



TRIBRACH TR-101/102/111/112

Thank you for purchasing the TOPCON product.
This instruction manual shows how to use the Tribrach.
For superior product performance, please read this instruction carefully
and keep it in a convenient place for future reference. Also read the
instruction of your surveying instrument when using.

Display for safe use



In order to encourage the safe use of products and prevent any danger to the operator and others or damage to properties, important warnings are inserted in the instruction manual.

We suggest that everyone understand the meaning of the following displays and icons before reading the “Safety Cautions” and text.

Display	Meaning
 WARNING	Ignoring or disregard of this display may lead to death or serious injury.
 CAUTION	Ignoring or disregard of this display may lead to personal injury or physical damage to the instrument.

- Injury refers to hurt, burn, electric shock, etc.
- Physical damage refers to extensive damage to buildings or equipment and furniture.

Safety Cautions

 WARNING
<ul style="list-style-type: none">•Cause eye injury or blindness. Do not look at the sun through a telescope.
 CAUTION
<ul style="list-style-type: none">•Cause eye injury or blindness. Do not look at the sun through a telescope.•Ensure that you mount the Tribach correctly, failing to do so may result in injury if the tribach were to fall over.•It could be dangerous if the instrument falls over, please check that you fix the instrument to the tripod correctly.•Risk of injury by falling down a tripod and an instrument. Always check that the screws of tripod are tightened.

User

Wear the required protectors (safety shoes, helmet, etc.) when operating.

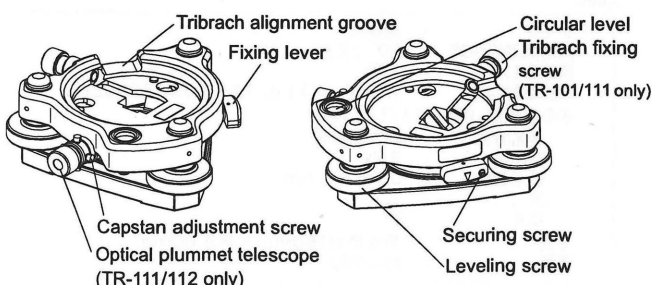
Exceptions From Responsibility

- 1) The user of this product is expected to follow all operating instructions and make periodic checks of the product's performance.
- 2) The manufacturer, or its representatives, assumes no responsibility for results of a faulty or intentional usage or misuse including any direct, indirect, consequential damage, and loss of profits.
- 3) The manufacturer, or its representatives, assumes no responsibility for consequential damage, and loss of profits by any disaster, (an earthquake, storms, floods etc.).
A fire, accident, or an act of a third party and/or a usage any other usual conditions.
- 4) The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits due to a change of data, loss of data, an interruption of business etc., caused by using the product or an unusable product.
- 5) The manufacturer, or its representatives, assumes no responsibility for any damage, and loss of profits caused by usage except for explained in the user manual.
- 6) The manufacturer, or its representatives, assumes no responsibility for damage caused by wrong movement, or action due to connecting with other products.

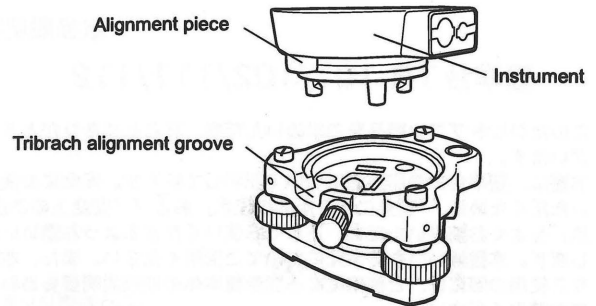
General Handling Precautions

Before starting work or operation, be sure to check that the instrument is functioning correctly with normal performance.

Nomenclature



Detach/Attach of Tribrach



Attachment

- 1** Coincide the alignment piece on the lower part of the instrument with the tribrach alignment groove.
- 2** Tighten the tribrach fixing lever firmly by turning clockwise.
- 3** Tighten the tribrach fixing screw.

Detachment

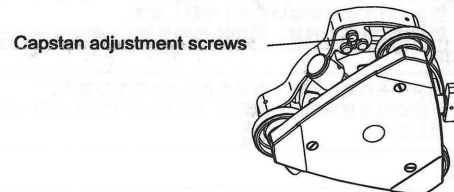
- 1** Loosen the tribrach fixing screw.
- 2** Loosen the tribrach fixing lever by turning counterclockwise.
- 3** Lift the instrument straight upwards and off.

Locking the tribrach fixing lever

The tribrach fixing lever can be locked from being moved accidentally. This is useful if the upper instrument section is not being detached very often. Simply tighten the securing screw on the tribrach fixing lever with a screw driver.

Checking and adjusting circular level

- 1** Attach an instrument adjusted correctly and level the instrument with the electronic level or the plate level on the instrument. If the bubble of the circular level is centered properly, adjustment is not required. Otherwise, proceed with the following adjustment.
- 2** Shift the bubble to the center of the circular level, by turning three capstan adjustment screws of the circular level, with a pin.



Checking and adjusting Optical plummet telescope (TR-111/112 only)

- 1** Attach an instrument adjusted correctly on the tripod head.
- 2** By using an optical plummet telescope, mark the point on the ground.
- 3** By using an optical plummet telescope of the tribrach, collimate the point of process **2**.
Then if the point is properly centered in the center mark, adjustment is not required. Otherwise, adjust in the following manner.
- 4** Coincide the center mark and the point by using four capstan adjustment screws.
First, loosen the capstan adjustment screw on the side to which the center mark must be moved. Then tighten the adjustment screw on the opposite side by an equal amount which will leave the tension of the adjustment screws unchanged. Revolve in the counterclockwise direction to loosen and in the clockwise direction to tighten, but revolve as little as possible.

Specifications

Type	: Detachable
Level sensitivity of the circular level	: 10"/2mm
Leveling screw	: 3 pcs.
Tripod attachment screw	: W5/8" x 11 Threads
Optical plummet telescope (TR-111/112 only)	
Focusing type	: Fixed
Magnification	: 2.2 x
Operating range	: 0.7m~ 1.8m
Image	: Erect
Field of view	: 5°
Dimension	: Max. diameter ϕ 160mm x Height 60mm
Weight	: Approx. 800g