

# **Grobet USA<sup>®</sup>**

# **Gemological Microscope**

# **Instruction Manual**

**No. 29.875 (110v)**

**No. 29.875X (220v)**

**No. 29.876 (110v)**

**No. 29.876X (220v)**

The instruction manual is for the Grobet USA<sup>™</sup> Gemological Microscope. In order to ensure safety and obtain optimum performance, we recommend that you read this manual thoroughly before operating the microscope. Retain this instruction manual in an easily accessible place near the microscope for further reference.

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## ***Before Use***

The Grobet USA Gemological Microscope is a precision instrument and should be handled with care. Avoid impact or abrupt movement during transportation.

The Grobet USA Gemological Microscope should be placed in a dry and clean place. Do NOT expose the microscope to direct sunlight. Avoid high temperatures and vibrations. The following environment is required: Indoor temperature 32 – 100 degrees Fahrenheit, Maximum relative humidity 80%.

To keep the image clear, avoid fingerprints or stains on the lens surface.

## ***Maintenance***

All lenses must be kept clean. Fine dust on the surface of the lens should be blown off with a hand blower or wiped off gently with a soft lens tissue. Fingerprints or oil should be wiped off with a tissue moistened with a small amount of rubbing alcohol.

Never use cleaning solutions to clean the surface, or plastic surfaces.

Do not take the microscope apart.

After use, cover the microscope with the dust-cover provided and store in a dry clean place free from moisture.

## ***Operation***

Remove the microscope from the carton and place it on a level surface. Open the container carefully and check the microscope and its accessories.

## ***Setting the Object***

Set the object on the stage plate and clamp the slide with the clips

## ***Illumination***

Plug the unit in and turn on the switch to get the object illuminated.

## ***Adjusting Focus***

Loosen the lock screw, and look through the right eyepiece while moving the head-bracket up and down until the outline of the object is found in the field of view. Tighten the lock screw to fix the height of the head on the pillar. Rotate the focus knob until the image is sharp and clear. Adjust the diopter of the left eye tube to get the image sharp and clear.

## ***Adjusting the Distance***

Push and pull the prism cover till the object is clear.

## ***Replacing the Slide***

Loosen the lock screw on the slide mount and pull from the right horizontally. Insert an alternative slide to the correct position. Tighten the lock screw.

## ***Replacing the lamp***

Before changing the lamp, unplug the unit. Make sure the lamp is cool before replacing it.

When changing the top lamp, loosen the lock screw on the lamp house. Take off the lamp cover and replace with a new one.

When changing the bottom lamp, remove the stage from the base, then replace with a new one.

## ***Technical Parameter***

The Grobet USA Gemological Microscope is equipped with pillar stands and top and bottom lights.

The diopter adjustment is + 5. Interpupillary adjustment is 55 – 75 mm.

	Turret Objectives	Magnification	Object Field (mm)	Working Field (mm)
No. 29.875	2X/4X	20X/40X	20.00/6.70	57.00
No. 29.876	1X/3X	10X/30X	10.00/5.00	57.00

100V – 120V and 220V Power Supply are assembled according to UL safety regulations.

Lamp: Tungsten bulb 12V/10Watt (No. 29.87501).

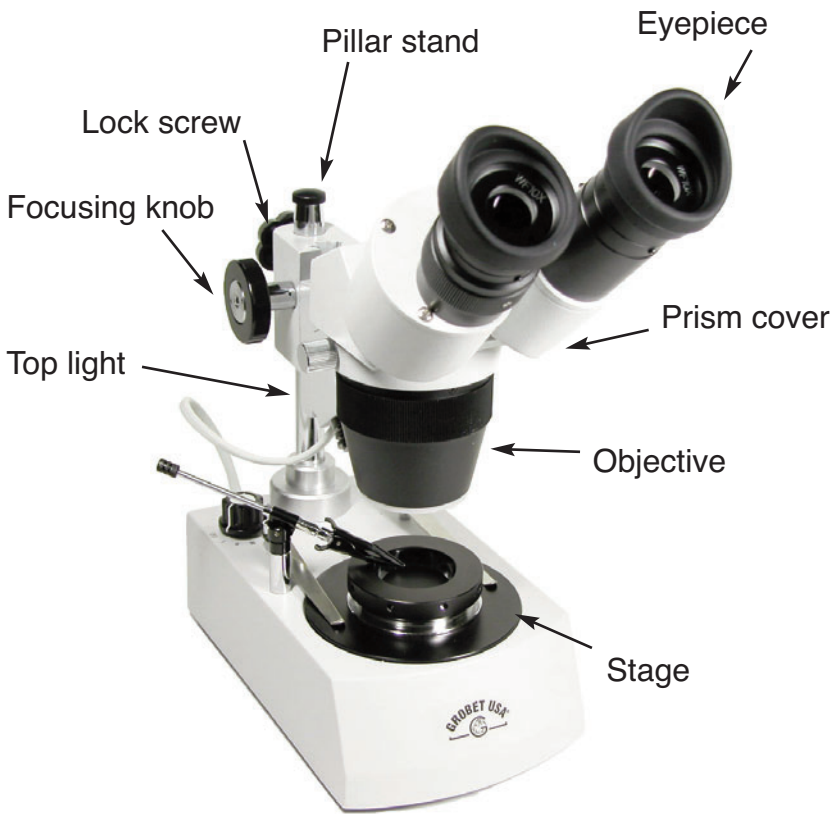
## ***Troubleshooting Guide***

### ***Optical System***

Trouble	Cause	Remedy
Dirt appears in the field of view	Dirt on object	Clean the object
	Dirt on the eyepieces' surface	Clean the surface
	Dirt on the objectives' surface	Clean the surface
Double Images	Wrong interpupillary distance	Readjust
	Wrong diopter adjustment	
	Different magnification	
Image is not clear	Dirt on the objectives' surface	Clean objectives
Incision Image	The objective is not fully in the light path	Adjust it to the correct position

## *Electrical System*

Trouble	Cause	Remedy
Bulb does not work	No power	Check the connection to the power supply
	The bulb was not installed correctly	Install correctly
	The bulb is burned out	Replace the bulb
	The fuse is burned out	Replace the fuse
Bulb is always burned out	Wrong type of bulb installed	Correct the bulb
Fuse is always burned out	Wrong type of fuse installed.	Install the correct fuse
The bulb flickers on the brightness is unstable	The bulb will burn out soon	Replace the bulb
	The wire is not connected properly	Ensure proper connection





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