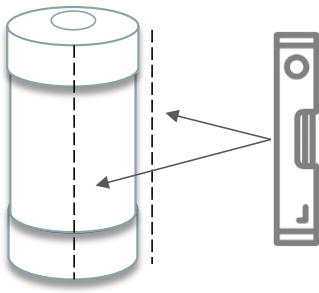


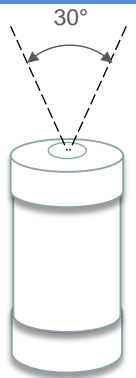
Quick Start Guide for the Ninox P2 System

Positioning



The Ninox tube that contains the photometer device must be positioned vertically so that the SQM lens behind the top window is directed towards the zenith (use a level if possible). It is important to make sure that there are no close light sources directly visible from the Ninox window (lamp post, private lighting, ...).

The Ninox system can be positioned at different heights but not too close from the ground in order to prevent humidity from entering the tube through the hole in the bottom part. An important constraint must be respected: there should be a solid angle of roughly 30° clear of any obstacles vertically above the Ninox window at the top of the tube.



The Ninox tube must be placed at a good distance from any tall obstacles such as walls or trees which could obstruct its field of view. It is also recommended not to place the Ninox system near a road (except for specific projects) or the windows of a home. Here are some examples of **incorrectly installed** Ninox systems:



Too close from a tree and field of view obstructed by a pole



Ninox system is not positioned vertically



Too close from the ground with the risk that humidity goes into the tube



Ninox field of view partly obstructed by the supporting pole

Here are some examples of **correctly installed** Ninox systems:



Ninox high enough in order not to be obstructed by the roof



Ninox positioned at the top of a supporting pole



Ninox far from any obstacle that could obstruct its field of view

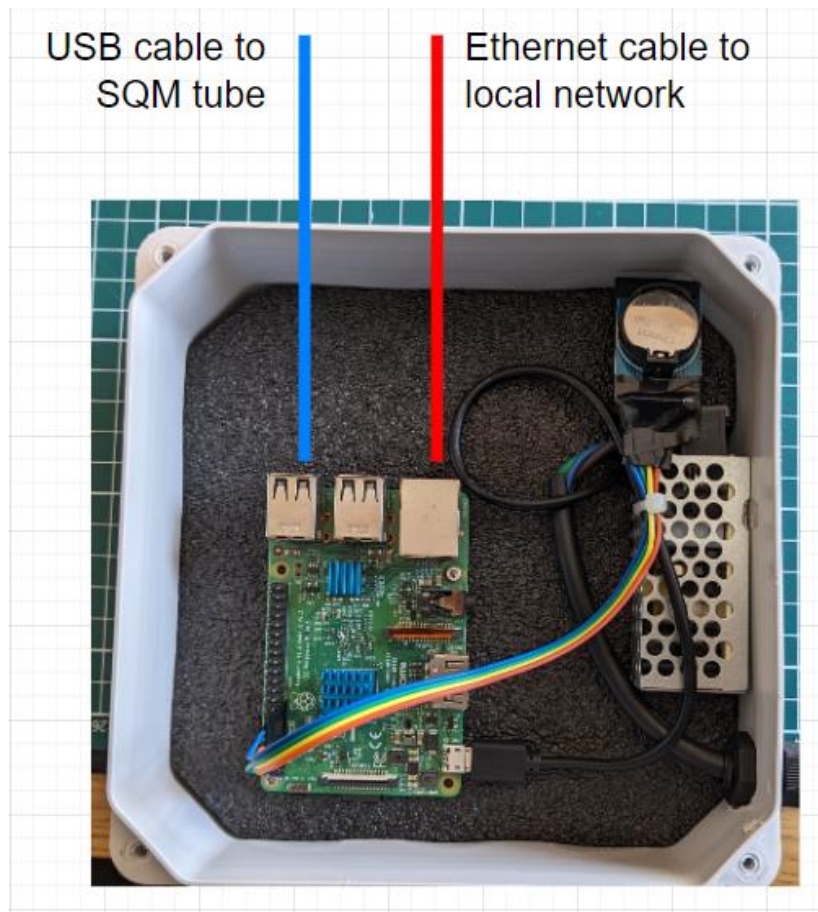


Ninox field of view not obstructed by the top of the tripod

The Ninox tube can be attached in various ways (preferably using zip ties when attached to a pole). The important thing is that the tube is securely fastened and the support is stable so as to withstand strong winds. The tube is waterproof but it is important to check the cleanliness of the window from time to time (use a soft microfiber cloth and a specific product for optics) and make sure there is no humidity visible through the top window.

Connecting the Ninox P2

It is advisable to place the Ninox P2 case in a sheltered place and only the tube should be placed outside. Before powering up the Ninox P2, it is necessary to connect it to the local network (with an Ethernet cable) and to connect the SQM tube (with the standard 3-meter USB-A extension cable provided). The figure below shows how these two cables should be connected to the nanocomputer inside the case (cables go through the flexible openings on the side of the case).



Care must be taken that the cables do not cause stress on the nanocomputer which would eventually move it and risk causing a short circuit.

The box has a standard 220V power cable. As soon as this cable is connected, the Ninox P2 starts (there is no on/off switch). A USB extension cable (with a male connector of type A and a female connector also of type A) of maximum 3 meters (such as the one provided) and of good quality must be used to connect the SQM in the tube to one of the USB ports in the Ninox P2 box (any USB port can be used). Once the extension cable is connected to the USB socket at the base of the tube, the latter must be pushed into the foam in order to protect it from humidity. It is advisable to insulate it well with electrical tape. In addition, the USB extension cable coming out of the tube must be secured to the support, for example with a cable tie, in order to avoid accidental tearing of the USB cable.

Accessing the Ninox P2

The Ninox P2 model is accessible through the wired Ethernet connection (by connecting the Ethernet port inside the box to a local network). Once the Ninox system is powered, you must wait one minute for the initialization to complete. You can then launch a browser and connect to the URL `http://ninox<nnn>/` where <nnn> represents the 3-digit serial number of the Ninox system. For example, you would type the following URL in the browser address bar assuming the Ninox P2 has the number 107: `http://ninox107/`

Another possibility to display the Ninox home page through the local network is to use its IP address. The IP address is allocated by the local network through DHCP and it can of course vary depending on the configurations. For example, if the local network has allocated the IP address 192.168.0.34, the following URL will be used to access the Ninox home page: `http://192.168.0.34/`.

The Ninox P2 system can also be accessed through its embedded Wi-Fi access point. Once the Ninox is powered up, it takes one minute to initialize and have the Wi-Fi hotspot SSID visible. Ninox will broadcast a Wi-Fi network with an SSID having the format `Ninox<nnn>` where <nnn> is a 3-digit identifier, for example 107, which corresponds to the

Ninox serial number visible on the tube. All what is needed then is to get connected to the Ninox Wi-Fi network one wants to access, for instance Ninox107, from a computer, a digital tablet or a smartphone. The password to connect to the Wi-Fi network is:

ninoxstar

Once connected to the Wi-Fi access point, a standard web browser must be used to access the Ninox system using the URL <http://192.168.42.1> (you can also use the URL <http://ninox<nnn>> if the local network supports name resolution).

Caution: if the Ninox P2 is not connected to a wired LAN and is accessed only through its Wi-Fi access point, you might have difficulties to connect to the access point since it does not grant an access to the Internet. This is usually not a problem with a computer, but some smartphone require you confirm that you actually wish to connect to the access point even if it does not provide an access to the Internet. In case of problem, forget the access point in the smartphone settings and connect to it again.

Updating the Geographical Coordinates

► Ninox Management

Password:

In the Ninox home page which is displayed after connecting to the URL, go into the zone « *Ninox Management* », enter the password **goninox** and click the button « *Manage Ninox* ».

Latitude:
 Longitude:
 Elevation (m):
 Name:

In the zone « *Geographical Location* », enter the longitude, latitude and altitude of the location where Ninox is installed. Use the '.' as a decimal separator. The coordinates can be expressed in decimal degrees or in degrees, minutes and seconds (with the 3 symbols ° ' " or blank spaces). Longitude must be positive to the East and latitude must be positive to the North.

Acquisition Activation

Still in the Ninox management page, click the button « *Enable acquisitions* » in the zone « *Acquisitions* ».

Acquisition	Software switch state
Waiting for nighttime	On
GPS	SQM
GPS not activated	SQM device found

Go back to the Ninox home page and check that the acquisition switch is green with the label « *On* » displayed. Check also that the SQM has been correctly detected (message « *SQM Device Found* » in the zone SQM).

Your Ninox is now ready to perform acquisitions as soon as the Sun is set!

Downloading measures

► Measures

Measures: 13232

Download the records from the Ninox database under the form of a ZIP file

Downloading measures is done from the “Ninox Management” area. Downloading the data can take quite a long time depending on the number of measures stored in the database and you must therefore possibly wait for a few minutes before the download is complete.

The data is sent by the Ninox system under the form of a ZIP file which is stored in the *Downloads* folder of the computer or phone used to make the transfer. The downloaded ZIP files contain CSV files with all the measures.

Stopping the Ninox System

► System Management

It is important to properly stop the Ninox system before removing the power supply. In order to do that, go into the Ninox management page (see above) and click the button « *Stop Ninox* ». Confirm the action and wait at least for 20 seconds before removing the power supply.