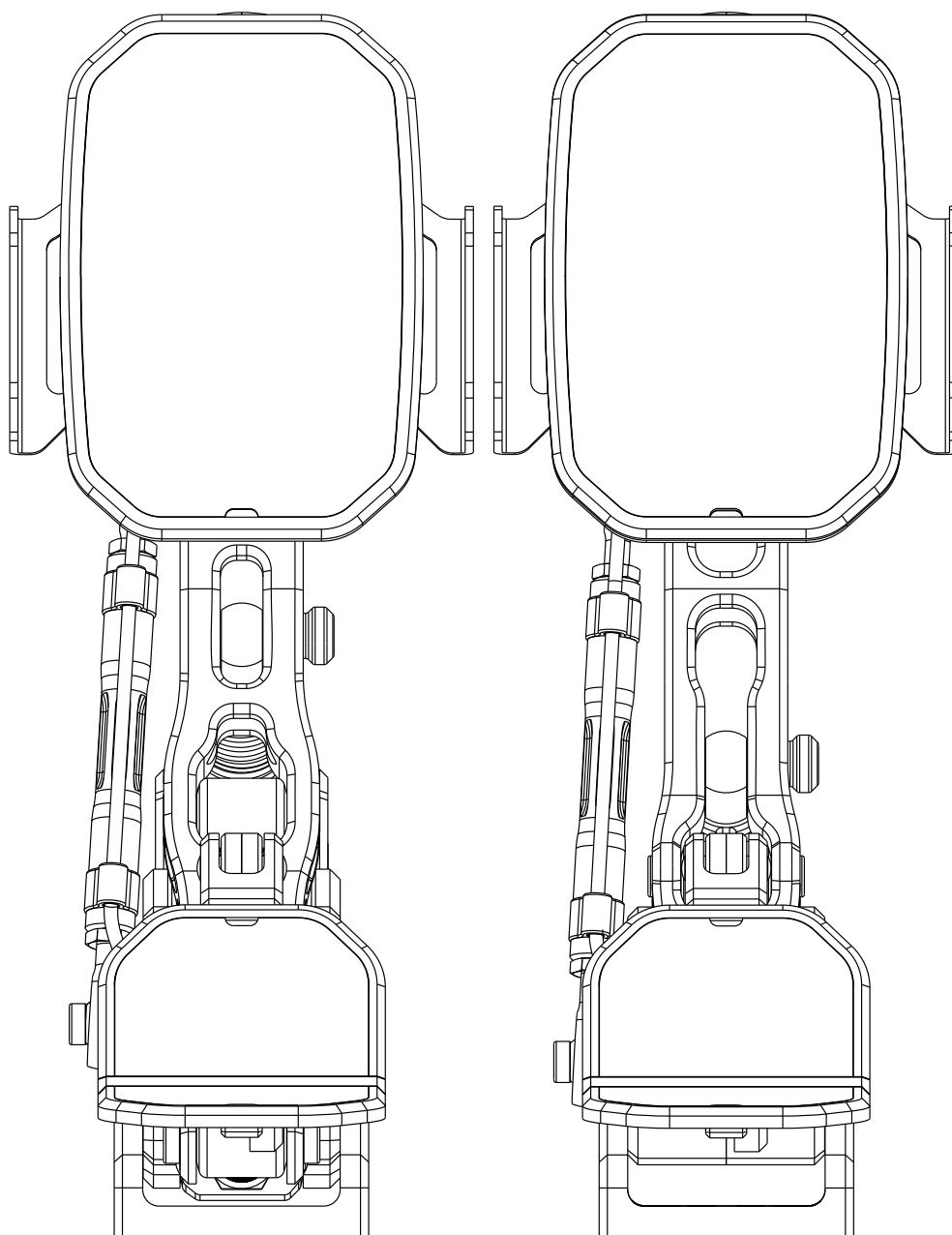




USER MANUAL



Thank you for purchasing PurrPRO FORMULA PEDALS. We are sure that it was the best choice!
Enjoy your top-notch sim racing experience with the set of our pedals.

Before you start your new sim racing adventure, please read this manual carefully to use
our product safely and adjust your pedals according to your needs, so you can get the best
possible experience when using PurrPRO FORMULA PEDALS.

1. SAFETY

- The device must not be exposed to rain or humidity in order to avoid risk of fire and the danger of electric shock.
- There is a risk of swallowing small parts of this equipment, so make sure to keep it away from children under the age of 6.
- This product is intended for adults. Do not let your children use it unsupervised.
- Always carefully check that all connections are tightened and assembled in accordance with the manual.
- Due to sharp edges, the equipment should only be used by one person. Keep other people away from the device when in use.
- The product is intended for indoor use only.
- Do not disassemble the product beyond the instructions provided in this manual.
- Never use this device if it is damaged or broken. If something unexpected happens, do not try to fix it yourself. Contact us immediately. Opening and attempting to repair it yourself may be dangerous for the user and will void the warranty.
- Remember to take 5-minute breaks every 20 minutes while playing. Do not exceed 2 hours of play.
- We strongly recommend that you do not drive a vehicle directly after playing a racing simulation game. Take a necessary break and rest.

2. PACKAGE

PurrPRO THROTTLE pedal	2x DC Power Adapter 15V
PurrPRO BRAKE pedal	Additional springs and washers
Additional different grip pedal face cover	USB Type C to USB Type A cable, 2,0 m
Additional different grip ankle covers	Molex to Molex pedals connection cable, 0,5 m
Additional pedal face side footrests	Mount bolts M6, T-nuts M6

3. CONTACT



If you encounter assembly issues or need assistance with this manual or our product, please contact us via support@fatblackcat.io or Discord.

Join our discord server! Scan QR code.

4. TECHNICAL SPECIFICATION

GENERAL

Platform compatibility	Windows PC, run by PurrOS software
Main material	CNC machined 6082 billet aluminium
Adjustable pedal angle	Yes, on mounting brackets, 18 degrees range
Adjustable pedal face angle	Yes, by adjusting ErgoLink length
Adjustable vertical height	Yes, by adjusting Active Heel Support height
Cockpit mount	U-shape bracket, M6 bolts and washers
Electronics	STM32 microprocessor, 16 bit on all axes
Power Adapter	2x AC/DC 15V 2,4A
Connectivity	USB Type C to Type A for PC connection, Molex to Molex between pedals
Colour	Black anodised aluminium/Carbon fiber
Overall weight	4,2 kg

PurrPRO THROTTLE

Throttle adjustable travel and stiffness	Yes, 91 mm travel limit in the base, three stiffness gradient positions in throttle arm, preload nuts in spring assembly
Throttle adjustable damping	Yes, adjustable hydraulic damper
Throttle sensor	Contactless magnetic, hall sensor
Throttle haptics	Yes, PurrForce haptics exciter, PurrOS software compatible with SimHub
Throttle size	244x298x90 mm (LxHxW)

PurrPRO BRAKE

Brake adjustable travel and stiffness	Yes, 73,5 mm travel limit, optional springs combo, preload nuts in spring assembly, preload nut in damper assembly
Brake adjustable push damping	Yes, adjustable top hydraulic damper
Brake adjustable trail damping	Yes, adjustable bottom hydraulic damper
Brake sensor	Loadcell sensor, 200 kg
Brake haptics	Yes, PurrForce haptics exciter, PurrOS software compatible with SimHub
Brake size	262x298x90 mm (LxHxW)

5. PurrPRO FORMULA PEDALS ASSEMBLY OUT OF THE BOX

After taking out the pedals from the box you will notice that both PurrPRO THROTTLE and PurrPRO BRAKE have adjustable mount foot under the base of the pedals. Additionally pedals come with side FOOTRESTS inside the box, but they are not mounted to the pedals. Now we will explain how you can mount side footrests to the pedals and how to mount the pedals to your simrig.

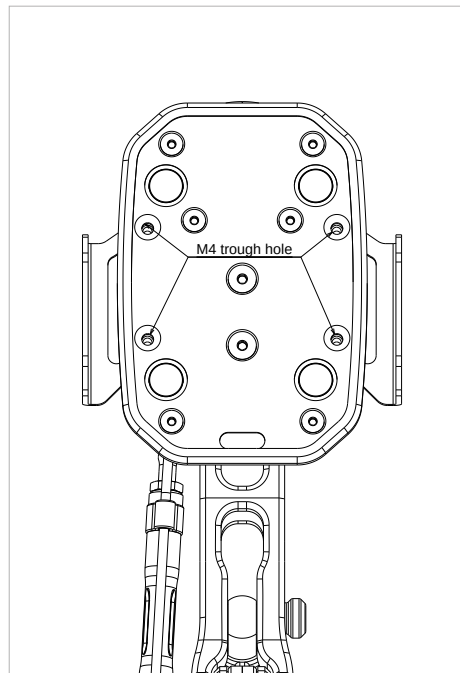
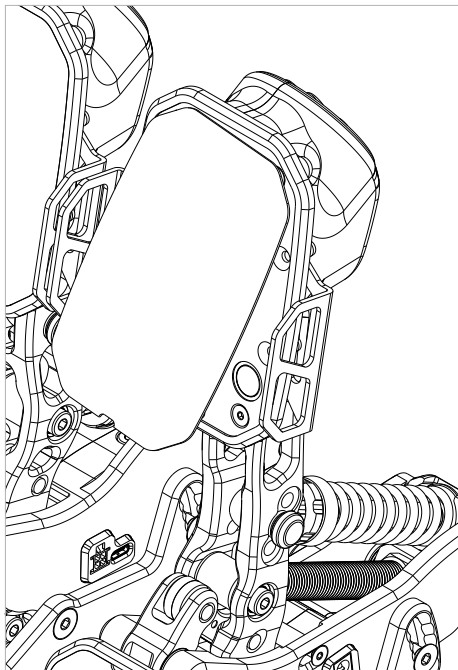
IMPORTANT: Pedals are designed to be mounted to sturdy simrig, **DO NOT USE** them on the floor, as they won't be stable.

5.1. FOOTRESTS MOUNT

You will find a set of 2 left side footrests and 2 right side footrests. Please notice that you can mount them on either side of the pedal face - this way you can choose to have the side wall higher or lower, depending on your preference.

To mount the footrests you will need to take the carbon pedal face off. To do that use a small plastic tool and pop a carbon pedal face at the bottom using a small cutout in the carbon plate. Be aware that the carbon face is held by magnets to stay in place, so you don't have to use much force to take it off.

After achieving that, use 4 trough holes to mount side footrests in the position you want to use. When side footrests are bolted to the pedal head, put the carbon pedal face onto the pedal head and make sure it sits flush with a thicker carbon plate for comfort.



ATTENTION: It may happen that magnetic stickers glue in first batch pedal sets is too weak and magnetic circles will not hold. If that happens please reapply them, by placing glue side to the top at the magnet inside the carbon part and then placing the carbon plate as it would be mounted normally. Apply pressure with your finger in the place of the faulty magnetic sticker. You can apply a minimal amount of superglue on the magnetic sticker, but be very careful. Do not apply a whole drop of superglue as it will most likely glue together two carbon parts when glue will go outside the magnetic sticker area.

5.2. SIM RIG MOUNT

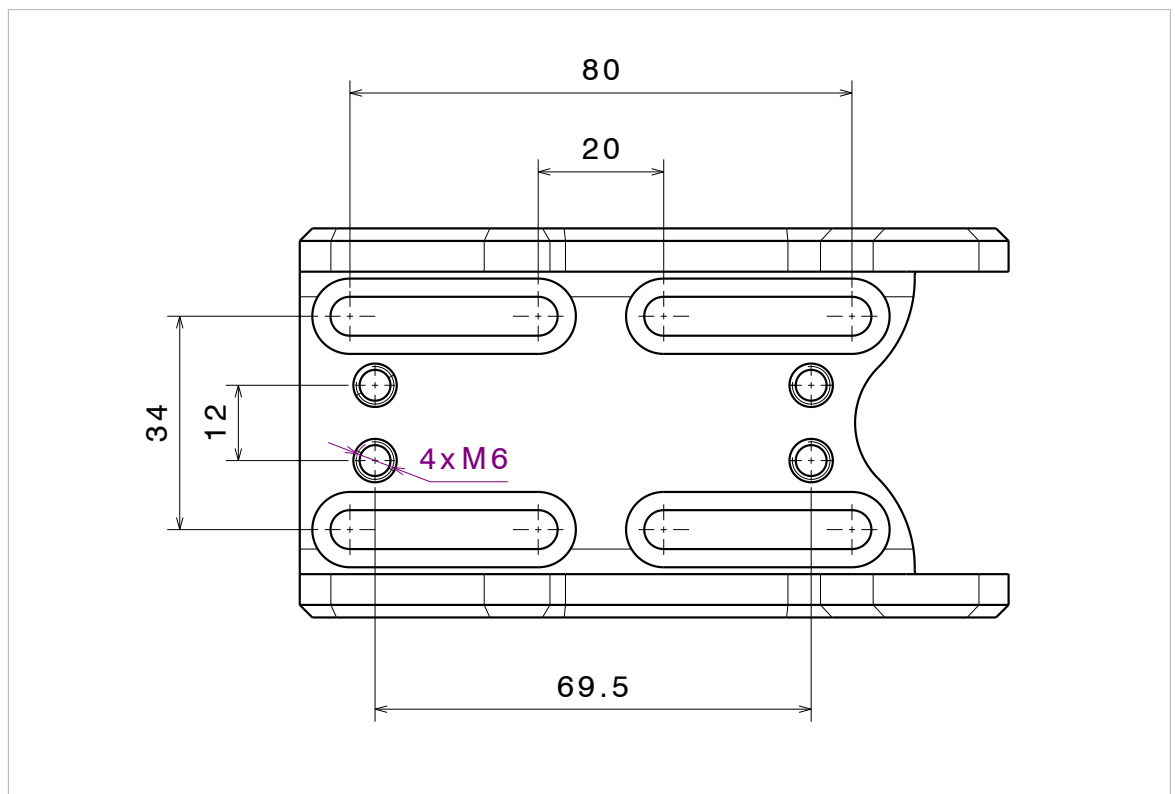
PurrPRO FORMULA PEDALS offer two ways of mounting pedal to your simrig. Below you will find drawing with holes dimensions and spacing.

5.2.1 PEDAL PLATE MOUNT

When your simrig has a pedal plate, you mount pedals using M6 bolts and M6 washers from underneath the pedal plate bolting pedals to the simrig using M6 threaded holes in the pedal foot.

5.2.2 ALUMINIUM PROFILE MOUNT

When your simrig has a pedal mount section made of aluminium profiles you mount pedals using M6 T-nut slid inside the groove in the aluminium profile, M6 bolts and M6 washer from above the pedal foot. To have access to mounting slots from above the pedal foot, you need to disassemble the pedal base from the pedal foot by unbolting 4 bolts as shown below. After achieving that, you first mount the pedal foot to the simrig in the position you want and fully torque M6 bolts **BEFORE** mounting pedal base to the pedal foot back again.



Recommended M6 bolts torque is 15 Nm. After securely tightening all bolts, pedals are ready for operation.

6. CONNECTING TO THE PC

PurrPRO FORMULA PEDALS are designed as two separate pedals: PurrPRO THROTTLE and PurrPRO BRAKE. Both pedals need to be first connected together using the provided **Molex to Molex 0,5m 4 pin** cable.

Pedals are connected to the PC using 2 meter **USB C to USB A** cable which is included in the box.

Each pedal requires external power supply for operation due to PurrForce haptics demands. Two AC/DC 15V power suppliers are included in the box. Connect them to the DC socket on the side of the pedal **before** connecting them to the power outlet.

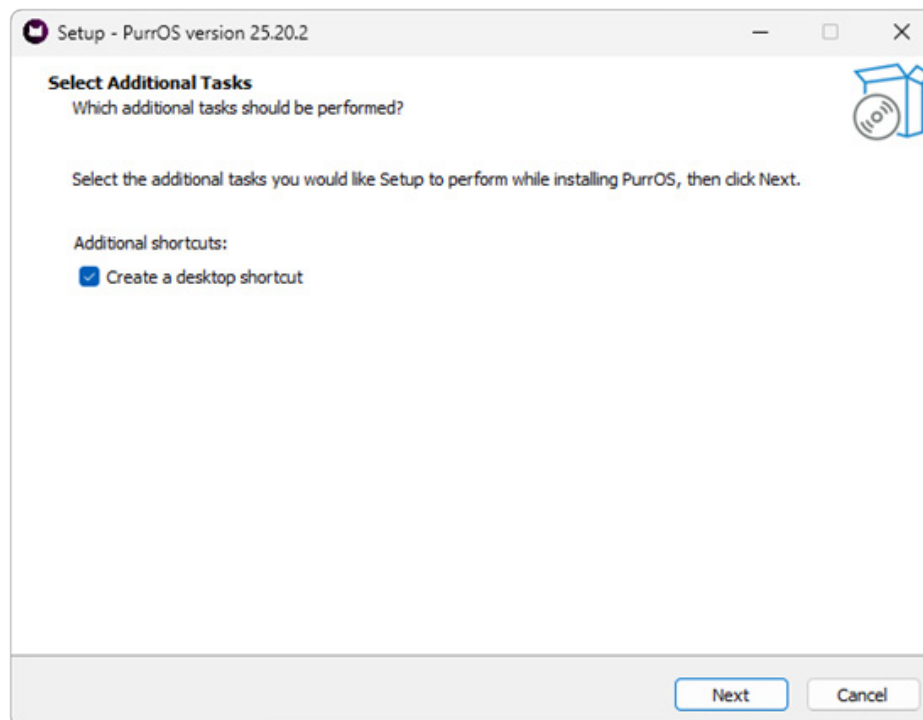
IMPORTANT: Without power suppliers pedals won't operate on PC USB connection only.

7. CALIBRATION

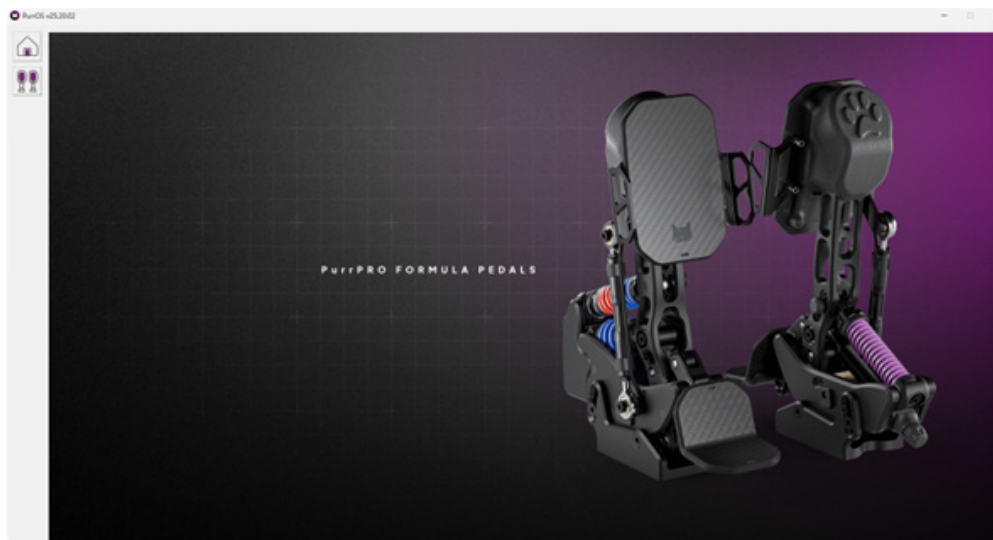
PurrPRO FORMULA PEDALS is really easy to calibrate, but first you need to download PurrOS software and install it.

Download PurrOS here: [PurrOS](#)

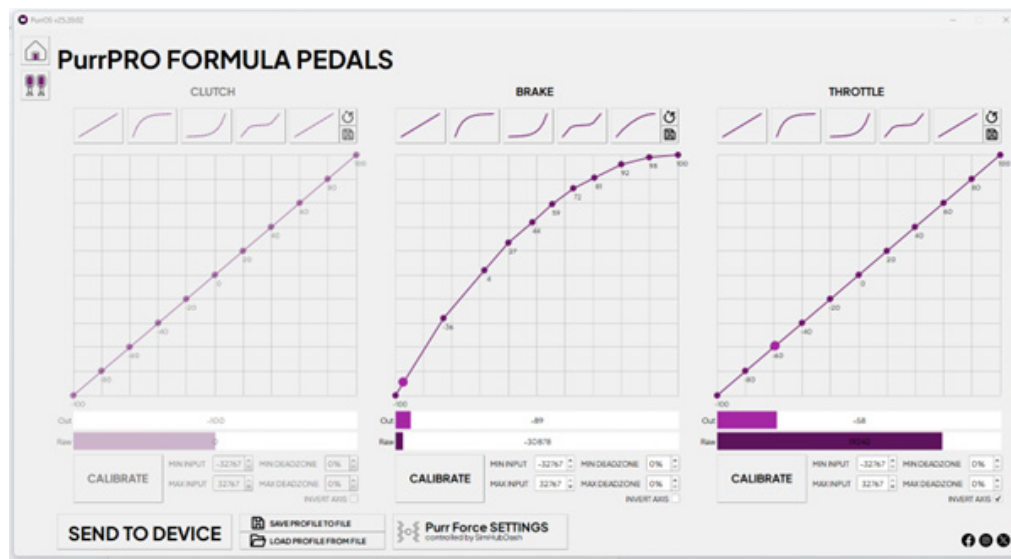
Install PurrOS app by double click on PurrOS.exe



When installation is complete, open PurrOS app – you will see a welcome screen with a banner button to our website. On the left you will see tabs buttons Home and Pedals, click on Pedals button to switch to PurrPRO FORMULA PEDALS page.



On top you will see the connected device name: PurrrPRO FORMULA PEDALS. Pedals setting page has 3 sections: Clutch, Brake and Throttle. The clutch section is not active until you connect the clutch pedal to your set (release date TBD.)

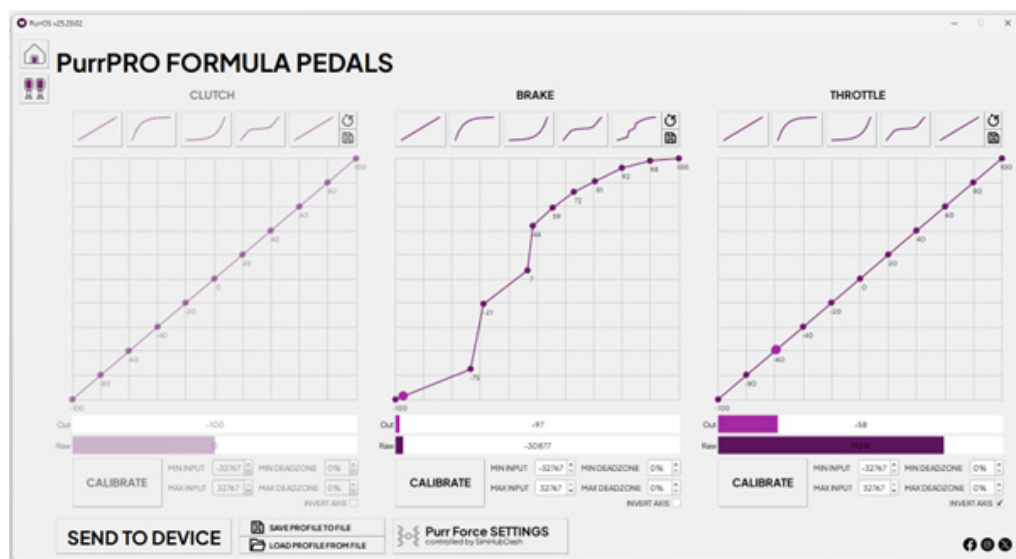


To calibrate your pedal click CALIBRATE button press and release the pedal, click STOP & SAVE to save calibration values.

Choose MIN and MAX deadzones.

IMPORTANT: Because of active heel rest and the weight of the leg we recommend not **putting your heel on the heel rest** during calibration, but press the pedal only using pedal face.

You can change characteristics of the pedal by using predefined characteristics or by moving points on the graph and achieve desired feeling. You can save your custom characteristic for the pedal by clicking the SAVE icon next to the last tile above the graph.

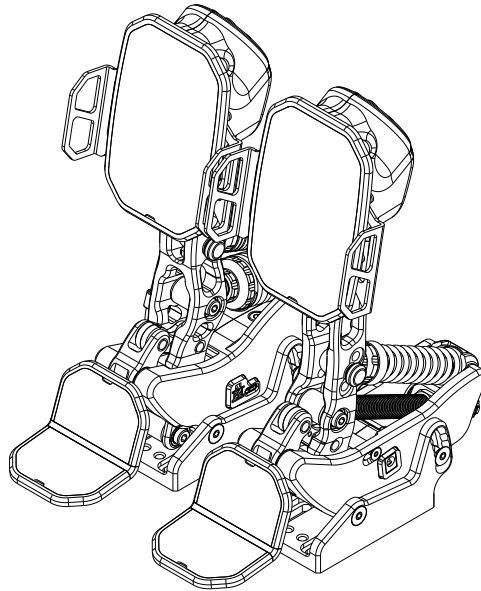


After calibration of the pedals, you need to send that configuration to the device by clicking the SEND TO DEVICE button.

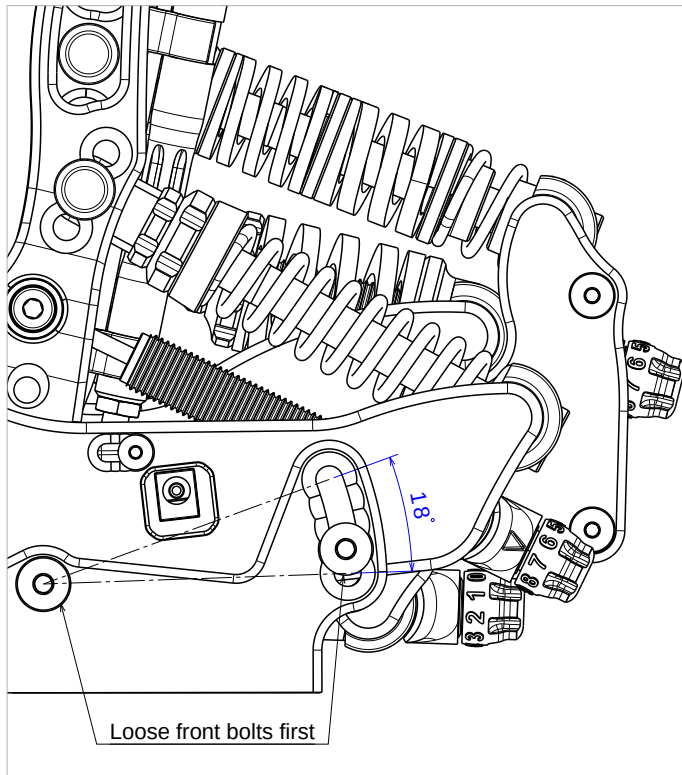
You can also save or load profiles that you've created for your sim games or specific cars.

8. GENERAL PEDALS ADJUSTMENT

PurrPRO FORMULA PEDALS offer a wide range of adjustment inspired by solutions offered for the race car pedals at the highest level of motorsport. We designed our pedals so they would feel almost like made to measure for your precision of inputs and comfort. By this approach you will focus on gaining performance on track not trying to adjust yourself to the pedals!



8.1. PEDAL BASE ANGLE



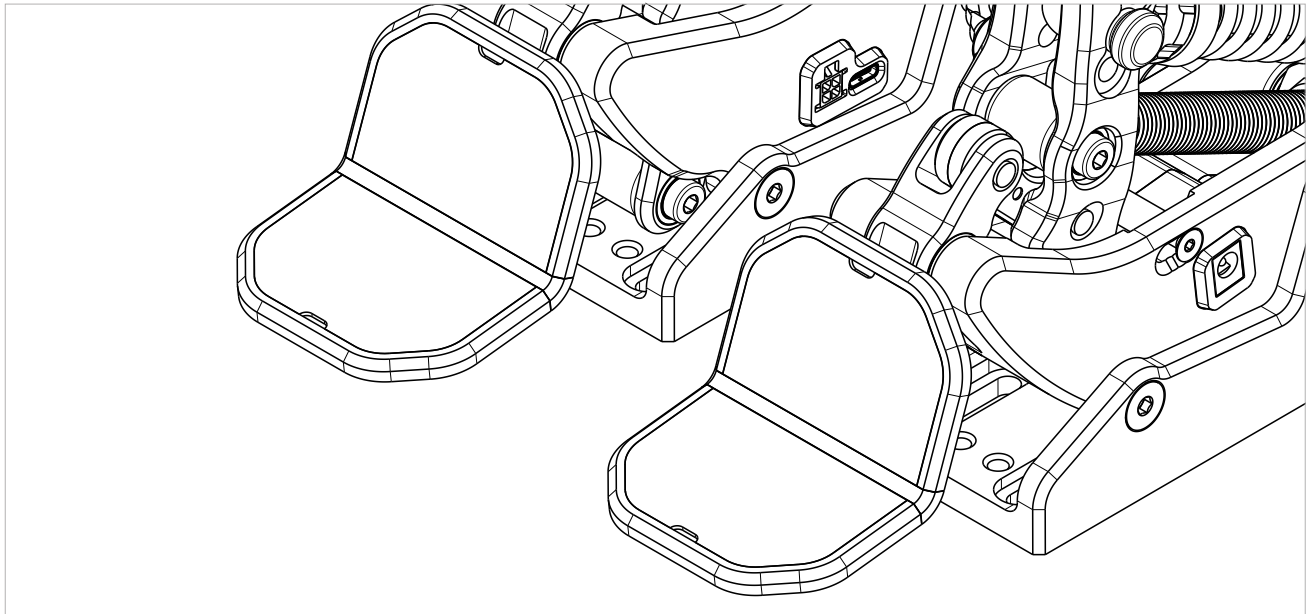
The PurrPRO FORMULA PEDALS mounted on the sim rig offer the ability to adjust the whole pedal angle within 18 degree range. To adjust the pedal angle you will need to lose front two bolts to allow a degree of freedom for axis of rotation and loose rear two bolts to make adjustment possible.

You will notice indents that will help you choose your angle position which provide a level of additional support after tightening bolts back again.

Recommended M6 bolts torque is 15 Nm.
After securely tightening all bolts, pedals are ready for operation.

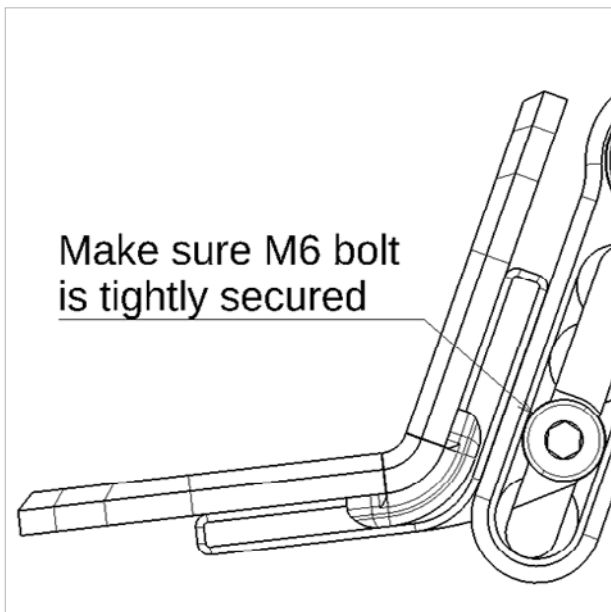
8.2. ACTIVE HEEL SUPPORT HEIGHT

PurrPRO FORMULA PEDALS offer innovative pedal kinematics with ACTIVE HEEL SUPPORT and NON TILT PEDAL FACE features.



ACTIVE HEEL SUPPORT (A.H.S) is a feature found only on PurrPRO FORMULA PEDALS. A solution inspired by designs found only at the highest level of motorsport is an active support for your leg and ankle during pedal operation.

A.H.S will increase your input precision and comfort of driving even during long racing sessions - you can adjust the height of the A.H.S by undoing one M6 bolt and moving the whole assembly higher or lower depending on your preference. You don't need to take the M6 bolt out completely, lose it, so you can slide A.H.S up and down.



Be aware that M6 bolts holding A.H.S assembly have light threadlock applied - we recommend Loctite 222.

You will notice indents with 10 mm steps in the internal face of the A.H.S assembly base part - this is where you should lock your position of choice. After adjusting the height remember to tighten the M6 bolt.

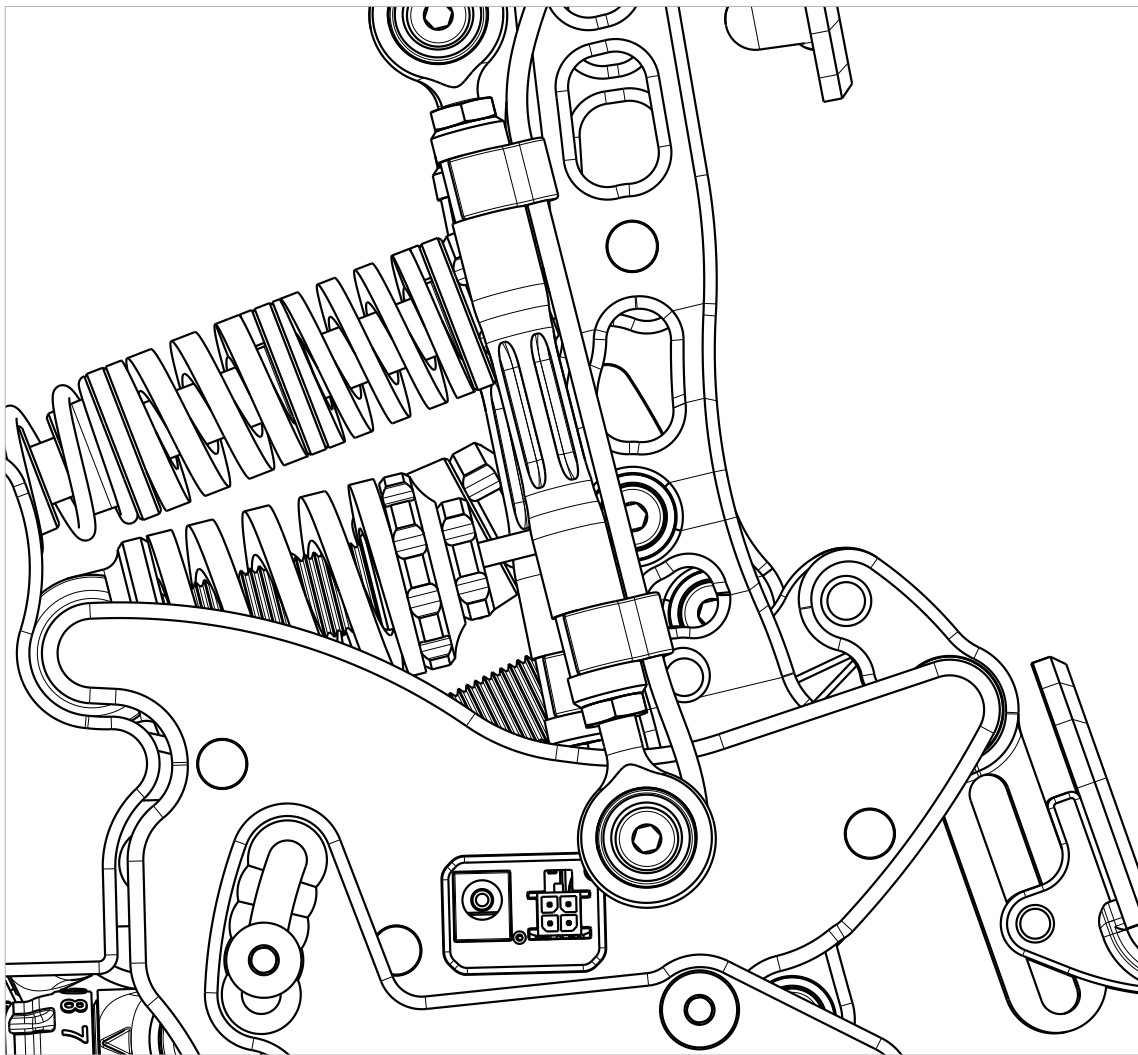
Recommended M6 bolts torque is 15 Nm. After securely tightening all bolts, pedals are ready for operation.

8.3. PEDAL FACE ANGLE

PurrPRO FORMULA PEDALS offer innovative pedal kinematics with ACTIVE HEEL SUPPORT and NON TILT PEDAL FACE features.

NON TILT PEDAL FACE (N.T.P.F) is a feature found only on PurrPRO FORMULA PEDALS. A solution inspired by design found only at the highest level of motorsport is a pedal face feature that keeps constant angle in reference to your driving position.

N.T.P.F is set up from the factory at the optimum reference angle, but you can change its angle by adjusting ERGO-LINK length, by loosening two counter nuts at the both end of the ERGO-LINK and rotating it clockwise or counterclockwise to change its length. Be careful with cable for PurrForce haptics, you can detach it by sliding it off the ERGO-LINK and moving it on the side for the time of the adjustments.



IMPORTANT: If ERGO-LINK length will change too much, it may happen that at the maximum travel of the pedal you will cause a clash with the pedal arm. Be cautious with your adjustments!

IMPORTANT: ERGO-LINK counter nuts at the top and bottom of it should always be tightly secured. Otherwise there is a risk that the rod end could be damaged if the counter nut will clash with parts behind it.

9. THROTTLE

PurrPRO THROTTLE offers a range of adjustments for pedal travel, stiffness and hydraulic damping, giving you best control over your throttle inputs in any situation.

9.1. THROTTLE TRAVEL

You can adjust throttle pedal travel by moving the adjustment slider in the base of the pedal. Loosen the bolt on the side of the pedal base and move the slider to the desired position. Do not unbolt it completely.

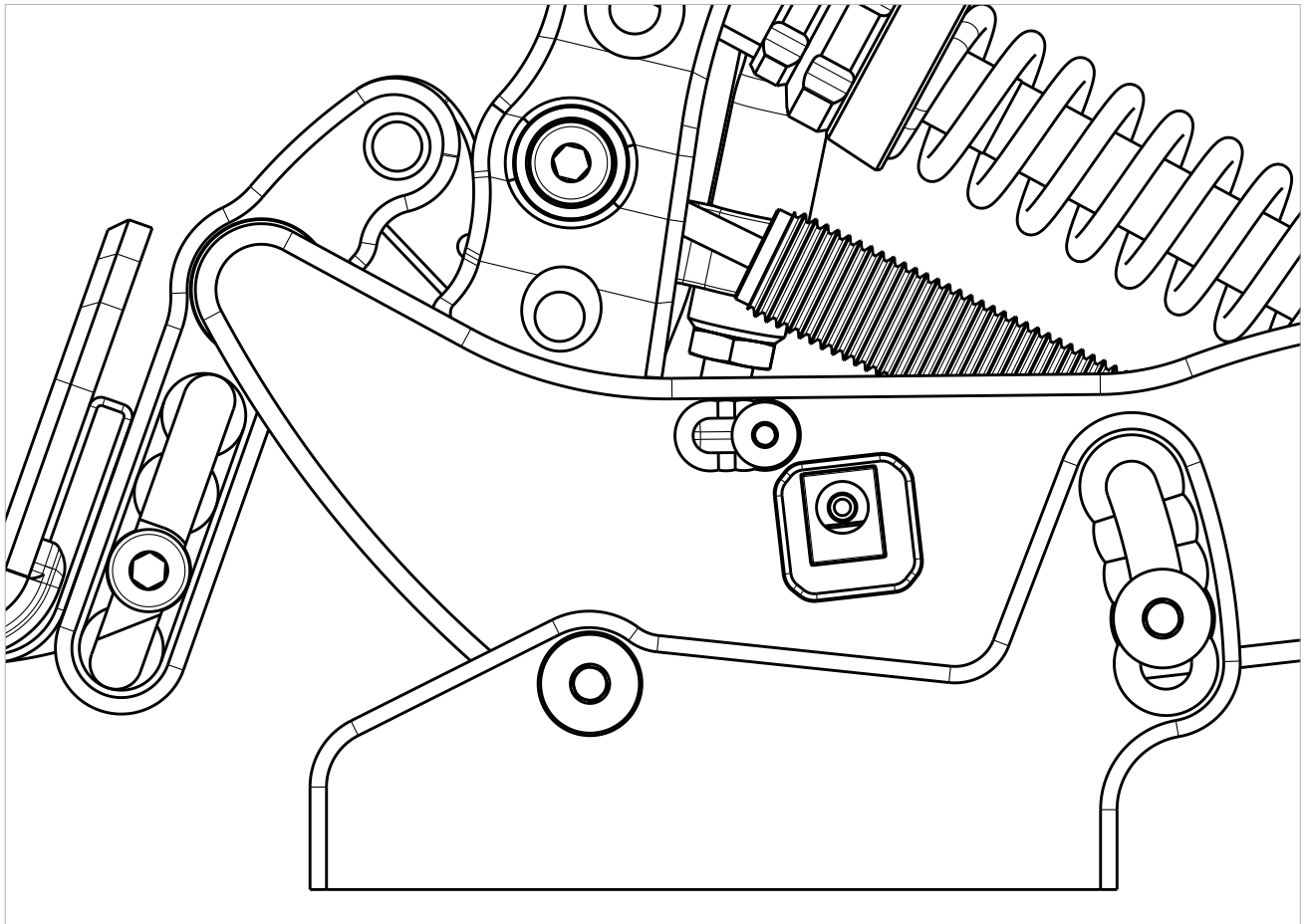
There are 4 positions for travel limit:

35 mm of pedal travel (measured at the top edge of pedal face)

54 mm

73 mm

91 mm

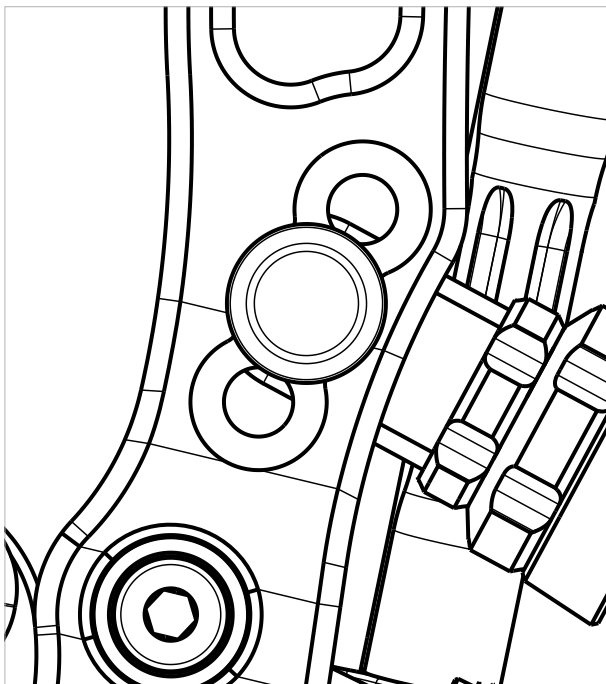
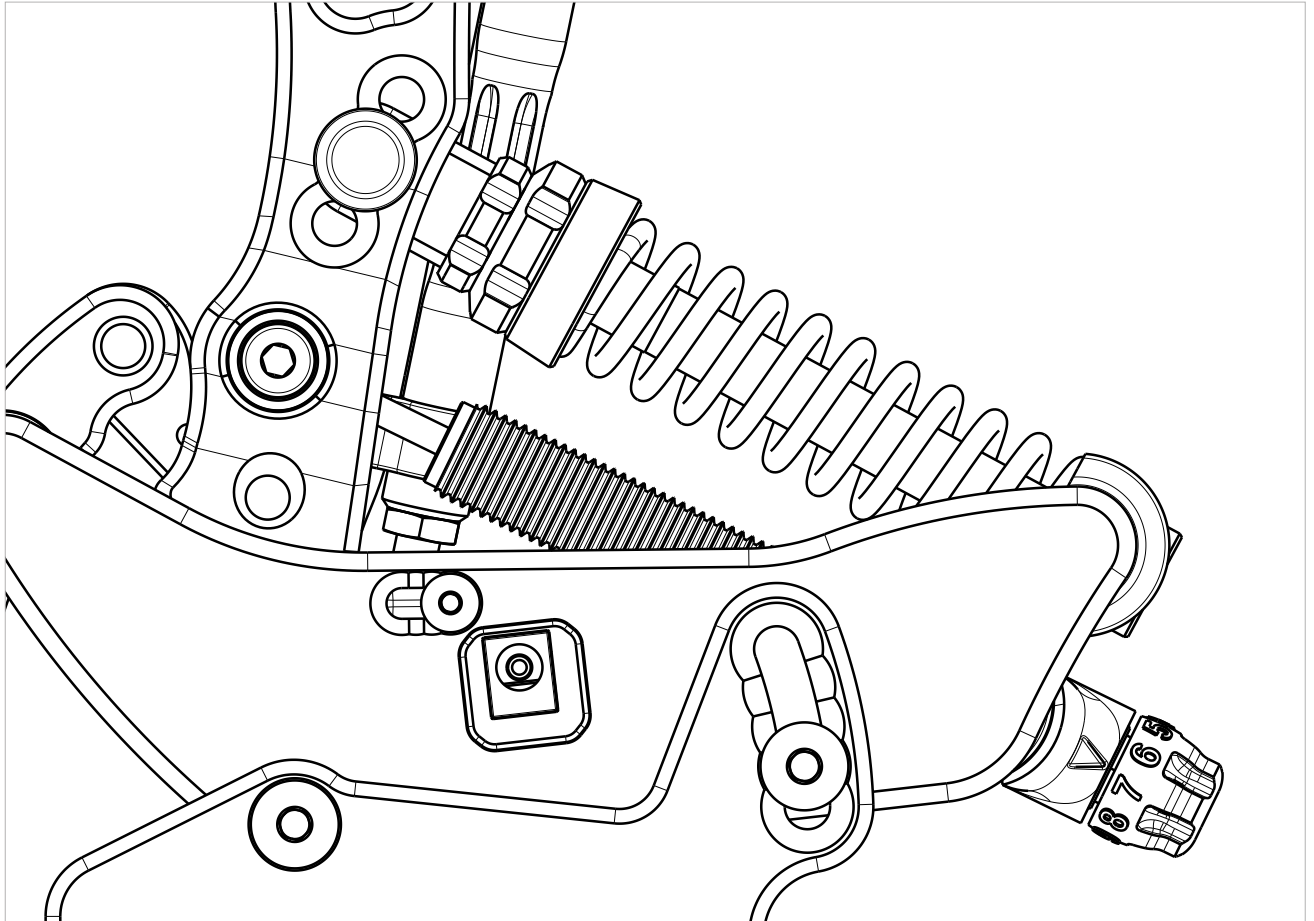


Tighten the M4 bolt so it doesn't slide when the pedal is pressed.

■ Recommended M4 bolts torque is 7 Nm. After securely tightening all bolts, pedals are ready for operation.

9.2. THROTTLE PRELOAD AND STIFFNESS

You can adjust throttle preload by untightening the counter nut on the preload nut at the throttle spring assembly and then rotating the preload nut to add compression to the throttle spring. After doing so, tighten the counter nut to preload nut.

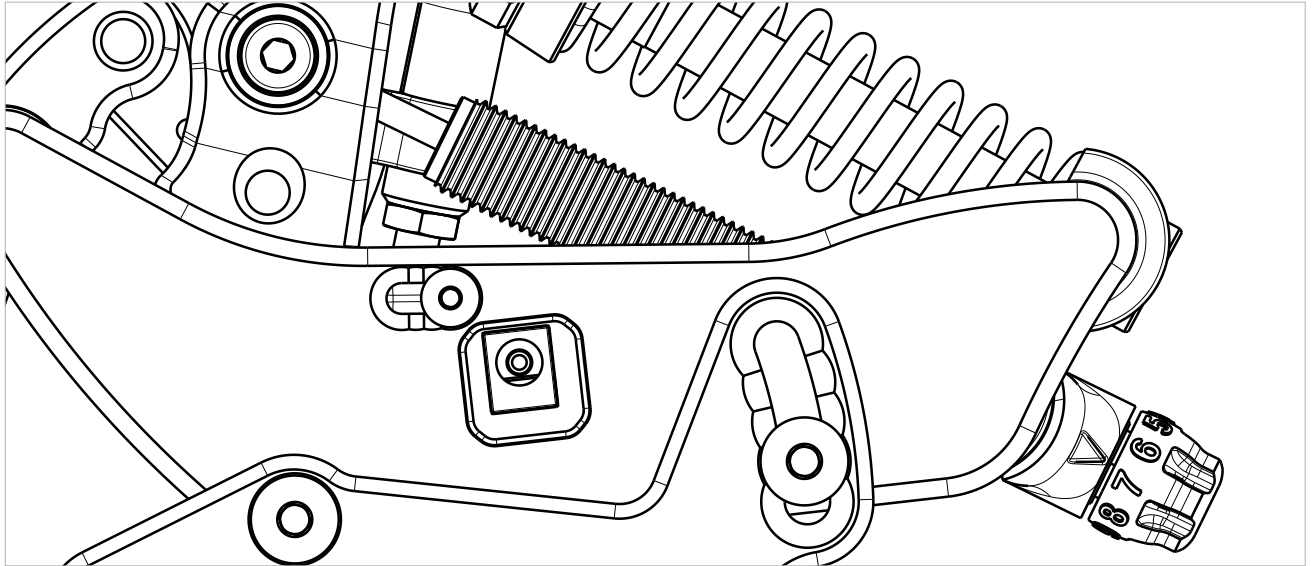


You can adjust stiffness of the throttle pedal by choosing one of three positions on the throttle pedal arm. Untighten preload nut to remove spring compression. Take Magnetic Quick Pin out of the socket and move it to a different position. Pay attention to the throttle spring assembly rod end bearing so it won't fall out of the pocket.

When you choose one of three positions, simply put a Magnetic Quick Pin into the hole and adjust spring preload to your preference.

9.3. THROTTLE HYDRAULIC DAMPING

You can adjust the throttle hydraulic damper. At the back of the pedal you will find an adjustment knob with 0–9 positions. Simply adjust the damping level by rotating the knob to your desired position. For throttle we recommend to start with the position 4 and adjust lower or higher to your preference. The adjustment knob can be rotated continuously and it will always have a damping level which is indicated by knob position.

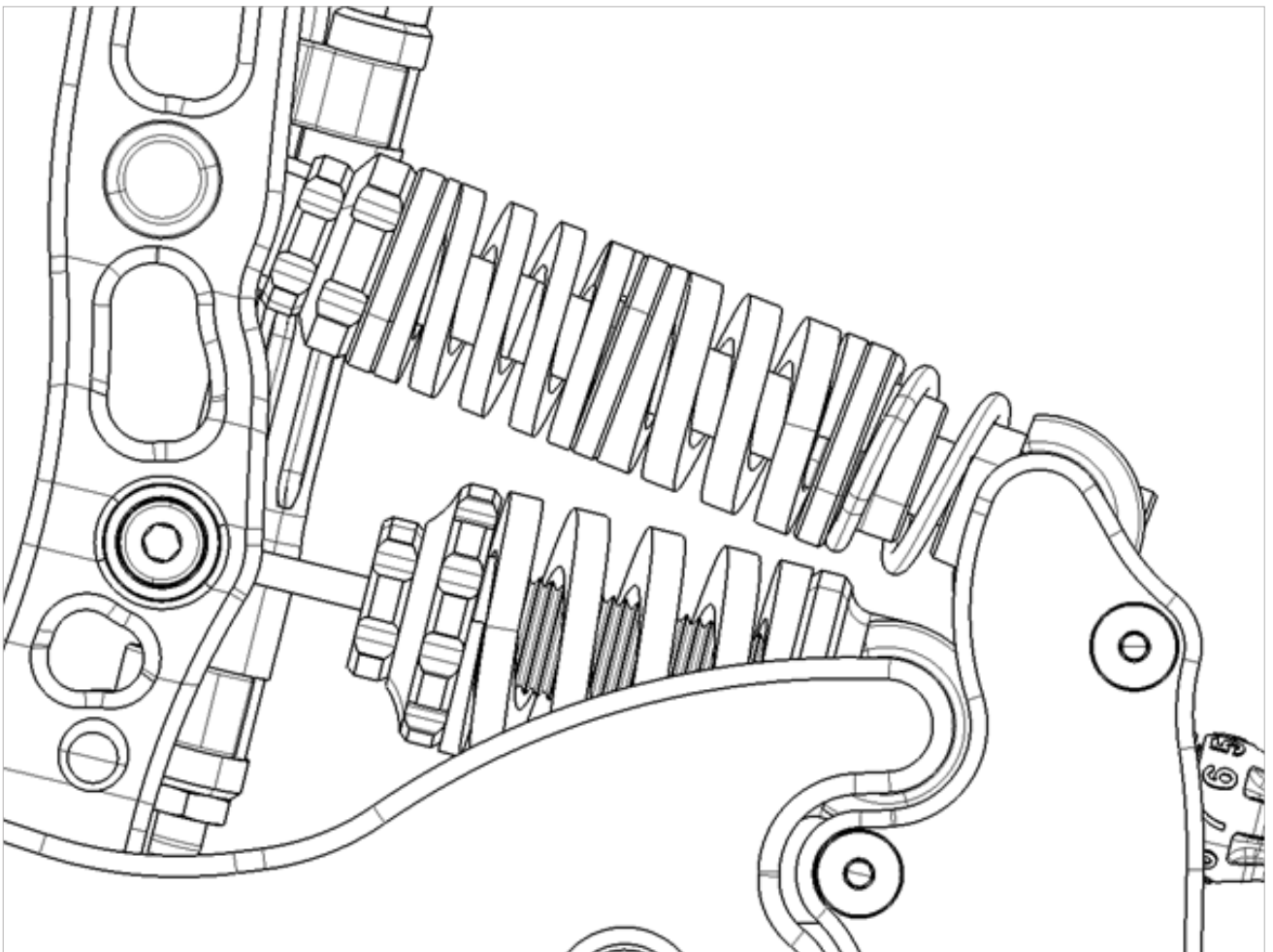


10. BRAKE

PurrPRO BRAKE offers a wide range of adjustments for pedal travel, stiffness, two stage hydraulic damping and optional 3rd stage braking giving you best control over your braking pressure and pedal release. You can achieve 130 kg+ of pedal force at the pedal face and make the pedal feel like in your road car or like in old school racing cars.

10.1. BRAKE STIFFNESS AND TRAVEL

Brake pedal stiffness and travel is a combination of nominal brake spring assembly setup and 3rd stage damper-spring combo setup. You can choose to activate the 3rd stage, but you don't have to if you don't need it. We recommend using the 3rd stage especially in combination with softer brake spring assembly setups.



10.1.1 BRAKE SPRING ASSEMBLY

You can adjust brake preload in a similar way as on the throttle pedal. Instead of only one spring like on PurrPRO THROTTLE, on the brake pedal you have a combination of 3 springs. Two main modulation springs and one light preload spring. In the box you will find a whole set of springs and washers with different colours and stiffnesses. List from hardest to lightest:

Yellow die spring 25 mm

Red die spring 25 mm

Blue die spring 25 mm

Green die spring 25 mm

Purple die spring 25 mm

Thick preload compression spring

Thin preload compression spring

Additionally you will find washers to pair the springs together. Brake preload springs have extra exchangeable washers with 7, 10 or 13 mm height to adjust the amount of travel for the last stage of brake pedal release. Between shortest and tallest preload washers will be 24 mm of pedal travel for preload spring. Pedals from the factory are set up with a 10 mm height preload washer which has a maximum of 20 mm of pedal travel on the preload spring.

IMPORTANT: Please pay attention to the plastic washers that are stacked between springs, they are not universal and should be stacked in a way that they will support the internal diameter of the springs.

Possible brake spring assembly combinations:

YELLOW - RED - THICK PRELOAD - 10 MM WASHER

YELLOW - BLUE - THICK PRELOAD - 10 MM WASHER

YELLOW - GREEN - THICK PRELOAD - 10 MM WASHER

YELLOW - PURPLE - THICK PRELOAD - 10 MM WASHER

YELLOW - RED - THIN PRELOAD - 10 MM WASHER

YELLOW - BLUE - THIN PRELOAD - 10 MM WASHER

YELLOW - GREEN - THIN PRELOAD - 10 MM WASHER

YELLOW - PURPLE - THIN PRELOAD - 10 MM WASHER

YELLOW - RED - THICK PRELOAD - 13 MM WASHER

YELLOW - BLUE - THICK PRELOAD - 13 MM WASHER

YELLOW - GREEN - THICK PRELOAD - 13 MM WASHER

YELLOW - PURPLE - THICK PRELOAD - 13 MM WASHER

YELLOW - RED - THIN PRELOAD - 13 MM WASHER

YELLOW - BLUE - THIN PRELOAD - 13 MM WASHER

YELLOW - GREEN - THIN PRELOAD - 13 MM WASHER

YELLOW - PURPLE - THIN PRELOAD - 13 MM WASHER

YELLOW - RED - THICK PRELOAD - 7 MM WASHER

YELLOW - BLUE - THICK PRELOAD - 7 MM WASHER

YELLOW - GREEN - THICK PRELOAD - 7 MM WASHER
YELLOW - PURPLE - THICK PRELOAD - 7 MM WASHER
YELLOW - RED - THIN PRELOAD - 7 MM WASHER
YELLOW - BLUE - THIN PRELOAD - 7 MM WASHER
YELLOW - GREEN - THIN PRELOAD - 7 MM WASHER
YELLOW - PURPLE - THIN PRELOAD - 7 MM WASHER
RED - BLUE - THICK PRELOAD - 10 MM WASHER
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GREEN - PURPLE - THIN PRELOAD - 10 MM WASHER
GREEN - PURPLE - THICK PRELOAD - 13 MM WASHER
GREEN - PURPLE - THIN PRELOAD - 13 MM WASHER

GREEN - PURPLE - THICK PRELOAD - 7 MM WASHER

GREEN - PURPLE - THIN PRELOAD - 7 MM WASHER

| Recommended combinations for car class:

2000s F1: YELLOW - RED - THICK PRELOAD - 13 MM WASHER

Hybrid F1: RED - BLUE - THICK PRELOAD - 10 MM WASHER

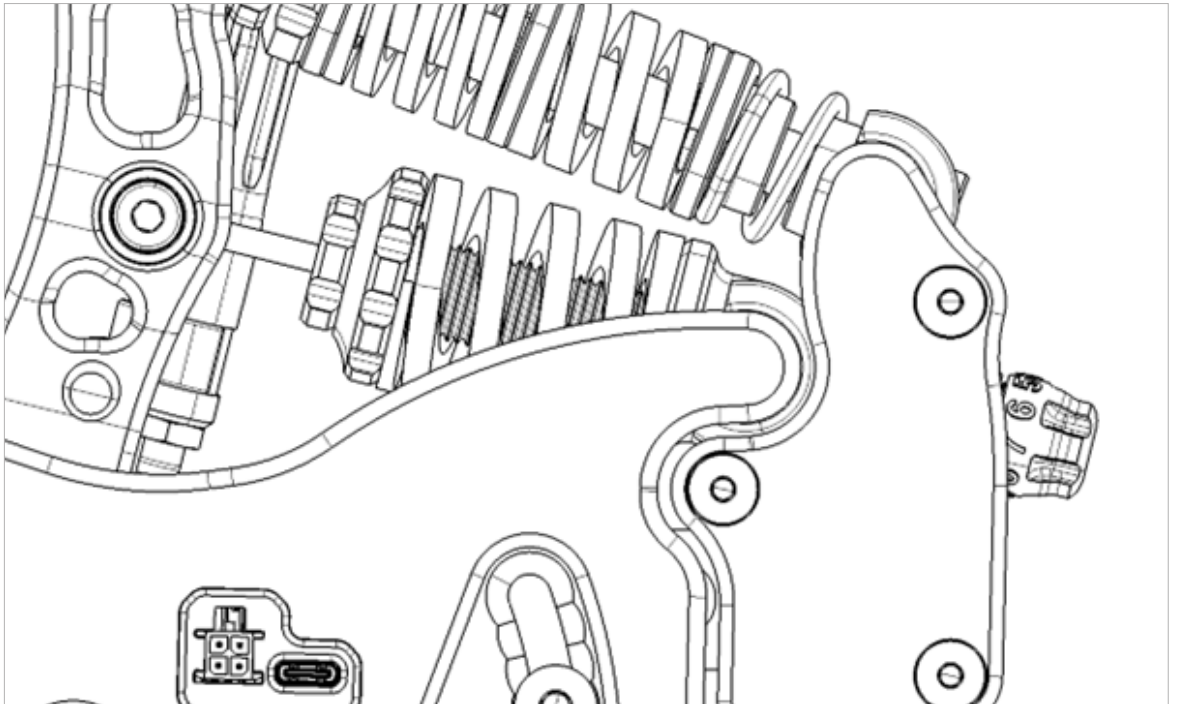
Prototype: YELLOW - BLUE - THICK PRELOAD - 10 MM WASHER

GT3: RED - BLUE - THICK PRELOAD - 10 MM WASHER

Modern road car: BLUE - GREEN - THIN PRELOAD - 10 MM WASHER

Vintage road car: GREEN - PURPLE - THIN PRELOAD - 7 MM WASHER

DAN SUZUKI: BLUE - GREEN - THICK PRELOAD - 10 MM WASHER

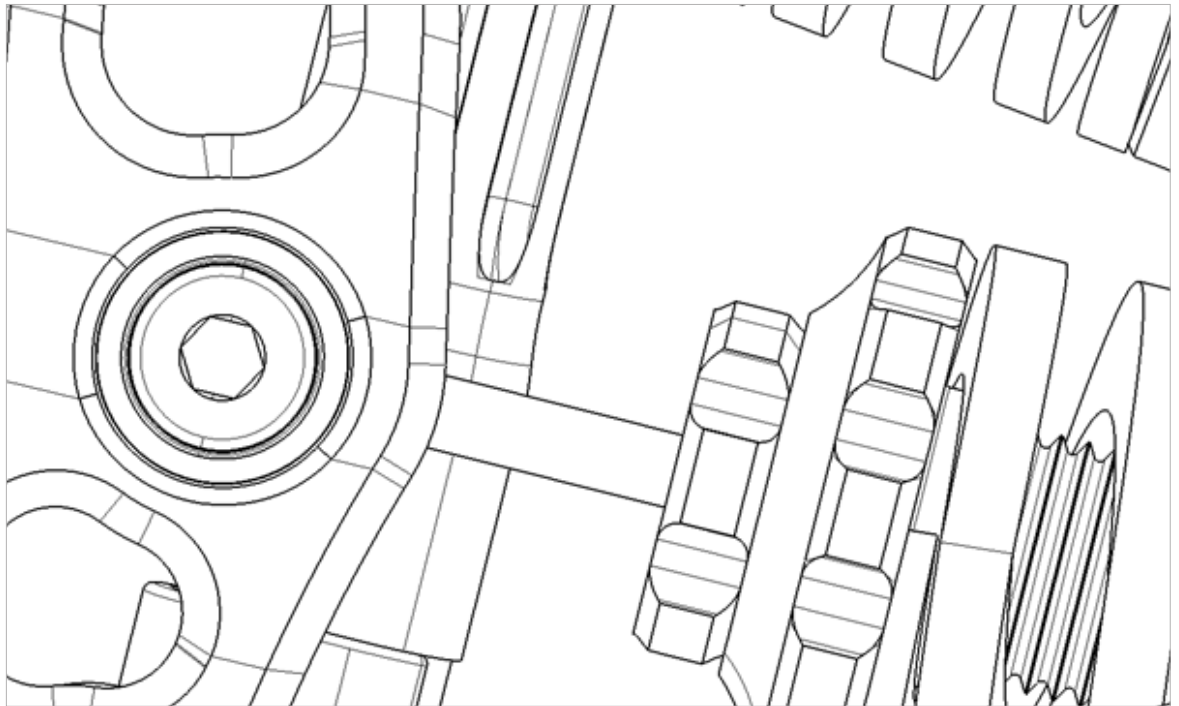


10.1.2 3RD STAGE DAMPER-SPRING COMBO

PurrPRO BRAKE offers an innovative approach to the maximum braking pressure phase during racing. We designed a 3rd stage damper-spring combo which helps to add modulation feeling at the very top of the braking pressure.

For example you can set up your PurrPRO BRAKE pedal in a way that 3rd stage will activate around 85–90% of your maximum braking pressure calibrated in the game – this will make it easier for you to modulate and find grip in the tires at this crucial moment.

In the box you will find two big die springs - yellow, mounted from the factory on the PurrPRO BRAKE pedal and blue one, which is optional to combine with softer brake spring assembly setups.



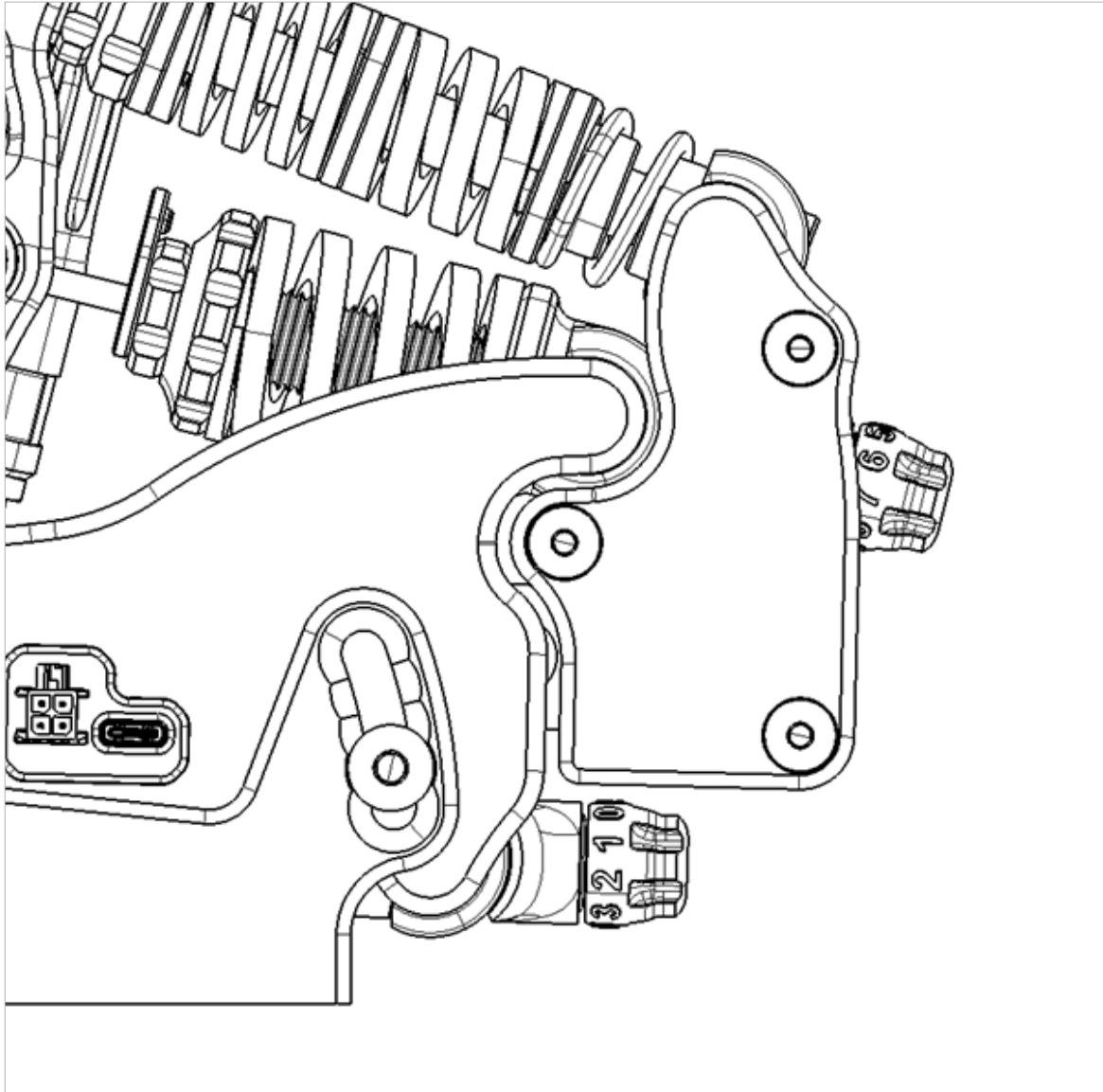
You adjust when the 3rd stage will be activated with the 3rd stage nut. First loose counter nut and then rotate 3rd stage nut to move hydraulic damper to desired position. **Distance between the hydraulic damper cylinder and bearing on the brake pedal arm will define the point of activation for the 3rd stage.** Every 2,32 mm between hydraulic damper and bearing on the brake pedal arm equals 10 mm of pedal travel at the top edge of the pedal face. After setting up the 3rd stage position, remember to tighten the counter nut for the 3rd stage nut.

Minimum distance between the hydraulic damper and brake pedal arm bearing is 2,2 mm, which means the 3rd stage won't activate before 10 mm of brake pedal travel.

Depending on the 3rd stage damper-spring combo position and brake spring assembly setup - 3rd stage can also be your hard stop indicator for desired pedal travel.

10.2. BRAKE HYDRAULIC TWO-STAGE DAMPING

PurrPRO BRAKE is the only brake pedal on the market with two-stage hydraulic damping for pressing and releasing the pedal. In the 3rd stage damper-spring combo you will find a hydraulic damper with adjustment knob at the back of the pedal - this hydraulic damper is responsible for adjusting the level of damping when you are pressing the brake pedal. We recommend that you don't be afraid and use higher settings for the hydraulic damping effect on our pedals.



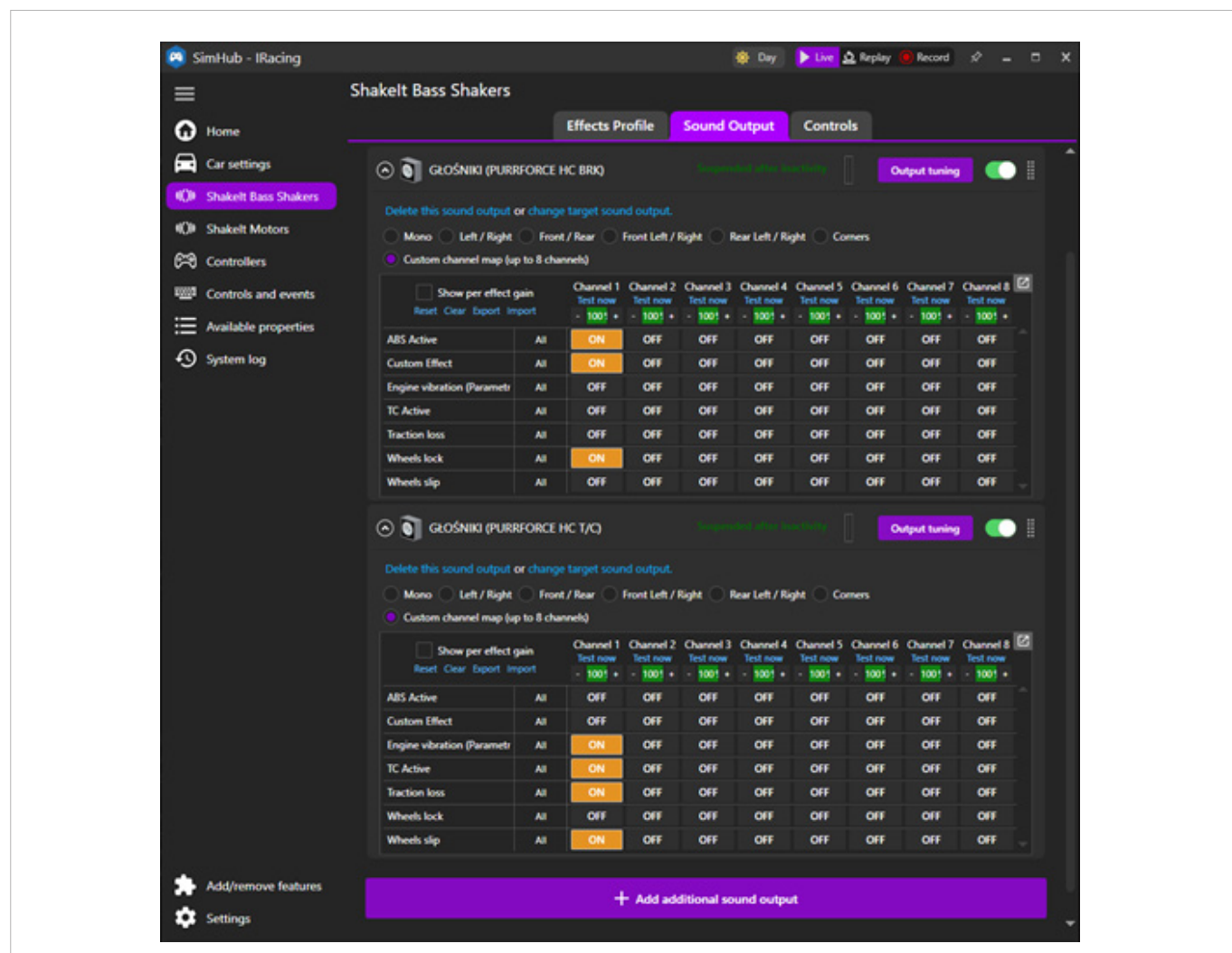
Under PurrPRO BRAKE you will find a second hydraulic damper with adjustment knob at the back of the pedal - this hydraulic damper is responsible for adjusting the level of damping when the brake pedal is released during the trailbraking phase of the cornering. At the back of the pedal you will find adjustment knobs with 0-9 positions. Simply adjust the damping level by rotating the knob to your desired position. We recommend trying higher settings for the hydraulic damping effect to help smooth out your trailbraking.

11. PurrForce HAPTICS

PurrPRO FORMULA PEDALS are designed with integrated haptics system in mind. PurrForce will enhance your immersion and will guide you in your efforts to find laptime on track! Each pedal has its own PurrForce Shaker which can be set up using SimHub software. PurrForce is fully compatible with the SimHub Shaker Bass Shaker module.

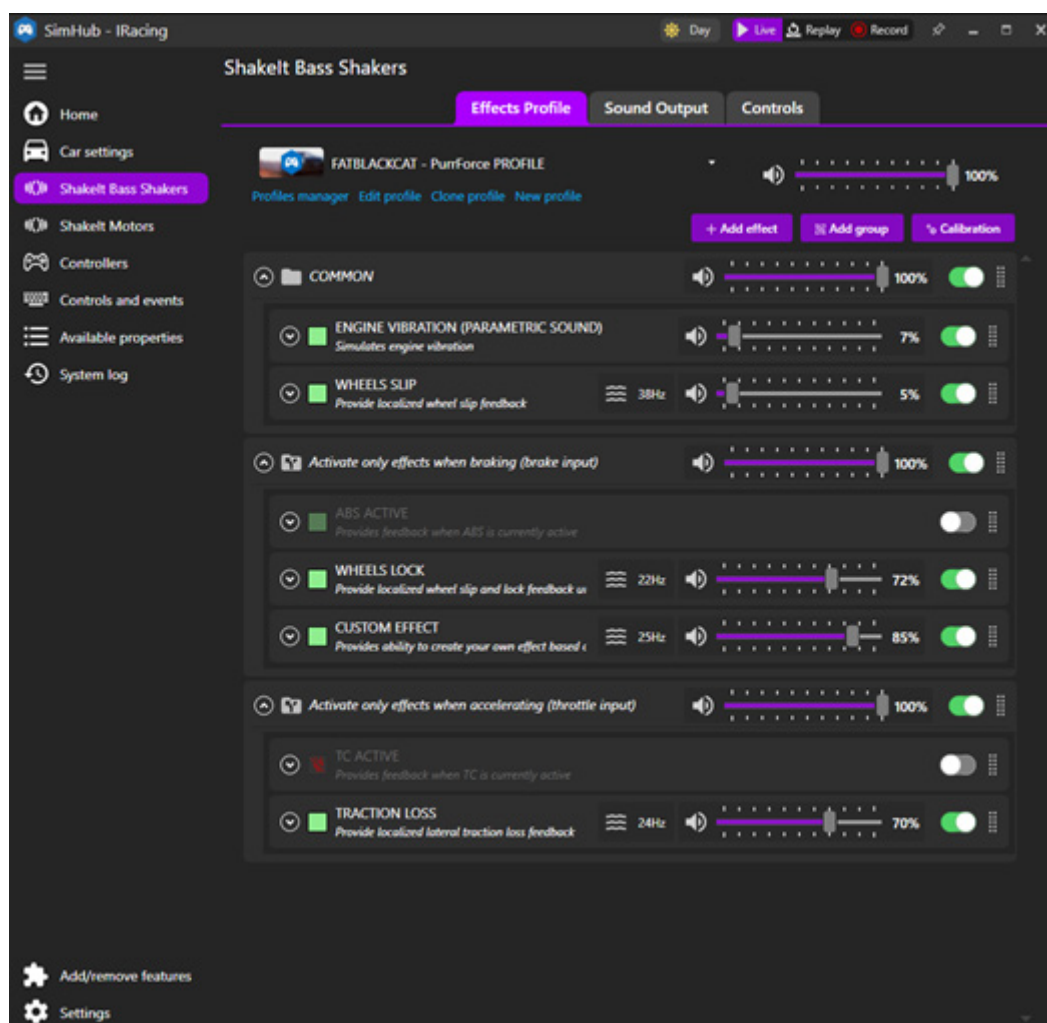
Here you can download baseline profiles: [PurrForce SimHub PROFILES](#)

Load profile in Sim Hub Shaker Bass Shakers module and then go to Sound Output tab and load **PurrForce HC BRK** (for the brake pedal) and **PurrForce HC T/C** (for the throttle and clutch pedals). Your configuration should look like this:



Depending on the Windows language version you will have to choose Sound Output again with "Change target sound output" button.

After setting up your hardware part of PurrForce now it's time to play with the effects. Go to the effects profile tab where you can change settings for your effects in PurrForce profile. You can modify that profile to your liking - you can add your own effects too.



IMPORTANT: Please always use the licensed Sim Hub version, **free version will add a lot of delay to the effects** which will feel not right during driving!

12. RECYCLING

We try to make our products as durable as possible. Please act responsibly when you need to discard (parts of) this product. Please use the appropriate paper waste stream to dispose of the packaging in case you don't want to keep it. We support our products with spare parts for many years after the original production date. In the very unlikely case the product itself needs to be scrapped, please make sure to follow local guidelines for responsible recycling. If you need to disassemble the product, please use the provided tools to do so. This allows you to separate the various materials used in the product. If you are unsure how to responsibly recycle the product, you may always send it back by mail to us.

13. MAINTENANCE

PurrPRO FORMULA PEDALS 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 that you clean pedals from dust every two weeks. After unboxing and using pedals for the first couple of hours please check ACTIVE HEEL SUPPORT and ERGO-LINK bolts and nuts. Do regular check on them every couple of weeks.



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