

FAQs AUTOTRAC (JRC Revision 09/12/20)

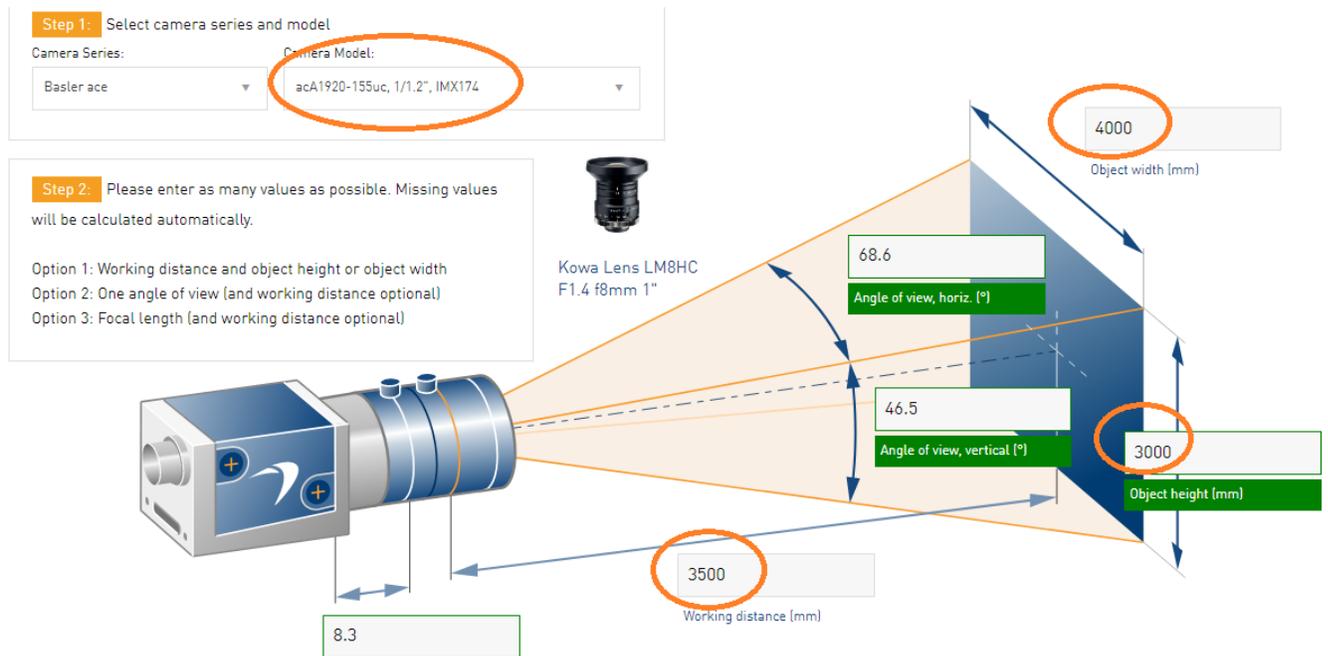
Camera

1. Is the camera model that will be shipped and any mounting accessories already known?

- Yes, below you can find the links to all the material related to the camera that will be shipped:
 - N° 1 – Camera "acA1920-155uc - Basler ace"
<https://www.baslerweb.com/en/products/cameras/area-scan-cameras/ace/aca1920-155uc/>
 - N° 1 – Kowa Lens LM8HC F1.4 f8mm 1" - Lens
<https://www.baslerweb.com/en/products/vision-components/lenses/kowa-lens-lm8hc-f1-4-f8mm-1/>
 - N° 1 - Tripod Mount ace - Camera Mount Adapter
<https://www.baslerweb.com/en/products/vision-components/accessories-and-bundles/tripod-mount-ace/>
 - N° 1 - Camera Bracket: 360 / 90 – Mounting
<https://www.baslerweb.com/en/products/vision-components/accessories-and-bundles/camera-bracket-360-90/>
 - N° 1 - Cable USB 3.0 Hybrid, Micro B sl/ A, 10 m - Data Cable
<https://www.baslerweb.com/en/products/vision-components/cable/cable-usb-3-0-hybrid-micro-b-sl-a-10-m/>

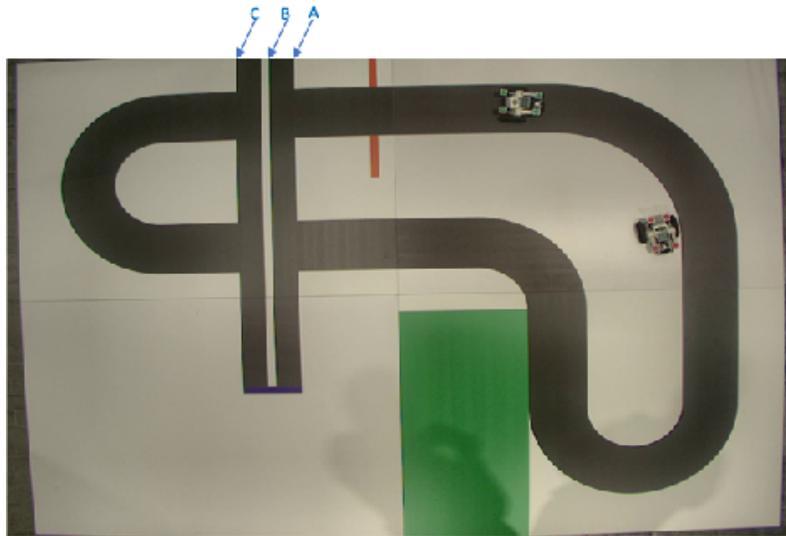
2. Is it possible to know the mounting height of the camera from the ground?

- The distance from the ground that we used for our tests is 3.5 meters. With this distance you should be able to see the whole track. Below you can find the simulation made on the camera manufacturer's website:

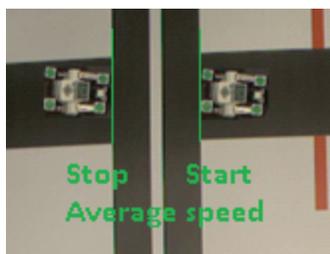


J-Shaped Track

3. The size of the banner is reduced from 4x3 meters to 4x2.8 meters. Does this affect the track characteristics (e.g., track width, parking area)? Or, is it just the reduction of the white boundary areas?
 - It is just the reduction of the white boundary areas.
4. The new rules state “The 2 signals (with green arrow) will be located on the right and 10cm before the “tram rail”.” Is the 10cm measured from Point A or Point B in the figure below?
 - From Point A



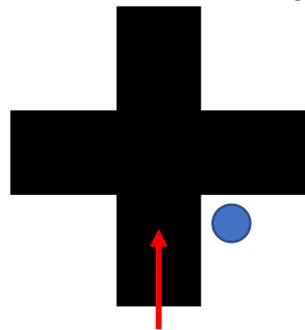
5. The rules state “When each vehicle is on the “tram rail”, it will have to reduce its speed to 0.35m/sec. (or less).” ⁽¹⁾
 - a. What is the boundary of the “tram rail” in this requirement? From Point A to Point C in the figure above?
 - Yes, from Point A to Point C
 - b. What vehicle speed will be used to compared against the speed limit of 0.35m/sec ⁽¹⁾? Instantaneous speed or average speed over the “tram rail” segment?
 - Average speed over the “tram rail” (see image below); however it is forbidden to stop the vehicle to reduce the average speed
Calculation of the average speed = the tram rail width divided by the time to go from start to stop in the picture



Note (1): Remember that now the average speed to keep on the “tram rail” is 0.35m/sec. (in the first version of the rules it was 0.2m/sec)

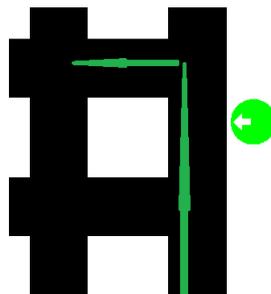
#-Shaped Track

6. The size of the banner is reduced from 4x3 meters to 4x2.8 meters. Does this affect the track characteristics (e.g., track width)? Or, is it just the reduction of the white boundary areas?
 - It is just the reduction of the white boundary areas
7. Will all the traffic signs be provided by JRC?
 - Yes (3D printing and stickers)
8. Will the signal base be metal or plastic?
 - It will be plastic (3D printed) but hollowed out on the bottom.
We suggest to insert some material to increase its weight and prevent it to fall down during the competition
9. Will the traffic signs always be placed on the lower right corner of the intersections (i.e., on the approaching leg of the intersection as in the figure below)?



Travel direction

- Yes, in some cases they will be outside the path (see image below)



10. Will the participants be informed of the number of traffic signs as well as their location, color, and arrow direction before the competition?
 - Yes, in STEP_1
11. Will the vehicles be allowed to back up or reverse during the competition in order to solve the potential conflict with another vehicle?
 - Yes, vehicles will be allowed to go back slightly, but not to reverse the direction

Logistics

12. How will the final “remote” session (STEP_5) be conducted? Pre-recorded video or live stream?

- Pre-recorder videos for performance on "J" and "#" tracks
- Live stream for project presentation, award ceremony and final discussion