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THINKTPMS T100, THINKTPMS T200, THINKTPMS T109,
THINKCAR T-Wand100, THINKCAR T-Wand200, THINKCAR T-
Wand300, THINKCAR T-Wand400, THINKTPMS T209

User Manual

TKT1

THINKCAR

Version: V1.00.001

Statement: **THINKCAR** owns the complete intellectual property rights for the software used by this product. For any reverse engineering or cracking actions against the software, THINKCAR will block the use of this product and reserve the right to pursue their legal liabilities.

Safety Precautions

To prevent personal injury or damage to vehicles or the diagnose equipment, please read this user's manual first carefully and observe the following safety precautions at a minimum whenever working on a vehicle:

- There are no user serviceable parts. Have the device serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the device is maintained. Disassembling the device will void
- **Caution:** This tool contains an internal Lithium Polymer battery. The battery can burst or explode, releasing hazardous chemicals. To reduce the risk of fire or burns, do not disassemble, crush, pierce or dispose of the battery in fire or water.
- This product is not a toy. Do not allow children to play with or near this item.
- Do not expose the device to rain or wet conditions.
- Do not place the device on any unstable surface.
- Never leave the device unattended during charging process. The device must be placed on a non-flammable surface during charging.
- Handle the device with care. If the device is dropped, check for breakage and any other conditions that may affect its operation.
- Do not operate the tool in explosive atmospheres, such as in the presence of flammable liquids, gases, or heavy dust.
- Keep the tool dry, clean, free from oil, water or grease. Use a mild detergent on a clean cloth to clean the outside of the device when necessary.
- People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
- Always perform automotive testing in a safe environment.
- Do not attempt to operate or observe the tool while driving a vehicle. Operating or observing the tool will cause driver distraction and could cause a fatal accident.
- 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: Exhaust gases are poisonous.
- Put blocks in front of the drive wheels and never leave the vehicle unattended while running tests.
- Use extreme caution when working around the ignition coil, distributor cap, ignition wires and spark plugs. These components create hazardous voltages when the engine is running.
- Put the transmission in P (for A/T) or N (for M/T) and make sure the parking brake is engaged.
- Keep a fire extinguisher suitable for gasoline/chemical/ electrical fires nearby.
- Don't connect or disconnect any test equipment while the ignition is on or the engine is running.

FCC Statement

FCC Requirement

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

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: 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.

IC Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference; and
- (2) This device must accept any interference, including interference that may cause undesired operation of the device.

The term "IC": " before the certification/registration number only signifies that the Industry Canada technical specifications were met. This product meets the applicable Industry Canada technical specifications.

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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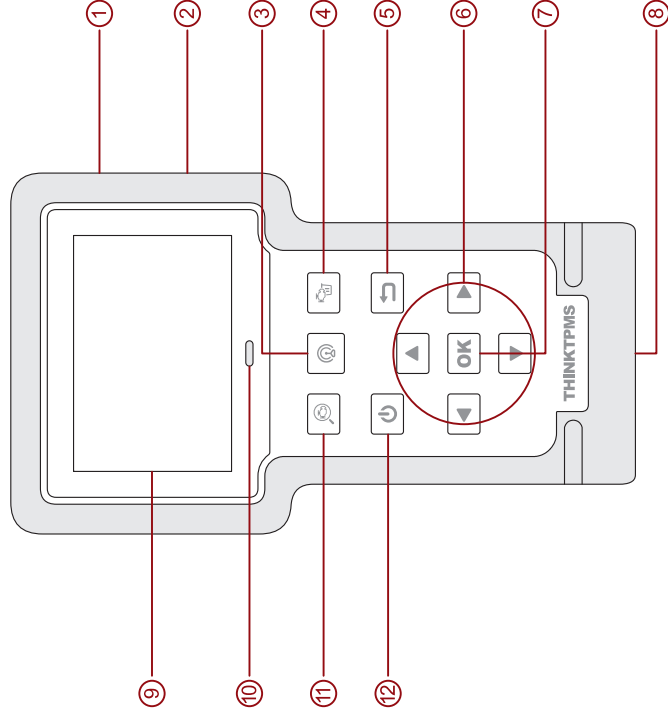
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Product Introduction

THINKTPMS T100 is a professional TPMS (Tire Pressure Monitoring System) service tool, with the ability to activate, read, relearn and program TPMS sensors. It can activate the pressure information by receiving signals via low or high radio frequency and reset TPMS module via OBD port.



No.	Name	Notes
1	Charging / Data I/O PORT	Connects the tool to computer via charging/data cable for upgrade.
2	MEMORY CARD SLOT	Insert the memory card into it to read or write the data/file stored in the memory card.
3	@ BUTTON	Press to activate vehicle sensors.
4	🔍 BUTTON	Used to quickly clear OBD fault codes.
5	↶ BUTTON	Returns to previous menu.

No.	Name	Notes
6	▲ BUTTON	- When in MENU mode, scroll UP through the menu and submenu line by line. - When in DATA VIEW mode, scroll through the screen data to the PREVIOUS page.
	► BUTTON	When in MENU/DATA VIEW mode, scroll through the screen to the PREVIOUS page.
	▼ BUTTON	- When in MENU mode, scroll DOWN through the menu and submenu line by line. - When in DATA VIEW mode, scroll through the screen data to the NEXT page.
	◀ BUTTON	When in MENU/DATA VIEW mode, scroll through the screen to the PREVIOUS page.
7	OK BUTTON	Confirms a selection (or action) from a MENU list.
8	DB-15 DIAGNOSTIC CONNECTOR	Connects the tool to the vehicle's Data Link Connector (DLC).
9	LCD SCREEN	Indicates test results.
10	CHARGING LED	Used to display charging status.
11	🔌 BUTTON	Used to quickly read OBD fault codes.
12	🔌 BUTTON	Press it for about 3 seconds to turn it on. - Screen On: Press it once to enter hibernate mode. - If the tool is not charged and there is no operation made for the preset auto power-off interval, it will automatically power off. - If the device is charging and there is no operation made for 5 minutes, it will automatically enter hibernate mode to conserve battery power. - Screen Off (hibernate): Press it once to wake it up. Press it for about 3 seconds to turn it off.

Product Parameters

Screen	3.5 inches
Resolution	320*480 pixel
Input voltage	9V~18V
Working current	≤500mA
Working Temperature	14°F~122°F (-10°C~50°C)
Storage Temperature	-4°F~140°F (-20°C~60°C)

Initial Use

Charging

1. Via AC outlet

Connect one end of the charging cable to the charging port of the tool, and other end to the power adaptor. Plug the power adaptor into a AC outlet to start charging. When charging is finished the charging complete symbol  replaces the charging symbol. Unplug the power adaptor from the AC outlet and disconnect the charging cable from the tool.

2. Via Computer

Connect one end of the charging cable to the charging port of the tool, and other end to a USB port on the computer to start charging. When charging is finished the charging complete symbol  replaces the charging symbol. Disconnect the charging cable from the tool and the computer.

3. Via OBD Diagnostic Port (Not recommended)

If the tool is properly connected to the vehicle's DLC(Data Link Connector) port, it will be charged automatically.

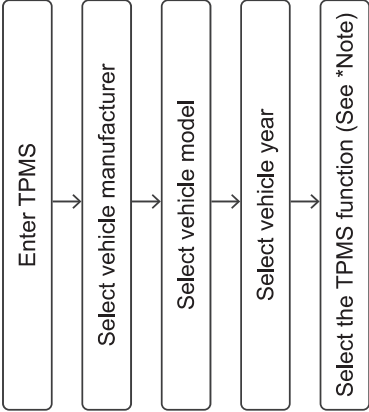
 Note: Attempting to charge the tool via OBD diagnostic port will consume vehicle's battery power. You are not recommended to charge the tool in this way except for OBD diagnosis operations.

Function Menu



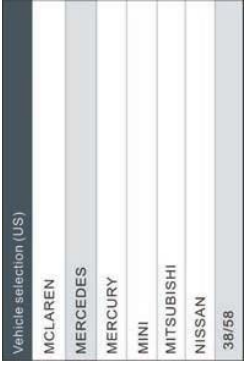
Function Menu

For initial use, please follow the flow chart below to start using it.

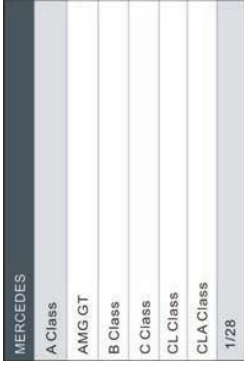


⚠ Note: For indirect TPMS vehicle, only the Relearning function is supported. For vehicle using Direct TPMS, it generally includes: Activation, Programming and Relearning. The available TPMS functions may vary for different vehicles being serviced.

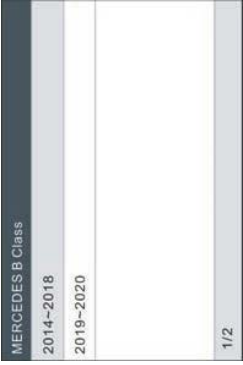
Take Mercedes Benz for example to demonstrate how to perform the TPMS functions.
1. Select  on the main menu interface and press the OK button to enter the vehicle selection interface.



2. Select B Class and press the OK button to enter the vehicle year selection interface.



3. Select 2014~2018 and press the OK button to enter the TPMS function selection interface.



4. Select 2014~2018 and press the OK button to enter the TPMS function selection interface.

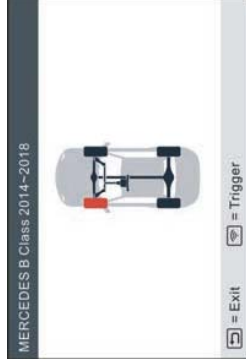


⚠ Note: For indirect TPMS vehicle, only the Learning function is supported. For vehicle using Direct TPMS, it generally includes: Activation, Programming and Relearning. The available TPMS functions may vary for different vehicles being serviced.

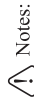
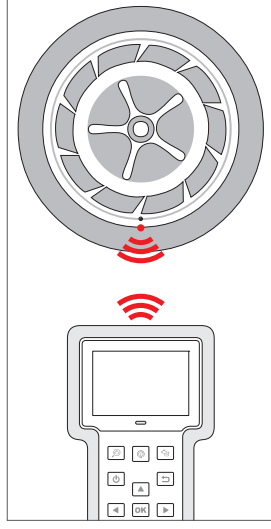
Activate Sensor

This function allows users to activate TPMS sensor to view sensor data such as sensor ID, tire pressure, tire frequency, tire temperature and battery condition.

1. Select Activate Sensor and press the **OK** button to enter the following interface.



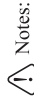
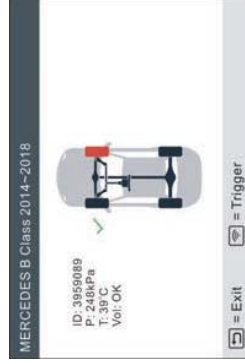
2. For universal sensors, place the tool alongside the valve stem, point toward the sensor location, and press the @ button.



Notes:

1. For early magnet-activated sensors, place the magnet over the stem and then place the tool alongside the valve stem.
2. If the TPMS sensor requires tire deflation (of the order of 10PSI), then deflate the tire and place the tool alongside the stem while pressing the button.

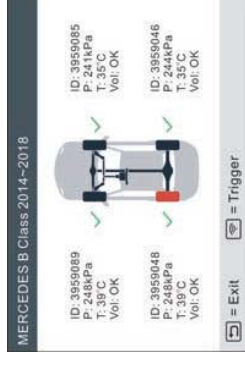
Once the sensor is successfully activated and decoded, the tool will sound a beep and the screen will display the sensor data with a tick ✓.



Notes:

1. If the sensor fails to be triggered, the X icon will appear next to the wheel position.
2. If the sensor data is abnormal, it will be displayed in red.

3. Repeat Step 2 for other vehicle sensors. After all sensors are successfully activated, the following interface will appear:



*ID: indicates the sensor ID.

*P: indicates the tire pressure.

*T: indicates the tire temperature.

*Vol: indicates the battery power level.

Program Sensor

This function allows users to program the sensor data to the THINKCAR sensor and replace faulty sensor with low battery life or one that is not functioning.

The following options are available for programming THINKCAR sensor: Auto Create, Manual Create, Copy ID by Activation and Create Multi-sensor (1-8).

Select PROGRAM SENSOR and press the **OK** button to enter the following interface.



Auto create

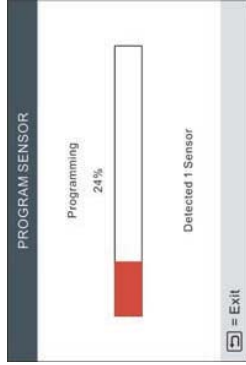
This function is designed to program the THINKCAR sensor by applying random IDs created according to the test vehicle when it is unable to obtain the original sensor ID. Select the wheel which needs to be programmed on the tool, place a THINKCAR sensor close to the TPMS antenna of the tool, and select **CREATE SENSOR** to create a new random sensor ID.



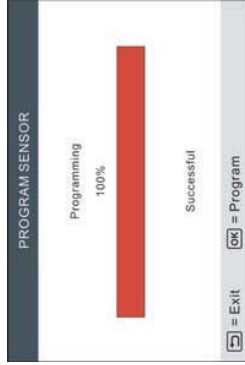
Press the **OK** button to start detecting the sensor and writing the new created sensor ID to the THINKCAR sensor.



A progress bar will appear on the screen indicating the programming process.



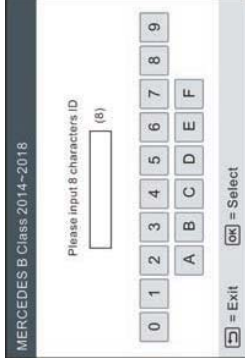
Once the sensor is successfully programmed, the following interface will appear.



 Note: If Auto Create is selected, the TPMS Relearn operation needs to be performed after programming all required THINKCAR sensor.

Manual input

This function allows users to manually enter sensor ID. Users can enter the random ID or the original sensor ID, if it is available. Select **MANUAL INPUT** to enter the following interface.



 Note: Do not enter the same ID for each sensor.

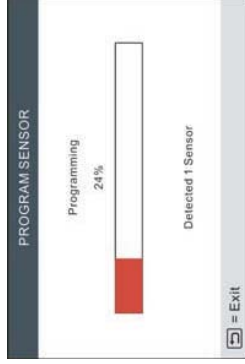
Use the on-screen virtual keypad to input a random or original (if available) sensor ID and press **OK**.



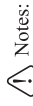
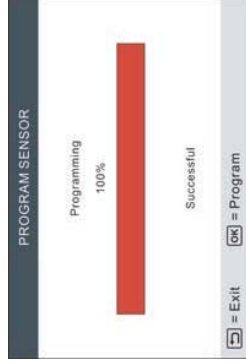
Select the wheel which needs to be programmed with the tool, place a THINKCAR sensor close to the TPMS antenna of the tool. Press the OK button to start writing the new sensor ID to the THINKCAR sensor.



A progress bar will appear on the screen indicating the programming process.



After the sensor is successfully programmed, the following interface will appear.

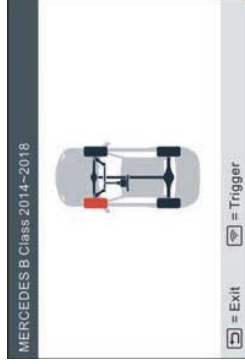


Notes:

1. If a random ID is entered, please perform the TPMS Relearn function after programming is finished.
If the original ID is entered, there is no need to perform Relearn function.
2. If a vehicle does not support relearn function, please select the Manual Input option to enter the original sensor ID manually, or trigger the original sensor at the activation interface to get its information, before programming the THINKCAR sensor.

Copy ID by activation

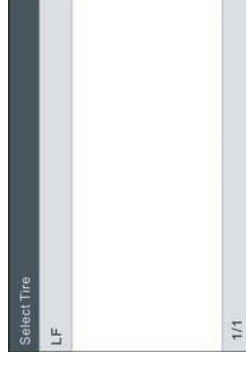
This function allows users to write in the retrieved original sensor data to the THINKCAR sensor. It is used after the original sensor is triggered.
Select **COPY ID BY ACTIVATE** and press the OK button to enter.



Select the specific wheel position and press the @ button to trigger the original sensor.
After the information is retrieved, it will be displayed on the screen.



Press the **OK** button to continue.



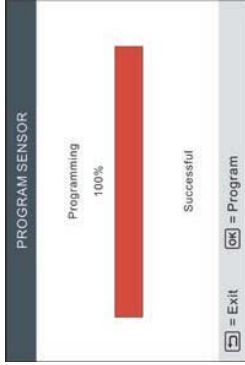
Select the specific wheel position and press the **OK** button to create a sensor ID.



Press the **OK** button to start writing the new sensor ID to the THINKCAR sensor.



After the sensor is successfully programmed, the following interface will appear.



Press the **→** button to return to the previous interface. Press the **OK** button to continue programming other sensors.

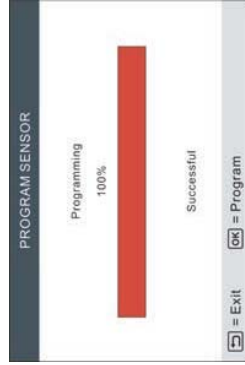
Program multi-sensor

This function allows users to program multiple sensors simultaneously. Up to 8 sensors can be programmed at the same time.

Stack up multiple sensors, select **CREATE MULTI-SENSOR (1-8)** to start programming.



After the sensors were successfully programmed, the following interface will appear.



Press the **→** button to return to the previous interface. Press the **OK** button to continue programming other sensors.

Relearn Sensor

This function allows you to check and view the detailed TPMS sensor relearn procedures.

Relearn operation applies only when the newly programmed sensor IDs are different from the original sensor IDs stored in the vehicle's ECU. Relearn is used to write the newly programmed sensor IDs into the vehicle's ECU for sensor recognition.



Maintenance Service (Only for THINKTPMS T200)

Oil Reset

The lightening of the car maintenance light indicates that the vehicle needs maintenance. Reset the mileage or driving time to zero after the maintenance, so the maintenance light will go out and the system will start a new maintenance cycle.

Elec. Throttle Adaption

Elec. Throttle Adaption is to utilize the car decoder to initialize the throttle actuator so that the learning value of the ECU returns to the initial state. By doing these, the movement of the throttle (or idle motor) can be more accurately controlled, thus adjust the intake volume. Situations when throttle matching is needed:

- a) After replacing the electronic control unit, the relevant characteristics of the throttle operation have not been stored in the electronic control unit.
- b) After the electric control unit is powered off, the memory of the electric control unit's memory is lost.
- c) After replacing the throttle assembly, you need to match the throttle.
- d) After replacing or disassembling the intake port, the controlling of the idle speed by the coordination between the electronic control unit and the throttle body is affected.
- e) Although the characteristics of the idle throttle potentiometer have not changed, the intake volume has changed and the idle control characteristics have changed at the same throttle openings.

ABS Bleeding

When the ABS contains air, the ABS bleeding function must be performed to bleed the brake system to restore ABS brake sensitivity. If the ABS computer, ABS pump, brake master cylinder, brake cylinder, brake line, or brake fluid is replaced, the ABS bleeding function must be performed to bleed the ABS.

DPF Regeneration

DPF regeneration is used to clear PM (Particulate Matter) from the DPF filter through continuous combustion oxidation mode (such as high temperature heating combustion, fuel additive or catalyst reduce PM ignition combustion) to stabilize the filter performance.

DPF regeneration may be performed in the following cases:

- The exhaust back pressure sensor is replaced.
- The PM trap is removed or replaced.
- The fuel additive nozzle is removed or replaced.
- The catalytic oxidizer is removed or replaced.
- The DPF regeneration MIL is on and maintenance is performed.
- The DPF regeneration control module is replaced.

Break-pad Reset

If the brake pad wears the brake pad sense line, the brake pad sense line sends a signal sense line to the on-board computer to replace the brake pad. After replacing the brake pad, you must reset the brake pad. Otherwise, the car alarms.

Reset must be performed in the following cases:

- The brake pad and brake pad wear sensor are replaced.
- The brake pad indicator lamp is on.
- The brake pad sensor circuit is short, which is recovered.
- The servo motor is replaced

Injector Coding

Write injector actual code or rewrite code in the ECU to the injector code of the corresponding cylinder so as to more accurately control or correct cylinder injection quantity. After the ECU or injector is replaced, injector code of each cylinder must be confirmed or re-coded so that the cylinder can better identify injectors to accurately control fuel injection.

Battery Matching

This function enables you to perform a resetting operation on the monitoring unit of vehicle battery, in which the original low battery fault information will be cleared and battery matching will be done. Battery matching must be performed in the following cases:

- Main battery is replaced. Battery matching must be performed to clear original low battery information and prevent the related control module from detecting false information. If the related control module detects false information, it will invalidate some electric auxiliary functions, such as automatic start & stop function, sunroof without one-key trigger function, power window without automatic function.
- Battery monitoring sensor. Battery matching is performed to re-match the control module and monitoring sensor to detect battery power usage more accurately, which can avoid an error message displaying on the instrument panel.

TPMS Reset

After the tire pressure MIL turns on and maintenance is performed, the tire pressure resetting function must be performed to reset tire pressure and turn off the tire pressure MIL. Tire pressure resetting must be performed after maintenance is performed in the following cases: tire pressure is too low, tire leaks, tire pressure monitoring device is replaced or installed, tire is replaced, tire pressure sensor is damaged, and tire is replaced for the car with tire pressure monitoring function.

Steering Angle Reset

To reset the steering angle, first find the relative zero point position for the car to drive in straight line. Taking this position as reference, the ECU can calculate the accurate angle for left and right steering. After replacing the steering angle position sensor, replacing steering mechanical parts (such as steering gearbox, steering column, end tie rod, steering knuckle), performing four-wheel alignment, or recovering car body, you must reset the steering angle.

IMMO Service

To prevent the car being used by unauthorized keys, the anti-theft key matching function must be performed so that the immobilizer control system on the car identifies and authorizes remote control keys to normally use the car. When the ignition switch key, ignition switch, combined instrument panel, ECU, BCM, or remote control battery is replaced, anti-theft key matching must be performed.

Warranty Terms

This warranty applies only to users and distributors who purchase THINKCAR TECH INC products through normal procedures. Within one year from the date of delivery, THINKCAR TECH warrants its electronic products for damages caused by defects in materials or workmanship. Damages to the equipment or components because of abuse, unauthorized modification, use for non-designed purposes, operation in a manner not specified in the instructions, etc. are not covered by this warranty. The compensation for dashboard damage caused by the defect of this equipment is limited to repair or replacement. THINKCAR TECH does not bear any indirect and incidental losses. THINKCAR TECH will judge the nature of the equipment damage according to its prescribed inspection methods. No agents, employees or business representatives of THINKCAR TECH are authorized to make any confirmation, notice or promise related to THINKCAR TECH products.

Service Line: 1-833-692-2766

Customer Service Email: support@thinkcarus.com

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