

RAT™ 4

OPTICAL GAMING MOUSE / OPTICAL GAMING-MAUS / SOURIS DE JEU OPTIQUE

PRODUCT GUIDE – **Version 1.0**

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1. Introduction

The original RATs set the benchmark for PC gaming peripheral design, engineering, and functionality with their launch back in 2010. For 2016, Mad Catz are delivering an upgraded range of seven products, to consumers that demand the best possible hardware for gaming.

Every member of the RAT family has been enhanced from the ground up. Including, new sensors, switch components, customizable lighting and expanded programming features. All under a bold colour scheme, designed to appeal to gamers and non-gamers alike.

All gamers are different. The RATs are precision engineered, making key parts of the product adjustable, to accommodate different sized hands and grip styles. We call this ***Dynamic Ergonomics***, and it is a key feature that runs through every product to improve the gaming experience. From adjustable palm rests on the ***RAT 4***, up to ultimate customization of every surface of the product on ***RAT PRO X+***, customers can tweak their RAT until it feels perfect for them.

Vibrant lighting further boosts the iconic look of the product, making it the centrepiece of your gaming rig.

RAT customization goes beyond the physical. The performance of the sensor and button configurations are just as important as how the product feels in your hand. Regardless of your preferred genre or style of play, our ***FLUX™ Software Interface*** can be used to quickly and intuitively tune all aspects of the sensor, macro buttons, and LEDs.

The ***RAT 4*** is a lightweight product with a solid and reliable optical sensor. Additional buttons and controls are minimized to make this a perfect product for a fast paced FPS and MOBA gaming.

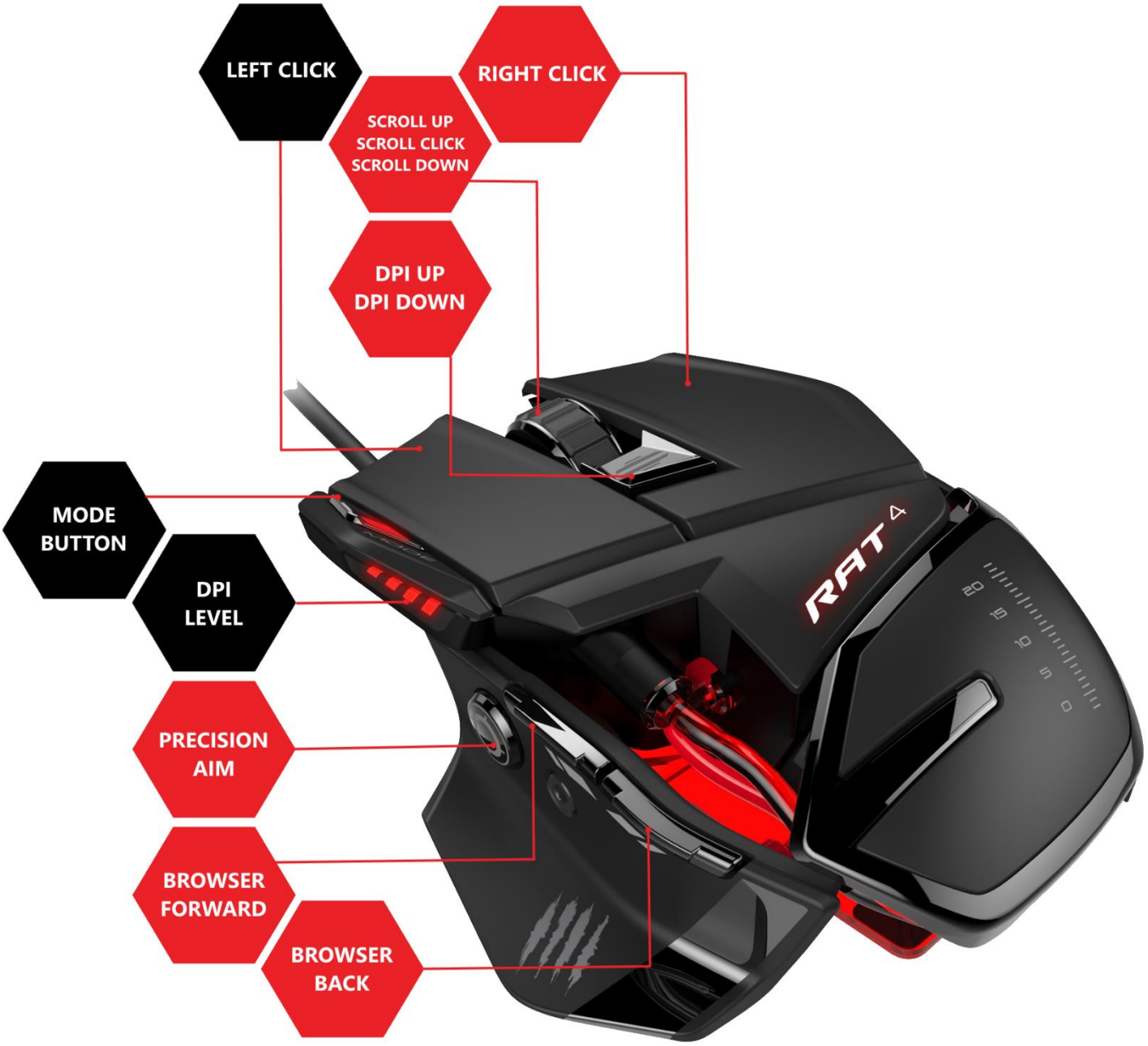


2. Feature Overview

This section will provide you with an overview of all of the controls, indicators and features that make up the product.

Controls and Indicators

RAT4 has 9 programmable controls, these are highlighted red in the below image.



What is a profile, and how do Modes work?



All of the additional functions and programmable controls can be used to your advantage when coupled with our FLUX software interface. FLUX can be used to create button mapping profiles, consisting of crucial commands for your favourite games and apps. Profiles are ideal for increasing in-game performance speed, and your efficiency in desktop applications. By assigning important in-game actions to the buttons on the RAT, such as Reload or Throw Grenade, you can access these controls faster, and keeps the focus of your left hand on the movement of your character.

RAT4 profiles can contain up to three modes of button assignments. This means that each of the programmable buttons can do three different actions, depending on what mode is active. For example, if you were playing a game with different player classes (Infantry, Sniper, Medic etc.), each mode could contain the specific controls for the different classes you would play as. So, when you are in-game, and you change class, you can quickly select the right mode of button mappings on your RAT.

To change mode, simply press the Mode button to cycle through them. The LED beneath the button indicates the active Profile Mode.

- Red = Mode 1 macro commands
- Blue = Mode 2 macro commands
- Purple = Mode 3 macro commands

Precision Aim



Precision Aim is an important feature of the RAT series. By adjusting the Precision Aim slider in the software, the gamer can press and hold the button to slow their cursor movement to help steady their aim for that crucial shot. If you do not want to use this feature, Precision Aim can be turned off, and the button is free to be used as an additional programmable control.

How does DPI Adjustment work?

The sensor resolution (DPI), and hence, the speed of cursor movement, is freely adjustable. In addition, you can also save 4 different DPI levels to the product. Pressing the DPI switch up or down will select a DPI level indicated by the 4 red LEDs. This is ideal for quickly increasing or decreasing the sensor resolution for the best cursor response in-game or in general use. If you prefer to use one DPI level, the DPI Switch function can be disabled via the software. This allows the two buttons to be used as additional programmable controls. If you choose to disable the DPI Switch feature, the DPI will remain at the level it was, when the switch was disabled.



The DPI Level is indicated by the 4 Red LEDs on the side of the product.

- Level 1 is set to 800 DPI by default.
- Level 2 is set to 1600 DPI by default.
- Level 3 is set to 3200 DPI by default.
- Level 4 is set to 5000 DPI by default.

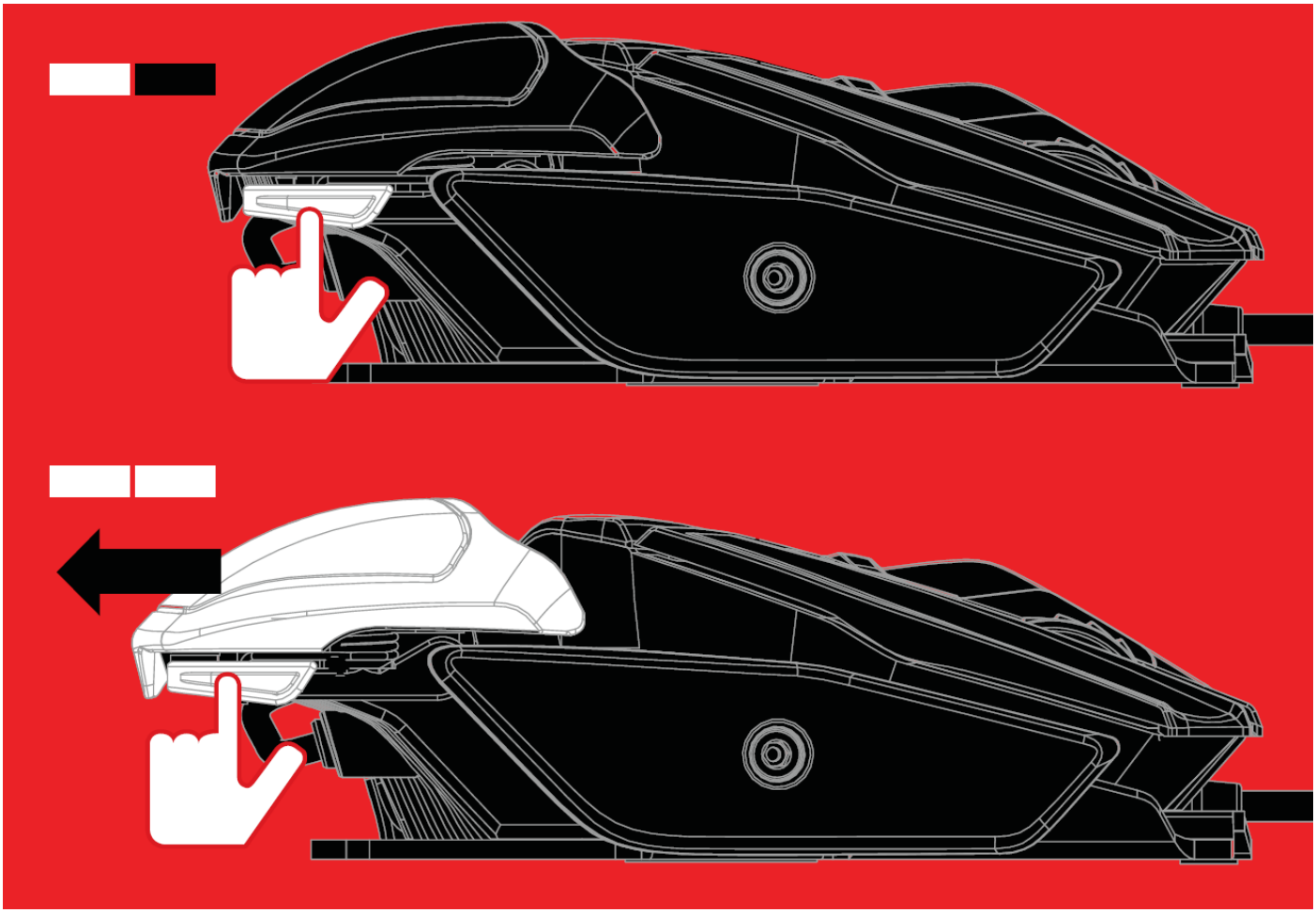
For more information on profiles, and how to configure the Precision Aim and DPI levels to your preference, please jump to Section 4.

Additional Features

In addition to the main controls, the RAT4 has powerful red illumination and an adjustable palm rest. The illumination is purely decorative. If preferred, the lighting can be turned off in the programming software.

The adjustable palm is invaluable for getting the product to feel just right in your hand. If you have a larger hand, the overall length of the product can be adjusted by altering the palm rest. This results in a much more natural grip and reduces fatigue over a long period of use.

To alter the palm rest position, locate and press the release catch on the lower right side of the palm rest. With the release catch held in, pull the palm rest back. Gradually ease off pressure on the release catch, and it will naturally click into one of the securing holes along the length of the product. Once the catch has engaged, release it, and the palm rest will remain in place.



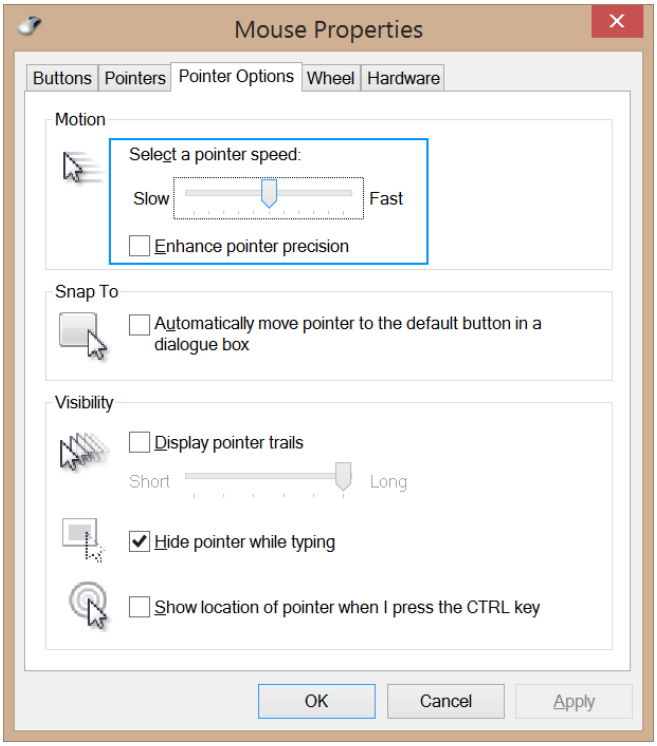
3. First-Time Setup and Software Installation

The ***RAT4*** can be used as a basic mouse when plugged into a PC via USB. However, if you would like to configure button response, and the performance of the sensor, both the product driver and software application will need to be downloaded and installed.

Connecting the RAT and configuring Windows

1. Make sure the PC is powered on.
2. Remove the label from the sensor aperture.
3. Plug the USB cable into an available port.
4. Windows will briefly install generic drivers for the RAT. It will then function as a basic 5 button mouse.

To make sure Windows is correctly configured, go to **Control Panel > Mouse**. Click on the **Pointer Options** tab. Make sure that the **Pointer Speed** slider is set to the middle position and that the **Enhance Pointer Precision** option does not have a tick.



Driver and Software Installation

In order to customize the product settings and make game profiles, you will need to download both the driver and software files from Madcatz.com.

1. Go to http://madcatz.com/downloads/.
2. Select your operating system and product in both the **Driver Download** and **Software Download** areas. You will then be given a link to download both the driver and the software application.
3. Run the driver file first. *You may be asked to restart your PC.*
4. Install the software application next. *If this is the first time you have installed our software, Windows may require you to install an update .net framework. This is normal.*
5. Once both are installed, you will see a RAT4 icon on your desktop, and a RAT4 icon in the system tray of your task bar. *If the system tray icon is not immediately visible, check the hidden icons by clicking the vertical arrow next to the system tray.*
6. The product is ready for customization.

4. Mad Catz RAT4 FLUX™ Software for Windows

A powerful software application for ***RAT4*** is supplied for Window users. As well as offering first-line support and setup tips, the software's two key functions are to allow the user to configure the performance settings of the product and to create game-specific profiles. The following section will tell you everything you need to know to get the product functioning how you want it to.





The desktop software enables the creation of game-specific profiles for your favourite games and apps. Profiles consist of keyboard key and mouse button presses that are then mapped to the additional controls on a product. For example, for a game like Battlefield, you can set commands like Throw Grenade, or Melee Attack to the additional RAT buttons to make is faster and easier to carry out these actions in-game.

A full set of commands set to each button is called a Profile Mode. Each profile consists of 3 modes. Essentially tripling the number of functions you can have the RAT carry out. To continue the Battlefield analogy, each of the three modes could be configured for three of the in-game classes. So, in Mode 1, a button could be set to Throw Grenade. In Mode 2, the same button could do Aircraft Countermeasures. In Mode 3, the same button could execute the Spot Enemy action.

Once the profile has been made, it can be linked to the corresponding game or application. So that, when the program or game window is in focus, the profile is automatically activated on the product.

FLUX is also fully compatible with commonly used cloud storage services. For example, you can link the Drop Box folder on your PC to the profile folder within FLUX. This means that you can easily back-up your profiles, and quickly access them on different PCs.

The following controls on the RAT4 can be programmed:

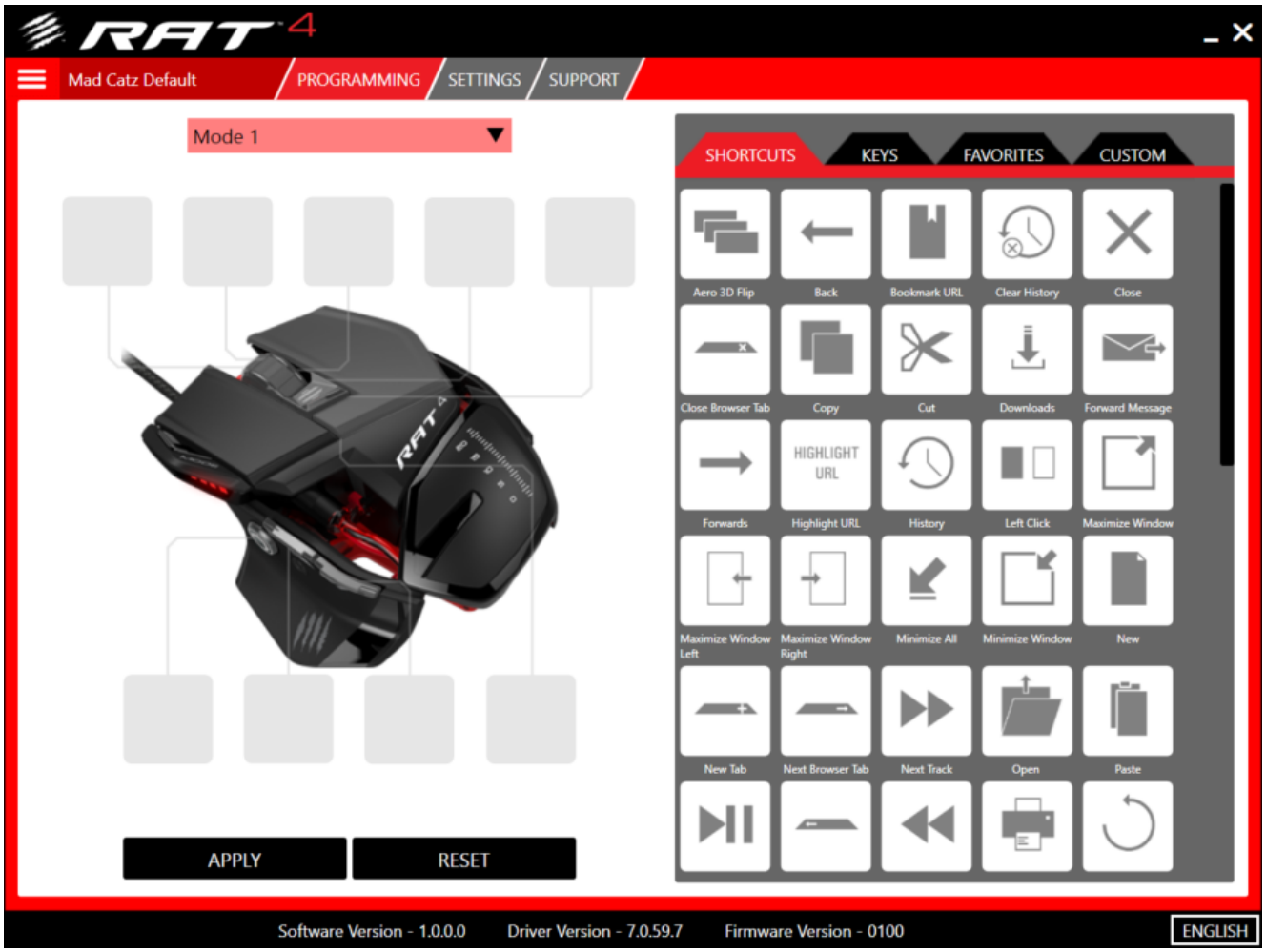
- Right RAT button
- Scroll Wheel Up
- Scroll Wheel Down
- Scroll Wheel Click
- DPI Up
- DPI Down
- Precision Aim
- Browser Forward
- Browser Back

Before you begin:

- Both the driver and software applications for the product need to be installed.
- User profiles are stored in **Public\Documents\Mad Catz\RAT4** folder. They are not stored in the device itself.
- Profiles are stored as .pr0 files and can be transferred to other computers that have the drivers and software installed.

FLUX Programming Overview

The following section will take guide you through the layout of the user interface and how each element operates. When you first load up FLUX, it will look like this:



Key Elements:

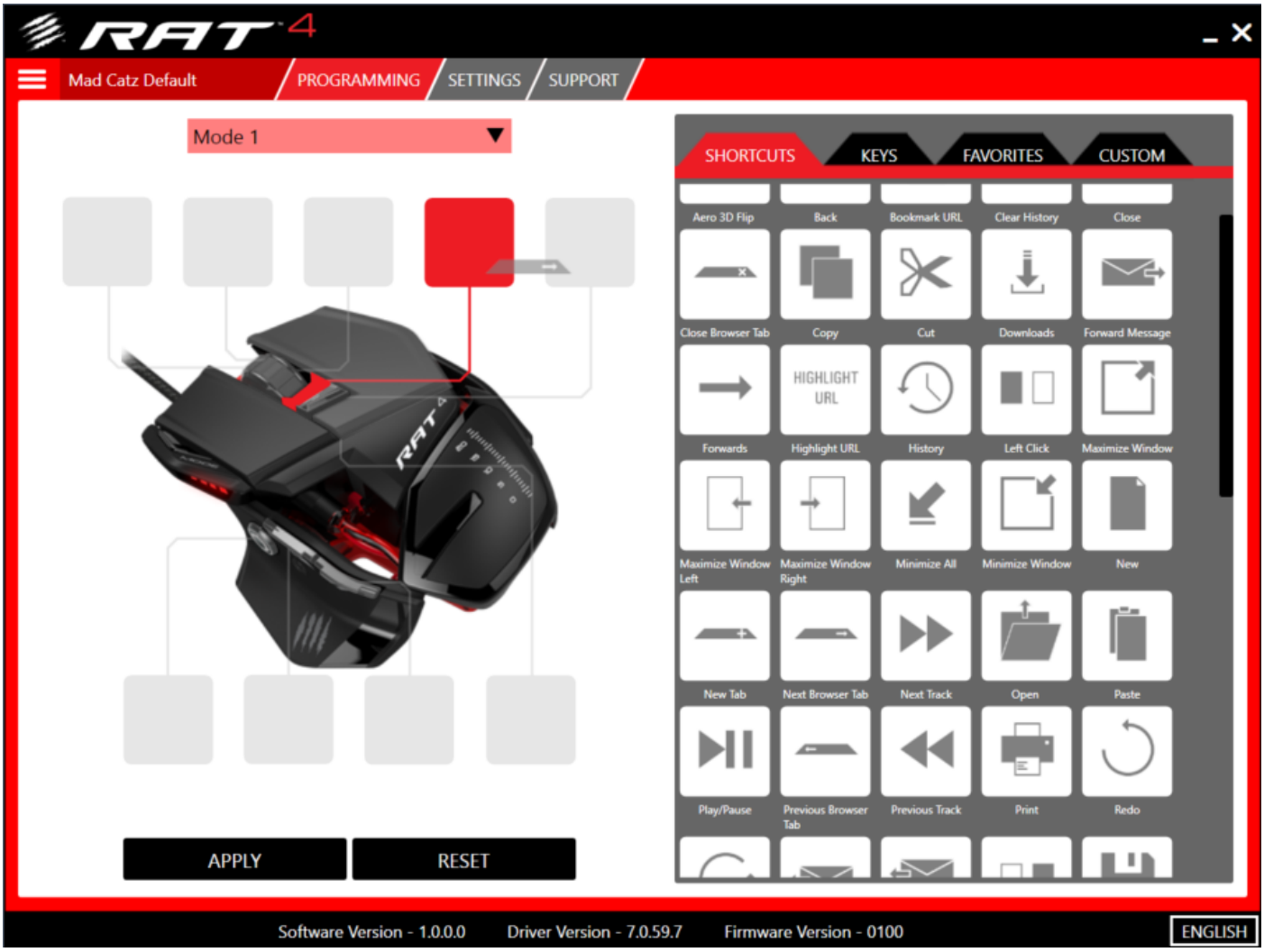
1. Running along the top of the app are the main tabs. Programming is selected by default. Click the button to change to the desired page. When a new version of software is available, an update tab will appear with direct download links.
2. The Programming page features an image of the product along with callouts to each of the programmable controls.
3. To the right of the image is the Command Library. The first tab contains pre-made shortcuts such as copy, paste, and other useful functions. The second tab contains single keyboard key presses. These are useful for ultra-quick profile setup. The third tab is for your favourite commands. If you right-click a command you can add it to favourites. This command will then always be visible regardless of what profile you are editing. Finally, the custom tab allows you to create your own commands. More on that later…
4. Directly above the product image is the mode selector drop down menu. Use this to select the profile mode you want to edit. The colour of the selected mode, corresponds to the Mode LED colour on the product.
5. Directly below the product image are the Apply and Reset buttons. Clicking Apply will activate a profile. Clicking Reset will clear the profile of all commands.
6. To the top left of the image, is the Profile Menu button. This will reveal/hide the different profiles you have access to for editing. The area next to the menu button displays the name of the current profile that is open for editing.

Quick Programming of the Mad Catz Default Profile

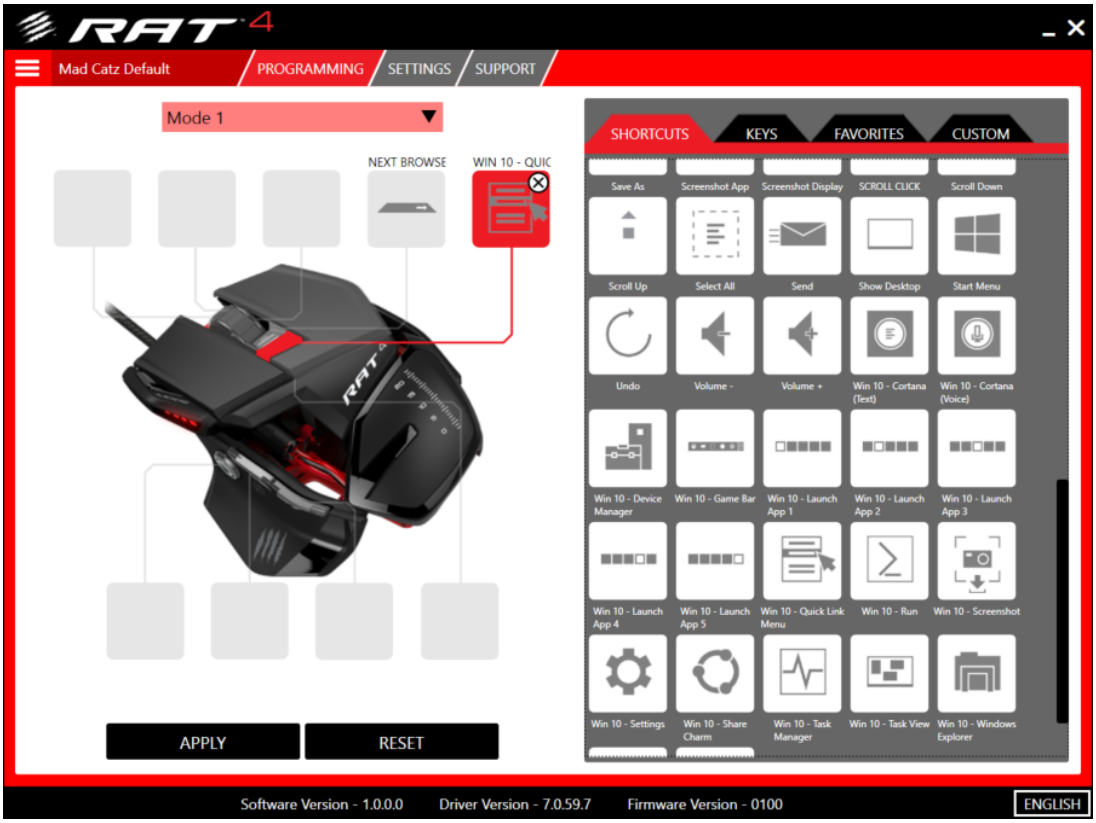
When you first load up the software, the profile presented for editing is the Mad Catz Default Profile. This profile is active when your system boots up. The default profile is great for applying commands that make browsing the Internet and controlling media, quick and intuitive.

To assign a command to a button, left-click and drag an icon from Command Library over to one of the callouts. When you release the left RAT button, the command will be assigned.

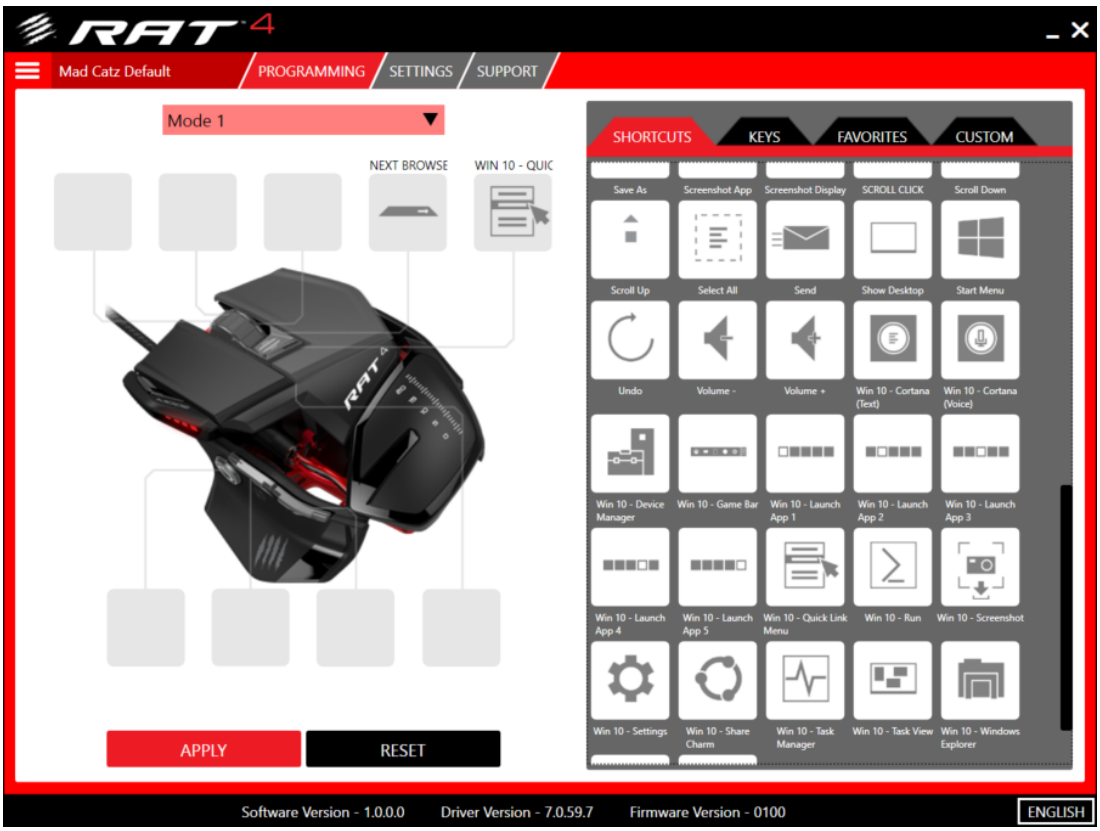
Repeat this process to assign all of the commands you need to the RAT.



To remove a command from a button, hover your RAT cursor over the callout. When the cross appears, left-click it.



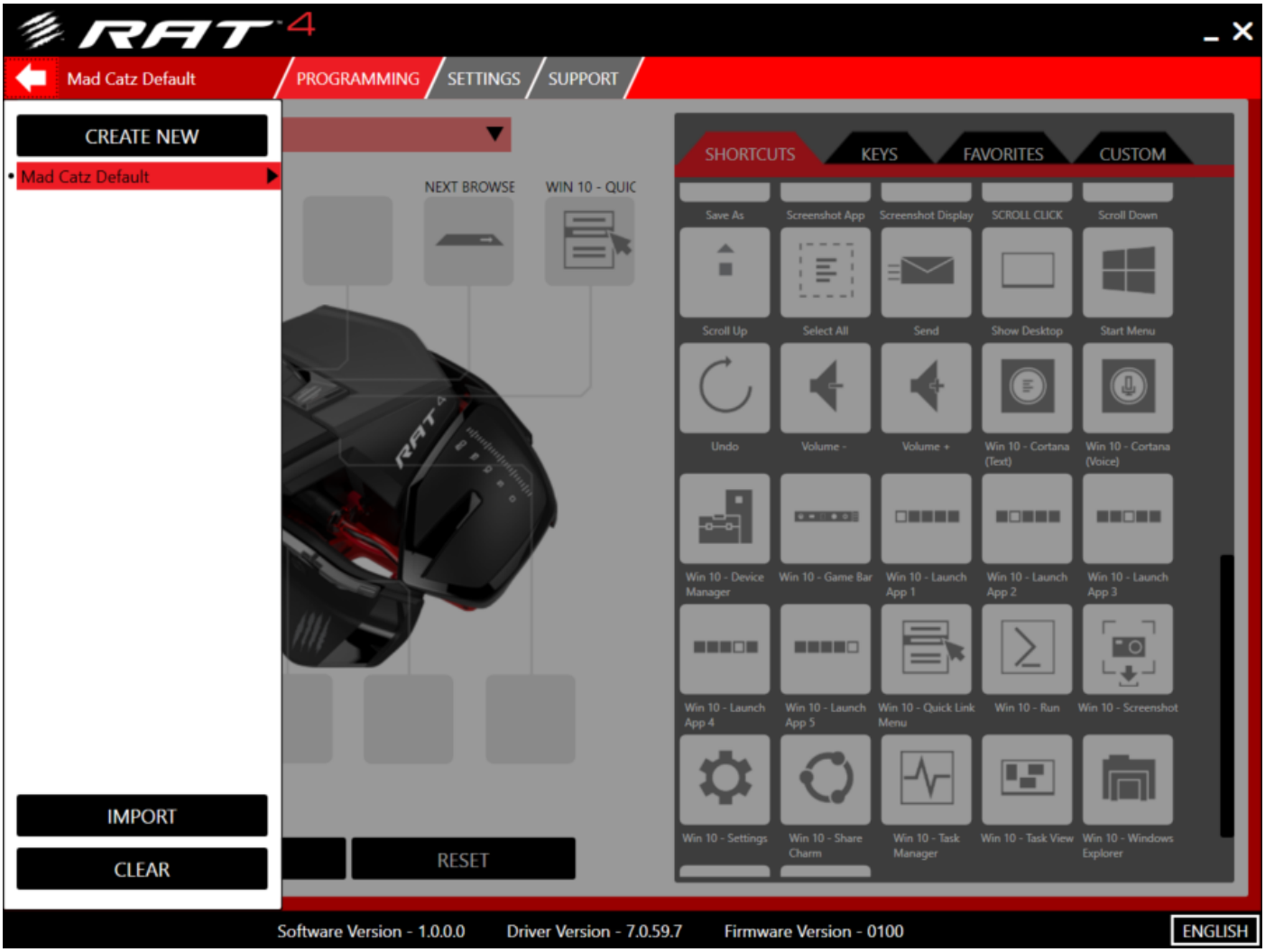
Once you are happy with the assignments, click the Apply button. The assignments will now be active on the RAT.



Profile Management

If you find that using a single profile is too restrictive, you have the freedom to create as many as you want.

First, click the Profile Menu button to reveal the additional parts of the interface.

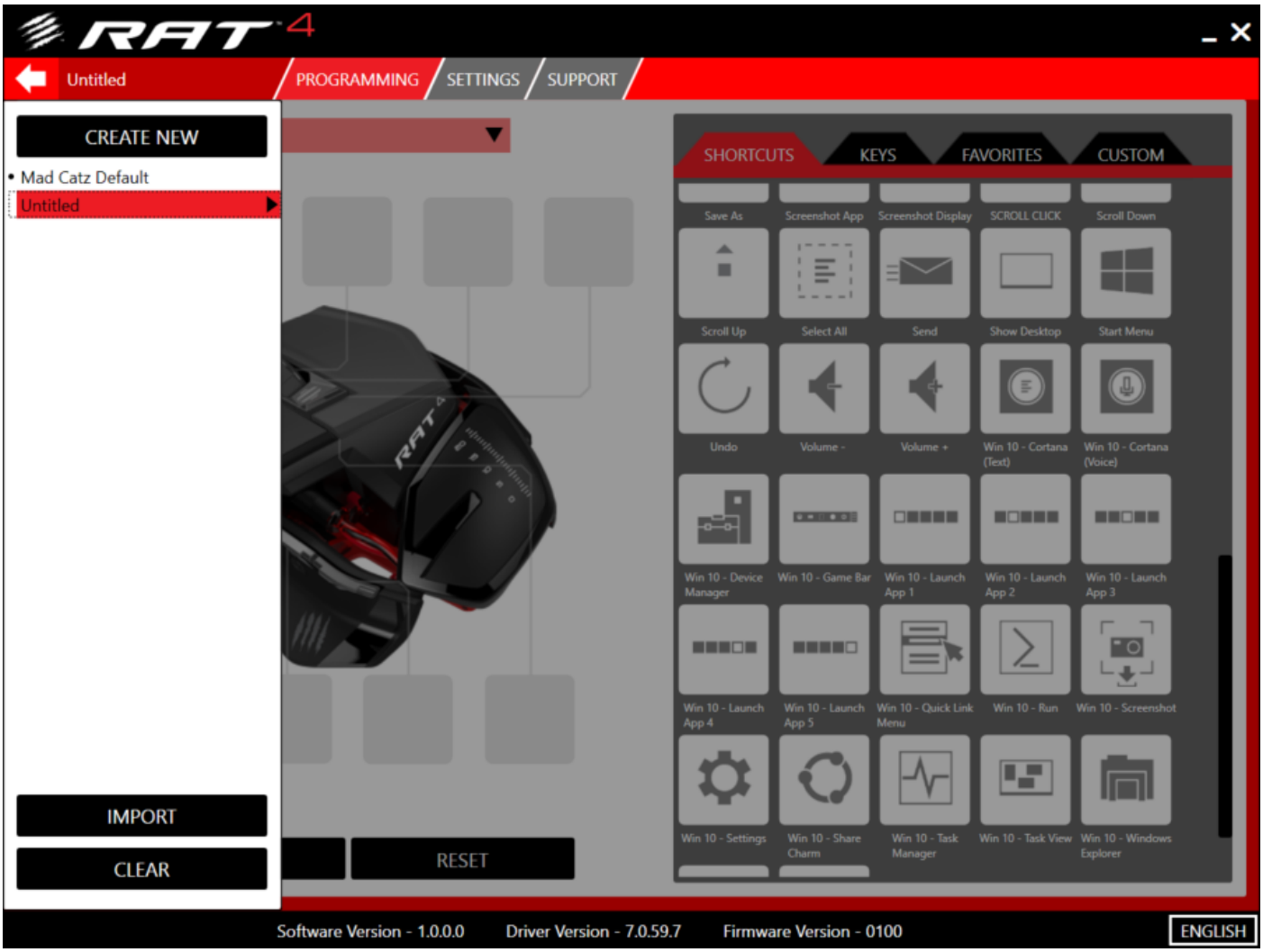


Key Elements:

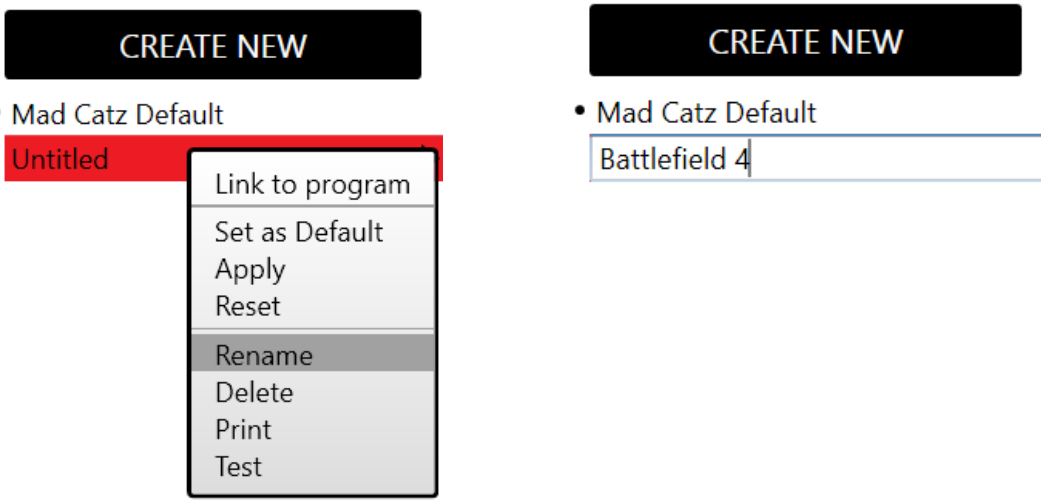
1. At the top of the Profile Menu is the **Create New** button. When this is clicked a blank untitled profile is added to the list.
2. Below the Create New button is the entry for the Mad Catz Default profile. The black dot to the left of profile name indicates that it is currently active. If I select a new profile and click apply, that dot would move to the newly applied profile. The profile name is also highlighted red. This means that the profile is currently selected for editing.
3. The Import button opens a file explorer window. This allows you to browse your hard disk or removable storage to import previously backed up profiles.
4. The Clear button disables any profile that is currently active on the product.
5. Each profile has a context menu that contains additional options. This can be accessed by either left-clicking the black triangle to the right of the profile name, or by just right clicking the profile entry.

Create your own Profile

Click the Create New button. It will generate a new untitled profile. It will be automatically selected for you to begin editing.

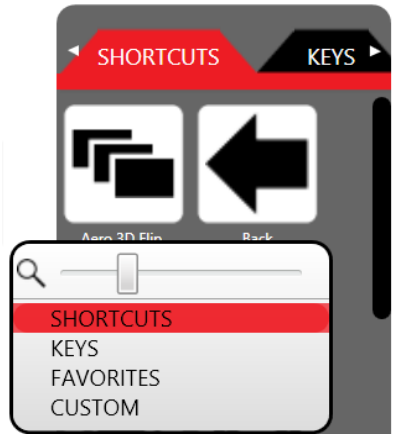


Right-click the profile to reveal the context menu and select Rename. Enter the desired profile name and hit enter on your keyboard.

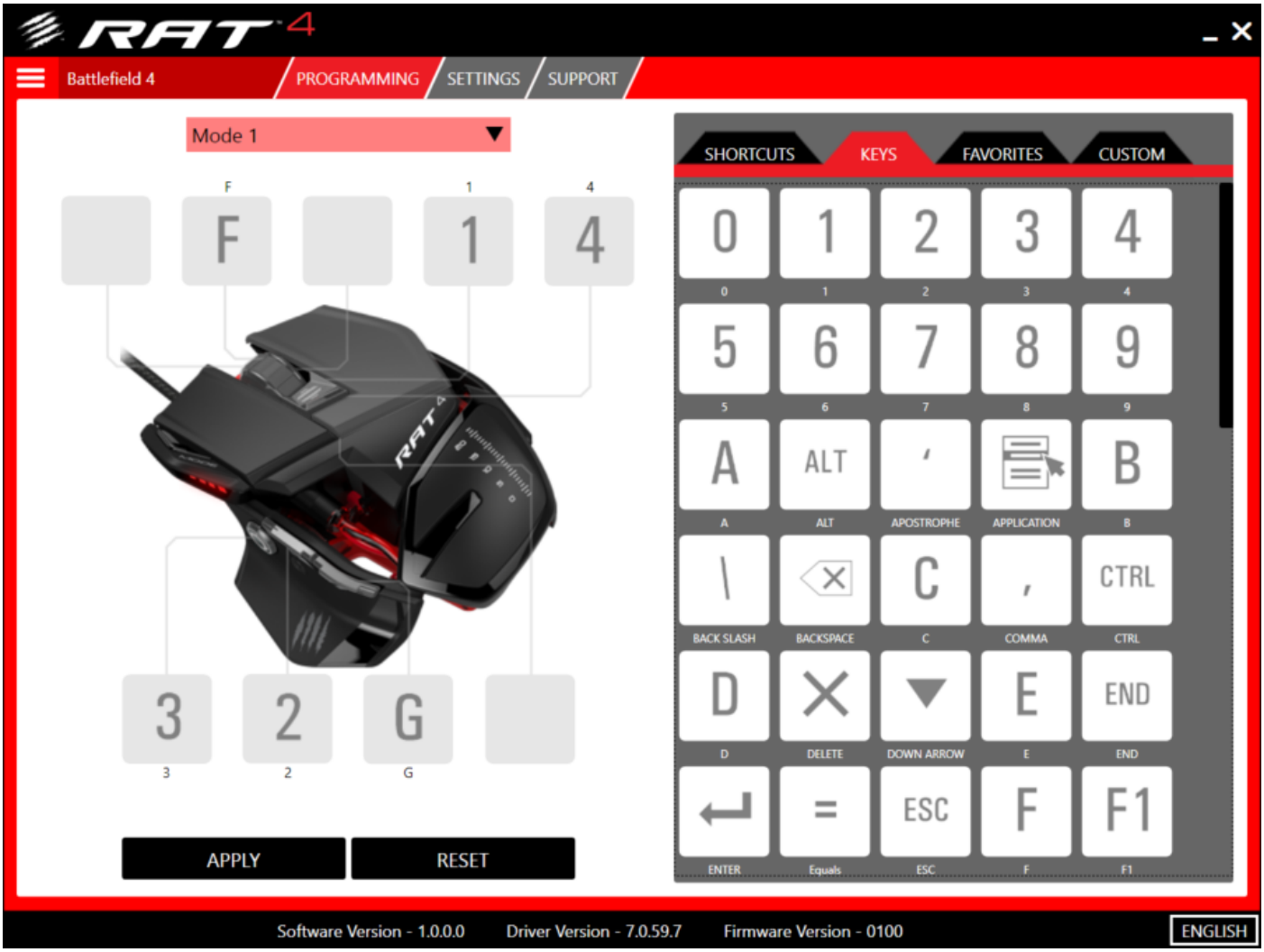


You can now assign commands to the buttons across all the profile modes. If you find that the Command Library is too difficult to view or navigate, you have two options:

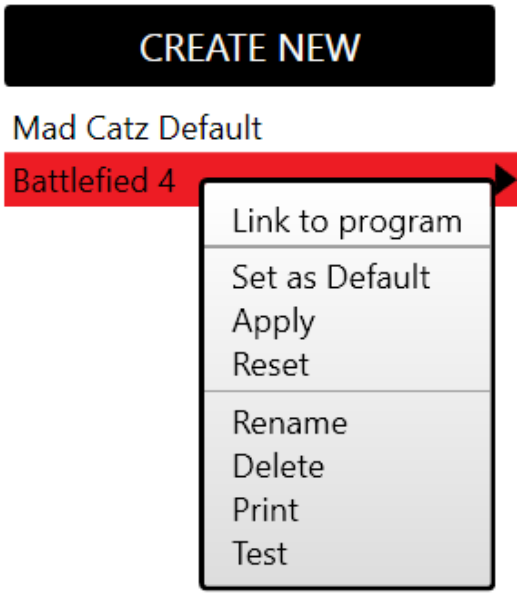
1. Hide the profile menu. Now that your new profile is selected for editing, it will not change until you select a different profile.
2. Right-click inside the Command Library to reveal its context menu. This will allow you to quickly jump to the different command tabs and resize the command icons to your preference.



In the image below, I have selected the Keys tab in the Command Library and added my preferred in-game actions to the programmable buttons.

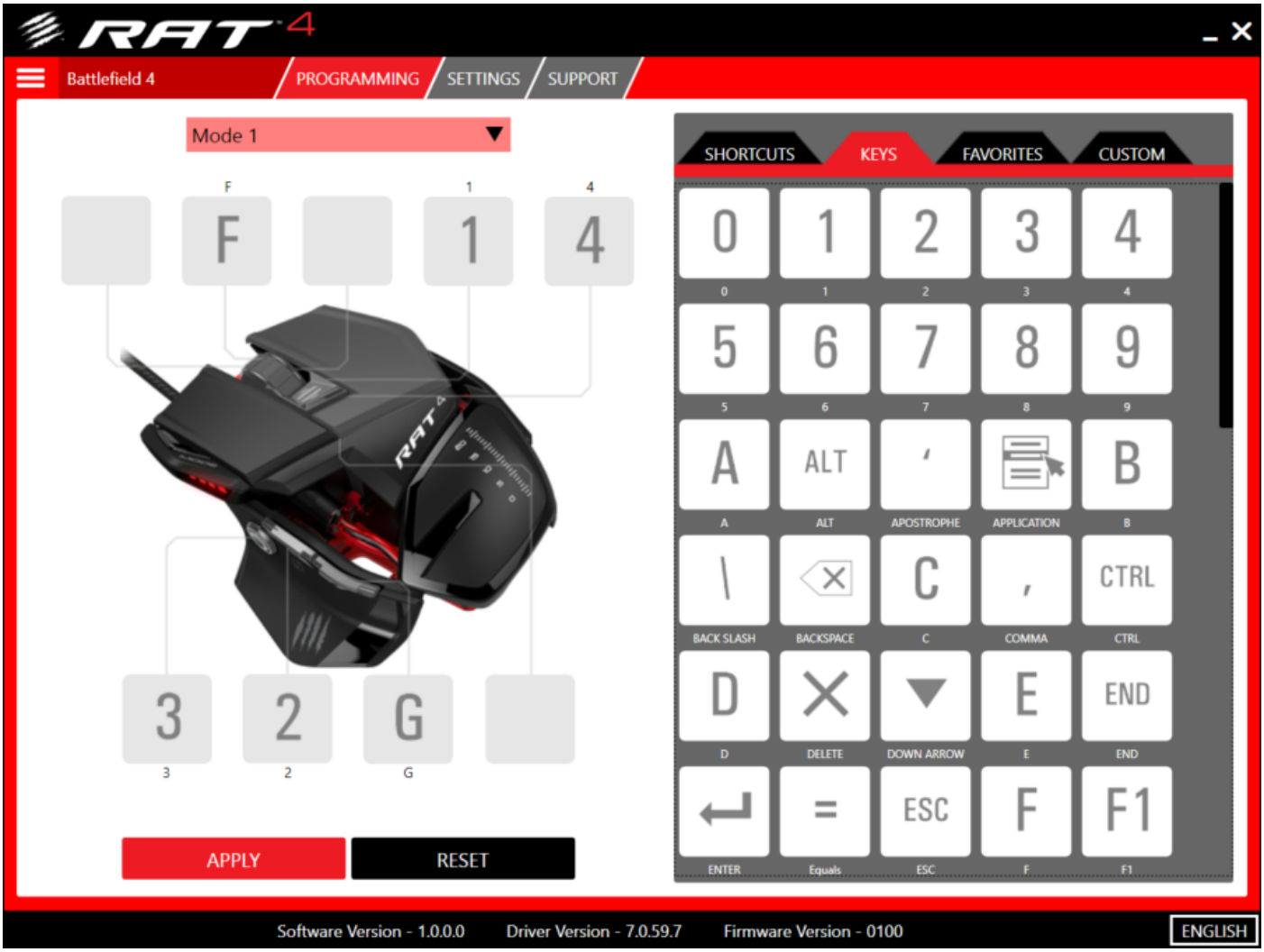


You can now **Apply** the profile and start gaming. Before you do, here are the explanations for the additional options in the Profile Context Menu.



- **Link to Program** – This will open up a file explorer window. You will need to browse to, and select, the .exe file that is associated with the game or application you want the profile to be associated with. The profile will then be automatically activated when that program window is in focus. When the linked program window is not in focus, the profile will revert back to your default.
- **Set as Default** – This will set the profile you have made to automatically be applied when Windows loads up.
- **Apply** – Same as the Apply button on the Programming Page. Activates a profile.
- **Reset** – Same as the Reset button on the Programming Page. Removes all assignments from a profile.
- **Rename** – Activates the text input cursor in order to rename the profile.
- **Delete** – Deletes a profile from your system.
- **Print** – Prints the profile and its assignments for reference.
- **Test** – Temporarily activates the profile and opens up a test screen for you to check the input of your profile commands.

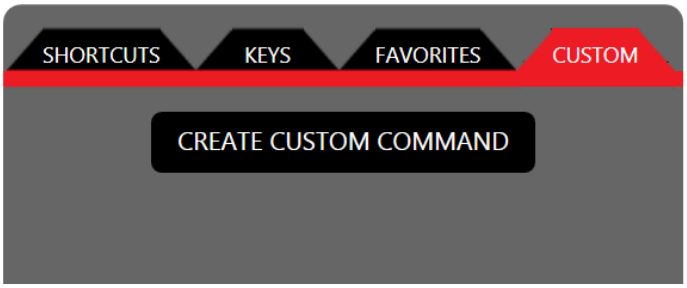
Once you are happy with your profile, click Apply.



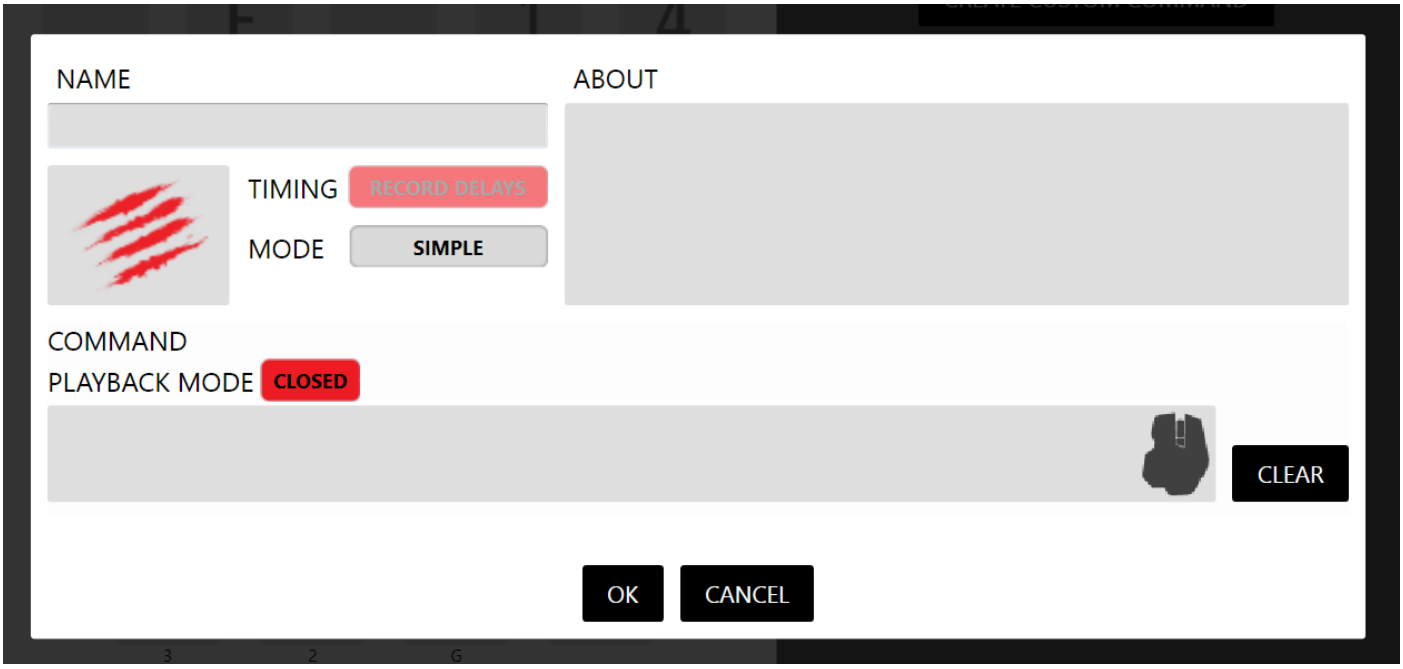
Custom Command Creation

Until now, this guide has dealt with the pre-made commands in the Command Library. This section will take you through the process of creating your own commands and adding them to your profiles.

In the Command Library, click the Custom tab and then click Create Custom Command.



This will open the Custom Command Editor.



Key Elements:

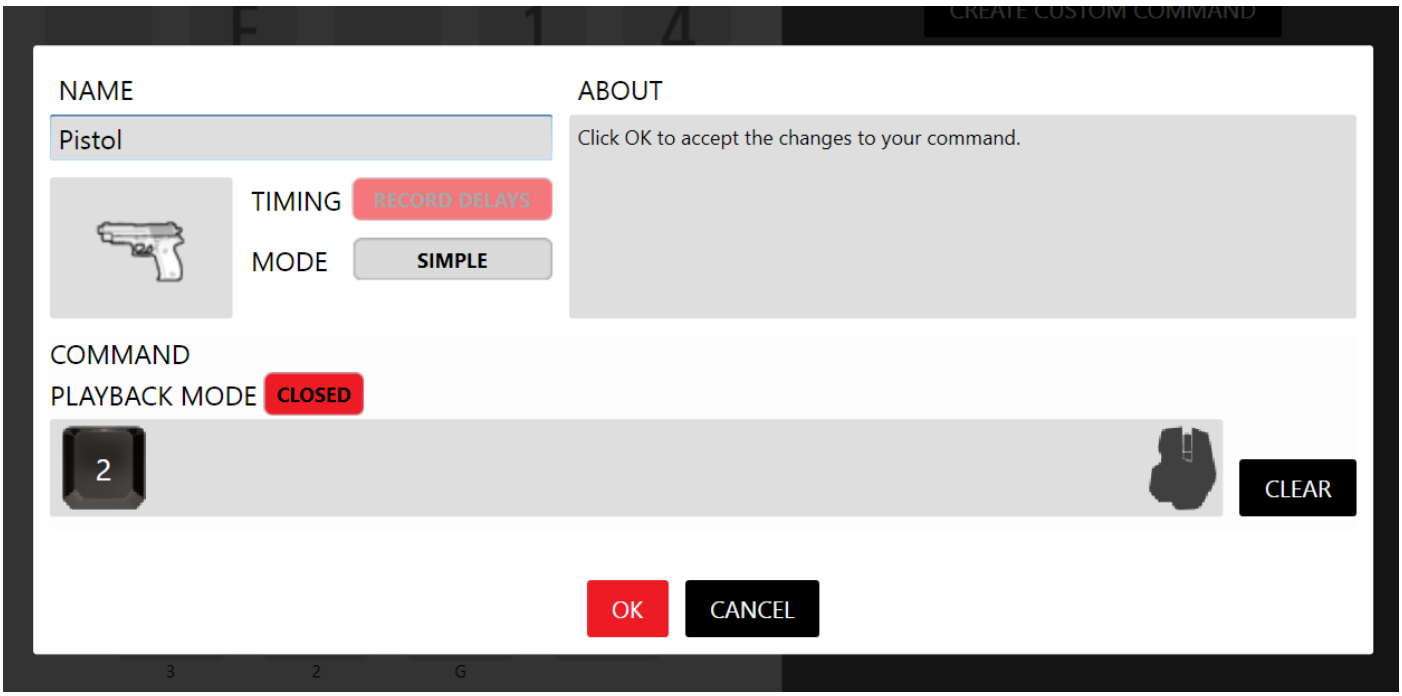
1. At the top of the Editor is the Name box. This is where you type the name of the command.
2. Beneath the Name, is a box that contains the Mad Catz scratches. Our software enables you to associate your commands with icons or images. For example, the command for selecting a Pistol in Battlefield could be an image of the pistol itself. The default command icon is the Mad Catz slash logo. Click the icon box to open up a file explorer window. You can now browse to the image you want to add to the command. Alternatively, drag and drop the image file straight into the box to quickly assign it. To delete an icon image, hover your RAT cursor over the icon until the cross appears, then click to delete it.
3. To the right of the Icon box are two buttons that set the type of command you want to create:
    a. **Timing**. The editor can either record the exact timing of your key presses or ignore them. If Record Delays is turned off any gaps between key presses will be removed so that the command will output as fast as possible.
    b. **Mode**. When this is set to Simple, your command options are limited. Firstly, the delays between key press events are not recorded. Secondly, you can only program the press event of a physical button. If you click the Mode button to change it to Advanced, you are free to record

and adjust keypress timings. You can also program every aspect of a physical key press. We define these as Press (button down), Repeat (button held), and Release (button up).

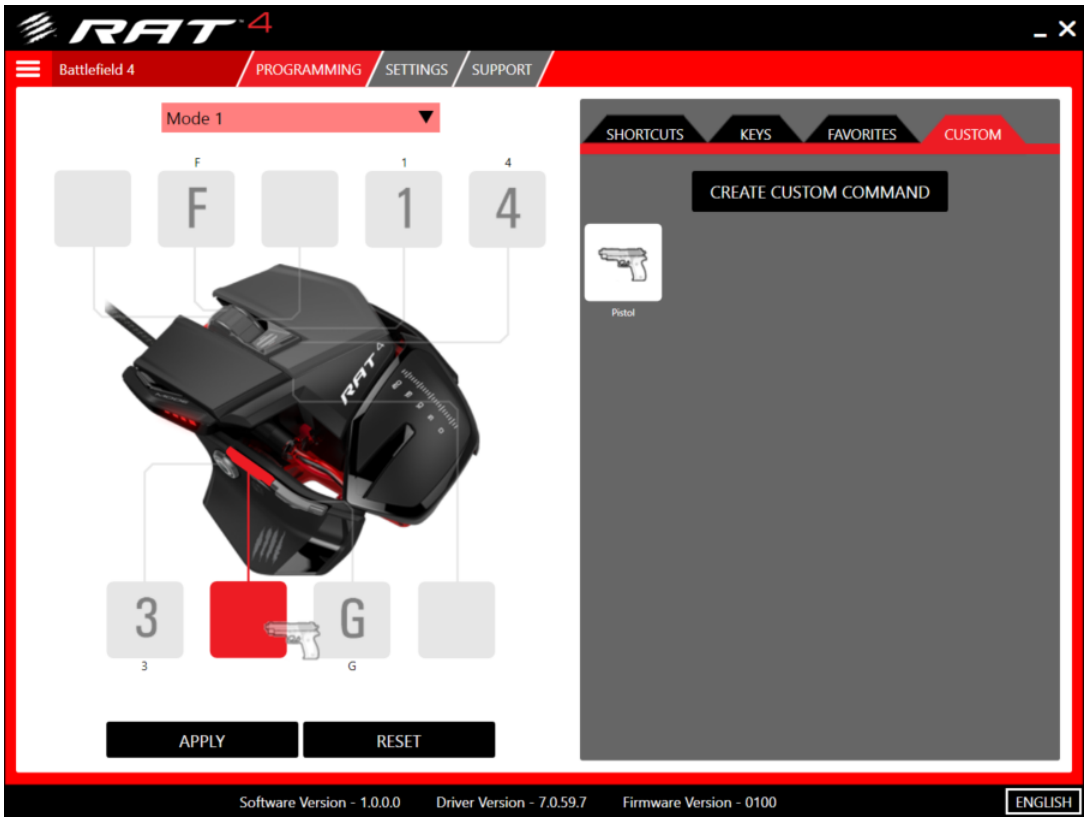
4. Underneath the Icon Box resides the Command Creation area.
    a. **Playback Mode**. This defines how the command is output or 'played' when the button is pressed. When set to closed, the entire key press string of a command will be played, even if you quickly press and release the button. When set to open, you need to press and hold the programmed button down for the entire duration of the key press string. If you release the button midway through the string, you will only get partial output to the game or software.
    b. **Command Entry Box**. This is where you type in the command you want to assign. Hover your RAT cursor inside the box to start entering your key presses. If you move your cursor out of this area, the editor will stop recording keyboard or RAT input. Note the RAT icon in the Command Entry Box. If you hover your RAT cursor over this icon, it will turn red. At this point, you can click any of the main RAT buttons or scroll up or down and the editor will record this input. This enables you to mix both keyboard key presses and RAT button presses to create more complex in-game commands.
5. The **Clear** button will remove all key press data from a command.
6. The **OK** button confirms the command and returns to the main Programming page.
7. The **Cancel** button rejects any command editing and returns to the main Programming page.
8. Finally, the **About** box gives you a helping hand if needed. Hover your RAT cursor over any aspect of the Custom Command Editor to get a reminder of what the feature does and how it can be used.

Create a Simple Custom Command

In this example, I have typed the name of the command, moved my cursor into the Command area and pressed the number 2 on my keyboard, and then clicked in the icon area to browse to the image I want associated with the command.



When the command is complete, click ok. It will now appear on the Custom tab, ready to be dragged and dropped onto one of the programmable buttons.

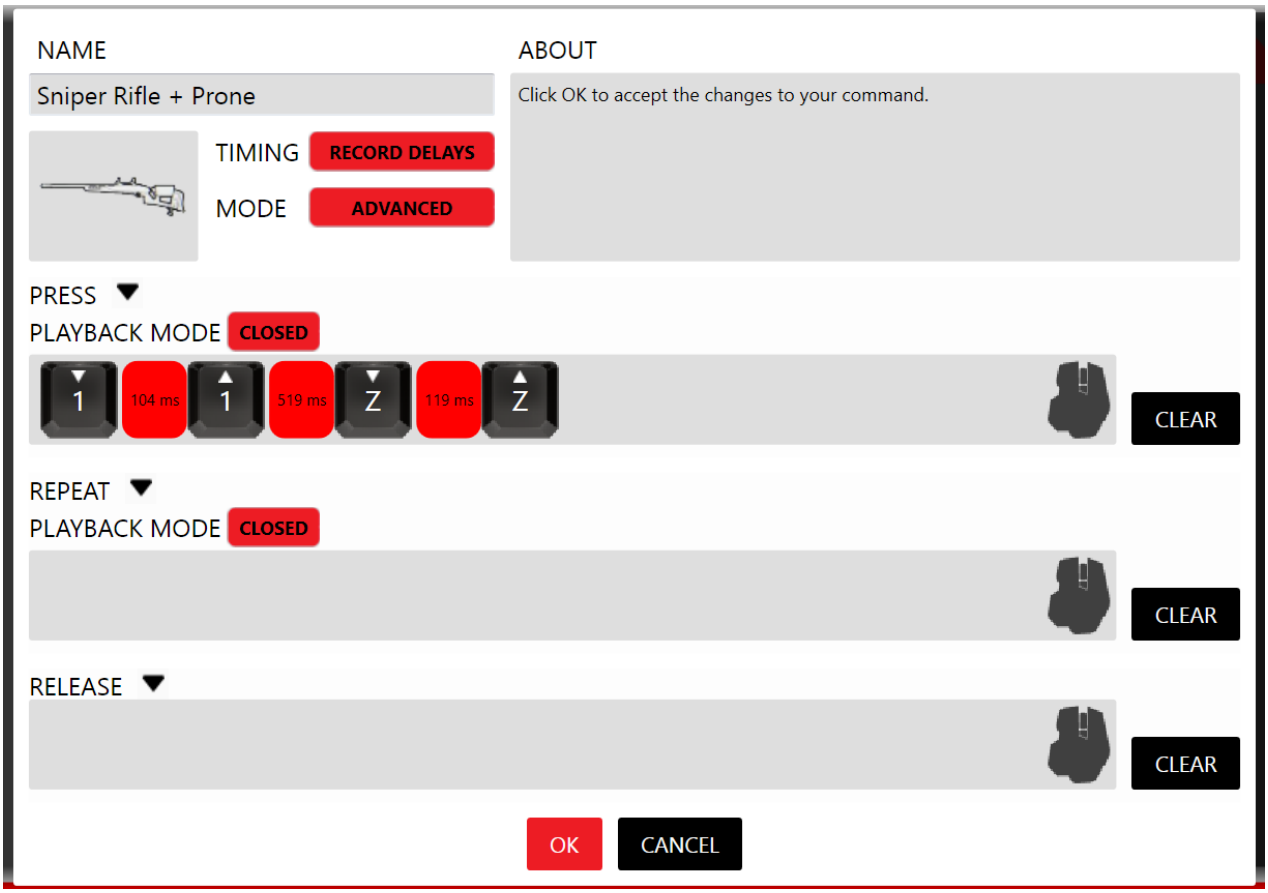


To delete a Custom Command, hover your RAT cursor over the icon and then click the X. If you want to edit an existing custom command, go to the Custom tab and left-click the command icon.

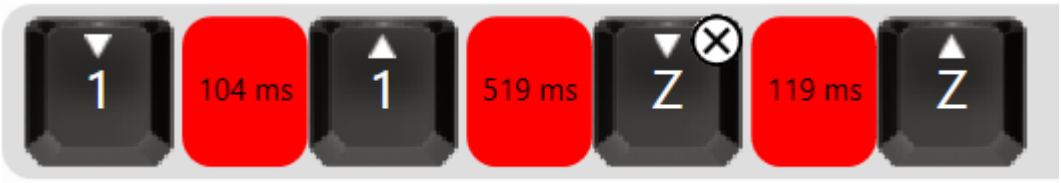
Create a Complex Custom Command

In this example, we will run through the creation of a multi-keypress command that takes into account the timing between keypress events. I want to create a command for Battlefield, that when activated, will get my Sniper Rifle out and then put me in the Prone position.

In the image below, I have opened the Custom Command Editor, set the Mode to Advanced, and Record Delays is on. I have also input the keyboard keypress as I would do it in the game. The timing delay between each key press event is denoted by the red bars, in milliseconds (ms). Note how that, when the Mode is set to Advanced, both the down and the up component of a keyboard key press is recorded.

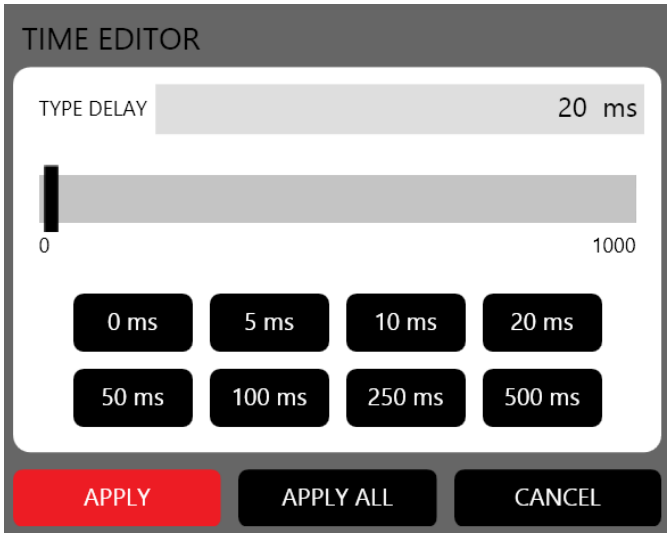


Don't worry if you make a mistake. You won't need to clear the whole command and start again. If you input the wrong key press, just hover your cursor over the keypress and click the X that appears. You can then re-enter the command.

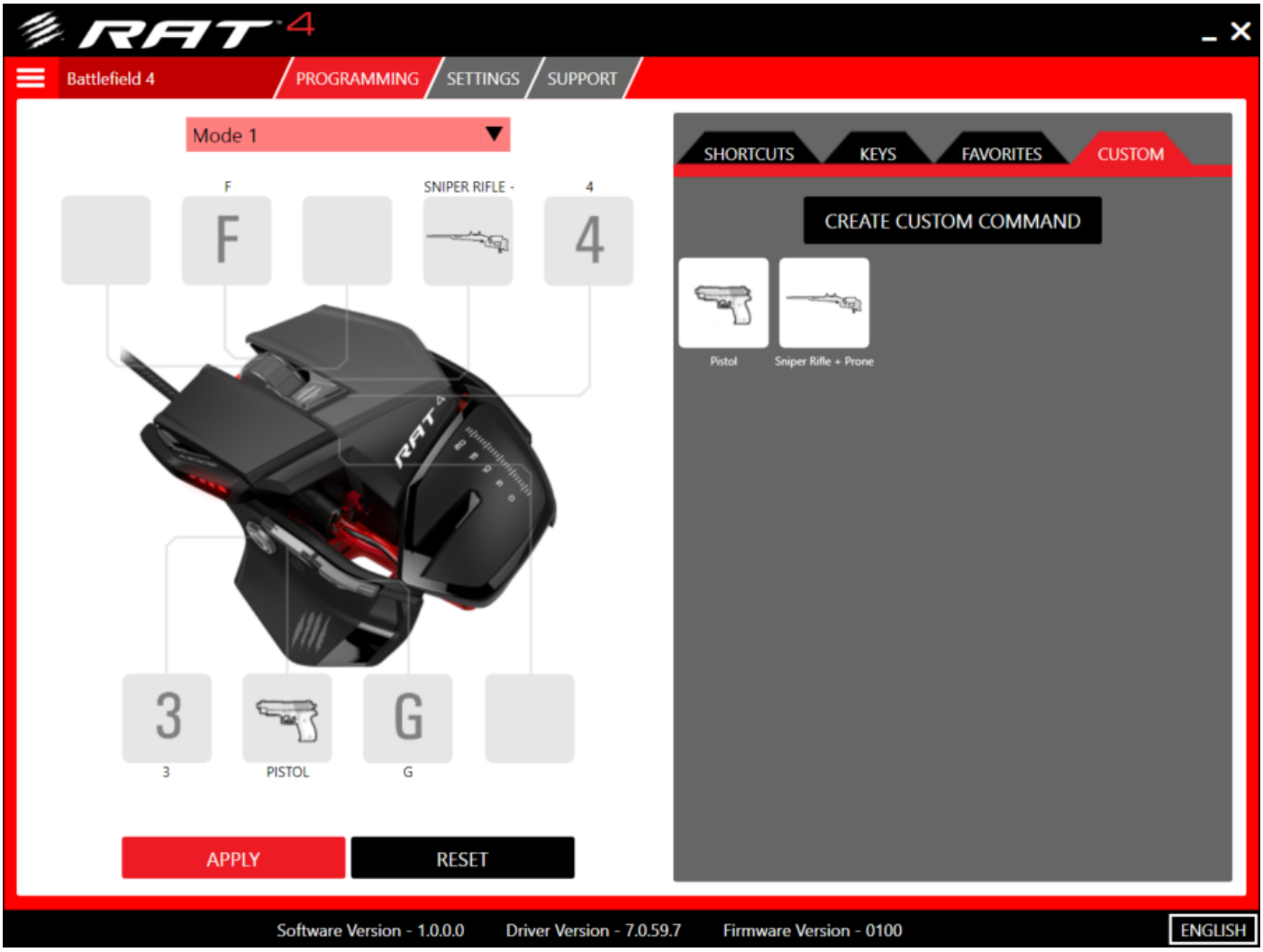


Once you are happy with the command, you can alter the timing between each keypress by left-clicking the red bars between the key press events. The Time Editor gives you multiple options for altering your command.

- Firstly, you can simply type in the desired ms delay.
- Secondly, you can drag a slider to the desired delay.
- Finally, you can select a preset delay from one of the option buttons.
- Once you are happy with your timing delay, you can either apply the update to a single delay between two key press events or apply the same delay to all the events in the command.



Once you are happy with the command, click ok. It can now be dragged onto one of the programmable buttons.



If you are happy with your profile, click the Apply button to activate it.

Using the System Tray Icon

The system tray icon is a quick and convenient way to access FLUX and activate profiles without having to load the interface. The icon has two states. When it is highlighted green, a profile is active.

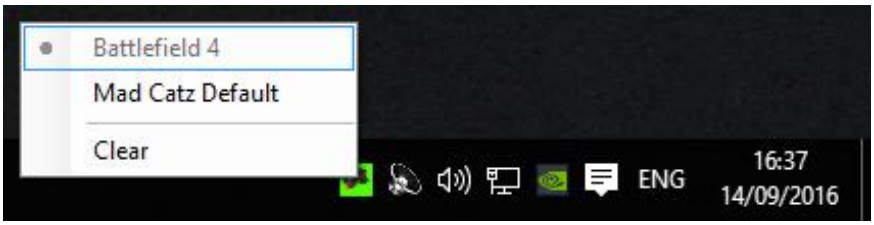


When it is not, all profiles are cleared.



If you left-click the icon, the FLUX interface will open.

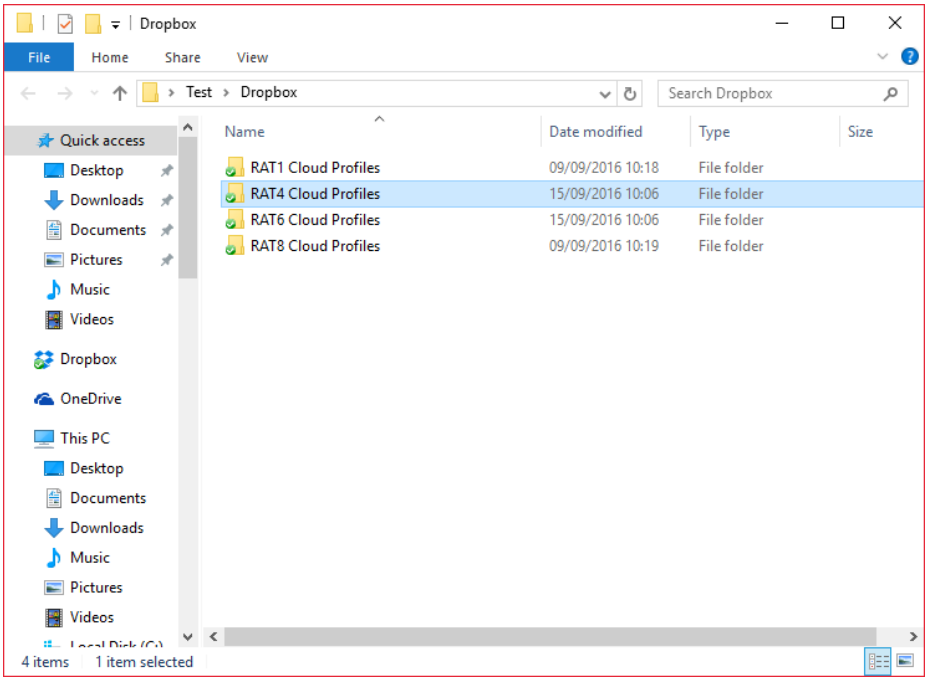
If you right-click the icon, a profile menu will appear. From here you can left click a profile name to activate it. Or, select clear to deactivate any profile assignments. Note that the black dot graphic that denotes which profile is active is replicated within the Profile Menu of the main FLUX interface.



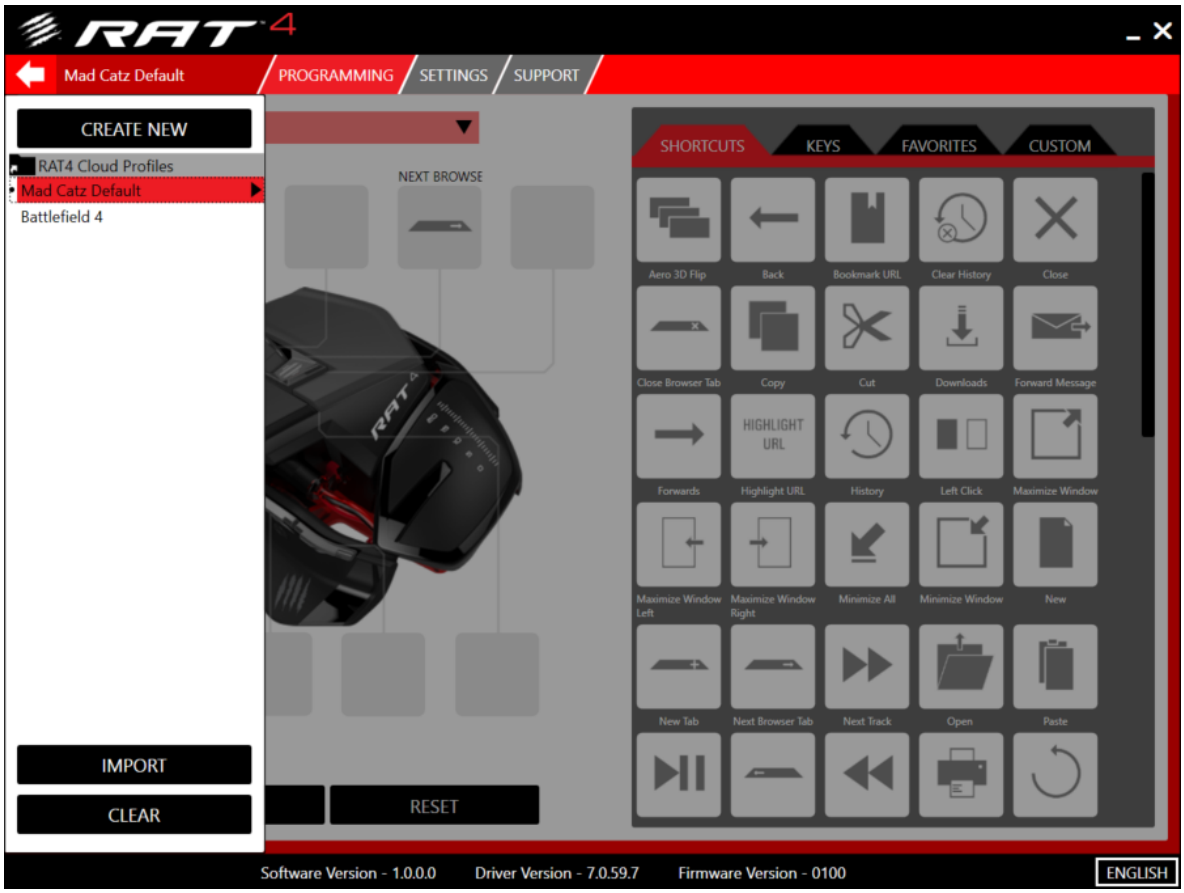
Cloud Storage Backup

FLUX can work in tandem with most popular cloud storage services (Drop Box, OneDrive, Google Drive etc.). This is really useful for keeping your profiles backed up. In addition, if you use your RAT on multiple PCs, you can always access and use the same profiles.

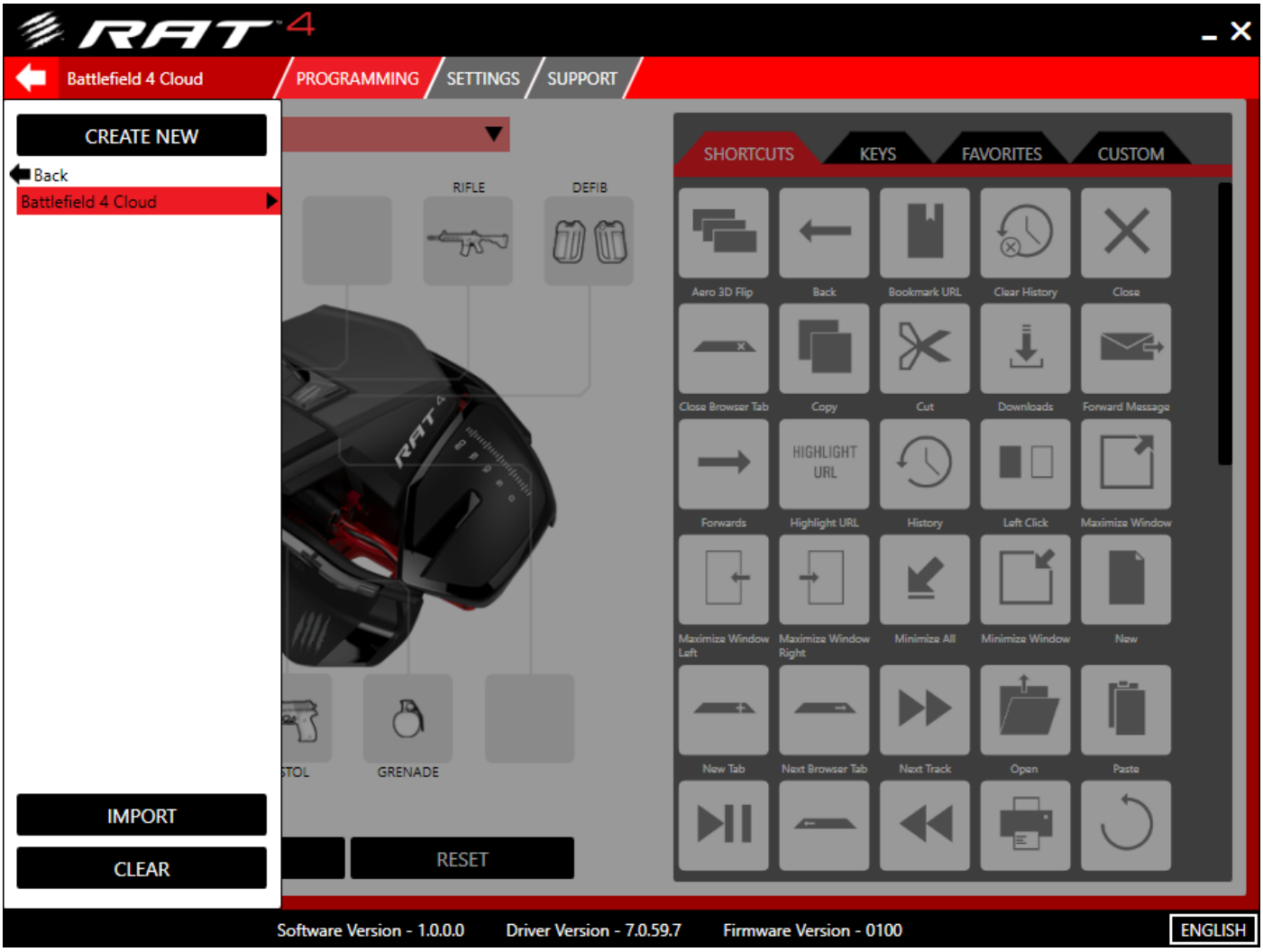
First, locate the folder on your PC that is associated with the cloud service. In in the image below, I have created RAT specific folders within the main Dropbox directory.



Next, drag and drop your cloud service folder into the profile list, and it will appear.



Now you can access the cloud folder from within the software. Click the folder to open it. Once the folder is open, you can create and edit profiles, and they will remain consistent across multiple computers that are using the same cloud service.



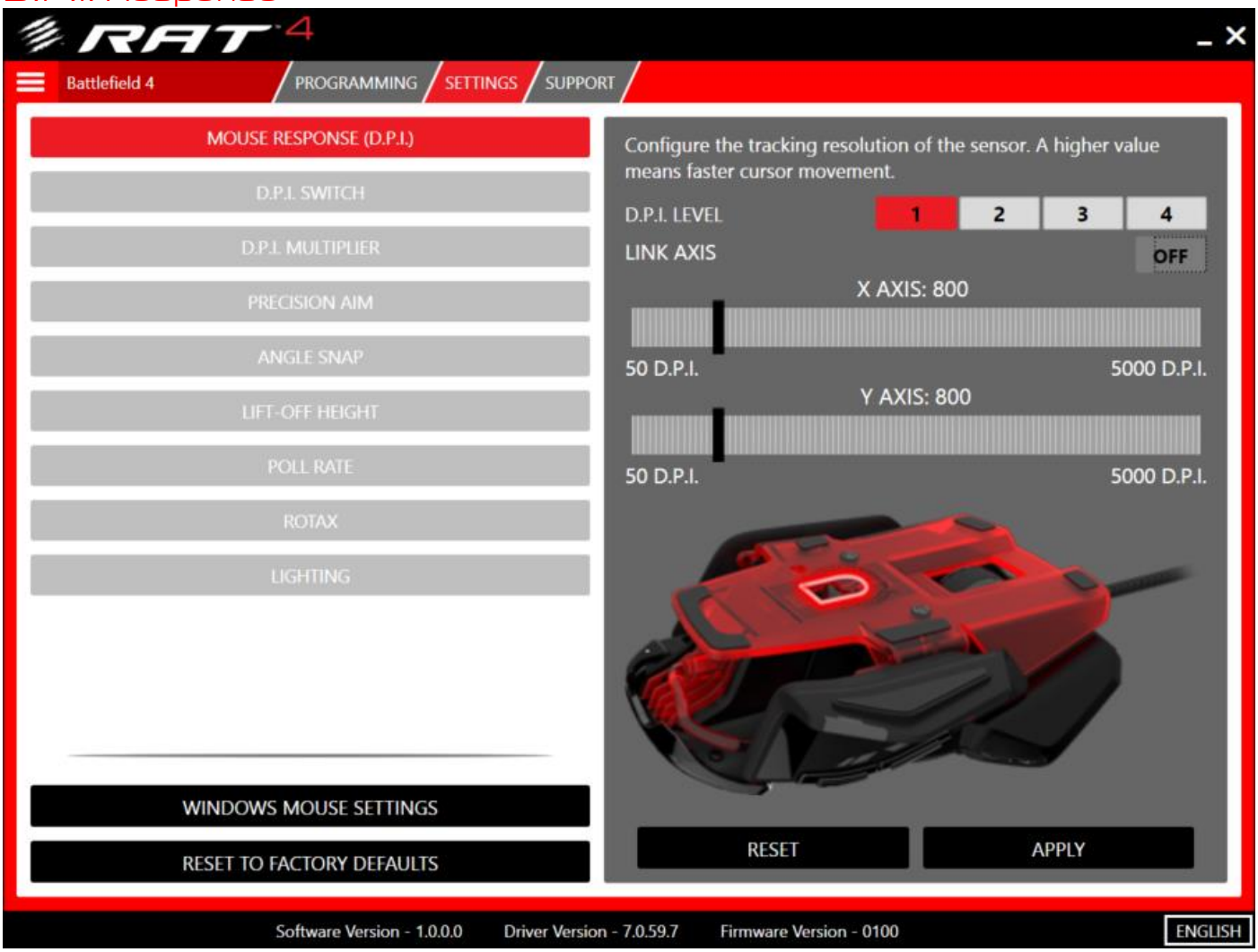
Click the back button to navigate back out to the main profile folder on your system.

You can always remove the folder link by right-clicking it and selecting the option from the context menu.

FLUX Settings Overview

The Settings page allows you to access and adjust the key performance values of the product, such as DPI and report rate. Unlike button mapping profiles, the product settings are stored in the memory that resides within the RAT, meaning that these options will carry over onto other computers without the need install the software. Click the Settings Page button to access the performance customization options.

D.P.I. Response



Set the tracking resolution of the sensor. The product will remember up to four unique DPI values. Both X and Y axes can be independently configured to suit the exact requirements of the game.

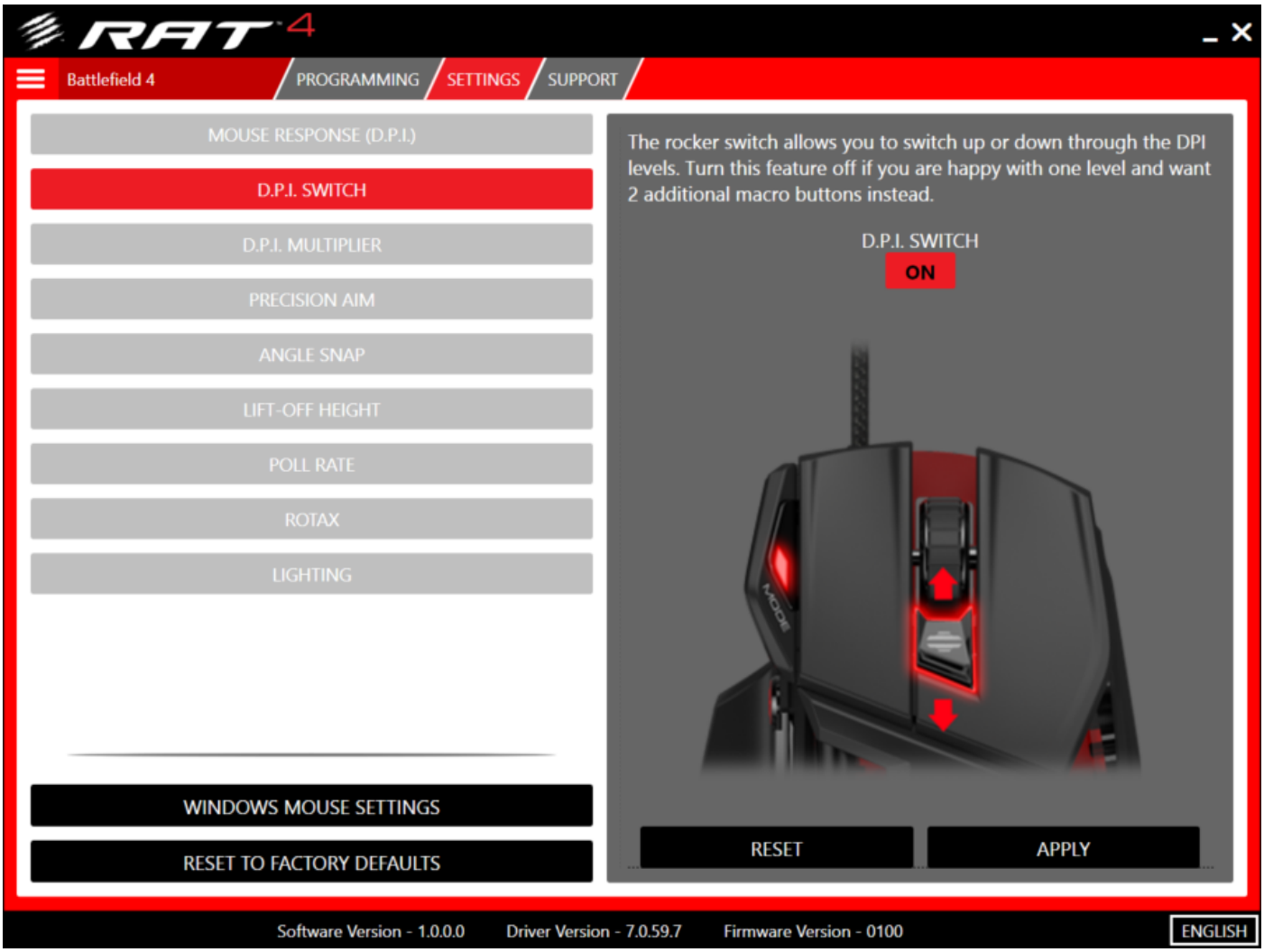
Each DPI level is native to the sensor. This means that no interpolation or any other additional onboard processing is used to achieve a certain DPI level.

Simply select a DPI level, drag the slider to the desired value and then click apply. If you want to change the X and Y values separately then make sure Link Axis is set to off.

Any acceleration that is experienced would be at the OS level, and can be tweaked. For more information, visit our blog:

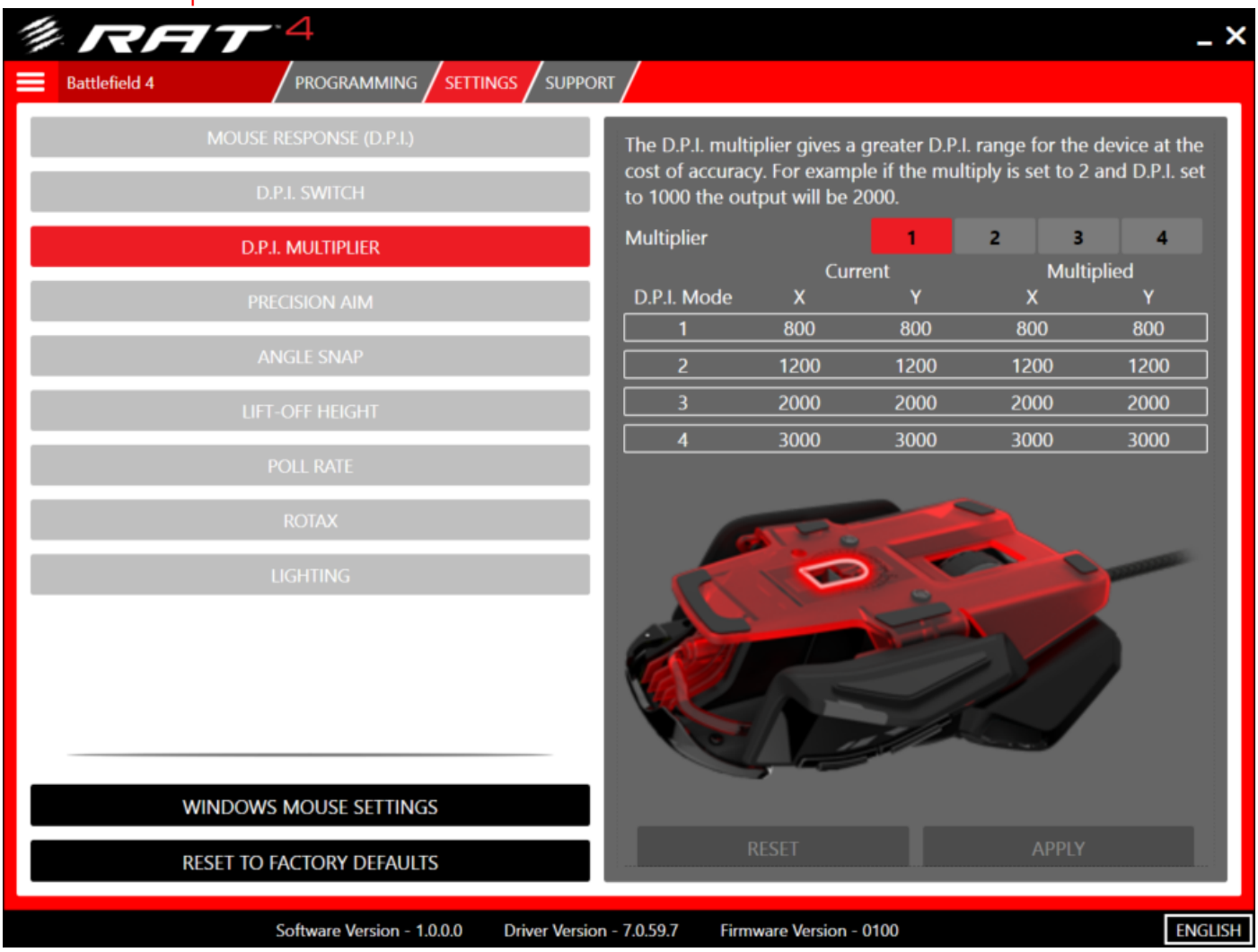
http://cyborggaming.com/blog/post/2010/06/04/So-what-is-Mouse-Acceleration.aspx

D.P.I. Switch



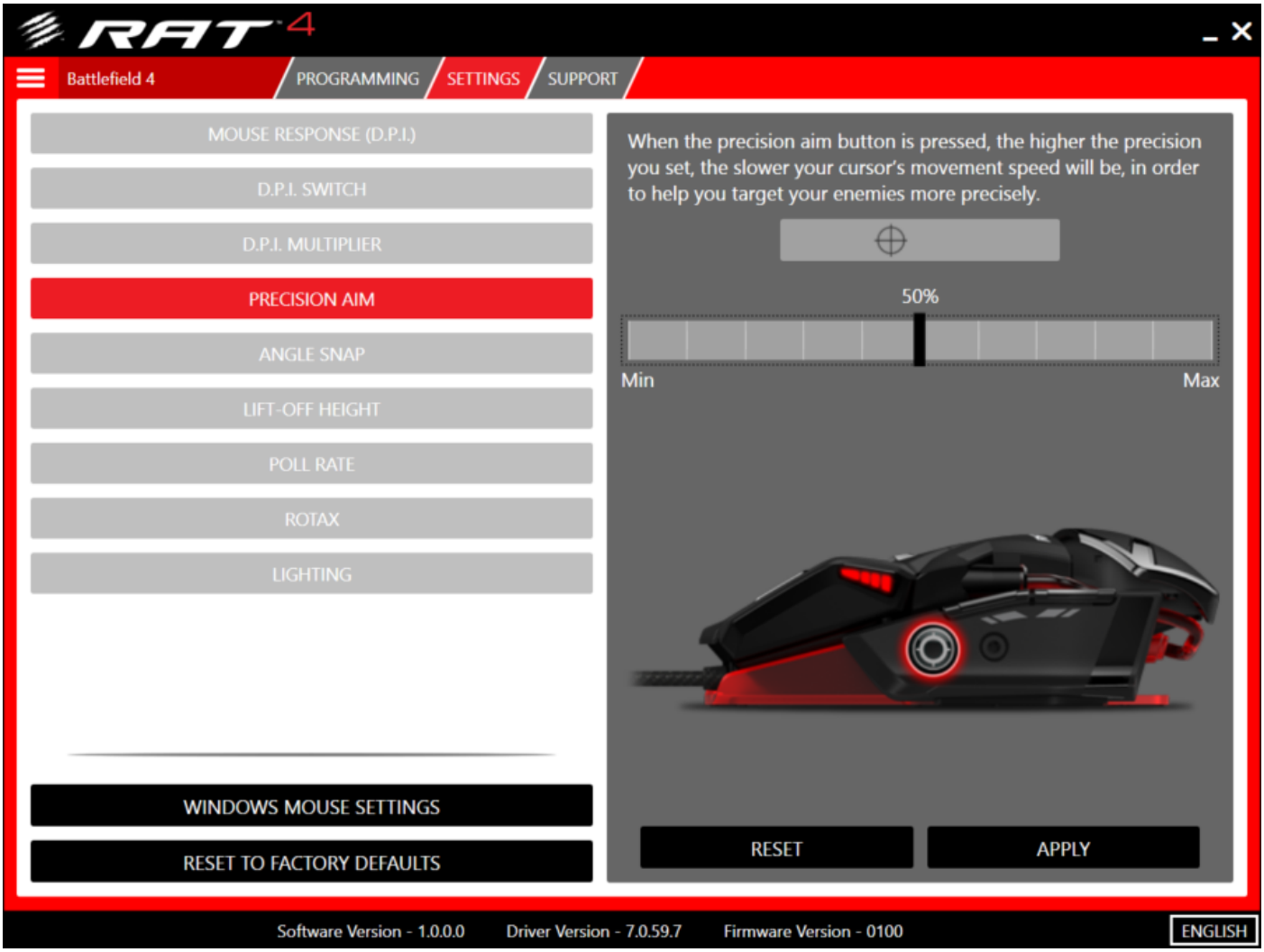
The DPI rocker switch is used to select up to four DPI levels indicated by the 4 red LEDs. Alternatively, if you are happy with one DPI level at all times, you can turn this feature off and use the two button presses as extra macro buttons for your profiles.

D.P.I. Multiplier



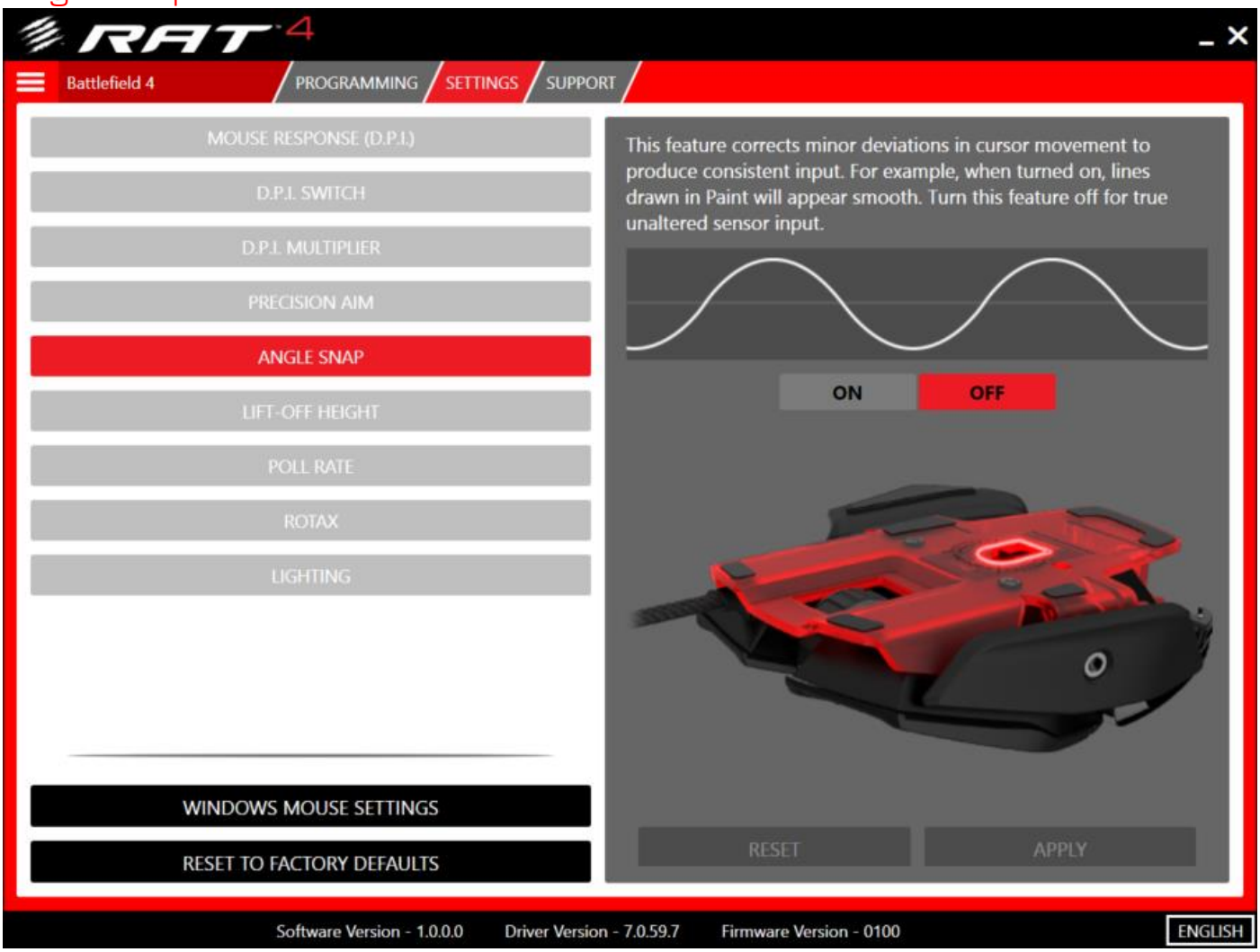
This is a new feature, designed to give an additional performance boost to the sensor response. Selecting a value on this page will multiply the data counts from the sensor to boost the overall D.P.I. If you want unaltered sensor data, keep the setting at the default setting of 1.

Precision Aim



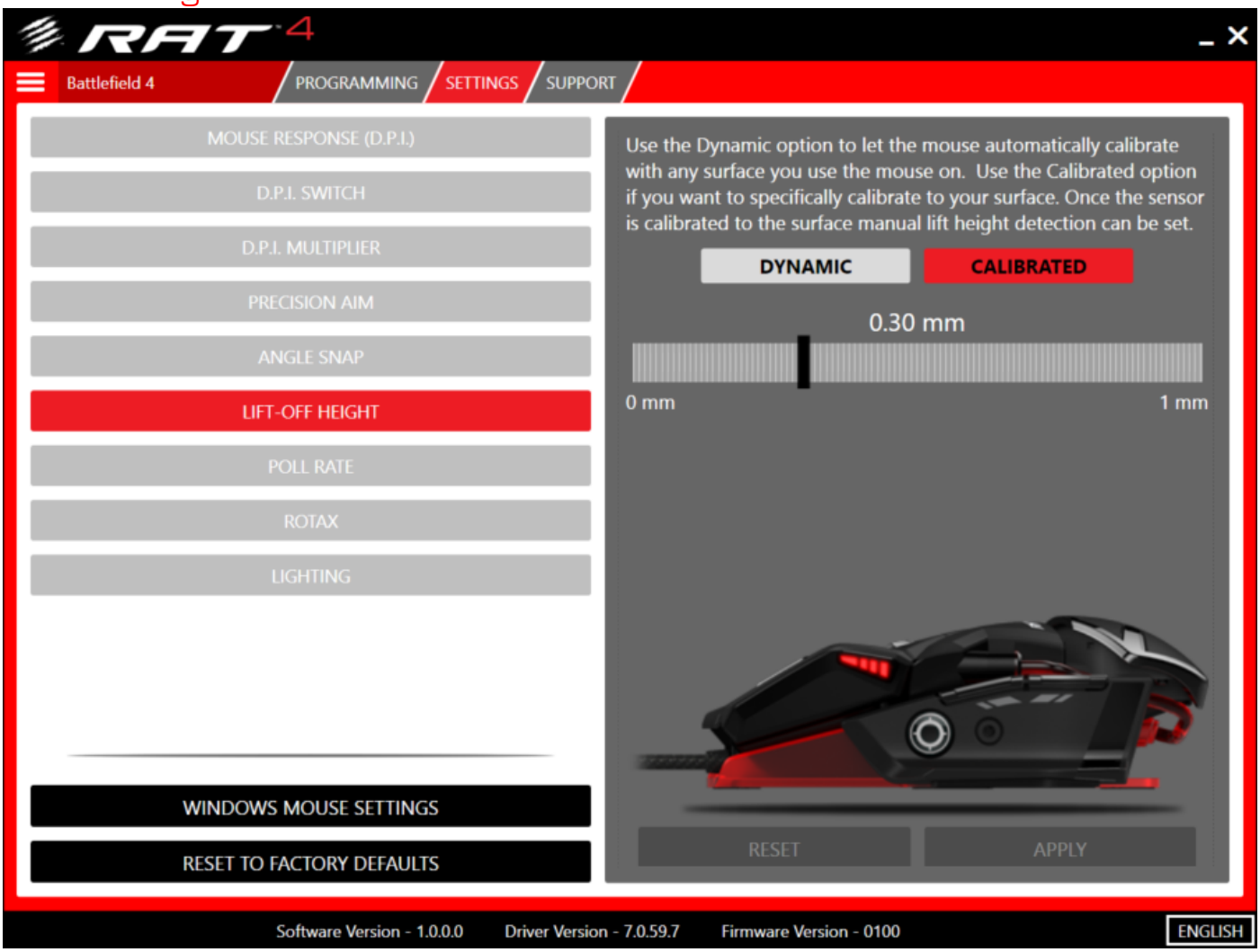
Adjust the slider to set the desired precision aim performance. The higher the precision % you set will result in a greater sensitivity reduction when the button is pressed.

Angle Snap



This is a feature within the sensor firmware that, when turned on, can correct tiny deviations in sensor movement. This can be beneficial in CAD/CAM applications where sometimes it is necessary to draw straight lines. However, when gaming, it is often better to have no interference between the movement of your hand and what gets reports to the PC and the game. With this in mind, this feature is turned off by default.

Lift-Off Height



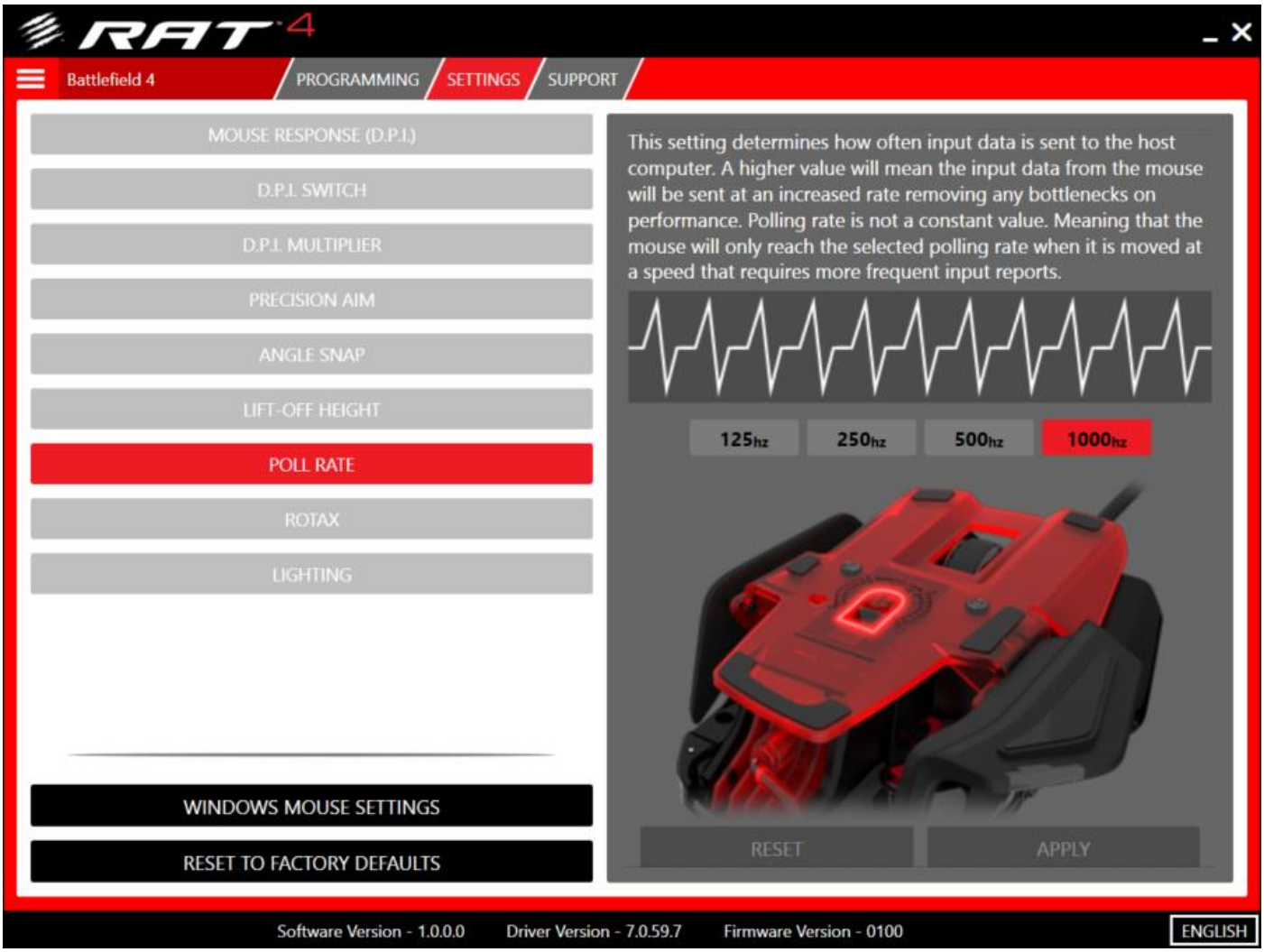
The Lift-Off height is crucial for ensuring the sensor is tracking correctly on your surface. It can also affect unwanted cursor movement if you lift the RAT a lot during gaming.

RAT4 can either be set to dynamic, which means the sensor intelligently adjusts its performance to match the surface you are using. Alternatively, you can select Calibrated. Once a short calibration process has been completed, you can then adjust the lift height specifically for your gaming surface.

We recommend:

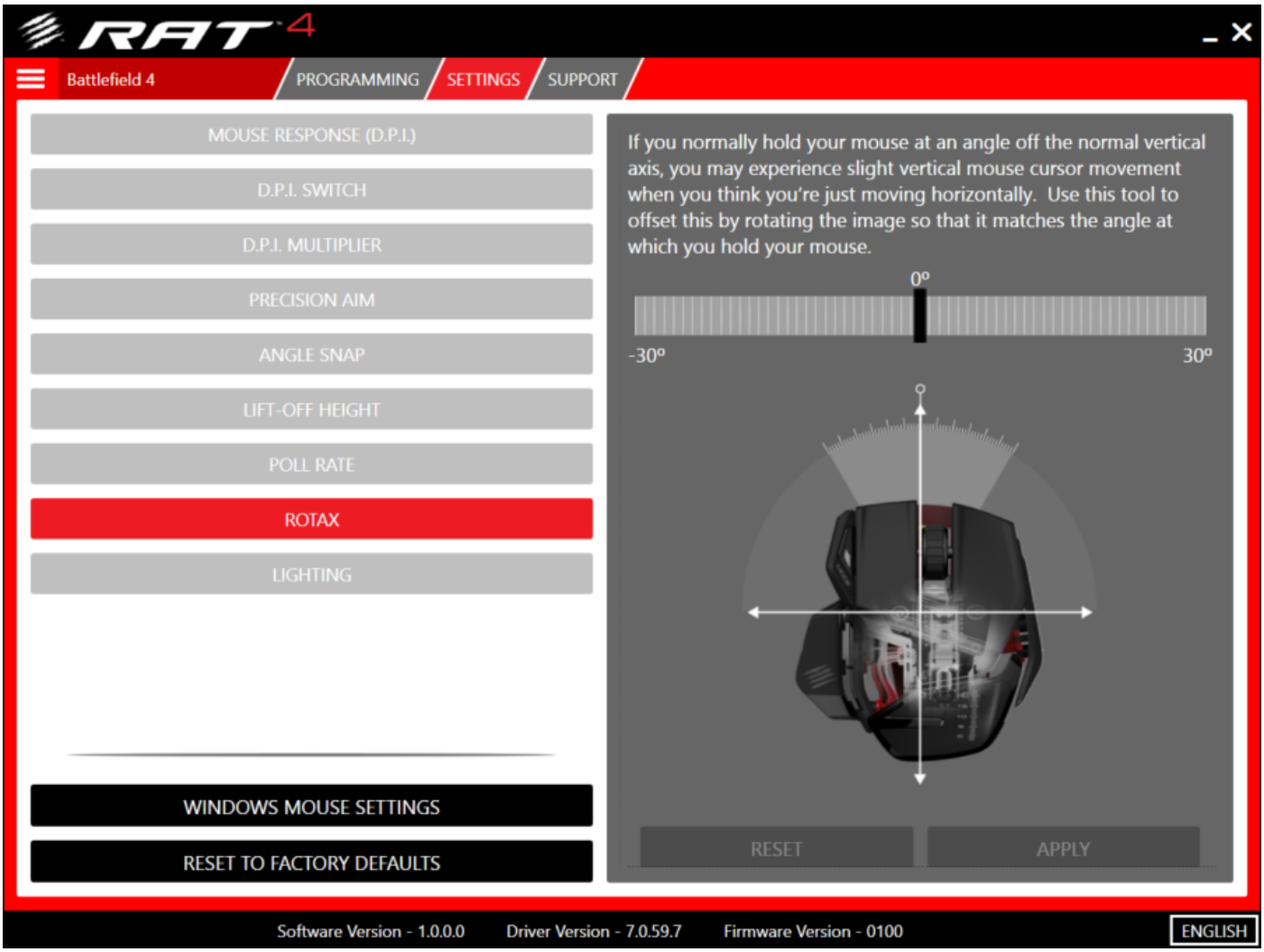
- Smooth or Metallic Surfaces – 0.3 mm
- Silicon mats or lightly textured surfaces = 0.6 mm
- Cloth Mats or heavily textured surfaces = 0.6 mm +

Poll Rate



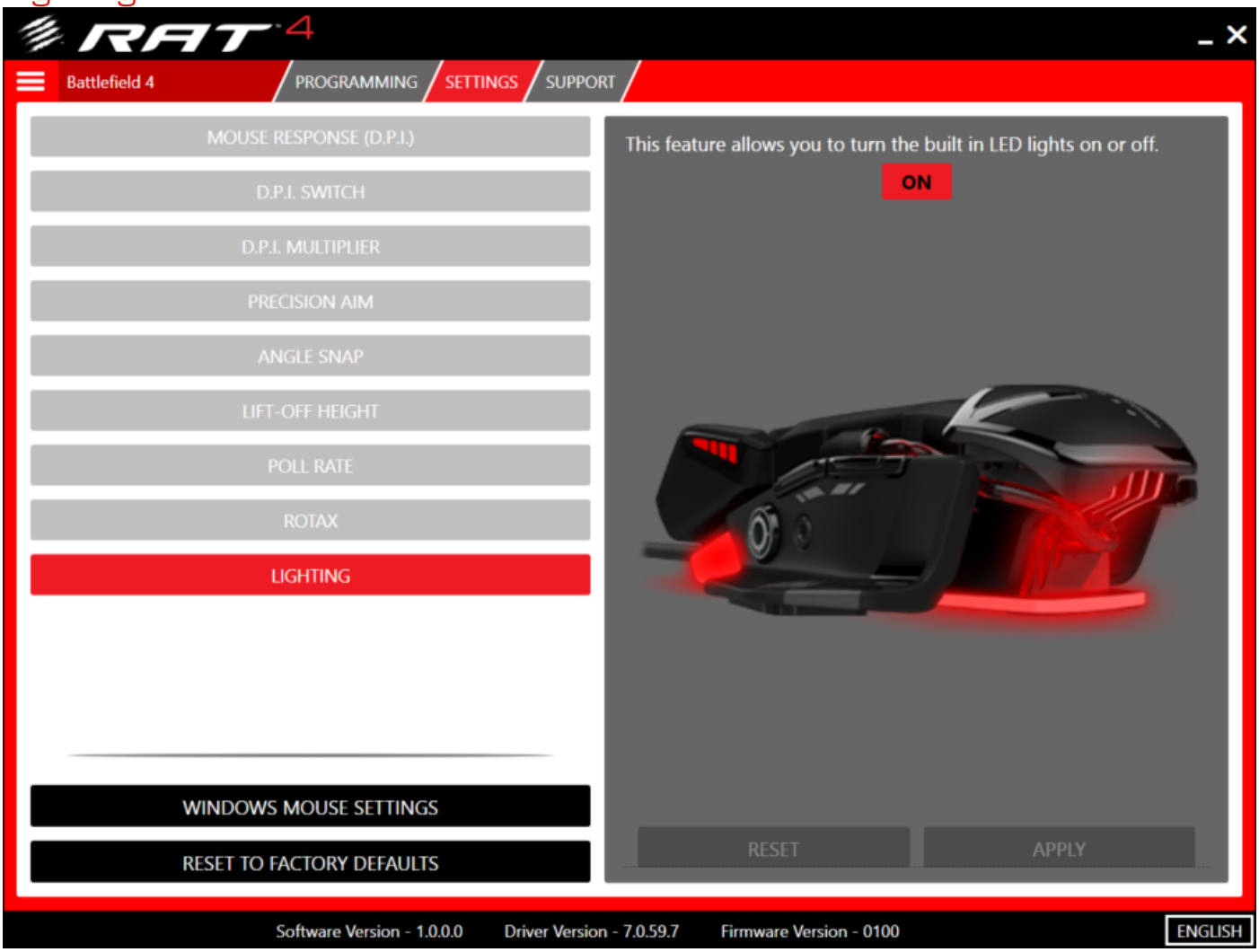
This setting determines how often input data is sent to the host computer. A higher value means faster data updates up to 1 ms (1000Hz). If you want to adjust this, simply click the desired value and click Apply.

Rotax



If you normally hold your RAT at an angle off the vertical axis, you may experience slight vertical RAT cursor movement when you think you're just moving it horizontally. Use this tool to offset this by rotating the image so that it matches the angle which you hold your RAT.

Lighting



This setting allows you to turn the onboard LEDs on or off.

To reset the product to its factory values, go to Settings and click **Reset to Factory Defaults**.

5. Product Questions

1. Does the product support firmware updates?
    - Yes. The product is firmware update compatible. If there are any updates to the firmware, Mad Catz will release a firmware update application to update the product.

2. Can the mode button be programmed?
    - No. The mode button is locked off from being programmed – and is there to enable the 3 x as many macro commands to be used on the product.

3. Can I set a custom profile to be active when my PC boots up?
    - Yes. To do this, expand the interface to show your custom commands. Click the context menu and then click Set as Default. This profile will now be active when your OS loads.

4. Can the DPI, and other product settings be set per profile?
    - No. These Settings are referred to as Global Settings. This means that, regardless of the button profile that is active, things like DPI, Precision Aim, and Roll Rate will remain the same. Unlike Profiles, the Settings are stored in the memory of the device, and remain the same when the RAT is plugged into a different PC.