

MrotatorT brackets TCPshort - TCP



Instruction and Maintenance Manual

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Welcome



Thank you for your preference and purchase. This manual has been designed to help you use the product to create quality panoramic images.

This document is constantly updated and made available in an electronic format from the product data sheet; download the manual frequently in order to ensure you always have the most up-to-date version.

These brackets are easily assembled and can be adapted to your specific setup, you can set up 12 different versions capable of satisfying the many requirements in the field of interactive panoramics.

They are suited both to the novice operator and the most experienced one; it satisfies the most extreme conditions of use where handling and lightness are indispensable qualities.

The "T" system is developed around a very precise rotator, which possesses a wide range of angular divisions which satisfy all the requirements of the various lenses used in panoramics.

With these brackets it is easy to capture a sequence of images which can be merged into one single panoramic shot. You can work in both landscape, for cylindrical panoramic images, and in portrait, for both cubical and spherical panoramic images, and the camera is able to rotate on its nodal point with precision and repeatability.

The "T" series brackets have been designed to enable you to use the most varied combinations of camera/lens in order to generate images suited to the main, most commonly used types of stitching software.

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Introduction



Pack Contents

- 1 – Vertical bracket
- 2 – Horizontal bracket clamping knob
- 3 – Spring
- 4 – Horizontal bracket
- 5 - Quick adapter system
- 6 – Attachment to the base “T” system

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Introduction



Horizontal bracket components

- 1 – Horizontal bracket with joint
- 2 - Quick adapter
- 3 - Thumbscrew for locking quick adapter
- 4 – Plastic interposition plate
- 5 - Horizontal “Z” support
- 6 - Vertical “Z” support

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Introduction

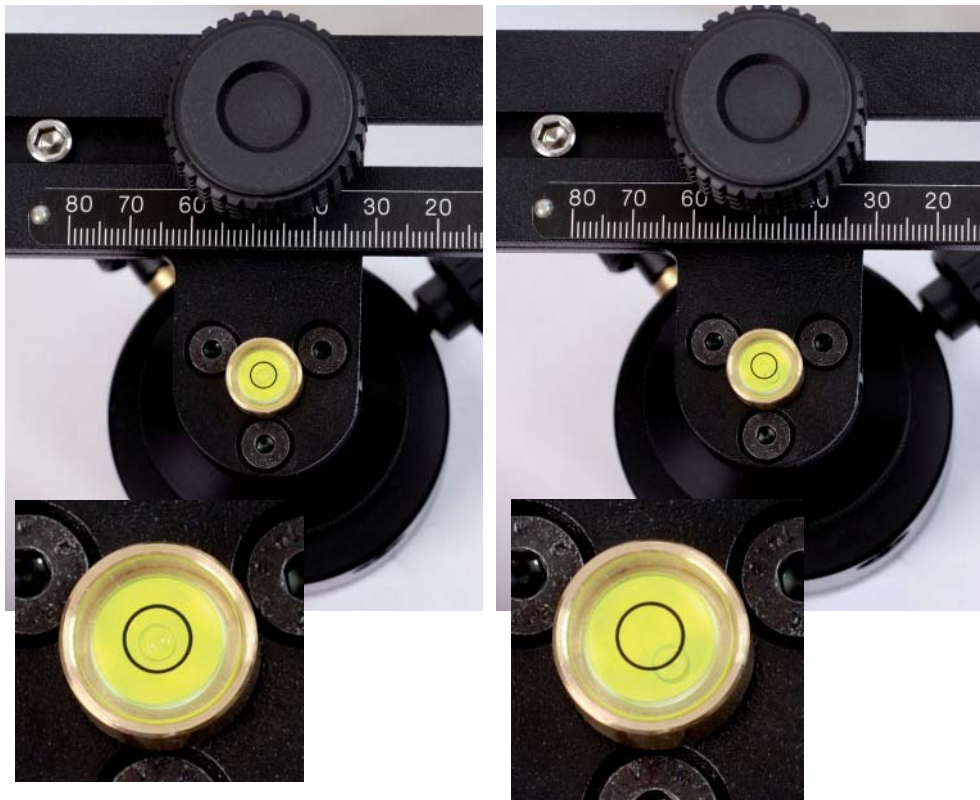


Attachment to base “T” components

- 1 –Horizontal base support
- 2 – Vertical bracket retaining knob
- 3 – Screws and allen key for base “T”
- 4 – Lateral sliding support
- 5 – Bubble level
- 6 – Lateral sliding support key

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Procedure for levelling "T" series brackets



The procedure described below must be followed in order to obtain correct levelling of the "T" series heads. Contrary to other solutions, where the bubble level is situated on a fixed part of apparatus and is not therefore subject to rotation, our bubble level is located at the centre of rotation and it rotates together with the bracket.

A few simple levelling procedures therefore need to be followed. Once levelling of the head is carried out (fig. 1) and the head is rotated, a evident deviation from the centre can be noted. (fig. 2).

This is not a defect, but in the rotation the bubble level records an instrumental error which is typical in bubble levels, the one we use records an error of a 30th of a degree.

In order to better understand the value of deviation, bear in mind that from the position in fig.1 to the position in fig. 2 there's less than half a degree, a figure which easily falls into the stitching software's scope of sensitivity.

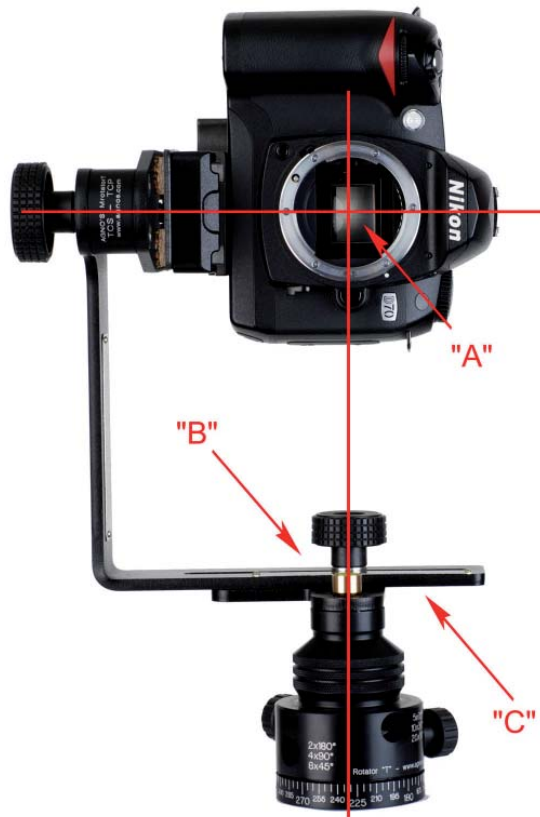
DO NOT RE-LEVEL the head in order to avoid misaligning subsequent shots.

The main characteristic of our Mrotator is that that it has a mechanically precise rotation and therefore guarantees correct alignment.

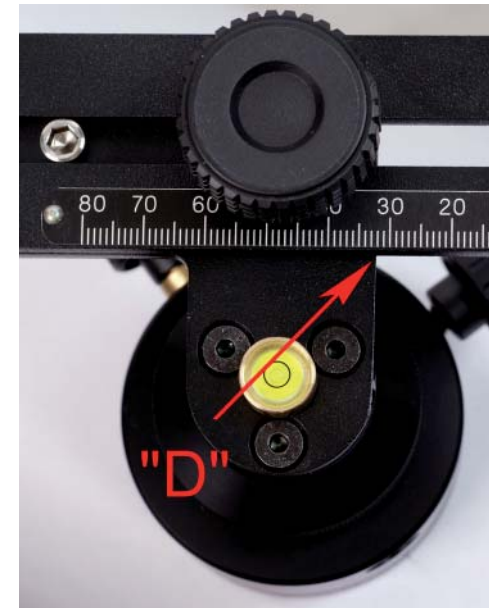
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Positioning the optical axis

Aligning the optical axis (method n° 1)



The first procedure to be carried out is the alignment of the optical axis of the camera to the centre of rotation of the head. In order to obtain optimal precision with this method it is best not to have the lens mounted on the camera. Use a set-square to bring the centre of the camera "A" onto the centre of rotation "B" using the millimetric slide "C". Once this task has been accurately carried out, mark the value obtained as in position "D" in order to be able to rapidly re-mount the head when used subsequently.



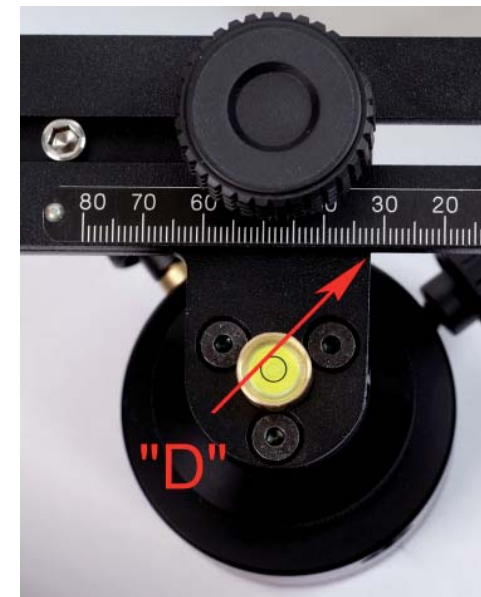
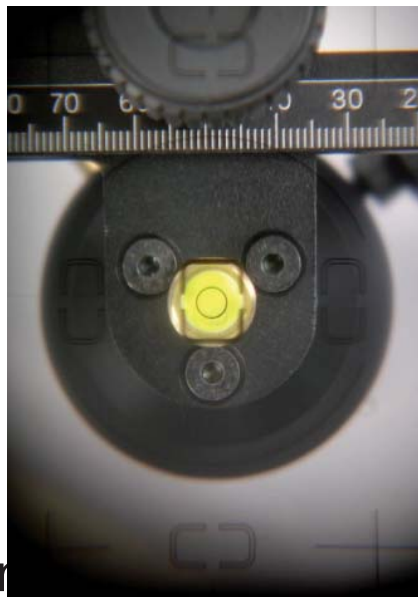
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Positioning the optical axis

Aligning the optical axis (method n° 2)



The first procedure to be carried out is the alignment of the optical axis of the camera to the centre of rotation of the head. In order to obtain optimal precision with this method it is best to use a lens, which is not too much of a wide-angle, mounted on the camera. Place the camera as in Fig. 1. Looking inside the camera, position the central focusing square right on top of the bubble level, using the lateral slide. Once this task has been accurately carried out, mark the value obtained as in position "D" in order to be able to rapidly re-mount the head when used subsequently.

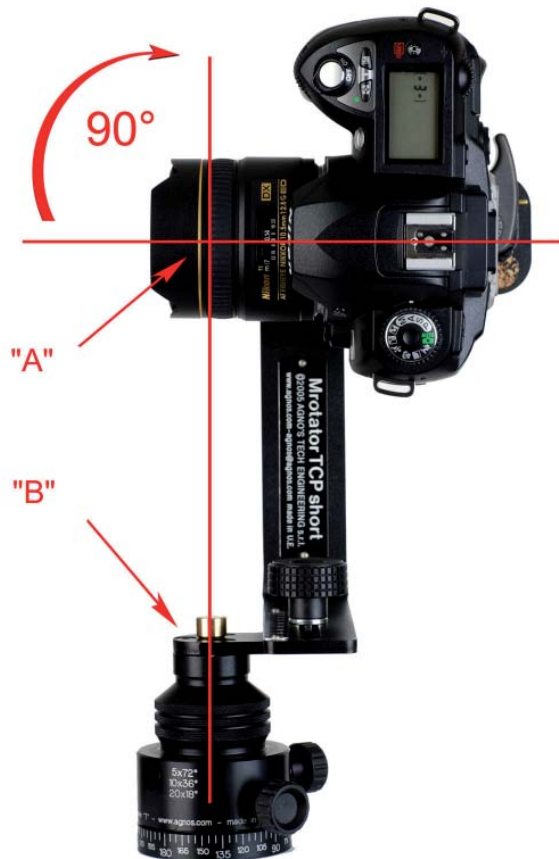


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Positioning of Zero parallax and Tilt Points

Aligning NNP



Every lens has its own specific and complex system of internal nodal point dependent

on the lens design. To simplify matters we fix a single point which is called NPP (No Parallax Point) which is basically the point on the lens where the point of rotation can be intersected and we can take a series of shots without parallax errors destined to be stitched into a single panoramic image. For the empirical determination of the NPP please refer to the relevant documentation. Unscrew the thumbscrew on the horizontal bracket on which the camera is mounted and move the camera forwards or backwards bringing the lens to the right position.

Using the same slide, set the correct angle of "Tilt" of the camera, which should be 90° in relation to the horizontal plane (Fig. 1). Once this task has been accurately carried out, mark the value obtained as in position "D" in order to be able to rapidly re-mount the head when used subsequently



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TCPshort Technical Characteristics

Bracket dimensions 160x180x80 mm

Bracket weight 1.120 gr.

Loadable weight 5,0 kg.

Angular division 12 x 30°

(vertical arm)



TCP Technical Characteristics

Bracket dimensions 225x180x80 mm

Bracket weight 1.235 gr.

Loadable weight 5,0 kg.

Angular division 12 x 30°

(vertical arm)

in an effort towards constant improvement, materials, design, moving parts, and accessories may be subject to change without prior notice

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Warranty and Product Return Policy

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Agnos Warranty and Return Policy

A • Limited Warranty

In the event of a defect in materials or workmanship, Agnos will repair the product with new or rebuilt parts for a period of three-hundred and sixtyfive (365) days from the date of original purchase. Such work will be performed free of charge. Follow the Product Return Procedure (Section D following). Likewise, any software purchased from Agnos also comes with a one year warranty if your disc or media is defective or damaged. This warranty is extended only to the original purchaser and is not transferable. A purchase receipt or other proof of original purchase will be required before warranty performance is rendered. This warranty only covers failures due to defects in materials or workmanship which occur during normal use. It does not cover damages or failures which are caused from accident, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, modification, service by anyone other than an authorized representative of Agnos, Acts of God, or by products not supplied by Agnos.

This warranty covers any damage incurred during original shipment of product to customer. Any item resold, or distributed by, and not explicitly manufactured by Agnos will be covered by their respective company's product warranty.

B • Warranty Exclusions

There are no express warranties except as listed above.

Agnos shall not be liable for special, incidental, consequential or punitive damages, including, without limitation, loss of goodwill, profits or revenue, loss of the use of this product or any associated equipment, cost of substitute equipment, downtime costs, or claims of any party dealing with buyer for such damages, resulting from use of this product or arising from breach of warranty or contract, negligence, or any other legal theory. All express and implied warranties, including the warranties of merchantability and fitness for a particular purpose, are limited to the applicable warranty period set forth above. Some states do not allow the applicable warranty period set forth above. Some states do not allow the exclusion or limitation of consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions or limitations may not apply to you.

This warranty and any claims which arise with the Agnos product(s) are governed by the laws of the state of Italy. By purchasing this product, customer acknowledges and agrees to these Limits and Exclusions. If a problem with your Agnos product develops during the warranty period, immediately contact Agnos for assistance.

C • Product Return Policy

All Agnos products come with a 30-day return policy (a minimum 10 percent restocking fees may apply) from date of purchase, with the exception of software. Both of the aforementioned items are copyrighted and subject to the laws concerning intellectual property. Agnos will replace defective software free of charge upon return receipt of defective item(s). Products returned under this policy, excluding replacement of defective items, must be shipped at purchaser's expense. Purchaser must ship product with an approved traceable service, such as UPS, and with appropriate levels of shipping insurance for the item being returned. Agnos will not be held responsible for returned items lost or damaged in transit. Agnos will issue a refund to customer's account if the following conditions are satisfied:

1) Receipt of item(s) in a restockable condition.

Criteria for Restockable Condition is as follows:

- All parts are included in box; hardware, manuals, discs, nuts/bolts, tools.
- No signs of damage; scratches, bent parts, missing pieces, markings, alterations, or additions to the product.
- All packaging materials are intact; foam, peanuts, cardboard, bubble bags.
- No signs of excess usage or wear to the product.

Items of Non-Restockable Condition are subject to the following:

- Restocking Fee(s) - a minimum of 10% and possible additional fees based on the condition of the product (how the product best meets the criteria above), at Agnos's discretion.

Non-Restockable Condition - constitutes the following:

- Missing parts; hardware, manuals, discs, nuts/bolts, tools, and packaging materials; foam, peanuts, cardboard, bubble bags.
- Signs of damage; scratches, bent parts, missing pieces, markings, alterations, additions to the product.
- Signs of excess usage or wear to the product.
- Damage or loss incurred during uninsured shipping to Agnos. In this case, Agnos cannot issue any type of refund. Customer will be responsible to submit claim with their shipping company.
- If damages occur in shipping, customer must submit claim with shipping company prior to any action by Agnos.

Items Part of Special Bundle

If item(s) are part of a special bundle offer, return of part of the bundle will void any special pricing and the item(s) remaining in the possession of the customer will revert to their regular Suggested Retail Price. The credit, to customer, will reflect the difference of the actual product SRP from the amount of credit due customer.

Shipping Costs

All shipping costs, VAT, duties and return costs are sole responsibility of customer. If customer purchases thru Agnos distributor or reseller, customer is responsible for all shipping and VAT costs incurred by that distributor or reseller. These charges are non-refundable. For instructions on the return of your product, follow the Product Return Procedure below.

D • Product Return Procedure

When returning a product, customer must first contact Agnos (or the distributor/reseller) and obtain a Return Material Authorization Number (RMA#).

After receiving the RMA#, customer will be instructed to return product directly to Agnos. Returned goods must be shipped with an approved traceable service, such as UPS, and with appropriate levels of shipping insurance for the item being returned. Agnos will not be held responsible for returned items lost or damaged in transit. RMA numbers are valid for 15 days, and the product(s) must be received by Agnos before the RMA expires. We are unable to accept for return any product(s) received after the expiration of the RMA.

Return Packaging

The product packaging must reflect customer name, address, RMA# as well as Agnos information:

Agno's Tech Engineering S.r.l.
Via IV Novembre, 8 44042 CENTO (Ferrara) ITALY

Contact Information: Voice: +390516831030 • Fax: +390516831030
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