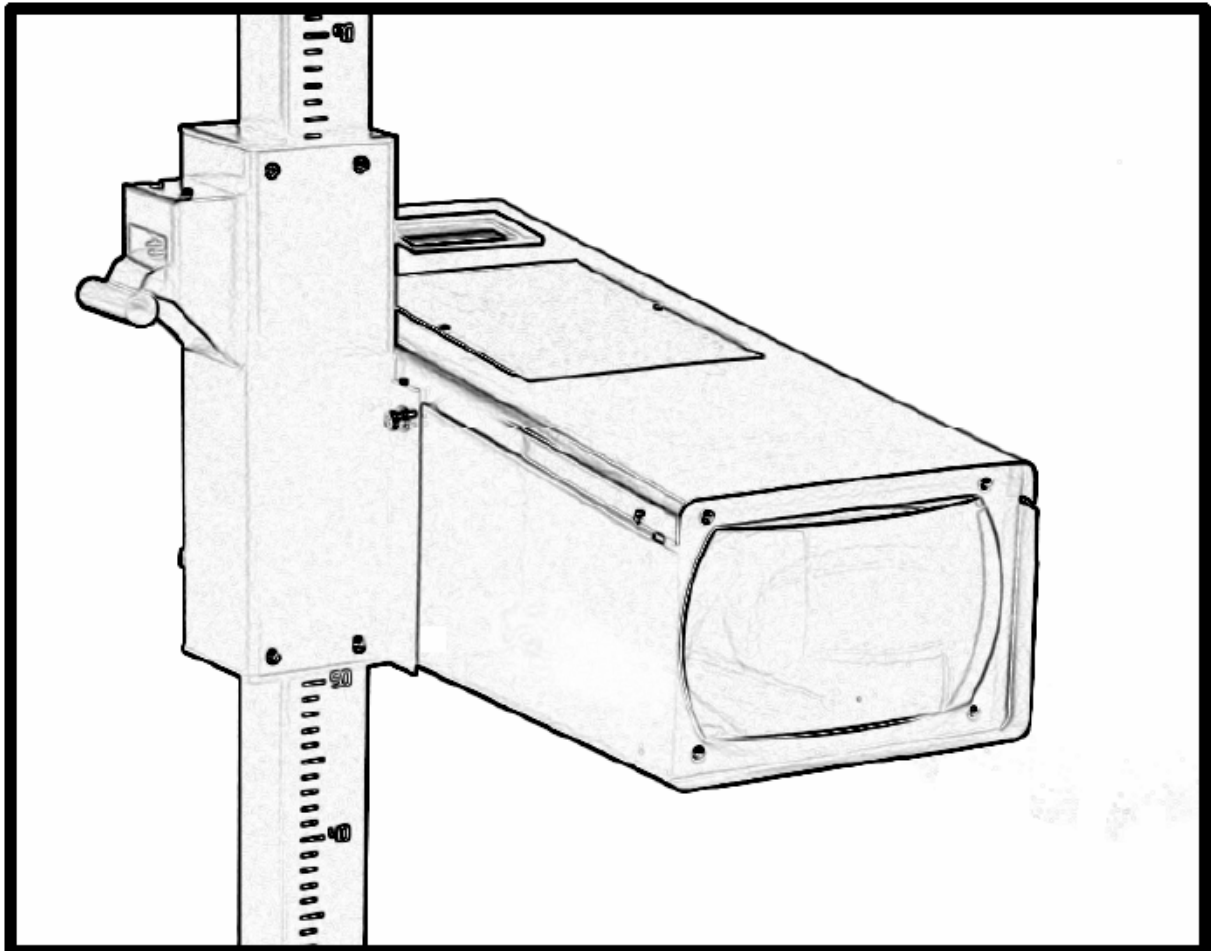




HEADLIGHT BEAMSETTER USAGE GUIDE



SLA-L80N
SLA-D200
SLA-T200wP
SLA-TPRO





Art. 80

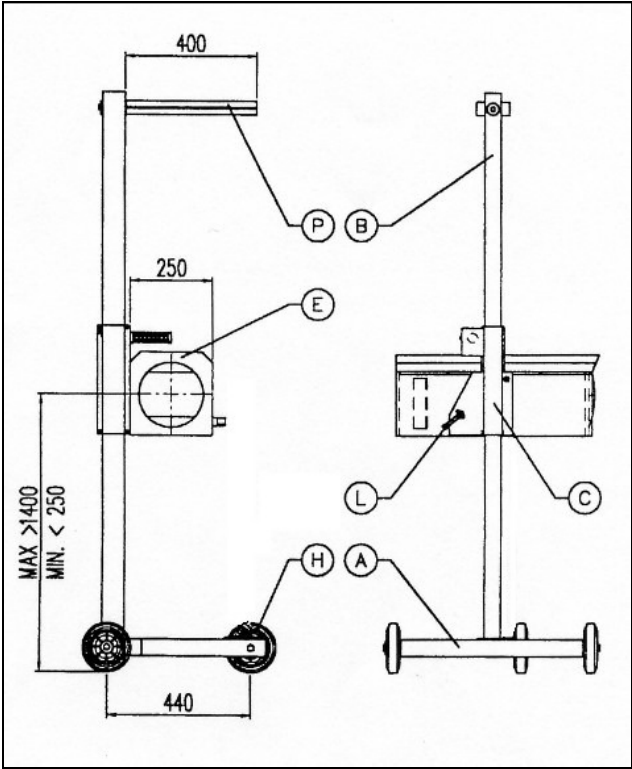


Art. 200

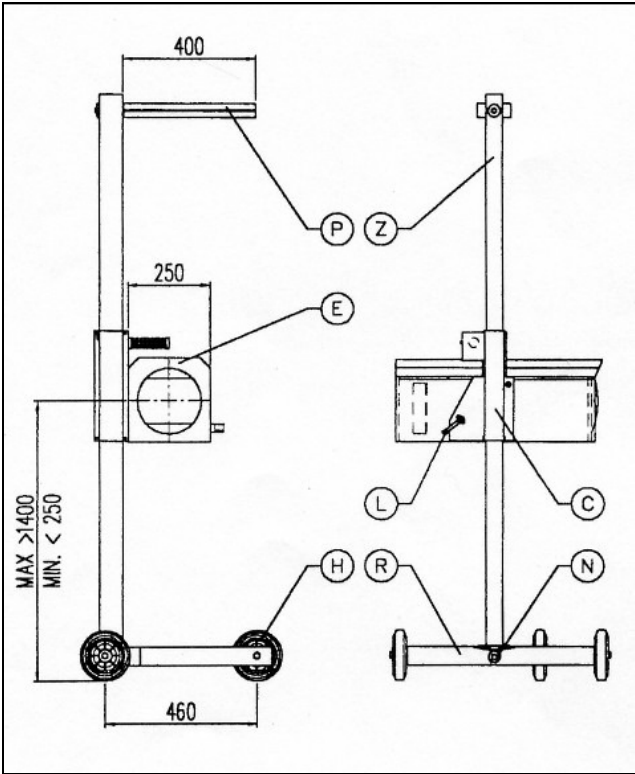


Art. 200/R

Fig.1 Assembling



Art. 80



Art.200

Fig. 3

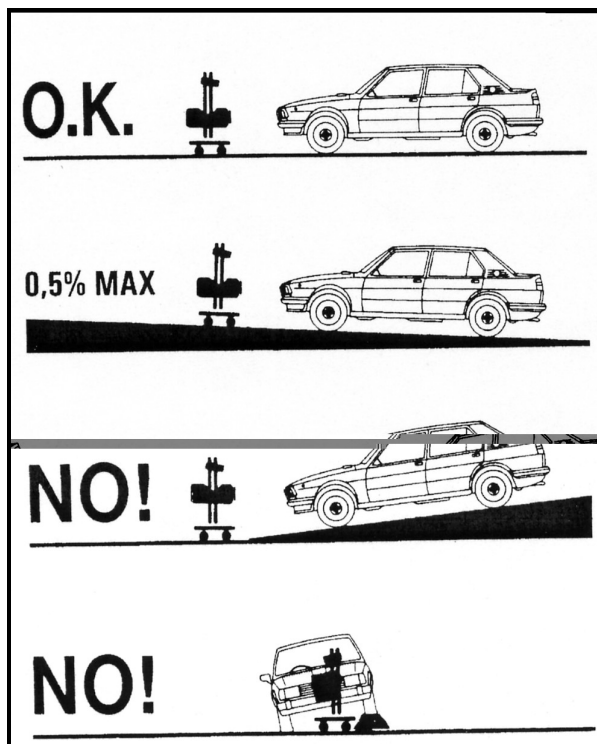
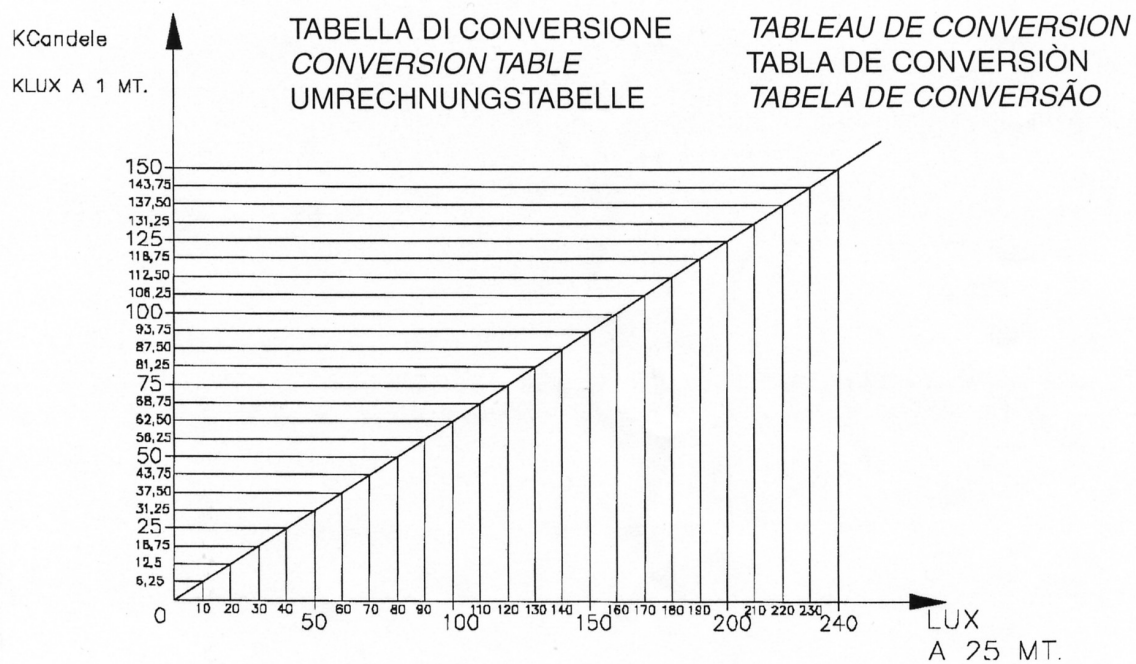


Fig.2
WORKING SURFACE



Fig.4
OPTICAL POSITIONING

Fig. 7
ANALOG LUXMETER



Fig. 8
DIGITAL LUXMETER



| | |
|---|--------|
| GENERAL STANDARDS (SAFETY)..... | PAGE 6 |
| DESCRIPTION OF THE EQUIPMENT-TECHNICAL FEATURES | 6 |
| PACKING..... | 6 |
| ASSEMBLY..... | 7 |
| WORK SURFACE..... | 7 |
| PREPARATION OF THE VEHICLE..... | 7 |
| OPTICAL POSITIONING | 7 |
| THE INTERNAL PANEL | 8 |
| TEST ON DIPPED HEADLIGHTS..... | 8 |
| SYMMETRICAL HEADLIGHTS..... | 9 |
| MAIN INDEPENDENT HEADLIGHTS | 9 |
| LUXMETER READ-OUT..... | 9 |
| CHECKING THE LIGHT INTENSITY OF THE HEADLIGHTS..... | 10 |
| OTHER ADJUSTMENTS AND CALIBRATIONS..... | 10 |
| CLEANING..... | 10 |
| DEMOLITION AND DISPOSAL..... | 10 |
| CHECKING MOPEDS AND MOTORCYCLES..... | 11 |

GENERAL STANDARDS

BEFORE USING THE HEADLIGHT BEAM SETTER, READ CAREFULLY THE INSTRUCTIONS CONTAINED IN THIS MANUAL. DO NOT ALLOW THAT NON-SKILLED STAFF USE THE EQUIPMENT AND CAUSE DAMAGE ON IT. THE WORKING ROOM MUST BE DRY, SUFFICIENTLY BRIGHT AND WELL-AIRED. IN ANY CASE, A SUITABLE EXHAUST GAS SUCTION SYSTEM MUST BE AVAILABLE BECAUSE SOME TESTS HAVE TO BE CARRIED OUT WITH RUNNING ENGINES. ANY ACCIDENTAL INHALATION OF CARBON MONOXIDE CAN CAUSE SERIOUS DAMAGES TO THE HUMAN BODY, SOMETIMES WITH LETHAL EFFECTS. INSERT THE HANDBRAKE BEFORE CARRYING OUT TESTS ON A VEHICLE. FURTHER, TO AVOID POSSIBLE READING MISTAKES, THE HEADLIGHT BEAM SETTER SHOULD NOT BE USED IN FULL SUNLIGHT, OR IN ANY ROOM SUBJECT TO SUDDEN TEMPERATURE CHANGES OR VIBRATION.

DESCRIPTION OF THE EQUIPMENT

HEADLIGHT

BEAM SETTER: equipment for checking headlights on automobiles, motorcycles and lorries in general;
 with fixed column art. Logic 50 Logic 80 Logic 100 and Digit 100;
 with tilt-back column art. Logic 200 and Digit 200
 tracking with mirror viewer on all models
 with analog luxmeter art. Logic 50 Logic 80 Logic 100 and Logic 200
 with digital luxmeter art. Digit 100 and Digit 200
 on rail art. Logic 200/R and Digit 200/R

TECHNICAL FEATURES:

HEIGHT: cm 177 on all models
WIDTH: cm 61 on all models
LENGTH: cm 65 on all models
WEIGHT: on all models: 32 Kg to 37 Kg
PACKING: cm 174 x 64 x 33
PACKING WEIGHT: 4,5 Kg
MIN. OPERATING HEIGHT: cm 24 on all models
MAX. OPERATING HEIGHT: cm 141 on all models
POWER SUPPLY: by means of the beam of the headlight, no battery: all models with analog luxmeter.
POWER SUPPLY: with a 9V battery, all models with digital luxmeter
WEIGHT OF ELECTRICAL/ELECTRONIC COMPONENTS: <1 Kg.
 The headlight beam setter is supplied packed in a recycled cardboard box.
 For assembling the equipment, please refer to the "ASSEMBLY" section.

ASSEMBLY (see fig. 1)

ART. Logic 50 Logic 80 Logic 100 and Digit 100:

- 1 Fix the column B on the base A using the four M8 screws.
- 2 Fix the side of the optical box E on the vertical sliding system C: insert the M8 screw into the upper hole introduce the clutch lever into the lower slot
- 3 Insert the threaded pin of P viewer into the hole on column B

A BASE
B COLUMN
C VERTICAL SLIDING SYSTEM
P MIRROR VIEWER
E OPTICAL BOX
F
G
H WHEELS
L CLUTCH LEVER
N

Art. Logic 200 and Digit 200:

- 1 Fix the column Z to the base R using the four M8 screws inserted on the rotating support of the base
- 2 insert the threaded pin of P viewer into the hole on column Z
- 3 Fix the side of the optical box E to the vertical sliding system C: introduce the M8 screw in the upper hole insert the clutch lever L in the lower slot

R BASE
Z COLUMN
C VERTICAL SLIDING SYSTEM
P MIRROR VIEWER
E OPTICAL BOX
F
H WHEELS
L CLUTCH LEVER
N BRAKE

WORKING SURFACE (see fig. 2)

When testing the headlights, the floor must be as flat as possible. Should that not be possible, both the headlight beam setter and the vehicle must be placed at least on a relatively uniform surface, but with a maximum 0,5% slope. We strongly recommend not to carry out tests on headlights if the ground is not perfectly regular and flat because their adjustment cannot be precise.

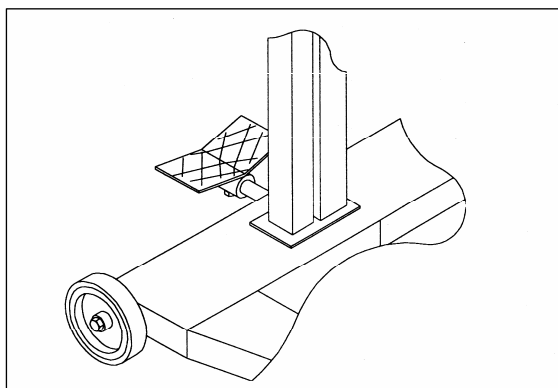
PREPARATION OF THE VEHICLE

Make sure that the headlights are clean and dry. If the vehicle is equipped with an headlights adjusting system inside the cabin, set it on "0". Remove anything that could interfere with the correct attitude of the vehicle: mud, snow, ice, etc. Straighten the car's wheels. Put a 70 Kg load on the seats. Make sure that the vehicle chassis has no distortions. Check that the tyre pressure is correct. Start the engine and leave it running while carrying out the tests. In case of vehicles with pneumatic suspensions start the engine 5 minutes before carrying out the tests, and leave it running during test procedure.

OPTICAL POSITIONING (see fig. 4)

Place the headlight beam setter in front of the car, at a distance of 20 to 50 cm.

- A) Look through the viewer and search for a horizontal detail on the car or two mutually symmetrical details (for example, the upper part of the windscreen or the bonnet). Check that the viewer line corresponds with these lines so that the whole equipment is parallel with the car. If not, slightly turn the headlight beam setter until this result is achieved.
- B) Measure the height from the ground to the center of the headlight and bring the optical box to the matching height referring to the graduated scale on the cover. The upper part of the sliding system should be used as a reference.
E.g.: if the height from the ground to the center of the headlight is 80 cm, you must bring must the vertical sliding system onto the 80 notch. A tolerance of plus or minus 3 cm is allowed.

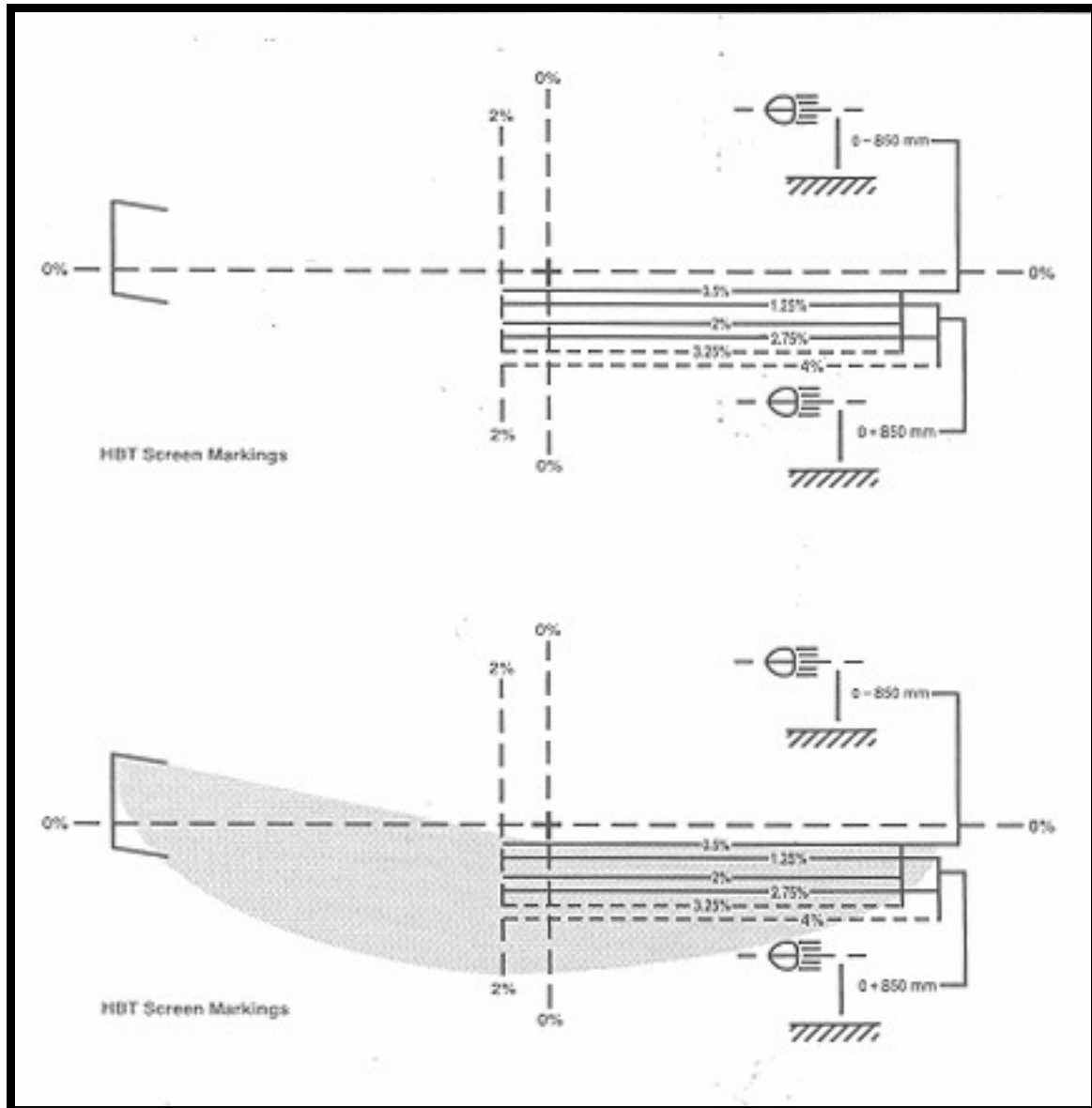


Art. 200 is equipped with swivel column and brake. This allows to easily rotate the equipment and Lock it on the desired point. The brake is locked by pushing the pedal on the base. The headlight beam setter on rail must be fitted with swivel column. (art. 200/R)

INTERNAL PANEL FOR UNITED KINGDOM

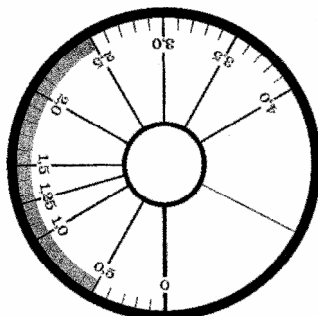
NOTICE

The next paragraph refers to the internal panel and the instruction table. Both internal panel and instruction table are suitable for most countries. In the United Kingdom it is compulsory to use the underneath fixed internal panel.

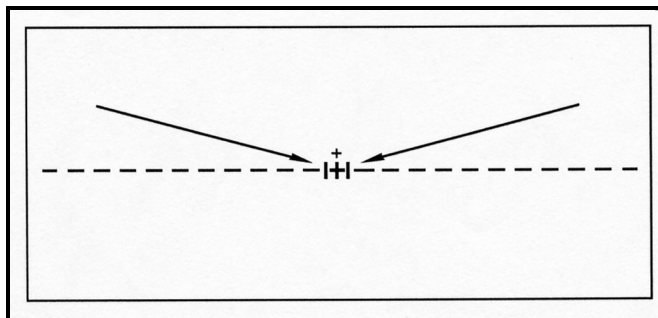


THE INTERNAL PANEL

The internal panel moves by means of the graduated wheel placed at the back of the optical box. According to the types of vehicle that you wish to check, set the wheel on the relevant signal as follows: **(Italian law)**



GRADUATED WHEEL




INTERNAL PANEL

WHEEL ON POSITION 1:
WHEEL ON POSITION 1,5:

For vehicles with a height from the ground to the center of the headlight up to 80 cm.
For vehicles with a height from the ground to the center of the headlight over 80 cm.

On some vehicles, next to the headlight, the manufacturer prints the correct inclination for the vehicle's headlights. In this case, use the indication given by the manufacturer.

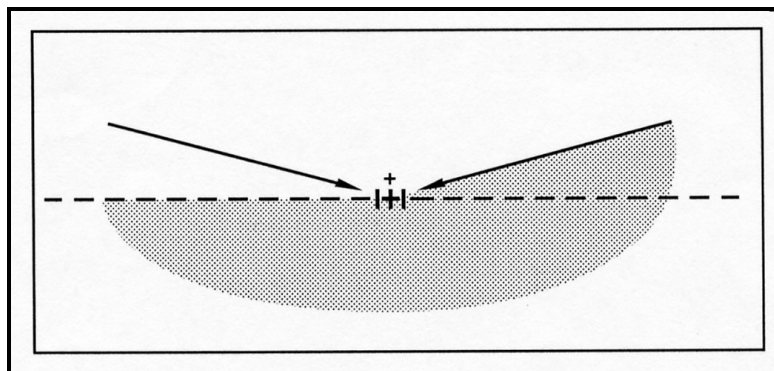
Ex:  2%, set on position 2,0

CHECKING DIPPED HEADLIGHTS

Before carrying out tests on the headlights, CAREFULLY MAKE SURE THAT THE WATER LEVEL INSIDE THE OPTICAL BOX IS PERFECTLY LEVELLED.

If necessary, level the optical box as follows: open the clutch lever "L", move the optical box until you reach a perfect levelling, then re-close the clutch lever.

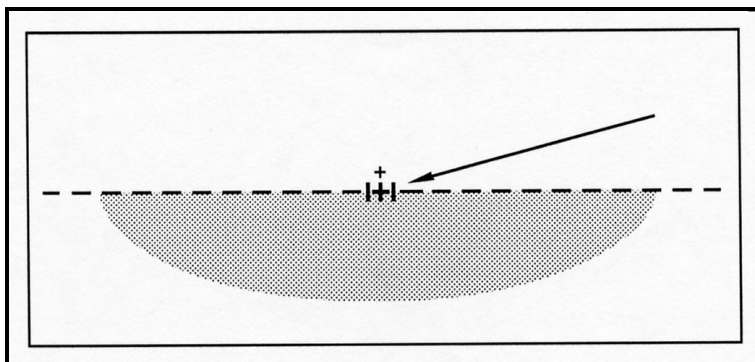
- Prepare the headlight beam setter and the vehicle as indicated above and switch on the dipped headlights: the projection of the headlights will appear on the internal panel.
- Check that this coincides with the line.
- If necessary, use the headlights adjusting system to reach the desired result
- In case of tests on asymmetrical headlights (which are mostly in use today) consider that their projection will also illuminate a section on the right side of the panel with an angle of at least 15° with reference to the horizontal surface (in case of right-hand drive vehicles, this section will be on the left side of the panel).
Just below the center, on the right, you can see a small area which is much more illuminated than the rest of the projection.



CORRECT PROJECTION ON THE PANEL-ASYMMETRICAL HEADLIGHTS

SYMMETRICAL HEADLIGHTS

In case of tests on symmetrical headlights, please consider that the projection on the panel will describe a perfectly horizontal line, without angles.

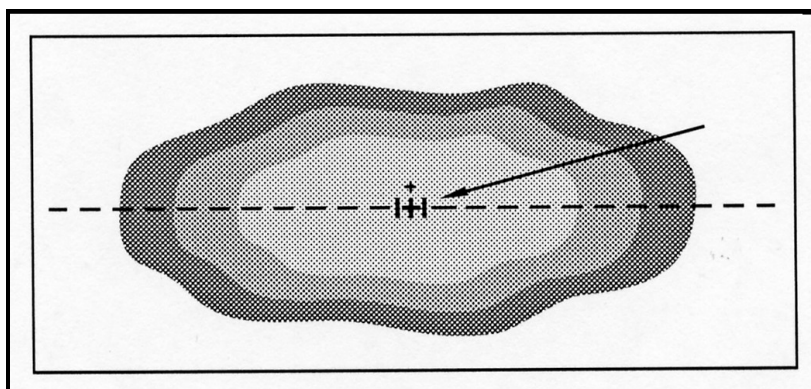


SYMMETRICAL HEADLIGHT PROJECTION

FOG LIGHTS CAN BE ASYMMETRICAL OR SYMMETRICAL

INDEPENDENT MAIN HEADLIGHTS

In this case, a very bright area in the middle of the panel must appear.



CHECKING THE LIGHT INTENSITY OF THE HEADLIGHTS

-) Switch on the main headlight
-) Check the measured intensity on the luxmeter

READING ON A GRADUATED, DIGITAL OR WITH UNIFIED SCALE LUXMETER (see fig. 7 and 8)

According to the EEC/UN standards, the minimum lighting of dipped headlight must be 3,75 KLUX and the maximum must be 90 KLUX.

For the main headlight, the minimum lighting must be 20 KLUX and the maximum must be 150 KLUX

We recommend that you keep to the following table, which completes the EEC/UN indications.

MINIMUM ATTAINABLE VALUES:

| | | |
|------|------|---|
| 3,75 | KLUX | Dipped headlights |
| 20 | KLUX | For vehicles with standard main headlights |
| 30 | KLUX | For vehicles with halogenous headlights type H4 |
| 40 | KLUX | For vehicles with halogenous headlights type H I and H3 |

All values are expressed in KLUX per 1 metre.

In case the above minimum values are not attained, faults on the vehicle electric installation may occur, such as a flat battery, a faulty dynamo, a bad wire connection or wires with insufficient section, insufficient earth, faulty switch contacts, oxidized fuse contact points, oxidized or corroded reflectors, blackened or clouded bulbs.

CHECKING THE LIGHT INTENSITY OF THE HEADLIGHTS

Once you have checked the inclination of the headlights, check the light intensity of both the dipped and the main headlight.

To carry out the tests, proceed as follows:

-) Switch on the main headlight

-) Press the LUX TEST button on the mark



-) Check the measured intensity on the luxmeter

Repeat the test with dipped headlight, press the LUX TEST button on



VALUES ACCORDING TO EEC/UN 20 STANDARDS

On the new generation of headlights, a manufacturer's number is stamped on their glass.

This number shows the lightening the projectors must have according to the following table:

| N° indicato sulla parabola | Abbagliante | |
|----------------------------|-------------|--------|
| | min. | max. |
| 7,5 | 36,5 | 42,06 |
| 10 | 42,06 | 56,49 |
| 12,5 | 56,49 | 72 |
| 17,5 | 72 | 90,14 |
| 20 | 90,14 | 108,17 |
| 25 | 108,17 | 126,2 |
| 27,5 | 126,2 | 138,22 |
| 30 | 138,22 | 162,25 |
| 37,5 | 162,25 | 186,29 |
| 40 | 186,29 | 204,32 |
| 45 | 204,32 | 228,36 |
| 50 | 228,36 | 240,38 |

Ex.: (25): the headlight must have a minimum lightening of 108.17 - max. 126.2

The above values are lux at 25 mt. Use the conversion table (fig.3) if the instrument is calibrated in Klux or Kcandles at 1 mt.

OTHER CALIBRATIONS AND ADJUSTMENTS

The machine is equipped with a water level fixed on the bottom of the optical box which can be seen through the transparent panel, when the highlight is on. To level the optical box, open the clutch lever on the side of the box and adjust the optical box until a perfect levelling is reached, then re-close the clutch lever. This adjustment can be necessary everytime the work surface is changed. The 3-wheel platform used with the optical pointing system is fitted with an eccentric screw adjustment mounted on the external wheel; in case of adjustments, turn the eccentric screw to the desired direction. This operation is usually carried out by the manufacturer and no further adjustment by the operator is required.

A correct use of the equipment allows to work for long periods without any interventions. Calibration of panel or luxmeter must be carried out in our factory; in this case the customers has to send us the optical box only (it can be easily dismantled by removing the screws).

CLEANING

When the instrument is not used we recommend to protect it from dust.

From time to time, pass a moistened rag on it to remove possible stains. The paint resists detergents. Do not oil the column when using alcohol for removing stains on it. Do not leave the equipment in rooms with corrosives vapours, for example, areas for charging batteries or varnishing areas.

DISPOSAL AND DEMOLITION

The machine includes:

- Glass (lens)
- Plastics (wheels, plexiglass cover, handle and other small parts)
- Copper (wires and luxmeter bobbin).
- Steel (structure and mechanisms) for a total of 85%
- Paper and paperboard (operating manual, packing).
- The machine is mostly made of steel; for its disposal, you should keep to your local regulations.

TESTING MOPEDS AND MOTORCYCLES

1-POSITIONING THE VEHICLE

The motorvehicle must be positioned with its longitudinal axis perpendicular with the directional rails of the headlight beam setter, and in any case parallel with the optical axis of the instrument; such a predisposition can be facilitated referring to a longitudinal strip on the floor, which has to be perpendicular with the rails.

The motorvehicle must be empty, the ground flat and levelled, the tyres inflated at the recommended pressure; in case of air hydraulic suspensions, they must be correctly adjusted.

2-POSITIONING THE HEADLIGHT BEAM SETTER

Once the motorvehicle has been placed in front of the beam setter, you can move the cross shifting system to take the beam setter on the projector optical axis: on the optical control system for aligning the instrument axis with the vehicle longitudinal one, on the horizontal aligning system to ensure the horizontality of the measuring box.

The distance between beam setter and headlight must be the same reported on the manual.

Align the optical center of the optical box lens with the headlight reference center. As far as possible measure the height from the floor to the center of the headlight or set the optical box of the beam setter at the correspondent height referring to the graduated scale of the unit.

For further adjustments refer to the operator's manual supplied by the manufacturer.

3-HOW TO CARRY OUT THE TESTS

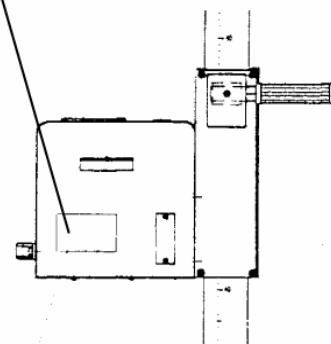
Once the alignment, horizontality, coaxiality and focusing have been achieved, you can check the following:

- a) With the dipped headlight - check that
 - * The difference of value between the headlight center and light/shade demarcation line is at least ≥ 10 cm at 10 meters (downward inclination $= 1\%$);
 - * The above difference of value is at least $= 1/10$ of the height of the headlight center from the ground (for headlights complying with DGM standards);
 - * The deviation on the horizontal plane of the light beam do not represent a value higher than $1,5^\circ$ on the screen outwards (corresponding to about 1 cm on the screen);
- b) With the main headlight – check that
 - * the center of light spot with highest light intensity is coaxial with the optical center of the instrument or displaced on the horizontal and vertical plane for not more than $1,5^\circ$ on the screen;
 - * The lightening of the main headlight, approved in compliance with the 97/24/CE directive and the DGM standard, is higher than 5000 lux for mopeds and between 20000 lux and 150000 lux at 1 meter for motorcycles and tricycles.
 - * In case of two main headlights- check that the light spots with highest light intensity are symmetrical with the instrument screen center.

THE IDENTIFICATION PLATE IS MADE OF SELF-ADHESIVE FILM (VYNIL AND "DESTROYABLE" PAPER) POSITIONED ON THE BACK OF THE EQUIPMENT.

Targhetta di identificazione: misure al vero

Posizione della
targhetta d'identificazione



ENVIRONMENTAL INFORMATION

Following disposal procedure shall be exclusively applied to the machines having the crossed-out bin symbol on their data plate

This product may contain substances that can be hazardous to the environment or to human health if it is not disposed of properly.

We therefore provide you with the following information to prevent releases of these substances and to improve the use of natural resources.



Electrical and electronic equipments should never be disposed of in the usual municipal waste but must be separately collected for their proper treatment.

The crossed-out bin symbol, placed on the product and in this page, remind you of the need to dispose of properly the product at the end of its life.

In this way it is possible to prevent that a not specific treatment of the substances contained in these products, or their improper use, or improper use of their parts may be hazardous to the environment or to human health.

Furthermore this helps to recover, recycle and reuse many of the materials used in these products.

For this purpose the electrical and electronic equipment producers and distributors set up proper collection and treatment systems for these products.

At the end of life your product contact your distributor to have information on the collection arrangements.

When buying this new product your distributor will also inform you of the possibility to return free of charge another end of life equipment as long as it is of equivalent type and has fulfilled the same functions as the supplied equipment.

EC statement of conformity

We Autec-VLT Automotive Equipment, Vlasakker 11 – 3417 XT Montfoort Netherlands,
do hereby declare, that the product

HEADLIGHT BEAM SETTERS Autest SLA-L80N – SLA-D200 – SLA-T200wP – SLA-TPRO

to which statement refers, conforms to the following standards or to other regulatory documents:

- **EN ISO 12100-1; EN ISO 12100-2**
- **EN 60204-1**

with reference to directives

- **2006/42/CE**
- **2006/95/CE of 16/01/07**
- **2004/108/CE**

Montfoort, 25/08/2010

Th. van Leeuwen
managing director

IMPORTANT: The EEC Conformity Declaration is cancelled if the machine is not used exclusively with original accessories and/or in observance of the instructions contained in the User's manual.

The form of this statement conforms to EN 45014 specification

| |
|------|
| NOTE |
|------|



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for

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