

# FIXED WING SETUP WIZARD



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## Project News

### LibrePilot progress

After the split there has been much work done with packaging for easy maintenance of code and new Linux distribution support like Fedora with rpm packages. All of the GCS is refreshed to fit with the new project and new features have been added to imp...

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## Project Activity



- AlessioMorale**  
Committed Merged in paul\_jewell/librepilot/fix\_google\_maps (pull request #77)
- AlessioMorale**  
Committed Merged in skarlss0/librepilot/skarlss0/LP-129\_remove\_broken\_scalemotor\_modes (pull request #75)
- paul-jewell**  
Committed Fix Google Maps version
- skarlss0**  
Committed LP-129 Remove broken motor scaling modes
- AlessioMorale**

LibrePilot GCS Version: 15.09-RC2

Welco...

Flight d...

Configurat...

Syst...

Sco...

HITL

Firmw...

Tx  
Rx

Connections: Serial: ttyS0

Connect

## Setup Wizard

## Welcome to the Setup Wizard

This wizard will guide you through the basic steps required to setup your flight controller for the first time. You will be asked questions about your platform (multirotor/heli/fixed-wing) which this wizard will use to configure your controller for its first flight.

This wizard does not configure all of the advanced settings available in the GCS Configuration. All basic and advanced configuration parameters can be modified later by using the GCS Configuration plugin.




**WARNING: YOU MUST REMOVE ALL PROPELLERS  
FROM THE VEHICLE BEFORE PROCEEDING!**

Disregarding this warning puts you at **risk of injury!**

Now that your props are removed we can get started. Ready?

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### Setup Wizard


## Firmware Update

It is necessary that your firmware and ground control software are the same version.

When you are ready you can start the upgrade below by pushing the button. It is critical that nothing disturbs the board while the firmware is being written.

It is recommended that you erase all settings on the board when upgrading firmware. Using saved settings for a previous version of the firmware **may result in undefined behaviour** and in worst case danger. It is possible to suppress the erase by deselecting the check box below.

Erase all settings

 Upgrade

Ready...

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## Setup Wizard

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It is recommended that you erase all settings on the board when upgrading firmware. Using saved settings for a previous version of the firmware **may result in undefined behaviour** and in worst case danger. It is possible to suppress the erase by deselecting the check box below.

 Erase all settings

Board updated, please press 'Next' to continue.



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Cancel

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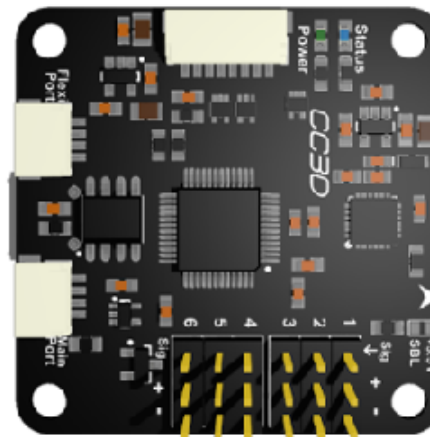
## Setup Wizard

### Board Identification

To continue, the wizard needs to determine the configuration required for the type of flight controller you have. When connected, the wizard will attempt to automatically detect the type of board.

If the board is already connected and successfully detected, the board type will already be displayed. You can **Disconnect** and select another device if you need to detect another board.

If your board is not connected, please connect the board to a USB port on your computer and select the device from the list below. Then press **Connect**.



Connection device: USB: CopterControl

Detected board type: OpenPilot CopterControl 3D

Disconnect

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Next >

Cancel

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**Reboot**

Please wait. Your controller is rebooting.  
This can take up to a minute.

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## Setup Wizard

## Input Signal Configuration

The flight controller supports many different types of input signals. Please select the type of input that matches your receiver configuration. If you are unsure, just leave the default option selected and continue the wizard.

Some input options require the flight controller to be rebooted before the changes can take place. If an option that requires a reboot is selected, you will be instructed to do so on the next page of this wizard.

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## CHOOSE RCINPUT TYPE



PWM



PPM



S.Bus



DSM Sat



SRXL

&lt; Back

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Cancel

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**Reboot**

Please wait. Your controller is rebooting.  
This can take up to a minute.

RCINPUT TYPE CHANGES  
NEED REBOOT

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### Setup Wizard

## Vehicle Type Selection


To continue, the wizard needs to know what type of vehicle the flight controller board is going to be used with. This step is crucial since much of the following configuration is unique per vehicle type.

Go ahead and select the type of vehicle for which you want to create a configuration.


The current version only provides functionality for Multirotors, Fixed-wing aircraft and Ground vehicle.




Multirotor



Fixed wing



Helicopter



Surface

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Cancel

SELECT FIXED WING

### Setup Wizard

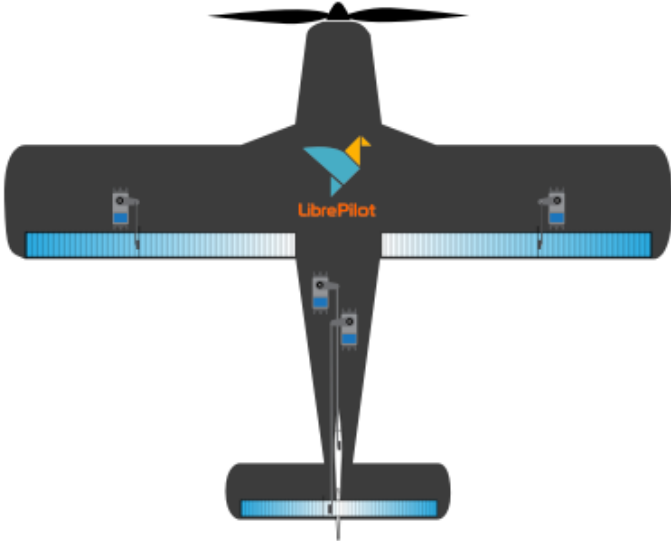
## Fixed-wing Configuration

This part of the wizard will set up the flight controller for use with a fixed-wing flying aircraft utilizing servos. The wizard supports the most common types of fixed-wing aircraft, other variants of fixed-wing aircraft can be configured by using custom configuration options in the Configuration plugin in the GCS.

Please select the type of fixed-wing aircraft you want to configure for below:

Select **Aileron Dual Servos**

This setup expects a traditional airframe using two independent aileron servos on their own channel (not connected by Y adapter) plus an elevator and a rudder.



< Back **Next >** Cancel


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### Setup Wizard

#### Output Signal Configuration


To set an optimal configuration of the output signals powering your servos, the wizard needs to know what type of servos you will use and what their capabilities are.

Please select one of the options below. If you are unsure about the capabilities of your servos, just leave the default option selected and continue the wizard.



Standard  
50 Hz Rate

Analog Servos



Digital  
333 Hz Rate

Digital Servos

< Back   **Next >**   Cancel

**CHOOSE SERVO TYPE**

## Setup Wizard

## Configuration Summary

The first part of this wizard is now complete. All information required to create a basic flight controller configuration for a specific vehicle has been collected.

Below is a summary of the configuration and a button that links to a diagram illustrating how to connect required hardware and the flight controller with the current configuration.

The following steps require that your flight controller is connected according to the diagram, remains connected to the computer by USB, and that you have a battery ready but **do not** connect it right now, you will be told when to in later steps of this wizard.

**Controller type:** OpenPilot CopterControl 3D  
**Vehicle type:** Fixed wing  
**Vehicle sub type:** Dual Aileron  
**Input type:** PPM (One cable for all channels)  
**Speed Controller (ESC) type:** Standard ESC (50 Hz)  
**Servo type:** Digital Servos (333 Hz)



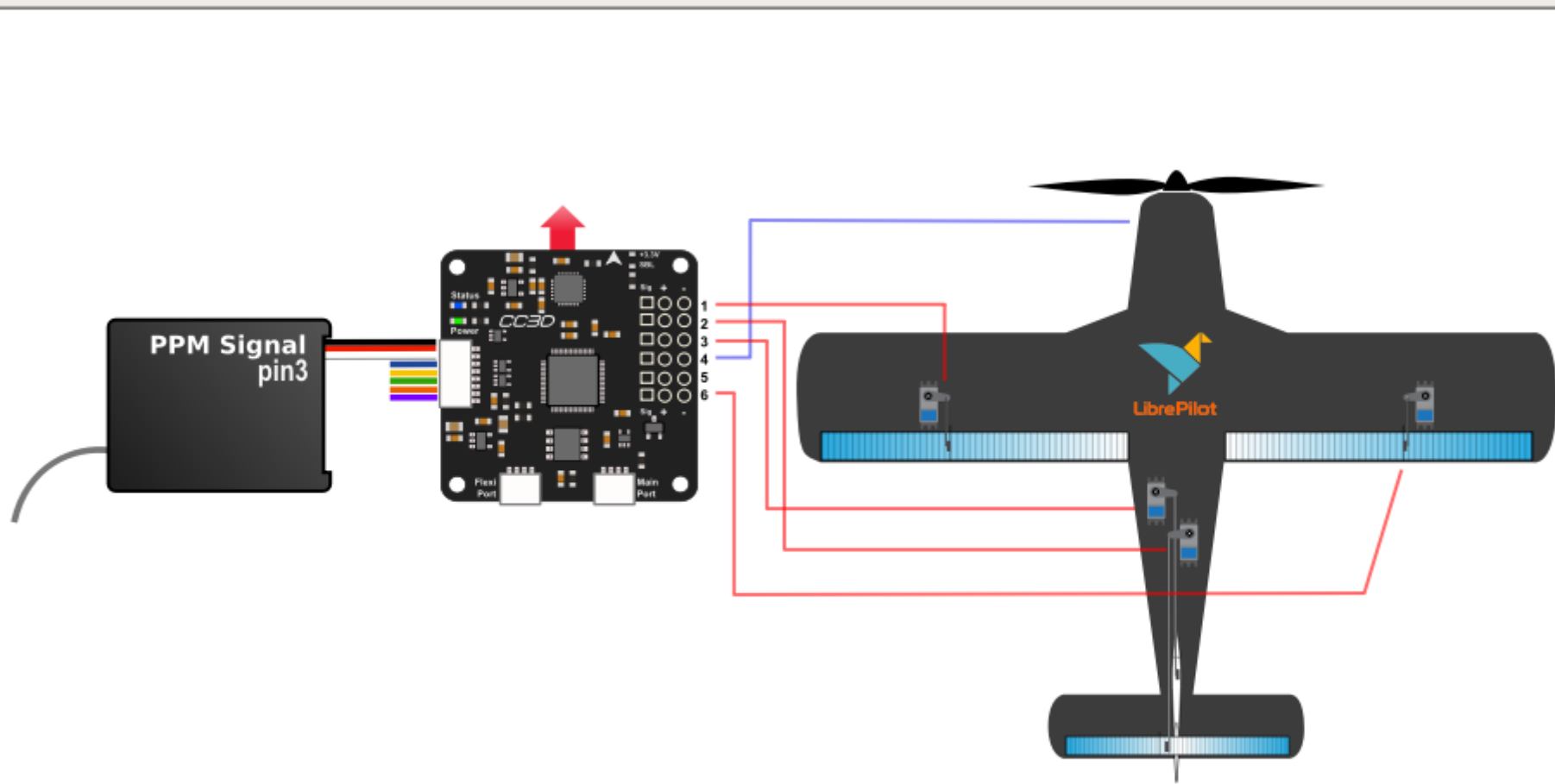
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Next &gt;

Cancel

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### Connection Diagram



Save

Close

## Setup Wizard

## Configuration Summary

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**Input type:** PPM (One cable for all channels)  
**Speed Controller (ESC) type:** Standard ESC (50 Hz)  
**Servo type:** Digital Servos (333 Hz)



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### Setup Wizard

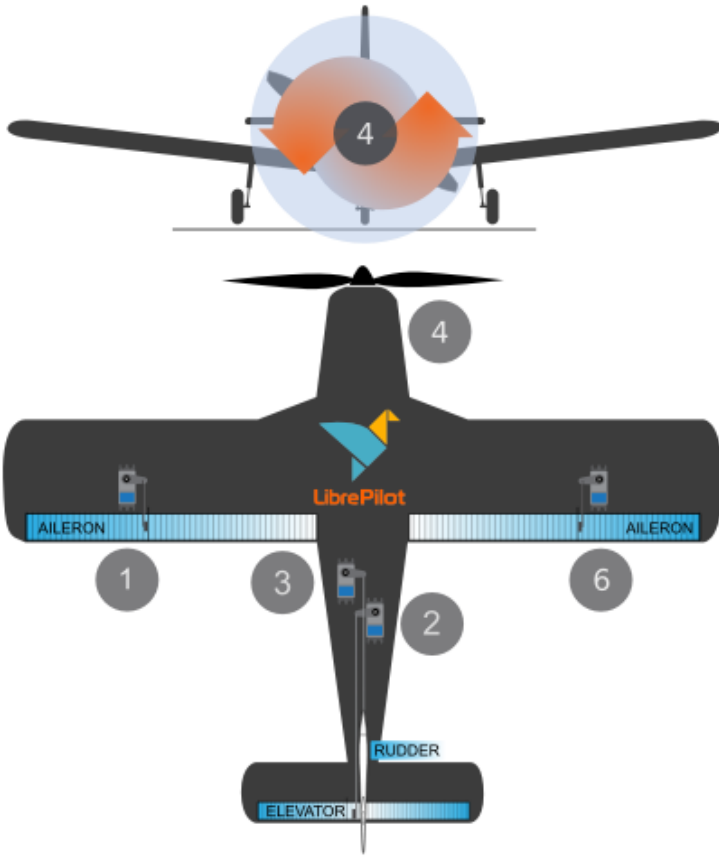
#### Output calibration

It is now time to calibrate the output levels for the signals controlling your vehicle.

**VERY IMPORTANT!  
REMOVE ALL PROPELLERS FROM THE  
VEHICLE BEFORE PROCEEDING!**

Connect all components according to the illustration on the summary page, and provide power using an external power supply such as a battery before continuing.

Depending on what vehicle you have selected, both the motors controlled by ESCs and/or servos controlled directly by the flight controller may have to be calibrated. The following steps will guide you safely through this process.



The diagram shows a top-down view of an airplane. Callout 1 points to the left aileron servo, callout 2 to the rudder servo, callout 3 to the right aileron servo, callout 4 to the motor on the propeller, callout 5 to the elevator servo, and callout 6 to the right aileron servo. Labels 'AILERON', 'RUDDER', and 'ELEVATOR' are placed near their respective servos. The LibrePilot logo is on the fuselage.

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## Setup Wizard

### Output calibration

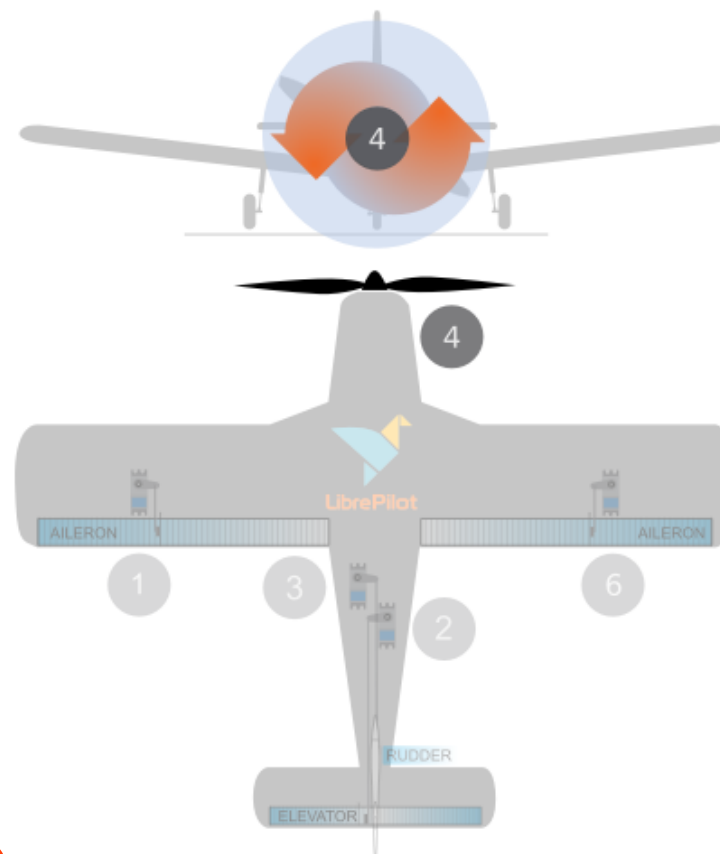
In this step we will set the neutral rate for the motor highlighted in the illustration to the right. Please pay attention to the details and in particular the motors position and its rotation direction. Ensure the motors are spinning in the correct direction as shown in the diagram. Swap any 2 motor wires to change the direction of a motor.

To find **the neutral rate for this motor**, press the Start button below and slide the slider to the right until the motor just starts to spin stable.

When done press button again to stop.

Output value : 1000  $\mu$ s

Start



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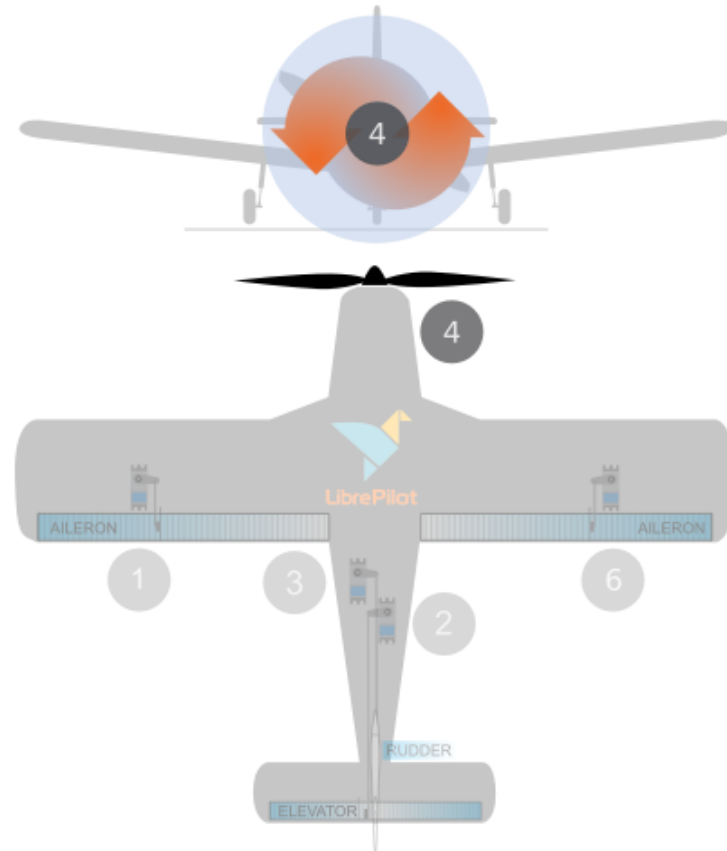
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To find **the neutral rate for this motor**, press the Start button below and slide the slider to the right until the motor just starts to spin stable.

When done press button again to stop.



Output value : 1071  $\mu$ s



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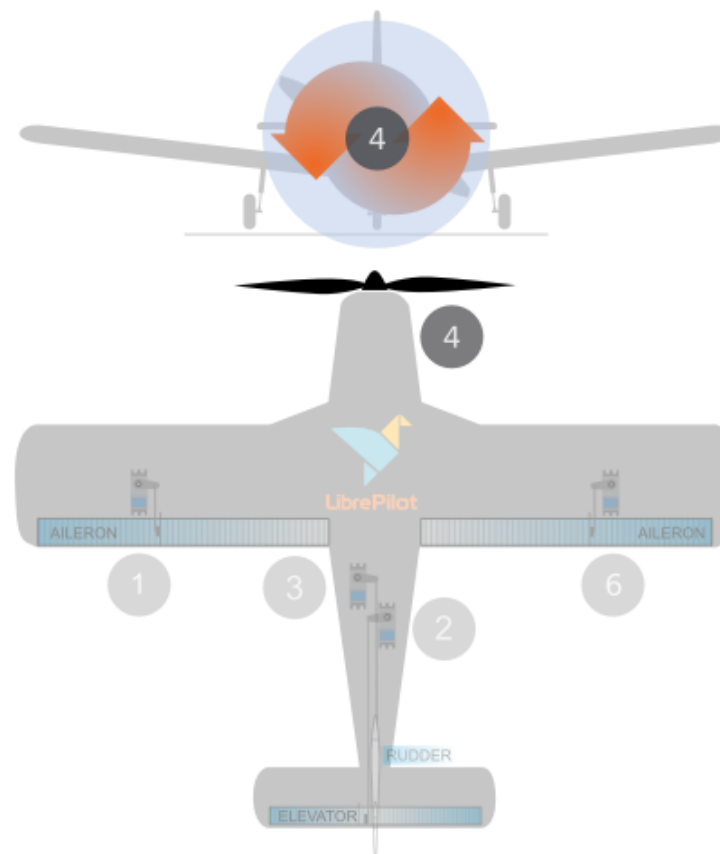
To find **the neutral rate for this motor**, press the Start button below and slide the slider to the right until the motor just starts to spin stable.

When done press button again to stop.

Output value : 1071  $\mu$ s



Start



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Cancel

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## Setup Wizard

### Output calibration

This step calibrates **the minimum, center and maximum angle of the two servo**, at same time. To set the angles for those servo, press the Start button below and slide the slider for the angle to set. The servo will follow the sliders position. Please adjust and compare the two servo's movement.

When done press button again to stop.

Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 1 value : 1500  $\mu$ s

Min

Center

Max

Reverse

Output 6 value : 1500  $\mu$ s

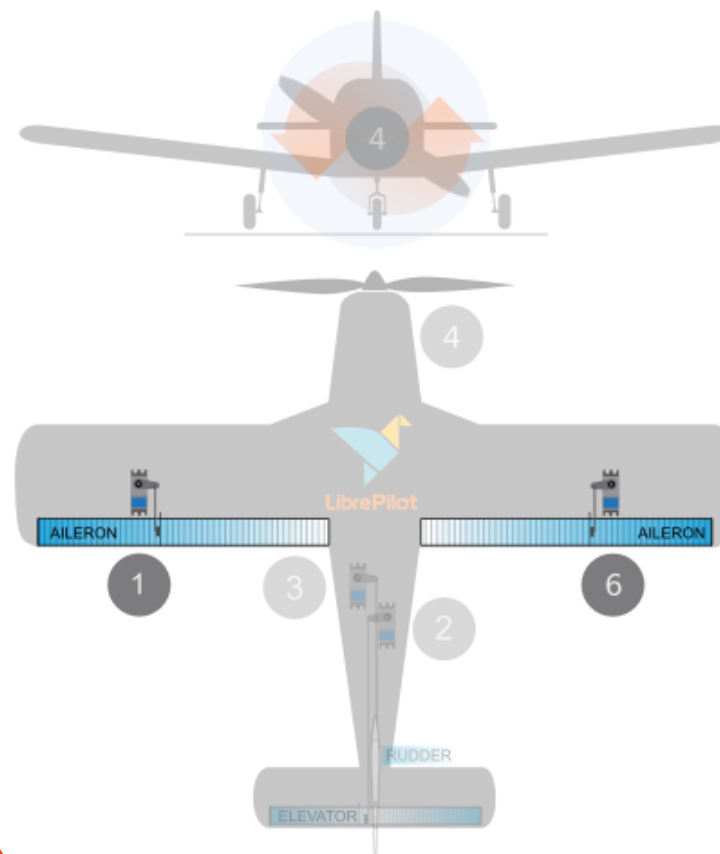
Min

Center

Max

Reverse

Start



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Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 1 value : 1112  $\mu$ s

Min

Center

Max

Reverse

Output 6 value : 1399  $\mu$ s

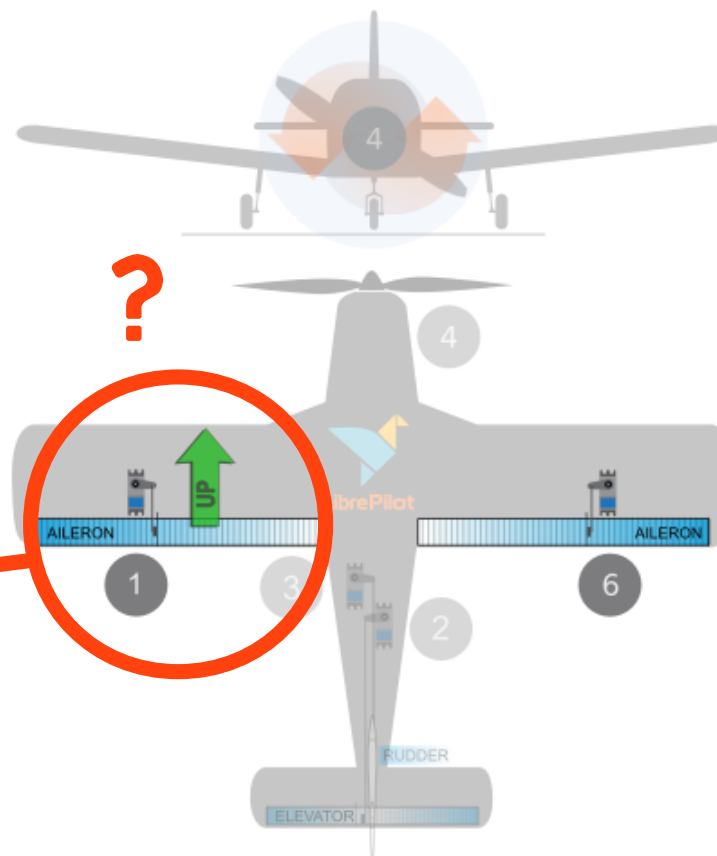
Min

Center

Max

Reverse

Stop



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Please adjust and compare the two servo's movement.  
When done press button again to stop.

Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 1 value : 1368  $\mu$ s

Min

Center

Max

Reverse

Output 6 value : 1399  $\mu$ s

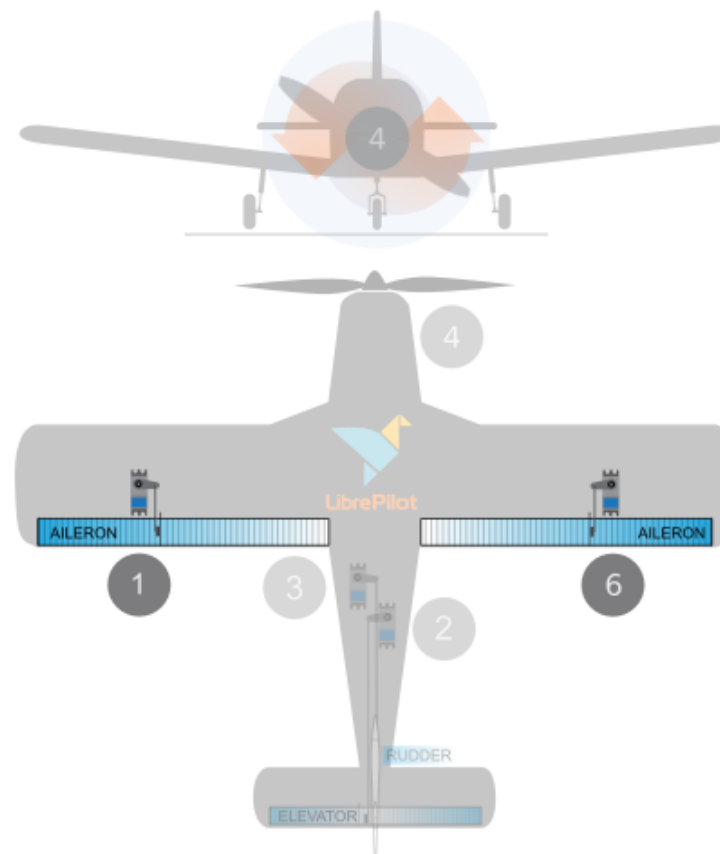
Min

Center

Max

Reverse

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Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 1 value : 1368  $\mu$ s

Min

Center

Max

Reverse

Output 6 value : 1399  $\mu$ s

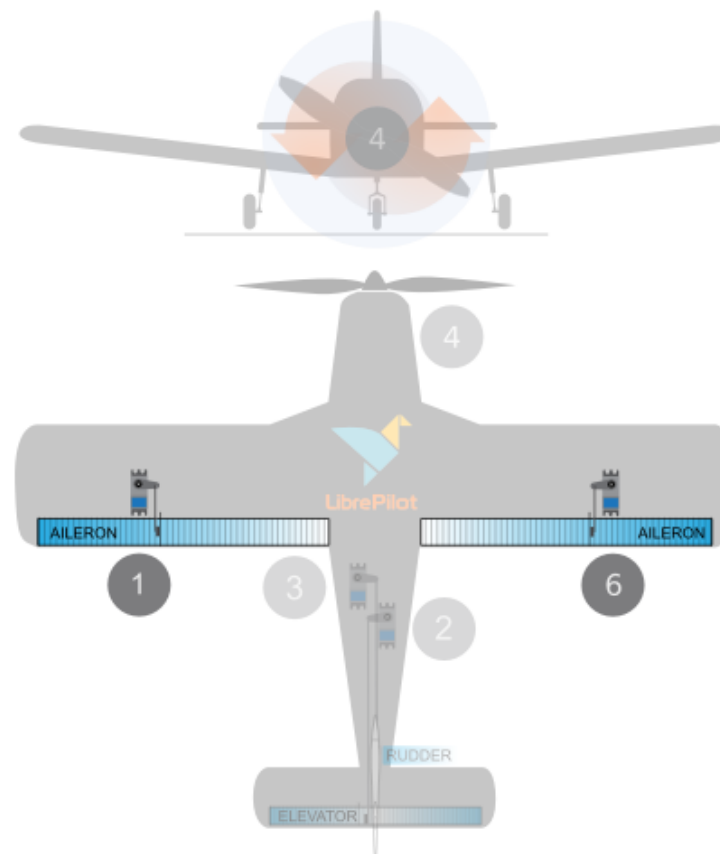
Min

Center

Max

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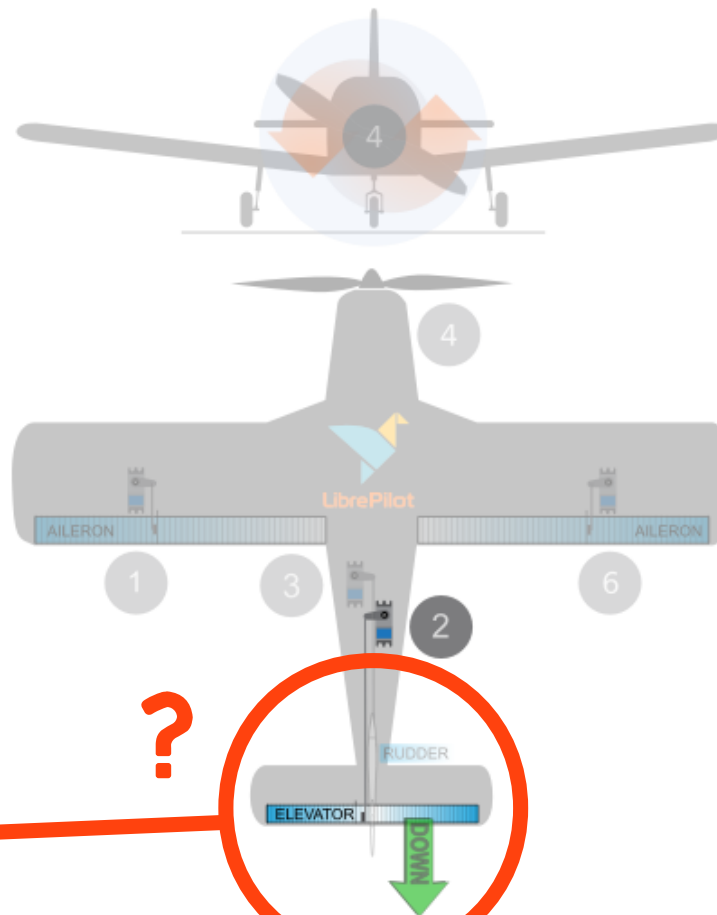
Departure from

### Setup Wizard

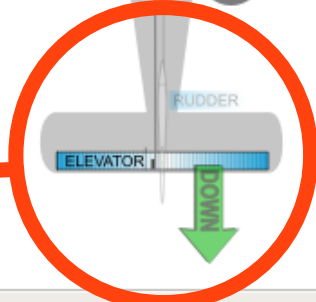
#### Output calibration

This step calibrates **the minimum, center and maximum angle of the servo**. To set the angles for this servo, press the Start button below and slide the slider for the angle to set. The servo will follow the sliders position. When done press button again to stop.

Check Reverse to reverse servo action if green arrow does not match the movement of the servo.



Output 2 value : 988  $\mu$ s  
Min [Slider]  
Center [Slider]  
Max [Slider]  
 Reverse  
[Stop]





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This step calibrates **the minimum, center and maximum angle of the servo**. To set the angles for this servo, press the Start button below and slide the slider for the angle to set. The servo will follow the sliders position.

When done press button again to stop.

Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 2 value : 1415  $\mu$ s

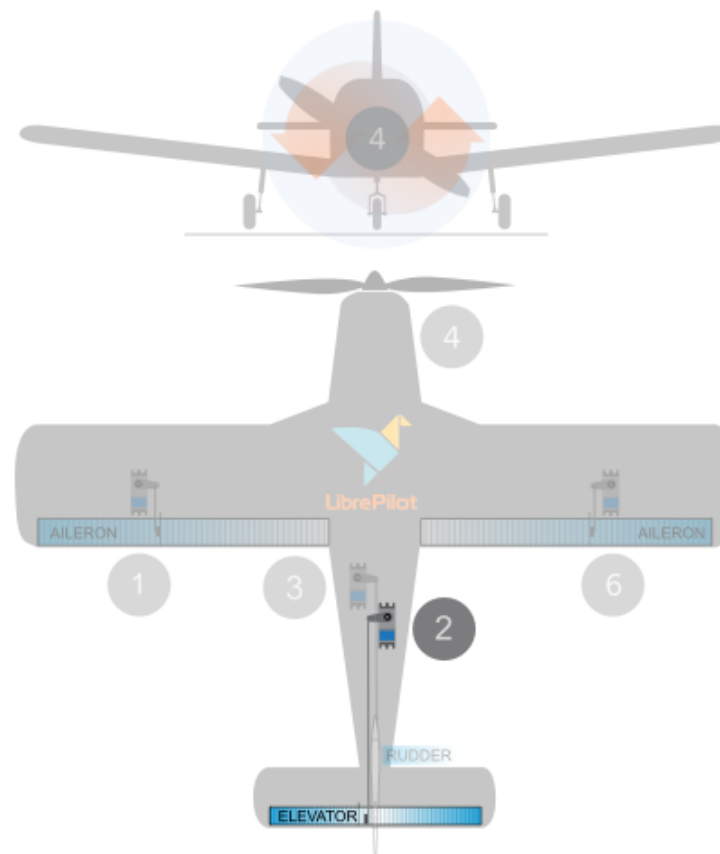
Min

Center

Max

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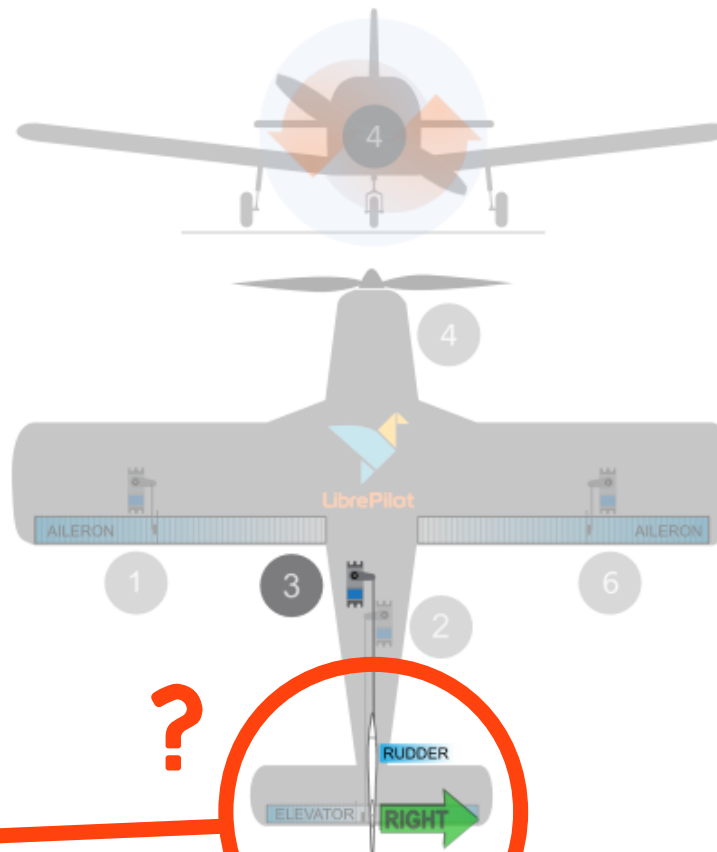
Departure from

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Check Reverse to reverse servo action if green arrow does not match the movement of the servo.



Output 3 value : 1678  $\mu$ s  
Min [slider]  
Center [slider]  
Max [slider]  
 Reverse  
[Stop]

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When done press button again to stop.

Check Reverse to reverse servo action if green arrow does not match the movement of the servo.

Output 3 value : 1399  $\mu$ s

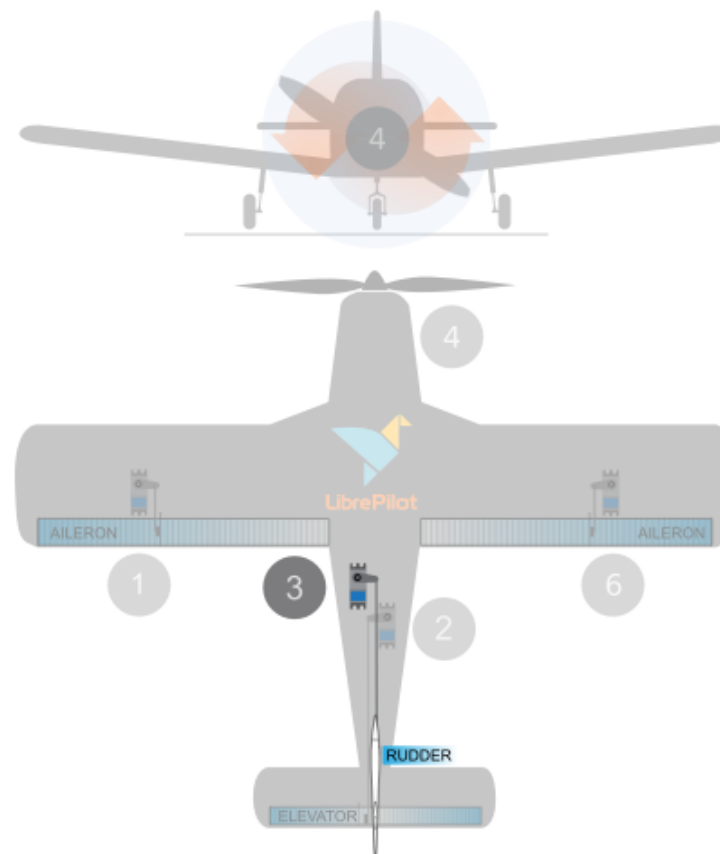
Min

Center

Max

Reverse

Start



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Cancel

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### Setup Wizard

#### Initial Tuning

This section of the Wizard allows you to select a set of initial tuning parameters for your airframe. Presented below is a list of common airframe types, select the one that matches your airframe the closest, if unsure select the generic

Current Tuning

DEFAULT SETTINGS



This option will use the current tuning settings saved on the controller, if your controller is currently unconfigured, then the pre-configured firmware defaults will be used.

It is suggested that if this is a first time configuration of your controller, rather than use this option, instead select a tuning set that matches your own airframe as close as possible from the list above or if you are not able to fine one, then select the generic item from the list.

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### Setup Wizard


#### Initial Tuning

This section of the Wizard allows you to select a set of initial tuning parameters for your airframe. Presented below is a list of common airframe types, select the one that matches your airframe the closest, if unsure select the generic variant.

Current Tuning

- SoniModel Mako
- Toro900

FROM TEMPLATE IF ANY



**Name of Vehicle:** SoniModel Mako  
**Name of Owner:** Laurent Lalanne (f5soh)  
**Size:** 1200mm  
**Weight:** 700g  
**Motor(s):** 2212 - 2200kv  
**ESC(s):** 30A Hobbywing  
**Servo(s):** 9g  
**Battery:** 2700mAh - 3S  
**Propellers(s):** 6x4

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## Setup Wizard

### Configuration ready to save

The wizard is now ready to save the configuration directly to your flight controller.

If any of the selections made in this wizard require a reboot of the controller, then power cycling the flight controller board will have to be performed after you save in this step.

Press the Save button to save the configuration.



Ready...

< Back

Next >

Cancel

LibrePilot GCS Version: 15.09-RC2





**Reboot**

Please wait. Your controller is rebooting.  
This can take up to a minute.

**Websites**

[Home](#)   [Wiki](#)

**Project News**

**LibrePilot progress**

After the split there has been much work done with packaging for easy maintenance of code and new Linux distribution support like Fedora with rpm packages. All of the GCS is refreshed to fit with the new project and new features have been added to imp...

**Tapatalk support in the forum**

Hello everyone

I have enabled tapatalk support, let me know if you have any issues using it.

**Departure from the OpenPilot Project, foundation of Libr...**

- [Committed Merged in paul\\_jewell/librepilot/fix\\_google\\_maps \(pull request #77\)](#)
- AlessioMorale**  
[Committed Merged in skarlss0/librepilot/skarlss0/LP-129\\_remove\\_broken\\_scalemotor\\_modes \(pull request #75\)](#)
- paul-jewell**  
[Committed Fix Google Maps version](#)
- skarlss0**  
[Committed LP-129 Remove broken motor scaling modes](#)
- AlessioMorale**

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### Websites

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### Project N

#### LibrePilot prog

After the split th  
easy maintenanc  
Fedora with rpm  
All of the GCS is  
features have be

#### Tapatalk suppo

Hello everyone

I have enabled t  
issues using it.

#### Departure from

### Setup Wizard

## Congratulations!

### Setup wizard is completed.

This part of the setup procedure is now complete and you are one step away from completing the setup of your flight controller.

To complete the setup please click the button below to close this wizard and go directly to the Transmitter Setup Wizard.

