
QUICK GUIDE

TM 711 RASTHER ALIGNER



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Warranty and coverage

The warranty does not cover damage caused by accidental situations, accidents, misuse, abuse, neglect or modification of equipment or any part thereof by unauthorized persons.

The warranty does not cover damage caused by installation and/or improper operation, or attempted repair by anyone not authorized by Tecnomotor.

In no event will the liability of Tecnomotor will exceed the original cost of equipment purchased, and will not cover consequential damages, incidental or collateral.

The Tecnomotor reserves the right to inspect any equipment involved in the case of request for warranty service.

The repair or replacement decisions are made at the discretion of Tecnomotor or persons authorized by it.

The repair or replacement as provided under this warranty constitutes the sole compensation to the consumer.

The Tecnomotor not be liable for any incidental or consequential damages arising from misuse of equipment of its manufacture.

Responsibility

The data contained in this program are based on instructions from manufacturers and importers. Therefore, Tecnomotor is not responsible for the warranty regarding the accuracy, reliability and integrity of software and data, nor for damage caused by failures in these elements.

Presentation

The TM 711 - Rasther Aligner is a device designed to measure steering system angles of light and heavy vehicles. With these readings it is possible to make convergence, camber and caster adjustments on the vehicles.

The TM 711 - Rasther Aligner is composed of:

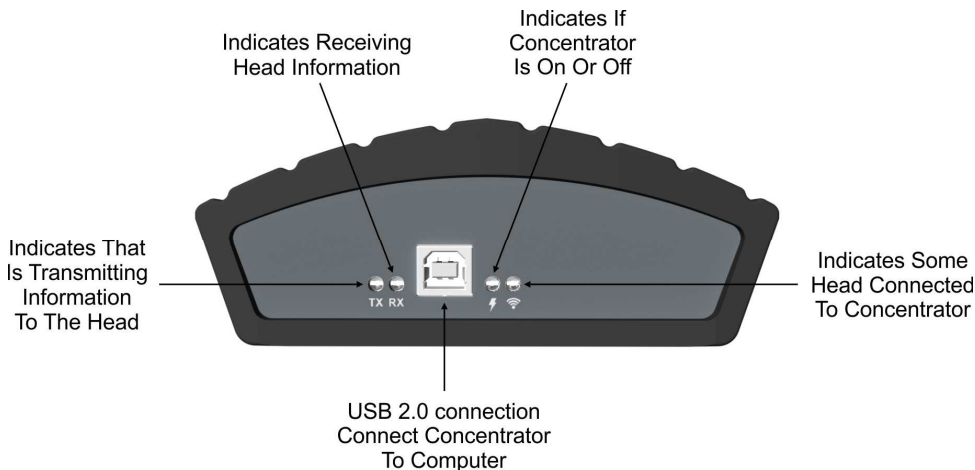
- 1 concentrator
- 1 left reading head
- 1 right reading head
- 1 hardlock
- 1 Rasther Aligner PC software
- 2 power supplies

The equipment

Concentrator

The Concentrator is the device that is connected to the computer via USB, allowing communication between the read heads and Rasther Aligner PC software.



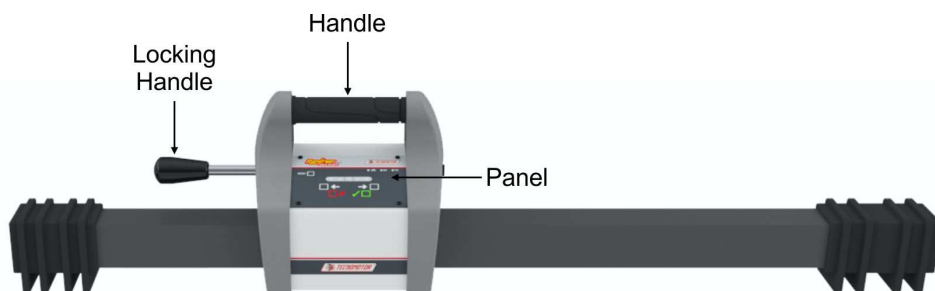


Concentrator side view

Reading heads

Responsible for reading and transmitting the readings of:

- Convergence
- Camber
- Caster



Reading Head - Front View

Note:

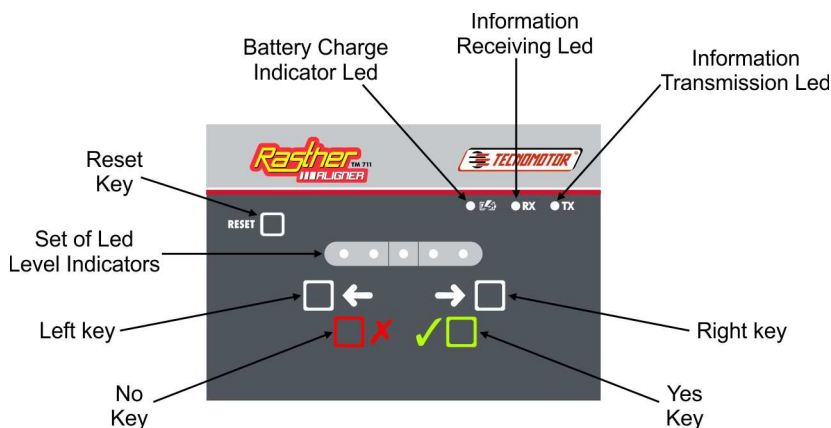
The locking handle should be used to lock the read head in the clamp during use or when in the rack.

When not in use or not in the rack, store the read head without tightening the locking handle.



Reading Head - Back View

Reading head panel



The panel has 5 buttons with the following features:

- **Reset:** Restarts the head if a problem occurs. The head remains on after the reset is triggered.
- **Yes and No:** Used to accept or decline options available in the Rasther Aligner PC software.
- **Right and Left:** Used to navigate through Rasther Aligner PC software options.

The panel also contains the following LED indicators:

- **5 Level indicator Leds:** Indicate the head leveling, the green (center) led being the correct level indicator.
- **Battery charge indicator Led:** When charging, the led turns on, at the end of the charge the led turns off. If an error occurs the led will blink.
- **Rx and Tx Leds:** indicate, respectively, the reception and sending of information in the head.

Hardlock

Hardware lock. Its purpose is to allow Rasther Aligner PC software to be accessed. Without this component it is not possible to use the Rasther Aligner PC as well as the read heads.

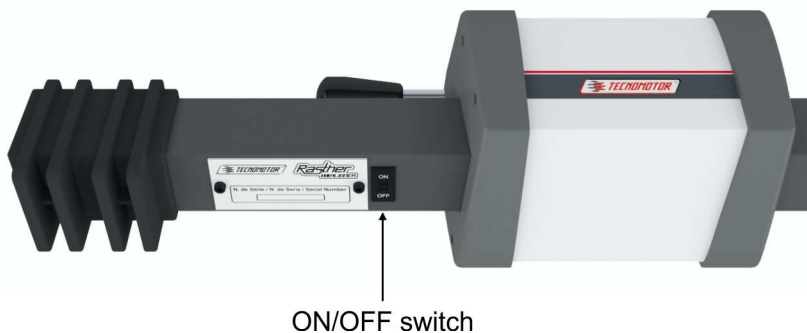


Battery Charging

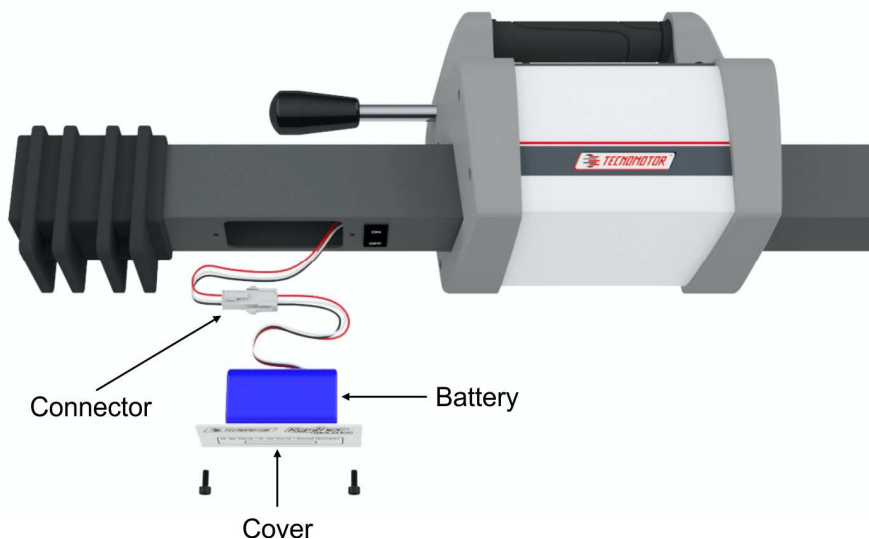
ON/OFF switch

This switch must be turned ON for the heads to operate and the battery to be charged. It can be turned OFF to protect the battery during storage when not in use for long periods.

The battery can be replaced if necessary.



The rechargeable Li-ion battery can be accessed through the cover located on the bottom of the head.

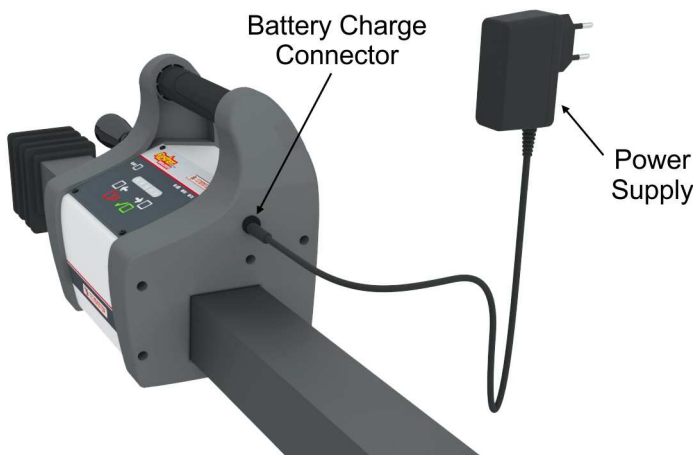


Important: The equipment is usually delivered with battery disconnected, so it is necessary, without installation time, being performed the verification and connection.

Whenever connecting the battery cable, check and wait until the charge status stay on.

The power connector, located opposite the locking handle, accepts 12 Vdc voltage (12.5V maximum, 9V minimum) with 1A current (mínimo) C+ (positive center).

Important: Batteries must be charged daily.

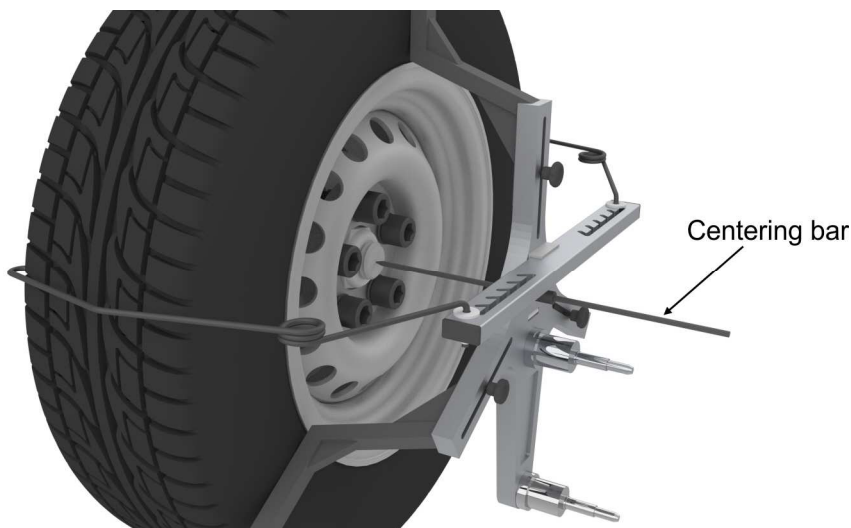


Accessories

- **Power supply**
 - Input: 100 ~ 240 Vac
 - Output: 12 Vdc 1A
- **Standard USB 2.0 cable**
- **Clamps**
- **Rear targets**
- **Centering ruler**
- **Front plates**
- **Brake pedal lock**
- **Steering lock**
- **Totem rack**

Operation

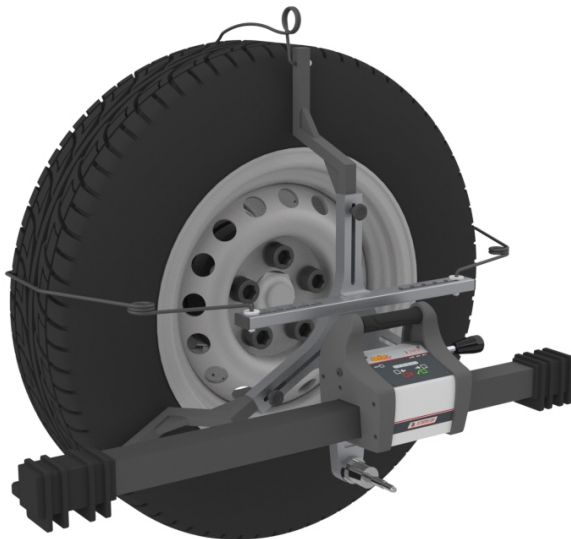
The operation of the equipment as a whole is extremely simple, just fixing the clamp on the wheels or tires. It is important that the clamp is centered and well fixed to the wheel.



Important:
Mandatory use of glove
and protective goggles.



Then fit the heads into the clamp taking care to make the correct leveling.



Finally just follow the procedures described in the TM711 Instruction Manual, available on the CD or Tecnomotor website (www.tecnomotor.com.br) on the Internet.

Rasther Aligner PC Software

Rasther Aligner PC software comes with the TM 711 - Rasther Aligner equipment and is used as the control interface of the equipment.

This equipment, together with its software, was developed to quickly perform the alignment process of heavy and medium vehicles.

Installation

The installation of the Rasther Aligner PC software is performed by running the SetupRastherAligner.exe file available on the CD or on the Tecnomotor website (www.tecnomotor.com.br) on the Internet.

Technical specifications

• Head

Physical Dimensions:

- Length x Depth x Height [mm]: 1020x140x210
- Weight [kg]: 4,35

Power:

- Internal: 7.4Vdc 4400 mAh Li-ion Battery
- External: 12 Vdc 1A min

Laser (Light Amplification by Stimulated Emission of Radiation):

- Class: 3^a
- Nominal power: < 5 mW
- Wavelength: 630 à 650 nm

Wireless Communication by ZigBee:

- Operating Frequency: 2.4 GHz
- Transmission Power: 2 mW
- Maximum distance: 10 m without obstacles

Sensors:

Convergence:

- Resolution: 0.05° or 3'
- Range: ± 1 a 2°, depending on vehicle dimensions

Camber:

- Resolution: 0.05° or 3'
- Range: $\pm 15^\circ$

KPI:

- Resolution: 0.05° or 3'
- Range: $\pm 30^\circ$

Caster:

- Resolution: 0.05° or 3'
- Range: $\pm 15^\circ$

SetBack:

- Resolution: 0.01 mm
- Range: ± 45 mm

- **Concentrator**

Physical Dimensions:

- Length x Depth x Height [mm]: 155x125x50
- Weight [kg]: 0,2

Power:

- External: 5 Vdc <100 mA min via cabo USB

Wireless Communication by ZigBee:

- Operating Frequency: 2.4 GHz
- Transmission Power: 2 mW
- Maximum distance: 10 m without obstacles

- **Software**

Recommended minimum computer specifications:

- Celeron Dual Core 2.6 GHz;
- 2 GB ram;
- HD 40 GB;
- 800 x 600 pixel display;
- Internet access;
- Mouse and keyboard;
- USB 2.0 port recommended, USB 1.1 compatible;
- Supported operating systems are Windows XP, Windows 7, and Windows 8.

Notes

[illegible]

Os dados apresentados neste manual tem como base às informações mais recentes disponíveis até a data de sua elaboração. A TECNOMOTOR não se responsabiliza, portanto, por eventuais incorreções existentes. Em caso de dúvida, consulte o nosso departamento técnico.



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TECNOMOTOR ELETRÔNICA DO BRASIL S.A.

Rua Albino Triques, 2040 - Tel/Fax: (16) 3362-8000/2106-8000
Santa Felícia - CEP 13563-340 - SÃO CARLOS - SP - BRASIL

CANAL DIRETO TECNOMOTOR: 0300 789-4455

TECNOMOTOR DISTRIBUIDORA S.A.

Rua Marcus Vinícius de Mello Moraes, 657
Bairro Santa Felícia - CEP 13563-304
Tel/Fax: (16) 2106-8009
SÃO CARLOS - SP - BRASIL

www.tecnomotor.com.br

e-mails: **tecnomotor@tecnomotor.com.br**
distribuidora@tecnomotor.com.br
apoiotecnico@tecnomotor.com.br