
LM-45

PORTABLE LENSMETER

User's Manual




LUXVISION

Notification

Dear Users,

Thank you for your purchase of LM 45 Lensmeter. Please take time to read our user's manual carefully before use.

This guarantees you to make full use of this unit and prolongs the operation life of this unit.

Precautions

If you have detected abnormal heat, smoke, noise or smell, immediately stop using the product.

In the event of an abnormality, turn off the power and disconnect the power plug from the power socket. Continuing to use the product may result in electric shock or fire.

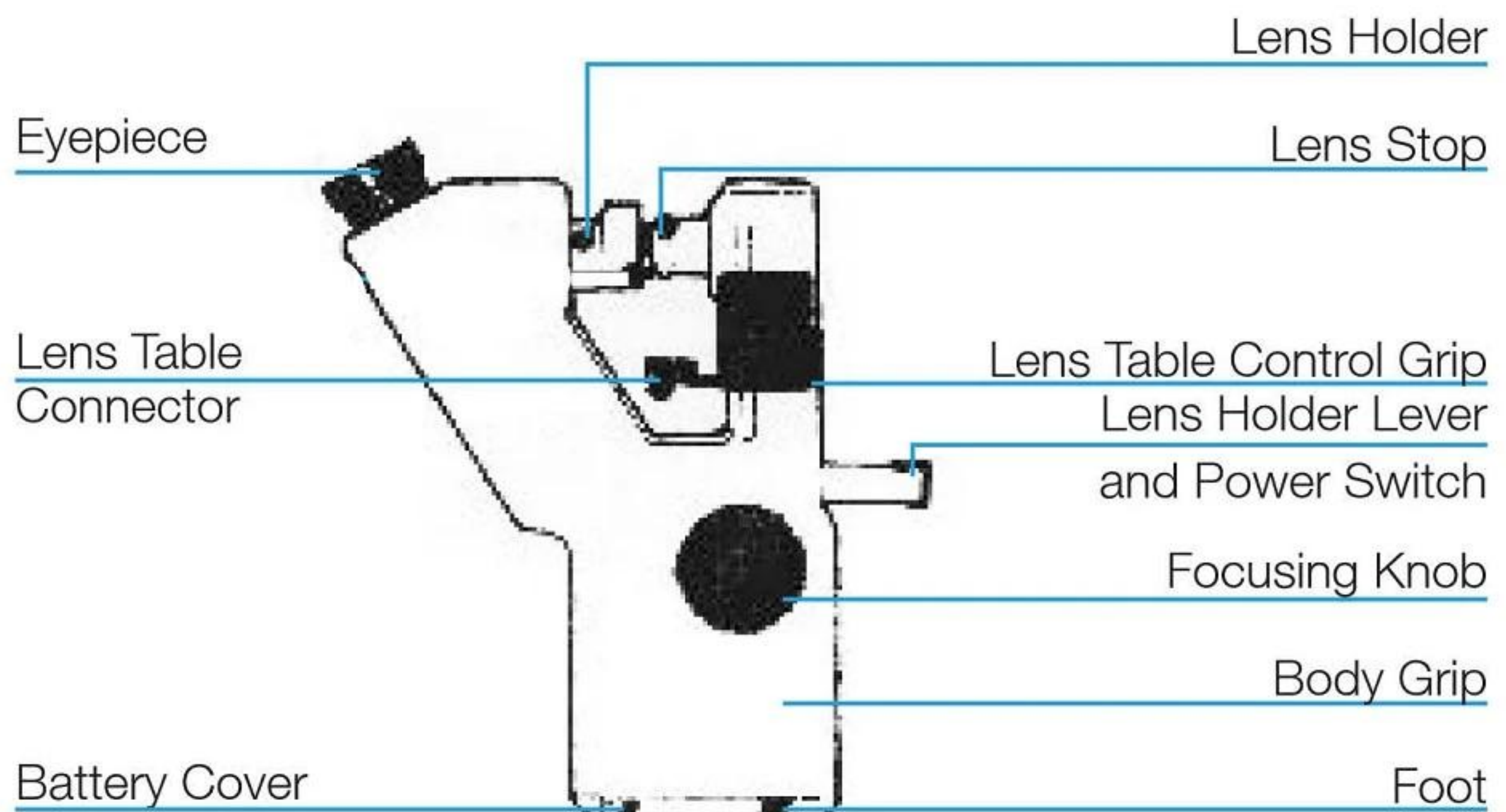
Observe the instructions given below regarding the power cable:

- Be sure to use the supplied or specified power cable.
- Do not modify, forcibly bend, kink or pull the power cable.
- When disconnecting the power cable from the AC outlet, be sure to hold the cable by the plug.
Pulling the cable may cause wire breakage or short circuit, resulting in fire or electric shock.
- Do not connect or disconnect the plug of the power cable to/from the AC outlet using wet hands.
Doing so may result in electric shock.
- Do not touch the product with wet hands while the power cable is connected to the AC outlet.
Doing so may result in electric shock.
- If the product will not be used for a long period, disconnect the power cable from the power source. Leaving the cable connected to the power socket for a prolonged period will consume electricity and may result in heating.

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1. Name of Parts



Marking Point

Fig. 1

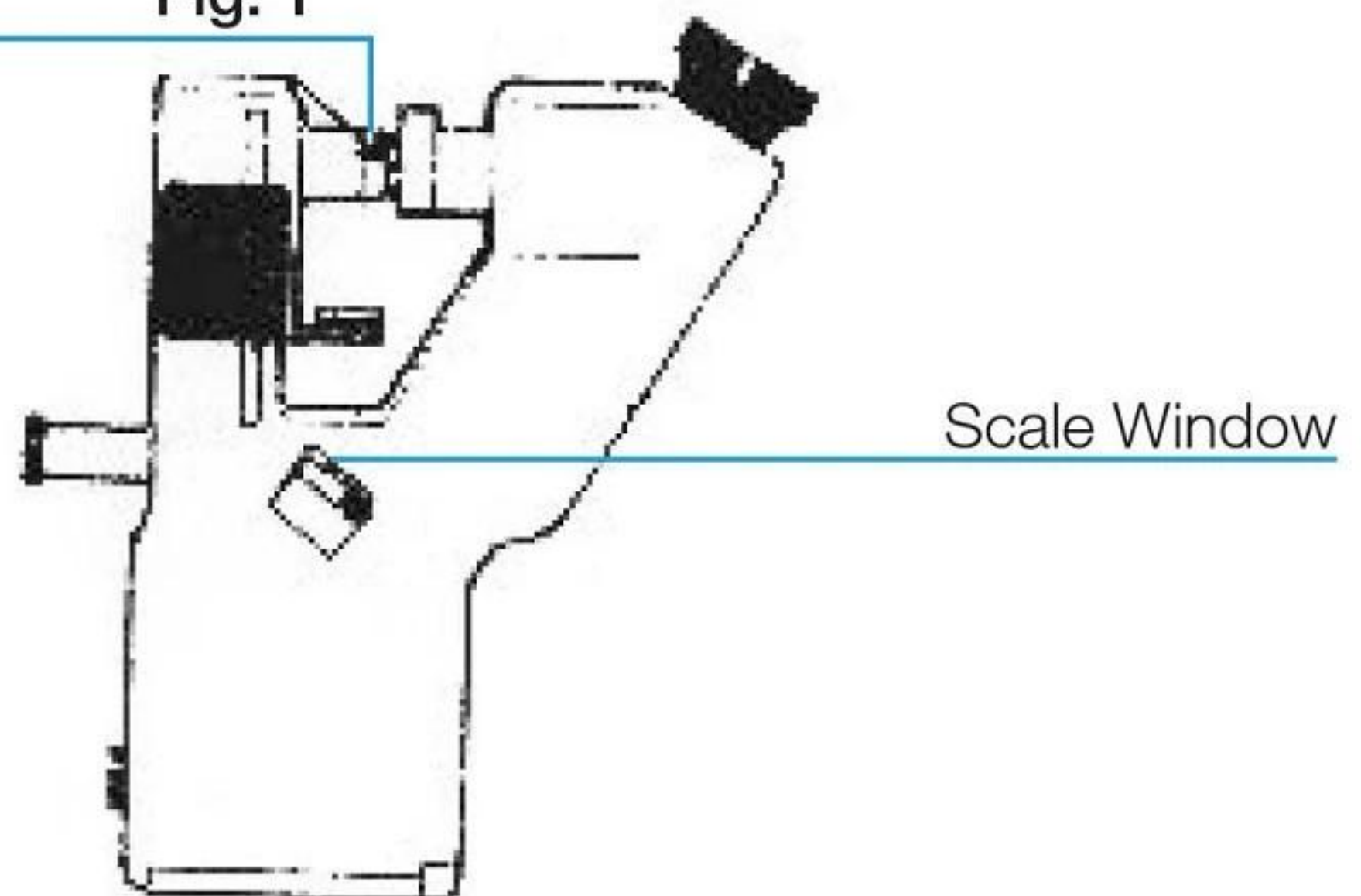


Fig. 2

Case

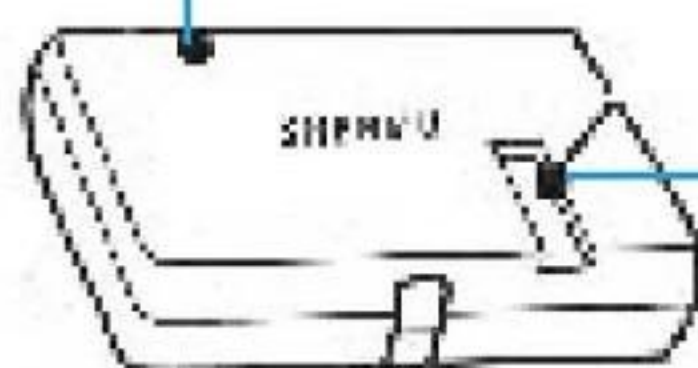


Fig. 4

Roceptacle Shoe



Fig. 3

2. Operation

Insert the lens table into lens table connector and get a stable condition. The insertion can be done from either side of the body (Fig.5). To remove the lens table, you can just pull it out from either side.

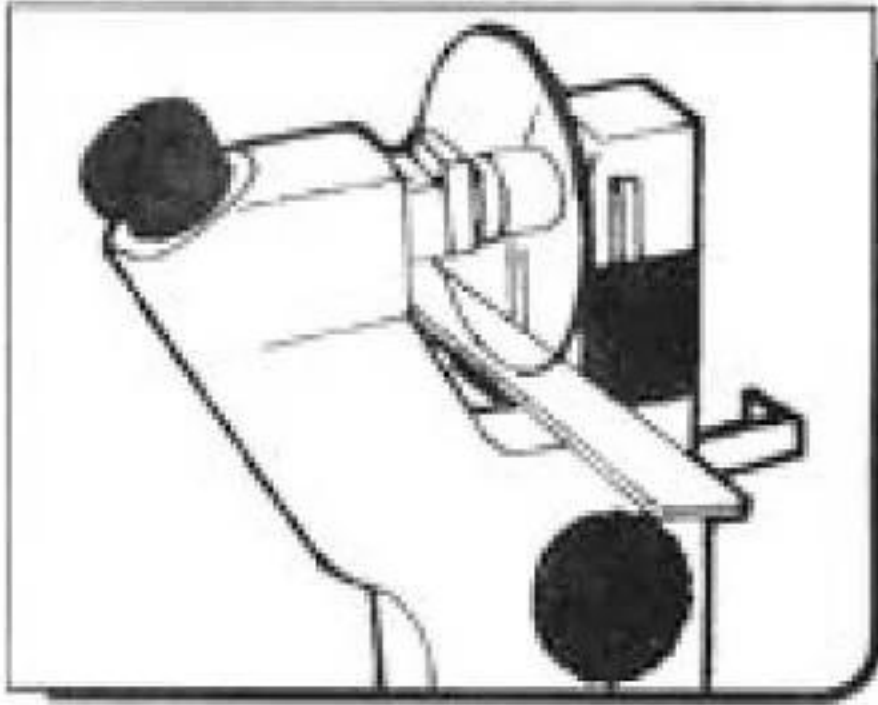


Fig. 5

2.1 Focusing Eyepiece

Rotate the focusing ring so that a scale is focused sharply.

2.2 Lens Holder Lever and Lens Setting

The lens holder lever has functions also as power switch. When you mount an examined lens, press the lens holder lever and mount the lens so that concave side of the lens attaches the lens stop. Then release the lens holder lever slowly like Fig. 6 and 7. Light source will turn on automatically when the examined lens is mounted.

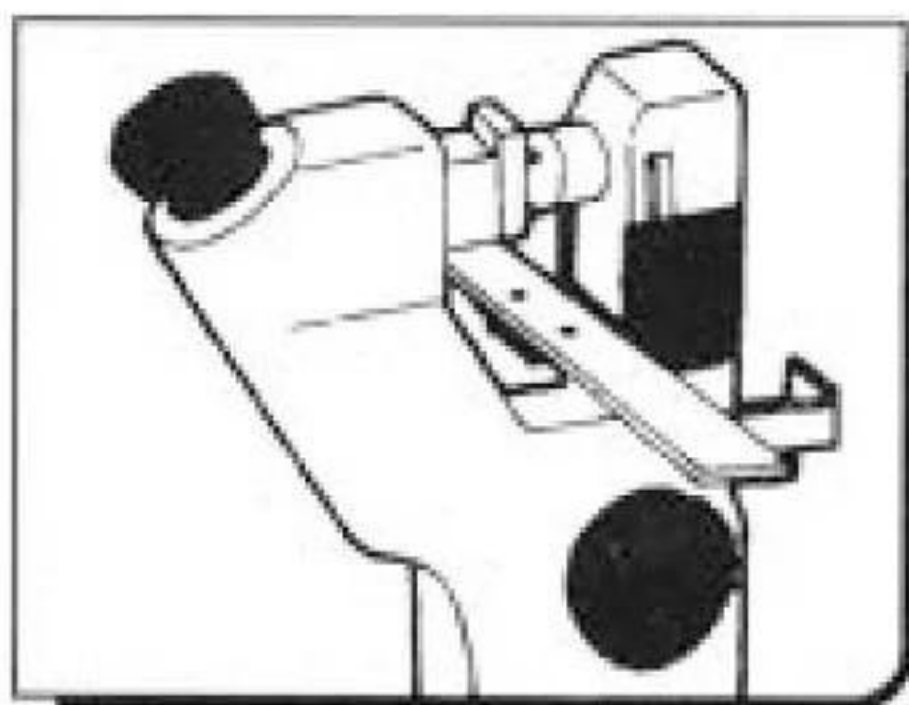


Fig. 6

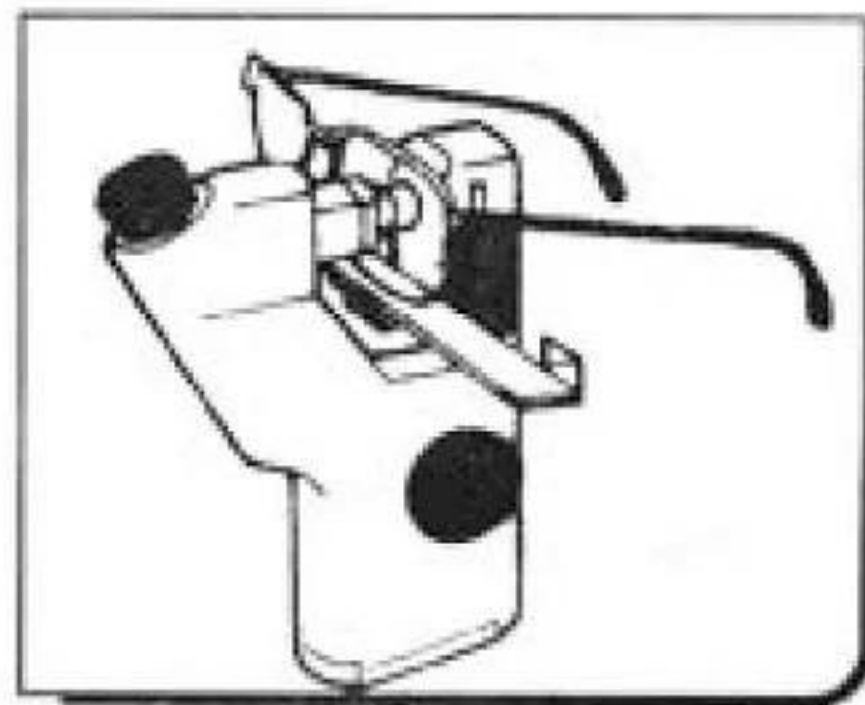


Fig. 7

2.3 Lens Table

The lens table can be moved up and down by sliding the lens table control grip. This procedure should be done correctly before measuring axis and prismatic power of the lens.

2.4 Spherical Lens Measurement

Rotate the focusing knob to get the sharpest image of the target and read the power of the lens through the scale window. The black scale indicates plus power and the red scale indicates minus power. For example, Fig. 8 shows -3.25 diopters.



Fig. 8

2.5 Cylindrical Lens Measurement

Rotate the focusing knob to get the sharpest image of the target for each meridian and read the power and axis for each meridian. Fig. 9 shows an example of cylindrical lens measurement.

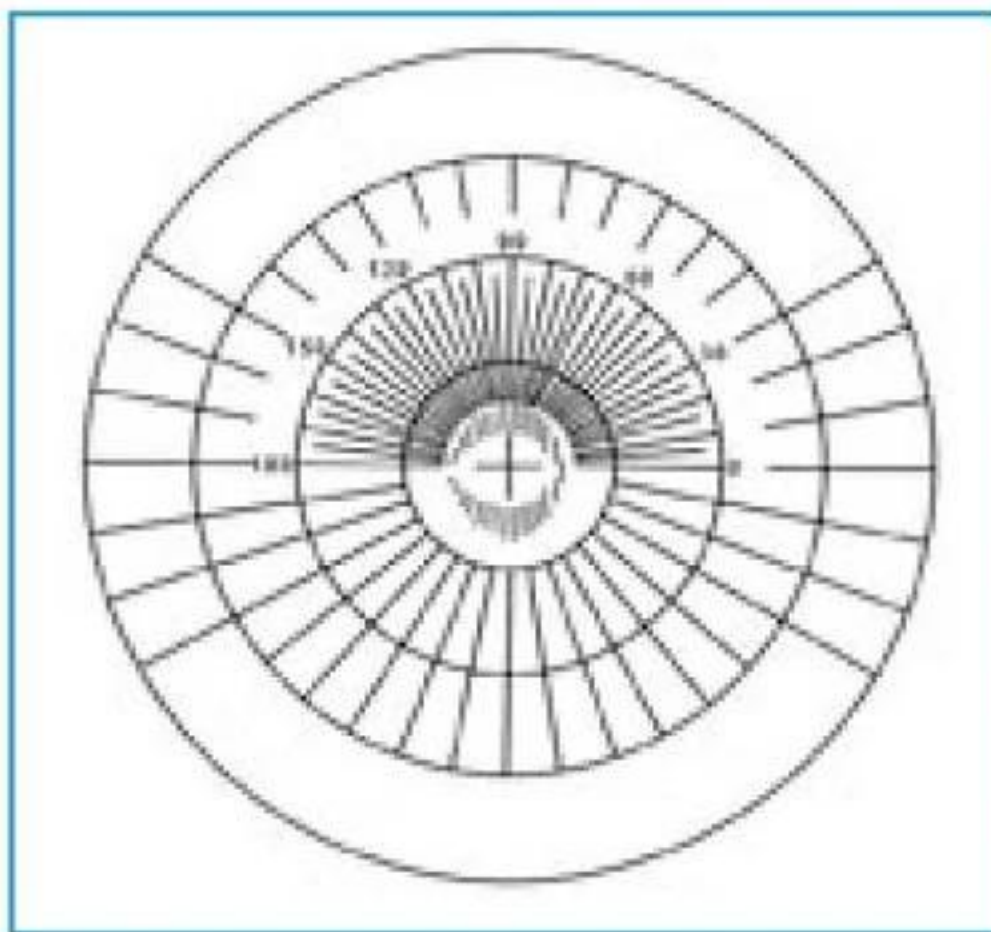


Fig. 9

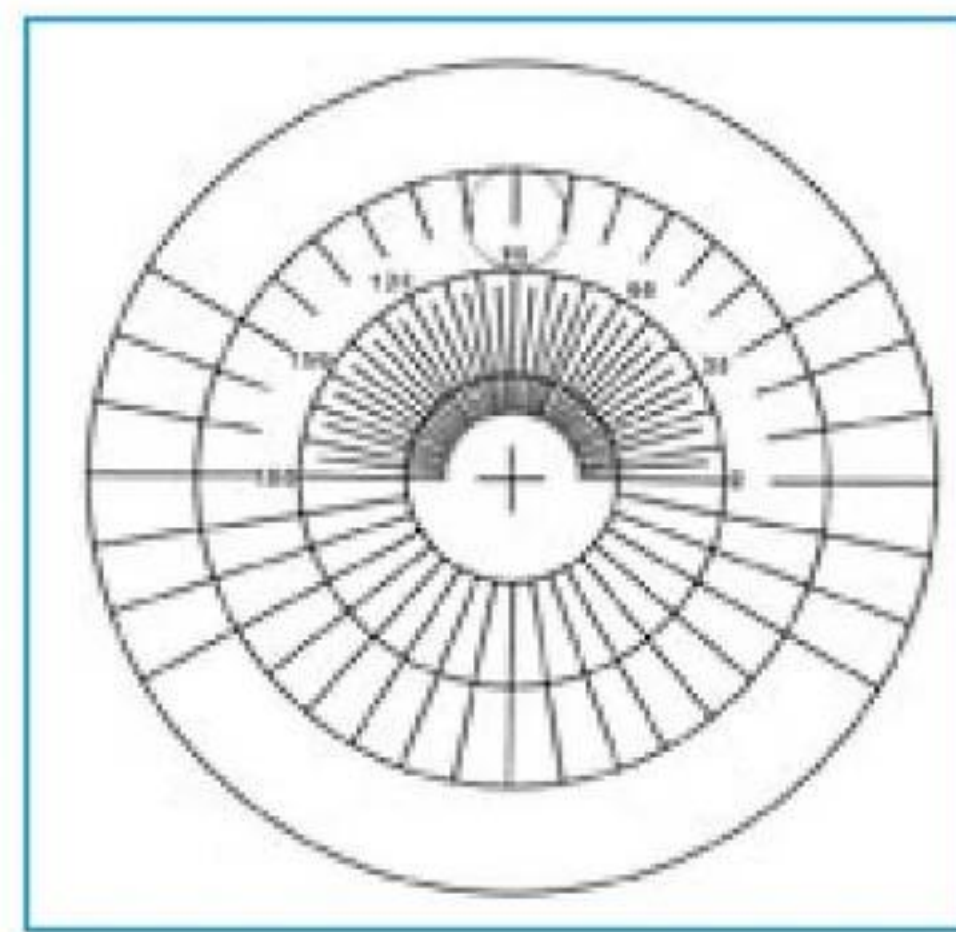


Fig. 10

2.6 Prismatic Power Measurement

Get the best focus point of the target image and read the prismatic power. Each circle of the scale indicate one prism diopter. You can measure up to four prism diopters within the field. Since the size of the target image was designed to correspond to one prism diopter, you can find 0.5 prism diopter easily by using the center dot of the target image. Fig. 10 shows an example of 2.5 prism diopters towards 90 degrees.

2.7 Cylindrical Lens With Prismatic Power Measurement

This kind of lens also can be measured with same procedure as 2.6 and 2.7. Fig.11 indicates 2 prism diopters towards 60 degrees with having cylindrical axis of 90 degrees.

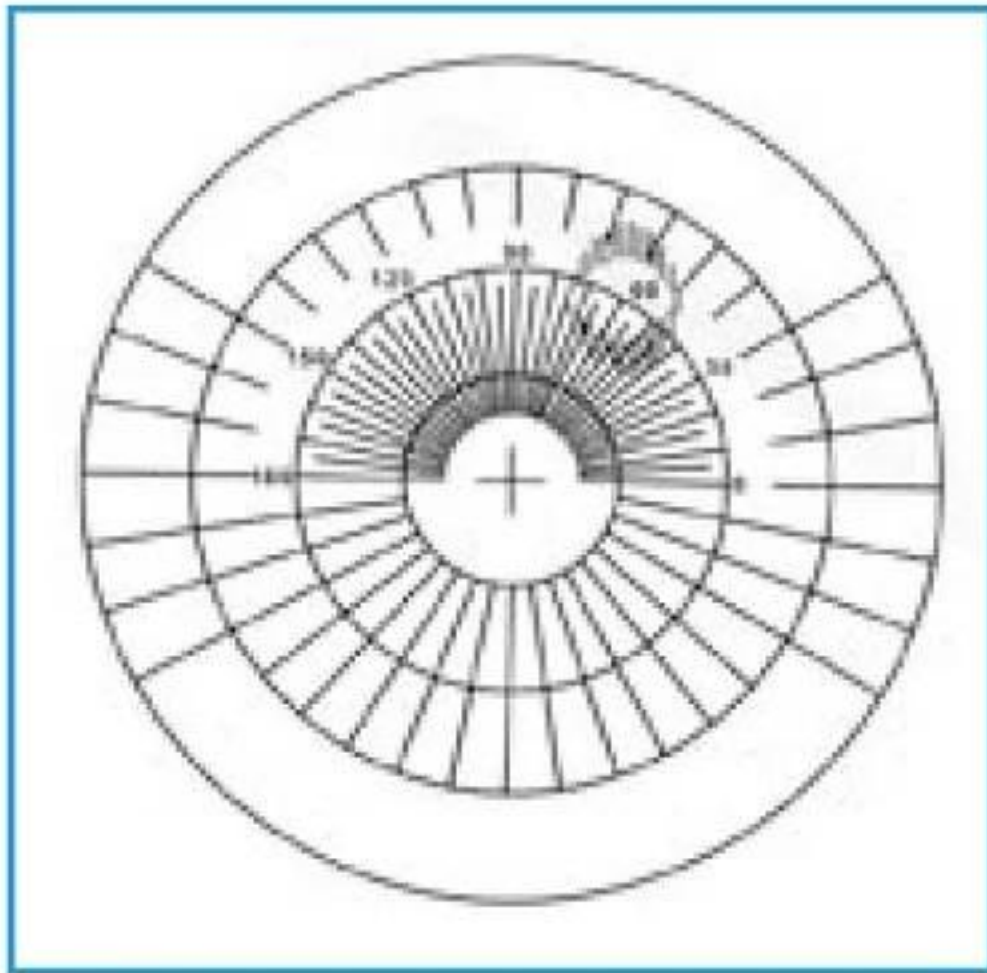


Fig. 11

2.8 Contact Lens Measurement

Hard contact lenses can be measured by using a contact lens adaptor which can be obtained separately.

2.9 Bifocal Lens Measurement

When you measure the addition of bifocal lens, contact the addition area to the lens stop and apply the same measuring method as 2.5 and 2.6.

2.10 Optical Center

Optical center can be found by using marking unit.

2.11 Pupil Distance

The pupil distance can be measured by using a marking point made by 2.11.

2.12 Table Type Application

This lens meter may also be used as a table type lens meter. The foot is attached on the bottom of the body. This foot will be slid into the receptacle shoe made on the case like Fig. 12. Especially when you use the lens meter on the table, this table type application is useful.

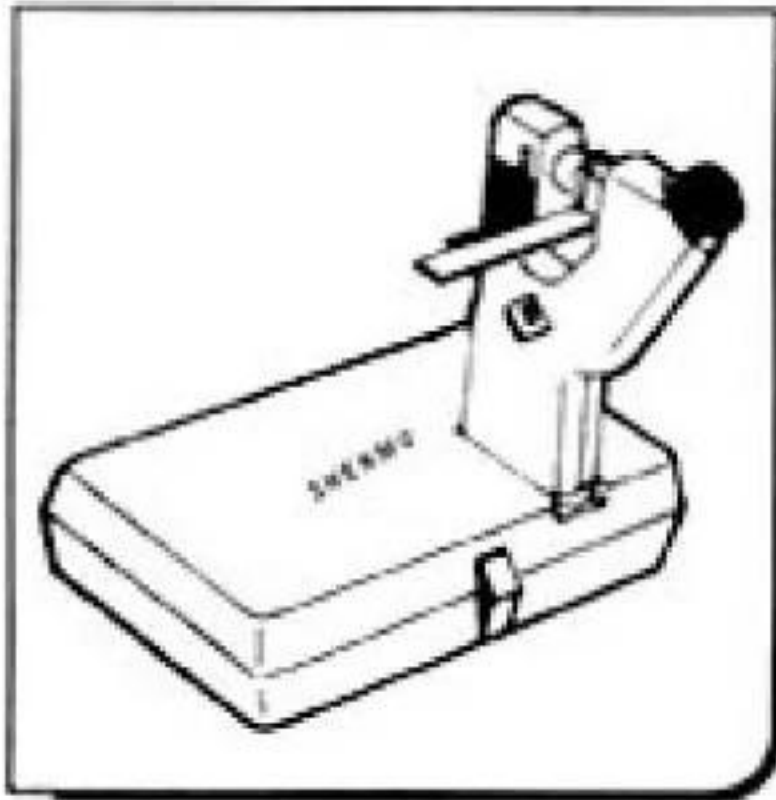


Fig. 12

2.13 Battery Change

Two AA size dry batteries are used as a power supply. To change batteries, open the battery compartment located at the bottom of the body and replace new batteries as indicated inside the compartment (Fig.13).

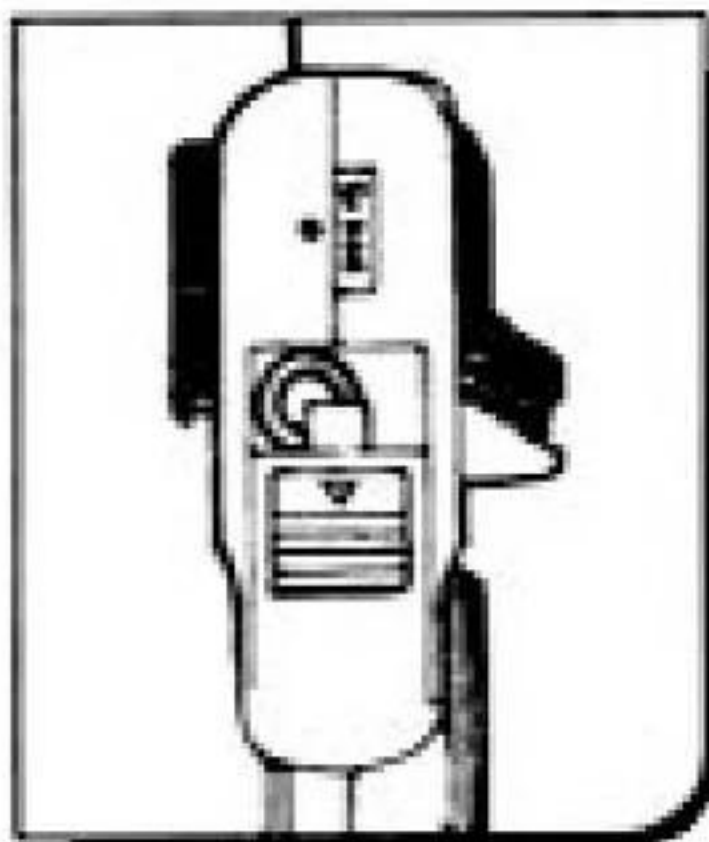


Fig. 13

3. Specifications

Vertex Power	
Range	-15.00 D to +15.00 D
Step	0.125 D (0.00 to ± 10.00 D)
	0.25 D (over ± 10.00 D)
Cylindrical Axis	
Range	0 to 180 degrees
Step	5 degrees
Prismatic Power	
Range	4 prism diopters
Step	1 prism diopter
Maximum Lens Diameter	80 mm
Eyepiece Focusing	± 5.00 D or over
Power	DC 3 volts (2 AA size dry batteries) 50 mW
Size and Weight	
Height	156mm
Width	26mm
Depth	118mm
Weight	360gr.

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