Title Trident\_1-9\_complementary\_3dPartsBuild\_doco (proposed future file)
File name Voron\_1.9\_3dprinting\_guide.pdf (1.9 - really? You put a . in a file)

Date 2021-12-13 (Unofficial version number)

**Copy-rite** None. Free domain. Be free. Fly my pretties. FLY! **Warranty** None. Use at own risk. For entertainment purposes only.

**Author** Stephen George (Original idea and creation)

#### Introduction

Use this guide to print the parts as you need them, possibly the night before.

Print parameters (More details on page 4 of official Trident manual)
Material ABS, Infill gyroid, Infill 40% Layer\_height 0.2mm, Wall\_count 4, Nossil
4mm, Top/bottom layers 5

#### The Rules

The first time a picture of the part is shown in the official instructions it should be added to the list below, along with the page number. After that it's ignored as you should have already printed it.

### The Machine the parts are for

Building Formbot kit,  $250 \times 250$ , Direct feed, Dragon High Flow, 3 hole cable chain.

#### **Keeping track**

The Printed  $\Box$  tick box in the page number box is for your use.

It allows you to print out this pdf (without this header page) and tick off the parts as they come off the printer. Hopefully you won't double print when you don't want to.

### Future Improvements to this doc

- 3) Add time of print using a Prusa mini as a guide.
- 4) Add AA (anti-aliasing) to images using gimp and scripts

NB thanks for all the great ideas. Even if I have not had time to implement them all. They are much appreciated. Any other ideas or comments please visit old.reddit.com/r/VORONDesign

### Source files

https://github.com/LesserSpottedAustralianSquirel/voron\_trident\_pic
This include this .pdf and the source files

### <u>Notes</u>

This is fan base documentation. The official document take precedence in any conflict of information or technical detail.

## Silly quote

May your Voron print head always fly "straight and true", never tire and crash the bed for a sleep.

Picture	Details	Page	Comment
	Directory STLs/Gantry/AB_Drive_Units  Filename a_drive_frame_upper.stl  Manual name A drive	26 Done?   Yes	And so it begins
	Directory STLs/Gantry/Front_Idlers  Filename [a]_tensioner_left.stl  Manual name none found	27 Done?  O Yes	NB Page 27 "Look for asterix next to the part. It indicates that this is an accent part."  Except * is not a good character in a file name, so they changed it to Files starting with [a]
	Directory STLs/Gantry/Front_Idlers  Filename [a]_tensioner_right.stl  Manual name none found	27 Done?   Yes	Joke alert Don't print part rm *  If you have no idea what I am talking about please ignore this note
	Directory STLs/Gantry/Front_Idlers  Filename front_idler_a_x2.stl  Manual name A idler	28 Done?  ☐ Yes	x2

Directory STLs/Gantry/Front_Idlers  Filename front_idler_b_x2.stl  Manual name none found	28 Done?  □ Yes	x2
Directory STLs/Gantry/AB_Drive_Units  Filename a_drive_frame_lower.stl  Manual name A drive	34 Done?  ☐ Yes	
Directory STLs/Tools  Filename AB_pulley_jig.stl  Manual name none found	35 Done?  ☐ Yes	tool
Directory STLs/Gantry/AB_Drive_Units  Filename b_drive_frame_lower.stl  Manual name B drive	37 Done? □ Yes	

	Directory STLs/Gantry/AB_Drive_Units  Filename b_drive_frame_upper.stl  Manual name B drive	37 Done? □ Yes	
No Pic	T-Nuts M5 AKA "Roll in" T nuts	44 Done?  Yes	They don't have to go into the end.  They can be "rolled in".  No need to disassemble frame.
No Pic	Warning Lone M3 on page Pretending to be M5	44 Done?  Yes	Beware Of Of the lone lone M3 T-nut. Which I read as an M5 and had to get it back out (frame disassembled)
	Directory STLs/Gantry/AB_Drive_Units  Filename [a]_y_endstop_bumper.stl  Manual name End stop	50 Done? □ Yes	
	Directory STLs/Z_Assembly  Filename  z_rear_extrusionbracket_left.st l  Manual name Rear brace	53 Done? □ Yes	

Directory STLs/Z_Assembly  Filename  z_rear_extrusionbracket_right.s tl  Manual name Rear brace	53 Done? □ Yes	
Directory STLs/Tools  Filename MGN9_rail_guide_x2.stl  Manual name Guide	58 Done? □ Yes	x2
Directory STLs/Z_Assembly  Filename z_carriage_rear_3hole.stl  Manual name Generic Cable Chain	64 Done?  Yes	Check directory for 2 hole version if required on cable chain
Directory STLs/Z_Assembly  Filename z_stepper_rear.stl  Manual name none found	65 Done? □ Yes	

Directory STLs/Z_Assembly  Filename [a]_z_rail_stop_x3.stl  Manual name none found	68 Done?  ☐ Yes	x3
Directory STLs/Z_Assembly  Filename z_stepper_left.stl  Manual name none found	69 Done? □ Yes	
Directory STLs/Z_Assembly  Filename z_stepper_right.stl  Manual name none found	73 Done?  ☐ Yes	
Directory STLs/Z_Assembly  Filename z_carriage_left.stl  Manual name Left Z joint	77 Done?  ☐ Yes	

Directory STLs/Z_Assembly  Filename [a]_z_carriage_left.stl  Manual name none found	77 Done? □ Yes	
Directory STLs/Z_Assembly  Filename [a]_z_carriage_right.stl  Manual name none found	79 Done?	
Directory STLs/Z_Assembly  Filename z_carriage_right.stl  Manual name none found	79 Done? □ Yes	
Directory STLs/Skirt  Filename corner_a_x2.stl  Manual name Feet	90 Done?	x2

Directory STLs/Skirt  Filename corner_b_x2.stl  Manual name Feet	90 Done? Yes	x2
Directory STLs/Skirt  Filename [a]_corner_baseplate_a_x2.stl  Manual name none found	90 Done?	x2
Directory STLs/Skirt  Filename [a]_corner_baseplate_b_x2.stl  Manual name none found	90 Done?	x2
Directory STLs/Gantry/X_Axis/XY_Joints  Filename  xy_joint_left_lower_MGN12.stl  Manual name  Left XY Joint	99 Done? Yes	

Directory STLs/Gantry/X_Axis/XY_Joints  Filename xy_joint_left_upper_MGN12.stl  Manual name none found	99 Done? Yes	
Directory STLs/Gantry/X_Axis/XY_Joints  Filename xy_joint_right_lower_MGN12.stl  Manual name Right XY Joint	99 Done? • Yes	
Directory STLs/Gantry/X_Axis/XY_Joints Filename xy_joint_right_upper_MGN12.stl  Manual name none found	99 Done?	
Directory STLs/Gantry/X_Axis/X_Carriage  Filename  x_carriage_frame_left.stl  Manual name  X Carriage	99 Done?	

	Directory STLs/Gantry/X_Axis/X_Carriage  Filename  x_carriage_frame_right.stl  Manual name  X Carriage	99 Done?	
	Directory STLs/Gantry/X_Axis/X_Carriage  Filename probe_retainer_bracket.stl  Manual name none found	100 Done?	Note: There are two similar shapes this one and the 9mm one probe_retainer_bra cket_9mm.st
	Directory STLs/Gantry/X_Axis/XY_Joints  Filename [a]_xy_joint_cable_bridge_3hole. stl  Manual name none found	100 Done? □ Yes	Note: Check directory for 2 hole version if required for cable chain Mine's a 3 hole
	Directory STLs/Tools  Filename MGN12_rail_guide_x2.stl  Manual name none found	113 Done?  □ Yes	x2
?		129 Done?  ☐ Yes	I am guessing the blue part is a thermal fuse. Not an STL

Directory STLs/Z_Assembly  Filename nozzle_probe.stl  Manual name none found	130 Done? □ Yes	
Directory STLs/Z_Assembly  Filename z_bed_left.stl  Manual name none found	134 Done? □ Yes	
Directory STLs/Z_Assembly  Filename z_bed_rear.stl  Manual name none found	136 Done?  ☐ Yes	
Directory STLs/Z_Assembly  Filename z_bed_right.stl  Manual name	138 Done?  ☐ Yes	

Directory STLs/Gantry/X_Axis/X_Carriage/ Direct Feed  Filename extruder_motor_plate.stl  Manual name none found	146 Done? □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage/ Direct Feed  Filename chain_anchor_3hole.stl  Manual name none found	146 Done? □ Yes	Check directory for 2 hole version if required
Directory STLs/Gantry/X_Axis/X_Carriage/ Direct Feed  Filename [a]_latch_shuttle.stl  Manual name none found	146 Done? □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage/ Direct Feed  Filename extruder_body.stl  Manual name none found	147 Done? □ Yes	

Directory STLs/Gantry/X_Axis/X_Carriage/ Toolheads/Dragon  Filename printhead_front_dragon.stl  Manual name none found	148 Done? □ Yes	DRAGON mount DO YOU HAVE A DRAGON hot end?
Directory STLs/Gantry/X_Axis/X_Carriage/T oolheads/Dragon  Filename printhead_rear_dragon.stl  Manual name none found	149 Done? □ Yes	DRAGON mount DO YOU HAVE A DRAGON hot end?
Directory STLs/Gantry/X_Axis/X_Carriage/D irect Feed  Filename [a]_latch.stl  Manual name none found	161 Done? □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage/D irect Feed  Filename [a]_guidler.stl  Manual name none found	161 Done? □ Yes	

Directory STLs/Gantry/X_Axis/X_Carriage/ Direct Feed  Filename [a]_connector_cover.stl  Manual name none found	163 Done?  □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage Filename [a]_blower_housing_front.stl  Manual name none found	167 Done? □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage Filename blower_housing_rear.stl  Manual name none found	167 Done?  □ Yes	
Directory STLs/Gantry/X_Axis/X_Carriage  Filename hotend_fan_mount.stl  Manual name none found	168 Done?  ☐ Yes	

Directory STLs/Z_Assembly  Filename z_cable_chain_mount_3hole.stl  Manual name Z chain Anchor	173 Done? □ Yes	Check directory for 2 hole version if required
Directory STLs/Panels  Filename wire_corner_left.stl  Manual name cable cover	175 Done?  □ Yes	
Directory STLs/Panels  Filename wire_corner_right.stl  Manual name none found	176 Done? □ Yes	
Directory STLs/ElectronicsBay  Filename cable_frame_anchor_x6.stl  Manual name none found	178 Done? □ Yes	x6

	Directory STLs/ElectronicsBay  Filename DIN_center_support_x2.stl  Manual name none found	181 Done?  ☐ Yes	x2
5	Directory STLs/ElectronicsBay  Filename DIN_frame_mount_x4.stl  Manual name none found	181 Done?  • Yes	×4
	Directory STLs/ElectronicsBay  Filename pcb_din_clip_v2_x5.stl  Manual name none foundy	189 Done?  □ Yes	x5
	Directory STLs/ElectronicsBay  Filename raspberrypi_bracket.stl  Manual name none found	198 Done?  ☐ Yes	

	Directory STLs/ElectronicsBay  Filename lrs_psu_bracket_x2.stl  Manual name none found	191 Done? □ Yes	x2
	Directory STLs/Skirt  Filename power_inlet_filtered.stl  Manual name none found	195 Done?  ☐ Yes	
	Directory STLs/ElectronicsBay  Filename PSU_stabilizer_50mm.stl  Manual name none found	198 Done?	
?	Springloaded Can't find	199 Done?  Yes	Possibly not printed part
?	Springloaded Can't find	199 Done?  Yes	Possibly not printed part
	Directory STLs/ElectronicsBay  Filename raspberrypi_bracket.stl  Manual name none found	201 Done?  Pes	WARNING LOOKS NOTHING LIKE PICTURE IN MANUAL I HAVE DONE SOMETHING WRONG
?	Can't find	202 Done?	

	□ Yes	
Directory STLs/Gantry/X_Axis/XY_Joints Filename [a]_endstop_pod_microswitch.stl  Manual name none found	203 Done? □ Yes	
Directory STLs/Gantry/AB_Drive_Units  Filename [a]_wire_cover.stl  Manual name none found	225 Done? □ Yes	
Directory STLs/Skirt  Filename side_fan_support_x2.stl  Manual name none found	233 Done? □ Yes	x2
Directory STLs/Skirt  Filename keystone_panel.stl  Manual name none found	233 Done? Yes	

	Directory STLs/Skirt/250  Filename front_skirt_a_250.stl  Manual name none found	233 Done?  □ Yes	WARNING  250mm x 250mm  do you have this bed size?
	Directory STLs/Skirt/250  Filename front_skirt_b_250.stl  Manual name none found	233 Done?  ☐ Yes	WARNING 250mm x 250mm do you have this bed size?
?	LED Screen Can't find	234 Done?  ☐ Yes	
	Directory STLs/Skirt  Filename mini12864_case_front.stl  Manual name none found	234 Done?  ☐ Yes	
9 1 1 5	Directory STLs/Skirt  Filename mini12864_case_rear.stl  Manual name none found	235 Done?  ☐ Yes	
	Can't find round thing You make my heart sing, Wild thing.	235 Done?  ☐ Yes	

Directory STLs/Skirt  Filename [a]_mini12864_case_hinge.stl  Manual name none found	236 Done?  ☐ Yes	
Directory STLs/Skirt  Filename [a]_keystone_blank_insert_x2.stl  Manual name none found	237 Done?  ☐ Yes	<b>x</b> 2
Directory STLs/Skirt  Filename [a]_skirt_logo_x2.stl  Manual name none found	237 Done?  ☐ Yes	X2
Directory STLs/Skirt  Filename rear_center_skirt_250.stl  Manual name none found	241 Done?  Yes	WARNING 250mm x 250mm do you have this bed size?

<b>Directory</b> STLs/Skirt <b>Filename</b> side_skirt_a_250_x2.stl <b>Manual name</b> none found	242 Done? Yes	WARNING  250mm x 250mm  do you have this bed size?  x2
Directory STLs/Skirt  Filename [a]_60mm_fan_blank_insert_x2.stl  Manual name none found	244 Done? □ Yes	x2
Directory STLs/Panels  Filename bottom_panel_hinge_x2.stl  Manual name none found	250 Done? □ Yes	x2
Directory STLs/Panels  Filename corner_panel_clip_4mm_x8.stl  Manual name none found	254 Done? □ Yes	Warning 4mm or 6mm part? x8

Directory STLs/Panels  Filename midspan_panel_clip_4mm_x7.stl  Manual name none found	254 Done?  □ Yes	Warning 4mm or 6mm part? x7
Directory STLs/Panels/Front_Doors  Filename latch_x2.stl  Manual name none found	263 Done?  ☐ Yes	x2
Directory STLs/Panels/Front_Doors  Filename handle_a_x2.stl  Manual name none found	263 Done?  ☐ Yes	x2
Directory STLs/Panels/Front_Doors  Filename handle_b_x2.stl  Manual name none found	263 Done?  □ Yes	x2

	Directory STLs/Panels/Front_Doors  Filename latch_x2.stl  Manual name none found	263 Done?  ☐ Yes	x2
100	Directory STLs/Panels/Front_Doors  Filename door_hinge_x6.stl  Manual name none found	265 Done?  ☐ Yes	×6
	Directory STLs/Exhaust_Filter  Filename exhaust_filter_housing.stl  Manual name none found	268 Done?  ☐ Yes	
	Directory STLs/Exhaust_Filter  Filename [a]_filter_access_cover.stl  Manual name none found	270 Done?	

	Directory STLs/Exhaust_Filter  Filename [a]_exhaust_filter_mount_x2.stl  Manual name none found	272 Done?	x2
	Directory STLs/Exhaust_Filter  Filename exhaust_filter_grill.stl  Manual name none found	272 Done?	
	Directory STLs/Exhaust_Filter  Filename bowen_retainer.stl  Manual name none found	275 Done?  ☐ Yes	
	Directory STLs/Exhaust_Filter  Filename spool_holder.stl  Manual name none found	276 Done?  ☐ Yes	
No. of the second secon	Steve  (Team member and person who "drove the bus home on Trident project")	280 Done?	Man in the red shirt. Well reddish. It's in that spectrum

Eddie (Team member)	280 Done?   Yes	This is not a red shirt.
Dunar (Team member)	280 Done?  Yes	Support structure may be required for the beard.
[a]_Russiancatfood.stl <b>Manual name</b> Maks Zolin	280 Done?  ☐ Yes	May require multiple materials Fearless leader



# Done!

I have one question for you.

Did you print the tool on page 58 in the accent colour?

 $\ \square$  Yes, because it's cool

 $\hfill \square$  No, Mr George, Because I am on to you

Place ✓ above

Note: I spent far too much time on this doco. I can only imagine the hard work that the Voron team has put into actually making the printer itself. So from a personal point of view I would like to say thanks to the official team here.