ATCP
Engenharia Física

USER GUIDE

TurboTester ®

High speed tachometer

1. INTRODUCTION

This user guide contains important and necessary information for the proper use and maintenance of the instrument TurboTester®.

⚠ **WARNING!**

Improper use of the instrument can cause damage and erroneous results. Please, read it carefully before start the equipment use.

The ATCP products are designed and manufactured to provide long life and optimum performance during use.

2. APLICATIONS

The **TurboTester®** is a high-tech instrument developed for test and quality control of dental high speed hand pieces and ultrasonic scalers.

3. IMPORTANT INFORMATION

- Users of cardiac pacemaker should not put the TurboTester® instrument in the shirt pocket.

- Do not use the instrument in places with excessive humidity and dust.

⚠ � **WARNING!**

The instrument uses a neodymium magnet inside and generates magnetic fields. Do not place the instrument near cardiac pacemakers or similar devices.

4. FUNCTIONS

(1) POWER
This button turns the instrument on and off and select between frequency and rpm metering.

(2) Decimal point
This point corresponds to the decimal point or comma.

(3) Display
LCD display with 4 digits.

(4) Case
Case top part.

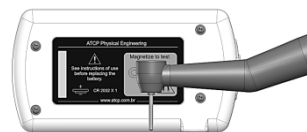**(5) Sensor**
Region which sense the device under test.

(6) Screws
It can be removed for battery replacement.

(7) Magnetic region
Magnet place (used to magnetize the handpiece rotor).

(8) Serial number
Serial number of the instrument used for traceability and technical support.

(9) Case
Case bottom part.

5. ISNTRUMENT USE

a) Turning on
Press the **POWER (1)** button shortly and select the function required.

Note: In the signal absence, the display will inform "00.00" or "000.0".

b) Performing a measurement
- Magnetize the hand piece.
- Turn on the TurboTester® and move it close to the piece under test.
- Take note of the value reported in the display.

Magnetize the handpiece (it should not be rotating)

Select RPM or Hz and get the handpiece or ultrasonic insert close to the sensor.

c) Turning off the instrument
Press the **POWER (1)** button shortly.

d) Auto-shutdown
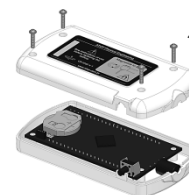The instrument automatically turns off after 3 minutes in idle.

6. BATERY

The instrument operates with an internal lithium battery model CR2032 (3V). The display will show the message "Lo b" (see image below) when the battery power level becomes low.
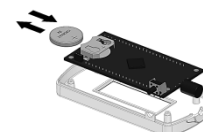

To replace the battery, proceed as follows:
- Turn off the instrument.
- Using a small Phillips screwdriver, remove the four screws (6) located on the rear of the instrument and then remove the case bottom (9) as shown in the following figure.
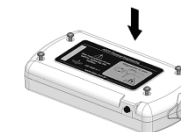

- Carefully remove the electronics of the instrument and push the battery out of the circuit.

- Insert the new battery in the housing observing the polarity.

- Replace the electronic circuit ensuring that it is perfectly embedded in the four positioners.

- Then attach the case bottom (9) closing the set. Insert and tighten the screws (6) until the case is completely and firmly closed.

7. WARRANTY

This instrument has 01 year warranty from the date of purchase against defects in material and manufacturing.

Factors that imply the loss of warranty:

- Inattention with regards this user guide' recommendations.

- Accidents, falls, improper operation or any other damage caused by misuse or action of natural agents.

- Modifications executed the instrument or its parts.

8. ESPECIFICATIONS

Frequency range: From 1 to 50 kHz

Resolution: 10 Hz

Dimensions: 91 x 51 x 16 mm

Weight: 50 g

Maximum distance from the device under test: > 0,1 m.

Note: The sensitivity varies with the frequency.

ATCP Engenharia Física
e-mail: ha@atcp.com.br
www.atcp.com.br