mitchell

MD-TS21 ADAS Recalibration System

The easiest setup with the most precise calibration.

Works With MD-500

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

The Superior ADAS Workflow

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 MD-TS21 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 MD-TS21 is designed to take any ambiguity out of the calibration process.

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 repair facility money.

MD-TS21 Includes

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)	

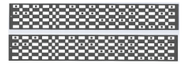
Accessory Tool Case

Accessory Tool Case	

Primary Components

Fixture	
Wheel Clamp Markers	
Prismatic Radar Reflector	
Distance Marker	
MD-500 Scan Tool With Guided Tour Platform and Bosch ADAS Positioning (BAP) Software	

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.

Leverage the Guided Interactive Calibration for the Most Precise and Efficient Set-Up

Step 1:
Plug In VCI and Auto ID

Step 2:
Select ADAS System to Calibrate

Step 3:
Identify Required Calibration Targets and Components

Step 4:
Position the Fixture

Step 5:
Place the Targets

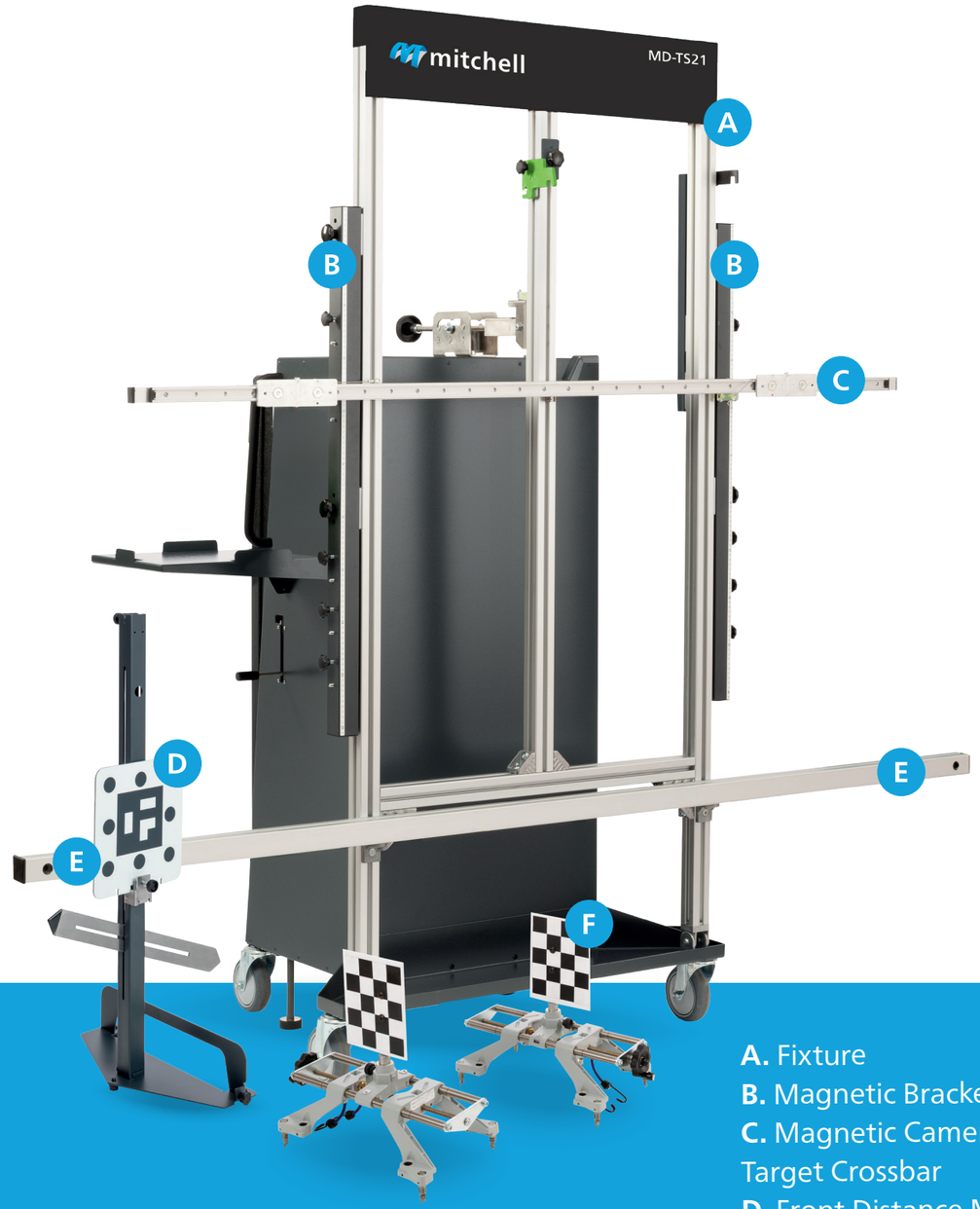
Step 6:
Confirm and Calibrate

Step 7:
Access Calibration Report in Mitchell Connect

Step 8:
Complete Post-Scan Diagnostics Report

Primary Components on MD-TS21

Front



A. Fixture
B. Magnetic Bracket
C. Magnetic Camera Target Crossbar
D. Front Distance Marker
E. Vision Positioning Camera
F. Wheel Hub Marker

Back

G. Integrated Target Storage
H. Bumper Kissing Plate
I. Magnetic Camera Target Crossbar (Stowed)

Prismatic Radar Reflector

The 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 in order to avoid false or improper radar calibration.
- Carrier engineered to connect future targets and alignment technologies.

ADAS Calibrations on the MD-500

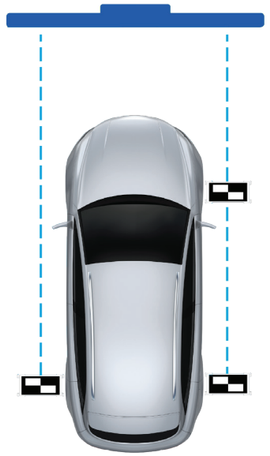
The MD-500 Scan Tool Is Integrated Into the MD-TS21 System

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, faster scan times, Cloud support as well as a full complement of diagnostic coverage. The MD-500 brings the power of ADAS recalibration to your shop.

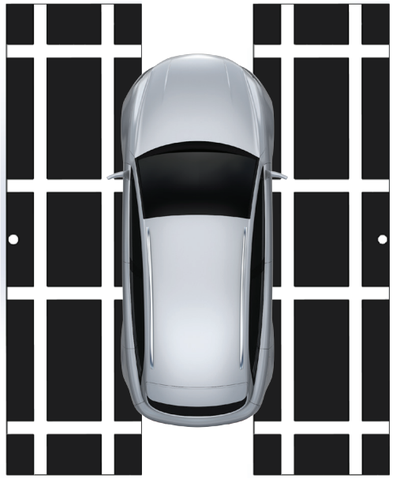
Commonized Set-Ups

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.

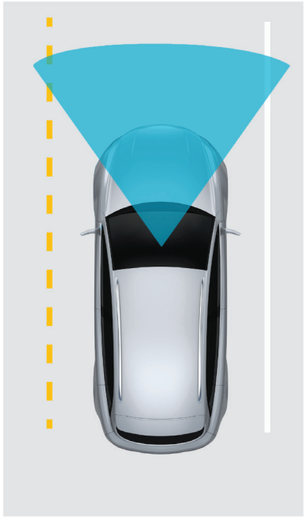


Front Facing Radar (MD-TS21)
Front Facing Camera (MD-TS21)

Front Facing Radar
(Prismatic Rader Reflector)



Surround View Calibration



Dynamic Calibration

Mitchell MD-TS21: Shop Size & Facility Recommendations

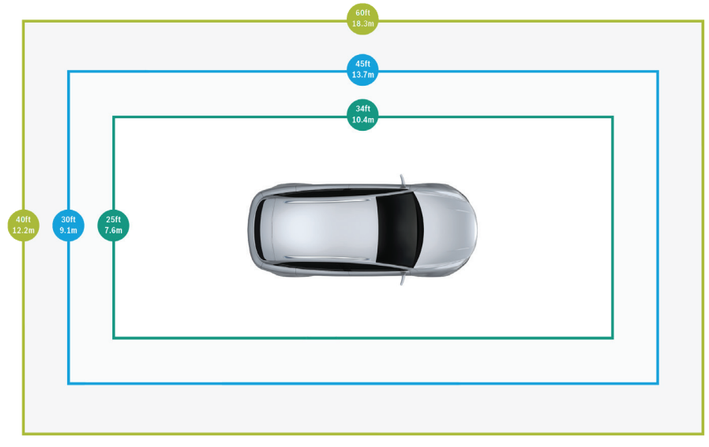
Space Dimensions

The space needed to recalibrate a vehicle can vary by OEM, vehicle or calibration type. That is why Mitchell recommends a space of 30 feet by 45 feet as a general floor space requirement. Not every vehicles will require this amount of space, but our recommend 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 25 feet by 34 feet can be utilized, however depending on the type of calibration, the vehicle may need to be moved within the space to complete the calibration.

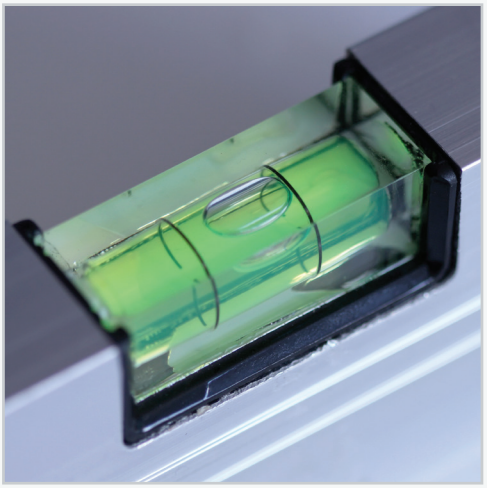
	Length	Width
Optimally Flexible Space: If you are looking for an ADAS specific space that will accommodate the largest number of ADAS equipped vehicles, these are dimensions that should be considered.	60 feet 18.3 meters	40 feet 12.2 meters
Recommended Space: This is the amount of space that Mitchell 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.	45 feet 13.7 meters	30 feet 9.1 meters
Minimum Space: This is the minimum space that Mitchell recommends for ADAS calibrations with the MD-TS21 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.	34 feet 10.4 meters	25 feet 7.6 meters

Note: Spaces smaller than the 34 feet by 25 feet 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. Mitchell recommends that there should be no more than 10mm 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 taught 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.

Get started now with Mitchell Diagnostics Solutions.
Call 1.800.238.9111 or visit mitchell.com/diagnositcs.

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Product recommendations and specifications have been provided by Bosch, Inc. per Bosch DAS-3000 guidelines.