

# TW3100 Wedge



## Instruction Manual

Version 1.1 - English



## **Introduction**

Your AstroTrac TW3100 was engineered in the UK with loving care by the AstroTrac team to provide you with a lifetime of reliability and service.

Good polar alignment is the secret to stunning trail free images and your TW3100 provides you with high precision adjustment utilising fine aircraft threads for maximum smoothness.

The darkest skies yield the most beautiful images and your TW3100's worldwide latitude range means you won't be disappointed whether you are at the pole, the equator, or anywhere in between.

Your TW3100 has been expedition tested and is constructed entirely from aluminium and stainless steel components so you can be confident it can hold its own in the great outdoors.

You can mount your TW3100 on a standard photo tripod using the built in 3/8" thread. Alternatively, for maximum rigidity attach your TW3100 to the ultra portable AstroTrac pier using three 8 mm screws.

Your TW3100 is designed to work with the AstroTrac TT320 or TT320X tracking mount.

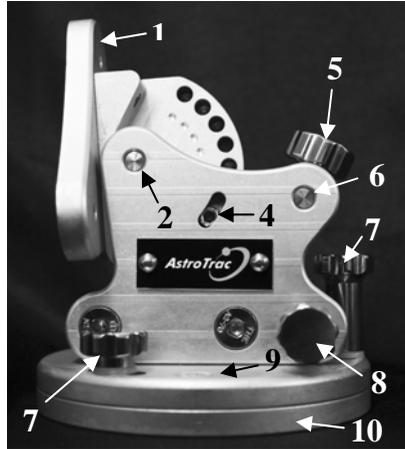
We hope you get great images with your TW3100 wedge and thank you again for choosing AstroTrac.

Richard Taylor

**Managing Director - AstroTrac**

## Overview

1. Mounting plate
2. Main axle
3. Latitude lock lever
4. Latitude coarse set screw
5. Latitude fine adjust knob
6. Latitude fine adjust bar
7. Azimuth lock knobs
8. Azimuth fine adjust knobs
9. Spirit level
10. Base plate



## Attaching to your Tripod

The base has a central 3/8" threaded hole so you can mount your TW3100 on a standard photo tripod. Wind the TW3100 down onto the tripod thread until it is tight against the top of the tripod.

## Attaching to your AstroTrac Pier

The base has three metric 8 mm threaded holes so you can mount your TW3100 on the AstroTrac Pier.

## Levelling

Polar alignment is made easier by leveling the tripod and wedge using the built in spirit level.

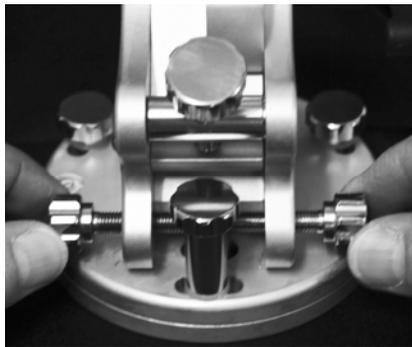


## **Aligning North**

You can align the wedge due north by sighting through the polar scope at night or by using a compass during the day.

Very gently undo the three Azimuth locking knobs a fraction of a turn until your wedge can be rotated by turning the azimuth fine adjustment knobs in opposite directions to each other.

It is best to keep the knobs slightly done up at all times to prevent wobble.



## **Setting your Latitude**

Make sure you set the coarse latitude before mounting anything on the AstroTrac. This way you will be able to feel the indexed movement of the mounting plate as you set the latitude and prevent damage to the latitude set screw.



Ensure the latitude fine adjust knob is wound roughly half way into the latitude fine adjust bar so there is sufficient travel

available for you to make fine adjustment up or down in latitude.

Unscrew the latitude set screw using the provided 1/8" hex wrench until it won't unscrew any further. The latitude set screw is retained by a slot in the side plate.

Using the latitude scale, move the mounting plate until the pointer is near to your latitude.

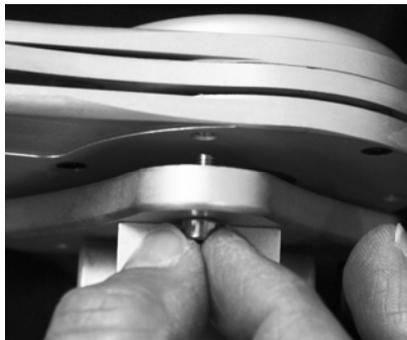
Gently tighten the latitude set screw until resistance is felt. Be careful not to overtighten or you may damage the thread.

Make fine adjustments in latitude using the latitude fine adjust screw. Gently tighten the latitude locking lever when you are finished.

### **Attaching your AstroTrac**

Use the three provided metric 4 mm socket head cap screws and hex wrench to attach your TT320X to the mounting plate.

Your TT320X can be mounted in any one of three positions to provide



clearance for your scope and counterweights.

For latitudes between 0 and 15 degrees you will need to mount your TT320 or TT320X with the drive arms in the approximate 10 o'clock or 2 o'clock position.

Ensure that the centre of gravity of your equipment is forward of your TW3100's main axle or your equipment may move unexpectedly when the latitude locking lever is released.

### **Transporting your TW3100**

Your TW3100 is designed to pack away inside the AstroTrac pier for easy transportation. Simply leave the TW3100 attached to the pier top plate and flip the plate over so that the TW3100 is inside the pier column before replacing and securing.

### **Balancing your Equipment**

For optimum performance we recommend balancing your equipment so that your TW3100 doesn't experience large twisting forces which can lead to trailed images.

### **Care and Maintenance**

Clean your TW3100 with warm soapy water and gently dry with a soft cloth. Avoid solvent based cleaners as they may damage the surface finish, latitude scale or logo badge.

## **Safety Warnings**

Keep fingers clear of inner parts of wedge when making latitude and azimuth adjustments.

Keep from reach of small children.

Ensure that your equipment is securely fastened to the wedge and cannot move suddenly or fall before operation.

Never remove any of the wedge knobs or levers when the wedge is loaded.

## **Specifications**

Dimensions	120 x 106 x 100 mm (4.7 x 4.2 x 3.9 inches)
Weight	1 kg (2.2 lb)
Load capacity	15 kg ( lb)
Latitude range	greater than 90 degrees
Coarse latitude adjustment	15 degrees
Fine latitude adjustment	infinite
Tripod mounting	3/8" UNC camera thread
Pier mounting	3 x metric 8 mm csk screws
TT320X mounting	3 x metric 4 mm screws

## **Warranty**

Your AstroTrac TW3100 wedge carries a one year warranty which covers faults arising due to manufacturing. The warranty does not cover damage arising from misuse, accidental damage or shipping.

If you experience a problem with your wedge, please contact AstroTrac by emailing [support@astrotrac.com](mailto:support@astrotrac.com) with a description of the problem. If it proves necessary to return your unit, we will provide instructions for returning your TW3100 and you will need to cover the cost of shipping it to us. On receipt of your TW3100, if the unit is under warranty and faulty, we will decide whether to repair or replace it and we will cover the cost of shipping back to you.

Please do not dismantle or alter your TW3100 in any way as this will automatically invalidate your warranty.

## **Contact Information**

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