

Task Checker



What You'll Need

Tools

- 3D printer (Multi Jet Fusion printer recommended)
- Laser cutter (60W or higher)
- Handheld drill
- 90° countersink bit
- 2.5 mm Allen wrench
- Soldering Iron
- Scissors
- *Optional: Dental Pick*

Materials

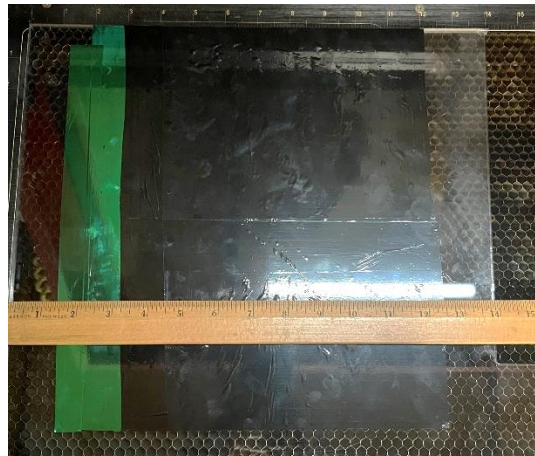
- 3D printer material: Nylon PA12
- *Quantity 4:* Hex Drive Flat Head Screw, M4 x 0.70 mm Thread, 10 mm Long ([91294A190](#) from McMaster-Carr)
- *Quantity 4-5:* Zinc-Plated Steel Washer, M8, 8.4 mm ID, 16 mm OD ([91166A270](#) from McMaster-Carr)
- *Quantity 4:* Heat-Set Inserts for Plastic, M4 x 0.70 mm, 4.7 mm Long ([94459A150](#) from McMaster-Carr)
- Cast Acrylic Sheet, Clear (.215 - .25" thick x 11.5" x 11.5" square)
- Cast Acrylic Sheet (.12 - .13" thick x 11.5" x 3.2") **in a color of your choice.*
- Engravable Adhesive Color Foil, Green
- Engravable Adhesive Color Foil, Black
- *Optional for wall mounting: Quantity 2: Philips Flat Head Screws for Wood, No. 10, 1-1/2" Long ([90031A251](#) from McMaster-Carr)*
- *Optional: Clear Packing Tape*
- *Optional: Clear Coat Spray Paint*

Build Instructions

1. Print nine (quantity: 9) of the *Task_Toggle_Switch*. See Assembly Drawing sheet for part orientation and recommended print settings.

Optional: After post-processing the task toggle switches, apply a coat of clear spray paint.

2. Using an adequately sized (11.5" + square) sheet of .25" clear cast acrylic, adhere the two colors of foil onto the base sheet; first draw a line 3" from the left edge of the base sheet from top to bottom and another 11.5" from the left edge. Cover everything between the lines with black foil. Depending on the size of the foil, you may need to adhere multiple strips.
3. Next, place a 1.5" strip of green foil to the left of the black foil from top to bottom of the base sheet.



4. Place the .25" base sheet into the laser cutter with the foil on top. Use the provided .dxf file named *V6_TASK_CHECKER_BASE.dxf* to laser cut the bottom sheet. See Assembly Drawing for recommended laser cutter settings.
5. Use the provided .dxf file named *V6_TASK_CHECKER_TOP.dxf* and a sheet of .125" colored cast acrylic to laser cut the top sheet. See Assembly Drawing for recommended laser cutter settings.
6. Remove all excess foil from the laser cut piece. *OPTIONAL: If the foil is difficult to remove, use a dental pick to remove the foil from the lettering.*

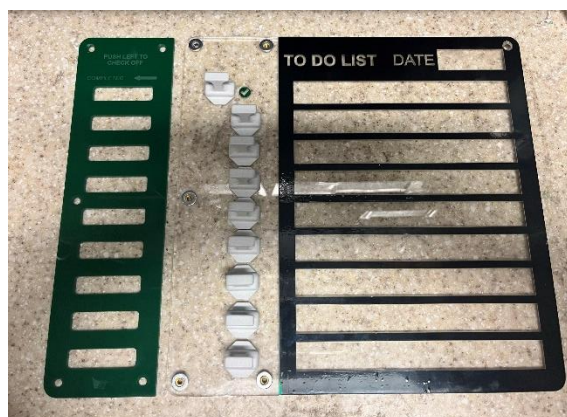


7. *OPTIONAL: Apply a strip of clear packing tape down the center of the clear column (on top of the green check marks and to the left of the black foil), this will help keep the foil from peeling off during use.*
8. Countersink all 5 holes on the top face of the top 0.125" acrylic sheet (*v6_Task_Checker_Top*).
9. Countersink the top right hole on the top face of the bottom sheet (*v6_Task_Checker_Base*).
10. Flip the base (bottom) sheet over so it is lying face down and use a soldering iron to place the Heat-Set inserts into the 4 holes highlighted in the image below:



Assembly Instructions

1. Place the base sheet on a flat, even surface face up. Place the 4 washers on the holes with the Heat-Set inserts.
2. Set the 9 Task Check Sliders on the base sheet and then place the top sheet over the sliders.



3. Using a 2.5 mm Allen wrench set the 4 screws into the holes with Heat-Set inserts and tighten.
4. *OPTIONAL: if needed, the two top corner holes can be used to mount the Task Checker to the wall using wood screws. Insert another washer between the top and bottom sheets of the top left corner when mounting the Task Checker in this manner.*

Using the Device

1. Using a Dry Erase marker, you can write the date and any daily to-do tasks (i.e. Take Medication, Brush Teeth, Eat Breakfast, etc.)
2. Once a task is complete, slide the task slider to the left to reveal a green check mark.

Safety precautions

Only use the product as described in this document.

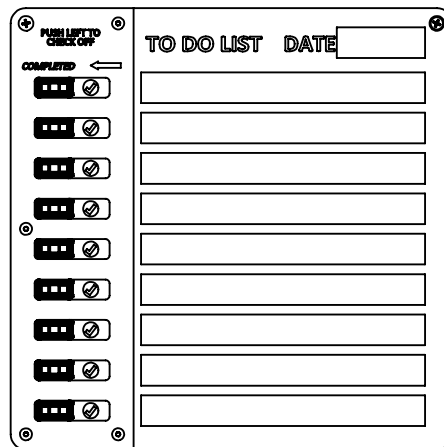
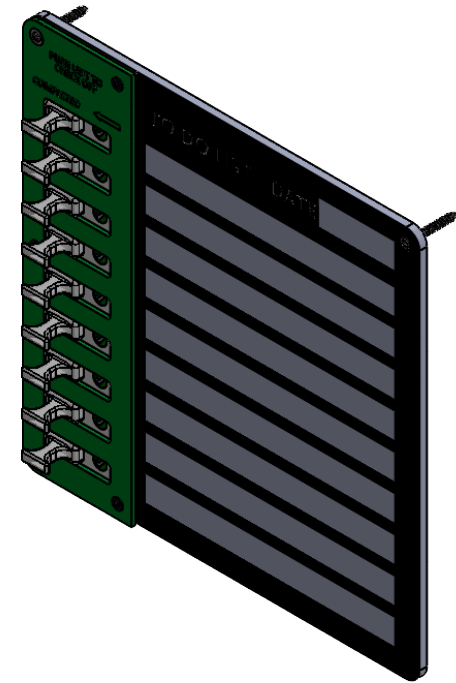
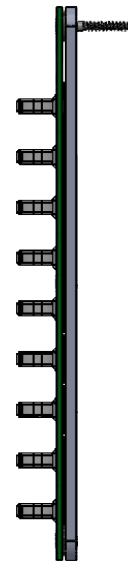
The dry erase writing may be wiped off with a dry cloth or erased with a Plexi-glass or acrylic cleaner. Do not use isopropyl alcohol as it may cause the acrylic to crack and the tape to peel.

Clean the 3D printed sliders with a wipe of your choice. However, 3D printed components are porous, so sanitization is not guaranteed.

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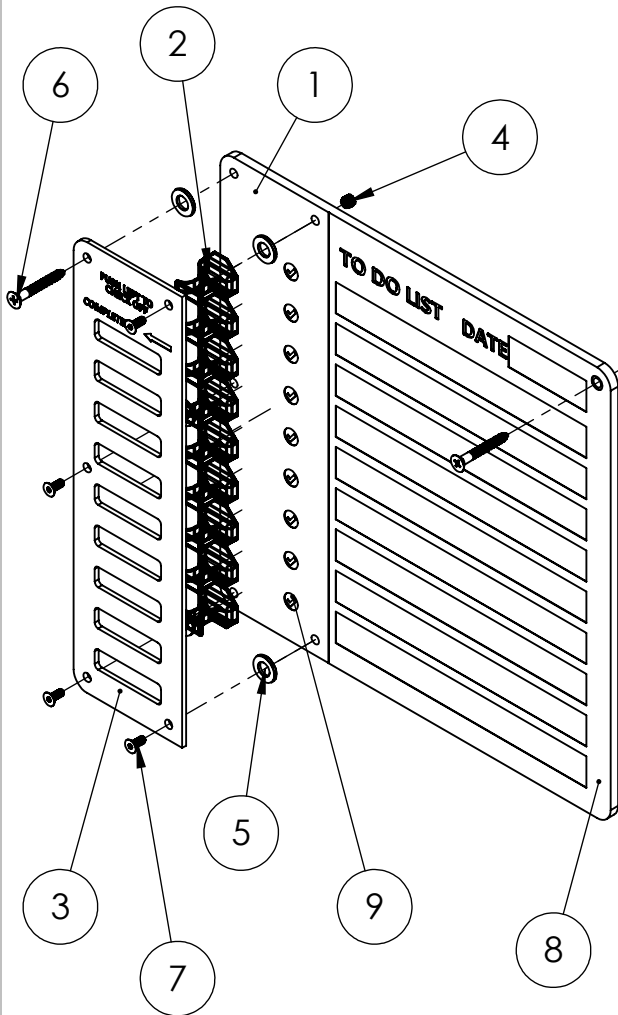
TASK CHECKER - FULLY ASSEMBLED



UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		NAME	DATE	Central Virginia VA Health Care System (CVHCS)	
SUGGESTED MATERIAL/PRINTER		DRAWN	KRS	09/30/2024	
3D Printed Parts: Nylon PA12		CHECKED	JTM	3/13/2024	
Laser Cut Parts: Cast Sheet		COMMENTS: All part numbers from McMaster-Carr. 2.5 mm Allen Wrench required for assembly.			
Acrylic, Engrivable Adhesive					
Color Foil		TITLE: TASK CHECKER ASSEMBLY			
POST-PROCESSING INSTRUCTIONS		SIZE	FILE NAME:	REV	
3D Printed Pieces: Bead blast and clean off excess PA12 powder		A	V6_TASK_CHECKER	v6	
Laser Cut Pieces: Debur Edges if necessary, clean with an acylic glass cleaner.					SCALE: 1:5
		PRINT ON A 8.5" X 11" SHEET		DO NOT SCALE DRAWING	

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BILL OF MATERIALS



ITEM NO.	FILE NAME OR PART NO.	FABRICATION	DESCRIPTION	QTY.
1	V6_CHECKER_BASE.cdr	LASER CUT	BOTTOM BOARD, AREA TO WRITE DATE AND TASKS	1
2	Task_Toggle_Switch	3D PRINTED	SLIDING TOGGLE SWITCHES	9
3	V6_CHECKER_TOP.cdr	LASER CUT	TOP BOARD, HOLDS SWITCHES TO SHOW TASK COMPLETION	1
4	94459A150	PURCHASED	HEAT-SET INSERTS FOR PLASTIC	4
5	91166A270	PURCHASED	ZINC-PLATED STEEL WASHER	5
6	90031A251	PURCHASED	PHILLIPS FLAT HEAD SCREWS FOR WOOD	2
7	91294A190	PURCHASED	BLACK-OXIDE ALLOY STEEL HEX DRIVE FLAT HEAD SCREW	4
8	6" X 25' ENGRAVABLE LASER FOIL - LASFOILBLK-RL	PURCHASED	ADHESIVE COLOR FOIL - BLACK	1
9	6" X 25' ENGRAVABLE LASER FOIL - LASFOILGRN-RL	PURCHASED	ADHESIVE COLOR FOIL - GREEN	1

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES

SUGGESTED MATERIAL/PRINTER
 3D Printed Parts: Nylon PA12
 Laser Cut Parts: Cast Sheet
 Acrylic, Engrivable Adhesive
 Color Foil

POST-PROCESSING INSTRUCTIONS
 3D Printed Pieces: Bead blast and clean off excess PA12 powder
 Laser Cut Pieces: Debur Edges if necessary, clean with an acylic glass cleaner.

	NAME	DATE
DRAWN	KRS	09/30/2024
CHECKED	JTM	3/13/2024

COMMENTS:

All part numbers from McMaster-Carr. 2.5 mm Allen Wrench required for assembly.

PRINT ON A 8.5" X 11" SHEET
 DO NOT SCALE DRAWING

Central Virginia VA Health Care System (CVHCS)

TITLE:
TASK CHECKER ASSEMBLY

SIZE	FILE NAME:	REV
A	V6_TASK_CHECKER	V6

SCALE: 1:4 SHEET 2 OF 6

DESIGN INTENT STATEMENT

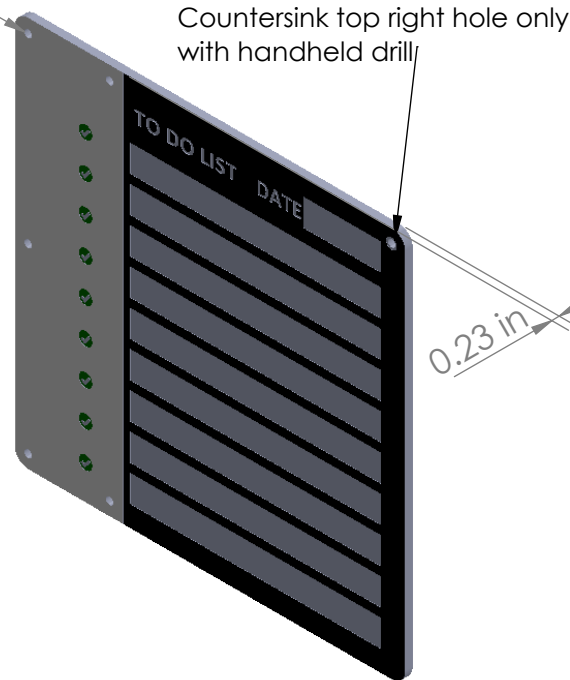
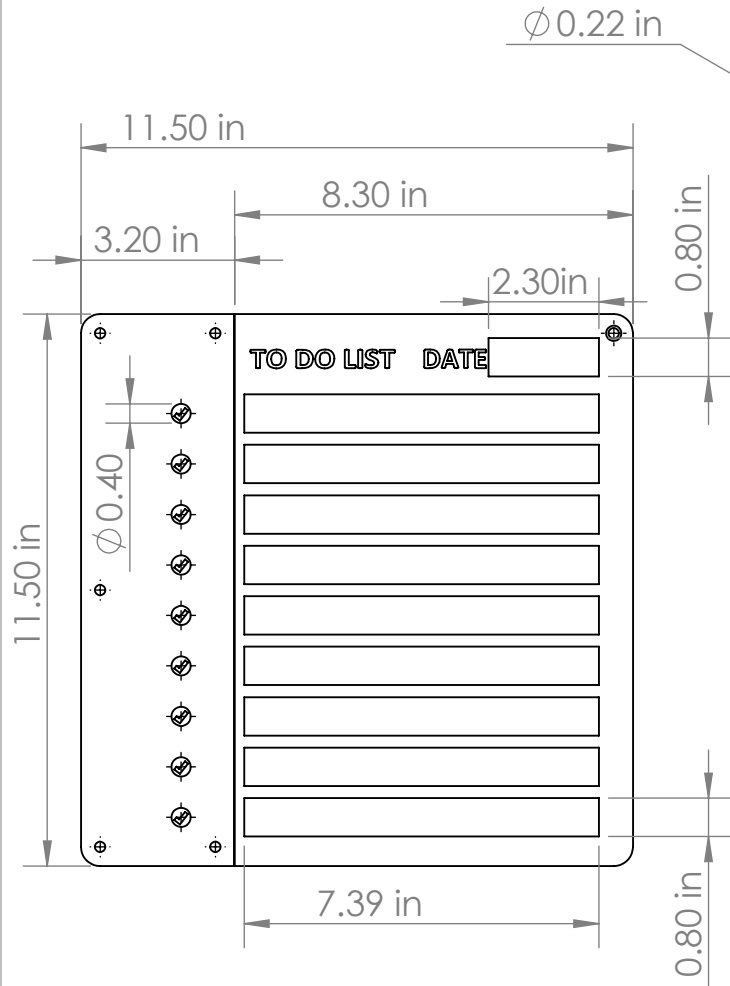
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TASK CHECKER BASE



B

B



RECOMMENDED LASER CUTTER SETTINGS*

- Material: Cast acrylic, Color Engravable Foil (x2 colors)
- Recommended thickness: .215"-0.235"
- Cutting power/speed: 100%/2%
- Engraving power/speed: 20%/100%
- Post-processing: countersink top right hole with handheld drill and 90° bit
- Follow instructions to adhere engravable color foil on top face of acrylic prior to cutting
- Use *v6_task_checker_base.cdr* or *.dxf*

*FOR 60W LASER CUTTER; OTHER LASER CUTTER SETTINGS WILL VARY

A

A

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UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES

SUGGESTED MATERIAL/PRINTER

- Clear Cast Sheet Acrylic, 0.215" - 0.235" thickness
- Engravable Color Foil

POST-PROCESSING INSTRUCTIONS

- Debur Edges if necessary.
- Peel off any excess foil
- Clean with an acrylic glass cleaner.

	NAME	DATE
DRAWN	KRS	09/30/2024
CHECKED	JTM	3/13/2024

COMMENTS:

All part numbers from McMaster-Carr. 2.5 mm Allen Wrench required for assembly.

PRINT ON A 8.5" X 11" SHEET
DO NOT SCALE DRAWING

Central Virginia VA Health Care System (CVHCS)

TITLE:

TASK CHECKER ASSEMBLY - BOTTOM

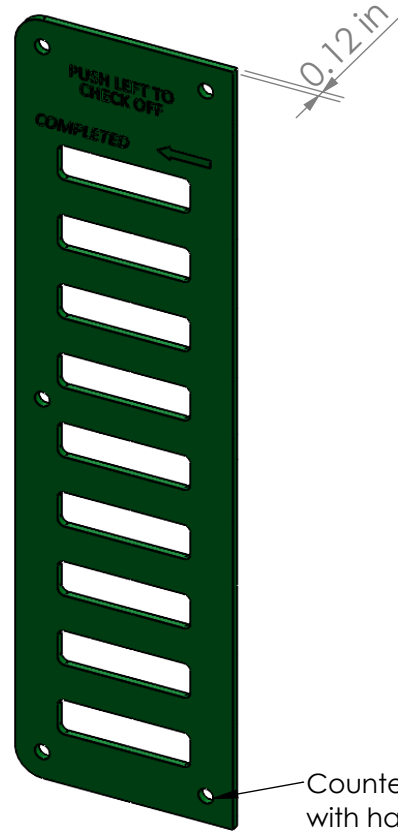
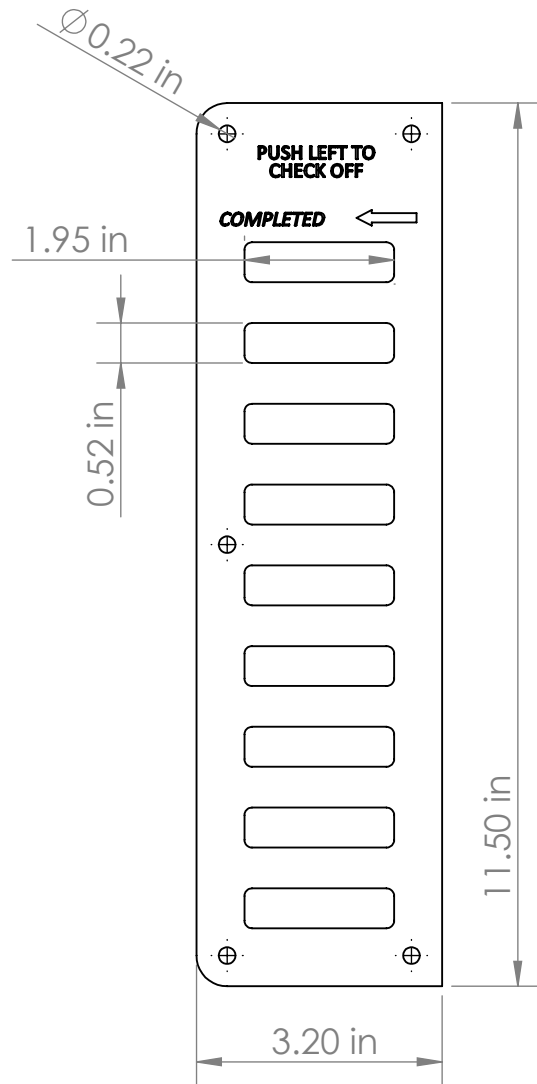
SIZE	FILE NAME:	REV
A	V6_TASK_CHECKER_BASE	v6
SCALE: 1:4	SHEET 3 OF 6	

TASK CHECKER TOP



B

B



Countersink all 5 holes with handheld drill

RECOMMENDED LASER CUTTER SETTINGS*

- Material: Cast acrylic
- Recommended thickness: .115"-0.125"
- Cutting power/speed: 100%/2%
- Engraving power/speed: 20%/100%
- Post-processing: countersink all 5 holes with handheld drill and 90° bit
- Use *v6_task_checker_top.cdr* or *.dxf*

*FOR 60W LASER CUTTER; OTHER LASER CUTTER SETTINGS WILL VARY

A

A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		NAME	DATE	Central Virginia VA Health Care System (CVHCS)
SUGGESTED MATERIAL/PRINTER		DRAWN	09/30/2024	
Color Cast Sheet Acrylic, 0.115" - 0.125" thickness		CHECKED	3/13/2024	TITLE: TASK CHECKER ASSEMBLY - TOP
POST-PROCESSING INSTRUCTIONS		COMMENTS:		
Debur Edges if necessary, Clean with an acrylic glass cleaner.		All part numbers from McMaster-Carr. 2.5 mm Allen Wrench required for assembly.		SIZE A
PRINT ON A 8.5" X 11" SHEET DO NOT SCALE DRAWING		FILE NAME: v6_TASK_CHECKER_TOP		REV v6
		SCALE: 1:3		SHEET 4 OF 6

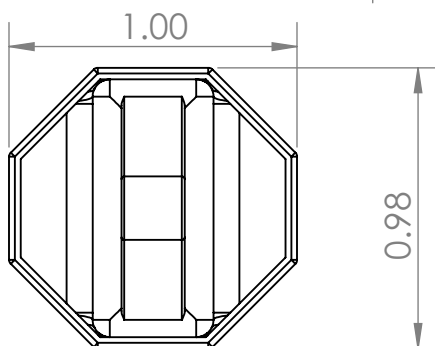
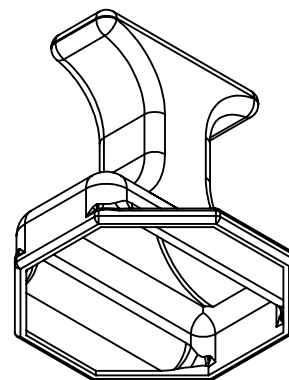
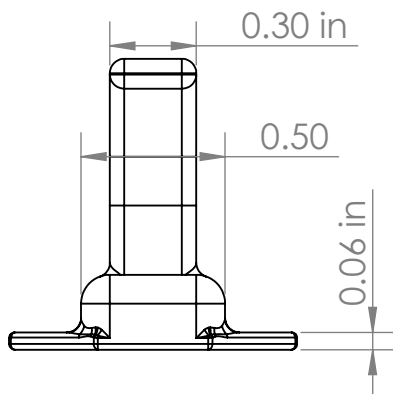
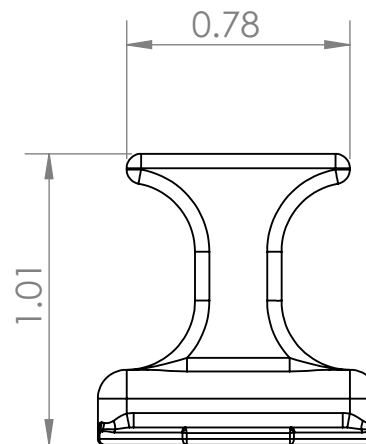
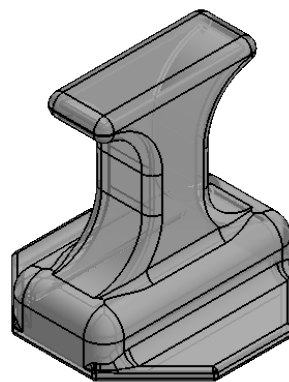
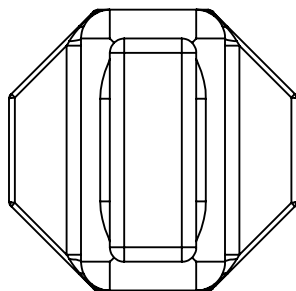
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2

1

TASK TOGGLE SWITCH



B

B

A

A

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		NAME	DATE	Central Virginia VA Health Care System (CVHCS)
SUGGESTED MATERIAL/PRINTER		DRAWN	09/30/2024	
Nylon PA12 in Multi Jet Fusion printer		CHECKED	3/13/2024	TITLE: TASK CHECKER ASSEMBLY - TOGGLE SWITCH
POST-PROCESSING INSTRUCTIONS		COMMENTS:		
Bead blast and clean off excess PA12 powder		Due to unique part geometry, print with Multi Jet Fusion printer for successful outcome		SIZE A
		PRINT ON A 8.5" X 11" SHEET DO NOT SCALE DRAWING		FILE NAME: TASK_TOGGLE_SWITCH
				REV v6
		SCALE: 1.5:1		SHEET 5 OF 6

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2

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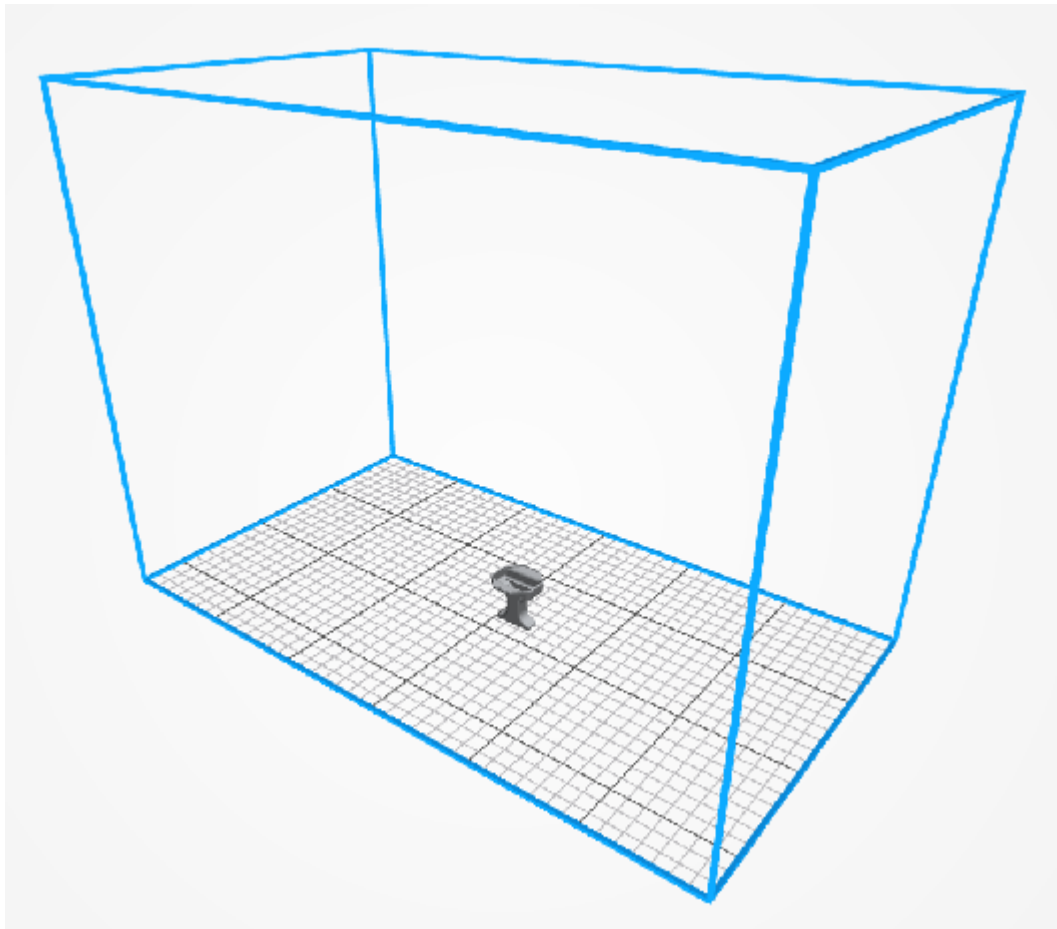
ORIENTATION RECOMMENDATION FOR PRINTING



TASK TOGGLE SWITCH

Print upside down in Multi Jet Fusion printer

B



B

RECOMMENDED PRINTER SETTINGS

- Material: Nylon PA12 powder
- Layer Height: 0.003"
- Infill Type: n/a
- Infill Density: 100%
- Wall Layers: n/a
- Ceiling and Floor Layers: n/a

A

A

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Central Virginia VA Health Care System (CVHCS)

TITLE:

TASK CHECKER ASSEMBLY -
TOGGLE SWITCH

SIZE

FILE NAME:

REV

A

TASK_TOGGLE_SWITCH

v6

SHEET 6 OF 6