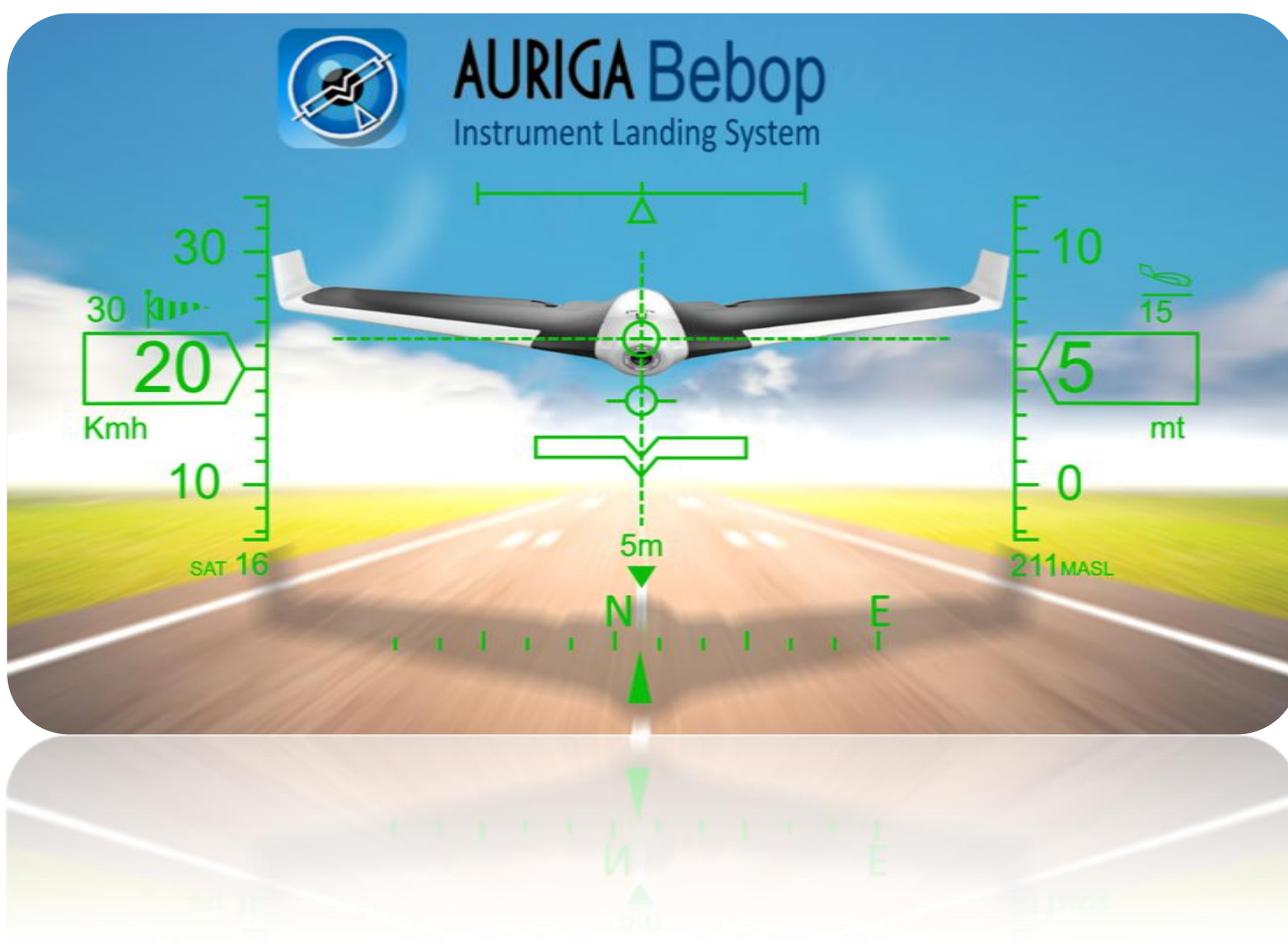




Instrument Landing System ILS User guide



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Overview

The instrument landing system (ILS), used in aeronautics, enables pilots to conduct an instrument approach to landing if they are unable to establish visual contact with the runway. That system operates as a ground-based instrument approach system that provides precision lateral and vertical guidance to an aircraft approaching and landing on a runway, using a combination of radio signals to enable a safe landing during instrument meteorological conditions, such as low ceilings or reduced visibility due to fog, rain, or blowing snow.



The ILS for your Parrot Disco helps you to approach a proper landing operations in such a way that it warns you when it is the right time to press the landing button on your Skycontroller.



The Auriga's ILS System allows you to set the best values of altitude and distance in order to approach the proper landing, besides Auriga's ILS instrument helps you to align the Disco in the right way of the landing pathway.

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ILS Settings

These settings allow you to set the best values of altitude and distance in order to properly approach the landing.

In the flight settings menu select Disco drone and , after set all flight parameters, tap on the ILS button (highlighted in the figure below) in order to set the ILS parameters.

The screenshot displays the 'FLIGHT SETTINGS' menu for the 'DISCO' drone. At the top, there are buttons for 'PROFILE 1' and 'PROFILE 2', each with 'LOAD' and 'SAVE' options. The 'ILS' button is highlighted with a red box and a red arrow. Below the drone name 'DISCO', there are sliders for 'Altitude limit' (set to 70m), 'Max distance' (set to 200m), 'Minimum altitude' (set to 10m), and 'Loiter altitude' (set to 30m). There is a 'GEOFENCE' toggle switch which is currently off. Below the sliders are buttons for 'Loiter direction' (CLOCKWISE and COUNTERCLOCKWISE) and 'Pitch mode' (NORMAL and INVERTED). At the bottom, a warning icon and text state: 'Set up the flight parameters in order to fly in according with your local civil aerial regulation'.



once the ILS key is tapped, the following screen is displayed:

DISCO LAST LANDING DATA

Start landing data

Speed	0 Km/h
Air speed	0 Km/h
Altitude	0 m
Distance	0 m
Angle	0 °

Final landing data

Distance from pilot	0 m
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ILS Settings (Instrument Landing System)

Enable ILS

Set the flight parameters in order to properly press the landing button

Altitude
30m

Distance
100m

to the top of the page are displayed all the data of the last landing performed:

Start Landing Data

Speed: is the speed value when the landing button was pressed;

Air speed: is the Air speed value when the landing button was pressed;

Distance: is the distance from the pilot point when the landing button was pressed;

Angle: is the angle with the ground when the landing button was pressed;

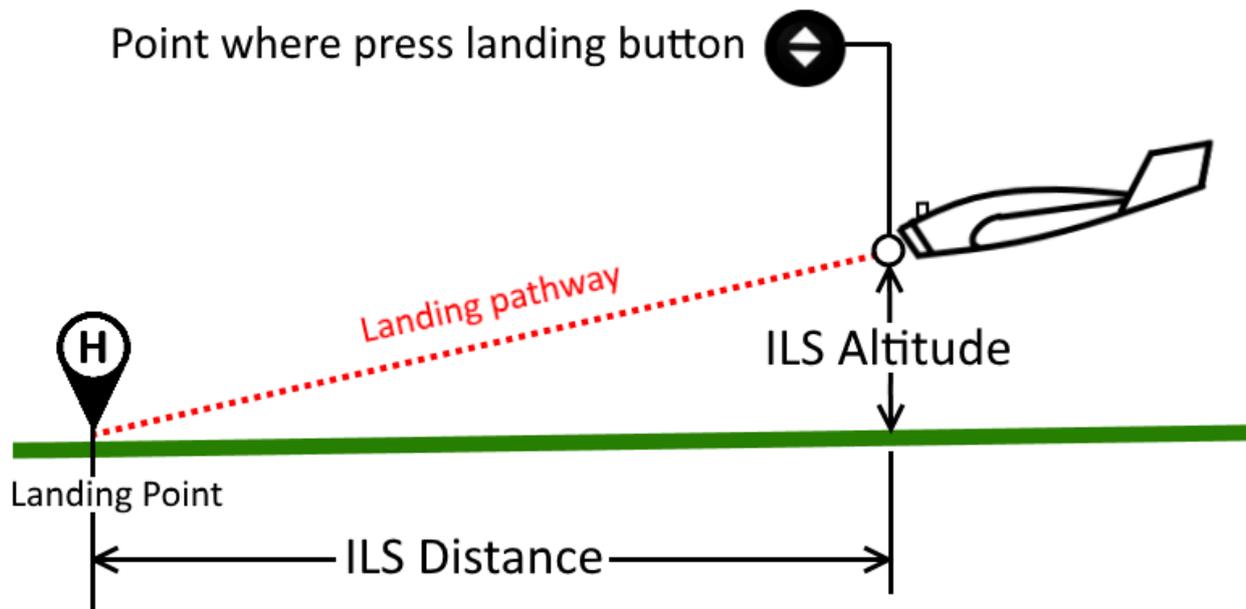
Final Landing Data

Distance from Pilot: is the distance from the final landing point and the pilot position.

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That data will allow you to set the best values assumed for the next landing drive by the ILS system.



In accordance with the last landing data set the ILS altitude and distance in order to have the right references in order to properly press the landing button for the next flight:

Set the flight parameters in order to properly press the landing button

Altitude
30m

Distance
100m

To enable the ILS instrument on the HUD tap on the checkbox *Enable ILS* :

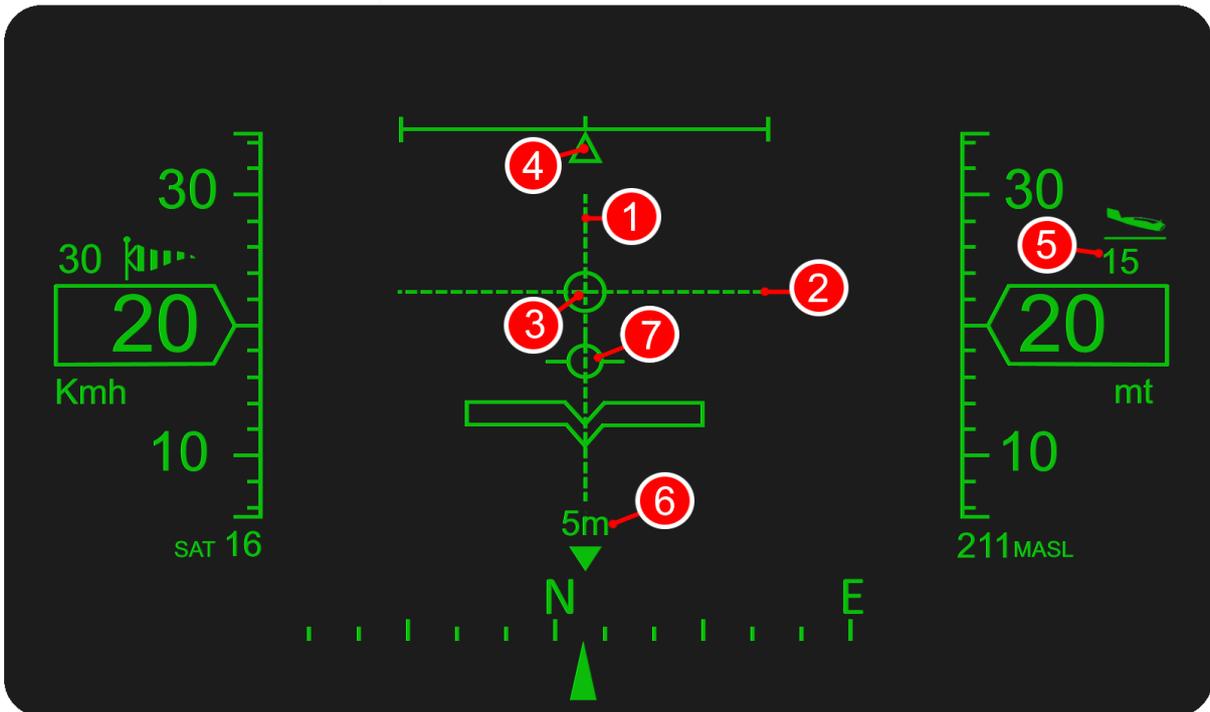
Enable ILS



ILS HUD

If ILS feature are enabled, in the ILS settings page, the HUD display appears as below:

7



1. Line of bow alignment of the Disco towards the position of the pilot. This line is displayed when the Disco points to the pilot direction.
2. Horizontal line of Disco altitude in relation to the ILS altitude target (see point 5). This line rises and falls respect to the midpoint which represents the altitude target.
3. Point of intersection of the two lines. When the alignment and altitude conditions are met, this circle must overlap with the HUD center circle (7).
4. Triangle indicating the pilot's orientation respect to the Disco. To have the Disco in front of you the triangle must be in the middle of the segment.
5. Altitude target set in the ILS settings page.
6. Remaining distance at the target point set in the ILS settings page.
7. HUD center.

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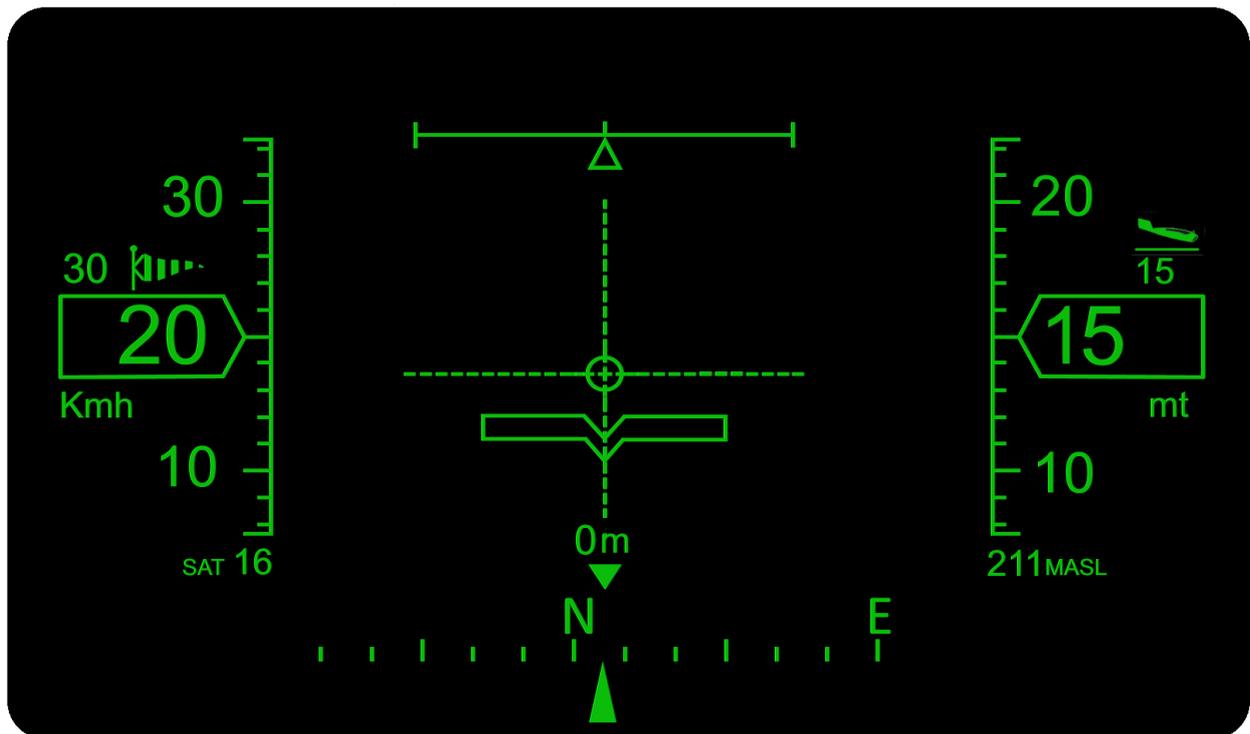
ILS Landing operations

In order to achieve the best landing performance, these conditions must be met:

- The vertical line (1) must be aligned with the center of the HUD (7);
- The horizontal altitude line (2) must be aligned with the center of the HUD (7).
this means that the point of intersection of the two lines (3) coincides with the center of the HUD (7).
- The remaining distance (6) must be close to 0;

For a frontal landing the triangle (4) must be in the middle of the segment.

Below is the HUD when the all targets are reached and it is the right time to press the landing button.



When the landing button is pressed the Disco icon appears in place of the remaining distance (6).

The landing procedure is now in progress good luck!

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