

PRODUCT RND PLANNING

TG-510 TIRE GAUGE/THRED DEPTH WITH BLUETOOTH

A: FUNCTION

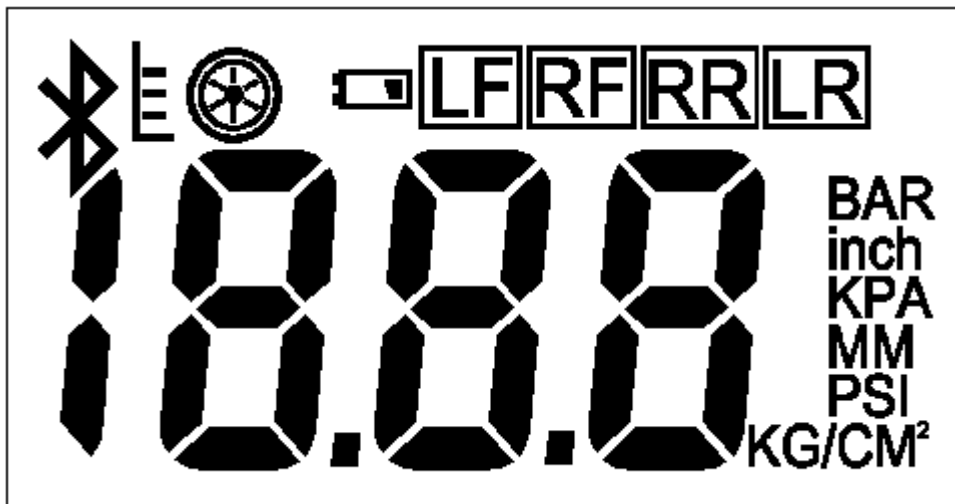
- 1: Blue Tooth 4.0 equipment
- 2: Tire Pressure Gauge, and conversion setting.
- 3: Tread Depth Measurement, and conversion setting.
- 4: 4 tires ,and conversion setting.
- 5: LCD white backlight remind function
- 6: LED flashlight lighting function
- 7: Low Battery Indication function
- 8: Auto off
- 9: User thread zero correction(additional functions)

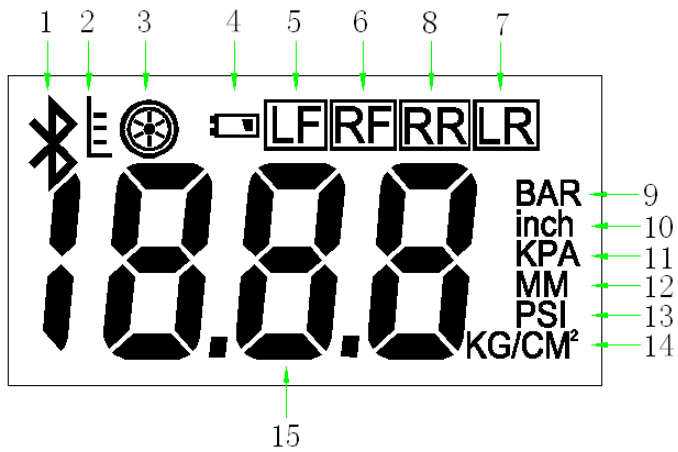
B: Measurement Range and Accuracy

- 1: Tire Pressure Measurement Range: 3PSI-150PSI
- 2: Tire Pressure Measurement Accuracy: ± 1 PSI
- 3: Tire Gauge Unit: PSI、KPA、BAR、KG/CM²
- 4: Tread Depth Measurement Range: 0 mm—25mm
- 5: Tread Depth Accuracy: ± 2 mm
- 6: Tread Depth Unit: MM, Inch
- 7: Compatible for Blue Tooth 4.0
- 8: Operation Environment Temperature Range: 0°C—50°C
- 9: Storage Temperature Range: -10°C—60°C

C: LCD

Size: 13.5*25.8mm(By the structure determination)





D: LCD Content

- 1: Blue Tooth Icon
- 2: Tread Depth Icon
- 3: Tire Pressure Icon
- 4: Low Battery Icon
- 5: Left Front Tire Icon
- 6: Right Front Tire Icon
- 7: Left Rear Tire Icon
- 8: Right Rear Tire Icon
- 9: Tire Pressure BAR Unit Icon
- 10: Tread Depth INCH Unit Icon
- 11: Tire Pressure KPA Unit Icon
- 12: Tread Depth MM Unit Icon
- 13: Tire Pressure PSI Unit Icon
- 14: Tire Pressure KG/CM² Unit Icon
- 15: Tire Pressure/Thread Depth Measuring Data

E: Buttons

- 1: key
Tire Pressure / Tread measurement mode conversion key; long press for more than 3 seconds is shutdown button;
Confirmation Key during setting process.
- 2: key:
Flashlight On/Off Key.
- 3: key:
Tire selection buttons; Press 3 seconds or more is unit setting button.

F: Operating Guide



- 1: On/Off
When power off, press button once, turn on the product; button more than 3s, the product automatically shut down.
When power on, LCD full display for one second, When turned on, after 90 seconds if no operation is automatically forced shutdown, enter a low-power, to protect the battery saving.

- 2: Bluetooth coding


When power on, the product automatically to code for Bluetooth connectivity, Bluetooth icon flashing prompt; if not connect successfully, no Bluetooth icon is displayed; if the connection is successful, the Bluetooth icon lights long.



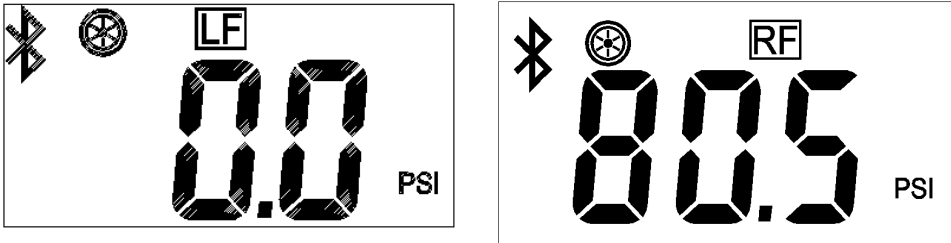
3: Tire / Tread conversion

When power on, press  once, automatically convert between tire pressure measurement mode or tread measurement mode  while the corresponding icon lights up.


4 Tire Pressure/Tread Measurement Operation:

A: After power on, press  key to select tire pressure measurement mode, measure them directly, LCD displays the corresponding tire pressure value and locks the reading after measuring successful.

B: If a Bluetooth connection is successful, it automatically uploads data in 2 seconds. Then uploads data every 3 seconds if no other operations done.



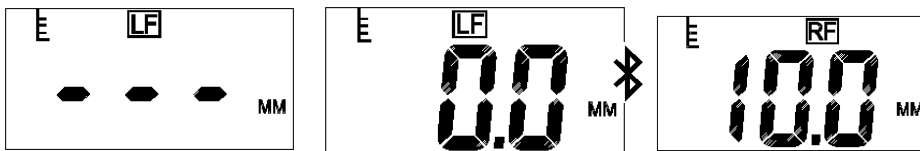
5: Tire Tread Measurement

A: After power on, press  to select tire tread measurement mode. If LCD shows"—", please move the slider to 0mm to unlock, then start tire tread measuring.

B: Under tire pressure tread measurement, LCD shows the corresponding tire tread depth directly. Display no change after 2 seconds means measurement succeed, reading locks for convenient view. To take another measurement, please move the slider to 0mm for unlocking and measuring again.

C: If a Bluetooth connection is successful, it automatically uploads data in 2 seconds. Then uploads data every 3 seconds if no other operations done.





D: Remark: To avoid moving the slider accidentally and data sent faulty. Unlock function is added.






6: Tire Selection

When power on, press  key for  time, the measurement converts automatically in left front tire the right front tire the left rear tire ,the right rear tire on after another, the corresponding icon lights up.

7: Measuring unit conversion



A: When power on, press  key 3 seconds above, the product automatically set the units under tire pressure measurement mode .When one of the  unit icons blinks, press  once, pops out in order, : **BAR** **PSI** **KPA** **KG/CM²** ed,

B: Under Tire Depth Tread Mode , one of the two unit icons blinks, press  once  pop out in order;

C: **MM**; **in**  to set the unit you need 

D: Remark: The initial units are set PSI and MM.

8: Flashlight On/Off


When power on, press the  key, LED flashlight is on for lighting. Press  again, LED is Off. Flashlight shuts off automatically after 60 seconds for low-power, battery saving..

9: Backlight LED





When power on, LCD backlight will turn on automatically; or when an operation, LCD backlight turns on

automatically as well. If no operation in 8 seconds, backlight turns off into the low-power, to protect the battery saving automatically.

10: Low Battery Indication:

When the product is in low power, low power icon  long lights, please replace the battery.

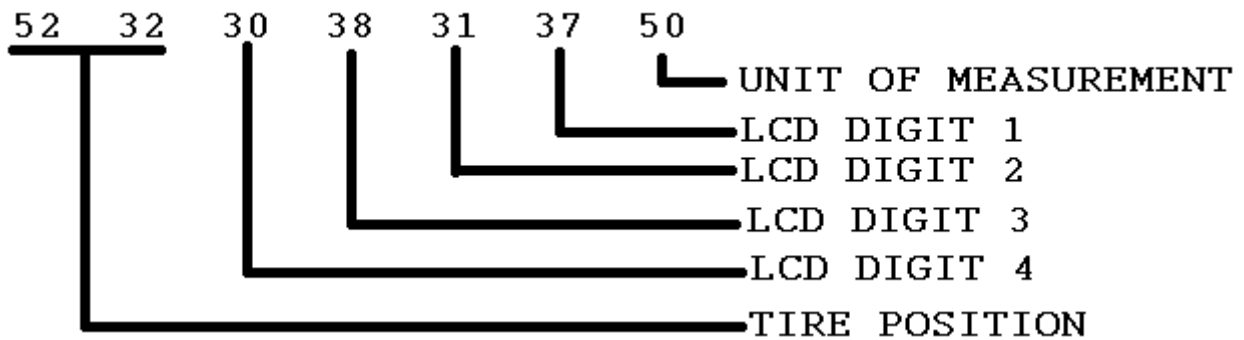
11: Tire Depth Tread Zero Calibration

The long-term use, all mechanical fatigue or other reasons, it is possible to cause measured tread depth of non return to zero, This function is for users self correction: Shutdown, long press the  button for more than 5 seconds, LCD 0.0 flicker,  ing products measured tread rod on a platform surface measured tread depth (plane, normal should be a value of 0) and after operation OK, please press the  button to confirm. Automatically save exit after confirmation 

Bluetooth Data Structure

After a measurement is made data will be sent via Bluetooth in the correct UUID below. After 3 seconds the measurement will be sent again to ensure the app got the data.

1. The data can be picked up by looking up the following UUID:
 - a. a32bdfa7-9952-4e54-8d5b-44b7be5fba5
2. The data will be only 7 Bytes in ASCII format, and is broken down as follow:



3. Unit of measurement:
 - a. BAR byte 1 shows as 42 hex for tire pressure measurement
 - b. Inch byte 1 shows as 49 hex for thread depth measurement
 - c. KPA byte 1 shows as 4B hex for pressure measurement
 - d. mm byte 1 shows as 4D hex for thread depth measurement
 - e. PSI byte 1 shows as 50 hex for tire pressure measurement
 - f. Kg/cm2 byte 1 shows as 6B hex for tire pressure measurement
4. LCD Digit 1, 2, 3, 4 shows on Byte 2, 3, 4, 5
 - a. Example above 30, 38, 31, and 37 is shows in the Tire gauge LCD as 8 1 7, this is the measured pressure. 81.7 PSI, the 30 ASCII represents a 0 and will not display if is 0.
5. Tire position are LF, RF, RR, LR
 - a. LF: Left Front shows as 4C 46 ASCII
 - b. RF: Right Front shows as 52 46 ASCII
 - c. RR: Right Rear shows as 52 52 ASCII
 - d. LR: Left Rear shows as 4C 52 ASCII

FCC Statement

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.

(2) This device must accept any interference received, including interference that may cause undesired operation.

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

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.

RF warning statement:

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter