

Data Analysis

The screenshot displays the PlannerX software interface, which is divided into several functional areas:

- Top Panel:** Includes a 'Select Log To Visualise' button with a hand icon and a 'Refresh Plot' button with a circular arrow icon.
- Map Area:** A central 3D map showing a city street layout with various landmarks. A red arrow indicates the rover's current position and orientation. The map is titled 'Gyroscoptic Data'.
- Left Panel:** A vertical menu with 'Choose Feature' buttons and a 'Move Forward' control with a speed input of '1000' and a unit of 'ms'. Below this are several 'Choose Feature' buttons with different icons.
- Right Panel:** A 'Route Planner' section with a 'Start' button (green), 'Stop' button (red), and 'Rover' button (purple). Below it is a circular gauge showing '48', '45', and '44'. Further down is a compass and a 'Selected Vehicle' dropdown set to 'Rover', with a 'Telemetry CH Code' of '100%'.
- Bottom Panel:** A dashboard of real-time data including:
  - Four triangular gauges for 'Throttle' (55%), 'RC\_Roll' (34%), 'RC\_Yaw' (55%), and 'RC\_Pitch' (34%).
  - Large digital displays for 'Altitude' (0.0), 'Roll' (0.0), 'Pitch' (0.0), 'Temperature' (0.0), and 'Pressure' (0.0).
  - A table of sensor data with columns for sensor names (CHS\_IN, CHS\_RL, Satellites, 3D Fix, SOG, COG) and their values.

# Official Documentation

2023

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# Introduction

## 1.1 Overview

PlannerX is a comprehensive ground control station software designed for real-time monitoring, parameter tuning, and mission planning for various vehicles, including rovers, robotic arms, rockets, and drones.

This 100% offline Windows application provides a user-friendly interface to control and analyze the status of the vehicle.



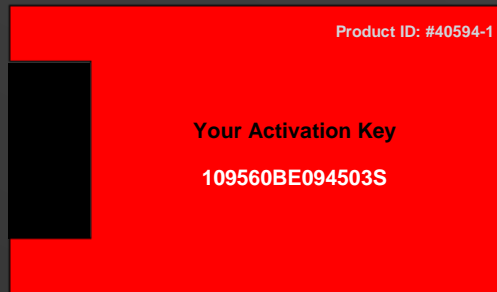
## 1.2 Features

- Real-time monitoring of vehicle parameters
- Intuitive UI for parameter tuning and mission programming
- Offline functionality, no internet connection required
- Simulations using log files
- Data analysis with customizable graphs
- Pin configuration for PilotX Autopilot Board
- Mission planning with GPS and No GPS modes
- Autopilot mode for automated vehicle control
- Channel mapping and receiver calibration in settings

# Installation

## 2.1 System Requirements

- Windows operating system
- PilotX Maverick Autopilot Box
- Activation Key Card



## 2.2 Installation Steps

Download the PlannerX installer from the official website. Run the installer and follow the on-screen instructions. Enter the Activation Key from the card provided in the PilotX Maverick Autopilot Box. Complete the installation process.



# Getting Started

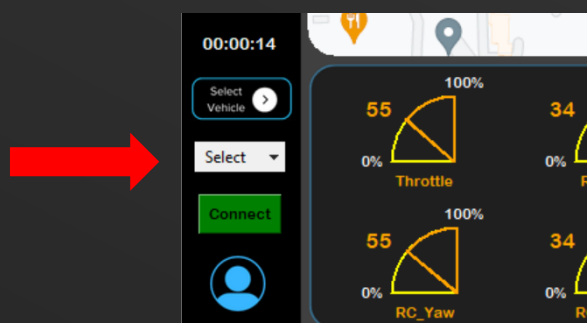
## 3.1 Activation

Upon launching the software, enter the Activation Key mentioned on the card provided in the PilotX Maverick Autopilot Box.



## 3.2 Connection to PilotX Autopilot Board

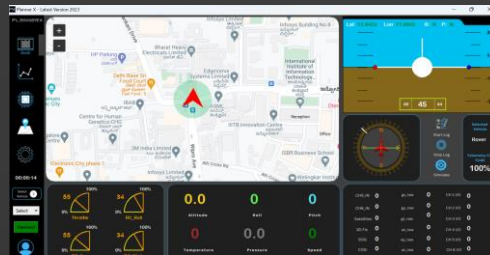
1. Connect the PilotX Autopilot Board to the computer.
2. In the software, go to the "Select Port" dropdown and choose the connected device.
3. Click "Connect" to establish a connection.



# User Interface

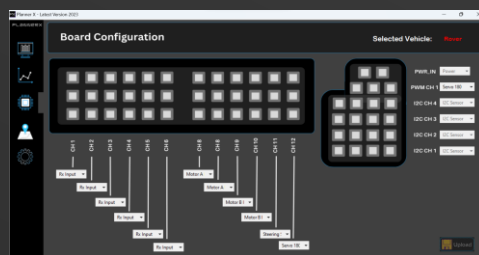
## 4.1 Station Tab

The mission control dashboard with Attitude Indicator, Heading Indicator, Live Channel Readings, Receiver Readings, Important Parameters, and a real-time map. Select the vehicle type and run simulations.



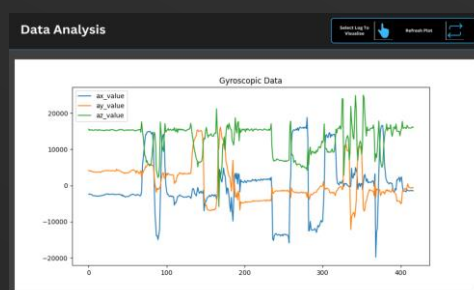
## 4.2 Data Analysis Tab

View and analyse recorded mission parameters using log files. Customize graphs based on selected parameters.



## 4.3 Pin Configuration Tab

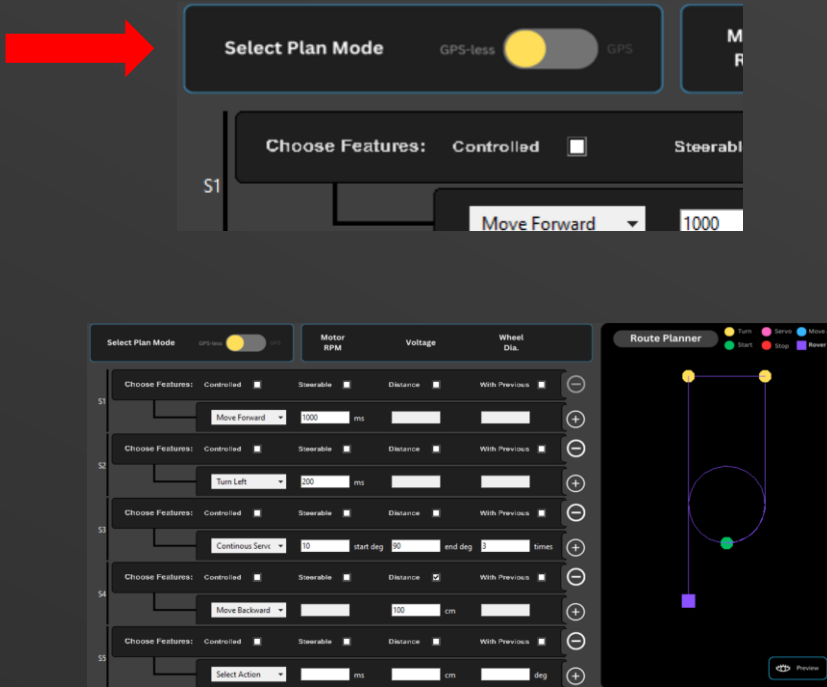
Configure PilotX Autopilot Board pins for specific devices (BLDC Motor, DC Motor, Servo 180, Servo 360, Receiver Channel) using dropdown menus.



# User Interface

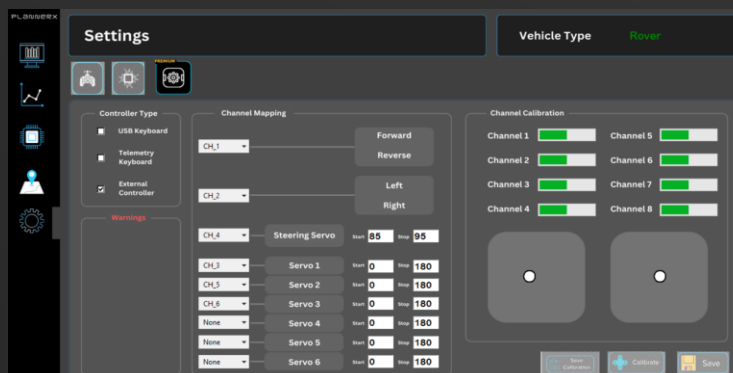
## 4.4 Route Planner Tab

Plan and preview missions in GPS Mode or No GPS Mode. Set routes, geo-fences, and autopilot options.



## 4.5 Settings Tab

Configure channel mapping, receiver channel calibrations, and choose the controller type (keyboard, External Transmitter, Gaming Joystick).



# Operations

## 5.1 Mission Control

Monitor real-time vehicle parameters and control the vehicle from the Station Tab.



## 5.2 Simulations

Run simulations using log files to simulate past missions.



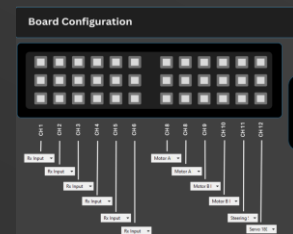
## 5.3 Data Analysis

Analyze recorded mission data in the Data Analysis Tab.



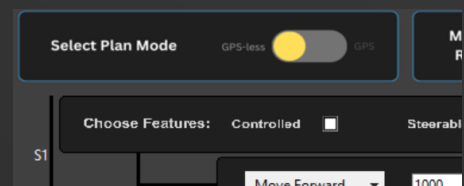
## 5.4 Pin Configuration

Configure PilotX Autopilot Board pins for specific devices in the Pin Configuration Tab.



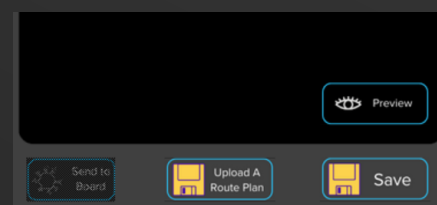
## 5.5 Mission Planning

Plan missions using the Route Planner Tab, considering GPS or No GPS modes.



## 5.6 Autopilot Board Upload

Upload planned missions to the PilotX Autopilot Board for automatic execution.





# Support & Resources

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## Official Website

[www.safeardefense.com](http://www.safeardefense.com)

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# Autonomous Starts Here!



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