

X56 HOTAS

HANDS ON THROTTLE AND STICK

手动油门与摇杆

USER MANUAL / 用户手册

ENGLISH 3

简体中文 23

STICK OVERVIEW

- A. POV
- B. Mini Analog Stick
- C. Thumb HATs, Witches and Castle
- D. Stick Buttons with Trigger and 2 x Head Buttons
- E. X, Y, and Rz Axes, Elevator, Aileron and Rudder Axes
- F. Pinkie and Flying Pinkie
- G. F.E.E.L. Spring System



GETTING STARTED

Drivers and Software Installation

Windows® 7/8/10

1. Download and install the X56 HOTAS software from logitech.com/support/x56
2. After reading the Disclaimer, select the **'I accept the terms of the Disclaimer'** option and click **'NEXT'** to continue
3. At the **Plug In** screen, plug the Stick and Throttle units into the PC. Click **'Next'** when it becomes highlighted
4. From the end screen, click **'Finish.'** Your drivers and software are now installed

NET Framework

1. If this is the first Logitech product that you have installed, you may be asked to install .NET Framework after the software installation finishes. **This is strongly recommended; this Microsoft Feature Update is required by the Software**
2. Click **'Download and install this file.'** The PC will now find the correct files from the Internet and download them
3. When the installation finishes, click **'Close'**

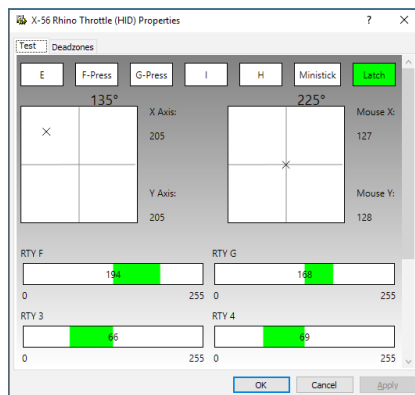
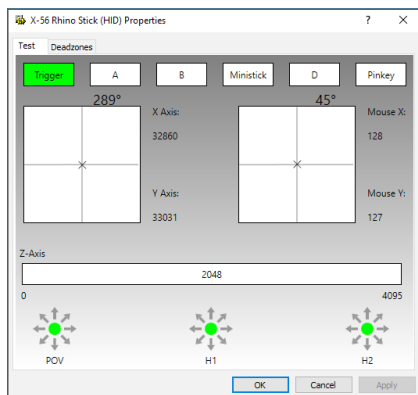
CONTROLLER SETTINGS

If at any time you wish to check that the X56 is working correctly, open the Game Controllers page and click on the controller's Properties tab.

Here are the various ways to do this from each operating system:

Windows® 8/10

1. From the **Metro/Start** screen, click the **'Control Panel'** icon. **NOTE:** If you have no Control Panel icon on your Metro/Start screen, type **'control panel'** and the icon for the **Control Panel** will appear
2. Once the **Control Panel** is open, double-click on the **'Devices and Printers'** icon. **NOTE:** If you cannot see this icon, make sure that you have large icons selected
3. With the **Devices and Printers** screen open, find the **X56 HOTAS** in the device list and right-click on this icon. From the dropdown menu, select **'Game Controller Settings'**
4. From the **Game Controllers window**, you should see the X56 HOTAS. listed and selected. Click **'Properties'** and this should take you to the **Controller Test** screen



From the Controller Test screen you can test all the functions, axes, buttons, rotaries, etc. When you have completed your tests, click 'OK' twice to get back to the main desktop

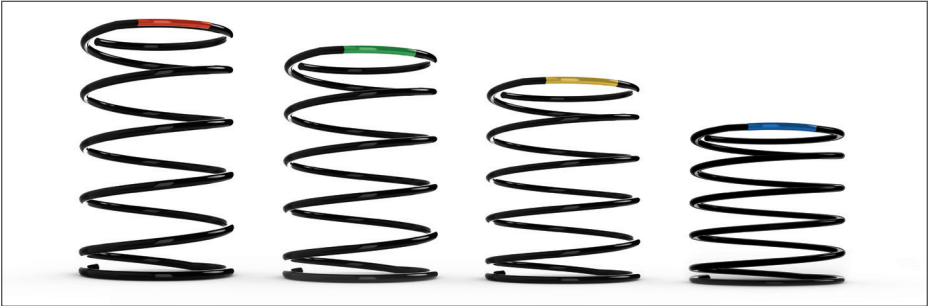
Windows® 7

1. Click on the **'Windows'** icon from the system tray. Hover over the **All Programs** menu. Click the **'Games'** folder and then the **'Games Explorer'** icon
2. Click the **'Tools'** option (with downward facing arrow) from the list across the top of the window. From the dropdown list, click **'Input Devices'**
3. From the **Game Controllers** window, you should see the X-56 Rhino listed and selected. Click **'Properties'** and this should take you to the **Controller Test** screen

F.E.E.L. Spring Tension System

Each spring placed on the Rhino stick shaft will give a different feeling. You can also operate the stick without a spring, providing a total of five different forces.

Each spring has a unique feel and different identification. These identifiers are color swatches at the top of each spring – Red, Yellow, Blue, and Green. This table lists some of the calculations used for differentiation:



	RED	GREEN	YELLOW	BLUE	Notes
k = Rate	1	2	3	4	
OD = Outside diameter	33	33	33	33	
d = Wire diameter	1.8	1.8	1.8	1.8	
E = Youngs Modulus (210000)	210000	210000	210000	210000	N/mm ²
FL = Free length	52	47	42	36	Un-compressed
WL = Working length	30.8	30.8	30.8	30.8	Pre-compressed
P1L = Position 1 length	25.8	25.8	25.8	25.8	Full Working Compression
n = Total Number of coils	4.5	4.5	4.5	4.5	Active coils (6.5 coils in spring)
D = Mean Diameter	31.2	31.2	31.2	31.2	
Rate K= $Ed^4/8n D^3$	1.70	1.70	1.70	1.70	N/mm
Load @ Breakout BL = FL-WL x k	36.12	27.60	19.08	8.86	N
Load @ P1L Sol = FL - SL x k	44.64	36.12	27.60	17.38	N
Stress= $8 x P x D / 3.14 x d^3$	608.50	492.38	376.25	236.90	N/mm ²
% UTS (M4 Music Wire)	30.89	24.99	19.10	12.03	%

Changing or removing a spring

To insert, change, or remove a spring, follow these steps. Ensure the trigger is facing away from you and that the X56 HOTAS logo plate is facing you.

1. Turn the Locking Bezel (part B) counterclockwise until the Stick comes away from the base.
2. Remove the Seal Ring (part C) by placing the fingers from your left and right hand under the ring on either side, and then lift up. The Seal Ring is stiff by design.
3. Pry apart the Locking Clamps (part D). These pull apart from the stick, but are under load from the spring. Take one half off first, hold the spring, and then remove the other half.
4. Remove the Spring (part E), then either replace with a new Spring or leave the Spring off.

To reassemble, reverse the order of the above steps, making sure to securely seat the Seal Ring (Part C) and firmly tighten the Locking Bezel (part D) on the Stick base.

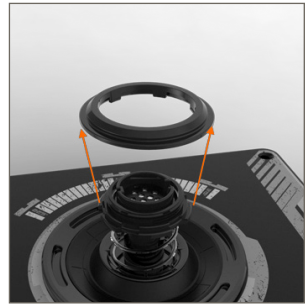
Note: When changing springs, please ensure that the USB cable is disconnected from your PC and avoid touching the connectors in the stick handle and base.



1. Turn Locking Bezel counterclockwise



2. Remove Stick



3. Remove Seal Ring



4. Pry apart Locking Clamps



5. Remove Spring

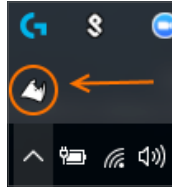
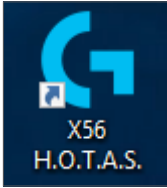
Software Overview

The software allows you to program the X56 with an array of keyboard commands, from basic single-key commands to very advanced, timed, and macro commands. It will also allow you to program any axis with keyboard commands, and program mouse commands.

In the software you can also alter the response curves and deadbands of the main axis – we'll cover the explanation of these topics later in the manual.

There are two ways to launch the software:

1. From the desktop icon that looks like this
2. From the start menu bar...



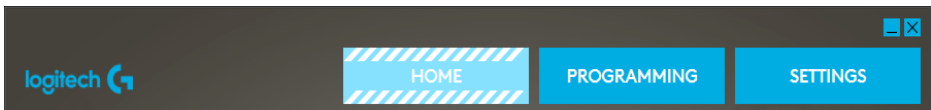
Once the software launches, you will be presented with the Home Screen.

If it's the first time you've run the software, you will be asked to choose your language.

Once this is done the main Home Screen will appear. If you've made a mistake choosing your language or you wish to choose another language, the language menu can be accessed by clicking on the icon in the bottom-right corner of the Home Screen.

There are three main Tabs within the software:

1. HOME
2. PROGRAMMING
3. SETTINGS



HOME TAB

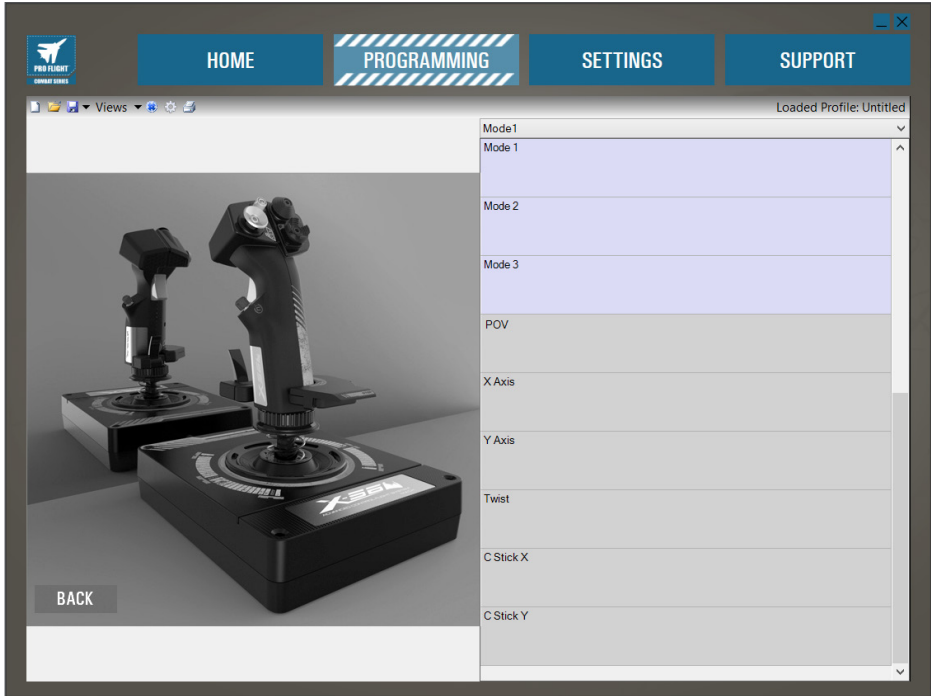


On the Home screen you'll see:

- Live Facebook feed from Logitech G
- Social media and website shortcuts, LogitechG.com, Twitter, YouTube, Instagram, etc
- Language selection, use the flag icon in the bottom-right corner to access this

PROGRAMMING TAB

After selecting the PROGRAMMING Tab you will see the X56's programming environment.



You will see a high-resolution image of the controller you are going to program on the left side of the screen. On the right side of the screen you will see a list of command boxes, called "Cells," going down the page.

At the top of the image panel you will see Stick and Throttle icons. Clicking on either of these will change the current unit you are programming. The unit you are programming is easily recognizable by the larger image that fills the window.

In the PROGRAMMING Tab you can mimic your controller to directly copy any of the keyboard commands used in your favorite games. The commands are then saved in what we call a Profile.

What is a Profile?

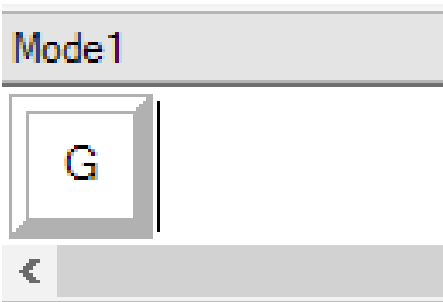
A Profile is the name given to a file that has programmed controller commands saved into it. For example, you may have a Joystick with a number of buttons/hats. If you want one of these to do something in-game that you would normally have to use a keyboard shortcut for, you can "assign" that command to that button. If you want Button 'A' to activate the landing gear (which is the "G" key on a keyboard), you can use the software to assign this function. You can also create more complicated assignments, like "shift+F2," or even timed commands and macros.

Making your first Profile

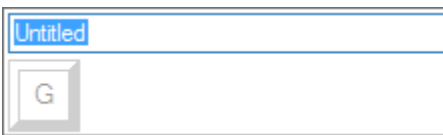
1. Either hover the mouse pointer over the Cell, or press the button you want to create a Profile for on the controller. If you hover your mouse over the **Button 'A'** Cell, **Button 'A'** will light up on the 3D Joystick image. Or just click **Button 'A'** on the stick and the correct Cell will light up.



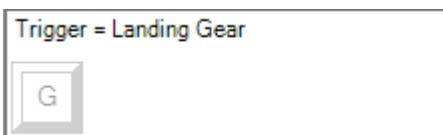
2. When the correct Cell is lit, left-click in it and a large flashing cursor will appear in the left side of the Cell. You will also see a green tick, a red cross, and a mouse icon on the right side of the Cell.

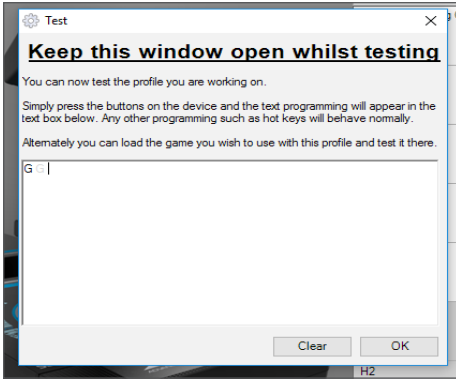


3. The Cell is now waiting for the keyboard command. Using your keyboard, press the button on the keyboard you would like **Button 'A'** on the stick to activate. For this example we will use the **'G'** key, which usually activates landing gear. When you press **'G'** on the keyboard, a large white tile with the letter **'G'** should appear in the Cell, as shown here. If this is the correct keyboard command, press the green tick icon on the right side. If not, press the red cross and redo the procedure to get the keyboard command into the Cell again.



4. After pressing the green tick icon, the command name box will appear, labeled as "Untitled" (left image, below). Simply choose a name for the command and type the name into this box. For this example, we chose "Landing gear." Press the enter key to complete the Cell. **Button 'A'** = Landing gear, which is your keyboard's **'G'** key (right image, below).





5. Test your Profile by opening the “Testing” window. Above the 3D image there are seven icons. The one that is second from the right, which looks like a silver cog, is labeled “Test Profile.”

Click on this icon and a new window will open. A cursor will already be flashing in the test area. Simply press **Button ‘A’** on the X56. When this is pressed, letter ‘**G**’ will appear in the window, which proves your first programmed button is working.

Close this window by clicking on the **“OK”** icon in the bottom-right corner of the Testing window.

6. You can add other keyboard commands if you wish and then test them. Just remember to save your work before you shut down the software.

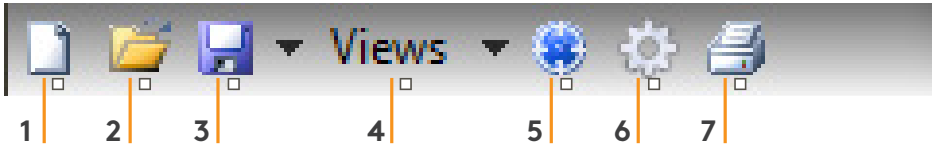


7. To make the programming you have just created work in your game, you must first save it as a Profile and then activate it. This can be done with one click. In the icon row just above the 3D image, you will see an icon that looks like a blue target. If you hover over this icon a tool tip labeled “Profile” will appear.

Click this icon and a standard Windows save box will appear. Give your Profile a name and save it. After saving, the Profile will become active and you can shut down the software and play your game. The X56 will now respond as you have programmed it.

8. The software is capable of many other powerful programming features that we have not yet covered. For example, you can program axes, mouse movement and mouse buttons, hats, and special timed or complicated commands.

Icons in the Profile Editor



1. New Profile

Opens a blank Profile for you to edit/build.

2. Open Profile

Opens a previously created Profile for editing.

3. Save Profile

Clicking "Save" will save a new Profile or overwrite a current Profile.

Using the drop-down arrow next to "Save," you can "Save as," allowing you to save the current Profile to a different location or as a different name.

4. Views

You can change the view in the Profile Editor to be just programming Cells (i.e., no image).

Clicking the "Views" button again will restore the default view and the image will reappear.

5. Profile

If you are working on a Profile to use immediately, so you can get flying straight away, click here.

6. Test Profile

Clicking this icon will bring up the test window. This is especially useful if you are attempting to program advanced timed or macro commands as it gives you a place to test your work before you fly.

7. Print

By pressing this icon, the Profile that you are currently building will be sent to the default printer on your system.

Settings

The settings page will allow you to alter the deadzone and response curves of all axes on both the Stick and the Throttle.

Response Curves

Depending on the type of aircraft that you fly, you may want your joystick to be more or less sensitive around the middle or end points of the axes. For example, if you're flying an F/18 on a refueling mission at 25,000 feet, you will be making very fine movements to get into the correct position. Having a shallower response curve around the center point of the joystick's X and Y axes will enable you to make very fine adjustment to your aircraft.

Deadbands

A deadband, sometimes known as a deadzone or neutral zone, is a part of the range in which an axis moves, undetected by the drivers and without effect on in-game progress. It may be around the center point of the axis range, or at either end of the axis range.

Axis Range Adjustment

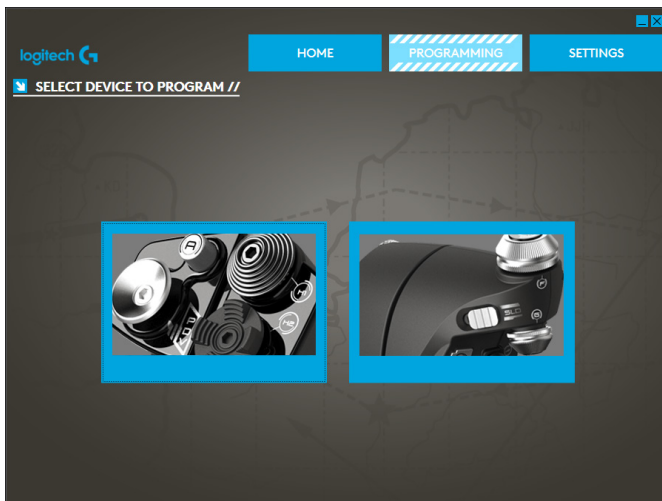
The axis range adjustment, or axis saturation to assign its correct name, allows you to shrink the raw data range of an axis.

Physical Axis Adjustment

The physical axis adjustment, or physical saturation, allows you to shrink the full axis data range into a small physical stick movement.

S-Curves and J-Curves

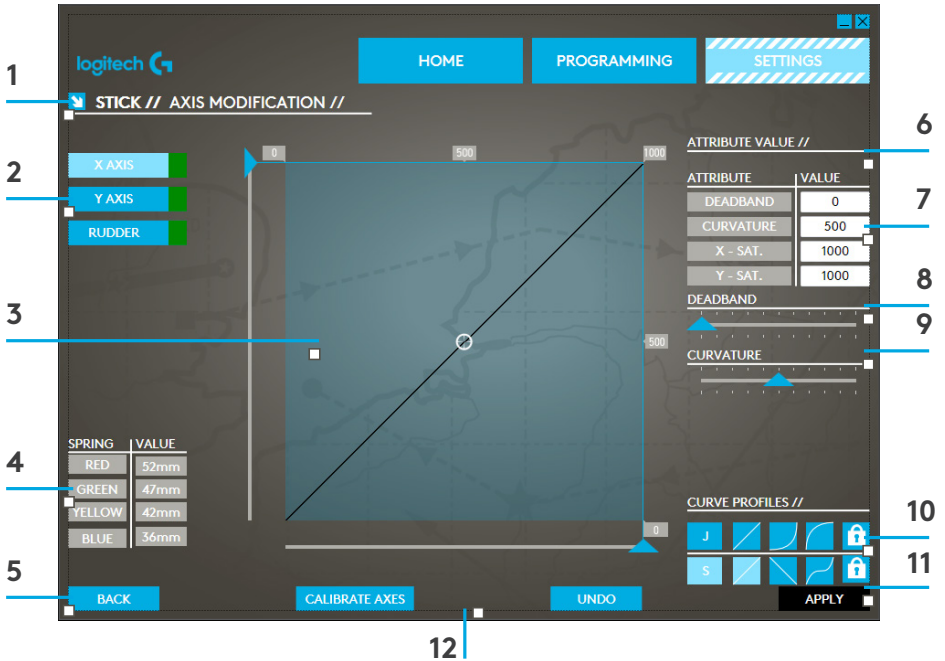
There are two types of adjustable curves – S-Curves and J-Curves. J-Curves are linear axes, like throttles and rotaries. S-Curves are non-linear, like X and Y axes.



The first screen you'll see is the 'SELECT DEVICE TO MODIFY' screen.

You have two choices; choose to alter either the Stick or the Throttle axis.

Once you are in the 'STICK// AXIS MODIFICATION' screen, you'll see a raft of options. We'll go through them one by one.



1. Name of the Part being Modified
2. Modifiable Axes
3. Manual Axis Adjustment and Test Area
4. Spring Values – for Reference when Changing Axis Data
5. Back Button
6. Physical Axis Adjustment Slider
7. Manual Axis Attribute Boxes
8. Deadzone Adjustment
9. Axis Curvature Adjustment
10. Pre-made Profiles
11. Apply Button
12. Undo Button

1. Name of the Part being Modified

This will either be the Stick or the Throttle unit for the X-56. If you wish to change the part that you're not currently on, use the back button (5) to go back to the selection screen.

2. Modifiable Axes

This shows a list of all modifiable axes. The Stick has three modifiable axes:

- X Axis
- Y Axis
- Rudder Axis

The Throttle unit has six modifiable axes:

- Left Throttle
- Right Throttle
- Rotary 1
- Rotary 2
- Rotary 3
- Rotary 4

3. Manual Axis Adjustment and Test Area

This area will show you how the current response curves/dead zones/saturation points are set up on the selected axis. You can also adjust the center deadzone, the range saturation, physical saturation, and the response curve on the selected axis. There is also a cross-hair which will show the physical position of the axis you are manipulating.

4. Spring Values

This is a reference section when you are adjusting the axes on the Stick. It will act as a guide for axis modification, and you may choose differing axis curves or deadzones depending on the Spring you have fitted to the Stick. If you are modifying the Throttle unit's axes you will not see this reference section.

5. Back Button

Takes you to the device selection screen.

6. Physical Axis Adjustment Slider

Allows the ends of the axes, the far left and far right on the X Axis or full up and full down on the Y Axis, to be moved inwards towards the center point. It is similar to setting up a deadzone at the far ends of your axis.

7. Manual Axis Attribute Boxes

This area allows you to input raw data to setup your deadband, curvature, range saturation, and physical saturation settings. This is very useful if you already have the data or a third-party source is supplying the data. For example, a forum post on how to setup the response curve for an F/A-18F.

8. Deadzone Adjustment

The deadzone slider will allow you to adjust the deadzone around the center point of the axis you currently have selected.

9. Axis Curvature Adjustment Slider

Shrinks the range of an axis. Instead of going from 0 to 65555, for example, we can shrink it to 300 to 62555.

10. Pre-made Profiles

We have included a set of predefined curves to select. This is to make it easier for those who do not wish to make their own curves. There are two different types of curves to choose from:

1. J-Curves – these curves will give you a single point of manipulation and are ideal for throttles and rotaries.
2. S-Curves – these curves will give you two points of manipulation and are ideal for setting up X and Y axes.

11. Apply Button

This button will save the curve that you are manipulating on the selected axis. Once saved, this axis will perform as saved, for all games, until the axis is adjusted and resaved or the reset button is used.

12. Undo Button

This button will turn the response curves on your currently selected axis back to their default state. This can be very useful when experimenting with curves and deadbands.

Altering Axis Attributes

Axis Status Notifications

You'll need to be aware of several notifications in the axis highlighter box when manipulating and applying axis data. On the left is a list of the current device's axes. The colors indicate the status of each axis.



Light Blue in the larger box indicates the currently selected axis. Green in the smaller box indicates that the data on the settings page and the data on the device are in sync for this axis.



Yellow in the smaller box indicates that the data for this axis has been modified on the settings page but has not yet been synced to the device.



To sync data, click 'Apply' in the bottom right. The entire box will turn Yellow then start to fill up Green to indicate that the data on the settings page is being synced to the device. Once data is fully synced, the larger box will revert to Light Blue and the smaller box will stay Green.



When the Axis box turns Green, the data from the settings page saves to the physical device. The main Axis box will then turn Blue and the slash will turn to Green.

Setting a Deadzone

To set a deadzone on an axis, whether it's an S-Curve or a J-Curve, simply move the deadzone slider (part 8). You will see the axis start to split from the middle in the manual adjust area. The deadzone will become larger as the slider moves farther.

Setting a Response Curve

To set a response curve on an axis, whether it's an S-Curve or a J-Curve, simply move the curvature slider. On an S-Curve setting you will see the curve turn snake-like, which indicates curvature above and below the center point the axis.

On a J-Curve setting you will see the whole axis curve as the slider moves. You can also change the curvature of either curve by moving the points in the manual adjustment area (part 4). If you move the points in the area, 2 for an S-Curve and 1 for a J-Curve, then the curve will adjust to the new points.

Setting an Axis Range

To set an axis range, simply move the Axis Range Adjustment Slider (part 5). This will shrink the data for that axis from the full negative side and from the full positive side. Now when you use the axis that you have just altered, the axis data output will only output up to the points that you have set in the settings.

Setting a Physical Axis

To set the physical axis range on any axis, move the Physical Axis Adjustment Slider (part 6). Moving this slider will shrink the minimum and maximum range of the physical axis. After moving the sliders to set your axis, every time you move the physical axis you'll see that the minimum and maximum range has shrunk.

Saving a Setting

To save settings so they're usable, click the 'Apply' Button in the bottom right-hand corner of the screen (part 13). Once you've hit 'Apply,' the axis icon (part 1) will turn Yellow, and progressively turn Green. A Green end segment and Blue main axis indicates saved data. For more details on axis notification, please check the 'Axis Notifications' section.

TROUBLESHOOTING

Q1 My computer is not recognizing the Controller, what's wrong?

- A 1. Have you downloaded and installed the drivers from support.logitech.com?
- A 2. Check the cable connections. Unplug your controller and plug it back in, making certain that it is securely attached.
- A 3. If you're using front or top facing USB ports, try plugging into the back of the PC.
- A 4. If using a hub, make sure it's a powered hub.

Q2 Why doesn't the game I'm playing recognize my Controller?

- A 1. Ensure that you have conducted the checks in Q1 [above].
- A 2. Does the game you are playing offer support for game controllers? Please refer to your game's manual, which should contain information regarding the use of game controllers. If it does not, you can use the powerful programming software to emulate the mouse and keyboard on your X56 HOTAS.

Q3 One of the buttons or axes is not working on my controller.

- A 1. Please test your product in the Game Controllers panel as mentioned in the early part of this manual.
- A 2. If you are still experiencing problems with the controller, please contact the tech support team at <http://support.logitech.com/Tickets/Submit>

Q4 In flight simulation games, like FSX, why doesn't my aircraft correctly respond to axes?

- A 1. The X56 HOTAS stick and throttle units are independent units, therefore they both have an X Axis, a Y Axis, etc. It is a simple case of going into the controller settings for your simulation game and setting up the X56 HOTAS. For a more detailed overview on how to do this please visit our FAQ page: logitech.com/support/x56

Q5 How do I change the X56 HOTAS LED color and brightness?

- A 1. Install the software to find a brightness slider under the SETTINGS tab.

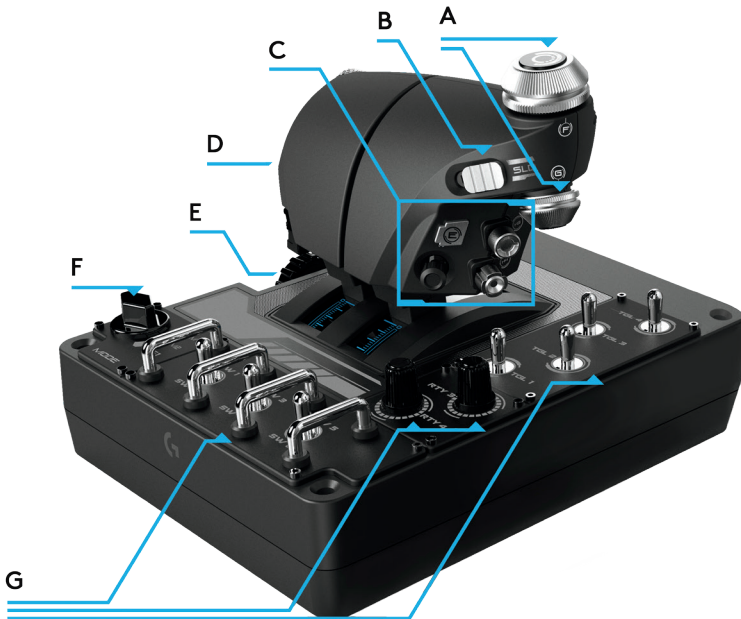
摇杆概览

- A. 视角
- B. 迷你模拟摇杆
- C. 拇指苦力帽，凸出型和凹陷型
- D. 摇杆按钮，包含一个扳机和 2 x 顶部按钮
- E. X、Y 和 Rz 轴、升降舵、副翼和方向舵轴
- F. 小指键和飞速小指开关
- G. 感觉式 弹簧系统



油门概览

- A. 油门旋钮，带嵌入按钮
- B. 2 位滑块
- C. 拇指控件，包括 2 个苦力帽、拇指按钮、迷你模拟摇杆
- D. 双油门，带油门锁
- E. 油门张力调节器
- F. 3 位模式开关
- G. 基础控件，包括 7 个拨动开关和 2 个旋转开关



入门指南

驱动程序与软件安装

Windows® 7/8/10

1. 从 logitech.com/support/x56 下载并安装 X56 手动油门和摇杆软件
2. 在阅读免责声明后，选择“**我接受免责声明的条款**”选项，并单击“**下一步**”继续
3. 在**插件**画面，将摇杆和油门单元插入 PC。在突出显示后，单击“**下一步**”
4. 从屏幕中，单击“**完成**”。至此，驱动程序与软件都已安装完毕

NET Framework

1. 如果您之前未安装过罗技产品，则在软件安装完毕后，可能提示您安装 .NET Framework。 **强烈建议您进行安装；
本软件需要此 Microsoft 功能更新**
2. 单击“**下载并安装此文件。**” PC 现在将从 Internet 找到正确的文件并进行下载
3. 在安装完毕后，单击“**关闭**”

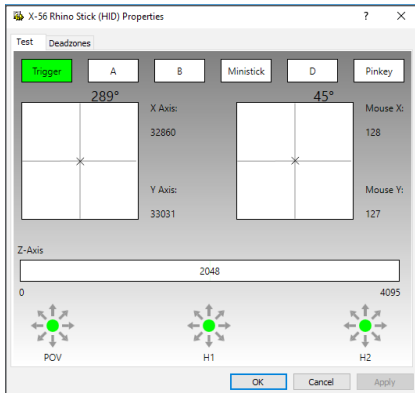
控制器设置

如果在任何时候您想要检查 X56 是否正常工作，打开“游戏控制器”页面并单击控制器的“属性”选项卡。

以下是在各个操作系统中不同的操作方式：

Windows® 8/10

1. 从 Metro/开始画面，单击“控制面板”图标。**注意：**如 Metro/“开始”屏幕中没有“控制面板”，键入“控制面板”，然后控制面板图标便会出现
2. 在控制面板已打开后，双击“设备和打印机”图标。**注意：**如果看不到此图标，确保已选择大图标
3. 在设备和打印机画面打开的情况下，在设备列表中找到 X56 手动油门与摇杆并右键单击此图标。从下拉菜单中，选择“游戏控制器设置”
4. 从游戏控制器窗口中，应可看到 X56 手动油门与摇杆已列出并选中。单击“属性”，此时将转到控制器测试画面



从“控制器测试”画面中，可测试所有功能、轴、按钮、旋钮等。在完成测试后，单击“确定”两次来返回主桌面

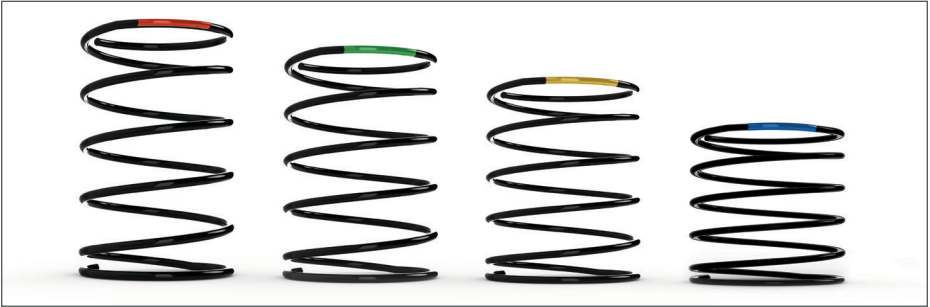
Windows® 7

1. 从系统托盘中单击“Windows”图标。将鼠标悬停到**所有项目**菜单上。单击“**游戏**”文件夹，然后单击“**游戏资源管理器**”图标
2. 从窗口顶部的列表中单击“**工具**”选项（带有向下箭头）。从下拉列表中，单击“**输入设备**”
3. 从**游戏控制器**窗口中，应可看到 X-56 Rhino 已列出并选中。单击“**属性**”，此时将转到**控制器测试**画面

感觉式 弹簧张力系统

Rhino 摇杆轴上的每个弹簧都会带来不同的感受。您还可在操作时选择不使用任何弹簧，因此总共可提供五种不同的力度。

每种弹簧可带来特有的感受，并有不同的识别方式。这些标识为弹簧顶部的色块，包括红色、黄色、蓝色和绿色。下标列出了具体数据，可帮助区分：



	红色	绿色	黄色	蓝色	注意
k = 等级	1	2	3	4	
OD = 外径	33	33	33	33	
d = 材料直径	1.8	1.8	1.8	1.8	
E = 弹性模量 (210000)	210000	210000	210000	210000	N/mm ²
FL = 自由长度	52	47	42	36	未压缩
WL = 工作长度	30.8	30.8	30.8	30.8	预压缩
P1L = 位置 1 长度	25.8	25.8	25.8	25.8	全有效压缩
n = 总圈数	4.5	4.5	4.5	4.5	有效圈数 (弹簧整体为 6.5 圈)
D = 平均直径	31.2	31.2	31.2	31.2	
弹性系数 $K = Ed^4 / 8n D^3$	1.70	1.70	1.70	1.70	N/mm
初始负载 $BL = FL - WL \times k$	36.12	27.60	19.08	8.86	N
终端负载 $SoL = FL - SL \times k$	44.64	36.12	27.60	17.38	N
应力 $= 8 \times P \times D / 3.14 \times d^3$	608.50	492.38	376.25	236.90	N/mm ²
% UTS (M4 琴钢丝)	30.89	24.99	19.10	12.03	%

更换或卸除弹簧

请按照这些步骤插入、更改或移除弹簧。确保扳机面对您的正前方，X56 手动油门与摇杆铭牌面向您。

1. 逆时针转动锁定挡板（部件 B），直到摇杆脱离底座。
2. 将两手的手指放到密封环两侧下方将其提起，取下密封环（部件 C）。此密封环采用刚性设计。
3. 撬开锁定夹具（部件 D）。向着远离摇杆、但又能承受弹簧载荷的方向拉。先取下一半，按住弹簧，再取下另一半。
4. 取下弹簧（部件 E），再换上新弹簧或不再使用弹簧。

要重新组装，则逆序执行上述步骤，确保稳固安放密封环（部件 C），并将锁定挡板（部件 D）拧紧在摇杆底座上。

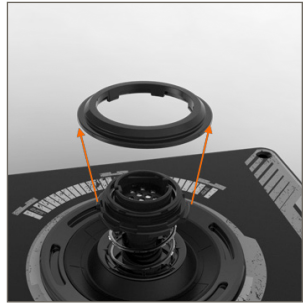
注意： 更换弹簧时，确保 USB 线已从 PC 上取下，并避免触碰摇杆手柄和底座中的连接器。



1. 逆时针旋转锁定圈



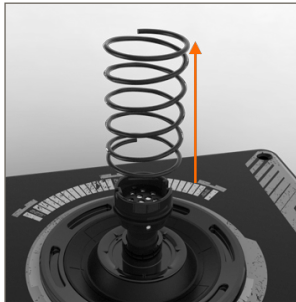
2. 卸下摇杆



3. 卸下密封环



4. 撬开锁定卡环



5. 卸下弹簧

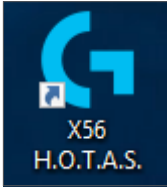
软件概览

通过软件可为 X56 编程一组键盘命令，从基本的单键命令到非常复杂的、定时的和有关于宏的命令。借此，您可为任何轴编程键盘命令，并可编程鼠标命令。

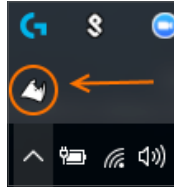
在此软件中，您还可更改主轴的响应曲线和死区，我们将在本手册的后面部分对此等问题进行说明。

软件有两种启动方式：

1. 使用桌面图标，如此所示



2. 使用开始菜单栏...

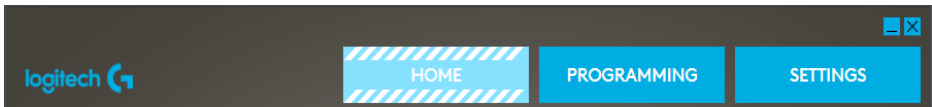


在软件启动后，将显示主页画面。

如果之前没有运行过此软件，则会提示您选择语言。完成后，主页画面将显示出来。如果选择的语言不正确，或希望选择另一语言，则可单击主页画面右下角的图标访问语言菜单。

软件中共有三个主要的选项卡：

1. 主页
2. 编程
3. 设置



主页选项卡

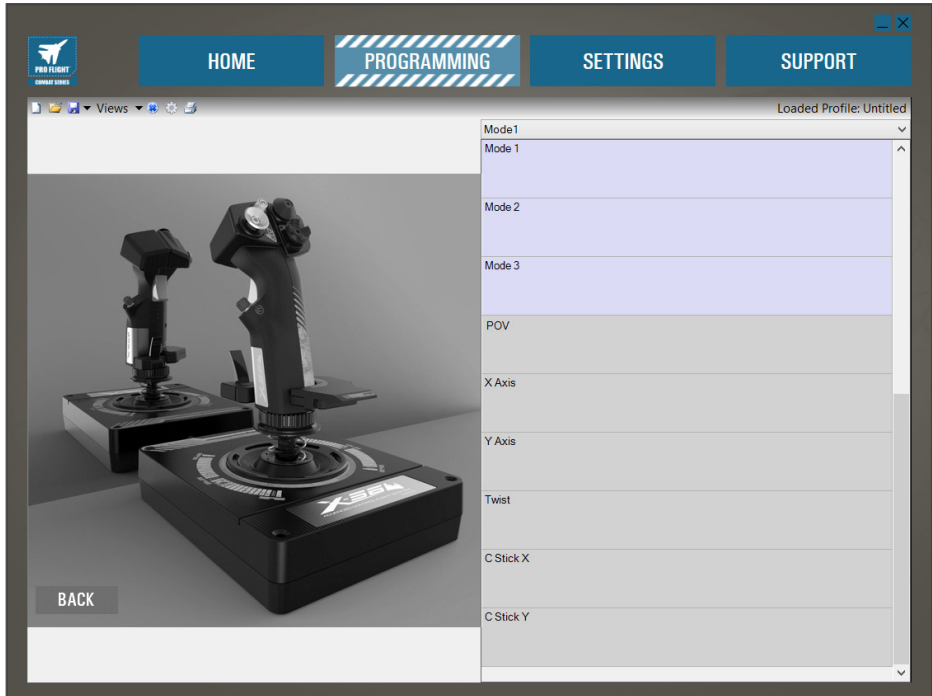


在主页画面中，可看到以下内容：

- 来自罗技 G 的实时 Facebook 内容
- 社交媒体和网站捷径、LogitechG.com、Twitter、YouTube、Instagram 等
- 语言选择，使用屏幕右下角的旗型图标来访问

编程选项卡

在选择“编程”选项卡后，可看到 X56 的编程环境。



屏幕的左面将显示出您所要编程的控制器的高分辨率图像。在屏幕的右侧将显示一个命令框列表，称为“单元”，页面可向下滚动。

在图片面板的顶部，可看到摇杆和油门图标。单击其中一个就会将其切换为当前的编程对象。当前窗口中显示的更大的图片对应的即使当前编程的单元。

在“编程”选项卡中，您能让控制器直接复制您喜爱的游戏中所用的任何键盘命令。然后命令将保存到我们的配置文件中。

何谓配置文件？

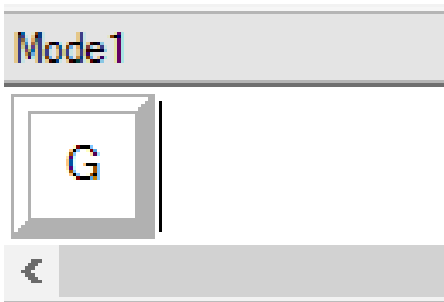
将已编程的控制器命令统一保存到一个文件中，这个文件就叫做配置文件。例如，您有一个游戏杆，上面有多个按钮/苦力帽。如要使用这些控件在游戏中执行某些功能（通常必须设置键盘快捷键来执行），则可将命令分配给游戏杆的按钮。如果要令按钮“A”激活起落架（即键盘上的“G”键），则可使用软件来分配这一功能。另外也可进行更复杂一些的功能分配，例如“Shift + F2”，或甚至是定时命令和宏。

初次制作配置文件

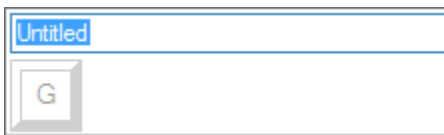
1. 将鼠标指针悬停到单元上，或者在控制器上按下要创建配置文件的按钮。如果将鼠标悬停到按钮“A”单元上，按钮“A”将在 3D 游戏杆图像上点亮。或者，直接在摇杆上按下按钮“A”，相应的单元就会亮起。



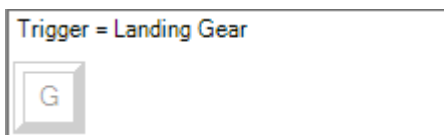
2. 在正确的单元点亮后，左键单击它，此时单元左侧将出现一个大的闪烁光标。您还会看到一个绿色对勾、红色 X，以及鼠标图标。

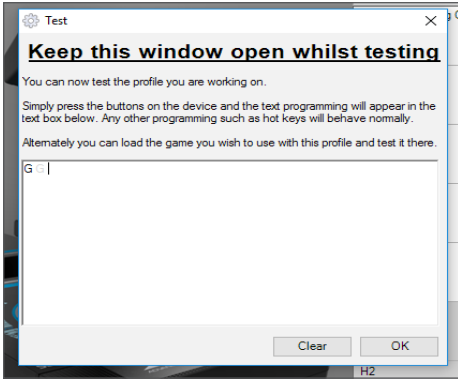


3. 此时单元正等待键盘命令。在键盘上，按下摇杆的按钮“A”所应激活的键盘按键。对于此例，我们将使用“G”键，此键通常用于激活起落架。当在键盘上按下“G”时，一个大白框将显示在单元中，并带有一个字母“G”，如图所示。如果键盘命令正确，按下右侧的对勾按钮。如果不正确，按下红 X 并重新进行此过程，再次将键盘命令设定到此单元。



4. 在按下绿色对勾后，命令名称框将显示出来，名为“无标题”（左图，下）。为命令起一个名字，并将此名字输入此框内。对于本例，我们起的名字为“起落架”。按下输入键来完成单元。按钮“A”= 起落架，即键盘的“G”键（右图，下）。





5. 打开“测试”窗口来测试配置文件。3D 图像上有七个图标。右数第二个看起来像银色齿轮的一个标记为“测试配置文件”。

单击此图标，于是一个新窗口弹出。光标将在测试区域内显示出来。直接在 X56 上按下按钮“A”。在按下后，字母“G”将显示在窗口中，这表明您起先编程的按钮运转正常。

在“测试”窗口右下角单击“确定”图标，以关闭此窗口。

6. 如果需要，可添加其他键盘命令，并加以测试。注意在关闭软件之前保存所做工作。



7. 要令刚刚编程的内容在游戏中发挥作用，必须将其另存为配置文件，然后将其激活。只需一次单击即可实现。在紧邻 3D 图像上面的图标行中，可看到一个像蓝色靶子的图标。如将鼠标悬停在上，可显示出工具提示“配置文件”。

单击此图标，于是一个标准 Windows 保存窗口将弹出。为配置文件起一个名字，然后保存。保存后，配置文件将激活，至此您便可关闭软件并开始游戏了。X56 现在将按照您所编程的方式提供响应。

8. 软件能够执行多种强大的编程功能，我们这里并没有完全介绍。潜在的编程对象包括轴、鼠标移动和鼠标按钮、苦力帽和特殊定时或者复杂命令等。

配置文件编辑器中的图标



1. 新建配置文件

打开一个要编辑/构建的空白配置文件。

2. 打开配置文件

打开之前创建的配置文件以进行编辑。

3. 保存配置文件

单击“保存”将保存一个新的配置文件，或者改写一个当前配置文件。

借助“保存”旁边的下拉箭头，您可执行“另存为”操作，从而将当前配置文件另存到其他位置或另存为名称不同的另一文件。

4. 视图

您可更改配置文件编辑器中的视图，令其仅显示正在变成的单元（即，没有图像）。再次单击“视图”按钮，此时将恢复默认视图，并且图像将再次出现。

5. 配置文件

如果您要在做完一个配置文件后，随即就用它来驾驶飞机，则单击此处。

6. 测试配置文件

单击此图标将弹出测试窗口。如果您要编程复杂的定时或宏命令，则此功能将非常实用，它能在您起飞之前让您能够先执行测试。

7. 打印

单击此图标后，您当前构建的配置文件将发送到系统上的默认打印机。

设置

借助设置页面，您可更改摇杆和油门上所有轴的死区和响应曲线。

响应曲线

根据飞机的类型，可能需要摇杆在轴的中心或端点位置更加灵敏或没有那么灵敏。例如，如要驾驶 F/18 进行 25,000 英尺重新加油任务，则需要非常精细的动作来调整恰当的方位。可让摇杆 X 和 Y 轴中心点的相应曲线更低一些，这样就能够对飞机进行非常精细的调整。

死区

死区有时也称为不灵敏区或中性区，指的是轴虽然移动但不会被驱动程序识别并且也不会在游戏中起到任何效果的范围部分。这既可以是围绕轴中心点的范围，也可能是两个端点附近的轴范围。

轴范围调整

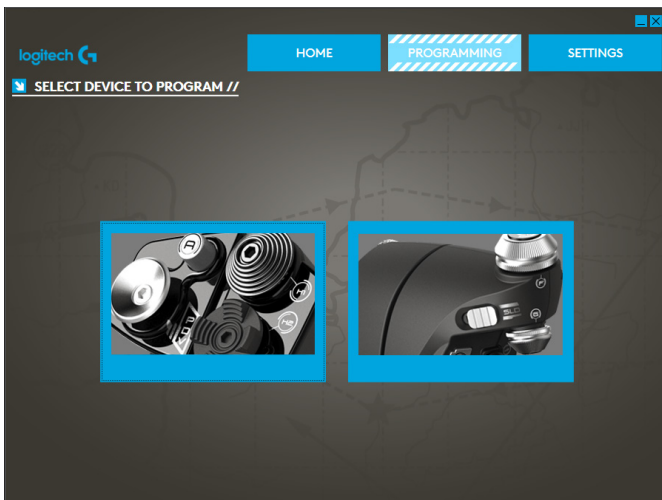
借助轴范围调整（或确切地称为轴饱和度），您可缩小轴的原始数据范围。

物理轴调整

借助物理轴调整（或称为物理饱和度），您可将轴的整个数据范围缩小成一个较小的物理摇杆移动。

S 曲线和 J 曲线

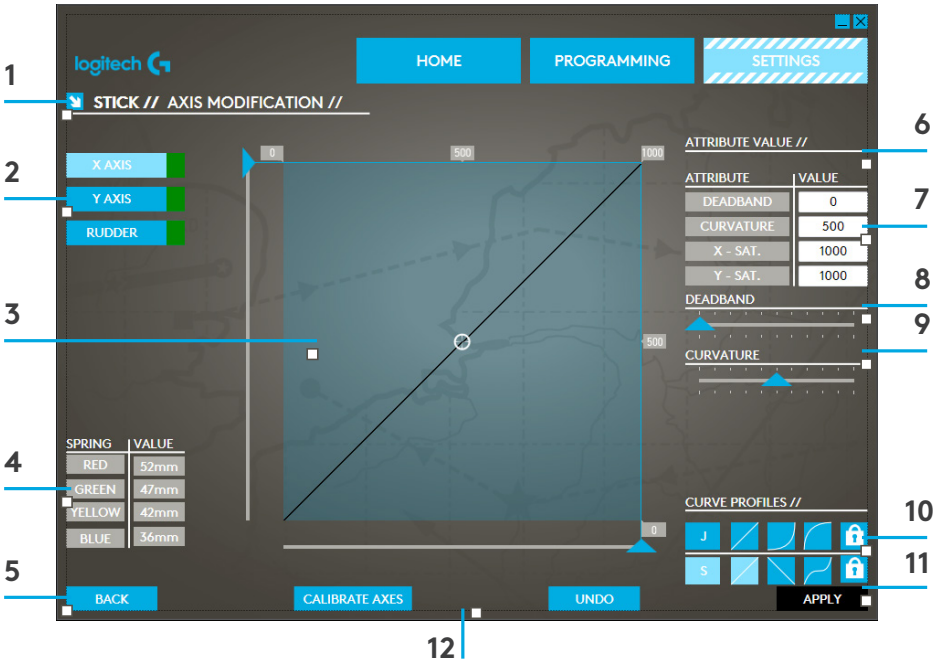
共有两种可调曲线 - S 曲线和 J 曲线。J 曲线为线性轴，如油门和旋转。S 曲线为非线性轴，如 X 和 Y 轴。



您将看到的初始屏幕是“选择要修改的设备”屏幕。

您有两个选项；选择更改摇杆或油门轴。

在进入“摇杆//油门修改”画面后，可看到一系列选项。我们将逐个介绍。



1. 当前修改的部件名称
2. 可修改的轴
3. 手动轴调整和测试区域
4. 弹簧值 - 用于在更改轴数据时参考
5. 后退按钮
6. 物理轴调整滑块
7. 手动轴属性框
8. 死区调整
9. 轴曲率调整
10. 预制配置文件
11. 应用按钮
12. 撤消按钮

1. 当前修改的部件名称

这将是 X-56 的摇杆或油门。如要更改当前未开启的部件，使用返回按钮 (5) 返回选择画面。

2. 可修改的轴

这将统一显示所有可修改的轴。摇杆具有三个可修改的轴：

- X 轴
- Y 轴
- 方向舵轴

油门单元具有六个可修改的轴：

- 左推进器
- 右推进器
- 旋钮 1
- 旋钮 2
- 旋钮 3
- 旋钮 4

3. 手动轴调整和测试区域

此区域将显示选定的轴上当前的响应曲线/死区/饱和点是如何设置的。您还可为所选的轴调整中心点死区、范围饱和度、物理饱和度和响应曲线。其中还有一个十字线，可在您操纵的过程中显示轴的物理位置。

4. 弹簧值

这是调整摇杆轴时的一个参考部分。它的作用是为轴的修改提供指导，根据摇杆上所安装的弹簧，您可选择不同的轴曲线或死区。如果正在修改油门单元的轴，则不会看到此参考部分。

5. 后退按钮

转到设备选择画面。

6. 物理轴调整滑块

令轴的端点位置（即 X 轴的左端和右端端点，或 Y 轴的顶端和底端端点）向中心点移动。这类似于设置轴末端的死区。

7. 手动轴属性框

借此区域，您可输入原始数据，从而设置死区、曲率、范围保护度和物理饱和度设置。如果您有数据，或者有第三方来源提供数据，则此功能非常实用。例如，某论坛就贴出了 F/A-18F 的响应曲线。

8. 死区调整

借助死区滑块，您可为当前选中的轴调整中心点附近的死区。

9. 轴曲率调整滑块

缩小轴的范围。例如，范围将不再是从 0 到 65555，而是缩小到 300 到 62555。

10. 预制配置文件

我们已加入了一组可选的预定义曲线。这是为了方便那些不想要自行创建曲线的用户。共有两种不同类型的曲线可供选择：

1. J 曲线 - 这些曲线提供单一操纵点，非常适合油门 以及旋钮。
2. S 曲线 - 这些曲线提供两个操纵点，可理想适合于 X 和 Y 轴的设置。

11. 应用按钮

此按钮会保存您当前在所选轴上操纵的曲线。保存后，此轴将在所有游戏中按所保存的方式工作，并在调整、再保存或复位按钮之前保持如此。

12. 撤消按钮

此按钮会令您当前所选轴的响应曲线返回默认状态。
此功能在您试验曲线和死区时非常实用。

更改轴属性

轴状态通知

在操纵和应用轴数据时，您需要了解轴的突出显示框内的多种通知。左侧是当前设备的各个轴。颜色指示的是各个轴的状态。



较大框中的浅蓝表示当前选定的轴。

较小框中的绿色表示，对于此轴，设置页面中的数据以及设备上的数据已同步。



较小框中的黄色表示，此轴的数据已在设置页面中修改，但尚未同步到设备。



要同步数据，单击右下角的“应用”。整个框将变黄，然后开始填充绿色，指示设置页面上的数据正在同步到设备。在数据已完全同步后，较大的框将恢复到浅蓝，较小的框将保持绿色。



当轴框变绿，设置页面中的数据将保存到物理设备。随后，主轴框将变蓝，并且斜杠将变绿。

设置死区

要为轴设置死区，无论是 S 曲线还是 J 曲线，都只需移动死区滑块即可（部件 8）。在手动调整区域中，您将看到轴开始从中间分开。滑块移动得越快，死区就越大。

设置响应曲线

要为轴设置响应曲线，无论是 S 曲线还是 J 曲线，都只需移动曲率滑块即可。在 S 曲线设置中，您将看到曲线如蛇形扭曲，这指示高于和低于轴中心点的曲率。

在 J 曲线设置中，您将看到整个轴曲线会随着滑块移动。您还可以通过在手动调整区域（部件 4）移动各个点来更改各个曲线的曲率。如果移动区域中的点（S 曲线包含 2 个，J 曲线 1 个），则曲线会根据新的点进行调整。

设置轴范围

要设置轴范围，只需移动轴范围调整滑块（部件 5）即可。这将缩小该轴在整个负值一侧和整个正值一侧的数据。至此，在您使用已调整的轴时，轴数据输出将仅输出您在设置中设置的点。

设置物理轴

要为任何轴设置物理轴，移动物理周调整滑块（部件 6）。移动滑块会缩小物理轴的活动范围。在通过移动滑块来对轴进行设置后，每次移动物理轴您都会发现范围已缩小。

保存设置

要保存设置并供实际使用，在画面右下角单击“应用”按钮（部件 13）。在按下“应用”后，轴图标（部件 1）将变黄，并逐渐变绿。绿色端线和蓝色主轴表示数据已保存。

有关轴通知的更多信息，请查看“轴通知”部分。

故障排除

Q1 我的计算机不识别控制器，问题在哪里？

- A 1. 您是否从 support.logitech.com 下载并安装了驱动程序？
- A 2. 检查电缆连接。拔出控制器接线并重新插入，确保已固定连接。
- A 3. 如果整在使用前端或机顶的 USB 端口，请尝试插入到 PC 后面的端口。
- A 4. 如果使用中转站，确保其已通电。

Q2 我玩的游戏为什么不识别控制器？

- A 1. 确保您已执行 Q1 [上面] 中的各项检查。
- A 2. 您玩的游戏是否支持游戏控制器？请查看游戏的手册，其中应包含游戏控制器使用方面的信息。如果不支持，则您可使用我们强大的编程软件来让 X56 手动油门和摇杆模拟鼠标和键盘。

Q3 控制器上的一个按钮或轴失灵。

- A 1. 请在游戏控制器面板中测试本品，具体操作请参见本手册的前面部分。
- A 2. 如果控制器仍有问题，请联系技术支持团队，网址为：<http://support.logitech.com/Tickets/Submit>

Q4 在《模拟飞行 10》或其他飞行模拟游戏中，为什么飞机不能正常对轴动作进行响应？

- A 1 X56 手动油门和摇杆的摇杆和油门单元为独立单元，因此他们都具有 X 轴和 Y 轴等。可方便地前往模拟游戏的控制器设置中，对 X56 手动油门和摇杆进行设置。有关如何设置的详细总体介绍，请访问我们的常见问题与解答页面：logitech.com/support/x56

Q5 如何更改 X56 手动油门和摇杆 LED 的颜色和亮度？

- A 1 安装软件并在“设置”选项卡下找到亮度滑块。

