



All you need to know to get started and work with Drone Harmony Cloud.

Contents

What Version Of Drone Harmony Cloud Is This Guide For?	2
Starting Out with Drone Harmony Cloud.....	2
Quick Facts.....	3
Can I plan missions in the web interface?	3
What do you need to work with Drone Harmony Cloud?	4
How to get the Drone Harmony mobile application?	4
The Interface	4
Synchronization	6
Data Security	8
Editing scenes and mission	8
Viewing options	9
Archived Missions.....	10
Using Tags	11
Additional Tips	12
Use key shortcuts.....	12
Use Points of Interest (POIs).....	13
Sharing flights and mission.	13
Set your defaults	13
FAQ	14
How will Drone Harmony Cloud evolve in the near future?	14
Is there a limit on the number of waypoints a mission can have?.....	14
Are drones other than DJI Supported?	14
Is there an iOS version?	14
Additional Resources.....	14
Want to contribute?	15

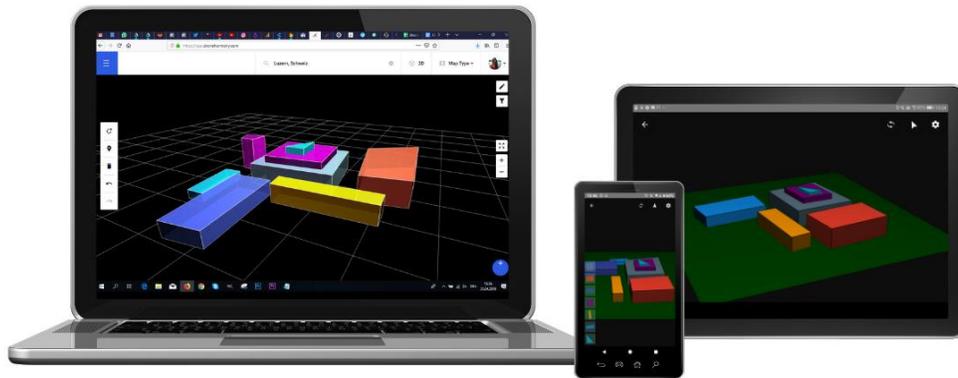
What Version Of Drone Harmony Cloud Is This Guide For?

This guide is up to date for **Drone Harmony Cloud Preview Version updated on May 13th 2019**. You can check the current version by going to Menu -> About.

To download the installation file of Drone Harmony Plus for you mobile device, [click here](#).

Starting Out with Drone Harmony Cloud

Drone Harmony Cloud refers to Drone Harmony's web application and cloud service. Drone Harmony Cloud works in unity with your Drone Harmony mobile application and is designed to complement it with additional enterprise features, such as cloud storage and synchronization, and a web-based mission planning interface. If you are interested in learning how to use the Drone Harmony's mobile application (Drone Harmony Basic, or Drone Harmony Plus), please read [this user guide](#).



Drone Harmony Cloud and Mobile Applications

If you are already familiar with Drone Harmony's mobile application, you should have no difficulty understanding the workflow in Drone Harmony Cloud, as they are practically identical. There are, however, differences in the interface and available tools, as both products serve slightly different needs. With the following short list, we highlight some *unique* capabilities of Drone Harmony Cloud.

- **Automatic Synchronization.** Drone Harmony Cloud synchronizes the stored missions on all your mobile devices, as well as the web platform automatically, without you needing to push data back and forth.
- **Work on your missions in the web browser.** You can use the web browser on any device and a mouse to work in a more convenient way with Drone Harmony.
- **Edit missions in the web interface in 2D and 3D.** Drone Harmony Cloud's web interface lets you edit missions in new and intuitive ways. You can now edit parts of your Drone Harmony state in 3D.
- **Tag and Archive your missions.** Add tags to easily sort, organize and navigate through all stored missions.

We elaborate on the exact way each feature works later on.

Just like the Drone Harmony web application, Drone Harmony Cloud is a quickly evolving product, and hence part of the information in this document might be outdated. It is advised to consult the resources in the end of the document for an up to date picture of the current state of all Drone Harmony products. [This page](#) contains the latest release notes for the mobile application. [The Drone Harmony website](#) always contains up to date information.

Quick Facts

Here are answers to some of the basic questions about Drone Harmony Cloud.

Furthermore, if you are not yet familiar with Drone Harmony's unique scene-based workflow, we recommend you read the corresponding section in the [user guide of Drone Harmony mobile](#).

How do I access Drone Harmony Cloud?

By going here: <https://app.droneharmony.com/>

Can I plan missions in the web interface?

Yes. However, at this stage the mobile application has a significantly richer set of automated mission you can generate.

I have a Drone Harmony Basic/Plus license. How do link it to the web platform and my cloud storage?

This is automatic. You can access the web application with the same login credentials that you use in the mobile application (the same Google account). Unless you disable the synchronization feature, you can access all your saved Drone Harmony states from all devices (see the section about automatic synchronization).

What do you need to work with Drone Harmony Cloud?

A web browser. The web application is optimized for larger screens, so while you can access it through the browser of your mobile phone as well, some features might be hard to use.

I don't have a Drone Harmony account yet. Can I try Drone Harmony Cloud?

Yes. Go to the [login page](#) and create an account. You can later use the same account to log into the Drone Harmony mobile application.

However, for now we recommend to start with mobile application, as it contains many more automated mission planning options. You can always use Drone Harmony Cloud to visualize and edit the missions you are creating in the mobile application.

How to get the Drone Harmony mobile application?

The Drone Harmony Mission Planner is available in two versions:

- **Drone Harmony Basic** available on the [Google Play Store](#).
- **Drone Harmony Plus** available for download on [our website](#).

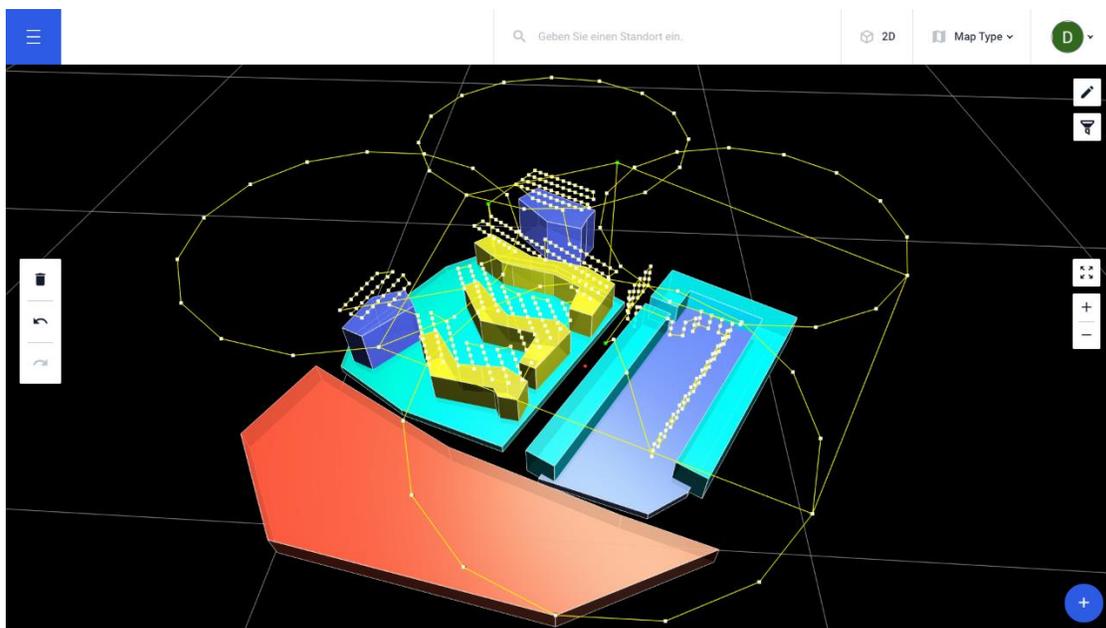
See our [product comparison page](#) for information about the different products and plans or email us at sales@droneharmony.com.

The Interface

Unlike traditional mission planners, Drone Harmony (both mobile and web applications) features a dual interface with

- A 2D Map view
- A full 3D viewer

Both views come with a large set of planning and editing options, suited for the type of information that is easier to access and comprehend in the corresponding view.



The same state in 2D and 3D in Drone Harmony Cloud

To toggle between 2D and 3D views click on the cube button on the top bar.

The combination of both 2- and 3D interfaces allows the user full expressive power to describe the mission parameters in an easy, intuitive and visual way. The 3D information in the app has, however, more than just the advantage of visualization. It is also the information that Drone Harmony uses to generate flight plans.

For the most part, the properties and uses of each interface are identical to the Drone Harmony mobile application. To learn more, we recommend reading [user guide of Drone Harmony mobile](#).

There are, however, some important differences between the interfaces in the mobile application and in Drone Harmony Cloud, mostly related to

- how you hide and show different parts of the scene, and
- how you edit parts of the scene.

We elaborate on these differences in the following sections.

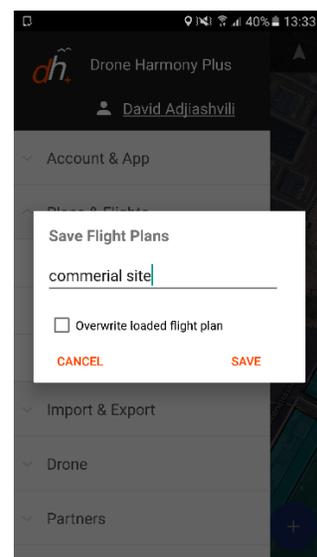
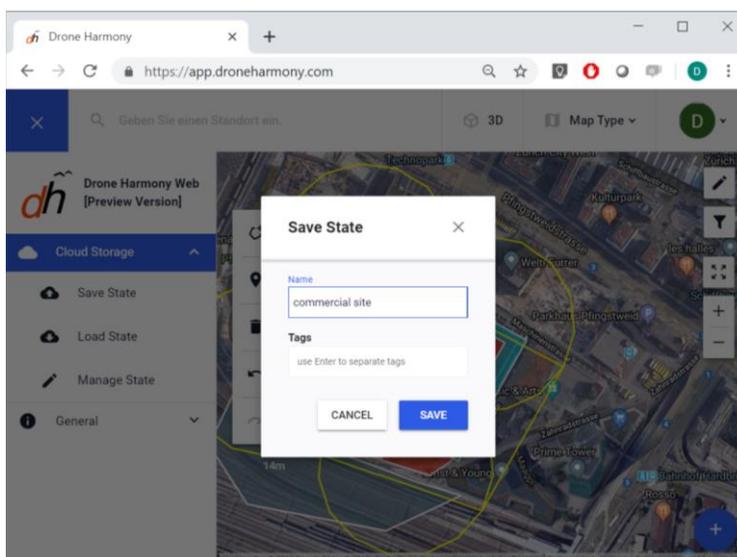
Synchronization

Drone Harmony Cloud comes with a cloud service that lets you automatically store your mission planning data and makes it easily accessible across your devices. This feature is called the **synchronization (sync) feature**. The sync feature enables the following main capabilities.

- Easy collaboration between data acquisition managers and pilots
- Automatic backup of all mission planning states and metadata

How does the sync feature work?

Every time you **save a state**, either in the mobile application, or the web-based interface, the stored state is pushed to the cloud.



What exactly is stored in the cloud?

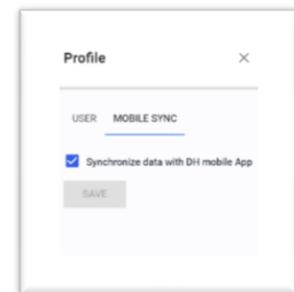
The stored elements of a Drone Harmony state are:

- The scene elements (structures, points of interest)
- Flight plans
- Flights - the executed (flown) missions, with the trajectory and the locations of recorded medias (images / videos)

In future iterations of Drone Harmony Cloud further elements of the state and related metadata will be stored in the cloud, including flight logs, terrain data and more.

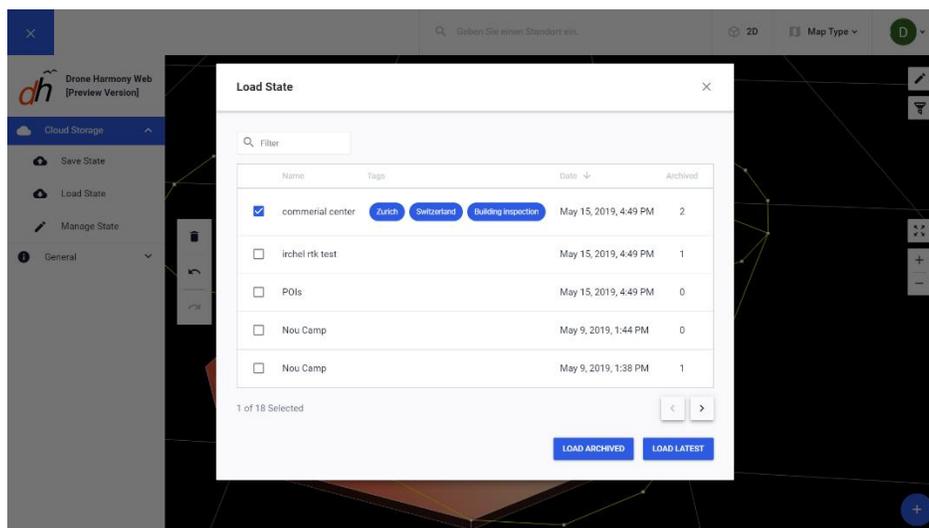
Can I opt out of automatic synchronization?

Yes. You can turn the sync feature on and off in the web application by clicking on the top-right button and navigating to Profile -> MOBILE SYNC.



What happens if my device is offline?

The synchronization with the cloud is triggered via an internet connection every time the Load State menu is opened in the mobile application. If there is no internet connection available, the saved states from the last synchronization, that are stored locally on the device, will be shown in the mobile device.



When the Load State menu is opened the data is synchronized across the devices

In summary, the sync feature automatically consolidates and creates backups in the Drone Harmony Cloud of all saved mission plans across all mobile devices associated with the Drone Harmony account. Furthermore, a team collaborating on a site can have

immediate access to all the missions planned by peers. The benefit for the manager is the ability to see an up to date snapshot of all the data acquisition activities in the comfort of the office, without the need to task her pilots to manually submit a report or export the Drone Harmony state.

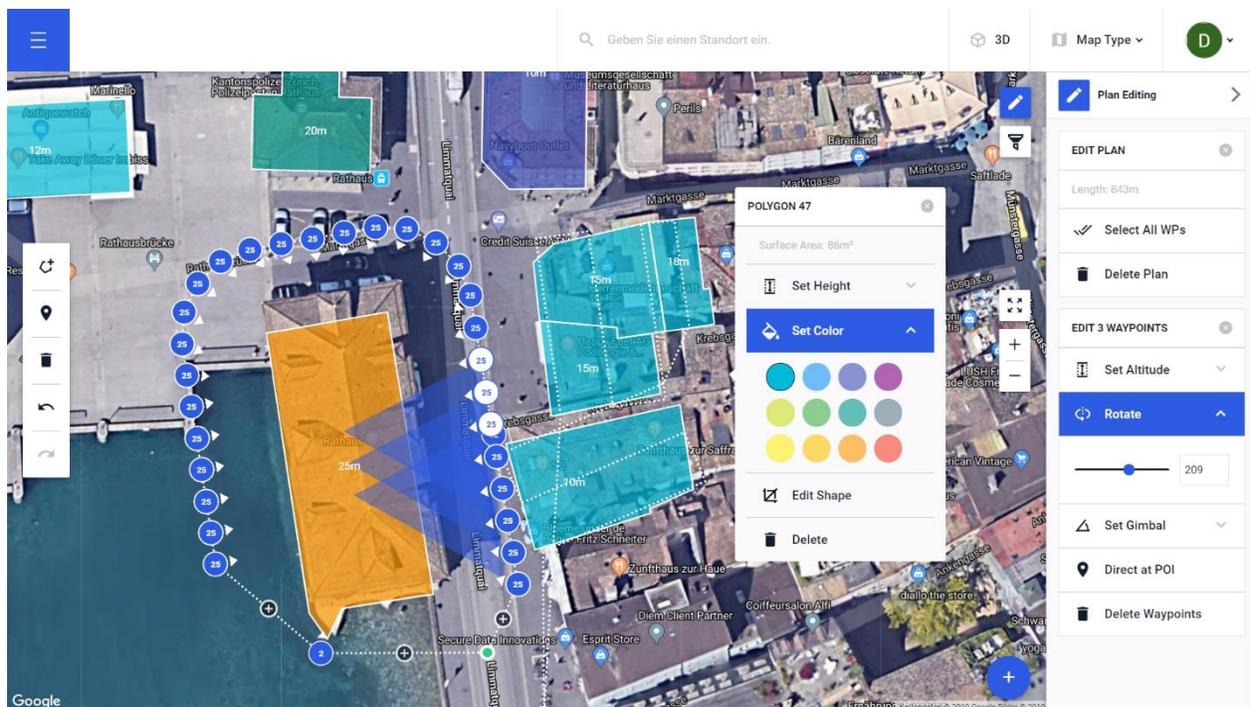
Data Security

All data sent from and to the Drone Harmony server is encrypted end-to-end with SSL encryption (from browser to server).

For information about the data privacy, please read our [privacy policy](#).

Editing scenes and mission

Drone Harmony Cloud enables easy visual editing of plans and missions. The tool set available is adapted to the web interface and can thus offer new capabilities, previously unavailable in the mobile application. As in the mobile application, both single elements (missions, waypoints etc.) and groups of elements can be modified simultaneously. In fact, it is possible to simultaneously edit elements of different types, as each edit menu can be docked separately on the screen. For example, in the following screenshot both the heading of three selected waypoints, and the color of one of the structures in the scene are edit mode at the same time.



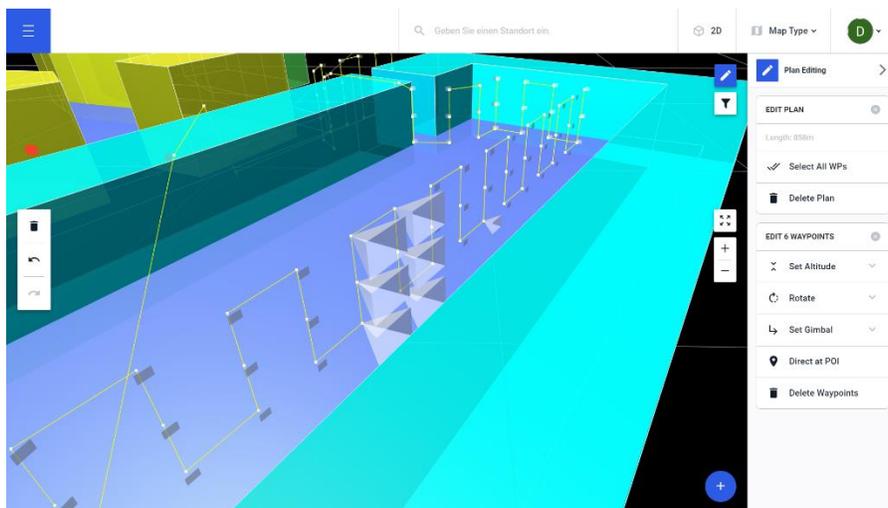
Simultaneous edit of elements in the scene

Most elements can be edited both in the 3D map view and the 3D view, but the exact parameters that can be changed might vary according to the interface. For example, in 3D it is possible to edit the height and color of a structure, while in 2D it is also possible to edit the outline of the structure.

What are the advantages of editing states in web interface?

One clear advantage is the ability to interact with the scene objects using a mouse and computer screen. Some additional advantages include:

- **Editing of vertical missions.** It is much easier to edit largely vertical missions, such as Façade Verticals, Helix etc. due to the ability to bulk-edit waypoints in 3D.
- **Changing properties of waypoints in different missions.** As it is possible to select numerous flight plans simultaneously, it is possible to also simultaneously edit collections of waypoints that belong to different missions. This allows, for example, to change the gimbal angle and heading to waypoints, direct waypoints



It is easy to edit vertical missions in the web 3D interface

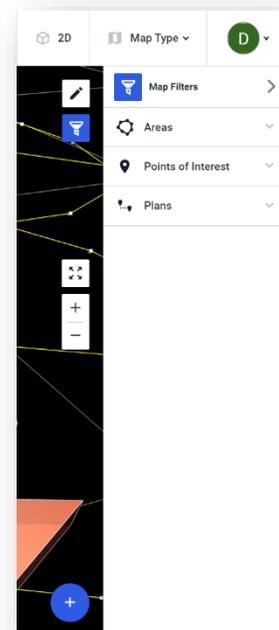
Viewing options

Drone Harmony Cloud offers full flexibility when it comes to visualizing parts of the scene. In this section we explain the different options and give

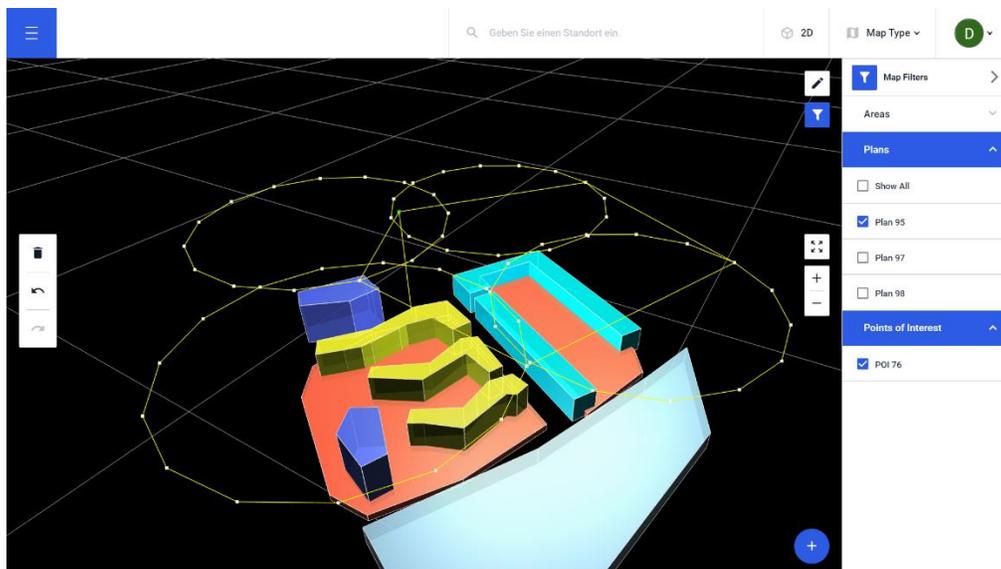
Unlike the mobile application, in the web application the tools used to hide/show any particular scene object are present in the **Map Filters toolbar** that is accessible in both 2d and 3d views. This is an advantage that makes this functionality more convenient in the web application.

To toggle the Map Filters toolbar click on the second button from the top in the right toolbar in either 2- or 3d view (see highlighted icon in the image).

The toolbar contains categories for scene objects. By clicking on a category, you can see a list of all objects of the category that are present in the scene. You can choose show, or hide all, or any subset of the category. In the image below you can see that several one flight plan and one point of interest are shown.

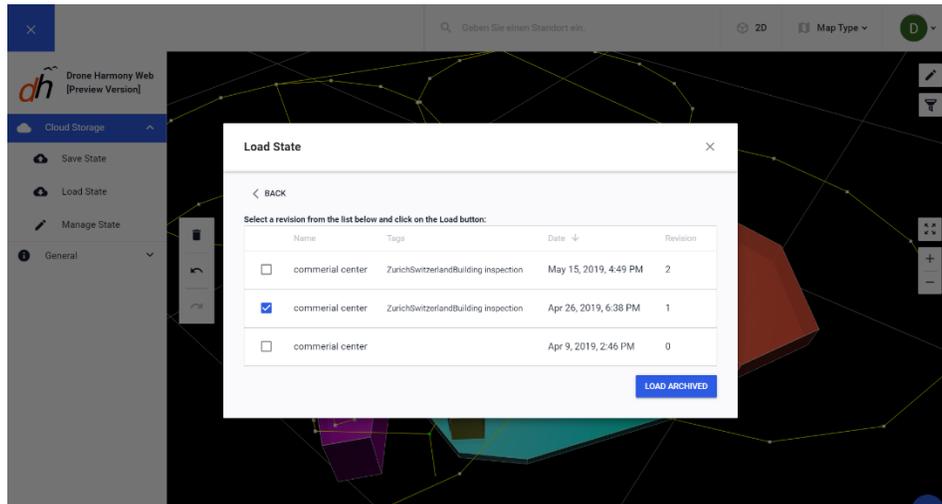


Map Filters Toolbar



Archived Missions

It is possible to save states more than once, overwriting the previous saved state. In such a scenario, older saved versions of the state are **archived**. Archived states can later be loaded, just as any other saved state by clicking on the “Load Archived” button in the load menu. This feature allows you to store several versions of a state without needing to have separate entries in the saved states menu. Archived states are numbered and dated for easy reference.

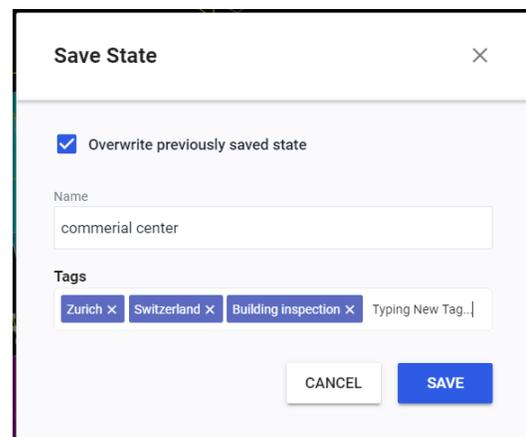


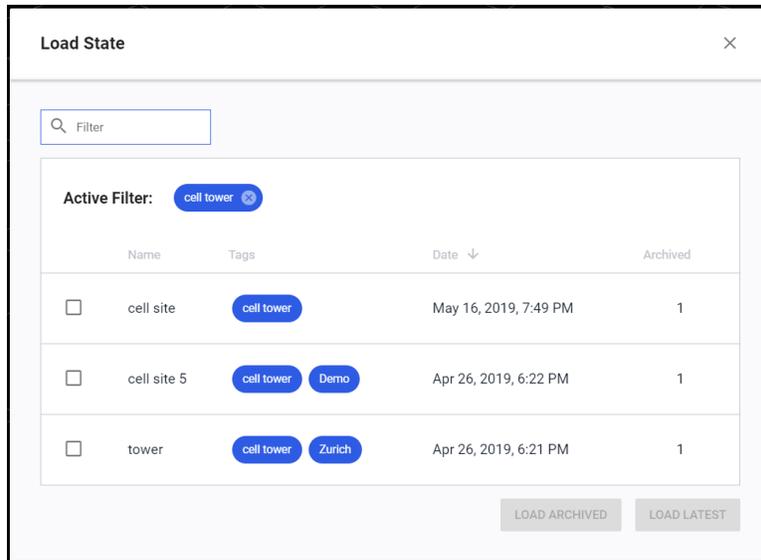
Archived missions can be easily accessed through the load menu

Using Tags

Saved states can be assigned **tags** for ease of reference and lookup. Tags can be simply added by typing tag names in the Save State dialogue box (as seen on the right). Depending on the type of data capture activities your organization is engaged in, it is useful to assign tags corresponding to job type (e.g. mapping, inspection, façade, cell tower etc.), geographic location etc.

Once user tags are assigned, it is easy to search the saved missions in the Load State menu by typing, or clicking on tags in the Filter textbox, as is seen below.





Additional Tips

Use key shortcuts

The web interface lets you take advantage of your computer's keyboard. We have implanted several useful shortcuts:

- Press the **ESC** key to collapse the main menu, Map Filters toolbar and Plan Editing toolbar.
- Press **Ctrl** in 3D view and drag the screen with your mouse to pan instead of rotating the 3D view.
- Press **Ctrl + z** to undo the last operation.
- Press **Ctrl + Shift + z** to redo the last action

Panning and Rotating in 3D View

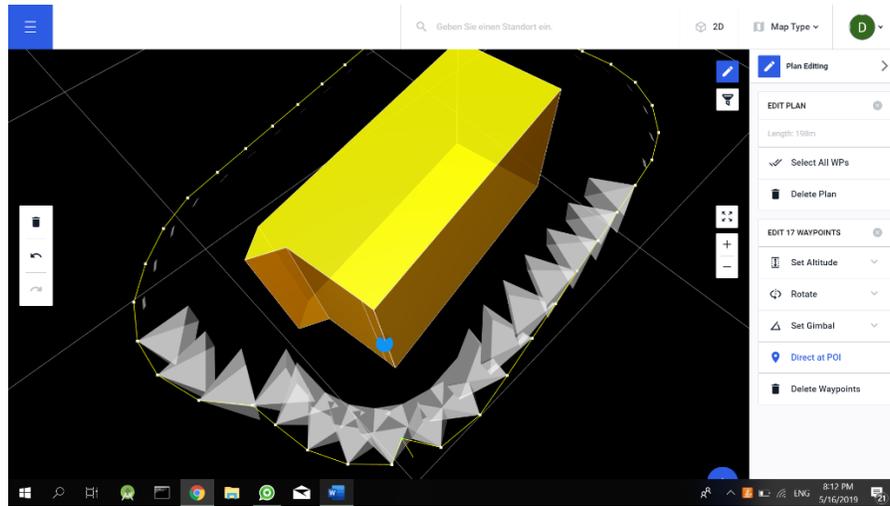
To focus on the desired part of the scene in 3D view it is possible to both rotate the view (left click and drag) and pan the view (right click and drag).

Edit vertical mission in 3D

If you are editing the altitude or camera angle of waypoints of vertical mission (e.g. Perimeter Verticals, Upward Helix etc.), you may find it easier to do this in 3D view.

Use Points of Interest (POIs)

Drone Harmony supports points of interest (**POIs**). POIs are locations in space that the user can define and use to easily direct camera angles of waypoints to these locations.



Use POIs to direct camera at a point in space

It is possible to define any number of POIs and it is easy to apply a POI to any number of waypoints at once (or to complete missions at once). [This article](#) explains how Drone Harmony POIs can be used in the mobile application.

Sharing flights and mission.

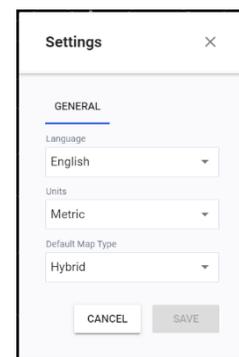
You have several options within Drone Harmony to store, load and share states of the app (including the scene, missions and flights). A convenient way to share missions and plans with colleagues is to use the “Export” option from the menu. This option allows you to share a state file (e.g. per email). This file is attached to the message and sent to the selected recipient, which in turn can open the attached file on his mobile device to load the shared state directly in Drone Harmony.

Set your defaults

To work even faster with Drone Harmony, take a minute to set some default settings by clicking on the top right button and selecting “Settings”.

Use the best map type for your work

You can select the map type by clicking on the Map Type button on the top panel. Depending on mission you are planning, it may be easiest to work with Satellite, Terrain, or Street Map. In the future, more map options will be available to facilitate planning in more use cases.



FAQ

For the official Drone Harmony FAQ see [this page](#). Here are answers to some of the more common questions.

How will Drone Harmony Cloud evolve in the near future?

Drone Harmony is transforming Drone Harmony Cloud into the focal point for mission planning for Drone Harmony customers. In its next iterations we intend to port all mission planning capabilities from Drone Harmony mobile to the web application. In the future, Drone Harmony Cloud will include many unique mission planning relying on customer GIS data, as well as enterprise features for easier management of data capture efforts within the enterprise. Read [this blog post](#) for more information.

Is there a limit on the number of waypoints a mission can have?

No. However, the DJI libraries only allow to upload 99 waypoints at a time. If you fly a mission with 100 or more waypoints, the drone will hover for a number of seconds in the middle of the flight to upload new batches of waypoints. You should see a message in the app in this case and you should not interfere in such a situation, as this process is automatic.

Are drones other than DJI Supported?

Not at the moment.

Is there an iOS version?

Not at the moment, but you can use Drone Harmony Cloud in a browser on an iOS device.

Additional Resources

There are many online resources for learning Drone Harmony. These include:

- [The Useg Guide for Drone Harmony mobile](#)
- [The Blog](#)
- [The Drone Harmony Website](#)

- [The Forum](#)
- [The Youtube Channel](#)

Legal documents:

- [Terms of Use](#)
- [Privacy Policy](#)

Want to contribute?

- Share ideas for new features and vote for other people's ideas on the [idea portal](#).