

COSBER



USER MANUAL

Digital Headlight Tester

COSBER C-DHT-Series

INDEX

1	Introduction.....	2
2	Overview	3
2.1	Display	3
2.2	Main functions	3
2.3	Power supply.....	4
3	Placing	5
3.1	Vehicle preparation.....	5
3.2	Positioning in the length axis of the vehicle.....	5
3.3	Positioning the optical block in front of the headlamp.....	6
3.4	Visual positioning	8
4	Control.....	8
4.1	Automatic storage of the pitch angle or forward tilt	8
4.2	Controlling dipped beam lamps	10
4.3	Controlling the fog lamps	11
4.4	Controlling high beam lamps	11
4.5	Test result.....	12
5	Configuration.....	13
6	Maintenance	14
7	Technical data	15
8	Disposal	16
9	CE Declaration of Conformity	17
10	Notes	18

1 Introduction

Thank you for having purchased the C-DHT62 digital headlight tester. This system, which fits with camera technology developed by COSBER, is an autonomous control and adjustment system adapted to all types of headlamps.

Please read this manual carefully before using the appliances to obtain the best results. Keep it in a safe place to be able to consult it if necessary.



REMARK!

THE INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. COSBER CANNOT BE HELD LIABLE FOR DIRECT OR INDIRECT DAMAGE OF ANY TYPE, NOR FOR LOSSES OR COSTS INCURRED THROUGH NON-COMPLIANT USE.

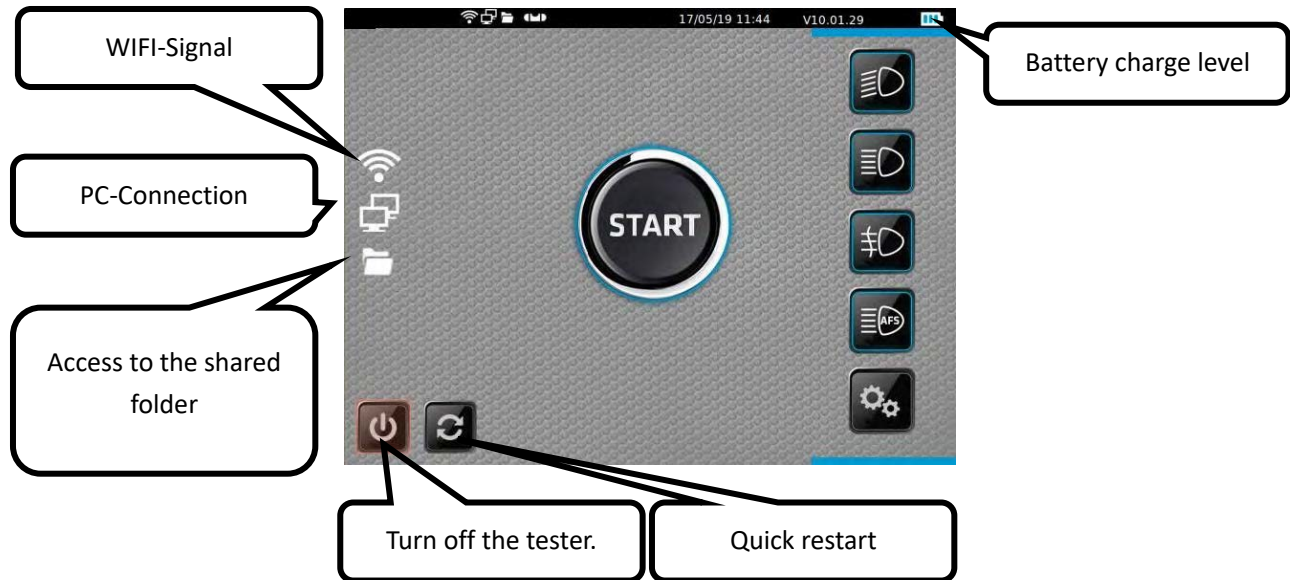


WARNING!

**THE LENS OF THE SYSTEM MUST NEVER BE EXPOSED TO SUNLIGHT.
THE CONCENTRATION OF SUNLIGHT CAN CAUSE HEATING AND A RISK OF DAMAGING THE EQUIPMENT AND/OR BURNS.**

2 Overview

2.1 Display



For more precise use it is recommended to use the stylus.



2.2 Main functions



Control

The control menu used to check the headlamps on all types of vehicles depending on current legislation. The appliance will guide you through complete control of the different vehicle lamps.



Dipped beam

It used to accurately adjust the dipped-beam headlamps: dip angle, lateral angle, and light intensity measurement.



High beam

It used to adjust the high beam: dip angle, lateral angle, and light intensity measurement.



Fog lamps

It used to adjust the fog lamps: dip angle and light intensity measurement.



AFS calibration

It is used to calibrate the AFS function. A specific diagnostic tool required to interact with the car system.



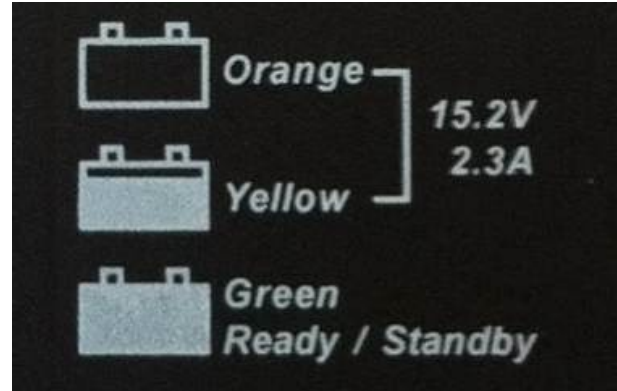
Configuration

This menu gives access to sub-menus used to configure the different headlight tester functions, such as the printer mode, the date and time etc.

2.3 Power supply

The headlight tester operates on lithium-ion batteries. It has a 10-hour autonomy in continuous operation.

The charger supplied with the appliance has a battery load indicator:



REMARK!

CHARGER:

**THE CONNECTION POINT IS THE ADAPTER BLOCK WHICH MUST REMAIN ACCESSIBLE.
A CHARGER DIFFERENT FROM THE ORIGINALLY SUPPLIED CHARGER MUST NOT USE UNDER
ANY CIRCUMSTANCES.**



BATTERIES:

THE REPLACEMENT OF THE BATTERIES MUST BE BY ORIGINAL PARTS.

DISPOSAL OF THE BATTERIES:

REMARK! DISPOSE OF THE BATTERIES IN COMPLIANCE WITH THE LAWS AND REGULATIONS APPLICABLE TO YOUR COUNTRY. DO NOT DISPOSE OF USED BATTERIES IN THE DUSTBIN: IN MOST COUNTRIES THE INCINERATION OF BATTERIES PROHIBITED, AS ARE THEIR BURIAL OR DISPOSAL IN PUBLIC LANDFILLS.

PLEASE CONTACT THE COMPETENT AUTHORITIES FOR MORE INFORMATION ON THE MEASURES ADOPTED BY YOUR COUNTRY TO COLLECT, RECYCLE AND DESTROY USED BATTERIES.

3 Placing

3.1 Vehicle preparation

Firstly, check the tire pressure. If the pressure is not correct, either inflate or deflate to the recommended pressure within the - 0 bar and + 0.3 bar limit. In all cases, the pressure must balance.

For vehicles fitted with discharge lamps, operate the windscreen wiper system when the lamps are lit.

Move the vehicle forward at low speed, gently stop the vehicle in the lamp checking zone with the wheels straight. Otherwise (for example after an axle check), the vehicle should advance the equivalent of one wheel circumference (without constraints on the axles) and then gently stopped.

For vehicles with non-traditional suspension (e.g. servo suspension), the engine must be started before carrying out any measurements, and the vehicle must be stabilized with the engine running.

Put on the handbrake (progressively for manually controlled brakes) or, for automatic models, place the gear stick in the P position (Park).

When the vehicle is fitted with a manual lamp adjustment system, either inside the vehicle or on the lamps, place the system in the position set by the manufacturer depending on the load. If the system is not operational, the control is carried out in the current configuration.

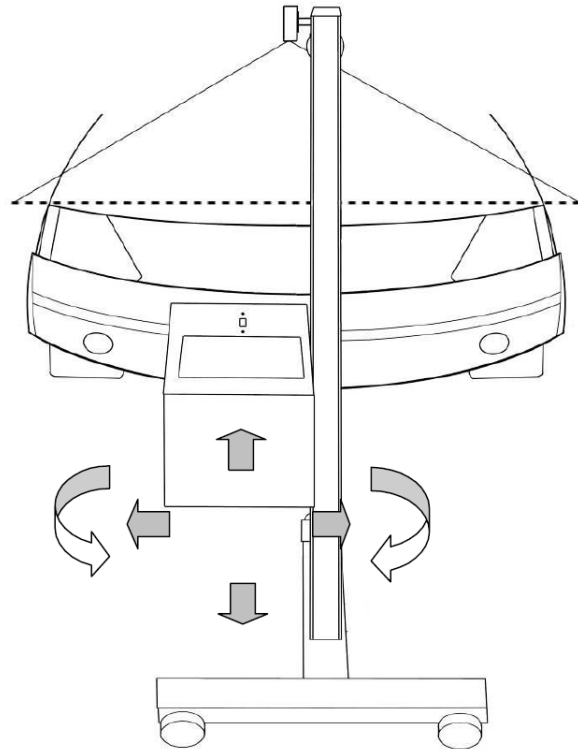
3.2 Positioning in the length axis of the vehicle

1) Bring the headlight tester in front of the center of the vehicle, such that the lens of the adjustment system is located between 20 and 80 cm in front of each lamp for the measurement.

2) Identify two fixed points on the vehicle, symmetrically placed in relationship to the central axis (example: upper left and right corners of the windscreen, angles of the bonnet, windscreen wiper nozzles if their base is not deformed).

3) Pivot the box to place the laser line on the selected fixed points of the vehicle.

4) You can begin the control procedure (or adjustment). During this phase you will move the headlight tester in front of the headlamp to check (or adjusted) while maintaining the angular position thanks to the laser.



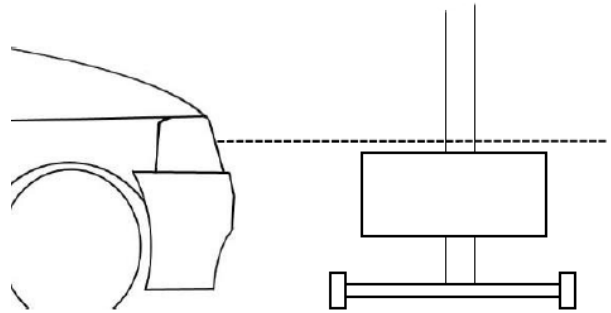
WARNING!
LASER
RADIATION

- **Class 2M laser device**
- **Do not look directly into the beam nor directly observe using "magnifying" optical instruments.**
- **The vehicle must be empty of occupants when the laser beam is being adjusted.**
- **Laser adjustment must use momentarily.**

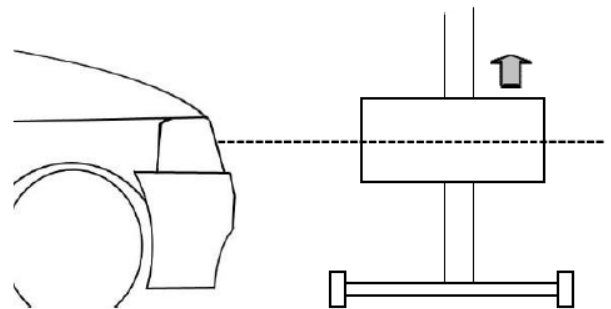
3.3 Positioning the optical block in front of the headlamp

Electronic positioning assistance will help you when positioning the optical block in front of the headlamps. It automatically activated before each angle measurement for passing beams. The indications displayed on the screen indicate in which direction the box is to be moved. When the optimum position is reached "Ok" is displayed on the screen and the appliance automatically switches to the next phase.

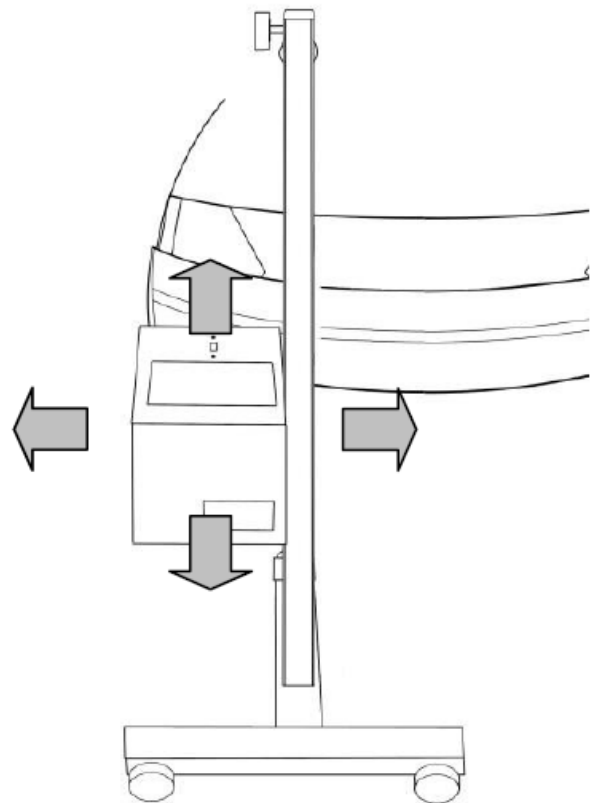
1) Place the headlamp adjustment system in front of the headlamp to be checked, by visually placing it below the center of the headlamp.



2) Follow the instructions on the screen to place the optical block at the correct height.



3) Finally, place the optical block accurately by following the instructions until "Ok" displayed on the screen.



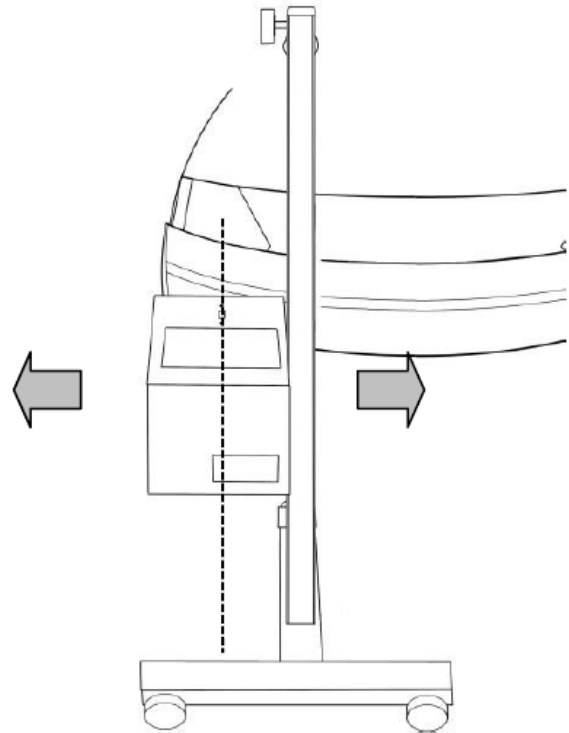
WARNING!

DURING THIS OPERATION MAKE SURE THAT THE FRONT OF THE APPLIANCE IS NOT EXPOSED TO A PARASITE EXTERNAL LIGHT SOURCE (SUNLIGHT, SPOTLIGHT), THIS COULD CAUSE INCORRECT POSITIONING.

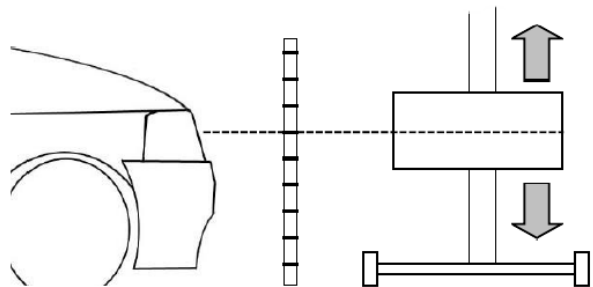
3.4 Visual positioning

If you do not have the electronic assistance, manual positioning is carried out by placing the lens and the center of the headlamp opposite each other.

- 1) First place the optical block laterally in front of the headlamp



- 2) Measure the height on the center of the headlamp and position the center of the lens at this height.



4 Control



In the control menu , the headlight tester will guide you through the entire vehicle headlamp control process.

4.1 Automatic storage of the pitch angle or forward tilt

In this step you need to enter the default value into the device

The value to be entered for the forward tilt is usually on the headlight.

If this is not the case, please use the manufacturer's default values.



Specify value

GL: a) Car wheelbase <2.5m

-1,30 [Headlight symbol] [Up/Down arrows]

-2,00 [Fog light symbol] [Up/Down arrows]

Type of vehicle		Headlamp adjustment dimension "e"		Tolerances			
				Motor vehicles by			
				No. 1 and 2 – [%] No. 3 and 4 – [cm]			
				Ab. Deviation from headlight – adjustment dimension			
		Low beam and main beam headlamps	Fog headlamps	Top	Down	Left	Right
1	Motor vehicles whose headlamps approved according to EC/ECE	Adjustment dimension specified on the vehicle	Adjustment dimension specified on the vehicle	Tolerances as in No. 2			
2	Other motor vehicles – height of the center of the headlamp above the installation surface (H) < 140cm above the installation surface						
	a) Car – small and micro car wheelbase < 2.5m	1,2	2,0	0,2	0,8	0,5	
	b) Car, car station wagon	1,2	2,0				
	c) Motor vehicles with level-controlled suspension or automatic inclination compensation of the light beam	1,0	1,0	0,5	0,5		
	(d) multi-axle tractors and machinery						

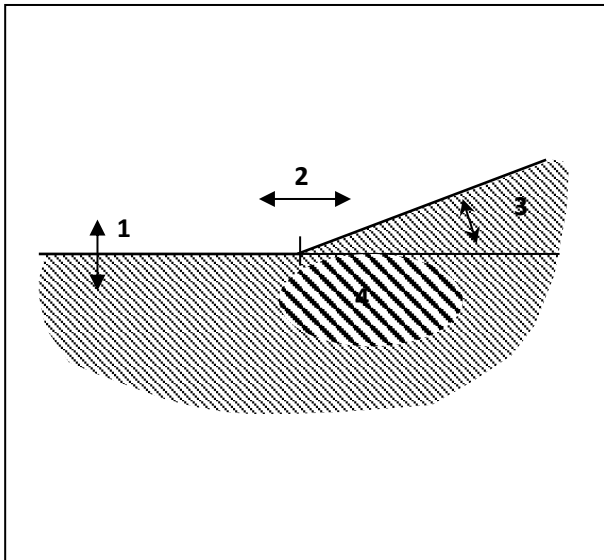
	(e) single-track motor vehicles and multi-track motor vehicles with a headlamp f) Trucks with horizontal loading area					
	g) Trucks with rear loading area (h) tractors for semi-trailers (i) Buses and coaches	Excluding motor vehicles according to No. 2c	3,0	4,0	1,0	0,5
3	Other motor vehicles – height of the center of the headlamp above the footprint (H) > 140 cm above the footprint (considering the table in Appendix 3). Also applies to motor vehicles < 40 km/h		$H/3^2$	$H/3+7^2$	10	5
4	Single-axle tractors or machinery		$2 \times N^3$	20		

4.2 Controlling dipped beam lamps

During this step you will control the left and right-side lamps of the vehicle.

First, you must position the headlight tester in front of the headlamp to control. (See chapter III).

The following example corresponds to the measurement of the left dipped beam lamp. The measured values displayed in red indicate a value that is outside the statutory limits.



☒

Cut-off: (%)	-1.6
Horizontal: (%)	1.9
Angle: (°)	12
Intensity: (lx)	102



You can view the headlight image by clicking the button.

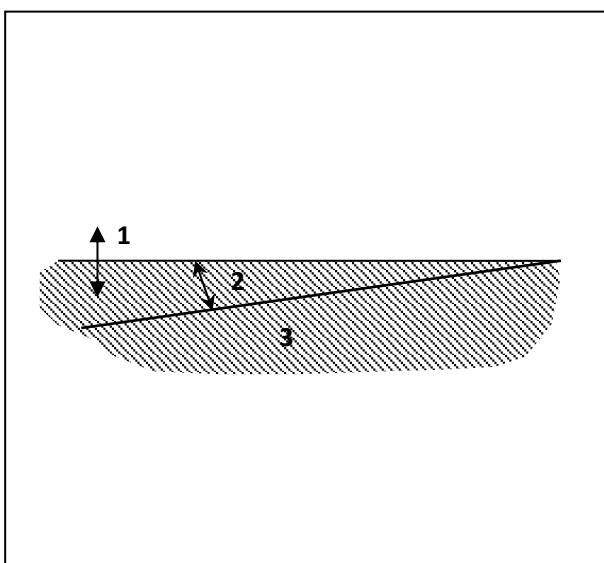


You can repeat the positioning of the headlight tester by button.

4.3 Controlling the fog lamps

During this step you will control the left and right-side fog lamps of the vehicle.

First, you must position the C-DHT62 in front of the headlamp to be controlled. (See chapter III).



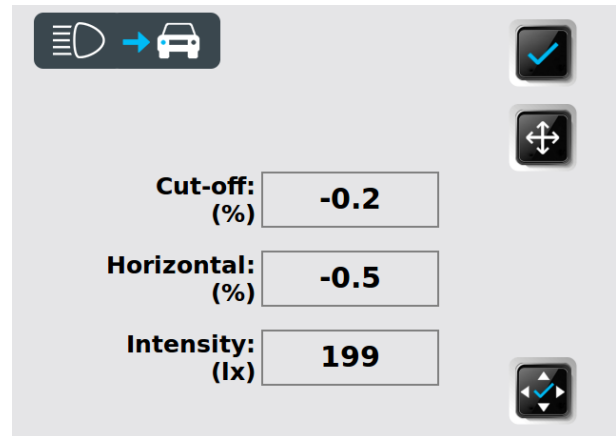
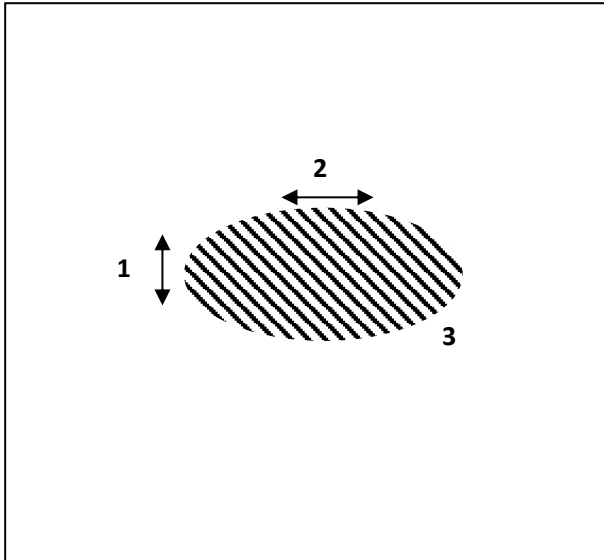
☒

Cut-off: (%)	-2.5
Angle: (°)	2
Intensity: (lx)	100

4.4 Controlling high beam lamps

During this step you will control the left and right-side high beam lamps of the vehicle.

First, you must position the headlight tester in front of the headlamp to control. (See chapter III).



4.5 Test result

In this step the appliance indicates the result of the test. You can see the results for each type of headlamp by clicking on one of the "result" boxes.



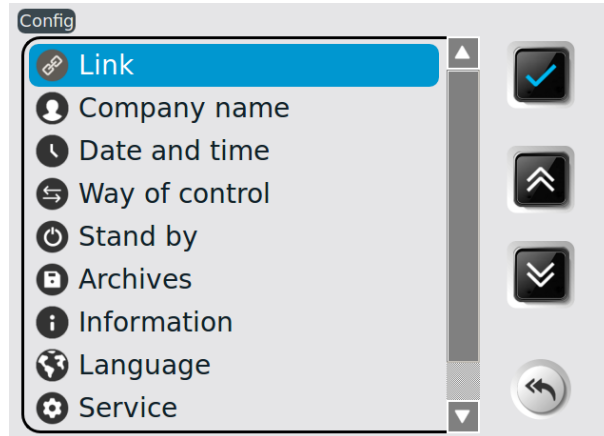
The data sent by PC connection.

The data is printed.

The data is sent to a "pdf" file on a USB stick.

5 Configuration

The configuration menu gives access to different sub-menus used to configure the appliance.



Link (Connection)

This menu has secure access and used to select the method used to send the data, configure the IT link and printing.

Company name

This menu used to record the name, address, and other information about your company. This data will then appear on the header of your printed tickets.

Date and time

This menu used to set the date and time.

Way of control

This menu used to choose in which order the headlamps checked in the control procedure. Right headlamp first then left (right - left) and vice versa (left - right).

Stand by

This menu used to configure the time after which the appliance will shut down automatically when not active.

Archives

This menu enables the results to automatically archive in the device. You can also save archives to a USB stick.

Information

This menu gives access to the following data:

- Model of appliances
- Software version
- Appliance serial number
- CPU card serial number
- Approval number
- Battery level
- Power of the WIFI signal

Language

This menu is used to select the language used by the appliance.

Service

This menu has secure access and is only for use by approved maintenance companies.

6 Maintenance

Lens maintenance:

- Avoid touching the lens to avoid dirtying it.
- Clean when necessary (using soapy water or a window cleaning product)
- If your lens cracked or has too many scratches, contact the service department of COSBER to replace the lens.

Battery maintenance:

- If the autonomy of your appliance is significantly reduced, contact the service department of COSBER to replace the batteries.

Mechanical checks:

- Position the lamp adjustment system at the spirit level calibration reference point indicated by your maintenance company when the appliance is installed, check that the bubble on the spirit level remains centered whatever the position of the optical block.
- If the bubble is significantly off center, contact the service department of COSBER to check the condition and calibration of your appliance.

7 Technical data

Specifications	
Weight	25kg
Measurements (LxWxH)	590x670x1900mm
Operating time by fully charged battery	approx. 15 hours in Standby-Mode
Charging time	approx. 4 hours (with automatic stop)

Operating conditions	
Batteries	Rechargeable Lithium-ion batteries
Charger power supply	15.2V 2.3A
Surrounding temperature	from 5°C to 40°C
Storage temperature	from -15°C to +55°C
Relative humidity	98% (non-condensed)

Measurement of the angle (headlamp dipped angle) in %	
Dip angle measurement range	from +6 to -6%
Lateral measurement range	from +10 to -10%
Accuracy	+/- 0.2%

Intensity measurement in Candela	
Measurement range	0 to 125kcd
Accuracy	10%

Non-Angle Compensation	
Correction range	from +1.5 to -1.5%
side measuring range	from +10 to -10%
Accuracy	+/- 0.2%

8 Disposal



THIS SYMBOL INDICATES THAT, IN COMPLIANCE WITH THE WEEE DIRECTIVE (2002/96/EC) AND WITH YOUR LOCAL REGULATIONS, THIS PRODUCT MUST NOT DISPOSED OF WITH HOUSEHOLD WASTE. IT MUST BE DEPOSITED IN A ZONE SPECIFIC TO THIS EFFECT, FOR EXAMPLE AN ELECTRIC AND ELECTRONIC WASTE OFFICIAL COLLECTION CENTER (EEE), IN ORDER TO BE RECYCLED, OR AT AN APPROVED PRODUCT EXCHANGE POINT WHICH IS ACCESSIBLE WHEN PURCHASING A NEW PRODUCT OF THE SAME TYPE AS THE PRODUCT BEING DISPOSED OF. ANY FAILURES TO RESPECT THESE RECOMMENDATIONS ON THE DISPOSAL OF THIS TYPE OF WASTE CAN HAVE NEGATIVE EFFECTS ON THE ENVIRONMENT AND PUBLIC HEALTH BECAUSE THESE ELECTRIC AND ELECTRONIC PRODUCTS CONTAIN POTENTIALLY DANGEROUS SUBSTANCES. IN PARALLEL, YOUR COMPLETE COLLABORATION IN THE CORRECT DISPOSAL OF THIS PRODUCT WILL CONTRIBUTE TO A BETTER USE OF NATURAL RESOURCES. FOR MORE INFORMATION ON EQUIPMENT COLLECTION POINTS FOR RECYCLING, CONTACT YOUR TOWN HALL, THE WASTE COLLECTION DEPARTMENT, THE APPROVED WEEE PLAN OR THE HOUSEHOLD WASTE REMOVAL SERVICE.

9 CE Declaration of Conformity

CE Declaration of Conformity

Low Voltage Directive: 2014/35/EU

EMC Directive: 2014/30/EU

RED Directive: 2014/53/EU

Product Name: Headlight test device

Model: C-DHT60/62

Manufacturer: Cosber GmbH, Bretonischer Ring 12, 85630 Grasbrunn

The above-mentioned product fulfills the relevant harmonization legislation of the European Union. This declaration of conformity is issued under the sole responsibility of the manufacturer.

The product has been assessed by the application of the following standards:
EN 61010-1:2011; EN 61326-1:2013; EN 300 328-2:2015

Authorized signatory

ppa. 
Alexander Jazeschen
General Manager & HQ IPM Director
Date: 28.10.2021

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