

Autonomous Emergency Braking (AEB) Car-to-Car testing with a stationary target (CCRs)



**We recommend using
the following systems:**

When testing AEB systems with a stationary vehicle target, it is necessary to know the precise location, speed, heading, acceleration and yaw rate of the Vehicle Under Test (VUT).

When testing with a stationary target, only the VUT is moving and so only one RT is required. It is best to simply survey the location of the target as a fixed point.



Vehicle Under Test

- / RT3000 v3 with RT-Range-S Hunter V2V option
- / RT-Strut



Additional Equipment

- / RT-Base-S

Required measurement	Euro NCAP required accuracy	RT3000 v3 accuracy
Position	0.03 m	0.01 m*
VUT Velocity	0.1 km/h	0.01 km/h
Yaw Rate	0.1 %/s	0.075 %/s
Longitudinal Acceleration	0.1 m/s ²	0.015 m/s ²

*with RTK base station

The set up process

1. Begin setup

- / Set up base station and switch on to commence position averaging

2. Install equipment in Vehicle Under Test

- / Install RT-Strut in hunter vehicle
- / Mount RT3000 v3 onto RT-Strut
- / Install radio modem from RT-Base-S and secure antenna to the hunter vehicle's exterior

3. Configure RT3000 v3 and warm-up

- / Power on the RT3000 v3 and use NAVconfig to configure
- / Initialise and then warm up the RT3000 v3 using the NAVassist template in NAVdisplay

4. Configure RT-Range

- / Position the front bumper of the hunter vehicle within manual measuring distance to the target vehicle's back bumper
- / Measure the precise lateral and longitudinal distance between the centre point of both bumpers
- / Open RT-Range Suite
- / Configure RT-Range with one fixed-point target by selecting "New From RT" and enter the measured distances forward and right of the RT3000 v3 (not the hunter vehicle)
- / For tests with no overlap, it is sufficient to configure a sensor point for the centre of the front bumper of the hunter vehicle and a bullseye on centre of the rear bumper of the target. Otherwise, polygons should be used for both

5. Validate configuration

- / Reposition hunter vehicle behind the target
- / Manually measure the lateral and longitudinal range (from centre of bumpers) and use the offset tool in the RT-Range Suite's Quick config, to correct any error in measurement

7. Start testing

- / Configure RT-Range display page with the required measurements
- / Select "Start logging" and commence your testing

