Parrot®
DISCO-PRO AG

CHECKLIST

BEFORE FLIGHT

DOWNLOAD FREEFLIGHT PRO AND PIX4DCAPTURE (Available on the App Store only)

1. Sign in to the App Store®.
2. Download the free apps FreeFlight Pro and Pix4Dcapture on your smartphone or tablet.
   - It is recommended to use Pix4Dcapture the free application allowing to generate a flight plan to capture photos above a specific area and to make your drone fly autonomously.
   - FreeFlight Pro is the official free application of Parrot allowing to freely pilot the drone.

CHARGE THE BATTERY OF PARROT DISCO-PRO AG

1. The battery must be unplugged from Parrot Disco-Pro AG.
2. Select the supplied adapter depending on your country and insert it into the charger.
3. Connect the cable to the charger.
4. Connect the battery to the charger cable and then plug the charger into the AC outlet.
   The charge time is approximately 55 minutes for an approximate flight time of 25 minutes.
   The light indicator is red during charge and turns green when the battery is charged.

CHARGE THE BATTERY OF PARROT SKYCONTROLLER 2

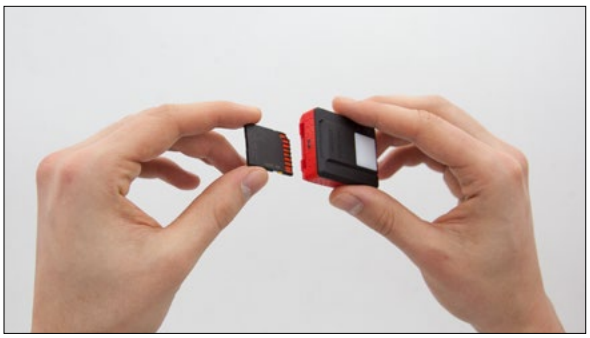
1. Select the supplied adapter depending on your country and insert it into the charger.
2. Connect the cable to the charger.
3. Connect Parrot Skycontroller 2 to the charger cable and plug the charger into the AC outlet.
   The charge time is approximately 1 hour and 40 minutes for 4 hours of use.
   The light indicator is red during charge and turns green when the battery is charged.

MAKE SURE YOU...

1. Take off the drone's cover.

2. Insert the Parrot Disco-Pro AG battery into the dedicated slot in Parrot C.H.U.C.K.

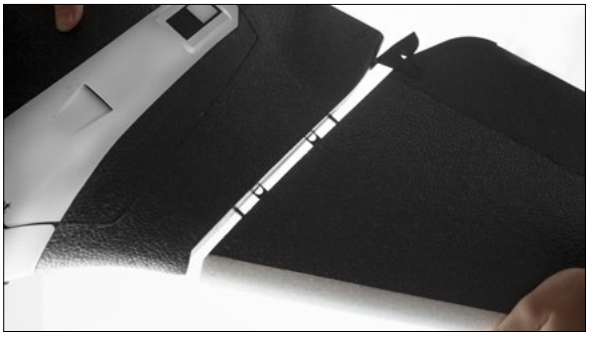
3. Take off the protective lens and the protective film.



4. Insert the SD card in Parrot Sequoia.

5. Place Parrot Sequoia in the dedicated slot.

6. Connect the micro USB cable of Parrot Sequoia into the plug provided on Parrot C.H.U.C.K. and put on the cover.



7. Attach the drone's wings to the drone's body and make sure the wing is fully slotted into the arm of the servomotor.

GETTING STARTED WITH PARROT SKYCONTROLLER 2 AND ITS ACCESSORIES

1. Turn on Parrot Skycontroller 2 by pushing the transparent button. Parrot Skycontroller 2 is already paired with Parrot Disco-Pro AG.

2. Place the smart device holder on Parrot Skycontroller 2 and install the smart device in it.

3. Connect the USB cable of your smart device from Parrot Skycontroller 2 to your smart device.

5. Turn on Parrot Disco-Pro AG. The button must be green. If the button is blue, it means that the drone does not have a GPS signal. Stand in a clear, open space to pick up a signal.

6. The Parrot Skycontroller button is green when it is connected.

7. Parrot Sequoia LED must be green.

SET UP A FLIGHT PLAN WITH PIX4DCAPTURE

GETTING STARTED WITH THE PIX4DCAPTURE APP

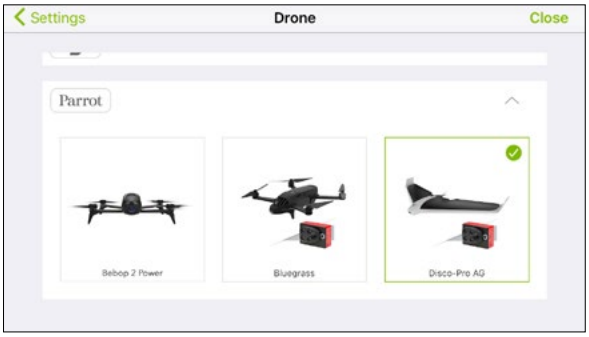
This step will allow you to simply configure the drone flight above your plot as well as the automatic photo capture done with Parrot Sequoia.

1. Open the application Pix4Dcapture and create an account.

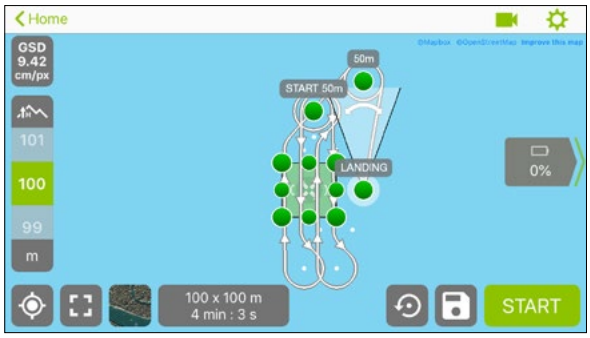
2. Select Parrot Disco-Pro AG.

3. Select the mission:

- **GRID**



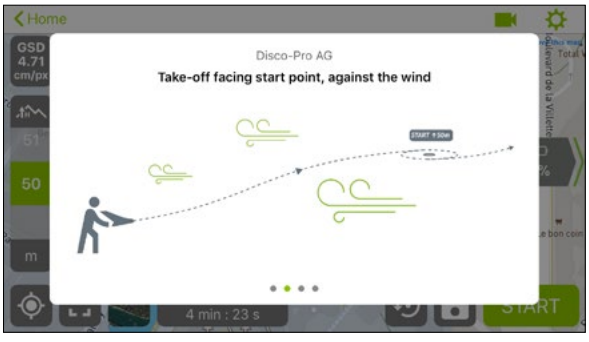
4. The Pix4D Dashboard will appear.

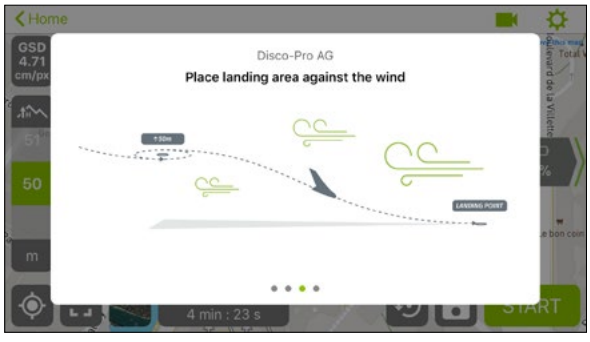


5. In the chosen mission menu, display the local map by pressing the button
Zoom out and scroll the map to the area you intend to go.
Then, display the default flight plan by pressing the **RESET** button

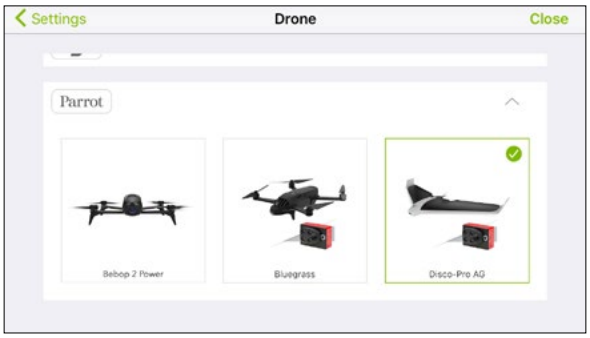
6. Place this flight plan above the crops you intend to map by dragging it with your finger. Rotate or adjust its size by dragging the corners.

7. Define the flight zone, a take-off and a landing point: make sure you takeoff and land facing the wind.



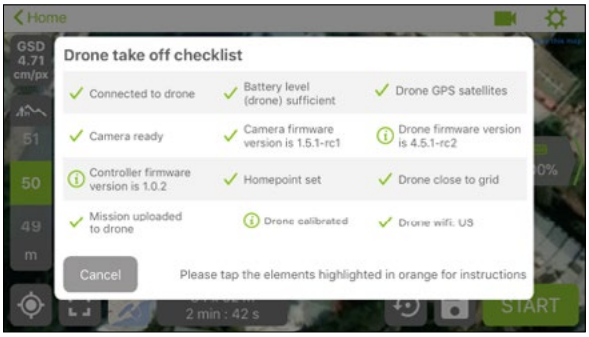


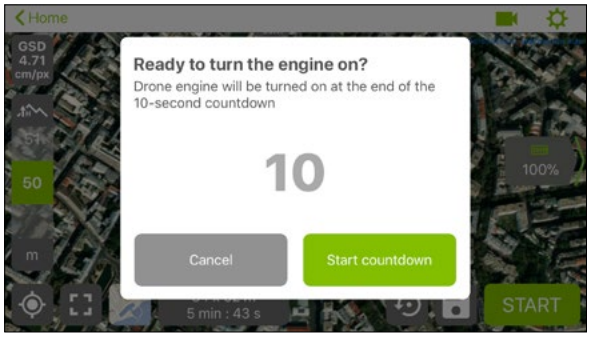
8. Adjust the flight altitude:



9. Take the drone and press **START** when your flight plan is correctly set up.
Note: Check if an update is required by pressing **FIRMWARE UPDATE**.

10. Please confirm by pressing **START**, a drone connection and take-off checklist is performed. In case of failure, please refer to the chapter *Main common causes of warnings for take-off checklist*.





11. Launch the drone, it starts the mission and flies automatically from the point selected on the map (represented by a flag).

12. During the flight, you can watch live video streaming from the drone by pressing the 'camera' icon
To come back to the mapping view, press the 'map' icon.

13. At the end of the flight, the drone comes back to the starting point and lands automatically. If needed, you can take control of the drone to land it at different location.

14. The photos are stored on the SD card. Remove the SD card from the drone to put it on your computer.

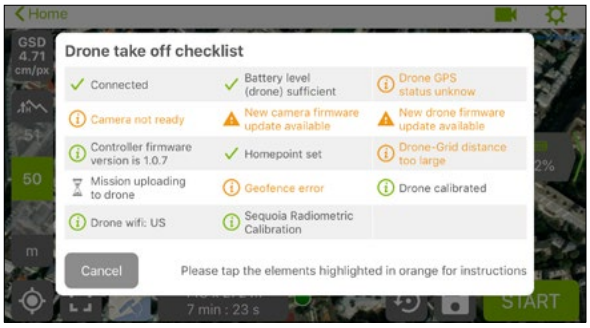
15. Go to **parrot.airinov.com** or **cloud.pix4D.com** and enter your email adress to create an account.

16. Select the photos from your SD card. In case you have performed the radiometric calibration of your Sequoia, add the images coming from the calibration to the selected photos. The upload will start and may take a few minutes depending on your internet connection.

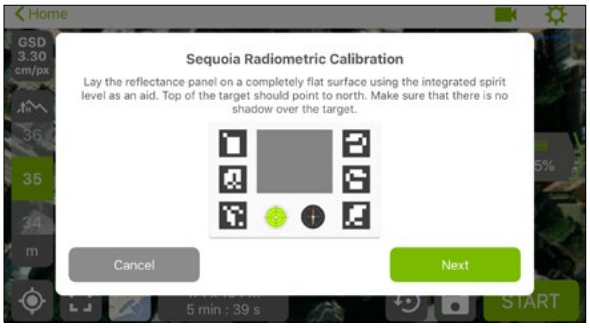
17. A report will be emailed to you within 24 hours.

RADIOMETRIC CALIBRATION OF PARROT SEQUOIA

It is not mandatory to perform a radiometric calibration if you want to create an NDVI map. However, radiometric calibration is essential to obtain absolute reference values, in particular to carry out nitrogen prescription.

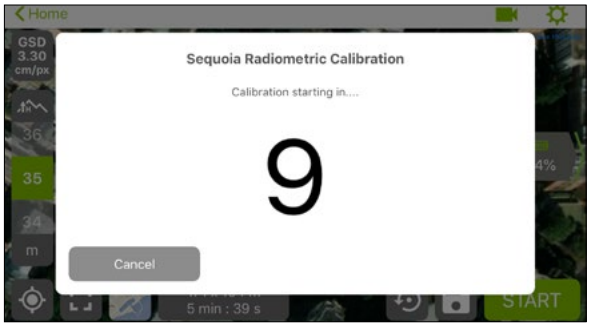


1. Access the Drone take off checklist and select 'Sequoia Radiometric Calibration'.

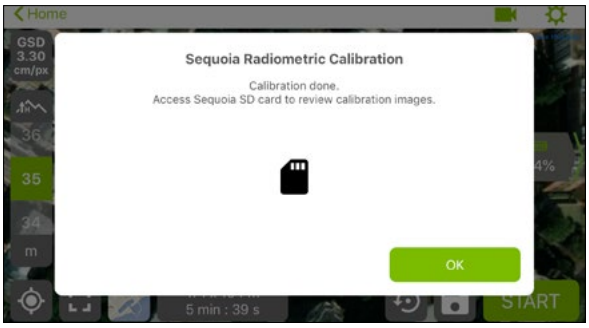


2. Follow the instructions.

3. Start the calibration process by pressing the start button.



4. A countdown will be displayed before the calibration process starts. Keep the drone immobile as shown in step 3. Do not cover the sunshine sensor with your shadow or your hand. Make sure the calibration target is not covered by anything, this includes shadows.



5. Once the calibration process has been completed, the pictures required to calibrate the drone are stored in the SD card.

PIX4DCAPTURE– MISSION RESUME AND MULTI-BATTERY FLIGHTS

Mission resume allows to continue a mission that has been aborted or interrupted by taking over manual control. The incomplete portion is saved in the same project as a new mission, so that it can be executed later.

The procedure to create the remaining mission of an interrupted one is described here:

1. Tap Save when the mission is interrupted to **SAVE** the incomplete portion.

2. In the *HOME* screen, tap **PROJECT LIST.**

3. In the **PROJECT LIST** screen, tap the project name of the interrupted mission.

4. In the *MISSION 1* view, the incomplete mission appears.

5. In the *MISSION 2* view, the remaining mission has been created.

6. Tap Open to **OPEN** the remaining mission.

7. Tap Start to **START** the mission.

8. Repeat the steps if needed to split the initial grid into more than two grids.

TIPS FOR USAGE

PRE-PLAN AND SAVE YOUR FLIGHT BEFORE GOING ONSITE

You can save flying settings and execute the flight later, follow these instructions.

1. First create your flight plan with instructions.

2. Then press the **SAVE** button. The flight plan and map will be saved under a project name you can change.

3. Onsite, to retrieve a flight plan, select **PROJECT LIST** (iOS) on the main menu, then select the project previously created and press **OPEN**.

4. The mission page you set earlier is displayed. Note that the flight plan can be modified any time if needed.

5. Onsite, it is recommended to check and adjust the flight plan as you may be needed to modify the position and altitude of the flight when looking at the real neighborhood and environment.

6. Then go to the chapter *Set up a flight plan with Pix4Dcapture.*

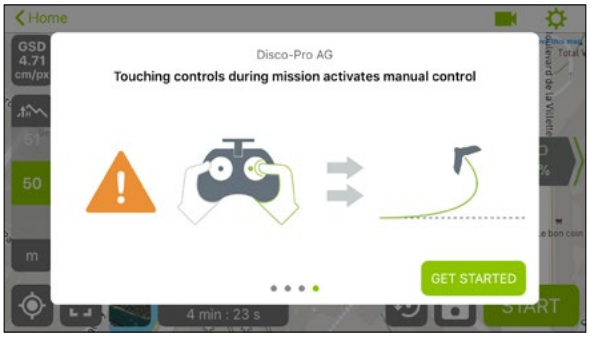
HOW TO IMPROVE QUALITY

- If the photos are not satisfactory, you can relaunch a new mission with relevant modifications.
- In windy conditions, the flight may be longer as the drone try to stabilize before taking the picture.
- Increase the overlap: For advanced users, the Front Overlap and Side Overlap can be changed in the settings section. Note that the memory used and the processing time will be more important.
- Lower the flight altitude, the better the data accuracy.

SAFETY

During an automatic flight, in case of emergency take back control of the drone by pressing:

- Any Parrot Skycontroller button.
- The **ABORT** button.

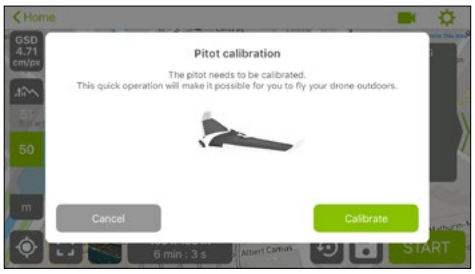


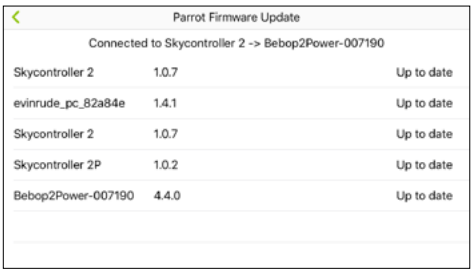
After that, Parrot Disco-Pro AG will turn on the standby mode and wait for your commands. Several options are available:

- Flight with manual control using Parrot Skycontroller 2.
- **RESTART** the Flight Plan, so the mission will start again.
- **LAND**: Parrot Disco-Pro AG will land depending on the position.

MAIN COMMON CAUSES OF WARNINGS FOR DRONE TAKE-OFF CHECKLIST

UPDATE AVAILABLE:

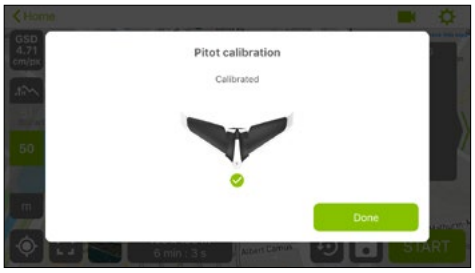




DRONE NOT CALIBRATED:

Launch the process as follow:

- Select: Drone not calibrated
- The drone calibration menu will appear.
- Follow instructions to calibrate the Parrot Disco-Pro AG.



Note: Drone calibration can also be done with FreeFlight Pro app.

BATTERY NOT CHARGED ENOUGH

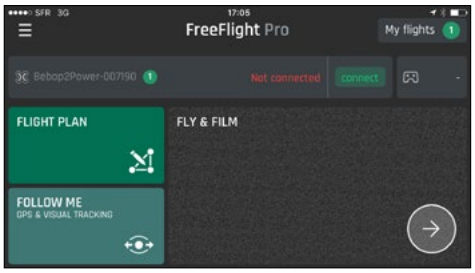
- Charge the battery.

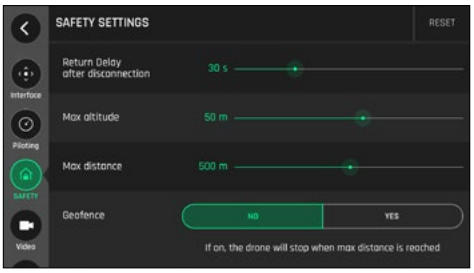
GPS POSITIONING NOT ACCURATE, or HOME POINT DISTANCE UNKNOWN

- Put the drone in an open space, as it may be too close to a wall or in a dark spot.

GEOFENCE

- Open the free FreeFlight Pro application.
- Activate Wi-Fi on your phone and open the application.
- Connect Parrot Disco-Pro AG.
- Check in the settings if the default geofencing is limiting your mission (max altitude and max distance).





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