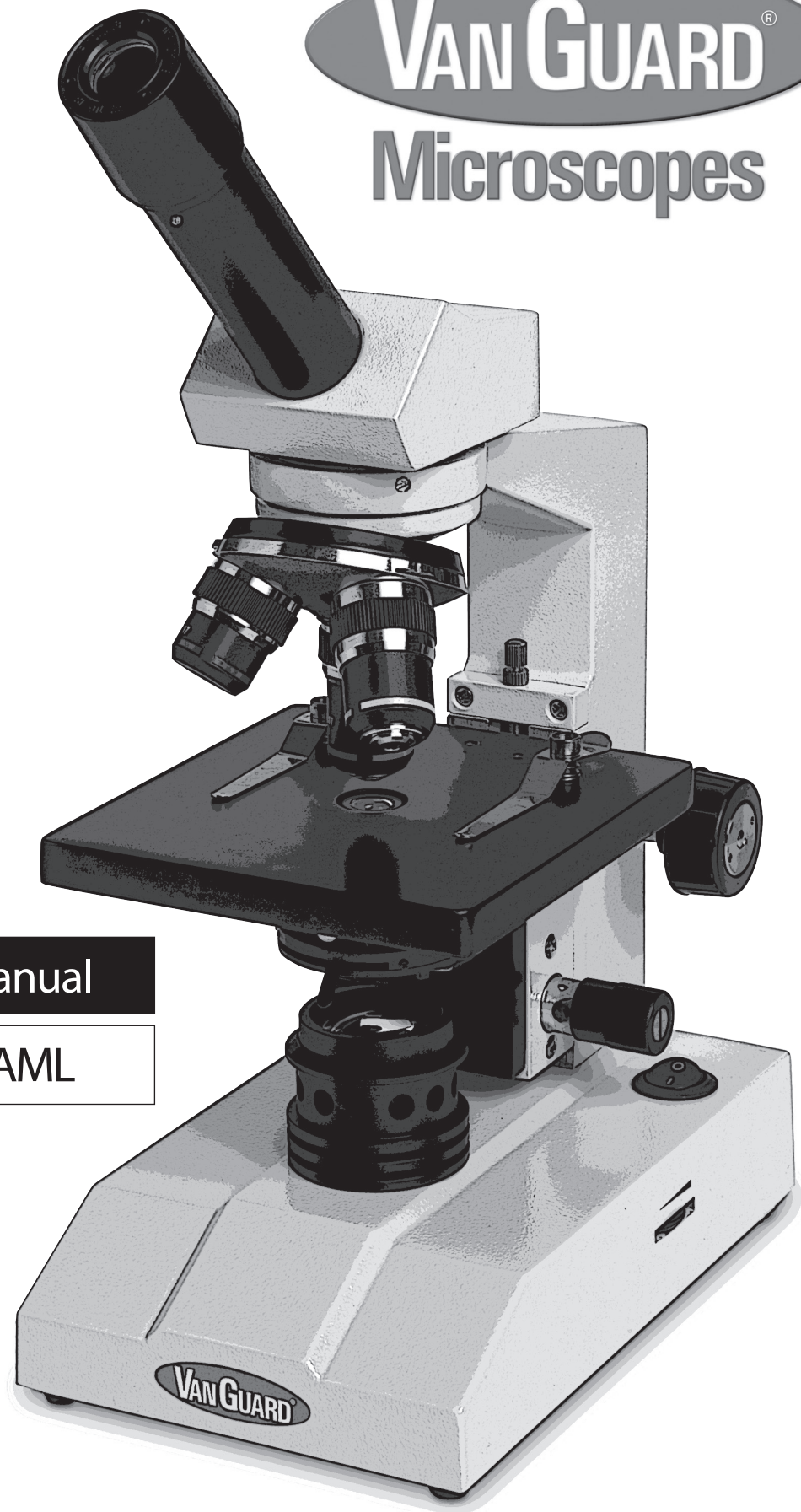


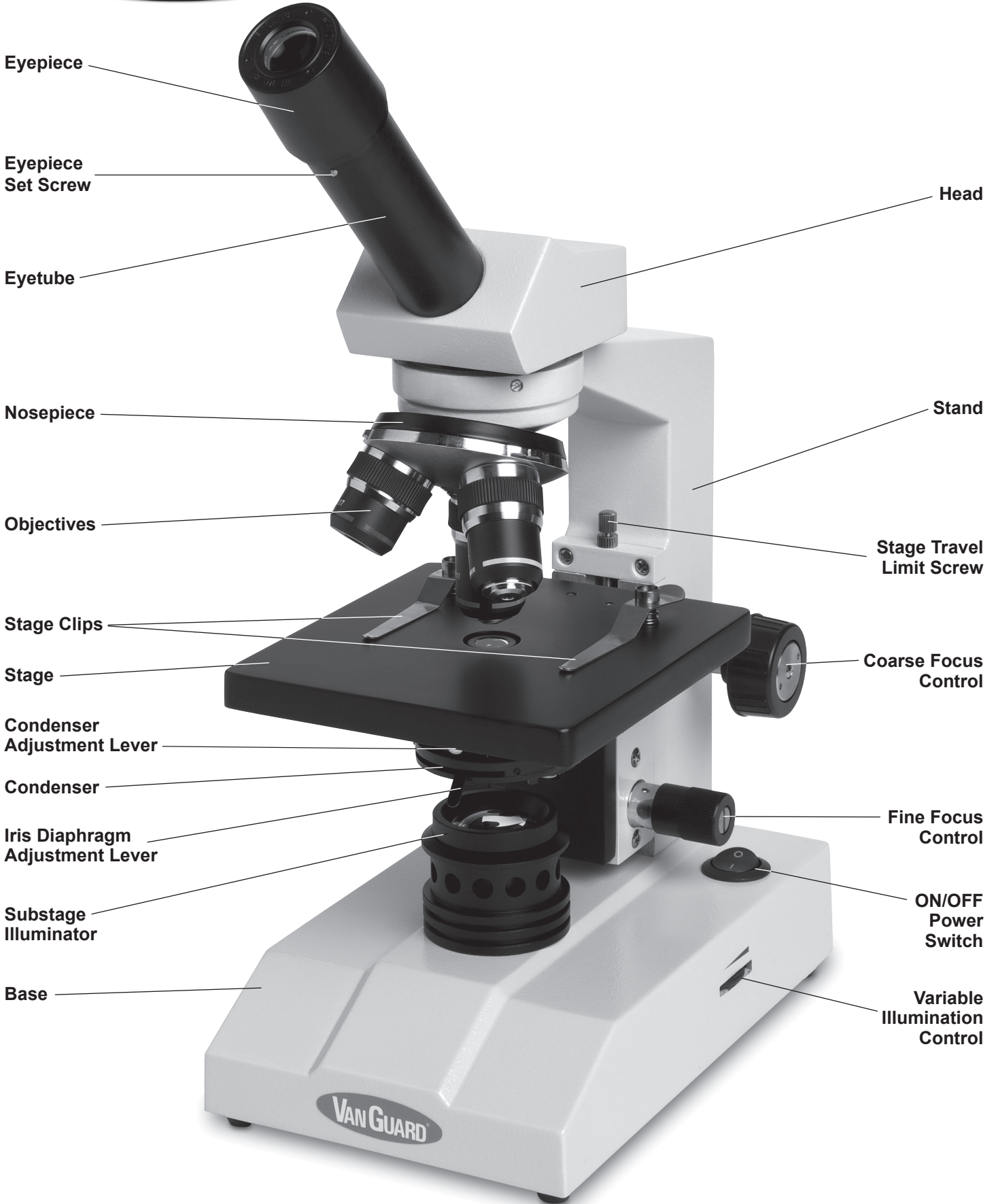
VAN GUARD[®]

Microscopes



Operation Manual

Model 1109AML





General Operation

Thank you for purchasing a VanGuard Microscope. With the user in mind, VanGuard Microscopes are built from modern designs and should provide a lifetime of reliable performance. We recommend you read this entire manual carefully before beginning to use the instrument.

Warranty details can be found at our website at the address below; please take the time to complete the registration form and email back to us. We need this information on file so that it is available in the event that your VanGuard Microscope should need service or repair.

VanGuard Warranty Information and Registration Form:
www.veege.com/pages/technical-support-service

Assembly

This microscope comes essentially preassembled; after removing the microscope parts from the protective foam packaging and checking it over for all components and accessories, final assembly can begin:

- 1 Place the stand on a stable counter top.
- 2 After loosening the eyepiece set screw, remove the protective black cap; slide the eyepiece into the eyetube, tighten the eyepiece set screw to secure the eyepiece.

LED Lighting and Power

- 1 Connect the power cord to a suitable power supply; turn on the substage illuminator with the ON/OFF switch located on the right side of the base.
- 2 The VanGuard model 1109AML incorporates an internal LED light source for long life and low power consumption. The LED lamp is designed to last for thousands of hours, therefore routine bulb replacement is no longer necessary.

Focusing Mechanism

- 1 Focusing adjustment is achieved by turning the coarse and fine focus control knobs. The large knob is used for coarse adjustment, while the smaller knob is used for fine adjustment. Focusing tension can be adjusted by turning the focus tension adjustment ring located just inside of the left coarse focus control knob.
- 2 To ensure long life, always turn the focusing knobs slowly and uniformly.

Substage Adjustments

Adjustments to the substage condensing system are crucial for proper illumination and performance. There are three basic adjustments which need to be made: Centering, Vertical Focusing, and Aperture Adjustment.

- 1 Centering: The condenser is factory-centered and fixed and therefore does not require any centering adjustments.
- 2 Vertical Focusing: The condenser can be raised and lowered with the condenser adjustment lever to focus the light for optimal illumination.
- 3 Aperture Adjustment: The light path can be adjusted with the iris diaphragm adjustment lever located just below the condenser. Aperture adjustments are made to induce contrast into a specimen, not to adjust light intensity.



Model 1109AML -- Monocular Head (1 ea.), Stand (1 ea.), Brightfield Condenser (1 ea.), 10X Eyepiece (1 ea.), 4X Achromatic Objective (1 ea.), 10X Achromatic Objective (1 ea.), 40X Achromatic Objective (1 ea.), External Power Cord (1ea.)

Maintenance

The eyepiece and objective lenses on VanGuard Microscopes are coated. They should never be wiped while dry as any dirt or dust will scratch the coating. The surfaces should either be blown off with an air canister, or blown and cleaned with an air-bulb and camel-hair brush. It is recommended to then use a lens cleaner. Apply with a cotton swab for a minimum of wetting, then wipe the surface clean with a quality lens tissue. Xylene, since it breaks down the bonding material holding the lenses, should never be used as a cleaner. Periodically your VanGuard Microscope should be fully serviced by a qualified service technician.

For information about parts, accessories, or service -- contact your dealer or VanGuard Microscopes directly at 1-800-423-8842.



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www.veegee.com/pages/technical-support-service