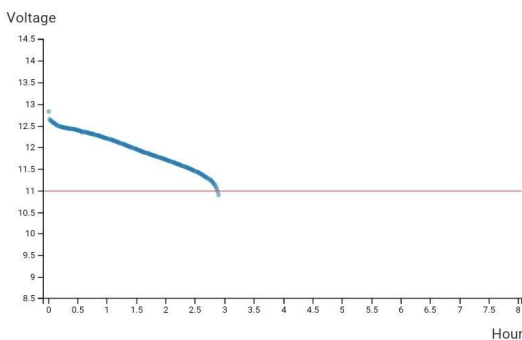
7.5 hours for the Backpack Battery Box.

**Please note that the battery capacity reduces with low temperatures, so it is best to store and operate the battery at room temperature.**

### Discharge curves for brand new batteries:

#### 7 Ah battery from the Camera case

##### A Discharge Curve:



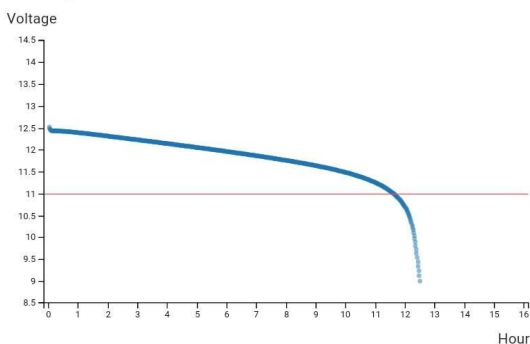
##### Good example

This is how it should be done.

After the alarm sounds at 11 Volt, the recording has been stopped and the camera has been switched off.

#### 24 Ah battery for long term recording

##### A Discharge Curve:



##### Bad example

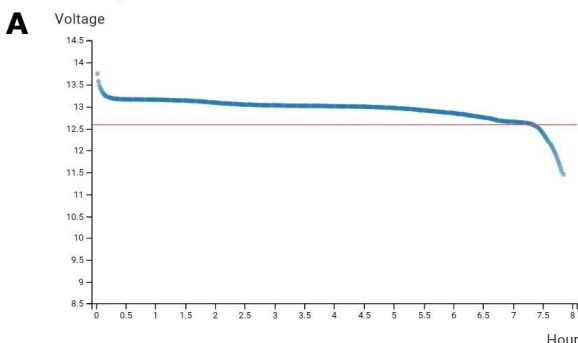
Recording continued after the alarm at 11 Volt.

The battery has been discharged fully. Such usage pattern reduces the battery lifetime significantly.

**This should be avoided.**

#### Backpack Battery Box

##### Discharge Curve:



##### Bad example

Alert has been set properly to 12.5 Volt for the Backpack Battery Box.

The alert has been ignored.

The Battery Box switched itself off to protect from damage.

**This should be avoided.**

# Charging the Battery

Batteries and the matching chargers:

Left:

**Camera case**

7Ah Lead Acid battery  
from the camera case

Middle:

**Cars**

24 Ah Lead Acid battery  
for cars

Right:

**Backpack**

16 Ah LiFePo  
Lightweight Backpack  
Battery Pack.

**Always use the right charger to avoid damaging the batteries.**



# Help tab



The help tab is updated every time you open it.

It displays:

- Camera's name
- Camera's serial number
- Camera's firmware version
- Camera's IP address
- Remote Control version

Manuals.

Manuals might be available in different languages.

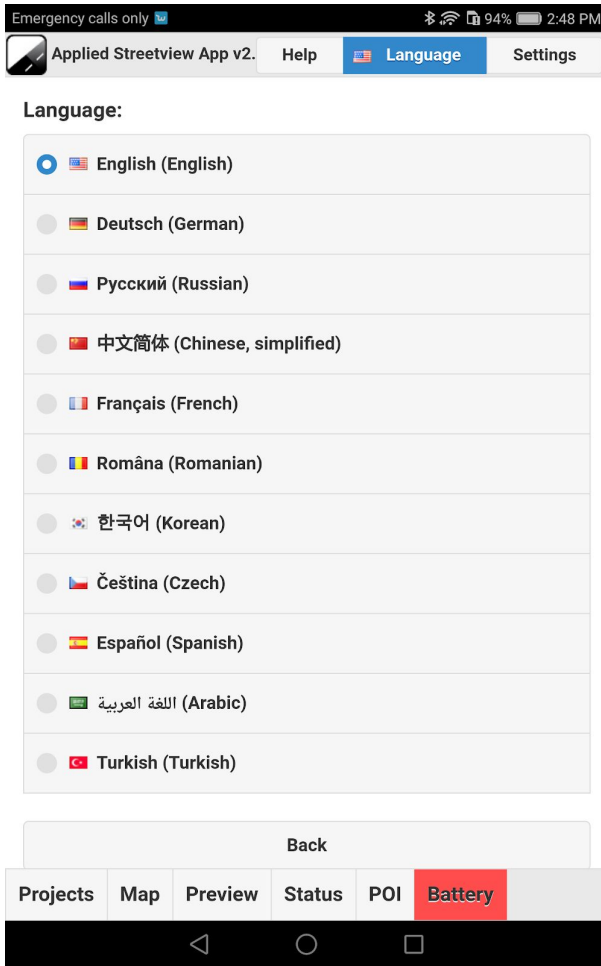
When in doubt, refer to the English language manual.

It is the most complete and up-to-date version.

After running the App, the manual is available as a .pdf file in the **Streetview** folder of the tablet. You can copy and print it.

The manuals are also available [online](#).

# Languages tab

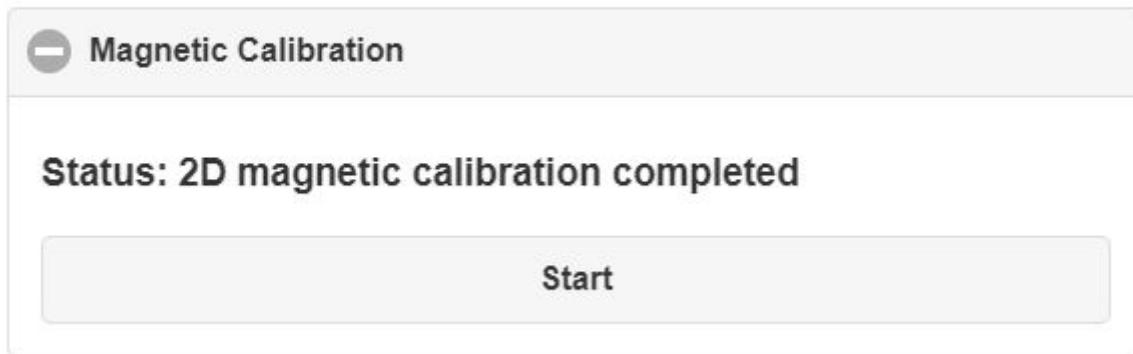


The Remote Control App has been translated into many languages.

We are happy to add languages. Just [ask](#).

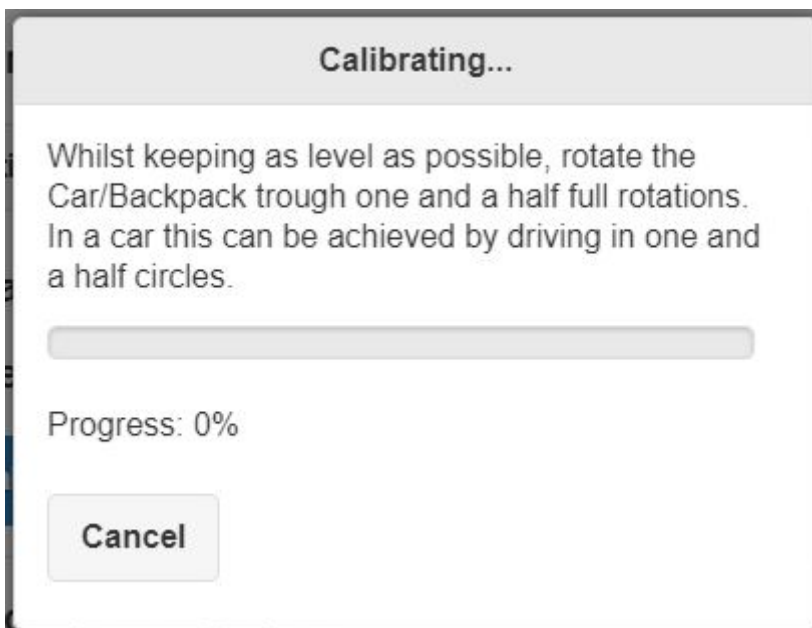
# Settings tab

## Magnetic Calibration



To use Magnetic Calibration, firmware **build-V0.25p-20170702135714.w19** or newer is required.

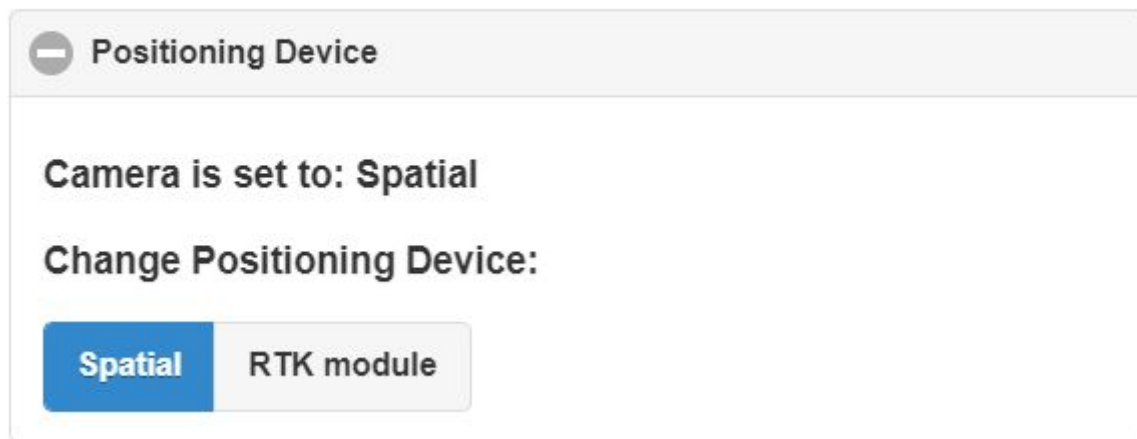
1. The Camera has to be on. The Car or Backpack has to be in a level orientation.
2. After power on, wait 5 minutes for the temperature and filter of the Spatial to stabilise.
3. Ensure there is a **GNSS fix** before proceeding. On the **Settings** tab, open **Magnetic Calibration** and click **Start**.
4. Drive the car through two full rounds at 5 km/h, for example in a leveled car park.  
The Backpack should be set on top of a furniture dolly, then rotated on the spot.



5. Check the **Progress** in the **Calibrating...** popup to ensure that the calibration completed successfully. If not successful click Cancel, wait 2 minutes and repeat step 4.

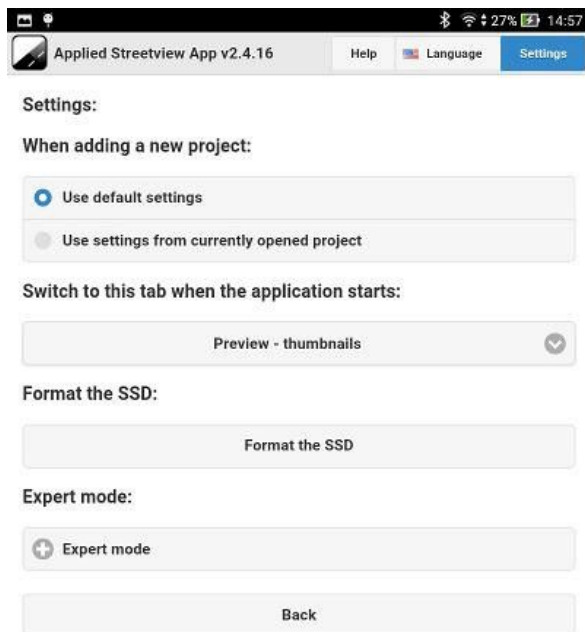
# Positioning Device

## Positioning Device:

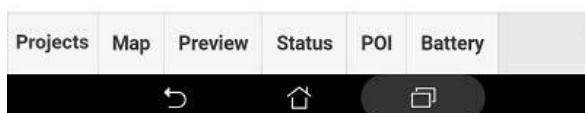


**Spatial** is the default positioning device. To use the RTK module refer to [Optional RTK positioning device](#) section of this manual.

## New project settings

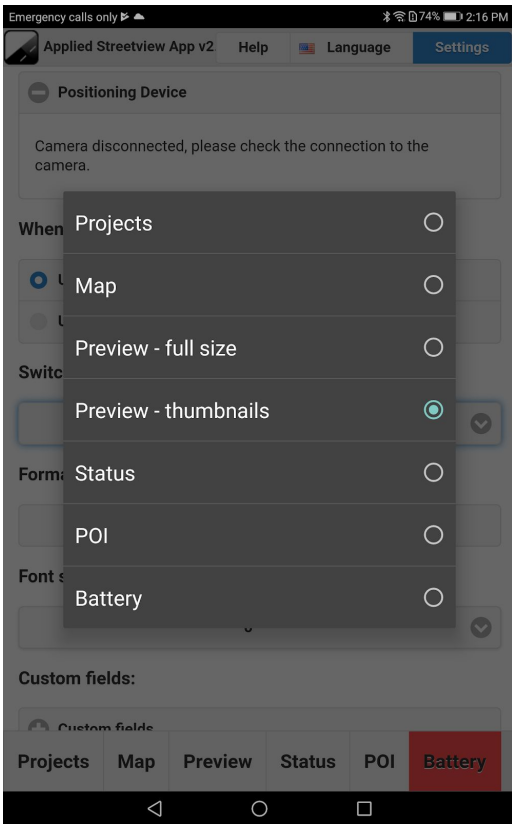


Set where to load the settings from. Copy your settings from the recent project to a new project.





# Change the Start Tab

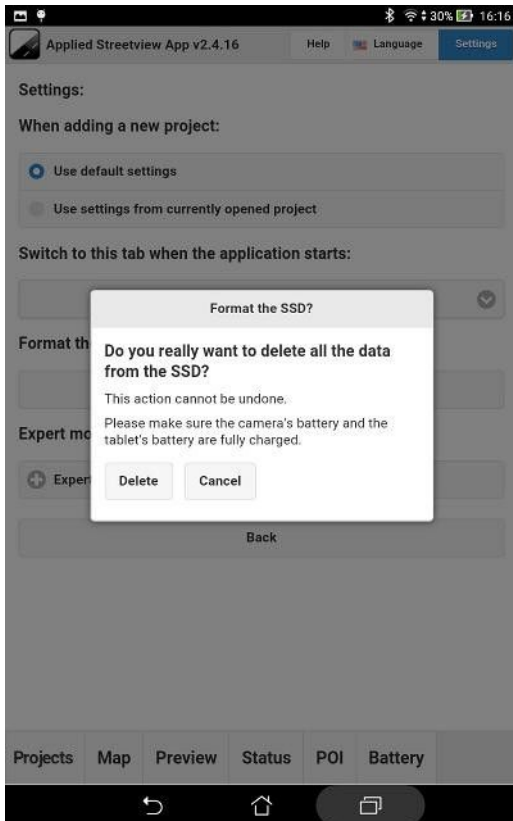


The Start tab automatically opens when starting the App.

Default is **Preview -> thumbnails.**

The camera does not record.

# Format the SSD



To re-use an SSD, it first needs to be emptied.  
Formatting is the way to do this.

New SSDs must also be formatted before the first usage.

We recommend **Samsung Series 850 EVO Basic** SSDs.  
Sizes supported: 120GB to 1TB.

**WARNING**  
**Do not format the SSD with a PC.**  
**Always format the SSD with the camera.**

## Font size

Font size:

Change the text and button size of Remote Control.

-2 - Smallest font size.

5 - Largest font size.

Setting a larger font-size is useful when operating the tablet in the car, allowing you to better see status information as well as operate the application.

This option will be hidden and ignored if Remote Control is installed on a device with a small screen, like a mobile phone.

## Custom fields font size

Custom fields font size:

Change the text and button size of the overlays in the Map tab.

-2 - Smallest font size.


5 - Largest font size.

Setting a larger font-size is useful when operating the tablet in the car, allowing you to better see status information as well as operate the application.












This option will be hidden and ignored if Remote Control is installed on a device with a small screen, like a mobile phone.

# Custom fields

## Custom fields:

 Custom fields

**Add**   **Backup**   **Import**   **Reset**

<b>Release Mode: Release mode</b>	
<b>Speed: Speed km/h</b>	
<b>Sat: Satellite count</b>	
<b>Fix: Position fix</b>	
<b>Start</b>	
<b>Stop</b>	
<b>Manual Release</b>	
<b>Line break</b>	
<b>Recorded: Data-sets count</b>	
<b>Data Capacity: Remaining time, distance or data-sets.</b>	
<b>Battery: Battery voltage Volt</b>	

## Expert mode:

 Expert mode

**Back**

Add

Custom fields

Value or action

Line break

Left text

Right text

Position

Top

Add Cancel

### Values or Actions

- Delimiter
  - Line break
- Value
  - Data-sets count
  - Altitude
  - Latitude
  - Longitude
  - Distance to previous data-set
  - Magnetic heading
  - HDOP
  - VDOP
  - Height deviation
  - Latitude deviation
  - Longitude deviation
  - Yaw
  - Pitch
  - Roll
  - Speed
  - Unix timestamp
  - Satellite count
  - Release mode
  - Track length

- Battery voltage
- Project name
- Tour name
- Remaining time, distance or data-sets.
- Storage remaining
- Storage total
- Storage used
- Storage used (%)
- Position fix
- GPS device
- GPS availability
- SSD availability
- OBD2 availability
- Action
  - Start
  - Stop
  - Manual Camera Release
  - Mark\_point
  - Mark\_line
  - Mark\_point with comment
  - Mark\_line with comment

### **Left text**

Text to the left of the selected **Value or action**

### **Right text**

Text to the right of the selected **Value or action**

### **Position**

Position of the selected **Value or action**, either in the **Top** or **Bottom** of the Map tab.

### **Add**

Add the selected **Value or action**

### **Cancel**

Close the popup

### Backup

Backup current Custom Fields configuration to a file.

### Import

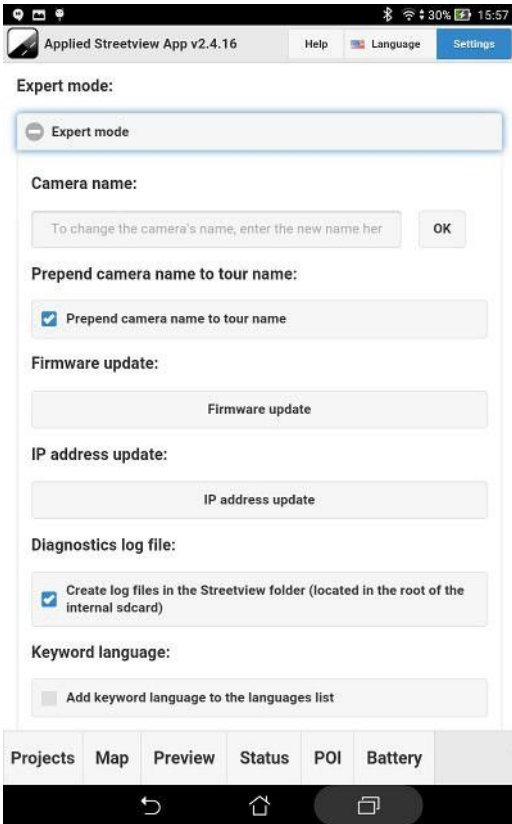
Restore a Custom Fields configuration from a file.

### Reset

Reset the Custom Fields configuration to the default.

# Expert Mode

Change the camera's name



The default name of the camera is **Camera**. Renaming the camera also changes the WiFi name. For the WiFi name to change you need to reboot the camera.

Then reconnect to the new WiFi name. The camera's WiFi password is **wireless**.

Changing the camera's name is useful when operating two or more cameras.

Enter, for example, the number plate of the recording vehicle.

### **Prepend camera name to tour name**

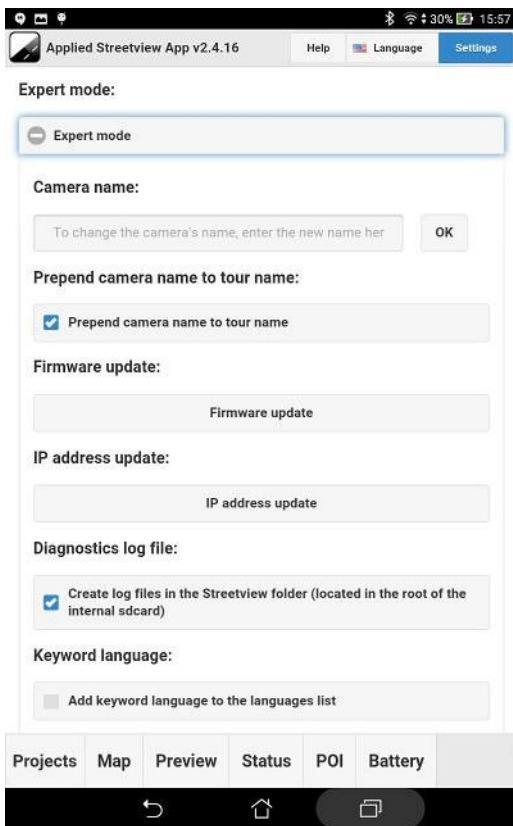
Creates tour folders like

**Camera-20160423-150957**

Format: name-yyyyymmdd-hhmmss

This helps to process the recorded footage.

# Firmware update



Firmware updates for the camera are made available from time to time.

First, make sure the batteries of the camera and the tablet are fully charged.

Copy the firmware file to the tablet's microSD card.

In **Settings** → **Expert Mode** tap the **Firmware update** button.

Follow the on-screen instructions.

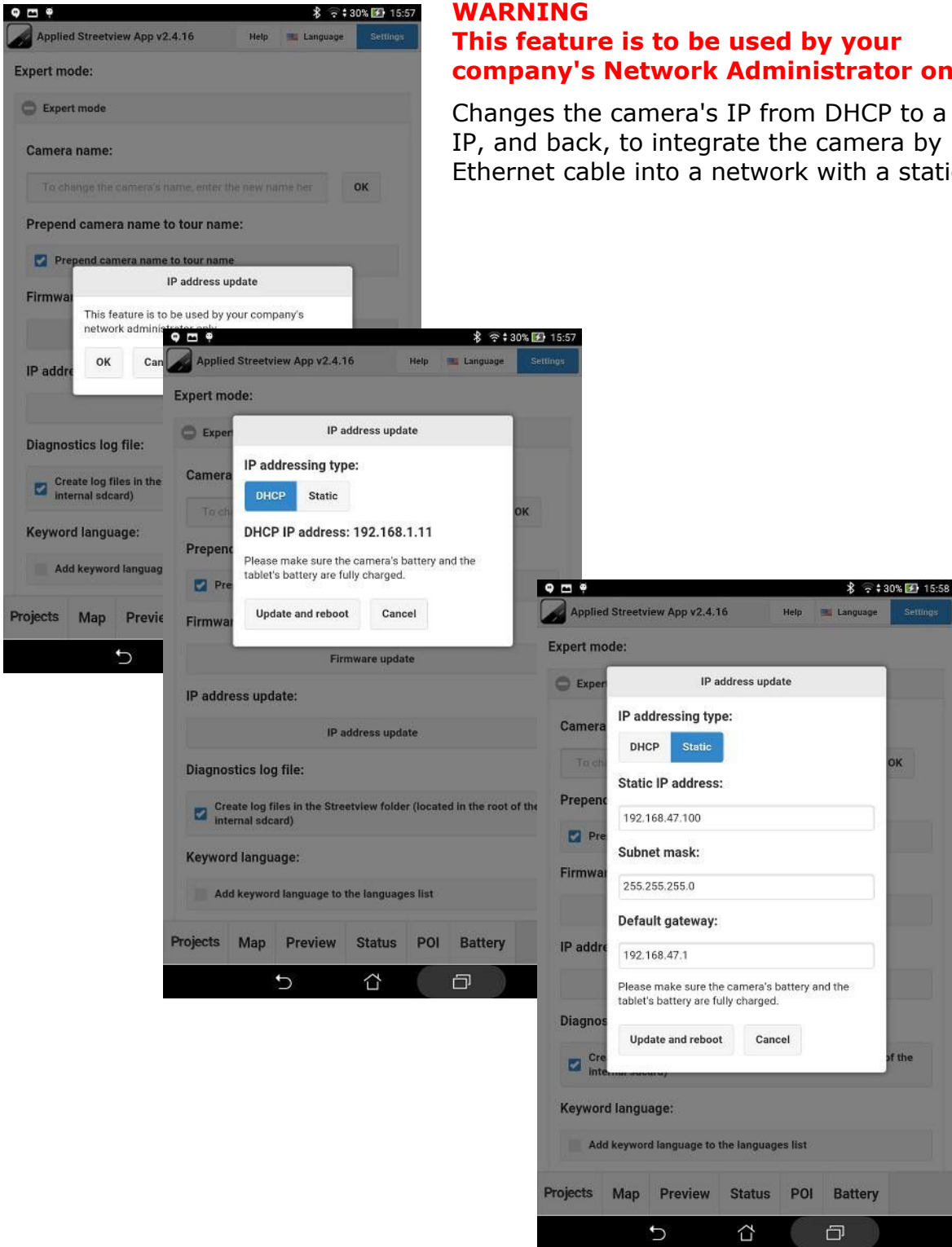
**Hint:**  
**Before doing any updates, check to see whether a new Remote Control version is necessary for the new camera firmware.**



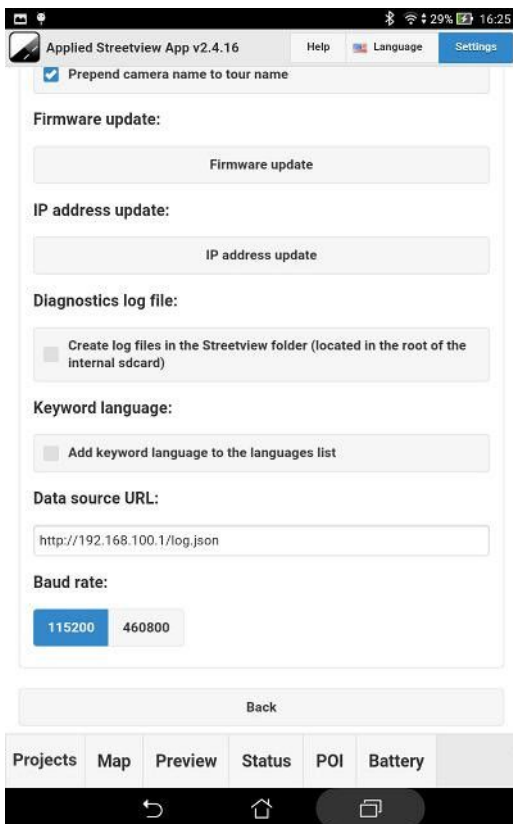
# IP address update

**WARNING**  
**This feature is to be used by your company's Network Administrator only!**

Changes the camera's IP from DHCP to a static IP, and back, to integrate the camera by Ethernet cable into a network with a static IP.



## Diagnostics log file



By default this is deactivated.

Support might ask you to temporarily switch this on to gather log data to solve a problem.

This feature creates large files that can impact the Apps performance when run for a long time. Deactivate when done.

### Keyword language

Adds a language to the language list.

It shows the placeholder and helps when creating a new translation.

### Baud Rate

Changes the Baud Rate for the communication of the camera with the Spatial.

The baud rates of both the camera and the Spatial need to be changed for it to work.

### **WARNING**

**Changing the Baud Rate is for development only. Do not use it.**

# Map-tiles

## Map tiles format info

[http://wiki.openstreetmap.org/wiki/Slippy\\_map\\_tilenames](http://wiki.openstreetmap.org/wiki/Slippy_map_tilenames)

As an example for the format, we provide the [Langen2](#) (53 MB) map tiles as a .zip file to you.

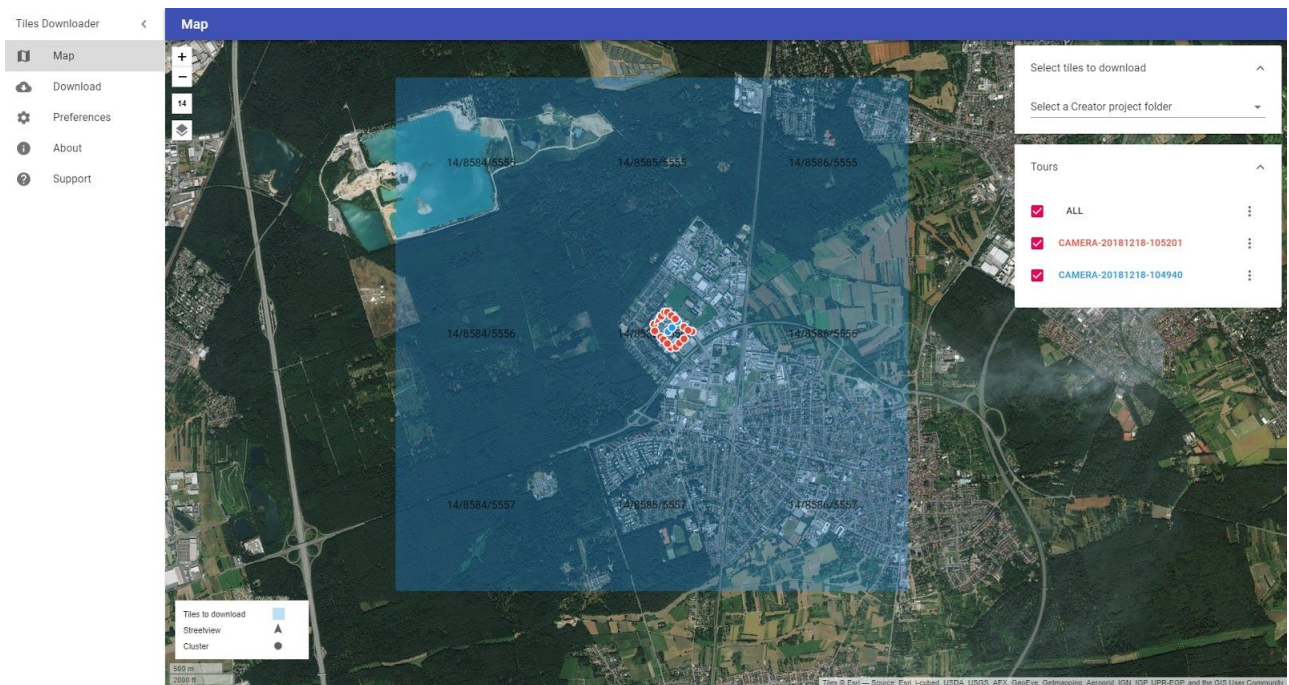
# Tiles Downloader

Our [Tiles Downloader](#) program makes it very easy to download both map-tiles and aerial images from about 40 providers.

They work with all our programs: Remote Control, Creator 3, all players.

You can test [Tiles Downloader](#) for free for 2 weeks!

Check out the [Tiles Downloader Manual](#).



# Create OpenStreetMap tiles with Maperitive

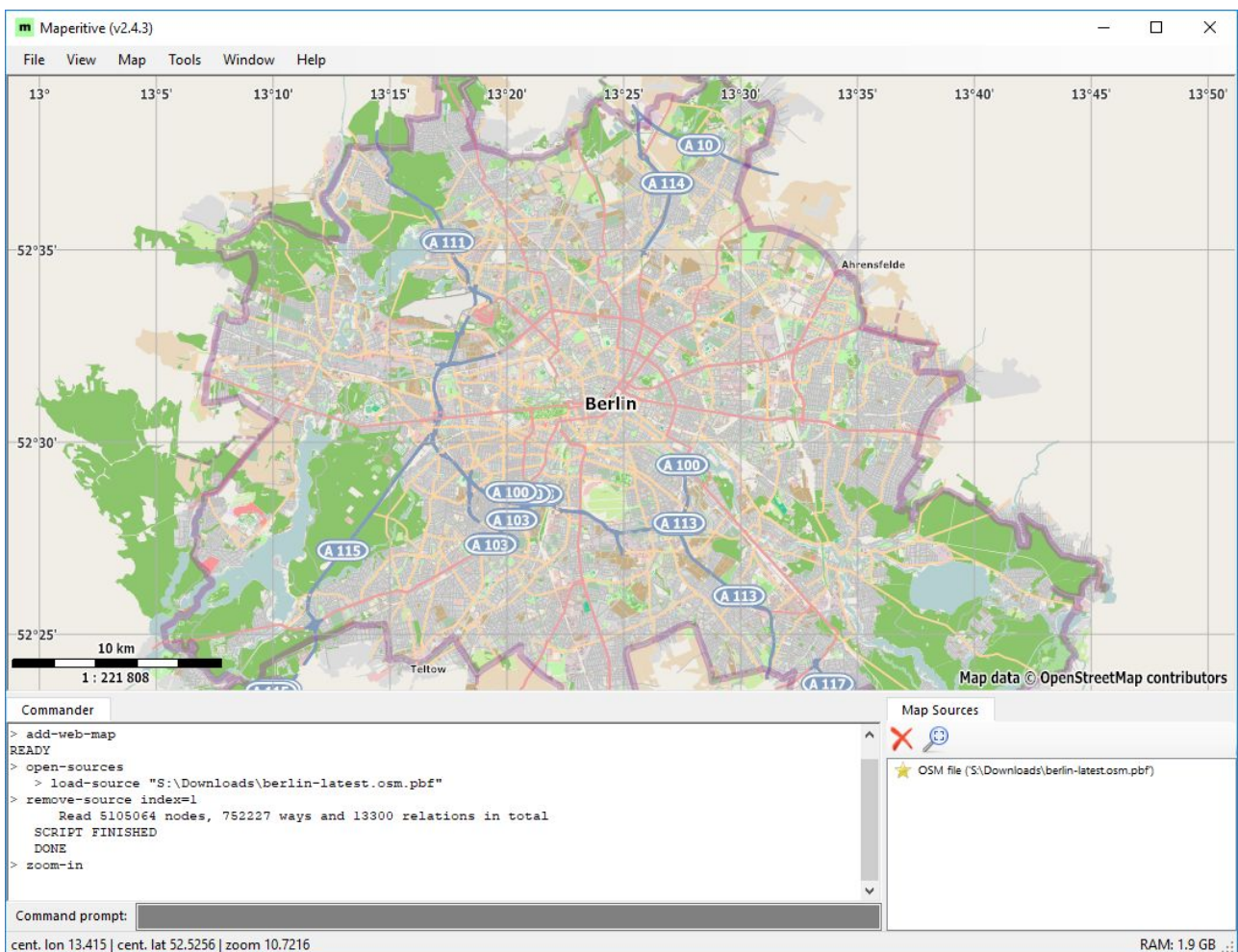
Download the Maperitive program from <http://maperitive.net>

Download an OpenStreetMap Data Extract for your area of interest from <https://download.geofabrik.de>. Choose the **.osm.pbf** format.

Run Maperitive.exe

In the bottom right corner is the **Map Sources** window.  
Select and delete: Web map (OSM Mapnik)

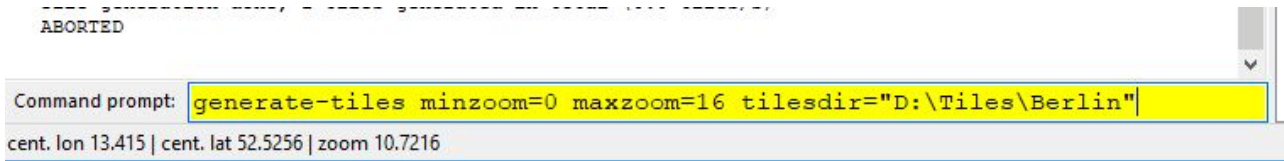
In the top menu click on **File -> Open Map Sources...** and select the downloaded \*.osm.pbf file.



Zoom the map window to set what map tiles will be generated.

Start generating tiles by pasting the following command in the **Command prompt** at the bottom. Then press Enter.

```
generate-tiles minzoom=0 maxzoom=18 tilesdir="D:\Tiles\Berlin"
```

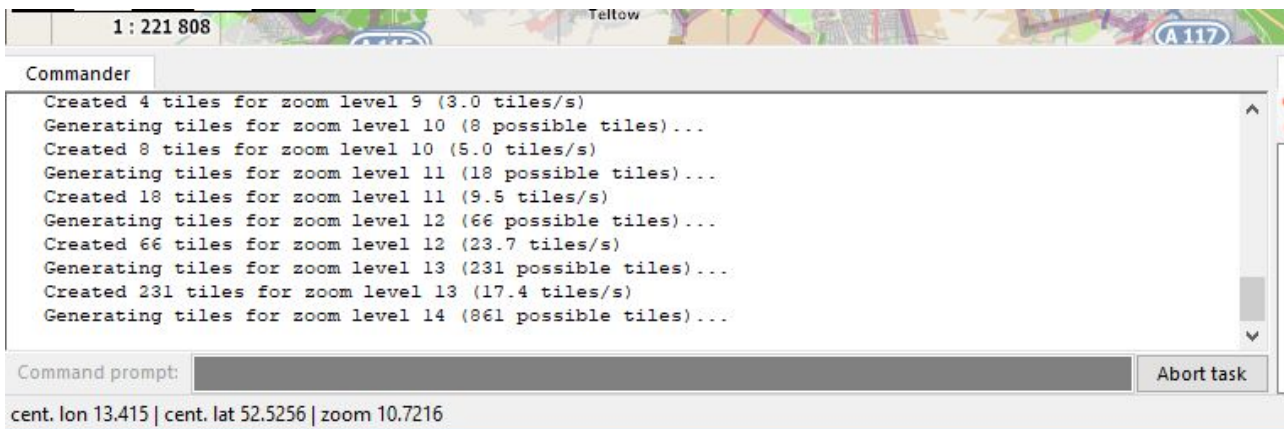


**minzoom, maxzoom:** the minimum and the maximum zoom level for which tiles should be generated. 0 to 18 good settings.

If not specified, the command will decide on its own.

**tilesdir:** specifies the root directory of the tile storage. If not specified, the **Tiles** directory will be used. Note that if you specify a relative path, the current directory will be used to determine the resulting path.

The tile generation progress will be displayed in the window above the **Command prompt**.



Depending on the selected area and the zoom levels this will need a while.

A detailed description of the **generate-tiles** command can be found here: <http://maperitive.net/docs/Commands/GenerateTiles.html>

To transfer the map-tiles to the tablet we recommended to remove the microSD card from the tablet, then connect it to the PC by a USB 3.0 card reader and the included microSD to SD-card adapter.

## Create map-tiles with Mapnik

For larger areas like states and countries, you need to create the tiles locally yourself from vector data available.

This will prevent the free map-tile servers from overload.

OpenStreetMap provides the data needed for free.

A popular free tile renderer:

<http://mapnik.org/>

### **More Info:**

<http://wiki.openstreetmap.org/wiki/Tiles>

<http://wiki.openstreetmap.org/wiki/Mapnik>

# Overlays

On top of the Remote Controls map, you can display recording area overlays to guide the driver.

## Draw Overlays

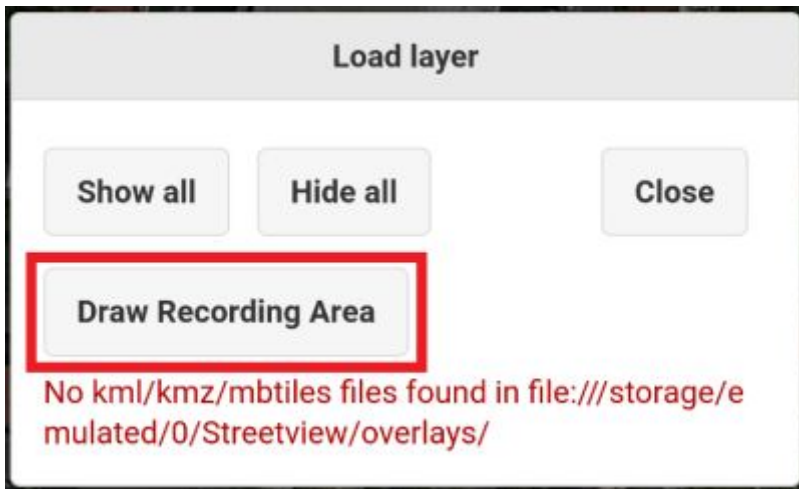
Open the **Map** tab then Click the **Overlays** icon.

It is located in the bottom right corner of the map.



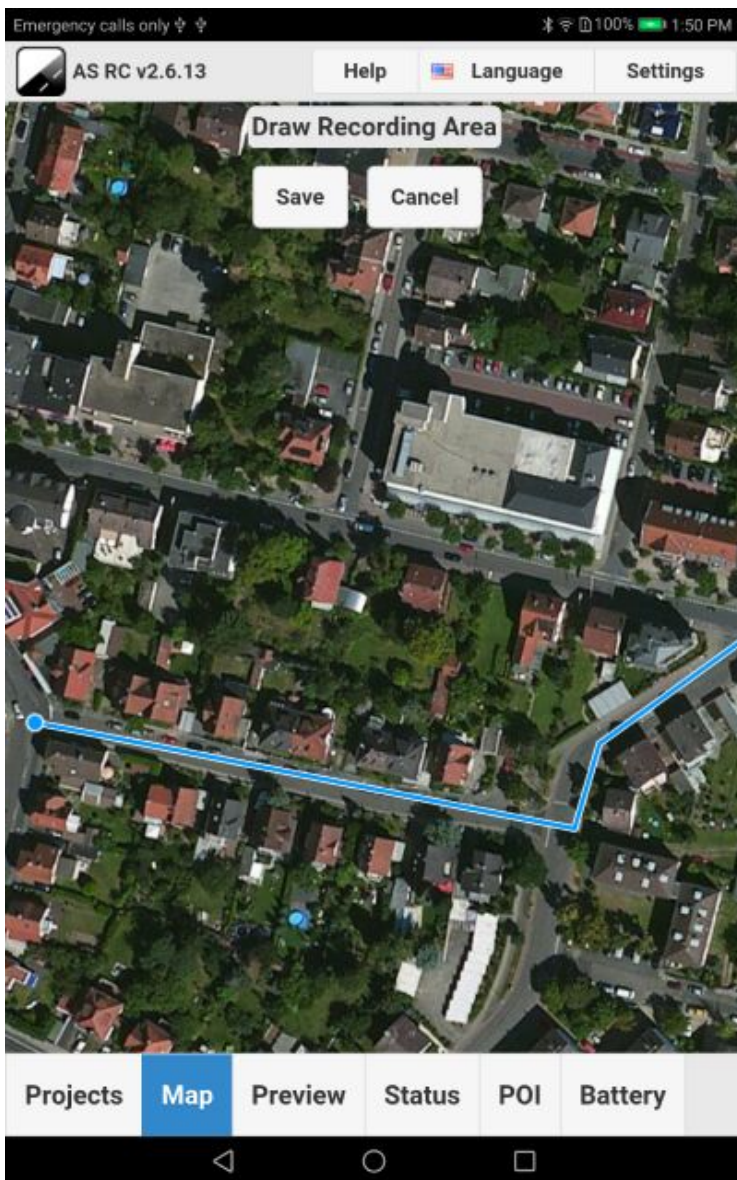


The **Load layer** popup will open.



Click on **Draw Recording Area** button.

Click on the map to start drawing a path. Once done, click on **Save**.



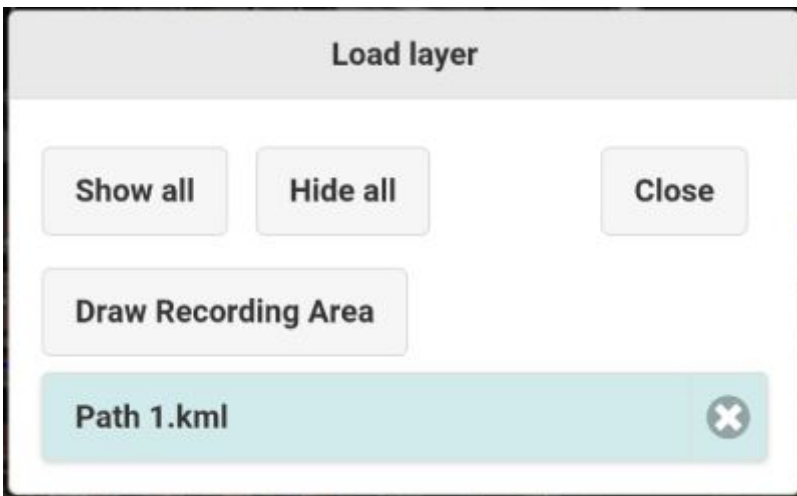
The **Save** popup will open.

A screenshot of a 'Save' dialog box. The title bar is grey and contains the word 'Save'. Below the title bar, there is a 'Name' label followed by a text input field containing 'Path 1'. Below that is a 'Color' label followed by a color selection bar showing a solid blue color. At the bottom of the dialog, there are two buttons: 'Save' and 'Cancel'.

Enter a name for your new overlay and pick a color of the path.  
Click **Save**.

Your new overlay should appear on the map.

To view all the existing overlays open the **Map** tab then click the **Overlays** icon.

A screenshot of a 'Load layer' dialog box. The title bar is grey and contains the text 'Load layer'. Below the title bar, there are three buttons: 'Show all', 'Hide all', and 'Close'. Below these buttons is a button labeled 'Draw Recording Area'. At the bottom, there is a list of overlays, with 'Path 1.kml' highlighted in a light blue background. To the right of 'Path 1.kml' is a small square button with a white 'x' on a grey background, used for removing the overlay.

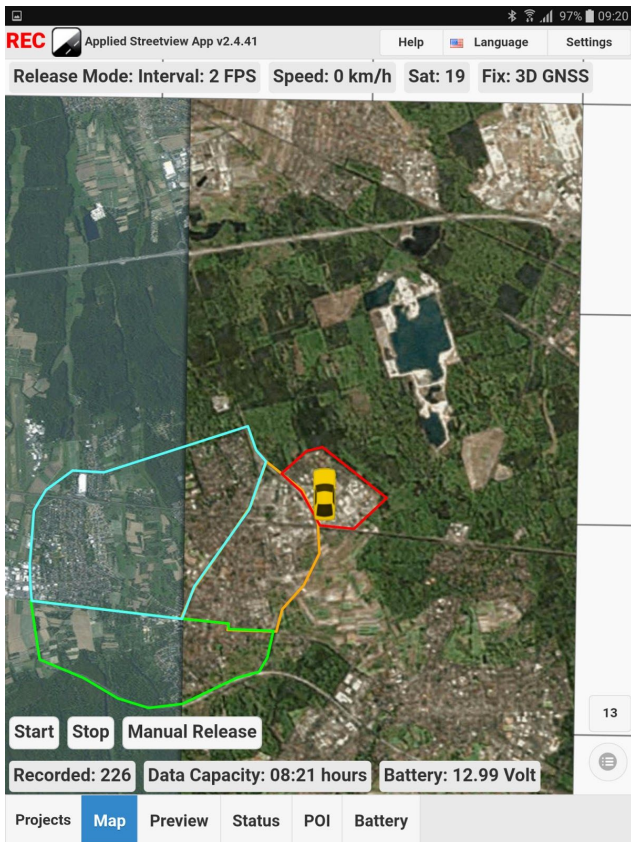
To delete an overlay click the Remove icon  next to it.

# Download Overlays

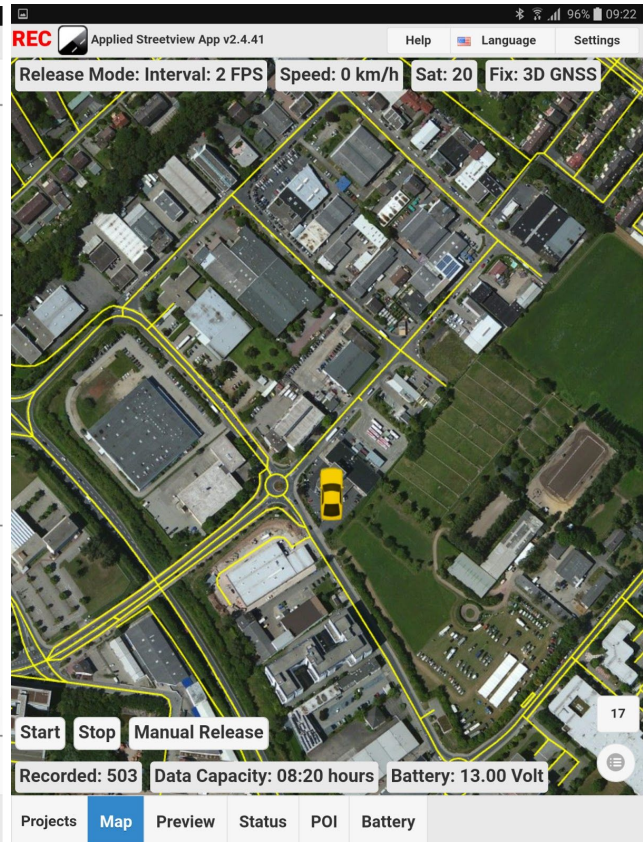
**kml/kmz** is ideal to define a recording area, or a few roads or Points of Interest. For big data (e.g. all the roads of a city) it needs **MBtiles** instead.

You can use both at the same time.

kml/kmz



MBtiles



## Create KML/KMZ online with GPS Visualizer

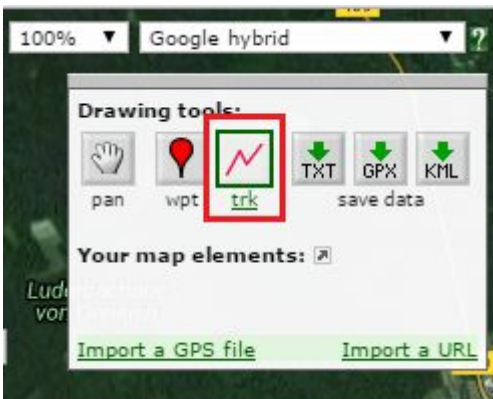
There are many ways to create kml/kmz files. These are only the easiest ways.

Go to <http://www.gpsvisualizer.com/draw/>

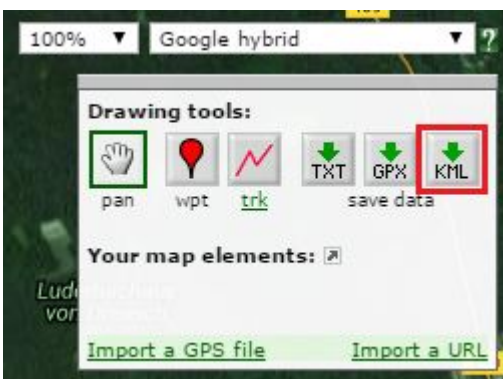
Find the recording location



Start drawing a track by clicking **trk** in the **Drawing tools** panel.



After all the tracks and waypoints (wpt) are drawn, save the data as a KML file.



## Create KML/KMZ with Google Earth

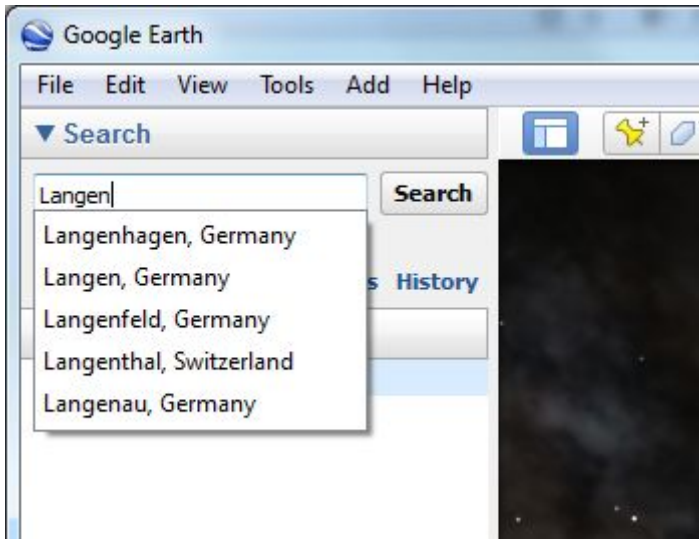
There are many way to create kml/kmz files. These are only the easiest ways.

### Download and Install Google Earth

<https://www.google.com/earth/download/ge/agree.html>

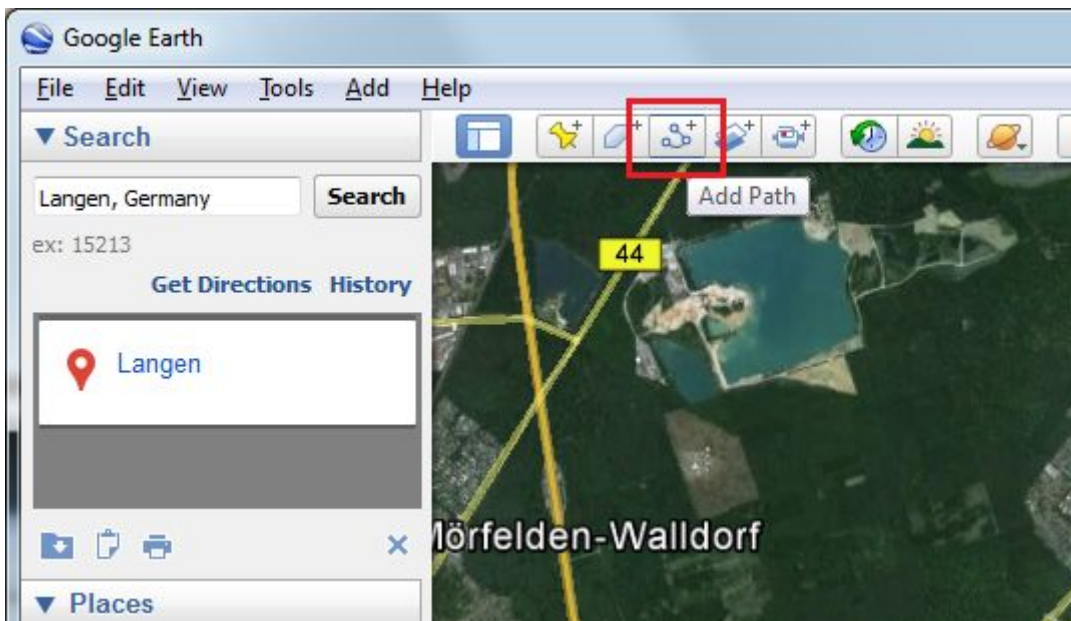
### Recording Location

Open Google Earth and find the recording location.



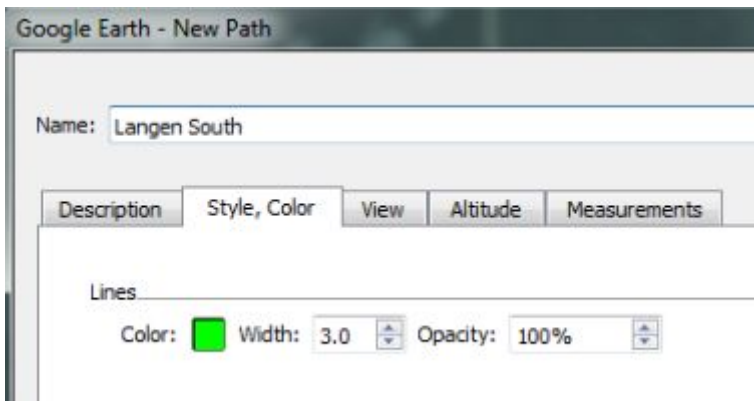
### Create KMZ files

Click on the **Add Path** tool.

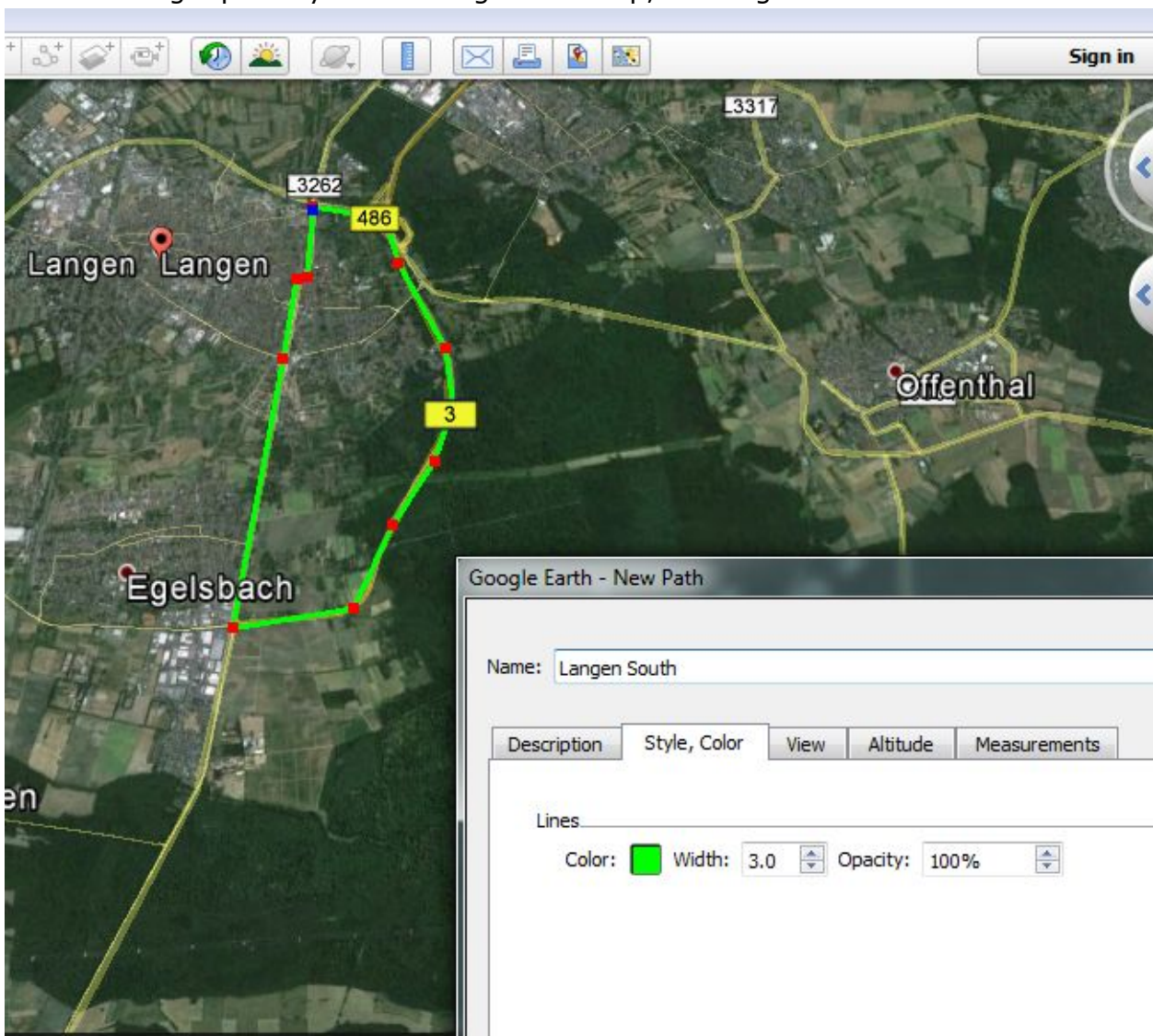


In the **New Path** popup, set a name for this feature.

In the **Style, Color** tab, change the width to 3 and choose a different color for each recording area.



Start drawing a path by left-clicking in the map, then right click to undo.



Click **Ok** when done.

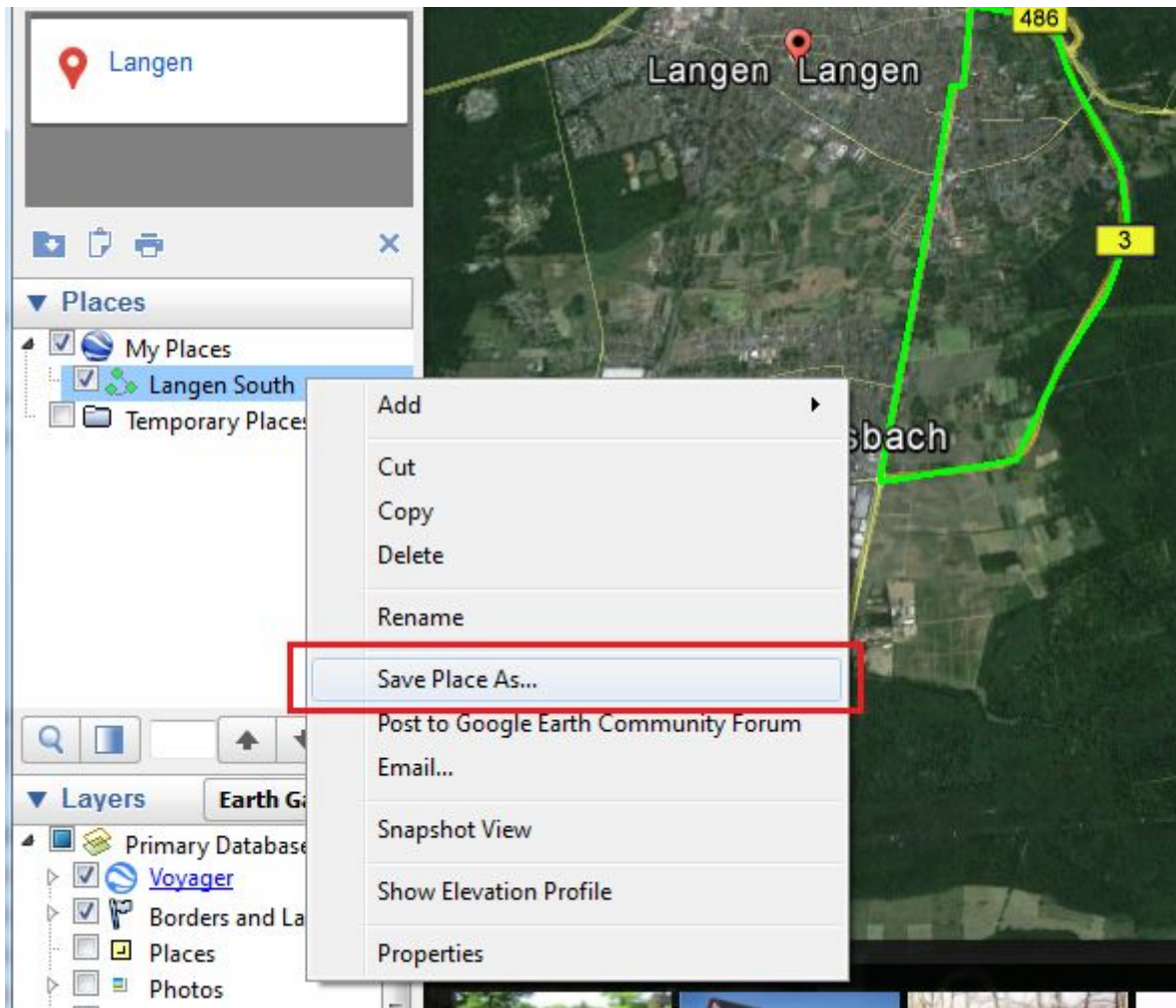
The recording area should appear in the left panel in **Places - My Places** section.  
Repeat.

Select and right-click on the newly created recording areas .

Then click **Save Place As...** to save it to a folder.

Copy all the .kmz files directly the tablet or to a SD card.

Inserted the SD card into the tablet.



Read more about Display kml/kmz or MBtile overlays with the Remote Control on the next page.

## Create MBTiles with TileMill

There are many way to create MBtiles files. These are only the easiest ways.

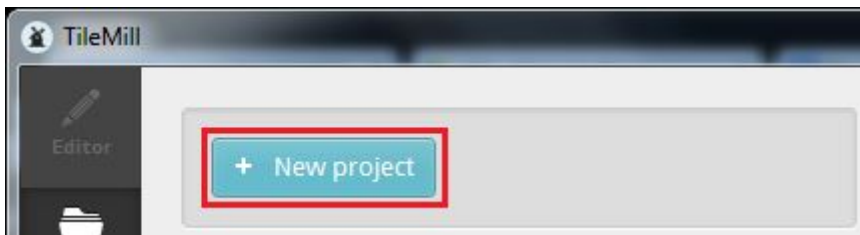
### Download and install TileMill

<https://www.mapbox.com/tilemill/>

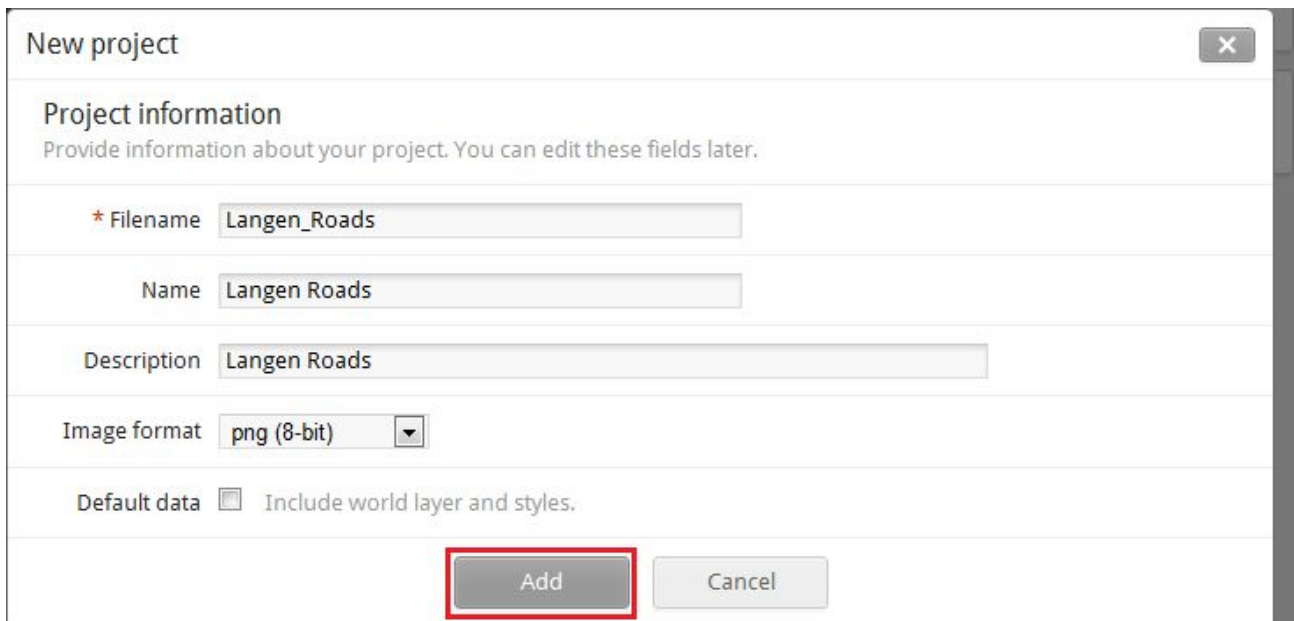
Download Demo data-set.

[http://updates.applied-streetview.com/Remote-Control/Langen\\_Roads.zip](http://updates.applied-streetview.com/Remote-Control/Langen_Roads.zip)

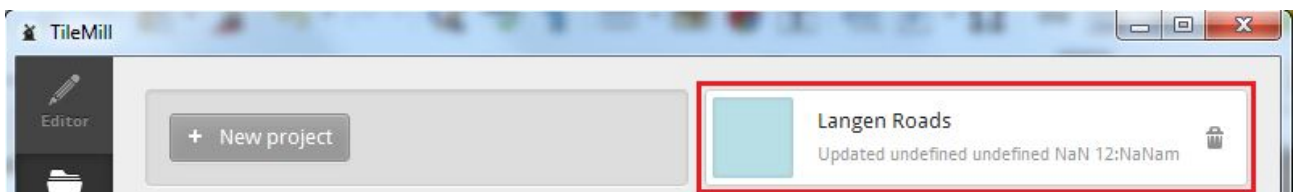
Run Start TileMill shortcut and create a new project.



Provide information about your project. If the resulting tile data-set doesn't have many different colors we recommend setting Image format to png (8-bit) to reduce the size.

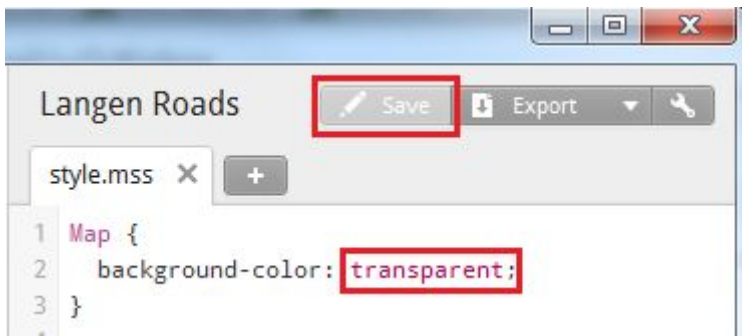


Open the project after it has been created.

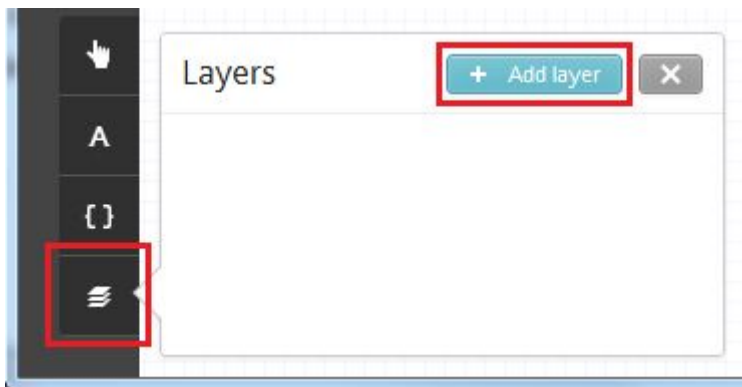




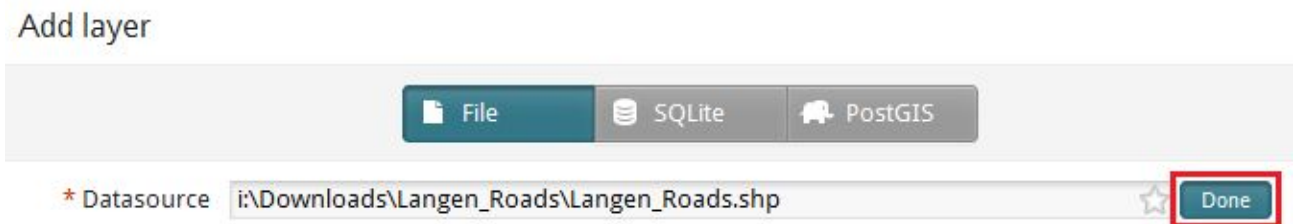
Set **Map background-color** to **transparent** and click save.



In the bottom left side click on Layers and then on **Add Layer**.

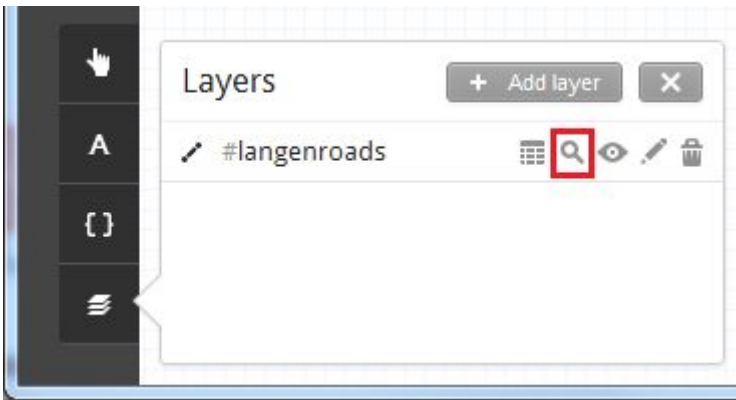


Select a data-source and click **Done**.

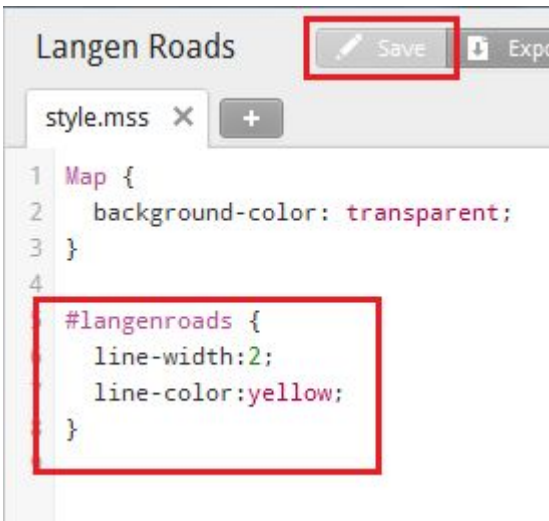


Then click **Save & Style**.

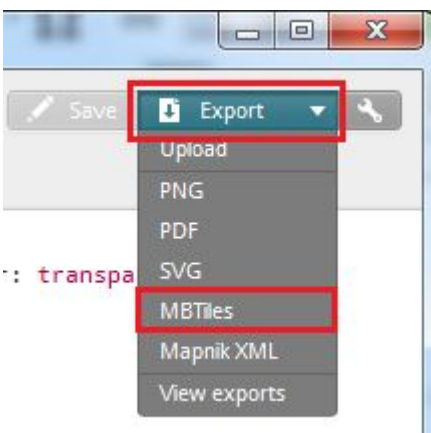
Click on the Magnifying glass icon in Layers to zoom to layer extents.



Adjust the layer style and then click **Save**.



When the map looks exactly as needed, it can be exported as MBTiles. Click on **Export** in the top right corner and then click on **MBTiles**.

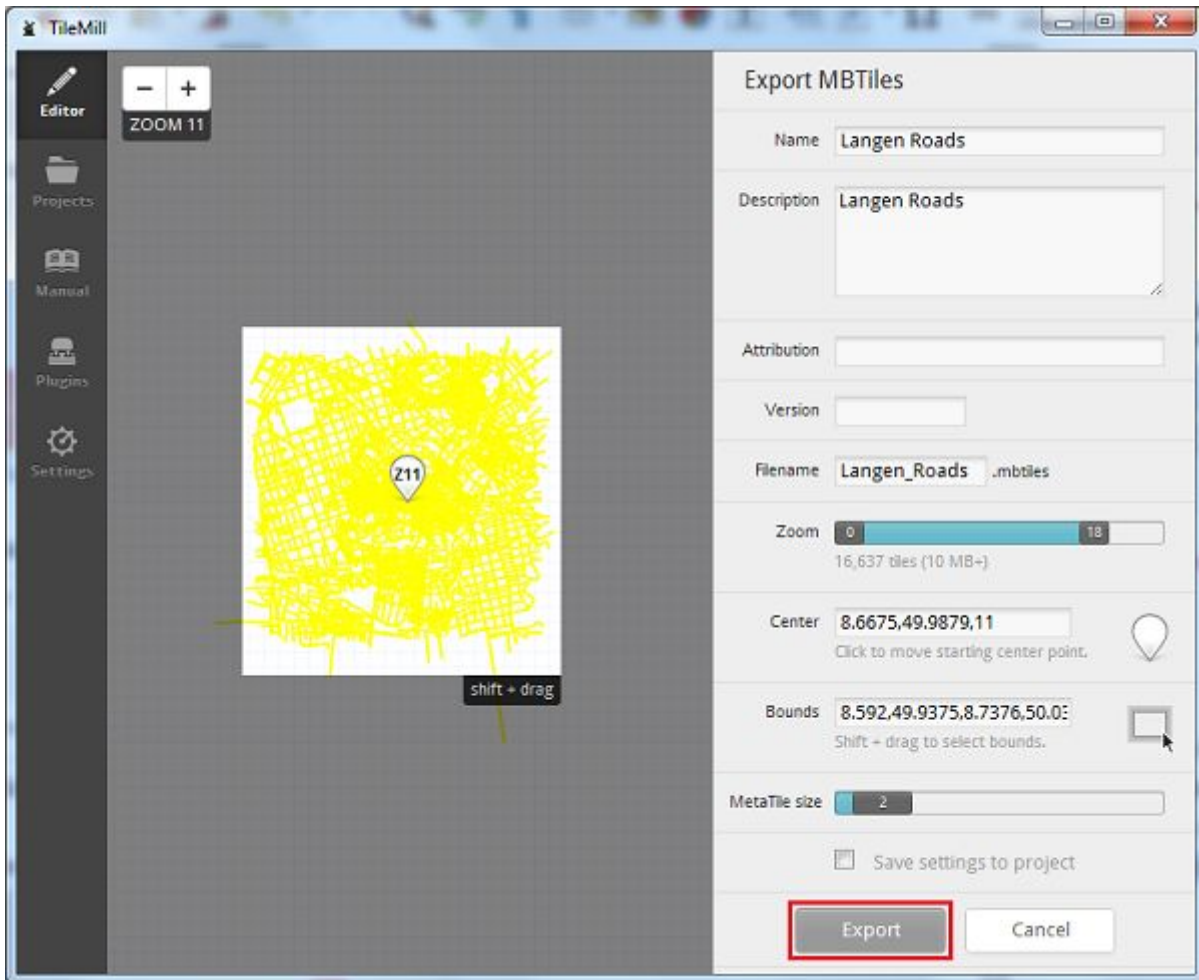


Set the **Bounds** by shift+dragging on the map.

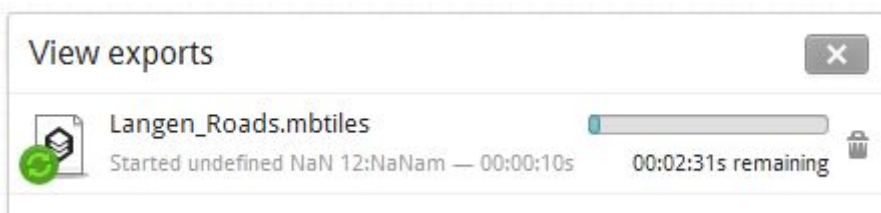
Set **Zoom** to 0-18. Going above 18 will exponentially increase the time taken to create the tiles.

Set the **Center** by left clicking on the map.

Click **Export**.



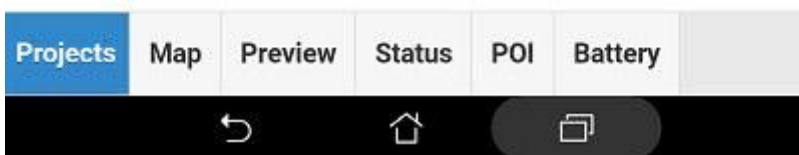
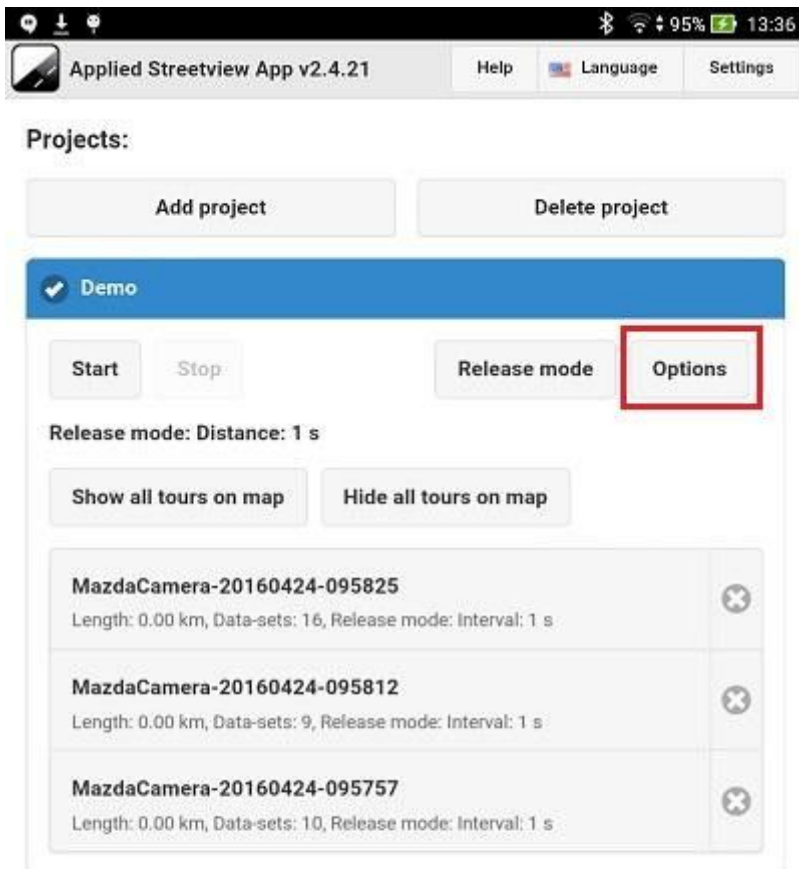
To see the progress of the export, click on **Export** in the top right corner and then click on **View exports**.



A more detailed TileMill manual is available at <https://www.mapbox.com/tilemill/docs/crashcourse/introduction/>

# Display kml/kmz or mbtile overlays with the Remote Control

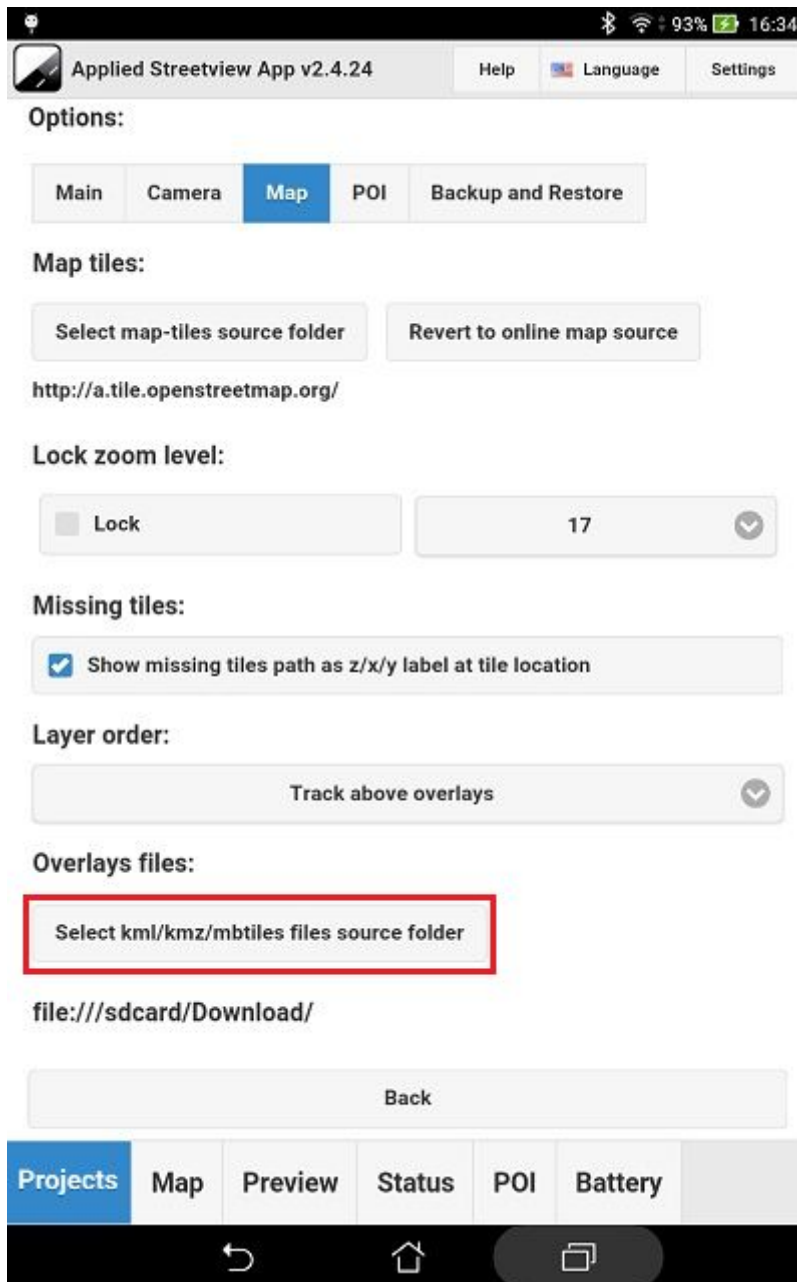
Open a project and click **Options**.



Select the **Map** tab.

Then click **Select kml/kmz/mbtiles files source folder**.

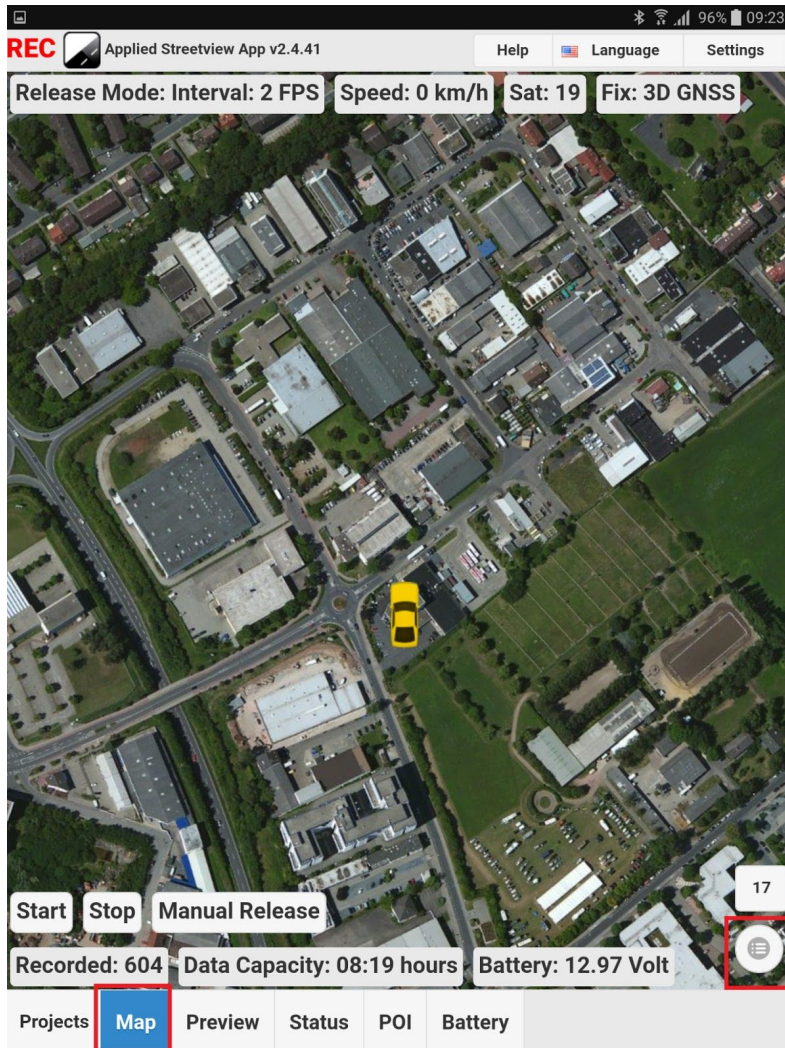
Pick the folder to which the kml/kmz/mbtiles files have been copied.



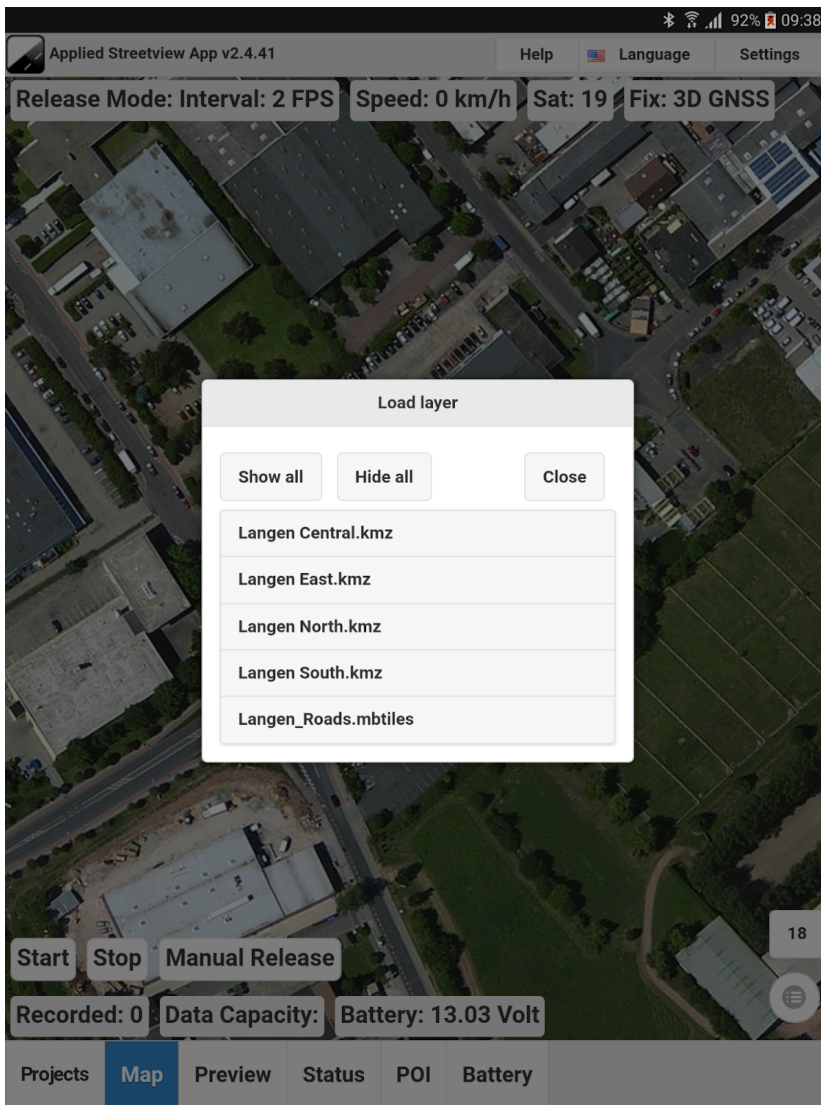
Open the **Map** tab.

Click the **overlays** icon.

It is located in the bottom right corner of the map.



The **Load layer** list shows a list of all available kml/kmz/mbtiles files. Click on a list item to show it on the map, click again to hide it.

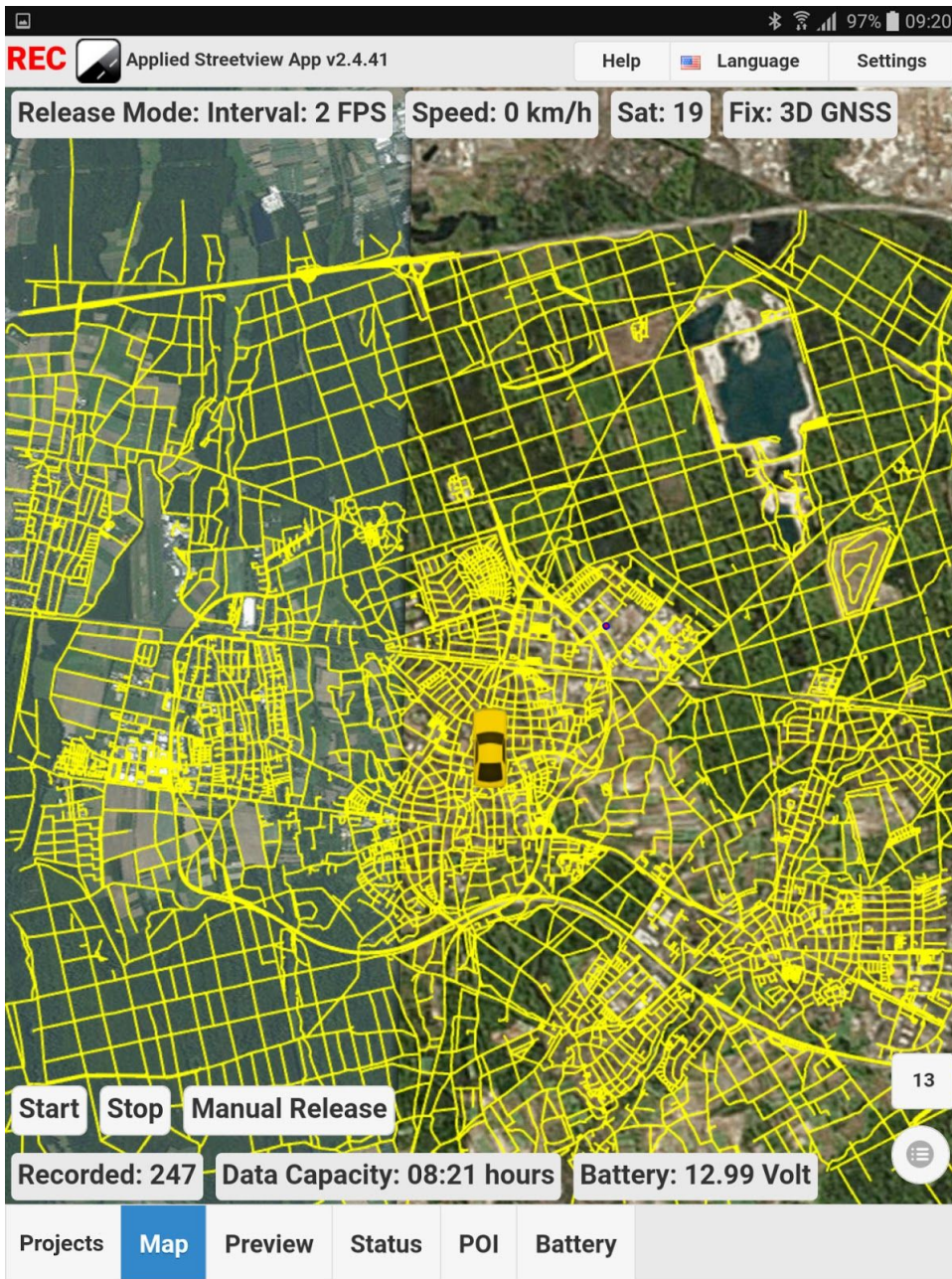


An example of multiple Recording Areas (red, blue, green, yellow) overlaying the map.





An example of mbtiles overlaying the map: MBtiles are used when there is a lot of data to process.



# Support

Please check for a new Remote Control version first:

<http://www.applied-streetview.com/remote-control>

**Support is provided for the newest version only.**

Support is available in **English language** only.

## Contact

**Helpdesk:** [support.applied-streetview.com](http://support.applied-streetview.com)

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