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› ACMER P1 S Pro Laser Engraver User Manual

ACMER P1 S PRO 6W

ACMER P1 S Pro Laser Engraver

Model: P1 S PRO 6W

Brand: ACMER

INTRODUCTION

The ACMER P1 S Pro Laser Engraver is a versatile and powerful tool designed for precision engraving and cutting across a wide range of materials. Featuring a 6W (6,000mW) output laser, this machine offers high speed and accuracy, making it suitable for both hobbyists and professionals. Its modular design ensures ease of assembly and maintenance, while broad software compatibility provides a user-friendly experience.



The ACMER P1 S Pro Laser Engraver, showcasing its design and engraving capabilities on a wooden surface.

Key Features

- **Powerful Cutting Capability:** Equipped with a 6W machine power, ultra-fine laser focus of 0.06mm, and minimum engraving accuracy of 0.01mm. Engraving speed can reach up to 10000mm/min. Capable of cutting 30mm wood board, 20mm acrylic, and 0.1mm stainless steel plate in a single pass.
- **Easy to Use:** Modular design for convenient assembly, repair, and part replacement. Compatible with multiple systems and mobile applications, allowing connection via Wi-Fi, USB cable, or TF card.
- **Versatile Material Compatibility:** Features a 380 x 370mm large engraving area. Can engrave over one hundred materials including paper, bamboo, wood, leather, PCB board, aluminum oxide, metal, and glass.
- **Enhanced Safety:** Class 4 laser certification (IEC 60825-1 compliant). Includes a laser shield to protect eyes and filter 97% of UV rays. Equipped with limit switches on X and Y axes for safety and convenient reset.

Overview of the ACMER P1 S Pro's key specifications and capabilities, including working area, speed, and precision.

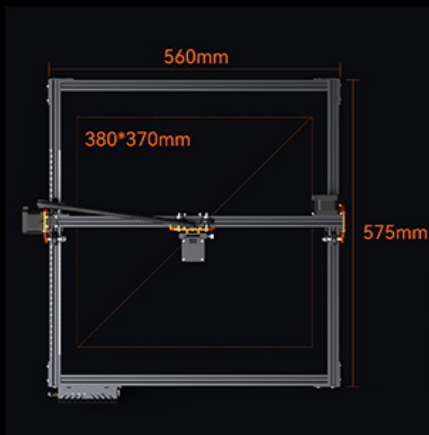
SETUP AND ASSEMBLY

The ACMER P1 S Pro Laser Engraver features a modular design, simplifying the assembly process. Users can easily put together the components, which also aids in future repairs or part replacements.

Connectivity Options

The machine offers flexible connectivity to suit various user preferences:

- **Wi-Fi:** Connect wirelessly to your smartphone or PC for convenient data transfer and control.
- **USB Cable:** Direct connection to a computer for stable data transmission.
- **TF Card:** Use a TF card for offline operation, allowing you to load designs directly onto the machine.



Large Working Area

The large working area of 380x370mm can fulfill the engraving and cutting requirements in most scenarios.



Convenient Measuring Ruler

X-axis and Y-axis are engraved with precise scale lines for quick measurement of engraved or cut objects.



High-performance ESP32 MCU

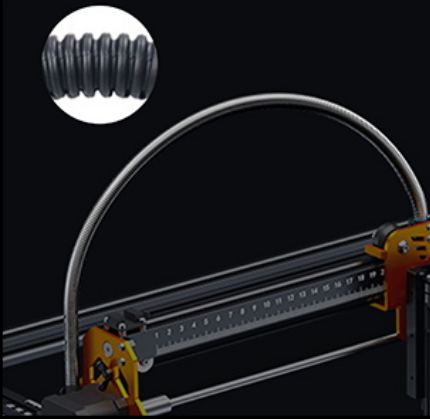
Optimized motion algorithms, Combining high-performance chip with maximum speed can reach 10,000mm/min

Design features enhancing user-friendliness, including cable management and module separation.

OPERATION

Engraving and Cutting Performance

The P1 S Pro is engineered for both intricate engraving and robust cutting tasks. Its 6W laser module provides a fine spot size of 0.06mm x 0.08mm, ensuring detailed and lifelike results. The machine's high speed of 10000mm/min significantly reduces project completion times.



Corrugated Tube for Efficient Cable Organization

Corrugated tubing can bundle wires together, preventing them from sagging onto the engraving material due to gravity and interfering with the engraving process. It also provides a neat and aesthetically pleasing way to organize the wires.



Separated Design of Motor and Laser Module

The X-axis motor side mounting effectively reduces the weight of the X-axis laser module. Compared to competitors, this results in more stable movement of the laser module, leading to higher engraving quality and speed.



More User-Friendly

Equipped with a stable high-speed WiFi module, it allows you to connect and control the machines within the local network for engraving work through a mobile app, making it more user-friendly.

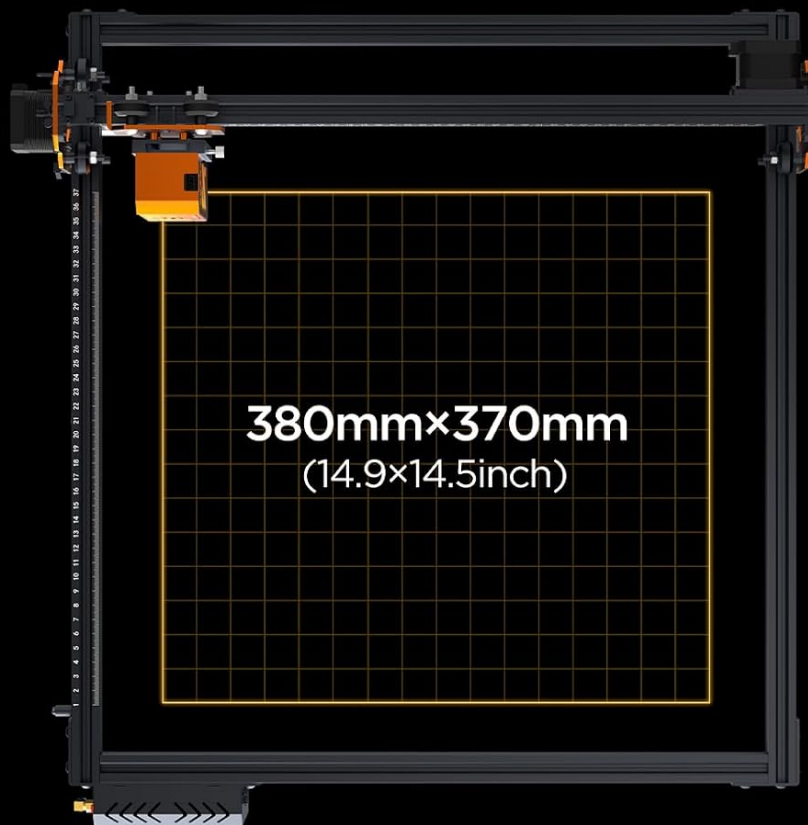
Demonstration of the laser's precision and eye protection features.

Working Area

The generous working area of 380mm x 370mm (approximately 14.9 x 14.5 inches) accommodates larger workpieces, reducing the need for multiple setups or adjustments for bigger projects.

Large engraving area

The spacious engraving area allows users to work with various sizes of materials, accommodating larger workpieces without the need for multiple setups or adjustments.



Visual representation of the spacious engraving area.

Software Compatibility

The P1 S Pro is compatible with popular engraving software, ensuring a smooth workflow:

- **LightBurn:** Fully compatible, supporting both Windows and Mac OS.
- **LaserGRBL:** Compatible with Windows.
- **ACMER APP:** Available for mobile devices (Android and iOS).

Supported file formats include JPG, PNG, DXF, SVG, AI, BMP, and more.

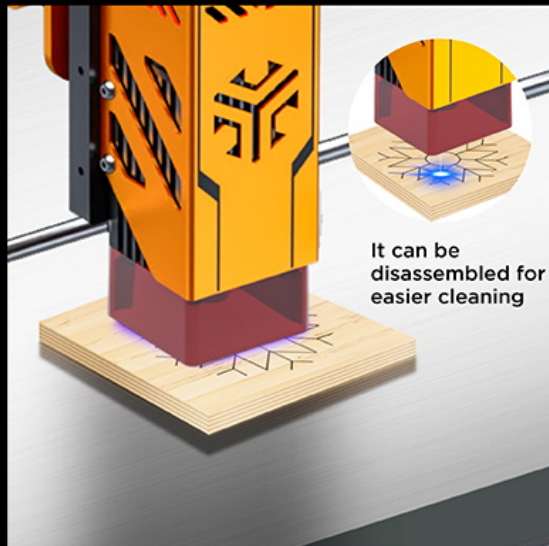
100% compatible with lightburn, LaserGRBL and ACMER APP



Software compatibility for the laser engraver, including desktop and mobile applications.

Multi-Machine Control

For increased productivity and efficiency, a single computer can control multiple P1 S Pro laser engraving machines simultaneously for carving and cutting operations.



New Eye Protection Design

The laser filter filters 98% of laser light into your eyes. You and those around you can watch laser engraving without goggles. It also prevents animals from catching the laser spot.



Ultra-thin Engraving Line

Professional test patterns reveal that the engraving line of the P1 S Pro is as thin as 0.06mm, even thinner than a strand of hair. This means that the P1 S Pro possesses superior and precise engraving capabilities, resulting in clearer textures and the ability to create exquisitely beautiful patterns.

Illustration of the multi-machine control capability.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your ACMER P1 S Pro. The laser filter is designed to be disassemblable for easier cleaning, which helps maintain laser efficiency and clarity of output.

Cleaning the Laser Filter

To clean the laser filter, carefully disassemble the laser module as instructed in the detailed product manual (not provided here). Gently clean the filter to remove any accumulated dust or debris. Ensure the filter is completely dry before reassembling the module.

TROUBLESHOOTING

This section provides general guidance for common issues. For detailed troubleshooting steps, please refer to the comprehensive online support resources or contact ACMER customer service.

- **Machine Not Powering On:** Ensure all power connections are secure and the power adapter is functioning correctly. Check the power outlet.
- **Laser Not Firing/Weak Output:** Verify the laser module is properly seated and connected. Clean the laser lens and filter. Ensure the material is within the correct focal distance.
- **Engraving/Cutting Inaccuracy:** Check that the machine frame is stable and level. Ensure belts are properly tensioned and wheels are clean. Verify software settings for speed and power are appropriate for the material.
- **Connectivity Issues:** For Wi-Fi, ensure the machine is within range of your router and the network credentials are correct. For USB, try a different port or cable. Restart the machine and your controlling device.

SPECIFICATIONS

Specification	Value
Manufacturer	ACMER
Item Weight	10.88 pounds
Product Dimensions	23.43 x 13.39 x 6.3 inches
Item Model Number	P1 S PRO 6W
Color	P1 Spro 6w
Item Package Quantity	1
Batteries Included?	No
Batteries Required?	No
Date First Available	July 3, 2023



All-Metal Support Frame

Corrugated tubing can bundle wires together, preventing them from sagging onto the engraving material due to gravity and interfering with the engraving process. It also provides a neat and aesthetically pleasing way to organize the wires.



Four-wheel Structure

Carving quality is more stable and durable

Four-wheel Structure

Four-wheel structure, compared with three-wheel drive more stable, can effectively reduce pulley wear.

Detailed view of the working area, measuring ruler, and the ESP32 MCU.

WARRANTY AND SUPPORT

Warranty Information

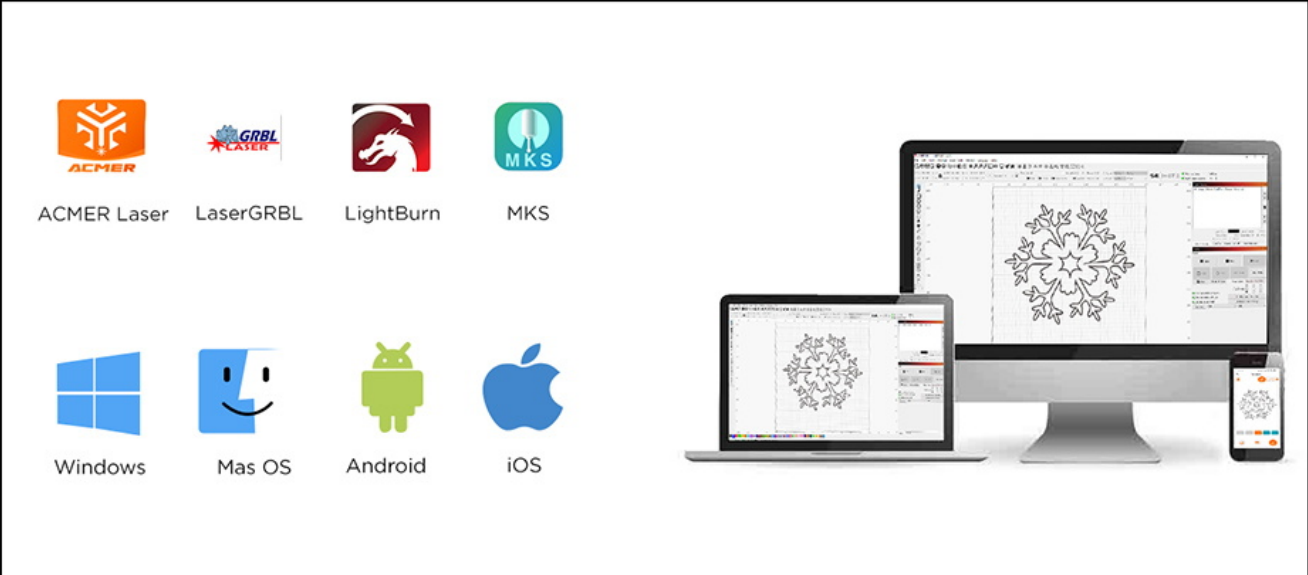
The ACMER P1 S Pro Laser Engraver comes with a **12-month warranty period** from the date of purchase. Please retain your proof of purchase for warranty claims.

Customer Support

ACMER provides 24/7 online support to assist with any inquiries or issues you may encounter. For technical assistance, troubleshooting, or general questions, please visit the official ACMER support channels or contact their customer service team.

Wide Compatibility

This machine is compatible with various popular engraving software such as LaserGRBL and LightBurn. It supports both Windows and Mac OS (LightBurn). The supported engraving file formats include JPG, PNG, DXF,SVG, AI, BMP, and more.



Certifications demonstrating compliance with international safety and quality standards.

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For more information, visit the [ACMER Store](#).

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

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