AB DYNAMICS™

Product Specification

Synchro™

Coordination and synchronisation of test objects for unrivalled testing efficiency

Synchro is the patented communication language used to coordinate AB Dynamics track testing products. It captures real-time vehicle to object data between a test vehicle (Subject Vehicle) and other vehicles or objects (Trackers). This enables any combination of AB Dynamics systems (vehicles, ADAS platforms, driverless systems) to be coordinated and synchronised to the subject vehicle. Available in Lite or Full variants, it enables every run to be conducted in a repeatable and accurate way - making track testing much more efficient.

Capabilities and features

- A common interface for all AB Dynamics' track test systems
- Synchronisation for up to 16 objects*
- Integration with all major IMU suppliers (OxTS, Genesys etc.)
- Up to 20 vehicle-to-object Synchro data channels logged
- Interface with RT-Range and ADMA Delta
- Controls longitudinal range with optional drift correction steering
- Triggers events using any combination of Synchro data channels
- Multi-directional synchronised control for complex traffic scenarios*

* Features currently exclusive to AB Dynamics products

Hardware and software requirements

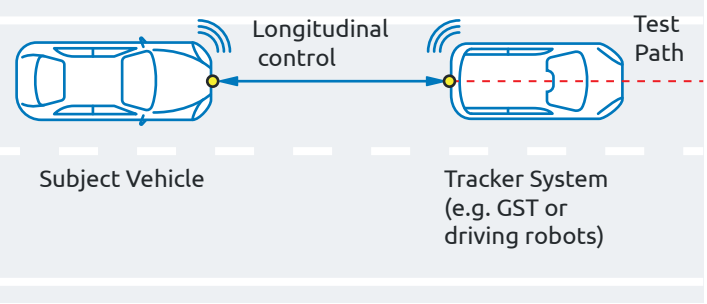
- Motion Pack with GPS antenna
- Windows based PC**
- AB Dynamics controller**
- Wireless telemetry system
- Speed control & path following capability (Tracker systems only)
- Synchro software licence (on Tracker systems only)

**It is possible to use Synchro in a more limited capacity without this item in the Subject Vehicle

Control capabilities

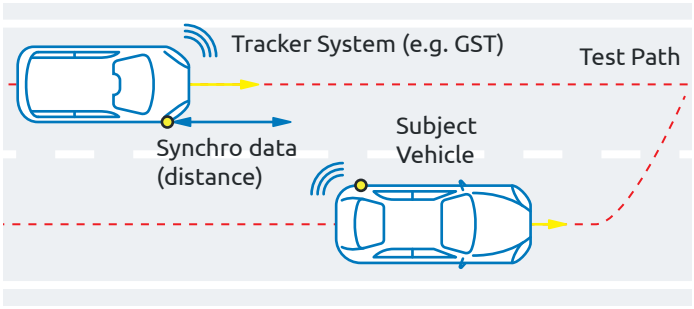
Longitudinal control (Synchro Lite, Full Synchro)

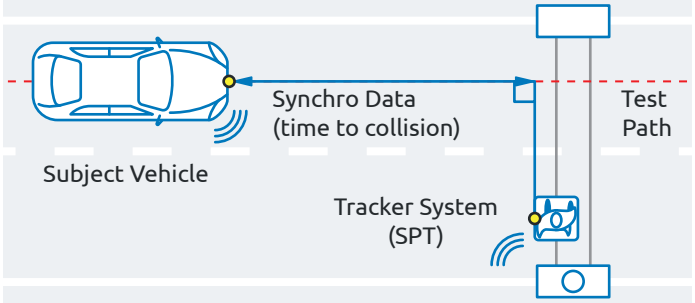
- Tracker system requires ability to perform speed control only
- For drift correction, Tracker System also requires basic path following capability
- Used for Euro NCAP braking target car-to-car scenarios using GST as the Tracker



Triggered control (Synchro Lite, Full Synchro)

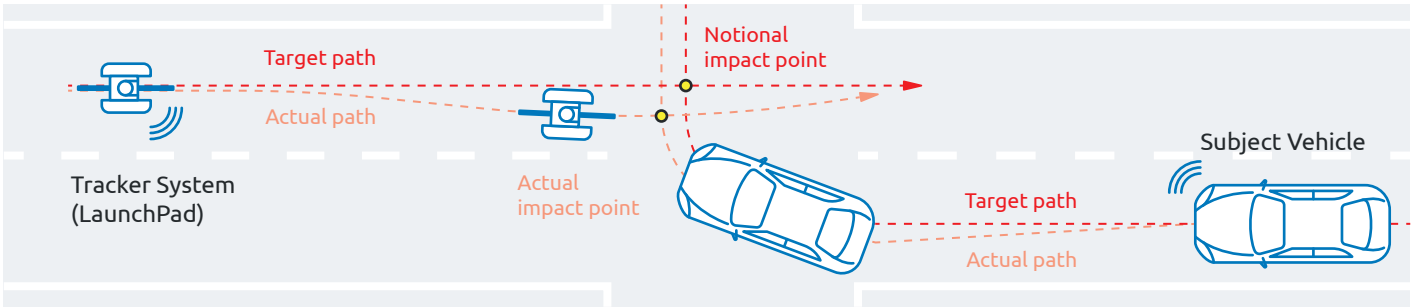
- Uses Synchro data channels such as 'time to collision' or 'longitudinal distance' to trigger any event
- Can be used to trigger vehicle-to-vehicle manoeuvres such as cut-in or start movement of Tracker
- Used for Euro NCAP emergency lane keeping and vulnerable road user scenarios





Multi-directional control (Full Synchro)

- Allows accurate synchronisation of paths with complex geometries
- Tracker can steer and change speed to compensate for Subject Vehicle positioning/speed error
- User-defined velocity ratios, distance correction and stop points supported
- Repeatable relative impact point as viewed in the reference frame of the Subject Vehicle
- Suitable for intersection tests and complex geometry paths
- Up to 15 Trackers can be coordinated by a single Subject Vehicle



About AB Dynamics

AB Dynamics is a leading global provider of automotive test and verification solutions that facilitate the development of vehicles that are safer, more efficient and sustainable. As part of the AB Dynamics Group of companies we enable customers to develop and test in virtual environments, validate on the track and then evaluate vehicles on public roads.

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