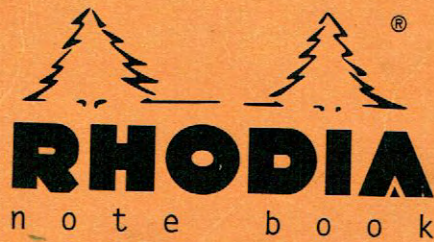


Sol Diego Colaser

LOG

BOOK #2



9/18/2016 Paul W Laser class

1/8" birch ply 100/25 mostly
100/35 99.9%

later - 100/35 does not cut. WTF?

cuts OK @ 70, not overpowered looking.

Reduced laser output -- why?

Test pulse anemic even before BC.

Current looks OK.

Cooling water low but still circulating. Thermal issue?

Maybe some interaction between raster + vector -

but attempt to reverify that failed.

Lens appears still perfect.

Windows installed some updates... surely not?

Air conditioning not keeping up. Voltage?

Also, air assist compressor is running hot.

Air blast may be weaker than before.

Evidence of a liquid spill all around the
air assist compressor!

Add $\sim 2/3$ gal distilled water.

No help. Takes 55+ % to cut 1/8" ply.

9/21/2016 Terry G. Doing some test cuts

1/4" Fluoro Acrylic. Started at 100s/35p, worked up in increments to 100s/100p without cutting through. Started ↓ speed, finally cut cleanly at 60s/100p.

Etching at 60p/100s. Nice effect.

Using Inkscape, no problems once I reduced the doc. size to reasonable values. Have to remember to change/check "order" values when vector etching.

9/22 Paul W Trying to fix power output

Removed & inspected HV power supply.

Surge suppressors look OK & test @ 252

No visible damage inside HV supply.

Replaced HV power supply (re-installed old one)

Added external surge suppressor on outlet.

Test cut 1/8" birch ply	100/20	99%
	100/25	99.9%
	100/30	perfect

⇒ power is back, approximately. Why??

test 1/4" acrylic	100/100	no
	80/100	no
	60/100	yes except back paper

1/4" acrylic (bigger job)	60/100	consistent but not thru on sharp corners
~2min @ 30mA 3 min	40/100	same but material is hot!

1/4 acrylic stars

100/100, 2 passes almost

80/100, run job twice Nice!

Laser seems normal.

9-24-2016 JEWELRY CLASS DEMO

CUT ONE DESIGN - 1/4" ACRYLIC 40s/100p
ONLY ISSUE WAS ME STUPIDLY NOT BEING
ABLE TO TELL THE BLOWER PWB FROM THE
AIR CONDITIONER PWB "J

9/25

Paul W Laser Class

1/8" birch ply

100/25 perfect
100/20 99.5%

laser engrave

15p/100s - light
2 passes - nice

trouble cutting at 100/30

⇒ laser power fading again
water temp > 30C - matters?

Test 1/2" sande ply

(Scrap from CNC router)

top focus 100/100 no

50/100 nice!

9/25	Paul W	Boxes	

	$\frac{1}{4}$ " red oak ply + tape (on back)	50/100 75/100	plenty 99.9
	$\frac{1}{4}$ " walnut ply + tape on back	75/100	good
	$\frac{1}{2}$ " solid red oak + tape	100/35	good
	$\frac{1}{8}$ " solid walnut + tape	100/35	good

9/27	Paul W	Titan parts	
	$\frac{1}{4}$ " acrylic	80/100, run twice	good

9/28	Kara	Please dept. shrag ♥	
	$\frac{1}{8}$ Birch plywood		
	raster then vector		
	↓	↓ 75	
	50% power	100 % power	} cut
	100% speed	100% speed	
	(TOO MUCH)!	100% power speed	
		.2% speed power	
	30% power		} etc
	100% speed		
	(great)		

10/1	Laura		
	Only cut 3 pendants (test) vectors were not working, had to redesign loop (break)		
	engrave	1005 70p	⊗
	engrave	1005 .5p	

10/3	Laura L (5mm Ply wood) cuts went well no issues	
100s 70p	1) Tripcurrent (Letters)	T ↓ 12in Separated the cuts tail to fit all letters
100s 70p	2) Tripcurrent Symbol	↑ 43in ← 29in
"	3) Undercurrent Symbol	
"	4) Triptych Symbol	83↓in 40←→in

10/4	Kara (Please round 2)	
	1/8 birch plywood (2in x 2 inch)	

	<u>Raster</u>	<u>Vector</u>
less burning! →	20% power	cut - 75% power
	100% Speed	100% speed
		etch - 2% power
		100% speed

10/8	Laura Tripcurrent pendants (5mm Ply)	
100s 70p	120 logos ✓	Came original vector cuts
100s 70p	vector engrave	

10/9	Colin Jemmoth	
	Wolfpack pendants - ply 100 speed	
	All vector:	cut 80% power
		engrave 0.5% power
		↳ 0.2% is better
	Knife engrave dispensary	
	100s / 50p raster.	
	Looks awesome!	

10/23

CHRIS K - 1/8" RED ACRYLIC

100% speed & power to cut parts

100% speed 4% power to etch numbers

Approx 30 mins per 12" x 12" sheet

cut around 300 small parts

10/26

CHRIS K - 1/8" RED ACRYLIC

100% speed 10% power to etch

100% speed & power to cut

Approx 1 hour 20 mins per 12" x 12" sheet

to cut around 300 small parts

11/9

CHRIS K 1/8" PLYWOOD

100% speed & power for cuts

100% speed & 5% power for some cuts

10% power was cutting too deep and
parts with shallow cuts snapped
when handled

11/16

CHRIS K 1/8" plywood

70% speed + 98% power

11/17

KARA 3/8" birch plywood

vector only ↓ nope too thick...

100% speed

" " 1/4" birch plywood

vector

100% speed 80% power

11/26 Paul W

Reported problem: laser went dead suddenly while cutting. No signs of power.

Diagnosis: Failed (defective) IEC power socket on laser. No connection between hot wire of IEC and integral fuse.

Patch: slapped some solder on to make connection. Works!

Final solution: obtain & install new IEC socket.

11/26 Paul W Cleaned optics.

Test cut $\frac{1}{8}$ ply	100/20	98%
	100/25	99+%
	100/30	~ perfect

11/26 Robert P.

HANDLE IS BROKEN

$\frac{1}{8}$ ply 100/30 — great

11/29 Martin Ivanowicz

Settings that worked:

2.7mm ~~1/8~~ Bamboo ply $\rightarrow$ Vector @ 100% speed, 50% current

.200" "Underlayment" from home depot $\rightarrow$ 50% speed, 100% Power

.173" Acrylic cut $\rightarrow$ 100/100 is too much, I think
Extended! Engrave = 100 spd / 10 power $\rightarrow$ too deep

5 power $\rightarrow$ still too deep

Machine is running good. Homing when booting up was slow

12/02 Martin

$\frac{3}{16}$ Cast acrylic $\rightarrow$ Cast has higher melting pt. than extruded! Requires more juice! But it etches better?

Cutting: 100 pwr / 60 speed $\rightarrow$ decent, but welds in corners

Engraving: 1% pwr / 20 current / 100 speed $\rightarrow$ This is good for engraving

★ Made a new handle because that was ~~clear~~ annoying A.F. ★ clear acrylic

Acrylic final tally...

Cast, $\frac{3}{16}$ thick: Engraving @ 1 pwr / 20 current / 100 speed
Clear Cutting @ 100 pwr / 100 current / 50 speed

Note this requires two runs, as current is a shared setting

$\frac{1}{8}$ " Birch ply seems to cut very inconsistently $\rightarrow$ cuts @ 100/100 for best results?

Better, still could be even better / slower

$\frac{1}{4}$ Birch $\rightarrow$ 100/38 $\rightarrow$ knots in the ply make results inconsistent, but perhaps still cost effective? Underlayment is cheaper & cuts better!

12/3 Laura (Decom Decom shit)

I didn't cut anything - having design issues

12/4 Robert

Leather 35 Pastor power awesome



12/8

Martin

Cutting cast acrylic $\frac{3}{16}$ thick all day. runs great!

Vector engrave: 100 speed / 1 pass / 20 current

Vector cut: 50 speed / 100 pass / 100 current

12/9/2016

TERRY

DOING A LARGE ETCHING/RASTER JOB.

(24" x 48") FILE LOADED IN RETINA 3D

ONLY AFTER CHANGING DEFAULT DPI.

11/4" Birch, ~~TESTED~~ AT 100% SPEED

TESTED 10%, 20% + 30% POWER.

10% GAVE A NICE LIGHT SURFACE ETCH.

30% DID A VERY DARK ETCH (THROUGH

THE TOP LAYER OF THE PLYWOOD). ALSO HAD

~~SOME~~ A LOT OF EDGE ARTIFACTS, SO

WENT WITH 10%.

"

SINCE IT (LITHO) TOOK HOURS, I

USED THE TIME TO MAKE A LITTLE

WHITEBOARD TO SUMMARIZE THE

CUTTING VALUES. MEANT TO BE UPDATED

BY EVERYONE "

12/10/16

Robert

AND
12/11/16

Rotary used - great on bamboo.

tapered cups shifted until I

placed them against one rubber O ring and on
top of the other two.

12/11/16

Jake M.

Bea B.

Cutting .189" plywood

Raster: 100% speed / 10% power

Vector cut: 50% speed / 100% power / 100% current

cutting mystery scrap vector cut only

speed 50% power 80%

Jogging was
acting janky
on and off

*Changed vector cuts down to 80% power, seems
to work better (smaller flame/less burn marks)

12/18/16	Everything went great!	pole pendants 100% speed 50% power on scrap w/ blue masking
Jake + Ben McGhee	Raster: 100 speed / 10 power Vector cut: 50 speed / 80 power / 100 current	
12/9 Robert	189" thick plywood vector cut boxes 100 S 100 P perfect 1/4 inch	
12/21/2016	RE-DOING MY LARGE RASTER ETCH JOB AS A VECTOR ETCH. DE-FOCUSSED THE LASER BY BY 0.25. Birch veneer, used 100% speed, 10% power. RASTER ETCH WAS ESTIMATED AT 7:00 hrs, VECTOR ETCH ESTIMATE IS 12:30. for 1/4 Plywood, the VECTOR CUT	
01/02/17 Robert	Engraving Bamboo & Cedar planks. Everything working perfect for a few hours - An electrical burn smell came from the laser & turned it off. Turned back on & no smell but it does NOT jog X Y → .	
1/5/17	Paul W Replaced power inlet module - crispy critter. Fuse now 15A - no 20A available @ Marshall's. Connector is only good for 10A anyway. Test cut nominal. Full power test - 10m @ 100/100 - OK!	

1-8-17 Robert P.

Engraving tile 40 raster power - perfect
Vettinging $\frac{1}{8}$ bamboo 100P 70S - perfect

1-12-17
TERRY

LARGE VECTOR ETCH + CUT ON $\frac{1}{4}$ " BIRCH
VECTOR ETCH: 100% SPEED, 25% P, ($\frac{1}{4}$ " DEFOCUS)
VECTOR CUT: 60% SPEED 100% P

1-14-17
Robert P.

engraving MAKAGONG $\frac{1}{4}$ in at 50S 100P - good
enough - had to pop them out - cutting $\frac{1}{8}$ in
bamboo & engraving 100P 100S FOR ~~VECTOR~~ 38P RASTER
POWER IN THE BUILDING WENT OUT. COMPUTER IS
WORKING BUT CAN'T ACCESS RETNA ENGRAVE
PROGRAM - LEFT A MESSAGE FOR PAUL

1/17/17

RAM

Cut Neoprene / Farted / Fixed it /

12pm - 715pm

1/26/17

Vitali - $\frac{1}{8}$ " acrylic mirror, semi-mirror & clear

1) optimal cut at 85% speed / 100% power

2) Did not find setting for perfect etch.

Best at 2% but still not sharp lines.

1/29/17
Robert

~~scrap~~
 $\frac{1}{4}$ cut at 60% 100 speed pops right out
bamboo.

1/30/17
1/31/17

RAM Cut things

RAM cut more things Laser cuts great

1/3/2017 Laser class

1/8 ply

Cut 100/50

engrave 20/100 and +/-

optics not in great shape.

4/3/2017 Paul W

engrave Manhasset music stand

@252dpi aluminum desk raster 100/100 not enough

2nd pass 100/100 mostly

3rd pass 100/100 pretty good!

cleaned lens & mirrors 2, 3

lens is not perfect.

2/2/2017

TAMM

WORKING GREAT!

VECTOR ETCHING BIRCH: 100 SPEED, 1% POWER

VECTOR CUTTING 1/4 BIRCH: 60 SPEED, 100% POWER

HAD TO GO BACK OVER SOME OF THE DESIGN
DUE TO KNOTS IN THE WOOD, BUT OTHERWISE
WORKED GREAT.

CLEANED LEFT SIDE MIRROR. OTHERS LOOKED FINE

* NOTICED MY DESIGN WAS RESULTING
PREVIOUS

IN THE LAST GOING OVER SOME SHAPES
TWICE FOR NO OBVIOUS REASON. IN
INKSCAPE, I MADE SURE TO "UNLINK" CLONES
AND CONVERTED ALL OBJECTS TO PATHS,
WHICH RESOLVED THE ISSUE.

2/3/2017
Term
ETCHING + CUTTING 1/4" Birch.
100% speed, 1% power gives a SWEET
LINE, WHEN VECTOR ETCHING.
50% speed, 100% power CUTS THE
PLYWOOD WELL EXCEPT FOR ISOLATED
AREAS WHICH I THINK ARE PROBABLY
KNOTTY IN THE PLYWOOD INTERIOR.

2/4/17
Robert
working on kerf with boxes. 1/4 in birch
at .0065 kerf is OK - fairly tight
I'm not able to engrave for some reason
Anything I send to Raster = message that it is
too large DPI I decreased with no luck.

2/5/17
Laser out last Δ for test on Effect
- Ramiro Laser Hamed, Learned how to Raster
Thanks Paul.

2/5
Paul W - Laser class
optics still not in great shape.

Some problem reading USB thumb drives.

Both were Mac-formatted drives, needed to
be partitioned in MBR style with MS-DOS
(FAT) filesystems.

Measured AC wall current at 100% vector
power - 10.37 A

2/9
Vic L (Jolly Rancher) K8 Birch Ply
Raster Speed 100; Power 30 - too bit too much burn
Vector Cut Speed 100; Power 75 - Nice B ☺

1/8 Birch Ply

2/8

Vic L (cont.)

Vector Cut Speed: 100 Power: 70

Vector Engrave Speed: 100 Power: 1

really Nice & Clean!

Vector Cut Speed: 100 Power: 70

Raster Engrave Speed: 100 Power: 25.8

Perfect!

1/4" clear acrylic scrap

Vector Cut Speed: 100 Power: 100 Pass: 1

Raster Engrave Speed: 100 Power: 25 Pass: 1

not deep enough

Vector Cut Speed: 100 Power: 100 Pass: 2

Raster Eng Speed: 100 Power: 29 Pass: 1



(Left a couple of new Birch Ply sheets on shelf. Help yourselves!)

This worked well!

2/10/2017
TERRY L

MAKING SOME SIGNS FOR LISA/COLAB.

USING 1/8" CLEAR PLY. MOSTLY ~~1/8"~~

VECTOR CUTTING SINCE ETCHING WOULD

TAKE MANY HOURS. ON FIRST 2 SIGNS,

DE-FOCUSED 1", VECTOR VALUES: 100% SPEED, 20% POWER.

ON 3RD SIGN ("THE CAGE") KEPT FOCUS, BUT

TRIPLED THE LINES. SLIGHTLY NEATER LOOKS

100% SPEED 1% POWER.

Q: IS POSSIBLE TO DO 0.5% POWER?

A: APPARENTLY! " NICER LINE

2/12/17	Peper: Speed 100/ Power 2	
Annot		

2/16	Paul W	
	Reported alignment (?) issues.	
	Aligned.	
	Rotated Mirror 2 to miss damaged spot	
	Replaced lens. omitted rubber ring.	
	Test wt 1/8 ply	100/20 99%
		100/22
		100/25
		100/40 drops out perfect
	Vitalis 1/8" ply	100/100 drops out
		100/75 "
		100/50 99+%
		100/60 drops out
		100/70
	again @ u.l.	100/60 almost
		100/75 drops out
	Swept up, thinned the herd of big scrap material.	
2/17	RAM The Effect samples	
	switch page size to raster no bigger than	
	8.5 x 11	<i>Paul W</i>

2/17 Dave T

Cutting clear acrylic $\frac{1}{8}$ - $\frac{1}{4}$ thick

Speed 100 Power 100 - etch only

Speed 40 Power 100 - almost cut but melted on bottom edge & burned

~~Speed~~

Speed 20 Power 100 - cut through but burned

Spd 40 Power 50 - nice edges, almost cut through

Spd 40 Power 40 - not cut through

Spd 30 " 50 - still burned, not quite cut

50 40 - pretty nice cut

70 40 - pretty nice cut.

10 40 - good cut

7/8 Jody Rancher ☺ (Vic)

Vector Cut Speed: 100 Power: 70

Raster Eng Speed: 100 Power: 26 → GOOD ☺

$\frac{1}{8}$ " birch ply

Probably could be cut this down - extra burn on loads

Test ran multiple files/same material

Vector Cut Speed: 100 Power: 70

Raster Eng Speed: 100 Power: 28

$\frac{1}{8}$ " birch ply w/ painter's tape on back

Pendants for Booty Hunter Camp

$\frac{1}{8}$ " ply 5 layers

Vector Cut Speed: 65 Power: 100 → no cut out

Vector Cut Speed: 100 Power: 1 → no line engrave

Mini-Sign



lots of wood smoke material isn't the best. ☹

2/20

Jolly Rancher (Vic) → trying again (hehe)

3/16" hardwood discs

① Vector Eng: Speed: 100 Power: 1 → nice clean line
Vector Cut: Speed: 100 Power: 50 → just right, almost
not enough power
to cut all the way
through

CRSSD
Pendants

② Vector Eng: Speed: 100 Power: 1
Vector Cut: Speed: 100 Power: 55 } C'est bon! 😊

③ Raster Eng: Speed: 100 Power: 100 ← OOPS!
Vector Cut: Speed: 100 Power: 40

④ Raster Eng: Speed: 100 Power: 27
Vector Cut: Speed: 100 Power: 40 } Good 😊

02/23
Robert

vector only - I still can't get Raster
to work for me - no matter what I put
in it says too big DPI too high I lower it
and still no luck. Ramiro you say you
figured out the Raster back on 2/5 - what
am I doing wrong? Thanks Robert

2/25 Paul W Ant Farms!

1/8" acrylic 100/50 almost
100/70 not quite thru back paper
100/85 good

1/4" acrylic 60/100 good
50/100 more reliable

upgraded Retina Engrave 3D to 4.420
This did not work. Reverted to 4.407

7 Vic L (Jolly Rancher)

1/4" Plywood

	Speed	Power	
VectorCut	80	100	→ pretty good except for small fibers
VectoCut	78	100	→ perfect!

1/4" acrylic

	Speed	Power	
Vector Eng	100	2	← probably want "1" Infinite FourSpace Pendants!
VectorCut	100	60	

3/1/2017 TERRY ETCHING A CUTTINGBOARD - UNKNOWN WOOD. WILL TRY A LOW POWER ETCH (100S, 10P) AND WILL REPEAT WITH DESIRED LOOK. ALSO DID TESTS ON EVA (1/2") FORM FOR A COSAME - 100% SPEED, 42% POWER VECTER CUTS MOSTLY.
PS - OPTICS REMARKABLY CLEAN AT START.

(CONTINUED)

ALSO ETCHED SOME ANODIZED ALUMINUM BLANKS. 100% SPEED, 30% POWER SEEMED TO WORK NICELY.

	Thick	MAT	speed	Pow	Success	Notes
3/1/17	3/8"	Plexi	90	40	No	Attempting cut
Jason	3/8"	Ply wood	70	50	Yes	
3/7/17		Aluminum	100	1	YES	Engrave

3/9/17 1/8 in plywood Router Power 15%
 engrave → Speed 100%
 Cut → Vector speed 100%
 Power 45%

3mm Birch R. Power 19%
 Plywood engr. R. speed 100%
 Board power 33
 (A+C) Cut → speed 100 ✓

hp 15
 rs 85
 vp 33
 vs 100

3/9

Vic (Jolly Preacher)

1/4" PlywoodPersonal
"Potty" Project
for Vitali ☺

Speed

Power

Vector Cut

78

100

Just to make sure it
cuts through fibers &
glue blobs.

Vector Cut

75

100

↳ good ☺

1/8" Birch PlyBoaty
Hunter
Camp ☺

Gifts

Vector Cut

100

65

Raster Eng

~~100~~~~27~~

Perfect, nice & clean

Raster Eng

~~100~~~~26~~

Back side could

go higher

Next time try 30-35.

☺

3/11

I can't Raster - only vector.

Robert

3/13

Vic (Jolly Preacher)

1/8" Birch Ply

Speed

Power

test
earrings

Vector Cut

~~100~~

65

Raster Eng

100

108

Good
Nice light
engrave.Gift
Pendants
attempt #36792

Vector Cut

100

65

Raster Eng

100

32

Good cut
Nice burn in the
birch makes birch
darker. ☺Inkscape
Note:When working with Inkscape
make sure objects are ungroupedAND all line opacity is set
to 100% otherwise Retina won't
see your whole design

3/15/2017 1/4" Acrylic (white)
Tenny Speed 50%, Power 100%
cutting nicely. MIGHT TRY & sand
on 2nd sheet.

3/15/17 white elmer's
Zach Foam board Vector speed 100
Perfect! cut power 16-~~20~~

Scrap
Wood 85
35
100
65 / 90 not cut

3/16/17 0.483in MDF

test 50 speed
100 power
- did not penetrate
30 speed, 100 power
- almost went through!
- I can see some penetration
20 speed, 100 power
- we are in business!

3/17 Vic (Jelly Rancher)
Gift Pendants (Vector Cut 100 78)
(Raster Eng 100 35) 1/4" Birch Ply
Good!

3/19 Curt B. 1/8 Plex:
vector Speed 75
Power 100 good

3/23/2017
Terry

CUTTING SOME CARDBOARD STENCILS
AND FOAM COSTUME PIECES. FOAM
IS 1/2" EVA, CUTS NICELY AT 100% SPEED, 45%
POWER. USED SAME SETTINGS FOR
2 PLY CARDBOARD, BUT PROBABLY
COULD HAVE USED LESS POWER. CUT
NICELY.

3/26/17
Rob

CUTTING 4 PLY - CLEAN CUTS 90S 100P

3/28/2017
Terry

FINISHING UP COSTUME PIECES AND
STARTED SOME PROP PIECES OUT
OF 1/8" PLY. CUT AT 50% SPEED,
100% POWER.

3/30/2017
Terry

RECUT SOME PROP PIECES (FORGOT
TO MIRROR THEM) AND DID A
LARGE BIRCH 1/4" ETCH & CUT.
ETCH SPEED 100%, POWER 2%
CUT 50% 100%

3/30/17

Vic (Jolly Rancher)

1/8" Birch Ply

	Speed	Power	
Vector Cut	100	40	← pretty good but not everything
" "	100	50	← <u>perfect</u> & dropped out

Rasler Eng

100

30

← nice ?

04/01/17
Rob

1/4 in birch vectored at 100S 80P perfect

4/4

Vic (Jolly Rancher)

1/8" Birch Ply

	speed	power	
vectorcut	100	50 52	→ perfect
raster engr	100	30	→ good depth

1/8" ~~Birch~~ Walnut

vectorcut	100	52	good
-----------	-----	----	------

r

100	52	<u>1/8" Mahogany</u>	needs more power
<u>100</u>	<u>60</u>		

100	52	<u>1/8" Cherry</u>	good!
-----	----	--------------------	-------

100	52	<u>1/8" Bolivian Rosewood</u>	Smoky!
-----	----	-------------------------------	--------

4/5/2001
Terry

1/4" Birch Ply

VECTOR ETCH: 100% SPEED, 20% POWER
1/2" DEFOCUSVECTOR CUT: 75% SPEED, 100% POWER.
(MOSTLY GOOD, BUT ANY AREAS WITH KNOTS
NEED ADDITIONAL CUT)

4/6

ply wood

vector only

100

100

not work

50

100

work

ZACH

m d f

1/4"

60

60

good

4/6/2017 1/4" Birch - 100% speed 2% power
for etching.

For cutting, I run it at 100% 1000%
2-3 times. Nicer cut, less hazing.
Etched some granite: 100% speed,
10% power (better etch)

4/7/2017 1/4 MD F vector
Zack Board 100 sp. 6 power for engrave
60 sp 100 power for cut
even then sometimes
not cutting all the way

next
4/4 power of life etching
50 power 100 speed
1/4 cedar

4/10 J. Gordon SP Pow notes

1/8" HMF mirror acrylic 70 40 Best cut yet

4/11 Vic (Jolly Rubber)

1/8" Bolivian Rosewood

		speed	power	
Vector Cut		100	53	- almost
" "		100	57	- close
" "		100	60	- good
" "		100	63	- "
" "		100	65	- "
" "		100	68	- too much
" "		100	70	- too much

gets really smoky
not ideal but pretty

Vector Cut		100	53	- almost
" "		100	57	- good
" "		100	60	- good
" "		100	63	- "
" "		100	65	- "
" "		100	68	- "
" "		100	70	- "

good material
low smoke
clean cuts

1/8" Cherry

Vector Cut		100	53	- good
" "		100	57	- "
" "		100	60	- "
" "		100	63	- "
" "		100	65	- "
" "		100	68	- "
" "		100	70	- "

Can go lower in power
smokes a little but less than birch.
easy to cut

Materials Test

Q13 511397

Speed Power 1/8" Mahogany

Vector Cut	100	53	-	nope
" "	100	57	-	almost
" "	100	60	-	mostly dropout
" "	100	63	-	good
" "	100	65	-	"
" "	100	68	-	"
" "	100	70	-	"

} pretty smoky
tends to want to
Spark. no
fire danger
but should
be watched

4/12/2011
Terry

LAGER SEEMS TO BE INOPERATIVE
^

4/12

Paul W

Found blown surge suppressors in
HV power supply, again. Replaced.
Laser working again.

1/4" acrylic

?? 80 speed 100 power run twice
good => 27 100 once

0.2677

4/13

Paul W

1/8" acrylic

100/90
80/100

no
good

4/14

Rob P

vector cut 90S 100P 1/4 birch good
not able to engrave. It says DPI too high.

4/14

ZACH

MDF

50s 10p cut - (not always
100s 6p engrave cutting?)

4/18/2017

Terry

1/4" Birch Ply.

ETCHING: 100% SPEED, 2% Power

CUTTING: ~~2~~ TWO PASSES 100% SPEED, 100% Power

4/20

ZACH

(Laser not cutting all the way
through on any setting 3/16
blackboard CMDF, except in particular
areas on the bed alignment issue?
also laser not recognizing where
it is positioned (warns it will go off
the designated area.) (I gave up, lol)
ignore this

4/20

Vic (Jolly Rancher)

BIRCH
1/4" Plywood

Pre-Cut
Test Cut
Playa Bench

Vector Cut

Speed

Power

100

80

Nice & clean cuts.

1/8" Birch Ply

Pendants

Vector Cut

100

50

Raster Engrave

100

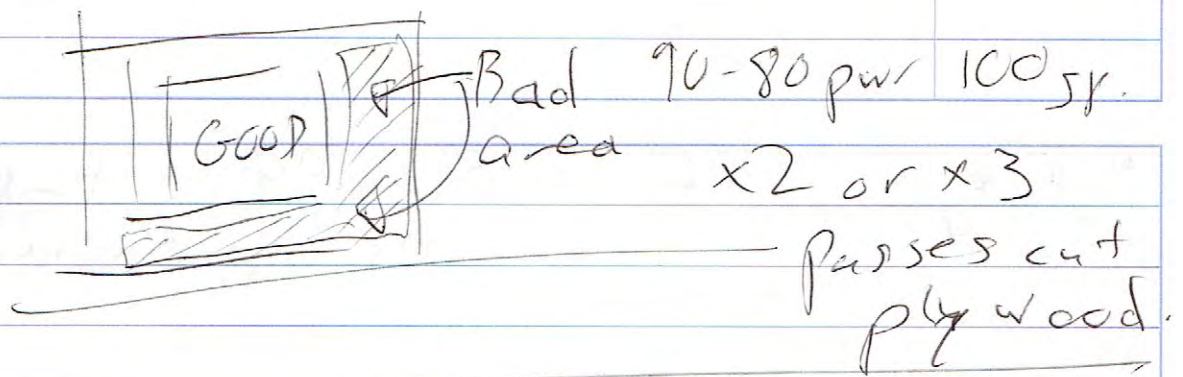
30

} Good?

4/21

Zach

I tried again, problem was
solved by focusing laser
slightly keeping avoiding corners of
the bed & doing multiple passes
there are just problem spots on the bed



4/22 Laser cuts Fine

4/25 Paul W

Table alignment : visually OK.

.1712	.1911	0.1513
	.2309	
.1314	.1911	.1712

on honeycomb

1.0202	1.0003	1.0003
.9606	.9805	0.9805

on Knife table

good enough.

Cleaned out underneath table.

Cleaned out a round table.

Mesh + knife table need cleaning, too.

Optics: beam splitter cleaned; not dirty.

M1 cleaned. Light haze

M2 cleaned. Light haze. Some permanent damage.

M3 cleaned. Clean in center.

Lens cleaned. Not dirty. One speck of damage

Nozzle was completely filthy. Cleaned.

4/25

Paul W

Alignment

everything adjusted.

Nothing was far out.

Vertical is not exactly right.

Test '5" ply 100/60

that's not full performance. Why?

1/26

Vic (Jody Rumber)

1/4" Plywood Birch

Pre CNC
test model
3

	<u>Speed</u>	<u>Power</u>
Vector Cut	100	80 - Perfect. easy dropout
Vector Cut	100	60
Raster Eng	100	28

1 1/8" Birch Ply

Had an issue with laser gantry not moving
or moving Very slowly along the Y-axis.
Consulted Paul.

Solution:

- 1) shut everything down
- 2) with power off, gently push (with both hands) gantry back to top of machine
- 3) power on
- 4) re-home laser.

	<u>Speed</u>	<u>Power</u>
Vector Cut	100	60
Raster Eng	100	26

& dropped a little for
"cleaner" raster

Everything's working again. :)

1/28
2:00 P.

Awesome vector & raster on '9 ply

4/29

Vic (Jolly Rancher)

1/4" Acrylic Clear

Gift Pendants
"SDS"
for

	<u>Speed</u>	<u>Power</u>
Raster Eng	100	15
Vector Cut	100	85

} good raster not enough power on cut

Raster Eng	100	20
Vector Cut	100	100

} good raster (better light reflection)

} cut is good enough to punch any cuts that don't go all the way through w/o melting or burning acrylic

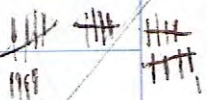
Gift Pendants
for "SDS"
wood version

	<u>Speed</u>	<u>Power</u>
Vector Cut	100	65
Raster Eng	100	27

1/8" Birch Plywood

} nice cut
light but clear raster image

Vector Cut 100 65 → KEEP THIS SETTING Vic



5/3/2017
Terry

TRYING OUT THE ROTARY ATTACHMENT
ON SOME SCRAP WOOD & SELENITE REOS.
EITHER I'M DOING SOMETHING WRONG OR
THE ATTACHMENT IS WONKY. DESIGNS NOT
ETCHING OR VECTURING AS EXPECTED.
WILL EMAIL PAUL. ALSO, HOMEING
THE LASER SEEMS VERY SLOW ON X-AXIS.

PS - WINDOW WAS OPEN WHEN I
BOT HERE. BE SURE TO CLOSE ~~IT~~
IT IF YOU OPEN IT.

05/06/17
Zach

Perfect Vector on $\frac{1}{4}$ birch 100P 90S

5/8/17

Vic (Jolly Rancher)

$\frac{1}{8}$ " Birch Ply

test
designs

	speed	power
VectorCut	100	68
Raster Eng	100	25

good cut
nice engrave

5/9/17

PAUL M. (PAULDO)

VECTORCUT $\frac{5}{100}$ $\frac{1}{0.5}$

NO RASTER

POSTER BOARD
PERFECT

5/9/17

Zach

$\frac{1}{8}$ " Birch ply

vectorline speed 100 Pwr 3

vector cut spd 100 Pwr 50

good.

some burn marks

5/13/2017

Terry

① COSUME PIECES (FOAM) 100% SPEED 2% Power - ETCH
50% Power - CUT
② $\frac{1}{4}$ " BIRCH PLY - 2 TIMES @ 80% SP, 100% Power

5/14

Vic (Jolly Rancher)

1/8" Acrylic (Clear)

Bowie test		Speed	power	
	raster engr	100	25	
	vector cut	50	100	→ little too slow, melt / smoke on bottom of sheet
	raster vector line	100	4	
	raster engr	100	40	} nice D
	vector cut	80	100	
	vector line	100	5	

1/8" Birch Plywood

		Speed	power
<u>Pendant</u>	raster engr	100	30
	vector cut	100	68
	vector line	100	2

1/4" Sapelle wood

		Speed	power
Test	vector cut	40	100

@ 1/8" Z-axis depth5/14/2017
Terry

GRANITE ETCH: (should have used lower
power) 100% SP, 100% power. I think
I used 50% power last time.

1/8 Birch PLY. vector etch 100% SP, 1% power
cut 100% SP, 80% power
(intentionally a little ↑, to make double sided
restoration easier)

RE-CUTTING COSMETIC PIECES: vector etch 100% SP, 1% power
1 1/2" H&B cut 100% SP, 50% power
1/4" PLY - cut ~~100~~ 50% speed, 100% power

May 18 Birch 1/8" 50 pwr 100 speed
Zach from H+H cuts good!
(I only do vector mode.) 1 pwr 100 speed engraves good!

MAY 24 1/8" cherry ply.
Terry V. ETCH: 100% speed, 1% power
R. ETCH 100% speed 10% power
V. CUT 75% speed 100% power.
No problems :)

May 25 Same settings :)

May 26 1/8" ply vector 70 sp/100 power
Brandie RASTER 100 sp/20 power
- Perfect :)

05/27/17 Perfect Raster 39% on pine/oak
Rob P.

May 30 1/8" ply vector 65 sp/100 power
Brandie - SPOTTY CUTS & slower seems
very slow

June 1 Back to 1/4" MDF...
Zach seeing if I can cut vector
without burning edges...
also feather settled on 80 pwr.
60 pwr / 70% 4 pass
100 speed is good

6/7/2017
Tami
VECTON ETCHING 1/4" BIRCH 100% SPEED, 20% Power
CUTTING - 50% - 75%, 100% Power

ETCHING + CUTTING 1/8" MAPLE
RASCHEL ETCH : 10% Power, 100% SPEED
CUT : 100% Power, 75% SPEED

6/7/17
VIC
(Jolly Rancher)
edgiffs

		Speed	Power
Router Eng	100	40	} Nice!
Vector Cut	80	100	
Vector Etch	100	6	
Vector Cut	100	75	

1/8" Acrylic Clear
1/8" Birch Ply

6/8/17
Zach
Vector current 50%
speed 100
power 1
speed 100
power 100
Engrave
- cut,
it worked. I need to try
different woods!

1/8" Birch Ply

6/11/17
VIC
(Jolly Rancher)

	Speed	Power
Router Eng	100	25
Vector Cut	100	75
Vector Etch	100	1

1/8" Birch Plywood

6/20/2017
WOOD ETCHING (UNKNOWN TYPE)
100% SP, 40% Power
1/8 MINOR - TRYING DIFFERENT SETTINGS FOR A SHARP CUT

80% SP, 100% Power x 2
80% SP, 50% Power x 3
80% SP, 30% Power x 4

1/32"
1/4"

6/20/17
Zach

1/4" Birch Ply

100% vector
100 speed
75 pwr 2 pass
cuts
100 speed
2 pwr 1 pass
engraves

ya, i

6/21 Laser was ON already upon arrival.

Etching "Brass" plating, ~~100~~

Rob
McGowan

100/100
50/100 not as good
Metal did not etch well

Simple greened
metal first

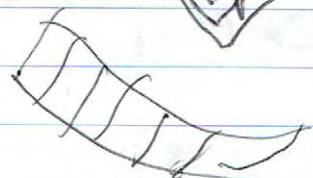
- guess it was not anodized
Tried Cermark paint.

- It worked well but I found

- higher ^{power} settings ~~warp~~ warp metal
- lower settings do not attach as well

- 100/60 worked best for me. - NO FUMES
OR DUST!
😊

~~Etching is weak OK~~



6/23 Paul W. - Laser checkup.

- water level good.

- table alignment

.2827
↑ twist
↓
High .2231

.3225

.2429 High
↑ slight twist
↓
.2628

.2901

.2507

||

||

.2901

.2503

0

0

.0674

0

0

table now aligned perfectly at corners.

Sags $\approx 0.07''$ in center. Not terrible.

- optics inspection

tube port a little smudged?

beam splitter getting worse

M1 clean

M2 dirty

M3 dirty + burned on one edge

lens - many tiny spots.

cleaned lens - most spots gone. Very minor damage remains.

cleaned M3, M2, M1

cleaned beam splitter

cleaned exit port w/ Q-tip

6/24
Rob P.

Raster in Bamboo 1005 27 power Protect

6/23

Paul W - Laser checkup cont'd

- alignment check

M1 alignment good.

red laser way off. Adjusted. Still terrible because the beam combiner is trashed.

New beam combiner on order. 12-20 days.

tweaked M1 alignment.

Beam combiner useless. Removed for now.

recheck M1 alignment.

M2 alignment off. Adjusted. Had to slide array rearward.

M3 alignment seems good.

test cut	1/8 ply	100/20	almost
		100/25	98%
		100/30	98%
		100/35	99%
		100/40	perfect

test engrave - large plain paper

vector 100/1 @ 5% current

very light mark

faded after first run or two.

cutting not well regulated.

NO RED DOT.

PART ON ORDER.

Zach
Out. 1 ^{thin} Paper. 20% 1 pw. 1st speed
vector cut

Posder paper 30% 1-1.5 pw 1st speed.

7/2
Vic
(Jolly Rancher)

	Speed	power
Vector Cut	100	73

^{w/ painter's tape backing}
1/8" Birch Ply
good clean cut.

	Speed	power
Vector Cut	80	83

1/8" Black Acrylic
perfect!

	Speed	power
Vector Cut	100	73
Raster Eng	80	83 18

1/8" Birch Ply

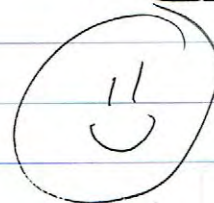
good combo
Raster large areas
at slower speed
produces smoother
results!

Good
settings
thanks!

7/3
1/16
(Jolly Rancher)

	Speed	Power
Vector Cut	100	73
Raster Eng	85	20
Vector line	100	5

1/8" Birch Ply



* when using painter's tape
bump raster power + 8-10% to
ensure you burn through tape &
adhesive residue.

7/8/17
Robert F.

engrave bunkies 37 power perfect.

169-259-239.1

8489

Jul 10 Acrylic 1/4" raster engrave 50-100 pwr
Zachary vector cut 90 pwr 2 pass

7/12

Vic/Jolly Rucker Speed power 1/8" Birch Plywood
Vector Cut 100 74 ~ Good
Raster Eng 90.7 17 ~ no painter's tape
Raster Eng 90.7 27.8 ~ with painter's tape
Vector lin 100 2 ~ Nice

7/14

Zach Paper roll, 20% power 100 speed
Acrylic 1/4" 90 power engrave
2 pass 100 vector cut

7/17

Brandon 1/4 Birch Speed power
Raster 100 30 ~ Too hot
vector 100 73 ~ leaves burn marks

7/18

Vic Speed Power 1/8" Birch Plywood
Vector Cut 100 74 }
Raster Eng 90 15 } "
Vector line 100 2 }

7/20

Rob P vector 100 S 100 P - Perfect
Raster 35 35

7/21

Vic Speed Power 1/8 Birch Ply
Vector Cut 100 74 }
Raster Eng 90 15 } "
Vector line 100 2 }

7/23

Jolly Rancher

- Re-homed Laser
- Shut down & did all updates to PC
- D/C'd & R/C'd connection to router
- Restarted everything from chiller to air hose.

↳ issue was laser was cutting offset by linch "x" & linch "y" in middle of a run. Then computer was unable to connect to laser after that.

* Seems to be working fine now. ☺

	Speed	power
Raster Eng	90	15
Vector Cut	100	74
Vector line	100	1
Vector line (light)	100	0.25

1/8" Birch Plywood

} great!

1/2" Birch Plywood

	Speed	power
Vector Cut	60	100
" "	45	100

→ almost perfect!

Set at laser defocused

Z-axis higher by 4 slow steps

7/28/2017
 cutting mirrored acrylic; 1/4" 4 passes speed 18
 power 100

8/1/17
 Brandon
 1/4 3-ply discount wood

		Speed	Power	
1 pass	1st vector	100	74	→ didn't make it through
"	2nd vector	75	100	→ just barely cut through
"	3rd vector	65	100	→ same a little better
"	4th vector	50	100	→ still not 100% through
2 passes	5th vector	75	100	→ better but no 100% cut
2 passes	6th vector	50	100	→ 100% happy w/ this

8/5 Laser Class

1/8 birch ply cut @ 100/40-50
 engrave @ 100/17

8/5/17 Paul W
 Curly Maple Veneer
 1" cameo 52g

cut @ 100/10 OK.
 engrave @ 100s 15p
 awful.

8/5/12 Paul W

Curly Maple veneer

simple dither raster engrave 100 s 10p 252dpi
better; poor contrast

halftone 100 s 10p 252dpi
almost usable

halftone 100 s 10p 529dpi
too dark - cut thru

halftone 100 s 5p 529
still a bit too dark

halftone 100 s 1p 1058
too dark

halftone 100 s 0.2p 1058
still cutting thru

halftone 100 s 0.05p 1058
still too much - not less?

halftone 100 s 0.2p 529
better, still murky

halftone 100 s 0.01p 529
no real change.

halftone 100 s 0.01p 252
OK tone but coarse.

simple 100 s 0.01p 252
ugly.

halftone, defocussed +0.2 100 s ~~0.01~~ 0.2p 252
not good.

Adjusted image.

halftone 100 0.2 529

better, but cuts thru

halftone 50 0.2 529
darker, more cut

8/5/17

Paul W

defocus +0.05 halftone ~~50~~ 0.2 529

another +0.05 halftone 100 0.2 529

OK but still cuts thru.

add 1 layer paper halftone 100 0.2 529

too much blockage.

^{total 0.15}
defocus +0.05 halftone 100 0.2 529

ugly.

back to focus. halftone 100 0.001 529

OK but still cuts.

Lighten right sideburn

halftone 100 0.001 529

OK good enough.

8/6/17

Paul W - Laser class

8/6/17

Paul W - clothespins

"1" ^{hangs} 1/4" plex cut 60/100 good

123456789 1/16" plex cut 100/20 good

clothespin vector engrave 100/5 good

≈ 400 pins engraved!

8/8/17

Brandon

1/4 birch plywood Masking tape on back

1pass vector cut

speed

65

power

100

great!

8/8 View (w/ help from Jgood :))

5mm laserable stamp rubber

raster power 57, speed 100

vector cut 60

laser power started off super strong + uneven but eventually normalized.

8/9

	Speed	power	1/8" Plywood Birch
Vector Cut	100	74	
Vector Line	100	2	good D "

8/10

	Speed	power	
vector cut	65	100	
vector line 1/8" Birch ply			1hr 45min

8/11

	speed	power		
vector	100	50	1/8" plywood	U
vector	100	50	1/4" plywood	" close. 60-70 better

8/12

Laser class

1/8 ply cut	100 / 40	good
raster engrave	15p / 100s	good
vector engrave	100 / 3	good

8-12

1/8 Ply wood

Vector

100/60

Good

Raster

20/100

Good

Cde Pulley

8/12

1/8 Plywood

Raster

18% power 100% speed 7/10

Vector

60% power 100% speed

1/4" ply

Vector 100%

100%

8/13

Laser Class

1/8 ply

cut

100/40

Raster engrave

100/3

1/4"

acrylic cut

100/90/2 passes

deep raster engrave

100/90 power

8/13

Paul W

Engrave anodized aluminum

529 dpi

100 spd

50 power

OK

252 dpi - too blobby on fine letters

8/14

Eddie Bee

~~1/8" ply~~

plywood cut

100

speed, 75 power, 1 pass

Good

8/14

Lien

1/2 in

plywood cut, 45 speed,

90-100

~~power~~

did the job!

8/15 Brandon

1/4 birch ply

		<u>speed</u>	<u>power</u>	
1st	—	65	100	clean cut
2nd	—	65	100	clean cut

★ -notizing funny sound coming from motors that move the laser when the cover is open. Maybe belts are dirty?

8/17

Speed power

1/8" Acrylic

Jolly
Puncher

Raster Eng	100	25
Vector Cut	80	32
Vector Line	100	1

} just right!
"

Leach

8/19

vector eng 35 too much
wood paddle pu
vector cut leather 40 ok. pu

EMV/A

8/20

The plane is tilted preventing
laser cut to go through
all the way on the right.

Emilia

Brandon

8/21 Laser was found w/ tilted bed and permanent damage/burnt crust on lens. Replaced lens + fixed tilted bed w/ help from Paul. Laser working like a champ!

1/2 in acrylic

raster
vector

Speed

100
50

power

~~100~~ 55
100 2 passes

perfect!

1/4 Birch ply

~~raster~~
vector

65

100

perfect!

8/22 Paul W.

1/16" acrylic cut

100/20 good

100/10 almost thru

100/15 good

1/16" acrylic + masking tape

100/20 good

8/22

Evy Heartlight

glass drinking cups on rotary,

testing for future reference. ~~tried~~

tried 100 SP 20P (didn't all show)

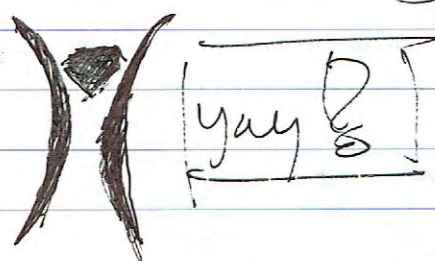
100 SP 30P looked pretty good, some flaking

100 SP 50P looked great cracked one cup

BEST RESULTS - 100 SP 45P ~~50P 60P~~

8/23				<u>1/8" Birch Plywood</u>
Jolly Remachor		<u>Speed</u>	<u>power</u>	} Good?
	VectorCut	100	74	
	Raster Eng	100	20	

				<u>1/8" Acrylic</u>
		<u>Speed</u>	<u>Power</u>	} right on?
	VectorCut	80	80	



9/6/17 First time user, Jonny. Failed to print raster/load vector file. Failed to laser cut raster, but vector worked. Will return later to figure out my vector image problems.

9/11/17 1/8" birch plywood
 Vector cut 75% speed
 75% power ✓ good

* Green light on chiller is dim but working

9/27 Paul W.
 Replaced beam combiner (Finally!)
 Red beam emitter is also shot. Melted!
 Checked alignment OK.

10-3-17 Zach

1/4" ply

100 sp. ~~19~~ 19 pwr. raster engrave
100 sp. 80 pwr vector cut

10/4 Lin felt polyester raster @ 7 power, 95 speed
vector @ 10 power, 50 speed
worked well.

10/5 Paul W. Replaced red laser.

Daiso bamboo bowl tests

Vector engrave 100/1 @ 25% ^{current} nice!

252dpi Raster engrave 100s, 0.1p not enough.
shows edges only.

100s, 1p same

100s, 3p same

100s, 7p same

100s, 20p nice!

at 20%, fills in black areas nicely. *

visible stairstepping in fine detail.

BUT - dark color wipes right off!

Leaves a look like cheap cardboard.

529 Raster engrave 100s, ^{40p} ~~20p~~ no.

significant depth, but the
dark still wipes off.

⇒ unsuitable material. Alas.

Vector cut

100/20 no

100/40 almost

100/60 good → see over

10/5/2017

Paul W

Daiso bamboo bowl

Cuts OK at 100/60

Smells like wood.

Very black edges. Sharp!

Smoke wipes off, or use masking tape.

Probably ruins the water resistance of bowl.

Very light vector engraving seems OK.

Try not to penetrate the hard shell.

10/9

Jolly
Rancher

	<u>Speed</u>	<u>Power</u>
Vector-Cut	85	90
Vector line	100	3

1/4" Birch Ply

> perfect?
(could go less power
next time)

U

~~10/10~~

10/11

Laura L

5mm Ply (1/8")

Vector cuts 5mm Underlay

	<u>Speed</u>	<u>Power</u>
Vector test	80/100	80/100

~~Vector test~~

Went well did
8 panels for
multipass

10/12

Lin - raster tab of raster engrave program doesn't work!
only vector tab. not sure what changed, the same file
from last week is not ~~taking~~ printing to fill
specimen ~~the~~ the same way it did last week, it
only shows as a vector now, even though I've run them as
raster before.

Lara Lindsay

10/13/17

7pm-11pm 5mm underlay board

finishing up the last 7 panels 80s 100p

Cutting fine no issues ;)

10/17/17

Eddie Bee

vector cut 1/4" plywood

speed 85 power 90 1 pass

Good!

11/4/17

Paul W

Melamine glass

raster engrave 250dpi 1p 100s no

5p 100s almost

15p 100s nice!

nice and dark when fresh, but rinses off to tan.

Signs of darker brown around edges. More power?

100/100

Deeper, but still rinses to tan.

Conclusion: not very suitable.

11/4

Laser Class

11/5

Laser Class

1/8 birch ply v. cut 100/40

glass engrave (rotary) 100/100

11/9

lindsey (jay good) - acrylic box

started w/ boxdesigner.org



The template it gave me created a box with edges that did not work together?

Switched to

make a box.io and worked ok.

material: 1/8" acrylic
speed: 100
power: 60.

11-14-17
Zach

1/4 inch ply

vector cut 100 sp

80 pwr

raster engr. 100 sp

30 pwr

The raster engrave is engraving with various thicknesses, achieved uniform thickness with dithering, but then could not control raster power settings, so wasn't deep enough.

11/15

Jolly Rancher

 $\frac{1}{8}$ " mirror acrylic

	Speed	Power	
Vector Cut Cut	80	80	- too hot ☹
	80	50	- better but edges crack
	<u>90</u>	<u>34</u>	- Good ☹
Vector Eng	100	7	- too deep
	<u>100</u>	<u>5</u>	- just right ☹

 $\frac{1}{8}$ " birch plywood

	Speed	power
Vector Cut	100	75
Vector Eng	100	2

11/22

Jolly Rancher

 $\frac{1}{8}$ " mirror acrylic

	Speed	Power
Vector Cut	90	36
Vector Eng	100	2

} just right ☹

11/29 TRY

cutting $\frac{1}{2}$ " clear acrylic. ~~too~~ not best

RESULTS WITH TWO PASSES - ONE HIGH POWER, ONE LOW

PASS 1: 30% speed, PASS 2: 100% speed

Both at 100% power

NOTE - INKSCAPE V0.91 WOULD NOT PRINT DESIGNS CORRECTLY TO RETINA ENGRAVER. USING V0.48 WORKED?!

44x36

12/11	Paper → 111# Metallic Cardstock
Keith	
Morrison	• 1 sheet → 100 spd, 1 pwr, 1 pas } etched paper current = 1
	↳ almost cut through
	• 1 sheet → 100 spd, 1 pwr, 1 pas } cuts through paper, minimal char current = 100 ↳ almost cuts through 2 sheets
	• Multi-sheets → 100 spd, 50 pwr, 1 pass } cuts through 8 of 8 sheets current = 100 ↳ charring on pages 2, 3, 4
	• 10 sheets → 100 spd, 30 pwr, 1 pass } 8 of 10 current = 100
	Charr
	on all → 100 spd, 40 pwr, 1 pass } 9 of 10 current = 100
	→ 100 spd, 50 pwr, 1 pass } 10 of 10 current = 100.

12/14	Paper Cont. → 111# Metallic Cardstock
KM	Optimal settings ^{single sheet} appear to be 100 speed, 1 pwr, 1 pass Vector Current between 35 - 40% ↳ minimal to no charring

12/15/17

Sami
Peterson

100s / 10p cuts through
↑ could possibly go lower

- accidentally set power to 100 once and
it got a little bit on fire

< 1/16" acrylic

100s / 1p "engrave"

Quarter inch letters.
Went all the way through only
in a couple points

TEXT

2/22/18 update

actually I forgot to turn on the
air compressor so maybe that's why
everything was on fire ... more power might be ok

12-17-17

3/4" POPLAR

CUT - P=100 S=30 DONE IN ONE PASS!

DAN R.

ETCH - P=35 S=100% ALL MOSTLY GOOD, tho the

64-315-9479

FIRST 20% OF THE FILE

CONSISTENTLY ETCHED LIGHTER,

REGARDLESS OF BED POSITION...

12/19/17

3/4" Pine (warped) Cut - P=100/S=1/2 Engrave - P=5/S=1/2

Brian M.

Cut through most parts on 2nd pass, got
through the rest on the 3rd pass. lightly engraved other
portions w 1 pass.

12/20/17

Had problems w/ getting Retina to
recognize Raster... turns out I needed to
change paper size in Print options.

12-27-17 ENGRAVED TEXT SET IN RHETNA'S DESIGN
DAN R. VIEW, EDITED AND WOODEN TOOL
611-315-9479 HANDLE SPEED = 100% POWER = 30%
FOCUSED ON LOWEST EDGE OF HANDLE CURVE.
MIGHTY FINE OUTCOME!

12-28-17
Will P. Acrylic 1/4" + paperbacking
808-283- S/P
3005
Vector Cut 100/50 - clean cut
Vector Cut 100/10 - Deep engrave
Not all the way through
Raster Engrave 100/50 - very deep engrave
Raster Engrave 100/10 - almost through
→ Still very deep
Raster Engrave 100/1 - Same depth
Raster Engrave 100/0.1 - Still no visible
change in depth

12/31/17 Metallic Paper - 111 #
Keith M
• Same settings as 12/14/17
• Laser would sometimes appear to
turn down power at certain
points → had to re cut areas

1/10/18 1/8" Birch vector cut 100/40
maddie Hamann raster engrave 100/20 (a little light but visible)

1/10/18 1/8" Baltic Birch vector cut 100/40
Chris Olson

1/7/2018

Paul W

1/4 acrylic

vector cut

S P

40/100

OK

vector engrave

100/30

OK/deep

new focus tools

100/15

OK

43 x 32

1/13/18

0.438in plywood

Power: 85/Speed: 25 - Two Passes

Vector Cut

1/14

Paul - Laser Class

3/16" (?)

plywood vector cut

100/60

Good!

1/14

KELLY

3/16"

plywood vector

100/50

vector

100/5

1/4"

Fluorite
Stone

100/100

- worked OK!

1/17

Jolly
Rancher

vector cut

speed

92

power

92



Birch
1/4" Ply wood

Good but
too much
char - faster
next
time



25260-01

Brushed Gold on Black Laserable Acrylic Sheet
8"x12"x0.22"
www.inventables.com

1/22/08

Vector Speed=100 Power=5 cut 1 Pass

Speed=100 Power=.01 etch 1 pass

(11)
good02/03/18
220 P.

Vector plxi 1/8 inch perfect

2/19

Paul W - Laser class

1/8 birch scrap

vector cut 100s/40p

vector engrave 100s/40p

raster engrave 100s/25p

glass (rotary)

raster engrave 100s/45p

2/22

Paul W

1/4" acrylic

vector cut

100/90/2 pass

good.

0.216" MDF

vector cut

100/40

no

100/80

nice

with tape both sides

100/100

nice

3/4

LOGIE

1/8 BIRCH PLYWOOD

RASTER POWER 45.1

SPEED 100

3/7/2018
Terry
VECTOR ETCHING BAL TIC BIRCH: 100% ~~SPED~~, 176P
CUTTING (~~178"~~) (1/4"): 100% power, 50% speed

3/7/18
Zach +
Casi
vector cut 1/4 ply ~~bite~~ 100 pwr
80 speed
engrave 100 speed 32 pwr

3/19/2018
Terry
1/4" AEMLIC 60/100 CUTTING NICELY

3/22/18 1/4 inch ply 100 speed
31 1/2 raster 75 pwr 2 pass
Vector cut

Jgood 4-1-18 - Red Artery DH Badge.

S	P	C	Notes
70	1	12	2Pos 0.118
100	1	18	Plexi Light Score TAG Too light
100	1	18	Plexi med score Too light
90	80	100	3/16" Plexi cut Not enough Power
70	1	20	Plexi med score Good / Slightly heavy
70	80	100	Plexi cut 3/16" Good / Slightly heavy
70	45	100	1/8" Plexi 2Pos 0.183 (x-34. y-12)
70	40	100	Cut (Pink was smaller) good - slightly heavy
70	35	100	Cut Heart Front 2 thick good Medium Invert!!
70	(40)	100	Cut Heart Back larger good Large

7 10 1/16" Plexi 2Pos 2501
70 10 100 Cut Heart Front smaller Inverted
70 10 Cut Heart Back larger Inverted

4/7/2018 Paul W / Laser Class

1/8" birch ply

vector cut 100/40 good

252 dpi raster engrave 1005/20p light

1/4 acrylic vector cut

60/100 good

1/4 acrylic raster

25 power > didn't

100 speed go through

added paper

35 power > good

100 speed left lines

4/7

Paul W - "Laser Tape" test

252 dpi raster engrave 100p 100s not enough

25 100 residue

50 100 residue

needs 2nd pass for cleanup?

4/11

Melissa C.

Unfolding humanity characters

1/16 acrylic

Speed

Power

vector current %

vector

engrave

100

30 1

20

cut

100

30

100

did well

4/19

Melissa C

unfolding human characters

1/16 acrylic

speed

power

current %

vector

engrave

100

8

200

cut

100

30

100

did well

	DENSE L	
Vector	1/8" Birch Plywood Speed 100 power 40	
	1/8" Acrylic	
Vector	Speed 70 Power 45 (needs more power - try 50)	
Raster	Speed 100 Power 25	
	Glenn M	
Vector	1/8" Acrylic Cut S100 P40 C100	
	not all the way	
	Vector engrave S100 P25 C100	
	too deep	
Vector	1/8" Acrylic Cut S100 P45 C100	still not deep
	Engrave S100 P12 C100	too much current
	1/8" Acrylic Cut S100 P50 C100	
	Works!	
	Engrave S100 P17 C30	
	Good!	
	Engrave letters S100 P8 C30	
	Good	
Vector	1/16" Acrylic Cut S100 P30 C100	
	cuts!	
Vector	1/16" Acrylic Cut S100 P30 C100	✓
	Engrave S100 P8 C20	✓
	Clear	
Vector	1/8" Acrylic Pendants	
	Cut: S100 P50 C100	
	Engrave Character: S100 P17 C20	
	Engrave logo: S100 P8 C20	
	HAH - 0.1286	
	-0.0209	
Vector	Jean	
	cut S100 p45 c100	worked great

5/7/18 1/4 inch ply

zach

Raster eng 31 pwr 100 sp

Vector eng 3 pwr 100 sp

Vector cut 82 pwr 100 sp

5/9

Jolly
Lambert

vector cut

speed

power

1/8" birch ply

80

80

↳ lovely

80

45

no letter "A"

vector cut

80

80

1/8" Acrylic Mirror

Raster Eng

100

25

↳ also lovely
nice deep engrave
but not too deep

S

P

1/4" birch ply

vector cut

80

80

↳ "A"

5/10

A
Same

Speed

Power

1/4" birch Plywood

5/13

vector cut

80

45

vector line

100

0.3

raster eng

100

25

↳ good

5/14/18 MICHAEL W.

LASED SURFACE OF PLYWOOD - VECTOR

SPEED: 100 / POWER: 1 / PASSES: 1

MICHAEL W.

5/15/18 CUT THRU 1/8" LAMIN BOARD - VECTOR

SPEED: 90 / POWER: 60 / PASSES: 1

5/23/18 1/4" BALTIC BIRCH PLY.

VECTOR ETCH: 100% SPEED, 1% POWER

CUT: 50% SPEED, 100% POWER
(REQUIRED MULTIPLE PASSES ALONG
RIGHT EDGE)

5/26 Laser class

various things we failed to write down.

5/28 MORE 1/4" BALTIC BIRCH PLYWOOD

TEST 2 (SAME AS WORK DONE ON 5/23)

LASER SEEMS EXTRA WOOD. VERY EVEN
ACROSS ENTIRE BED. ☺

5/29 ONE MORE, SAME AS YESTERDAY. ☺

TEST 3 DROPPED THE CUTTING SPEED TO
20% TO ENSURE CUT IN ONE PASS

5/30 Maddie

1/8" acrylic mirror

etch: Speed 100 power 1 current 20

cut: speed 100 power 90 current 100

↳ insufficient on RH inner corner
of 1x1" sheet

5/31/18 Jeff

	Thickness	current	Spd	power	
Cut Acrylic	1/8"	100	100	50	good
Engrave "	"	21	100	1	good

6/2 Donna

	Speed	power	current	
1/8" acrylic 1/8"				
vector cut	100	100	100	✓ good

6/3 CHRIS
1/8" acrylic
vector cut

speed	power	
10	28	good

6/23 Paul training!
Hardboard
Vector cut +
raster engrave

thickness	current	speed	power
1/8" +			
		100	70
		100	20

6/23 Paul W

Box for Rose 6mm plywood

	SPD	POWER	
vector cut	50/100		good
	75/100		good but not reliable
	100/100		nope

6/25 Emilia

Plywood jewelry

raster & vector	SPD	POWER
	50	100

Raster cut through :-

6/28

Maddie H

2mil mylar film for "silk" screens

raster engrave only

power 10

speed 75

works well if dots are sufficiently big (~~40ish dpi~~)
(40ish dpi?)

THIS IS AN AWESOME THING.

7/2

Emilia

Fabric (synthetic 1mm thick)

speed 85

or

90

THEY ARE

Power 7

5

BOTH GOOD



7/3

Engraving letters on Poplar wood surface

S - 100

P - 25

looks great  2m deep light burns

~~PM~~

Engrave fractals on scrap wood

S - 100

P - 15

Burned through

S - 100

P - 05

"

"

S - 100

P - 01

"

"

S - 100

P - .25

"

" less

on hardwood

S - 100

P - .25

heavy (design issue?)

S - 100

P - .10

OK

S - 100

P - .05

No result

HW Floral Mandala

2" x 2" S - 100 P - ~~100~~ 5 = perfect dark lines

7/5/2018 Paul W - Laser diagnosis

- laser test fires OK. So HW not broken (badly)

- Retina Engrave 3D won't connect. 4.424

restart computer.

no help

169.254.239.1

checked firewall settings. - enabled all copies
of retinaengrave3d

now it connects, yay.

test cut worked OK. 1/8 birch, 100/40 good.

So - WTF?

inspected HV power supply. Dusty but no visible problem.

retest - still good cuts

checked alignment. M2 was off vertically.

realigned easily.

tests good

Bigger test. 1/8" acrylic scrap.

vector cut ~~100/45~~ 70/45 good

529.2dpi raster engrave 100s/20p tool light

252 100 100 deep

Lid lifters are almost dead.

I'll order new ones.

7/27/2018 Melissa

did well

- Acrylic

speed

power

current

Raster

100

8

20

Cut (vector)

140

30

100

7/5/18 Glenn - same speed as
Melissa
laser performance down

7/7/18 Diane - Anodized aluminum

7/8/18 Paul W
Laser table was misaligned.
Who crashed it?
Re-aligned.

7/8/18 Kate & Kiana 1/4" acrylic
Speed-100 good clean cut
power-85

7/11/18

Jolly Rancher

Speed power

Vector Cut	100	74
Raster Eng	90	18

1/8" Birch Ply

> Good! ☺

1/4" Birch Ply

Vector Cut	100	1
Vector Line	88	90

→ needs a bit
more power