TEXA radar and camera calibration solutions

ADAS systems (Advanced Driver Assistance Systems) are designed to ensure driving safety and comfort and are becoming increasingly common in latest-generation vehicles, even in the utility segment. Functions include autonomous emergency braking, assisted speed control, lane keep assist, pedestrian and traffic sign recognition, to name just a few.

The ability to provide professional services for these systems is no longer an option but a practical necessity if you want to keep pace with the times and offer your customers a top class assistance. To help vehicle repair professionals work on these sophisticated active safety systems, TEXA has developed **a complete range of modular, multi-brand tools** that satisfy the needs of **glass replacement specialists, body shops, multi-brand garages and tire fitters**.

**PLEASE NOTE**
TEXA’s ADAS solutions are strictly compliant with the specifications of vehicle manufacturers.

The range includes:
- RCCS 2 (Radar and Camera Calibration System), available in three versions
- CCS (Camera Calibration System)
- ACS (All Around Calibration System)
- Radar blind spot calibration reflector
- ADAS TRUCK kit

These TEXA solutions help you restore ADAS functions with maximum precision according to the vehicle manufacturer’s own standards, perform static and dynamic calibration, and enjoy at least 30% better CAR and TRUCK coverage than other market solutions.

The **IDC5 software** guides the technician step by step throughout the procedures, thanks to dedicated help data sheets specifically developed for each vehicle.

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### Long-Range Radar (~250 m)

### LIDAR (~150 m)

### Camera (~80 m)

### Short/Medium Range Radar (~20 m)

### Ultrasound (2-4 m)
Additionally, to help understand the ADAS technology, TEXAEDU has developed **D9C** and **D9T**, two dedicated **specialised training courses** to learn how to carry out operations in compliance with the standards requested by the various manufacturers.

**Direct line to an expert**

If you have any doubts or questions regarding a calibration procedure, you can call TEXA's dedicated ADAS Call Centre to get a quick, competent and accurate answer that responds exactly to your needs.

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**ADAS COVERAGE: CONSTANT COMMITMENT AND DEVELOPMENT**

- ACURA
- ALFA ROMEO
- AUDI
- BENTLEY
- BMW
- CHEVROLET
- CHRYSLER
- CITROEN
- FIAT
- FORD
- HOLDEN
- HONDA
- HYUNDAI
- INFINITI
- JAGUAR
- JEEP
- KIA
- LAMBORGHINI
- LAND ROVER
- LEXUS
- LINCOLN
- MAZDA
- MERCEDES-BENZ
- MINI
- MITSUBISHI
- NISSAN
- OPEL
- PEUGEOT
- PORSCHE
- RAVON
- RENAULT
- ROLLS-ROYCE
- SEAT
- SKODA
- SMART
- SSANGYONG
- SUBARU
- SUZUKI
- TOYOTA
- TROLLER
- VOLKSWAGEN
- VOLVO
RCCS 2: TEXA’s radar and camera calibration system comes in three versions

RCCS 2 allows you to work independently in all phases of repair and even check ride height on cars and light commercials to offer your customers a simple, safe and highly professional service.

RCCS 2 comes in three versions:
1) with wheel clamps
2) with tire clamps
3) with ride height control kit, CCD sensors and wheel clamps

The RCCS is modular since it is compatible with all TEXA panels, with the possibility to choose only the required panels, based on the operator’s needs.

The RCCS is versatile, as it can be used in combination with the other specific solutions for the calibration of radars and rear cameras, therefore creating a complete solution that allows you to operate on electronic driver assistance systems, such as:

- Rear collision warning
- Lane departure warning
- Adaptive cruise control
- Park assist
- Traffic sign recognition
- Blind spot detection
- Night vision system
- 360° camera

The RCCS 2 system used in combination with side mats for 360° cameras, rear camera calibration panel, device for blind spot radar.
RCCS 2: a simple, safe, professional, multifunctional and multi-brand structure

RCCS 2 is a complete, professional solution for all kinds of radar and camera calibration. The system comprises a robust main support with electrically powered height adjustment and a practical knob at the rear for the manual adjustment of perpendicularity with respect to the vehicle. The adjustment bar is equipped with two distance meters and a sliding reflector plate with a central laser for front radar pointing.

An additional laser level at the top of the structure locates the centre of the vehicle simply by pointing at its front badge.

This advanced technology allows the system to be aligned easily, accurately and safely with respect to the vehicle and the floor. The RCCS 2 system is mounted on castoring wheels for easy movement around the workshop.

A great opportunity for body shops, tire fitters, mechanics and glass replacement specialists.
**RCCS 2 (Radar and Camera Calibration System)**

**RCCS 2**'s high-performance optical alignment lets you perform all kinds of calibration work on radar and camera systems quickly and accurately.

The **system comes in two versions:**
1) with **wheel clamps**
2) with **tire clamps**

The vehicle is aligned by the lasers of two **distance meters** mounted on the structure's cross-beam aimed at two practical **pointing bands**.

It is important to remember that **correct vehicle alignment must be checked** before all calibration work to avoid the risk of inaccurate settings, reduced safety and customer dissatisfaction. Many garages are currently obliged to call in a professional with the specialist equipment needed to check vehicle alignment, with an obvious impact on the organisation and profitability of their work.

To solve this problem for garages committed to offering customers a complete and highly professional service, the **RCCS 2 system with wheel clamps can be expanded** and electronic CCD detectors added to check ride height and digital alignment.
Wheel clamps

Tire clamps

Doppler simulator

Tire clamps

ACS device
Latest generation laser technology
These new distance meters are TEXA’s latest solution for guaranteeing the high level of professionalism and precision now demanded from the world’s garages.
Detail of the sliding reflector plate and central laser for front radar pointing.
RCCS 2 with integrated ride height control

By choosing an RCCS 2 with ride height control kit, you can offer customers rapid and professional service. This solution simplifies the work of aligning the vehicle with the multifunctional structure and also permits accurate checks to be made on its status.

The kit features **four electronic CCD detectors** with infrared sensors for installation on the RCCS 2 structure and on the wheels, using **four-point wheel** clamps. Thanks to the light weight of the detectors and the absence of connecting cables between the front and rear, the system is extremely practical and ensures absolute precision in measuring the positions of the vehicle’s corners.

Excellent accuracy is also guaranteed by **TOE AND THRUST ANGLE CHECK**, a software application that lets you perform two types of check in a few simple steps: a quick check on the alignment of the RCCS 2 system with respect to the vehicle’s thrust angle and the garage floor, and a check on wheel alignment. These checks must be completed in preparation for the next phase of radar and/or camera calibration.
Dedicated software for aligning the RCCS 2 structure with the vehicle and checking ride height

The operator first fits the four CCD detectors to the wheels and checks wheel alignment. He then removes the CCD sensors from the front wheels and mounts them on the RCCS 2’s adjustment bar to align the structure correctly with respect to the vehicle’s thrust line (referred to the back axle).

Let’s look at a practical example of how to align the structure and check wheel alignment using this dedicated software.

During the wheel alignment check, the software lets you enter the diameter of the tires, then displays the nominal ranges for toe, semi-toe and thrust angle.

The 4 CCD detectors must be parallel to the work surface and the steering must be centralised. When these conditions are achieved, the display reads out "STOP".

The message "OFFSET" shows how much the RCCS 2 structure is misaligned with respect to the vehicle’s centreline. "ANGLE" shows the structure's angle of yaw with respect to the vehicle's centreline.

Mount the 4 sensors on the clamps and check run out. Push the vehicle back until the clamps are at an angle of 45°. Now push the vehicle forwards to return the clamps to the vertical position.

Summary screen showing data measured by the four CCD sensors compared to the manufacturer’s nominal figures. Provided the measured values fall within the range of tolerance, the RCCS 2 structure can now be positioned.

The structure is correctly aligned with the vehicle and the radar or camera system can now be calibrated.
**Electronic CCD detector** with infrared sensors. Thanks to the light weight of the detectors and the absence of connecting cables between the front and rear, the system is extremely practical and ensures absolute precision in measuring the positions of the vehicle's corners.

**Self-centring wheel clamps**
TEXA's winning solution for perfect vehicle alignment is based on new self-centring, **quick-fit wheel clamps** that can be fitted with pointing bands or the innovative CCD detector system (RCCS 2 with digital calibration kit).
The RCCS 2 structure features a practical knob at the rear for accurately adjusting panel position and ensuring perfect perpendicularly to the vehicle.
The CCS, a multi-brand kit for Camera Calibration

While in the past, if the windscreen was damaged or broken, all you had to do was replace it, now it is necessary to restore the proper operation of the cameras dedicated to driver assistance. The CCS (Camera Calibration System) has been designed to create the best combination according to the technician's operational needs. It is composed of a robust support on which the several panels divided by make are to be positioned. The CCS can also be used with a graduated mat and two supports to centre the axle on the wheels through laser levels (optional).

The manufacturing features of the Kit make it a solution that is extremely easy to use, handy and easy to carry, even for use outside of the workshop. The CCS is perfect for those who cannot permanently dedicate an area of their workshop to the calibration of cameras: in fact, once the operations on one or several vehicles is complete, all the equipment can be disassembled and easily stored away.
IR Calibration Target

This extremely useful accessory permits rapid and extremely accurate calibration of the vehicle’s infrared camera, a device that is essential to road safety as it helps drivers identify persons or animals ahead in the dark. Positioned in front of the vehicle, the IR Calibration Target simulates the presence of a warm body.

Reflector for blind spot radar calibration

It is an essential device to calibrate the ultrasonic radars installed in vehicles such as HYUNDAI, HONDA, KIA, LEXUS, MAZDA, MITSUBISHI, SUBARU, TOYOTA. It is composed of a metal reflector cone, a laser and a goniometer jig to help the operator position the pyramid cone correctly. The reflector developed by TEXA is flexible as it can be used for the front, side and rear radars.
ACS (All Around Calibration System)

The ACS system is particularly useful as it permits the calibration of 360° cameras and Doppler devices* on vehicles of the VAG Group (AUDI, SEAT, SKODA, VOLKSWAGEN and LAMBORGHINI).

The ACS system comprises an aluminium structure that holds two horizontal panels and practical, vertical supports for two additional magnetic plates. The base incorporates three holders for the laser distance meters needed to verify the correct alignment of the structure with respect to the vehicle.

This TEXA solution is extremely practical and comes with wheels for rapid, easy movement. This is an important characteristic as it allows a single operator to perform all operations quickly and easily, saving resources and time for other jobs.

*Rear and side radar can be calibrated using TEXA’s Doppler Simulator.
Calibration panels and accessories

To calibrate different ADAS components, RCCS 2 uses 30 special panels and accessories covering the models of 42 manufacturers.

CAR calibration panels

- KIA/HYUNDAI, FIAT 500X and JEEP RENEGADE Type 2 (front)
- MERCEDES (front)
- MERCEDES night vision (front)
- NISSAN/INFINITI (front)
- NISSAN Type 1 (front)
- NISSAN Type 2 (front)
- RENAULT/SMART (front)
- VAG (front)
- TOYOTA Type 1 (front)
- TOYOTA Type 2 (front)

Additional kits

- ACS (All Around Calibration System)
- Doppler Simulator for VAG and MAZDA

Doppler Simulator for VAG and MAZDA

- KIA HYUNDAI (front)
- HONDA (front)
- HONDA Type 2 (front)
- ALFA ROMEO Type 1 (front)
- MAZDA (front)
- MAZDA Type 2 (front)
- SUBARU with calibration template (front)
- MITSUBISHI/SUZUKI (front)
- KIA HYUNDAI (front)
- SUZUKI IGNIS (front)
- IVECO DAILY (front)
- DAIHATSU Type 1 (front)
- DAIHATSU Type 2 (front)
CAR rear / 360° camera calibration

- VAG (rear)
- VAG (cam 360°)
- MERCEDES Type 1 (rear)
- MERCEDES Type 2 (rear)
- OPEL INSIGNIA

CAR radar calibration

- Template kit for VOLVO RADAR positioning
- Blind spot cone TOYOTA/SUBARU/HONDA
- Blind spot cone KIA/HYUNDAI/MAZDA
- Blind spot cone MITSUBISHI
- Radar calibration panel for DAIHATSU

The panels can be perfectly integrated with the RCCS 2 and CCS. Check the complete and always up-to-date ADAS coverage: www.texa.com/adas
ADAS TRUCK Kit

Some truck and commercial vehicle manufacturers require specific equipment for the proper calibration of driver assistance systems, which include cameras, radars and sensors that govern the Adaptive Cruise Control. TEXA offers an adjustment system that includes a measuring bar, panels divided by make - dedicated to cameras and laser devices - that are essential for the correct alignment and calibration of WABCO, TRW and TRW/Knorr radars. The ADAS TRUCK Kit also includes a set of clamps with laser pointer, a laser to adjust the Adaptive Cruise Control and the mirror adapter for WABCO radars.

Furthermore, the IDC5 software guides the operator step by step in the case of vehicles that carry out the self-calibration through on-road adaptation procedures.
TRUCK calibration panels and accessories

VOLVO/RENAULT TRUCK Euro 6
MAN SCANIA IVECO DAILY 2014
VOLVO EU6, RENAULT TRUCK EU6 (MAN LCV TGE, VW Crafter)
VAG (front)
MERCEDES (front)
KIA/HYUNDAI, FIAT 500X, FIAT DUCATO X290 and JEEP RENEGADE Type 2 (front)

ISUZU
Magnetic graduated scale for checking chassis alignment
Laser for Adaptive Cruise Control
WABCO radar mirror adapter (optional)
Set of clamps with laser pointer
A perfect match with the IDC5 software

TEXA’s solutions are to be used in combination with the IDC5 diagnostic software, which allows quick calibrations. In fact, the application provides specific diagnostic help sheets for each make/model, with the instructions for the correct positioning of the unit (such as panel height from the ground, distance from the vehicle, alignment, etc.), guiding you step by step throughout the procedures. At the end of the calibration, you can also print a report to hand over to the customer, with the evidence of the operations carried out.

TEXA devices are an ideal solution for operators, allowing them to:

- Expand the business;
- Operate easily, safely and professionally;
- Recalibrate all ADAS installed in vehicles;
- Build up the most suitable combination based on your own professional needs;
- Invest in an innovative system with a secure economic return;
- Count on highly qualified training, with the dedicated TEXAEDU courses.
D9C: Diagnosis and calibration of Advanced Driver Assistance Systems

The D9C course is focused on the technical features and operating modes of the advanced driver assistance systems and devices involved: radar, lidar, cameras, infrared cameras and ultrasonic sensors. The course also provides an overview on the operation of the Park Assist, Lane Departure Warning, Adaptive Cruise Control, Forward Collision Warning, Adaptive High Beam Control, Pedestrian Detector, Blind Spot Detection, Night Vision and Drowsiness Detection System.

Practical examples of static and dynamic calibrations with TEXA’s technical tools will be provided during the courses, querying and interpreting IDC5 software’s pages about Errors, Parameters, Statuses, Activations and Adjustments.

D9T: Diagnosis and calibration of Advanced Driver Assistance Systems - TRUCK

By attending the D9T course, you will be able to study the technical features and operating modes of the advanced driver assistance systems on heavy-duty vehicles, such as lane departure warning, adaptive cruise control and blind spot detection.

The training module also allows you to learn the position and functionality of the technologies involved: radar, multifunction camera, sensors and actuators, infrared camera, ultrasonic sensors.

Practical examples of static and dynamic calibrations will also be provided, carrying out diagnostic and troubleshooting procedures using TEXA tools.

*Check the availability in your reference market.
TEXA

Founded in Italy in 1992, TEXA is today a world leader in the design, industrialisation and production of multi-brand diagnostic tools, exhaust gas analysers, air conditioning charging stations and telediagnostic devices, for cars, bikes, trucks, boats, and agricultural vehicles. TEXA is present all over the world with a widespread net of distributors: it commercialises directly in Brazil, France, the UK, Germany, Japan, Spain, the US, Poland and Russia through its subsidiaries. TEXA currently employs some 700 people around the world, including over 150 engineers and specialists working in Research and Development. Over the years, TEXA has received a large number of prizes and awards for innovation, in many countries worldwide. All TEXA tools are designed, engineered and built in Italy, using extremely modern automated production lines which guarantee maximum precision. TEXA is particularly committed to the quality of its products: it obtained the strictest certifications, such as the TISAX (Trusted Information Security Assessment Exchange), a standard defined by the VDA, the German Association of the Automotive Industry, which guarantees the highest level possible of information and know-how protection against increasingly frequent cyber-attacks. It joins other certifications, such as the IATF 16969, specific for first automotive suppliers; the VDA 6.3, another method by German manufacturers that established itself as an international point of reference; and the ISO/IEC 27001 in the information security field.

TEXA’s ADAS calibration systems, RCCS and RCCS 2, have recently obtained a prestigious qualification certificate by TÜV Rheinland. The company, a world reference, at the end of a series of tests carried out on the Vairano race track, released a product qualification certificate to TEXA, establishing that its tools are “equipment recognised and qualified”. Furthermore, the test results, in terms of vehicle performance, are the same as the ones that can be reached using the manufacturer’s original calibration.

To check out the extensive coverage of TEXA products, go to: www.texa.com/coverage

To check on IDC5 compatibility and minimum system requirements, go to: www.texa.com/system