



- The results would be different in even same material with different finishing or different colors, so you need to adjust the speed and power rate based on different objects. Also, please adjust the focal length to be the best, make the focal spot to be the smallest.
- It couldn't engrave or cut directly: Glossy metal plate, Transparent materials, Reflecting materials, Some materials in white color or previous to light, etc. Then, you need to use the marker pen to black it to engrave.
- It is recommended that the minimum cutting speed of 10W and above laser modules should not be less than 200mm, otherwise the cutting materials may easily catch fire!
- When the laser engraver is working, the operator must pay close attention and not place it alone to prevent the engraved material from catching fire. Please set up the laser engraver in a fireproof area and ensure good ventilation. If possible, we recommend that you purchase it a fire extinguisher and keep it close to the machine.
- Please check the documentation of ortur, find the corresponding software tutorial, and modify the corresponding value.

To Engraving	Material	≤ 2.1W	= 5W	= 10W	= 20W
MDF		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 40
Plywood		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 15000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 80
Pine		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100
Paulownia		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 40
Paperboard (Cardboard Box)		Image Mode: Grayscale Interval (mm): 0.06 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 9000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 70	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 35
A4 Paper (Not White)		Image Mode: Grayscale Interval (mm): 0.06 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 60	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 9000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 15	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 35
Kraft Paper 250g		Image Mode: Grayscale Interval (mm): 0.06 Speed (mm/m): 2000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 9000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 60	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100
Leather		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 60	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 30
Black Acrylic		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 2000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 50
Cobblestone		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 100mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 100mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 1000mm Power Min (%): 0 Power Min (%): 25	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 2000mm Power Min (%): 0 Power Min (%): 100
Ceramics		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 500mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 1000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 5000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100
Coated Metal		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 250mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 6000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 25	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 25
Plated Metal		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 100mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 100mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 1000mm Power Min (%): 0 Power Min (%): 25	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 8000mm Power Min (%): 0 Power Min (%): 100
Stainless Steel		X	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 100mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.05 Speed (mm/m): 2000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100
Glass		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 500mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 1500mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 5000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100
Knit		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 50
Cotton		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 50
ABS Plastics		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 50
Bamboo		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 3000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 7000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 15000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 65
Silica Gel		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 40mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 1000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 2000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100
Rubber		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 200mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 5000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 10000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 20000mm Power Min (%): 0 Power Min (%): 100
Ceramic Tile		Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 200mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.07 Speed (mm/m): 4000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.1 Speed (mm/m): 8000mm Power Min (%): 0 Power Min (%): 100	Image Mode: Grayscale Interval (mm): 0.12 Speed (mm/m): 16000mm Power Min (%): 0 Power Min (%): 100
Tin Lead Ore		X	X	X	X

To Engraving	Material	≤ 2.1W	= 5W	= 10W	= 20W
Copper		×	×	×	×
Silver		×	×	×	×
Gold		×	×	×	×
Pure Aluminum		×	×	×	×
Soap		×	×	×	×
White Foam		×	×	×	×
Transparent Acrylic		×	×	×	×

To Cutting	Material	≤ 2.1W	= 5W	= 10W	= 20W
Black Acrylic 5mm		X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 3	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 3	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 1
8mm		X	X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 4	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 2
20mm		X	X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 11	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 5
25mm		X	X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 14	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 8
30mm		X	X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 19	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 12
PVC 3mm		X	Image Mode: Line Speed (mm/m): 500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1
5mm		X	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 700mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 600mm Power Min (%): 100 Pass Count : 1
7mm		X	X	Image Mode: Line Speed (mm/m): 200mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 400mm Power Min (%): 100 Pass Count : 1
Leather 2mm		X	X	Image Mode: Line Speed (mm/m): 300mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 500mm Power Min (%): 100 Pass Count : 1
A4 Paper		Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 2500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 4500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 8000mm Power Min (%): 100 Pass Count : 1
Knit		X	Image Mode: Line Speed (mm/m): 500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 2000mm Power Min (%): 100 Pass Count : 1
Cotton		X	Image Mode: Line Speed (mm/m): 500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 2000mm Power Min (%): 100 Pass Count : 1
ABS Plastics		X	Image Mode: Line Speed (mm/m): 500mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 1000mm Power Min (%): 100 Pass Count : 1	Image Mode: Line Speed (mm/m): 2000mm Power Min (%): 100 Pass Count : 1
Bamboo		X	X	Image Mode: Line Speed (mm/m): 200mm Power Min (%): 100 Pass Count : 10	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 3
Silica Gel		X	X	Image Mode: Line Speed (mm/m): 200mm Power Min (%): 100 Pass Count : 8	Image Mode: Line Speed (mm/m): 100mm Power Min (%): 100 Pass Count : 4