

The Definitive Guide to Laser Engraving and Cutting with the Snapmaker



Potter

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Your Snapmaker lets you turn your ideas into reality. You can engrave on dozens of materials like paper, plywood, MDF, hardwood, leather, fabric, sticker, and even food like cookie! Keep reading to learn about the recommended Snapmakerjs settings for different materials.




Snapmaker offers two types of laser modules. The one comes with the Snapmaker Original 3-in-1 3D printer is a 200mW laser module and you can upgrade it with the new 1600mW laser module.

- Cork
- Bamboo
- EVA
- Rubber
- Acrylic
- Corrugated Cardboard
- Plywood
- MDF
- Leather
- Sticker
- Colored Card

* Make sure that you've set the best work origin for laser engraving and cutting. For 1600mW Laser Module, you can use the Fine Tune Work Origin feature to achieve the best cutting result.

* The recommended settings might not apply to all situations. Take them as a reference, and you can fine-tune the parameters for your materials :)




Cork

B&W	Grayscale	Vector
		

Cork	For 1600mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	60%	3000	3000	/
	Grayscale	40%	3000	1000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	90%	3000	1500	/

Cork	For 200mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	90%	3000	1000	/
	Grayscale	70%	3000	1000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	90%	3000	800	/




Bamboo

B&W	Grayscale	Vector
		

Bamboo	For 1600mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	90%	3000	1000	/
	Grayscale	100%	3000	1000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	90%	3000	800	/

Bamboo	For 200mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	90%	2000	800	/
	Grayscale	90%	2000	500	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	90%	2000	500	/




EVA

B&W	Grayscale	Vector
		

EVA		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	90%	3000	2000	/	
		Grayscale	60%	3000	3000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	90%	3000	2000	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	5mm	Vector	100%	2000	90	1	0

EVA		For 200mW Laser Module					
		Engrave ✓			Cut ✗		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	90%	2000	1000	/	
		Grayscale	90%	2000	1000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	90%	2000	1000	/	




Rubber

B&W	Grayscale	Vector
		

Rubber	For 1600mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	90%	2000	1500	/
	Grayscale	90%	3000	800	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	100%	2000	500	/

Rubber	For 200mW Laser Module				
Engrave ✓			Cut ✗		
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	100%	2000	1000	/
	Grayscale	100%	2000	400	Algorithm: Atkinson Movement Mode: Line (Normal Quality)
	Vector	100%	2000	400	/




Acrylic

B&W	Grayscale	Vector
		

Acrylic		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	90%	3000	3000	/	
		Grayscale	90%	3000	2000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	90%	3000	500	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	2mm	Vector	100%	1500	40	3	0

Acrylic		For 200mW Laser Module					
		Engrave ✓			Cut ✗		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	90%	2000	500	/	
		Grayscale	100%	2000	300	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	100%	2000	300	/	

Corrugated Cardboard

B&W	Grayscale	Vector
		

Corrugated Cardboard		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	80%	3000	2000	/	
		Grayscale	50%	3000	1000	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	90%	3000	800	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	1mm	Vector	100%	1500	180	2	0
	3mm	Vector	100%	1500	130	2	0
	4mm	Vector	100%	1500	120	3	1

Corrugated Cardboard		For 200mW Laser Module					
		Engrave ✓			Cut ✗		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	90%	2000	1000	/	
		Grayscale	100%	2000	800	Algorithm: Atkinson Movement Mode: Line (Normal Quality)	
		Vector	90%	2000	500	/	

Plywood

Plywood	For 200mW Laser Module				
Engrave ✓ Cut ✗					
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	100%	1000	1000	/
	Grayscale	100%	1500	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 30
	Vector	100%	1000	1000	/

Plywood		For 1600mW Laser Module					
Engrave ✓ Cut ✓							
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	100%	1500	1500	/	
		Grayscale	100%	1500	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 5	
		Vector	100%	1500	1500	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	1.5mm	Vector	100%	1500	75	1	0
	2.2mm	Vector	100%	1500	120	3	0.4
	2.8mm	Vector	100%	1500	120	4	0.4

MDF

MDF	For 200mW Laser Module				
Engrave ✓ Cut ✗					
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	100%	1000	1000	/
	Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 10
	Vector	100%	1000	1000	/

MDF	For 1600mW Laser Module				
Engrave ✓ Cut ✗					
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	100%	2000	2000	/
	Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 2
	Vector	100%	2000	2000	/

Leather

Leather	For 200mW Laser Module				
Engrave ✓ Cut ✕					
	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings
Engrave	B&W	100%	1500	400	/
	Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 15
	Vector	100%	1500	400	/

Leather		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	70%	2000	2000	/	
		Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 3	
		Vector	70%	1500	300	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	0.6mm	Vector	70%	1500	300	2	0

Sticker

Sticker		For 200mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	100%	2000	1400	/	
		Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 3	
		Vector	60%	2000	2000	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	0.3mm	Vector	100%	1500	300	1	0

Sticker		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	40%	2000	2000	/	
		Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 3	
		Vector	35%	1500	300	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	0.3mm	Vector	100%	1500	800	1	0

Colored Card

Colored Card		For 200mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	100%	1500	300	/	
		Grayscale	100%	2000	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 15	
		Vector	100%	1500	300	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	0.3mm	Vector	100%	1500	200	1	0

Colored Card		For 1600mW Laser Module					
		Engrave ✓			Cut ✓		
		Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Other Settings	
Engrave		B&W	70%	2000	2000	/	
		Grayscale	70%	1500	/	Algorithm: Atkinson Movement Mode: Dot (High Quality) Dwell time (ms/dot): 4	
		Vector	40%	2000	2000	/	
	Thickness	Mode	Power	Jog Speed (mm/minute)	Work Speed (mm/minute)	Multi-pass	Pass Depth
Cut	0.3mm	Vector	40%	1500	600	1	0

Feel free to contact us for more help at support@snapmaker.com. We are always available to help you out.

Visit our website to learn more about Snapmaker 3-in-1 3D Printer.

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