

A world map in shades of blue and white, serving as the background for the slide. A horizontal white band is overlaid across the middle of the map.

CARGO TRANSPORT



DLV-1 NEO TAKE-OFF AND LANDING PLANNING



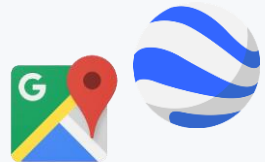
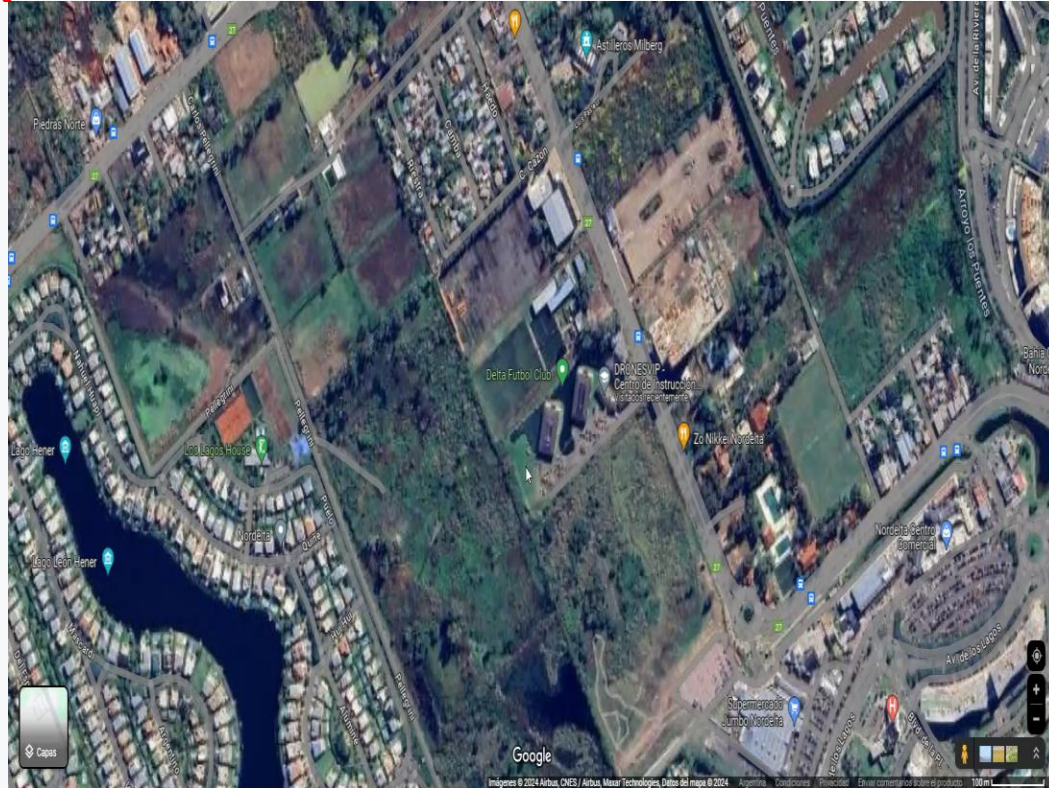
To plan a delivery mission, it is essential to respect the maximum distances and heights according to our operations manual and regulations of our country of origin. Each area of operation must be analyzed in detail with respect to:

1. Take-off and landing (free and delimited area)
2. Coordinates(extracted from Google earth/maps/drone position) for mission planning.
3. Natural and artificial obstacles to our route.
4. 4G connection en route to avoid connection losses.
5. Personnel authorized to act in the event of a possible failure of the equipment in the delivery area and route.
6. Evaluate maximum travel distances according to type of flight.

IMPORTANT: for our droneports/dronepads, it is important to delimit the area well with an operating radius of 20 meters from the center of the ARUCO(QR), and delimit the area with cones or fencing.



DLV-1 NEO COORDINATE EXTRACTION



SPEEDBIRD AERO WEB INTERFACE LOGIN



We log in with our assigned username and password

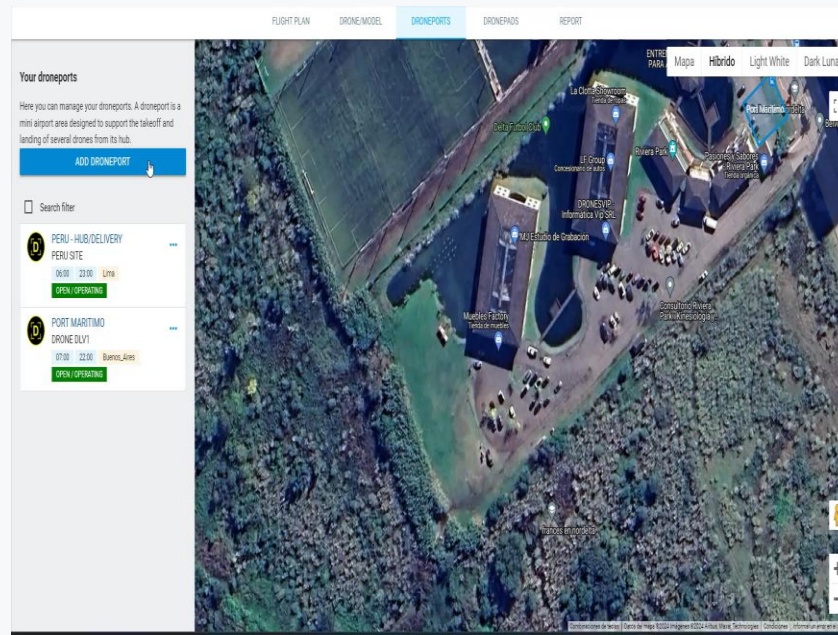
A screenshot of the Speedbird Aero login interface. The interface features a blue header bar at the top. Below the header, there is a white login form centered on a light gray background. The form includes the Speedbird Aero logo (a blue stylized bird) and the text "Speedbird Aero". Below the logo, there are two input fields: "Username" and "Password", each with a small label above the input line. At the bottom of the form is a blue button labeled "LOGIN".

SPEEDBIRD AERO **WEB INTERFACE**



Creating Droneports and Dronepads

To create the dronepads (UAV landing and take-off points), it is necessary to define the DRONEPORT polygon, which is a no-fly zone for other UTM-enabled drones.



SPEEDBIRD AERO WEB INTERFACE



Creating Droneports and Dronepads

Once our drone port has been made, we are going to make our Dronepads that will be the takeoffs and landings of our flight with the coordinates that we extracted from Google maps.

The screenshot displays the 'DRONEPORTS' section of the Speedbird Aero web interface. The interface includes a navigation menu at the top with options: FLIGHT PLAN, DRONE MODEL, DRONEPORTS (selected), DRONEPADS, and REPORT. On the left, there is a sidebar titled 'Your droneports' with an 'ADD DRONEPORT' button and a search filter. The main content area shows a list of droneports and a satellite map view.

Droneport Name	Location	Status
PERU - HUB/DELIVERY PERU SITE	Lima	OPEN / OPERATING
PORT MARITIMO DRONE DUVI	Buenos_Aires	OPEN / OPERATING
PUERTO DE OPERACIONES PUERTO DE OPERACIONES	Buenos_Aires	CLOSED

The satellite map view shows a large green rectangular area labeled 'PUERTO DE OPERACIONES' outlined in blue. Other landmarks visible on the map include 'ColorNails Studio' and 'Muebles Factory'. The map interface includes controls for map style (Mapa, Híbrido, Light White, Dark Luna), zoom in/out buttons, and a compass.



SPEEDBIRD AERO **WEB INTERFACE**

Creating Droneports and Dronepads



The screenshot displays the 'DRONEPORTS' section of the Speedbird Aero web interface. The top navigation bar includes 'FLIGHT PLAN', 'DRONE/MODEL', 'DRONEPORTS', and 'REPORT'. The main content area is split into two panels. The left panel, titled 'Your droneports', contains a description: 'Here you can manage your droneports. A droneport is a mini airport area designed to support the takeoff and landing of several drones from its hub.' Below this is a blue 'ADD DRONEPORT' button and a 'Search filter' section. The right panel shows a satellite map of an urban area with a large blue building labeled 'TOYOTA DEL PILAR'. The map includes navigation controls like 'Mapa', 'Hibrido', 'Light White', and 'Dark Luna', along with zoom and pan tools.

Your droneports

Here you can manage your droneports. A droneport is a mini airport area designed to support the takeoff and landing of several drones from its hub.

ADD DRONEPORT

Search filter

- PERU - HUB/DELIVERY PERU SITE**
06:00 - 23:00 Lima
OPEN / OPERATING
- PORT MARITIMO DRONE DLV1**
07:00 - 22:00 Buenos_Aires
OPEN / OPERATING
- PUERTO DE OPERACIONES PUERTO DE OPERACIONES**
07:00 - 00:00 Buenos_Aires
CLOSED



SPEEDBIRD AERO WEB INTERFACE

FLIGHT PLANNING



FLIGHT PLAN | DRONE/MODEL | DRONEPORTS | **DRONEPADS** | REPORT

Mapa | Hibrido | Light White | Dark Luna

Your dronepads

Here you can manage your dronepads. They are your private network of takeoff and landing locations, designated for use by one drone at a time.

[ADD DRONEPAD](#)

Search filter

- AXION
AXION
34°23'34"S 78°39'49"W
- DESPEGUE DV
DESPEGUE DV
34°23'52"S 78°39'35"W
- ENTREGA DV
ENTREGA DV
34°23'33"S 78°39'54"W
- PER DELIVERY SITE
PER DELIVERY SITE
12°23'20"S 78°45'39"W
- PER HUB SITE
PER HUB SITE
12°23'21"S 78°45'34"W

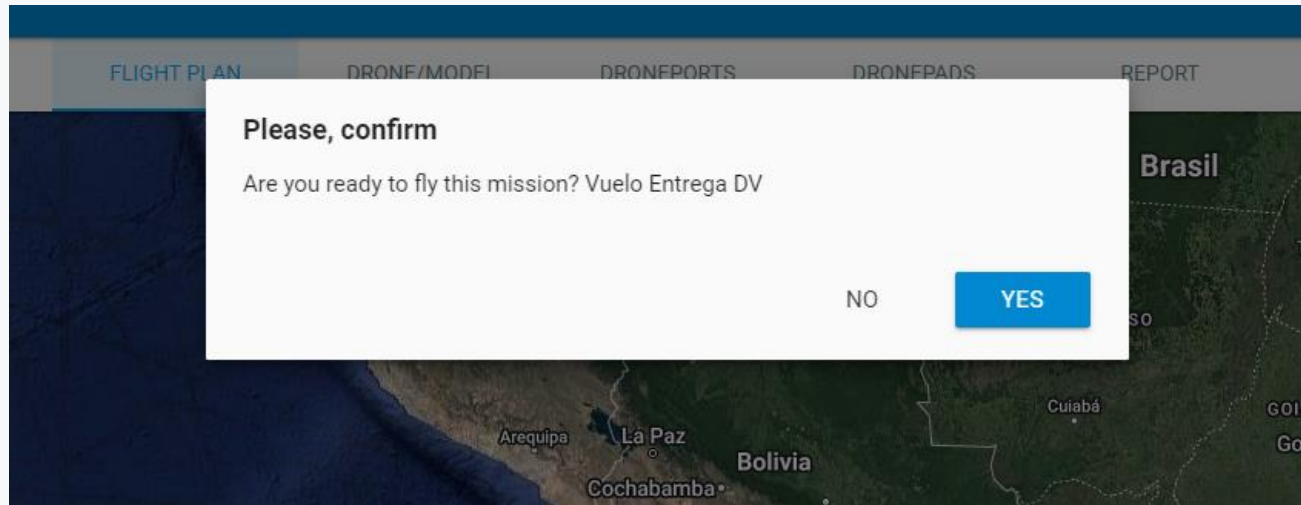


SPEEDBIRD AERO **WEB INTERFACE**



Once the flight plan has been made, we will be able to access to see the dashboard

We apply in "yes" to be able to access the flight command.



SPEEDBIRD AERO WEB INTERFACE

Load Weight



The screenshot displays the Speedbird Aero web interface. At the top, it shows flight details: Flight Plan: Vuelo Entrega DV, Code: 296d6b8a, Drone: AR VNT 1016, Op-1: Brenda Schreiner. The main interface is divided into several sections:

- Top Left:** Roll 0°, Pitch 0°, Head 0°. Below this is a heading indicator showing North (N) and other directions (NW, NE, SE, SW).
- Top Right:** START TIMER!, FLIGHT WEIGHT, SERVO, EXIT.
- Center:** A map view showing the drone's location and flight path. A modal dialog is overlaid on the map, titled "Please, confirm the cargo info before takeoff".
- Bottom Left:** A grid of gauges for various metrics: Battery Level (0%), GPS Sats (0), IMU Temp (0°C), Humidity (0.0%), Altitude (0m), GPS2 Sats (0), and Speed (km/h).
- Bottom Right:** A control panel with buttons for ARM, Pause, SRTL, Override, Land, and Terminate. Below these are status indicators for (CMP) OFFLINE, (LTE) 4G 0%, (RPA) NOT READY, (APS) OFFLINE, and (LAT) OFFLINE. A weather widget shows 13°C, Precipitation 0.14 mm, Visibility 10 km, Wind 11 kph, and Humidity 44%.

The modal dialog "Please, confirm the cargo info before takeoff" contains the following fields:

- Manual entry
- Cargo weight (in grams):
- How many items?:
- Orders IDs:
- Orders Source: Select Source (dropdown menu)
- Buttons: SKIP, SAVE

We will indicate what weight it will carry inside the box, before taking off with our scale and we will indicate how many items we will carry, store and that's it!!



PRE-TAKE-OFF SPEEDBIRD AERO



Flight Plan: Tin Code: 7d80d316 Drone: AR VNT 1016 Op-1: Brenda Schreiner Op-2: Speedbird Support

START TIMER! FLIGHT WEIGHT SERVO EXIT

Roll 0° Pitch 2° Head -75°

Mapa

ARM

Light mode Dark mode

(CMP) ONLINE

(LTE) 4G 100%

(RPA) STANDBY

(APS) STANDBY

(LAT) BEST

STABILIZE

Distance 55.6 m

Duration 51.5 min

Override

Land

Terminate

Cargo locked
Cargo releasing
Parameters downloaded
Mode STABILIZE
Vehicle connected
Check joystick
Fence polygon received. Max altitude set to 40 meters
Mission uploaded: true
Flight plan received

19°C

Precipitation 0 mm
Visibility 10 km
Wind 28 kph
Humidity 37%

001 UAV ARG MM

0 M 3 0 M 5

0 M 2 0 M 1

0 M 6 0 M 4

93% Battery Level 24.9v -2.7A

16 GPS Sats 3D Fix 68

46°C IMU Temp Humidity 37%

-1m Altitude LIDAR 0.34m

16 GPS Sats 3D Fix 68

0 Speed (km/h)

Follow Drone Motors Map

Precision Landing

STABILIZE

START

CHECK FLOW

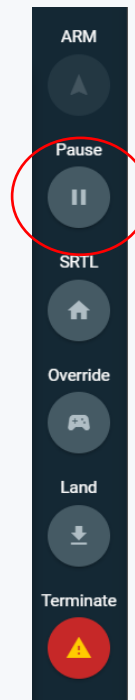
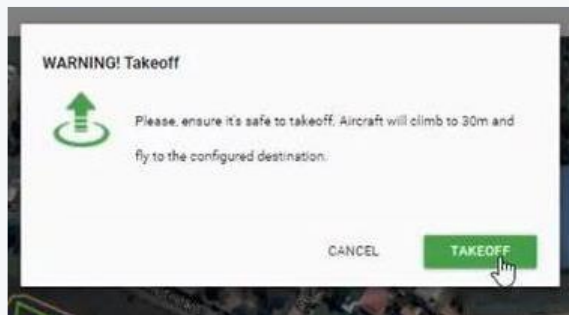
That is the workflow to talk before flying, always comment on the parameters out loud to be able to check them and be able to arm the drone for takeoff.



PRE-TAKE-OFF **SPEEDBIRD AERO**



Once the drone is checked and we have the authorization of the Speedbird remote pilot and we consider that we can take off, before 8 seconds we click on "TAKE OFF", if this does not happen the drone will turn off the engines and we must restart the procedure.



The mouse cursor should always be "PAUSE".



FLIGHT SPEEDBIRD AERO



START TIMER! FLIGHT WEIGHT SERVO EXIT

Mapa

ARM

Status

(CMP) ONLINE

(LTE) 4G-100%

Pause

(RPA) STANDBY

(APS) STANDBY

(LAT) BEST

STABILIZE

Distance 55.5 m

Duration 90.7 min

Override

Land

Terminate

Cargo locked

Cargo releasing

Parameters downloaded

Mode STABILIZE

Vehicle connected

Check joystick

Fence polygon received. Max. altitude set to 40 meters

Mission uploaded: true

Flight plan received!

19°C

Precipitation 0 mm

Visibility 10 km

Wind 28 kph

Humidity 37%

Mezclador de audio

Transiciones de escena

Controles

Audio del escritorio 0.0 dB

Mic/Aux 0.0 dB

Corte

Iniciar Transmisión

Detener Grabación

Iniciar Cámara Virtual

Modo Estudio

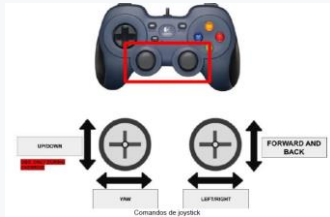
Ajustes

Salir

19°C Soleado

LIVE: 00:00:00 REC: 00:00:00 CPU: 2.1%, 30.00 fps

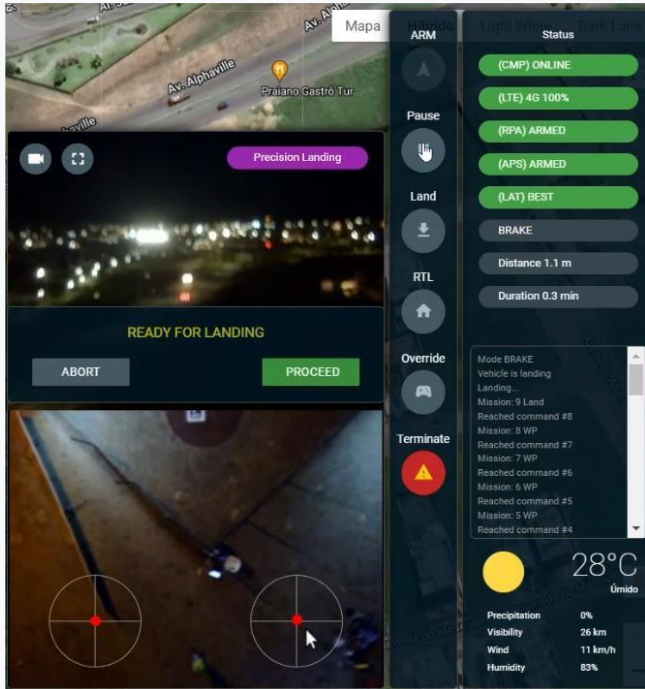
5:23 PM 10/4/2023



Always record the flight screen



IN-FLIGHT CONSIDERATIONS



RETURN AND LANDING AT THE ORIGIN

After releasing the cargo at the destination drone platform, the UAV initiates the automatic return to the originating drone platform. The map shows a green checkpoint at the destination point, indicating that the cargo was successfully delivered.

On its return, upon reaching the original drone platform, the UAS begins an operational descent. The remote pilot should always monitor the ground camera to verify the positioning of the UAS descent.

At 25 m above ground level, the message "READY FOR LANDING" appears on the RPS screen, and waits for the pilot's confirmation to proceed with the landing, otherwise, he will go down only leave the load and return to the starting point.



FLIGHT REPORTS

Cloud Control Server (Staging) 2.2.0

DRONE/MODEL DRONEPORTS DRONEPADS FLIGHT PLANS **REPORT**

Flight reports
Below is a list of Flight Summary Reports recorded after every completed flight.

Search Filter:

Data Initial: 12/02/2023

End Date: 12/02/2023

Customer: Select customer

Drone: Select drone

Select timezone

SEARCH

Show 2 of 2 reports

- DLV-2 0003 IFOOD
From Feb, 12 2023 13:08
Status: Complete
- DLV-2 0003 IFOOD
From Feb, 12 2023 12:26
Status: Complete

MORE

Delivery (Mission)	
Flight Code	1515e152
Origin	RIOMAR DECOLAGEM 1.0
Destination	RIOMAR POUZO
Created	Feb, 12 2023 13:04:42
Takeoff	Feb, 12 2023 13:08:18
Delivered	Feb, 12 2023 13:13:28
Land	Feb, 12 2023 13:18:08
Flight Time	00:09:50
Delivery Time	00:05:10
Payload	3446 g
Payload Items	2

At the end of the mission, the pilot must perform the following procedure:

Report any bugs, if necessary, on the pop-up screen.

Insert the safety pin of the parachute controller.

Disconnect and remove the batteries.



DRONESVIP

QUESTION TIME!



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CARGO TRANSPORT

