

Boss Laser Orientation

Boss LS 3655

Power – 150-watt CO2 laser

Work area – 55.1" x 35.4" (pass thru accommodates larger workpieces)

Software – Lightburn

Settings- Ruida , Serial/USB 1400mm x 899mm, origin at rear right

A discount code is available and will save 75% on your own license. Just \$20 instead of 80

Please note that this code is exclusively for Pikes Peak Makerspace Members and is not to be shared outside of the organization.

Laser Safety

- NEVER use the laser if you have not completed the approved training.
- ALWAYS keep the exhaust fan and chiller running while the laser is in use
- NEVER leave the laser unattended while it is running.
- NEVER use unapproved materials such as PVC
- NEVER lift the lid of the machine while it is running.
- NEVER engrave or try to cut reflective material
- NEVER push or pull the laser head and its gantry while the laser is running.
- ALWAYS ensure the work area interior and exterior is clean before and after your work.

Powering up the laser

The machine's main power switch is controlled via a keyed access. This key is secured in a lock box. You will be provided with the code after you complete your training.

Pre-flight

1. Ensure the work area is clean and free of hazards
2. Turn on water chiller and compressor
3. Turn on the Boss 3655 LS – (the machine will home the laser head)
4. Open LIGHTBURN on the PC / insert USB drive on the side of the machine
5. Go to File- open and select your file (should be in .lbm format)
6. Place material on the work bed
7. Use red laser dot to align the head to determined work origin (Absolute Coordinates, Current Position, User Origin)
8. Auto focus using the Lightburn software
9. Press "Frame" to confirm that the work area is within the material parameters
10. Close the lid
11. Turn Exhaust fan on
12. Hit Start
13. When job is completed, turn off the exhaust fan
14. Return the laser head to the home position and hit origin on the machine

What is ok to laser?

	Engrave	Cut	
Acrylic	X	X	
Wood	X	X	
Leather	X	X	
Plastics*	X	X	NO PVC
fabric	X	X	
MDF	X	X	
Cardboard	X	X	
Paper	X	X	
Corian	X	X	
Foam	X	X	
Fiberglass	X	X	
Rubber	X	X	
Aluminum	X		
Copper	X		
Gold	X		
Steel	X		
Cord	X		
Glass	X		
Tile	X		

Common Power and Speed Settings

	engrave	cut
Acrylic	15% @ 350 mm/s	65% @ 20 mm/s
Anodized Aluminum	15% @ 325 mm/s	NA
Balsa Wood	15% @ 350 mm/s	40% @ 25 mm/s
Bass Wood	20% @ 350 mm/s	40% @ 25 mm/s
Birch Wood	20% @ 350 mm/s	65% @ 20 mm/s
Birch Plywood	20% @ 350 mm/s	70% @ 20 mm/s
Cardboard	15% @ 350 mm/s	50% @ 15 mm/s
Ceramic	27% @ 350 mm/s	NA
Glass	20% @ 325 mm/s	NA
Granite	18% @ 275 mm/s	NA
Leather	15% @ 350 mm/s	70% @ 15 mm/s
Powder Coated Metal	15% @ 325 mm/s	NA
Mirror Backside	15% @ 325 mm/s	NA
Paper	15% @ 30 mm/s	NA
Romark	15% @ 350 mm/s	NA
Rubber	15% @ 350 mm/s	70% @ 15 mm/s
Foam	40% @ 25 mm/s	NA