

VITALSINE™

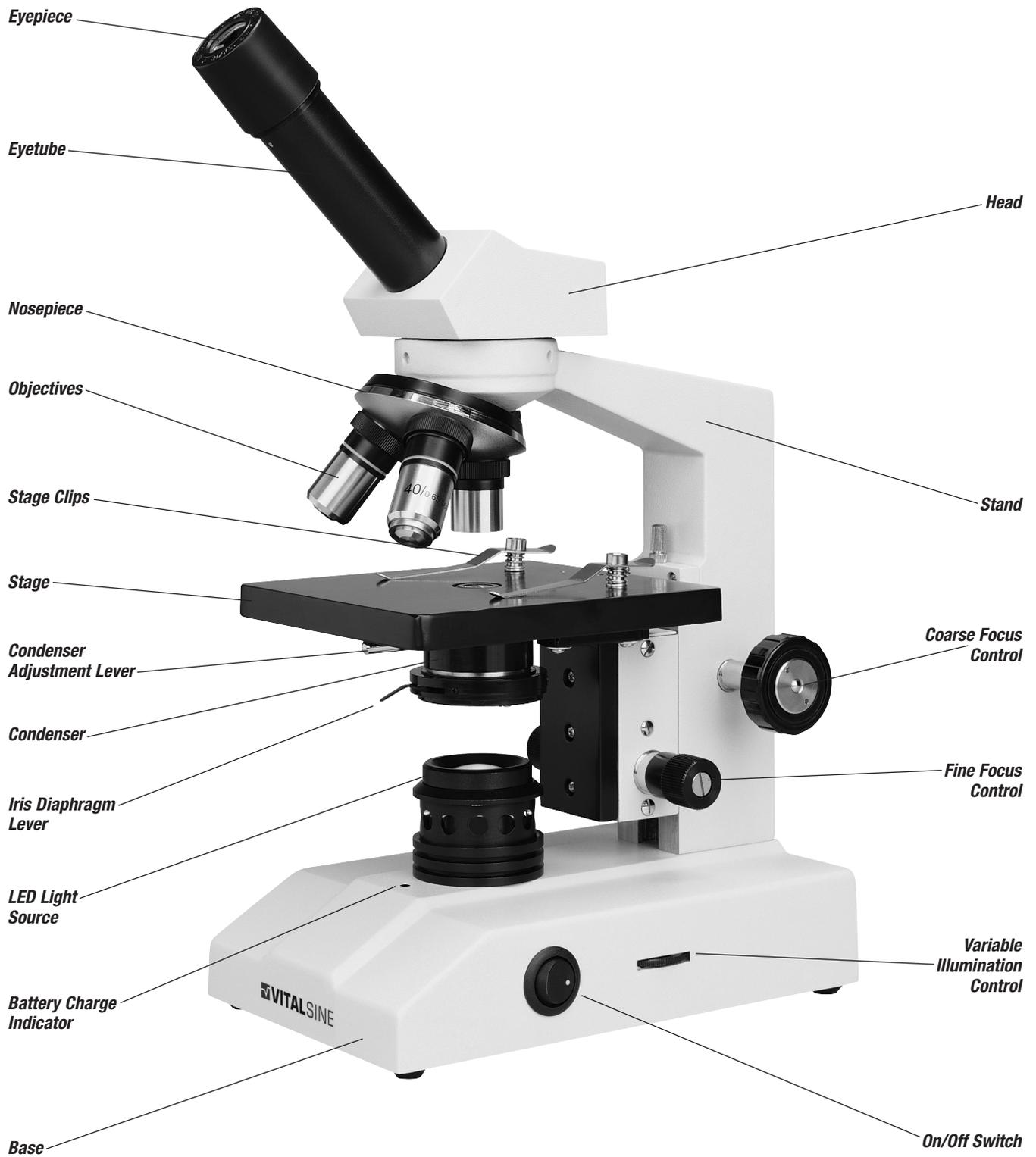
Microscope Owner's Manual ***(Part No. M76)***



Serial Number _____ Date Purchased _____



AQUATIC ECO-SYSTEMS™



General Operation

Thank you for purchasing this Vital Sine™ microscope. With the user in mind, Vital Sine™ microscopes are built from modern designs and should provide a lifetime of reliable performance. We recommend you read all instructions carefully before beginning to use the instrument.

Assembly

This microscope comes factory preassembled; please follow these brief steps before initial use.

1. Place the microscope on a stable countertop.
2. Confirm that the objectives are threaded securely in place in the nosepiece.
3. Confirm that the eyepiece is secured properly in the eyetube.

Lighting & Power

1. This microscope is equipped with a rechargeable LED light source, allowing it to be used in the field or in a conventional laboratory setting.
2. Before the microscope is used for the first time, it's advised to fully charge the internal battery pack. Connect the external charger to a suitable power supply and plug into the connector at the rear of the microscope.
3. While the battery pack is charging, the battery charge indicator will glow red; once charging is complete, the battery charge indicator will turn green. Recharge times can vary, but the full process (with an exhausted battery pack) should generally last 2-3 hours.
4. If the microscope is used in a setting with an available power supply, the external charger can be connected to the microscope during use to keep the battery pack charged.

Focusing Adjustments

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

Substage Adjustments

1. Adjustments to the substage condensing system are crucial for proper illumination and performance.
2. **CENTERING:** The condenser on this microscope is factory-centered and, therefore, does not require centering adjustments.
3. **VERTICAL FOCUSING:** The condenser can be raised and lowered with the condenser adjustment lever to focus the light for optimal illumination. As a rule of thumb, the lower the magnification, the higher the condenser should be positioned in the optical path.
4. **APERTURE ADJUSTMENT:** The light path can be adjusted with the iris diaphragm adjustment lever located on the condenser. Aperture adjustments are made to induce contrast for a specimen, not to adjust light intensity.

Maintenance

The eyepiece and objectives on this microscope are coated. They should never be wiped while dry, as any dirt or dust will scratch the coating. The surfaces should either be blown with an air canister or blown and

cleaned with an airbulb and camel-hair brush. It's 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, which breaks down the bonding material holding the lenses, should never be used as a cleaner.

5-Year Limited Warranty

Vital Sine™ microscopes are warranted by Aquatic Eco-Systems, Inc., to be free from defects in material and workmanship for a period of five (5) years from the date of purchase, except for electrical components, which have a one (1) year limited warranty. During this period, Aquatic Eco-Systems, Inc., or its authorized service station will at their option and without charge either repair or replace any part found to be defective in materials or workmanship.

This warranty is subject to the following limitations and exceptions and will not apply if:

- 1) There is no proof of date of purchase. The purchase invoice must accompany the unit when sent in for repair. The warranty extends to the original consumer purchaser only and is not assignable or transferable.
- 2) The damage is due to normal wear and tear, misuse, abuse, negligence, accident, inadequate maintenance, disregard for operating instructions or any other cause not due to the manufacture of the microscope (e.g. objective failure from oil penetration due to lack of timely cleaning).
- 3) The serial numbers, names and/or functions are altered or obliterated, or unauthorized repair or replacement of parts by the end-user or an unauthorized third party while under warranty.
- 4) Consumable items (such as, but not limited to, bulbs) have failed.

This warranty expressly excludes transportation damage and adjustment or readjustment. In no case shall Aquatic Eco-Systems, Inc., be liable to the buyer or any person for any special, indirect, incidental or consequential damage, whether claims are based in contract or otherwise with respect to or arising out of product furnished hereunder. Should you have a problem with this product, contact Aquatic Eco-Systems, Inc., within the warranty period and we will direct you how to proceed. For prompt service, call the Aquatic Eco-Systems Returns Department at 407-886-3939 between 8:00 am and 4:30 pm EST Monday through Friday, send a fax to 407-886-6787 or e-mail aes@aquaticceco.com.