

SUSPENSION MODULE



by



Installation and user manual per module

Easy Lift series "NxxxxxxxXxxx" or above



User Manual



Dear Customer,

thank you for choosing Land Rover Passion and for purchasing Easy Lift suspension module. This product has been designed and manufactured respecting the highest standards, enduring high quality performances, safety and user-friendliness.

Land Rover Passion recommends the installation of the module to be carried out by a professional car electrician.

Do you need assistance?

Should you need any assistance, please contact the dealer or Land Rover Passion directly to the following e-mail address:

support@landroverpassion.com

Warranty:

This product is under warranty to current laws. For any reference, please refer to the page “terms and conditions” on the following website:

<http://www.landroverpassion.com/termini-e-condizioni>

Product or manual modifications can be made without prior notice. Please check for any new version of this manual on our website www.landroverpassion.com

The contents of this manual are exclusive property of LRP di Massimiliano Berta and cannot be in any way reproduced, either in whole or partially, irrespective of the means used for this purpose, without the prior written permission of LRP.

Any request must be sent by email to info@landroverpassion.com



LRP di Massimiliano Berta, both in its capacity as a manufacturer and as a distributor, declines any direct and/or indirect responsibility for damage to property and/or injury to people in any way related to the use of the information contained in this booklet and to the use of Easy Lift, an accessory for which the user is solely and exclusively responsible.

In this regard, LRP di Massimiliano Berta wishes to advise users of the Easy Lift that as the accessory can modify the height values pre-set by the manufacturer of the vehicle for which Easy Lift is intended, it may render it less stable.

Do not drive the vehicle in an unstable status!

LRP di Massimiliano Berta disclaims any liability arising, even indirectly, from negligent and/or imprudent behaviour. An example of such would be an attempt to access - for any reason - the part underneath the vehicle without previously adopting all the available safety measures designed to counteract an accidental variation in height.

LRP di Massimiliano Berta, both in its capacity as manufacturer and distributor, declines any direct and/or indirect liability for damage to property and/or injury to people in any way related to the use of Easy Lift in places open to public traffic.

By purchasing an Easy Lift module, you implicitly accept these terms, and specifically the waiver of liability outlined in this disclaimer, absolving LRP di Massimiliano Berta from any liability arising from the installation and use of Easy Lift.

Summary

1.	Safety information	5
2.	Package contents	6
3.	Installation manual	7
3.1.	Installation of Bypass wiring harness	7
3.2.	Installation of controller	9
3.2.1.	DISCOVERY 3 L319-04	9
3.2.2.	DISCOVERY 4 L319-10	10
3.2.3.	RANGE ROVER SPORT L320-05	13
3.2.4.	RANGE ROVER SPORT L320-10	14
3.3.	Correct positioning of the Easy Lift Module	17
3.4.	CALIBRATION PROCEDURES	18
3.4.1.	HEIGHTS CALIBRATION	18
3.4.2.	SELF-LEVELLING CALIBRATION	19
4.	Operating instructions	21
4.1.	Description and general logics of the controller	21
4.2.	Module configuration	22
4.2.1.	heights customization	22
4.2.2.	Default program customization	22
4.3.	STANDARD PROGRAMS – Heights variation	24
4.4.	SPECIAL PROGRAMS	26
4.4.1.	WHEEL ALIGNMENT PROGRAM	27
4.4.2.	EXTRA LOW PROGRAM	27
4.4.3.	SELF LEVELLING PROGRAM	27
4.5.	Control and visualization through the App	29
4.6.	Neutral button	29
5.	Troubleshooting	31

1. Safety information



**PLEASE READ INSTRUCTIONS CAREFULLY BEFORE STARTING THE INSTALLATION
AND USE OF THE EASY LIFT MODULE**

This manual contains very important information about installation and use of your new suspensions module. Please spend the necessary time to read it in order to be able to know and manage the module correctly and at its best.

These symbols you will find into the instructions manual have the following meaning:



ATTENTION: it indicates an important safety warning and failing to respect the indications supplied can cause module malfunction, severe injuries or damage to the vehicle or equipment.



SUGGESTION: it indicates a suggestion or trick about using the module to fully benefit of its functionality.

2. Package contents

Description	Q.ty	Picture
Easy Lift Module	1	
Controller (main unit and extended cable)	1	
Bypass wiring harness	1	
Bypass plug	1	
Fixing plate for Discovery 3 (optional)	1	
Range Rover Sport Ashtray adapter (optional)	1	
Dual Lock Tape	1	
Warranty card	1	

3. Installation manual

3.1. Installation of Bypass wiring harness

Required tools:

1 Phillips-head screwdriver

Procedure (same for Discovery 3, Discovery 4 and Range Rover Sport):



- Ensure the vehicle is on a flat surface and that it can't move accidentally
- Remove the panel of the steering column by grabbing it on the top part and pull it towards the seat
- Using the Phillips screwdriver, remove the two screws located on the front of the panel positioned above the pedals, and remove it. The panel is fixed by three pins into the sound deadener coating of the bulkhead behind the pedals and by a fixing clip toward the central tunnel. Remove it by pulling gently towards the pedals
- On the left bulkhead (on the right for RHD vehicle), on the upper side of the compartment of the steering column, it is now possible to see the suspension ECU on which 4 connectors are inserted:



- Remove connectors no. 1 and no. 4 from the ECU and insert them in the corresponding female connectors of the LRP bypass wiring harness supplied
- Insert now into the ECU the male connectors of Easy Lift's bypass wiring harness
- Plug the wiring harness to the Easy Lift module.

3.2. Installation of controller

Easy Lift can be managed either by the controller or by Android or iOS Smartphone (see chapter 4.5). For practicality utilization purposes, Land Rover Passion advises the complete installation but, in case you want to simplify and you decide to use the App exclusively, go directly to the following chapter 4.5



The controller should always be plugged and unplugged by taking its connector with your fingers, never by pulling the cable. When you reassemble the vehicle please take maximum attention to avoid the cable gets stuck between the plastics.

You can find the installation procedures below, separately described for each different vehicle model.

3.2.1. DISCOVERY 3 L319-04

Required tools:

- 1 Phillips-head screwdriver
- 1 drill with \varnothing 22mm bit / cutter

Procedure:

- Set Neutral gear and remove the gear knob by forcibly pulling it upwards
- Remove the Phillips head screw located in front of the hand-brake control
- Remove, by pulling it upwards, the plate located behind the hand-brake control and drill a central 22mm diameter hole, or replace it with a pre-drilled one (if separately purchased as optional item).
- Gently lift the cover of the central console by pulling upwards simultaneously on both external anterior and posterior sides. Please pay attention to the wirings below: it is not necessary to unplug them
- Remove the rubber glove box located in front of the gearshift and the underlying plastic

- Insert the controller in the hole of the drilled plate. Make sure the led indicators face in the driving direction and re-insert the plate in its original location
- Insert the controller wiring in the space behind the hand-brake switch, previously closed by the removed plastic, and, making sure not to crush the wire, pass it into the central console and reach the Easy Lift module. You can use the central hole in front of the gearshift:



- Plug the controller connector to the Easy Lift module
- Re-install the cover of the central console and of the steering column by following backwards the procedure followed to remove them
- Use the dual lock tape supplied in the package and secure the Easy Lift module in a handy place in the compartment of the steering column as shown on following point 3.3
- Calibrate the Easy Lift module as explained on following point 3.4

3.2.2. DISCOVERY 4 L319-10

Required tools:

1 Phillips-head screwdriver

Procedure:

- Select Neutral gear position and, for 6 gears vehicles, remove the gear lever by pulling it upwards
- Remove the cup holder located in the central tunnel and remove the relative housing by pulling it upwards
- Unscrew the two Phillips-head screws which are located in the central tunnel, under the cup holder removed
- Remove the little plastic bulkhead in the inner side of the glove box in the central tunnel
- Open the cover of the glove box or the fridge in the central tunnel
- Gently lift the cover of the central tunnel by pulling upwards on both external posterior sides. Pay attention to the wirings below: it is not necessary to disconnect them
- Unhook the cigarette lighter power connector and, while pushing the metal body out, press the two clips highlighted in the pic below slightly from the inside so that you can easily remove it:



- Insert the controller's wiring in the remaining plastic of the 12V socket and, making sure not to crush the wire, pass it into the central console and reach the Easy Lift module. You can use the central hole in front of the gearshift:



- Plug the controller connector to the Easy Lift module
- Re-install the cover of the central console and of the steering column by following backwards the procedure followed to remove them
- Use the dual lock tape supplied in the package and secure the Easy Lift module in a handy place in the compartment of the steering column as shown on following point 3.3
- Calibrate the Easy Lift module as explained on following point 3.4

3.2.3. RANGE ROVER SPORT L320-05

Required tools:

- 1 Phillips-head screwdriver
- 1 Drill with milling drill bit $\varnothing 20$ mm.

Procedure:

- Remove the “inverted U” shaped car radio frame. In order to do this, grab the two side parts and pull them towards the centre of the vehicle
- Remove the two screws located down on the sides of the car radio
- Select Neutral gear position and remove the gear lever by pulling it upwards
- Open the cover of the glove box or the fridge in the central tunnel
- Gently lift the cover of the central tunnel by pulling upwards on both external posterior sides. Pay attention to the wirings below: it is not necessary to disconnect them
- Remove the ashtray and drill the main plastic as shown in the picture below:



- Insert the controller's wiring in the ashtray adapter provided and, making sure not to crush the wire, pass it into the central console and reach the Easy Lift module. You can use the central hole in front of the gearshift:



- Plug the controller connector to the Easy Lift module
- Re-install the cover of the central console and of the steering column by following backwards the procedure followed to remove them
- Use the dual lock tape supplied in the package and secure the Easy Lift module in a handy place in the compartment of the steering column as shown on following point 3.3
- Calibrate the Easy Lift module as explained on following point 3.4

3.2.4. RANGE ROVER SPORT L320-10

Required tools:

- 1 Phillips-head screwdriver
- 1 Plastic lever
- 1 Drill with milling drill bit $\varnothing 20$ mm

Procedure:

- Use the plastic lever and remove the frame of the CD slot
- Remove the two screws located down, laterally, inside the slot just opened
- Select Neutral gear position and, if 6 gears vehicle, remove the gear lever by pulling it upwards
- Open the cover of the glove box or the fridge in the central tunnel
- Gently lift the cover of the central tunnel by pulling upwards on both external posterior sides. Pay attention to the wirings below: it is not necessary to disconnect them
- Remove the original ashtray and drill the main plastic as shown in the picture below :



- Insert the controller's wiring in the ashtray adapter and, making sure not to crush the wire, pass it into the central console and reach the Easy Lift module. You can use the central hole in front of the gearshift:



- Plug the controller connector to the Easy Lift module
- Re-install the cover of the central console and of the steering column by following backwards the procedure followed to remove them
- Use the dual lock tape supplied in the package and secure the Easy Lift module in a handy place in the compartment of the steering column as shown on following point 3.3
- Calibrate the Easy Lift module as explained on following point 3.4

3.3. Correct positioning of the Easy Lift Module



In order to allow the self-levelling function to work correctly, the module must be mandatorily placed on the back side of the plastic shown in the pic below, with the connectors facing downwards, well hold by the fixing band dual tape supplied:



3.4. CALIBRATION PROCEDURES



WARNING: height variations must not be set if the calibration procedure has not been carried out before.

3.4.1. HEIGHTS CALIBRATION

The calibration of the module is necessary to adapt and customize Easy Lift to the vehicle on which it's been installed. It is mandatory to do it in case of:

- new installation
- installation on a different vehicle (movement/sale)
- replacement of one or more height sensor
- replacement of one or more air spring
- calibration of the original vehicle travel height made by a workshop

If the procedure is activated by mistake/accidentally, it is possible to stop it by double-clicking the knob. In case that any value has been already memorized, it is mandatory to complete the process or to left it and repeat it from the beginning.

- Place the vehicle on a flat, levelled surface with Land Rover Standard height set
- Leave the engine on and wait a few seconds in order to allow the vehicle to self-level
- Press and keep pressed the controller's knob for at least 4 seconds, until the knob starts flashing alternating red and green and the leds turn on blinking, too
- Rotate the knob counterclockwise: the 4 leds stop blinking
- Press the knob one time: 2 red leds turn on while the knob keeps on blinking
- By using the Land Rover suspension switch, select the Off Road height. As soon as it is reached, press the knob one time. 2 yellow led turn on while the knob keeps on blinking
- By using the Land Rover suspension switch, select the Access height. As soon as it is reached, press the knob one time. All led turn off and the knob becomes green

- By using the Land Rover suspension switch, select the Standard height
- Turn off and then turn on again the engine

The calibration process is now completed and the module is ready to use.



Once the heights calibration procedure is completed the module is automatically set to correctly work with the specifics of the vehicle on which it's been installed. Should one move it to another vehicle, only a new calibration process will be needed to adapt the module to the new car.



The heights variations requested to set the calibration will consume the content of the air reservoir. Should you request a rapid height variation without allowing the vehicle the necessary time to refill the air reservoir, the following requested variations may take a little more time to completely set up.

3.4.2. SELF-LEVELLING CALIBRATION

The levelling sensor calibration is required to memorize the longitudinal and transversal position of the vehicle: this is the reference value that Easy Lift will restore when the levelling function is activated. The calibration has to be set mandatorily in case of:

- First installation
- Installation on a different vehicle (moving/sale)
- change of position, even if minimal, of the principal Easy Lift unit compared to the position where it was placed when the previous calibration had been set

If activated by mistake/accidentally, it's possible to stop the procedure by double-clicking.

- Position the vehicle on a flat, levelled surface, with Land Rover Standard height set
- Leave the engine on and wait a few seconds in order to allow the car to self-level

- Press and keep pressed the controller's knob for 4 seconds, until the knob starts flashing alternating red and green and the leds turn on blinking, too
 - Rotate the knob clockwise: the 4 leds start an alternating flashing
 - Press the knob once: during the memorizing phase of the position, 2 leds will remain steadily turned on and the knob will flash in red
- Once the procedure is completed, the module will return automatically in "Neutral" setting.

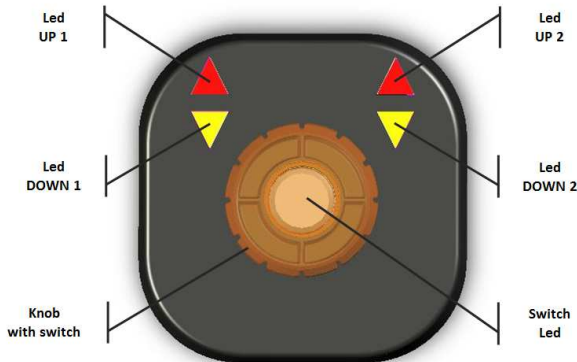


The better calibration is done, the better will be the levelling of the vehicle. It is fundamental then to verify that none of the wheels is higher or lower compared to the others, for example owing to holes in the surface or evident asperities/imperfections of the ground. If these conditions are respected, if wanted it is possible to calibrate the vehicle even if it's not placed on an horizontal surface. By doing so it will so be possible to choose a different inclination, for example for a more comfortable sleeping position following your own preferences, for example with the head side slightly higher.

4. Operating instructions

4.1. Description and general logics of the controller

The controller is made up of one knob and 4 led indicators:



The multifunction Easy Lift's knob allows to select and activate the desired programs in a simple and intuitive way. The device has also a switch and a signalling led.

The green colour indicates the use of the "Standard" programs or, in case the other 4 leds are off, the "Neutral" status of the module. When the "Neutral" status is set, it does not affect the level of the vehicle in any way.



"Neutral" status

The red colour indicates the use of the "Special" programs instead.

When pressed, two fast flashes indicate that the command was received and the selected program will be activated.

From any status or program, by quickly pressing the knob twice, the Easy Lift module returns to "Neutral" setting (Quick Neutral function) or to the default program that has been set (see chapter 4.2.2).

As described in detail below, the several lighting combinations of the 4 triangular led indicate the selected program.

4.2. Module configuration

Easy Lift can be customized in every moment both in heights and in setting the default program to automatically restore through double-clicking on the controller's knob.

4.2.1. HEIGHTS CUSTOMIZATION

Factory setting corresponds to:

- -30mm; -20mm; -10mm; +35mm; +55mm; +70mm

Users, through the phone App, can associate different heights to each program, with the following restrictions:

- Maximum of 3 preset for lowerings
- Maximum of 3 preset for raisings
- No less than 5mm of variation between a program and the next ones

Easy Lift module can be used in addition to the Land Rover heights, in order to increase the range of combinations and variations reachable. Thanks to the combination of the Land Rover Off Road height and Easy Lift +70mm setting, for example, a total variation of about +125mm is obtainable.



ATTENTION: the EAS system of the vehicle can't manage with height variations of less than a 10mm. This is a vehicle limitation that the Easy Lift module cannot bypass. As previously described, it is possible to program heights with shorter intervals but during utilization, in case you need a change in the vehicle's height for a shorter interval compared to the EAS limit (for ex. from +10mm to +15mm), you must first activate a program with a higher height variation (for ex. from +10 to "Neutral" and then to +15mm).

4.2.2. DEFAULT PROGRAM CUSTOMIZATION

The default program reached by double-clicking the controller's knob is "Neutral". This default program can be customized following your own needs and preferences. Vehicles which feature

big tires, for example, may need a greater default height compared to the Neutral one. Customers who own a more sporty vehicle may prefer a constant lowered setting, instead. Customization can be done through both the phone App (*Settings* page) and through the Controller, following the procedure described below:

- Activate the program to set as the default
- Rapidly click for 3 times on the Controller's knob

Once the setting is confirmed, the knob will flash shortly in Red colour.

The same procedure can be followed to reset the "Neutral" as the default position and height.

4.3. STANDARD PROGRAMS - Heights variation

Easy Lift features to a maximum of 6 height variations presets, plus a Neutral preset. Starting from the Neutral position, rotate the knob CLOCKWISE and in sequence select the following variations:

Rotation	Height	Led status
	<i>Preset raising 1</i>	
	<i>Preset raising 2</i>	
	<i>Preset raising 3</i>	

Rotate the knob COUNTERCLOCKWISE select the following variation in sequence:

Rotation	Heigh	Led status
	<i>Preset Lowering 1</i>	
	<i>Preset Lowering 2</i>	
	<i>Preset Lowering 3</i>	

It is always possible to activate a variation without necessarily pass from the previous or from the neutral position.


After selecting the wished program, this must be activated within 4 secs by pressing the knob once, otherwise the module returns to the previous status. As a confirmation the command has been received, the knob will quickly flash twice.






Owing to the Land Rover programming logics, the more the required variation is wide, the more quick will be the feedback of the vehicle. Small variations, for example the change from -20mm to -30mm, can require more seconds to be completed.

4.4. SPECIAL PROGRAMS

To log into the selection of the special programs, press the knob twice (double click) starting from the Easy Lift Neutral position. The led of the knob becomes red. The default proposed program is “Wheel Alignment”, activated by rotating the knob once in 4 secs:

Rotation	Program	Led status
-	<i>Wheel alignment/Service</i>	

By rotating the knob COUNTERCLOCKWISE, instead, in sequence the “Extra Low” program, first, and the “Self Levelling” program, then, will be selected:

Rotazione	Programma	Stato Led
	<i>Extra Low</i>	
	<i>Self-Levelling</i>	 (Alternating blinking)

Once the wished program has been selected, it will have to be activated within 4 secs by clicking the knob once, otherwise the module comes back to the previous status. In order to confirm the command has been received, the knob will quickly flash twice.

4.4.1. WHEEL ALIGNMENT PROGRAM

The program allows to carry out the wheel alignment without going necessary before and after to the dealership to set suspension in tight mode; this will grant not only money savings but also time savings.

It must be activated whilst the engine is on and the vehicle located on wheel alignment lift. Once this program is activated, the engine can be switched off.



If you want to make a specific alignment for a height different than the Standard one, you can activate the program without switching from the Neutral position, simply by holding down the knob for 4" directly from the active Easy Lift preset.



The program must not to be activated whilst the vehicle is running. At the end of the operations please remember to deactivate it by pressing the knob twice.

4.4.2. EXTRA LOW PROGRAM

The program allows to lower the vehicle from the Standard Height to the minimum reachable limit, just before the DTC system shows and saves corner sensor failures. It is mandatory to use it only to ease the access of people with reduced mobility and/or ease the loading/unloading of the car.



The Extra Low program is not for driving use, but it can be used at low speed for access to low garages, parking and similar situations.

4.4.3. SELF LEVELLING PROGRAM

This program allows you to automatically level the vehicle in order to reach maximum comfort to sleep into the car or into a roof-placed tent.

Easy Lift can compensate angles until $4/4,5^\circ$ on a single axle or of equivalent value on the sum of both the axes, with a tolerance of $0,5^\circ$ per axle.

To obtain the maximum efficiency, the system must be activated every time starting from standard Land Rover height.



The program is not meant to be used during driving. It has to be activated whilst the vehicle is stopped and must be mandatorily deactivated before restart driving.

- Position the vehicle to Land Rover Standard height
- Leave the engine on and wait for a few seconds in order to enable the vehicle to self level
- If in a different position, switch Easy Lift in “Neutral” position (green knob and turned off leds) and wait that complete the height variation
- Log in to the Special Programs selection by double-clicking the knob; it becomes red
- Rotate the knob COUNTERCLOCKWISE until it reaches the Automatic Self-Levelling program (the 4 leds will start flashing in alternate way)
- Within 4 secs. press the knob once

Once the program is activated, the system will take the vehicle position, it will compare it to the one memorized during Calibration (par. 3.4.2) and will make the necessary corrections to re-set the memorized level.

- Once levelling is completed, the vehicle can be turned off.



As previously described, owing to the Land Rover programmation logics, the more the required variation is wide, the more quick will be the feedback of the vehicle. Small variations can require more seconds to be completed. As a consequence, depending on the level difference to compensate, the levelling operation can take a few minutes, too. Take your time to obtain your best comfort.



In case a levelling of more than 4,5° is needed, the system can signal an error to the suspensions (red or yellow indicator light) or signal “Extended height”. In such case, deactivate the program and wait for a few seconds. The anomaly will automatically disappear. Please look for a less offset parking and repeat the procedure.

4.5. Control and visualization through the App



Please download the latest version of the App in the respective Play and App Store. Once the App is running, go to the “Settings” page to be able to:

- Research and connect the module directly from App
- Customize the heights variations programs
- Customize the default program (New Default)

Once Easy Lift is connected, enter the serial number of the product, without asterisks, taking care to respect the upper/lower case letters.



During the use of Easy Lift’s App the car’s speakerphone will always be available to use.

To access the selection of activatable programs, press on the green bar indicating the current status of Easy Lift. When opening the widget with the buttons, press the desired program, then confirm to activate it or cancel to return to the previous status.

4.6. Neutral button



In case you have chosen not to install the controller and for unforeseen reasons it is no longer possible to manage Easy Lift via the Smartphone (phone drain, phone damage, etc.), Easy Lift can be returned to “Neutral” position



User Manual



simply by pressing briefly the white button installed on the control unit, between the two main connectors.

5. Troubleshooting

Problem	Possible cause	Possible solution
The controller doesn't turn on	The connectors of the bypass wiring harness and of the controller are not correctly inserted in the Easy Lift module	Verify and correctly insert the connectors
	The original Land Rover suspensions ECU (EAS) is not electrically connected	Verify the 5.0 Amp fuse nr. 35 positioned in the fuse box behind the main glow box
At the end of installation, "Suspensions fault" is reported	The EAS' connectors have been unplugged before battery disconnection	Turn off end turn on again the car; this is an auto resetting error
	The bypass wiring harness is not correctly connected	Verify the correct installation of the wiring harness and of all the EAS connectors. If persistent, proceed with the following step
	Possible anomaly of the wiring harness or the Easy Lift module	Contact Land Rover Passion's assistance
Using the Extra Low program the vehicle indicates "Extended mode"	Maybe the original calibration of the suspensions is not correct and, when the function is activated, one or more sensors surpass the limit normally allowed	The calibration of the suspensions is not mandatory since, even when this anomaly is showed, the system does not lift the vehicle. Once the Extra Low program is no more needed, reset Easy Lift in Neutral position and use the Land Rover suspensions command to leave the extended modality.
The "Self Levelling" program does not make the needed corrections	Calibration of the module's levelling has not been memorized	Repeat the Calibration procedure



User Manual



<p>The “Self Levelling” program works in a misligned way</p>	<p>The module lays in a different position compared to the one of when Calibration was made</p>	<p>Check if the position of the module has changed or if it is no longer stucked to the dual tape support.</p> <p>Re-position the module firmly, repeat the Calibration procedure and activate the Self Levelling program again.</p>
--	---	--

