VISO SYSTEMS
BaseSpion

Assembly Manual

Revision: December 2024

Congratulations on purchasing your new Viso Systems product. Before using this product, please read the Safety Information.

This manual contains descriptions and troubleshooting necessary to install and operate your new Viso Systems product. Please review this manual thoroughly to ensure proper installation and operation.

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[*www.visosystems.com*](http://www.visosystems.com)

Contents

1. Package content and weight

Main components/assemblies

Base – 14 kg
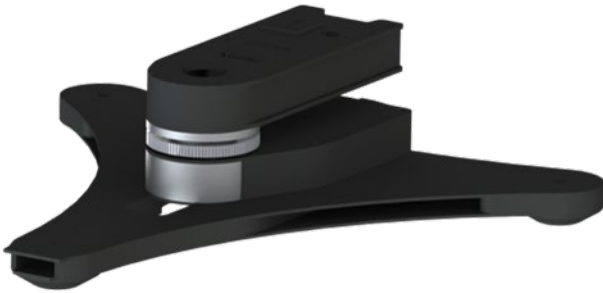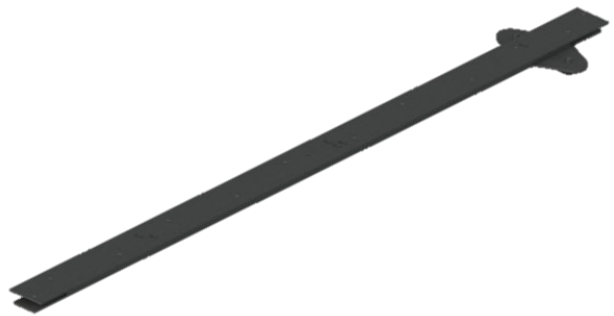
3 x sensor rail – 4 kg (20 kg)

BaseSensor 6 kg

Tower 4 kg

E27 Fixture and adapters – 0.5 kg

Assembly parts and cables

1 x IEC 2 m Cable

1 x USB 5 m Cable

1 x RJ45 7.5 m Cable

1 x Foot for Base

24 x Screws for Extender

1 x Steel Rod

2. Package dimensions and weight

Shipping Packages	Shipping Dimensions	Shipping Volume	Weight
1. Sensor	50 x 50 x 20 cm	0.050 m^3	6 kg
2. Base + Tower	60 x 60 x 35 cm	0.126 m^3	19 kg
3. Rails	165 x 28 x 28 cm	0.129 m^3	20 kg

Total shipping weight: 45 kg.
Total shipping volume: 0.31 m^3
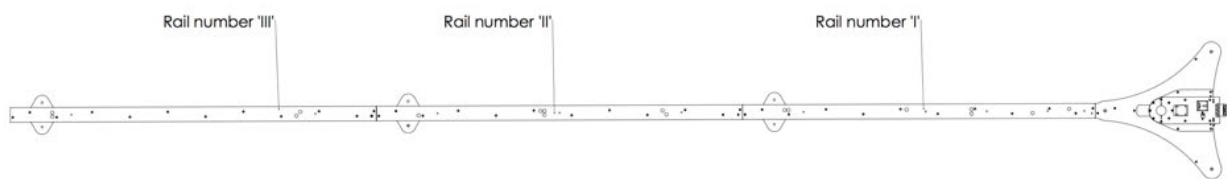The shipment consists of a total of 3 packages.

3. Assembly

Work on a level table which has the length and width to accommodate the full BaseSpion assembly.

3.1. Connect the three rails

The three rails are mounted in a specific order with number "I" closest to the base. The rails are marked I, II, and III, as shown on the picture below:
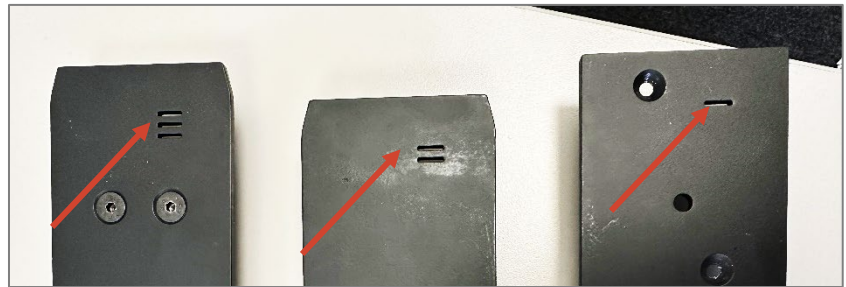
<u>Start by assembling rails I and II:</u>

Turn Rail I upside down, work at the end without the number, and push 8 square groove nuts into the grooves in the end:
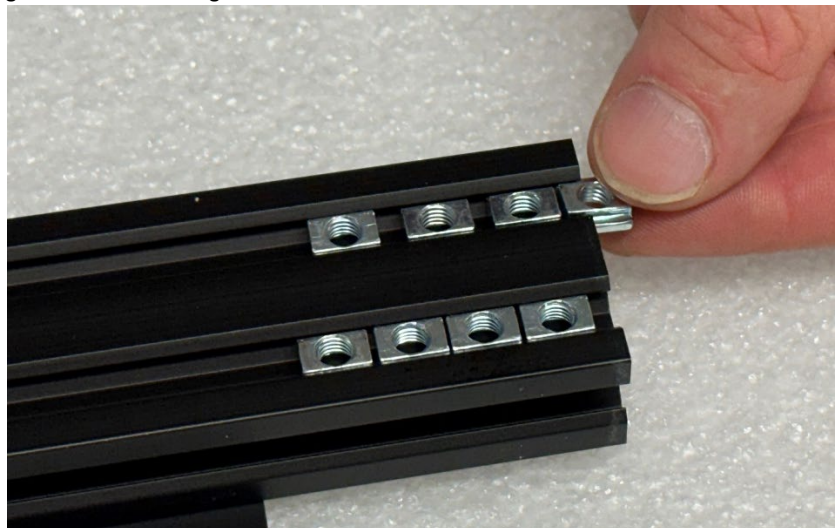
Attach an assembly plate using 8 button head screws. Do not tighten the screws at this point.

Push two assembly pins in – one on each side:

Push the next rail piece on (the right end of rail II):

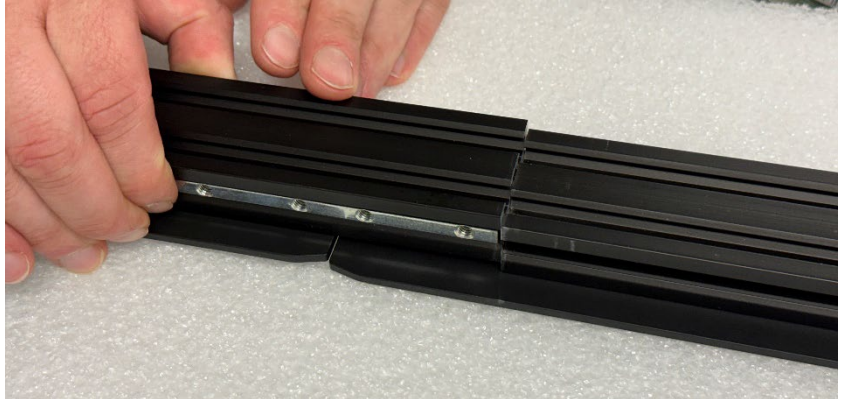Put 8 grubs screw in the threaded holes – 4 on each side - and tighten them while keeping focus on alignment.
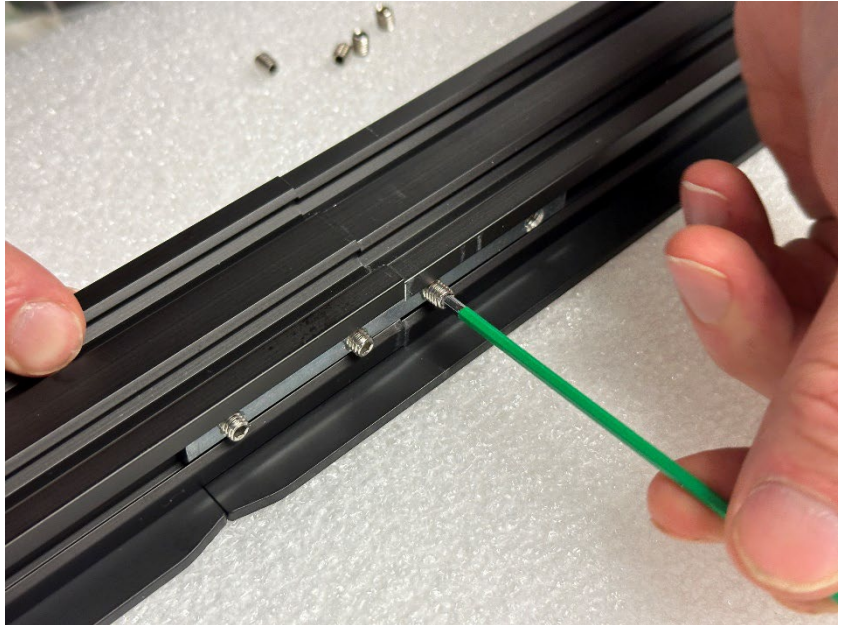
The two rail pieces must be aligned to form an almost invisible assembly line. Feel with your fingertips to ascertain that no edge protrudes:
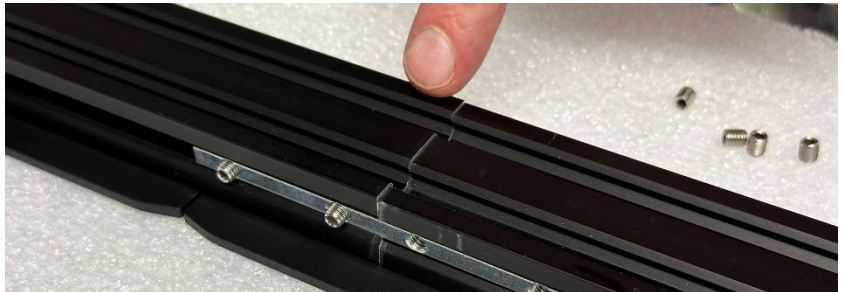
Push the assembly plate over the newly established joint with four holes on each side of the joint. and secure it with 8 button head screws:
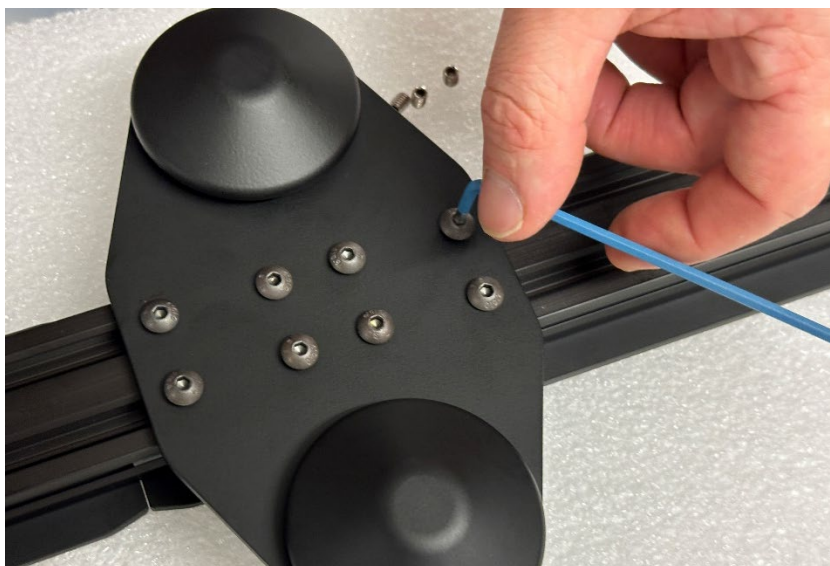
Repeat this assembly sequence for rail sections II and III.

Finally, check your alignment carefully:

Right

Wrong
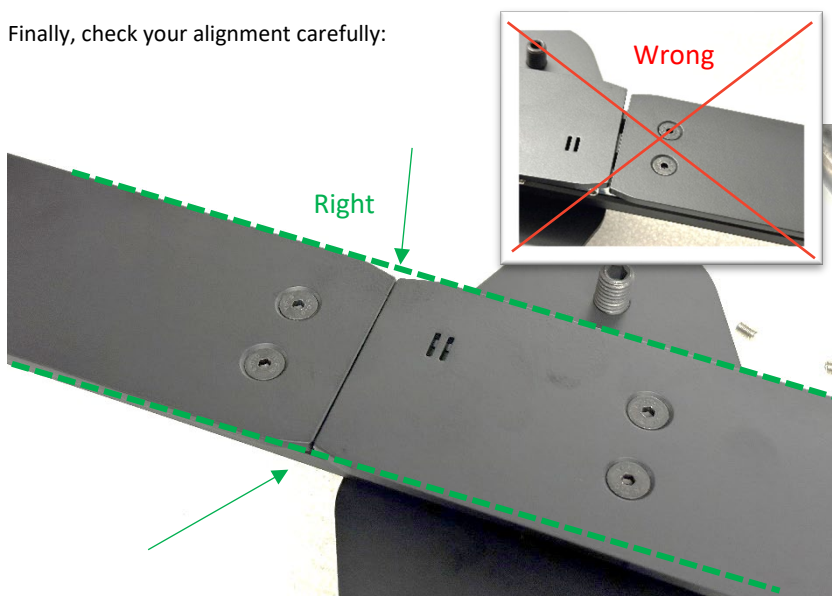
Put feet on the end of rail III

Push in 8 groove nuts:
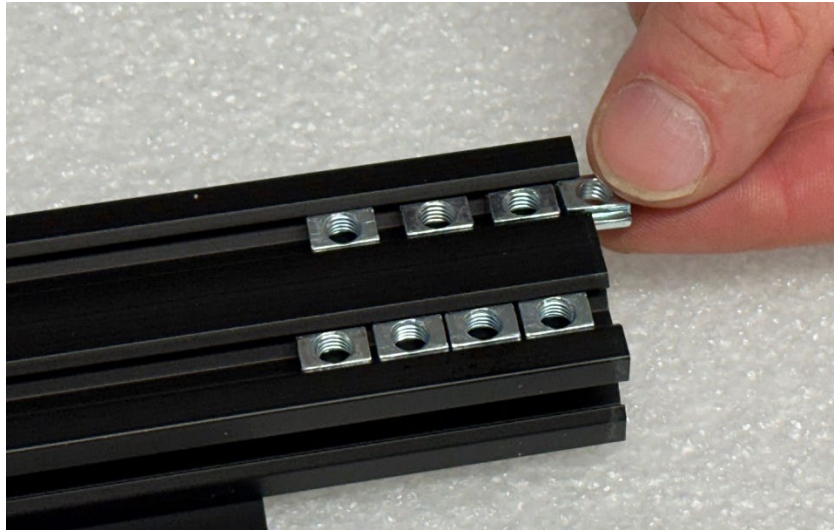
Put the last assembly plate on and secure with 8 button head screws:
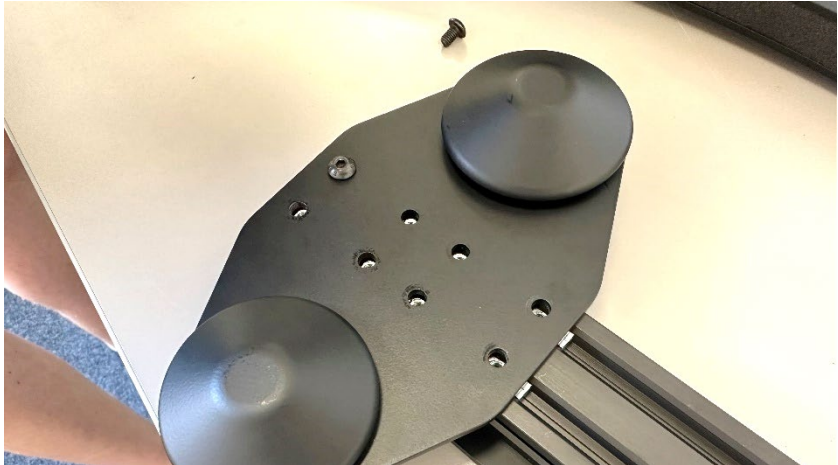
Mount connector to Rail I and the gonio

Now move to Rail I at the end closest to the gonio base. Keep the whole rail assembly upside down.
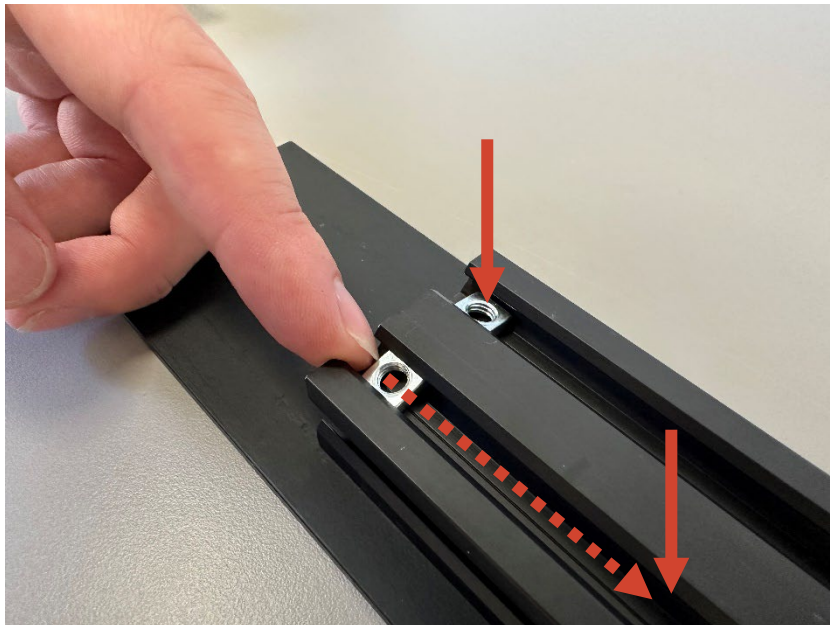
Insert two square, groove nuts and place them roughly so that the holes in the connector piece fit. Use the supplied screws countersunk M5 screws to mount the connector piece.

Turn the rail right-side up and mount the two countersunk M4 screws on top:
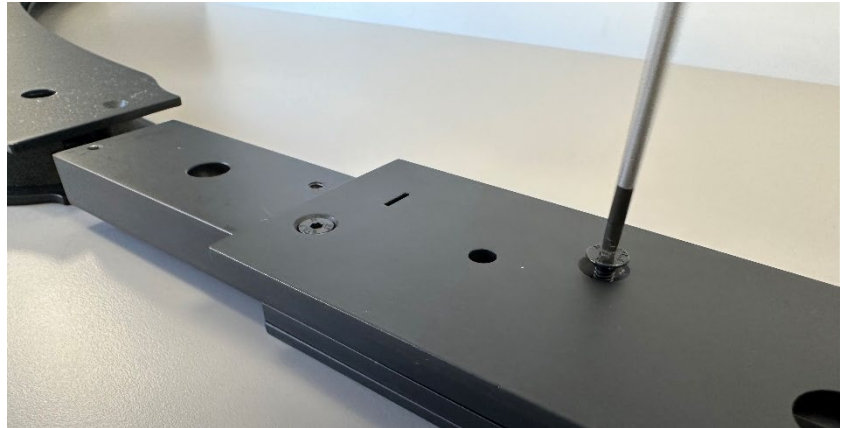
Prepare the gonio base for assembly. Lock the base with the latch.

Carefully pull the foam sides out to make room for the connector piece:
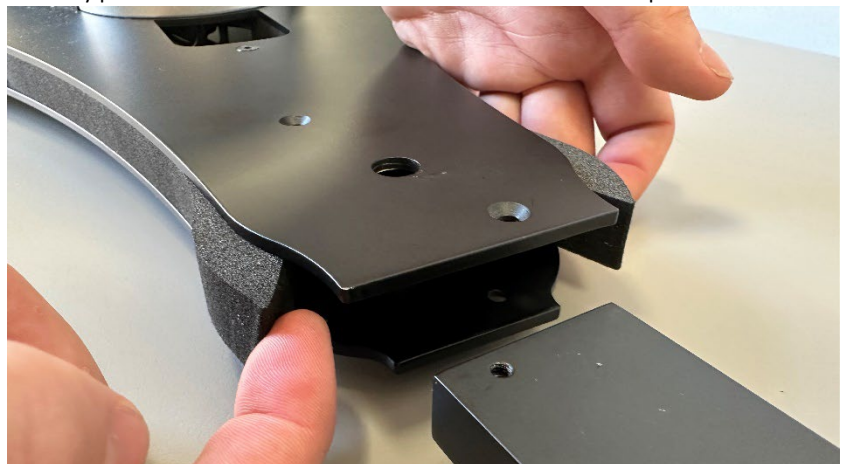
Gently push in the whole rail assembly, and secure the connector piece with two screws on the top side:

Find a colleague to help gently turn the whole assembly around to secure with the two screws on the bottom side:
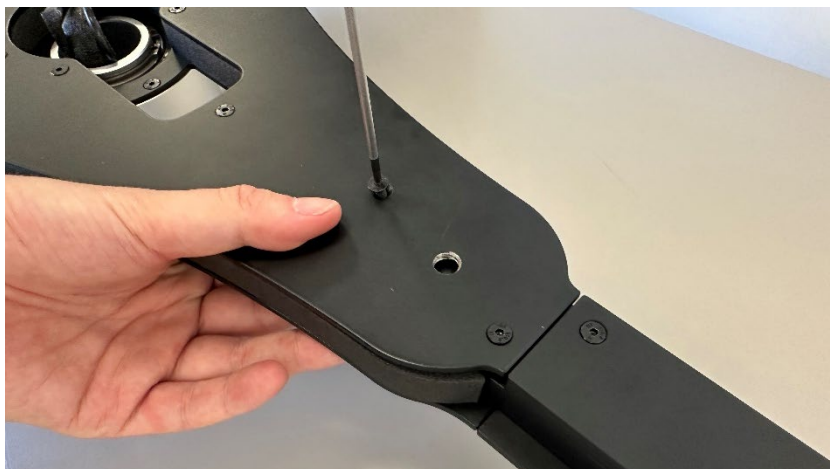
Then screw the big, adjustable foot into the big threaded hole:

3.2. Level the System

Finally, turn the whole assembly around and check alignment:

The system must be levelled correctly to get correct measurement. To ensure proper levelling begin with the base unit and the move on to Rail I, II and then III.

Levelling is done by turning the feet, either from below or using an Allen Key from the top.
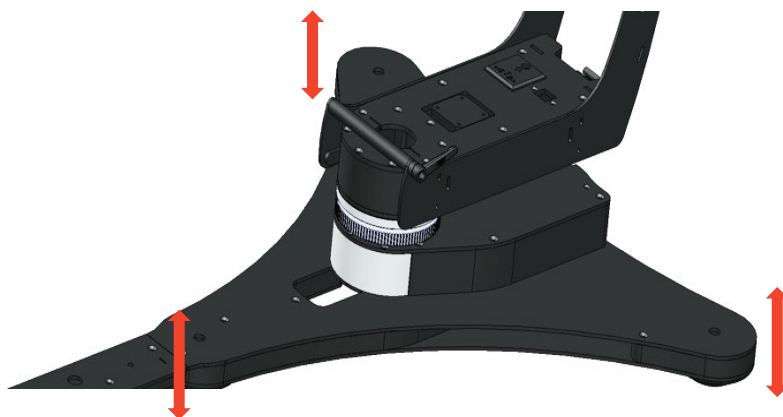
- Put the whole assembly on the intended surface.
- Carefully check that all rail pieces are aligned with each other horizontally.
- Use a standard spirit level to check vertical alignment of the gonio base crosswise and lengthwise and adjust with the feet underneath if needed.
- Continue vertically levelling the rest of the rail, again using the spirit level and the feet underneath.

Mount Tower to Base

Slide tower backwards onto the Base, like shown below.
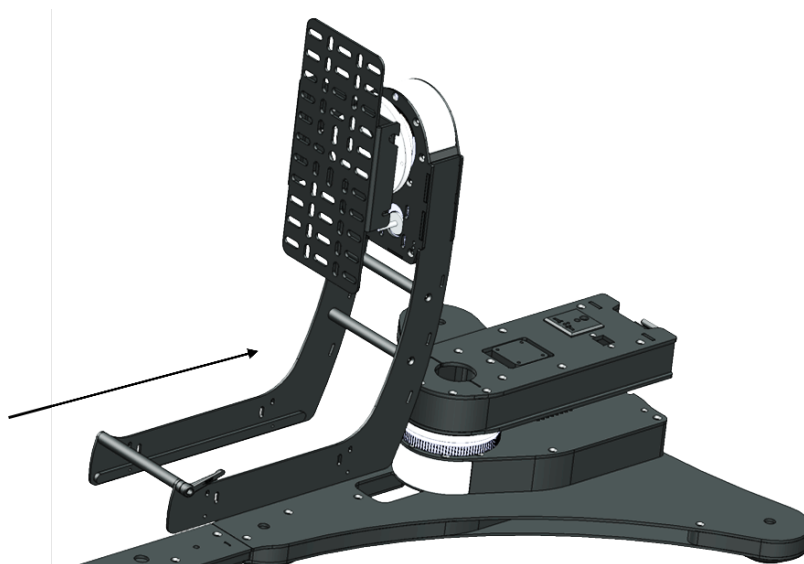
Connect the C-Plane Head to the RJ45 connector on top of the base with the supplied 50cm RJ45 cable.

RJ45 Connector

C-Plane Head

3.3. Mount Sensor

The Sensor should be mounted by sliding it on from the back end of the rail. Lift up the small position pin in front of the Sensor to slide it on.

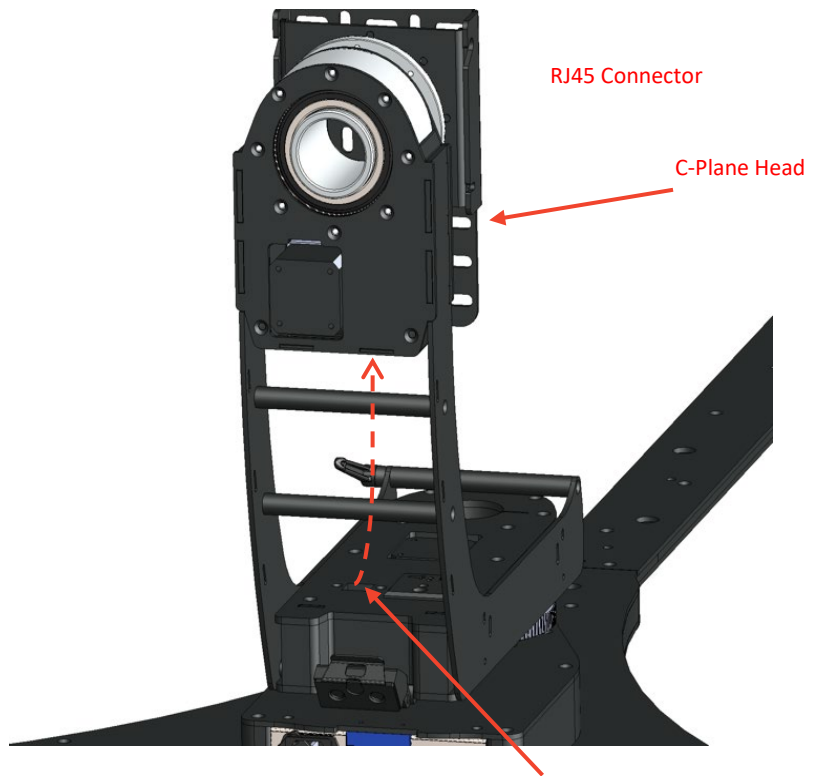Attention: Please slide the sensor on gently while holding the rear end up, thus supporting the sensor and making sure that the distance detectors underneath are not harmed. This should also be observed when taking the sensor off.

ATT: When the sensor is connected with the RJ45 cable to the Base, it may be necessary to restart the software for the Sensor to be able to detect the distance. Make sure to slide the Sensor to a position where the position pin on the Sensor falls into place and locks the Sensor.
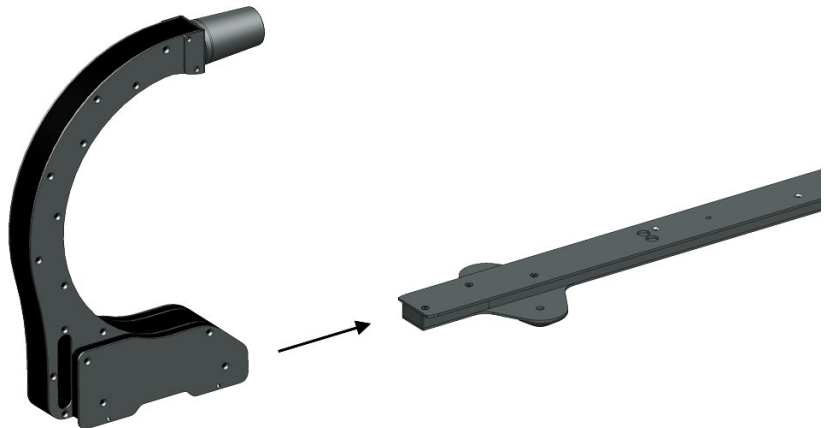
3.4. Cable connection

Below is a connection diagram showing the cable configuration, please refer to the user manual for further details.

C-plane motor

Light source power outlet

Gonio-meter

Sensor

Base **Base motor**

Rail

Connector board is on the back of the base

VISO
BaseSpion

USB   BASE SENSOR

www.visosystems.com
patent pending
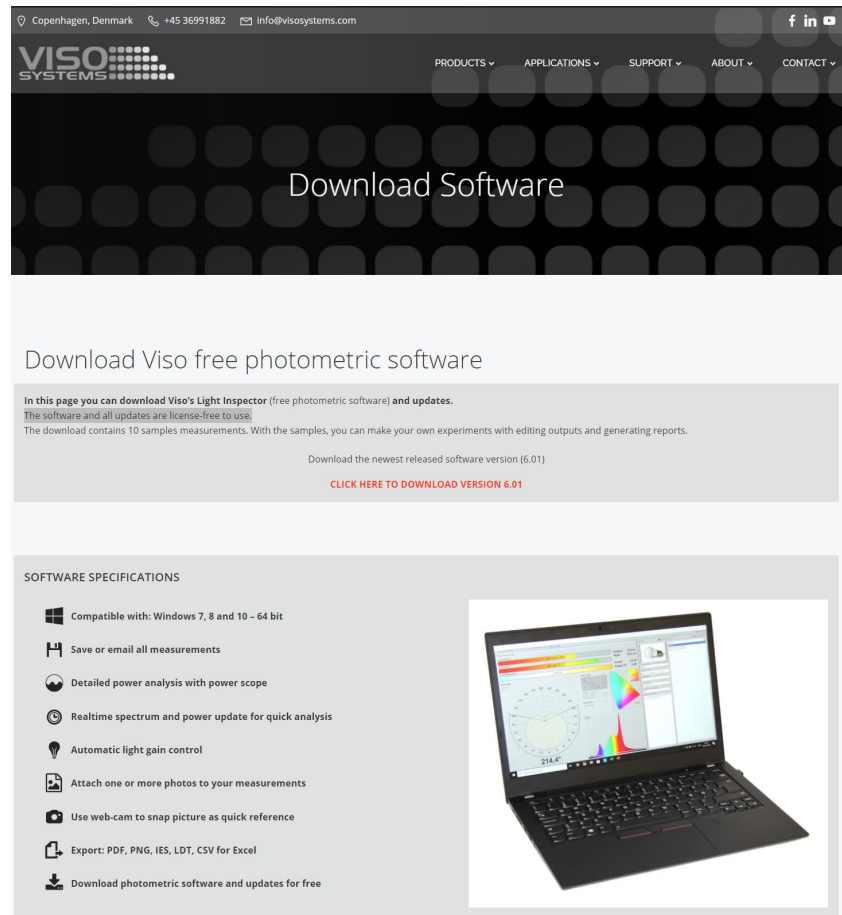Made in Denmark

90 - 260 VAC
FUSE F5A

CE

Mains In
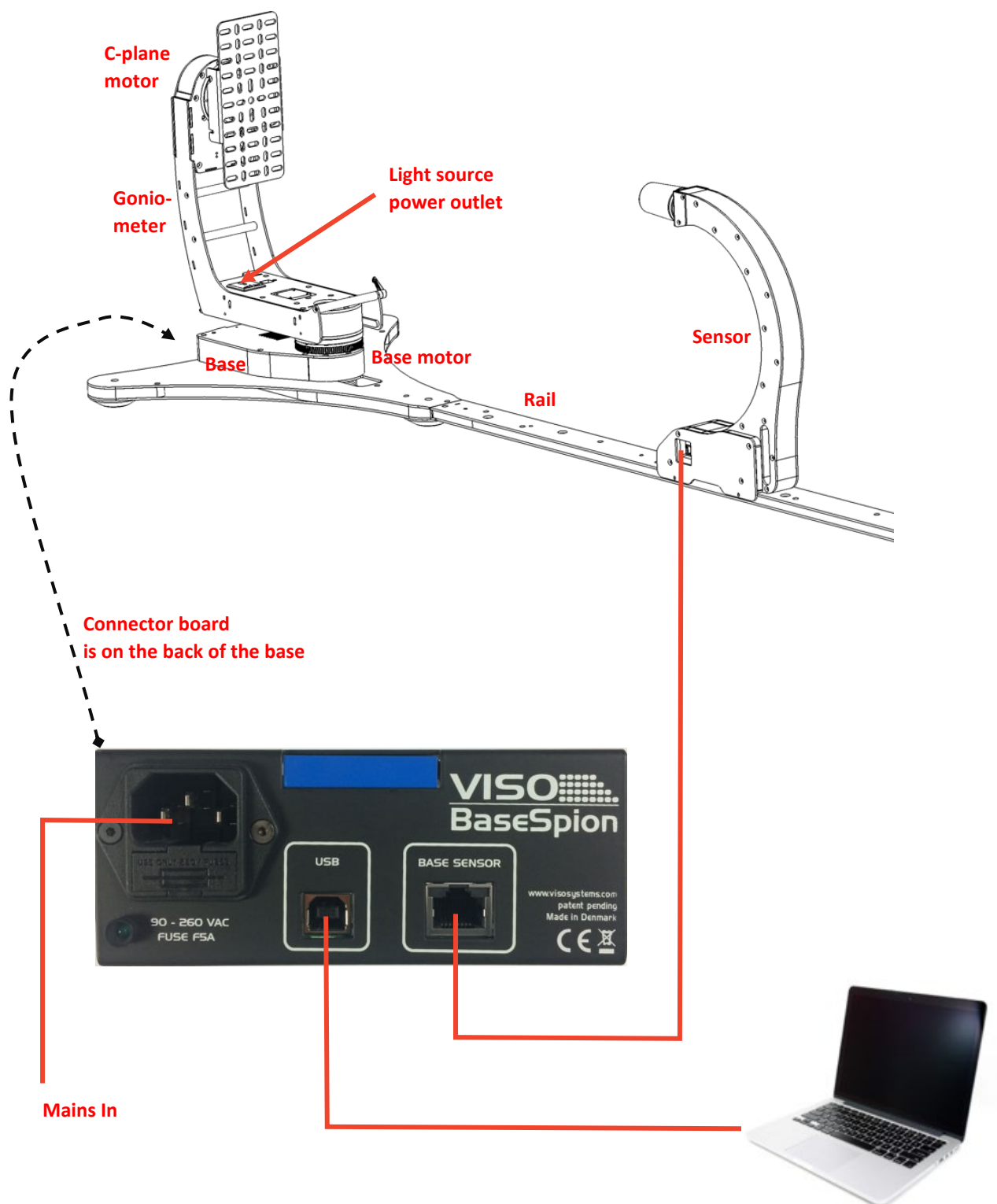
4. Software

4.1. First download

Please download the latest released software (Viso Light Inspector) version to your PC to run your new goniospectrometer solution. You will find the software here:

https://www.visosystems.com/download-light-inspector/

The full software and all updates are license-free to use. You may download the software to as many PC's as you wish.

4.2. Software updates

Viso Systems releases software updates 2-4 times per year. Update your software to gain access to system improvements and new features. All new software updates are backwards compatible with existing Viso units. Your system will continue working also without updating.

At Viso Systems we design, develop and manufacture OEM- and customer-specific goniophotometer solutions. Our mission is to support customers with powerful and yet easy to use control measurements solutions. Products are developed and manufactured in Copenhagen, Denmark.

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Light measurement made easy