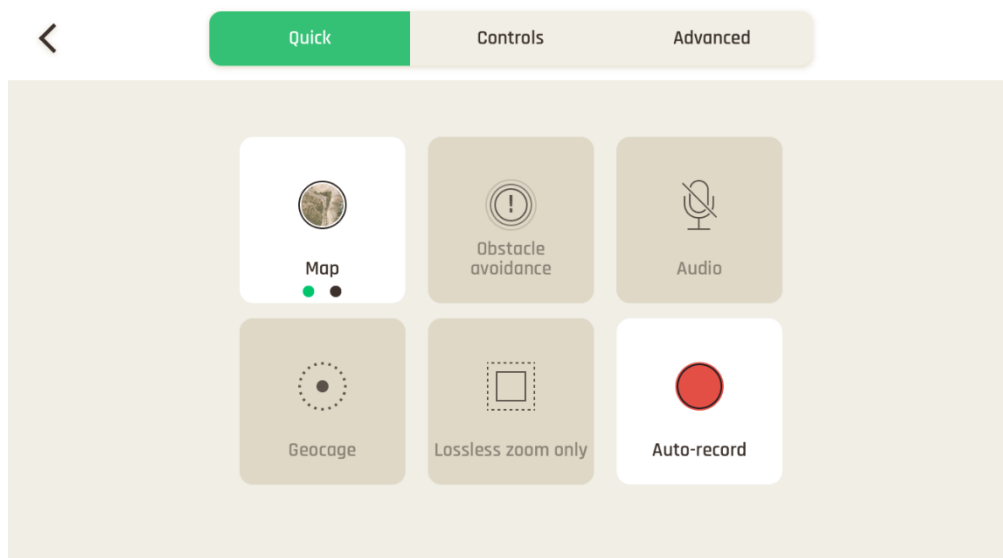


SETTINGS

Access **FreeFlight 7** settings through the icon on the extreme right of the top bar of the HUD. This section presents the Quick and Controls settings.

Quick

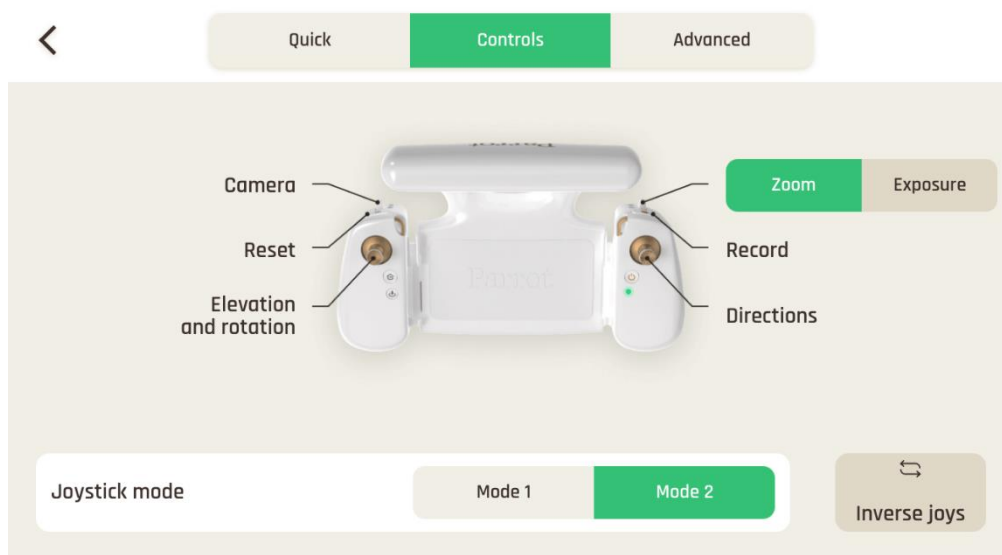
For each item, tap to toggle (Map or 3D view) or activate and highlight – as Auto-record on the following screenshot.



Quick settings

Controls

Controls settings manage the way your controller behaves. Tap an option to select it.



Quick settings

ADVANCED SETTINGS

For each item, the default value (DV) is displayed in **bold characters** or highlighted on screenshots.

Behaviour

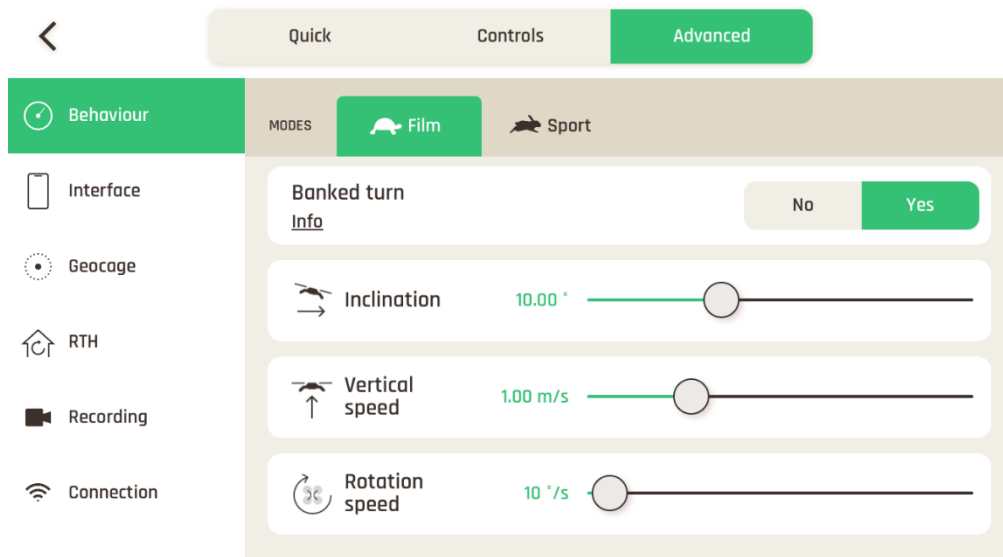
The Behaviour settings allow you to adapt the flight behavior of ANAFI Ai for each mode ("Film" and "Sport").

Use each slider to fix your values.

Camera tilt speed	1°/s to 180°/s (DV: 10°/s for FILM ; 20°/s for SPORT)
Banked turn	NO / YES (DV: YES for FILM , NO for SPORT)
Inclination	0.25°/s to 30°/s (DV: 10°/s for FILM ; 25°/s for SPORT)
Vertical speed	0.05m/s to 4m/s (DV: 1m/s for FILM ; 2m/s for SPORT)
Rotation speed	10°/s to 200°/s (DV: 10°/s for FILM ; 20°/s for SPORT)

- **Note that "Inclination" and "Vertical speed" values are the ones which carry the biggest impact on ANAFI Ai's acceleration and general flying behavior. Corresponding sliders turn to orange instead of black to warn users the settings they have selected require extreme care, superior piloting skills, or both, when flying ANAFI Ai.**

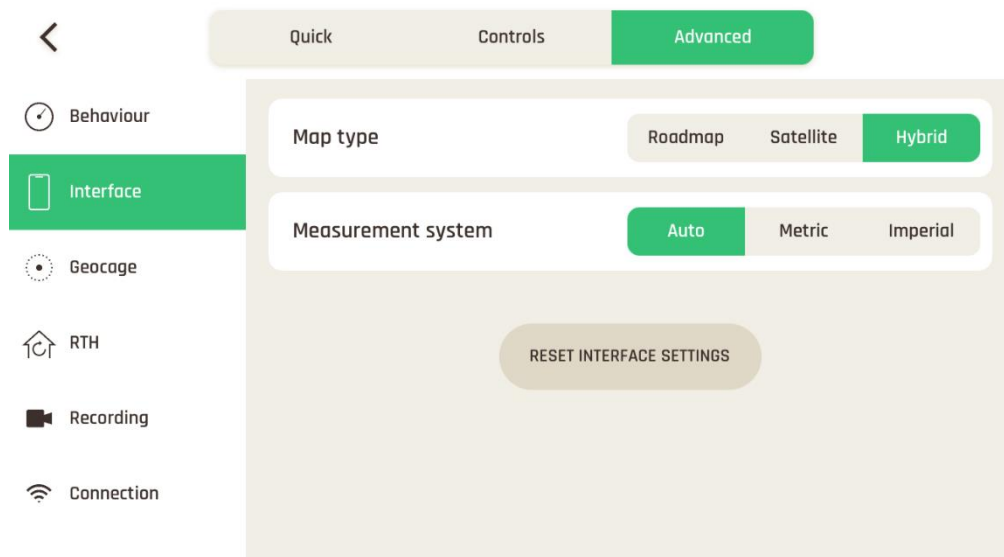
Tap each reset button on the bottom of each page to reset the corresponding Mode to its default values.



Behaviour settings

Interface

For each item, Map type or Measurement system, tap an option to select it.



Interface settings

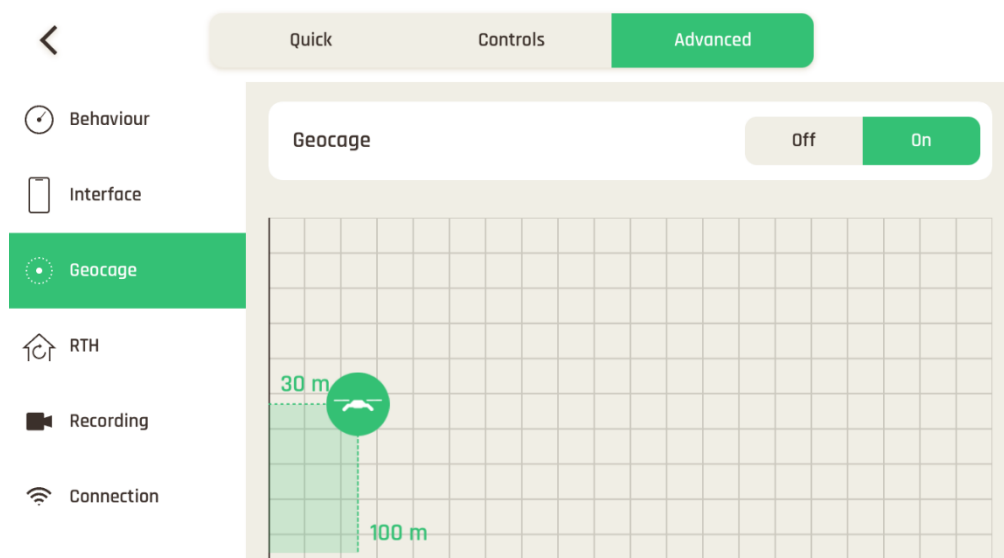
Tap “RESET INTERFACE SETTINGS” on the bottom of the page to reset to default.

Geocage

The Geocage is activated (“On”) by default, with the following values:

- Height: **30 m** (configurable from 1 m to 150 m)
- Distance: **100 m** (configurable from 10 m to 4 km)

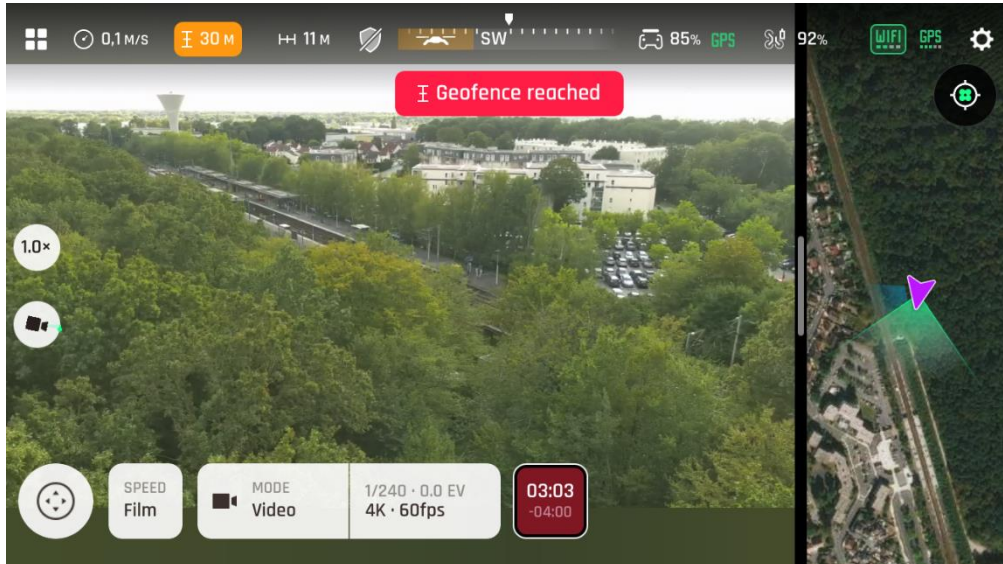
Tap “Off” to deactivate or tap and slide the drone to set new values.



Geocage settings

Tap “RESET GEOCAGE PREFERENCES” on the bottom of the page to reset to default.

When the Geocage is activated, FreeFlight 7 displays an alert when the drone approaches the set limit, and it stops when it reaches them, as in the screenshot below.

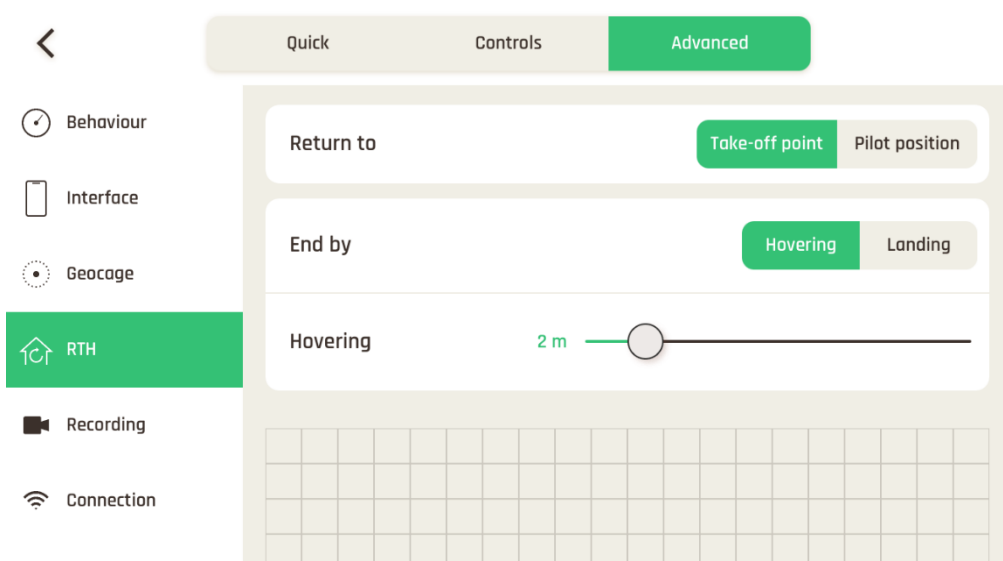


The Geofence of the Geocage is reached

RTH

Through RTH settings, you define the behavior of your drone when power runs low.

The following screenshot displays the default values of the menu. The Hovering slider is set at **2 m** and it is configurable between 1 m and 10 m. The RTH minimum height is set at **30 m** and it is configurable between 20 m and 100 m.



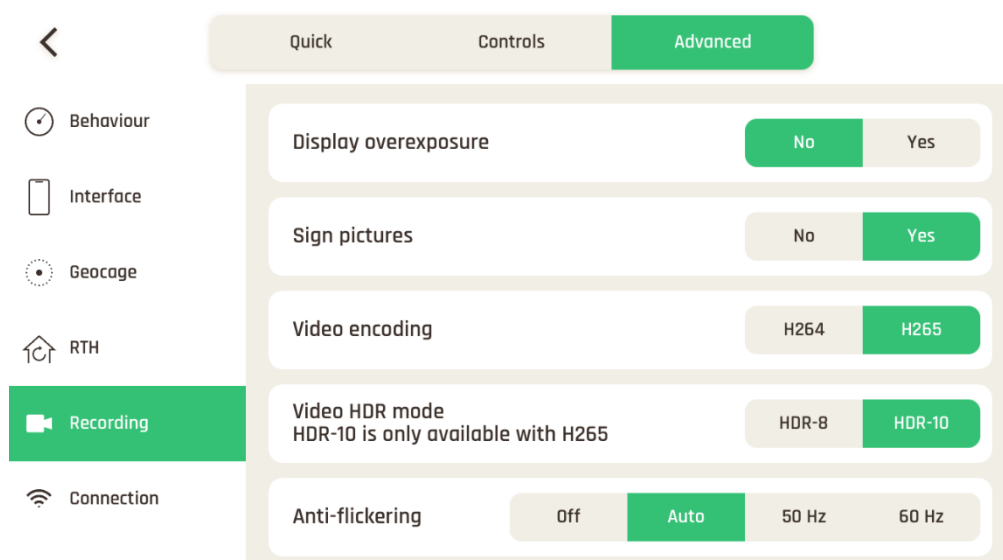
RTH settings

Tap “RESET RTH PREFERENCES” on the bottom of the page to reset to default.

Recording

Recording settings enable you to select camera options, both in photo and video modes.

The default values are displayed in the following screenshot.



Recording settings

About Overexposure display: when this setting is activated, the HUD of **FreeFlight 7** shows all overexposed areas of the screen as hatched, which enables you to fine-tune your framing, your EV settings, or both.

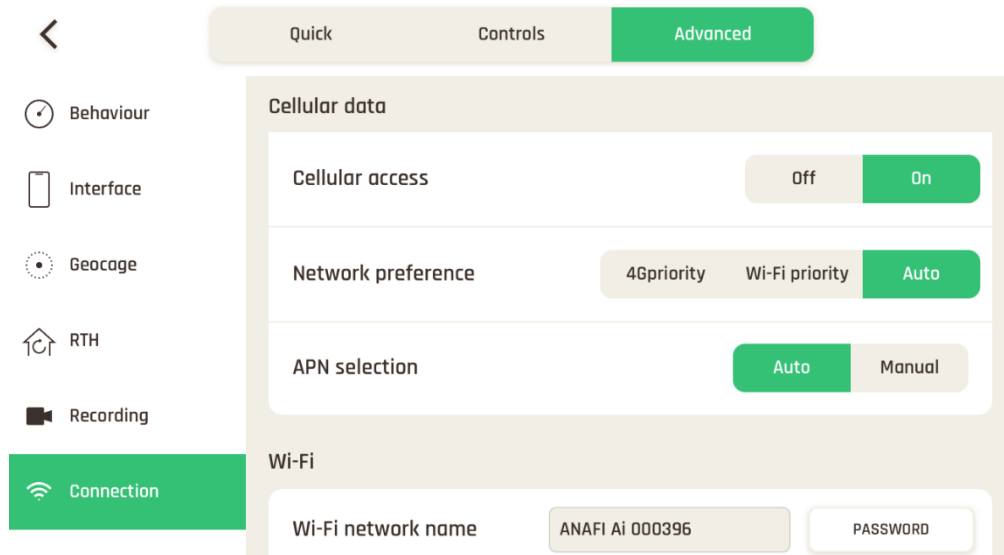
About Picture signing: deactivate this setting if you do not need your pictures to serve as evidence, as each picture is signed individually and therefore reduces the burst performance of the drone.

About Anti-flickering: this setting and the associated technology aim at eliminating the flicker effect which can arise due to some artificial lights. The “AUTO” option should work for most users, but depending on your country, you can try other settings if you feel bothered by a flicker effect on your device’s screen, your artificial light videos, or both.

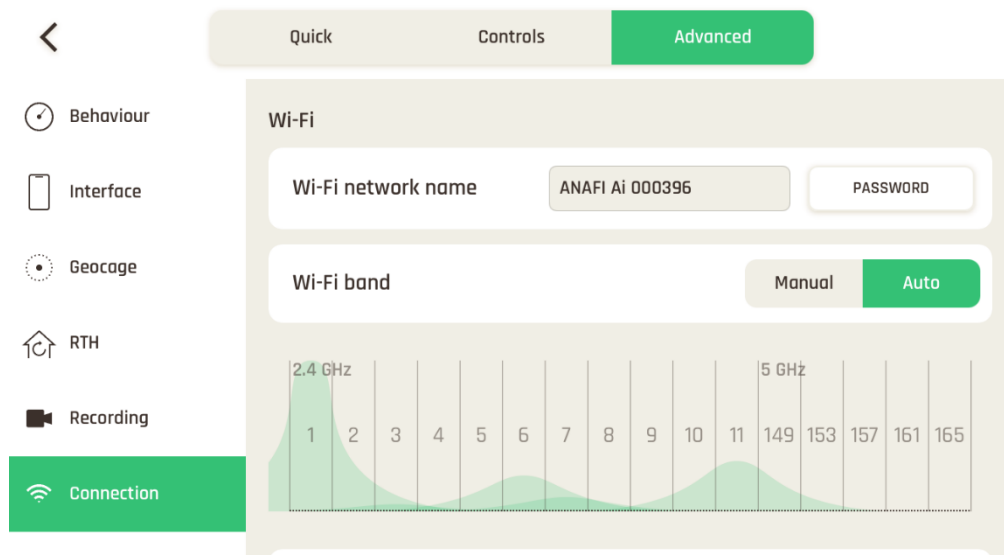
Tap “REINITIATE CAMERA SETTINGS” on the bottom of the page to reset to default.

Connection

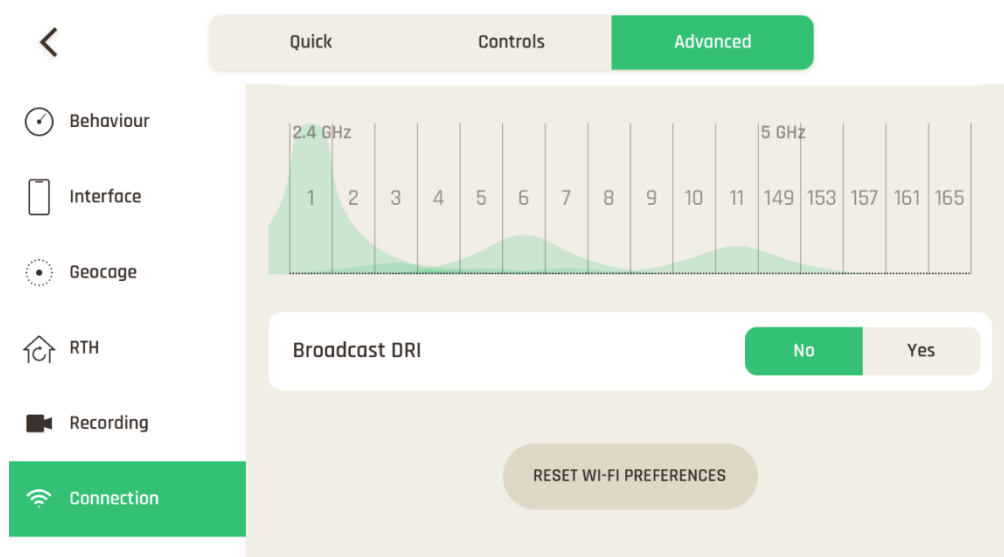
Connection settings let you manage your 4G connection, change your ANAFI Ai's Wi-Fi network name, password & band, and broadcast your DRI. The following screenshots highlight default values for each item.



Connection settings: Cellular data



Connection settings: Wi-Fi



Connection settings: DRI broadcast

About Direct Remote Identification (DRI): the DRI system makes your drone locally broadcast information about itself for regulatory compliance (where applicable).

Tap “RESET WI-FI PREFERENCES” on the bottom of the page to reset to default. **FreeFlight 7 must be connected to ANAFI Ai for this button to appear.**

VIDEOS, PHOTOS AND PANORAMAS

ANAFI Ai is equipped with a state-of-the-art 4K, 3-axis-stabilized camera, which delivers astoundingly sharp motion and still pictures, through a 1/2" CMOS 48MP sensor.

The lens of the camera includes low dispersion aspherical elements, that reduce chromatic aberrations and flare, and guarantee optical excellence to such a small, smart and versatile airborne imaging system.

Although you can film and take pictures using your device as ANAFI Ai's only controller, we recommend you always use the Parrot Skycontroller 4 and your device, for the best controlled, most precise, and safest filming and photos-shooting flights.

Making videos

By default, ANAFI Ai and **FreeFlight 7** are set to start recording a video as soon as ANAFI Ai takes off. This literally means all you have to do, to start filming, is to fly ANAFI Ai into the sky!

However, depending on your filming objectives, ANAFI Ai and **FreeFlight 7** offer a wealth of settings, from full auto to manual professional options, for you to make the most of every situation.

If required, tap the "Mode" box in the bottom bar of the HUD, to select the video mode.

Main filming options are twofold, and accessible from the HUD of FreeFlight 7.

First, select a **video resolution** (4K or 1080 p) by tapping the corresponding box of the HUD.



Video mode menu

Second, select a **framerate** (fps – frames per second) **value** from the corresponding box of the HUD.

Tap the video settings box again to close the sub-boxes and confirm your choices.

Available fps values depend on the resolution you have selected, and on whether you have activated the HDR option:

4K:	24, 25, 30, 48, 50 and 60 fps
4K HDR:	24, 25 or 30 fps
1080 p:	24, 25, 30, 48, 50, 60, 96, 100 and 120 fps
1080 p HDR	24, 25 or 30 fps



Video format menu

When you are happy with your settings and your framing, press the hard shutter button on the right of **Parrot Skycontroller 4** (or tap the soft shutter button of the HUD) to start filming.

The round soft shutter button of the HUD turns into a square and displays a double timer: time since the video started (main timer, top) and remaining filming time (small timer, bottom).

Press the hard shutter button of the controller (or tap the soft shutter button of the HUD) again to end the recording. The soft shutter button of the HUD comes back to steady, red and round. The timer disappears.

Taking photos

To access the photo options of ANAFI Ai tap the “Mode” box in the bottom bar of the HUD.

Six photo modes are available on ANAFI Ai: **Photo (single shot)**, **Timelapse**, **GPS Lapse**, **Panorama (4 formats)**, **Bracketing** and **Burst**.

Thanks to its 48MP CMOS sensor, ANAFI Ai produces three main picture formats:

- **rectilinear** (up to 16MP) or **wide** (48MP or 12 MP) **JPEG**;
- **wide 48MP or 12 MP JPEG and DNG** (Digital NeGative: Adobe open standard RAW format);
- **composite panoramas** (JPEG), up to **32MP**.

Note that the HDR option is only available for 12MP photos.

First, select a **photo mode** by tapping the “Mode” box of the HUD.

The options appear on your device. Tap a photo mode to select it.

When a photo mode is selected, the soft shutter button of the HUD appears as a full white circle.

There is no option for the “**Photo**” (single shot) and “**Burst**” modes.

Selecting the “**Timelapse**” mode opens seven options: 0.5 sec (12MP only), 1 sec, 2 secs, 4 secs, 10 secs, 30 secs and 60 secs.

Selecting the “**GPS Lapse**” opens six options: 5m, 10m, 20m, 50m, 100m, and 200m.

Selecting the “**Panorama**” mode opens four options: Vertical, Horizontal, 360 and Super Wide.

The Panorama mode is the only photography mode which requires the drone to be flying before you can activate the shutter. Refer to the next section, “Generating Panoramas”, for additional details about the “Panorama” mode.

Selecting the “**Bracketing**” mode opens three options: 3 photos (-1 EV, +0.0 EV, +1 EV), 5 photos (-2 EV to +2 EV) and 7 photos (-3 EV to +3 EV). When one of these options has been selected, the soft shutter button of the HUD displays the number of the corresponding option.

Second, select a **photo format** from the corresponding box of the HUD.

Tap the “**Imaging box**” to call the **photo settings** boxes.

Tap the “**Resolution box**” to select **48MP** or **12MP**.

Tap the **last box on the right** of the screen to access the **photo formats**.

Available photo formats for each photo mode are as follows:

Photo (Single):	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
Timelapse:	JPEG RECT only
GPS Lapse:	JPEG RECT only
Panorama:	JPEG RECT only
Bracketing:	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
Burst:	JPEG RECT, JPEG WIDE

Tap a format (JPEG RECT, or JPEG WIDE if available, or any DNG+JPEG format if available) to select it.

Tap the “Imaging” box again to close the sub-boxes and confirm your choice.



Photo formats: JPEG RECT



Photo formats: DNG+JPEG

When you are happy with your settings and your framing, press the hard shutter button on the right of the **Parrot Skycontroller 4** (or tap the soft shutter button of the HUD) to take a photo.

In “**Photo**” mode, the screen flashes in black and white to confirm a picture has been taken.

In “**Timelapse**” mode, the screen flashes in black and white to confirm a picture has been taken. 0.5 to 60 seconds later, depending on your option choice, the drone takes another photo, and so on until you press the shutter button again to stop the Timelapse.

In “**GPS Lapse**” mode, the screen flashes in black and white to confirm a picture has been taken. Control and move ANAFI Ai: when the drone reaches any point on a 5 to 200-meter bubble around the initial photo, depending on your option choice, the drone takes another photo, and so on until you press the shutter button again to stop the GPS Lapse. Between each shutter action, a green progress bar, at the bottom of the HUD, lets you estimate the distance the drone must cover before the next shot.

For additional details on the “**Panorama**” mode, refer to the next section, “*Generating Panoramas*”.

In “**Bracketing**” mode, the screen flashes in black and white to confirm 3, 5 or 7 pictures have been taken.

In “**Burst**” mode, the screen flashes in black and white to confirm 10 pictures have been taken in the span of 1 second.

About ANAFI Ai photo formats:

JPEG RECT: 4:3 aspect ratio, up to 16MP and 75.5° horizontal field of view (HFOV)

JPEG WIDE: 4:3 aspect ratio, 48MP, 84° HFOV – zoom is disabled for this format

DNG+JPEG: 4:3 aspect ratio, 48MP, 84° HFOV – zoom is disabled for WIDE option

- **The DNG+JPEG option produces at least 2 files (1 DNG, 1 JPEG) for each shutter action.** As other RAW picture formats, **DNG is a very useful format for professional photography** processing and workflow. Indeed, RAW formats retain all the information gathered by photography sensors, contrary to JPEG formats – which are compressed and processed renderings of this comprehensive information. In consequence, RAW pictures such as ANAFI Ai’s **DNG are heavy files, but they offer the very best post-processing and retouching possibilities.**

Creating Panoramas

ANAFI Ai panoramas are generated automatically through the gallery of **FreeFlight 7**, based on a series of pictures taken by the drone.

The generation of a panorama, regardless of its format, implies three phases:

- collecting the pictures**, in flight;
- downloading the pictures** from ANAFI Ai to your device;
- stitching the pictures together** to create the panorama, on your device, through the gallery of **FreeFlight 7**.

Before shooting a panorama:

Make sure you are not flying lower than 10 meters (30ft) over water.

Make sure no object nor subject are present in a 10 meters (30ft) radius around ANAFI Ai.

Bear in mind ANAFI Ai locks the exposure (refer to the “AE Lock ” section of this guide for additional information on exposure locking) **of the frame with which you start your panorama**. For this reason, Parrot recommends you always frame the main subject of the intended panorama before pressing the shutter button.

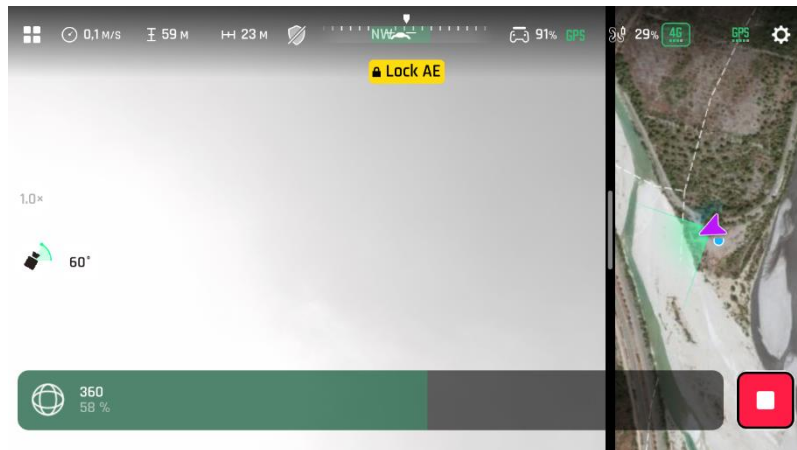
Bear in mind ANAFI Ai will not enable you to proceed with a panorama if the drone is short on power (capturing a 360 Panorama takes ANAFI Ai 85 seconds).

To capture a panorama, select the “Panorama” box from the imaging “Mode” menu of the HUD. Then, tap the panorama type you want to select it: **Vertical, Horizontal, 360 or Super Wide**.



Panorama types

When you are happy with your framing, press the hard shutter button on the right of the **Parrot Skycontroller 4** (or tap the soft shutter button of the HUD) to begin the Panorama capture. ANAFI Ai starts taking pictures and the bottom of the HUD displays a progress bar which fills with green as the capture unfolds.

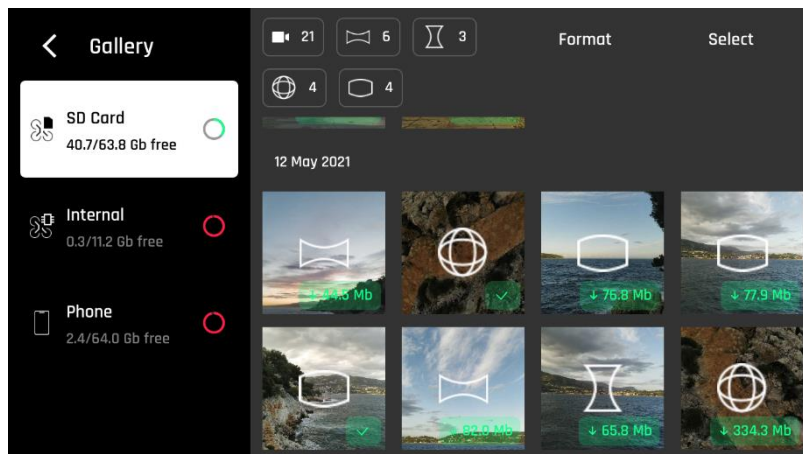


Panorama in progress

Panorama types capture characteristics:

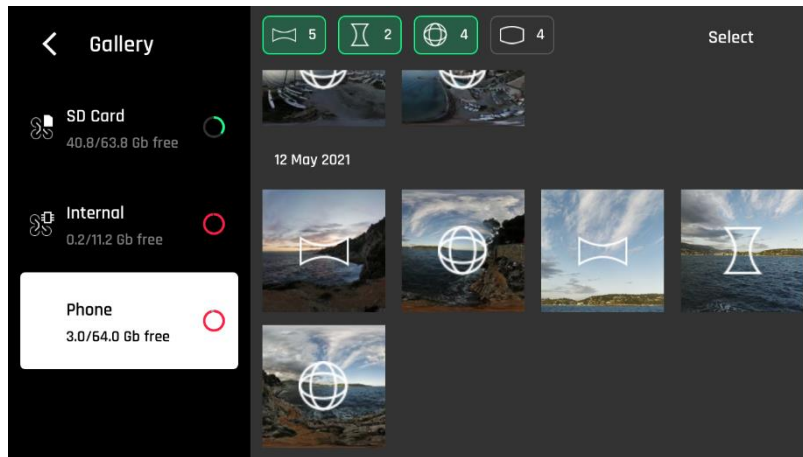
- Vertical:** ANAFI Ai takes 8 photos in about 20 seconds
- Horizontal:** ANAFI Ai takes 10 photos in about 20 seconds
- 360:** ANAFI Ai takes 42 photos in about 85 seconds
- Super Wide:** ANAFI Ai takes 9 photos in about 18 seconds

To download the Panorama pictures to your device, land ANAFI Ai From the homepage of **FreeFlight 7**, tap the “**MEDIAS Tile**” to access the **Gallery**. Like other medias, Panoramas are marked with their distinct icon and a green download box, which shows the size of the corresponding series of pictures. The icon boxes at the top center of the screen enable you to filter your media.



iOS SD Card Gallery displaying all Panorama types

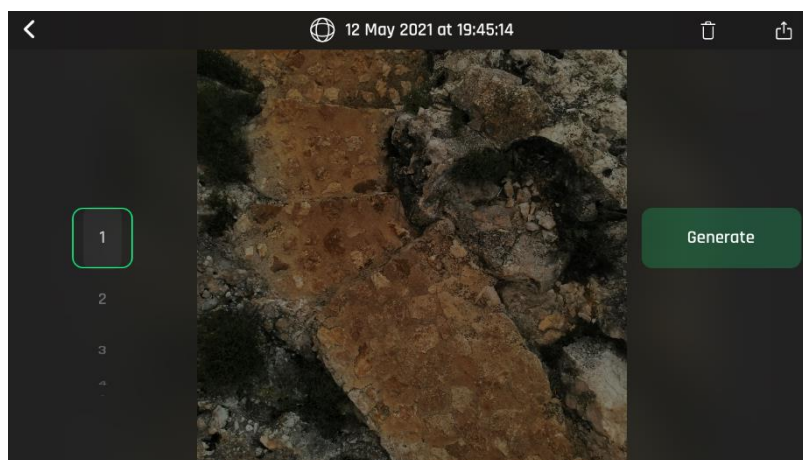
Tap the green box of the Panorama you want to generate to start downloading the corresponding series of pictures to your device. When the download is complete, **FreeFlight 7** displays a page from where you can delete the downloaded photos: tap “Keep” to keep the originals on the microSD card; tap “Delete” to delete them. Select its tab on the left to access the **FreeFlight 7** Phone Gallery, which contains only the media you have downloaded from ANAFI Ai’s microSD card.



iOS Phone Gallery with 3 out of 4 icon filters activated

- For each **Vertical**, **Horizontal** and **Super Wide** panorama capture, you will be able to generate one panorama only.
- For each **360** capture, you will be able to generate three different preset panoramas (**Sphere**, **Tiny Planet** and **Tunnel**).

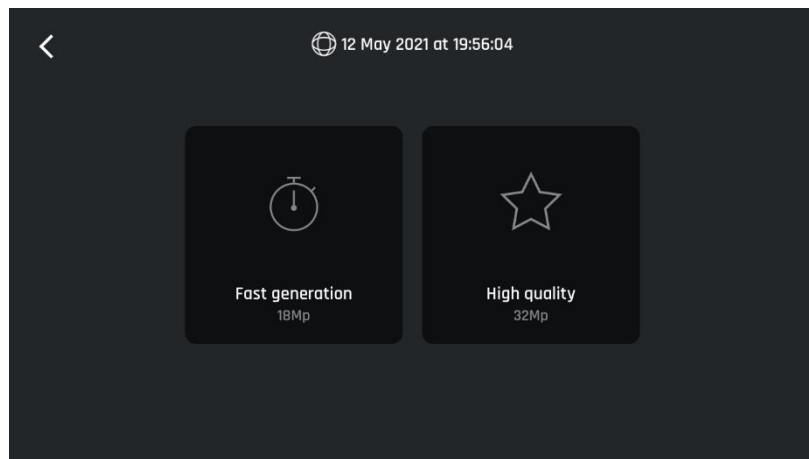
Finally, select the panorama you want to generate from your Local gallery:
FreeFlight 7 displays the following screen.



iOS panorama generation page

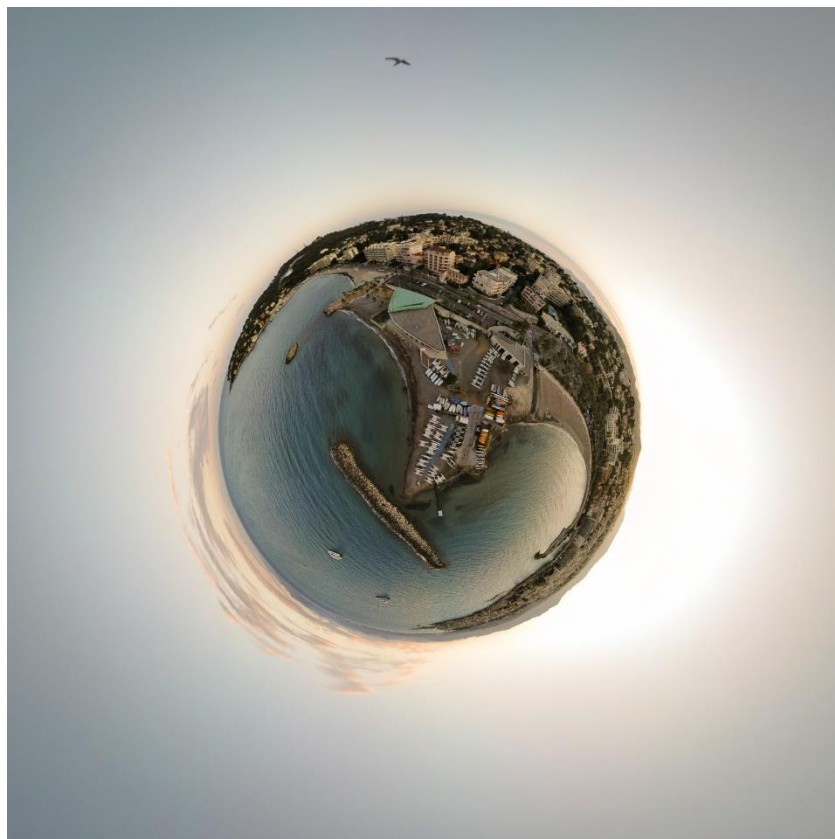
Tap “Generate” to create the panorama (or browse the individual pictures with the slider on the left).

Depending on the power of your device, **FreeFlight 7** may display one or two resolution options, up to 32 MP. Select the option you want to launch the generation. The time this process takes also depends on your device’s power. For the highest quality 360 panorama (32 MP), it can take several minutes.



iOS panorama format options

When the panorama creation is complete, **FreeFlight 7** adds the result at the top of the corresponding photo folder.



An example of Tiny Planet



An example of Tunnel

GIMBAL TILT AND ZOOM CONTROLS

ANAFI Ai features a controllable gimbal (180° tilt range, from nadir to zenith) and a 6x zoom. This section presents these features and the way to activate them.

Gimbal tilt control

ANAFI Ai's gimbal tilt control is activated through the left trigger of **Parrot Skycontroller 4**. It is available in **all video and photo modes**, and in all manual piloting modes.

To aim the gimbal toward the ground, push the tilt control trigger down.

To aim the gimbal toward the sky, pull the tilt control trigger up.

To reset the gimbal tilt to a horizontal position, press the optics reset button on the left of Parrot Skycontroller 4 (this action also resets the zoom factor of the lens to 1x).

Zoom control

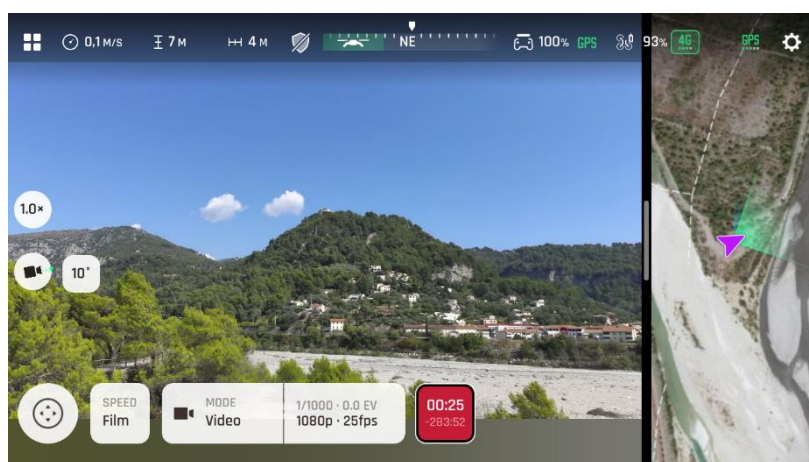
ANAFI Ai's zoom control is activated through the right trigger of **Parrot Skycontroller 4**. It is available in **all video modes, and in JPEG RECT photo mode** (with an impact on the final resolution of your pictures). WIDE photo modes imply the use and rendering of all 48MP delivered by ANAFI Ai's CMOS sensor: zoom is deactivated in both WIDE photo modes.

To zoom in on a subject, push the zoom trigger down.

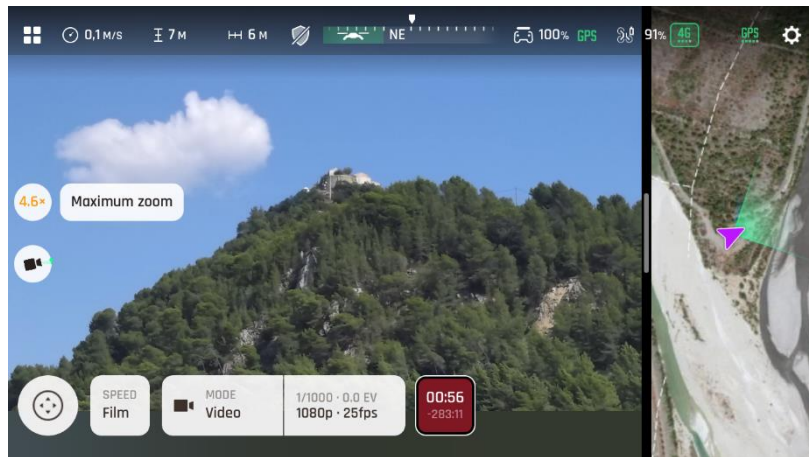
To zoom out, pull the zoom trigger up.

Pressing the optics reset button on the left of Parrot Skycontroller 4 instantly resets the zoom factor of the lens to 1x (this action also resets the gimbal tilt to a horizontal position).

The HUD of FreeFlight 7 presents precise, decimal-by-decimal zoom information at all times, in the middle of the left side of the screen, as shown on the following screenshots.



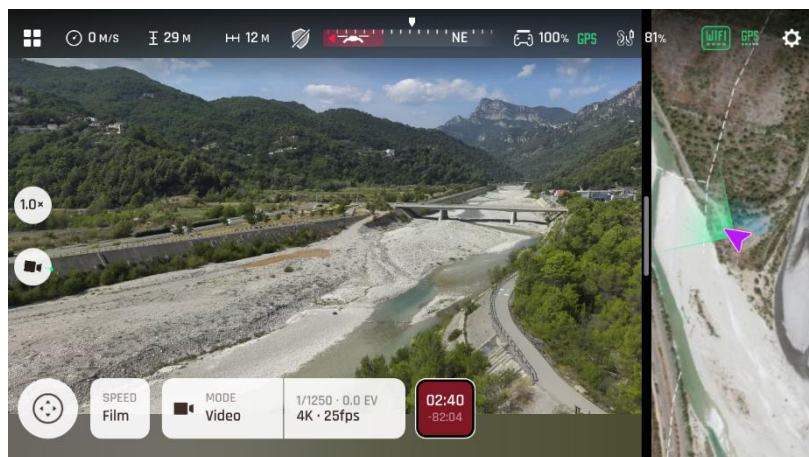
1080p 1x zoom



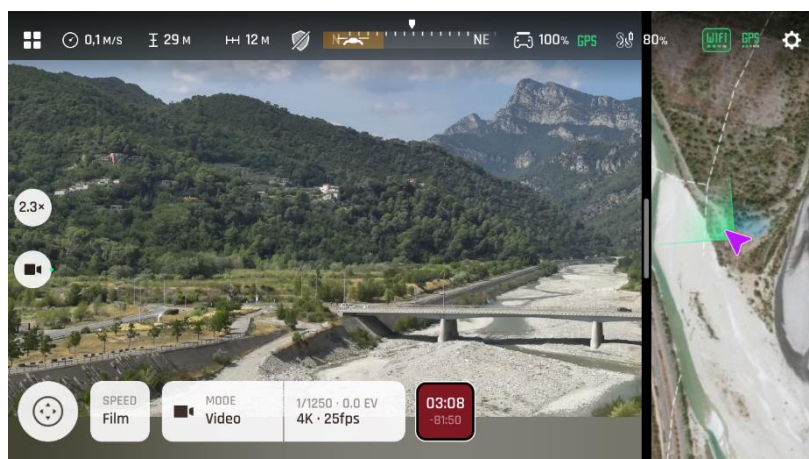
1080p 4.6x (max lossless) zoom

As already mentioned, ANAFI Ai presents no lossless zoom capabilities for pictures: the zoom is deactivated by design in WIDE formats (JPEG and DNG+JPEG), and it has an impact on the resolution of the pictures in JPEG RECT format.

By contrast, ANAFI Ai offers **impressive lossless zoom** capabilities for **4K (2.3x)** and **1080p (4.6x)** videos.



4K 1x zoom



4K 2.3x (max lossless) zoom

ADVANCED IMAGING

ANAFI Ai is set to deliver high quality and balanced 4K videos and 48MP photos, out of the box.

Some image enthusiasts and all professional directors, videographers and photographers, however, will find their way through pro-imaging settings. This section is designed to help you exploit manual settings and develop your filming and photography styles.

The Exposure value (EV) is the only setting accessible in the Auto mode, from the “Imaging box” menu of the HUD.

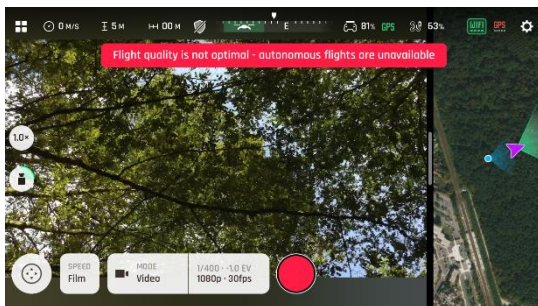
Exposure value (EV)

The EV expresses the general darkness or lightness of a photograph – or a video. At +0.0 (zero) EV, ANAFI Ai automatically adapts the shutter speed and the ISO value to deliver a perfectly balanced photo or video: not too dark and not too light.

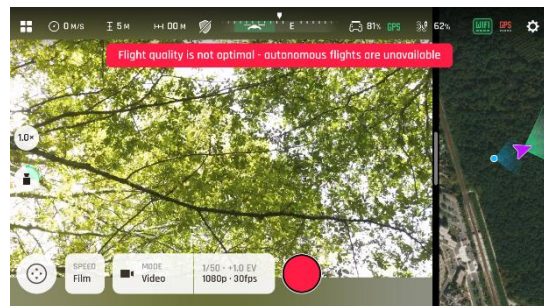
Tap the “+0.0 EV” box to activate the EV scale.

Slide your finger on the scale to adapt your EV toward negative values and darken your picture or video.

Use positive values to lighten your images. This can be useful if you want to capture a backlit scene and to fade surroundings in light.



-1.0 EV



iOS +1.0 EV

To activate further settings, tap the “ ” box, on the left of the Imaging settings box. The additional settings boxes are unlocked, they stand out in white rather than yellow and “ ” is replaced by “ ”.

Shutter speed (s)

The “s” value refers to the time, in fraction of second, when the shutter stays open to capture a still picture: it is called exposure time.

In Auto mode, ANAFI Ai selects the best shutter speed and ISO value couple, in real time, depending on the scene and available light. In consequence, selecting a shutter speed also deactivates the Auto ISO mode.

As ANAFI Ai's f/2.4 aperture lens lets a lot of light in, even compared to most professional SLR lenses, your drone can achieve very fast "s" values (down to 1/10000s) and capture very fast action. It can also be used for slow shots, up to 1 second for the photo mode.

Note that ANAFI Ai can shoot pictures and videos when it is not flying. You can even hold it in your hand and use it as a premium stabilized 4K video and photo camera.

Tap the "s" box to open the shutter slider.

Select a value to exit the auto-mode for shutter speed and ISO. This action also deactivates the EV slider.

Set the s value you require, then tap the "ISO" box to select an ISO value.

Experiment! The display of the HUD reflects your settings. If you get lost, tap Auto either on the "s" or the "ISO" slider to get back to auto exposure and reactivate the EV slider.

ISO value (ISO)

The ISO value refers to the sensitivity of the sensor. As we have seen, it is linked to the shutter speed value: both sliders activate when you deactivate the "Auto" mode and set a value for one, or for the other. The lower the ISO value, the lower the sensitivity of the sensor, and the lower the image noise (digital grain). Therefore, under good lighting conditions, such as sunny daylight outside shots, low ISO values (between 50 and 200) should always be selected. The sensitivity of the sensor increases as the ISO value goes up: 1600 ISO can be used to capture low light interior scenes, or exterior shots at dusk or dawn, for example.

By default, in Auto mode, ANAFI Ai constantly adapts its ISO and shutter speed values to the scene it is filming. Setting an ISO value for a whole shot or series of shot, however, is very useful to professional filming.

Tap the ISO box to open the shutter slider.

Select a value to exit the Auto mode for ISO and shutter speed. This action also deactivates the EV slider.

Set the ISO value you require, then tap the "s" box to select a shutter value.

Experiment! The display of the HUD reflects your settings. If you get lost, tap Auto either on the "s" or the "ISO" slider to get back to auto exposure and reactivate the EV slider.

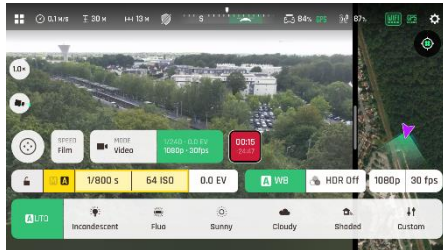
White balance (WB)

White balance deals with the color temperature of the light. Cold lights make the whites look blue. Warm lights make the whites look yellow. By default, in Auto WB mode, ANAFI Ai keeps the whites white, at all times: it adapts its WB value in real time.

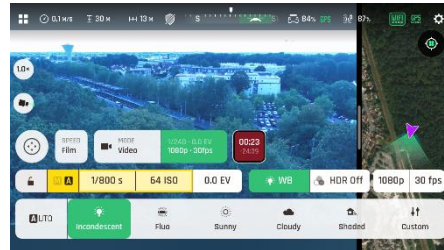
However, setting a WB value for an entire shot is especially useful for professional filming: stable WB facilitates the grading (color treatment) of videos.

Tap the WB box to open the white balance options.

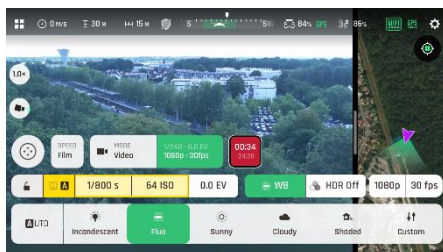
Select the **WB** option that is best suited for your shooting conditions, your subject, or both. The display of the HUD reflects your settings and helps you make the best choice.



Auto WB



Incandescent WB



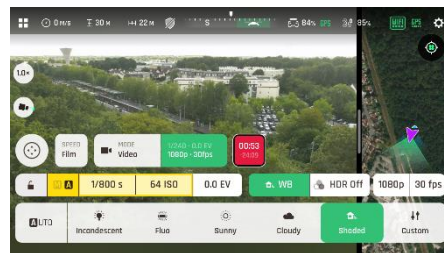
Fluo WB



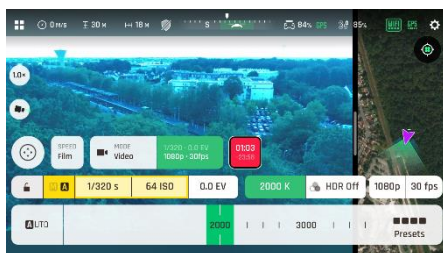
Sunny WB



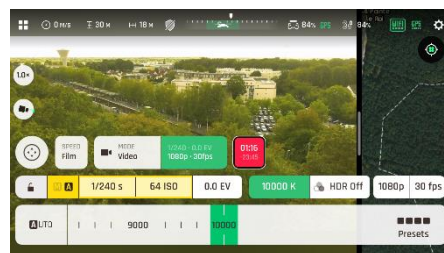
Cloudy WB



Shaded WB



WB 2 000 K



WB 10 000 K

Lock AE

As any serious camera, **FreeFlight 7** offers the possibility to lock the general exposure of a view, to fine-tune the framing of a shot and keep the desired exposure.

To access this function, tap the “Imaging settings box” of the HUD.

Tap the “Open lock” icon, on the far left of the Imaging menu to lock the exposure value to that of the current view. The icon turns into a “Closed lock” on a yellow background. A yellow “Lock AE” box appears under the “Next available action” box, at the center of the top bar of the HUD.

Move ANAFI Ai around or tilt its gimbal to change the frame: the exposure settings remain as they were when you activated the function.

Tap the “Closed lock” icon to deactivate the exposure lock: the icon reverts to “Open lock” on a white background.



Exposure is locked on the sky

Lock AE Touch

With the “Lock AE Touch” (or “Spot AE”) function of FreeFlight 7, you can also lock the exposure of a frame on any detail of any view.

To activate this function, follow the “Lock AE” procedure of the preceding section. When the exposure is locked, touch the part of the frame you want to base your exposure on. A yellow square animates around this spot and the yellow “Lock AE” box is replaced by a yellow “**Lock AE Touch**” box.

Refer to the following screenshots for additional details on the logic of this great feature.



Exposure is locked on the top of the trees: shutter speed is set at 1/240 s



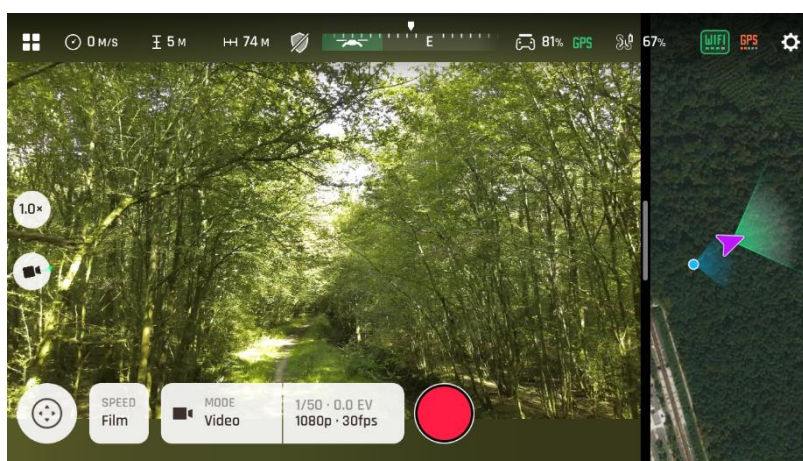
Exposure is locked on a building on the horizon: shutter speed is set at 1/500 s

HDR

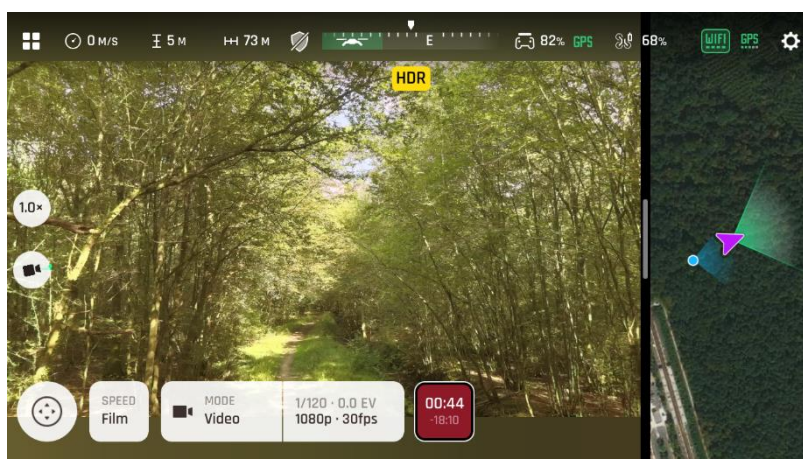
HDR (high dynamic range) is another great way to enhance a video or a photo. **The HDR option is available for videos (no lossless zoom and limited to 30 fps max in 4K, lossless zoom limited to 2.3x and limited to 30 fps max in 1080 p) and 12MP photos.**

To activate the HDR option, tap the “Imaging” box from the lower bar of the HUD, then tap the “HDR box”.

Select “HDR On”: a HDR notice appears in black inside a yellow box, at the center of the top of the HUD. Press the hard shutter button on your Parrot Skycontroller 4 (or the soft shutter button of the HUD) to start filming in HDR or to take an HDR photo.



HDR Off



HDR On

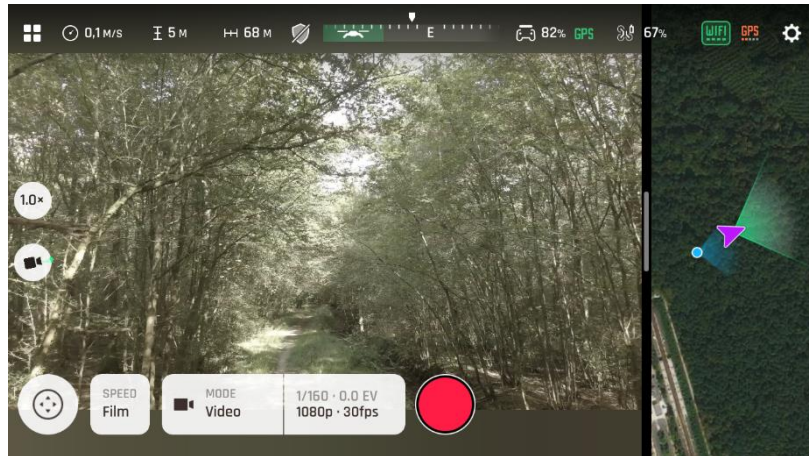
Follow the same procedure and select “**HDR Off**” to revert.

- **Note that you cannot modify “EV”, “s” or “ISO” values when the HDR mode is activated.** However, you always keep control over your white balance (“WB”).
- **Note that activating (or deactivating) HDR halts any ongoing video recording, and starts a new recording with the new setting, after 5 seconds.**
- ANAFI Ai features **2 HDR options: HDR-8 and HDR-10. HDR-10 is only available through H265 video encoding** – refer to the “ADVANCED SETTINGS/Recording”

section of this guide for additional details on HDR and video encoding options selection.

P-Log

The **P-Log** option is also available through the “**HDR box**”. This alternative imaging style makes images a little less contrasted and saturated: P-Log style is ideal for videos you want to edit and process using professional grading tools and filters.



P-Log filming style

PILOTING MODES

Tap the “PILOTING MODE” box in the bottom bar of the HUD of **FreeFlight 7** to access the piloting modes options.

Tap a mode to select it. Each mode is associated with a specific behavior, which this section describes.

Manual flight

The Manual flight mode is ANAFI Ai’s default mode. It enables you to pilot the drone and fully control its camera tilt and zoom.

When you release the commands in Manual flight mode, ANAFI Ai stays in position, hovering.

Cameraman

The Cameraman mode enables you to keep an object or a subject in the center of your frame, while you pilot ANAFI Ai around it/him/her.

Frame the object or subject you want to film and fly around.

Tap the “PILOTING MODE” box in the bottom bar of the HUD to access the options. Tap “Cameraman” to select this piloting mode.

Draw a rectangle with your finger on the screen of your device, around the object or subject you want ANAFI Ai to follow – or double tap this object or subject. When your target is locked, the blue rectangle turns to green and the orange “LAND” box at the center of the top bar of the HUD turns red and displays “STOP”. ANAFI Ai’s frame centers on your target, inside the green box.

Drag the green box to the area of the frame where you want your target to remain at.

Fly ANAFI Ai around your target. The drone keeps your target in the part of the frame you have selected. Therefore, if you push the right joystick of the **Parrot Skycontroller 4** to the left, ANAFI Ai circles around your target clockwise. If you push the right joystick of the **Parrot Skycontroller 4** to the right, ANAFI Ai circles around your target counterclockwise.

When the Cameraman mode is activated, ANAFI Ai manages the gimbal tilt to keep the target in the frame. Therefore, the left trigger of the **Parrot Skycontroller 4** is deactivated in this mode. However, you can still control the zoom, with the right trigger.

When you release the commands in the Cameraman mode, ANAFI Ai hovers and rotates to keep following the target.

To end the following of your target, tap the red “STOP” box at the center of the top bar of the HUD.

When no target is selected, or when the following of the target has been ended by the pilot, ANAFI Ai's behavior is similar to that of the Manual flight mode.

- **Activate and monitor the Cameraman mode with care: always check your flight plan and the trajectory of your subject are clear from obstacles and safe, always retain visual contact with ANAFI Ai, and always be ready to stop the following (tap the "STOP" box of your HUD) in case a danger or any sort of unexpected obstacle arises.**

Touch & Fly: Waypoint

Waypoint is the default "Touch & Fly" mode. It enables you to fly ANAFI Ai to any point on the map. Tap "Touch & Fly" from the "PILOTING MODE" box menu. The map of your surroundings opens full screen. The live image captured by ANAFI Ai is minimized in the bottom right corner of your screen.

Tap a point on the map to select a destination for ANAFI Ai: this point is marked as a white circle with an orange border. ANAFI Ai immediately starts flying toward the selected point. Use the slider on the right of the screen to control the drone's altitude (the orange figure inside the circle) when it reaches its destination.



iOS Touch & Fly: ANAFI Ai flying to its destination

Touch & Fly: POI

To access the POI Touch & Fly option, tap the "Type" box from the lower bar of the HUD, and select POI.

In POI mode, press and hold a point on the map to create a point of interest (POI), marked as a white square diamond with a blue border. Control the height of the POI (the blue figure inside the square diamond) through the slider on the right: this effectively controls the tilt of the gimbal, while you use the **Parrot Skycontroller 4** to fly around your target. ANAFI Ai remains focused on the POI.



iOS Touch & Fly: POI

Tap “STOP” from the red box at the center of the top bar of your screen to halt ANAFI Ai, or to reset a POI.

MISSIONS

Flight Plan

Flight Plan is a powerful tool, which enables you to fully prepare and configure your flights and filming sessions, from home, on the train, in a plane, or anywhere else you can take your FreeFlight 7 device with you.

Through an example, this section will teach you the basics of automated flight and shooting management, with ANAFI Ai and Flight Plan.

Tap **Flight Plan** from the “PILOTING MODE” box menu. The map of your surroundings opens full screen. If you are not connected to ANAFI Ai, the minimized live view is black, as on the screenshots that follow. Find your next dream flying spot on the map.



iOS Flight Plan

Consider this pointy bit of land, with a lighthouse in the middle. Say you could fly ANAFI Ai and shoot a film there. Let's do it!



iOS: new Flight Plan

First, select your initial waypoint: ideally, very close to your intended take-off point. Tap the screen to set it. The green circle represents the waypoint, the white figure the altitude of the drone, and the white arrow the direction of ANAFI Ai's camera.



iOS: initial waypoint

Tap the white arrow and hold it to move it around. In this example, we want ANAFI Ai to frame the lighthouse as it starts the flight.



iOS: initial waypoint, with the camera framing the lighthouse

Tap the map to set the second waypoint: the distance between the two waypoints appears on the screen. Use the slider on the right of the screen to set the altitude of the waypoint. In this example, ANAFI Ai will climb from 3 to 30 meters between the initial waypoint and the second waypoint.



iOS: second waypoint

Add waypoints to tour the area and end your Flight Plan where you intend to land.



iOS: full Flight Plan

The tip of the peninsula is a POI: we want ANAFI Ai to focus on it while it flies around it. **Tap it and hold your finger on the screen to call choices (POI/Close).**



iOS: setting a POI

Tap “Point of interest” to add the POI. It appears as a blue square diamond. The figure in the center represents the height of the POI, which you can modify using the slider on the right of the screen. All waypoints turn white as they can now be selected to be linked to the POI.



iOS: open waypoints

Tap waypoints to link them to the POI. In this example, we want ANAFI Ai to film the tip of the peninsula as it flies around it: we have selected the three waypoints to the left of the peninsula. The arrows of those waypoints have turned toward the POI and are colored in blue – the last one which was selected has a blue border around the white arrow.



iOS: three waypoints linked to the POI

Tap the POI to confirm your choices. Blue waypoints are linked to the POI, which appears as a white square diamond with a blue border. During the entire blue part of the flight, ANAFI Ai's camera will stay focused on the tip of the peninsula, enabling you to achieve the smoothest flyby shoot. Green waypoints remain independent from the POI.



iOS: POI Flight Plan

Tap a green waypoint to edit it: use the slider on the right of the screen to modify its height; tap and move its white arrow to set the direction of ANAFI Ai's camera. For this example, we had the drone point toward the land at most steps of the Flight Plan, and toward the lighthouse at take-off and landing, with a descent from 30 to 3 meters between the last two waypoints.



iOS: POI Flight Plan

All you have to do now is to close **FreeFlight 7**, to get to your flying spot, to prepare ANAFI Ai, your **Parrot Skycontroller 4** and your device for the flight.

Tap the "PILOTING MODE" box on the HUD to call the options. Select "Flight Plan": the last plan you have set up appears.

Tap the green arrow on the right of the left bottom bar of the Flight Plan interface to begin the Flight Plan: ANAFI Ai takes off, flies to the first waypoint and starts the Flight Plan. At the end of the Flight Plan, depending on your settings and depending on your version of FreeFlight 7, ANAFI Ai lands at, or hovers over, the last waypoint you have set.

That is why, for this section, we have chosen to consider that ANAFI Ai's final waypoint is also its landing spot.

- **Activate and monitor every Flight Plan with extreme care: always check your drone's route is clear from obstacles and safe, always retain visual contact with ANAFI Ai, and always be ready to stop the Flight Plan (tap the "STOP" box of your HUD or reclaim commands of the drone) in case a danger or any sort of unexpected obstacle arises.**

Vehicle

LOREM IPSUM TBDeveloped

PHOTOGRAMMETRY MISSIONS

About photogrammetry

According to the American Society for Photogrammetry and Remote Sensing (ASPRS), **photogrammetry is the science and technology of obtaining reliable information about physical objects and the environment through the process of recording, measuring and interpreting photographic images.**

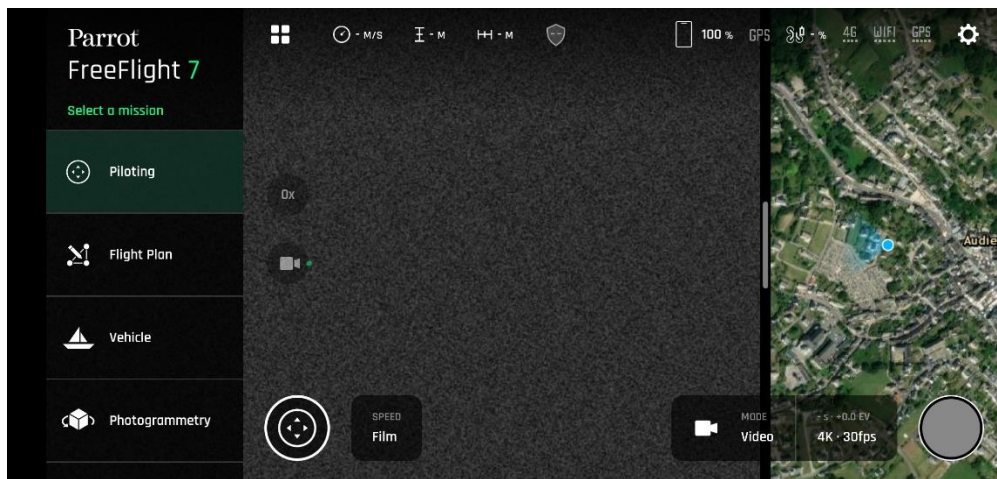
The ASPRS was created in 1934, but the field of photogrammetry has since greatly benefited of the emergence of flying cameras such as Parrot drones. One of the leaders of the field is Pix4D, which became a Parrot Group company in 2012.

ANAFI Ai and **FreeFlight 7** therefore embark Pix4D technologies which enable existing Pix4D users to seamlessly link their drone to their Pix4D account. New users can use ANAFI Ai to discover Pix4D photogrammetry services, through three offered mapping missions.

There are four types of photogrammetry mapping missions: Simple, Double, Circular and Automatic.

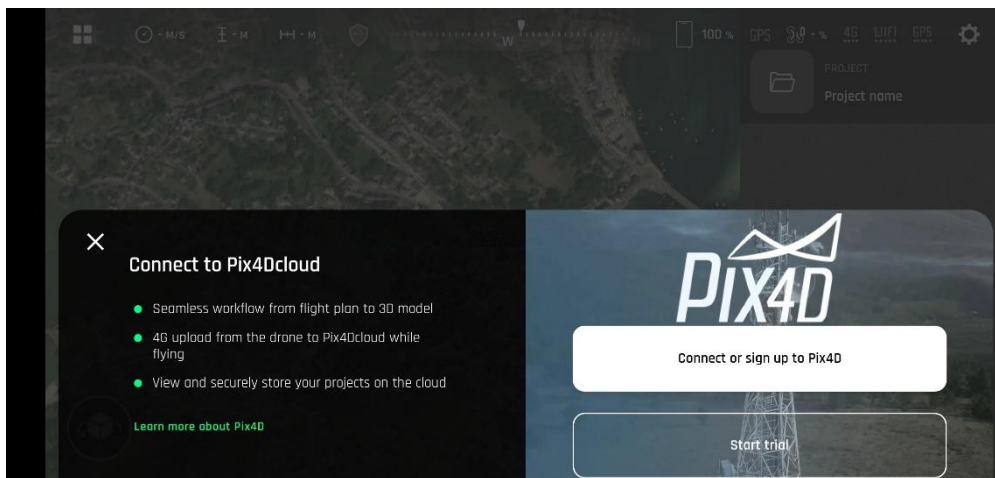
This section describes the specificities of each mission, and the way to program them.

To launch a photogrammetry flight, select “Photogrammetry” through the Mission selection menu of **FreeFlight 7**.



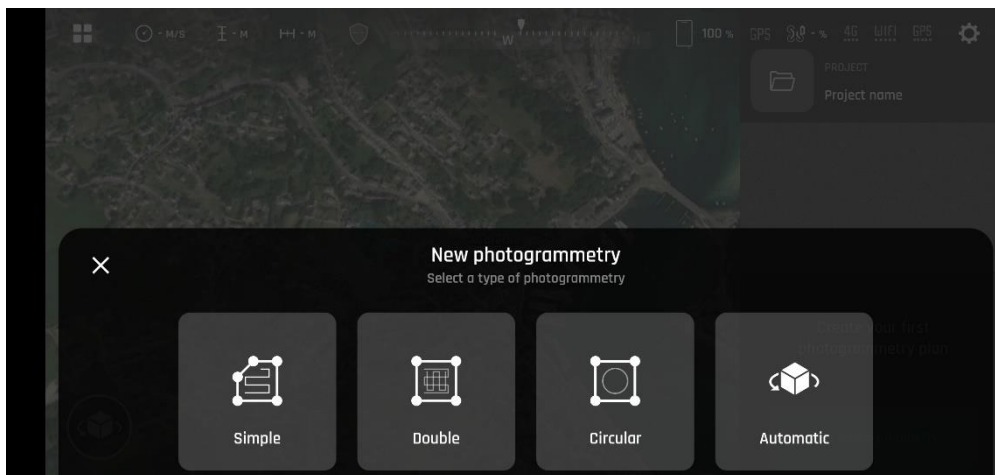
FreeFlight 7 mission selection menu

From the following screen, either connect to your Pix4Dcloud account, or start your trial.



FreeFlight 7 Pix4D options

Finally, select a photogrammetry mission type.



FreeFlight 7 photogrammetry type selection

Simple

Simple grid photogrammetry flights are useful to create 2D maps. Simple grids can be precisely adapted to any shape, to match the borders of a field or a coastline, for example. Follow these steps to program and launch a simple grid mapping flight.

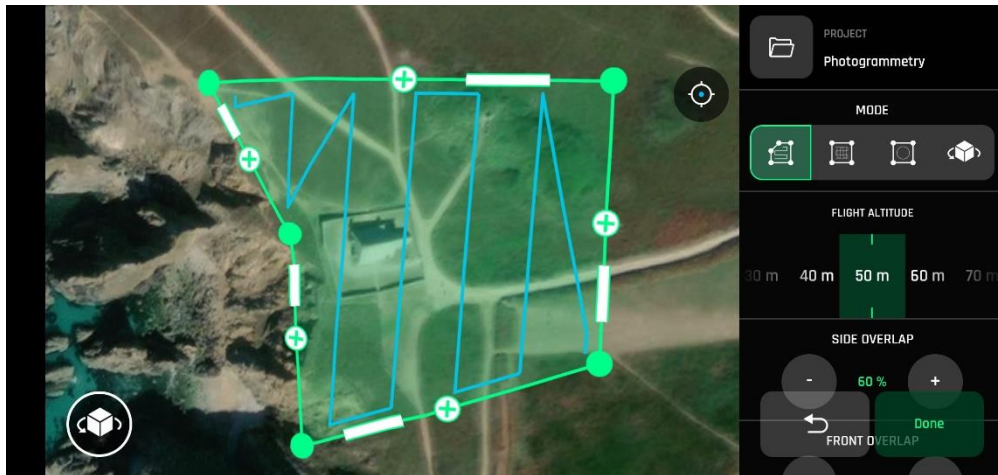
Tap the map to create a square grid.

Tap and slide the green corners of the square to adapt the grid to the zone you want to map.

Tap any “+” sign to create a new segment and a new corner.

Select a flight altitude (the higher, the shorter the flight, but the lesser details on the map).

- Select a side overlap.
- Select a front overlap.
- Select a camera angle.
- Select a drone speed.
- Select your RTH option (Yes or No)
- Select your 4G upload option (Yes or No)
- Tap “Done” when ready.
- Tap “Play” to launch the flight.



FreeFlight 7 Simple photogrammetry

Double

Double grid photogrammetry flights are useful to create 3D maps or 3D models of square areas. Follow these steps to program and launch a double grid mapping flight.

- Tap the map to create a square grid.
- Tap and slide the green corners of the square to adapt the grid to the zone you want to map.
- Select a flight altitude (the higher, the shorter the flight, but the lesser details on the map).
- Select a side overlap.
- Select a front overlap.
- Select a camera angle.
- Select a drone speed.
- Select your RTH option (Yes or No)
- Select your 4G upload option (Yes or No)
- Tap “Done” when ready.
- Tap “Play” to launch the flight.



FreeFlight 7 Double photogrammetry

Circular

Circular photogrammetry flights are useful to model an isolated building or structure in 3D. Follow these steps to program and launch a Circular mapping flight.

Tap the map to create a square flight area.

Tap and slide the square to position the object you want to map at the center of the flight area.

Tap and slide the green corners of the square to adapt the flight area to the part surrounding the target object you want included in the 3D model.

Select a flight altitude.

Select an angle between images.

Select a camera angle.

Select a drone speed.

Select your RTH option (Yes or No)

Select your 4G upload option (Yes or No)

Tap "Done" when ready.

Tap "Play" to launch the flight.



FreeFlight 7 Circular photogrammetry

Automatic

Automatic photogrammetry flights are designed to create the 3D model of a single building, with a single tap on the screen.

Tap the box which appeared on the map over the building you want to model.

The box turns green.

Select your RTH option (Yes or No)

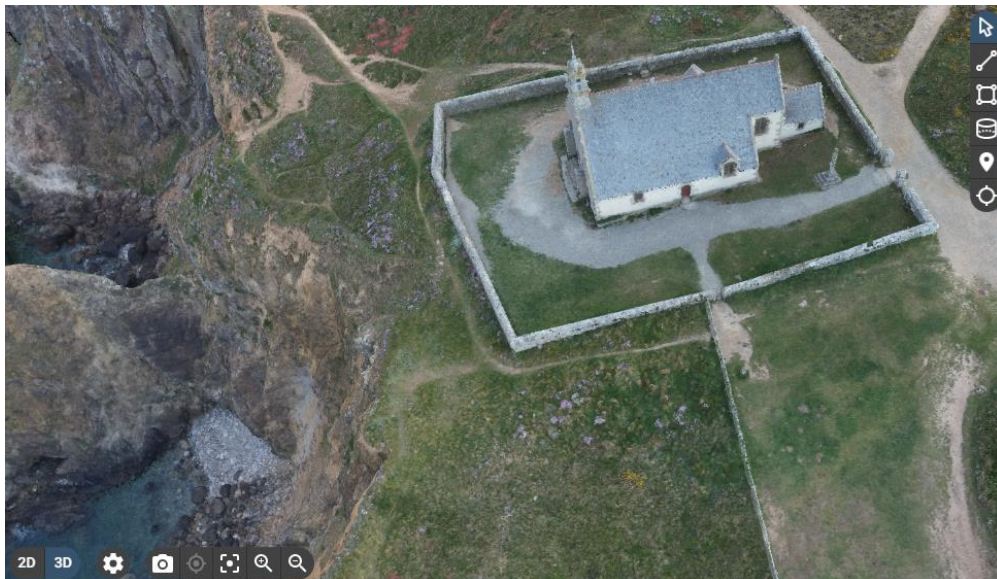
Select your 4G upload option (Yes or No)

Tap “Done” when ready.

Tap “Play” to launch the flight.



FreeFlight 7 Automatic photogrammetry



An example of Pix4Dcloud 3D model

If you have feedback or comments about the v.beta0.9 of this user guide, please reach out to:

technical.writer@parrot.com