



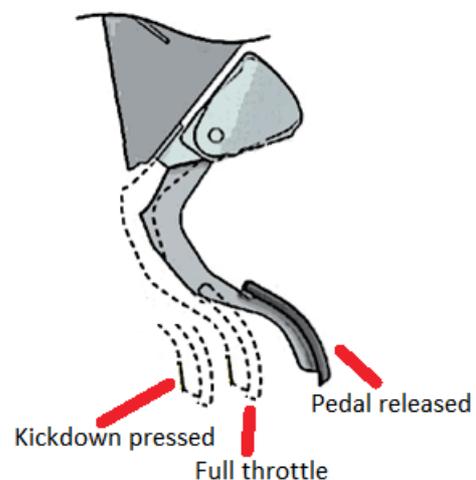
## LeafBox manual, v1.0

LeafBox should be installed to accelerator pedal plug of Nissan Leaf. It does not matter generation or year of production, but there are various settings depend on your driving mood, year of production and type of accelerator pedal (with or without kick-down).

### 1. How to set the LeafBox?

Basically you need to find if your Leaf has an accelerator pedal with or without kick-down. Kick-down equipped version are usually US domestic market cars, but this may vary. How to find it? While car is off, please press firmly accelerator pedal until noticeable drag. If then, while increasing force your pedal “clicks” and goes further – this means that this is a “kick-down” version. Alternatively, when drag occurs, and you increase force, but nothing changes (pedal is pressed “to the metal”) - your pedal is not equipped with mechanical “kick-down”.

At this moment you should decide, if you prefer to drive your Leaf with ECO mode (then normal mode will be equivalent to LeafBox off) or with normal mode. Also you should decide if you use rather D-mode or (if equipped) B-mode. Also please know a generation of your Leaf (2011-2012 is Gen1, it has no heat pump not “heat” button).



Year of production	Kick-down present?	Is ECO preferred?	B or D mode used?	Set orange programmer to:
2011-2012	Yes	No	D	1
2011-2012	No	No	D	2
2011-2017	Yes	Yes	D,B (D suggested)	3
2011-2017	No	Yes	D,B (D suggested)	4
2013-2017	Yes	No	B	5
2013-2017	No	No	B	6
2013-2017	Yes	No	D	7
2013-2017	No	No	D	8

Select appropriate program using orange programmer (see photo), then install cover back.

If you are focused for best possible range, it is highly suggested to use ECO mode and D-mode – because with D-mode with LeafBox regeneration is enhanced enough, to offer better total regeneration efficiency, even better than B-mode. I suggest to use B-mode in dense city traffic only, or do not use it at all.



## 2. Installation

This is critically important to follow the procedure:

- disconnect car battery (under the hood, right side). It is OK to disconnect any terminal (positive or negative). If you DON'T disconnect car battery – there is no problem to install LeafBox, but Leaf is clever – it powers accelerator pedal all the time so it will catch an DTC error – showing it at the dash (yellow car with exclamation mark).

If you did not disconnect battery then there are two options – car runs (you can drive it) with that error (then simple switching car off for 30 sec will solve an error) or car does not run – then you MUST disconnect car battery under the hood for 30 sec.

- if your Leaf has a sun charger (in rear spoiler) please cover it with any non-translucent surface.  
 - connect LeafBox plug to accelerator pedal (unplug factory plug from accelerator pedal) – connect delivered plugs to pedal and car side. Please follow following video: <http://y2u.be/ClyKtweMWQE>  
 - connect LeafBox to it's plug. Remember to choose LeafBox working mode before installation with internal programmer (use Phillips screwdriver to open LeafBox, programmer is an orange one). LeafBox can be left at cabin silencer that is installed in all Leafs under steering wheel, or you can put it in any place, tightening it to the surface with included zip ties.



### 3. Switching LeafBox on and off with accelerator pedal

To switch LeafBox off or on please follow this procedure:

- car is off
- sit in the car, close door. All doors should be closed, including rear ones.
- wait 30 seconds or more
- press accelerator pedal to the metal
- while keeping accelerator pressed open drivers' door.
- wait for sound – 2 beeps = LeafBox is on now. 1 long beep – LeafBox is off now.

LeafBox remembers last setting even if you unplug it from harness. LeafBox informs you about actual setting when you come to car and open drivers' door (with sound, as described above).

### 4. Fine tuning of LeafBox

It is possible, that none of programs installed would fit your needs. You can easily correct program to your needs or write update, or switch on or off extra regeneration for D-mode (default is ON) with software from LeafBox page: <http://vtechtuning.eu/leafbox.html>  
Please install drivers first, then start the software. There is a separate manual for LeafBox Manager software.

### 5. Some ways to drive smoothly and extend Leaf range:

•Coast to a stop: Driving quickly and hard braking at lights and stop signs wastes energy, as mechanical braking will be partially involved then. Releasing the accelerator when recognizing the need to slow down, stops the energy supply and start regeneration. It is even better if **you can coast (glide) using LeafBox coasting option** (as described below).

•Accelerate gently, but not too slow.

**LeafBox will help you to accelerate with “4 points” at dash power meter.**

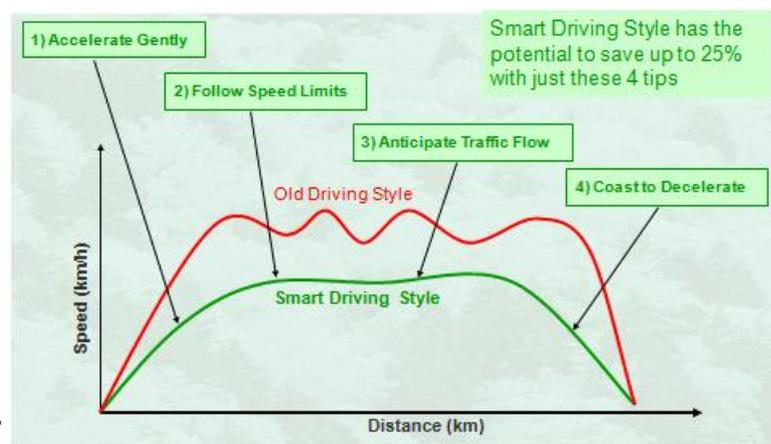
Too lazy acceleration may result in forcing EV motor to work in less efficient area. Same is for too speedy acceleration. Get up to cruising speed at a moderate pace.

•Maintain a constant speed: Keep your momentum by coasting without the power (use “gliding” behavior of the car by keeping your feet at accelerator pedal

a bit so **LeafBox can detect that you want to coast**. The fewer times you have to come to a complete stop, the better your mileage will be.

•Anticipate traffic flow: Watch well ahead and be aware of changing lights that will turn red before you get there.

•Control pressure of tires. Too low pressure impacts economy a lot.



## **6. Troubleshooting**

### **1. I cannot find where to install LeafBox**

At the accelerator pedal (right one) in the car. Plug is above the pedal assembly, see video: <http://y2u.be/CIyKtweMWQE>

### **2. I cannot disconnect plug from accelerator pedal**

It works like “press and pull”. Please see how lock at plug is built by looking at same lock in LeafBox harness. Maybe you need to use small screwdriver, if your fingers are not powerful enough.

### **3. I’m not sure, where to leave LeafBox installed?**

Put it under sound silencer under steering wheel, connecting it with tie wraps to any element except moving elements of steering wheel.

### **4. Is it obligatory to disconnect car battery (the one under hood)?**

It is suggested to do that, otherwise car will catch an error and present it on the dashboard. Error may disappear after one car restart (this will occur if car is driveable with error) or it will be needed to unplug battery for 30 seconds (if car does not want to engage gear with error).

### **5. I have an error at the dash and car does not want to drive.**

Just unplug car battery for 30 seconds and connect it again – all will be ok then.

### **6. I disconnected and reconnected battery but an error still exists...**

Check if you haven’t forgotten to connect LeafBox to wiring, or one wiring plug is not connected properly and car cannot see accelerator pedal.

### **7. I’m not sure if extra regeneration in D-mode works properly**

You can a. set box program to 0 (zero) to switch it off, and switch extra regeneration for D-mode accordingly. b. Another option is to connect LeafBox to LeafBox Manager software (using USB cable) and switch on and off extra regeneration from within the program. c. You can also switch the box off by following the procedure described in Chapter 3. d. You can install dummy mockup box if you have one.

### **8. I do not see any difference after installing LeafBox**

This means that your accelerator pedal parameters (voltage levels) are far from standard ones. In that case LeafBox is not working for security reasons, showing error of range in LeafBox Manager

software. Then please do throttle adaptation, following the procedure described in LeafBox Manager manual, and all will be ok.

**9. I want to reset my LeafBox but I forgotten to save original setup. What to do?**

Download factory setup from LeafBox page: <http://vtechtuning.eu/leafbox.html> (section Downloads) and program it.