Longer Rotary Extender

LONGER Rotary Extender (with Riser) Instruction Manual

Model: Rotary Extender | Brand: Longer

1. Introduction

The LONGER Rotary Extender is a versatile 3-in-1 laser rotary attachment designed for engraving a wide variety of cylindrical and irregular objects. This tool enhances the capabilities of your laser engraver, allowing for precise and efficient engraving on items such as wine glasses, tumblers, baseball bats, rings, and more. It features four interchangeable modules: Roller Rotary, Chuck Rotary, Sphere-Engraving Module, and Ring-Engraving Stud, providing flexibility for diverse engraving projects.

Engineered for high precision, the rotary extender securely holds objects with its soft-pad covered chuck jaws, enabling smooth operation and detailed results. Its durable construction from anodized aluminum alloy with a corrosion-proof coating ensures long-term reliability. The adjustable Z-axis and chuck rotary module allow for engraving extra-long cylinders and uniquely shaped items.

2. Setup

The LONGER Rotary Extender comes pre-assembled for ease of use. Follow these steps to integrate it with your laser engraver:

1. **Component Identification:** Familiarize yourself with the components included in your package. Refer to the diagram below for a visual guide.
2. **Placement:** Position the Rotary Extender on a stable surface beneath your laser engraver. Ensure there is adequate clearance for the laser module to move freely above the object to be engraved.
3. **Connection:** Connect the Rotary Extender to your laser engraver using the provided motor extension cable. Typically, this connects to the Y-axis port of your laser engraver. Ensure the connection is secure.
4. **Height Adjustment:** Adjust the height of the laser engraver or the Rotary Extender's riser add-on to ensure the laser focal point is correctly aligned with the surface of the object to be engraved.

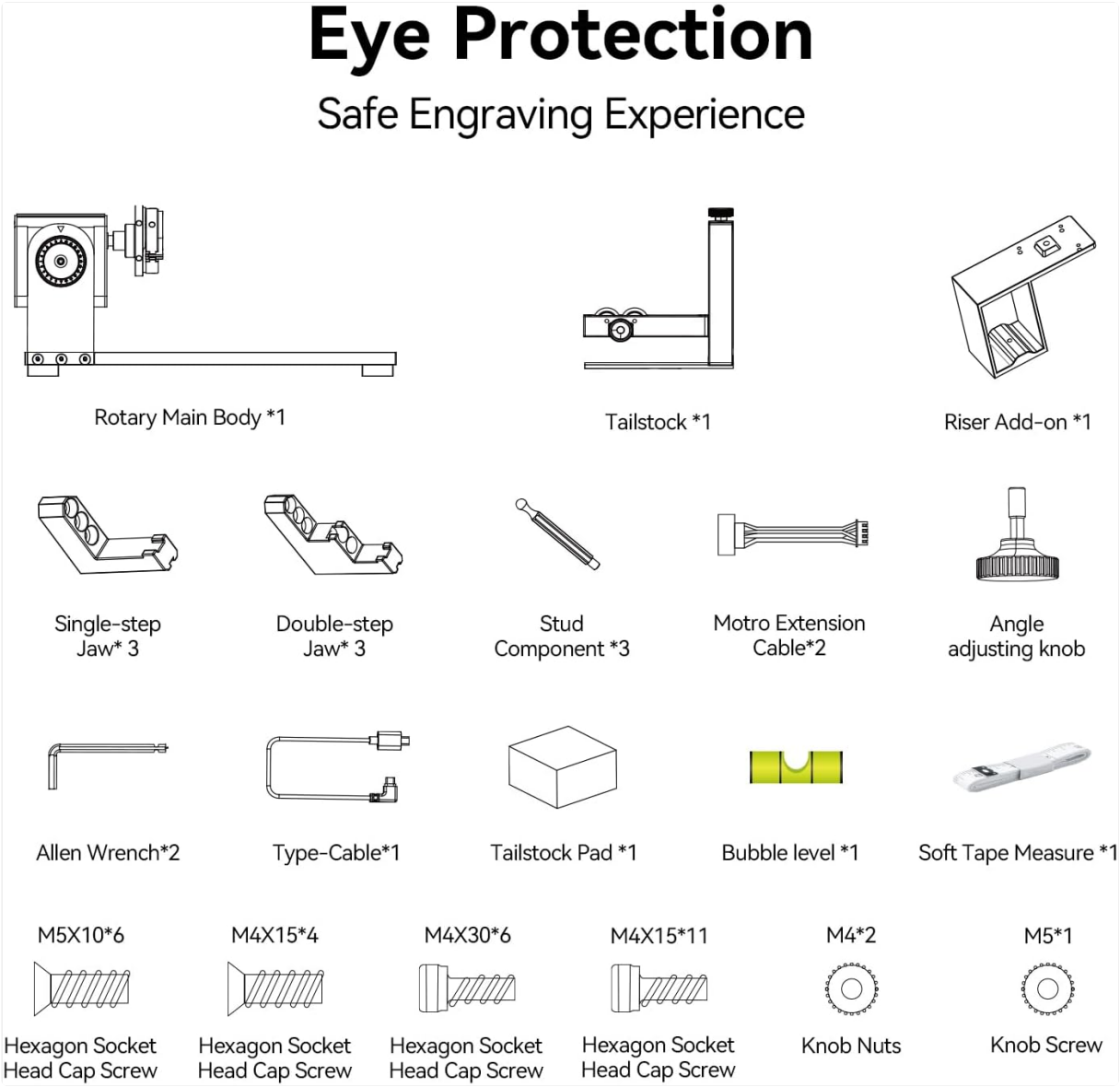

Figure 2.1: Included Components and Parts List

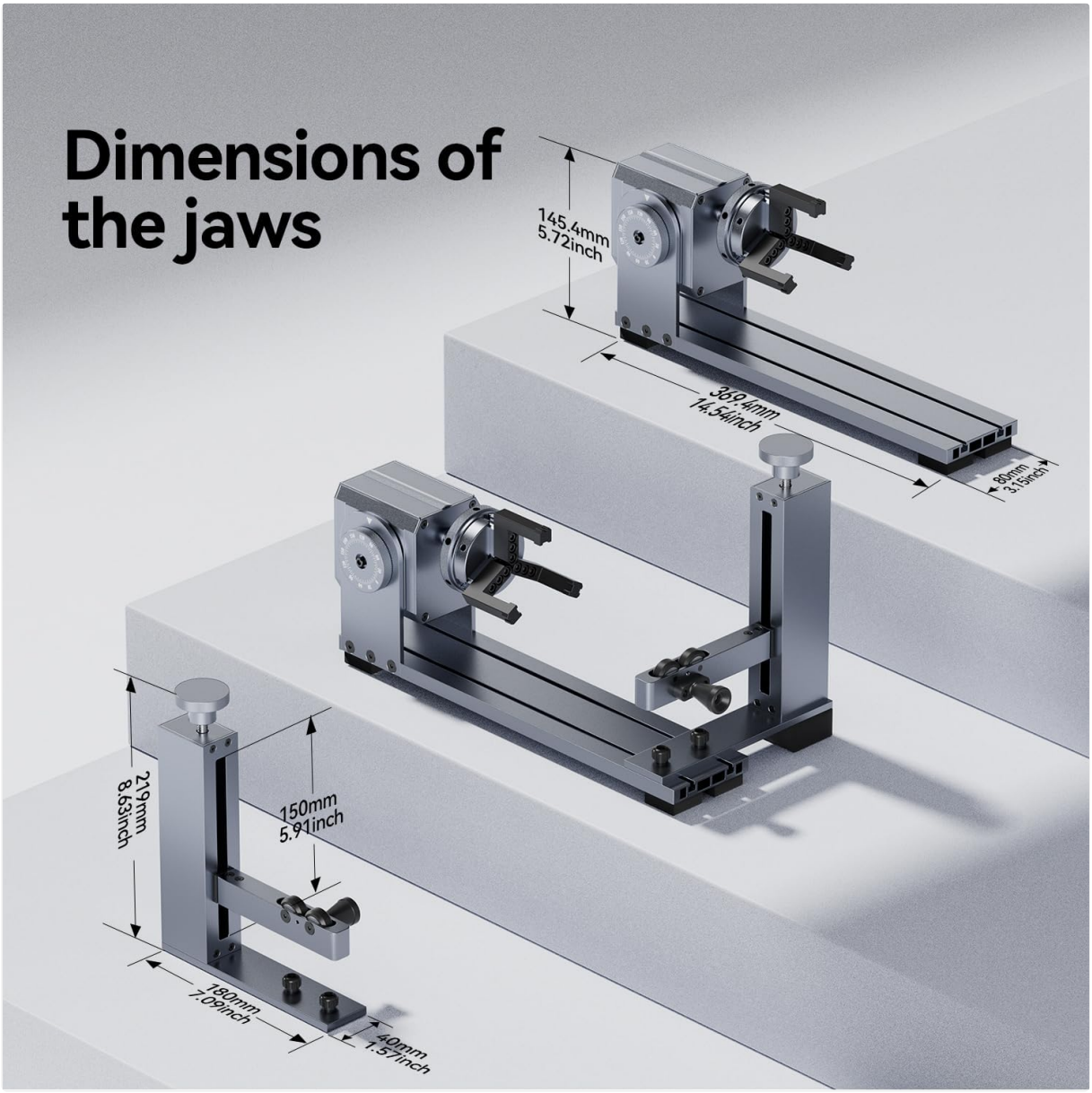

Figure 2.2: Rotary Extender in Operation with a Laser Engraver

3. Operating Instructions

The Rotary Extender offers various methods for holding and engraving objects. Ensure your laser engraver software (e.g., Laserbox Basic, LaserGRBL, LightBurn) is configured for rotary engraving.

3.1 Securing Objects

The Rotary Extender includes multiple jaw sets and a stud component to accommodate different object shapes and sizes:

- **L-shaped Jaw:** Ideal for holding objects with a wider base or irregular shapes.
- **Ladder Jaw:** Suitable for objects with varying diameters, providing multiple contact points.
- **Hexagonal Jaw:** Best for objects with hexagonal or similar multi-sided profiles.
- **Stud Component:** Used for small, delicate items like rings or spheres.

To secure an object:

1. Select the appropriate jaw set or stud component for your object.
2. Attach the chosen jaws to the chuck rotary module.

3. Carefully place the object into the jaws and tighten them until the object is held securely without excessive force that could damage it. For delicate items, consider adding soft pads to the jaws to prevent slippage and damage.
4. Adjust the tailstock to support the other end of the object, ensuring it is level and stable. Use the included bubble level for precise leveling.

Figure 3.1: Three Sets of Jaws for Various Engraving Needs

Figure 3.2: Engraving Diameter Range with Different Jaw Types

3.2 Angle Adjustment

The chuck jaws can be rotated 180° for adjustment, allowing you to engrave objects at different angles or to accommodate irregular shapes. Use the angle adjustment knob to set the desired orientation.

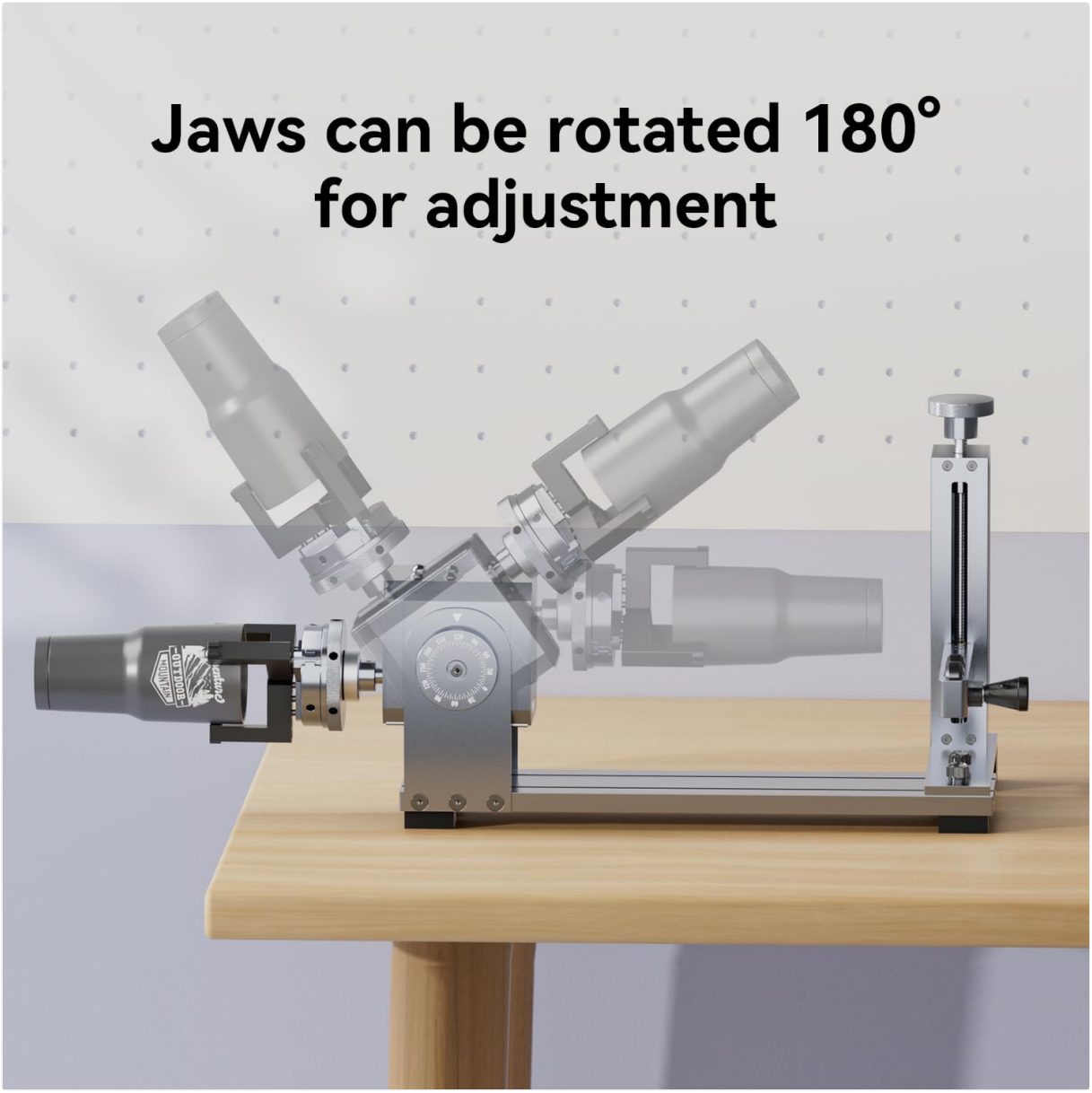

Figure 3.3: Jaws Rotated 180° for Adjustment

3.3 Engraving Process

Once the object is secured and aligned, proceed with your engraving software. The Rotary Extender is compatible with Laserbox Basic, LaserGRBL, and LightBurn. Follow your software's instructions for setting up rotary engraving projects.

Observe the following videos for practical demonstrations of engraving various objects:

Video 3.1: Demonstration of Jaw Roller Engraving. This video shows the rotary extender in action, engraving a cylindrical object using the jaw roller mechanism.

Video 3.2: Engraving Eggs with the Rotary Extender. This video illustrates how to set up and engrave delicate, spherical objects like eggs using the rotary attachment.

Video 3.3: Engraving Cups with the Rotary Extender. This video demonstrates the process of engraving cylindrical objects such as cups, highlighting the stability and precision of the rotary attachment.

4. Maintenance

To ensure the longevity and optimal performance of your LONGER Rotary Extender, follow these maintenance guidelines:

- **Cleaning:** Regularly clean the rotary extender to remove dust, debris, and engraving residue. Use a

soft, dry cloth. Avoid abrasive cleaners or solvents that could damage the finish or internal components.

- **Inspection:** Periodically inspect the chuck jaws, tailstock, and all moving parts for any signs of wear, damage, or looseness. Tighten any loose screws using the provided Allen wrenches.
- **Lubrication:** If any moving parts feel stiff, apply a small amount of light machine oil to ensure smooth operation. Do not over-lubricate.
- **Storage:** When not in use, store the Rotary Extender in a clean, dry, and safe environment to protect it from dust and accidental damage.

5. Troubleshooting

If you encounter issues with your Rotary Extender, refer to the following common problems and solutions:

- **Rotary Extender Not Recognized by Laser/Software:**
  - Ensure all cables are securely connected, especially the motor extension cable to the Y-axis port of your laser engraver.
  - Verify that your laser engraver's firmware and software (e.g., LightBurn, LaserGRBL) are updated to the latest version and correctly configured for rotary engraving.
  - Restart both your laser engraver and the software.
- **Object Slippage During Engraving:**
  - Ensure the chuck jaws are tightened sufficiently to hold the object firmly.
  - For smooth or delicate objects, consider adding soft, non-slip pads to the jaws to increase grip and prevent damage.
  - Verify the tailstock is providing adequate support and is properly aligned.
- **Engraving Distortion on Round Objects:**
  - In your engraving software, adjust the Y-axis scaling. Some users find that shrinking the Y-axis of a design to approximately 83% can correct distortion on round objects. Experiment with values to find the optimal setting for your specific object and design.
  - Ensure the object is perfectly level and centered in the rotary attachment.
- **Loose Components or Instability:**
  - Check all screws and fasteners on the rotary extender and its components. Tighten any that are loose using the appropriate Allen wrenches.
  - Ensure the base of the rotary extender is stable on your work surface.

6. Specifications

Feature	Detail
Product Dimensions	16.99 x 11 x 6.7 inches
Item Weight	8.64 pounds
Manufacturer	Longer
Compatibility	Longer Nano, Nano Pro, Ray5, Laser B1, and most laser engravers; Software: Laserbox Basic, LaserGRBL, LightBurn

Feature	Detail
Engraving Speed (Max)	360°/s
Stepper Motor Angle	0.45°
Material	Anodized aluminum alloy with corrosion-proof coating

7. Warranty and Support

Longer is committed to providing excellent customer service and professional technical support for its products. For any inquiries or assistance, please contact our support team.

- **Technical Support Phone:** +1 888-575-9099
- **Operating Hours (EST, UTC-5):**
  - Monday - Friday: 9:00 AM - 6:00 PM
  - Sunday - Thursday: 8:30 PM - 7:00 AM

Please have your product model and purchase information ready when contacting support to facilitate a quicker resolution.