3DRAP

Operation Manual

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PIKES SHIFTER

AKINA HANDBRAKE

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Akina has been designed to give you the chance to experience the **adrenaline** of drifting and the challenges of the most extreme rally on your seat.

Akina's features make it a reference point for Sim Racers looking for **performance, realism and customization.**

Artūrs Bondars - Drift Driver

How Akina was born

To bring all the thrill of the real experience into Sim Racing, we have chosen the only path possible: collaborations with **drivers and professionals from the real world.**

Akina was born from the collaboration with **Artur Bondars** and the **Drivemotive** drifing academy, key point when it comes to drifting.

Akina is inspired by the land that has **perfected drifting** to the point of making it an art: **Japan**.

Mount Haruna, also known as Mount **Akina**, is the place where everything was born.


Initial D - Monte Akina

I've been working for years with 3DRap Team to improve the realism of their Sim Racing produts

I'm very astonished. It feels just like a real hydraulic handbrake.

Overview


Alcantara covered lever
Lever tilt adjustment
DEF System Electronic adjustment for a linear or progressive feel
DMF System Mechanical adjustment for a linear or progressive feeling
AKINA
HANDBRAKE
Structure entirely in steel
High resolution electronics with 12 bits precision
Preload adjustment up to 8 kgf

Electronics

The electronics of Akina is based on a **12-bit** microcontroller, able to offer maximum precision and reliability.

The **autotune function** has been implemented, to maximize resolution and improve modulation in each maneuver.

Torsion Spring and Preload

Akina's mechanical movement depends on an **oversized torsion spring**, to make sure you can push our handbrake, and your riding experience, to the limit.

Thanks to the **preload** adjustment, the system can offer resistance **up to 8 kgf**, more than enough to correctly simulate any type of handbrake.

Hand Grip Setup

Akina gives you the ability to **customize the handle** and get as close as possible to the real sensations of the car you are driving.

For maximum control in every situation.

Vertical

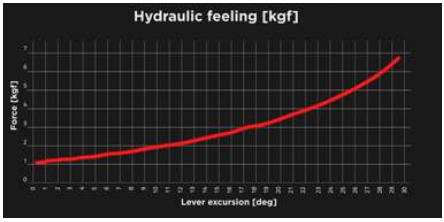
The vertical grip, on the other hand, is the typical one of **rally or drift cars.**
This type of setup allows you to apply more force to the handbrake lever, without sacrificing speed and alertness.

Horizontal

The horizontal grip takes you inside **standard cars** like the MX5. Conventional cars that still require a powerful and responsive handbrake to be driven.

DMF System

The DMF (*Dual Mechanical Feeling*) system allows you to modify Akina's **mechanical** response between **linear** or **progressive** feel.



Linear

With the adjustment screw **placed at the top**, in correspondence with the linear graph on the sticker, the actuation spring rises and provides a linear Akina response, useful for simulating the response of a **traditional car handbrake**.

Progressive

With the adjustment **screw moved down** to match the logarithmic graph on the sticker, the actuation spring offers a mechanical feel similar to the response of a **hydraulic handbrake** on a drift or rally car.

DEF System

The DEF (*Dual Electronic Feeling*) system modifies Akina's **electronic signal** mapping.
The signal conversion can also take place in this case in a **linear** or **progressive** way.

Thanks to the **combination** of these setups it is possible to create different presets, to find the one that best suits your driving needs (see *Presets* section).

Linear

With the switch positioned in correspondence with the linear graph, it is possible to have a better dosage of the handbrake, for a more user-friendly use.

Progressive

The switch set on progressive accentuates the progressive behavior of the handbrake; the signal limit is reached faster towards the end of the stroke, as is typical in handbrakes for professional use.

Presets

Thanks to the **combination** of available adjustments that Akina makes available, it is possible to create different presets to find the one that best suits your driving needs.

Rally

DMF Progressivo DEF Progressivo

With the full progressive setting it is possible to simulate the behavior of a rally handbrake, which does not have much travel and is hard at the end.

Drift

DMF Progressivo DEF Lineare

With the hybrid setting of progressive mechanics and linear electronics it is possible to simulate the behavior of a handbrake of a drift car, hard at the end but much more modulable thanks to the linearity of the electronic signal.

Stradale 1

DMF Lineare DEF Progressivo

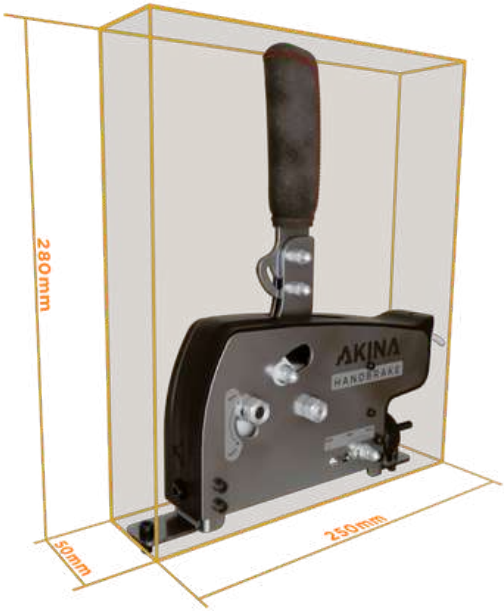
With a linear mechanical response and progressive electronics it is possible to simulate the behavior of a stock handbrake, but which is very close to the typical handbrake of a series production car with cable actuation.

Stradale 2

DMF Lineare DEF Lineare

With linear mechanical response setting and linear electronics you get a road setup with an After market handbrake or auto stock with drift setup.

Weight, Dimensions, What's Included



Dimensions

280 mm x 50 mm x 250 mm

Weight

1,5 KG

What's included

- Akina
- Customized adjustment key
- USB cable
- Manual

Pikes is the sequential handbrake designed to optimize every gear change.


Pikes Peak - International Hill Climb

Why Pikes

Our Sequential Shift is inspired by one of the **toughest uphill time trial**: the Pikes Peak International Hill Climb.

Pikes Peak is a track that requires **reliable, indestructible and precise shifting** - that's how we designed our Pikes.

Pikes was born from the know-how acquired on the track with **Formula Predator's** and which led the SRZ Team to **victory** in the 2019 championship.

The project involving the steering wheel and the car gearbox allowed us to experiment and get to know the **feeling and the mechanical feedback** of a sequential gearbox.

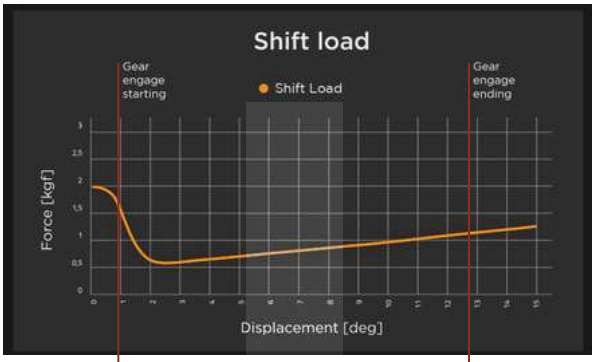

Team SRZ - Formula Predator's

Overview


Alcantara covered lever
MES System
System consisting of magnets, compression spring and two cams
PIKES
SHIFTER
Structure entirely in steel
High resolution electronics
with 12 bits precision

MES System

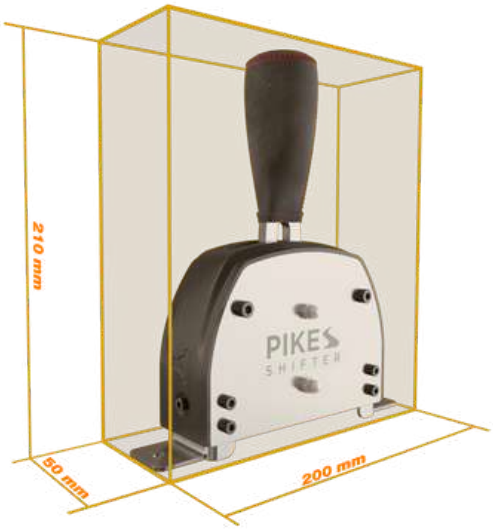
The **MES System** is a technology developed by 3DRap **to reproduce as closely as possible** the behavior of a real sequential gearbox with its **gear engagement mechanism**.



In the **initial phase** of operation, the shift lever exhibits greater resistance, simulating the movement of the shift mechanism.

In the **final phase**, the gear has engaged, the lever offers less resistance, thus simulating the moment in which the gearbox mechanisms synchronize.

Weight, Dimensions, What's Included



Dimensions

210 mm x 50 mm x 200 mm

Weight

0,8 KG

What's included

- Pikes
- Customized adjustment key
- USB cable
- Manual

Warranty & Support

Technical support ENG

support@3drap.it

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

Spare parts and repair are free within 2 years (1 year for company), any shipping costs to Spare parts and repair are free within 2 years (1 year for company), any shipping costs to be paid by 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 parts.
- Malfunctions related to poor ordinary maintenance (dirt on 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 (sensors and 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.

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