

Sim Pedals Sprint product manual

HEUSINKVELD

WILLIAMS ESPORTS

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**Congratulations on acquiring a set of Heusinkveld
Sim Pedals Sprint!** We hope you will enjoy this top-of-
the line racing simulator pedal set for many years to
come.

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Introduction

This is the manual for the Heusinkveld Sim Pedals Sprint. We advise you to read it thoroughly in order to get the most enjoyment out of your pedal set.

Table of contents

This manual has the following main sections:

- Introduction.
- Initial setup.
- SmartControl adjustments.
- Mechanical adjustments.
- Maintenance.

Packing list

The box contains the following:

- Throttle pedal.
- Brake pedal with integrated controller.
- Clutch pedal (only if you have ordered a 3-pedal set).
- USB cable.
- Manual.
- Accessory box, which contains:
 - 10mm rubber.
 - 19mm rubber.

- 28mm rubber.
- 3x 10mm thick acrylic spacer.
- 5mm thick disc.
- 7/8mm wrench.
- 10/13mm wrench.
- 2.5mm hex key.
- 3mm hex key.
- 4mm hex key.
- USB cable.
- Brake pedal angle adjustment tool.
- 12x M5x12mm bolts.
- 12x M5x20mm bolts.
- 12x M5 washer.
- 12x M5 flanged nut.

Videos

In the Support section of the heusinkveld.com website you will find tutorial videos which further demonstrate a number of the pedal adjustments shown in this manual.

Manual version & digital download

This is **version 1.3** of the manual. The latest version of the manual can be found at heusinkveld.com/support.

Contact

If you have any questions which are not covered in this manual or in the instruction videos, feel free to send us an email at support@heusinkveld.com.

Initial setup

In this section we will get your Sim Pedals Sprint up and running. Detailed software and mechanical adjustments are explained later in this manual.

Setting the pedal angle

Before mounting the pedals, you have the option to adjust the pedal angle. In the default configuration the pedals are slanted backwards (-25 degrees). This is a useful position if your seat is relatively high compared to the pedal area, or if your rig has an angled base / pedal plate.

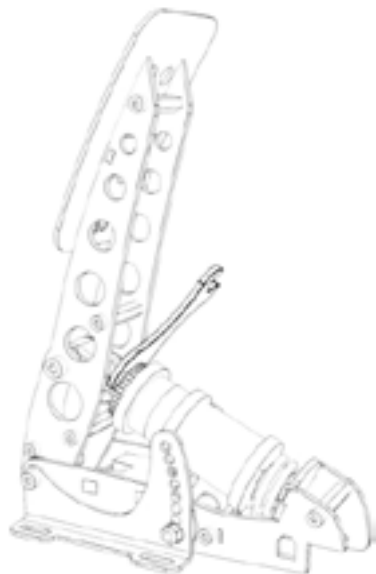
The lower your seat is relative to the pedal area, the further you may wish to angle your pedals forward. Eight positions covering a total range of 30 degrees (from -25 degrees to +5 degrees) are available.

The procedure to adjust the angle of the brake is different compared to the throttle or clutch. Note that for this pedal angle adjustment the pedals should not be mounted to a base. Some (not all) of the steps are illustrated by images.

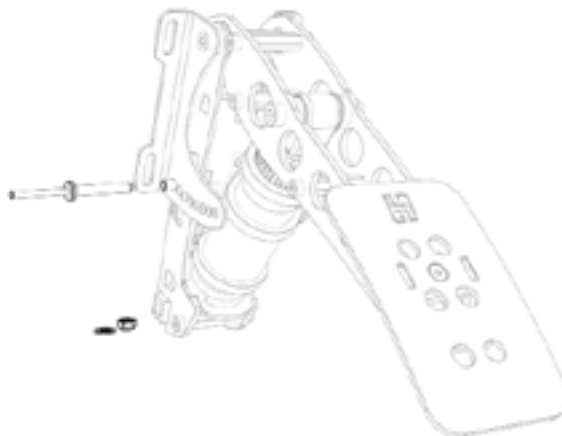
Adjusting the angle of the brake pedal

The angle of the brake is adjusted as follows:

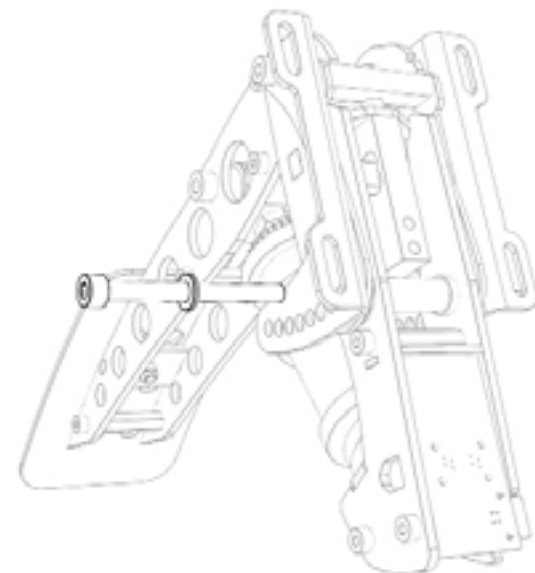
1. Remove all preload on the rubber stack. First you need to turn the lock nut towards the pedal arm, using the supplied wrench. Then you turn the black knurled adjustment nut towards the pedal arm. Do not pop the rubber stack out of position.
2. Put the pedal upside-down. Remove the nut from the bolt which runs through the rear of the feet. **Do not remove the bolt yet.**
3. Use the supplied adjustment tool to push the bolt out of position. Turn bolt counter-clockwise if it can't easily be pushed out. Inserting the adjustment tool is required to lock the brake mechanism while adjusting the pedal angle. Push in the tool (thick side of the tool into the pedal) until the collar touches the pedal foot.
4. When the adjustment tool is in place, remove the bolt. **Do not remove the adjustment tool.**
5. Adjust the unlocked pedal foot to the desired position.
6. Re-insert the bolt until it pushes out the adjustment tool. Do not push the bolt completely through the still unadjusted foot. Remove the adjustment tool.
7. Adjust the other pedal foot to the desired position.
8. Push the original bolt completely through.
9. Re-attach and tighten the nut.
10. Set the desired preload. Make sure there is enough tension on the rubber stack so it won't pop out.



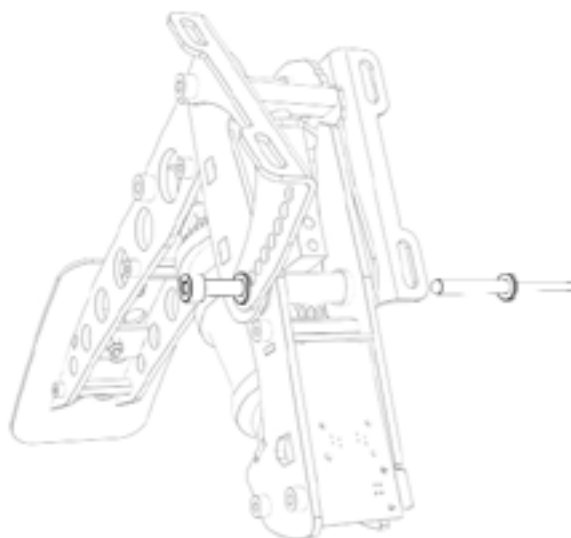
Step 1: Remove preload from the rubber stack (turn lock nut and knurled nut)



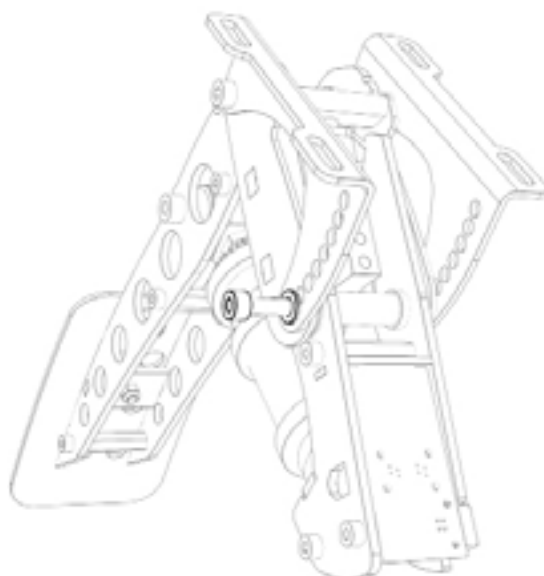
Step 2: Remove the nut from the bolt. **Do not remove the bolt yet.**



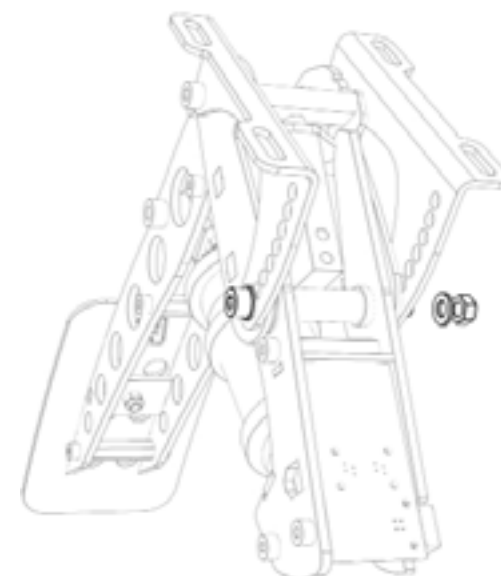
Step 3-4: Insert adjustment tool and push out the bolt. **Do not remove tool.**



Step 5-6: Adjust unlocked foot. Then re-insert bolt and push out adjustment tool.



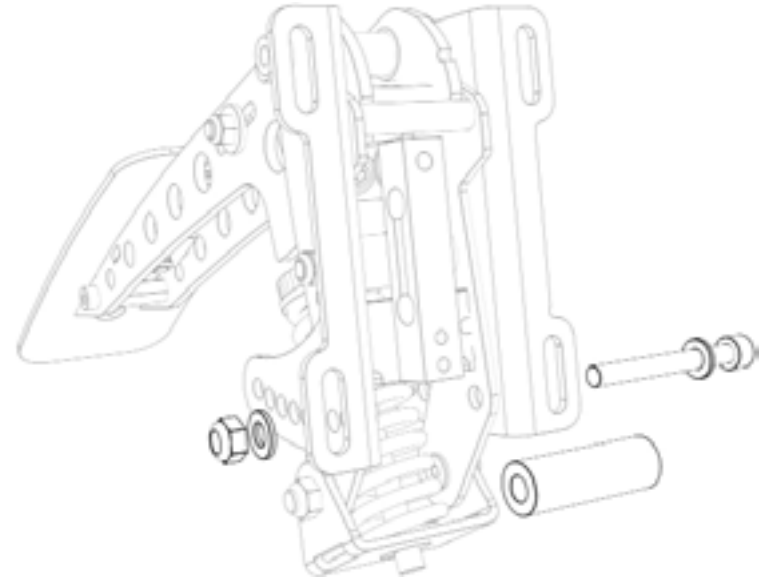
Step 7: Adjust other foot with bolt partially in place.



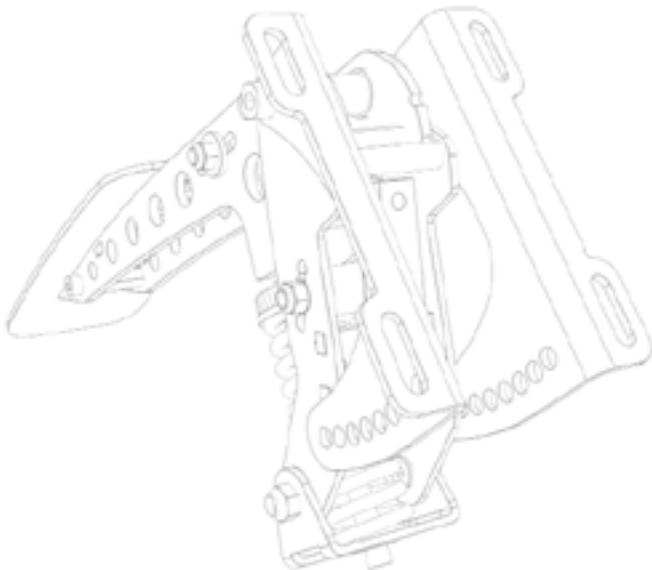
Step 8-9: Completely push through the bolt. Re-attach nut and tighten.

Adjusting the angle of the throttle and clutch pedal

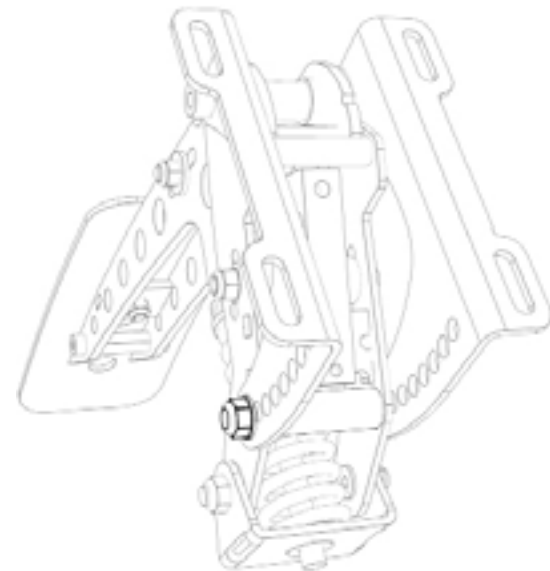
1. Put the pedal in front of you, with the pedal face plate facing up and away from you.
2. Remove the nut from the bolt which runs through the rear feet.
3. Remove the bolt. Note that the spacer may now come loose.
4. Adjust both pedal feet as desired.
5. Re-insert the bolt through both feet and the central spacer. The sensor wire runs between the plastic and the spacer and exits from underneath the spacer.
6. Re-attach and tighten the nut.



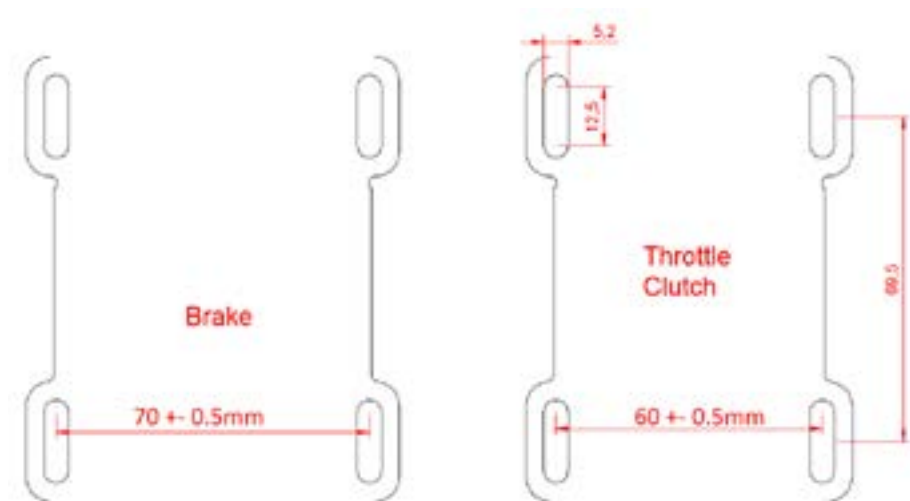
Step 2-3: Remove nut and washer, remove the bolt and spacer.



Step 4: Adjust both pedal feet as desired.



Step 5-6: Re-insert bolt, spacer, washer & nut and tighten. Check wire.



Pedal mounting schematic (for later spec pedals with 3mm thick feet)

Mounting the pedals

Each pedal is equipped with four mounting slots, allowing forwards and backwards adjustments to be made for optimal ergonomics. The bolt size for these slots is M5 (5mm).

The width of the throttle and clutch pedal is identical, the brake pedal is a bit wider. For reference, please see the schematic (all dimensions are in millimeters).

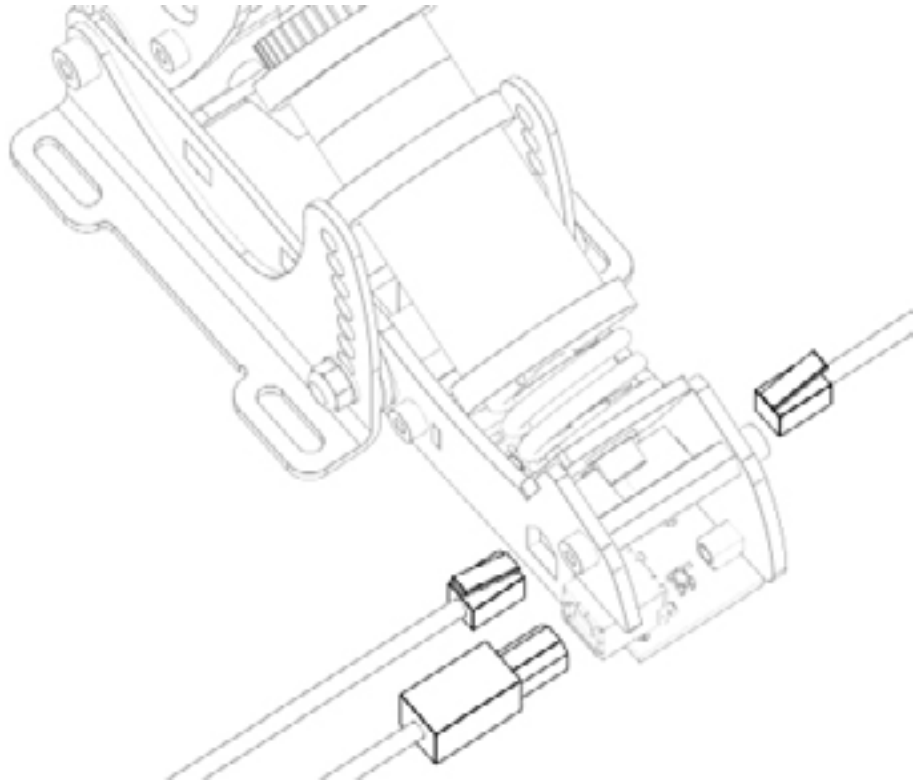
Because the Sim Pedals Sprint can handle relatively high operating forces (up to 65kg at the brake pedal), you must install the pedals on a very rigid base. Possible mounting solutions are aluminium profile beams, a thick metal (drilled) plate or our (optional) Sim Pedals Sprint Baseplate.

The following mounting materials are included:

- 12x M5x12mm bolts.
- 12x M5x20mm bolts.
- 12x M5 washer.
- 12x M5 flanged nut.

Connecting the electronics

The controller board of the pedals is integrated in the rear of the brake pedal. The throttle pedal and clutch pedal connect to each side of the brake using an RJ9 connector. It does not matter on which side you connect the throttle or clutch cable.



Connecting the RJ9 and USB cables to the controller in the brake.

If you ever need to remove the RJ9 plugs from the brake, use a small flathead screwdriver to press the tabs on the RJ9 plugs.

Next, connect the provided USB-cable. One side of the cable can be plugged into the brake pedal. The other side should be connected directly to your pc.

Please make sure there always is a bit of slack in the cables. This prevents damage to plugs, sockets and electronics. Specifically if you use a motion simulator, secure the USB cable to the (moving) frame of your simulator before you connect it to the brake.

Plug & play

Your pedals are now ready for racing. They are pre-calibrated with a brake force of appr. 30kg and will work after assigning them in your favourite simulator software. Please note that iRacing requires an additional one-time in-game calibration: calibrate all axis to an output of 4095.

SmartControl adjustments

Your Sim Pedals Sprint come with a powerful configuration tool allowing you to set up your pedals in ways not previously possible: SmartControl.

Download SmartControl

The software can be downloaded from our website heusinkveld.com. Click on Support (top bar). Scroll to Sim Pedals Sprint. Click on Download SmartControl. Save the file and run from a folder of your choice.

Overview

With SmartControl you can configure (non-linear) pedal output curves, set pedal deadzones and the brake pedal force. All settings can be saved into profiles, which can be loaded again in a few mouse clicks.

Settings applied in SmartControl will have effect in any simulator software, without having to make additional adjustments, re-assign controls or recalibrate (including iRacing) in the simulator software itself.

Calibration

SmartControl also includes a calibration wizard. Because your pedals have been pre-calibrated during assembly, calibration is not required before first use. Recalibration in SmartControl is only required when:

1. The mechanical end-stop of the throttle pedal has been adjusted.
2. Mechanical adjustments have been made to the brake.
3. The cables of the throttle and clutch pedal have been switched in the brake-mounted controller (for example when you mount your pedals inverted).

Throttle and clutch deadzone adjustment

For the throttle and clutch pedal you can set a bottom and top deadzone in SmartControl.

- Bottom deadzone: Pedal output starts after a little bit of movement from the pedal.
- Top deadzone: Pedal output reaches 100% a little bit before hitting the endstop.

The throttle and clutch deadzone are expressed as a percentage of total pedal travel. The effect of your deadzone setting can be checked in realtime in the green vertical signal output bar.

Because the Sim Pedals Sprint use soft endstops there may be small signal variations between instances of the pedal being at rest or being fully pressed. We therefore always recommend setting a minimum bottom & top deadzone of 3%. You should get 0% or 100% pedal output without having to force the pedals into their endstop.

Especially on the clutch pedal a larger top deadzone will influence the bite point, the point where releasing the clutch further makes the car move. This depends greatly on the software title and car used. A larger bottom deadzone will prevent accidental clutch slip from resting your foot on the pedal.

Brake bottom deadzone adjustment

Preload on the rubber stack applies a small force to the load cell. After SmartControl calibration, this slight initial force becomes 0% output. The bottom deadzone can apply additional offset, resulting in a brake pedal that needs some initial force and movement before becoming active.

The bottom deadzone is a percentage of the set brake force. At 30kg brake force and 5% deadzone, the load cell will register 1,5kg of force before brake pedal output starts. The effect of your deadzone setting can be checked in realtime in the green vertical signal output bar.

Your brake is equipped with a 2-stage system. Initially a metal coil spring is compressed. This coil spring simulates the pad-to-disc gap. The main loading of the brake disc is simulated by compressing the rubbers. A use case for setting a large bottom deadzone can be that you only want braking in the simulator to start after the metal coil spring has been fully compressed.

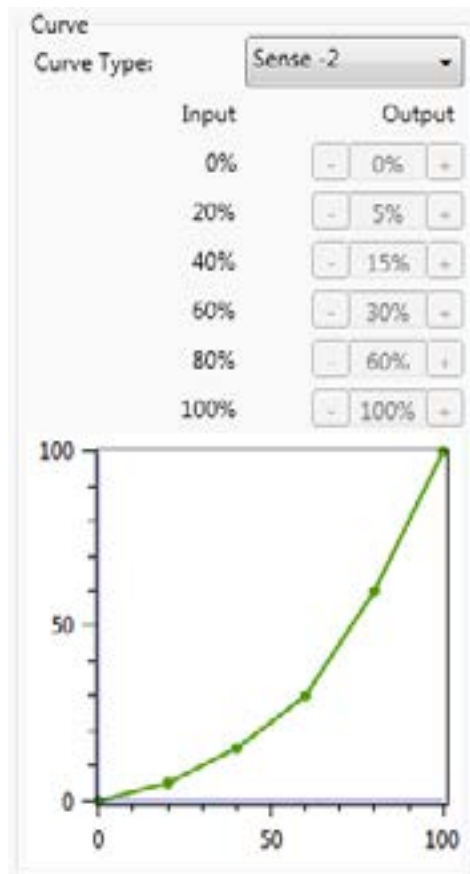
Brake force setting

SmartControl allows you to set a maximum force on the brake pedal. This setting is in kilograms (kg) and represents the actual brake force where your foot touches the brake pedal pad (for a medium sized foot).

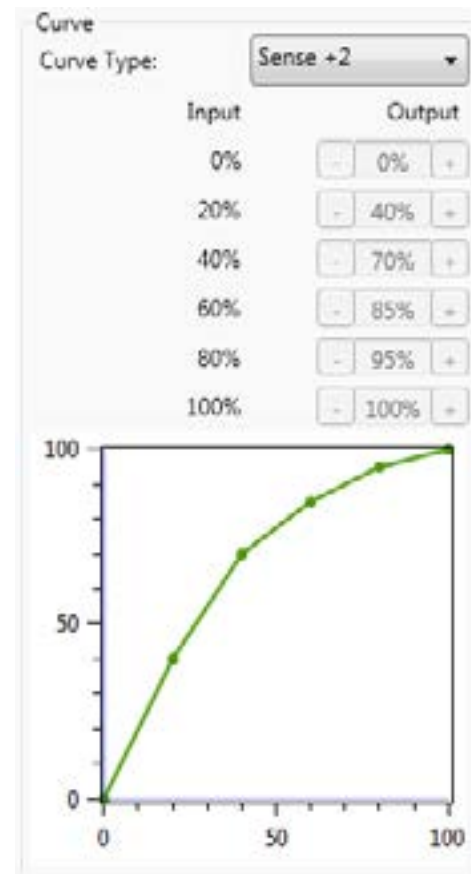
When you press the set maximum force on the brake pedal, the pedal will give 100% brake output signal to the simulator software. The maximum brake force of the Sim Pedals Sprint is 65kg.

How you set the maximum brake force depends on your personal preference. Even in similar real race cars, the required peak brake force varies a lot as this is a function of the size of the brake cylinders and other components installed in that specific car.

In general, fast high-downforce race cars require higher brake forces than slower, low-downforce race cars.



Use case 1: Throttle curve in case of rain.



Use case 2: Throttle curve in an underpowered car.

Throttle, brake and clutch mapping

A key feature of SmartControl is the ability to set custom signal output maps per pedal. Traditionally race simulator pedal output has had a one-on-one sensitivity in relation to the pedal input. SmartControl allows you to map non-linear output curves using 5 zones (six input parameters).

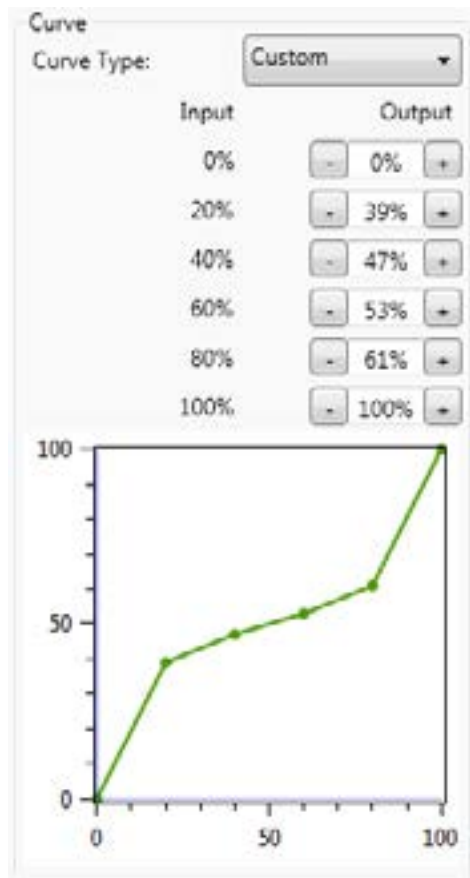
Each pedal has a Curve Type pull-down menu with pre-defined output curves. Here you can also select the option to make a custom curve and then set the desired pedal output percentage at the 0%, 20%, 40%, 60%, 80% and 100% marks of the pedal input. You have complete freedom to set your own shapes.

Please note that some simulator software offers in-game options affecting the linearity of certain pedal outputs. In order for SmartControl to work effectively, always make sure that all in-game pedal settings are set to linear.

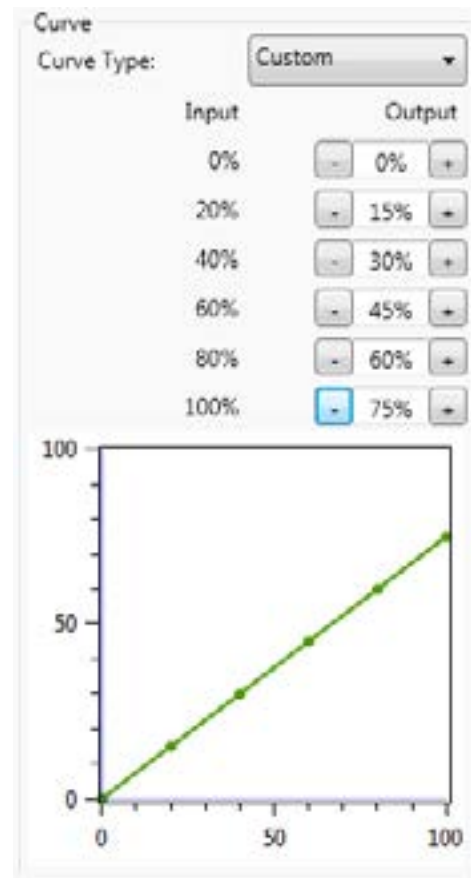
We will illustrate this functionality with a few use cases:

Use case 1: Throttle curve in case of rain

Real race car drivers have the option to adjust the throttle response of their car to be less sensitive on initial input. This helps to prevent unintended wheelspin when starting to apply the throttle in slippery conditions, such as rain. SmartControl allows you to set a lower sensitivity in the early phases of throttle application.



Use case 3: Clutch curve with optimal bite point setting.



Use case 4: Early brake lock compensation.

Use case 2: Throttle curve in an underpowered car

As opposed to use case 1, sometimes you want your throttle response to be as aggressive as possible. This can be the case when you race an underpowered car with limited chance of wheelspin. SmartControl allows you to set a curve in which the sensitivity is higher in the initial phases of throttle application.

Use case 3: Clutch curve with optimal bite point setting

When making a standing start, you want to reach an optimal ratio between clutch slip and RPM. This ensures you have maximum acceleration.

If you know where this optimal bite point of your clutch is, you can configure the clutch output curve in a way that it is easy to accurately reach and hold the optimal bite-point. In the image the optimal bite point is when the clutch is 50% disengaged.

Use case 4: Early brake lock compensation

Some cars in certain titles are known to lock the wheels well before maximum brake input is reached, for example already at 70% of pedal input. SmartControl allows you to set a lower output percentage at 100% pedal input.

This means you can use the full force range of your brake (close to 100% pedal input instead of 70% pedal input) pedal before your wheels start locking up.

Using SmartControl with iRacing

The Sim Pedals Sprint output values per pedal axis always range from 0-4095, regardless of your settings in SmartControl. Most simulator software can instantly use these output values, because Windows works with a default range of 0-4095 for 12bit USB devices as well.

A notable exception is iRacing, because iRacing uses an in-game method to calibrate the pedals. In order for the Sim Pedals Sprint to function correctly in iRacing, you must do the following:

1. When using the pedal calibration wizard in iRacing, you will see a RAW value. When asked to press a pedal, make sure you always press it to a value of 4095 for every single pedal.
2. Always set the Brake Force Factor to 0.

This ensures that your SmartControl settings always function correctly in iRacing. You will only need to calibrate in iRacing once. Re-calibration after changing SmartControl settings is not required.

iRacing offers the optional setting 'custom controls for this car'. If you use this setting, always make sure to follow instructions 1 and 2 per car in order for your SmartControl adjustments to function correctly in iRacing.

Save a profile

SmartControl allows you to store an unlimited amount of profiles. In order to save a profile, do the following:

- Click File, then click Save Profile.
- Select a folder where you want to save your profiles.
- Set the desired filename, leave the extension (.xml) as is.
- Click Save.

Load an existing profile

In order to use a previously saved profile, do the following:

- Click File, then click Open Profile.
- Locate the profile, then click Open.
- In order to apply the profile, click Save settings to the pedals in the Profile tab.

Good to know

All profiles are saved relative to your personal calibration values. This means that you can exchange pedal profiles with fellow Sim Pedals Sprint owners and apply them without re-calibrating.

Profile changes are applied directly onto the Sim Pedals Sprint controller board. If your simulator software is Alt-TAB friendly, you can apply a different profile or test specific adjustments in the middle of a training session.

Mechanical adjustments

Next to SmartControl adjustments, there are also plenty of mechanical adjustments that change the feel of your Sim Pedals Sprint.

Overview

The following adjustments are available:

All pedals:

- Pedal plate height.

Throttle:

- Pedal travel.
- Pedal force.
- Pedal spring preload.

Brake:

- Pedal stiffness.
- Coil spring preload.

Clutch:

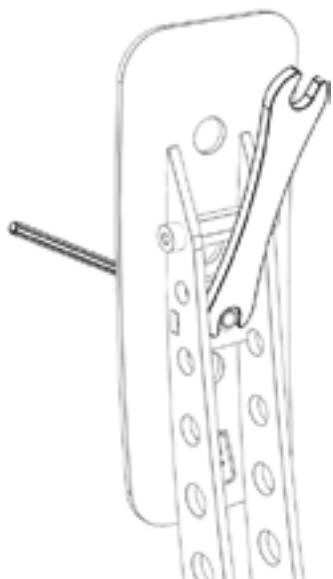
- Pedal force.
- Pedal spring preload.

Each of the adjustments will be explained in detail below. Some (not all) of the steps are illustrated by images.

All pedals - pedal plate height adjustment

The pedal plate of each pedal can be rotated in order to accommodate different lengths of human feet. By default the pedals are in their tallest position. If you race without shoes and/or have small feet, you may benefit from a lower pedal height. The pedal height is adjusted as follows:

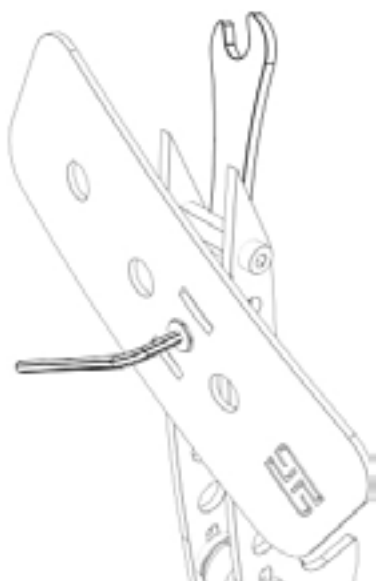
1. Take the supplied 2.5mm hex key and 7mm wrench.
2. Use the wrench to lock the rear nut. Insert the hex key in the bolt on the front side of the pedal plate.
3. Loosen the nut and bolt so the pedal plate can rotate. It's not necessary to completely remove the nut from the bolt.
4. Rotate the pedal plate 180 degrees.
5. Lock the nut back in place. Do not overtighten.



Step 2: Use the wrench to lock the rear nut, insert the hex key.



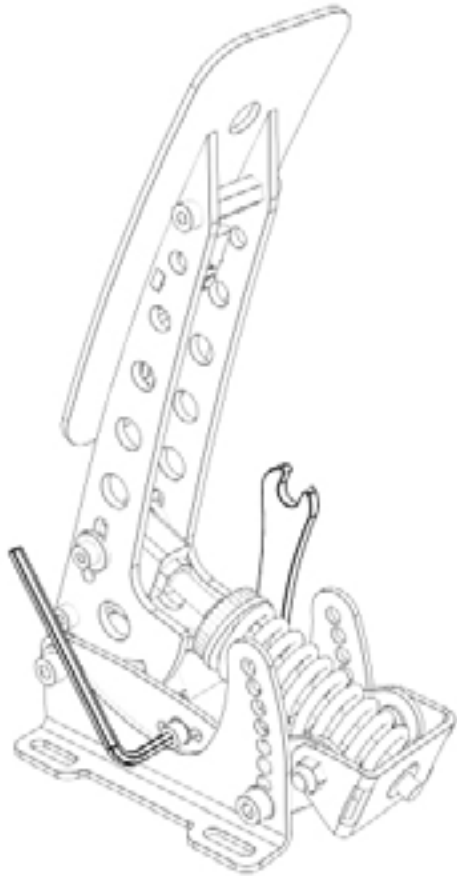
Step 3: Loosen the nut and bolt so the pedal plate can rotate.



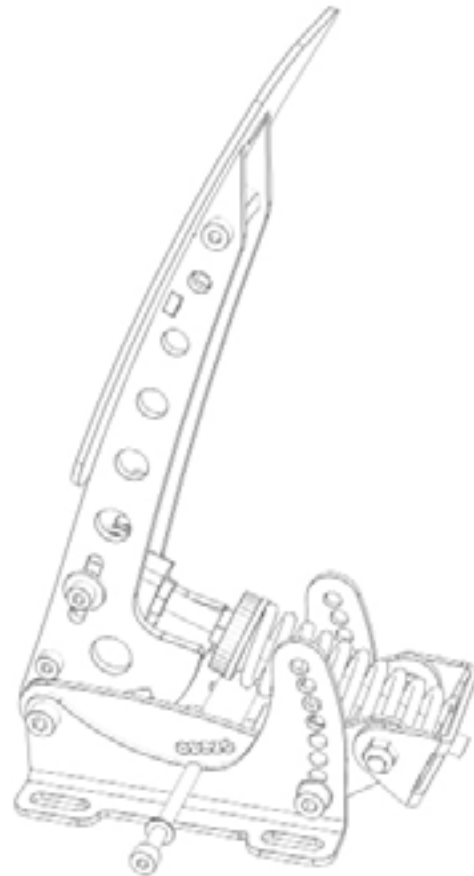
Step 4: Rotate the pedal plate 180 degrees.



Pedal plate height adjustment overview.



Step 1-2: Locate the round rubber endstop. Use hex key and wrench.



Step 3: Remove nut, washers and bolt so the endstop can be moved.

Throttle - pedal travel

There are 5 available settings which determine the amount of travel of the throttle pedal. By default the pedal is set in the center position (3 out of 5). This means you can make the travel 1 or 2 positions shorter or longer.

In order to change the pedal travel, adjust the throttle as follows:

1. Locate the round endstop with rubber cover.
2. Take the supplied 3mm hex key and the 7mm wrench. Lock the nut with the wrench and insert the hex key in the bolt.
3. Remove the nut and washer and pull out the bolt (and washer) which runs through the rubber endstop.
4. Move the endstop to the desired position. If your fingers are too thick to reach inside the mechanism, you can use the hex key to gently push the endstop in the desired position.
5. Re-insert the bolt, washers and re-attach the nut. Tighten the nut.
6. Recalibrate the pedals in SmartControl.

Throttle - pedal force curve

In the arm of the throttle pedal you'll find an adjustment to (mainly) change the slope of the pedal force curve. In the highest position, you'll need more force to reach the end of pedal travel compared to the lowest setting. It also slightly raises the overall amount of force required.

The adjustment is made as follows:

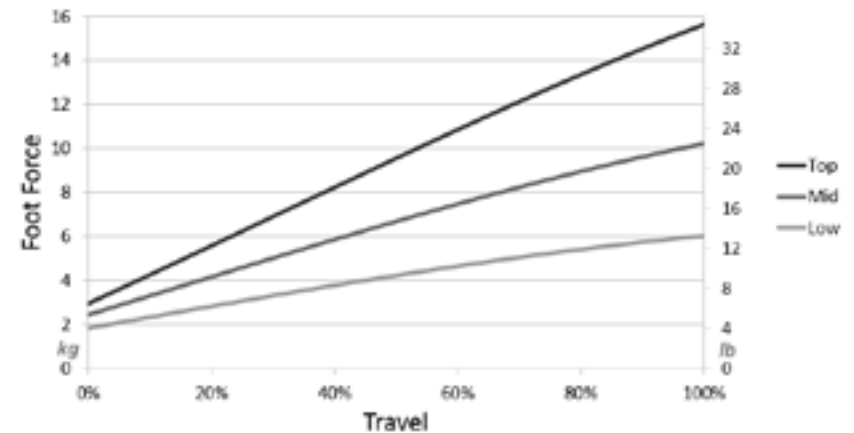
1. Loosen (do not remove) the nut on the adjustment bolt.
2. Slide the adjustment bolt to the desired position. If it is difficult to slide, you may slightly loosen the lowest hex spacer in the pedal arm.
3. Re-tighten the nut.



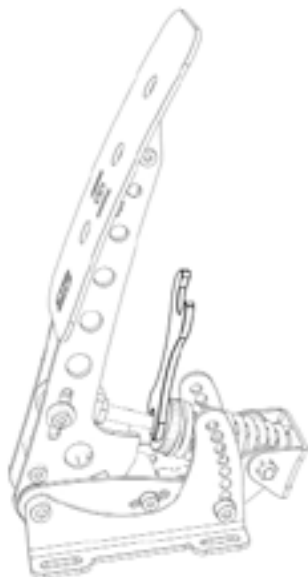
Step 1: Loosen nut on the adjustment bolt.



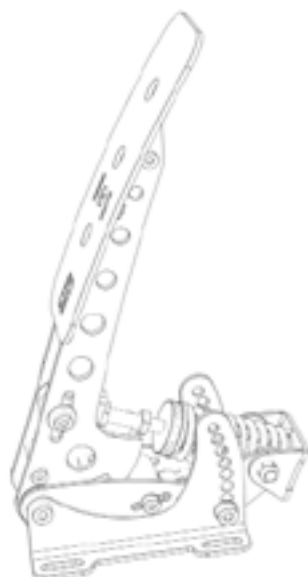
Step 2: Slide the adjustment bolt (shown here in the highest position).



Throttle pedal force curve adjustment - possible force curves.



Location of the pedal spring preload adjustment.



Step 1-2: Separate lock nut from adjustment nut, then turn the adj. nut.

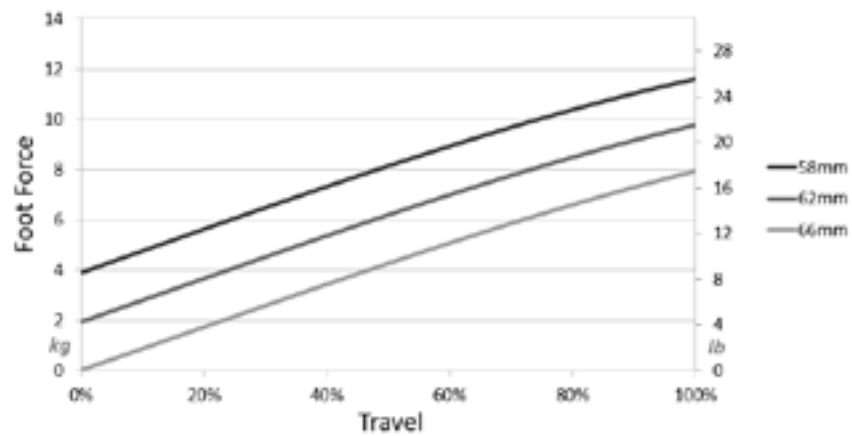
Throttle - pedal spring preload

Next to the spring you will find an adjustment to change the spring preload. By making the spring length in the rest position shorter or longer, you change the initial amount of force required to move the pedal. The slope of the force curve will remain identical.

Caution: Because the spring length in the rest position is affected by the pedal force curve settings, not all preload settings work in conjunction with all pedal force curve settings. Strictly adhere to the minimum spring length recommendations as set out later in this paragraph, otherwise damage to your pedal may occur.

The adjustment is made as follows:

1. Use the supplied 10mm wrench to remove the lock nut from the preload adjustment nut.
2. Set the desired preload by turning the preload adjustment nut. Make sure that you don't turn the preload adjustment nut beyond the thread of the rod.
3. Tighten the lock nut back against the preload adjustment nut.
4. Check if the other lock nut, which tightens the rod into the metal eye (inside the pedal arm), is still tight against the eye.



After making the pedal spring preload adjustment, make sure to check if it meets the minimum spring length requirement:

1. Push the pedal all the way down to the endstop, so the spring is compressed.
2. Take measurement of the compressed spring length. It should be at least 40mm (1,6 inch).
3. If your spring is shorter than 40mm (1,6 inch), re-adjust your preload setting.

Throttle pedal spring preload adjustment- possible force curves.



Check minimum compressed spring length after adjusting preload.

Brake - principle of operation

The Sim Pedals Sprint brake pedal is force based. The harder you press, the higher the signal output to the simulator software will be.

Your brake is equipped with a 2-stage system. Initially a metal coil spring is compressed. This coil spring simulates the pad-to-disc gap. The main loading of the brake disc is simulated by compressing the rubbers.

By adjusting the brake pedal deadzone in SmartControl you have the option to let the brake signal output start as soon as you compress the metal coil spring, or only after the metal coil spring has been fully compressed.

Brake - pedal stiffness

The Sim Pedals Sprint allow for a large range of settings to set the stiffness of your brake. This is done by varying the total length of the rubbers in the brake rubber stack.

Please note that adjusting the stiffness determines how much pedal travel you will get for a fixed amount force applied to the brake pedal. The total amount of force required to get 100% pedal output in your simulator software is set in the SmartControl software.

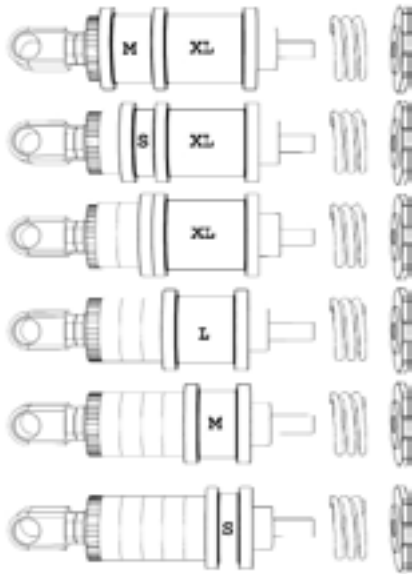
A total of 6 stiffness settings are available:

- 1 small rubber (S). This is the hardest setting.

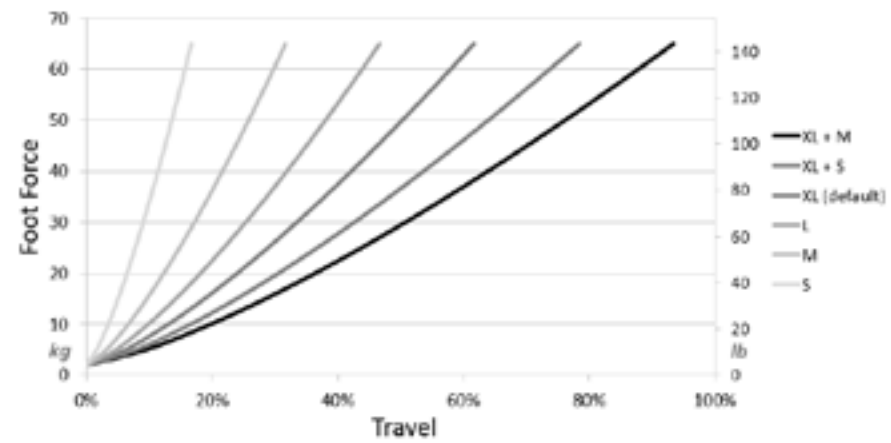
- 1 medium rubber (M)
- 1 large rubber (L)
- 1 extra large rubber (XL), this is the default setting.
- One extra large + one small rubber (XL+S)
- One extra large + one medium rubber (XL+M). This is the softest setting.

The brake pedal stiffness is changed as follows:

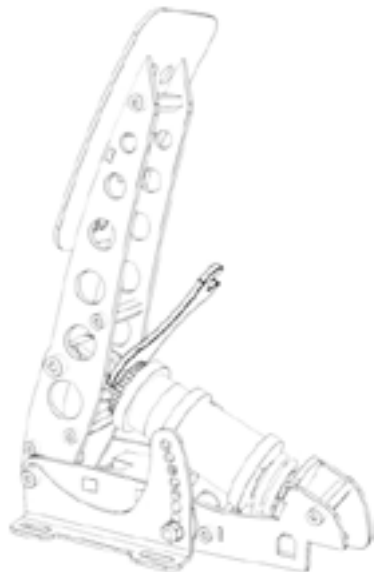
1. Remove all preload on the rubber stack. First you need to turn the lock nut towards the pedal arm, using the supplied wrench. Then you turn the black knurled adjustment nut towards the pedal arm.
2. Pop the rubber stack out of position by pressing with 2 thumbs on the rear of the pedal backplate.
3. Remove or add rubbers, discs and spacers as desired. Look carefully at the rubber stack schematics to correctly assemble a rubber stack. There must always be a large disc before and after every individual rubber.
4. Pop the rubber stack back in position.
5. Re-set the desired preload by turning the knurled nut. Make sure there is enough tension on the rubber stack so it won't pop out. Do not turn the preload adjustment nut beyond the thread of the rod. If this happens, consider adding an extra spacer.
6. Lock the knurled nut by tightening the lock nut firmly against it.
7. Recalibrate the pedals in SmartControl.



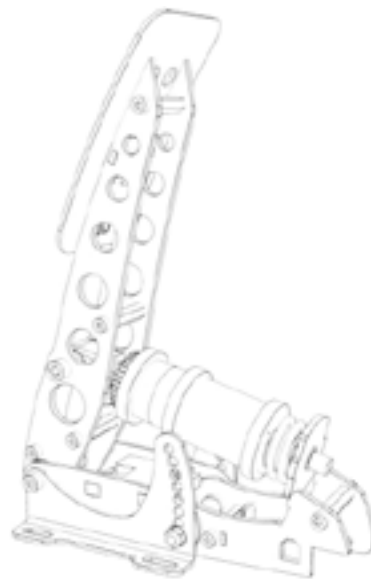
Available brake stiffness settings.



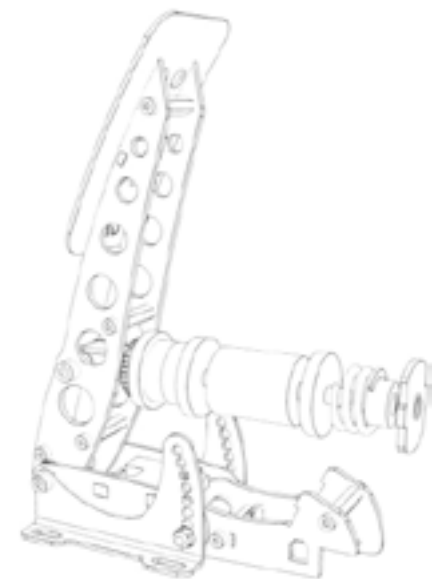
Force curves for each brake setting.



Step 1: Remove all preload.



Step 2: Pop out rubber stack.



Step 3: Add/remove rubbers, washers and spacers.

Brake - coil spring preload

The coil spring simulates the pad-to-disc gap of a brake assembly. You have the option to shorten this gap by changing the preload on the coil spring:

1. Turn the lock nut (which locks the knurled adjustment nut) towards the pedal arm, using a supplied wrench.
2. Adjust the black knurled adjustment nut to the desired position. Make sure there is enough tension on the rubber stack so it won't pop out.
3. Lock the knurled nut again by tightening the lock nut firmly against it.
4. Recalibrate the pedals in SmartControl.

Please note that the rubbers will shrink a little during the first hours of use. You may have to adjust the preload after this one time 'break in' period.

Recommended brake settings

We often get asked what a correct brake pedal setting is for a specific car. It's important to keep in mind that even for similar cars there can be large variations in the brake feel, depending for example on the size of the hydraulic brake cylinders.

Also, the Sim Pedals Sprint can handle a maximum brake force of 65kg. While this may be enough for lower junior formula cars, road cars and slower GT cars, typically quick

formula cars and top-level GT cars require higher peak brake forces. You will therefore not be able to simulate 1:1 brake forces for all race cars with the Sim Pedals Sprint.

In terms of brake stiffness, a general rule of thumb is that a quicker, high downforce car has a stiffer brake pedal compared to a slower, low downforce car. The following recommendations can therefore be a good baseline when finding a brake setup which suits you:

- F1, GP2, F3, Indycar, LMP: One small rubber (S)
- GT cars, Nascar, Rally: One large rubber (L)
- Road cars: One extra large plus one small rubber (S+XL).

Cars with high downforce typically require very sudden, very hard brake application at the end of a straight. A stiff, barely moving pedal is easier to operate this way than a long soft pedal. Physically moving your foot always takes time, so the stiffer the pedal is, the quicker you can build up braking force.

Road cars or softly sprung stock cars on the other hand may benefit from a slightly slower brake force buildup. Weight transfer takes more time in these cars, and the front tires will lock up if your braking force grows quicker than the weight transfer.



Location of the pedal force curve adjustment bolt.



Step 2: Remove nut on the adjustment bolt. Remove washers and bolt.

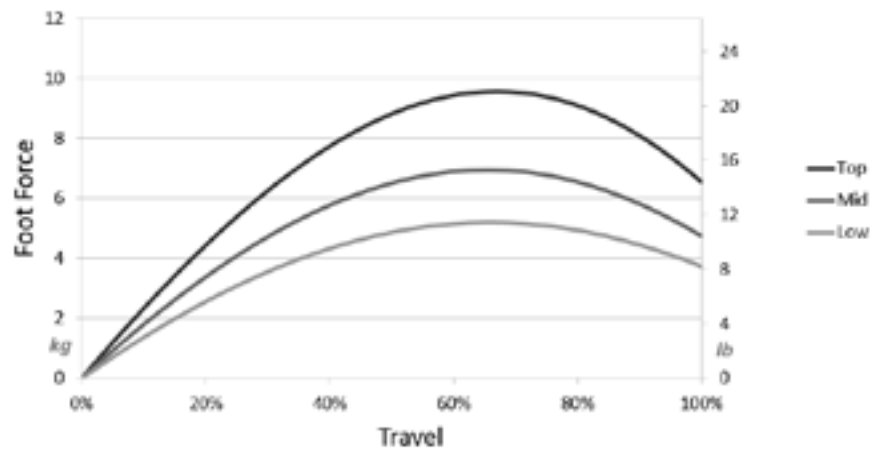
Clutch - pedal force curve

In the arm of the clutch pedal you will find an adjustment to change the slope of the pedal force curve. In the highest position, you'll need more force to reach the end of pedal travel compared to the lowest setting.

There are 3 possible settings. By default, the pedal force adjustment setting is in the middle position.

The adjustment is made as follows:

1. Remove all preload from the spring. First you need to turn the lock nut towards the pedal arm, using the supplied 10mm wrench. Then you turn the preload adjustment nut towards the pedal arm.
2. Remove nut on the adjustment bolt. Remove bolt.
3. Reposition the eye at the end of the spring rod to the desired position in the pedal arm.
4. Insert bolt , re-attach the nut and tighten.
5. Set the preload nut and the lock nut back to the original position.



Clutch pedal force curve adjustment - possible force curves.

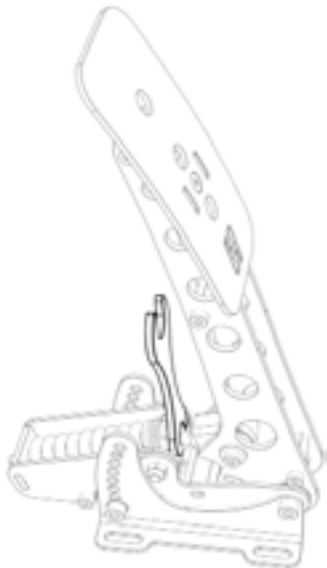
Clutch - pedal spring preload

Next to the spring you will find an adjustment to change the spring preload. By making the spring length in the rest position shorter or longer, you change the initial amount of force required to move the pedal. The slope of the force curve will remain identical.

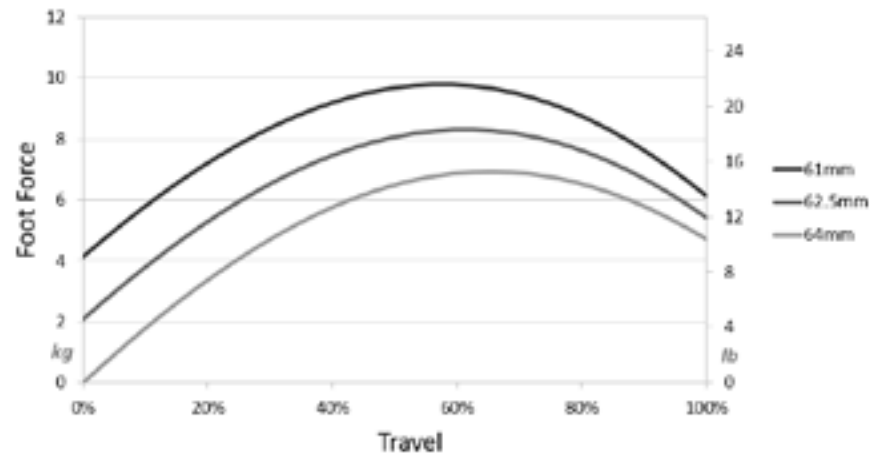
Caution: Because the spring length in the rest position is affected by the pedal force curve settings, not all preload settings work in conjunction with all pedal force curve settings. Strictly adhere to the minimum spring length recommendations as set out later in this paragraph, otherwise damage to your pedal may occur.

The adjustment is made as follows:

1. Use the supplied 10mm wrench to remove the lock nut from the preload adjustment nut.
2. Set the desired preload by turning the preload adjustment nut. Make sure that you don't turn the preload adjustment nut beyond the thread of the rod.
3. Tighten the lock nut back against the preload adjustment nut.
4. Check if the other lock nut, which tightens the rod into the metal eye (inside the pedal arm), is still tight against the eye.



Location of the pedal spring preload adjustment.



Clutch pedal spring preload adjustment - possible force curves.

After making the pedal spring preload adjustment, make sure to check if it meets the minimum spring length requirement:

1. Leave the pedal in the rest position.
2. Take measurement of the uncompressed spring length. It should at least be:
 - 60mm (2,36 inch) when in the lowest/softest pedal force curve setting (4mm preload).
 - 61mm (2,40 inch) when in the middle/medium pedal force curve setting (3mm preload).
 - 62mm (2,44 inch) when in the highest/stiffest pedal force curve setting (2mm preload).
3. If your spring is shorter, re-adjust your preload setting.

Maintenance

Your Sim Pedals Sprint have been designed to have a minimum of wear, tear and noise. In order to keep your pedals in good shape for many years, we recommend following these maintenance procedures.

Preventive lubrication - throttle & clutch

Most pivot points on the Sim Pedals Sprint have self lubricating bearings. On the throttle and the clutch there are 3 positions which may however receive preventive lubrication:

- Bearing in the backplate (rear part of the swingarm, through which the spring rod runs).
- Both side-bearings of the swingarms.

Please refer to the images to see the exact location.

The recommended lubricant for the throttle and clutch is PTFE Dry Spray. A good service interval would be to lubricate every 100 hours of use.

Lubrication - brake pedal

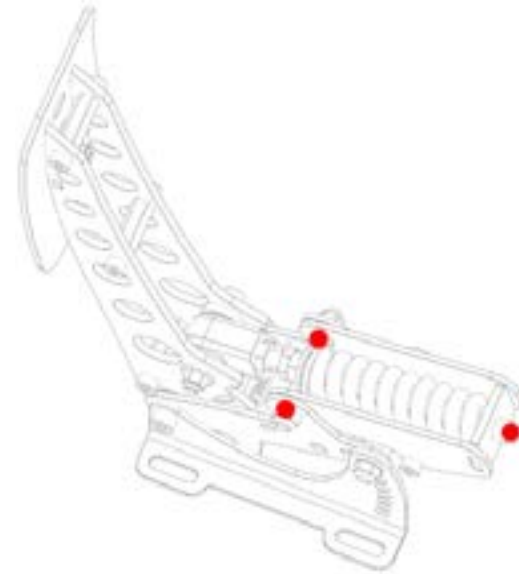
Lubrication of the brake is only required if the brake makes an unwanted noise. In this case, check if the noise comes from the bearing in the backplate of the brake (through which the rod runs). If so, apply a bit of lubricant to this bearing.

The recommended lubricant for your brake pedal is PTFE Dry Spray.

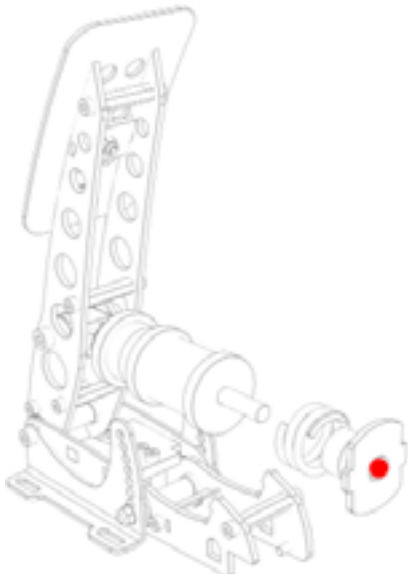
Caution: The brake rubbers are made from synthetic rubber. **Never use petroleum based lubricants to lubricate your brake pedal.** This will render the rubbers useless.



Throttle lubrication points.



Clutch lubrication points.



Brake lubrication point.



Recommended lubricant - PTFE Dry Spray.

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