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### Longer 1-B1



## Longer Laser B1 30W Laser Engraver Cutter

### INSTRUCTION MANUAL

## Product Overview

The Longer Laser B1 30W is a high-performance laser engraver and cutter designed for a wide range of materials including wood, metal, paper, acrylic, glass, and leather. It features a powerful 36W output, an impressive working speed of up to 36,000 mm/min, and a large working area of 450 x 440 millimeters. Equipped with an auto air assist system and advanced safety features, the Laser B1 ensures precision, quality, and user safety for all your creative and professional projects.



Image: The Longer Laser B1 30W engraver, showcasing its design and examples of engraved items like a wooden cutting board, wine glasses, and a leather wallet.

## Setup Guide

Before operating your Longer Laser B1, please follow these setup instructions carefully. The assembly process is designed to be straightforward. For detailed visual guidance, refer to the video tutorials provided on the included thumb drive or the official user manual.

### 1. Unboxing and Assembly

Carefully unbox all components. The frame features exceptional machining and fit, making assembly easy. Follow the step-by-step instructions in the user manual to connect all parts securely.

### 2. Initial Connections

- Connect the power cable to a 120V AC outlet.
- Ensure all motor and sensor cables are properly connected to their respective ports.
- If using the air-assist pump, connect it as per the manual's diagram.

### 3. Software Installation and Connection

The Longer Laser B1 supports various software and connection methods:

- **Software:** Compatible with LaserGRBL (for Windows XP/7/8/10) and LightBurn (for Windows, Mac OS, and Linux).
- **Connection Methods:** You can connect the engraver via USB, TF card, WiFi, or a dedicated mobile application. Choose the method that best suits your workflow.

## Unleash Your Unlimited Creativity



Wood



Paper



Fabric



Rubber



Stainless Steel



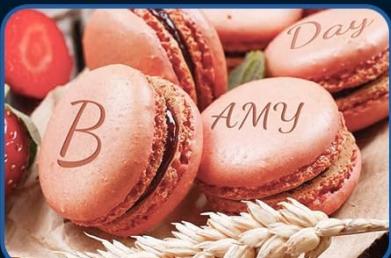
Glass



Black Acrylic



Metal



Food



Ceramics



Leather

Image: Illustration of the multiple software and connection options available for the Longer Laser B1, including USB, TF card, WiFi, and mobile app connectivity.

## Operating Instructions

The Longer Laser B1 is designed for efficient and precise engraving and cutting. Familiarize yourself with its capabilities to maximize your creative output.

### Key Features and Performance:

- **Powerful Laser Output:** The B1 features an output power of up to 36W, enabling it to cut through materials like 25mm basswood and 50mm acrylic with ease.



Image: A visual representation of the Longer 33-36W Diode Laser's power, demonstrating its ability to cut through 20-30mm wood, 50mm black acrylic, and 0.1mm stainless steel.

- **High-Speed Performance:** Achieve rapid completion of tasks with an astonishing cutting speed of 36,000 millimeters per minute.

# 36000mm/min

Ultra High Speed & High Quality

Workload in Same Time



VS



36000   
mm/min

20000   
mm/min

Image: A graphic comparing the ultra-high speed of the Longer Laser B1 30W (36,000 mm/min) to other machines (20,000 mm/min), illustrated with an engraving of a tiger.

- **Large Working Area:** The 450 x 440 millimeters working area provides 23.75% more space than many competitors, accommodating larger materials and diverse projects.

# Larger Engraving Area

Meeting greater creative demands

23.75%  area



Other

15.75x15.75 inch  
(400x400mm)



Longer B1 30W

17.72x17.32 inch  
(450x440mm)

Image: A visual comparison highlighting the larger engraving area of the Longer B1 30W (17.72x17.32 inches) compared to other standard machines.

- **Colorful Engraving:** Directly engrave vibrant, colorful patterns on mirrored stainless steel, achieving realistic and lifelike artwork.

# Bringing Brighter Colors to the Engraved Metal

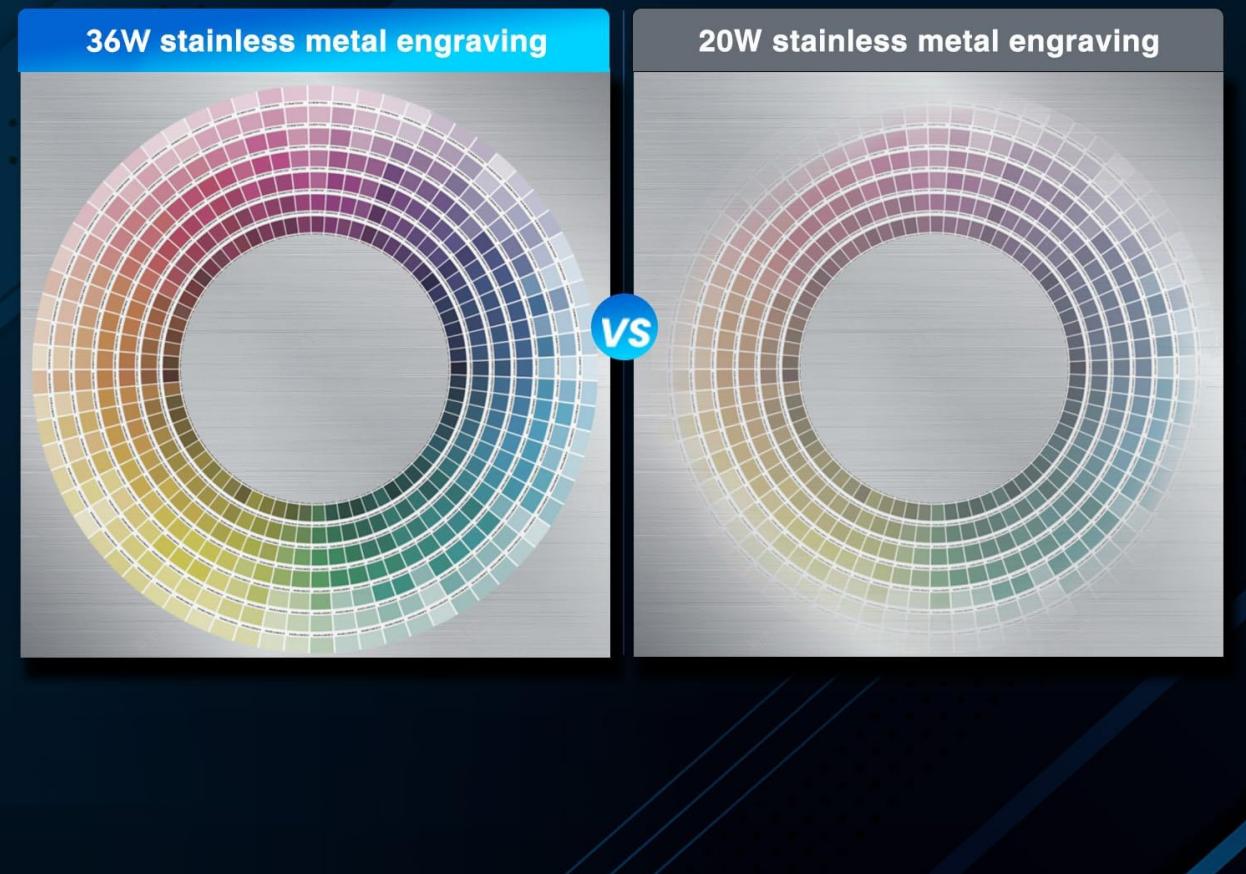


Image: A color wheel comparison demonstrating the brighter and more vibrant colors achievable with 36W stainless metal engraving compared to 20W engraving.

- **Automatic Air-Assist Pump:** The included air-assist pump, controlled by LightBurn software, enhances precision and quality by removing smoke and cleaning the surface during cutting and engraving.

# Equipped with an Assist Pump

Through lightburn parameter Settings, the motherboard can automatically control the air pump switch, remove smoke, clean the surface, improve the quality of cutting and engraving.



Image: An illustration of the air-assist pump setup, showing the difference in engraving quality: clean surfaces with air assist versus yellowed surfaces without.

## Material Compatibility:

The Longer Laser B1 is versatile and can be used with a variety of materials for both engraving and cutting:

- Wood (e.g., basswood, plywood)
- Paper and Cardboard
- Fabric
- Rubber
- Stainless Steel
- Glass
- Black Acrylic
- Various Metals
- Food items (for engraving)
- Ceramics
- Leather



## Strong After - Sales Support

We have several warehouses in United States & Europe and our customer service team is professionally trained to provide you with timely and effective help for any product issues.



**Technical Support: (+1) 888-575-9099**

Mon-Fri: 9:00am-6:00pm (EST,UTC-5)

Sun-Thu: 8:30pm-7:00am (EST,UTC-5)

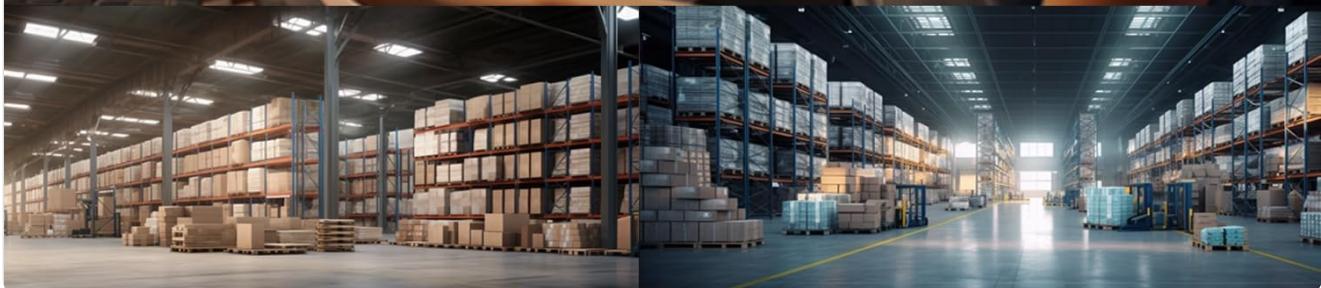


Image: A collage demonstrating the wide range of materials that can be engraved or cut with the Longer Laser B1, including wood, paper, fabric, rubber, stainless steel, glass, black acrylic, various metals, food, ceramics, and leather.

### Demonstration Video:

Your browser does not support the video tag.

Video: This video demonstrates the Longer Laser B1 in action, showcasing its cutting capabilities on wood to create intricate designs and assemble a wooden bird model. It highlights the precision and speed of the laser engraver.

## Maintenance

Regular maintenance ensures the longevity and optimal performance of your Longer Laser B1. Always power off and unplug the machine before performing any maintenance.

### 1. Cleaning the Machine

- **Laser Module Lens:** Gently clean the laser module lens with a soft, lint-free cloth and a small amount of lens cleaning solution. Avoid abrasive materials.

- **Work Area:** Regularly clear debris and dust from the engraving bed and surrounding areas. A vacuum cleaner or compressed air can be used.
- **Rails and Belts:** Inspect the X and Y axis rails and belts for any obstructions or wear. Keep them clean and free of dust to ensure smooth movement.

## 2. Air-Assist Pump Maintenance

If you are using the air-assist pump, ensure its air filter is clean and replace it if necessary to maintain optimal airflow and prevent smoke residue buildup on your materials.

## Troubleshooting

This section addresses common issues you might encounter with your Longer Laser B1. For more complex problems, please refer to the full user manual or contact customer support.

### Common Issues and Solutions:

- **Machine Stops Randomly:** This can sometimes be resolved with a firmware update. Check the official Longer website or contact support for the latest firmware and installation instructions.
- **Y-Axis Not Moving:** Verify all cable connections to the Y-axis motor and ensure no physical obstructions are present on the rails. If the issue persists, it may indicate a motor or driver problem, requiring technical support.
- **Poor Engraving/Cutting Quality:**
  - Check laser focus.
  - Ensure the air-assist pump is functioning correctly and its nozzle is clear.
  - Adjust power and speed settings in your software for the specific material.
  - Clean the laser lens.

### Advanced Safety Features (Troubleshooting Indicators):

The Laser B1 is equipped with eight major safety features that can also indicate potential issues:

- **Move/Tip Instant Stop:** If the machine is moved or tilted during operation, it will automatically stop. Ensure the machine is on a stable, level surface.
- **Flame Detection:** The machine will stop immediately if a flame is detected. Ensure proper ventilation and material compatibility.
- **Offline Protection:** Stops if connection is lost.
- **Motionless Protection:** Stops if the laser module remains stationary for too long while active.
- **Security Lock:** Prevents unauthorized use. Ensure the lock is disengaged for operation.
- **Eye Protection:** Always wear appropriate laser safety glasses. The laser module also features panoramic light filtering glass to block blue light and filter 97% of UV light.
- **Emergency Stop Button:** Press this red button immediately in case of any emergency.
- **Zero Reset:** Used for homing the machine.

# More Protection Features



Emergency Stop Button



Limit Switches (2 boundaries)



Move / Tip Instant Stop



Detect Flames Instant Stop

Image: Visual representation of the Longer Laser B1's safety features, including the emergency stop button, limit switches, move/tip instant stop, and flame detection system.

## Technical Specifications

Feature	Specification
Brand	Longer
Model Number	1-B1
Laser Output Power	30W (up to 36W)
Working Speed	Up to 36,000 mm/min

Working Area	450 x 440 mm (17.72 x 17.32 inches)
Item Weight	21.6 pounds
Product Dimensions	29.33 x 5.31 x 22.44 inches
Power Source	Corded Electric
Voltage	120 Volts (AC)
Material	30W (referring to laser power, not machine material)
Color	Blue

## Warranty Information

The Longer Laser B1 30W Laser Engraver Cutter comes with a **2-Year Manufacturer Warranty**. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for any warranty claims. For full details regarding warranty terms and conditions, refer to the official documentation included with your product or contact Longer customer support.

## Customer Support and Resources

For any questions, technical assistance, or support regarding your Longer Laser B1, please utilize the following resources:

- **Official User Manual (PDF):** Access the comprehensive user manual [here](#) for detailed instructions and diagrams.
- **Technical Support:** Contact Longer's technical support team for direct assistance.
  - Phone: +1 888-575-9099
  - Operating Hours (EST, UTC-5): Mon-Fri: 9:00am-6:00pm, Sun-Thu: 8:30pm-7:00am
- **Online Resources:** Visit the official Longer website or Amazon store for FAQs, software updates, and additional product information.

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Reply

Image: A customer support representative with a headset, symbolizing Longer's commitment to strong after-sales support.