

KYB



User's Manual

**(Operation of Common App
for all Car Models)**



CAUTION

1. Before using the product, carefully read and understand the user's manual.
2. Keep the user's manual in a safe place so that you can refer to it at any time.

KYB Corporation

User's Manual of ActRide Electronically Controlled Suspension System.

Thank you for purchasing the ActRide Electronically Controlled Suspension System. This user's manual explains precautions for safe replacement work and use. Please read this user's manual carefully before replacement work or use.

Contents

-  General safety precautions
 - 1. Preparation
 - 2. Setup
 - 3. Basic app operations
 - 4. Troubleshooting (when you have a problem)
 - 5. Controller specifications
 - 6. Disposal instructions
 - 7. Copyright
 - 8. Trademarks

General safety precautions

- Please read this user's manual carefully before installation or use. Before replacement work, please be sure to read the maintenance manual issued by the car manufacturer.
- The replacement work must be done at a qualified specialist store.
- Do not perform replacement work in an area with open flames.
- Keep this user's manual in a safe place along with the car user's manual and maintenance book so that it can be easily accessed and referenced, and attach it to the product when the car is going to be transferred to another owner.

About pictorial symbols

This user's manual uses various pictorial symbols to alert you to the correct use of the product and to prevent injury to yourself or others, and damage to property. The symbols and their meanings are as follows. Before reading the main text, please make sure you understand the contents.

 **WARNING** Ignoring this symbol and handling the product incorrectly may result in death or serious injury.

 **CAUTION** Ignoring this symbol and handling the product incorrectly could result in personal injury or damage to property only.

 **Point** This symbol indicates information useful for handling the product.

WARNING

- Drivers should never operate or look at a smartphone while driving. This can cause you to lose focus on what is ahead and result in a traffic accident. If you wish to operate a smartphone, be sure to stop the car in a safe place.
- This product is designed to control the damping force of shock absorbers. Do not use it for any other purpose. Failure to do so may result in a traffic accident or malfunction.
- Professional skills are required to install and wire this product.
Incorrect installation or wiring may result in fire or malfunction.
- Perform installation work in a well-ventilated area.
Working in an area where ventilation is insufficient may result in an explosion or fire.
- Never install this product in a location where it interferes with driving operations such as the steering wheel, shift lever, or brake pedal, a location where it obstructs your forward visibility, a location where it interferes with driving, or a location where it poses a danger to passengers. This may result in a traffic accident or malfunction.
- This product is designed exclusively for use with 12 V dc cars that are body-grounded. It cannot be used with 24 V dc or cars that use both 12 V and 24 V dc. This may result in fire or malfunction.
- Before starting installation, be sure to remove the negative terminal of the 12 V battery. Working without disconnecting the negative terminal may cause a short circuit, resulting in electric shock or injury.
- If you notice any errors such as a strange noise or odor coming from this product, immediately stop using it and contact your retailer. This may result in a traffic accident, fire, or malfunction.
- When installing this product, be careful not to damage the electrical wiring or piping of the car. This may result in fire or malfunction.
- If you notice any abnormalities such as abnormal noise, vibration, or an abnormal odor while driving, immediately stop the car and have it inspected and serviced by a professional. Performing inspection work by yourself is extremely dangerous and has a risk of injury. Be sure to contact a professional with specialized knowledge.
- Never disassemble or modify this product. This may result in a traffic accident, fire, or malfunction.
- Installation of this product was checked with the manufacturer's original car height. If the car height is different from the original height, please install it with extreme caution.
Failure to do so may result in a traffic accident or damage to the harness.
- When replacing the fuse, be sure to use a fuse with the specified capacity (amperage). Using a fuse with a higher capacity may result in fire.
- When replacing the fuse, be sure to disconnect the ACC cable and 12 V battery cable. Failure to do so may result in fire or electric shock.
- If you notice any errors such as foreign objects inside the controller, water intrusion, smoke, or an abnormal odor, immediately stop using it and contact your retailer.
This may result in a traffic accident, fire, or electric shock.
- Do not allow water or foreign objects to get inside the controller. This may result in a traffic accident, fire, or malfunction.
- Avoid installing the harness in high-temperature areas.
If the harness comes into contact with high-temperature areas of the car, the insulation will melt and cause a short circuit, resulting in fire or electric shock.
- For safety, be sure to install the fuse holder near the 12 V battery. Failure to do so may result in fire.

WARNING

- Never install the fuse holder in a location that interferes with the deployment of the airbag.
Doing so may cause airbag malfunction, resulting in a fatal accident. Before starting the work, check with the car manufacturer or dealer for important precautions.
- Be sure to connect and fix the harness securely with terminals and cable ties, and route it so that it does not get pinched by metal parts of the car or receive excessive force.
Contact with metal parts may damage the harness, resulting in fire or electric shock.
- Never install this product in any car model other than compatible models. Failure to do so could result in a traffic accident.
- Never use car safety parts* for controller installation or ground wiring. This may result in a traffic accident or fire.
*Bolts and nuts from the brake system, steering, fuel tank, etc.
- Never perform installation or wiring in areas designated by the car manufacturer as prohibited. This may result in a traffic accident or injury.
- Be sure to check the car operation after completing work.
If the product does not function properly, it may result in a traffic accident, fire, or electric shock.
- When modifying the power harness, have it installed by a professional for a secure installation. Please note that any modifications made by the customer will not be covered by the warranty.
- Always use the included and designated parts. Failure to do so may result in a traffic accident, fire, or malfunction.
- After modifying the car waterproof cap, be sure to take measures against water intrusion
If the modification is insufficient, water may enter the car, resulting in fire or electric shock.
- Install the controller and harness in a location where they will not be stepped on. Failure to do so may result in fire, electric shock or malfunction.
- Never get power from other devices. This may exceed the rated capacity, resulting in fire or electric shock.
- Keep small parts out of the reach of infants and young children.
There is a risk of them being swallowed by mistake. If this happens, consult a doctor immediately.

CAUTION

- When installing the controller, be careful of static electricity.
Static electricity accumulated on the human body may cause the controller to malfunction. Before starting work, be sure to discharge static electricity from your body by touching a nearby metal object such as an aluminum sash or doorknob.
- Removing the negative terminal of the 12 V battery may erase the memory of clocks, audio equipment, and other devices with memory functions. Before starting the work, please check the user's manuals for each product. After completing work, please set up the devices according to the instructions in each manual.
- When attaching double-sided tape, be sure to wipe off any dirt or a mild detergent or similar. Failure to do so may cause the controller to come off, resulting in malfunction or other issues.
- Do not use the product for long periods of time with the engine turned off. Failure to do so may cause the car battery to run down.

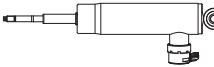
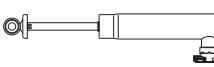
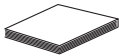
CAUTION

- Attach the ground terminal avoiding the painted surface of the car body.

This may result in ground failure. When attaching the ground terminal to a painted surface, peel off the painting.

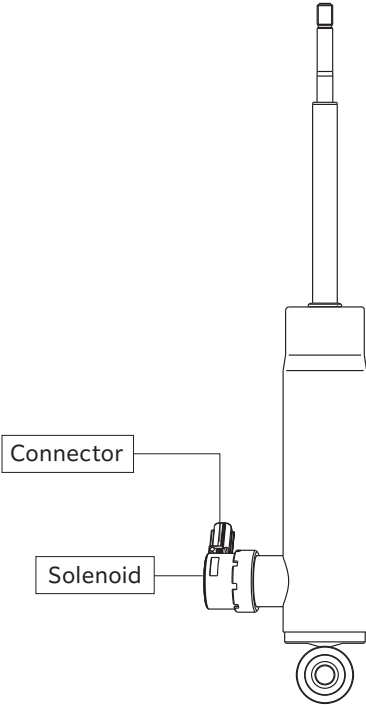
- Do not subject this product to strong impacts. This may result in malfunction.
- Firmly attach the product so that no excessive force is applied to the harness connection part. Failure to do so may result in malfunction or harness damage.
- When removing the connector, do not pull the harness, but hold the connector body and press the claw part to remove it. Failure to do so may result in malfunction or harness damage.
- For safety, please wear protective equipment for installation or wiring work. Failure to do so may result in injury.
- Be sure to securely fasten the ground terminal to the ground part on the car with the screws. This may result in ground failure.
- Immediately after driving, the tires, wheels, muffler, brakes, shock absorbers, and other parts are hot. Allow each part to cool sufficiently before starting work. Failure to do so may result in injury or burns.
- Do not handle the shock absorber roughly. This may result in damage.
- Please note that the specifications of this product and this manual may be changed without prior notice for the purpose of improvement.
- The speeds displayed in this app are for reference only, and accuracy is not guaranteed. When driving, always use the speedometer of the car as a reference.
- GPS measurement accuracy of the smartphone may be reduced due to factors such as radio interference.
- This product collects position information, but does not store or transmit it as personally identifiable information.
- To prevent the leakage of position information, please perform appropriate security settings.
- This app is updated regularly to improve functionality and fix bugs.
To ensure a safe and comfortable experience, please be sure to update the app to the latest version when an update is available.
- This device uses the 2.4 GHz frequency band. This frequency band is also used by microwave ovens and other industrial, scientific, and medical equipment, as well as indoor radio stations (radio stations requiring a license) for mobile identification used on manufacturing lines, specified low-power radio stations (radio stations not requiring a license), and amateur radio stations (radio stations requiring a license).
(The above wireless equipment is collectively referred to as "other wireless equipment.")
- If this device causes radio interference to "other wireless equipment," immediately move the device to another location or stop operating it (stop emitting radio waves).
- If you are using a medical device such as a cardiac pacemaker, please consult the medical device manufacturer or your doctor about the effect of radio waves on the medical device before using this product.

Main components

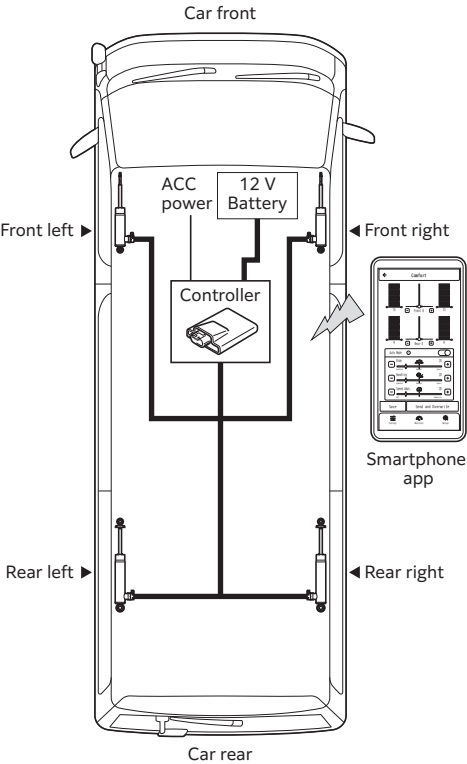
Name	Quantity	Shape	
		Front	Rear
Shock absorber	For 1 vehicle	 × 2	 × 2
Controller	1		
User' s Manual (Operation of Common App for all Car Models)	1		
Harness (exterior use)	For 1 vehicle	 × 2	 × 2
Harness (interior use)	1		
User' s Manual (Car-Specific Installation Manual)	1		

Please note that due to changes in product specifications, the illustration may differ from the actual design. For details on components, please see “the Car-Specific Installation Manual.”

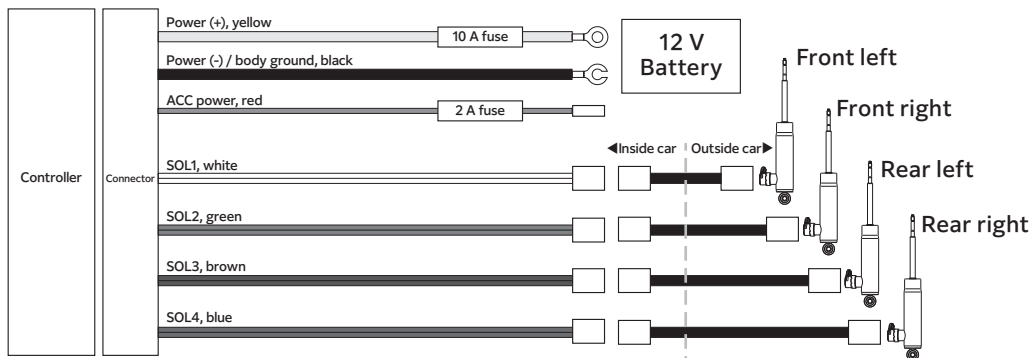
Shock absorber



System configuration

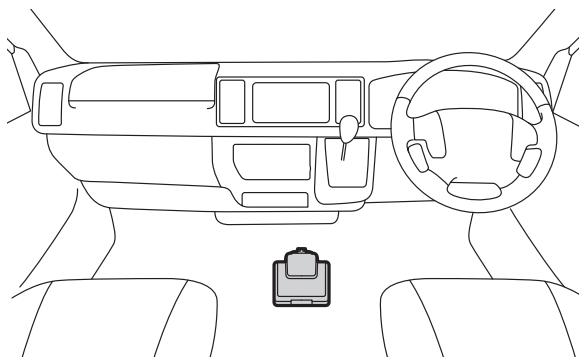


Harness wiring diagram

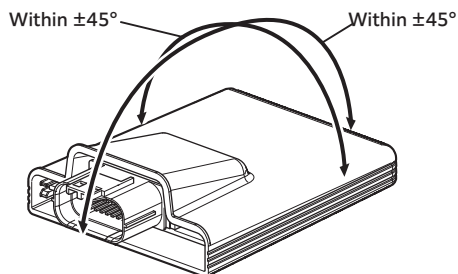


CAUTION When installing the controller, please note the following.

Installation position
(reference)



Installation angle



- Install it at an angle within $\pm 45^\circ$ to the horizontal.
- There are no restrictions on the angle relative to the direction of travel (direction of the controller connector).
- Write down the direction of the controller connector in the memo field of the Car-Specific Installation Manual. This information will be required at app setup.
- Write down the serial number on the controller in the memo field of the Car-Specific Installation Manual. This information will be required at app connection.
- Do not touch the controller connector.
- As it has a built-in sensor, please install it in a stable position.
- Install it inside the car.
- Install it in a location not exposed to direct sunlight.
- Install it in a location where it will not receive heat from the engine, etc.
- Keep the ambient temperature as low as 60°C or below.
- Fix it firmly with double-sided tape or fastener tape.

1. Preparation before work

1-1. Install the shock absorber. (See the "Car-Specific Installation Manual.")

1-2. Install the harness. (See the "Car-Specific Installation Manual.")

1-3. Install the controller. (See the "Car-Specific Installation Manual.")

1-4. Install the dedicated app. Please check the terms of use in the app store, and install it after agreeing to them.

Dedicated app

ActRide App



This app is available on a smartphone with Android™ OS 12 or higher and iOS 17 or higher

Note: As of December 2025

Please check the product website for the latest information.



CAUTION

Data set on your device using the dedicated app cannot be transferred to another device. If you change your smartphone model, you will need to install the app again and transfer the data manually.

2. How to setup

2-1. Start the car engine.

2-2. Start the app, and connect it with the controller.

2-3. Perform setting on the app screen.

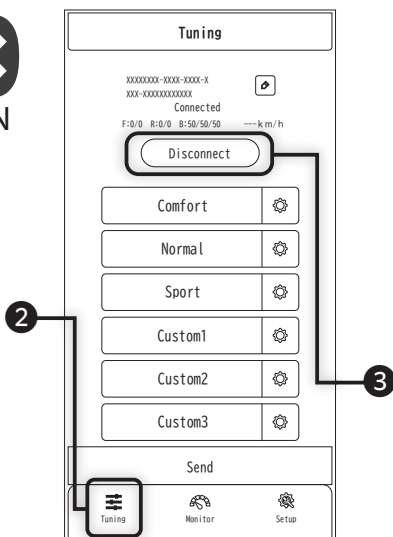
2-4. 3. Go to **Basic operation of the app** (from page 11 of this manual)

2-1. Start the car engine.



Start the engine.

2-2. Start the app, and connect it with the controller.



- 1 Turn on the Bluetooth setting of the smartphone.

Note: For information on setting permissions, please see "Additional information regarding permissions."

- 2 Start the app, and select the Tuning tab.

- 3
 - a Press [Connect.]
 - b Follow the instructions, and select the controller you want to connect.
 - c Enter the last four digits of the serial number (S/N).

For example, if the S/N is 1234567891, enter "7891" .

Note: S/N is shown at the back of the controller or on the label included with the product. There is a space to write down the serial number in the memo field of the Car-Specific Installation Manual.

<Additional information regarding permissions>

Regarding the permission dialog that appears during the process, please select the following.

Allow notifications to be sent

Note: If the above is not allowed, no announcements will be made when the app is connected or disconnected.

Location access and background access permissions

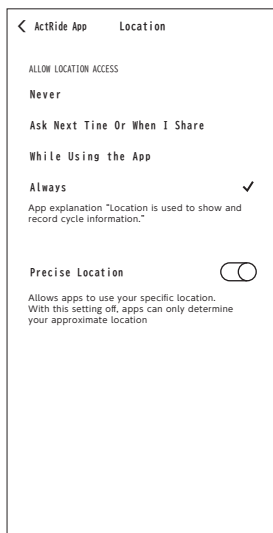
(Example: iPhone OS)

Setting > Apps > ActRide App > Location

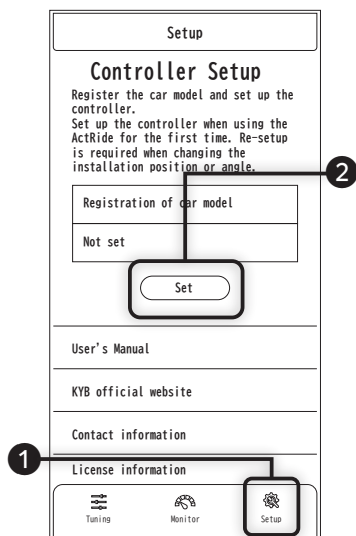
- Select [Always] for location access.

- Allow [Precise Location.]

Note: If the above is not allowed, the speed adapt function (car speed linkage) will be partially restricted. Perform setting in the same way on Android OS.



2-3. Perform setting on the app screen.



- 1 Select the [Setup] tab.
- 2 Press [Set] in Controller Setup.

CAUTION

- At the time of setup, you will need to stop the car on a level surface for a certain period of time. Please perform the setup in a location where you can ensure safety.
- Re-setup is required when changing the installation position or angle.

Setup procedure

1. Register the car model.

2. Select the controller installation position.

3. Correct the controller direction.

Note: Select the direction of the controller connector relative to the car.

4. Perform controller horizontal correction.

Note: Park the car on a level surface and press the correction start button.

When selecting the controller installation position and correcting the direction, please see the notes written in the memo field of the Car-Specific Installation Manual.

2-3-1 Check the operation.

- 1 Make sure that no error codes are displayed.
➡ If an error code is displayed, see the error code table (page 16).
- 2 Send one of the settings from the Tuning screen, and make sure that the message "Settings have been reflected in the controller" is displayed.

3. Basic app operations

After the setup is complete, you can use the app to send settings to the controller. Also, if you start the engine and then launch the app, it will automatically connect to the controller.

Even if you don't start the app, the controller will operate with the last settings sent.

Note: To use the speed adapt feature, you must start the app or execute the background.

3-1. Start the car engine.

3-2. Start the app.

Note: Depending on the signal strength, automatic connection may not be made. In this case, please connect the app manually.

Select and send custom settings.

Tuning screen

To page 11

Edit custom settings.

Custom screen

To page 12

See data.

Monitor screen

To page 11

Perform setup.

Setup screen

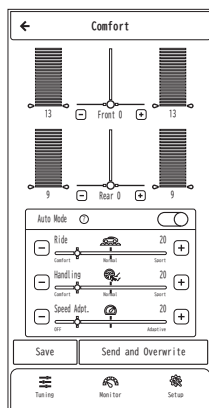
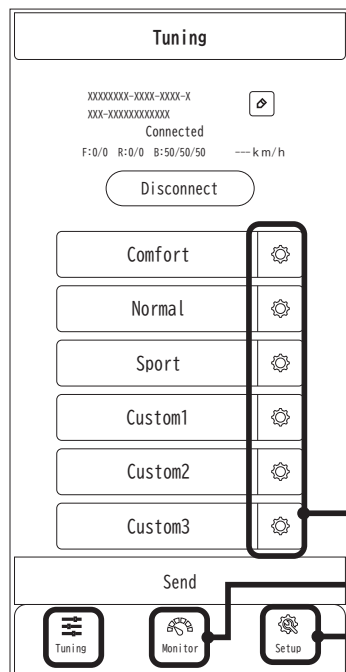
To page 9

<Screen transition>

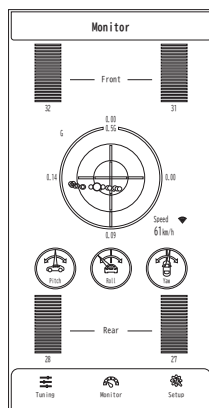
Tuning screen

Custom screen

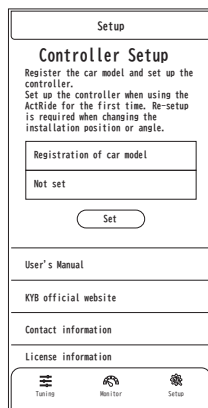
Select the gear icon to go to the Custom screen.



Monitor screen



Setup screen



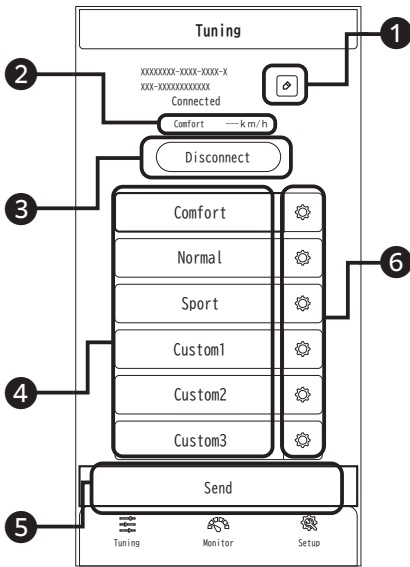
Select the icon at the bottom of the screen to go to each item.

3-1. Start the car engine.

Start the engine.

3-2. Start the app.

3-2-1 Tuning screen



Custom setting management and data transmission can be performed.

- 1 You can change the controller name as you like.

Note: It will be displayed when the controller is connected.

- 2 It will display the name of the custom setting currently being applied.

Note: If the smartphone is not linked to a controller, the custom setting name will not be displayed on the app screen.

- 3 You can connect or disconnect the controller.

- 4 You can select the tuned custom settings. Presets are available for [Comfort], [Normal], and [Sport].

Note: For details on presets, see page 15.

- 5 The selected custom settings can be sent to the controller.

Note: When the controller is not connected, the button is disabled.

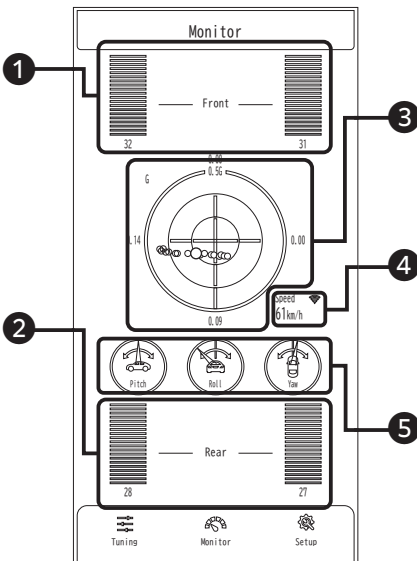
- 6 You can go to the custom screen.



Point

You can temporarily save your settings when you are offline, such as at home, and then send them when you get in your car to reflect the saved data.

3-2-2 Monitor screen



Displays the real-time data related to the movement of the shock absorber and the car.

Note: This will not be displayed when the controller is not connected.

- 1 Displays the step number of the front damping command.

- 2 Displays the step number of the rear damping command.

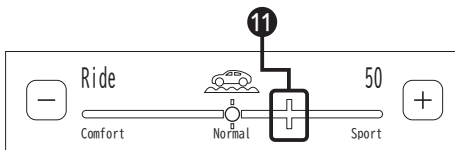
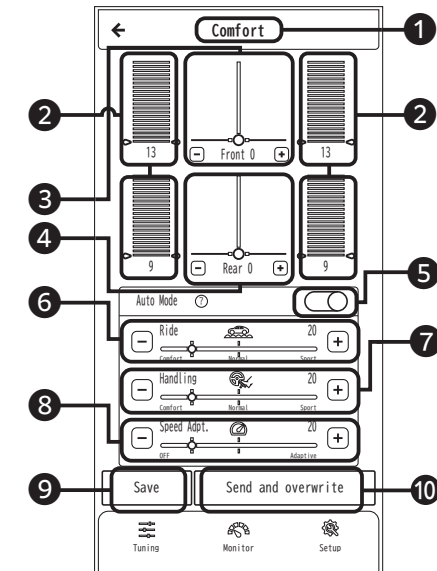
- 3 Displays the G-Ball (front-back/left-right) obtained from the controller sensor.

- 4 Displays the car speed obtained from your smartphone.

Note: This will not be displayed when the controller is not connected and the GPS cannot be acquired.

- 5 Displays the angular velocity (pitch, roll, yaw) of the car body obtained from the controller sensor.

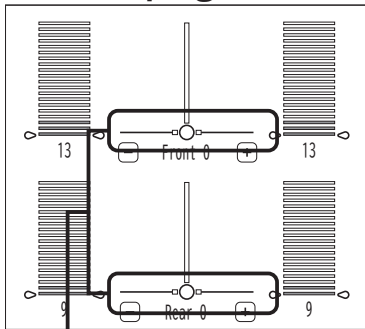
3-2-3 Custom screen



Edits the selected custom settings.
Also, the setting details are sent and saved.

- 1 Displays the name of the custom setting you are currently editing.
- 2 Displays the step number of the damping command in real time.
Note: This will not be displayed when the controller is not connected.
- 3 Changes the step number of the front base damping.
- 4 Changes the step number of the rear base damping.
- 5 Switches auto mode ON/OFF.
- 6 Changes the step number of the ride control settings.
- 7 Changes the step number of the handling control settings.
- 8 Changes the step number of the speed adapt settings.
- 9 Saves the current settings in the app. You can edit the name to overwrite any custom settings.
Note: The setting will not be sent to the controller.
- 10 The current settings are sent to the controller and overwrite the custom settings being edited.
Note: When the controller is not connected, the button is disabled.
- 11 The step number currently set in the controller is displayed as a thin memory line.
Note: Displayed for front/rear base damping, Ride, Handling, and Speed Adpt.

<Base damping>



Slider bar

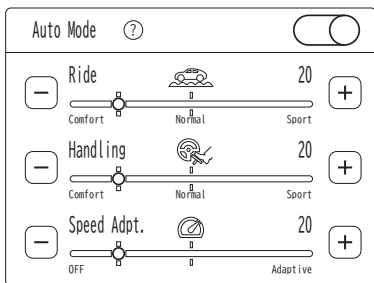
By moving the slider bar up and down, you can adjust the step number of the front and rear base damping.

Note: You can set it to 0 for soft (low damping) or 100 for hard (high damping).

- When auto mode is OFF, the step number will be fixed at the set number.
- When auto mode is ON, the damping command will change based on the set base damping step number.

Note: To maximize the control effect, the upper limit of the base damping setting is set to 50 in auto mode. For safety reasons, damping may increase automatically during sudden steering.

<Auto mode>



The sensors in the controller precisely capture the car movements and control damping commands in real time. The auto mode can be set by moving the bars for the three parameters Ride, Handling, and Speed Adpt. left and right. In combination with base damping, ride comfort, maneuverability, and stability can be adjusted individually. You can freely set the parameters according to the situation and your preferences.

<Ride control (ride comfort control)>



The damping is controlled by detecting vibrations transmitted from the road surface to the car body. You can change the ride comfort. Lowering the setting to 0 will result in a more relaxed and high-quality ride, while raising it to 100 will result in a firmer, flatter ride.

Relaxed ride quality

Comfort

Normal

Sport

Firm ride quality

- The vehicle moves gently up and down.
- Suppresses small inputs from the road surface and provides good absorption.

- Flat ride quality with small up-down movement.
- Quickly suppresses vibrations and converges well.

Note: The damping command increases or decreases based on the set base damping. The higher the Ride value, the greater the change in the damping command in response to vibrations transmitted from the road surface.

<Handling control (maneuverability control)>

Handling



The damping is controlled by capturing the car movements of steering, accelerating, and braking. You can change the car maneuverability. Lowering the setting to 0 will result in a more relaxed, smoother ride, while raising it to 100 will result in a quicker, lighter ride.

Relaxed and smooth handling

Comfort

Normal

Sport

Quick and light handling

- The vehicle turns while rolling smoothly.
- The vehicle posture changes smoothly at the time of accelerating or decelerating.
- The vehicle turns sharply while suppressing rolling.
- Posture changes are reduced at the time of accelerating or decelerating.

Note: The damping command increases based on the set base damping.
The larger the Handling value, the larger the change in damping command will be in response to the car movement (turning, forward/rearward) caused by the car operation (steering, braking, accelerating).

<Speed Adpt. (car speed linkage)>

Speed Adpt.



The damping command increases in conjunction with car speed. You can change stability during high-speed driving. At 0, the damping command does not change with car speed. Raising the setting to 100 will result in greater damping command, and the car speed increases.

Note: The smartphone and controller must be connected while this function is used.

Disabled

OFF

Adaptive

Reduces wobble and increases stability

- Damping does not change with car speed.
- The higher the speed, the higher the damping.
- Increases stability and reduces wobble.
- However, the ride comfort will be firmer.

Note: The damping command increases based on the set base damping.
The larger the Speed Adpt. value, the greater the damping command at higher car speeds.
To enable Speed Adpt., the location access must be allowed. Also, to keep the app functioning even when your smartphone screen is locked, the background processing must be allowed. For details, see page 8.

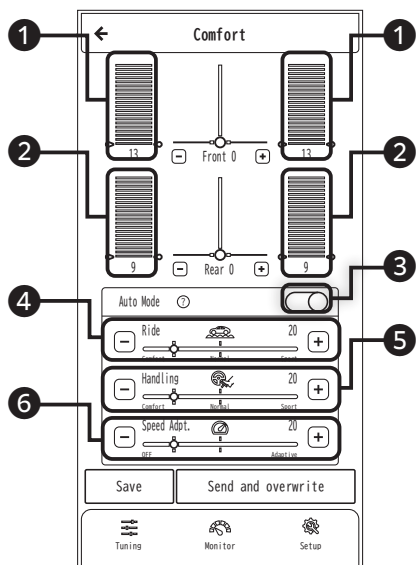


Point

The presets prepared on the tuning screen are the initial custom settings when you install the app. You can use this preset as a reference and change the tuning settings according to your preferences. The table below shows the initial values.

Note: The preset values can be changed and overwritten. If you want to reset the values to the default value, refer to the table below.

The initial value table only shows reference values for restoring the initial settings. Please note that these are not values recommended by the manufacturer.



Initial value table

	No.	Comfort	Normal	Sport
Base	❶	Front 0	Front 5	Front 10
	❷	Rear 0	Rear 5	Rear 10
Auto mode	❸	ON	ON	ON
Ride	❹	20	50	80
Handling	❺	20	50	80
Speed Adpt.	❻	20	20	20

4. Troubleshooting (when you have a problem)

If the app is connected, please check if an error code is displayed. If an error code is displayed, check the error code table and follow the instructions. If no error code is displayed, check the troubleshooting table.

If symptoms do not improve, please contact our customer support listed on the back cover.

If the controller stops working, the shock absorber will mechanically be fixed into a safe damping force. This will not affect driving.

■ Error code table

Error code	Error details	Way to cope with
E11	Battery high voltage detection	Operation has stopped due to high voltage detection. Make sure that the power supply voltage supplied to the controller is within the range of 10.5 to 16 V.
E12	Battery voltage drop	Low voltage has been detected. The operation will continue. Make sure that the power supply voltage supplied to the controller is within the range of 10.5 to 16 V
E21	Shock absorber error Front left wheel	The operation stops because the current cannot be properly passed through the target solenoid. Recheck the wiring. Caution: Because the solenoid is very hot immediately after operation, do not touch it directly with your hands.
E22	Shock absorber error Front right wheel	
E23	Shock absorber error Rear left wheel	
E24	Shock absorber error Rear right wheel	
E31	Controller temperature rise	The controller temperature is too high and will stop working. Please leave it for a while, and try again. If the controller is installed in a place where the ambient temperature exceeds 60° C, change the installation place. Caution: Because the controller is very hot, do not touch it directly with your hands.
E32	Controller temperature drop	The controller temperature is too low and will stop working. Please leave it for a while, and try again.
E41	Memory error	Because there is an error in the controller memory, the controller setup and any custom settings being applied will be reset to the default values. Re-execute the controller setup, and re-send the custom settings.
E51	Controller error	An error has occurred in the controller, so the operation will stop. If the error occurs repeatedly, please contact our customer support.
E52	Controller error	A minor error has occurred in the controller, but operation will continue. If the error occurs repeatedly, please contact our customer support.

■ Troubleshooting table

	Symptoms	Possible cause	Way to cope with
1	The smartphone app cannot connect to the controller.	The engine is not started.	Start the engine.
		The controller power cable and ACC cable are not properly connected or are disconnected.	Check if the controller power cable and ACC cable are not properly connected.
		The battery voltage is outside the operating range.	Check that the battery voltage is within the operating voltage range. The operating voltage range is 10.5 to 16 V.
		The fuse is blown.	Please check that the fuse is not blown. There are two fuses, one in the power cable and one in the ACC cable.
		The passcode used at the time of connection is incorrect.	Enter the last four digits of the serial number (S/N) on the back of the controller or on the label attached to it.
		The controller is already connected to the other smartphone.	Use the other smartphone to disconnect or close the app on the app, and then reconnect the app on the smartphone you want to connect to.
		There is an object between the controller and smartphone that blocks the signal, or the distance between them is too far.	Remove any obstacles that block the signal between the controller and smartphone, or shorten the distance between them.
		The connection is unstable due to radio wave interference from other devices.	Turn off any nearby electronic devices (Wi-Fi, Bluetooth devices, etc.) that use the 2.4 GHz frequency band, and then try connection again.
		The Bluetooth setting of the smartphone is turned off.	Turn on the Bluetooth setting of the smartphone.
		Bluetooth is connected via the OS settings.	Connection must be made from the app. Follow the instructions in the app, and check the OS settings.
		The smartphone battery is low.	If the smartphone battery is low, it may enter power saving mode, which may limit the Bluetooth function. Try again after charging your smartphone.
		Temporary malfunction of the controller or smartphone has occurred.	After canceling the Bluetooth pairing of the "SCU2190" from the smartphone OS settings, restart the smartphone and the engine, and then try again.
2	The car speed display shows "----".	The controller is not connected.	When the controller is connected, the car speed will be displayed on the app. Check the connection.
		There is something on top of the smartphone that blocks GPS signals.	Do not put anything on the smartphone.
		You are in a place where the GPS reception is poor (such as a tunnel or among trees).	Move to a place with good GPS reception, and try again.
		The location access of the app is turned off, or permissions are insufficient.	See "Additional information regarding permissions" on page 8.

■ Troubleshooting table

	Symptoms	Possible cause	Way to cope with
3	The shock absorber damping does not change even when the custom settings are operated.	The Send button or Send and overwrite button is not pressed.	Press either button to apply the settings to the controller.
4	The damping force of a shock absorber in a different position than expected changes.	The shock absorber harness connections have been swapped.	See “Harness wiring diagram” on page 6, and check that the shock absorber harness is connected correctly.
5	Even though the car speed has changed, the damping command step number does not change.	Speed Adpt. is turned off.	Turn on Speed Adpt.
		The smartphone app and the controller are not connected.	Connect the smartphone app and the controller.
		The reception state of the GPS is not stable.	Move to a place with good GPS reception, and check again.
		The location access of the app is turned off, or permissions are insufficient.	See “Additional information regarding permissions” on page 8.
6	Even if the car is moved, the damping command does not change automatically.	The Auto Mode is turned off.	Turn on the Auto Mode.
7	The G-ball is off-center.	Controller setup has not been performed.	To calibrate the sensors inside the controller, please perform controller setup.
		Controller setup was performed on an uneven surface.	Set up the controller again on an even surface.
		The car is parked on an inclined place.	It is normal for the G-ball to be off-center when the car is inclined.
		The controller installation requirements are not met.	Please install the controller according to the instructions in the manual (see page 6).
8	The car speed displayed on the smartphone app differs from the speedometer (meter) of the car.	The reception state of the GPS is not stable.	If the value significantly differs from the speedometer of the car, move to a location with better GPS reception and check again. Depending on the processing power of your smartphone, accurate car speed may not be obtained.
9	The base damping was set higher than 50, but the damping command only displays 50.	Auto mode is set to ON.	When Auto mode is ON, the upper limit of the base damping setting is set to 50 to maximize control effectiveness. (When the car moves, the damping command changes from the base damping.)

Note: If symptoms do not improve even after checking the above items, please contact our customer support listed on the back cover.

5. Controller specifications

Part number	SCU2190
Operating temperature range	-35°C to 60°C
Operating voltage	DC 12 V
Consumption current	6.4 A or below during operation
Standby current (dark current)	0 mA
Mass	221 g
External dimensions	W122 × H33 × D82 mm
Acceleration/angular velocity sensor	3-axis acceleration (forward/rearward, left/right, up/down) +3-axis angular velocity (pitch, roll, yaw)
Wireless type	Bluetooth® 5.0, 2.4 GHz band (2402~2480 MHz), 0.1 dBm

FCC Compliance Statement

FCC CAUTION

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

6. Disposal instructions

Proper disposal of shock absorber

Do not dispose of shock absorbers in general trash. Take them to a local authorized waste disposal company. If you dispose of shock absorbers yourself, follow local hazardous waste regulations and drain the oil, etc. from the shock absorber before recycling. Also note that the controller and shock absorber contain electronic components and must be recycled separately as electronic waste. Please consider recycling methods and recover valuable materials, always observing regulations regarding accident prevention and environmental protection whenever possible.

7. Copyright

Copyright terms

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- QR Code® is a registered trademark of DENSO WAVE INCORPORATED.
- ActRide® is a registered trademark of KYB.

Product Warranty (ActRide Warranty)

If this product leaks oil or the product itself malfunctions due to manufacturing reasons despite being used correctly within one year from the date of purchase or even though the mileage is less than 20,000 km, we will replace it with a new product in accordance with the warranty regulations.

Warranty regulations

1.The warranty period for this product is one year from the date of purchase or until the mileage reaches 20,000 km, whichever comes first. Please note that the warranty only covers the product itself and does not cover removal and installation costs or any associated expenses (such as loaner car or towing fees), compensation for damages due to an accident, or losses caused by the car being unable to be used after installation.

2.To receive a warranty claim, please attach the following documents and send the defective product to KYB "ActRide Warranty Department" through your retailer (installation shop).

(1) Fill out the "ActRide Warranty" application form.

(2) A copy of a document proving the purchase date (such as a receipt, work manual, sales or delivery note)

Request to retailers (installation shops)

Please stamp this document and confirm and fill in the mileage at the time of exchange.

Please explain to the customer that they should keep the documents of (1) and (2) (this document, receipt, etc.) as proof of purchase date.

3.If the replacement or use is contrary to the replacement or use methods described in this user' s manual, or if any of the following exemptions apply, the product will be excluded from the warranty even if it is within the warranty period.

<Exemptions>

(1) If you are unable to present the documents required for the warranty claim

(2) Damage or malfunction due to improper handling, such as dropping the product after purchase, during shipping, or during replacement.

(3) If this product is installed or used in a car model other than the one listed in our compatibility chart

(4) If this product has been modified or altered before installation or use

(5) Defects caused by external factors such as scratches, paint or plating peeling, or rust due to aging or normal use, or defects resulting from such causes

(6) Defects caused by using the product in combination with products or parts other than those designated by us

(7) Defects caused by natural disasters such as earthquakes, floods, or lightning strikes, fires, accidents, or abnormal voltages

(8) Defects caused by competitive driving on circuits or in muddy areas, or submersion in rivers or oceans

4.This product warranty is valid only in Japan.



"ActRide Warranty" Application Form **KYB**

Product name		Buyer Information	
Car model		Name	
Model			
First year of registration			
Part number		Address	
Lot number			
Date of sale			
Mileage at time of replacement		Phone number	
Retailer name / address / phone number		Controller label location	
Problem details		Replacement store name / address / and phone number (if different from retailer)	

Cut here

Request to retailers (installation shops):

Please fill in the car model to be installed, the date of sale, and the mileage at the time of installation, and affix your company seal. Please be sure to hand over this user's manual to the customer.



CAUTION

Please note that KYB cannot guarantee against malfunction, non-operation, or errors in driver assistance systems or safety devices caused by the installation of KYB products.

Manufacturer / seller
Customer support

KYB Corporation

Global Business Unit, Aftermarket Sales Department No.1
28th Floor, South Tower, World Trade Center Building, 2-4-1 Hamamatsu-cho,
Minato-ku, Tokyo 105-5128, Japan
TEL.+81-3-6895-1268 <https://www.kyb.co.jp/kybclub/>