

# GEMORO®



ELITE 1030LED User Manual

Congratulations on your purchase of the advanced **Elite 1030LED** by **GEMORO Superior Instruments**, the most trusted name in gemological instrumentation for the jewelry industry.

You've made a smart choice. Not only are the precision optics superior in this microscope, but the full featured **GEMORO Elite 1030LED** utilizes the latest in daylight LED illumination and allows for true portability. It uses 110-120V AC power, but you can also switch to using its exclusive built-in rechargeable battery powered feature. This allows you to do appraisals on-the -go, plus easily move the microscope while repositioning it from your desk to your sales counter without worrying about AC power accessibility.

**The following diagram identifies the microscopes parts and features:**

1. 360° Rotatable Microscope Head
2. 10x Eyepieces
3. Fine Focusing Diopter Adjustment Ring
4. Interpupillary Distance Width Adjustment
5. Tension Locking Screw
6. Coarse Focusing Knob
7. Gem Clip
8. Gem Clip Post
9. Gooseneck Spot LED Light
10. 1x & 3x Objective
11. Objective Cover (black)
12. Four Position Light Switch Knob
13. Power Switch
14. Microscope Base
15. Battery Compartment
16. Dark Field Condenser
17. Iris Diaphragm Arm
18. Rheostat Light Dimmer
19. AC/DC Power Cord Receptacle



## ASSEMBLING YOUR MICROSCOPE FOR USE:

Please remove the microscope, batteries and accessories from its packaging and follow the below instructions:

1. Insert the (3) supplied AA NiMH rechargeable batteries into the Battery Compartment on the bottom of the Microscope Base in the proper polarity position.
2. Place either the Dark Field Condenser, the Frosted Glass Plate, or Black/White Plate on the top of the base in the round slot over the LED light source.
3. Your microscope comes with both a tall Gem Clip Post (more commonly used) and a short Gem Clip Post. For convenience, two of the tall posts are included and already installed by the factory. The tall post height is designed to only be used with the Dark Field Condenser in order to maintain focusing. The short post height is designed to only be used with the Frosted Glass or the Black/White plate to maintain focusing. These posts are interchangeable and may be unscrewed and positioned on either side of the Microscope Base depending on whether you are right or left-handed. It is recommended to place the post you are not using in a secure location, since it is small and can be easily lost.
4. Place the Gem Clip on the tall Gem Clip Post, while positioning the Gem Clip Tweezers over the Dark Field Condenser. Alternatively, place the Gem Clip on the short Gem Clip Post, while positioning it over the desired plate.
5. Place the Rubber Eye Guards (not shown) over each of the Eyepieces.
6. Insert the male end or plug on the AC/DC adapter/charger (not shown) into the back of the Microscope Base. Then insert the two-pronged plug on the AC Adapter/Charger cube into a 110/120V AC outlet. When plugged in this will allow the batteries to be charged and the AC power to be operational.
7. Attach the Gooseneck Spot LED Light to the receptacle on the side of the microscope base. Once attached and positioned properly, use the supplied Allen wrench to tighten the small locking screw to further secure it in place. (See *GEMORO ELITE 1030LED Installation & Service Tools* section on page 6.)
8. Flip the Power Switch to the ON position.
9. Rotate the 4 Position Light Switch Knob to turn the lighting functions ON/OFF based on the below positions:
  1. I = Overhead Light (incident) and Gooseneck Spot LED
  2. II = Combo Base, Overhead Light (transmitted and incident) and Gooseneck Spot LED Light
  3. III = Base Light Source (transmitted)
  4. OFF = Power down
10. It is advised that you save the box and packaging for your microscope to properly protect it in the event you are traveling with it or need to ship it in for servicing.

## **USING YOUR MICROSCOPE:**

Please follow the below user instructions:

1. Loosen the Tension Locking Screw on the side of the Microscope Head. The head may be rotated 360°. Rotate the head to the desired position so that the eyepieces are either facing you or your client. Once in the desired position, tighten the screw to lock the heads position.
2. Remove the round black Objective Cover that is over the Objective at the bottom of the Microscope Head. (IMPORTANT: If this isn't removed, when looking through the lenses it will appear black.)
3. Turn the Power Switch on and rotate the 4 Position Light Switch Knob to the desired lighting.
4. On the left side of the microscope base, rotate the Rheostat Light Dimmer to the desired lighting intensity.
5. Place the stone in the Gem Clip and position the end of the tweezers in the center above the Dark Field Condenser or plate.
6. Position the Gooseneck Spot LED Light so that it shines on the item being viewed.
7. While placing your eyes over the Eyepieces, adjust the Interpupillary Distance Width Adjustment to the width of the user's eyes for clear observation. Properly adjusting this enables you to see one clear image through the eyepieces.
8. Turn the Coarse Focusing Knobs with both hands to raise or lower the Microscope Head until the stone comes into focus.
9. Turn the Fine Focusing Diopter Adjustment Ring until the stone comes perfectly into focus.
10. Rotate the 1x & 3x Objective to change the power to either 10x or 30x.
11. If using the Darkfield Condenser, hold it steady and rotate the Iris Diaphragm Arm to adjust the Iris Diaphragm as desired.

## **ELECTRICAL & LIGHTING**

**Input Voltage:** DC 5V

### **Lighting:**

- a) Natural Daylight.
- b) Incident Light 1W LED (without transmitted light).
- c) Transmitted Light 1W LED (without transmitted light).
- d) Gooseneck Spot LED Light 1W.

## GEMORO ELITE 1030LED INSTALLATION & SERVICE TOOLS

Along with your GEMORO ELITE 1030LED microscope, you will find two tools. The description and usage instructions for these tools are as follows:



**ALLEN WRENCH (Allen Key / Hex Key)** - This “L” shaped tool is used when attaching the Gooseneck LED Light Source to the microscope base, while further securing it into a stationary position.

1. After plugging the Gooseneck LED Light Source into the microscope base, look for a small hole on the side of the silver threaded ring near the plug. Within the hole you will see a tiny hex screw.
2. Insert either end of the tool into the hex screw and turn it clockwise to tighten the screw. Carefully tighten the screw.

**WARNING: DO NOT OVER-TIGHTEN THE SCREW, AS IT CAN BECOME STRIPPED AND IT WILL NOT BE ABLE TO BE REMOVED.**

3. When removing the Gooseneck LED Light Source to protect it when traveling, insert the tool into the hex screw. Then turn it counter clockwise a few rotations to loosen it. (It is not necessary to remove the screw.) You may then unscrew the silver threaded ring and unplug the Gooseneck LED Light Source from the base.

**NOTE: The tiny hex screw is susceptible to being lost, so handle it with care.**



**WRENCH** - This tool is used to tighten or loosen the Coarse Adjustment Knobs on the rear arm of the microscope base.

The Coarse Adjustment Knobs may become loosened over time. If this occurs, they may be retightened to the proper tension.

1. To change the tension of the Coarse Adjustment Knobs, with the rear of the microscope facing you, on the left side (only) look for a small hole on the stem of the Coarse Adjustment Knob. The hole is located on the knobs stem next to the rear arm of the microscope base.
2. Insert the pin on either end of the tools gripping head into the hole.
3. Turn the tool clockwise to tighten the Coarse Adjustment Knobs to increase the knobs tension. Alternatively, turn it counter clockwise to decrease the knobs tension.

**WARNING: DO NOT OVER-TIGHTEN THE TENSION: IF OVER-TIGHTENED, IT MAY DAMAGE THE THREADS AND CAUSE THE COARSE ADJUSTMENT KNOBS TO NO LONGER REMAIN STATIONARY.**

**NEED HELP?** Please contact **GEMORO** at **800.527.0719** or email **service@sykessler.com** for support.

## STRUCTURAL DATA

1. 45° inclined and 360° rotatable Microscope Head. Both ocular tubes have a diopter adjustment of  $\pm 5$ dp.
2. The interpupillary distance using the 10x eyepieces is between 54x76mm.

## RECHARGEABLE BATTERY & LED LIGHT REPLACEMENT

1. In the event you need to replace the rechargeable batteries, first unplug the microscope from the electrical outlet, and then open the Battery Compartment on the bottom of the Microscope Base. Replace the 3 AA NiMH rechargeable batteries and then replace the battery door. Allow the microscopes batteries to charge for approximately 10 hours before using it with battery power. **CAUTION: USE ONLY 1.2v NiMH AA BATTERIES. OTHER TYPES OF BATTERIES MAY BURST, CAUSING PERSONAL INJURY AND DAMAGE TO THE MICROSCOPE.**
2. If any of the LED lights are not functioning and may need to be replaced, please contact GEMORO at 800.527.0719 or [service@sykessler.com](mailto:service@sykessler.com).

## MAINTENANCE AND STORAGE

1. Your microscope is a professional instrument and should be handled with care. Always avoid dropping your microscope during transport.
2. Place it on a dry and clean surface.
3. Do not touch the lenses with your fingers.
4. Keep the optics clean from dust and dirt. When cleaning the lenses, use a lint-free cotton or microfiber cloth.
5. The optics and mechanical parts are not user serviceable.
6. Put the Dust Cover (not shown) on the microscope when not in use.

## ACCESSORIES—OPTIONAL 15X AND 20X EYEPIECES

Item #1518-22 15x Eyepieces (increases magnification to 15x and 45x)

Item #1518-23 20x Eyepieces (increases magnification to 20x and 60x)

## EYEPIECE

| Model                | SWF10x    | WF15x     | SWF20x    |
|----------------------|-----------|-----------|-----------|
| Magnification        | 10x       | 15x       | 20x       |
| Field of Vision (mm) | $\phi 23$ | $\phi 13$ | $\phi 10$ |

## **WARRANTY**

Your **GEMORO** Elite 1030LED comes with a ONE YEAR LIMITED WARRANTY. Damage caused by abuse will void the warranty. This warranty becomes effective from the date of the original purchase by the consumer assuming the purchaser fills out the WARRANTY REGISTRATION FORM at <https://www.sykessler.com/warranty-registration/> or the purchaser provides a copy of their invoice (bill of sale) when making a warranty claim. In the event the microscopes owner has not registered it or provided a copy of their invoice confirming when they purchased it, warranty service will be determined by the serial number tracking system as interpreted by the factory. In the event the **GEMORO** Elite 1030LED is no longer available or has been discontinued and warranty coverage is applicable, at the factory's sole discretion, an equivalent microscope may be substituted for the defective microscope. The purchaser shall incur the cost for postage, insurance, and handling for all warranty and non-warranty repairs. Warranty repairs and/or replacements will be shipped back to the customer FOB Destination to the location of the customer's choosing if within the continental United States. Non-warranty repairs will be shipped back to the customer FOB Factory. Should the customer require the repair and/or replacement to be shipped outside the continental United States, the customer will be required to pay any related shipping charges and any related taxes/duties for the respective destination country, regardless of whether it is a warranty or non-warranty claim.



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