# **Automotive Diagnostic Tool TK900**

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 its legal liabilities.

#### **FCC Statement**

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 d evice, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reason able protection against harmful interference in a residential installation. This equipment ge nerates uses and can radiate radio frequency energy and, if not installed and used in acc ordance with the instructions, may cause harmful interference to radio communications. H owever, 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 receive r is connected
- -- Consult the dealer or an experienced radio/TV technician for help

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.

#### **SAR Information Statement**

Your Automotive Diagnostic Tool is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Federal Communications Commission of the U.S. Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for Automotive Diagnostic Tool employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the FCC is 1.6 W/kg. \* Tests for SAR are conducted with the Automotive Diagnostic Tool transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the Automotive Diagnostic Tool while operating can be well below the maximum value. This is because the Automotive Diagnostic Tool is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a Automotive Diagnostic Tool model is available for sale to the public, it must be tested and certified to the FCC that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions

and locations (e.g., at the ear and worn on the body) as required by the FCC for each model. The highest SAR value for this Automotive Diagnostic Tool when worn on the body, as described in this user guide, is 0.71 W/Kg (Body-worn measurements differ among Automotive Diagnostic Tool models, depending upon available accessories and FCC requirements). While there may be differences between the SAR levels of various Automotive Diagnostic Tool and at various positions, they all meet the government requirement for safe exposure. The FCC has granted an Equipment Authorization for this Automotive Diagnostic Tool with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines. SAR information on this Automotive Diagnostic Tool is on file with the FCC and can be found under the Display Grant section of http://www.fcc.gov/oet/fccid after searching on

FCC ID: 2AUARTOOLT900 Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at http://www.wow-com.com. \* In the United States and Canada, the SAR limit for Automotive Diagnostic Tool used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements. The SAR test distance is 0mm.

#### **IC Statement**

This device complies with Industry Canada's licenceexempt RSSs. 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 undesi red operation of the device.

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

#### **IC WARNING**

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

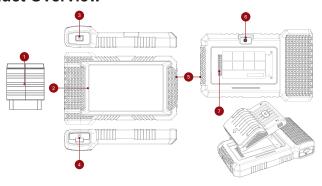
### **SAR Information Statement**

Your Automotive Diagnostic Tool is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Innovation, Science and Economic Development Canada of the Canada Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for Automotive Diagnostic Tool employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the ISED is 1.6 W/kg. \* Tests for SAR are conducted with the Automotive Diagnostic Tool transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the Automotive Diagnostic Tool while operating can be well below the maximum value. This is because the Automotive Diagnostic Tool is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a Automotive Diagnostic Tool is available for sale to the public, it must be tested and certified to the ISED that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the ISED for each model. The highest SAR value for this Automotive Diagnostic Tool when worn on the body, as described in this user guide, is 0.71 W/Kg

(Body-worn measurements differ among Automotive Diagnostic Tool, depending upon available accessories and ISED requirements). While there may be differences between the SAR levels of various Automotive Diagnostic Tool and at various positions, they all meet the government requirement for safe exposure. The ISED has granted an Equipment Authorization for this Automotive Diagnostic Tool with all reported SAR levels evaluated as in compliance with the ISED RF exposure guidelines. SAR information on this Automotive Diagnostic Tool is on file with the FCC and can be found under the Display Grant section of https://sms-sgs.ic.gc.ca/ after searching on IC: 26415-TOOLT900 Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at http://www.wow-com.com. \* In the United States and Canada, the SAR limit for Automotive Diagnostic Tool used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

The SAR test distance is 0mm.

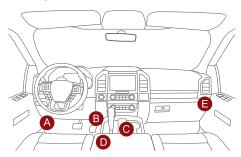
## 1. Product Overview



- 1. THINKDIAG Mini (Bluetooth Diagnostic Dongle)
- 2. 7 inches (1280\*720)
- 3. On/Off key (click to close the screen)
- 4. TYPE-C charging port & development system debugging USB port
- 5. TPMS Antenna Location
- Support 1300W pixel camera for taking pictures
  Installation position for the module (printer installation diagram)

*Tip: The other 5 modules are installed in the same way.* 

## 2. Connect the THINKTOOL T900 with your vehicle through the OBDII port



Usually, the OBD port is located under the dashboard, above the pedal on the driver's side. The five locations shown in the picture are common OBDII port locations.

## 3. Turn on the THINKTOOL T900



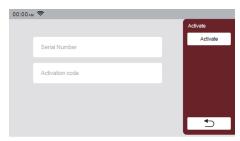
After connecting with the car, the screen will display as shown in the picture.

## 4. Connect Wi-Fi



The system will automatically search all available Wi-Fi networks and you can choose the "Wi-Fi" needed. Notice the "Wi-Fi" must be set before use.

## 5. Activate diagnostic Dongle



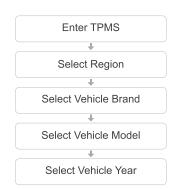
Please enter the SN number and activation code of the connector and click Activate. *Tip: The activation code can be found on the password letter.* 

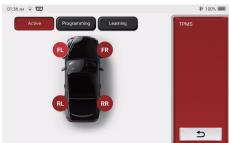
## 6. Functions Description



The THINKTOOL T900 main unit has the following 9 functions:

- **6.1 Scan:** This module has Autosearch (automatic scanning of car models vin), manualcar models, Demo (demonstration of the diagnosis process), History (diagnosisrecords), OBD&IM (9 emission-related module diagnosis)
- **6.2 OBD:** Support OBD II and EOBD protocols after 1996, diagnosing all problems.
- **6.3 TPMS:** For initial use, please follow the steps below to enter the TPMS function menu.





#### 6.3.1 Activate Sensor

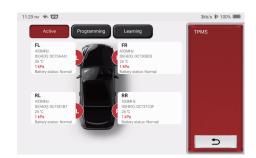
This function allows users to activate TPMS sensor to view sensor data such as sensor ID, tire pressure, tire frequency, tire temperature and battery condition. For universal sensors, place the tool alongside the valve stem, point toward the sensor location, and press the OK button. Once the sensor is successfully activated and decoded, THINKTOOL T900 will vocally announce that the sensor is activated and the screen will display the sensor data.

#### Notes:

 ${\it I. For early magnet-activated sensors, place the magnet over the stem and then place the THINKTOOL~1900~alongside~the~valve~stem.}$ 

II. If the TPMS sensor requires tire deflation (of the order of 10PSI), then deflate the tire and place the THINKTOOL T900 alongside the stem while pressing the OK button.

Repeat this step to check other vehicle sensors. After all sensors are successfully activated, the following interface will appear.



### 6.3.2 Program Sensor

This function allows users to program sensor data to THINKCAR sensors to replace faulty sensors that are with low battery capacity or not functioning. The following options are available for programming THINKCAR sensors: Automatically Create (Auto), Manually Create (Manual) and Copy ID by Activation (Replication).

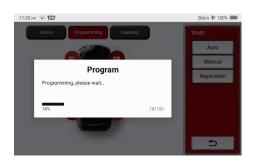
Auto: This function is designed to program THINKCAR sensors by applying random IDs created according to the test vehicle when it is unable to obtain the original sensor IDs. Select the wheel which needs to be programmed, place a THINKCAR sensor close to the TPMS antenna of the tool, and select "Auto"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

Manual: This function allows users to manually input sensor ID. Users can input a random ID or the original sensor ID if it is available.

Replication: This function allows users to write in the retrieved original sensor data to the THINKCAR sensor. It is used after the original sensor is activated.

#### Programming steps:

- a. Place a THINKCAR sensor close to the TPMS antenna of the tool
- b. Select the wheel (FL, FR, RL, RR) that the sensor is to be installed in
- c. Select the programming method (Auto, Manual, Replication)
- d. Click "Programming"



The programming process normally takes less than 1 minute, and it vocally announces the programming result, with sensor data displayed on the screen after it completes.

#### 6.3.3 Relearn Sensor

This function allows users 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.



**6.4 Reset:** Supports the most common multiple maintenance and reset functions, it involves in 28 reset functions, there are shown as follows: Maintenance Light Reset (OIL); Steering Angle Reset (SAS); Battery Matching (BMS); ABS Exhaust (ABS); Throttle Matching (ETS); Brake Pad Reset (EPB); DPF Regeneration (DPF); Antitheft Matching (AFS); Injector Coding (INJEC); Tire Pressure Reset (TPMS); Suspensio Level Calibration (SUS); Headlight Matching (AFS); Gearbox Matching(Gearbox); Sunroof Initialization (SUN); EGR Adaption (EGR); Gear Learning (Gear); ODO Reset (ODO); Airbag Reset

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(Airbag); Transport Mode (Transport); A/F Reset (A/F); Stop/Start Reset (Stop/Start); NOx Sensor Reset (NOx); AdBlue Reset (Diesel Engine Exhaust Gas Filter) (AdBlue); Seat Calibration (SeatS); Coolant Bleeding (Coolant); Tyre Reset (Tyre); Windows Calibration(Windows); Language Settings (Language).

- **6.5 ThinkStore:** Display related products, please contact the dealer if necessary.
- **6.6 ThinkModule:** It involves 7 functional modules shown as follows.
- · THINKPRINTER -- Thermal printer for diagnostic reports. (with professional THINKPRINTER thermal printing paper)
- THINKWORKLIGHT-- High Brightness LED Light.
- · THINKTOOL video oscilloscope-- HD video oscilloscope module.
- · THINKTOOL battery tester-- battery tester module.
- · THINKTOOL ScopeBox-- oscilloscope module.
- · THINKTOOL thermal imager-- infrared thermal imager module.

Note: Please buy the 6 functional modules from thinkcar local retailers.

- **6.7 Repair Info:** It includes 4 items, a fault code database, a list of vehicles able to be diagnosed, videos, a learning course. The maintenance technician can quickly refer to the explanation of the fault codes, and understand all the vehicles that can be diagnosed through the tool. The videos contain equipment usage, maintenance and diagnosis guides. The learning course demonstrates how tools are operated. These four functions help technicians quickly grasp the equipment use and improve diagnostic efficiently.
- **6.8 ThinkFile:** It is used to record and establish the files of the diagnosed vehicles. The files are created based on the vehicle VIN and check time, including all diagnostic-related data such as diagnostic reports, data stream records and screenshots.
- **6.9 Setting:** Common system settings can be made here to modify and add information.

## 7. Settings

**THINKCAR** 



You can do some basic set up on this page. Include Wi-Fi, screen brightness, language, time zone, and so on.

- Feedback: You can feedback the diagnostic software/app bugs to us for analysis and improvements.
- **Update:** This module allows you to update the diagnostic software & App and set up frequently used software.
- · Screenshots: Turn on this switch to take a screen capture.
- · Screen floating window: Turn on this switch to record the screen operation video.
- · Network: Set the connectable Wi-Fi network.
- · Firmware fix: Used to update the firmware.
- Language: Select the tool language from the languages displayed on the interface.
- **Time zone:** Choose the time zone of the current location, then the system will automatically configure the time according to the time zone you chose.

## 8. FAQ

Here we list some common questions and answers related to this tool.

- Q: Why does it have no responses when connected to a vehicle?
- A: Check whether the connection with the vehicle diagnostic interface is normal, whether the ignition switch is on, and whether the tool supports the vehicle.
- Q: Why does the system stop while reading the data stream?
- A: This may be caused by loose diagnostic connection. Please unplug the connector and reconnect it firmly.
- Q: Communication error with vehicle ECU?
- A: Please confirm:
  - 1. Whether diagnostic connector is correctly connected.
  - 2. Whether ignition switch is ON.
  - 3. If all checks are normal, please send vehicle year, make, model and VIN number to us by Feedback function.
- Q: Why does the screen flash when the engine ignition starts?
- A: It is normal and caused by electromagnetic interference.
- Q: How to upgrade the system software?
- A: 1. Start the tool and ensure a stable Internet connection.
  - 2. Go to "Settings" -> "App Update", click "OTA" and then click "check version" to enter the system upgrade interface.
  - Complete the process by following the instructions on the screen step by step. It may take a few minutes. After successfully completing the upgrade, the tool will automatically restart and enter the main interface.

## 9. Warranty Terms

**THINKCAR** 

This warranty applies only to users and distributors who purchase THINKTOOL T900 products through normal procedures. Provide free warranty within one year. THINKCAR TECH warrants its electronic products for damages caused by defects in materials or workmanship. Damages to the equipment or components caused by abusing, unauthorized modification, using for non-designed purposes, operation ina 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.

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Customer Service Email: support@mythinkcar.com

Official Website: www.mythinkcar.com

Products tutorial, videos, FAQ and coverage list are available on Thinkcar official website.

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