LABTIMER

Mini 4WD | Read Unit | 3 Lane

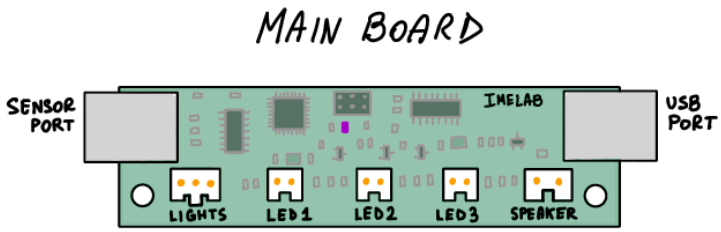
KIT ASSEMBLY MANUAL

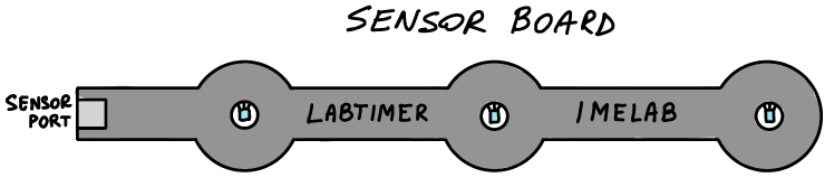
Powered by

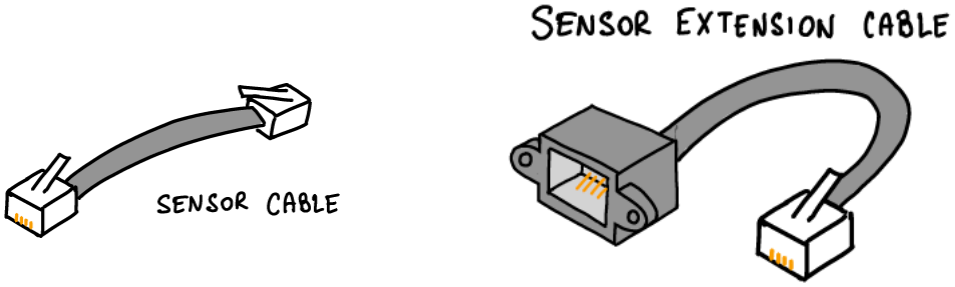
IMELAB™ Innovation Meets Experience

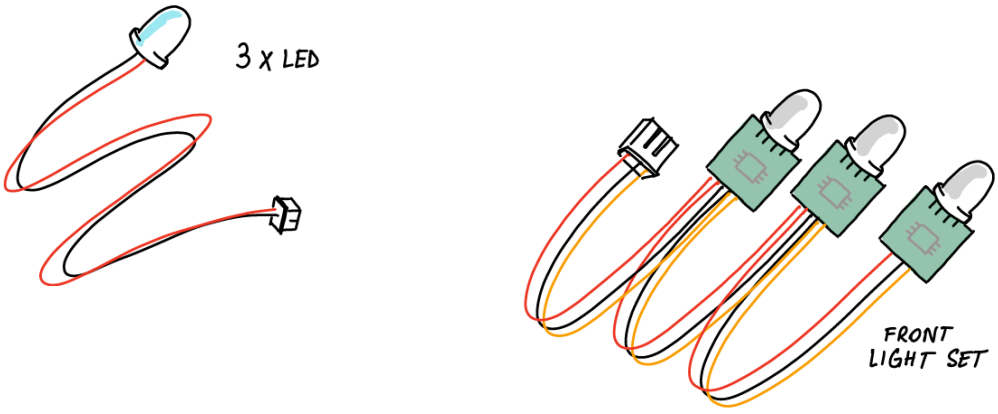
Contents

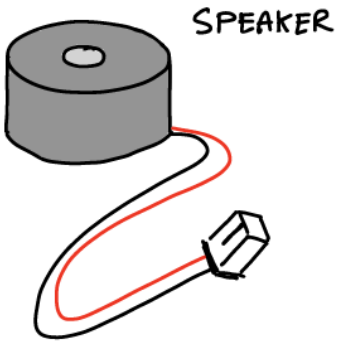
Kit content


MAIN BOARD
SENSOR PORT
IMELAB
USB PORT
LIGHTS
LED 1
LED 2
LED 3
SPEAKER

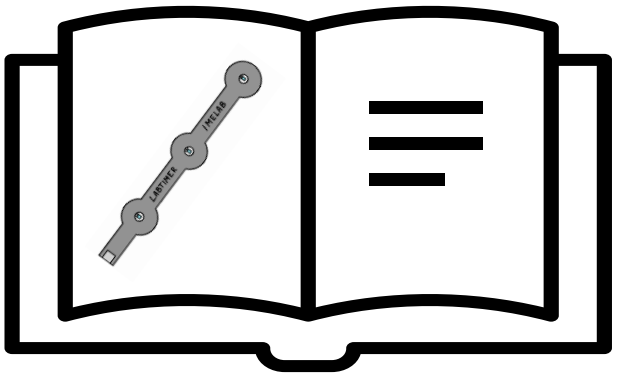

SENSOR BOARD
SENSOR PORT
LABTIMER
IMELAB


SENSOR EXTENSION CABLE
SENSOR CABLE


3 X LED
FRONT LIGHT SET

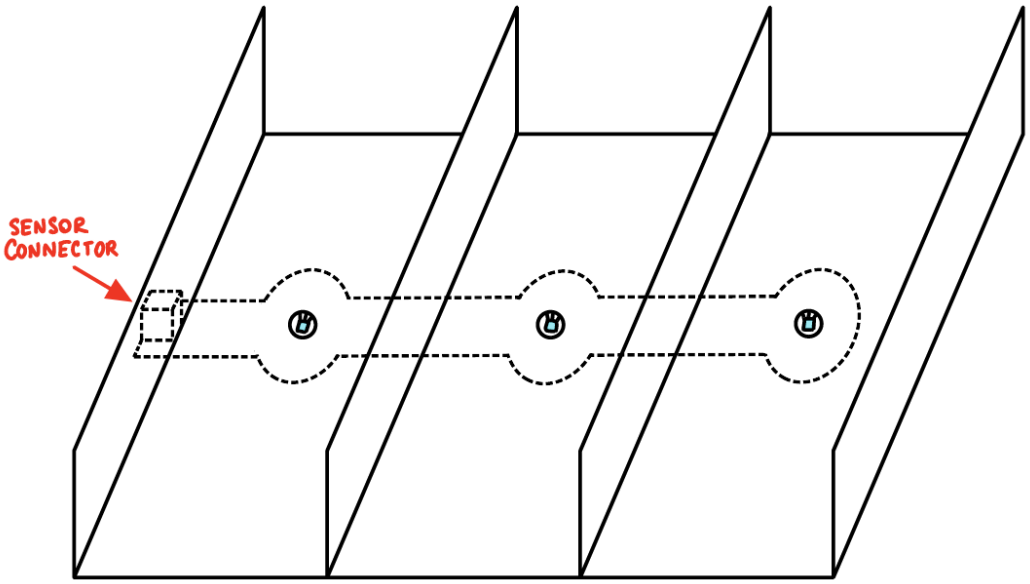

SPEAKER

Sensor installation



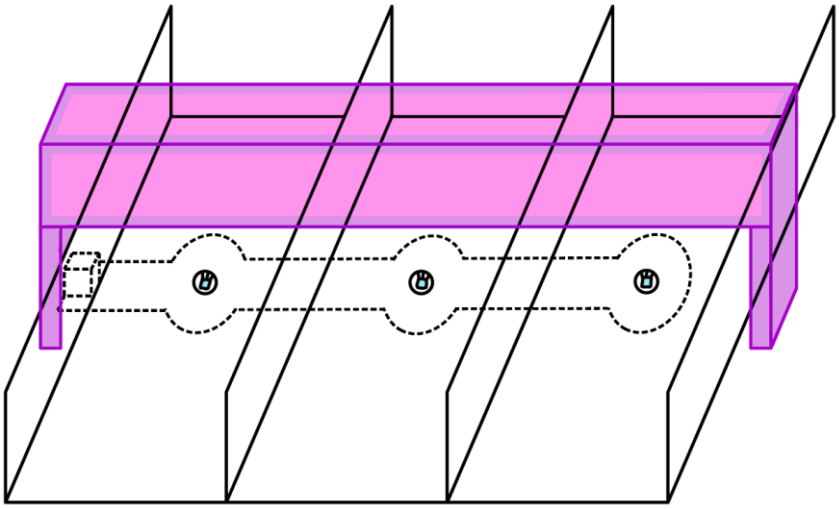
Please follow the **Sensor Installation Manual** available on IMELAB website.

The result will look like this

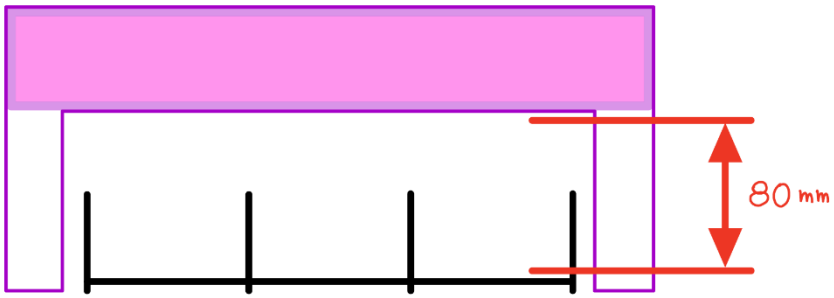


Chassis overview

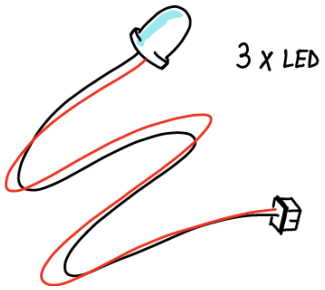
The chassis should be larger than the track width to stand on the floor.



Since a Mini 4WD can be as high as 70mm ready to run, the distance between the bottom surface of the chassis and the track should be at least 80mm.



LEDs installation

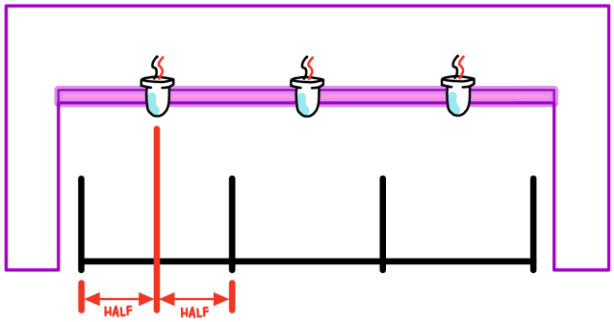


These LEDs, light emitting diodes, should be aligned with the sensor installed on the bottom of the track surface.

When a race start, they are turned ON automatically, enlightening the sensor behind the track with a circular white beam.

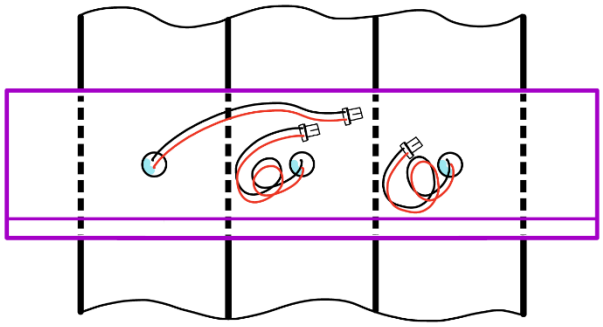
Each time a Mini 4WD pass through a *LABtimer Reading Unit*, the beam is interrupted, triggering a reading event.

The bottom surface of each LEDs should stick out from the chassis for a couple of millimetres.



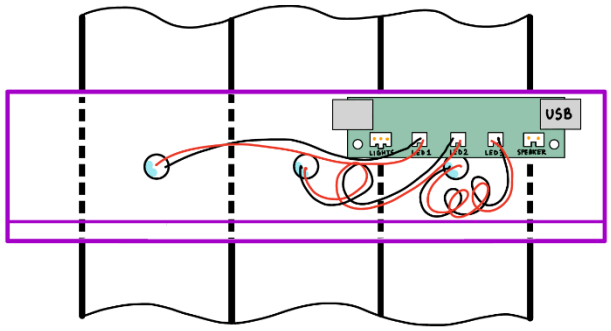
Top view, inside the chassis.

Without the main board installed

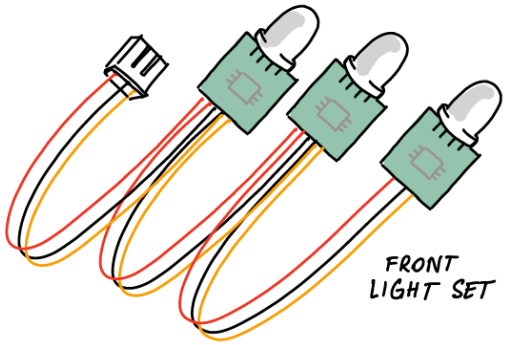


Top view, inside the chassis.

Connect the LEDs into the connectors named
LED1, LED2 and LED3



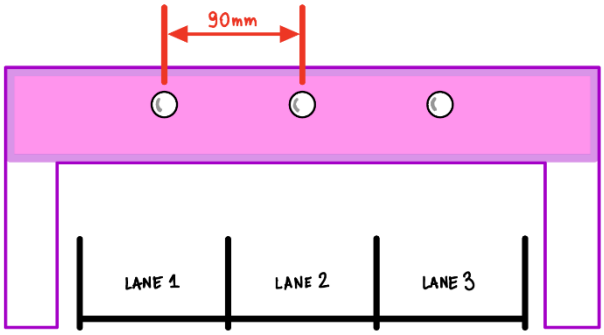
Front light set installation



The front lights report the race status to the racer. They are bright and multicolour leds, the most iconic for *LABtimer*.

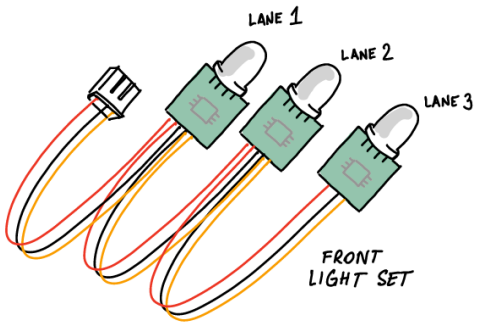
3 BLUES when a race is preparing... Get ready, turn on your car... GREEN! START!

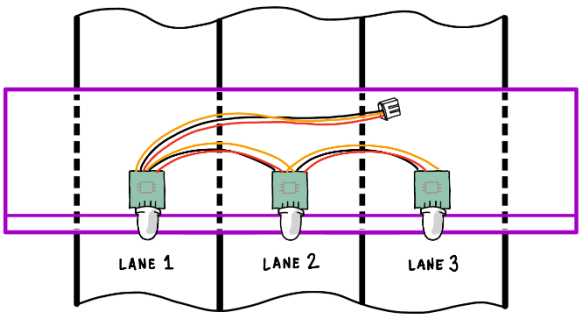
Each reading triggered by a Mini 4WD running behind the *LABtimer Reading Unit* is notified with a blue blink, and at the end of the race the order of arrive is displayed on top of each lane: GREEN for the first, YELLOW for the second, RED for the third, off for... your car is out, sorry!



Drill the front side of the chassis, the one faced to the START section of your track.

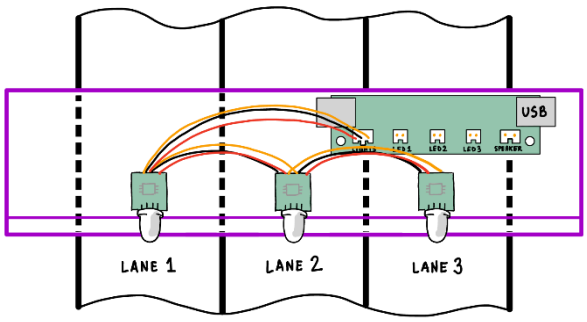
The light set is coming pre-assembled, for an easy and cleaner installation inside the enclosure. Please mind the lane-to-led matching sequence.



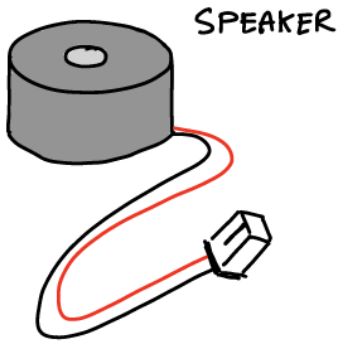


Top view, inside the chassis.

Connect the light set to the main board on the connector named LIGHTS.



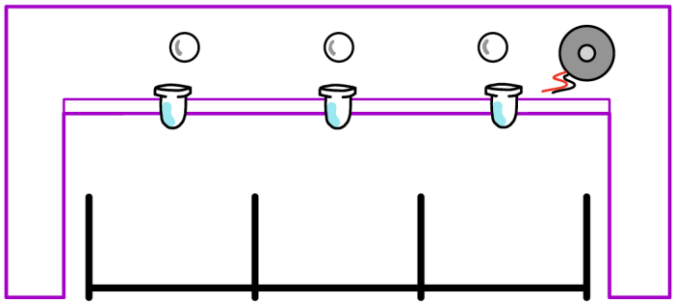
Speaker installation



The loud speaker is used during the race start phase: it's perfect to be heard from the racers on the START line.

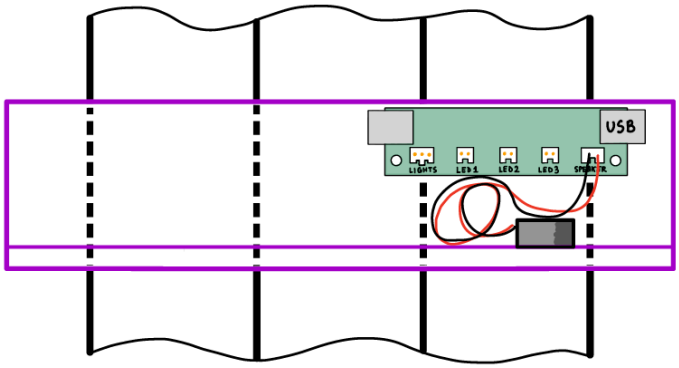
Since it's very directional, it is recommended to place it front faced on the chassis.

This can be a good spot!



Top view, inside the chassis.

Connect the speaker to the main board on the connector named SPEAKER.

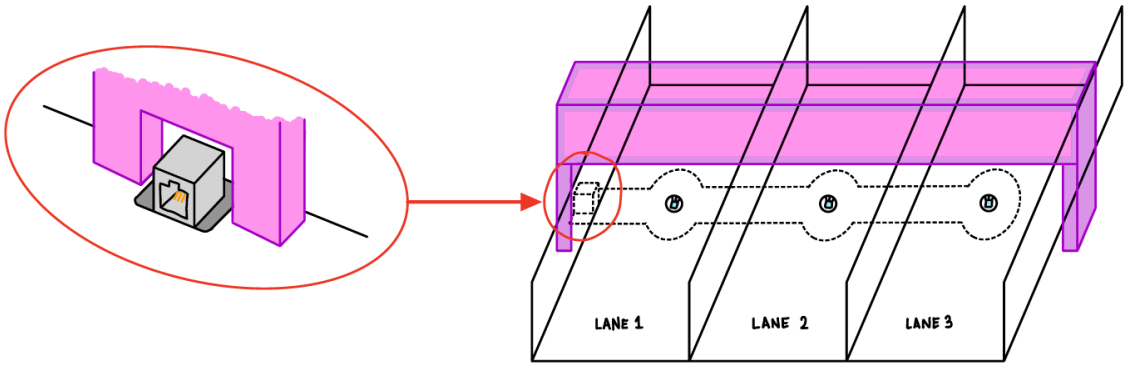


Sensor connections

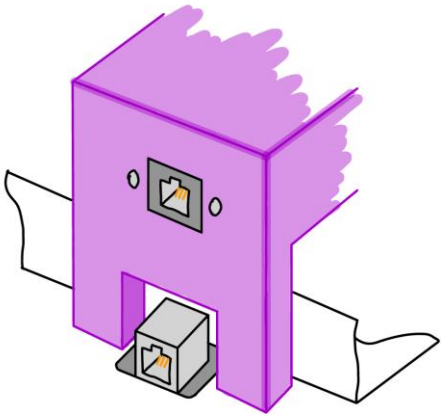
The sensor board is used in combination with the top LEDs to read a Mini 4WD when it pass through a *LABtimer Reading Unit*.

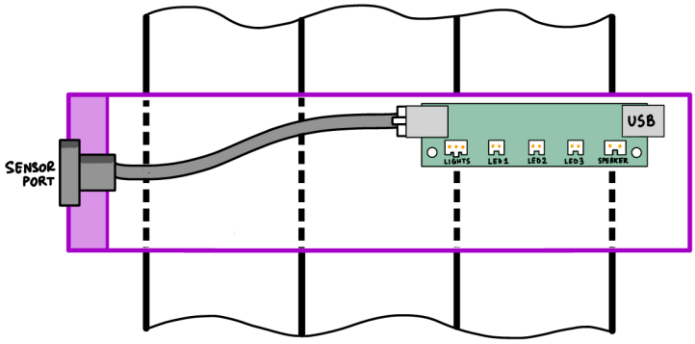
These sensor board has to be connected to the main board using a self-locking cable, which can be easily removed to store the *LABtimer Reading Unit* when not used.

On the left side of the chassis, the one on the lane 1 side, leave enough space for the sensor board connector.



For a best result, install the sensor extension cable to the left side of the chassis.





Connect the two unit together using the sensor cable.