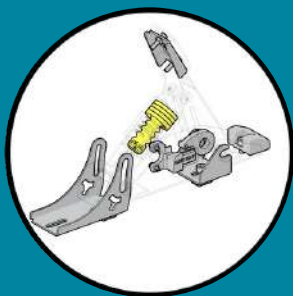
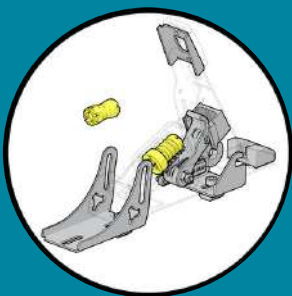
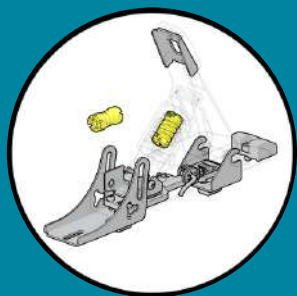




User manual

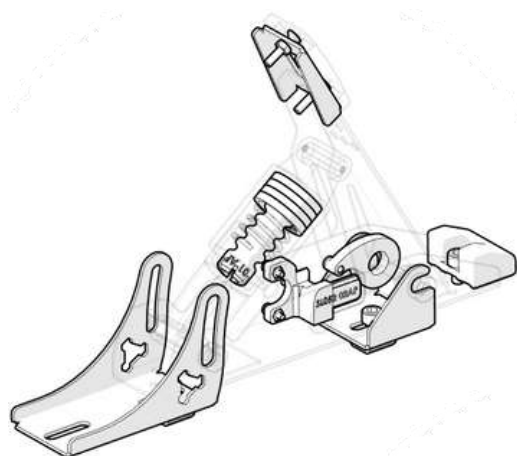
GGKIT

Power up your Logitech Pedals



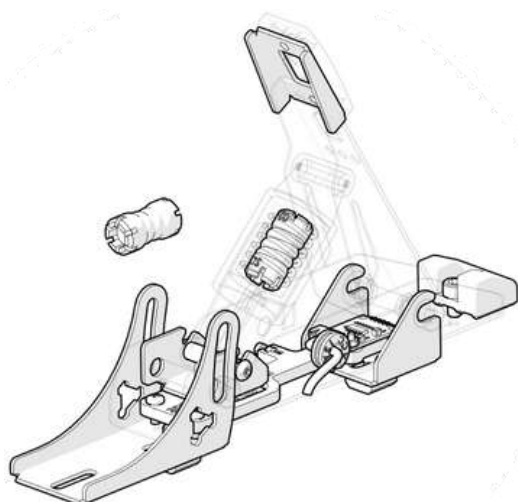
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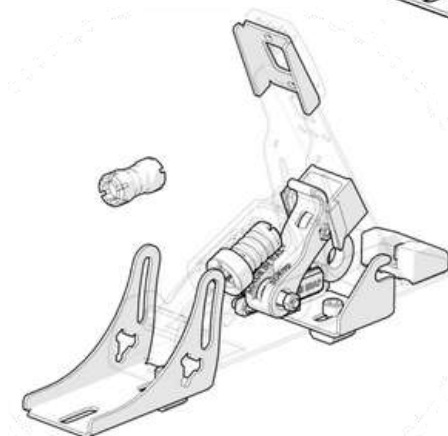


Throttle

Brake



Clutch



How it's made up

How it's made up

- **Parts for modifying the accelerator pedal;**
- **Brake pedal modification parts;**
- **Proprietary electronics;**
- **Proprietary wiring.**

New functions

1. **Plates for adjusting the inclination** of the pedals and sliding in depth;
2. **Extension for the pads** to lengthen the lever reaching the ergonomic set-up of the PRO pedal sets;
3. Pair of interchangeable **elastomers for brake pedal**, to modify hardness and stroke (Medium and Hard Elastomer);
4. Pair of interchangeable **elastomers for the clutch pedal** (they are the same shared with the brake but interchangeable with the clutch), to modify hardness and stroke (Medium and Hard Elastomer) plus spacers to preload the spring and enhance the effect;
5. **Elastomer and end-of-stroke pads** to modify the hardness and physical travel of the accelerator pedal;
6. **Kinematics** on bearings to create the double detachment effect on the clutch pedal (it is a skill of the PRO pedal sets);
7. **12-bit hall-effect sensors** in place of native throttle and clutch potentiometers;
8. **16-bit load cell** instead of native potentiometer;
9. Proprietary **software** for managing signals on single axes;
10. Proprietary **electronic board** and **firmware**.

Software Compatibility

LogiKit is compatible with:

- **PC** (Windows);
- **Logitech bases** (via connector provided)*;
- **Thrustmaster bases (T500 excluded)** (via connector to be purchased separately)*.

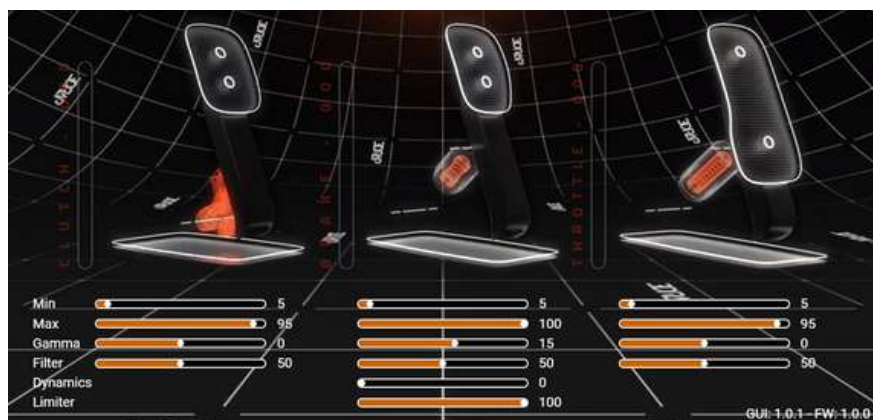
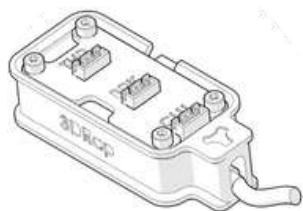
***The USB cable must be connected to the console or to an external power supply for it to work properly.**

Hardware Compatibility

The pedals can be installed individually thanks to specific plates that also allow adjustments.

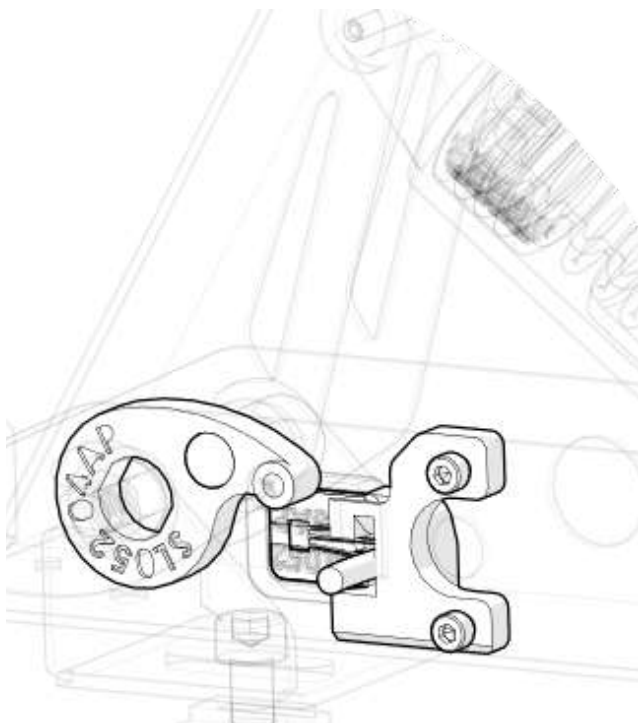
Software and electronic board

The GGKit electronic board automatically calibrate the pedal signals when switched on; in addition, through the **dedicated software** is possible to completely customize the character of each pedal by acting on the parameters made available by the GUI. This will allow you **to get the perfect response** depending on the car you choose to drive.



Hall sensor (throttle and clutch)

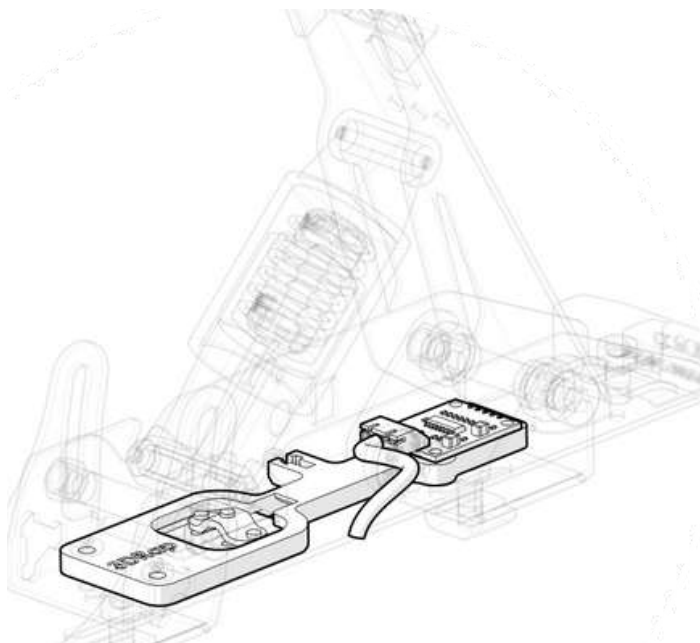
With GGKit, the native potentiometers are replaced by hall effect sensors on the accelerator and clutch pedals thanks to a harness created ad hoc by 3DRap; unlike the common potentiometer, the hall effect sensor does not undergo any wear mechanism thanks to the absence of physical contact between the moving parts, which is why it is much more reliable over time.



The GGKit electronic board guarantee a high resolution of the signal from the hall effect sensors which use **12-bit** sampling **to improve the modulation of throttle and clutch pedals**. The activation precision is guaranteed by the design of the components of the kit involved in the operation of the hall effect sensor and by the autotune managed by the firmware developed by 3DRap.

Load cell (brake)

3DRap allows you **to have a working brake with a load cell**, but also to be able to manage it thanks to the use of hardware and software developed ad hoc for the correct management of the signal. **The signal is high-resolution with 16-bit** sampling, to increase the feeling and the management of trail bracking (a technique used by pilots to dose the last phases of the braking manoeuvre).



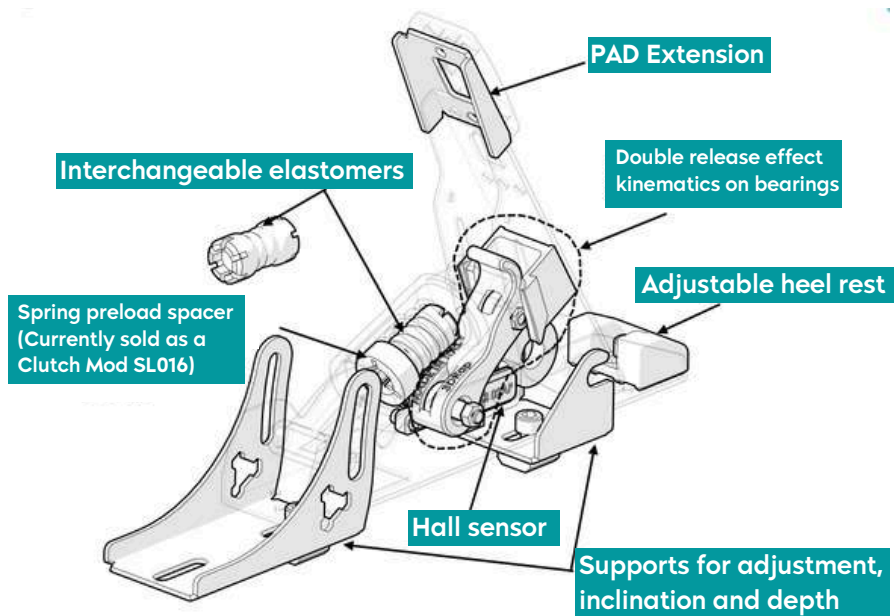
The maximum force of the brake pedal is approximately 30 [kgf], and it's possible to modulate it to your liking thanks to the use of a pair of interchangeable elastomers supplied, designed and engineered ad hoc:

- **Hard elastomer:** allows for a stiffer brake pedal, with less travel; it is suitable for formula cars equipped with a mechanical drive pump;
- **Soft elastomer:** allows the brake travel to be slightly increased, improving modulation on rally or GT category cars, usually equipped with power brakes.

Additionally, GUI adjustments allow you to further fine-tune the feel of the load cell.

Clutch pedal

3DRap allows you to have **a working brake with a load cell** but also **to be able to manage it** thanks to the use of **hardware and software developed ad hoc** for the correct management of the signal. The signal is high-resolution with 16-bit sampling, to increase the feeling and the management of trail braking (a technique used by pilots to dose the last phases of the braking manoeuvre).



On the native pedalboard the three pedals have a very basic configuration: they use a potentiometer to translate the position, they have a spring to produce the reaction force. The clutch pedal has been revisited:

- **12-bit Hall sensor** (see dedicated paragraph);
- **Tilt and depth adjustment supports:** they are used to offer complete customization of the pedal position, giving the simdriver the opportunity to maximize comfort by reaching the optimal posture;
- **Adjustable heel rest:** offers a further contribution to improve the overall ergonomics of the pedal;

Hard elastomer
(SL053_02)



Medim elastomer
(SL053_03)

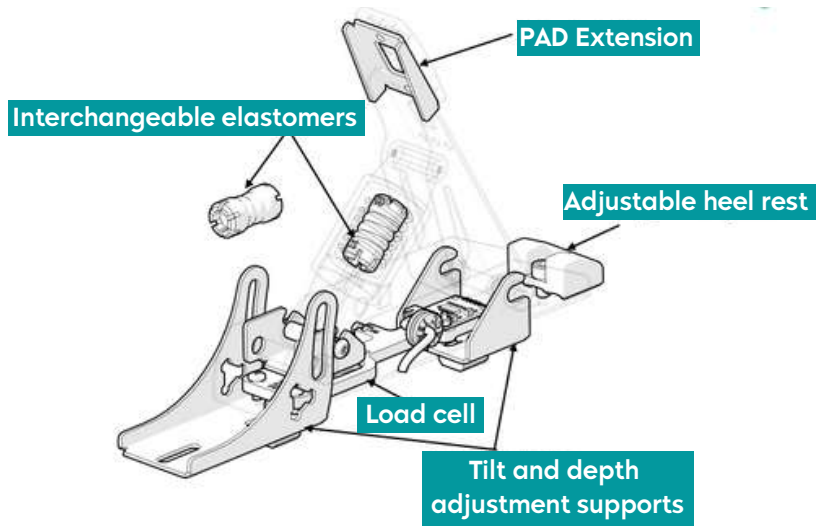


Spring preload
spacer (SL016)



Double-detach effect kinematics on bearings: mechanism designed with the aim of reproducing the double-heel effect of real clutches emulated by higher-end pedal sets; the effect can be amplified and modulated using the spacer for spring preload and the interchangeable elastomers; the use of bearings ensures maximum smoothness and avoids the occurrence of wear mechanisms.

Brake pedal



- 16-bit load cell (see dedicated paragraph);
- Tilt and depth adjustment supports;
- Adjustable heel rest;
- Interchangeable elastomers: it is possible to use two elastomers of different hardness:

**Hard elastomer
(SL053_02)**

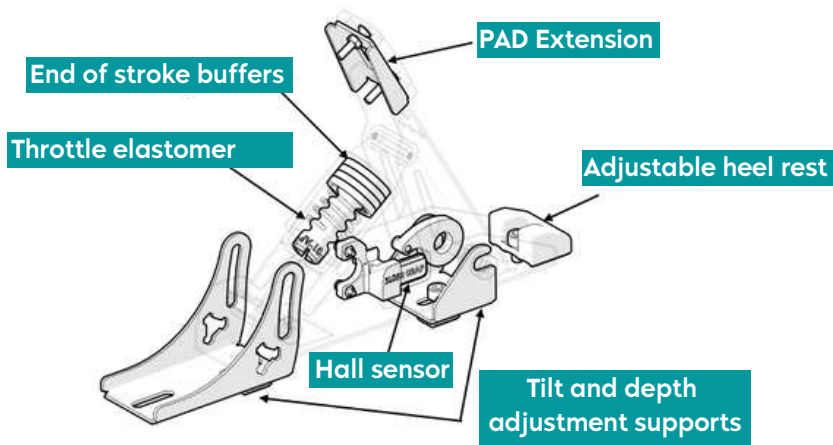


**Medim elastomer
(SL053_03)**



3DRap allows you to have a working brake with a load cell but also to be able to manage it thanks to the use of **hardware and software developed ad hoc** for the correct management of the signal. **The signal is high-resolution with 16-bit** sampling, to increase the feeling and the management of trail braking (a technique used by pilots to dose the last phases of the braking manoeuvre).

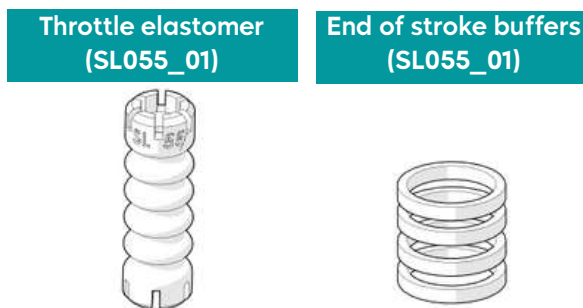
Throttle pedal



A good PRO range accelerator pedal must have the following functions:

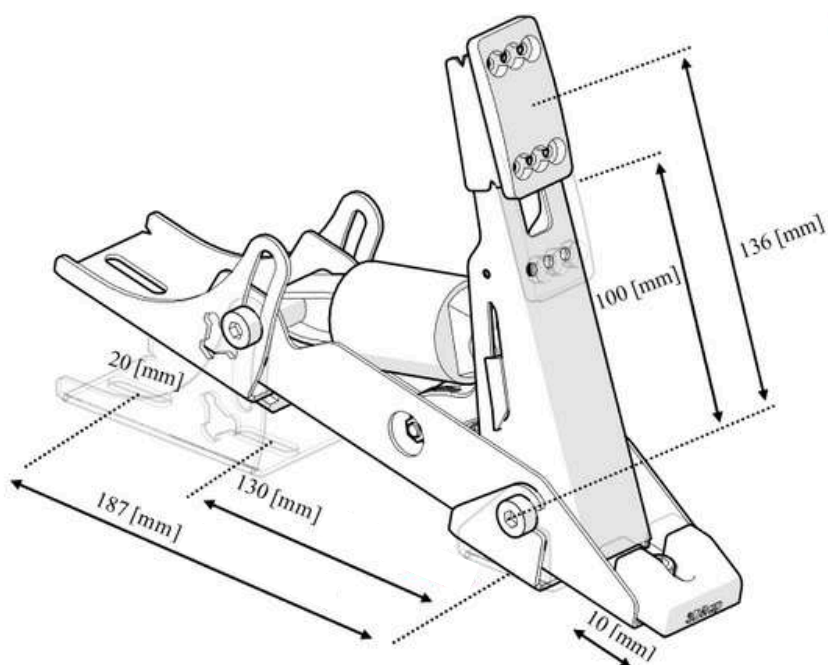
- Tilt and depth adjustment supports;
- Adjustable heel rest;
- Pedal stroke adjustment;
- Pedal force adjustment;

With LogiKit it is possible to obtain one shot all the functional requirements listed; the end-of-stroke buffers allow the pedal stroke to be reduced by more than 15 mm; the specially designed elastomer allows you to increase the resistance of the pedal for those who need to feel greater feedback during the gas opening phases.



In addition to the improvements in the mechanical feeling, it is always possible **to punctually act on the signal coming from the hall sensor** to carry out painstaking adjustments to the throttle.

Size and adjustment



Warranty and Assistance



Support

support@3drap.it

Contact the technical support of 3DRap s.r.l. to clarify doubts regarding use or to ask for intervention on troubleshooting.

Free spare parts and repairs within 2 years (1 year for companies). The management costs (transport costs, customs duties, and any extras) are charged to the customer.

3DRap s.r.l. is not responsible for product malfunctions with reference to situations of abnormal use:

- Deformation of mechanical parts due to excessive tightening of the adjustment registers - Deformation of mechanical parts due to excessive tightening of the adjustment registers highlighted in the brochure attached to the product or due to incorrect assembly of the pedals.
- Malfunctions related to poor ordinary maintenance (dirt on Hall sensors, abnormal wear caused by poor lubrication of components).
- Axis signal problems following unauthorized disassembly, tampering and alteration of the electronic components installed inside the product (i.e. load cell, hall sensors, connectors).

3DRap s.r.l. is also not responsible for malfunctions caused by the use of third-party 3DRap s.r.l. is also not responsible for malfunctions caused by the use of third-party software and the use of non-proprietary hardware.



3DRAP

SIM RACING EQUIPMENTS



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