APPENDIX B: MATERIAL SETTINGS

Epilog Mini / Helix Suggested Material Settings

Material	DPI/Freq.	30 watt	40 watt	50 watt	60 watt	80 watt
Acrylic						
Photo Engraving	300 DPI	90s 60p	90s 55p	90s 50p	90s 45p	90s 40p
Text/Clipart Engraving	300 DPI	90s 80p	90s 75p	90s 70p	90s 65p	90s 60p
Text/Clipart Engraving	600 DPI	90s 75p	90s 70p	90s 65p	90s 60p	90s 55p
Cutting 1/8" (3 mm)	5000 f	9s 100p	12s 100p	15s 100p	20s 100p	25s 100p
Cutting 1/4" (6 mm)	5000 f	5s 100p	6s 100p	8s 100p	12s 100p	15s 100p
Cutting 3/8" (9.5 mm)	5000 f	-	-	3s 100p	4s 100p	5s 100p
Cutting Note: Adjusting the standard focus distance so it is closer to the lens by about .030" (.762 mm) will produce better edge quality on 1/4" acrylic and thicker. Two passes may produce better results and allow for cutting through thicker materials. There are two types of acrylic: cast is better for engraving (creates a frosted look when engraved) and extruded acrylics are better for smooth-edged cutting.						
Alumamark						
Engraving	300 DPI	90s 55p	90s 45p	90s 35p	90s 25p	90s 20p
Engraving	600 DPI	90s 45p	90s 35p	90s 25p	90s 15p	90s 10p
Anodized Aluminum						
Photos/Clipart	300 DPI	90s 55p	90s 50p	90s 45p	90s 40p	90s 35p
Photos/Clipart	600 DPI	90s 50p	90s 45p	90s 40p	90s 35p	90s 30p
Text	600 DPI	90s 60p	90s 55p	90s 50p	90s 45p	90s 40p
We find when engraving anodized aluminum, text appears best at 600 DPI, but photos and clipart can be engraved with great detail down to 300 DPI.						
Cork						
Engraving	300 DPI	90s 50p	90s 45p	90s 40p	90s 35p	90s 30p
Cutting	500 f	25s 50p	25s 45p	25s 40p	25s 35p	25s 30p
Cotton						
Engraving	300 DPI	90s 30p	90s 25p	90s 20p	90s 15p	90s 10p
Denim						
Engraving	300 DPI	90s 35p	90s 30p	90s 25p	90s 20p	90s 15p
Fleece						
Engraving	150 DPI	90s 35p	90s 30p	90s 25p	90s 20p	90s 15p
Cutting	2500 f	25s 25p	25s 20p	25s 15p	25s 10p	25s 5p
When engraving fabric, try changing the graphic to 80% gray and use the Jarvis dithering pattern for the best results. Every fabric you are cutting will need to have adjusted settings - find a small swatch of the fabric you can test first.						
Glass						
Engraving	300 DPI	15s 100p	20s 100p	25s 100p	30s 100p	35s 100p
When etching glass, try changing the graphic to 80% gray before engraving and using the Jarvis dithering pattern. You can also diffuse heat by covering the glass with a thin sheet of dish soap.						
Leather						
Photo Engraving	300 DPI	90s 40p	90s 35p	90s 30p	90s 25p	90s 20p
Text/Clipart Engraving	600 DPI	90s 50p	90s 45p	90s 40p	90s 35p	90s 30p
Cutting 1/8" (3 mm)	500 f	30s 80p	30s 75p	30s 70p	30s 65p	30s 60p

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Material	DPI/Freq.	30 watt	40 watt	50 watt	60 watt	80 watt
Mat Board						
Engraving	400 DPI	70s 100p	70s 90p	70s 80p	70s 70p	70s 60p
Cutting	500 f	20s 50p	20s 45p	20s 40p	20s 35p	20s 30p
Bottom-up engraving is suggested for mat board etching.						
Marble						
Photo Engraving	300 DPI	90s 55p	90s 50p	90s 45p	90s 40p	90s 35p
Text Engraving	600 DPI	90s 65p	90s 60p	90s 55p	90s 50p	90s 45p
Every marble is very different for settings. Start low and increase the power with a second run if you haven't used that marble before.						
Painted Brass						
Engraving	300 DPI	90s 45p	90s 40p	90s 35p	90s 30p	90s 25p
Engraving	600 DPI	90s 40p	90s 35p	90s 30p	90s 25p	90s 20p
Plastics						
Engraving	300 DPI	90s 40p	90s 35p	90s 30p	90s 25p	90s 20p
These settings work well with many plastics, including plastic phones and covers. Even one color plastics can achieve a great look when engraved.						
Plastic (2 Layer Engraveable)						
Engraving	300 DPI	90s 80p	90s 75p	90s 70p	90s 65p	90s 60p
Engraving	600 DPI	90s 70p	90s 65p	90s 60p	90s 55p	90s 50p
Cutting 1/8" (3 mm)	5000 f	15s 100p	20s 100p	30s 100p	30s 85p	30s 70p
Rubber Stamps						
Engraving	400 DPI	6s 100p	10s 100p	20s 100p	30s 100p	50s 100p
Engraving	600 DPI	16s 100p	20s 100p	30s 100p	40s 100p	60s 100p
Cutting	100 f	10s 100p	15s 100p	20s 100p	25s 100p	40s 100p
Stainless Steel w/Cermark						
Engraving	600 DPI	20s 100p	25s 100p	30s 100p	35s 100p	45s 100p
Twill						
Cutting	2500 f	50s 50p	50s 45p	50s 40p	50s 35p	50s 25p
Wood						
Photo Engraving	600 DPI	40s 100p	45s 100p	50s 100p	55s 100p	60s 100p
Clipart/Text Engraving	600 DPI	30s 100p	35s 100p	40s 100p	45s 100p	50s 100p
Clipart/Text Engraving	300 DPI	25s 100p	30s 100p	35s 100p	40s 100p	45s 100p
Deep Engraving	600 DPI	10s 100p	15s 100p	20s 100p	25s 100p	30s 100p
Thin Veneer	500 f	30s 22p	30s 18p	30s 14p	30s 12p	30s 9p
Cutting 1/8" (3 mm)	500 f	25s 100p	30s 100p	35s 100p	40s 100p	45s 100p
Cutting 1/4" (6 mm)	500 f	8s 100p	10s 100p	15s 100p	20s 100p	25s 100p
Cutting 3/8" (9.5 mm)	500 f	-	-	6s 100p	10s 100p	12s 100p
When cutting wood, multiple passes may allow cutting of thicker materials. You can readjust the focus between passes down to the center point of the cut for the best results.						