

RA Series

Ride Acoustic System

Speaker in the frame

Our sound module is the world's first integrated acoustic module for e-bikes that impresses with outstanding sound quality and unparalleled volume. It ensures that all warning and information sounds from the e-bike system are clearly audible.



Theft-protected

Thanks to the deep installation in the frame, the module is optimally protected against damage and tampering, which guarantees long-lasting and reliable use. Invisible on the outside, high-tech at its best on the inside!



Your e-bike, your sound, your safety

We tune individually for every brand and every bike model. One fits all? Not with us. The sound module offers every rider the opportunity to design individual sounds that sound unmistakable on the road. Increase your safety with a powerful, penetrating sound that is also clearly perceived by motorists. We offer a road-legal horn for the EU market.



Modules

RA 200

Ride Acoustic System 1



The Ride Acoustic System RA 200 is a high-quality acoustic module that is integrated directly into the e-bike frame.

It offers first-class sound design and plays warning and informative tones in outstanding sound quality.

RA 2000

Ride Acoustic System 2



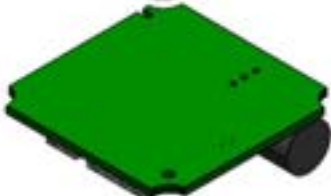
The Ride Acoustic System RA 2000 is an extended version of the sound module 1 and can be used in S-Pedelecs. This module combines first-class sound with a reliable horn to ensure that you can be heard in any traffic scenario. The powerful sound not only ensures increased safety, but also gives your S-pedelec that little bit of extra presence. EU-certified, of course!

Mechanical Structure

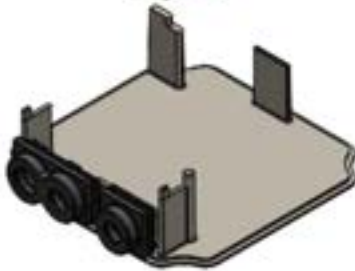
The housing system



top casing
without
horn grille



control box:
control PCB



base plate

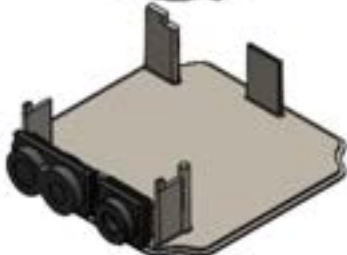
RA 200 (system 1)



top casing
with
horn grille



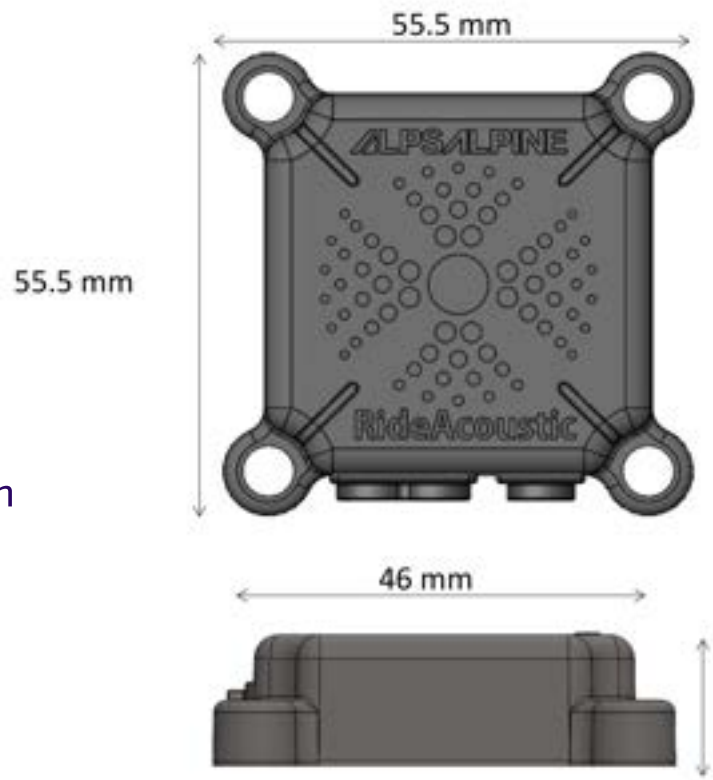
control box:
control PCB



base plate

RA 2000 (system 2)

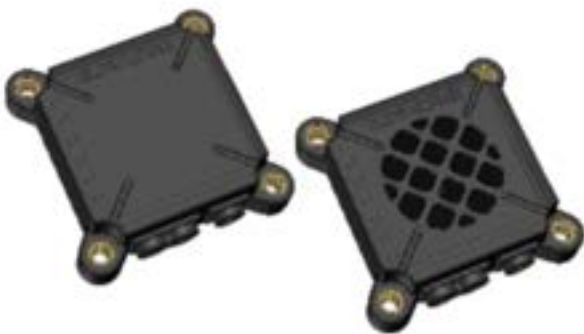
A look at the housing with the current dimensions.



Construction options

Ride Acoustic System RA 2000

Depending on the frame conditions of the respective S-Pedecels, the elements of the RA 2000 sound module can be installed either separately or back-to-back.



separate installation of the two components



back-to-back installation of the two components

Mounting within the frame

Ride Acoustic System 200 & 2000

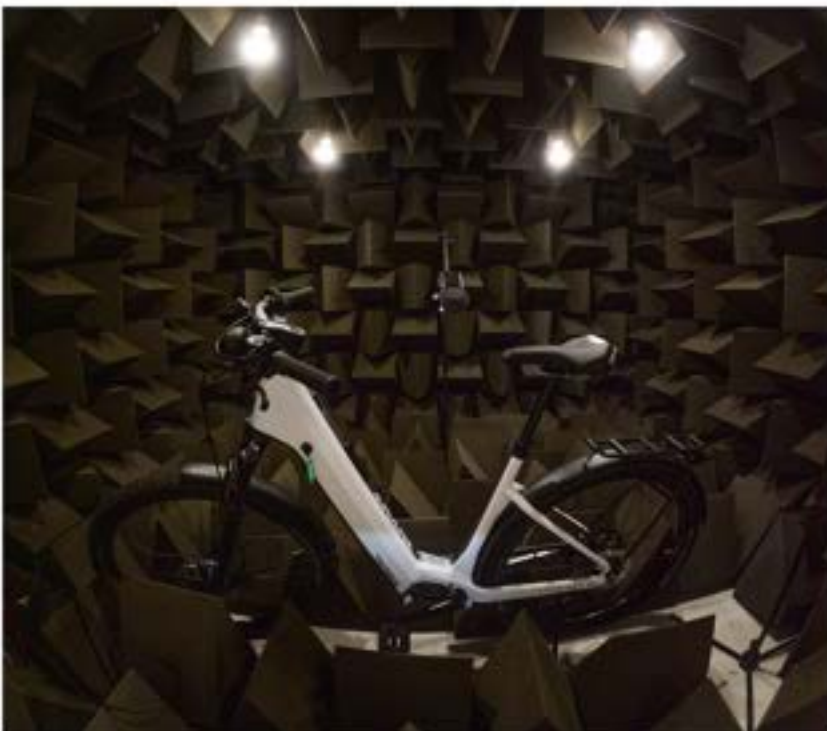


There are various mounting options for integrating the RS 2000 into the bicycle frame, providing us with great flexibility in terms of installation.

Our individual tuning

Positioning in the frame

Once the decision has been made as to which components are to be installed in the frame of the bike model, our engineers take over the installation. We are aware that the sound can vary depending on the position of the sound module in the frame and the materials used. That's why we carry out individual software tuning in order to optimize the sounds for each model.



Speaker

Electro-dynamic transducer for best audio performance

Horn

Piezo-electric transducer for road-legal sound pressure level

Power input

7~16 VDC, approx. 20W

Memory

4 Mbit

(up to 16 Mbit as an option)

Data I/F

CAN2.0B or CAN-FD
(BLE 5.3 as an option)

Physical I/F

Higo Mini F or Micro

PCB size

40x40mm

Ingress protection

IP55

Temperature robustness

-20 ~ 60 °C

Frequency range

200 ~ 8000 Hz

Ride Acoustic System

Acoustic signature

Each model can sound its own style through a variety of individual tones.

Premium Sound

The first integrated acoustic module for e-bikes with superior sound

Notification Sounds

Battery /
Charging status
Speed Limits /
Cruise Control
Defect / Error status

UI Sounds

Startup / Shutdown
Riding Modes
Navigation system

Alarm sounds

Anti-Theft Alerts
Patrol Alerts
Find-My-Bike

Alarm and Horn

More security through the powerful, rich sound with real assertiveness

All delivered from a single trusted source

Structure, hardware & software

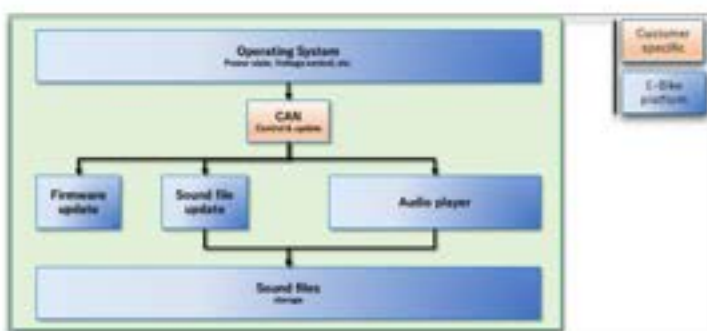
We guide you through every step of the implementation process, from the initial concept to the final execution. Our priority is maintaining close collaboration to ensure everything runs smoothly and meets your needs. Trust in our expertise to handle the complexities, allowing you to enjoy a seamless and stress-free integration. Whether refining details or addressing challenges, we're committed to delivering success with precision and care, keeping communication open and solutions tailored to you.



- *Universal structure to fit in tight packages
- *Custom low-cost fixing parts to install in target frames



- *Original electric concept, optimized for bikes
- *Size: 40 x 40 mm
- *IPx5 protection class



- *Original software integrating the target functionality
- *Custom firmware updates and data I/F via CAN/ UART/BT

ALPSALPINE

Perfecting the Art of Electronics

We'd love to hear from you—
let's start the conversation!



Florian Dammer
Senior Key-Account-Manager
florian.dammer@alpsalpine.com