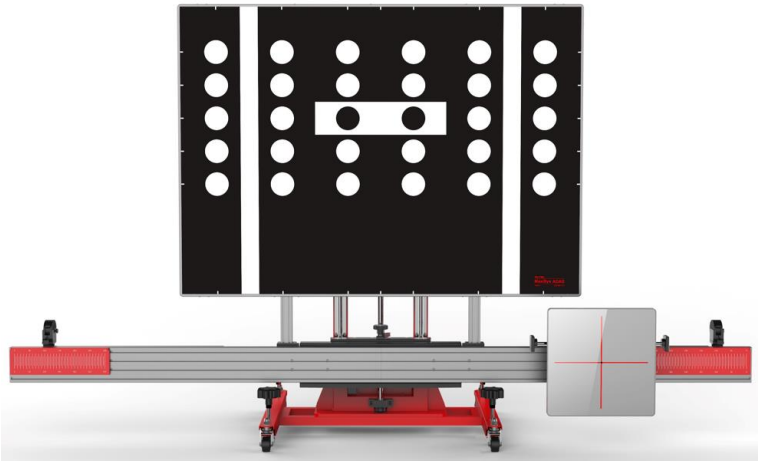
USER MANUAL

MAXISYS ADAS

STANDARD CALIBRATION FRAME

(AUTEL-CSC0600)



Patent

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Autel will not be liable for any direct, special, incidental, or indirect damages, or for any economic consequential damages (including the loss of profits) as a result of using this equipment.

IMPORTANT

Before operating or maintaining this equipment, please read this manual carefully, paying extra attention to the safety warnings and precautions.

For Services and Support

pro.autel.com
www.autel.com
1-855-288-3587 (North America)
+86 (0755) 8614-7779 (China)
support@autel.com

For technical assistance in all other markets, please refer to *Technical Support* in this manual.

Safety Information

For your own safety and the safety of others, and to prevent damage to the equipment and vehicles upon which it is used, it is important that the safety instructions presented throughout this manual be read and understood by all persons operating or coming into contact with the equipment.

There are numerous procedures, techniques, tools, and parts required for servicing vehicles, as well as the skills of the person doing the work. Because of the vast number of test applications and variations in the products that can be tested with this equipment, we cannot possibly anticipate or provide advice or safety messages to cover every circumstance. It is the automotive technician's responsibility to be knowledgeable of the system being tested. It is crucial to use proper service methods and test procedures. It is essential to perform tests in an appropriate and acceptable manner that does not endanger your safety, the safety of others in the work area, the device being used, or the vehicle being tested.

Before using the equipment, always refer to and follow the safety messages and applicable test procedures provided by the manufacturer of the vehicle or equipment being tested. Use the equipment only as described in this manual. Be sure to read, understand, and follow all safety messages and instructions in this manual.

Safety Messages

Safety messages are provided to help prevent personal injury and equipment damage. All safety messages are introduced by a signal word indicating the hazard level.

DANGER

Indicates an imminently hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury to the operator or to bystanders.

Safety Instructions

The safety messages herein cover situations Autel is aware of at the time of publication. Autel cannot know, evaluate or advise you as to all of the possible hazards. You must be certain that any condition or service procedure encountered does not jeopardize your personal safety.

DANGER

When an engine is operating, keep the service area WELL VENTILATED or attach a building exhaust removal system to the engine exhaust system. Engines produce carbon monoxide, an odorless, poisonous gas that causes slower reaction time and can lead to serious personal injury or loss of life.

It is not advised to use headphones at a high volume

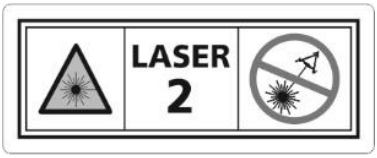
Listening at high volumes for long periods of time may result in loss of hearing.

Safety Warnings

- Always perform automotive testing in a safe environment.
- Wear safety eye protection that meets ANSI standards.
- Keep clothing, hair, hands, tools, test equipment, etc. away from all moving or hot engine parts.
- Operate the vehicle in a well-ventilated work area, for exhaust gases are poisonous.
- Put the transmission in PARK (for automatic transmission) or NEUTRAL (for manual transmission) and make sure the parking brake is engaged.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while testing.
- Be extra cautious when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Keep a fire extinguisher suitable for gasoline, chemical, and electrical fires nearby.
- Do not connect or disconnect any test equipment while the ignition is on or the engine is running.
- Keep the test equipment dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clean the outside of the equipment as necessary.
- Do not drive the vehicle and operate the test equipment at the same time. Any distraction may cause an accident.
- Refer to the service manual for the vehicle being serviced and adhere to all diagnostic procedures and precautions. Failure to do so may result in personal injury or damage to the test equipment.
- To avoid damaging the test equipment or generating false data, make sure the vehicle battery is fully charged and the connection to the vehicle's DLC is clean and secure.
- Do not place the test equipment on the distributor of the vehicle. Strong electro-magnetic interference can damage the equipment.

LASER RADIATION

Never point the laser beam at people, particularly at their face or eyes.



The term laser equipment refers to devices, systems or test set-ups generating, transmitting or employing laser radiation.

The class of the laser device indicates the level of potential danger associated with its accessible laser radiation. In the case of class 2 laser equipment, the accessible laser radiation is in the visible spectral range (400 nm to 700 nm).

The eyelids provide sufficient protection for inadvertent brief eye contact with such laser radiation. Class 2 laser devices may therefore be used without further precautionary measures if the user is definitely not required to either look into the laser intentionally for extended periods of time (>0.25 s) or repeatedly look into the laser or at directly reflected laser radiation.

⚠ **WARNING**

Taking medication or alcohol consumption will slow down the reflex action of the eyelids. This results in a particular risk. Wearing laser safety glasses of protection level R1 is recommended for anyone who is under the influence of medication.

Persons who are not trained to work with laser equipment and on the hazards of laser radiation, may not enter workplaces where work takes place with laser beams nor a laser emitting device.

Safety measures:

- The operator is to place the warning “Warning of Laser beam” at eye level and in a visible manner at the measuring station.
- Do not look directly into laser source.
- The operator must comply with the intended use.

WEAR SAFETY SHOES

Safety shoes must be worn.

When performing work with risk of injury to the feet, notice about the necessity of wearing protective shoes must be given. Foot injuries can, for example, be caused by falling over or falling tools or work items, trapping the foot, occurrence of nails or metal shavings in the soles, etc.

Safety measures:

- The operator is to place the mandatory sign “Wear Safety Shoes” at eye level and in a clearly visible manner at the measuring station.
- Operators should always wear the recommended protective shoes.

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1 Using This Manual

This manual contains equipment usage instructions.

Some illustrations shown in this manual may contain modules and optional equipment that are not included in your system.

1.1 Conventions

The following conventions are used:

1.1.1 Bold Text

Bold text is used to highlight selectable items such as buttons and menu options.

Example:

- Tap **OK**.

1.1.2 Notes and Important Messages

Notes

A **NOTE** provides helpful information such as additional explanations, tips, and comments.

Important

IMPORTANT indicates a situation that if not avoided may result in damage to the equipment or vehicle.

1.1.3 Hyperlink

Hyperlinks are available in electronic documents. Blue italic text indicates a selectable hyperlink; blue underlined text indicates a website link or an email address link.

1.1.4 Illustrations

Illustrations used in this manual are samples; the actual testing screen may vary for each vehicle being tested. Observe the menu titles and on-screen instructions to make correct option selection.

1.1.5 Procedures

An arrow icon indicates a procedure.

Example:

➢ **To attach the wheel clamps**

1. Attach two wheel clamps to the rear wheels respectively, and rotate the bolt (Pos. 1) clockwise until pawls (Pos. 2) are tightly secured.
2. Fully insert the connecting shaft of the laser (Pos. 4) into the clamp port (Pos. 5) and ensure the laser calibration board faces the rear of the vehicle. Tighten the bolt (Pos. 3) to secure the laser.

2 General Introduction

Autel's MaxiSys ADAS is designed to calibrate Advanced Driver-Assistance Systems quickly and easily. Lane departure warning, adaptive cruise control, rear collision warning, and other camera and radar-based safety systems are becoming a common feature on vehicles of every class. The radar and camera used by these systems necessitate the utmost precision when calibrating following many common repairs, such as camera/radar replacement or chassis adjustment.

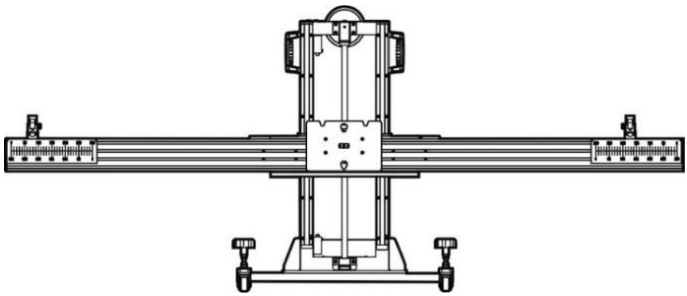
Autel's MaxiSys ADAS tool displays vehicle-specific step-by-step instructions and detailed illustrations to enable the technician to perform efficient and accurate calibrations on these increasingly popular vehicle systems.

MaxiSys ADAS's ADAS module covers eleven manufactures: Volkswagen, Mercedes-Bens, BMW, Lexus, Nissan, Infiniti, Honda, Toyota, Hyundai, KIA, Ford, and Volvo. More vehicles will be included in future updates.

2.1 Calibration Frame Kit

2.1.1 Calibration Frame (AUTEL-CSC0600)

MaxiSys ADAS utilizes one calibration frame for the calibration of radar and camera used by advanced driver-assistance systems like Adaptive Cruise Control, Lane Departure Warning, Blind Spot Detection, Night Vision System, etc. Different calibration tools can be easily attached to the sliding board on the crossbar.

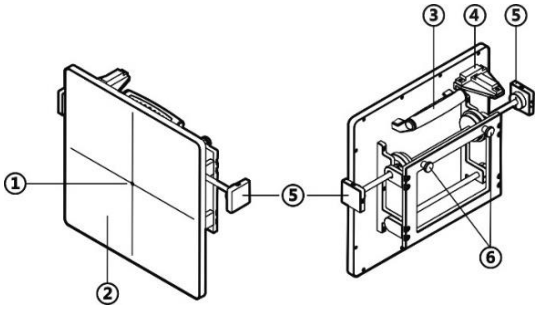


NOTE

The ruler boxes on both sides of the crossbar can move left or right as needed for measuring. Turn the knob on the ruler box to loosen for movement.

2.1.2 Reflector (AUTEL-CSC0602/01)

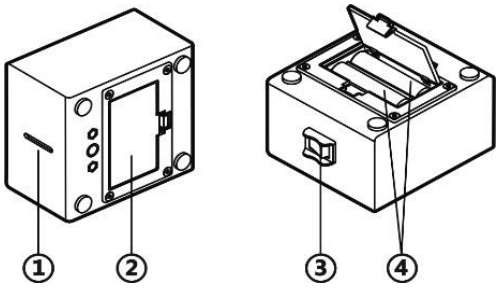
The reflector is required for positioning the calibration frame and calibrate radar.



1. Laser Pass-thru Hole
2. Reflector Surface
3. Handle
4. Gradienter
5. Gear Knob — for different gears as requited for different calibration
6. Pothook

2.1.3 Laser (AUTEL-CSC0500/04)

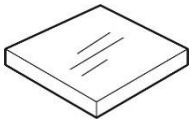
The laser is used to identify the center axle of the vehicle.



1. Laser Outlet
2. Battery Box
3. Power Switch
4. 5# Dry Battery

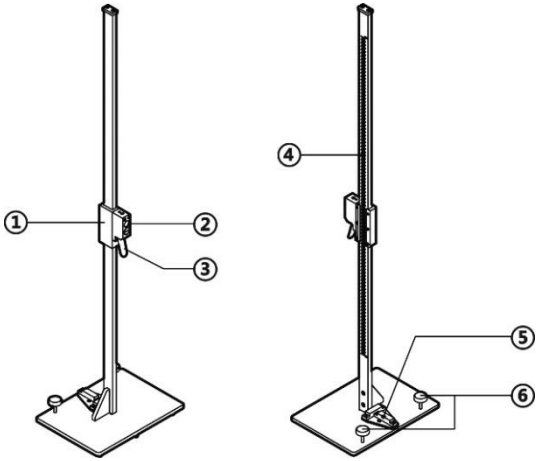
2.1.4 Mini Reflector (AUTEL-CSC0602/07)

Together with laser on the calibration frame, mini reflector is used to adjust the reflector on the calibration frame parallel with the radar.



2.1.5 Calibration Stand (AUTEL-CSC0800)

Calibration stand is used to hold the corner reflector for radar calibration.

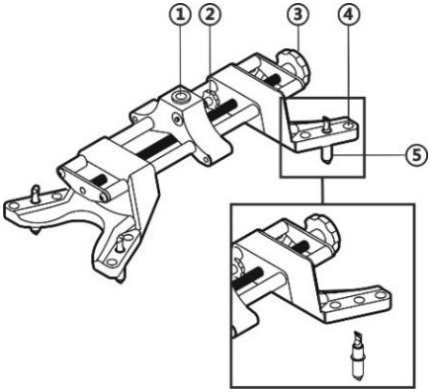


1. Fixing Lock — for tightening the mounting slot.
2. Mounting Slot — for mounting the fixing axle of the corner reflector or other calibration tools.
3. Handle
4. Ruler — for measuring the height
5. Gradienter
6. Horizontal Adjusting Screws — for horizontal position adjustment of the sliding block height.

2.2 Wheel Clamp Kit

2.2.1 Wheel Clamp (AUTEL-CSC0500/01)

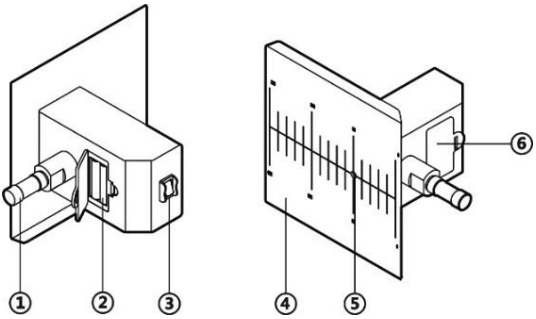
By attaching to the wheel of the vehicle, wheel clamp supports laser AUTEL-CSC0500/02 so that the laser beam is parallel with the vehicle center axle.



1. Fixing Axle Slot — for inserting the fixing axle of the laser.
2. Tighten Screw — for tightening the fixing axle slot.
3. Tighten Screw — for tightening the wheel clamp onto the wheel.
4. Pawl Slots — for adjusting the pawls for different size of wheels.
5. Pawls — for attaching the wheel clamp to the wheel.

2.2.2 Laser (AUTEL-CSC0500/02)

The laser is required for aligning the reflector both horizontally and vertically.

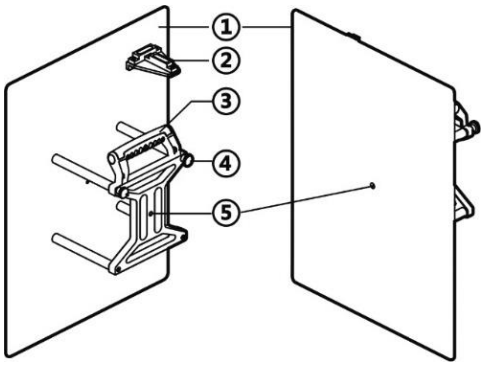


1. Fixed Axle — for inserting into the fixing axle slot on the wheel clamp.
2. 7# Dry Battery
3. Power Switch
4. Scale Board
5. Laser Pass-thru Hole
6. Battery Box

2.3 Accessories Kit I (For Japan & South Korea Vehicles)

2.3.1 Radar Calibration Plate (AUTEL-CSC0602/02)

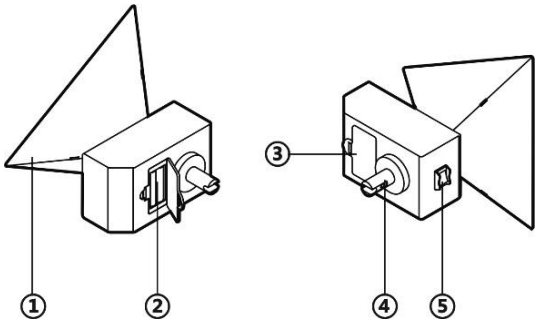
By attaching to the sliding board on the calibration frame, radar calibration plate is used for calibrating the Continental radar.



1. Plate Surface
2. Gradienter
3. Handle
4. Pothook
5. Laser Pass-thru Hole

2.3.2 Corner Reflector (AUTEL-CSC0802/01)

By attaching to the sliding board on the calibration frame, radar calibration plate is used for calibrating the millimeter-wave radar.

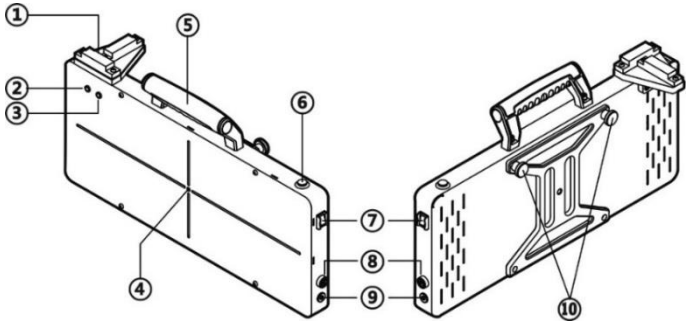


1. Triangular Signal Receiving Board
2. 7# dry battery
3. Battery Box
4. Fixing Axle
5. Power Switch

2.4 Accessories Kit II (For Europe & U.S. Vehicles)

2.4.1 NV Calibrator (AUTEL-CSC0603/01)

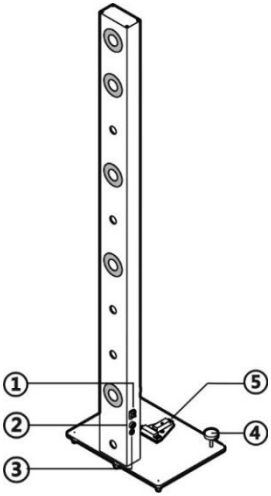
By attaching to the sliding board on the crossbar of the calibration frame, NV calibrator AUTEL-CSC0603/01 is used for night vision system calibration of Volkswagen and GM vehicles.



1. Gradienter
2. Power LED (Red)
3. Power LED (Green)
4. Laser Pass-thru Hole
5. Handle
6. Operating Switch
7. Power Switch
8. Fuse Socket
9. DC Power Supply Input Port
10. Pothook

2.4.2 NV Calibrator (AUTEL-CSC0803/01)

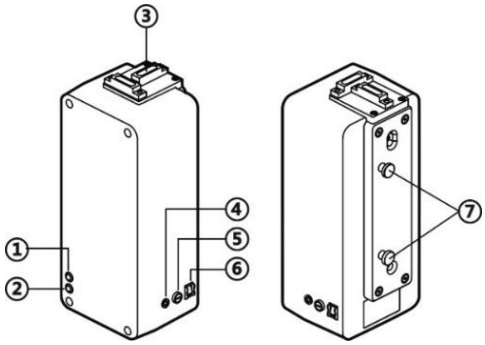
NV calibrator AUTEL-CSC0803/01 is used for night vision system calibration of Benz vehicles.



1. Power Switch
2. Fuse Socket
3. DC Power Supply Input Port
4. Horizontal Adjusting Screws
5. Gradienter

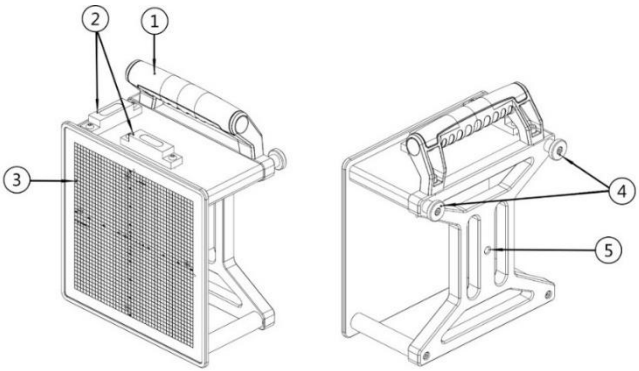
2.4.3 Radar Calibration Box (AUTEL-CSC0605/01)

By attaching to the sliding board on the crossbar of the calibration frame, Radar Calibration Box AUTEL-CSC0605/01 is used for blind spot detection system calibration of Volkswagen vehicles.



1. Power LED (Green)
2. Power LED (Red)
3. Gradienter
4. DC Power Supply Input Port
5. Fuse socket
6. Power Switch
7. Pothook

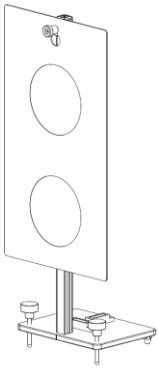
2.4.4 Radar Calibration Plate (AUTEL-CSC0602/08)



1. Handle
2. Gradienter
3. Scale Board
4. Installation Buckle
5. Laser Hole

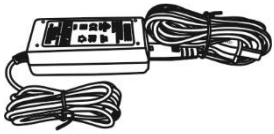
2.4.5 Target Board (AUTEL-CSC0804/01)

Together with pattern AUTEL-CSC0806/01, target board AUTEL-CSC0804/01 is used for around view monitoring system calibration of Volkswagen vehicles.



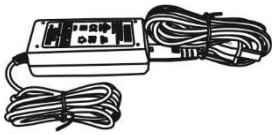
2.4.6 12V Power Adapter

12V power adapter is used for power supply of Volkswagen NV Calibrator AUTEL-CSC0603/01 and Benz NV Calibrator AUTEL-CSC0803/01.



2.4.7 24V Power Adapter

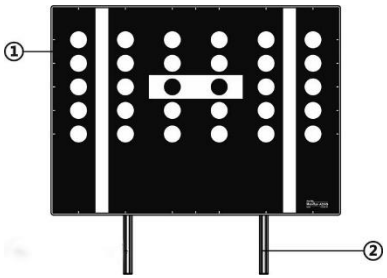
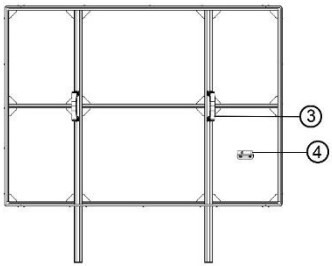
24V power adapter is used for power supply Radar Calibration Box AUTEL-CSC0605/01.



2.5 Target Board & Target Board Holder

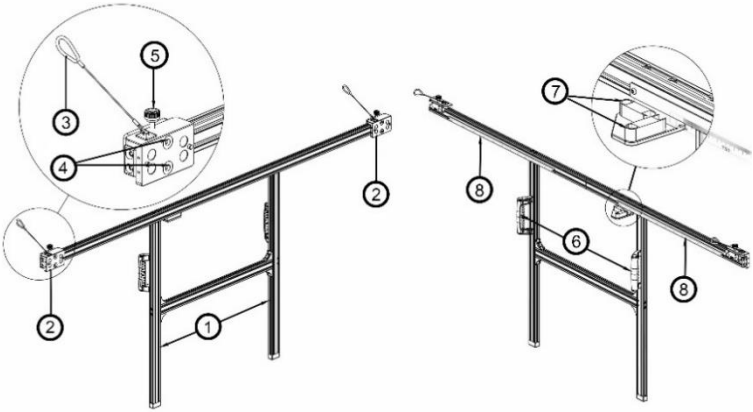
2.5.1 Target Board (AUTEL-CSC0601/01)

The target board is used for pasting different patterns for Lane Departure Warning systems calibration of different vehicles.

	
Front	***Back***

1. Target Board
2. Fixing Pole
3. Handle
4. Gradienter

2.5.2 Target Board Holder (AUTEL-CSC0600/02)

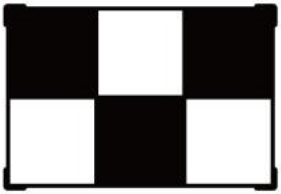


1. Poles
2. Slide Plate
3. Locker
4. Magnet
5. Knob
6. Handle
7. Gradienter
8. Ruler

2.6 Target Board & Patterns Kit I (For LDW System)

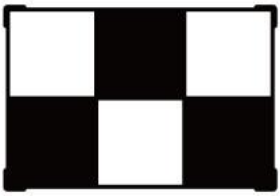
2.6.1 Target Board (AUTEL-CSC0601/08-L)

Target Board AUTEL-CSC0601/08-L is used for Lane Departure Warning system calibration of Honda vehicles.



2.6.2 Target Board (AUTEL-CSC0601/08-R)

Target Board AUTEL-CSC0601/08-R is used for Lane Departure Warning system calibration of Honda vehicles.

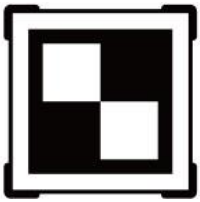


2.6.3 Target Board (AUTEL-CSC0601/05)

Target Board AUTEL-CSC0601/05 is used for Lane Departure Warning system calibration of Honda vehicles.

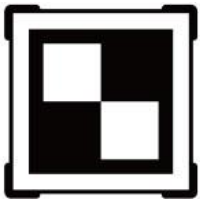
2.6.4 Target Board (AUTEL-CSC0601/11)

Target Board AUTEL-CSC0601/11 is used for Lane Departure Warning system calibration of Toyota / Lexus vehicles (1).



2.6.5 Target Board (AUTEL-CSC0601/15)

Target Board AUTEL-CSC0601/15 is used for Lane Departure Warning system calibration for Toyota vehicles (2).

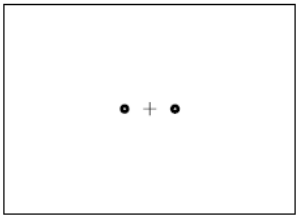


2.6.6 Target Board (AUTEL-CSC0601/09)

The Target Board AUTEL-CSC0601/09 is used for Lane Departure Warning system calibration for Hyundai/KIA vehicles.

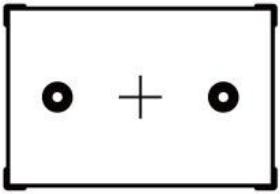
2.6.7 Pattern (AUTEL-CSC0601/02)

Pattern AUTEL-CSC0601/02 is used for Lane Departure Warning system calibration of Mercedes Benz vehicles.



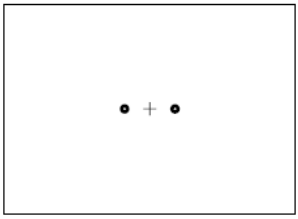
2.6.8 Target Board (AUTEL-CSC0601/02)

Target Board AUTEL-CSC0601/02 is used for Lane Departure Warning system calibration of Mercedes Benz vehicles.



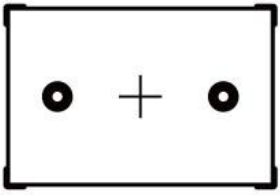
2.6.9 Pattern (AUTEL-CSC0601/19)

Pattern AUTEL-CSC0601/19 is used for Lane Departure Warning system calibration of Mercedes Benz vehicles (2).



2.6.10 Target Board (AUTEL-CSC0601/19)

Target Board AUTEL-CSC0601/19 is used for Lane Departure Warning system calibration of Mercedes Benz vehicles (2).



2.6.11 Pattern (AUTEL-CSC0601/03)

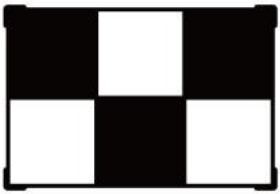
Pattern AUTEL-CSC0601/03 is used for Lane Departure Warning system calibration of Nissan vehicles (1).

2.6.12 Pattern (AUTEL-CSC0601/04)

Pattern AUTEL-CSC0601/04 is used for Lane Departure Warning system calibration of Nissan vehicles (3).

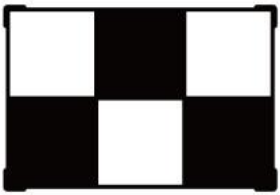
2.6.13 Target Board (AUTEL-CSC0601/03-L)

Target Board AUTEL-CSC0601/03-L is used for Lane Departure Warning system calibration of Nissan vehicles (1).



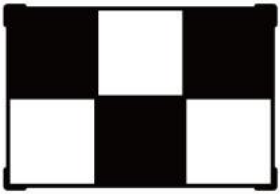
2.6.14 Target Board (AUTEL-CSC0601/03-R)

Target Board AUTEL-CSC0601/03-R is used for Lane Departure Warning system calibration of Nissan vehicles (1).



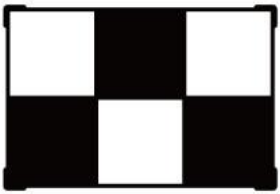
2.6.15 Target Board (AUTEL-CSC0601/04-L)

Target Board AUTEL-CSC0601/04-L is used for Lane Departure Warning system calibration of Nissan vehicles (3).



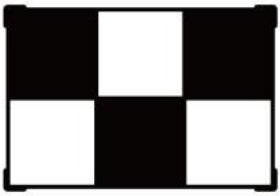
2.6.16 Target Board (AUTEL-CSC0601/04-R)

Target Board AUTEL-CSC0601/04-R is used for Lane Departure Warning system calibration of Nissan vehicles (3).



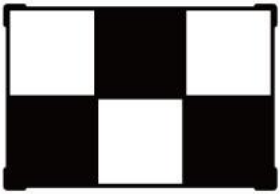
2.6.17 Target Board (AUTEL-CSC0601/08-L)

Target Board AUTEL-CSC0601/08-L is used for Lane Departure Warning system calibration of Honda vehicles (2).



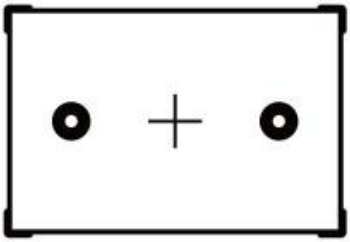
2.6.18 Target Board (AUTEL-CSC0601/08-R)

Target Board AUTEL-CSC0601/08-R is used for Lane Departure Warning system calibration of Honda vehicles (2).



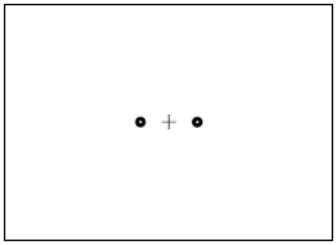
2.6.19 Target Board (AUTEL-CSC0601/12)

Target Board AUTEL-CSC0601/12 is used for Lane Departure Warning system calibration of Mazda vehicles (1).



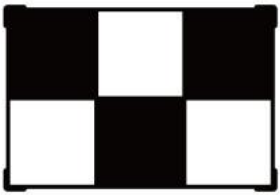
2.6.20 Pattern (AUTEL-CSC0601/12)

Target Board AUTEL-CSC0601/12 is used for Lane Departure Warning system calibration of Mazda vehicles (1).



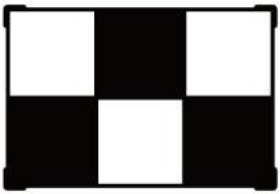
2.6.21 Target Board (AUTEL-CSC0601/13-L)

Target Board AUTEL-CSC0601/13-L is used for Lane Departure Warning system calibration of Mazda vehicles (2).



2.6.22 Target Board (AUTEL-CSC0601/13-R)

Target Board AUTEL-CSC0601/13-R is used for Lane Departure Warning system calibration of Mazda vehicles (2).



2.6.23 Pattern (AUTEL-CSC0601/14)

Pattern AUTEL-CSC0601/14 is used for Lane Departure Warning system calibration of Subaru vehicles (1).

2.6.24 Pattern (AUTEL-CSC0601/20)

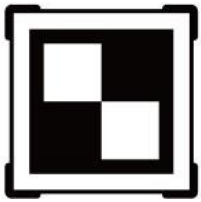
Pattern AUTEL-CSC0601/20 is used for Lane Departure Warning system calibration of Renault vehicles (2).

2.6.25 Pattern (AUTEL-CSC0601/22)

Pattern AUTEL-CSC0601/22 is used for Lane Departure Warning system calibration of Mitsubishi vehicles.

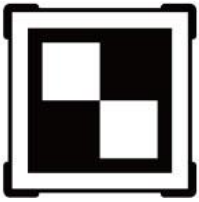
2.6.26 Target Board (AUTELCSC0601/22-L)

Target Board AUTEL-CSC0601/22-L is used for Lane Departure Warning system calibration of Mitsubishi vehicles.



2.6.27 Target Board (AUTEL-CSC0601/22-R)

Target Board AUTEL-CSC0601/22-R is used for Lane Departure Warning system calibration for Mitsubishi vehicles.



2.6.28 Target Board (AUTEL-CSC0601/06-L)

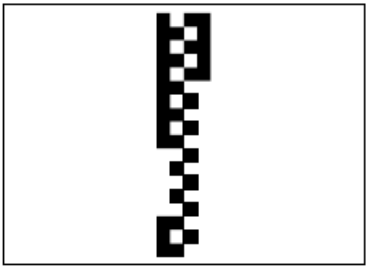
Target Board AUTEL-CSC0601/06-L is used for Lane Departure Warning system calibration of Nissan / Infiniti vehicles (2).

2.6.29 Target Board (AUTEL-CSC0601/06-R)

Target Board AUTEL-CSC0601/06-R is used for Lane Departure Warning system calibration of Nissan / Infiniti vehicles (2).

2.6.30 Pattern (AUTEL-CSC0601/07)

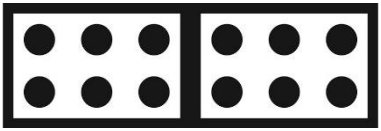
Pattern AUTEL-CSC0601/07 is used for Lane Departure Warning system calibration of Hyundai / KIA vehicles (1).



2.7 Patterns Kit II (For AVM System)

2.7.1 Pattern (AUTEL-CSC0806/01)

Pattern AUTEL-CSC0806/01 is used for Around View Monitoring system calibration of Volkswagen vehicles.

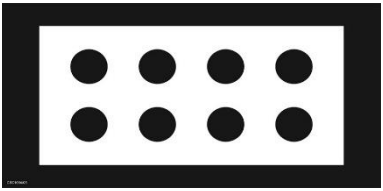


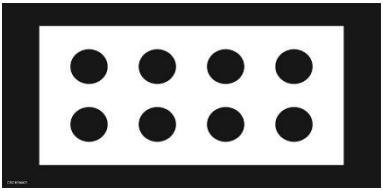
2.7.2 Pattern (AUTEL-CSC1004/02)

Pattern AUTEL-CSC1004/02 is used for Around View Monitoring system calibration of certain Honda vehicles (1).

2.7.3 Pattern (AUTEL-CSC1004/03)

Pattern AUTEL-CSC1004/03 is used for Around View Monitoring system calibration of certain Honda vehicles (2).





2.7.4 Pattern (AUTEL-CSC1004/01)

Pattern AUTEL-CSC1004/01 is used for Around View Monitoring system calibration of Volkswagen vehicles (2).

2.7.5 Pattern (AUTEL-CSC1004/05)

Pattern AUTEL-CSC1004/05 is used for Around View Monitoring system calibration of Ford vehicles.

2.7.6 Pattern (AUTEL-CSC1004/06)

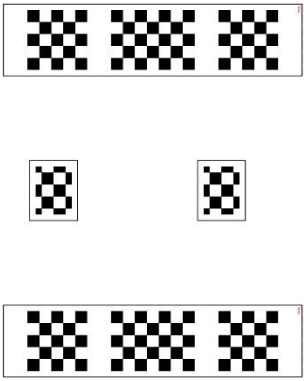
Pattern AUTEL-CSC1004/06 is used for Around View Monitoring system calibration for Cadillac vehicles.

2.7.7 Pattern (AUTEL-CSC1004/07)

Pattern AUTEL-CSC1004/06 is used for Around View Monitoring system calibration for Porsche vehicles.

2.7.8 Pattern (AUTEL-CSC1004/08)

Pattern AUTEL-CSC1004/08 is for Around View Monitoring system calibration for PSA vehicles.



2.7.9 Pattern (AUTEL-CSC1006/03)

Pattern AUTEL-CSC1006/03 is used for Around View Monitoring system calibration for Nissan vehicles in non-Chinese area.

2.7.10 Pattern (AUTEL-CSC1006/04)

Pattern AUTEL-CSC1006/04 is used for Around View Monitoring system calibration for Nissan vehicles in China.

2.7.11 Pattern (AUTEL-CSC1006/01)

Pattern AUTEL-CSC1006/01 is used for rear collision warning system calibration of Benz vehicles.

2.8 Technical Specifications

2.8.1 Laser Range Finder

Specifications

Function	Specification
Model	dTape5
Measuring Range	0.2~20m
Measuring Accuracy	±2mm
Continuous	Yes
Measuring unit	m/ft/in/ft + in
Laser class	Class 2
Wavelength	630~670nm
Radiated Power	<1mW
Reference	rear side
Battery Type	AAA 2x1.5V
Working Temp.	0℃ ~ 40℃
Size	100*35*23mm

2.8.2 Volkswagen NV Calibrator

Specifications

Function	Specification
Model	AUTEL-CSC0603/01
Voltage	12V
Current	3A
Rate	36W
Size	400*47*240mm
Working Temp.	-20℃ ~ 50℃

2.8.3 Benz NV Calibrator

Specifications

Function	Specification
Model	AUTEL-CSC0803/01
Voltage	12V
Current	4A
Rate	24W
Size	400*47*240mm
Working Temp.	-20℃ ~ 50℃

2.8.4 Radar Calibration Box

Specifications

Function	Specification
Model	AUTEL-CSC0605/01
Voltage	24V
Current	1A
Rate	24W
Size	338*150*135mm
Working Temp.	-20℃ ~ 50℃

2.8.5 Wheel Clamp Laser

Specifications

Function	Specification
Serial No.	AUTEL-CSC0500/02
Voltage	5V
Current	0.8A
Rate	4W
Laser Class	Class 2

Function	Specification
Wavelength	650nm
Spot Size	5mm
Laser Rate	0.5mW~1mW
Working Range	20m
Working Temp.	-10℃ ~ 40 ℃
Size	174*145*126mm

2.8.6 Corner Reflector

Specifications

Function	Specification
Serial No.	AUTEL-CSC0802/01
Voltage	5V
Current	0.8A
Rate	4W
Laser Class	Class 2
Wavelength	650nm
Spot Size	5mm
Laser Rate	0.5mW~1mW
Working Range	20m
Working Temp.	-10℃ ~ 40℃
Size	168*168*165mm

2.8.7 Laser on the Calibration Frame

Specifications

Function	Specification
Serial No.	AUTEL-060004
Voltage	5V
Current	0.8A
Rate	4W
Laser Class	Class 2
Wavelength	650nm
Spot Size	5mm
Laser Rate	0.5mW~1mW
Working Range	20m
Working Temp.	-10℃ ~ 40 ℃
Size	300*202*57mm

2.8.8 Line Laser

Specifications

Function	Specification
Serial No.	AUTEL-CSC0500/04
Voltage	5V
Current	0.8A
Rate	4W
Laser Class	Class 2
Wavelength	520nm
Laser Rate	0.5mW~1mW
Working Range	10m
Working Temp.	0℃ ~ 65 ℃
Size	93*74*55mm

3 Calibrate the Camera and Sensor

MaxiSys ADAS supports the calibration of cameras and sensors used by advanced driver-assistance systems, including Adaptive Cruise Control (ACC), Blind Spot Detection (BSD), Rear View Camera (RVC), Lane Keep Assist (LKA), Around View Monitoring (AVM), and Night Vision System (NVS).

In this chapter, when the calibration is needed, what tools and preparatory measures are required, and the toolset placement will be introduced with Volkswagen vehicle as an example. Because the information varies by vehicle and model, we have all the information included in the **Help** section of the tablet once you start the ADAS calibrate session. Please follow the specific instructions in the Help section for the vehicle being serviced to ensure safe and accurate calibration.

The calibration toolset placement is followed by calibration procedure, during which, MaxiSys ADAS tablet communicates with the vehicle ECU to complete the calibration. The calibration procedure also varies by vehicle and model, please follow the step-by-step instruction on the MaxiSys ADAS tablet to fulfill the calibration.

3.1 Adaptive Cruise Control (ACC) System

This is an instruction example of Volkswagen vehicle.

Calibration procedures can vary by vehicle. Please follow the instruction on your tablet.

3.1.1 Select Situation That Needs Calibration

1. Repair or replace the Adaptive Cruise Control (ACC) radar sensor control unit.
2. ACC radar sensor deviation angle out of normal range.
3. Adjust position of the ACC radar sensor on the vehicle body.
4. Repair or replace bumper or radiator grill.
5. Adjust chassis.

3.1.2 Calibration tools required

- ✓ Calibration Frame AUTEL-CSC0600;
- ✓ Reflector AUTEL-CSC0602/01;
- ✓ Mini Reflector AUTEL-CSC0602/07;
- ✓ Wheel Clamp (x2) AUTEL-CSC0500/01;
- ✓ Laser (x2) AUTEL-CSC0500/02;
- ✓ Hex Wrench AUTEL-CSC0602/06;
- ✓ Tape Measure.

3.1.3 Calibration Preparations

NOTE

- Before calibration, check if the vehicle is equipped with Night Vision system.
- If Night Vision system is equipped, use the MaxiSys ADAS tablet to check if calibration is needed. If calibration is needed, follow the Night Vision system calibration instructions on the tablet to complete calibration.
- After completing Night Vision system calibration, the ACC radar sensor calibration can be performed with the same calibration frame AUTEL-CSC0600 at the same position.
- If no Night Vision system is present on the vehicle or it does not need to be calibrated, proceed to perform the ACC radar sensor calibration.

1. Park the vehicle on a flat and level surface with its front wheels pointing straight and ensure there are no objects within three meters or ten feet of the front of the vehicle;
2. Bring the vehicle to a complete stop, its rear axle steering straight and switch the ignition off;
3. Ensure the vehicle's coolant and engine oil are at recommended levels and the gas tank is full. The vehicle should not be carrying any load (passengers or cargo);
4. Attach the VCI to the vehicle and connect the diagnostic tool to the vehicle (if connected through OBDII cable, please pass cable through window);
5. Close the vehicle doors and turn off all exterior lighting;
6. Adjust the tire pressure to the recommended value;
7. Connect a battery charger to ensure procedure is completed without interruption and to avoid battery discharge;

8. For vehicle equipped with air suspension, please activate “Jack Mode”;
9. Generally, the ACC radar sensor is located on either side of the front bumper;
10. Remove the grill on the ACC radar sensor to check if the sensor is firmly attached and/or damaged. If damaged, replace and re-attach sensor. Ensure the sensor is securely attached.

NOTE

- The specific location of the sensor is dependent on the vehicle.
- The calibration frame must be placed as requested before this calibration function can be performed.
- Tap “**Help**” to view set-up steps or tap “**Video**” to view a demonstration. After completing the set-up of the calibration frame and gathering the recommended tools, tap “**OK**” to start calibrating.

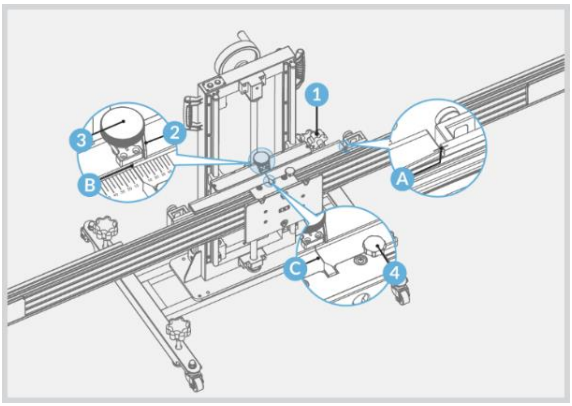
3.1.4 Calibration Toolset Placement

NOTE

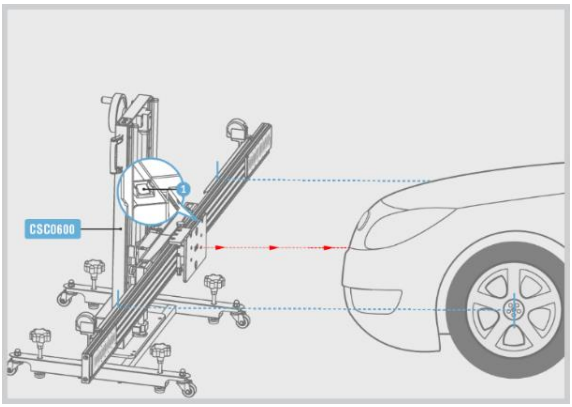
Perform Night Vision system calibration if system is present or if not yet completed. The tablet will display instructions for Night Vision calibration. The Night Vision system calibration and the ACC calibration use the same calibration frame.

➢ **Place the calibration frame**

1. Move the calibration frame to the level ground in front of the vehicle. If the pattern board has been installed onto the crossbar, remove it first.
2. Rotate the fine tuning bolt (Pos. 1) to align the marked lines in position A.
3. Loosen the handle (Pos. 2), then rotate the fine tuning bolt (Pos. 3) until the scale value in position B is 0. Tighten the handle (Pos. 2) to secure the crossbar.
4. Align the pointer on the sliding plate with the marked line in position C. Then tighten the bolt (Pos. 4) to secure the sliding plate.



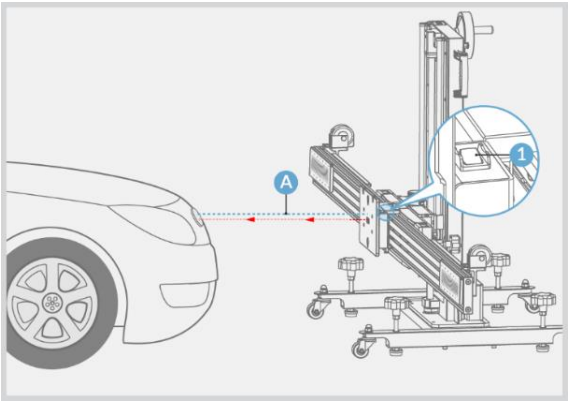
5. Ensure the front wheels point straight forward.
6. Place calibration frame AUTEL-CSC0600 directly before the front center of the vehicle. Adjust the height of the crossbar so that it is roughly level with the center of the front wheel. Then turn on the laser (Pos. 1) and aim it at the front center of the vehicle.



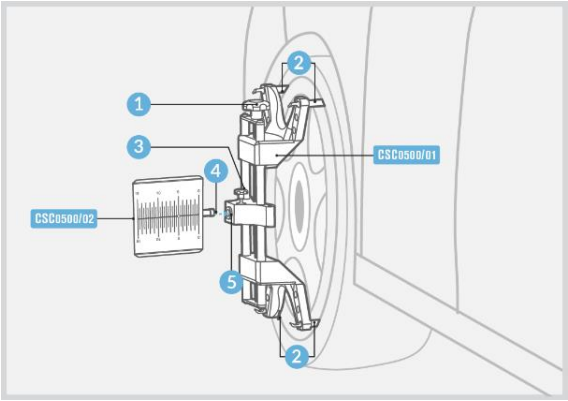
7. Hold the handle on the calibration frame and move the frame until the distance between the vehicle emblem and the crossbar sliding plate is A=130cm +/- 2.3cm (value applies to Audi / Audi A4 USA / CAN 2016 and beyond / Saloon) and the laser remains at the front center of the vehicle. Then turn off the laser (Pos. 1).
8. Rotate all the bolts on the base until they slightly touch the ground.

NOTE

Ensure that the distance from one side of the crossbar to the center of one front wheel and the distance from the other side of the crossbar to the center of the other front wheel are equal.

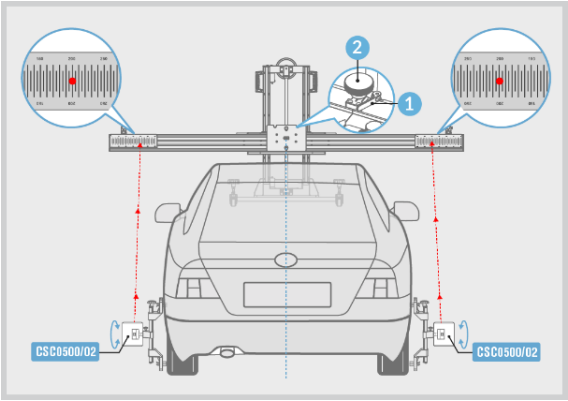


9. Check wheel clamp CSC0500/01 and ensure its four pawls (Pos.2) are equal in length.
10. Attach two wheel clamps to the rear wheels respectively, and rotate the bolt (Pos.1) clockwise until pawls (Pos.2) are tightly secured.
11. Fully insert the connecting shaft of the laser (Pos.4) into the clamp port (Pos. 5) and ensure the laser calibration board faces the vehicle's driving direction. Tighten the bolt (Pos. 3) to secure the laser.

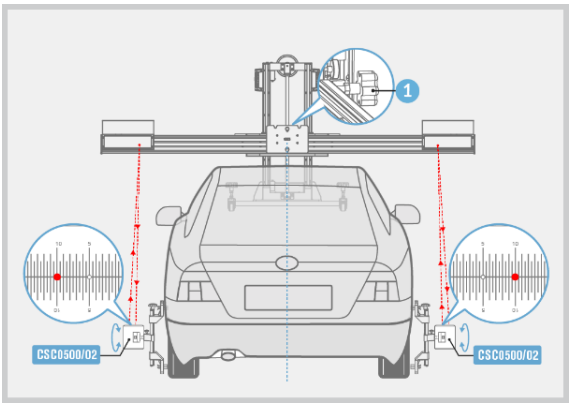


➢ **To center the calibration frame in front of the vehicle**

1. Turn on lasers AUTEL-CSC0500/02 attached to the rear wheels and adjust them to aim the laser at the rulers on both sides of the crossbar cover plate.
2. Loosen the handle (Pos. 10) and rotate the fine tuning bolt (Pos. 2) until the rulers on both sides have the same value lit by the laser. Then tighten the handle (Pos. 1) to secure the crossbar.
3. Unfold the cover plates on both ends of the crossbar.
4. Adjust lasers AUTEL-CSC0500/02 attached to the rear wheels so that the lasers can shine anywhere on the crossbar reflectors.



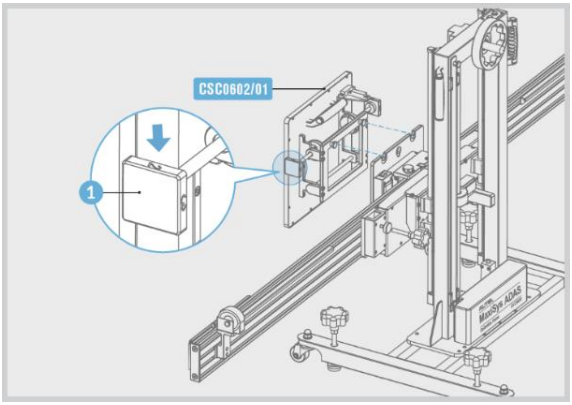
5. Adjust the lasers attached to the rear wheels to control the up/down movement of the reflected lasers. Finally, the reflected laser (on at least one side) must be located at the scale board of the laser coordinate board.
6. Rotate the fine tuning bolt (Pos. 1) to control the left/right movement of the reflected laser.
7. Following the above adjustments, the scale values lit by the reflected lasers on both sides must be the same.
8. Fold the cover plates on both ends of the crossbar.



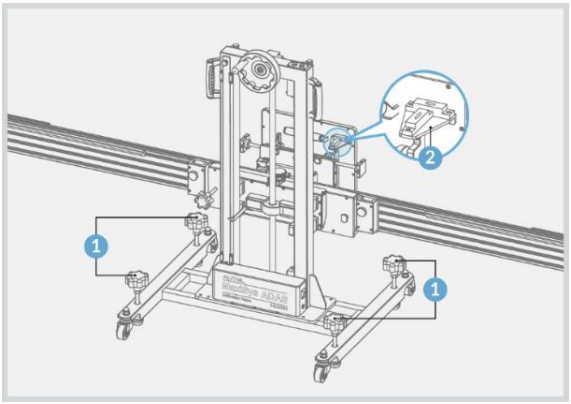
9. Calibration frame has been properly placed. Turn off the lasers attached to the wheel clamps on both rear wheels and recover the wheel clamps.
10. Tap **Exit** to return to the calibration preparation screen and tap **OK** to start the calibration function.
11. Check if the calibration frame has been properly placed. If it has been properly placed, tap **OK** to continue the calibration function.
12. Do not perform the calibration function until the calibration frame is placed properly. Tap **Cancel** to return to the calibration preparation screen, where the steps for the placement of the calibration frame are demonstrated.

➢ **To attach the reflector and reference the spirit level**

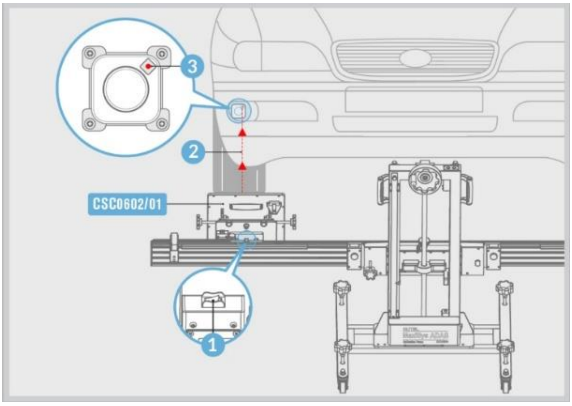
1. Fully attach reflector AUTEL-CSC0602/01 to the crossbar sliding plate.
2. Rotate the bolt (Pos. 1) so that the side labeled 2 is facing up.



3. Rotate all the bolts (Pos. 1) on the base of the calibration frame to reference the spirit level (Pos. 2).



4. Turn on the laser (Pos. 1).
5. Adjust the height of the crossbar and move reflector AUTEL-CSC0602/01 left or right to aim the laser beam (Pos. 2) at the mini reflector (Pos. 3) on the radar sensor (on the right side of the vehicle's driving direction).



NOTE

- If the spirit level shifts during adjustment, the horizontal position needs to be re-adjusted.
- The location of the adjusting bolt may vary by vehicle. Adjust diagonal bolts until the reflected laser aligns with origin.

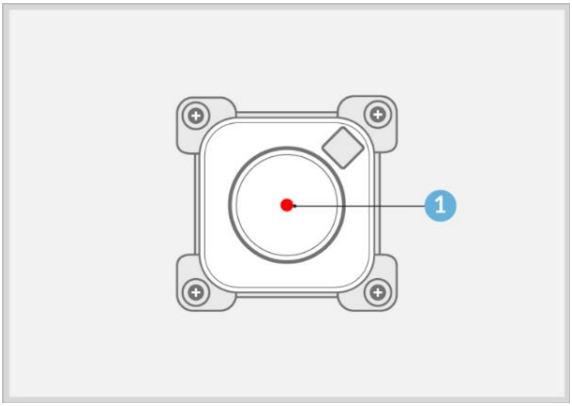
6. Use hex wrench AUTEL-CSC0602/06 to adjust sensor bolts (Pos. 1 and Pos. 2) so that the reflected laser (Pos. 3) aligns with origin (Pos. 4).
7. Adjust ACC radar sensor on the left side of the vehicle's driving direction in the same way.

NOTE

- Ensure ignition is on.
- To make sure diagnosis is going on smoothly, please keep the diagnostic voltage higher than 12V. if voltage is insufficient, please connect the device with battery charger.

➢ **Right ACC radar sensor calibration**

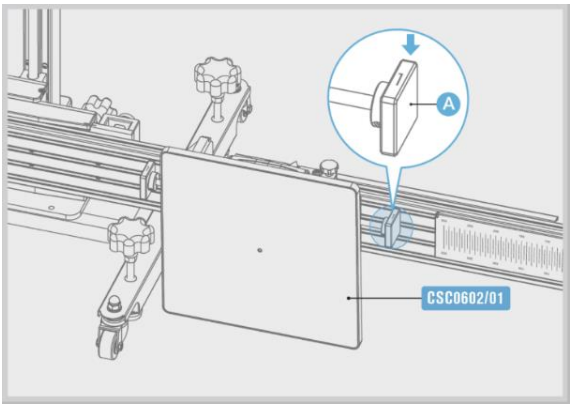
1. Adjust the height of the crossbar and move the reflector left or right to aim the laser beam at the center (Pos. 1) of the radar sensor on the right side of the driving direction.



NOTE

If the spirit level shifts during adjustment, the horizontal position needs to be re-adjusted.

2. Turn knob (Pos. A) on reflector AUTEL-CSC0602/01 so that the side labeled 1 is facing up.



3. Turn knob (Pos. A) on reflector AUTEL-CSC0602/01 so that the side labeled 2 is facing up.
4. Turn knob (Pos. A) on reflector AUTEL-CSC0602/01 so that the side labeled 3 is facing up.
5. The distance regulation control modile-J2534 (Master) was successfully adjusted. Finally, the Distance regulation control module 2-J2534 (Slave) is adjusted.

Calibrate the Left ACC radar sensor in the same way.

3.2 Lane Change Assist (LCA) System

This is an instruction example of Volkswagen vehicle.

Calibration procedures can vary by vehicle. Please follow the instruction on your tablet.

3.2.1 Select Situation That Needs Calibration

1. Repair or replace Lane Change Assist control unit.
2. Repair or replace rear bumper hood/trunk.
3. Adjust position of Lane Change Assist control unit on the vehicle.

3.2.2 Required Calibration Tools

- ✓ Calibration Frame AUTEL-CSC0600;
- ✓ Radar Calibration Box AUTEL-CSC0605/01;

- ✓ Wheel Clamp(x2) AUTEL-CSC0500/01;
- ✓ Laser (x2) AUTEL-CSC0500/02;
- ✓ 24V Power Adapter;
- ✓ Tape Measure.

3.2.3 Calibration Preparations

1. Park the vehicle on a level surface with its front wheels pointing straight and ensure there are no objects within 3 meters (118 inches) behind the vehicle;
2. For vehicles with air suspension, please set the chassis height as medium or automatic (shown on the instrument panel);
3. Ensure the vehicle's coolant and engine oil are at recommended levels and the gas tank is full. The vehicle should not be carrying any load (passengers or cargo);
4. Attach the VCI to the vehicle and connect the diagnostic tool to the vehicle (if connected through OBD II cable, please pass cable through window);
5. Apply the parking brake and close all doors. No one should be inside the vehicle;
6. Adjust the tire pressure to the recommended value;
7. If needed, remove the tinsel label on the bumper cover.

NOTE

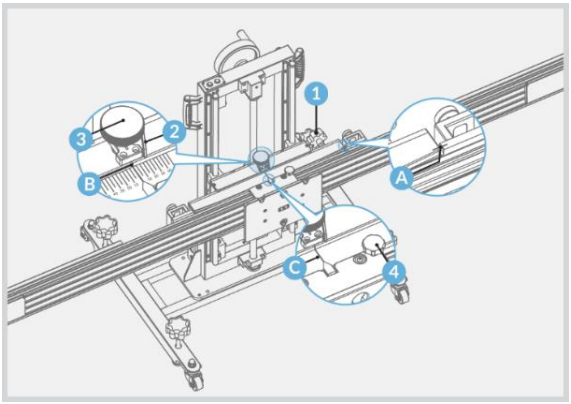
- Do not open or close doors during calibration.
- The calibration frame must be placed as requested before this calibration function can be performed.
- Tap **Help** to view set-up steps or tap **Video** to view a demonstration. After completing the set-up of the calibration frame and gathering the recommended tools, tap **OK** to start calibrating.

3.2.4 Calibration Toolset Placement

➢ **To mount the reflector and place the calibration frame**

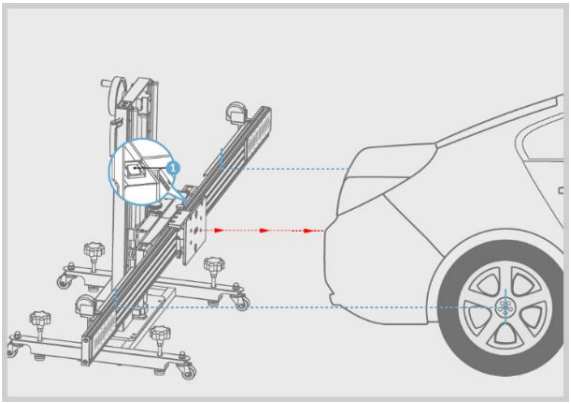
1. Move the calibration frame to the level ground behind the vehicle. If the pattern board has been installed onto the crossbar, remove it first.
2. Rotate the fine tuning bolt (Pos. 1) to align the marked lines in position A.
3. Loosen the handle (Pos. 2) and then rotate the fine tuning bolt (Pos. 3) until the scale value in position B is 0. Tighten the handle (Pos. 2) to secure the crossbar.

4. Align the pointer on the sliding plate with the marked line in position C. Then tighten the bolt (Pos. 4) to secure the sliding plate.

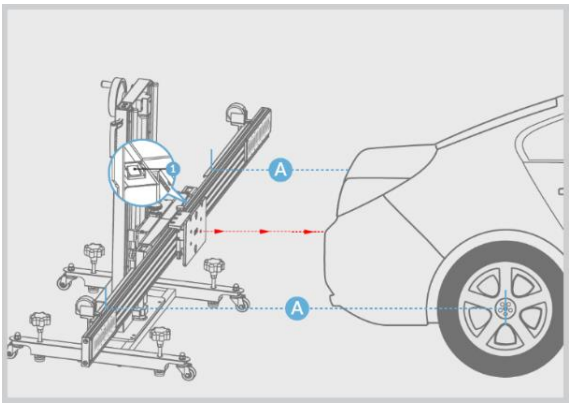


➢ **To center the calibration frame at the rear of the vehicle**

1. Place calibration frame AUTEL-CSC0600 directly behind the rear center of the vehicle. Adjust the height of the crossbar so that it is roughly level with the center of the rear wheel. Then turn on the laser (Pos. 1) and aim it at the rear center of the vehicle.



2. Hold the handle on the calibration frame and move the frame until the (horizontal) distances between the centers of both rear wheels and the crossbar are A=240 cm (value applies to Audi / Audi A4 USA / CAN 2016 and beyond / Saloon) and the laser remains at the rear center of the vehicle. Then turn off the laser (Pos. 1).
3. Rotate all the bolts on the base until they slightly touch the ground.



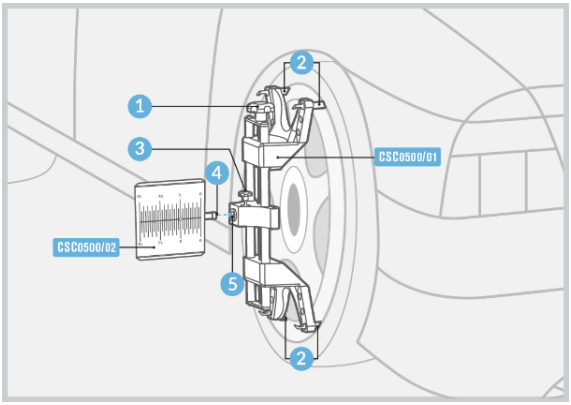
NOTE

Do not move the crossbar while adjusting distance.

4. Check wheel clamp AUTEL-CSC0500/01 and ensure its four pawls (Pos. 2) are equal in length.

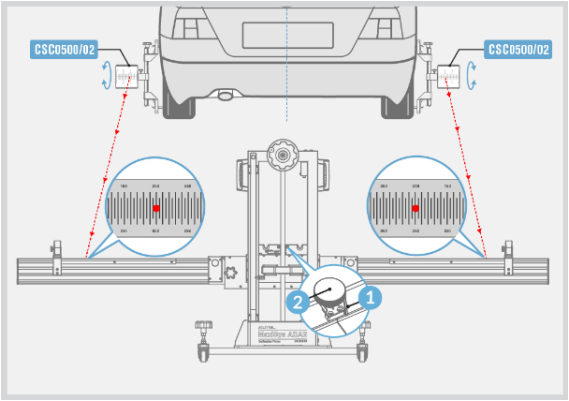
➢ **To attach the wheel clamps**

1. Attach two wheel clamps to the rear wheels respectively, and rotate the bolt (Pos. 1) clockwise until pawls (Pos. 2) are tightly secured.
2. Fully insert the connecting shaft of the laser (Pos. 4) into the clamp port (Pos. 5) and ensure the laser calibration board faces the rear of the vehicle. Tighten the bolt (Pos. 3) to secure the laser.



➢ **To adjust the laser at the rulers**

1. Turn on lasers AUTEL-CSC0500/02 attached to the rear wheels and adjust them to aim the laser at the rulers on both sides of the crossbar cover plate.
2. Loosen the handle (Pos. 1) and rotate the fine tuning bolt (Pos. 2) until the rulers on both sides have the same value lit by the laser. Then tighten the handle (Pos. 1) to secure the crossbar.
3. Unfold the cover plates on both ends of the crossbar.
4. Adjust lasers AUTEL-CSC0500/02 attached to the rear wheels so that the lasers can shine anywhere on the crossbar reflectors.

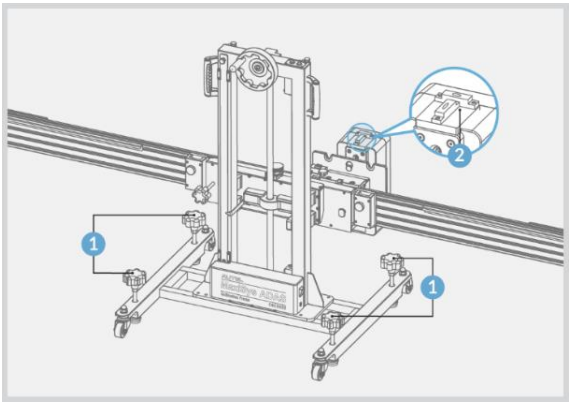


5. Adjust the lasers attached to the rear wheels to control the up/down movement of the reflected lasers. Finally, the reflected laser (on at least one side) must be located at the scale board of the laser coordinate board.
6. Rotate the fine tuning bolt (Pos. 1) to control the left/right movement of the reflected laser.
7. Following the above adjustments, the scale values lit by the reflected lasers on both sides must be the same.
8. Fold the cover plates on both ends of the crossbar.
9. Calibration frame has been properly placed. Turn off the lasers attached to the wheel clamps on both rear wheels and recover the wheel clamps.
10. Tap **Exit** to return to the calibration preparation screen and tap **OK** to start the calibration function.
11. Check if the calibration frame has been properly placed. If it has been properly placed, tap **OK** to continue the calibration function.
12. Do not perform the calibration function until the calibration frame is placed properly. Tap **Cancel** to return to the calibration preparation screen, where the

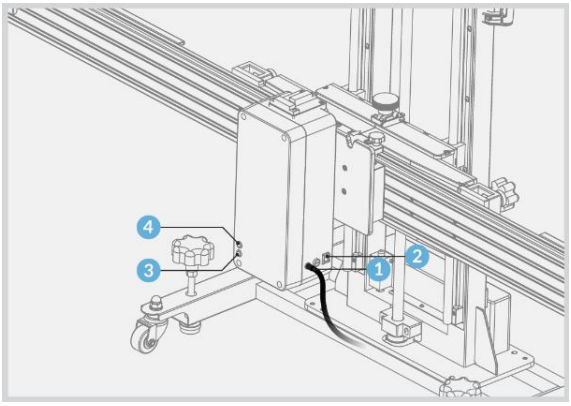
steps for the placement of the calibration frame are demonstrated.

- **To attach the radar calibration box and reference the spirit level**

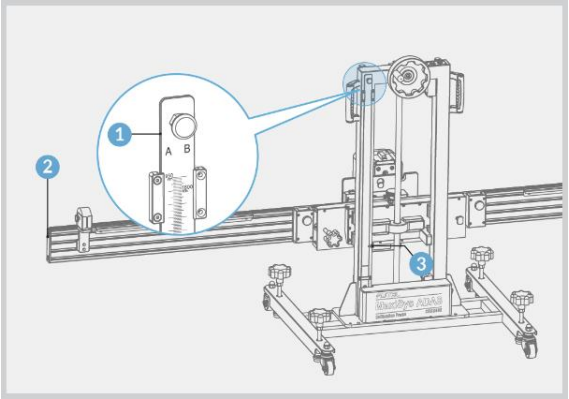
1. Fully attach the radar calibration box CSC0605/01 onto the sliding plate.
2. Rotate all the bolts (Pos. 1) on the base of the calibration frame to reference the spirit level (Pos. 2).



3. Plug the included power cord into the power port (Pos. 1). Turn on the switch (Pos. 2) and the red LED (Pos. 3) illuminates. Do not go to the next step until approximately 10 seconds later when the green LED (Pos. 4) illuminates.



4. Loosen the bolt on the top of the ruler (Pos. 1) so that the ruler touches the ground.
5. Adjust the height of the crossbar (Pos. 2) to set the pointer (Pos. 3) at 715 mm on the A-side of the ruler.



6. Push the ruler (Pos. 1) back to the original position and secure it.
7. Please continue the next steps according to the tablet instructions until the calibration is successful.

3.3 Lane Keep Assist (LKA) System

This is an instruction example of Volkswagen vehicle.

Calibration procedures can vary by vehicle. Please follow the instruction on your tablet.

3.3.1 Select Situation That Needs Calibration

1. Repair or replace front video camera.
2. Repair or replace front windshield.
3. Adjust chassis.
4. Adjust vehicle body height.
5. Relearn vehicle height through vehicle height sensor.

3.3.2 Required Calibration Tools

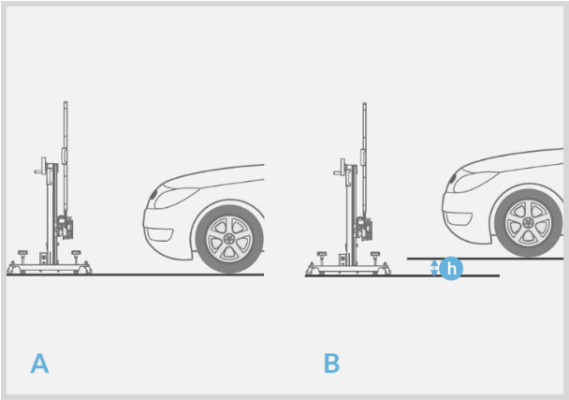
- ✓ Calibration Frame AUTEL-CSC0600;
- ✓ Pattern Board AUTEL-CSC0601/01;
- ✓ Wheel Clamp(x2) AUTEL-CSC0500/01;
- ✓ Laser (x2) AUTEL-CSC0500/02;

✓ Tape Measure.

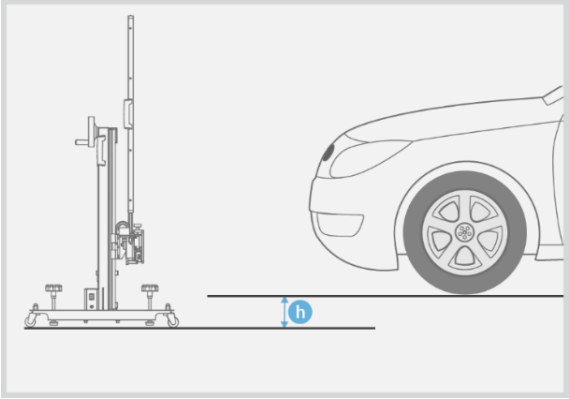
3.3.3 Check the Vehicle Body Height

Please choose a parking spot:

1. If it's a level ground like figure A, choose Figure A;
2. If it's a spot (e.g. workshop station) where calibration frame and vehicle are not at the same level, choose Figure B.



3. If Figure B is selected, measure the height "h" between the two levels, and enter the measured value (unit: mm).



NOTE

If the vehicle body height is not in the adjustable range of the calibration frame, a note interface displays. Proceed according to the Note.

3.3.4 Calibration Preparations

1. Park the vehicle on a level surface with its front wheels pointing straight and ensure there are no objects within 3 meters in front of the vehicle;
2. Bring the vehicle to a complete stop, its rear axle steering straight and turn the ignition off;
3. Ensure the vehicle's coolant and engine oil are at recommended levels and the gas tank is full. The vehicle should not be carrying any load (passengers or cargo);
4. Attach the VCI to the vehicle and connect the diagnostic tool to the vehicle (if connected through cable, please pass cable through window);
5. Close the vehicle doors and turn off all exterior lighting;
6. Adjust the tire pressure to the recommended value;
7. If needed, connect the vehicle to a battery charger to prevent full discharge;
8. For vehicles with air suspension, activate the vehicle jack mode;
9. Ensure the windshield and the camera lenses are clean and unobstructed;
10. Ensure the calibration area is well lit;
11. Clean the dashboard.

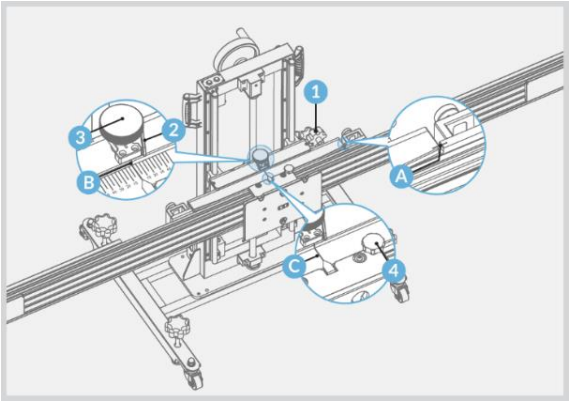
NOTE

- Ensure there is no reflection on the windshield (reflective objects can be covered with black cloth).
- The calibration frame must be placed as requested before this calibration function can be performed.
- Tap **Help** to view set-up steps or tap **Video** to view a demonstration. After completing the set-up of the calibration frame and gathering the recommended tools, tap **OK** to start calibrating.
- Please refer to the Autel Calibration Tools User Manual to complete auxiliary tool placement.

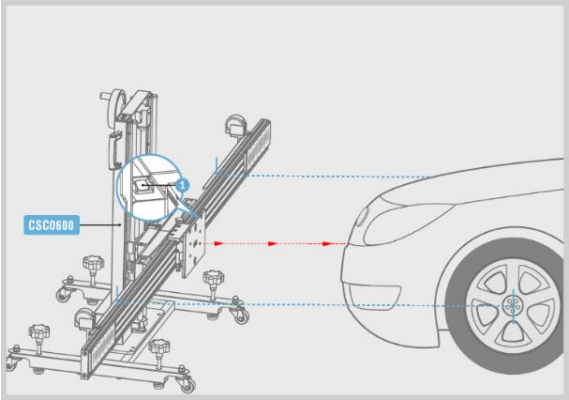
3.3.5 Calibration Toolset Placement

➢ **To mount the reflector and place the calibration frame**

1. Move the calibration frame to the level ground in front of the vehicle. If the pattern board has been installed onto the crossbar, remove it first.
2. Rotate the fine tuning bolt (Pos. 1) to align the marked lines in position A.
3. Loosen the handle (Pos. 2) and then rotate the fine tuning bolt (Pos. 3) until the scale value in position B is 0. Tighten the handle (Pos. 2) to secure the crossbar.
4. Align the pointer on the sliding plate with the marked line in position C. Then tighten the bolt (Pos. 4) to secure the sliding plate.

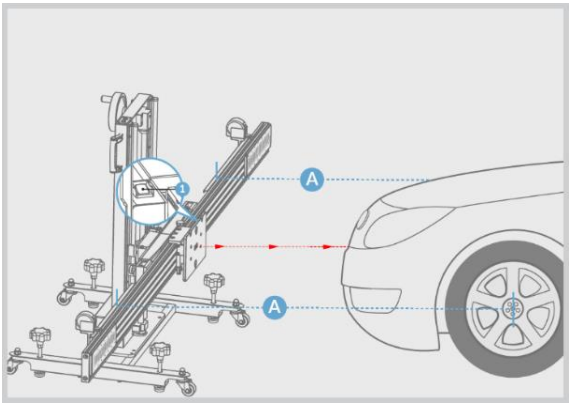


5. Ensure the front wheels point straight forward.
6. Place calibration frame CSC0600 directly before the front center of the vehicle. Adjust the height of the crossbar so that it is roughly level with the center of the front wheel. Then turn on the laser (Pos. 1) and aim it at the front center of the vehicle.



➢ **To center the calibration frame at the rear of the vehicle**

1. Hold the handle on the calibration frame and move the frame until the (horizontal) distances between the centers of both front wheels and the back of the crossbar are A=150cm + / - 2.5cm (value applies to Audi / Audi A7 2011 and beyond / Sportback) and the laser remains at the front center of the vehicle. Then turn off the laser (Pos. 1).
2. Rotate all the bolts on the base until they slightly touch the ground.

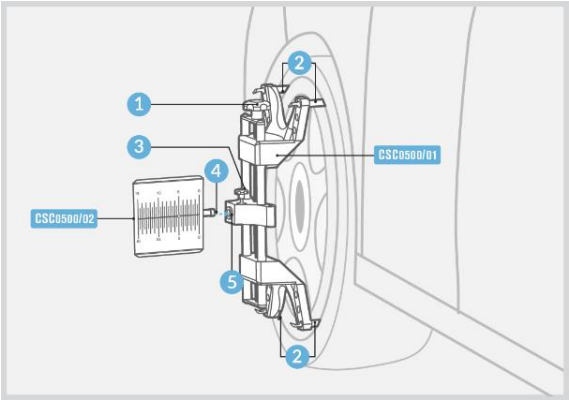


NOTE

Do not move the crossbar while adjusting distance.

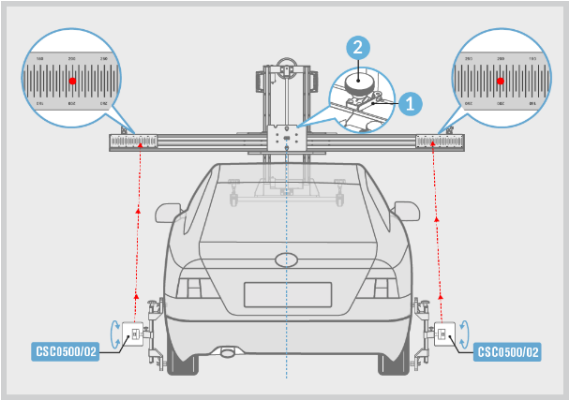
3. Check wheel clamp AUTEL-CSC0500/01 and ensure its four pawls (Pos. 2) are equal in length.
4. Attach two wheel clamps to the rear wheels respectively, and rotate the bolt (Pos. 1) clockwise until pawls (Pos. 2) are tightly secured.

5. Fully insert the connecting shaft of the laser (Pos. 4) into the clamp port (Pos. 5) and ensure the laser calibration board faces the vehicle's driving direction. Tighten the bolt (Pos. 3) to secure the laser.



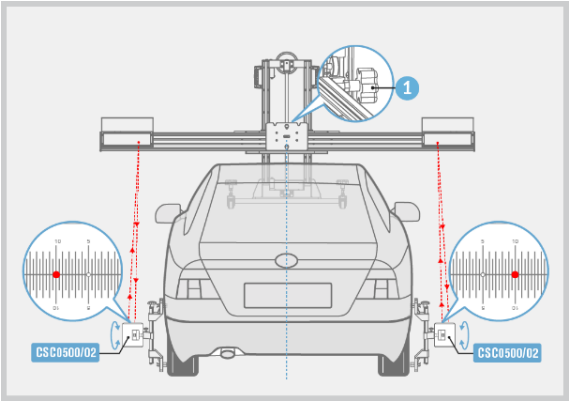
➢ **Adjust the reflector parallel to the vehicle**

1. Turn on lasers AUTEL-CSC0500/02 attached to the rear wheels and adjust them to aim the laser at the rulers on both sides of the crossbar cover plate.



2. Loosen the handle (Pos. 1) and rotate the fine tuning bolt (Pos. 2) until the rulers on both sides have the same value lit by the laser. Then tighten the handle (Pos. 1) to secure the crossbar.
3. Unfold the cover plates on both ends of the crossbar.
4. Adjust lasers CSC0500/02 attached to the rear wheels so that the lasers can shine anywhere on the crossbar reflectors.

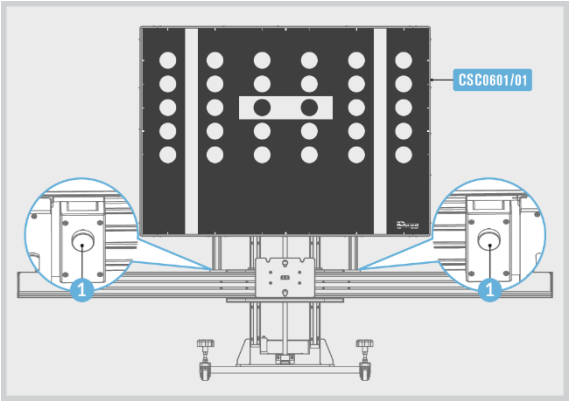
5. Adjust the lasers attached to the rear wheels to control the up/down movement of the reflected lasers. Finally, the reflected laser (on at least one side) must be located at the scale board of the laser coordinate board.
6. Rotate the fine tuning bolt (Pos. 1) to control the left/right movement of the reflected laser.
7. Following the above adjustments, the scale values lit by the reflected lasers on both sides must be the same.



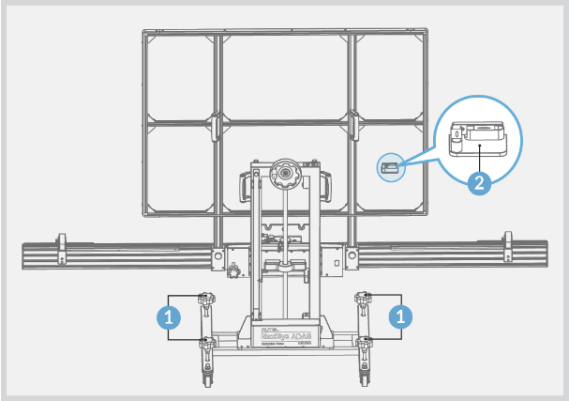
8. Fold the cover plates on both ends of the crossbar.
9. Calibration frame has been properly placed. Turn off the lasers attached to the wheel clamps on both rear wheels and recover the wheel clamps.
10. Tap **Exit** to return to the calibration preparation screen and tap **OK** to start the calibration function.
11. Check if the calibration frame has been properly placed. If it has been properly placed, tap **OK** to continue the calibration function.
12. Do not perform the calibration function until the calibration frame is placed properly. Tap **Cancel** to return to the calibration preparation screen, where the steps for the placement of the calibration frame are demonstrated.

➢ **Parallel the mirror to the vehicle**

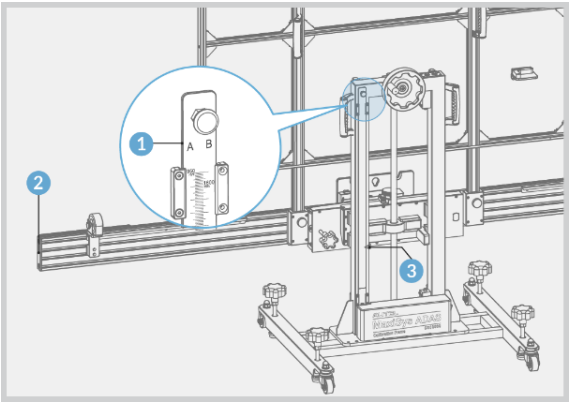
1. Attach pattern board AUTEL-CSC0601/01 onto the crossbar of the calibration frame and tighten the bolt (Pos. 1) to secure it.



2. Rotate all the bolts (Pos. 1) on the base of the calibration frame to reference the spirit level (Pos. 2).



3. Loosen the bolt on the top of the ruler (Pos. 1) so that the ruler touches the ground.
4. Adjust the height of the crossbar (Pos. 2) to set the pointer (Pos. 3) at 1090mm (value applies to Audi / Audi A7 2011 and beyond / Sportback) on the B-side of the ruler.



5. Push the ruler (Pos. 1) back to the original position and secure it.
6. Begin the calibration procedures until success.

3.4 Around View Monitoring (AVM) System

This is an instruction example of Volkswagen vehicle.

Calibration procedures can vary by vehicle. Please follow the instruction on your tablet.

3.4.1 Select Situation That Needs Calibration

1. Replace panoramic camera.
2. Replace panoramic camera system control unit.
3. Refresh panoramic camera system control unit software.
4. Enter new data into panoramic camera system control unit.
5. Repair components that are equipped with panoramic camera or affect camera installation.
6. Adjust chassis.
7. Overlap areas of images shot by panoramic cameras are dislocated.
8. Adjust vehicle body height.
9. Adjust position of panoramic camera on vehicle body.

3.4.2 Required Calibration Tools

- ✓ Pattern AUTEL-CSC1004/01;
- ✓ Tape Measure.

3.4.3 Calibration Preparations

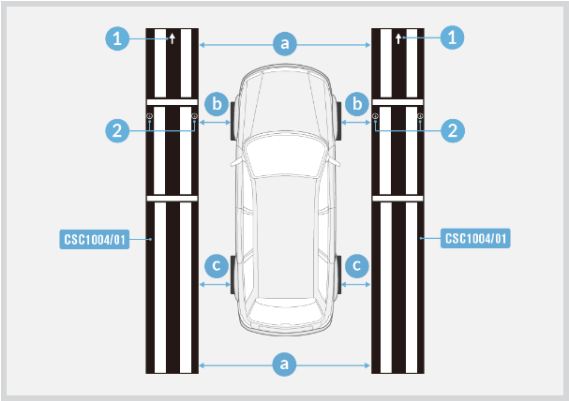
1. Park the vehicle on a flat and level surface with its front wheels pointing straight and ensure there is room around the vehicle.
2. Extend the exterior rear view mirrors on both sides of the vehicle.
3. Ensure the camera lenses are clean. If needed, clean lenses with damp cloth.
4. Check the respective camera images on the central console display. Replace the camera if the image is affected due to camera damage.
5. Ensure the vehicle's coolant and engine oil are at recommended levels and the gas tank is full. The vehicle should not be carrying any load (passengers or cargo).
6. Attach the VCI to the vehicle and connect the diagnostic tool to the vehicle (if connected through OBD II cable, please pass cable through window).
7. Apply the parking brake and close all doors and trunk.
8. Adjust the tire pressure to the recommended value.
9. Connect a battery charger and ensure the charger is out of the camera view.
10. Turn on Ignition.
11. Press panoramic image button to show panoramic image on the central console display.
12. To avoid recognition error, ensure there are no objects surrounding the calibration area.
13. Ensure the calibration area is well lit.

3.4.4 Calibration Toolset Placement

1. Place two patterns AUTEL-CSC1004/01 on both sides of the vehicle and ensure the distance is A=2000-2500mm (value applies to Audi / Audi A4 USA / 2016 and beyond / Saloon)
2. Ensure arrow (Pos.1) points the vehicle driving direction, and cross line (Pos.2)

aligns front wheel center, the patterns on both sides of the vehicle should parallel.

3. Ensure the vehicle is parked between the two patterns, and the distances b and c are the same.



NOTE

Ensure pattern CSC1004/01 is placed correctly and its surface lies flat and reflects no light.

3.5 Night Vision System (NVS)

This is an instruction example of Volkswagen vehicle.

Calibration procedures can vary by vehicle. Please follow the instruction on your tablet.

3.5.1 Select Situation That Needs Calibration

1. Repair or replace Night Vision System (NVS) camera.
2. Repair or replace bumper or radiator grill.
3. Adjust chassis.
4. Chang the vehicle body height.
5. Chang position of NVS camera on the vehicle body.

3.5.2 Required Calibration Tools

- ✓ Calibration Frame AUTEL-CSC0600;
- ✓ NV Calibrator AUTEL-CSC0603/01;
- ✓ Wheel Clamp (x2) AUTEL-CSC0500/01;
- ✓ Laser (x2) AUTEL-CSC0500/02;
- ✓ 12V Power Adapter;
- ✓ Tape Measure.

3.5.3 Calibration Preparations

1. Park the vehicle on a level surface with its front wheels pointing straight;
2. Ensure the vehicle's coolant and engine oil are at recommended levels and the gas tank is full. The vehicle should not be carrying any load (passengers or cargo);
3. Attach the VCI to the vehicle and connect the diagnostic tool to the vehicle (if connected through OBD II cable, please pass cable through window);
4. Apply the parking brake, close all doors and turn off all external lighting;
5. Adjust the tire pressure to the recommended value;
6. Keep the vehicle in a cold state;
7. Connect a battery charger to ensure procedure is completed without interruption and to avoid battery discharge;
8. Check if the NVS camera is inside the holder and if the view is unobstructed. (the NVS camera is generally located near the grill or the front emblem of the vehicle)
9. Check if the protective window of NVS camera is damaged. If yes, please replace.

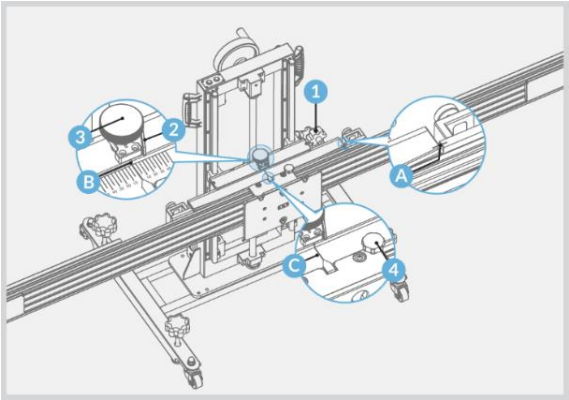
NOTE

- Camera location may vary by vehicle.
- The calibration frame must be placed as requested before this calibration function can be performed.
- Tap "**Help**" to view set-up steps or tap "**Video**" to view a demonstration. After completing the set-up of the calibration frame and gathering the recommended tools, tap "**OK**" to start calibrating.
- Please refer to the Autel Calibration Tools User Manual to complete auxiliary tool placement.

3.5.4 Calibration Toolset Placement

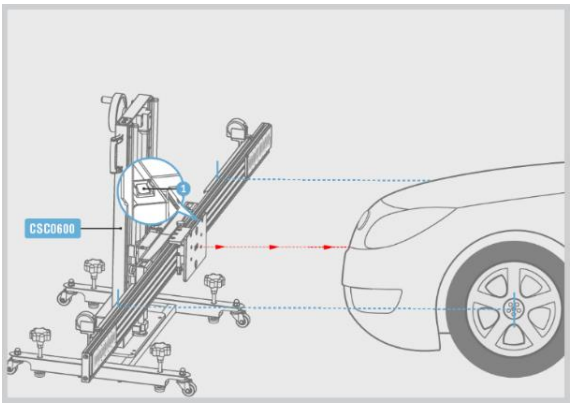
➢ **To mount the reflector and place the calibration frame**

1. Move the calibration frame to the level ground in front of the vehicle. If the pattern board has been installed onto the crossbar, remove it first.
2. Rotate the fine tuning bolt (Pos. 1) to align the marked lines in position A.
3. Loosen the handle (Pos. 2) and then rotate the fine tuning bolt (Pos. 3) until the scale value in position B is 0. Tighten the handle (Pos. 2) to secure the crossbar.
4. Align the pointer on the sliding plate with the marked line in position C. Then tighten the bolt (Pos. 4) to secure the sliding plate.



➢ **To center the laser at the front of the vehicle**

1. Ensure the front wheels point straight forward.
2. Place calibration frame AUTEL-CSC0600 directly before the front center of the vehicle. Adjust the height of the crossbar so that it is roughly level with the center of the front wheel. Then turn on the laser (Pos. 1) and aim it at the front center of the vehicle.

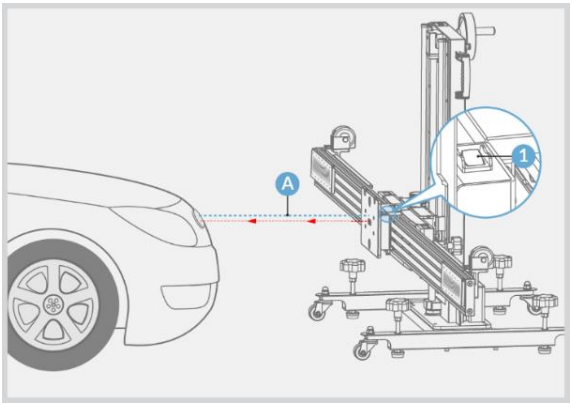


➢ **To measure the Frame-Vehicle distance**

1. Hold the handle on the calibration frame and move the frame until the (horizontal) distance between the vehicle emblem and the crossbar sliding plate is A=124cm +/- 2.3cm (value applies to Audi / Audi A7 2011 and beyond / Sportback) and the laser remains at the front center of the vehicle. Then turn off the laser (Pos. 1).
2. Rotate all the bolts on the base until they slightly touch the ground.

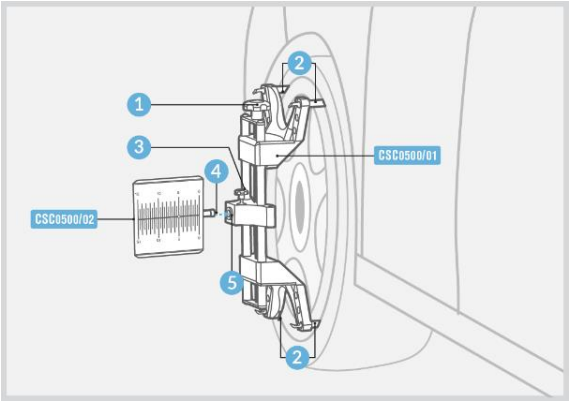
NOTE

Do not move the crossbar while adjusting distance.



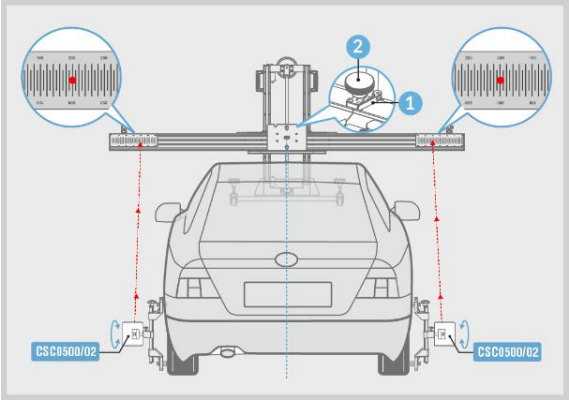
➢ **To attach the wheel clamps**

1. Check wheel clamp AUTEL-CSC0500/01 and ensure its four pawls (Pos. 2) are equal in length.
2. Attach two wheel clamps to the rear wheels respectively, and rotate the bolt (Pos. 1) clockwise until pawls (Pos. 2) are tightly secured.
3. Fully insert the connecting shaft of the laser (Pos. 4) into the clamp port (Pos. 5) and ensure the laser calibration board faces the vehicle's driving direction. Tighten the bolt (Pos. 3) to secure the laser.

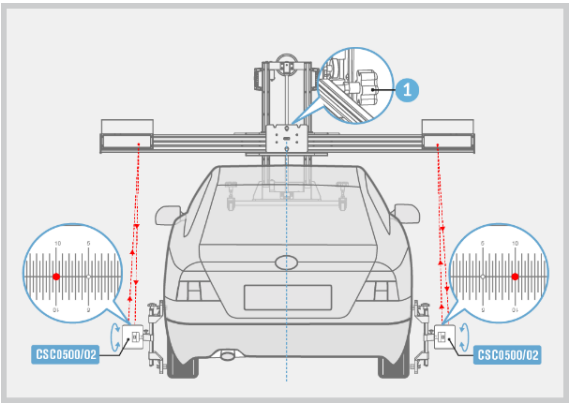


➢ **To aim laser at the crossbar cover plate**

1. Turn on lasers AUTEL-CSC0500/02 attached to the rear wheels and adjust them to aim the laser at the rulers on both sides of the crossbar cover plate.
2. Loosen the handle (Pos. 1) and rotate the fine tuning bolt (Pos. 2) until the rulers on both sides have the same value lit by the laser. Then tighten the handle (Pos. 1) to secure the crossbar.



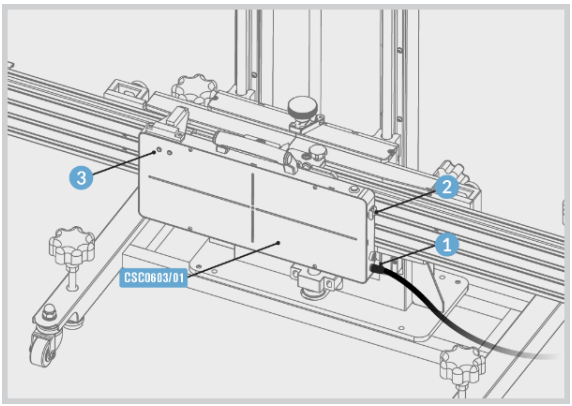
3. Unfold the cover plates on both ends of the crossbar.
4. Adjust lasers AUTEL-CSC0500/02 attached to the rear wheels so that the lasers can shine anywhere on the crossbar reflectors.
5. Adjust the lasers attached to the rear wheels to control the up/down movement of the reflected lasers. Finally, the reflected laser (on at least one side) must be located at the scale board of the laser coordinate board.
6. Rotate the fine tuning bolt (Pos. 1) to control the left/right movement of the reflected laser.
7. Following the above adjustments, the scale values lit by the reflected lasers on both sides must be the same.
8. Fold the cover plates on both ends of the crossbar.



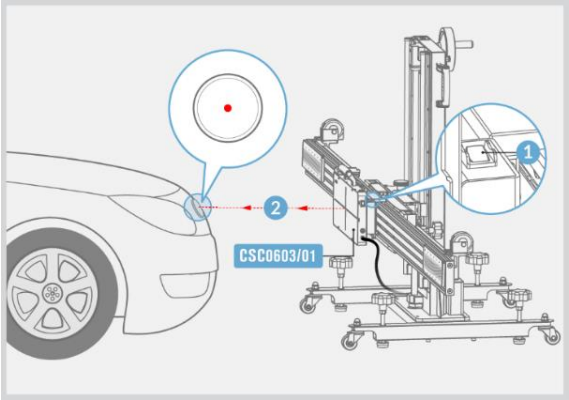
9. Calibration frame has been properly placed. Turn off the lasers attached to the wheel clamps on both rear wheels and recover the wheel clamps.
10. Tap **Exit** to return to the calibration preparation screen and tap **OK** to start the calibration function.
11. Check if the calibration frame has been properly placed. If it has been properly placed, tap **OK** to continue the calibration function.
12. Do not perform the calibration function until the calibration frame is placed properly. Tap **Cancel** to return to the calibration preparation screen, where the steps for the placement of the calibration frame are demonstrated.

➢ **To install NV calibrator**

1. Install NV calibrator AUTEL-CSC0603/01 onto the crossbar sliding plate.
2. Plug the included power cord into port (Pos. 1). Turn on power switch (Pos. 2) and red LED (Pos. 3) lights.



3. Rotate all the bolts (Pos. 1) on the base of the calibration frame to reference the spirit level (Pos. 2).
4. Turn on the laser (Pos. 1).
5. Adjust the height of the crossbar and slide NV calibrator CSC0603/01 left or right to aim the laser beam (Pos. 2) at the center of the NVS camera.



6. Slide NV calibrator AUTEL-CSC0603/01 to the center of the crossbar to aim the pointer (Pos. 1) at the marked line (Pos. 2). Then turn off the laser (Pos. 3).
7. Continue the next procedures until the calibration is successful.

4 Maintenance and Service

4.1 Maintenance Instructions

- Keep the calibration tools clean at all times.
- Do not use any abrasive, corrosive cleansers or detergent.
- Do not immerse the calibration tools in water or other fluids.
- Maintain the tools in dry conditions and keep them within normal operating temperatures.
- Do not store the tools in humid, dusty or dirty areas.
- Use only authorized battery chargers and accessories. Any malfunction or damage caused by the use of unauthorized battery charger and accessories will void the limited product warranty.
- Ensure that the battery charger does not come in contact with conductive objects.
- If the calibration tools should fail despite the care taken in manufacturing and testing procedures, repair should be carried out by an authorized after-sales service center for Autel tools.

NOTE

- The built-in Lithium-ion Polymer battery is factory replaceable only; incorrect replacement or tampering with the battery pack may cause an explosion.
- Do not use a damaged battery charger.

4.2 Service Procedures

This section introduces information for technical support, repair service, and application for replacement or optional parts.

4.2.1 Technical Support

If you have any question or problem on product operations, please contact us.

Autel China Headquarters

- **Phone:** +86 (0755) 8614-7779 (Monday-Friday, 9AM-6PM Beijing Time)

- **Email:** support@autel.com
- **Address:** Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China
- **Web:** www.autel.com

Autel North America

- **Phone:** 1-855-288-3587 (Monday-Friday, 9AM-6PM Eastern Time)
- **Email:** ussupport@autel.com
- **Address:** 36 Harbor Park Drive, Port Washington, New York, USA 11050
- **Web:** www.autel.com/us

Autel Europe

- **Phone:** +49(0)89 540299608 (Monday-Friday, 9AM-6PM Berlin Time)
- **Email:** support.eu@autel.com
- **Address:** Landsberger Str. 408, 81241 München, Germany
- **Web:** www.autel.eu

Autel APAC

Japan:

- **Phone:** +81-045-548-6282
- **Email:** support.jp@autel.com
- **Address:** 6th Floor, Ari-nadoribiru 3-7-7, Shinyokohama, Kohoku-ku, Yokohama-shi, Kanagawa-ken, 222-0033 Japan
- **Web:** www.autel.com/jp

Australia:

- **Email:** ausupport@autel.com
- **Address:** Unit 5, 25 Veronica Street, Capalaba

Autel IMEA

- **Phone:** +971 585 002709 (in UAE)
- **Email:** imea-support@autel.com
- **Address:** 906-17, Preatoni Tower (Cluster L), Jumeirah Lakes Tower, DMCC, Dubai, UAE
- **Web:** www.autel.com

Autel Latin America

Mexico:

- **Phone:** +52 33 1001 7880 (Spanish in Mexico)
- **Email:** latsupport@autel.com
- **Address:** Avenida Americas 1905, 6B, Colonia Aldrete, Guadalajara, Jalisco, Mexico

Brazil:

- **Email:** brsupport@autel.com
- **Address:** Avenida José de Souza Campos n° 900, sala 32 Nova Campinas Campinas – SP, Brazil
- **Web:** www.autel.com/br

4.2.2 Repair Service

If it is necessary to send back your device for repair, please download and fill out the repair service form from www.autel.com. The following information must be included:

- Contact name
- Return address
- Telephone number
- Product name
- Complete description of the problem
- Proof-of-purchase for warranty repairs
- Preferred method of payment for non-warranty repairs

NOTE

For non-warranty repairs, payment can be made with Visa, Master Card, or with approved credit terms.

Send the equipment to your local agent, or to the address below:

Floor 2, Caihong Keji Building, 36 Hi-tech North Six Road, Songpingshan Community, Xili Sub-district, Nanshan District, Shenzhen City, China

4.2.3 Other Services

You can purchase the accessories directly from authorized tool suppliers of Autel, or your local distributor or agent.

Your purchase order should include the following information:

- Contact information
- Product or part name
- Item description
- Purchase quantity

5 Compliance Information

FCC Compliance

This device complies with Part 15 of the FCC rules and Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Cet appareil est conforme aux CNR exempts de licence d'Industrie Canada. Son fonctionnement est soumis aux deux conditions suivantes:

1. Ce dispositif ne peut causer des interferences; et
2. Ce dispositif doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement de l'appareil.

⚠ **WARNING**

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RoHS COMPLIANCE

This device is declared to be in compliance with the European RoHS Directive 2011/65/EU.

CE COMPLIANCE

This product is declared to conform to the essential requirements of the following Directives and carries the CE mark accordingly:

EMC Directive 2014/30/EU
R&TTE Directive 1999/5/EC
Low Voltage Directive 2014/35/EU

Autel Intelligent Technology Corp., Ltd.

www.autel.com

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