

# LadyBird – specs and manual

## General description

LadyBird is a very compact Bluetooth remote controlled dedicated to modern roadbook navigation using android phone or tablet running apps like Piste Roadbook Reader. Additionally, it can control some navigation apps like Osmand, Locus Map, etc. Using apps like Automate, you can control basically everything on your android device.

## Hardware specifications

|  |         |
|--|---------|
| Length:                                | 65±1 mm |
| Width:                                 | 18±1 mm |
| Top surface height from the handlebar: | 13±1 mm |
| Handlebar diameter:                    | 22±1 mm |

Mounting on the bar is done with two M4 hex screws.

|                               |   |
|-------------------------------|---|
| Cable length:                 | 1±0.1 m   |
| Wire color coding:            | <b>BLUE</b> – negative; <b>BROWN</b> – positive |
| Voltage range:                | 4 ... 24 VDC                                    |
| Current consumption (@12VDC): | < 0.15 mA                                       |
| Overcurrent protection:       | YES   |
| Overvoltage protection:       | YES   |
| Reverse polarity protection:  | YES   |

## Pairing

You need to pair LadyBird to your android device before use. Simply connect the power supply to the LadyBird and scan for Bluetooth devices with your android device. LadyBird should appear, proceed with connecting and pairing it. If prompted with code confirmation, just click OK and it will connect. Now it's paired and whenever it's powered, it will connect to the paired android device when it's in range and has Bluetooth enabled.

## Power source recommendation

Connect the power cable of the LadyBird to the power source which is present when vehicle is running, or which could be turned on/off. Example: headlight, parking light, etc.

The power consumption of the LadyBird is very low, but it's not recommended to connect it directly to the battery of the vehicle.

Connecting to the stable DC power supply is recommended. Connect to the AC power supply at your own risk.

## Usage

LadyBird has 4 physical buttons which are numbered in the picture below. In addition you have extra 6 virtual buttons which are basically a combination of two physical buttons.



The device works as a simple BLE HID Keyboard. The key mapping of physical and virtual buttons is presented in the table below.

| Physical or Virtual | Button combination | Letter (US keyboard) |
|---------------------|--------------------|----------------------|
| Physical            | 1                  | <b>c</b>             |
| Physical            | 2                  | <b>d</b>             |
| Physical            | 3                  | <b>=</b>             |
| Physical            | 4                  | <b>-</b>             |
| Virtual             | 1 + 2              | <b>m</b>             |
| Virtual             | 1 + 3              | <b>n</b>             |
| Virtual             | 1 + 4              | <b>o</b>             |
| Virtual             | 2 + 3              | <b>p</b>             |
| Virtual             | 2 + 4              | <b>q</b>             |
| Virtual             | 3 + 4              | <b>r</b>             |

The default key mapping is such that you can center map, zoom in, zoom out in most navigation maps by default. In roadbook reading apps like Piste Roadbook Reader, you can map these keys to the desired functionality.

## Examples

Example with Automate and Switching between Piste Roadbook Reader and Osmand:

1. Install Automate (by LlamaLab).
2. Install Piste Roadbook Reader.
3. Install Osmand.
4. Open Automate:
  - a. In Flows scroll down to “More flows...”
  - b. Go “START”
  - c. In top right corner push magnifying glass icon
  - d. Search for “Switch nav apps”.
  - e. It should find flow #45015.
  - f. “DOWNLOAD” it
  - g. Now it should appear in the main “Flows” menu and can be accessed from there.
  - h. Open it and start it.
  - i. Connect LadyBird if not connected yet and push buttons 2 and 3 at the same time.
  - j. Piste Roadbook Reader will start and if you push buttons 2+3 again, it will open Osmand. Pushing the 2+3 combination will switch between these two apps.
  - k. You can edit Automate Flow and set different Physical/Virtual button for switching application, you can replace, add, remove apps you want to switch between. You can even program to call somebody when the programmed button is pressed.