

DAS 3000-1

# DAS 3000 ADAS Recalibration System

The easiest setup with the most precise calibration

Precision measurement  
and recalibration solution  
for ADAS-equipped  
vehicles of today and  
the future.



Works with Bosch  
ADS 625



**BOSCH**  
Invented for life

# What is ADAS?

## Advanced Driver Assistance Systems

Advanced Driver Assistance Systems (ADAS) are vehicle technologies that provide safer driving experiences for the vehicle, driver, passenger, and the surrounding environment. ADAS technologies are paving the road to autonomous vehicles which can run full time with only maintenance stops. ADAS' primary goal is to reduce accidents and save lives.

### ADAS Technologies are commonly referred to in levels of automation

Level 0 No automation	Level 1 Driver assistance	Level 2 Partial automation	Level 3 Conditional automation	Level 4 High automation	Level 5 Full automation
Full-time driver performance is executed by the human driver of all aspects of the dynamic driving task, even when enhanced by warning or intervention systems	Driving mode-specific execution by a driver assistance system of either steering or acceleration and deceleration, using information about the driving environment, with the expectation that the human driver performs all remaining aspects of the dynamic driving task	Driving mode-specific execution by a driver assistance system of both steering and acceleration of deceleration using information about the driving environment and with the expectation that the human driver performs all remaining aspects of the dynamic driving task	Driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, with the expectation that the human driver will respond appropriately to request to intervene	Driving mode-specific performance by an automated driving system of all aspects of the dynamic driving task, even if a human driver does not respond appropriately to a request to intervene	Full-time performance by an automated driving system of all aspects of the dynamic driving task, under all roadway and environmental conditions that can be managed by a human driver

### Common ADAS functions found in today's vehicles

- Surround View Camera
- Automatic emergency braking
- Adaptive cruise control



- Backup camera
- Blind spot warning

#### Driving control assistance

- ▶ Adaptive cruise control
- ▶ Active driving assistance
- ▶ Lane keeping assistance

#### Collision intervention

- ▶ Automatic emergency braking
- ▶ Automatic emergency steering
- ▶ Rear automatic emergency braking

#### Collision warnings

- ▶ Blind spot warning
- ▶ Forward collision warning
- ▶ Lane departure warning
- ▶ Parking obstruction warning
- ▶ Rear cross traffic warning

#### Parking assistance

- ▶ Active parking assistance
- ▶ Remote parking assistance

#### Other driver assistance systems

- ▶ Automatic high beams
- ▶ Backup camera
- ▶ Driver monitoring
- ▶ Heads-up display
- ▶ Night vision
- ▶ Surround view camera

## There are two main types of ADAS calibration:

Static and Dynamic. While most vehicles will require one or the other, some vehicles may require both. Here is a quick breakdown of the differences between Dynamic and Static calibrations:

### Dynamic Calibration

- ▶ Pre-determined service drive of 5 to 30 miles at set speed intervals
- ▶ Initiated through a diagnostic scan tool
- ▶ In some cases, may require a pre-alignment or static calibration before the dynamic calibration process
- ▶ Difficult during inclement weather and poses a liability for shops sending technicians to drive customer vehicles outside of the shop environment.

### Static Calibration

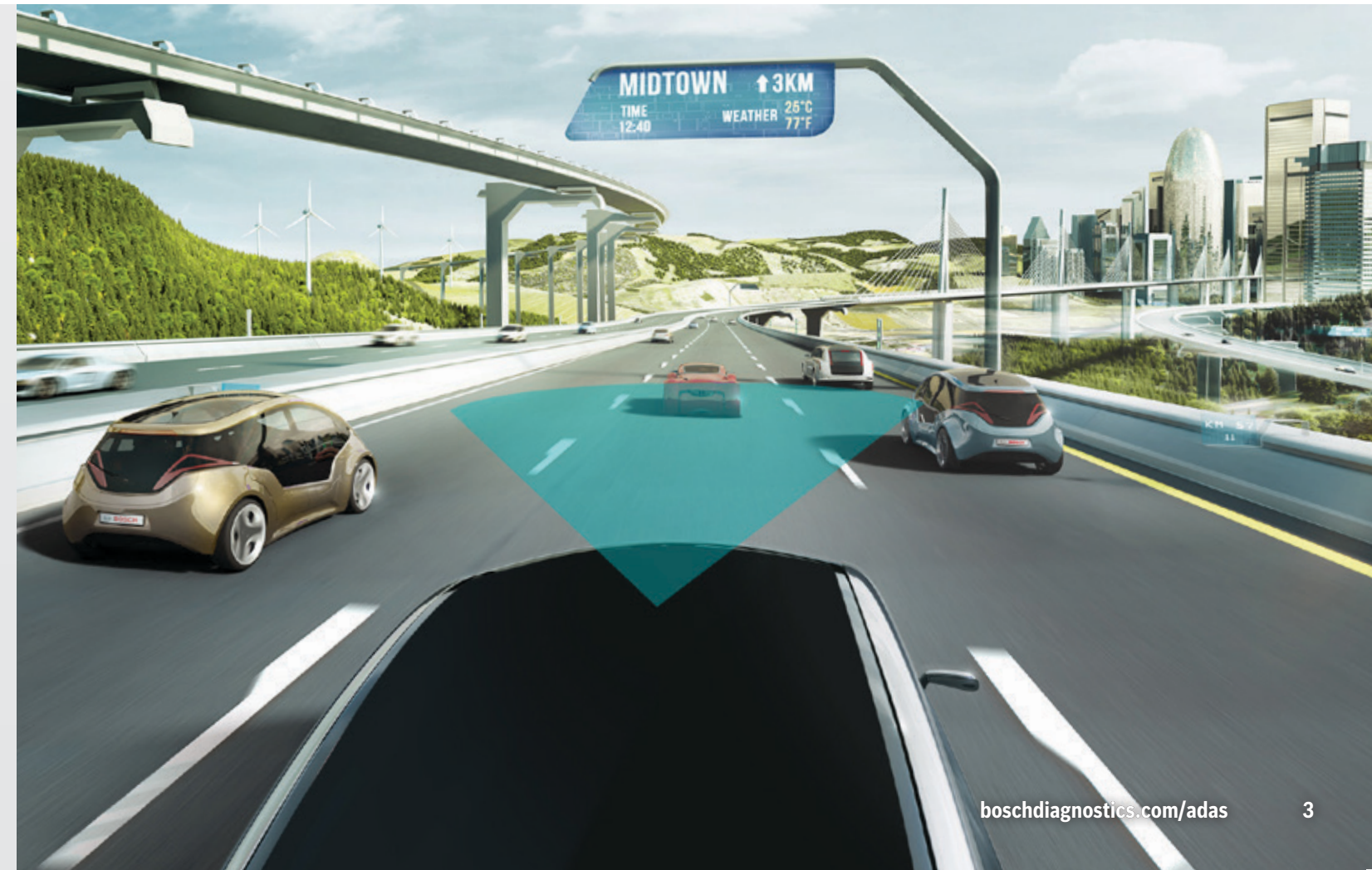
- ▶ Placement of targets or radar reflectors at predetermined locations in a static shop environment
- ▶ Initiated through a diagnostic scan tool
- ▶ Requires fixture and targets in addition to scan tool

## Importance of Accuracy and Precision



### Precise recalibration is critical

Through our engineering expertise and extensive testing, gain confidence in precise measurements and trust that your customers' vehicles are recalibrated within the tightest tolerances to the strictest standards, correctly the first time.



# The superior ADAS workflow, only from Bosch

## OE Sensor Development

Co-developing the next generation of vehicle sensors with major OEMs means your equipment is ready for the vehicles of today and of the future.

## World's Largest Automotive Supplier

As the largest supplier of sensors, Bosch knows what it takes to accurately calibrate ADAS systems. Bosch is partnering with many of the largest OEMs to develop the next generation of cameras, radars and sensors.

## Recalibration Experience

Bosch has long been developing recalibration solutions with over 1 million calibrations completed to date.

## Invented for Life

We want our products to spark enthusiasm, improve quality of life, and help conserve natural resources.

## Simplified Set up Process

Commonized OE procedures to simplify set-up and calibration processes

## Designed for the Future

Not just designed for today's ADAS systems. Bosch is already co-developing the next generation of ADAS sensors and the DAS 3000 has been designed with these future technologies in mind

## Speed and Efficiency

Saves shops time and money by getting customer vehicles calibrated faster and with the confidence that it's done right

## Precision and Confidence

From the precision digital measurements to the intuitive user-interface, the DAS 3000 is designed to take the ambiguity out of the calibration

## Integrated Target Storage

Allows technicians to stow their camera targets while allowing immediate access for the fastest calibration set up while keeping targets clean and serviceable



The tools you need to get the job done right and make your shop money

# Leverage the guided interactive calibration for the most precise and efficient set-up

Step 1



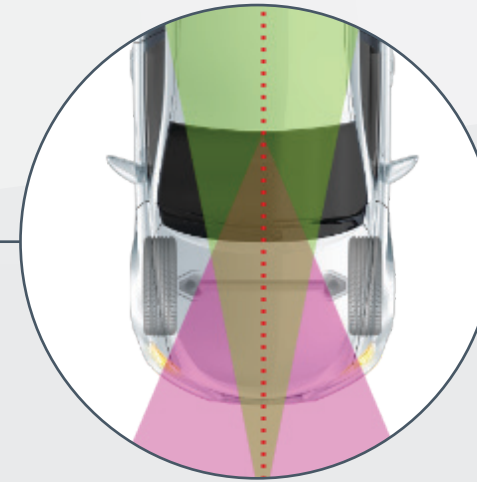
Plug in VCI and Auto ID

Step 2



Complete pre-scan diagnostics report

Step 3



Select ADAS system to calibrate

Step 4



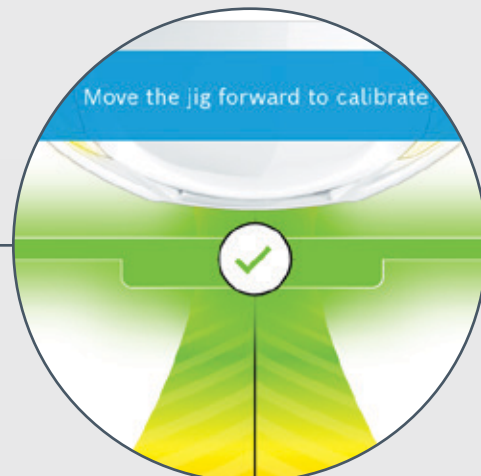
Identify required calibration targets and components

Step 8



Complete post-scan diagnostics report

Step 7



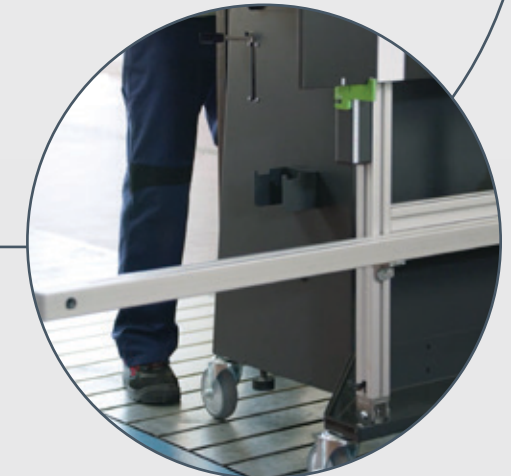
Confirm and calibrate!

Step 6



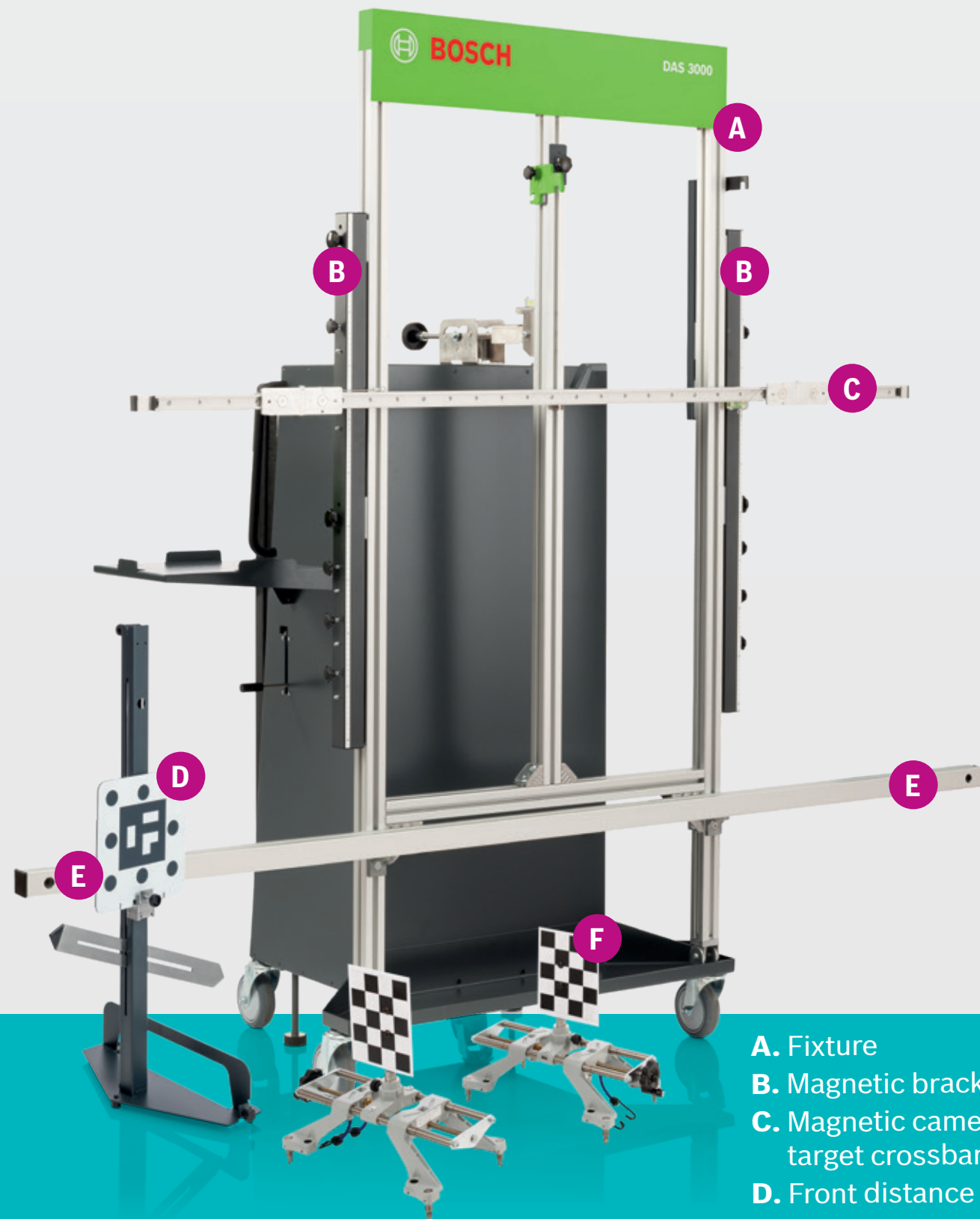
Place targets

Step 5



Position the fixture

# Primary components on DAS 3000



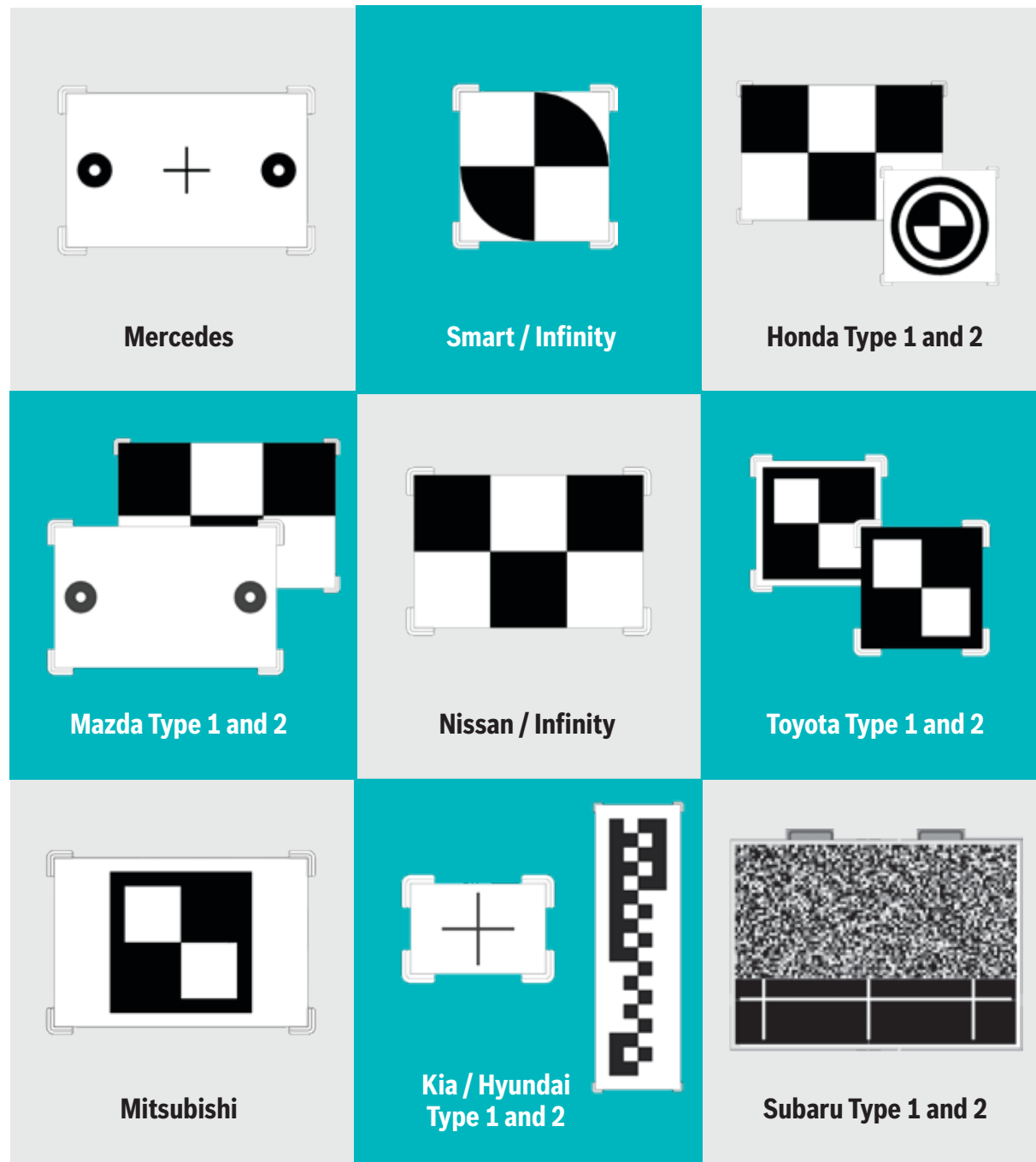
- A. Fixture
- B. Magnetic bracket
- C. Magnetic camera target crossbar
- D. Front distance marker



- E. Vision Positioning Camera
- F. Wheel hub marker
- G. Integrated target storage
- H. Bumper kissing plate
- I. Magnetic camera target crossbar (stowed)

# Target Boards

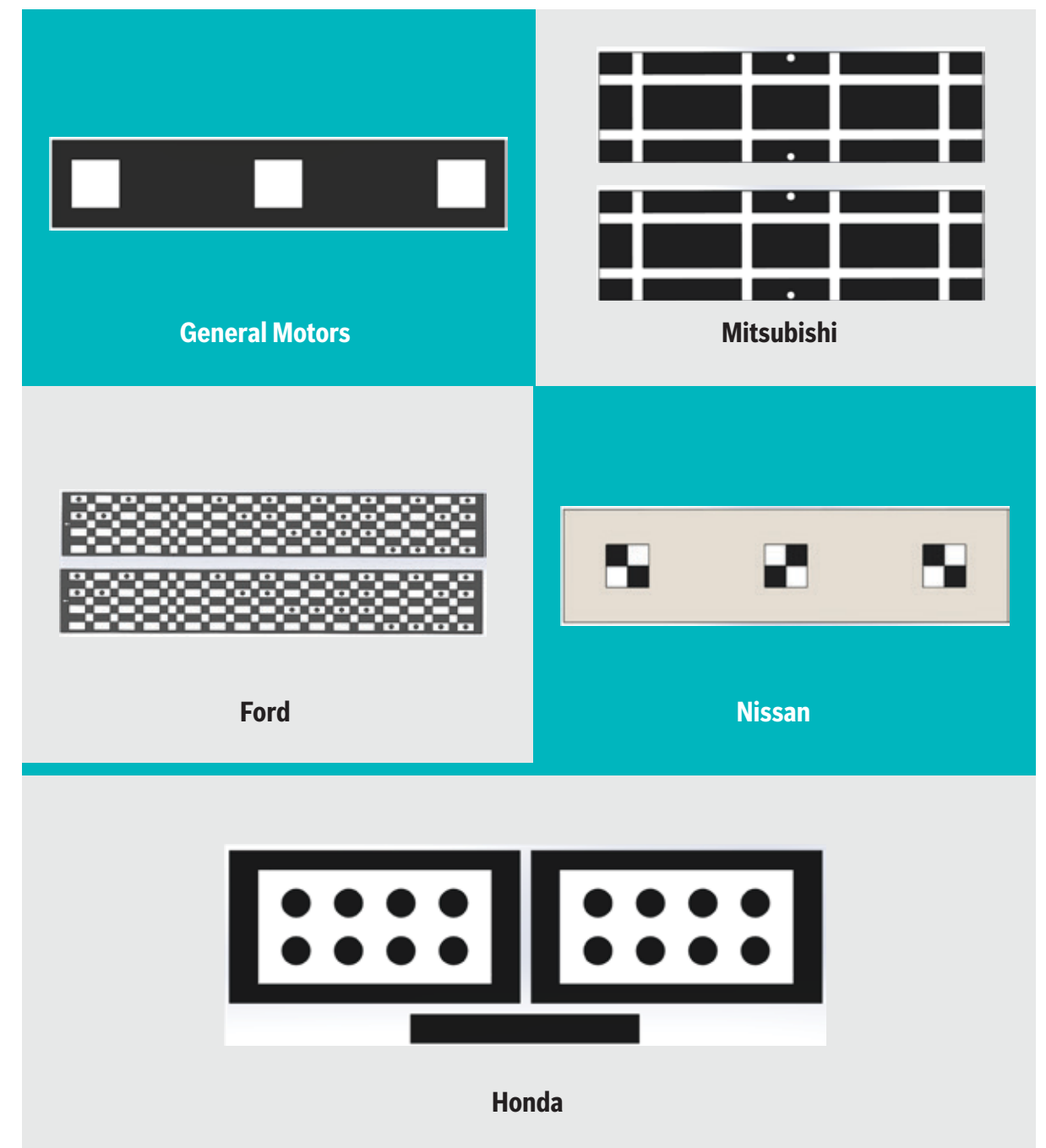
The DAS 3000 kit includes 13 camera target boards and 1 Dual Purpose Camera and Radar board.



Targets are not to scale.

# Floor Mat Targets

The surround view and backup camera floor mats are ruggedized for a shop environment. They're made of a highly durable vinyl and have a UV protected coating to reduce glare and prevent fading.



Targets are not to scale.

# SCT 815

The SCT 815 Prismatic Radar Reflector is an integral part of the calibration process for Kia, Hyundai, Mazda, Toyota and Honda vehicles

- ▶ Dual lasers for set-up: Red line laser for distance and green line laser for alignment
- ▶ Designed with fiberglass material to avoid false or improper radar calibration
- ▶ Carrier engineered to connect future targets and alignment technologies



# ADAS Recalibrations on the ADS 625

The ADS 625 scan tool is integrated into the DAS 3000 system

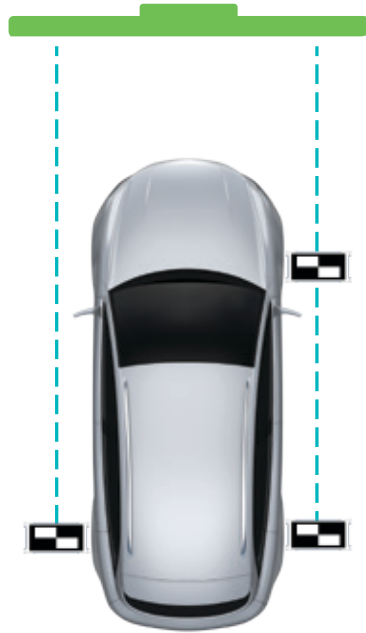
The ADAS guided instruction module walks users through the entire recalibration process including fixture placement, target selections and sensor recalibration.

Offering pre- and post-scan reporting options as well as a full complement of diagnostic coverage. The ADS 625 is Bosch's flagship scan tool and brings the power of ADAS recalibration to your shop.



# Commonized Set-ups

Commonized recalibration procedures are built from the unique requirements of OEM makes and models – reducing to a minimum of set-up variations and simplifying ADAS recalibrations.



Front Facing Radar (DAS 3000)  
Front Facing Camera (DAS 3000)



Front Facing Radar (SCT 815)



Surround View Calibration



Dynamic Calibration

# Training

Bosch is committed to not only providing the best recalibration equipment, but also helping shops use that equipment to its fullest. With the purchase of the DAS 3000, users can register for virtual training hosted by the Bosch technical training team. This interactive training class is designed to get you started recalibrating ADAS functions using your DAS 3000 ADAS Recalibration System. The training will include:

- ▶ ADAS Systems and Technology
- ▶ DAS 3000 Overview
- ▶ ADAS Calibration Process
- ▶ Q&A session

Once you have registered your DAS 3000, you will receive a training registration link where you can select your preferred date and time to attend the virtual training event. Training sessions will be recorded and made available for reference.

[Bosch ADAS Setup, Assembly and Calibration Videos](#)

# Tech Support

**12 months of Enhanced ADAS support is included with the DAS 3000-1 Master Kit.**

The DAS 3000 has been designed with the technician in mind and is incredibly easy to use. However, we know that even the best of us get stumped once in a while. That is why the DAS 3000-1 includes a full 12 months of Enhanced ADAS Support from our professionally-trained ADAS technical support team. Our technical support team can answer questions, troubleshoot and assist virtually with issues relating to ADAS calibrations.

The Enhanced ADAS Support can be extended for an additional 12 month. Even without the Enhanced ADAS Support package, our technical support team will still be available to advise and help with questions related to the scan tool and the DAS 3000 hardware. However, the Enhanced ADAS Support goes beyond just the scan tool. Our ADAS team can provide remote assistance to troubleshoot ADAS calibration issues and recommend solutions to help get the job done.

**The Enhanced ADAS Support team can be reached at:**

**Tel: 1-888-812-3275**

**[techsupport.diagnostics@us.bosch.com](mailto:techsupport.diagnostics@us.bosch.com)**



# ADAS Recalibration Facility Recommendations

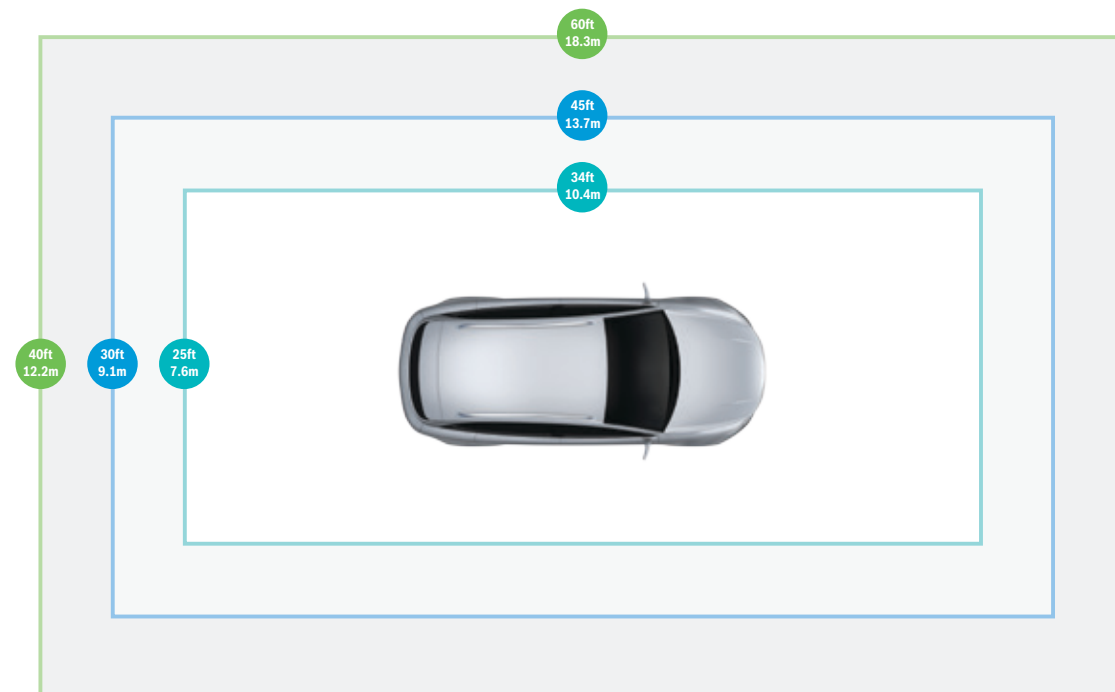
## Space Dimensions

The space needed to recalibrate a vehicle can vary by OEM, vehicle, or calibration type. That is why Bosch recommends a space of 30 x 45 feet as a general floor space requirement. Not every vehicle will require this amount of space, but our recommended dimensions maximize the number of vehicles that a shop can recalibrate.

We realize that not every shop has this type of space available. A space of 25ftx34ft can be utilized, however depending on the type of calibration, the vehicle may need to be moved within the space to complete the calibration.

	Length	Width
<b>Optimally Flexible Space:</b> If you are looking for an ADAS specific space that will accommodate the largest number of ADAS equipped vehicles, these are dimensions that should be considered.	60ft 18.3M	40ft 12.2M
<b>Recommended Space:</b> This is the amount of space that Bosch recommends in order to calibrate most vehicles based on a careful analysis of the OE processes. Some larger vehicles may require additional space based on the vehicle's size and calibration type.	45ft 13.7M	30ft 9.1M
<b>Minimum Space:</b> This is the minimum space that Bosch recommends for ADAS calibrations with the DAS 3000 and the accompanying equipment. This amount of space will allow for recalibration on most ADAS equipped vehicles. However, depending on the vehicle size and type of calibration, it may require the vehicle to be moved within the space to complete a full recalibration.	34ft 10.4M	25ft 7.6M

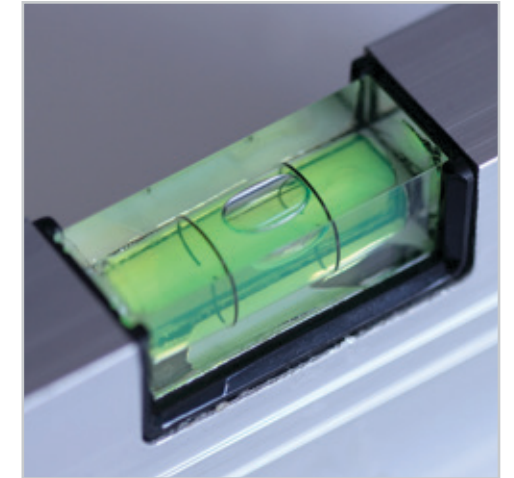
Note: Spaces smaller than the 34ft x 25ft can be utilized to recalibrate some vehicles and ADAS systems, but as the space decreases so do the number and types of vehicles that can be calibrated.



## Floor Level

The floor of the calibration space should be as level as possible. Bosch recommends that there should be no more than a 10mm difference across the floor from the driver's side to the passenger side of the vehicle and from rear of the vehicle to the front of the vehicle.

This can be measured by setting up a string line in the area that will be designated for calibration. Pull the line taut and measure the height of the string on one side. Adjust the string from the opposite side until it shows that it is level using a bubble level. Then measure the height of the string at both ends. The difference between the measurements should be no more than 10mm.



## Lighting

Lighting can change with seasons, weather and the time of day. Lighting can also be affected by a facility's windows or garage doors opening and closing. The calibration area should be well lit with evenly diffused and distributed light in the calibration area. It is recommended to cover any windows with direct sunlight during a calibration and avoid any directional lighting around vehicle during calibration.

## Background and Surrounding Areas




Because many of the ADAS sensors utilize light and radar, being aware of the surrounding area during a calibration is important. The area outside of the calibration area should be clear of geometric patterns in line of sight, for example behind the targets/fixture. The floor and the walls should be one solid light neutral color.

During a recalibration, the recommended space should be clear of vehicles, toolboxes or other shop equipment. Also, ensure that no one is walking through the recalibration space during a recalibration event.



# Calibrate faster. Generate more revenue. Grow your business. Repeat.

The superior ADAS workflow can guide you from setup through calibration in **half the time**.

-  No tape measures
-  No plumb bobs
-  No mirrors


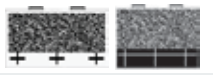


















Uncover the truth about the superior solution at [boschdiagnostics.com/adas](https://boschdiagnostics.com/adas)


## DAS 3000-1 Includes



Primary Components	
Fixture	
Wheel Clamp Markers	
SCT 815 Prismatic Radar Reflector	
Distance Marker	
ADS 625 Scan Tool with Guided Tour Platform and Bosch ADAS Positioning (BAP) Software	
Accessory Tool Case	
Accessory Tool Case	

Target Boards	
VW/Audi Combo Camera/Radar Target Board	
Subaru 2.1 & 3.1 Target Board	
Universal XL Target Board	
Honda #1 Target (set of 2)	
Toyota #1 Target	
Daimler/Infiniti #2 Target	
Mazda #1 Target	
Honda #3 Target	
Toyota/Lexus #3 Target	
Hyundai/Kia #3 Target	
Nissan #2 Target (set of 2)	
Universal/Infiniti #1 Target (set of 2)	
Mitsubishi #1 (set of 2)	

Floor Mats	
GM	
Ford	
Honda	
Mitsubishi	
Nissan	

Integrated Target Storage	
Stow your camera targets in a clean and serviceable way, allowing immediate access for the fastest calibration set-up.	

# Driven by efficiency

**Bosch technologies are used worldwide in almost all vehicles. People, and assuring their mobility, is what we are focused on.**

Therefore, we have dedicated the last 125 years of pioneering spirit and expertise in research and manufacturing to achieving this.

We continue to work on our unique combination of solutions for spare parts, diagnostic devices, workshop equipment and services.

- ▶ Solutions for efficient vehicle repairs
- ▶ Innovative workshop equipment and software
- ▶ The world's most comprehensive range of new and replacement parts
- ▶ Large network of wholesale customers, for quick and reliable parts supply
- ▶ Competent hotline support
- ▶ Comprehensive educational and training offers
- ▶ Targeted sales and marketing support

