



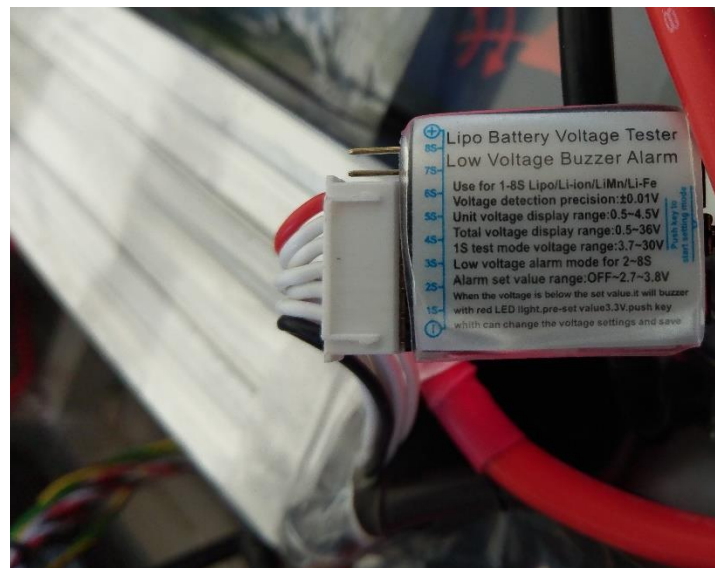
## SATURNE quick start guide



### Preparing the robot

First ensure the **rear circuit battery switch** is on **OFF** position.

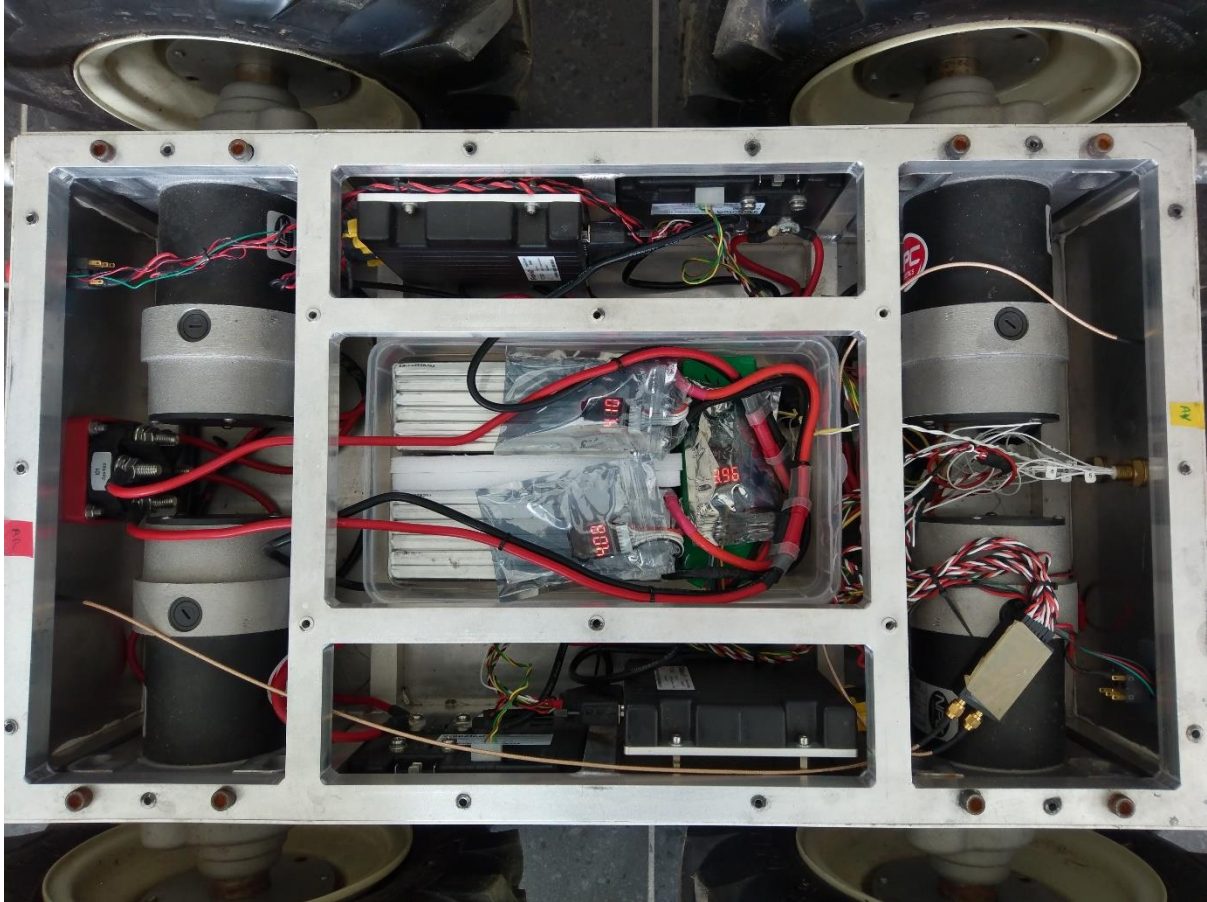
Ensure the **2 motors batteries** (Li-Po 6S 22 Ah with XT150 connectors) are charged (near 25 V) and optionally plug a **voltage checker** on each of them to get an alarm when one of them becomes too low.



If needed, **unplug the front SEACON connectors** by unscrewing their black locking sleeve, **remove the strap** used to secure the top aluminum cover plaque, remove that plaque, **place the batteries inside** the robot and plug them on the corresponding connectors. Warning: the connectors might be

a bit hard to plug/unplug. Ensure the voltage checkers from the different batteries never get in contact (put them in their plastic bags).

If needed, place similarly the **electronics battery** (Li-Po 6S 10 Ah (or possibly smaller 4S battery) with XT90 connector), optionally with a voltage checker (this battery is not necessary for RC-only use).



Ensure no cable could be stuck and place the single **top aluminum cover plaque** (for RC-only use) or the top aluminum cover plaque with the electronics box (for autonomous and additional sensors functionalities, see **SATURNE advanced use and maintenance** document) and **attach it with the strap**.





**Plug the SEACON** caps to protect the front SEACON connectors from dust, humidity, etc. when they are unused (for RC-only use) or plug the corresponding colored SEACON connectors coming from the top electronics box (for autonomous and additional sensors functionalities) and **remove the Velodyne LIDAR black protection bag** if needed. Warning: the embedded computer and all the devices in the optional top electronics box will switch on.



Put the radio battery (Li-Po 2S 800-3000 mAh) inside the radio.



## Using the robot with the radio

Ensure at least one of the **emergency buttons** is in **pushed** position.

Switch the **radio on**.

Ensure it is **safe** to move the robot in its **environment** and when ready, turn the **rear circuit battery** switch in the **ON** position and twist to **release all emergency buttons** (front, rear, and one is on the optional top electronics box). The **right stick of the radio** can be used to move the robot and the maximum speed can be limited using the **S1 potentiometer**. Ensure the trim indicators are centered.

Warnings:

- Switching off the radio or getting out of range gives control to the optional top electronics box.
- In case the robot gets out of control, push one of the emergency buttons on the robot.
- The batteries might be damaged if they get too low. Stop using the robot as soon as possible if one of the voltage checker rings and follow **After use** part. In practice, consider stopping when one of the battery is below 22 V when idling.

## After use

First **push** at least one of the **emergency buttons** and turn the **rear circuit battery switch** in the **OFF** position, if needed ensure you **cleanly shutdown the embedded computer** (see **SATURNE advanced use and maintenance** document) **before unplugging the front SEACON connectors**, opening the robot and **unplugging the batteries from everything, including the voltage checkers**. Note that the circuit battery switch does not cut the power to the optional top electronics box.

It should be safe to leave the batteries connected inside the robot as long as **no voltage checker is plugged** on them, the **rear circuit battery switch** is in the **OFF** position, **the top electronic box is not connected** via its SEACON connectors and nothing can make undesired electrical contacts inside the robot or on its front SEACON connectors.

Do not forget to **turn off the radio** (it should be safe to leave the battery connected inside, but **do not leave any battery connected to the TBS transmitter** module, directly connecting a battery to it is only recommended in case the robot becomes out of range) and put back everything in its respective bag/place.

## Charging the batteries

Use the provided charger able to charge 4 different batteries simultaneously, the small Li-Po 2S with JST (little red) connector side should be for the radio battery while the other sides should be used for the motors and electronics batteries.

Always double-check the connections and that the configuration of the charger is compatible with the batteries currently connected. You might need to launch the charge multiple times due to the high capacity of the motors batteries. See e.g. <https://youtu.be/vzAOG9ctZRU> if you never used configurable chargers.

