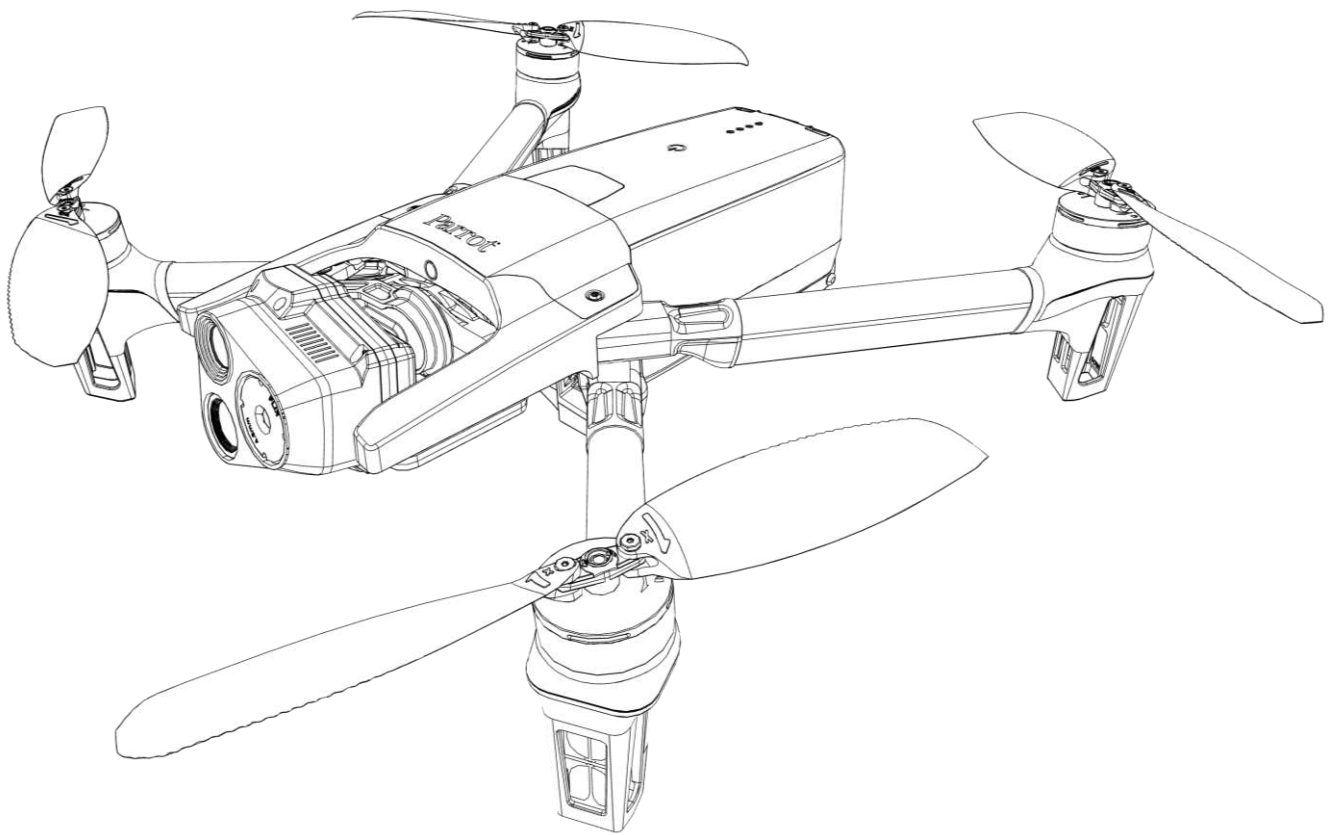


# ANAFI USA

## FreeFlight 6 USA User Guide



Version: 6.10.2.1

Updated: December 21, 2023

# Parrot

## Documentation changelog

This section details the major changes to Parrot's technical documentation since the previous update.

What changed	Where
Details added about the HDMI port for Skycontroller 4.	Page 21
Warning added about update requirement, including for offline users.	Pages 3, 10, 24, 89
FreeFlight 6 USA offline update procedure for Android users via .apk file added.	Page 22
Flying chapter images updated.	Page 28
Flight plan chapter updated.	Page 82

### ANAFI USA documentation

This user guide completes the documentation of ANAFI USA, which also consists of:

- ANAFI USA Flight Safety Guide, available online - [www.parrot.com](http://www.parrot.com);
- ANAFI USA and FreeFlight 6 USA release notes, available online - [www.parrot.com](http://www.parrot.com);
- ANAFI USA repair and maintenance tutorials available on Parrot's [YouTube](#) account.

## Using this guide

Parrot strongly recommends that you read the following information and instructions thoroughly before your first flight.

- This guide is specific to two drone configurations:
  - o ANAFI USA coupled with the Parrot Skycontroller 3, or
  - o ANAFI USA coupled with the Parrot Skycontroller 4.
  - o Freeflight 6 USA flight application.

**Note:** ANAFI USA requires the FreeFlight 6 USA app to fly, and to make sure your drone and controller are fully up to date with the latest features.

- **Read entirely at least once.** It answers most questions that most users encounter when they use ANAFI USA.
- **Keep it for reference and stay alert for updates.** Updates are advertised on all Parrot websites and social media. These updates are mandatory and must be systematically performed prior to any flight to ensure maximum performance and safety.
- **The Table of contents, on page 6, is active.** Click a title to access the corresponding section.
- **This online user guide has no index.** Use **[ctrl]-F** (Windows) or **[command]-F** (Mac) to browse all occurrences of any keyword (*flight, preferences, gimbal, Android, iOS, Flir, Boson<sup>®</sup>, photo, EV, ISO*, and so on).

**Important:** Parrot strongly recommends that you regularly refer to the [Release Notes ANAFI USA](#) available on the Parrot website, to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 6 USA App. If you are an offline user, you must contact your local Parrot Partner or Parrot Contact to obtain the .apk file to perform an offline system update.

Refer to the “[FreeFlight 6 USA offline update via APK file \(Android users\)](#)” chapter for more information.

## Prerequisites

Refer to the enclosed Super Quick Start Guide (SQSG) if you need illustrated guidance to get these quick prerequisites out of the way.

1. Wake up your ANAFI USA's smart battery. Charge the battery using one of the enclosed USB-A to USB-C cables and the enclosed charger. The battery's LEDs start flashing indicating that the battery is awake. Let it charge while you read. Parrot recommends you always run a full charge of your smart battery before flying ANAFI USA.
2. Download FreeFlight 6 USA on your iOS or Android smartphone. ANAFI USA requires FreeFlight 6 USA to fly. The app will enable you to update your Skycontroller and ANAFI USA when you power them on for the first time.



*Android FreeFlight 6 USA QR code*



*iOS FreeFlight 6 USA QR code*

When you have downloaded and installed FreeFlight 6 USA, turn your Skycontroller on (if you have a Skycontroller 3: unfold the central arm; if you have a Skycontroller 4: press the ON/OFF button).

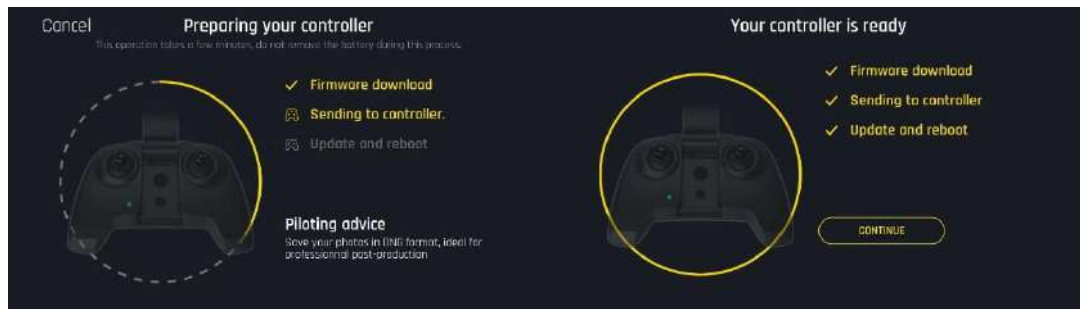
Use your device's USB cable to connect it to Skycontroller USB port, and install it on the device holder, as shown in the enclosed SQSG.

A prompt appears on your screen, which invites you to allow communication between your device and the controller.

Tap **Allow** (iOS), or **OK** (Android): FreeFlight 6 USA runs. After your device displays the app's splash screen, you get to FreeFlight 6 USA homepage.

*If the prompt does not appear on your screen when you connect your device to your Skycontroller, launch FreeFlight 6 USA manually.*

3. Tap the green **FLY** box on the homepage of FreeFlight 6 USA to launch the initial updates. FreeFlight 6 USA automatically updates the Skycontroller first, and ANAFI USA second.
4. **Skycontroller update:** tap the green **CONTINUE** box to proceed. FreeFlight 6 USA displays an animation and a progress circle on a screen labelled **Preparing your controller**. When the update is finished, the screen displays **Your controller is ready**. Tap **CONTINUE** to access the update of ANAFI USA (screenshots below are Android).



5. ANAFI USA update: tap the green **CONTINUE** box to proceed. FreeFlight 6 USA displays an animation and a progress circle on a screen labelled “Preparing your drone”. When the update is finished, the screen displays **Your drone is ready**. Tap **CONTINUE** box to return to the FreeFlight 6 USA homepage.
6. All systems are ready for flight.

## Table of contents

<b>DOCUMENTATION CHANGELOG .....</b>	<b>2</b>	Deployment from a moving vehicle .....	26
ANAFI USA documentation.....	2	Standard take-off from a moving vehicle .....	26
<b>USING THIS GUIDE.....</b>	<b>3</b>	<b>FLYING .....</b>	<b>28</b>
<b>PREREQUISITES .....</b>	<b>4</b>	Optimal speeds .....	28
<b>TABLE OF CONTENTS .....</b>	<b>6</b>	Optimal autonomy (flight time) .....	28
<b>FOREWORD.....</b>	<b>8</b>	Optimal elongation (distance).....	28
About ANAFI USA .....	8	<b>WI-FI LINK OPTIMIZATION .....</b>	<b>29</b>
Wi-Fi .....	8	<b>RETURNING HOME.....</b>	<b>30</b>
GPS .....	8	Precise Home Setting .....	30
4K video formats .....	8	Smart RTH .....	30
The smart battery .....	9	Managing coordinates.....	30
HDMI .....	9	Advanced RTH settings.....	32
Auto-RTH (return home) .....	9	Pilot RTH.....	32
Devices .....	9	Custom RTH.....	32
User guide screenshots .....	9	<b>LANDING .....</b>	<b>35</b>
About My.Parrot accounts .....	9	Recovery from a moving vehicle .....	35
<b>DISCLAIMER .....</b>	<b>10</b>	Hand landing .....	35
<b>TECHNICAL SPECIFICATIONS .....</b>	<b>11</b>	<b>REPLACING PROPELLER BLADES.....</b>	<b>37</b>
Package contents.....	12	<b>SMART LIPO BATTERY .....</b>	<b>38</b>
<b>PRESENTATION OF ANAFI USA.....</b>	<b>13</b>	Battery removal.....	38
<b>PRESENTATION OF SKYCONTROLLER 3 .....</b>	<b>15</b>	Battery installation.....	38
LED status indicator color codes.....	16	Battery charging .....	38
Pairing ANAFI USA to a Skycontroller 3 .....	17	Battery update .....	39
<b>PRESENTATION OF SKYCONTROLLER 4 .....</b>	<b>18</b>	Battery care and safety .....	40
LED status indicator color codes.....	20	Battery information.....	40
Pairing ANAFI USA to a Skycontroller 4 .....	20	<b>MICROSD CARD AND MEDIA MANAGEMENT.....</b>	<b>41</b>
HDMI video sharing.....	20	Installing a microSD card.....	41
<b>FREEFLIGHT 6 USA OFFLINE UPDATE VIA APK FILE</b>		Retrieving photos and videos.....	41
<b>(ANDROID USERS).....</b>	<b>22</b>	Compatible microSD cards .....	41
<b>PRE-FLIGHT CHECKLIST .....</b>	<b>23</b>	Direct media retrieval (drone to computer).....	41
Transport & handling.....	23	FreeFlight 6 USA Gallery.....	41
Equipment .....	23	MicroSD card formatting.....	42
Regulations.....	23	MicroSD card encryption.....	43
Flight conditions .....	23	<b>INTRODUCING FREEFLIGHT 6 USA .....</b>	<b>44</b>
<b>GETTING STARTED.....</b>	<b>24</b>	Presentation of the HUD .....	44
<b>TAKING OFF.....</b>	<b>25</b>	<b>PREFERENCES .....</b>	<b>46</b>
Ground take-off.....	25	Controls.....	46
Hand launch.....	25	Presets.....	46
		Thermal .....	47

Interface .....	48	Relative Thermal mode .....	69
Safety.....	48	Spot Thermal mode.....	70
Camera .....	49	<b>THERMAL ANALYZER MODE .....</b>	<b>71</b>
Network.....	50	<b>CINESHOTS (VISIBLE SPECTRUM ONLY).....</b>	<b>72</b>
<b>VIDEOS AND PHOTOS.....</b>	<b>51</b>	360° .....	72
Making videos .....	51	Reveal.....	72
Taking photos .....	52	Spiral .....	72
Creating Panoramas .....	55	Epic.....	73
<b>GIMBAL TILT AND ZOOM CONTROLS .....</b>	<b>58</b>	<b>PILOTING MODES .....</b>	<b>74</b>
Gimbal tilt control .....	58	Manual flight .....	74
Zoom control .....	58	Cameraman .....	74
Camera Calibration.....	59	Follow Me.....	75
<b>PRO-IMAGING SETTINGS .....</b>	<b>62</b>	Smartdronies.....	76
Exposure value (EV).....	62	<b>HOW TO PREPARE YOUR MAP .....</b>	<b>78</b>
Shutter speed (s) .....	62	Save future flying area maps online for offline use..	78
ISO value (ISO) .....	63	Import custom maps to FreeFlight 6 USA .....	78
White balance (WB).....	64	<b>MAP-BASED FLYING MODES .....</b>	<b>82</b>
HDR.....	65	Flight Plan.....	82
NATURAL Style.....	65	Touch & Fly: Waypoint .....	84
P-LOG Style.....	65	Touch & Fly: POI.....	85
INTENSE Style .....	65	<b>APPENDIX 1: TROUBLESHOOTING GUIDE.....</b>	<b>86</b>
PASTEL Style .....	65	Troubleshooting procedures .....	86
ADJUSTMENT.....	65	Resetting the Skycontroller 3 or Skycontroller 4.....	86
Lock AE .....	66	Issues.....	87
Lock AE Touch.....	67	<b>APPENDIX 2: OPERATIONAL CHECKLIST .....</b>	<b>89</b>
<b>THERMAL IMAGING .....</b>	<b>68</b>	Useful information .....	89
Presentation of the Thermal HUD (post-processing) 68			

## Foreword

### About ANAFI USA

ANAFI USA was designed and optimized to fly as is. Parrot strongly discourages the use of any add-on or accessory which could be mounted on, or attached to ANAFI USA (feet extensions, buoys, hulls, etc.). Accessories impose extra weight on the drone and its motors. Electronic accessories may also interfere with the drones' communications.

**Important:** The maximum take-off mass (MTOM) of ANAFI USA is 644 g (1.42 lb). If you equip your drone with an accessory, it can drastically reduce its autonomy.

**Warning:** Do not alter the center of gravity of the drone.

Always transport ANAFI USA safely stored in its case. Always reposition the gimbal protection before storing the drone in its case.

### Wi-Fi

Switch off your device's Wi-Fi connection when flying ANAFI USA with both the Skycontroller and your phone or tablet. In this configuration, the drone and the controller communicate through ANAFI USA's Wi-Fi network and activating your device's Wi-Fi results in interference.

Your device's Wi-Fi must only be activated, and connected to ANAFI USA's Wi-Fi network, when you want to fly the drone using your device as the sole controller.

### GPS

ANAFI USA does not need a satellite – GPS, Glonass, Galileo – synchronization (or fix) to take off. It can therefore be piloted indoors and through cluttered areas, stabilized by its onboard sensors.

However, automated and assisted flight modes require both ANAFI USA and the FreeFlight 6 USA device (preferably associated with the Skycontroller) synchronization to geocoordinate satellites. The Skycontroller alone has no geo-positioning capacity.

For this reason, Parrot recommends ANAFI USA pilots to always set up, start, and finish their automated and assisted flights from wide open areas, such as a sports field.

**WARNING:** ANAFI USA flight stability performance may be impacted when you fly at night without a GPS fix. To reduce the possibility of drifts, Parrot recommends that you always wait for GPS synchronization before flying the drone at night. If GPS synchronization is not achieved with the drone on the ground, Parrot recommends that you leave the drone in hover flight until the GPS synchronizes.

If you continue to experience difficulties with flight stability, reduce the following values in the **Presets** menu:

- **Global reactivity**
- **Banked turn**
- **Inclination**
- **Vertical speed**
- **Rotation speed**

Refer to the "[Preferences / Presets](#)" section of this guide for more information.

### 4K video formats

4K video formats are professional grade media which may not be read natively by slower computers.



Furthermore, for software reasons, the stream broadcast by the Skycontroller is better defined in the 1080p video mode than in 4K (or any photo mode), especially when using zoom. For this reason, Parrot recommends favoring default video settings (1080p, 30 fps) for direct observation.

4K video recording should be reserved for post-mission data exploitation.

### The smart battery

One smart battery comes preinstalled on the ANAFI USA. If you remove the battery, you must reinstall it in the same orientation. Ensure that you do not install the battery upside down as it could expose the battery and the drone to irreparable electrical damage.

**Important:** The LEDs and power button face up in the correct orientation

**Note:** ANAFI USA's battery enters **Wintering** mode when not in use for ten consecutive days. You must wake the battery up and charge it completely before you fly ANAFI USA for the first time.

### HDMI

The Skycontroller 4 is equipped with a micro-HDMI port, which enables you to stream ANAFI USA images to a screen or to HDMI goggles. Parrot recommends using a certified micro-HDMI to HDMI cable (not included in the box) to connect external pieces of equipment to the Skycontroller 4. Uncertified cables may impair the ecosystem's Wi-Fi performance.

The packaging of certified HDMI cables displays the following logo:



### Auto-RTH (return home)

If the battery charge level becomes low, ANAFI USA attempts to return to its most recent take-off point, at a minimal height over this take-off point. The default minimal height is 30 meters, but you can configure this height to between 20 and 30 meters through FreeFlight 6 USA.

**Important:** This feature requires synchronization to GPS, Glonass, or Galileo satellites.

Refer to the "[Coordinates and advanced RTH settings](#)" and "[PREFERENCES / Safety](#)" sections of this guide for further information on RTH.

### Devices

On this page and the following, the word "device" refers to the smartphone or tablet, either iOS or Android-based, on which FreeFlight 6 USA is installed.

### User guide screenshots

For clarity and brevity, some screenshots in this guide, illustrating functions common to all the drones of the series, have been taken from earlier ANAFI series user guides.

However, all screenshots associated with specific ANAFI USA functions have been updated.

### About My.Parrot accounts

Parrot strongly recommends that you use your My.Parrot account (or create one if ANAFI USA is your first Parrot drone) to allow Parrot to store your ANAFI USA flight data. Sharing your data, even anonymously, benefits the community, as it enables us to improve our products.

It also directly benefits all identifiable users in case they need to contact Parrot support teams.

## Disclaimer

1. ANAFI USA IS NOT A TOY and must not be used or handled by persons under the age of 18 years.
2. BEFORE USING ANAFI USA:
  - (A) CAREFULLY READ the user manual and all information and documentation available on [www.parrot.com](http://www.parrot.com). Documentation is subject to change and may be updated at any time and without prior notice (hereinafter referred to as "Parrot Documentation"). SPECIAL ATTENTION must be given to the paragraphs marked: **Warning**.
  - (B) Ensure that the complete drone ecosystem is up to date. Parrot regularly releases firmware updates for:
    - FreeFlight 6 USA
    - ANAFI USA
    - Smart Battery
    - Skycontroller 3, and Skycontroller 4

Updates add new features, and improve stability, and performance of the complete system. Updates are mandatory and must be systematically performed prior to any flight to ensure maximum performance and safety. Flying with a non-up-to-date system may impact warranty rights and jeopardize safety requirements.

- (C) ENSURE YOU ARE AWARE OF THE REGULATIONS APPLICABLE TO THE USE OF DRONES AND THEIR ACCESSORIES (hereinafter referred to as "Applicable Regulations");
  - (D) REMEMBER that ANAFI USA may expose others and yourself to EQUIPMENT DAMAGE, PERSONAL INJURY, OR BOTH, which could result in serious harm or death.
3. All Parrot drones must always be used with genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use will void the warranty, and impact safety requirements.
4. All Parrot drone systems include charger(s). These are the only recommended chargers to use to charge your Parrot drones Smart Battery and Skycontroller 3 and Skycontroller 4. Other generic USB chargers may be used provided that they are certified according to the country of use and have the applicable rating/specification. Performance and warranty are only guaranteed when using a genuine charger included in the Parrot drone system. Parrot takes no responsibility (warranty or safety) for third party USB chargers being used with a Parrot system.
5. Videos and photos promoted and advertised by Parrot Drones SAS and its affiliates have been made by and with experienced professionals and drone pilots. IN CASE OF DOUBT RELATING TO THE USE OF YOUR ANAFI USA DRONE AND ITS ACCESSORIES, ALWAYS REFER TO THE MOST RECENT VERSION OF THE PARROT DOCUMENTATION.
6. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, PARROT DRONES SAS, ITS SUBSIDIARIES, AND THEIR RESPECTIVE DISTRIBUTORS AND RETAILERS SHALL NOT BE LIABLE FOR ANY DAMAGES ARISING FROM, OR IN CONNECTION WITH THE NON-COMPLIANCE OF PARROT WITH THE DOCUMENTATION OR THE APPLICABLE REGULATIONS BY YOURSELF OR ANY PERSON USING YOUR ANAFI USA.

**Important:** Parrot strongly recommends that you regularly refer to the [Release Notes ANAFI USA](#) available on the Parrot website, to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 6 USA App. If you are an offline user, you must contact your local Parrot Partner or Parrot contact to obtain the .apk file to perform an offline system update.

Refer to the "[FreeFlight 6 USA offline update via APK file \(Android users\)](#)" chapter for more information.

## Technical specifications

### DRONE

- Mass: 500 g (1.1 lb)
- Maximum take-off mass (MTOM): 644 g (1.4 lb)
- Maximum transmission range: 4 km (2.5 mi) with the enclosed Parrot Skycontroller
- Maximum flight time: 32 minutes
- Maximum horizontal speed: 14.7 m/s (32.9 mph)
- Maximum ascent speed: 4 m/s (8.9 mph)
- Maximum descent speed: 3 m/s (6.7 mph)
- Maximum wind resistance: 14.7 m/s (32.9mph)
- Maximum propeller speed: 11,000 rpm
- Sound power level at 1m (3.3 ft): 84 dB
- Service ceiling: 5,000 m above MSL (Mean Sea Level)
- User defined geofencing
- Operating temperature: -36°C (-33°F) to +50°C (122°F)
- No take-off temperature limitation - if battery temperature is maintained between +5°C (+41°F) and +70°C (+158°F)
- IP53: Rain and dust resistant
- Maximum static thrust: 12.92 N
- Thrust to weight ratio: 2.63
- No NFZ (no-fly zone) limitation
- Takes off from / lands in the hand of the operator
- Manage your data privately between drone and device OR share anonymous data on secured European servers

### DIMENSIONS

- Size folded: 252 x 104 x 84 mm (9.9 x 4.1 x 3.3")
- Size unfolded: 282 x 373 x 82 mm (11.1 x 14.7 x 3.2")

### SENSORS

- Satellite navigation: GPS, GLONASS & GALILEO
- Barometer and magnetometer
- Vertical camera and ultra-sonar
- 2 x 6-axis IMU
- 2 x 3-axis accelerometers
- 2 x 3-axis gyroscopes

### EO IMAGE CHAIN

- 2 Sensors: 1/2.4"
- Digital zoom: 32x
- Electronic shutter speed: 1 s to 1/10,000 s
- ISO range: 100-3200
- Video resolution: 4k/FHD/HD
- Video format: MP4 (H.264)
- Photo resolution:
  - Wide: 21 MP (84° FOV);
  - Rectilinear: up to 16 MP (up to 75.5° FOV)
- Photo formats: JPEG, DNG (Digital Negative RAW)

### IR IMAGE CHAIN

Sensor: FLIR BOSON

- 320x256 resolution
- -40°C (-40°F) to +150°C (+302°F) temperature range
- Thermal sensitivity: <60 mK
- Measured IR wavelength range: 7.5 to 13 micrometers
- Photo format: JPEG
- Video format: MP4 (H264)
- Video recording resolution: 1280x720, 9 fps

### IMAGE STABILIZATION

- 3-camera IR/EO stabilized gimbal:
  - Hybrid: 3-axis
  - Mechanical: 2-axis roll / pitch
  - Electronics (EIS): 3-axis yaw / roll / pitch
- Controllable gimbal tilt range: -90° to +90°

### FAST-CHARGING SMART BATTERY

- Type: High density LiPo
- Capacity: 3,400 mAh (3 x 4.4 V cells)
- Battery life: 32 minutes
- Charging port: USB-C
- Charges fully in 2h with a USB-PD (Power Delivery) charger – not included in the pack
- Charges fully in 3h20 with the fast-charging port of the provided charger
- Mass: 195 g (0.4 lb)
- Voltage: 11.55 V
- Max charging power: 30 W



### PARROT SKYCONTROLLER 3

- Folded size: 94 x 152 x 72 mm (3.7 x 6.0 x 2.8")
- Unfolded size: 153 x 152 x 116 mm (6.0 x 6.0 x 4.6")
- Mass: 283 g (0.6 lb)
- Transmission system: Wi-Fi 802.11a/b/g/n (Wi-Fi beacon)
- Operating frequencies: 2.4 GHz, 5.8 GHz, UNII-1 & UNII-3
- Direct video stream resolution: 720p
- Battery capacity: 2500 mAh (3.6 V)
- Battery life: Charges fully in 1h10 (with a 1.85 A charger). Discharges in 2h30 (with Android device) / 5h30 (with iOS device)
- Compatible mobile devices: Screen size up to 6.5"
- USB ports: USB-C (charge), USB-A (connection)

### PARROT SKYCONTROLLER 4

- Size without terminal: 238 x 147 x 55 mm (9.4 x 5.8 x 2.2")
- Maximum size: 315 x 147 x 55 mm (12.4 x 5.8 x 2.2")
- Mass: 610 g (1.34 lb)
- Transmission system: Wi-Fi 802.11a/b/g/n (Wi-Fi beacon)
- Operating frequencies: 2.4 GHz, UNII-1 & UNII-3
- Direct video stream resolution: 720p
- Battery capacity: 3,350 mAh (7.2 V)
- Battery life: Charges fully in 3h45 for up to 6h use (varies according to device used and state of charge)
- Compatible mobile devices: Screen size up to 8"
- Charges smartphones and tablets
- USB ports: 2xUSB-C (charging and connecting)
- Micro-HDMI port
- Dust resistant (IP5X)



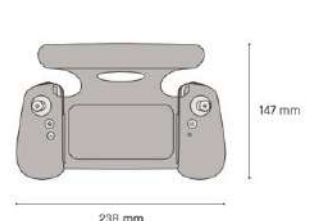
Unfolded ANAFI USA



Folded ANAFI USA



SKYCONTROLLER 3



SKYCONTROLLER 4

## Package contents

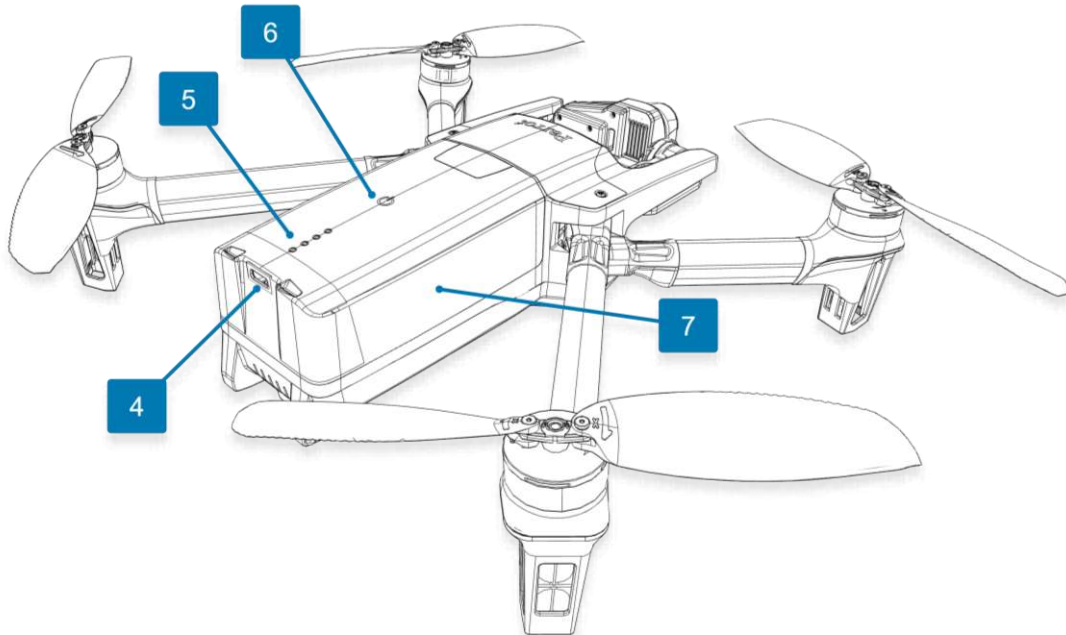
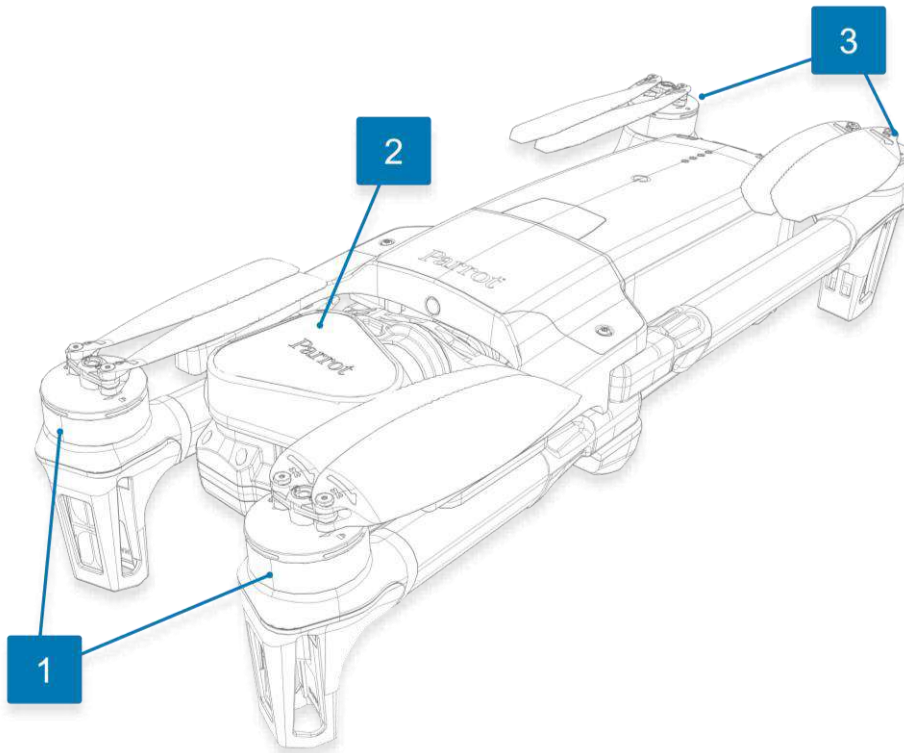
Your ANAFI USA package contains:


- 1 ANAFI USA drone
- 3 smart batteries (2 + 1 preinstalled on ANAFI USA)
- 1 Skycontroller 3, or 1 Skycontroller 4
- 1 multi-port fast USB charger
- 1 additional set of propeller blades
- 4 USB-A/USB-C cables
- 1 USB-C/USB-C cable (for Skycontroller 4 packs only)
- 1 hard case

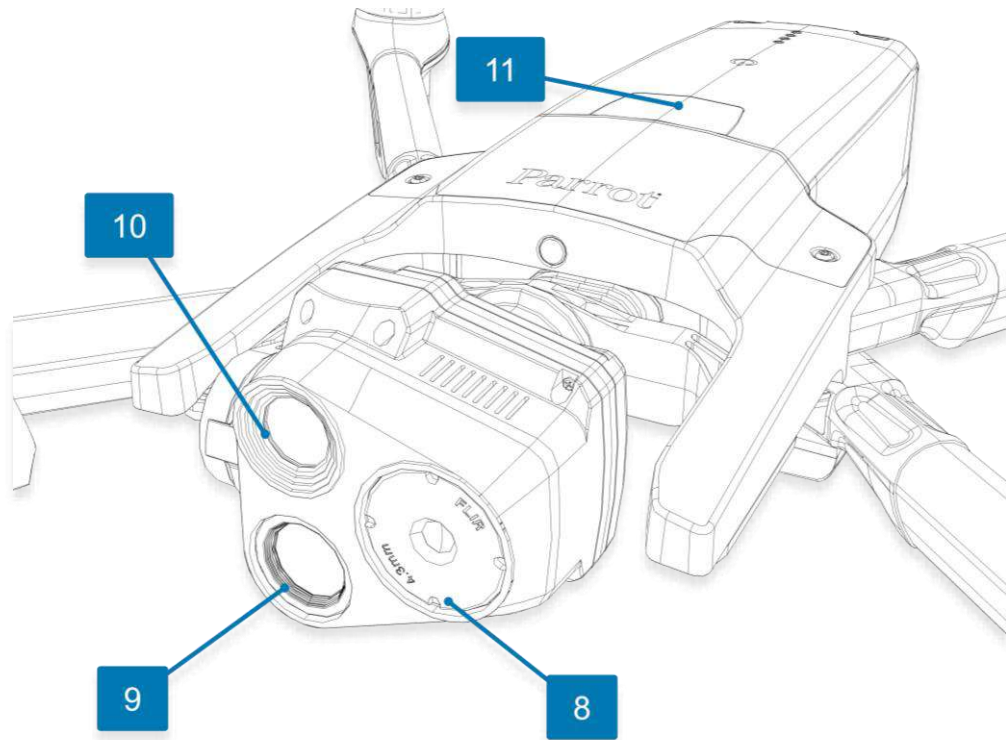


*Picture is for illustration purposes only: device not included.*

Presentation of ANAFI USA



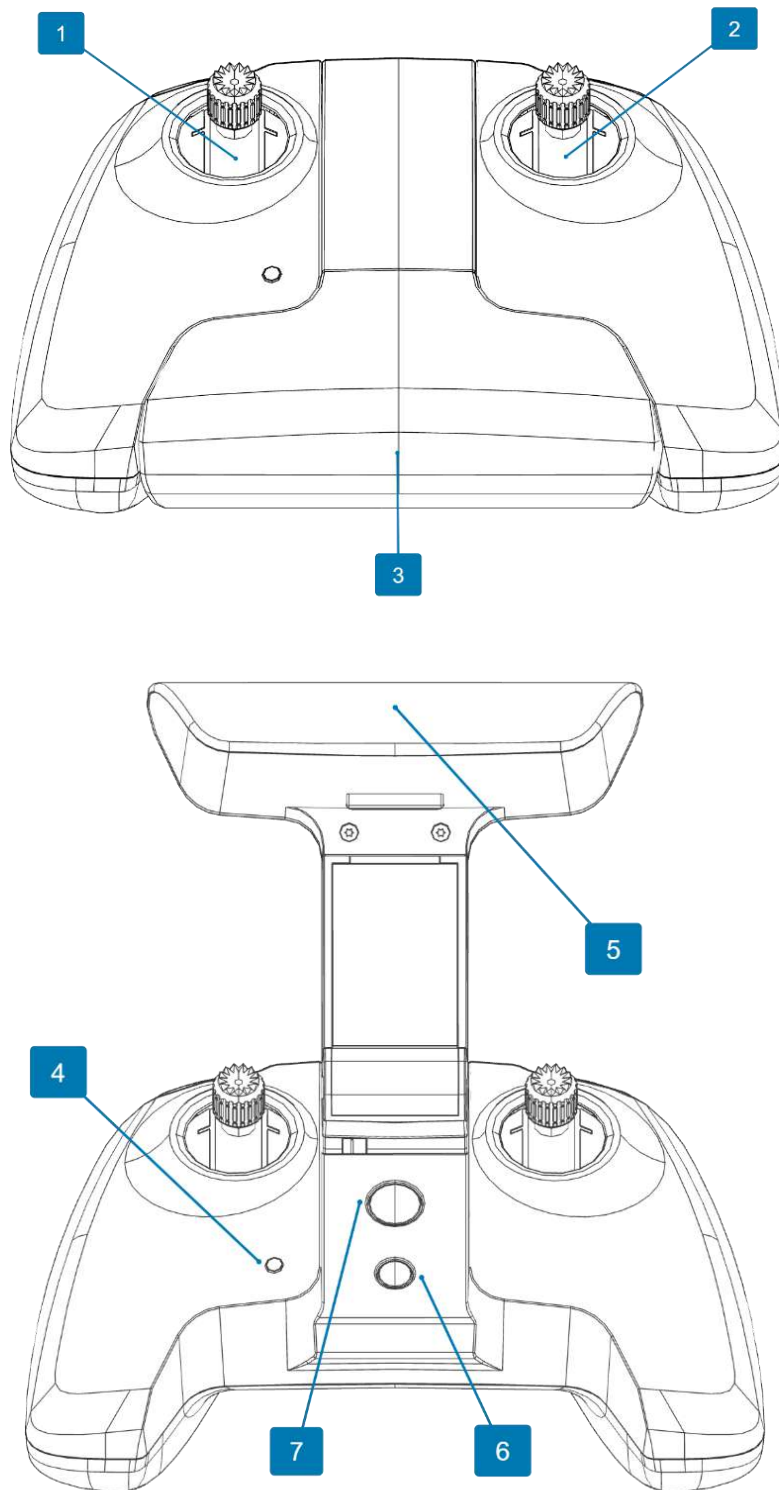
- |                                       |   |
|---------------------------------------|---|
| 1. Front foldable arms and propellers | 5. Charge level LED indicators  |
| 2. Gimbal protective cover            | 6.  Power button |
| 3. Rear foldable arms and propellers  | 7. Smart battery  |
| 4. USB-C charging port                |   |





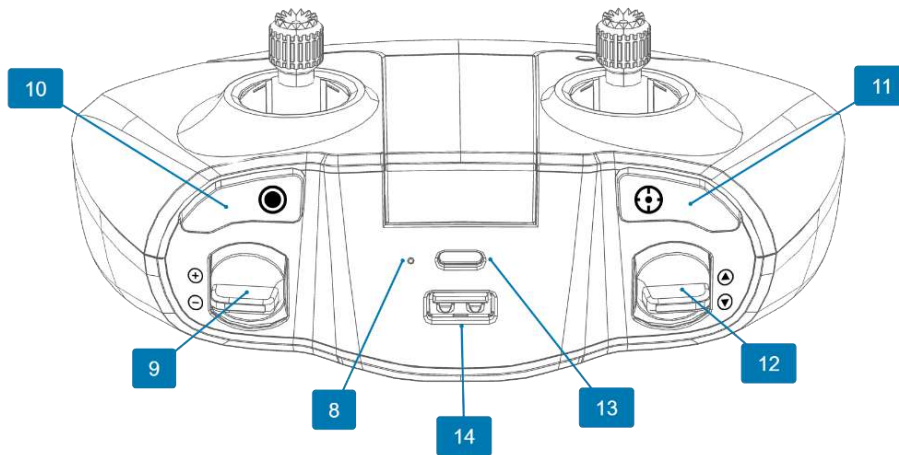
- 8. Thermographic camera
- 9. 21 MP telephoto camera

- 10. 21 MP wide angle camera
- 11. Battery extraction button

## Presentation of Skycontroller 3



- |  |  |
|--|--|
| 1. Left joystick                           | 5. Wi-Fi antenna   |
| 2. Right joystick                          | 6.  Take-off/Land button        |
| 3. Power on foldable arm and device holder | 7.  RTH (Return to Home) button |
| 4. Status LED indicator                    |  |



- 8. Charging LED
- 9. **Zoom** trigger. Down; zoom in. Up; zoom out
- 10. **Shutter** (take photo, start/stop filming)
- 11. **Optics reset**. Returns to no tilt, 1x zoom
- 12. **Tilt** trigger. Down; tilts down. Up; tilts up
- 13. USB – C charging port
- 14. USB – A device port

### LED status indicator color codes

When the Skycontroller 3 is powered on, its status LED indicator (number 4 on image) and its charging LED (number 8 on image) provide an instant visual indication:

#### Status LED indicator colors and behavior

	Flashing green	Skycontroller 3 update in progress
	Alternating light blue/dark blue	Connecting to ANAFI USA
	Flashing light blue	No drone configured or incorrect WPA key
	Steady dark blue	Connected to ANAFI USA
	Alternating purple/dark blue	Autonomous flight in progress
	Alternating red/any color	Low battery alert (ANAFI USA, Skycontroller 4, or both)


#### Charging LED colors and behavior

	Steady red	Charging
	Steady green	Charged

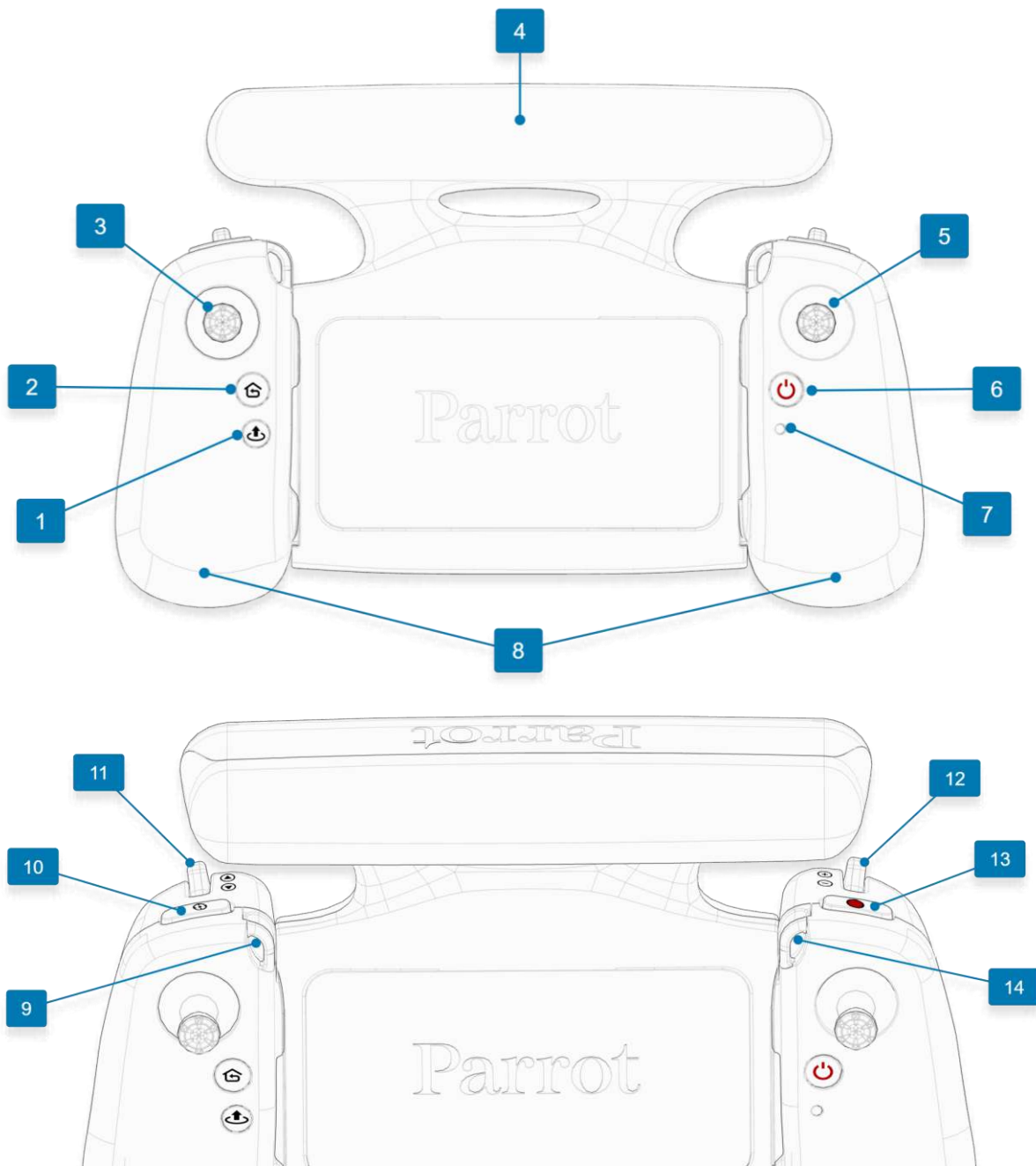







### Pairing ANAFI USA to a Skycontroller 3

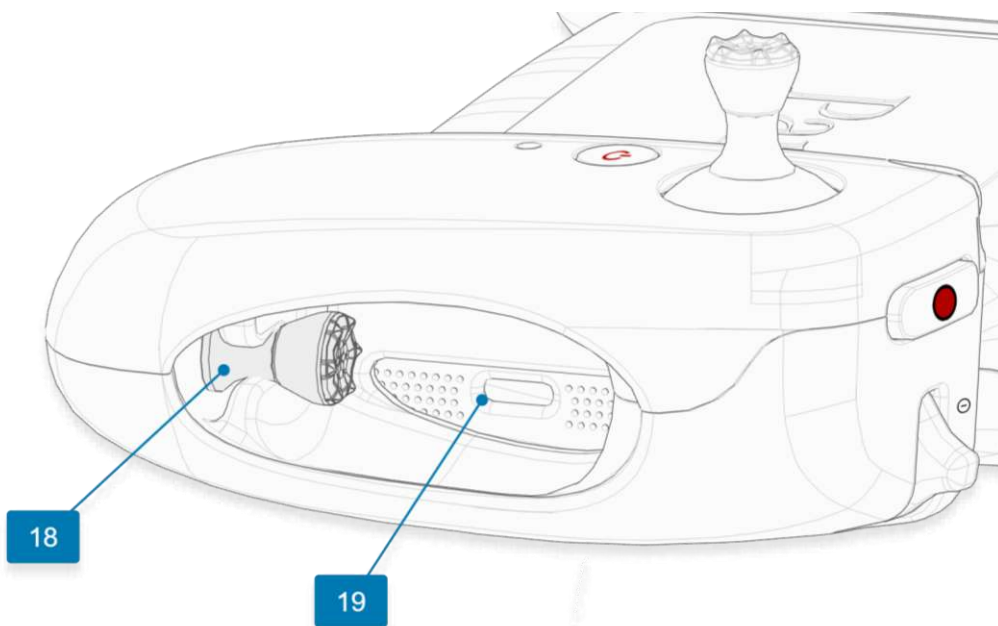
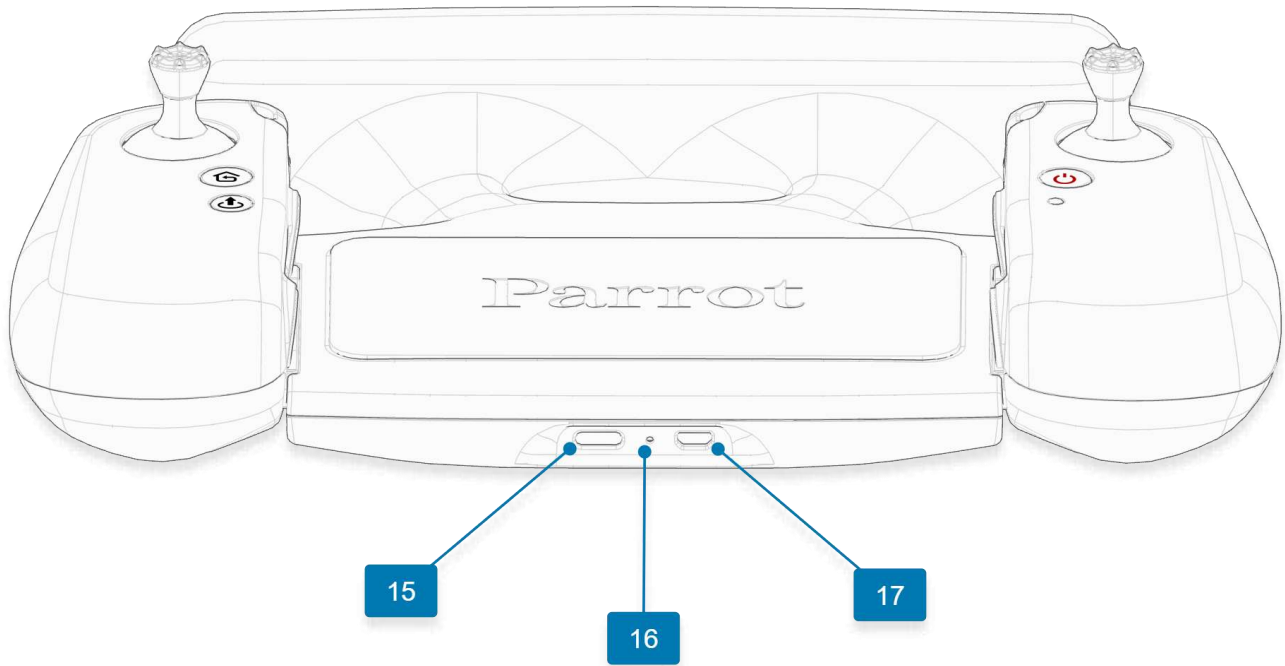
Follow this procedure to pair a drone and a controller for the first time, and to restore the lost pairing between a drone and a controller.

1. Verify that a compatible microSD card is inserted into ANAFI USA.
2. Press  **Power** on ANAFI USA.
3. Open the Skycontroller 3 to power it on.
4. Connect the drone and the controller with a USB cable (USB-A connection to the controller, USB-C connection to the drone).
5. The LED of the Skycontroller 3 briefly flashes green to indicate it acknowledges ANAFI USA.
6. Wait for synchronization between Skycontroller 3 and ANAFI USA (steady dark blue LED on the controller): Verify that the left trigger of the Skycontroller 3 activates the drone's gimbal to ensure the synchronization is complete.
7. Disconnect the controller from the drone.

## Presentation of Skycontroller 4






1.  Take-off/Land button
2.  RTH (Return to Home) button
3. Left detachable joystick
4. Wi-Fi antenna
5. Right detachable joystick
6.  Power button
7. Status LED indicator
8. Sliding handles
9. Left neck strap loop
10.  **Optics reset**
11. Gimbal tilt trigger
12. Zoom trigger
13.  **Media recording**
14. Right neck strap loop



- 15. USB – C charging port
- 16. Charging LED
- 17. Micro - HDMI port

- 18. Left spare joystick storage (1 of 2)
- 19. USB – C device connection port

**WARNING:** If you press  **Take-Off/Land**,  **RTH**, and  **Media Recording** simultaneously, the EMERGENCY MODE on ANAFI USA activates immediately. EMERGENCY MODE instantly cuts power to all motors on ANAFI USA, which causes the drone to fall from the sky.







Refer to the “[Flying](#)” section for more information.

**Note:** EMERGENCY MODE is available on Skycontroller 4 only.



### LED status indicator color codes

When the Skycontroller 4 is powered on, its status LED indicator (number 7 on image) and its charging LED (number 16 on image) provide an instant visual indication:

#### Status LED indicator colors and behavior



	Flashing green	Skycontroller 4 update in progress
	Alternating light blue/dark blue	Connecting to ANAFI USA
	Flashing light blue	No drone configured or incorrect WPA key
	Steady dark blue	Connected to ANAFI USA
	Alternating purple/dark blue	RTH in progress
	Alternating red/any color	Low battery alert (ANAFI USA, Skycontroller 4, or both)

#### Charging LED colors and behavior

	Flashing green	Charging
	LED off	Charged

### Pairing ANAFI USA to a Skycontroller 4

Follow this procedure to pair a drone and a controller for the first time, and to restore the lost pairing between a drone and a controller.

1. Verify that a compatible microSD card is inserted into ANAFI USA.
2. Press  **Power** on ANAFI USA.
3. Press  **Power** on the Skycontroller 4.
4. Connect the drone and the controller with a USB cable (USB-C connection to the USB-C port inside the right handle of the controller, USB-C connection to the drone).
5. The LED of the Skycontroller 4 repeatedly flashes green to indicate it acknowledges ANAFI USA, and to establish pairing protocols.
6. Wait for synchronization between Skycontroller 4 and ANAFI USA. The controller shows a steady dark blue LED.
7. Verify that the left trigger of the Skycontroller 4 activates the drone's gimbal to ensure the synchronization is complete.
8. Disconnect the controller from the drone.

### HDMI video sharing

Use a micro-HDMI to HDMI cable to connect the Skycontroller 4 to an external screen (or VR goggles). The screen displays ANAFI USA's video stream.

**Note:** External screens only display the drone's video stream, and none of the additional information provided by FreeFlight 6 USA. Operators can watch the drone's view on an external screen, while they navigate FreeFlight 6 USA menus (settings or dashboard) on the device associated to the Skycontroller 4.

To visualize thermal images through the HDMI port, you must have the settings defined to:

- Piloting HUD Media type: **Video**
- Piloting HUD Spectrum: **Thermal**
- Thermal settings: Thermal post-processing: **No**

Parrot recommends using a certified micro-HDMI to HDMI cable (not included in the box) to connect external pieces of equipment to the Skycontroller 4. Uncertified cables may impair the ecosystem's Wi-Fi performance.

## FreeFlight 6 USA offline update via APK file (Android users)

If for any reason you choose not to download or update FreeFlight 6 USA via the Play store, you can alternatively update the system via an APK file (.apk). This update method does not require an internet connection to your Android device.

Follow this procedure to update FreeFlight 6 USA via an APK file:

1. Obtain the **FreeFlight6Usa-release.apk** file from Parrot or your genuine Parrot reseller.
2. Copy the **FreeFlight6Usa-release.apk** file to your Android device's internal memory.
3. Open the file manager on your Android device.
4. Search for the **FreeFlight6Usa-release.apk** file that you saved in step 2.
5. Tap the **FreeFlight6Usa-release.apk** file, a popup appears which asks you to allow installation of unknown apps. You must enable your Android device to install third-party applications.
6. Tap **Install**. A window opens to notify you that the FreeFlight 6 USA application is installed.
7. Tap **Done**.

When you open the FreeFlight 6 USA application, a popup appears asking for authorization for the application to access your Android device. Select **Always open FreeFlight 6 USA when Skycontroller USA is connected**, then tap **OK**.

FreeFlight 6 USA is now up to date.

**Warning:** Ensure that you obtain the APK file from Parrot, or your legitimate Parrot reseller. Your Android device and personal data are more vulnerable to attacks from unknown apps. After you update FreeFlight 6 USA, Parrot recommends that you revert your Android device to the original setting which prevents you from installing unknown apps.

## Pre-flight checklist


### Transport & handling

- Always transport ANAFI USA in its hard case, safely positioned, with the gimbal's protection cover on.
- Always transport the Skycontroller safely in the relevant location in the hard case.
- Protect the battery from temperature extremes, both low and high. Try to keep the battery as close as possible to ambient temperatures.
- Always handle the ANAFI USA with care. Do not apply pressure to the drone and generally avoid touching the sensitive camera and gimbal.
- Always keep the hard case with the drone and battery in dry places.

### Equipment

- Ensure that you have downloaded the latest version of FreeFlight 6 USA, and that both your Skycontroller and your ANAFI USA have been updated with the latest versions of firmware.

**Important:** Updates are mandatory and must be performed systematically prior to any flight to ensure maximum performance and safety.

- Ensure that you have the correct USB cable to connect your Skycontroller and your device.
- Ensure that you insert a microSD card with enough free memory space into the drone.
- Ensure that you unfold all four foldable arms of the drone.
- Ensure that the propellers are clean, intact, and unobstructed.
- Ensure that both ANAFI USA's and Skycontroller's batteries are fully charged.
- Ensure that you always use genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use will void the warranty and impact safety requirements.
- Ensure that the drone's battery is securely installed on the drone's body.
- Ensure that the drone's gimbal protective cover is removed.
- Ensure that the drone's lenses are clean. If the lenses require cleaning, clean them before you press  **Power** on the drone. Hold the gimbal between two fingers so that you do not apply pressure to the mechanism. Gently wipe the lenses with a microfiber cloth.

### Regulations

- Ensure that drone use is permitted where you intend to fly.
- Check for potential restrictions regarding the use of Wi-Fi frequencies in the area where you intend to fly.



### Flight conditions

- Verify that the flying zone is safe and clear.
- Do not fly ANAFI USA over urban areas, or over restricted airspaces such as airports, train stations, power plants, national reserves, etc.
- Check the weather. Do not fly ANAFI USA in the fog, or in wind exceeding 15 m/s (33 mph).
- Due to the operating mode of its vertical camera and ultrasonic sensor, Parrot recommends you do not fly ANAFI USA over water, or other reflective surfaces, such as mirrors, glass, etc.

ANAFI USA has been designed to assist first responders and has no inbuilt no-fly zone limitations and can fly in the rain.

**Warning:** You must not use ANAFI USA at night unless special authorization has been granted. Always deploy ANAFI USA responsibly.


## Getting started

1. Charge the battery using the enclosed USB-A to USB-C cable and a USB-A power adapter. Charging times depend on the supply capacity of the adapter. Refer to the [“Battery charging”](#) section of this guide for more information. Parrot recommends you always run a full charge of your smart battery before flying ANAFI USA.
2. If you want to use the controller and enjoy the full ANAFI USA experience, charge Skycontroller.
3. Ensure that your flying zone is safe and clear.
4. To start the drone, place it on a flat horizontal surface and press  **Power**.
5. If you use Skycontroller 3:
  - A. Unfold the central part of the controller to power it on.
  - B. Wait for the steady dark blue light.
  - C. Connect your device to the controller using a USB-A cable.
6. If you use Skycontroller 4:
  - A. Press  **Power** for 3 seconds to power it on.
  - B. Wait for the steady dark blue light.
  - C. Connect your device to the controller using a USB-C cable.

**Note:** Parrot recommends you always fly ANAFI USA with Skycontroller 3, or Skycontroller 4, and a device, for the best flight experience.

7. If you decide not to use Skycontroller:
  - A. Connect your device to the Wi-Fi network of ANAFI USA, using the Wi-Fi settings card located inside the drone’s carrying case - SSID format: ANAFI USA-xxxxx.
  - B. FreeFlight 6 USA connects to ANAFI USA.
8. Update, Calibrate and Take-off
  - A. Systematically check for FreeFlight 6 USA, Skycontroller, and ANAFI USA software updates.

Refer to the [Release Notes ANAFI USA](#) available on the Parrot website, to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 6 USA App. If you are an offline user, you must contact your local Parrot Partner or Parrot Contact to obtain the .apk file to perform an offline system update. Refer to the [“FreeFlight 6 USA offline update via APK file \(Android users\)”](#) chapter for more information.


- B. Calibrate your ANAFI USA, your Skycontroller, or both, if required. Follow the instructions on your device’s screen.
- C. Verify that your flying zone is still safe and clear, and that no person or animal has approached or is approaching ANAFI USA.
- D. Stay at least 2 m (6 ft) from the drone, press  **Take-off/land** to start the flight operation.




## Taking off

### Ground take-off

Position ANAFI USA on a flat, even, and clear surface.

Press  **Power** on ANAFI USA, move at least 2 m (6 ft) away from ANAFI USA and check that the surroundings of the drone are clear.

Press  **Take-off/Land** on your Skycontroller, or tap the green **TAKE-OFF** box, on the screen of your device.

ANAFI USA takes off and stabilizes at 1 m (3 ft) from the ground, waiting for commands from the pilot.

### Hand launch

A hand launch procedure is more dangerous than a ground take-off. Be especially careful with the hand launch feature. It requires complete focus. Do not become distracted and stay aware of your surroundings.

**Warning:** DANGEROUS MANEUVER. RISK OF BODILY INJURY AND DAMAGE TO THE DRONE IN CASE INSTRUCTIONS ARE NOT FOLLOWED. LACERATION HAZARD. Do not touch the propeller blades during flight. Propeller blades can cause deep cuts if your fingers, or other body parts, come into contact with them. Keep the drone as far away from your face as possible.


**Note:** PARROT STRONGLY RECOMMENDS THAT YOU DO NOT PERFORM A HAND LAUNCH PROCEDURE INDOORS, DUE TO LOW STABILITY, AND INCREASED RISK.

Parrot recommends that you work as a team of two people: one person to perform the take-off procedure, while the other person focuses on flying the drone. This eases the pressure of having to multi-task.


Pay attention to the wind direction and speed. Do not face the wind. Keep yourself at a safe distance from the drone considering the possibility of drifting with the wind.

When you first open FreeFlight 6 USA, a hand launch tutorial reminds you of the following procedure. You can activate hand launch from this tutorial page.

You can also activate the hand launch option from **PREFERENCES > Interface** of FreeFlight 6 USA (refer to the "[PREFERENCES / interface](#)" section for more information).

Press  **Power** to power on ANAFI USA and position the drone on your flat, open hand. On the screen of your device, the green **TAKE-OFF** box is replaced by a blue **HAND LAUNCH** box.



Press  **Take-off/land** on your Skycontroller or tap the blue **HAND LAUNCH** box on the screen of your device. The drone's blades start to rotate slowly, and the screen displays a hand-launch animation.

Wait until the propellers' rotation speed stabilizes, then briefly and rapidly lift ANAFI USA up and forward with your open hand. ANAFI USA becomes airborne. It stabilizes and waits for commands from the pilot.

Only perform a hand launch procedure when there is no other launch alternative.

**Caution:** In environments with sand, you can use hand launch, instead of ground take-off to prevent sand from penetrating the motors.

### Deployment from a moving vehicle

Points of attention for the deployment of the drone from a moving vehicle


- Whenever possible, mobilize two operators for the deployment of the drone from a moving vehicle.
- If only one operator is available, favor the **Take-off from a moving vehicle** procedure.
- If required by FreeFlight 6 USA and whenever possible, perform the magnetometer calibration of the drone far away from any metallic mass.
- When preparing a deployment from a ship or an armored vehicle, always keep your powered-on drone in your hand, away from the floor of the ship or the roof of the vehicle.
- The GPS fix is not mandatory to deploy the drone from a moving vehicle, but it is always recommended.
- In the unlikely situation where the drone becomes disoriented after a launch or a take-off from a moving vehicle (uncontrolled rotation), quickly and firmly take back the commands of the drone in rotation and elevation (left joystick laterally and upward in default mode) to retrieve flight control.

### Hand launch from a moving vehicle


Parrot recommends mobilizing two operators for this procedure: one operator launches the drone while another operator controls the drone with both joysticks of the Skycontroller.

**Warning:** Be especially careful when hand launching ANAFI USA from a moving vehicle. It requires complete focus. Do not allow yourself to become distracted and stay aware of your surroundings.

Activate the hand launch option from **PREFERENCES > Interface** of FreeFlight 6 USA (refer to the [“PREFERENCES / Interface”](#) section of this guide for more information).

Press  **Power** to power on ANAFI USA and position the drone in the palm of the operator's hand. On the screen, the green **TAKE OFF** box has been replaced by a blue **HAND LAUNCH** box.

**Important:** Stabilize the speed and direction of the vehicle as much as possible. The maximum vehicle speed for this feature is 30 km/h in a straight line. Do not operate this feature in wind or downwind.

Press  **Take-Off/Land** on the Skycontroller or activate the launch directly from the blue **HAND LAUNCH** box on the screen. Motors and propellers start to rotate slowly, and an animation on screen confirms the activation of a hand launch.


When the propellers' speed has stabilized:

1. Briefly and rapidly lift ANAFI USA upward with your open hand, and toward a direction free of all obstacles.
2. Immediately push the left joystick of the Skycontroller (elevation) upward (default control mode) to give altitude to the drone's altitude.
3. If possible, monitor the behavior of the hovering drone for 10 to 30 seconds before beginning the mission, to confirm the convergence of all sensors' estimates.


### Standard take-off from a moving vehicle

**Warning:** Be especially careful when performing a standard take-off from a moving vehicle. It requires

complete focus. Do not allow yourself to become distracted and stay aware of your surroundings.

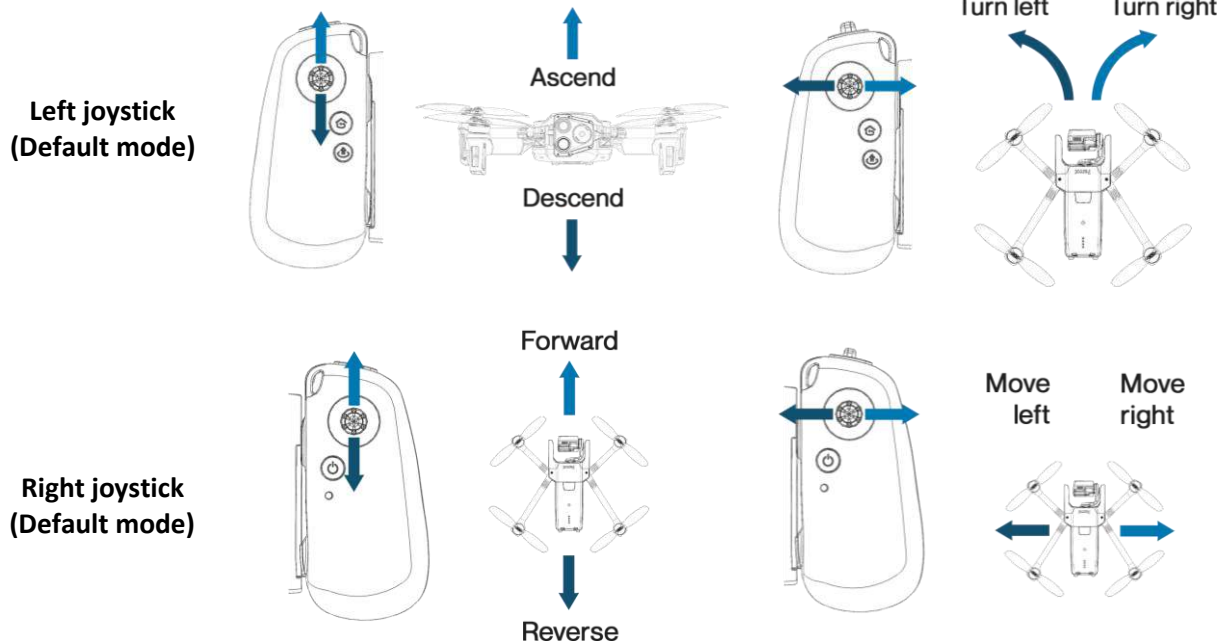
Press  **Power** to power on ANAFI USA and position the drone in the palm of your hand.

**Important:** Stabilize the speed and direction of the vehicle as much as possible. The maximum vehicle speed for this feature is 30 km/h in a straight line. Do not operate this feature in wind or downwind.

1. Press  **Take-off/Land** on Skycontroller, or activate the take-off directly from the green **TAKE OFF** box of the screen;
2. immediately push the left joystick of the Skycontroller (elevation) upward (default control mode) to give altitude to the drone;
3. If possible, monitor the behavior of the hovering drone for 10-30 seconds before beginning the mission, to confirm the convergence of all sensors' estimates.

Deactivate the hand launch option from **PREFERENCES > Interface** of FreeFlight 6 USA (refer to the "[PREFERENCES / Interface](#)" section of this guide for more information).

## Flying



**Note:** The images above show Skycontroller 4, however the controls are identical for Skycontroller 3.

You can modify ANAFI USA's controls through the PREFERENCES menu of FreeFlight 6 USA. Refer to the "[PREFERENCES / Controls](#)" section of this guide for more information.

As a safeguard measure, ANAFI USA is programmed to instantly cut its motors in case of impact on one of its propeller blades: always control your drone carefully.

**WARNING:** ANAFI USA features an EMERGENCY MODE (on Skycontroller 4 only). If you activate EMERGENCY MODE in flight, all motors immediately cut out and instantly forces the drone to crash to the ground. The EMERGENCY MODE meets the regulatory requirement for Specific category flights in French national standard scenarios S1 & S3. The use of this mode is at the user's responsibility.

To activate EMERGENCY MODE, press the following buttons on Skycontroller 4 simultaneously:

-  RTH
-  Take-off/Land
-  Media recording

### Optimal speeds

Refer to the "[PREFERENCES / Presets](#)" section of this guide for more information about the settings of the flight behavior of the drone. Among these settings, two precise values enable you to optimize either ANAFI USA's flight time, or the distance it can cover on a single battery.

### Optimal autonomy (flight time)

At full throttle, a 9° inclination angle (pitch) enables ANAFI USA to maintain a 6 m/s horizontal speed. This speed, maintained on a full flight, guarantees the longest autonomy for the drone.

### Optimal elongation (distance)

At full throttle, 22° inclination angle (pitch) enables ANAFI USA, at full throttle, to maintain a 12 m/s horizontal speed. This speed, maintained on a full flight, enables the drone to cover the longest distance, on a single battery.

## Wi-Fi link optimization

ANAFI USA’s ecosystem is designed to optimize, in real time, the Wi-Fi communications between the Skycontroller and the drone. By default, the ecosystem automatically selects the most efficient Wi-Fi channel available.

In urban environments, 5 GHz Wi-Fi channels typically suffer less interference than 2.4 GHz channels. Refer to the [“PREFERENCES / Network”](#) section of this guide for more information on Wi-Fi channel management and allowing automatic switching to 5 GHz channels.





To maintain an optimal Wi-Fi link between the remote control and the drone, remember to keep a clear line of sight between them, and always direct the antennas of the Skycontroller toward ANAFI USA.

Several FreeFlight 6 USA alerts enable you to react before a complete loss of Wi-Fi link. If the connection breaks down, ANAFI USA automatically initiates an RTH procedure. By default, the drone flies upward to 30m and starts flying toward its take-off position.

In most cases, this behavior enables a very fast recovery of the Wi-Fi link between the remote control and the drone, and pilots regain full control of the flight.

Refer to the [“Returning home”](#), [“Smart RTH”](#), [“Coordinates and advanced RTH settings”](#) and [“PREFERENCES / Safety”](#) sections of this guide for more information on RTH configuration.

Refer to the following table for FreeFlight 6 USA Wi-Fi statuses and the corresponding icons.

	The Wi-Fi link is perfect.
	The Wi-Fi link is good.
	The Wi-Fi link is poor.
	The Wi-Fi link is about to lose connection.

**Warning:** Never fly your drone out of your direct line of sight unless special authorization has been granted.

## Returning home

To return ANAFI USA to its take-off position, press  **RTH** on your Skycontroller, or tap the  **RTH** on your screen.

ANAFI USA rises to 30 meters higher than the take-off point height and returns to hover over its take-off position.

**Note:** The default setting is 30 meters over the take-off point, but you can configure the height to between 20 and 100 meters through FreeFlight 6 USA.

Refer to the “[PREFERENCES / Safety](#)” section of this guide for more information on RTH configuration.

## Precise Home Setting

When flight conditions are optimal at take-off, ANAFI USA can set a **PRECISE HOME** with its vertical camera. In that case, a pop-up on the screen of FreeFlight 6 USA confirms a precise home has been set, and the home icon of the minimap turns green.



*Android “Precise Home Set” pop-up*

## Smart RTH

ANAFI USA features a Smart RTH capability which considers its altitude and distance from its take-off point. The drone computes in real time, the battery power it requires to return home, or to the pilot, or to a custom location (refer to the “[PREFERENCES / Safety](#)” of this guide for more information).

When the battery charge level becomes low, FreeFlight 6 USA alerts you that it will enter Smart RTH mode.

If you feel confident you can return ANAFI USA to its take-off point, or if you wish to land it at a different location, you can cancel the Smart RTH directly from the alert pop-up.

## Managing coordinates

ANAFI USA features a fly-by-coordinates function which allows you to instantly display, reuse and share any coordinates in the surroundings of your drone, or the GPS position of your drone itself. This is especially useful to precisely locate any point of interest or person ANAFI USA has detected.

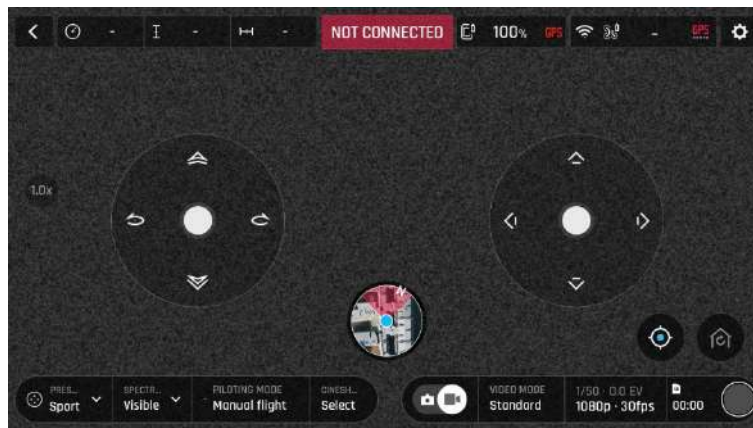
This section explains how to access coordinates on the FreeFlight 6 USA app map, in flight or to prepare a flight.

By default, coordinates are displayed on the FreeFlight 6 USA app map. They can be set as:

- latitude and longitude (LATLNG: default value)
- MGRS (Military Grid Reference System: NATO's geocoordinate standard)
- UTM (Universal Transverse Mercator)
- DMS (degree, minute, second – of arc)

Refer to the [“PREFERENCES / Interface / Coordinates systems”](#) section of this guide for information on selecting a coordinates system.

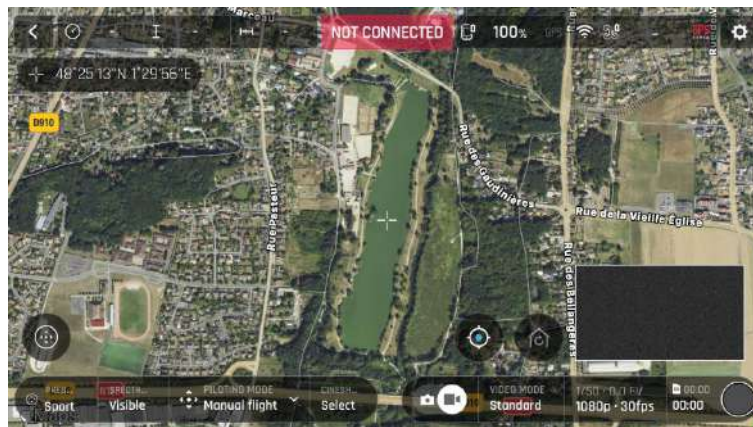
In the following example, the coordinates system is set as DMS. The drone is offline, and the device is connected to local Wi-Fi.



*Offline FreeFlight 6 USA interface: tap minimap to open full screen (iOS)*

Tap **FLY** from the FreeFlight 6 USA homepage.

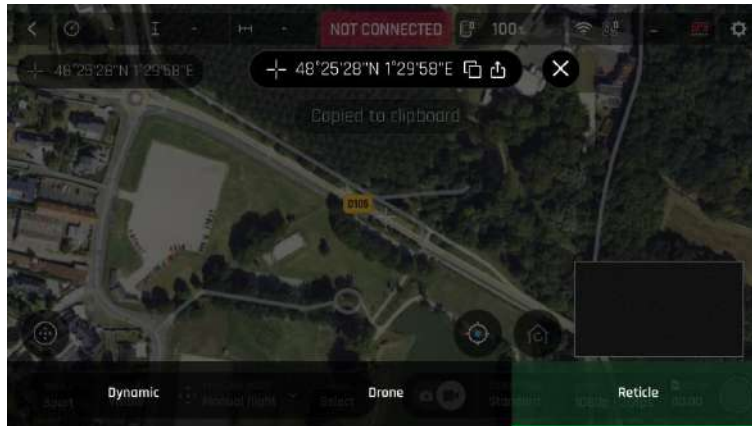
Tap the minimap on the bottom center of the offline interface to access the full screen map.




*Reticle (crosshair) at the center of the screen, coordinates top left (iOS)*

By default, “Reticle” (crosshair at the center of the screen) coordinates are displayed on the top left of the screen.

Move the map around and zoom in to pinpoint any spot, then tap the coordinates box to activate coordinates options.




*Coordinates options, copy activated (iOS)*

Tap  **Copy** to copy coordinates to clipboard – and reuse as custom RTH point, for instance. Note the faint **Copied to clipboard** notification on the latest screen capture. Notification position and format differ from one device operating system to another.

**Tap an option at the bottom of the screen to select**

<b>Reticle</b> (default)	displays center of the map coordinates
<b>Drone</b>	displays drone coordinates (when online), or last known position (when offline)
<b>Dynamic</b>	displays drone, POI or WP coordinates (autonomous or assisted flights only*)

\*Refer to the [“Map-based flying modes”](#) section of this guide for more information.

Tap  **Share** from coordinates options to open your device’s sharing options, like on the screenshot.

Tap **X** to exit coordinate options back to the full screen map.

### Advanced RTH settings


The custom RTH option relies on managing coordinates, described in the previous section.


Activate advanced RTH settings through the **Safety Preferences** of FreeFlight 6 USA (refer to the [“PREFERENCES / Safety”](#) section of this guide for more information).

There are two advanced RTH options: **Pilot**, and **Custom**.

**Important:** By activating advanced RTH features, the drone might not be able to reach its destination in case of low battery, if you select return to **Pilot**, or a **Custom** position. Parrot will not be held responsible in the event that the drone lands in a different location.

### Pilot RTH

When you select the **Pilot** advanced RTH option, ANAFI USA returns to the GPS position of the Skycontroller at the exact moment an  **RTH** button is activated, or to the last known coordinates of the controller, in case it has lost GPS synchronization.

For this reason, we recommend ANAFI USA pilots remain in the same location, after they have activated an  **RTH** button, when in **Pilot** advanced RTH mode.

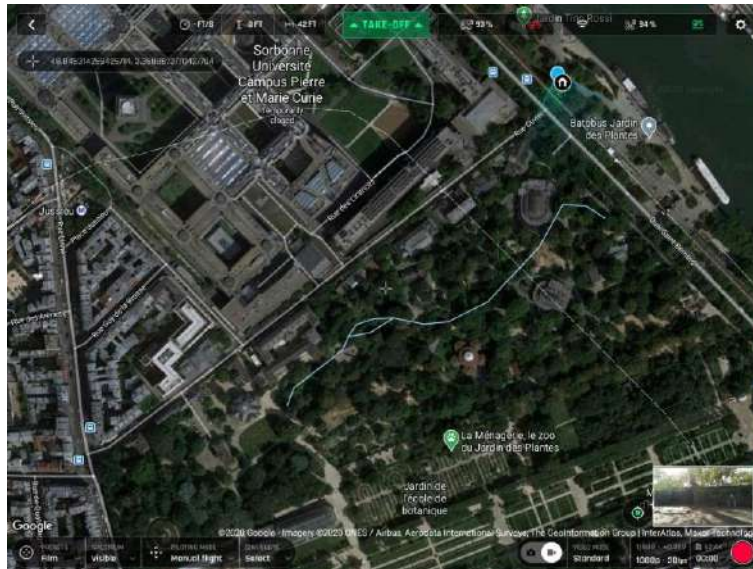
### Custom RTH

When you activate the **Custom** advanced RTH option, set up ANAFI USA for a flight and it has a GPS synchronization, the current position of the drone appears in the “Custom point” field by default.



There are two ways to change this custom point.

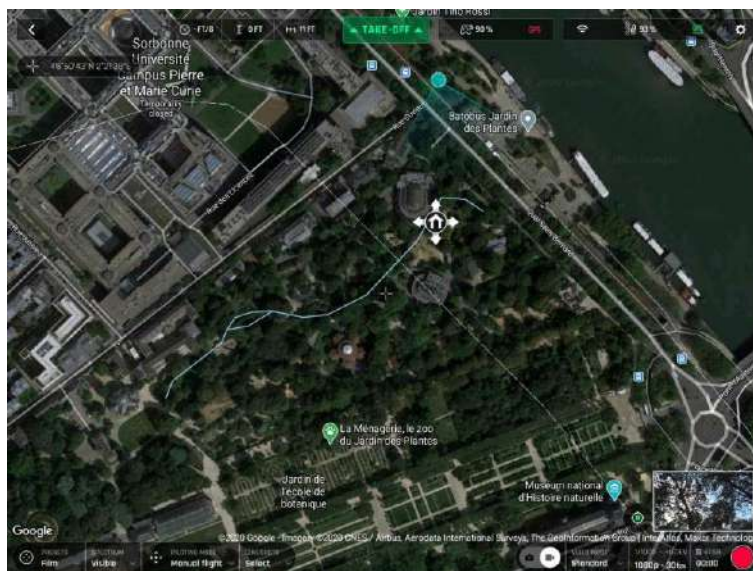
- Paste the coordinates you copied from the map of FreeFlight 6 USA – refer to the earlier section of this guide.
- If you set up your drone for a flight, apply the following simple procedure to move the **Home** icon directly on the map of FreeFlight 6 USA.



*Initial home, at flight setup (Android tablet)*

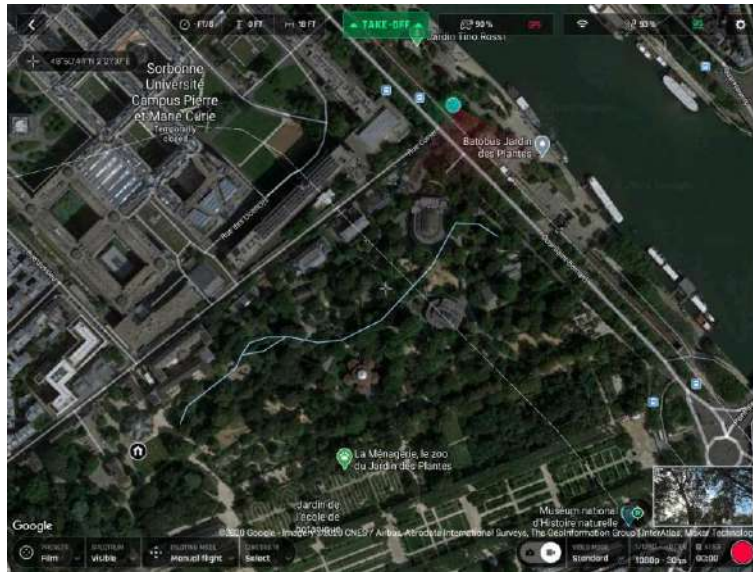
The **Home** icon appears close to the drone icon, or exactly over the drone icon if the 1<sup>st</sup> GPS fix at power up was excellent, like in our example. The blue dot shows the position of the controller which is typically the pilot.

Tap the **Home** icon to activate it, then drag and drop it to your desired RTH point.



*Home icon activated, ready to be dragged and dropped (Android tablet)*


In our example, we set up for a flight at a corner of a park, and planned an RTH over an open area, close to the center of the same park.



*Custom RTH point set (Android tablet)*

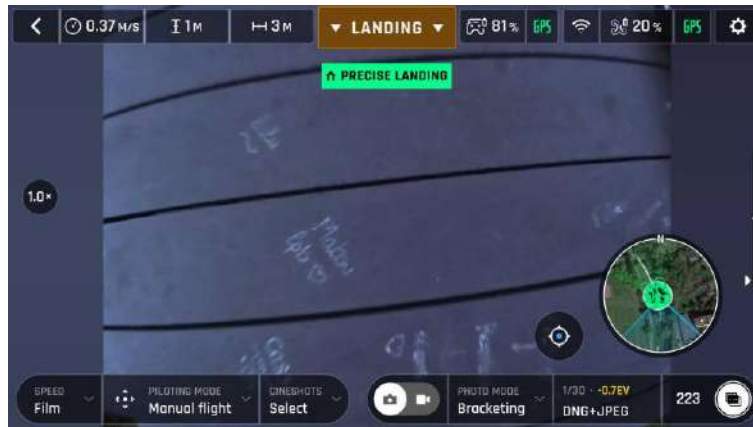
Access Safety Preferences again and note the Custom point coordinates have been updated.

## Landing

Fly ANAFI USA directly over a flat, even, and clear surface, then press  **Take-off/Land**, or tap the orange **LAND** box on the screen of your device.



The orange **LAND** box changes to **LANDING**. ANAFI USA lands.



*Precise Landing, Android*

## Recovery from a moving vehicle

**Warning:** Be especially careful when recovering ANAFI USA from a moving vehicle. It requires complete focus. Do not allow yourself to become distracted and stay aware of your surroundings. Always wear a strong glove to recover ANAFI USA

Parrot recommends mobilizing two operators for this procedure: one operator pilots the drone, the second operator recovers ANAFI USA.

Before performing a drone recovery, reduce and stabilize the vehicle's speed as much as possible.

The pilot must present the rear of ANAFI USA on the side of the vehicle where the recovery operator is waiting for it.

To do so, the pilot must synchronize the lateral speed of the drone with that of the vehicle, and the altitude of the drone with that of the hand of the recovery operator.

When the drone is within the recovery operator's reach, open hand, palm facing upward, he grabs the battery of the drone, from the bottom, under the drone's arms, between the thumb and the four other fingers.

Performing a quick wrist motion, the recovery operator turns the drone upside-down. ANAFI USA motors cut instantaneously.

## Hand landing

A hand landing procedure is more dangerous than a ground landing. Be especially careful with the hand land feature. It requires complete focus. Do not become distracted and stay aware of your surroundings.

**Warning:** DANGEROUS MANEUVER. RISK OF BODILY INJURY AND DAMAGE TO THE DRONE IN CASE INSTRUCTIONS ARE NOT FOLLOWED. LACERATION HAZARD. Do not touch the propeller blades during

flight. Propeller blades can cause deep cuts if your fingers, or other body parts, come into contact with them. Keep the drone as far away from your face as possible. Only attempt a hand landing on a stable surface, with no obstacles in the immediate vicinity.

**Note:** PARROT STRONGLY RECOMMENDS THAT YOU DO NOT PERFORM A HAND LANDING PROCEDURE INDOORS, DUE TO LOW STABILITY, AND INCREASED RISK.


Do not attempt a hand landing in wind strong enough to make the drone fight to hold its hovering position.

Drone GPS synchronization is mandatory for a successful hand landing.

Let the drone do the work. Do not forcefully grab the drone while it is hovering.

Parrot recommends that you work as a team of two people: one person to perform the hand landing procedure, while the other person focuses on flying the drone. This eases the pressure of having to multi-task.

Pay attention to the wind direction and speed. Do not face the wind. Keep yourself at a safe distance from the drone considering the possibility of drifting with the wind.

Fly ANAFI USA at least 50 cm directly over your open hand then press  **Take-off/Land** or tap the orange **LAND** box on the screen. ANAFI USA lands on your hand.

Only perform a hand landing procedure when there is no other landing alternative.

**Caution:** In environments with sand, you can use hand landing, instead of ground landing to prevent sand from penetrating the motors.

## Replacing propeller blades

Propeller blades are instrumental for flight integrity, and they are delicate pieces of equipment. Even minor contacts with external elements, such as walls, tree branches, etc., can damage their structure. Damage is not necessarily visible.

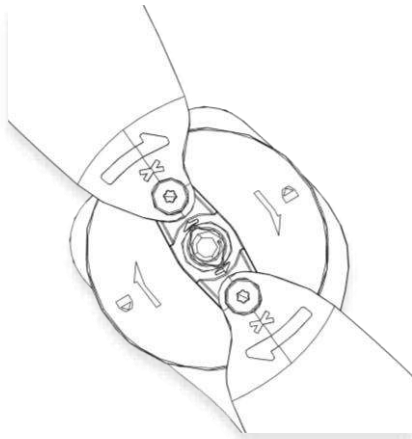
Parrot recommends you immediately replace propeller blades if they sustain such a contact.

**Note:** ANAFI USA propeller blades can be replaced instantly without tools.

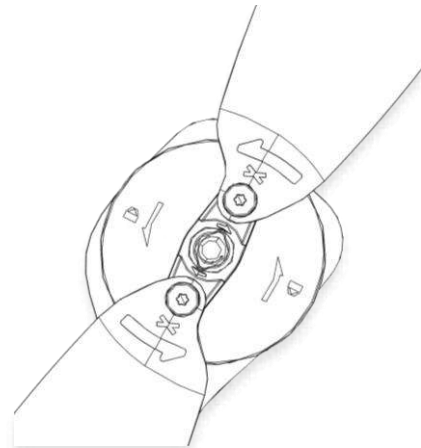
To replace a propeller blade:

1. Unfold the arm that supports the blades which require replacement.
2. Hold the motor (round rotating part) of the propeller between your left thumb and index finger.
3. Unfold the blades and pinch the part which screws onto the motor, between the blades, with your right thumb and index finger.

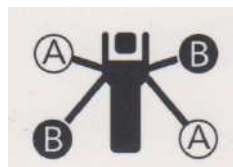
**A. blades:** unscrew used/damaged A blades (Front left & rear right) counterclockwise and screw new ones clockwise.



**B. blades:** unscrew used/damaged B blades (Rear left & front right) clockwise and screw new ones counterclockwise.




Verify that your blades respect the following diagram before setting up ANAFI USA for its next flight.



## Smart LiPo Battery

One smart battery comes preinstalled on the ANAFI USA. You can charge the smart battery when installed on ANAFI USA, or when removed from ANAFI USA. If you remove the battery, you must reinstall it in the same orientation. Ensure that you do not install the battery upside down as it can expose the battery and the drone to irreparable electrical damage. Always use genuine Parrot smart batteries. Non-genuine batteries are forbidden, and their use will void the warranty and impact safety requirements.

**Important:** The LEDs and  **Power** button face up in the correct orientation.

**Important:** Do not apply pressure or touch the drone's gimbal when you handle ANAFI USA

**Note:** LiPo batteries gradually lose capacity after 300 charge/discharge cycles.

### Battery removal

To remove the smart battery from the drone, unfold the rear arms of ANAFI USA. Set the drone on a flat and even surface and press the push-button which connects the battery to the body of the drone with your thumb. Gently slide your thumb and the battery toward the back of ANAFI USA. When the hook of the push-button is disengaged from the body of the drone, lift the battery away from ANAFI USA.

### Battery installation

To install the smart battery on the drone, unfold the rear arms of ANAFI USA. Set the drone on a flat and even surface and position the battery's three hooks into the drone's corresponding slots. Place your middle finger on the Parrot logo of ANAFI USA and your thumb on the back of the smart battery. Squeeze your fingers together until you feel and hear the battery clicking into the body of the drone.

### Battery charging

To charge the smart LiPo battery, use the enclosed USB-A to USB-C cable to connect the battery to its enclosed charger. Alternatively, this cable enables you to charge the battery from:

- a tabletop or laptop computer's USB-A port.
- a power bank's USB-A port.

#### Indicative full charging times at 20°C

Enclosed charger:	between 200 and 240 minutes
A computer's/ power bank's USB-A port:	between 300 and 350 minutes

ANAFI USA's smart battery can also be recharged through a Power Delivery adapter or charger (USB-PD standard), using a USB-C to USB-C cable (not included in the box). In that configuration, full charging time of the battery can be reduced to 115 minutes.

**Important:** Parrot does not recommend ANAFI USA users to invest in a USB-PD power bank, as not all of them support USB-C to USB-C charging of ANAFI USA's battery. Due to the nature of the USB-C technology, some USB-PD power banks recharge on ANAFI USA's smart battery, rather than the other way around.

**Warning:** Other generic USB chargers may be used provided that they are certified according to the country of use, and have the applicable rating/specification. Performance and warranty are only guaranteed when using the genuine charger included in the Parrot drone system.

When ANAFI USA’s smart LiPo battery is plugged into a power source and charging, its 4 LEDs indicate in real time the charge level:

LED 1	LED 2	LED 3	LED 4	Charge Level
				0 - 25% charged
				25 - 50% charged
				50 - 75% charged
				75 - 100% charged
				Fully charged

When the battery is not installed on ANAFI USA, you can check its charge level at any time by pressing the battery **Power** button:

LED 1	LED 2	LED 3	LED 4	Charge Level
				0 - 25% charged
				25 - 50% charged
				50 - 75% charged
				75 - 100% charged

When the battery is installed on the drone, and when ANAFI USA is powered on, the number of steady LEDs enables you to estimate your remaining flying time:

LED 1	LED 2	LED 3	LED 4	Remaining flight time
				less than 8 minutes
				8-16 minutes
				16-24 minutes
				24-32 minutes

**Battery update**

ANAFI USA smart batteries can be updated, like the drone itself, its controller and its controlling software FreeFlight 6 USA. When a battery update is available with a FreeFlight 6 USA release, a message appears in the app. Follow the in-app instructions to update your battery.

**Warning:** Keep your battery plugged into a power supply throughout the software update procedure. Repeat the procedure with all your batteries.

## Battery care and safety

ANAFI USA's smart battery features a wintering mode, designed to increase its durability and facilitate its care. Ideally, when not in use for a prolonged period, batteries should be stored half-charged. When not in use for 10 days, ANAFI USA's smart battery discharges itself, if required, to 65% charge, over a 48h period.

After a maximum of 12 days without use, the smart battery enters hibernation with a charge level which never exceeds 65%. If you leave your ANAFI USA battery for 12 days, the power button does not activate the charge level LED indicators. You must charge the battery to exit the wintering mode and start operating as described in the earlier paragraphs. This behavior preserves the battery over time. Parrot recommends you always run a full charge of your smart battery before flying ANAFI USA.


ANAFI USA's smart battery must be handled, transported and stored with care:

- never leave a battery unattended while charging;
- never expose a battery to extreme temperatures, either hot, nor cold;
- never charge a battery which is still warm from use (wait for at least 20 minutes);
- never use or recharge a damaged or swollen battery;
- always store your battery in a dry, ventilated place, at a temperature close to 20°C;
- always carry your battery in a fire-retardant bag or case (unless it is installed on ANAFI USA: it can then be transported with the drone, inside its carrying case).

**Note:** ANAFI USA's smart battery can only charge in ambient temperatures between +10°C and +45°C. Flying time is reduced if you use ANAFI USA in temperatures approaching -10°C. The ideal operating temperature of the smart battery is 20°C. Ensuring that the smart battery remains as close as possible to 20°C before starting a flight minimizes the reduction in the smart battery's capacity in cold environments.

If the behavior of your battery is not consistent with the information in this section, and if the battery does not power your ANAFI USA, you must hard reset your battery.

To perform a battery hard reset:

1. Plug the battery into a power source with the enclosed cable,
2. Press the  **Power** button for 15 seconds (regardless of the behavior of the LEDs).

The hard reset is successful if the battery's LEDs flash quickly, one after the other, alternating green and red.

## Battery information

To access the **Battery information** interface on FreeFlight 6 USA, tap the **Drone** icon on the main menu, then tap **BATTERY INFORMATION**. The **Battery information** interface provides the status of the following battery characteristics:

- **Serial number**
- **Software version**
- **Hardware revision**
- **First usage**
- Individual cell voltage (mV)
- Charge level (%)
- Temperature (°C)
- Total **Voltage** (V)
- **Total Capacity** (mAh)
- **State of health** (%)
- **Cycles**



## MicroSD card and media management

This section explains how to install a microSD card inside ANAFI USA and how to retrieve your media from the microSD card.

### Installing a microSD card

To install a microSD card into its slot, you must remove the battery from the drone. Refer to the [“Battery removal”](#) section of this guide for more information.

When you remove the battery from the body of the drone, you uncover the microSD slot, which is protected by a small metal lock.

Slide the metal lock with a finger toward the back of ANAFI USA to open it, you will feel a slight click. Lift the front part of the lock to open the slot. Position the microSD card into its keyed slot. Ensure that the metal contacts of the card are facing down and set on the contacts of the drone. The shortest side of the microSD card must face toward the back of the drone.

Tilt the metal lock over the microSD card. Press a finger gently on the lock and slide it toward the front of ANAFI USA to close and lock it, you will feel a slight click. A closed lock icon and an arrow, located on the right of the microSD slot, confirm the way you must slide the lock to close it.

### Retrieving photos and videos

Use a microSD to SD card adapter to transfer videos and photos you have taken with ANAFI USA to your computer. Slide the microSD card into the adapter and use the adapter how you would use any other SD card. Access your videos and photos through a card reader or the SD card slot of your computer. Copy your videos and photos to the hard drive of your computer to edit, store, and manage your media.


**Tip:** Parrot recommends you backup your photos and videos, and you empty your microSD card after each flight, to ensure you always have available memory space to capture new still or moving images.

### Compatible microSD cards

Refer to Parrot online documentation for an updated list of compatible microSD cards.

### Direct media retrieval (drone to computer)

You can also retrieve your media directly from ANAFI USA, without extracting the microSD card.

Use an enclosed USB-A to USB-C cable to connect the drone (USB-C) to a USB-A port of your computer. Press  **Power** to power on ANAFI USA.

ANAFI USA mounts as an external drive. Copy your media from the DCIM/100MEDIA directory to your computer’s hard drive.

When you finish managing your media, eject ANAFI USA as any other external drive.

**Note:** When plugged in to a computer and powered on, ANAFI USA’s battery discharges itself. You must recharge your smart battery after you retrieve your media, even if the battery was fully charged when you began the procedure.

### FreeFlight 6 USA Gallery

Finally, you can manage your media and download them directly from ANAFI USA to your device with the Gallery of FreeFlight 6 USA.

The Gallery also lets you:

- preview videos, without downloading them to your device;
- create panoramas (refer to the "[Creating panoramas](#)" section of this guide for more information);
- format a microSD card;
- encrypt a microSD card (refer to the next sections of this guide for additional details).

To access the Gallery from the homepage of FreeFlight 6 USA, either tap the **microSD card** box, on the top bar of the interface, or tap the **Gallery** box, at the center of the interface.

If ANAFI USA is powered on and connected to the device (directly or through the Skycontroller, the FreeFlight 6 USA Gallery displays the microSD card media, by default.

Tap any media to preview it.

Tap any green media download box to transfer the corresponding media to your device.

Access the media you have downloaded to your device by tapping the Local box, at the top of the interface.

### MicroSD card formatting

Tap the **Format SD card** button of the SD Card screen of FreeFlight 6 USA Gallery to **Select the type of formatting** options. Select one of the following options:



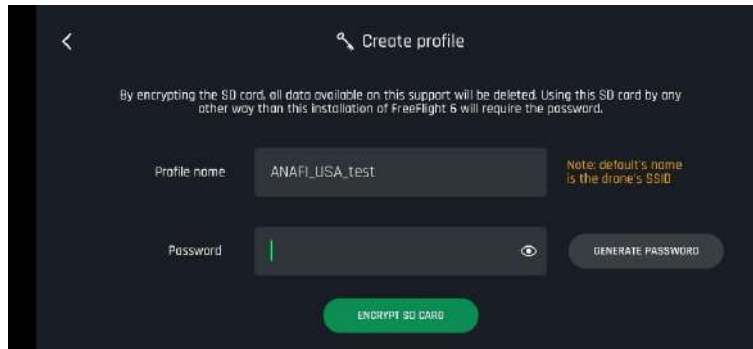
Confirm your selection from the next screen to launch the formatting.

**Important:** Both options delete all microSD card contents, including flight data.

## MicroSD card encryption

Encrypting a MicroSD card implies its formatting and the loss of all data present on the card memory.

Tap the **Encrypt SD card** button of the SD Card screen of FreeFlight 6 USA Gallery to access the encryption profile creation page.

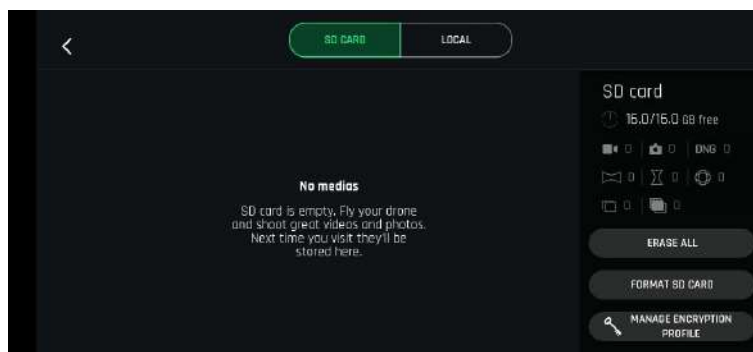


Confirm or type a profile name.

Type your own Password or tap **GENERATE PASSWORD**.

Tap **ENCRYPT SD CARD** to launch encryption.

The following screen confirms an Encryption profile has been applied to the SD card:



A MicroSD card encrypted by ANAFI USA is unreadable without the associated Encryption profile.

The Encryption profile is held by the version of FreeFlight 6 USA, thus by the device with which the encryption has been carried out.

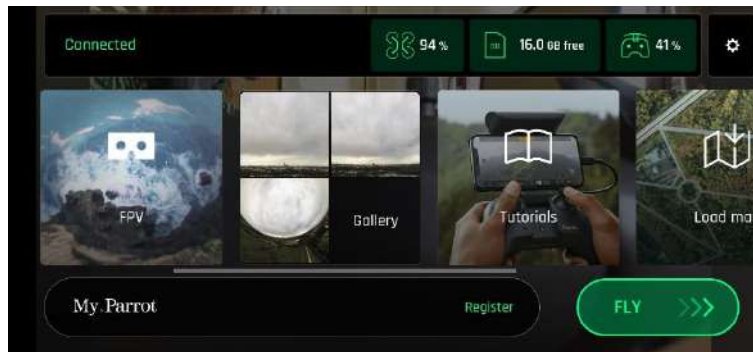
Consequently, if a drone is destroyed, its MicroSD card can only be decrypted through another ANAFI USA drone paired to a Skycontroller associated to the device holding the instance of FreeFlight 6 USA with which the encryption was performed.

## Introducing FreeFlight 6 USA

The HUD (heads-up display) interface of FreeFlight 6 USA enables you to access all the features of ANAFI USA, from the screen of your device.

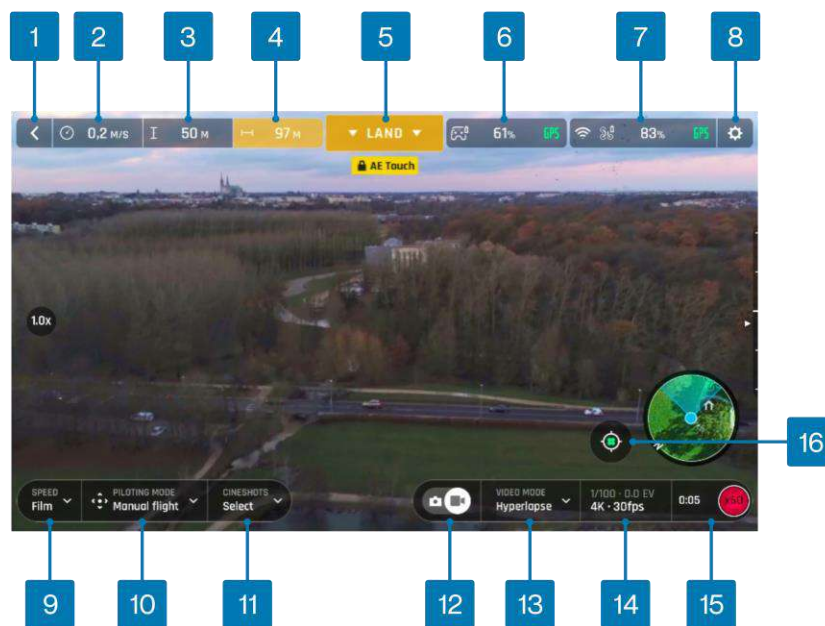
This section explores FreeFlight 6 USA functions, starting with a presentation of the top and bottom bars of the HUD (iOS and Android).

Access the HUD by tapping **FLY** on the bottom right of the homepage of FreeFlight 6 USA

















Android FreeFlight 6 USA homepage

### Presentation of the HUD




- |  |  |
|--|--|
| 1. Back to homepage                        | 9. Speed box   |
| 2. Drone ground speed                      | 10. Piloting mode box  |
| 3. Drone height relative to take-off point | 11. Cineshots box  |
| 4. Drone horizontal distance from pilot    | 12. Photo/video toggle   |
| 5. Next available action                   | 13. Photo/Video mode box                                       |
| 6. Controller box (charge and GPS sync)    | 14. Photo/Video settings box                                   |
| 7. Drone box (charge and GPS sync)         | 15. Soft shutter button and timer/Number of media (Photo mode) |
| 8. Preferences                             | 16. Map center toggle (Pilot/Drone)                            |

**Overview of current drone Piloting, Cineshots, Dronies, Photo and Video modes:**

<b>Piloting modes:</b>	<ul style="list-style-type: none"> <li> Manual flight</li> <li> Cameraman</li> <li>Follow Me</li> <li>Smartdronies</li> <li>FPV</li> <li>Flight Plan</li> <li>Touch &amp; Fly</li> </ul>	<b>Cineshots:</b>	<ul style="list-style-type: none"> <li>360° (left &amp; right)</li> <li>Reveal (30 &amp; 60m)</li> <li>Spiral (30 &amp; 60m)</li> <li>Epic (30 &amp; 60m)</li> </ul>
<b>Video modes:</b>	<ul style="list-style-type: none"> <li> Standard</li> <li> Cinema</li> <li> Hyperlapse</li> <li> High-Framerate</li> <li> Slow Motion</li> </ul>	<b>Smartdronies &amp; POI Dronies:</b>	<ul style="list-style-type: none"> <li>Orbit</li> <li>Parabola</li> <li>Dolly Zoom</li> <li>Boomerang</li> </ul>
<b>Photo modes:</b>	<ul style="list-style-type: none"> <li> Single</li> <li> Timer</li> <li> Burst</li> <li> Bracketing</li> <li> Panorama</li> <li> Timelapse</li> <li> GPS Lapse</li> </ul>	<b>Follow Me Dronies:</b>	<ul style="list-style-type: none"> <li>Orbit</li> <li>Parabola</li> <li>Tornado</li> <li>Boomerang</li> </ul>


**Tip:** Ensure that both GPS icons are green (and not red) before you make ANAFI USA take off. This means that your device and ANAFI USA are both synchronized to enough GPS, Glonass and Galileo satellites to optimize the stability of the drone, especially at higher altitudes.

## Preferences





Tap  Settings on the top right of the homepage, or the HUD, to access **PREFERENCES**. Preferences enable you to fine-tune ANAFI USA to customize it to your piloting and filming styles. Access Preferences submenus from the tiles on the left of the screen.

For all items, default values (DV) are marked in bold characters.


### Controls

The  **Controls** preferences set the way the Skycontroller behaves. It also enables you to activate the **Hand-launch** option.






Tap an item option to select it. When you select an option, the icon turns from white to green.

 <b>Controls PREFERENCES</b>	
<b>Control mode</b>	<b>CLASSIC</b> / ARCADE (only available in flight)
<b>Options:</b>	
 <b>Inverse joys</b>	<b>OFF</b> / ON
 <b>Special</b>	<b>OFF</b> / ON
 <b>EV Trigger</b>	<b>OFF</b> / ON
<b>Hand-launch</b>	<b>NO</b> / YES

**Note:** If you activate the **EV Trigger**, you control the EV (exposure value) directly from the zoom (right) trigger of the Skycontroller (refer to the "[Presentation of Skycontroller 3](#)" or the "[Presentation of Skycontroller 4](#)" section of this guide for more information). With this setting, you can manually modify your EV from -3.0 to +3.0 by increments of 0.3, which automatically impacts the shutter speed ("s" value) of the camera.

Tap **RESET ALL CONTROL PREFERENCES** to reset  **Controls** preferences to the default values.

### Presets

The  **Presets** preferences allow you to adapt the flight behavior of ANAFI USA for the four modes:  
-  **FILM**,  **SPORT**,  **CINEMATIC** and  **RACING**

 <b>Presets PREFERENCES</b>	
<b>Global reactivity</b>	1% to 100% (DV: <b>100%</b> for <b>FILM</b> , and <b>SPORT</b> ; <b>15%</b> for <b>CINEMATIC</b> ; <b>30%</b> for <b>RACING</b> )
 <b>Gimbal:</b>	
<b>Horizon</b>	<b>FIXED</b> / <b>DYNAMIC</b> (DV: <b>FIXED</b> for <b>FILM</b> , and <b>SPORT</b> ; <b>DYNAMIC</b> for <b>CINEMATIC</b> , and <b>RACING</b> )
<b>Camera tilt speed</b>	1°/s to 180°/s (DV: <b>20°/s</b> for <b>FILM</b> , <b>SPORT</b> , and <b>RACING</b> ; <b>10°/s</b> for <b>CINEMATIC</b> )

⚙️ Flight:	
<b>Banked turn</b>	NO / YES (DV: <b>YES</b> for <b>FILM</b> , <b>CINEMATIC</b> & <b>RACING</b> ; <b>NO</b> for <b>SPORT</b> )
<b>Inclination</b>	1°/s to 40°/s (DV: <b>7°/s</b> for <b>FILM</b> ; <b>20°/s</b> for <b>SPORT</b> , and <b>CINEMATIC</b> ; <b>25°/s</b> for <b>RACING</b> )
<b>Vertical speed</b>	0.1m/s to 4m/s (DV: <b>1.4m/s</b> for <b>FILM</b> ; <b>4m/s</b> for <b>SPORT</b> ; <b>2.4m/s</b> for <b>CINEMATIC</b> ; <b>3m/s</b> for <b>RACING</b> )
<b>Rotation speed</b>	3°/s to 200°/s (DV: <b>40°/s</b> for <b>FILM</b> , and <b>RACING</b> ; <b>80°/s</b> for <b>SPORT</b> ; <b>20°/s</b> for <b>CINEMATIC</b> )

**Note:** Tap **Info** for more information about **Horizon** and **Banked turn**.

**Note:** **Global reactivity**, **Inclination**, **Vertical speed** and **Rotation speed** values have the biggest impact on ANAFI USA's acceleration and general flying behavior. Corresponding sliders turn to orange instead of green to warn users the settings they have selected require extreme care, superior piloting skills, or both, when flying ANAFI USA. Your drone will always remain very responsive, but with extreme settings, it will accelerate much more rapidly.

Tap **RESET ALL PRESETS PREFERENCES** to reset ⌚ **Presets** preferences to the default values.

## Thermal

The 🌡️ **Thermal** preferences deal with specific thermography settings.

### 🌡️ Thermal PREFERENCES

<b>Color gradient</b>	<b>Fusion</b> / Rainbow / White Hot / Black Hot
<b>Thermal post-processing</b>	NO / YES
<b>Thermal sensor calibration</b>	<b>AUTO</b> / MANUAL
<b>Temperature range</b>	<b>DEFAULT</b> / VERY HIGH TEMPERATURES

### Thermal post-processing


Tap **Info** for more information about **Thermal post-processing**. Parrot recommends **NO** for real time operations, and **YES** for post flight analysis operations.

### Thermal calibration

**AUTO** mode is recommended for most users. If you select the **MANUAL** mode, the application will periodically remind you to calibrate your thermal camera, through the dedicated 🌡️ button of your HUD.

Tap **RESET ALL THERMAL SETTINGS** to reset 🌡️ **Thermal** preferences to the default values. This button also reinitializes thermal Spot and Absolute scales to default values, as well as visible and thermal images blending.

## Interface

 **Interface** preferences define the information which appears on your FreeFlight 6 USA HUD.

### **Interface PREFERENCES**

<b>Interface</b>	<b>FULL / LIGHT</b>
<b>Show minimap</b>	<b>NEVER / WITH CONTROLLER / ALWAYS</b>
<b>Display GPS position</b>	<b>YES / NO</b>
<b>Coordinates system</b> <sup>[1]</sup>	<b>LATLNG / MGRS / UTM / DMS</b>
<b>Time zone</b>	<b>SYSTEM TIME / UTC</b>
<b>Map type</b>	<b>ROADMAP / SATELLITE / HYBRID</b>
<b>Map Engine</b> <sup>[2]</sup>	<b>GOOGLE MAP / MAPLIBRE</b>
<b>Show framing grid</b>	<b>NO / 3 x 3 / 6 x 6</b>
<b>Measurement system</b>	<b>AUTO / IMPERIAL / METRIC</b>
<b>FPV Goggles</b> – tap <b>CHANGE</b> to select from these options:	Parrot – CockpitGlasses 1 Parrot – CockpitGlasses 2 <b>Parrot – CockpitGlasses 3</b> Google – DayDream View Homido V2 Homido Prime Homido Merge VR BNext Skillkorp VR5 Zeiss VR One

Tap **TEST** to verify the rendering of your **FPV Goggles** selection.

### **[1] Coordinates systems**

<b>LATLNG</b>	latitude and longitude
<b>MGRS</b>	Military Grid Reference System (NATO's geocoordinate standard)
<b>UTM</b>	Universal Transverse Mercator
<b>DMS (or D°M'S")</b>	degree, minute, second (of arc)


[2] The ability to change the **Map Engine** is not available on iOS.

### 3 x 3 framing grid

The **3 x 3** framing grid facilitates building entries, through doors or windows.

Tap **RESET ALL INTERFACE PREFERENCES** to reset **Interface** preferences to the default values.

## Safety

 **Safety** preferences allow you to create a safe and clear flying area for ANAFI USA.

When the **Geocage** is activated, ANAFI USA will automatically stop when it reaches the maximum height or the maximum distance you select. A red prompt will also appear on your HUD.

### **Safety PREFERENCES**

<b>Geocage</b>	<b>NO / YES</b>
<b>Max height</b>	1m to 150m (DV: <b>30m</b> )
<b>Max distance</b>	10m to 4 km (DV: <b>300m</b> )
<b>Minimum height when using RTH</b>	20m to 100m (DV: <b>30m</b> )
<b>End behavior</b>	<b>HOVERING / LANDING</b>



<b>Hovering height</b>	1m to 10 m (DV: <b>2m</b> )
<b>Advanced RTH settings</b>	<b>NO / YES</b>
<b>Return position</b>	<b>TAKE-OFF / PILOT / CUSTOM</b>

**Note:** By activating advanced RTH features, if you select return to **Pilot** or **Custom** position, the drone might not be able to reach its destination in case of low battery. Parrot will not be held responsible in case the drone lands in a different location.

### End behavior and Hovering height

Parrot recommends ending RTH sequences by hovering (default value) as it enables the pilot to control the end of the flight. However, for missions at sea, Parrot recommends you modify the hovering altitude over 2m (default value). Up to 2m, at the end of the RTH, the drone will compute its height over the ground, with its ultrasonic sensor. Above 2m, it will compute its height over its take-off point, with its barometer.

For example, if the drone takes off from the deck of a ship, 40m above the sea level, with a hovering altitude set at 2m, at the end of the RTH, the drone will look for the ground and could stop 2m above the surface of the sea.

If it takes off with a hovering altitude set at 3m, it will stop 43m (40 + 3) above the surface of the sea.

Tap **RESET ALL SAFETY PREFERENCES** to reset  **Safety** preferences to the default values.

### Camera

■ **Camera** preferences allow you to select camera options, both in photo and video modes.

#### ■ Camera PREFERENCES

<b>Camera calibration – Tap CALIBRATE</b>	<b>Correct horizon, Gimbal calibration and Cameras alignment</b>
<b>Auto record from take-off</b>	NO / YES (video only)
<b>Lossless zoom only</b>	NO / YES
<b>Display overexposure</b>	NO / YES
<b>Anti-flickering</b>	<b>AUTO / 50Hz / 60Hz / OFF</b>

### Correct horizon and Cameras alignment

Only resort to the **Correct horizon** and the **Cameras alignment** procedures if you notice your videos and photos are systematically tilted on the same side or if your visible and thermal cameras are misaligned. Refer to the "[Camera Calibration](#)" section of this guide for the detailed procedure.

### Overexposure display

When this setting is activated, the HUD of FreeFlight 6 USA shows all overexposed areas of the screen as hatched, which enables you to fine-tune your framing, your EV settings, or both.

### Anti-flickering

This setting and the associated technology aim to eliminate the flicker effect which can arise due to some artificial lights. The **AUTO** option works 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 **RESET ALL CAMERA PREFERENCES AND SETTINGS** to reset ■ **Camera** preferences to the default values.

## Network

📶 **Network** preferences allow you to change your ANAFI USA's Wi-Fi network name, password, and band.

### 📶 Network PREFERENCES

<b>Broadcast DRI</b>	<b>OFF / ON</b>
<b>Network name</b>	Tap the field to change your ANAFI USA's network name. Tap <b>PASSWORD</b> to enter the password.
<b>Wi-Fi band</b>	<b>AUTO / MANUAL</b>

Tap **PASSWORD** to define the Wi-Fi key shared by ANAFI USA and the Skycontroller USA. Parrot defines a unique random password for each ANAFI USA and Skycontroller USA package, but Parrot highly recommends you define your own password.

The security of your ecosystem and data depends on the security of this password. Your password must be at least 10 characters long, and must use at least 3 types of characters among:

- Uppercase characters,
- Lowercase characters,
- digits,
- special characters.

### Direct Remote Identification (DRI)

The DRI system makes your drone locally broadcast information about itself for regulatory compliance (where applicable). Tap **Learn more** for more information.

### Manual Wi-Fi band setting

Tap the **MANUAL** tile in **Wi-Fi band**, then tap a free band to select it.

In urban environments, 5 GHz Wi-Fi channels typically suffer less interference than 2.4 GHz channels. The following table shows the recommended Wi-Fi channels depending on your geographical zone, and environment.

Geographical Zone	Recommended Wi-Fi channels in urban environment	Recommended Wi-Fi channels in non-urban environment
<b>Australia</b>	149 - 165	1 - 11
<b>Canada</b>	149 - 165	1 - 11
<b>Europe</b>	149 - 165	1 - 11
<b>Japan</b>	1 - 11	1 - 11
<b>Singapore</b>	1 - 11	1 - 11
<b>South Africa</b>	1 - 11	1 - 11
<b>South Korea</b>	149 - 165	1 - 11
<b>Taiwan</b>	149 - 165	1 - 11
<b>United Kingdom</b>	149 - 165	1 - 11
<b>Ukraine</b>	149 - 165	1 - 11
<b>United Arab Emirates</b>	149 - 165	1 - 11
<b>United States</b>	149 - 165, (36 - 48 less power)	1 - 11, 149 - 165

To enable the automatic optimization of Wi-Fi communications on the 5 GHz channels, manually select a 5 GHz channel, then revert the Wi-Fi band setting to **AUTO**.

## Videos and Photos

ANAFI USA is equipped with a 3-axis-stabilized gimbal, which delivers sharp motion and still pictures, through two 1/2.4" CMOS 21MP sensors.

The lenses of the cameras include low dispersion aspherical elements, that reduce chromatic aberrations and flare.

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

### Making videos

By default, ANAFI USA and FreeFlight 6 USA are set to start recording a video as soon as ANAFI USA takes off.

However, depending on your filming objectives, ANAFI USA and FreeFlight 6 USA offer multiple configurable settings, from full auto to manual professional options.

If required, tap the photo/video toggle in the middle of the bottom bar of the HUD, to circle the film camera (right icon) in white.

There are 2 main filming options accessible from the HUD of FreeFlight 6 USA.

First option:

1. Select a **video mode** by tapping the corresponding box of the HUD.
2. Tap a video mode to select it and tap the **video mode** box again to confirm your choice.

Second option:

1. Select a **video resolution and a framerate** (fps – frames per second) value from the corresponding box of the HUD.
2. Tap the **video settings box** to call the individual **video resolution** and **fps** boxes.
3. Tap the **video resolution box** to access the available video resolutions and tap one to select it.
4. Tap the **fps box** to access the available fps values and tap one to select it.
5. Tap the video settings box again to close the sub-boxes and confirm your choices.

#### Available video resolutions and fps values depend on the video mode you select:

<b>Standard</b>	all-round <b>4K, 2.7K</b> or <b>1080p</b> filming, at <b>24, 25</b> or <b>30fps</b> .
<b>Cinema</b>	spectacular <b>4K cinema</b> filming, at <b>24fps</b> .
<b>Hyperlapse</b>	time-lapse video with a configurable speed factor (x15, x30, x60, x120, x240), in <b>4K, 2.7K</b> or <b>1080p</b> , exported at <b>24, 25</b> or <b>30fps</b> .
<b>Slow-Motion 1080p</b>	filming at <b>48, 50</b> or <b>60fps</b> , automatically slowed down by a factor of 2 (x0.5) and exported at 24, 25 or 30fps.
<b>Slow-Motion 720p</b>	filming at <b>96, 100</b> or <b>120fps</b> , automatically slowed down by a factor of 4 (x0.25) and exported at 24, 25 or 30fps.
<b>High-Framerate</b>	<b>1080p</b> filming at <b>48, 50</b> or <b>60fps</b> (ideal for post-processing) and <b>720p</b> filming at <b>96, 100</b> or <b>120fps</b> .

In the following screen shot, **Standard video mode** is activated. Available video resolutions are **4K (UHD)**, **2.7K** and **1080p (FHD)**, either in **24**, **25** or **30fps**, which you would find out by tapping **30 fps** on the bottom right of the screen.



*iOS Standard video format menu*

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

The soft shutter button of the HUD animates and displays a cycle between a red square and red circle. The timer starts running.

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 resets.

### Taking photos

To access the photo camera of ANAFI USA, tap the **photo/video** toggle in the middle of the bottom bar of the HUD, to circle the photo camera (left icon) in white.

Seven photo modes are available on ANAFI USA: **Single shot**, **Burst**, **Bracketing**, **Timelapse**, **GPS Lapse**, and **Panorama** (5 formats).

ANAFI USA produces three main picture formats:

- **rectilinear JPEG** (up to 16MP);
- **wide 21MP JPEG and DNG** (Digital NeGative: Adobe open standard RAW format)
- **composite panoramas** (JPEG), up to 32MP

Main photography options are accessible from the HUD of FreeFlight 6 USA.

**First**, select a **photo mode** by tapping the corresponding box of the HUD.

The options appear on your device. Tap a photo mode to select it and tap the **photo mode** box again to confirm your choice.

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

When the **Burst** mode is selected, the soft shutter button of the HUD displays the Burst icon inside a white circle.

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 Bracketing icon inside a white circle.

Selecting the **Timer** mode opens three options: 3 seconds, 5 seconds and 10 seconds. When one of these options has been selected, the soft shutter button of the HUD displays **3 secs**, **5 secs** or **10 secs** inside a white circle, depending on the option which has been chosen.

Selecting the **Panorama** mode opens three options: **Vertical**, **Horizontal** and **360**. When one of these options has been selected, the soft shutter button of the HUD displays the corresponding icon inside a grey (ANAFI USA landed) or white (ANAFI USA flying) circle.

The **Panorama** mode is the only photography mode which requires the drone to be flying before you can activate the shutter. Refer to the “[Creating Panoramas](#)” section of this guide for more information.

Selecting the **Timelapse** mode opens six options: 5 secs, 10 secs, 15 secs, 30 secs, 60 secs, and 120 secs. When one of these options has been selected, the soft shutter button of the HUD displays a Timelapse icon.

Selecting the **GPS Lapse** opens six options: 5m, 10m, 20m, 50m, 100m, and 200m. When one of these options has been selected, the soft shutter button of the HUD displays a GPS Lapse icon.

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

Tap the **photo settings** box to call the **photo settings** boxes.

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

**Available photo formats for each photo mode are as follows:**

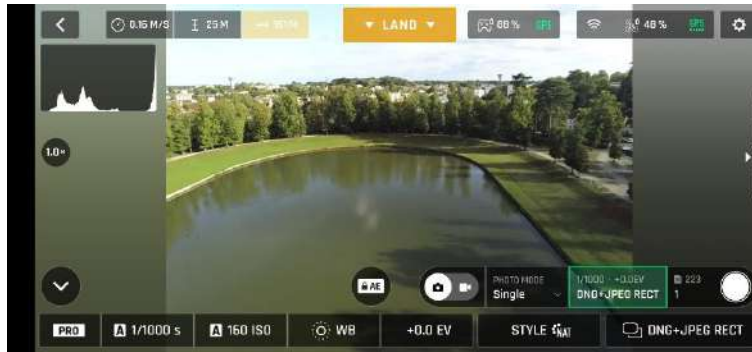
<b>Single</b>	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
<b>Burst</b>	JPEG RECT, JPEG WIDE
<b>Bracketing</b>	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
<b>Timer</b>	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
<b>Panorama</b>	JPEG RECT only
<b>Timelapse</b>	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)
<b>GPS Lapse</b>	JPEG RECT, JPEG WIDE, DNG+JPEG (RECT or WIDE)

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

Tap the photo settings box again to close the sub-boxes and confirm your choice.



*Android photo formats: DNG+JPEG WIDE*



*Android photo formats: DNG+JPEG RECT*

In **Single** mode, the screen flashes white then freezes briefly in black and white to confirm a picture has been taken. The number to the left of the soft shutter button (the number of media on the microSD card) of the HUD is increased by 1.

In **Burst** mode, the screen flashes white then freezes briefly in black and white to confirm 14 pictures have been taken in the span of 1 second. The number to the left of the soft shutter button of the HUD is increased by 14.

In **Bracketing** mode, the screen flashes white then freezes briefly in black and white to confirm 3, 5 or 7 pictures have been taken. The number to the left of the soft shutter button of the HUD is increased by 3, 5 or 7, depending on your option choice.

In **Timer** mode, the countdown is displayed (from 3, 5 or 10 seconds) at the center of the HUD, the timer of the soft button also countdowns, then the screen flashes white and freezes briefly in black and white to confirm a picture has been taken. The timer of the soft shutter button resets. The number to the left of the soft shutter button of the HUD is increased by 1.

Refer to the “[Creating Panoramas](#)” section of this guide for more information on the **Panorama** mode.

In **Timelapse** mode, the screen flashes white then freezes briefly in black and white to confirm a picture has been taken. 5 to 120 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. Between each shutter action, a green progress bar, at the bottom of the screen, serves as a countdown. At the end of the Timelapse, the number to the left of the soft shutter button reflects the total number of medias on the microSD card of the drone.

In **GPS Lapse** mode, the screen flashes white then freezes briefly in black and white to confirm a picture has been taken. Control and move ANAFI USA: 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. At the end of the GPS Lapse, the number to the left of the soft shutter button reflects the total number of medias on the microSD card of the drone.

#### ANAFI USA photo formats

##### Photo formats

<b>JPEG RECT</b>	4:3 aspect ratio, up to 16MP and 75.5° horizontal field of view (HFOV)
<b>JPEG WIDE</b>	4:3 aspect ratio, 21MP, 84° HFOV – zoom is disabled for this format
<b>DNG+JPEG</b>	4:3 aspect ratio, 21MP, 84° HFOV – zoom is disabled for this format

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

### Creating Panoramas

ANAFI USA panoramas are generated automatically through the FreeFlight 6 USA gallery, based on a series of pictures taken by the drone.

The generation of a panorama, regardless of its format, has 3 phases:

- collecting the pictures in flight;
- downloading the pictures from ANAFI USA to your device;
- stitching the pictures together to create the panorama, on your device through the FreeFlight 6 USA gallery.

**Important:** Before shooting a panorama:

- Ensure that you are not flying lower than 10 meters (30ft) over water.
- Ensure that no object or subject is present within a 10-meter (30ft) radius around ANAFI USA.
- ANAFI USA locks the exposure (refer to the "[Lock AE](#)" section of this guide for more information on exposure locking) of the frame you start your panorama with. For this reason, Parrot recommends you always frame the main subject of the intended panorama before pressing the shutter button.
- ANAFI USA cannot proceed with a panorama if the drone battery power is low (capturing a 360 Panorama takes ANAFI USA up to 90 seconds).

To capture a panorama, select the **Panorama** box from the **Photo Mode** menu of the HUD. Then, tap the panorama type you want to select: **Vertical**, **Horizontal** or **360**. The soft shutter button icon reflects your choice, as on the screen capture below.



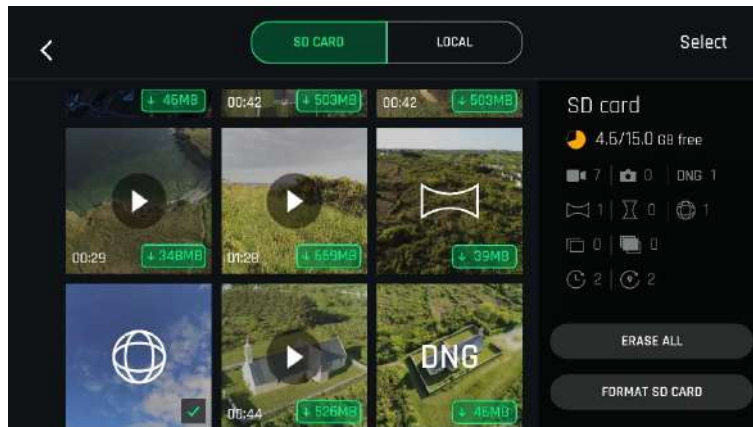
*Panorama formats, Android*

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

**Panorama types capture characteristics:**

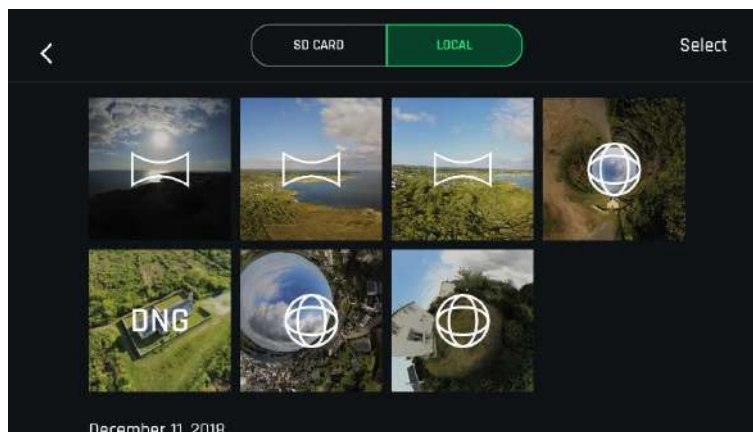
<b>Vertical</b>	ANAFI USA takes 8 photos in approximately 18 seconds
<b>Horizontal</b>	ANAFI USA takes 10 photos in approximately 20 seconds
<b>360</b>	ANAFI USA takes 42 photos in approximately 90 seconds

To download the Panorama pictures to your device, land ANAFI USA, access the homepage of FreeFlight 6 USA and tap the **SD CARD** box or the **Gallery** box to display the media present on your microSD card. Like other media, Panoramas are marked with their distinct icon and a green download box, which shows the size of the corresponding series of pictures.



*MicroSD card gallery*

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 6 USA displays a page from where you can delete the downloaded photos. Tap **Yes** to keep the originals on the microSD card. Tap **No** to delete them. FreeFlight 6 USA displays the Local (device) gallery, which contains only the media you have downloaded from ANAFI USA's microSD card.



*Local (device) gallery*



Finally, select the panorama you want to generate from your Local gallery. FreeFlight 6 USA displays the following screen:



*Android panorama generation page*

Tap **CREATE** to generate the panorama (or tap the other icon to access the series of individual pictures).

Depending on the power of your device, FreeFlight 6 USA 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.

When the panorama creation is complete, FreeFlight 6 USA displays the panorama and gives you the option to delete the original files.

For each **Vertical** or **Horizontal** panorama capture, you will be able to generate one panorama only.

For each **360** capture, you can generate three different preset panoramas (**Sphere**, **Little Planet**, and **Tunnel**) and a potentially infinite number of custom panoramas, through the 360 editor.


When you create a custom panorama, the direct rendering is a preview only. For each custom panorama you decide to create, FreeFlight 6 USA completely reprocesses the data to minimize stitching issues and discrepancies.

## Gimbal tilt and zoom controls

Two of ANAFI USA's main assets are its gimbal tilt control capabilities (180°, nadir to zenith), and its 32x zoom. This section presents these features and the way to activate them.


### Gimbal tilt control

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

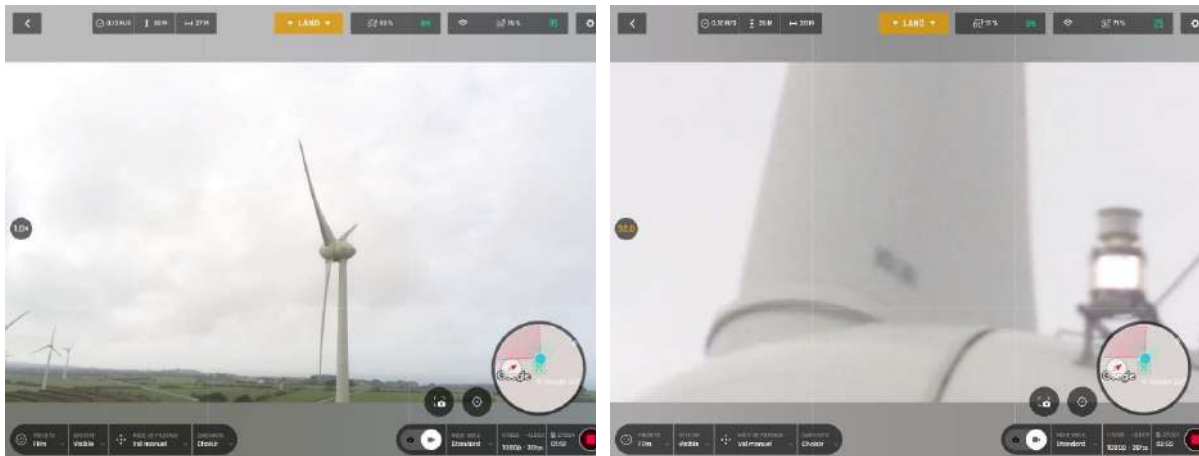
- To aim the gimbal toward the ground, push the tilt control trigger down.
- To aim the gimbal toward the sky, pull the tilt control trigger up.
- To reset the gimbal tilt to a horizontal position, press the  **Optics reset** button on the left of Skycontroller (this action also resets the zoom factor of the lens to 1x).

### Zoom control

ANAFI USA's zoom control is activated through the right trigger of Skycontroller. 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 21MP delivered by ANAFI USA's CMOS sensors: 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 Skycontroller 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 6 USA 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 screen captures.



*x1 zoom*

*x32 zoom*

## Camera Calibration

### Correct horizon (exceptional procedure)

**Note:** Your ANAFI USA's camera has been factory-calibrated with high precision.

Unlike the calibration of ANAFI USA or that of the Skycontroller, which must be performed periodically, the camera calibration must not be performed unless it appears necessary, typically, after a crash. If you notice a tilted horizon on all your videos and photos, and if this tilt is always on the same side, access camera calibration to make your horizon perfectly straight again.

This feature is accessible from the ANAFI USA box on the FreeFlight 6 USA homepage (or from the ANAFI USA box of the HUD) and from the **PREFERENCES / Camera** menu.

Before starting this procedure, you must position ANAFI USA on a flat and perfectly level surface, exactly perpendicular to any pattern containing straight lines you can use as horizon references. A set square can help you check that a line on your floor is perpendicular to your wall.



*Finding a line perpendicular to the wall*



*ANAFI USA ready for horizon correction*

When ANAFI USA is correctly positioned, perpendicular to its straight horizon reference, press **Power** to power it on, along with the Skycontroller and your device.

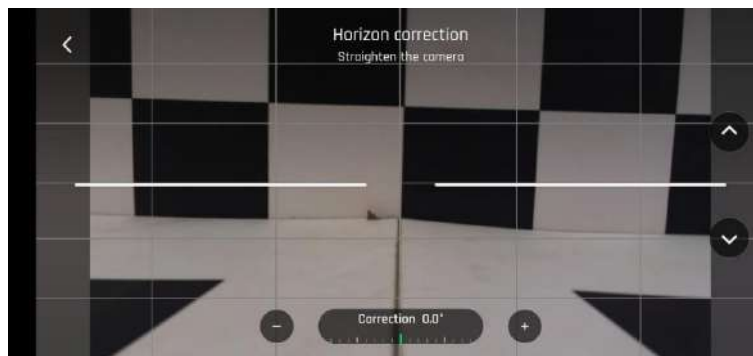
Access **Camera calibration** from the ANAFI USA box of the homepage or the HUD of FreeFlight 6 USA, or from the **PREFERENCES / Camera** menu.

Select the **Correct horizon** option from the following screen.



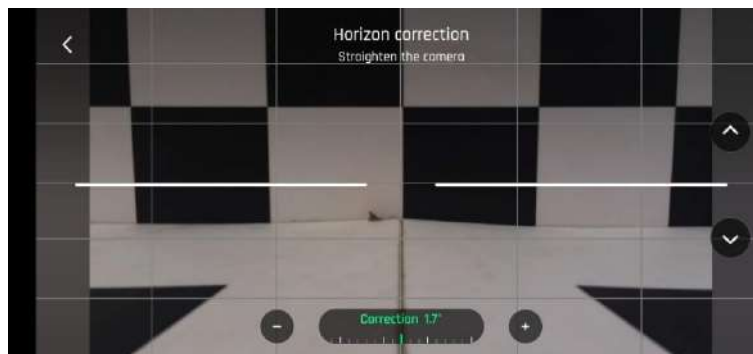
*ANAFI USA: gimbal/camera calibration (Android)*

The following screen appears.



*Gimbal/camera calibration: before (Android)*

Tap **+ plus** or **- minus** until the artificial horizon of ANAFI USA matches the horizon reference facing the drone. Do not worry about vertical lines: as you can see from the screenshots, they do not appear straight or parallel on the gimbal calibration screen.



*Gimbal/camera calibration: after (Android)*

When you have straightened the tilt of the camera, tap the **< Back** on the top left of the screen to confirm your setting and exit camera calibration.

### Gimbal calibration

Use this option to perform a gimbal calibration, similar to that which occurs after ANAFI USA is powered on.

**Note:** **FreeFlight 6 USA** may require you to carry out this procedure (as it may require you to perform a drone magnetometer calibration) before allowing you to fly ANAFI USA.

### Cameras alignment (exceptional procedure)

Use this option to align the images of your visible and thermal spectrum cameras.

As the interface advises, due to cameras parallax, use the farthest possible object as your alignment reference, ideally, at least 16.3 m (53.5 ft).



*ANAFI USA: Camera alignment, before (Android)*

**Note:** You can activate the zoom (right) trigger to magnify the view of your reference.

Tap **+** plus or **-** minus on each axis to align visible and thermal views.



*ANAFI USA: Camera alignment, after (Android)*

Tap **< back** on the top left of the screen to exit the interface and confirm your settings.

## 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 **Auto** mode, from the **Video/Photo settings** box menu of the HUD.

### Exposure value (EV)

The EV expresses the general darkness or lightness of a photograph or video. At +0.0 (zero) EV, ANAFI USA automatically adapts the shutter speed and the ISO value to deliver a perfectly balanced photo or video.

Tap the **+0.0 EV** box to activate the EV slider.

Slide your finger on the screen to the negative values on the left to darken your picture or video. Slide your finger on the screen to the positive values on the right to brighten your picture or video.



1.0 EV, iOS



+1.0 EV, iOS

To activate further settings, tap **Auto** on the far left of the Video/Photo settings box. The additional settings boxes are unlocked, they stand out in white, and **Auto** is replaced with **Pro**.

### Shutter speed (s)

The **s** value refers to the time that the shutter stays open to capture a still picture. It is called exposure time.

In **Auto** mode, ANAFI USA selects the best shutter speed and ISO value couple, in real time, depending on the scene and available light.

**Note:** Selecting a shutter speed deactivates the Auto ISO mode.

As ANAFI USA's f/2.4 aperture lenses let in a lot of light, 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:** ANAFI USA can shoot pictures and videos when it is not flying. You can hold it in your hand and use it as a 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. 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. It is linked to the shutter speed value. Both sliders activate when you deactivate the **Auto** mode and set a value for one, or 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, select low ISO values, for example 100 or 200. The sensitivity of the sensor increases as the ISO value goes up. 3200 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 USA constantly adapts its ISO and shutter speed values to the scene it is filming. However, setting an ISO value for a whole shot or series of shots is advised for 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. 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 USA 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 advised 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, Android*



*Incandescent WB, Android*



*Fluo WB, Android*



*Sunny WB, Android*



*Cloudy WB, Android*



*Shaded WB, Android*



*WB 2 000 K, Android*



*WB 10 000 K, Android*



## HDR

HDR (high dynamic range) can enhance a video or a photo. The HDR option is available for **Standard** video mode **4K**, **2.7K** and **1080p** formats (regardless of framerate values) and **JPEG photos**.

To activate the HDR option, select a **Standard** video mode or a **JPEG** photo format from the relevant boxes of the bottom bar of the HUD. A white and round HDR icon appears on your screen, to the left of the photo/video trigger.

Tap the **HDR** icon. It turns yellow, and a HDR notice appears in black inside a yellow box, under the **next available action** box, at the center of the top bar of the HUD. Press the hard shutter button on your Skycontroller (or tap the soft shutter button of the HUD) to start filming in HDR or to take a HDR photo.

Tap the round HDR icon again to deactivate HDR. The yellow HDR box disappears from the screen.



*HDR Off, Android*



*HDR On, Android*

**Note:** You cannot modify **s**, **ISO** or **WB** values when the HDR mode is activated. However, you always keep control over your EV value. Activating (or deactivating) HDR stops any ongoing video recording.

## NATURAL Style

The **Natural** Style is the default ANAFI USA Style: it respects nature's colors and tones. Activate the **NATURAL** style from the **Style** box of the **Video/Photo** settings menu.

## P-LOG Style

**P-LOG** style is an alternative Style to **NATURAL** style, both in video mode, and photo mode. It makes images a little less contrasted. **P-LOG** style is ideal for videos you want to edit and process using professional grading tools and filters. Activate the **P-LOG** style from the **Style** box of the **Video/Photo** settings menu.

## INTENSE Style

**Intense** style is second alternative Style to **NATURAL** style both in the video mode, and in the photo mode. It makes images more saturated and contrasted. Activate the **INTENSE** style from the **Style** box of the **Video/Photo** settings menu.

## PASTEL Style

**Pastel** style is third alternative Style to **NATURAL** style both in the video mode, and in the photo mode. It makes images less saturated, but it brings out their warmest tones. Activate the **Pastel** style from the **Style** box of the **Video/Photo** settings menu.

## ADJUSTMENT

The **ADJUSTMENT** button, next to the **P-LOG** box, provides three additional settings for your **Normal** style still images and films:

### Additional settings

<b>Saturation</b>	sets the intensity of the colors (from -2 to +2)
<b>Contrast</b>	sets the degree of difference between lightest and darkest parts of the image (from -2 to +2)
<b>Sharpness</b>	sets the distinction of detail reproduction (from -1 to +1)



*All settings at minimal values (iOS)*

Tap the **RESET** button, on the right of the screen, to bring all values to 0 (zero).

Tap the **< back**, on the left of the screen, to confirm your settings and exit the **ADJUSTMENT** menu.

### Lock AE

In **FreeFlight 6 USA** you can 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 **Video settings** box (**video** mode) or the **Photo settings** box (**photo** mode) of the HUD.

A **Lock AE** icon appears, to the left of the **HDR** icon (it replaces the **HDR** icon in **DNG+JPEG** photo format, as **HDR** is not available with this setting).

Tap the **Lock AE** icon to lock the exposure value to that of the current view. The icon turns yellow. A yellow **Lock AE** box appears under the **Next available action** box, at the center of the top bar of the HUD.

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

Tap the **Lock AE** icon again to deactivate the exposure lock. The icon turns back to white, and the yellow **Lock AE** box disappears.

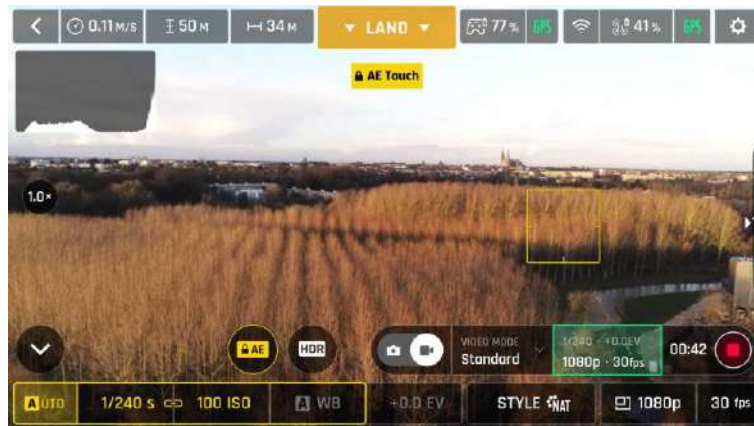


*Exposure is locked on the sky (Android)*

### Lock AE Touch

With the **Lock AE Touch** (or **Spot AE**) function of **FreeFlight 6 USA**, 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.



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



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

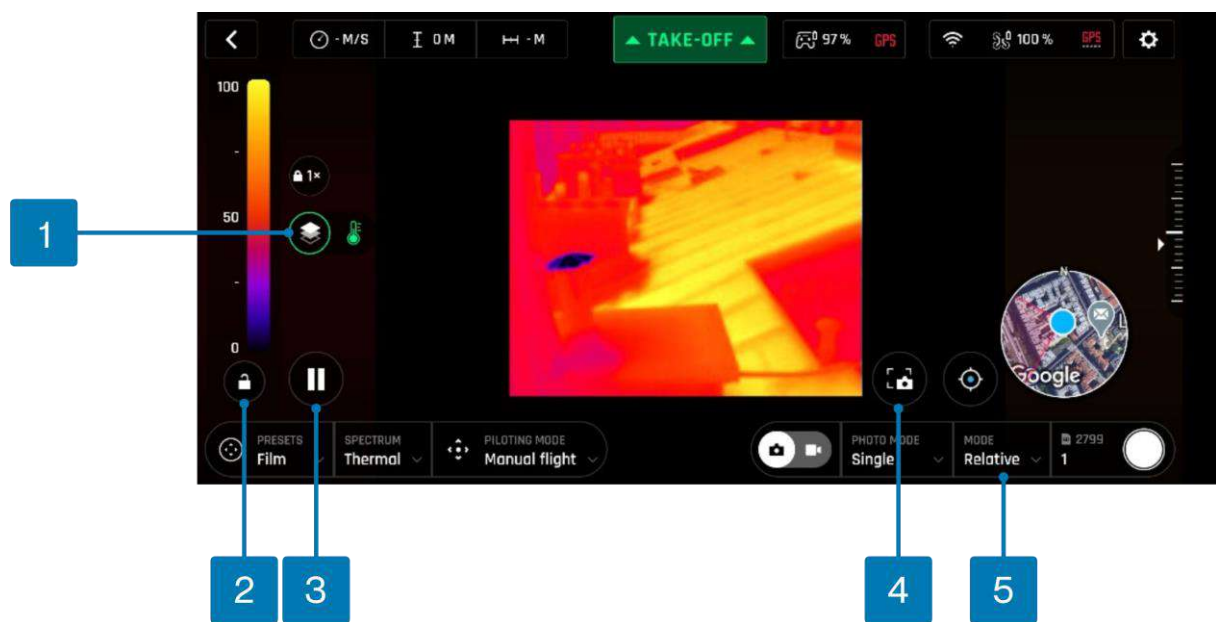
## Thermal Imaging

Thermal imaging, or infrared (IR) thermography, is the process of acquiring, measuring and analyzing thermal information from non-contact devices, such as ANAFI USA's FLIR Boson camera.

Thermal imaging devices transform invisible IR radiations, or heat transfers, into colored images the human eye can interpret and analyze.

To access ANAFI USA's thermography mode, either tap the **THERMAL** box on the homepage of **FreeFlight 6 USA** or tap the **SPECTRUM** box on the lower bar of the HUD and select **Thermal**.

### Presentation of the Thermal HUD (post-processing)



1. Spectrum blending
2. Lock scale
3. Pause view
4. Take a screenshot
5. Thermal mode selection

\*(the thermometer icon indicates only the IR spectrum is displayed)

**Note:** When post-processing is activated (default value), the **Pause** view and **Lock scale** buttons are available. They disappear when post-processing is deactivated (refer to the "[PREFERENCES / Thermal / Thermal post-processing](#)" section of this guide for more information).

As for the Visible Spectrum, you can record both **Thermal photos** and **videos**. You can choose through the **photo/video** toggle button in the lower bar of the HUD (or among additional settings, as in the Thermal HUD screen capture).

When in **Thermal Spectrum**, the choice of photo modes is limited to three options, each of which delivering 1280x720 rectilinear JPEG thermography images:

- Single shot
- Timelapse (10, 30, 60, 120 or 240 seconds intervals between shots)
- GPS Lapse (5, 10, 20, 50, 100 or 200 meters spherical intervals between shots)

The **Thermal Spectrum** video mode is limited to a single option. ANAFI USA shoots 9 frames per second 1280x720 thermography MP4 (H264) videos.

You can capture screenshots, directly to your Skycontroller, through the dedicated screen button. This feature is available when filming and enables you to extract a still image from a film without stopping the recording.

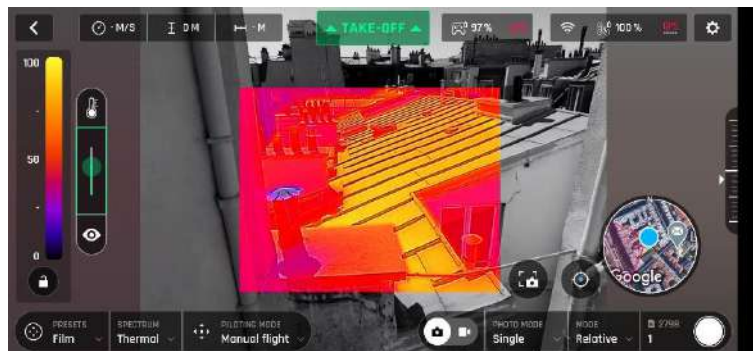
**Note:** ANAFI USA is a multicamera system (two EO lenses for one visible camera, one thermographic camera). However, photo or video mode selection is independent from the cameras. In other words, for example, switching from Visible Spectrum photo mode calls the last Thermal Spectrum photo mode that was selected; similarly, switching from Thermal Spectrum video mode calls the last Visible Spectrum video mode that was selected.

### Relative Thermal mode

The Relative mode is the default thermography mode of ANAFI USA, which is activated upon first access to the Thermal HUD.

The Relative mode provides a quick overview of a scene's temperature range. In this mode, even slight heat differences materialize as strong contrasts.

Its main specificity is that the scale it displays, on the left of the HUD, matches by default the temperature range of the scene ANAFI USA is filming, on a 0 to 100 graduated scale.



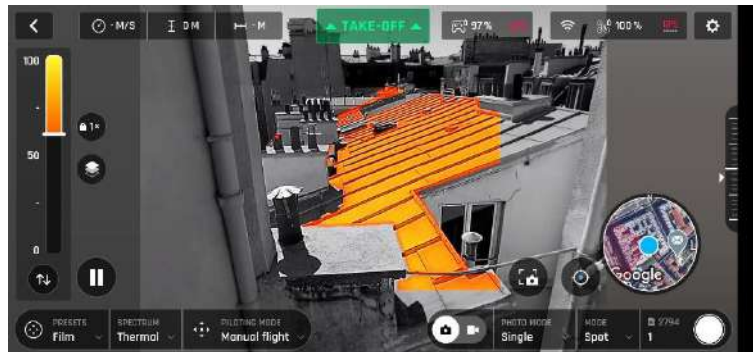
*Relative Thermal mode (balanced blending between IR and visible)*

However, when the post processing is activated, the lock button enables you to temporarily lock the scale to the temperature range of any scene. This is especially useful if you must reframe your scene to include part of the sky. The sky always appears as a cold element, which disturbs the scale.

## Spot Thermal mode

The Spot Thermal mode of ANAFI USA isolates hot or cold.

Use the **inverted arrows button** (under the scale, on the left of the screen) to toggle from hot to cold (or from cold to hot) and slide your finger along the scale to adapt the threshold of the scale to your scene and highlight only the coldest or hottest spots.



*Spot Thermal mode: only the hottest elements of the scene are colored.*

**Note:** In Spot Thermal mode, the thresholds you set manually are only reset when you tap the **RESET THERMAL SETTINGS** button in the Thermal Preferences tab.

## Thermal analyzer mode

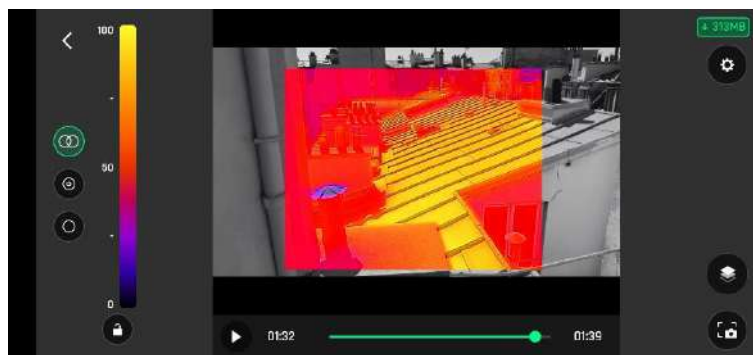
The Thermal analyzer feature of FreeFlight 6 USA provides a quick thermal analysis, directly from your device.

This function gives you full control over the on-screen rendering of any thermography video or photo you have taken with ANAFI USA. From the analyzer, you can:

- access Thermal Preferences directly from the preview's Preferences icon, top right;
- navigate inside your thermography videos;
- modify the thermography modes (Relative, hot and cold spots) and their associated thresholds at any point of any video or on any photo;
- modify the blending between Visible and Thermal spectrums;
- save as many screenshots as you want.

However, Thermal analyzer videos cannot be saved or exported by **FreeFlight 6 USA** – even if most devices enable you to record your screen.

To analyze a thermography media, access your **Local FreeFlight 6 USA Gallery** and open a thermal video preview or a photo.



*Thermography video preview, Relative mode (Android)*

Tap the green **ANALYZE** box.

The photo displays or the video plays in Analyzer mode. The interface gives you access to most options available for filming.







*Same image, (hot) Spot mode (Android)*

## Cineshots (visible spectrum only)

ANAFI USA features a series of automated shots, which enable you to capture scenes professionally.


Ensure that you have selected the video settings you require and tap **CINESHOTS** in the bottom bar of the HUD to access Cineshots.



Tap one of the following Cineshots to select it:

-  **360°**
-  **Reveal**
-  **Spiral**
-  **Epic**


For each, two options appear. ANAFI USA films all your Cineshots automatically if you have free space on your microSD card.


### 360°


When  **360°** cineshot is activated, ANAFI USA maintains its position and altitude, and rotates slowly and completely around its axis to capture a full panorama.

Tap **Right** or **Left** to select the direction you want your drone to rotate, and to activate the  **360°**. After a countdown on the HUD, ANAFI USA starts its rotation. An animation flashes on your screen, and the  **360°** box progressively fills with green as the cineshot unfolds.



### Reveal



When  **Reveal** cineshot is activated, ANAFI USA tilts its camera toward the ground and starts moving forward in a straight horizontal line. Slowly, over 30 or 60 meters, the camera gimbal tilts up, revealing the scenery in front of ANAFI USA.

**Important:** Before you activate the  **Reveal** cineshot, verify that the area in front of ANAFI USA is safe, and clear of obstacles.

Tap **30m** (small-arrow icon) or **60m** (large-arrow icon) to select the range of your reveal shot, and activate it. After a countdown on the HUD, ANAFI USA tilts its camera down and starts moving forward. An animation flashes on your screen, and the  **Reveal** box progressively fills with green as the cineshot unfolds.


### Spiral

When  **Spiral** cineshot is activated, ANAFI USA tilts its camera to the ground and starts moving up, in a straight vertical line. Slowly, as it climbs to 30 or 60 meters, ANAFI USA carries out a full 360° rotation around its axis, then its camera tilts up progressively, panning over the scenery along a 180° rotation. ANAFI USA finishes the  **Spiral** cineshot with a 180° angle, compared to its starting point.



**Important:** Before you activate the  **Spiral** cineshot, verify that the area above ANAFI USA is safe, and clear from obstacles. Do not activate the  **Spiral** Cineshot under obstacles, for example trees or bridges.


Tap **30m** (small-arrow icon) or **60m** (large-arrow icon) to select the range of your spiral shot, and activate it. After a countdown on the HUD, ANAFI USA tilts its camera down and starts moving up




and rotating. An animation flashes on your screen, and the  **Spiral** box progressively fills with green as the Cineshot unfolds.

### Epic

When  **Epic** cineshot is activated, ANAFI USA moves away backward in a smooth ascending line, keeping its subject in the center of its frame for 30 or 60 meters. The  **Epic** cineshot gives the best results when ANAFI USA starts from a position close to its subject.

**Important:** Before you activate the  **Epic** cineshot, verify that the area behind ANAFI USA is safe, and clear from obstacles.

Tap **30m** (small-arrow icon) or **60m** (large-arrow icon) to select the range of your epic shot, and activate it. After a countdown on the HUD, ANAFI USA starts moving backward and upward. An animation flashes on your screen, and the  **Epic** box progressively fills with green as the Cineshot unfolds.

**Important:** Activate and monitor all cineshots with care. Always check your automated shot flight plan is clear from obstacles and is safe, always retain visual contact with ANAFI USA, and always be ready to reclaim control of your drone.

**Note:** Any action on any stick of Skycontroller immediately terminates the current cineshot.

## Piloting modes

Tap the **PILOTING MODE** box in the bottom bar of the HUD of **FreeFlight 6 USA** 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 USA'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 USA hovers in the same position.

### Cameraman

The **Cameraman** mode enables you to pilot ANAFI USA around an object or a subject and keep them in the center of your frame.

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.

You must enter a fixed horizon configuration into the **Cameraman** mode, or the mode does not lock. Draw a rectangle with your finger on your screen, around the object or subject you want ANAFI USA to follow, or double tap the 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 USA'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 USA around your target. The drone keeps your target in the part of the frame you have selected. If you push the right joystick of the Skycontroller to the left, ANAFI USA circles around your target clockwise. If you push the right joystick of the Skycontroller to the right, ANAFI USA circles around your target counterclockwise.

When the Cameraman mode is activated, ANAFI USA manages the gimbal tilt to keep the target in the frame. The left trigger of the Skycontroller 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 USA 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 USA's behavior is similar to that of the Manual flight mode.

**Important:** 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 USA, 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.

## Follow Me

The **Follow Me** mode enables ANAFI USA pilots to have their drone follow them in action.

**Warning:** Fly ANAFI USA at least 5 meters (15ft) high and 10 meters (30ft) in front of you, facing you. A red alert at the bottom of the HUD on **FreeFlight 6 USA** informs you if you are too close to ANAFI USA, or if it is flying too low.

Frame yourself.

Tap the **PILOTING MODE** box in the bottom bar of the HUD to access the options. Tap **Follow Me** to select this piloting mode.

Both a drone GPS synchronization and a controller GPS synchronization are imperative to activate this mode. Upon first activation, the following screen appears:



*iOS, Follow Me GPS warning*

Tick the box on the bottom left on the page if you do not want this warning to appear again when no prerequisite is missing. Tap **FLY** to access the Follow Me mode.

Select one of the three Follow Me options (refer to in-app explanations for details):

- Track
- Lock
- Dynamic

**Note:** Parrot recommends you only use the Dynamic option in completely open and unobstructed areas.

Draw a rectangle with your finger on your screen, around yourself. When ANAFI USA has a lock on you, 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**.

By default, ANAFI USA keeps you in the center of the frame, but you can drag the green box to the area of the screen you want to remain at. If you push the right joystick of the Skycontroller to the left, ANAFI USA circles around you clockwise. If you push the right joystick of the Skycontroller to the right, ANAFI USA circles around you counterclockwise.

In the **Follow Me** mode, ANAFI USA manages the gimbal tilt to keep you in the center of the frame. Therefore, the left trigger of the Skycontroller is deactivated in this mode. However, you can still

control the zoom, with the right trigger.

When you release the commands in the **Follow Me** mode, ANAFI USA keeps following you from a constant distance if you are moving. If you remain in the same position, ANAFI USA stops and stays focused on you.

To have ANAFI USA stop tracking you, tap the red **STOP** box at the center of the top bar of the HUD.

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

The **Follow Me** mode features a series of exclusive Dronies which can be activated as you move, always keeping you in the center of the frame. For each Dronie, two options are available (they are listed in brackets):

#### Dronie options

<b>Orbit (left or right)</b>	ANAFI USA circles around you in a full 360°.
<b>Parabola (10 or 30 m)</b>	ANAFI USA flies in an arc over your head, gaining 10 or 30 meters in altitude and turning 180° at its peak.
<b>Tornado (10 or 30 m)</b>	ANAFI USA performs a double <b>Orbit</b> around you, one up 10 or 30 meters, the other down 10 or 30 meters, back to its original height.
<b>Boomerang (30 or 60 m)</b>	ANAFI USA flies away from you for 30 or 60 meters, with an ascending angle following that of the starting gimbal tilt, then comes back to its starting point.

To select a Follow Me Dronie, make sure you are in the Follow Me mode and that ANAFI USA is tracking you.

Tap the **Select Dronie** box in the bottom bar of the HUD.

Tap a Dronie to select it. Tap the option you have chosen to activate the Dronie. After 2 seconds, ANAFI USA starts moving around you. The corresponding Dronie box fills with green as the Dronie unfolds.

**Important:** Activate and monitor the Follow Me mode and each Dronie with care. Always check your flight plan is clear from obstacles and safe, always retain visual contact with ANAFI USA, 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.

**Note:** To optimize the drone's tracking, always make sure you remain visible by ANAFI USA. Do not let an obstacle obstruct the camera's view and do not hide in the shadows, or ANAFI USA could lose track of you.

#### Smartdronies

ANAFI USA features four Smartdronies:

The **Orbit**, **Parabola** and **Boomerang** Dronie can be accessed through this menu, refer to the above section for details about the **Boomerang** Dronie. The smartest of ANAFI USA's dronies is the **Dolly Zoom**.

Frame yourself, or a group of people, with ANAFI USA: keep the drone at least 5 meters away, between 1 and 2 meters above the ground.

**Warning:** Verify that the flight path of your drone is perfectly clear: at least 30 meters behind it, flat and without obstacles.

Tap **Smartdronies** from the **PILOTING MODE** box menu.

Both a drone GPS synchronization and device GPS synchronization are imperative to activate this mode. Upon first activation, the same warning page appears as for the **Follow Me** mode. Tick the box on the bottom left on the page if you do not want this warning to appear again when no prerequisite is missing. Tap **FLY** to access the **Smartdronies** mode.

Tap the **Dolly Zoom** Dronie to open its three options.

## How to prepare your map

This chapter describes how to prepare a map for flight. There are 2 ways to prepare a map:

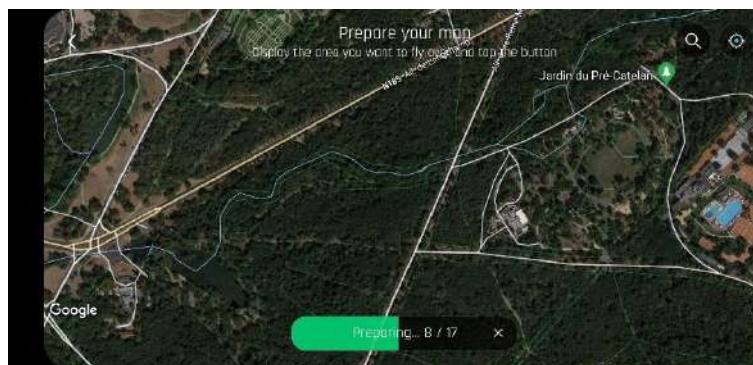
- Save your future flying area map on FreeFlight 6 USA while connected to the Internet, then use it offline in the field.
- Import your own custom maps to FreeFlight 6 USA without an internet connection.

### Save future flying area maps online for offline use

You can use this tool to prepare a satellite view of your next destination. The satellite view displays during the flight even if you do not have an internet connection in the field.

1. Ensure that your FreeFlight 6 USA device is connected to the internet.
2. Specific to FreeFlight 6 USA Android: ensure that the map engine interface setting is set on **GOOGLE MAP**
3. Tap the **Load map** tile on the FreeFlight 6 USA home screen.
4. A satellite view screen opens. Scroll to the area that you intend to fly over.
5. Tap **Prepare the map**.

A green bar appears which displays the progress of your map preparation.



The map of your future mission is then saved to the FreeFlight 6 USA application memory. The map remains available even when your device is offline.

### Import custom maps to FreeFlight 6 USA

You can import your own map files to FreeFlight 6 USA including MBTiles, and PNG maps.

#### Map engines



FreeFlight 6 USA iOS features 1 option for the map engine.

FreeFlight 6 USA Android features 2 options for the map engine used. Each map engine uses a different type of map file. You can import offline maps for both engines. You must change the **Map Engine** in FreeFlight 6 USA depending on which type of map file you choose:

Map Engine	File type	Operating system
<b>GOOGLE MAP</b>	PNG Tile	Android
<b>MAPLIBRE</b>	MBTiles	Android
<b>APPLE PLAN</b>	PNG Tile	iOS


**Important:** For FreeFlight 6 USA Android, when you use the **MAPLIBRE** map engine instead of **Google Map**, the minimap is always hidden.

To change the map engine on FreeFlight 6 USA Android:




1. Tap  Settings.
2. The PREFERENCES menu opens, tap  Interface.
3. Scroll down to Map Engine.
4. Tap GOOGLE MAP or MAPLIBRE.

### Upload custom maps

**Important:** FreeFlight 6 USA automatically renames duplicate files by adding a number in parentheses after the file name, for example: MyMap(1). Parrot recommends that you name each map file differently before you transfer the map file in order to easily distinguish between 2 regions.

1. Connect your FreeFlight 6 USA device to a computer.
2. Copy the file(s) to the desired folder on the FreeFlight 6 USA device (Recommended folder: **FreeFlight 6 USA\Custom maps**).
3. Return to the FreeFlight 6 USA home screen and tap the **Load map** tile.
4. The **Prepare your map** screen opens, tap  **Download Custom Maps** at the bottom right.
5. The **Custom Maps** screen opens, tap **Import** at the top right.
6. The device File Manager opens. Tap on the **My Files** folder, in the device internal storage.
7. Search for the map file in the folder you selected in step 2 (Recommended folder: **FreeFlight 6 USA\Custom maps**) and select the file(s) that you want to import.
8. Tap **Done**. The **Custom maps** screen opens again, and a green circular progress bar indicates that the map(s) is(are) loading.
9. Tap **< Back**. The **Prepare your map** screen opens again.
10. Tap **< Back**. The home screen opens again.
11. Tap **FLY** on the FreeFlight 6 USA home screen. The HUD screen opens.
12. Tap the circle showing the map on the bottom right of the screen. You can now see your map. You may need to zoom to the correct location.

If a .mbtiles map file is corrupt, it may force FreeFlight 6 USA to crash. If you experience difficulties due to a corrupted map, follow this procedure:

1. For FreeFlight 6 USA Android only, revert to the **GOOGLE MAP** map engine:
  - a. Tap  Settings.
  - b. The PREFERENCES menu opens, tap  Interface.
  - c. Scroll down to Map Engine.
  - d. Tap GOOGLE MAP.
2. Return to the FreeFlight 6 USA main screen and tap the **Load map** tile.
3. The **Prepare your map** screen opens, tap  **Download Custom Maps** at the bottom right.
4. On the **Custom Maps** screen, swipe left on the corrupted map until you see the **Delete** tile.
5. Tap **Delete**, a menu opens. You must confirm if you want to delete the file.
6. Tap **YES**.

### How to create your own custom DTED and GeoTIFF maps online

Alternatively, you can create DTED or GeoTIFF maps online, and then upload these maps to FreeFlight 6 USA. Follow these steps to create, download, and import custom maps.

1. Navigate to the USGS Earth Explorer, available at <https://earthexplorer.usgs.gov/>.

**Note:** You must create an account, and log into USGS to download and order scenes.

2. Search for the area you want to create a map for.

3. To create a grid, click on the map at least 3 times to place map pins.
4. Click the **Data Sets** tab.
5. Click **Digital Elevation** to expand the menu.
6. Click **SRTM** to expand the menu.
7. Click the checkbox beside **SRTM 1 Arc-Second Global**.
8. Click the **Results** tab.
9. Click the download icon. The **Download Options** window opens.
10. Click **Download** beside **GeoTIFF 1 Arc-second**.

**Note:** You must convert the **GeoTIFF 1 Arc-second** file into a format compatible with FreeFlight 6 USA. Refer to the following chapter on how to convert a GeoTiff map into a MBTiles map or PNG tile map.

#### Convert a GeoTIFF map to a MBTiles map or a PNG tile map

The free QGIS software allows you to convert GeoTIFF maps into .mbtiles files for the **MAPLIBRE** map engine, or .png files for the **GOOGLE MAP** and **APPLE PLAN** map engine. Follow this procedure to convert your files:

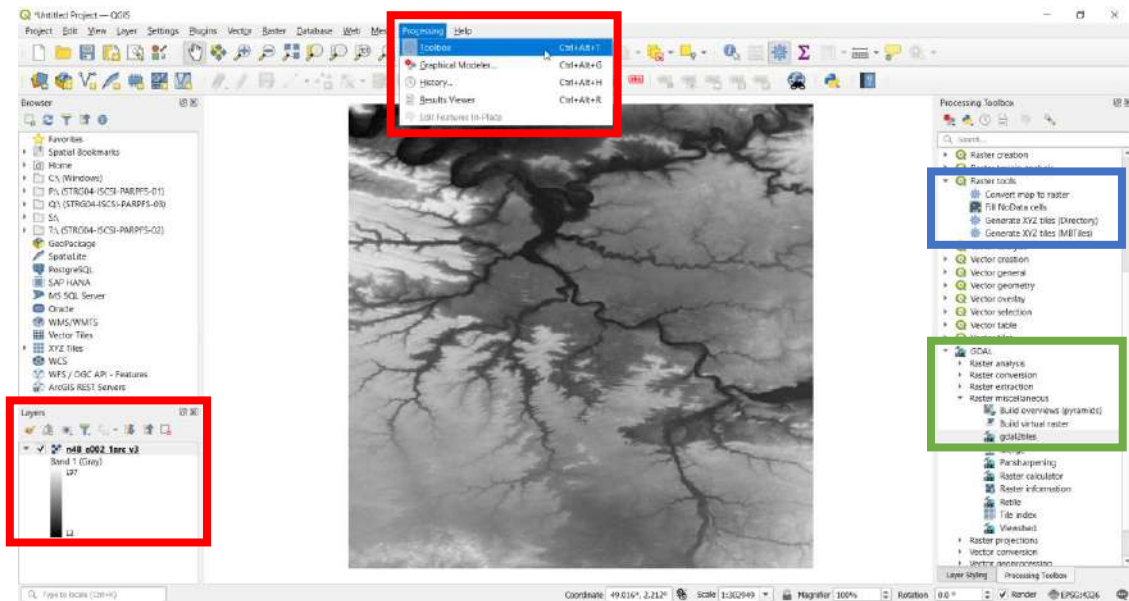
1. Launch [QGIS](#). Double-click on **New Empty Project**, under **Project Templates**.
2. Drag and drop your GeoTIFF file from your computer into the main QGIS window to bring your GeoTIFF file into the software's main interface.
3. Ensure that your GeoTIFF file has been imported onto your PC screen. It appears in the **Layers** menu on the left-hand side of the screen.
4. In the top bar navigation menu, click on **Processing**, then on the first option in the drop-down menu, **Toolbox**. The conversion interface opens on the right-hand side of the screen.
5. To create a .mbtiles file, follow sub step A), to create a .png file, follow sub step B):
  - A. .mbtiles file - In the **Toolbox**, double-click on **Raster Tools**, then click on **Generate XYZ tiles (MBTiles)** (See the blue box).
  - B. .png file - In the **Toolbox**, double-click on **GDAL**, then double-click on **Raster miscellaneous**, then click **gdal2tiles** (See the green box). Click **Run** to start the conversion.

**Note:** If you follow step 5.B to create a .png file, the conversion process is complete after you click **Run**, however, you must compress all new folders (.zip format) from the **Output directory**. Do not rename the folders. The conversion can take over 1 hour, depending on the size of the original file.

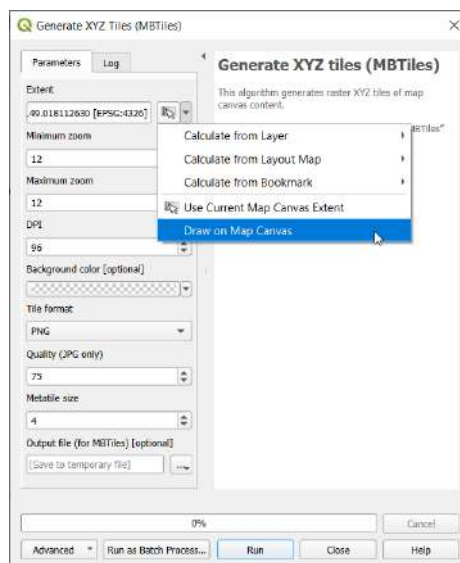
If you follow step 5.A, continue with step 6 for the .mbtile conversion process.



**Note:** The GeoTIFF map in the example below is displayed in grayscale.



6. The **Generate XYZ tiles (MBTiles)** menu opens. Under the **Parameters** tab, in the **Extent** field, click the  $\vee$  down arrow to open a drop-down menu.
7. Click **Use Current Map Canvas Extent**.
8. From the drop-down menu, click **Draw on Map Canvas**.
9. Choose the appropriate zoom levels.
10. Under the **Parameters** tab, in the **Output file (for MBTiles) [optional]** field, click the  $\vee$  down arrow to open a drop-down menu.
11. Click **Save to file...**
12. Name the file, and click **Save**.
13. Click **Run**. The conversion can take more than one hour, depending on the size of the map and the parameters of the previous steps.



## Map-based flying modes

### Flight Plan

Flight Plan enables you to fully prepare and configure your flights and filming sessions.

Tap **Flight Plan** from the **PILOTING MODE** box menu. The map of your surroundings opens full screen. If you are not connected to ANAFI USA, the minimized live view is black.

**Note:** The following screenshots are from the iOS interface. The Android interface differs slightly.



- |                          |                             |
|--------------------------|-----------------------------|
| 1. Initial way point     | 7. Waypoint number          |
| 2. Waypoint altitude     | 8. Cameral direction        |
| 3. <b>↑↓PLAN options</b> | 9. Waypoint distance marker |
| 4. Saved flight plans    | 10. Slider                  |
| 5. Piloting mode box     | 11. Current waypoint        |
| 6. Undo/Redo             |                             |

Parrot recommends that you modify the settings of the flight plan before you begin. Tap **↑↓PLAN OPTIONS**. A new window opens with 2 options:

#### PLAN OPTIONS

<b>Landing on last way</b>	No/Yes	Choose if the drone lands on the last waypoint, or if the drone hovers.
<b>Automatic progressive course</b>	No/Yes	Choose if the drone stops briefly at each waypoint, or if the drone transitions smoothly from waypoint to waypoint.

Tap on the **FLIGHT PLAN** box, a window opens. Tap **New**.

Choose the location of your initial waypoint, ideally, very close to your intended take-off point. Tap the screen to create the waypoint. The waypoint appears as a green circle. The white figure in the center represents the drone altitude, and the white arrow represents the camera direction.

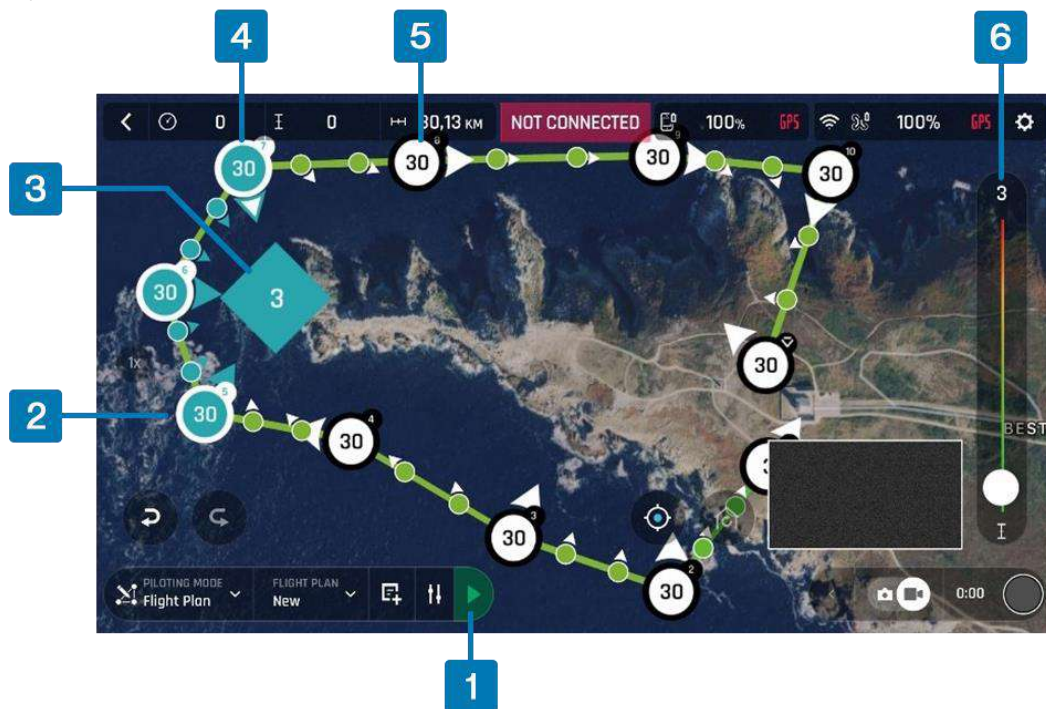
Change the direction of the ANAFI USA’s camera by pressing and holding on the white arrow. Rotate the arrow to the desired camera direction.

Tap the map to create more waypoints. The distance between the current waypoint and the previous waypoint appears on the flight path.

Tap the distance between the waypoints to change the figure from waypoint distance to drone speed between those 2 waypoints. Use the slider to increase or decrease the speed.

To change the height of an individual waypoint, tap the desired waypoint. Drag the slider on the right of the screen to modify the altitude. In the example above, ANAFI USA climbs from 3 meters at the initial waypoint to 30 meters for the following waypoints.

To create a Point of Interest, press and hold on the screen. A menu opens with 2 options: **Point of interest** / **Close**.



- |  |   |
|--|---|
| 1. Start Flight Plan button                          | 4. Final waypoint linked to a POI (indicated by a white arrow with blue border) |
| 2. Waypoint linked to POI                            | 5. Independent waypoint   |
| 3. Currently selected <b>Point of interest</b> (POI) | 6. Altitude of POI  |

Tap **Point of interest** to add the POI. The POI appears as a blue square diamond. The white figure in the center represents the POI altitude. Drag the slider on the right of the screen to modify the altitude.

**Note:** If you want a more precise method to define the drone speed between waypoints, waypoint altitude, or POI altitude instead of using the slider, press and hold on the relevant figure. A menu bar appears. To modify the drone speed, tap **Speed**. To modify the waypoint or POI height, tap **Altitude**. A window opens where you can enter the desired value.

When you select a POI, all waypoints turn white to indicate that you can now link the waypoints to the POI.

Tap a waypoint to link it to the POI.

When you link a waypoint to a POI, the waypoint arrow rotates toward the POI, and the arrows turn from white to blue. The arrow of the last waypoint you select remains white but has a blue border around the white arrow.

To unlink a waypoint from a POI, tap the POI, then tap the waypoint that you want to unlink.

Tap the POI to confirm your choices. The POI changes from a blue diamond to a white diamond with a blue border. Blue waypoints are linked to the blue POI. During the entire blue segment of the flight, ANAFI USA's camera will stay focused on the blue POI, enabling you to achieve a flyby shoot. Green waypoints remain independent from the POI.

**Note:** POIs are color coded. Each POI you create is a different color from the previous. When you link a waypoint to a POI, the waypoint changes color to the corresponding POI color.

You can modify waypoints and POIs at any time. Tap the waypoint or POI to change the height, and drag the icon to change the location.

To remove a waypoint or a POI, tap undo on the left-hand side. Alternatively, press and hold on the waypoint or POI icon. A menu bar appears, tap **Delete**.

### Start your flight plan

Tap the **PILOTING MODE** box on the HUD to display the options. Select **Flight Plan**. The last plan you created appears.

Tap the green arrow on the right of the left bottom bar of the **Flight Plan** interface to begin the **Flight Plan**. ANAFI USA 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 6 USA, ANAFI USA lands at, or hovers over, the last waypoint you created.

**Warning:** Monitor every Flight Plan with extreme care. Always verify the drone's route is safe, and clear of obstacles. Always maintain visual contact with ANAFI USA, and always be ready to stop the Flight Plan (tap the **STOP** box of your HUD or reclaim commands of the drone) in case of danger or unexpected obstacles.

### Touch & Fly: Waypoint

Waypoint is the default **Touch & Fly** mode. It enables you to fly ANAFI USA 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 USA is minimized in the bottom right corner of your screen.

Tap a point on the map to select a destination for ANAFI USA. This point is marked as a white circle with a green border. For each new Waypoint **Touch & Fly** session, FreeFlight 6 USA asks you to confirm the first destination of ANAFI USA as on the following screen capture. Tap the green **TAP HERE TO START** box, ANAFI USA flies toward its designated destination. Use the slider on the right of the screen to control the drone's altitude (the green figure inside the circle) when it reaches its destination.

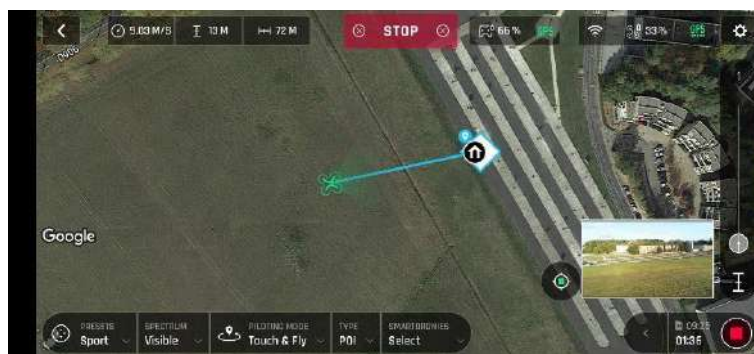


*Android Touch & Fly Waypoint: first destination confirmation screen*

**Important:** Activate **Touch & Fly** Waypoint with care. After the initial confirmation, any tap on the map will immediately send ANAFI USA to the corresponding spot. Parrot recommends you set your FreeFlight 6 USA filming or photography options before activating the **Touch & Fly** Waypoint mode. If, by mistake, you send ANAFI USA toward a dangerous area, tap the **STOP** box at the center of the top bar of the HUD, or firmly reclaim commands from the Skycontroller.

### 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, tap a point on the map to create a point of interest, marked as a white square diamond with a blue border, labelled with a **POI** icon. Control the height of the **POI** (the blue figure inside the square diamond) through the slider on the right. This controls the tilt of the gimbal, while you use the Skycontroller to fly around your target. ANAFI USA remains focused on the **POI**.



*Android Touch & Fly: POI*

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

From the **Smartdrones** box, next to the **Type** box of the lower bar of the HUD, you can also activate **Smartdrones** (Orbit, Parabola, Dolly Zoom, Boomerang) of your **POI**.

Refer to the "[Smartdrones](#)" section of this guide for more information.

## Appendix 1: Troubleshooting guide




This guide addresses all issues ANAFI USA users may have encountered while using a drone from the ANAFI USA series.

**Important:** If you encounter any issues with your drone, read the troubleshooting section thoroughly and apply the appropriate procedures relevant to your issue before you contact Parrot customer support.

### Troubleshooting procedures


#### ANAFI USA drone hard reset

Hard resetting ANAFI USA reverts ANAFI USA's most recent firmware to its original state. Parrot recommends the drone hard reset as a first intent procedure for several issues, notably gimbal calibration troubles.

1. Verify that a compatible microSD card is inserted into ANAFI USA.
2. Power ANAFI USA on (short press on the battery's  **Power** button).
3. Wait for the gimbal to calibrate (or for the gimbal calibration to fail).
4. Press and hold the battery's  **Power** button. After 8 seconds the battery's LED lights up in red.
5. Release the battery's  **Power** button. ANAFI USA powers off briefly then reboots.
6. Verify that the contents of ANAFI USA's microSD card: the hard reset procedure has generated a .TXT document named "wifi\_security\_key" at the root of the microSD card. This is not applicable to ANAFI USA SE version.

#### ANAFI USA's smart battery hard reset




Hard resetting ANAFI USA's battery can correct battery issues. Parrot recommends a battery hard reset whenever the battery's behavior is unexpected.

1. Plug your smart battery into a power source.
2. Regardless of the battery's behavior, press and hold its power button for 15 seconds.
3. Release the  **Power** button. The battery's LEDs run successively in green and red, then flash alternatively in green.
4. The battery's hard reset is complete.

### Resetting the Skycontroller 3 or Skycontroller 4

Resetting the Skycontroller reverts the controller back to its latest firmware update. It cleans all logs and credentials and restores the original ecosystem's Wi-Fi SSID and password.

To reset the Skycontroller, ensure that it is not connected to any drone, or the drone will initiate a take-off sequence.

Press and hold the controller's  **Take-off/Land**,  **Optics reset**, and  **Media recording** buttons for 15 seconds, then release the 3 buttons.



**Note:** The LED starts flashing after 10 seconds, but you must hold the buttons for an additional 5 seconds.

The Skycontroller reboots. The reset is successful.

The same procedure can be performed safely, even with a drone connected, through the **Reset** button of the Skycontroller page, in **FreeFlight 6 USA**.

## Reboot all systems

Rebooting all systems can solve connectivity issues (black screen, white noise, etc.).

1. Press  **Power** to power off ANAFI USA.
2. Close the FreeFlight 6 USA application on your Skycontroller.
3. Reboot your Skycontroller.  
Press  **Power** to power on ANAFI USA.
4. Wait for synchronization between Skycontroller and ANAFI USA: check that the left trigger of the Skycontroller activates the drone's gimbal to ensure the synchronization is complete.

## Issues

What do I do if I experience a connectivity issue (black screen, white noise, thermography camera activation failure, frozen or lagging stream)?

1. Check that your device's Wi-Fi is disabled: Parrot recommends you set your device in Airplane mode when you fly ANAFI USA, to minimize the risks of communication disturbance.
2. Reboot all systems (refer to the relevant procedure in the earlier section of this guide).

What do I do if my ANAFI USA's gimbal does not calibrate?

Hard reset ANAFI USA (refer to the relevant procedure in the earlier section of this guide).

What do I do if my ANAFI USA does not power on?

Ensure that your smart battery is "awake". Plug it into a power source to take it out of wintering mode. Its LED should start flashing to acknowledge that it is charging. Parrot recommends you always fully charge your smart battery before you fly ANAFI USA.

What do I do if my battery shows a strange behavior (flashing LED, red LED, etc.)?

Reset the smart battery (refer to the relevant procedure in the earlier section of this document).

What do I do if I cannot properly read the information displayed by **FreeFlight 6 USA**?

1. Access the settings of your device.
2. Find the **Display / Text and display size** (or equivalent) options.
3. Turn down the **text size** of your device, its **display size**, or both to let **FreeFlight 6 USA** accommodate all its information on your screen.

What do I do if my ANAFI USA is connected to the Skycontroller, but won't take off when I hit the take-off button?

1. Connect your device (in airplane mode, or with Wi-Fi turned off) to your Skycontroller.
2. The drone or controller boxes of the homepage of FreeFlight 6 USA indicate either that:
  - you must update your Skycontroller, your ANAFI USA, or both;
  - or you must calibrate your ANAFI USA's gimbal;
  - or you must carry out a magnetometer (drone) calibration;
  - or you must calibrate your Skycontroller.

What do I do if my ANAFI USA flips over at take-off?

The propeller blades have been improperly installed. Remove all propeller blades and reinstall them properly and carefully, following the instructions enclosed in all ANAFI USA propeller blades packs.

What do I do if my Skycontroller does not synchronize with my ANAFI USA?

1. Check no device is connected on ANAFI USA's Wi-Fi network, with FreeFlight 6 USA running.
2. Pair your ANAFI USA to your Skycontroller (refer to the relevant procedure in the earlier section of this document).

What do I do if my Skycontroller does not synchronize with my device?

1. Try connecting your Skycontroller and your device with a different cable, to eliminate a potential faulty cable issue.
2. When you have eliminated the faulty cable issue, and if you still cannot get the controller and device to synchronize, turn your Skycontroller off.
3. Try connecting your device to your ANAFI USA's Wi-Fi network and open FreeFlight 6 USA.
4. If your device does not connect to ANAFI USA, try uninstalling FreeFlight 6 USA and reinstalling it (**WARNING:** if you use an iOS terminal, remember to save your FreeFlight 6 USA media on your device or on a computer, as uninstalling FreeFlight 6 USA will delete all your media).
5. When your device and ANAFI USA are connected, plug your device to your Skycontroller.
6. After less than a minute, the full ecosystem connection (FreeFlight 6 USA on the device, Skycontroller, ANAFI USA) should be restored.

*If the full connection is not restored, contact Parrot Support.*

What do I do in the unlikely event my ANAFI USA has sustained a crash?

**IMPORTANT:** You must change all your propeller blades before attempting another flight. Propeller blades are instrumental for flight integrity and delicate pieces of equipment. Minor crashes may not show visible signs of damage to their structure.

1. Set up ANAFI USA for a flight.
2. Check the ANAFI USA page of FreeFlight 6 USA. Any permanently damaged element (gimbal or motor) appears in red. If an element is damaged, refer to point 8 below.
3. If no element is damaged, perform the calibration(s) requested by FreeFlight 6 USA (gimbal, magnetometer, or both).
4. Fly ANAFI USA, take pictures and videos.
5. Check your ANAFI USA pictures and videos to see if your drone's horizon is offset.
6. If your horizon is offset, perform the **Correct horizon** procedure of FreeFlight 6 USA's **Camera Preferences**.
7. If the **Correct horizon** function cannot straighten your horizon, it means a part of your gimbal is deformed and your drone requires service and a new calibration. Refer to point 8 below.
8. **Note:** If the crash damaged a component of ANAFI USA which is essential to a safe flight (such as its vertical camera or its ultrasonic sensor), your drone will not be able to take off and a **FreeFlight 6 USA** alert will tell you to contact your Parrot Support Partner. In this case, you must provide the Parrot Support Partner with:
  - a. the serial number of your ANAFI USA;
  - b. a proof of the purchase (invoice) of your ANAFI USA;
  - c. the full contents of your microSD card "FDR" folder.



## Appendix 2: Operational checklist

### Useful information

This checklist has been developed with military ANAFI series drone pilots. It provides useful information to every ANAFI USA pilot.

#### Update & calibration

Device	SYSTEMATICALLY UP TO DATE
FreeFlight 6 USA	SYSTEMATICALLY UP TO DATE
Skycontroller	SYSTEMATICALLY UP TO DATE
ANAFI USA	SYSTEMATICALLY UP TO DATE
Magneto calibration	OK
Skycontroller calibration	OK
Gimbal calibration	OK

**Important:** Parrot strongly recommends that you regularly refer to the [Release Notes ANAFI USA](#) available on the Parrot website, to ensure that you have the latest versions of the drone and controller firmware, and FreeFlight 6 USA App. If you are an offline user, you must contact your local Parrot Partner or Parrot Contact to obtain the .apk file to perform an offline system update. Refer to the [“FreeFlight 6 USA offline update via APK file \(Android users\)”](#) chapter for more information.

#### Skycontroller & ANAFI USA OFF

Arms	unfolded, locked
Arms mechanical lash	NONE
Lens cap	OFF
Check drone and gimbal	OK
Check propellers	intact, free
Check Skycontroller	OK, 100 % charged
Check terminal to Skycontroller cable	OK
ANAFI USA battery	OK, 100% charged
ANAFI USA battery LED	4 x OK
ANAFI USA battery temp	OK
Device	OK, 100% charged
MicroSD card	Inserted
ANAFI USA battery	3 hooks engaged in drone, locked

#### Skycontroller & ANAFI USA ON

Skycontroller	open, ON, flashing light to dark blue LED
ANAFI USA	ON, gimbal calibration OK
SC3 / ANAFI USA Wi-Fi connection	steady dark blue LED on SC3,
L trigger moves gimbal:	OK
Device	ON, Wi-Fi & Bluetooth OFF
Device / SC3 link	FreeFlight 6 USA launched,
Image feed & telemetry:	OK
Flight mode selection	MANUAL
RTH Height	set (20m to 100m)
Max altitude	set
Max distance	set
Geocage	activated if needed
Image settings	OK
Check Stick Mode	Inverted / Special mode
Map on app	OK

Micro SD card	Formatted
Battery levels	XXX% (report on flight log if ≠ from 100%)
Global reactivity	set
Camera tilt speed	set
Inclination	set
Vertical speed	set
Rotation speed	set
<b>Before take-off</b>	
ANAFI USA GPS signal	Red / Orange / Green
Device GPS signal	Red / Green
Flight mode	MANUAL
Weather	OK
TO Zone	Clear
Drone status	Check
Take-off/Land command	Take-off
<b>After take-off</b>	
Precise Home Set	Depending on conditions / 10 secs or 10 meters
Check Stick Mode	Inverted / Special mode
Flight mode	MANUAL
Check flight commands	OK
Check gimbal	OK
Video feed	OK
Video latency	OK
Drone status	Check
<b>Before landing</b>	
Flight mode	MANUAL
Weather	OK
Landing Zone	Clear
Drone status	Check
Take-off/Land command	Land
<b>After landing</b>	
Check engines off	OK
Drone status	Check
ANAFI USA Battery	OFF
Skycontroller	OFF
Check drone/gimbal/propellers	OK
Lens cap	ON
ANAFI USA Battery	Disengaged, stored away
Micro SD card	Stored away
ANAFI USA arms	Folded, no mechanical lash
ANAFI USA drone	Stored away
Device	OFF / Stored away
Skycontroller	Stored away
Cables	Stored away
<b>Documents</b>	
Flight & batteries info	Report on flight log