UNIVERSAL LASER SYSTEMS - INSTRUCTIONS

Grey Laser, X-660

[Location: CAED Support Shop]

1. check that both the laser cutter and the fan are on

2. open your file (refer to the *Laser Template.3dm* file for further instructions on how to prepare your file)

3. use the **Print** command (a new window should automatically open; you should see controls on the left and a print preview pane on the right)

4. ensure that the printer is set to **X-660** (under <u>Destination</u>)

5. ensure that the **Scale** is set to **1:1**; **On Paper** should be set to **1.0 Inch** and **In Model** should be set to **1.0 Inch** (under <u>View and Output Scale</u>)

6. select **Window** (under <u>View and Output Scale</u>)

7. click **Set** (under <u>View and Output Scale</u> > Window) and ensure that **Only Selected Objects** is NOT selected (under <u>Visibility</u>)

8. select a new print area (i.e. draw a window around the 18 × 32 predefined bounding box; if necessary, the window grips can be manipulated after the window is drawn) and hit the return/enter key on the keyboard

9. ensure that the **Default Line Width** is set to **Hairline** (under <u>Linetypes & Line Widths</u>)

10. click **Properties** (under <u>Destination</u>)

11. click **Load**

12. select your material

13. click **Open**

14. click **OK**

15. click **Print** (we suggest attempting a test print first)

16. press **Start** on the laser

17. ensure that the laser remains under supervision at all times

if a small test print doesn't yield results that you like, your material doesn't exist in our collection, or you're experimenting with custom settings on your own, you can manually adjust settings yourself, and test them until they're tailored to your specific job

After Step 10:

11. make adjustments from scratch or click **Load** and build on existing presets for a material similar to yours

> **a.** pen mode: choose which mode the laser uses for a given color (i.e. control whether a color signifies vector, raster, or skip)
>
> **b.** % power: 0-100 (higher power results in darker and deeper effects)
>
> **c.** % speed: 0-100 (higher speed moves the laser over the material more quickly, so it results in lighter and shallower effects)
>
> **d.** PPI (Pixels Per Inch): 0-1000 (higher density pixels concentrates affected points, so it results in darker and deeper effects)

12. click **Set** after every change (click **Save** to create a .las file for future use)

13. click **OK**

14. click **Print** (we suggest attempting a test print first)

15. press **Start** on the laser

16. ensure that the laser remains under supervision at all times

Green Laser, VLS6.60

[Location: Digital Fabrication Lab]

Materials Database Method

    1. check that both the laser cutter and the fan are on

    2. open your file (refer to the *Laser Template.3dm* file for further instructions on how to prepare your file)

    3. use the **Print** command (a new window should automatically open; you should see controls on the left and a print preview pane on the right)

    4. ensure that the printer is set to **VLS6.60** (under Destination)

    5. ensure that the **Scale** is set to **1:1**; **On Paper** should be set to **1.0 Inch** and **In Model** should be set to **1.0 Inch** (under View and Output Scale)

    6. select **Window** (under View and Output Scale)

    7. click **Set** (under View and Output Scale > Window) and ensure that **Only Selected Objects** is NOT selected (under Visibility)

    8. select a new print area (i.e. draw a window around the 18 × 32 predefined bounding box; if necessary, the window grips can be manipulated after the window is drawn) and hit the return/enter key on the keyboard

    9. ensure that the **Default Line Width** is set to **Hairline** (under Linetypes & Line Widths)

    10. click **Properties** (under Destination)

    11. click **Materials Database**

    12. select your material

    13. set your **Material Thickness**

    14. click **Apply**

    15. click **OK**

    16. click **Print** (we suggest attempting a test print first)

    17. open Universal Laser Systems Control Panel (see red square icon in task bar)

    18. click **Play**

    19. ensure that the laser remains under supervision at all times

<u>Manual Control Method</u>

1. check that both the laser cutter and the fan are on

2. open your file (refer to the *Laser Template.3dm* file for further instructions on how to prepare your file)

3. use the **Print** command (a new window should automatically open; you should see controls on the left and a print preview pane on the right)

4. ensure that the printer is set to **VLS6.60** (under <u>Destination</u>)

5. ensure that the **Scale** is set to **1:1**; **On Paper** should be set to **1.0 Inch** and **In Model** should be set to **1.0 Inch** (under <u>View and Output Scale</u>)

6. select **Window** (under <u>View and Output Scale</u>)

7. click **Set** (under <u>View and Output Scale</u> > Window) and ensure that **Only Selected Objects** is NOT selected (under <u>Visibility</u>)

8. select a new print area (i.e. draw a window around the 18 × 32 predefined bounding box; if necessary, the window grips can be manipulated after the window is drawn) and hit the return/enter key on the keyboard

9. ensure that the **Default Line Width** is set to **Hairline** (under <u>Linetypes & Line Widths</u>)

10. click **Properties** (under <u>Destination</u>)

11. click **Manual Control**

12. click **Load**

13. select your material

14. click **Open**

15. click **Apply**

16. click **OK**

17. click **Print** (we suggest attempting a test print first)

18. open Universal Laser Systems control panel (see red square icon in task bar)

19. click **Play**

20. ensure that the laser remains under supervision at all times

if a small test print doesn't yield results that you like, your material doesn't exist in our collection, or you're experimenting with custom settings on your own, you can manually adjust settings yourself, and test them until they're tailored to your specific job

After Step 11:

11. make adjustments from scratch or click **Load** and build on existing presets for a material similar to yours

> **a.** mode: choose which mode the laser uses for a given color (i.e. control whether a color signifies vector, raster, or skip)
>
> **b.** % power: 0-100 (higher power results in darker and deeper effects)
>
> **c.** % speed: 0-100 (higher speed moves the laser over the material more quickly, so it results in lighter and shallower effects)
>
> **d.** PPI (Pixels Per Inch): 0-1000 (higher density pixels concentrates affected points, so it results in darker and deeper effects)
>
> **f.** z-axis: value should reflect material thickness

12. click **Set** after every change (click **Save** to create a .las file for future use)

13. click **Apply**

14. click **OK**

15. click **Print** (we suggest attempting a test print first)

16. click **Play**

17. ensure that the laser remains under supervision at all times

Red Laser, ILS9.150D

[Location: Digital Fabrication Lab]

Materials Database Method

    1. check that both the laser cutter and the fan are on

    2. open your file (refer to the *Laser Template.3dm* file for further instructions on how to prepare your file)

    3. use the **Print** command (a new window should automatically open; you should see controls on the left and a print preview pane on the right)

    4. ensure that the printer is set to **ILS9.150D** (under Destination)

    5. ensure that the **Scale** is set to **1:1**; **On Paper** should be set to **1.0 Inch** and **In Model** should be set to **1.0 Inch** (under View and Output Scale)

    6. select **Window** (under View and Output Scale)

    7. click **Set** (under View and Output Scale > Window) and ensure that **Only Selected Objects** is NOT selected (under Visibility)

    8. select a new print area (i.e. draw a window around the 18 × 32 predefined bounding box; if necessary, the window grips can be manipulated after the window is drawn) and hit the return/enter key on the keyboard

    9. ensure that the **Default Line Width** is set to **Hairline** (under Linetypes & Line Widths)

    10. click **Properties** (under Destination)

    11. click **Materials Database**

    12. select your material

    13. set your **Material Thickness**

    14. click **Apply**

    15. click **OK**

    16. click **Print** (we suggest attempting a test print first)

    17. open Universal Laser Systems Control Panel (see red square icon in task bar)

    18. click **Play**

    19. ensure that the laser remains under supervision at all times

<u>Manual Control Method</u>

1. check that both the laser cutter and the fan are on

2. open your file (refer to the *Laser Template.3dm* file for further instructions on how to prepare your file)

3. use the **Print** command (a new window should automatically open; you should see controls on the left and a print preview pane on the right)

4. ensure that the printer is set to **ILS9.150D** (under <u>Destination</u>)

5. ensure that the **Scale** is set to **1:1**; **On Paper** should be set to **1.0 Inch** and **In Model** should be set to **1.0 Inch** (under <u>View and Output Scale</u>)

6. select **Window** (under <u>View and Output Scale</u>)

7. click **Set** (under <u>View and Output Scale</u> > Window) and ensure that **Only Selected Objects** is NOT selected (under <u>Visibility</u>)

8. select a new print area (i.e. draw a window around the 18 × 32 predefined bounding box; if necessary, the window grips can be manipulated after the window is drawn) and hit the return/enter key on the keyboard

9. ensure that the **Default Line Width** is set to **Hairline** (under <u>Linetypes & Line Widths</u>)

10. click **Properties** (under <u>Destination</u>)

11. click **Manual Control**

12. click **Load**

13. select your material

14. click **Open**

15. click **Apply**

16. click **OK**

17. click **Print** (we suggest attempting a test print first)

18. open Universal Laser Systems control panel (see red square icon in task bar)

19. click **Play**

20. ensure that the laser remains under supervision at all times

if a small test print doesn't yield results that you like, your material doesn't exist in our collection, or you're experimenting with custom settings on your own, you can manually adjust settings yourself, and test them until they're tailored to your specific job

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>
>	**d.** PPI (Pixels Per Inch): 0-1000 (higher density pixels concentrates affected points, so it results in darker and deeper effects)
>
>	**f.** z-axis: value should reflect material thickness

12. click **Set** after every change (click **Save** to create a .las file for future use)

13. click **Apply**

14. click **OK**

15. click **Print** (we suggest attempting a test print first)

16. click **Play**

17. ensure that the laser remains under supervision at all times