

# CIMEL CE318-N

# Quick Setup Guide

**Menu structure is on pages 10-12**

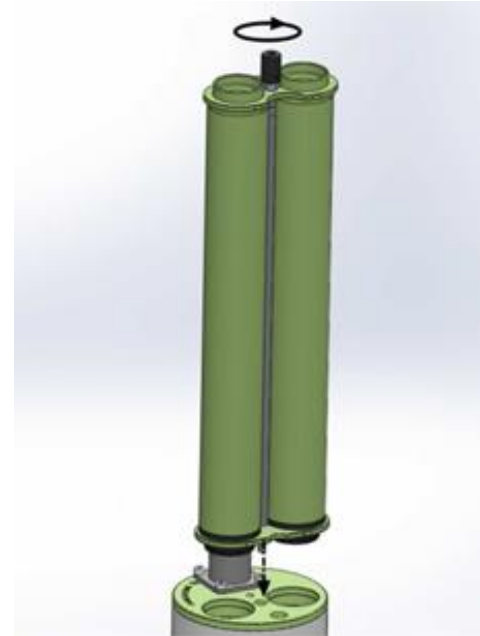
Instructional video

[https://aeronet.gsfc.nasa.gov/new\\_web/training\\_videos/Setup.avi](https://aeronet.gsfc.nasa.gov/new_web/training_videos/Setup.avi)

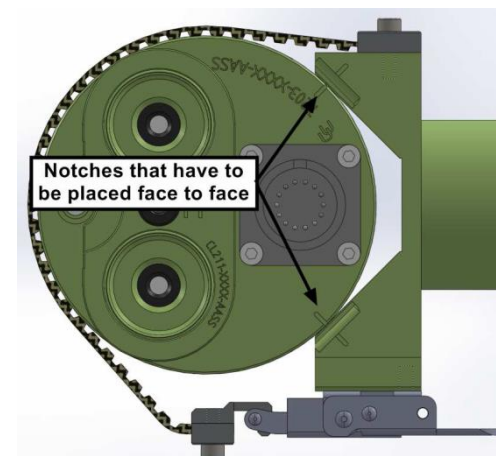
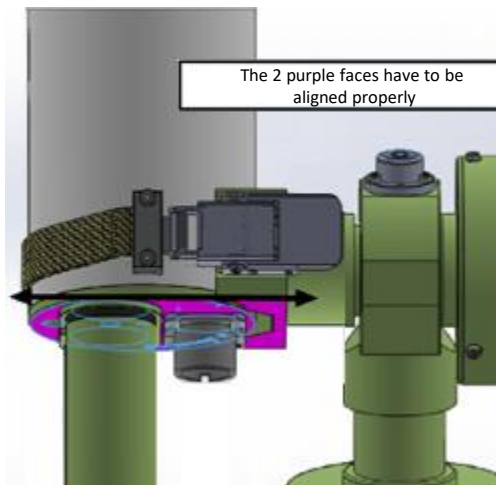
[https://aeronet.gsfc.nasa.gov/new\\_web/training\\_videos/Setup.mov](https://aeronet.gsfc.nasa.gov/new_web/training_videos/Setup.mov)

1. Perform a **“PARK”** scenario in the control box menu. The robot will find its home position

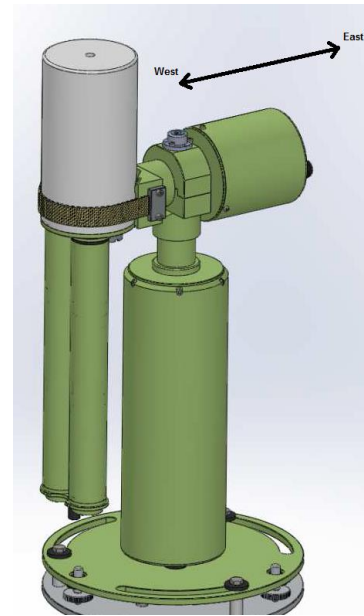
2. Assemble the collimator to the sensor head by tightening the long central threaded rod using pliers (**Do Not Overtighten**). The notch must face the 4 quadrant lens on the sensor head front plate.



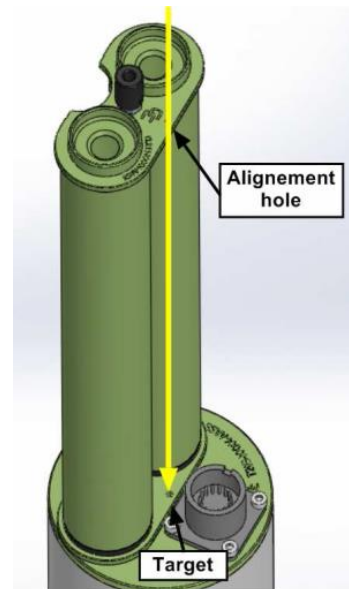
3. Strap the sensor head on the V-shaped support of the robot with the collimator pointing down.



4. Perform a **“PARK”** scenario in the control box menu. The robot will find its home position. The collimator should return to pointing down.

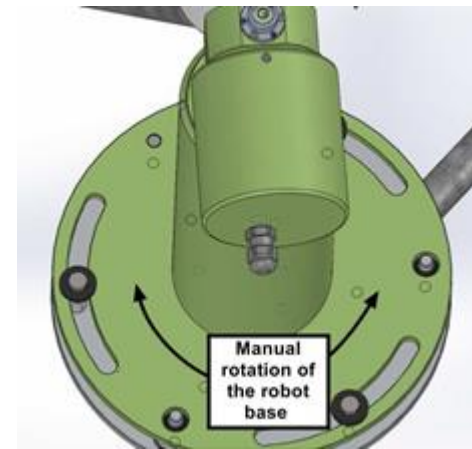
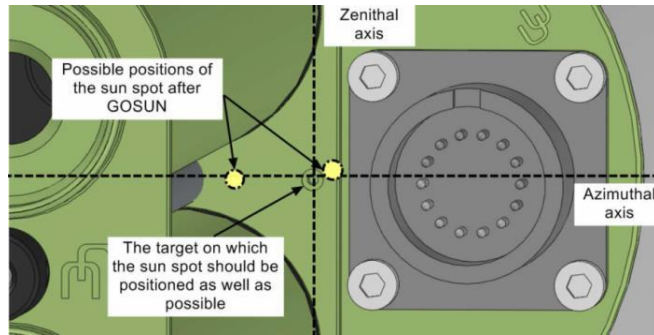


5. Perform a **“GOSUN”** scenario in the control box menu. The sensor head will point to the sun.



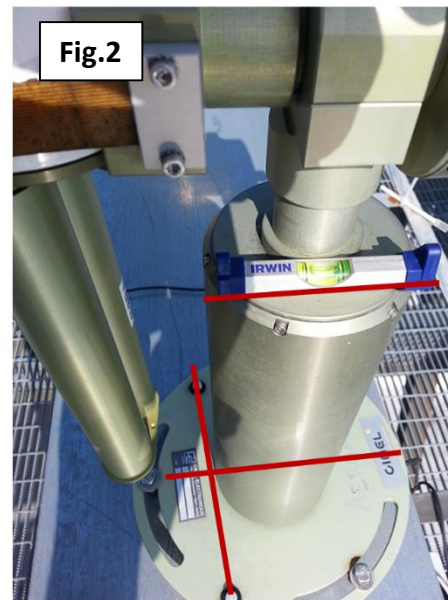
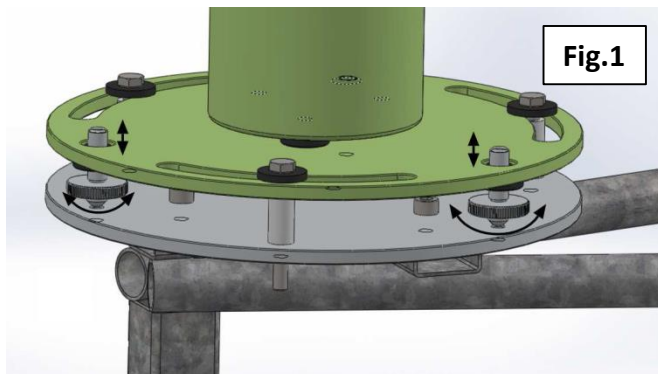
6. After a “GOSUN” scenario rotate the base of the robot until the sun spot lines up to the target.

**Note:** The sun spot may not be centered on the target.



## 7. ROBOT LEVELING:

Without disturbing the sensor head, place the level on the AZ housing. using both the adjusters on the robot base (Fig. 1) adjust the level in the direction that is perpendicular with the adjustable feet (Fig.2), and then adjust the level in the direction that is parallel with the adjustable feet (Fig.3). This will ensure that robot is level in all directions.

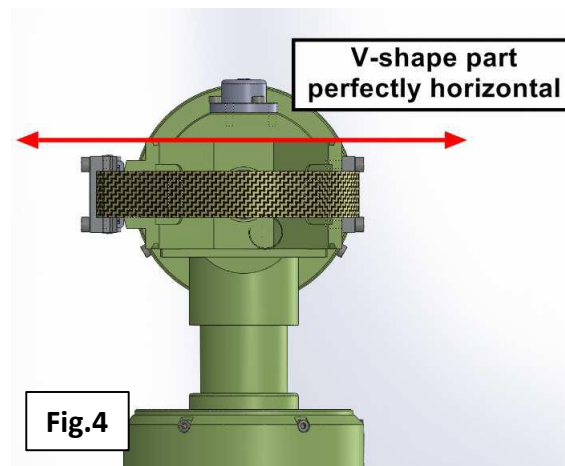
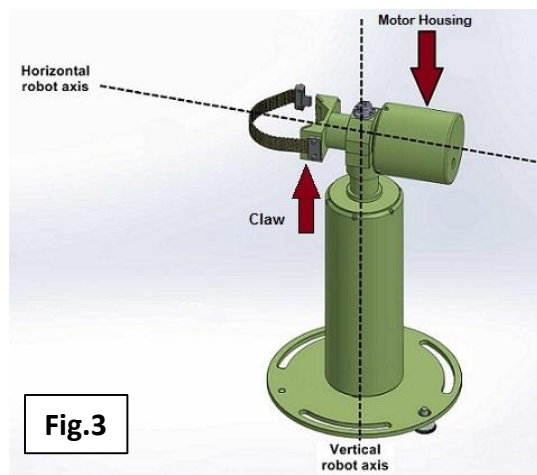
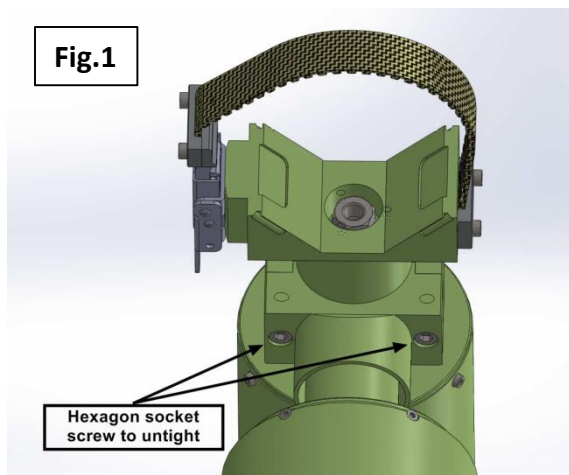


## 8. Robot claw leveling adjustment:

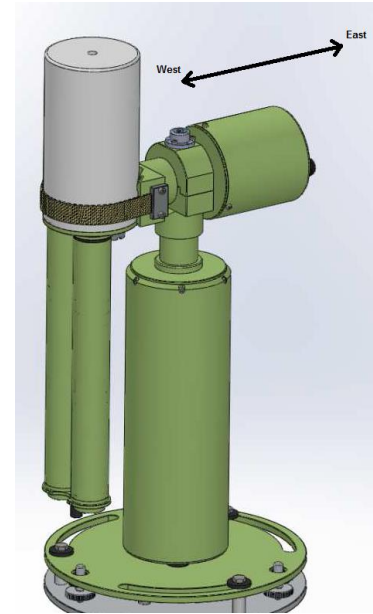
perform a “**PARK**” scenario, it might happen that the V-shape part of the robot is not perfectly horizontal.

If this happens:

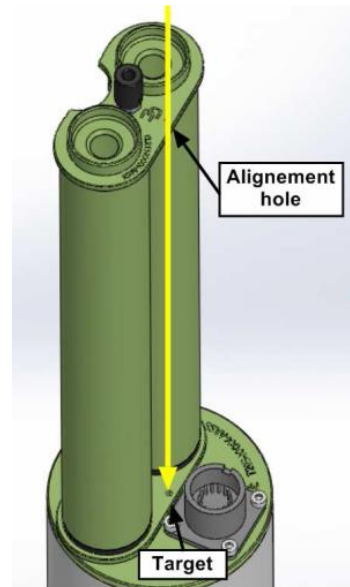
- Place the level on the V-shaped (claw) part of the robot.
- Loosen the 2 hexagon socket screws (Fig.1).
- Rotate the robot horizontal axis by the motor housing so that the V-shaped (claw) part is perfectly horizontal. Check with the level (Fig.2).
- Tighten the screws and check if the V-shape part is perfectly horizontal after a “**PARK**” scenario.



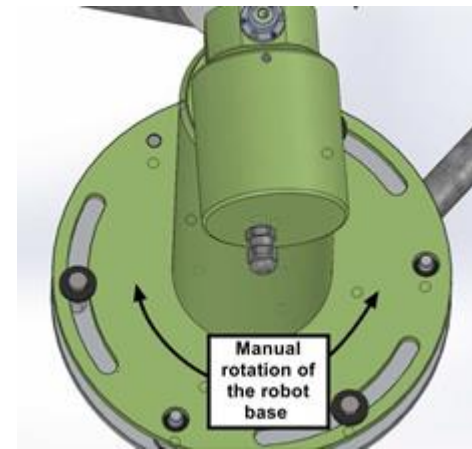
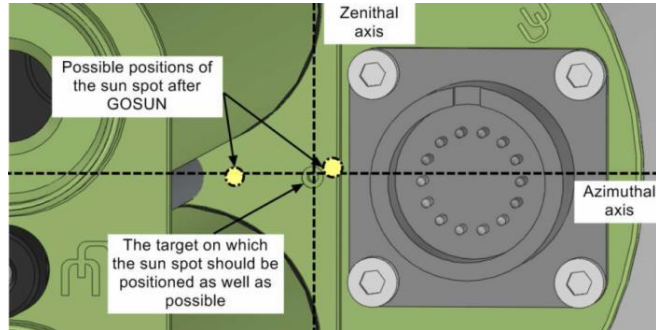
9. Perform a **“PARK”** scenario in the control box menu again. The robot will find its home position. The collimator should return to pointing down.



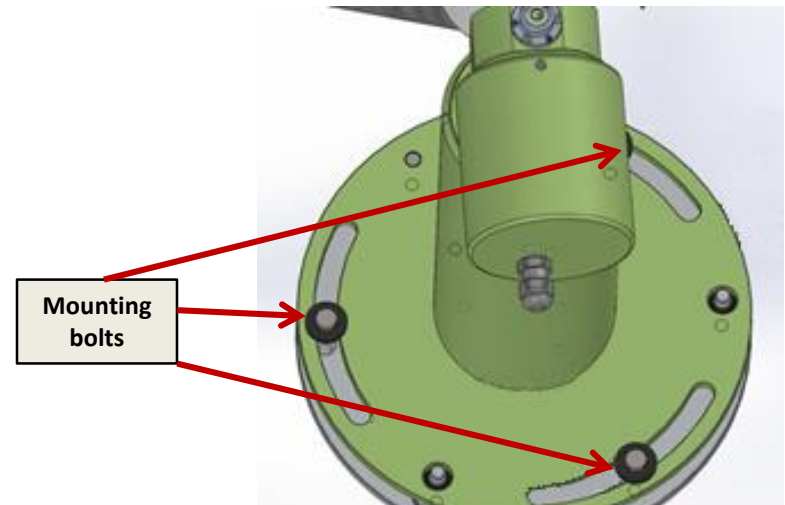
10. Perform a **“GOSUN”** scenario in the control box menu. The sensor head will point to the sun.



**11.** After a “GOSUN” scenario rotate the base of the robot until the sun spot lines up to the target. The sun spot may not be centered on the target but should be closer than 4mm. If the sun spot is further, go back to step 4.



**12.** Tighten the bolts on the robot base to secure the robot without changing its position. Important note: watch out that the level didn't move. If the level moved, go back to step 4 and repeat procedure.



**13.** Connect the sensor head cable and secure the cable to the ZN motor (fig. 1 – 3)



**Fig.1**

Sensor head cable should hang down to the end of collimator



**Fig.2**



**Fig.3**



**14.** Perform a “**PARK**” scenario in the control box menu again. The robot will find its home position.

**15.** Perform a “**GOSUN**” scenario in the control box menu. The sensor head will point to the sun.

**16.** Perform a “**TRACK SUN**” scenario in the Control box menu, The robot will follow the sun. Check that the sun spot is centered on the collimator target at the end of the scenario.

**Note:** If it doesn't track correctly, check and reseal connections

**17.** When the track is done correctly, repeat step 15, 16 and 17 once or twice to validate the photometer behavior.

# PERFORMING A "PARK" SCENARIO

(Cimel has to be in Manual mode in order to do the following operations)

Scenario → Park

1. 

06/25/10	10:27		
PW	MAN	SCN	VIEW

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	----------------------------------	-----------------------
2. 

←	0.0→v	0.0^	
RTN	GO	- +	OFF

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
-----------------------	-----------------------	-----------------------	----------------------------------
3. 

←	0.0→v	0.0^	
RTN	GO	- +	PARK

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	----------------------------------	-----------------------	-----------------------
4. 

activing	PARK
----------	------

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------
5. 

←	0.0→v	0.0^	
RTN	GO	- +	PARK

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------



# PERFORMING A "GOSUN" SCENARIO

(Cimel has to be in Manual mode in order to do the following operations)

Scenario → Go Sun

1. 

06/25/10	10:27		
PW	MAN	SCN	VIEW

<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	----------------------------------	-----------------------
2. 

←	0.0→v	0.0^	
RTN	GO	- +	OFF

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
-----------------------	-----------------------	-----------------------	----------------------------------
3. 

←	0.0→v	0.0^	
RTN	GO	- +	PARK

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
-----------------------	-----------------------	-----------------------	----------------------------------
4. 

←	0.0→v	0.0^	
RTN	GO	- +	GOSUN

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	----------------------------------	-----------------------	-----------------------
5. 

activing	GOSUN
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<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	-----------------------	-----------------------	-----------------------
6. 

←	-0.1→v	-0.1^	
RTN	GO	- +	GOSUN

<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
-----------------------	----------------------------------	-----------------------	-----------------------



# PERFORMING A "TRACK" SCENARIO

(Cimel has to be in Manual mode in order to do the following operations)

Scenario → Track

1. 

06/25/10	10:27		
PW	MAN	SCN	VIEW

○ ○ ● ○
2. 

←	0.0→v	0.0^	
RTN	GO	-	+

○ ○ ○ ●
3. 

←	0.0→v	0.0^	
RTN	GO	-	+

○ ○ ○ ●
4. 

←	0.0→v	0.0^	
RTN	GO	-	+

○ ○ ○ ●
5. 

←	0.0→v	0.0^	
RTN	GO	-	+

○ ● ○ ○
6. 

activing	TRACK		
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○ ○ ○ ○
7. 

←	0.0→v	0.0^	
RTN	GO	-	+

○ ○ ● ○

