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› **Makeblock** /

› **xTool D1 Pro 20W Laser Engraver, Laser Cutter and High Accuracy Laser Engraving Machine for Personalized Gifts, Business Cards, 20000mW Output, Class 4**

Makeblock MXD-K001-004

xTool D1 Pro 20W Laser Engraver User Manual

Model: MXD-K001-004

1. SETUP AND INSTALLATION

Proper setup is crucial for the safe and efficient operation of your xTool D1 Pro laser engraver. Follow these steps carefully.

1.1 Unboxing and Initial Assembly

Begin by carefully unboxing your xTool D1 Pro. Ensure all components listed in the packing list are present. The initial assembly involves fitting the frame components together and connecting the necessary cables.

Video Description: This video provides a step-by-step guide for unboxing the xTool D1 Pro and performing the initial assembly, including connecting the frame plates, installing the optical shaft, and connecting internal cables.

1.2 Software Installation (xTool Creative Space)

The xTool Creative Space (XCS) software is essential for operating your laser engraver. Install it on your computer before first use.

Video Description: This video demonstrates how to install the xTool Creative Space software on your computer, guiding you through the download and installation process.

1.3 Device Connection and Firmware Update

Connect your xTool D1 Pro to your computer via USB. The software may prompt you to update the firmware. It is recommended to perform firmware updates for optimal performance and access to new features.

Image Description: This image highlights the user-friendly design of the xTool D1 Pro, emphasizing easy installation and built-in flame detection features for safe operation.

2. OPERATING INSTRUCTIONS

Learn how to effectively use your xTool D1 Pro for engraving and cutting various materials.

2.1 Using xTool Creative Space Software

The xTool Creative Space software allows you to import designs, set parameters, and control the laser engraver.

Video Description: This video demonstrates the functionalities of xTool Creative Space, including importing files, adjusting design elements, and preparing projects for engraving or cutting.

2.2 Setting Focal Length

Accurate focal length setting is critical for precise engraving and cutting results. Use the provided focal length tool to adjust the laser head.

Design for Higher Accuracy

Closed Syuchronous Belt

ALL-STEEL Wheel & Shaft

0.0004 inches
movement accuracy

<0.00079 inches
repositioning accuracy

Image Description: This image illustrates the precision design of the xTool D1 Pro, featuring a closed synchronous belt and all-steel wheel and shaft for high accuracy in movement and repositioning.
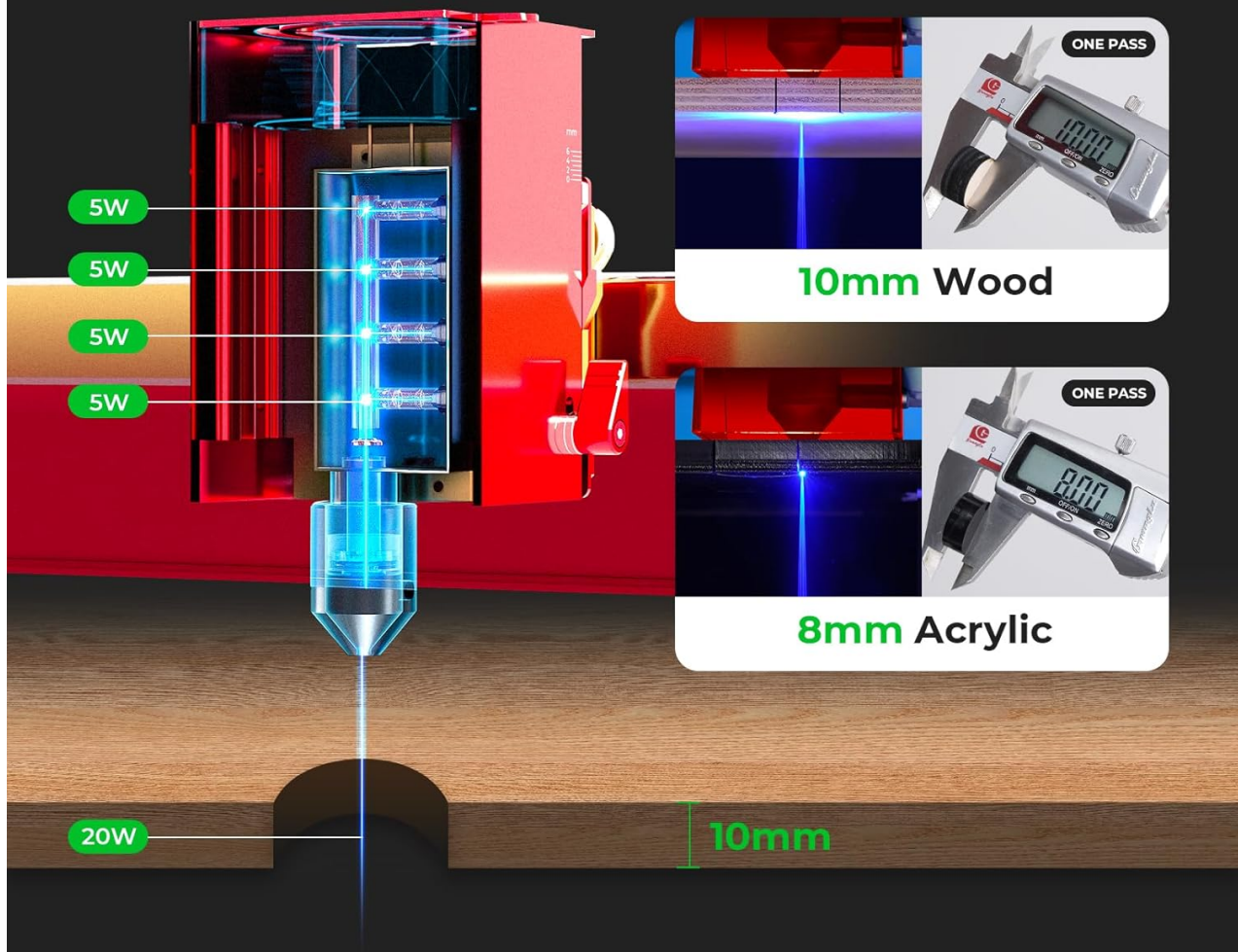
2.3 Engraving and Cutting Process

Once your design is ready and focal length is set, you can initiate the engraving or cutting process. Always wear laser safety glasses during operation.

20W Diode Laser

Higher Output Power for Thicker Cuts

5W

5W

5W

5W

20W

ONE PASS

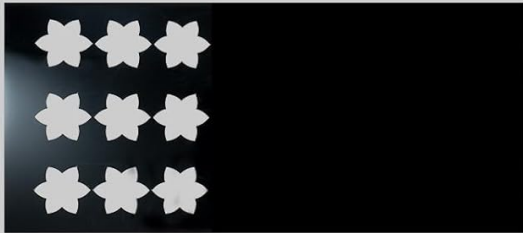**10mm** Wood

ONE PASS

8mm Acrylic

10mm

Image Description: This image showcases the 20W diode laser of the xTool D1 Pro, demonstrating its ability to cut through 10mm wood and 8mm black acrylic in a single pass, indicating high output power for thicker materials.
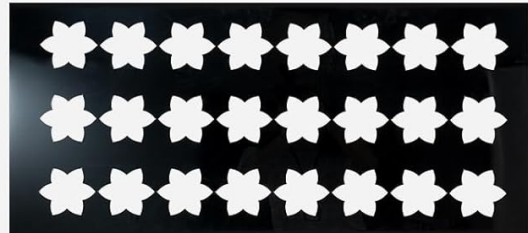
Image Description: This image illustrates the xTool D1 Pro's enhanced processing speed, showing it is 2.5 times faster than comparable machines, achieving speeds up to 400mm/s for increased productivity.

3. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your xTool D1 Pro.

3.1 Lubricating Guide Rails

The sliding rod is a chrome-plated light shaft. Lubricant grease should be applied to the sliding rod shaft periodically to prevent rusting. Frequent users (running more than 8 hours/day) should maintain at least once every 15 days. Light users (running no more than 2 hours/day) should maintain at least once every 2 months.

Video Description: This video demonstrates the proper procedure for lubricating the guide rails of your xTool D1 Pro to ensure smooth operation and prevent wear.

3.2 Replacing the Nozzle

If the nozzle becomes clogged or damaged, it may need to be replaced to maintain engraving quality.

Video Description: This video provides instructions on how to replace the nozzle of the xTool D1 Pro laser module.

3.3 Replacing the Light Shield

The light shield protects your eyes from laser light. If it becomes damaged or scratched, replace it immediately.

Video Description: This video guides you through the process of replacing the light shield on your xTool D1 laser engraver.

3.4 Checking and Adjusting X-Axis Guide Rail

Periodically check the X-axis guide rail for proper alignment and stability to ensure consistent engraving quality.

Video Description: This video provides detailed instructions on how to check and adjust the X-axis guide rail for xTool D Series machines, ensuring structural soundness and stability.

4. TROUBLESHOOTING

Common issues and their solutions for the xTool D1 Pro.

4.1 Software Connectivity and Operation Issues

If the software is temperamental or fails to connect, ensure the USB cable is securely connected and try restarting the software and device. Check for any error messages related to device not found or connection issues.

4.2 Inconsistent Laser Output or Failure to Cut

If the laser output is inconsistent or fails to cut, ensure the lens and cone cover are clean. Refer to maintenance section 3.2 for nozzle replacement if necessary. Verify that the material settings (power, speed, passes) in the software are appropriate for your material.

4.3 Belt Tightness Adjustment

If the synchronous belt is too tight or too loose, it can affect processing accuracy. Adjust the belt tightness as shown in the setup video.

4.4 Firmware Update Issues

If the software prompts for a firmware update, follow the on-screen instructions. Ensure the device is connected via USB and do not power off the laserbox during the update process.

4.5 Safety Features and Alarms

The xTool D1 Pro is equipped with flame detection and movement protection. In case of smoke, fire, tilt, bump, or movement, the device will stop working and set off an alarm. Address the cause of the alarm immediately.

Video Description: This video highlights the top safety features of the xTool D1 Pro, including flame alarm and movement protection, demonstrating how the machine reacts to potential hazards.

5. SPECIFICATIONS

Feature	Detail

Manufacturer	Makeblock Co., Ltd.
Part Number	MXD-K001-004
Item Weight	20.5 pounds
Product Dimensions	31.3 x 14.76 x 6.1 inches
Item Model Number	MXD-K001-004
Size	D1 Pro 20W Basic
Color	Golden Red
Style	Industrial
Material	Stainless Steel
Item Package Quantity	1
Batteries Included?	No
Batteries Required?	No
Date First Available	July 11, 2022

6. WARRANTY

Your xTool D1 Pro comes with a 12-month warranty from the date of purchase.
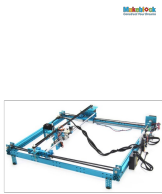
7. SUPPORT

For further assistance, technical support, or warranty claims, please visit the official Makeblock Store or refer to the provided documentation.

Official User Guide (PDF): Download Here

Instructions for Use (IFU) (PDF): Download Here

Visit the Makeblock Store: Makeblock Store on Amazon

Related Documents - MXD-K001-004

[Makeblock Laser Engraver Upgrade Pack for XY Plotter Robot Kit V2.0 User Guide](#)
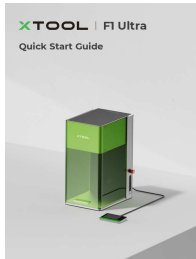User guide for the Makeblock Laser Engraver Upgrade Pack, detailing installation, wiring, firmware updates, and software setup for the XY Plotter Robot Kit V2.0. Learn to engrave various materials with recommended settings and sample projects.

此页不印刷
xTool_M2_用户手册_多语言_V1.0_D1.1.6
料号: KD010767000
成品尺寸: 210*280mm
展开尺寸: 420*280mm
材质: 封面250g铜版纸, 内页100g铜版纸
工艺: 封面覆哑膜, 双面CMYK印刷, 胶装

[xTool M2 User Manual: Setup, Operation, and Safety Guide](#)
Comprehensive guide for the xTool M2 laser cutter and engraver, covering setup, operation, safety precautions, maintenance, and troubleshooting. Includes detailed instructions and specifications.

[XTool F1 Ultra Quick Start Guide: Setup, Operation, and Maintenance](#)
Comprehensive quick start guide for the XTool F1 Ultra, a powerful dual laser engraving and cutting machine. Covers unboxing, setup, operation, software installation, and maintenance for optimal performance.
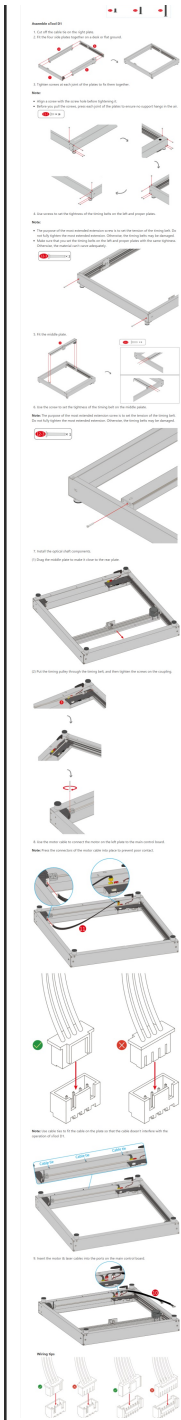
[xTool F1 User Manual: Dual Laser Engraver and Cutter Guide](#)
Comprehensive user manual for the xTool F1, a 2-in-1 dual laser engraver and cutter. Learn about its features, operation, safety guidelines, and maintenance.

[xTool D1 Laser Engraver Assembly and Operation Guide](#)

A comprehensive guide to assembling, connecting, and operating the xTool D1 laser engraver, including safety precautions and software usage.

[XTool M1 Ultra User Manual: Laser Cutter Setup and Operation](#)

Comprehensive user manual for the XTool M1 Ultra laser cutter and engraver. Includes setup, safety, operation, maintenance, and troubleshooting guides for precision cutting and engraving tasks.