APPLIEDSTREETVIEW

Backpack Mount

Manual

Version: 2018-06-03

Table of Content

Overview

This manual is for the **Original 360 Camera** with the **Backpack Mount**.
Please also read the main Camera Manual for the **Original 360 Camera** with the **Car Mount**.

Mount Manuals

For the other mounts, **read this manual** and in addition:

Backpack Mount Manual
Railway Mount Manual (Work in progress)
Ferry Mount (Work in progress)

App and Program Manuals

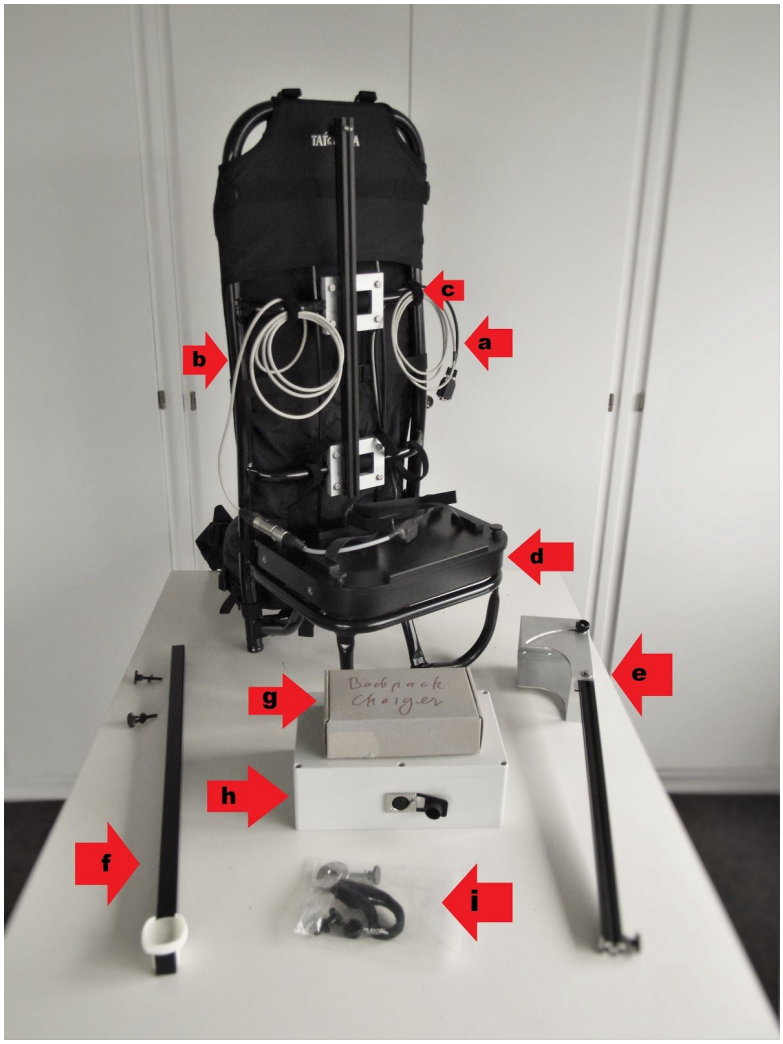
Please see the Remote Control Manual for how to operate the camera.
Please see the Creator 2 Manual for how to process the footage recorded.

Programs of Interest

Privacy Keeper
Visualizer
Facades

AS Server
Photogram
Android Player
Railway Editor

What's in the Backpack



Backpack with:

a) 1.8 m data cable
b) 1.8 m power cable
c) Velcro straps
d) Navigation Device and GNSS antenna in the compartment below the grey Battery Box.
e) Black Aluminium pole with adjustable silver camera holder
f) Black wooden antenna holder with 2 black knurled bolts and 2 black washers
g) Battery Charger, 50/60Hz, 110 to 240 Volt.
h) Grey Battery Box
i) Spare parts bag

Safety

Rigging and Unrigging the Backpack

- Make sure to work in a safe place
  E.g. not on a public road where traffic might endanger the rigger.

Remote Control

Operating the remote control while e.g. cycling at the same time is not allowed by law in most countries. Always stop before operating the remote control.

Accessories

Camera

- Depending on your workflow, a few additional **Samsung EVO** 850 or 860 SSDs might be needed. Supported capacities: 120GB, 250GB, 500GB 750GB, 1TB

- Newly purchased SSDs must be formatted in-camera with the remote control before first usage: Settings -> Format

- Also before re-using an SSD, format it in-camera to empty it:
  Settings -> Format

- **Hint:** Never format or delete an SSD with a PC! If you accidentally have, format it again in-camera

Tablet

- For bicycles or motorcycles a **handlebar holder** to mount the tablet with the remote control. The tablet should be mounted in portrait orientation.

- A 20.000 mAh **USB power bank and a 1.5 or 2m USB cable** to extend the tablet's operating time.

Workflow

Helpful Hints

Plan

- The day of the week when the dustbins are out for collection is not really an ideal day for recording beautiful footage for tourism
- Footage shots for tourism should usually show tourists in them
- Consider weekday vs weekend when recording e.g. a city center or a tourism area like beach or hiking path.

Height

- With the camera mounted, the height increases by about 60cm. Not to hit any ceilings.

Rain

- One is unable to record Streetviews properly when it’s raining
- Water drops on the lens protectors make the recorded footage unusable
- In case it does rain, the camera is splash proof, but not rain proof
- All raindrops contain dust particles. So, for the best image quality always replace the lens protectors for clean ones even when there’s only been a few raindrops

Remote Control App

- Consider installing the remote control app to your Android mobile phone in addition to the tablet. In case something goes wrong with the tablet, this way you can still operate the camera.

Even with map tiles and recording areas etc. missing, the remote control still works fine.

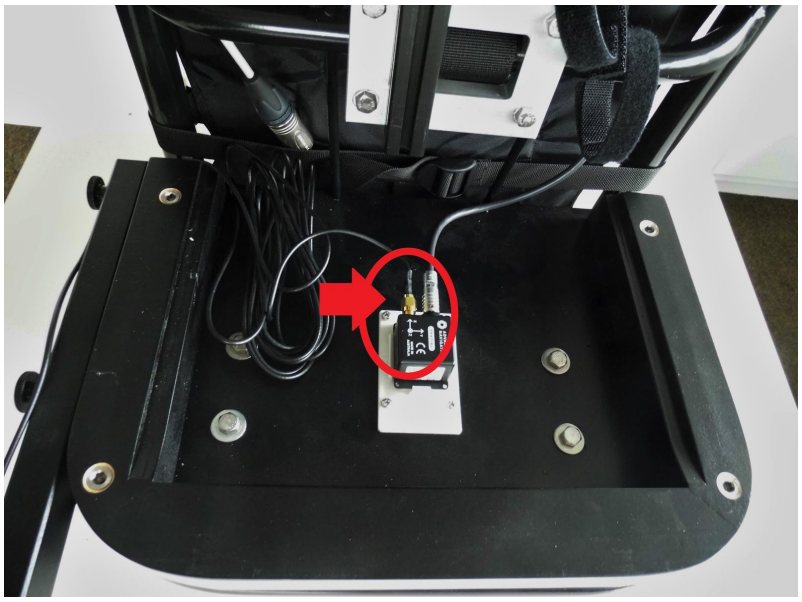
Rigging

Rigging the Backpack only takes about 5 minutes and can be done by a single person.

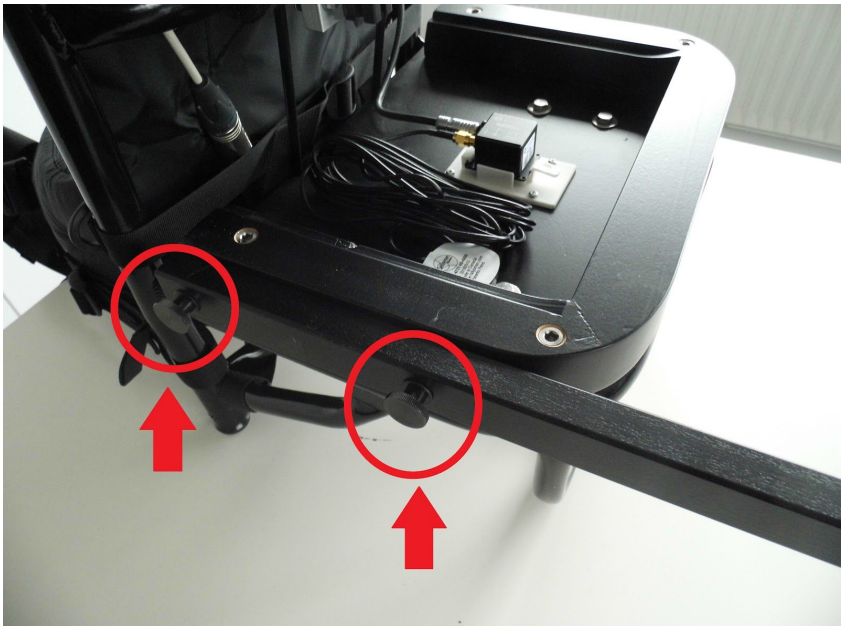
a) Remove the battery box by loosen the strap.

b) Unscrew the 4 black bolts to remove the battery holder.

e) Plug the antenna and the data cable into the Spatial.

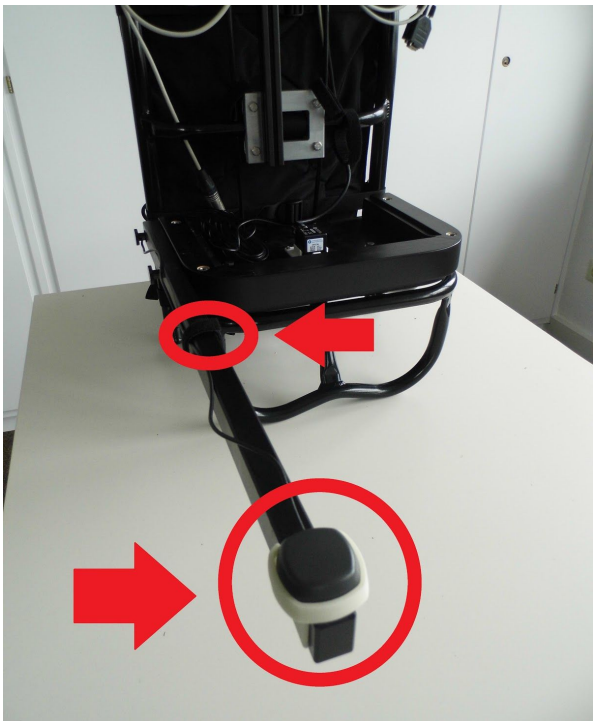


c) Attach the GNSS antenna holder with 2 black knurled bolts with washers.



d) Attach the antenna. Secure the antenna cable with a Velcro strap.

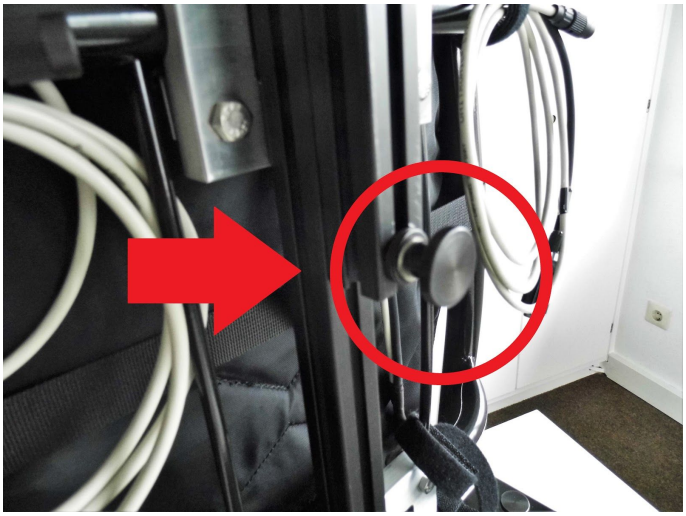
Make sure not to pull on the black antenna cable.
Always handle the antenna by it's grey housing.



f) Close the compartment with the 4 black bolts.

g) Secure the grey Battery Box with the black strap.

h) Attach the top profile with the camera holder.



Preparations

Camera

Charge the battery box overnight.
Make sure you have either a new SSD or there is space left.
Format a new/re-used SSD in-camera.

Tablet/Remote Control

Charge the tablet.
For long-time recording a 20.000 mAh USB power-bank is suggested.

Make sure the Android tablet is set to your **local time**.
This is necessary to tag your recordings with the right local time.
The camera itself only knows the GPS time, which you do not want.

Make sure to download the map-tiles for the recording area.
Save the map-tiles folder to the tablet's SD card.
To organise large projects you can create **.kmz files** for overlays to define the recording area.
You also can have transparent **mbtiles**.

See the Remote Controls manual for how to do this:
http://www.applied-streetview.com/remote-control/

From time to time connect the Android tablet to the internet and check for an Android update.
Update if available.

Rigging

The rigging must always be done in full for the camera system to work properly.
Do not skip mounting/connecting e.g. the GPS antenna or the Spatial.

Attach the gray Battery Box to the Backpack with the black strap.
The Battery Box’s weight helps to balance the Backpack.

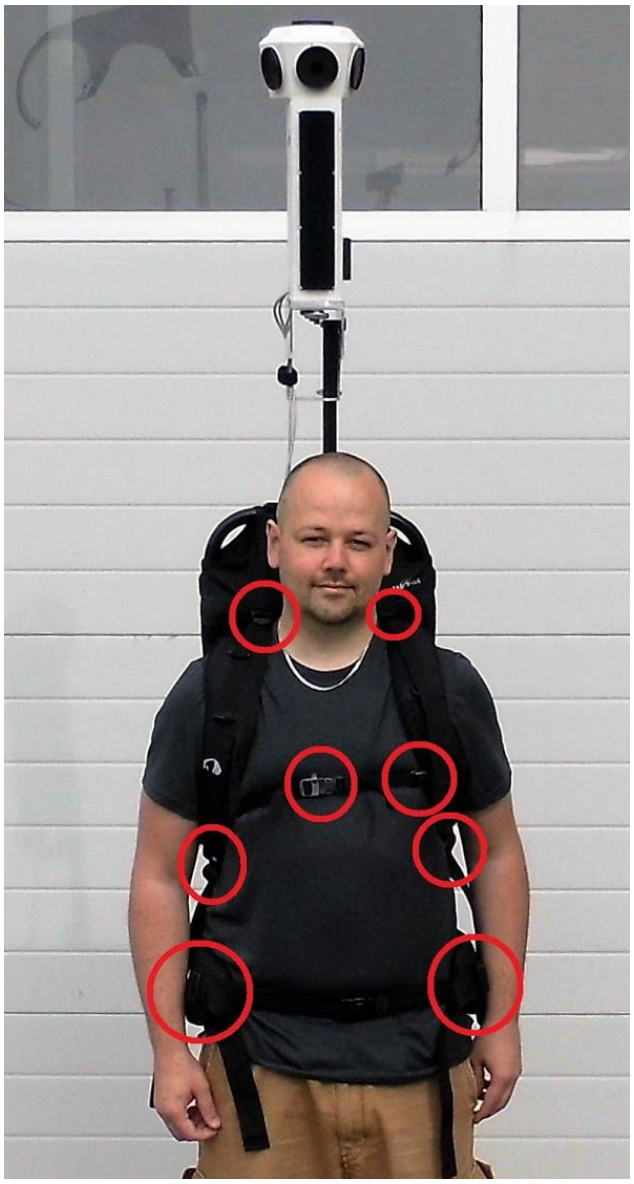
Which way is forward?
The big black heatsink of the camera must point towards the shoulder straps.
With the shoulder straps of the Backpack on the left side, you also see the small square heatsink of the camera.

Skew the the camera holder a bit. It helps to attach the knurled knobs. Mount the camera with the two knurled knobs and the two spring washers.

Open the camera's cable compartment.
Attach the data and power cable.
The plugs are “bajonet”.
There is a small marker at each plug. It needs to point downwards.
Turn the top of the bayonet plug towards the camera.
Insert the two plugs. Secure them by turning the top of the bajonet away from the camera.

Adjustment

The recording person to put the backpack on.
Adjust the backpacks straps. See the red marks.
Walk 20 meters for the backpack to settle.
Make sure it fits comfortably.



Re-adjust the backpacks straps at the red marks.

HOW TO IDEALLY ADJUST YOUR RUCKSACK

Step 1 // Put on your rucksack
Loosen the shoulder straps and lift the rucksack by the handle to leg-height and slip your arms into each shoulder strap one by one.

Step 2 // Fasten hip strap
Always fasten the hip strap before tightening the shoulder straps: the middle of the hip strap should be in line with the hip bone.

Step 3 // Shoulder straps
After adjusting the back length, moderately tighten the shoulder straps.

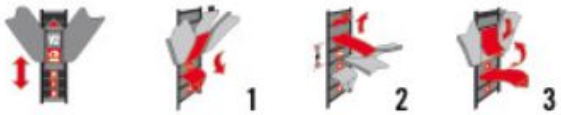
Step 4 // Load control straps
Affix load control straps in the collarbone area at an approx. 20 – 30° angle.

Step 5 // Chest strap
Improves freedom of movement, stabilises carrying system and therefore prevents early exhaustion.

Step 6 // Load control
Hip strap Improves horizontal load control.

ADJUSTING THE TATONKA LADDER SYSTEM

We can develop our products as much as we want – if a rucksack doesn't sit correctly against the body then its features cannot carry any weight. Many TATONKA carrying systems are therefore equipped with an adjustable ladder system, which allows you to individually adjust the rucksack to your back length.



When purchasing a rucksack, make sure you choose a size that is "roughly" equivalent to your back length. S for short backs, M for medium-sized backs, L for long backs and XL for very long backs. Any fine adjustments can then be made using the adjustable ladder system.

Step 1 // Thread the lower Velcro flap behind the rung of the ladder that is ideal for your back length.
Step 2 // Then thread the upper Velcro flap, leaving a gap of two ladder rungs.
Step 3 // Now affix the two flaps onto the central section – first the top one, then the bottom one.

Put the rucksack onto your back. Does everything fit? Even if it's already sitting comfortably, this question should only be answered after carrying out a mini practice test. After all, 20 kilos more or less on your back certainly make a difference. Now fill it up and walk around the garden for a while with it on your back to get a feel for the rucksack and its weight. Does everything still fit? If not: simply make some more small adjustments. All rucksack tips can be found at www.tatonka.com under the 'Products' menu.

Camera Mount

A second person to adjust the camera to be vertical.

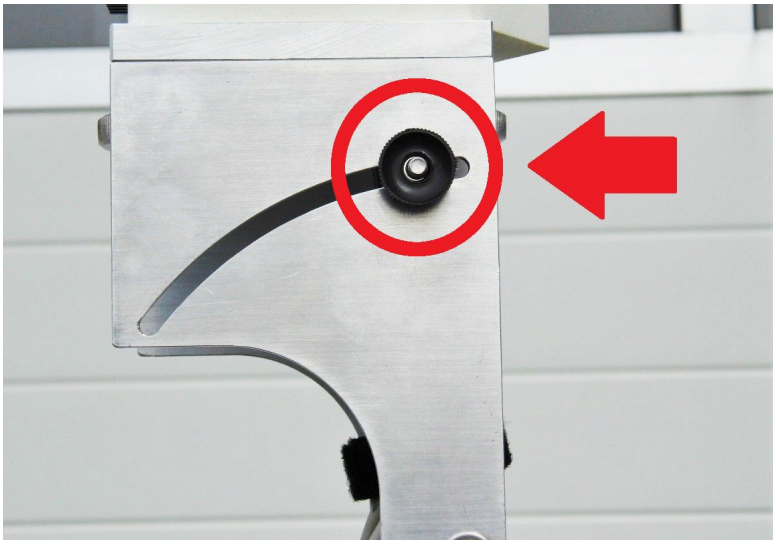
Before adjusting

Camera is leaning forward.

After adjusting

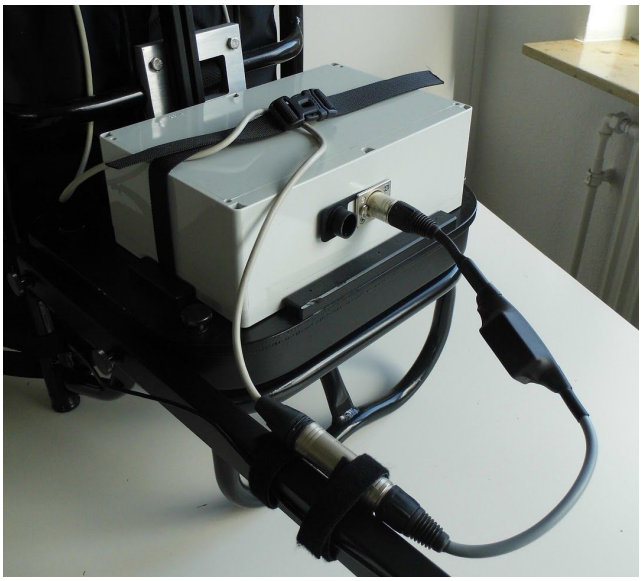
Camera is vertical.

Adjust the camera using the knob.



Recording

Set the Backpack onto even ground.
Connect the power cable to the Bluetooth Battery Monitor to the Battery box.
Wait 3 minutes.



The Navigation Device initiates for leveling and positioning.

This is important. Do NOT skip this step.

Connect the Android tablet by WIFI to the camera.
The default WIFI device name of the camera is **camera**.
The password in **wireless**. It can not be changed.

Start the Remote Control on the Android tablet.
Create a new project on the **Record** tab.
Make settings for the map, recording area or mbtiles. (All optional.)
Set the recording mode.
Recommended for outdoors: **Distance, 5 meters**.
Recommended for indoors: **Interval, 1 second**.

Pick the Backpack up and put it on your back. Fasten the black straps.
Start recording.
Stop recording. Power off the tablet.

Unplug the power cable from the grey battery box.
Remove the SSD from the camera for processing.

Aftercare

Clean the camera:
- Unscrew the UV-filters.
- Screw on the replacement UV-filters.
- Clean the dirty UV-filters with warm water and soap.
Dry the UV-filters with a lint-free cloth.

Clean the camera’s itself if necessary.
Make sure the UV filters are mounted and all compartments are closed when cleaning the camera.

Charge the battery box.
Charge the tablet.

Put a new SSD into the camera.
Format the SSD in-camera to delete any footage left on it from the last recording.
DO NOT format the SSD or delete files from the SSD with a PC. Only with the camera.

Done. The camera is ready for the next recording.

Common Errors and How to avoid them

1. **Camera mounted facing backwards.**
   The large black heatsink must face forward. Toward the shoulder straps of the Backpack.
2. **GPS antenna not connected.**
   The Backpack must always be set-up completely. **Do not skip** connecting e.g the GPS antenna or the Spatial.
3. **No proper initialisation.**
   Stick to the following sequence: Set the Backpack on the ground. Power it on. Wait 3 minutes. Put it on. Start recording. If you do not wait 3 minutes, leveling data is invalid and automatic leveling will not work when processing.
4. **Always start and end recording outdoors with GPS reception.**
   This is especially important when recording indoors or underground. This way your recordings are positioned at about the right location. Even when there is not GPS positioning indoors or underground. Check your outdoor position on the Remote Controls map. It might need a moment to get a fix when leaving a building.

Processing

Processing footage recorded by the Backpack in general works the same as processing footage recorded by car.

Hint:
When doing indoor recording you will have to adjust the position of the streetviews on the Creator map manually, for no GPS reception indoors. **It helps a lot to start and end recording outdoors to position all your footage at about the right position on the map.**

Recommended workflow for manually adjusting the position on the Creator map:
Do the leveling.
Process all the streetviews.

Use 2 monitors.
Move the Creators **Pano Window** to the second monitor.
When selecting an icon on the map, the Pano Window will show it automatically.

Now you can move and rotate one or many icons on the map.
See the Creator Manual for the details.
http://www.applied-streetview.com/processing-program/
Print the page with the keyboard shortcuts.

Process as usual.

Support

Support is available in English:

Helpdesk: support.applied-streetview.com
E-Mail: support@applied-streetview.com
Skype ID: applied-streetview
Phone: +49 (0)6103 - 37 27 494

Consulting

We are available to be hired for consulting.

Please contact:

E-Mail: jan.martin@applied-streetview.com
Skype ID: applied-streetview
Phone: +49 (0)6103 - 37 27 494