

Laser Solid Wood



LASER SOLID WOOD - Laser Engraving/Cutting

LSW18ALD | LSW18CHE | LSW18MAP | LSW18WAL



GENERAL LASER ENGRAVING PROCESS

Recommended Equipment & Accessories

- CO2 Laser Engraver
- Clean Towel or Sponge
- Isopropyl Alcohol
- Optional: Medium Tack Paper Masking
- Optional: Laser Cutting (Honeycomb) Grid

Recommended Settings- Laser Engraving	
40W lasers	
Laser Power	90-100
Laser Speed	60-70
Resolution (DPI/PPI)	500-600

Recommended Settings- Laser Engraving	
50-60W lasers	
Laser Power	80-100
Laser Speed	70-80
Resolution (DPI/PPI)	500-600

Recommended Settings- Laser Engraving	
75W lasers	
Laser Power	50-60
Laser Speed	40-50
Resolution (DPI/PPI)	500-600

Recommended Settings- Glowforge Engraving	
Laser Power	100 (full)
Laser Speed	750-1000
Passes	1
Resolution (LPI)	125-270

General Laser Engraving Instructions

- Place the wood sheet onto the laser bed and align to the zero point on the laser bed.
 - If vector cutting, use of a Laser Cutting Grid on the laser bed is recommended to increase the laser cutting efficiency, help prevent flaming, and protect the back second side of the wood sheet.
- Adjust the laser focus to the surface of the wood sheet.
 - Some hobby laser systems automatically autofocus. In such cases, manual focus of the laser is not required.
- Once the artwork is positioned, engrave using the suggested starting settings.
 - Settings may need adjusted depending on the laser tube wattage.
- When finished, remove the cut pieces and/or engraved pieces from the laser bed.
- If cleanup is needed, wipe the front and/or back surfaces of the cut pieces with a clean cotton cloth lightly misted with isopropyl alcohol.

Tips and Tricks

- If flaming happens during the engraving, activating air assist (if equipped) for raster engraving may help to reduce or eliminate flaming during engraving.
- To help protect the wood surface surrounding the engraved areas, medium tack paper masking can be applied before engraving. When using masking, laser settings may need to be slightly increased.
- Air brush the engraved area to further enhance the contrast between the wood surface and the engraving. Apply medium tack paper masking before engraving. Once the engraving is finished, leave the paper masking on the wood sheet and then air brush the engraved areas. Leave the masking on until the paint dries. Once the paint has dried, remove the masking from the wood surface.

GENERAL LASER CUTTING PROCESS

Recommended Settings- Laser Cutting	
40W lasers	
Laser Power	90-100
Laser Speed	10-20
Frequency (Hz)	1,000-1,500

Recommended Settings- Laser Cutting	
50-60W lasers	
Laser Power	80-100
Laser Speed	15-25

Recommended Settings- Laser Cutting	
Frequency (Hz)	1,000-1,500

Recommended Settings- Laser Cutting	
75W lasers	
Laser Power	60-80
Laser Speed	20-30
Frequency (Hz)	1,000-1,500

Recommended Settings- Glowforge Cutting	
Laser Power	100 (full)
Laser Speed	150-200
Passes	1

General Laser Cutting Instructions

- Place the wood sheet onto the laser bed and align to the zero point on the laser bed.
 - When vector cutting, use of a Laser Cutting Grid on the laser bed is recommended to increase the laser cutting efficiency, help prevent flaming, and protect the back second side of the wood sheet.
- Adjust the laser focus to the surface of the product.
 - Some hobby laser systems automatically autofocus. In such cases, manual focus of the laser is not required.
- Once the artwork is positioned, laser cut using the suggested starting settings.
 - Settings may need adjusted depending on the laser tube wattage.
- When finished, remove the cut pieces and/or engraved pieces from the laser bed.
- If cleanup is needed, wipe the surface with a clean cotton cloth lightly misted with isopropyl alcohol.

Tips and Tricks

- Using air assist (if equipped) for vector will help to reduce or eliminate flaming during cutting.
- To help protect the wood surface surrounding the cut edges, medium tack paper masking can be applied before laser cutting. When using masking, laser settings may need to be slightly increased.

Troubleshooting

- The engraving is too shallow.
 - Laser power setting and/or resolution may need to be increased.

- Laser speed setting may need to be decreased.
 - Check laser focus.
 - Check and clean laser lenses and mirrors.
 - Check laser alignment. (see laser users manual on how to check and adjust laser beam alignment)
 - The engraving is too deep.
 - Laser power setting and/or resolution may need to be decreased.
 - Laser speed setting may need to be increased.
 - The engraved area is charring/melting.
 - Laser power setting and/or resolution may need to be decreased.
 - Laser speed setting may need to be increased.
 - The edges along the laser cut line are curling.
 - Laser power setting may need to be decreased.
 - Laser speed setting may need to be increased.
 - Use a laser cutting ("honeycomb") grid insert to set the product up off of the solid metal laser bed.
 - Use air assist if available.
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Templates and Images

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