CHECK-LIST Homologation guide

Are my robots ready for the approval tests? Check it yourself!
Test these following points (non exhaustive list) before presenting your robots to the approval area.

Robot #1

- [ ] **≤ 120 cm: non deployed perimeter** (in vertical projection)
- [ ] **≤ 130 cm: fully deployed perimeter** (in vertical projection)
- [ ] **≤ 35 cm: height** (beacon support and emergency stop button excluded)
- [ ] **≥ 50 cm:** cord length **(starting system)**
- [ ] Beacon mast support (optional): convex hull at any altitude, between a 7×7 cm circle & a 10×10 cm square, solid & opaque.
- [ ] Beacon support (optional): min a Ø 7×7 cm circle to max a 10×10 cm square, Velcro rough hook side, stable, height=43 cm, may support 300 g
- [ ] **Obstacle avoidance system;** sufficient coverage around the robot in order to guarantee the detection in all the moves
- [ ] Ø ≥ 2 cm, height ≤ 37.5 cm and red coloured: **emergency stop button**
- [ ] A space of 100 x 70 mm is visible on one side for sticking the participation label.
- [ ] Presence of an **actuator** that can be used for one action (not necessarily to move)
- [ ] **≤ 4 bars** at any point of non-commercial compressed air systems
- [ ] **Lasers:** classes 1, 1M authorized; classes 2 accepted if the laser stays inside the playing area; higher classes forbidden. Provide the data-sheets.
- [ ] All the **Lithium** batteries in safety bags (except LiFePO4 & Mindstorm); bring the chargers.
- [ ] No forbidden equipments or **dangerous** for the persons or the goods (playing areas). File the projecting parts.

Robot #2

I do not have a second robot (skip the following)

- [ ] **≤ 120 cm: non deployed perimeter** (in vertical projection)
- [ ] **≤ 130 cm: fully deployed perimeter** (in vertical projection)
- [ ] **≤ 35 cm: height** (beacon support and emergency stop button excluded)
- [ ] **≥ 50 cm:** cord length **(starting system)**
- [ ] Beacon mast support (optional): convex hull at any altitude, between a 7×7 cm circle & a 10×10 cm square, solid & opaque.
- [ ] Beacon support (optional): min a Ø 7×7 cm circle to max a 10×10 cm square, Velcro rough hook side, stable, height=43 cm, may support 300 g
- [ ] **Obstacle avoidance system;** sufficient coverage around the robot in order to guarantee the detection in all the moves
- [ ] Ø ≥ 2 cm, height ≤ 37.5 cm and red coloured: **emergency stop button**
- [ ] A space of 100 x 70 mm is visible on one side for sticking the participation label.
- [ ] Presence of an **actuator** that can be used for one action (not necessarily to move)
- [ ] **≤ 4 bars** at any point of non-commercial compressed air systems
- [ ] **Lasers:** classes 1, 1M authorized; classes 2 accepted if the laser stays inside the playing area; higher classes forbidden. Provide the data-sheets.
- [ ] All the **Lithium** batteries in safety bags (except LiFePO4 & Mindstorm); bring the chargers.
- [ ] No forbidden equipments or **dangerous** for the persons or the goods (playing areas). File the projecting parts.

- [ ] The robot(s) must stand in the starting area.
- [ ] **≤ 205 cm: sum of the non-deployed perimeters** of the two robots
- [ ] **≤ 220 cm: sum of the deployed perimeters** of the two robots

Additional constraints

Basket

- Should be contained in the dedicated platform and with good visibility from the audience.
- **Width ≤ 22.2 cm;**
- **Length ≤ 45 cm;**
- **Height (not deployed) ≤ 30 cm** (and during the match, can be deployed up to 90 cm)

☐ The basket count the cherry inside

☐ **≤ 3 kg :** weight

☐ Emergency button (if batteries)
Fixation: threaded rod of Ø 8 mm & butterfly nut.

Embedded beacons

☐ ≤ 10×10×8 cm, velcro soft loop side/bottom, rough hook side/top.

☐ **≤ 300 g :** weight

☐ Laser & batteries constraints are the same as for robots.

Central tracking device

☐ Dimensions (6 cm allowed in any direction around the platform, except towards the opponent side), fixation (threaded rod of Ø 8 mm & butterfly nut, and safety cable with a ring), weight (**≤ 2 kg**)..

Fixed beacons

☐ ≤ 10×10×51 cm

☐ **≤ 1,5 kg : weight**

☐ Fixation: threaded rod of Ø 8 mm & butterfly nut.
Laser & batteries constraints are the same as for robots.

☐ The score display is visible and easy to read. It is installed on the robot(s) or on the display cabinet.

Good to know!

- I anticipate my passage to the approval area. I do not wait until the last minute!
- I do not hesitate to homologate my systems individually when they are ready.
- When a substantial material modification is done, I must re-homologate what is nécessary.