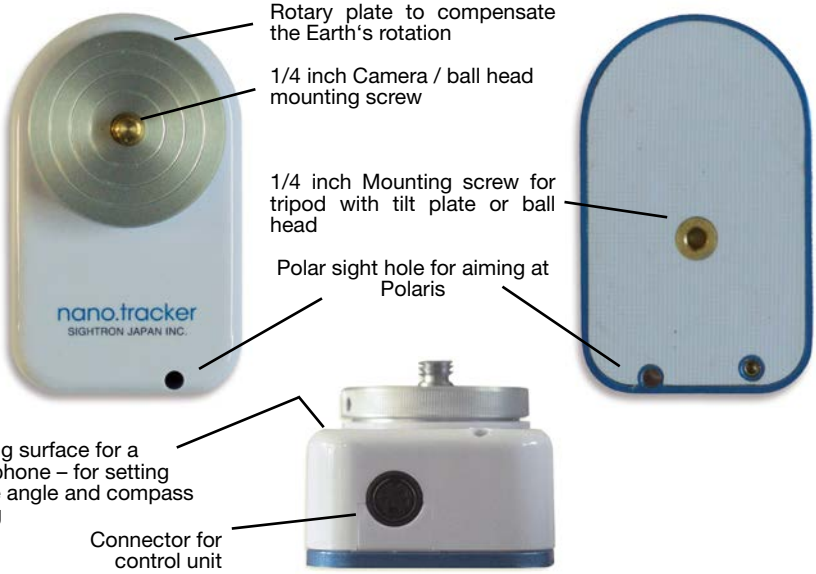
nano.tracker 2.0

Celestial Tracking Unit

Tracking Unit nano.tracker 2.0

Front Side

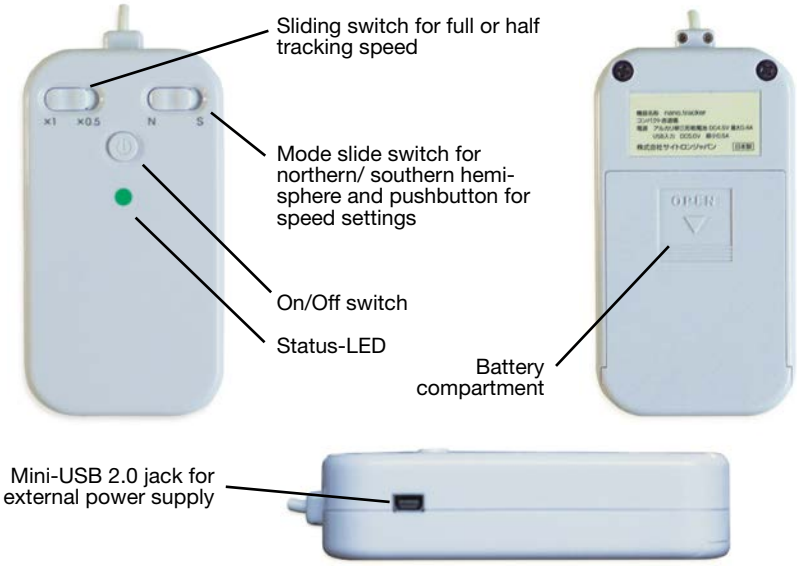
Back Side



Control Unit for the nano.tracker 2.0

Front Side

Back Side



Necessary Accessories

The nano.tracker is mounted between a tripod and a camera. Before you start using the device, please make sure you have the following accessories:

- 3x AA batteries or alternatively an external power supply (3.6~4.5 Volts DC) with a Mini-USB 2.0 plug (e.g. an external battery pack or a PC with USB port).
- A sturdy tripod with a ball or tilt head (we recommend a two-way tilt head with spirit level and scale) and a 1/4“ mounting screw (JIS standard).
- A light and sturdy ball head with a mounting base of approximately ø 50mm and a 1/4" thread (JIS standard), which will be attached to the rotary plate of the nano.tracker.
- A photo camera with a lens of max. 50mm focal lens (35mm when using a full-frame DSLR or analog 35mm film camera).
- We recommend using a programmable remote control for your camera.
- When using the naono.tracker in the southern hemisphere a compass and a clinometer are needed (both available as smart phone app).

Please note that the weight of your camera, with lens and ball head attached, should not exceed 2 kilograms.

Installation and start-up – step by step

1. Inserting the batteries

a) Carefully open the battery compartment on the back side of the control unit.
b) Insert 3x AA batteries into the battery compartment. Please pay attention to the correct polarity.
c) Close the battery compartment carefully.

Using an external power supply in alternative to batteries:

Connect the external power supply (e.g. an external battery pack or a PC with USB port) with the nano.tracker‘s mini-USB 2.0 port using a USB cable.

2. Setting up the system

a) Place the tripod with the attached ball or tilt head on an even and solid surface. If possible do not extend the legs of the tripod, thus it is more stable in windy conditions.
b) Level the tripod by adjusting its legs to make it horizontal.
c) Mount the nano.tracker on the ball or tilt head and make sure the polar sight hole (aiming aid for Polaris) is not obscured.
d) Attach the small ball head to the rotary plate of the nano.tracker.
e) Attach the ready-to-use camera onto the small ball head.
f) Connect the control box with the nano.tracker.

Make sure that all screw joints are tight and secure. Any loose and wobbling connection will adversely affect the quality of your image!

Time-lapse pictures with camera panning

Time-lapse photography is a technique whereby multiple frames are captured and thereafter compiled into a film by internal camera software or PC software. This creates an interesting effect where time appears to be moving faster and thus lapsing (time-lapse). Nowadays this is a built-in feature of many camera models. With the nano.tracker you have the ability to integrate camera panning in your time lapse recording. Set up the nano.tracker so that the rotary plate is mounted horizontally on the tripod. Point the camera at the first scene of your exposure series, choose the speed of the nano.tracker and start the exposure.

Depending on the selected speed settings the following panning speeds are available (see also page 7: 5. Setting the tracking speed):

- 0.13°/min: sidereal speed mode and slide switch at „x0.5“
- 0.25°/min: sidereal speed mode and slide switch at „x1“
- 6.25°/min: 50x sidereal speed mode and slide switch at „x0.5“
- 12.50°/min: 50x sidereal speed mode and slide switch at „x1“

The direction of rotation is set with the N/S slide switch:

- Camera panning to the left: set the mode slide switch to „N“
- Camera panning to the right: set the mode slide switch to „S“

Specifications

Tracking modes:	sidereal, solar and lunar speed, fast mode (50x), half speed (x0.5), northern/southern hemisphere
Motor:	stepper motor
Gear Wheel:	50 teeth
Bearing:	two pieces
Max. Payload:	2 kg
Polar sight hole:	8.9° field of view
Power Supply:	3x AA batteries
Voltage:	3.6~4.5 Volts DC
Duration of Operation:	approx. 5 hours (alkaline batteries at 20°C)
Dimensions:	Tracking Unit: 60 x 98 x 44 cm Control Unit: 50 x 105 x 22 cm
Weight:	Tracking Unit: approx. 400g Control Unit: approx. 80g (without batt.)

Specifications and equipment are subject to change without any formal notice or obligation on the part of the manufacturer.