Title Trident 1-9 complementary 3dPartsBuild doco (Proposed future filename)

File name Voron_1.9_3dprinting_guide.pdf (You put . In a filename?)

Date 2021-12-15 AM Drop 3 (Unofficial version number)
 Copy-rite None. Free domain. Be free. Fly my pretties. FLY!
 Warranty None. Use at own risk. For entertainment purposes only.

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Claudermilk (Major proof read and error checking)

Introduction

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

Latest version?

I tend to rush the first draft out and let everyone complain. To get the latest version of this document please goto url below and check the date.

https://github.com/LesserSpottedAustralianSquirel/voron_trident_pics/blob/main/ Voron 1.9 trident 3dprinting guide.pdf

Print parameters (More details on page 4 of official Trident manual)

Material ABS, Infill gyroid, Infill 40% Layer_height 0.2mm, Wall_count 4, Top/bottom layers 5, Nossle/Nozzle 0.4mm

NB: Many of the Voron parts "mate" together. Therefore the top needs to be quite smooth. I found that a light sand papering helped allow these parts to mate. Another idea maybe to enable "ironing" in your slicer.

NB: I used a Prusa mini to print the parts in ABS. I had to use a brim to prevent warping. While the brim came off easily I had to use a plumbers deburring tool (from the hardware shop) and sometimes a craft knife to remove the elephants foot like effect.

The Rules

The first time a picture of a 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 x 250, Direct feed, Dragon High Flow, 3 hole cable chain.

Keeping track

The Printed \Box tick box, under the picture, allows you to print out this pdf 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 (yet) to implement them all. They are much appreciated. Any other ideas or comments please visit old.reddit.com/r/VORONDesign

Notes

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

Picture	Details	Comment
Printed?	Directory STLs/Gantry/AB_Drive_Units Filename a_drive_frame_upper Page Number 26	And so it begins
Printed?	Directory STLs/Gantry/ Front_Idlers Filename [a]_tensioner_left Page number 27	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]
Printed?	Directory STLs/Gantry/ Front_Idlers Filename [a]_tensioner_right Page number 27	Joke alert Don't print part rm * If you have no idea what I am talking about please ignore this note

Printed?	Directory STLs/Gantry/ Front_Idlers Filename front_idler_a_x2 Page number 28	x2
Printed?	Directory STLs/Gantry/ Front_Idlers Filename front_idler_b_x2 Page number 28	x2
Printed?	Directory STLs/Gantry/AB_Drive_Units Filename a_drive_frame_lower Page number 34	
Printed?	Directory STLs/Tools Filename AB_pulley_jig Page number 35	Tool

Printed?	Directory STLs/Gantry/AB_Drive_Units Filename b_drive_frame_lower Page number 37	
Printed?	Directory STLs/Gantry/AB_Drive_Units Filename b_drive_frame_upper Page number 38	
	T-Nuts M5 AKA "Roll in" T nuts Page number 44	They don't have to go into the end. They can be "rolled in". No need to disassemble frame.
M3 T-Nut	Warning Lone M3 on page. Pretending to be M5 Page number 44	Beware Of of the lone lone M3 T-nut. Which I read as an M5 and had to get it back out.

Printed?	Directory STLs/Gantry/AB_Drive_Units Filename [a]_y_endstop_bumper Page number 50	
Printed?	Directory STLs/Z_Assembly Filename z_rear_extrusionbracket_left Page number 53	
Printed?	Directory STLs/Z_Assembly Filename z_rear_extrusionbracket_right Page number 55	
Printed?	Directory STLs/Tools Filename MGN9_rail_guide_x2 Page number 58	x2

Printed?	Directory STLs/Z_Assembly Filename z_carriage_rear_3hole Page number 64	Check directory for 2 hole version if required on cable chain
Printed?	Directory STLs/Z_Assembly Filename z_stepper_rear Page number 65	
Printed?	Directory STLs/Z_Assembly Filename [a]_z_rail_stop_x3 Page number 68	x3
Printed?	Directory STLs/Z_Assembly Filename z_stepper_left Page number 69	

Printed?	Directory STLs/Z_Assembly Filename z_stepper_right Page number 73	
Printed?	Directory STLs/Z_Assembly Filename z_carriage_left Page number 77	
Printed?	Directory STLs/Z_Assembly Filename [a]_z_carriage_left Page number 77	
Printed?	Directory STLs/Z_Assembly Filename [a]_z_carriage_right Page number 79	

Printed?	Directory STLs/Z_Assembly Filename z_carriage_right Page number 79	
Printed?	Directory STLs/Skirt Filename corner_a_x2 Page number 90	x2
Printed?	Directory STLs/Skirt Filename corner_b_x2 Page number 90	x2
Printed?	Directory STLs/Skirt Filename [a]_corner_baseplate_a_x2 Page number 90	x2

Printed?	Directory STLs/Skirt Filename [a]_corner_baseplate_b_x2 Page number 90	x2
ACTION COMMITTEE TO SERVICE AND ACTION COMMITTEE SERVICE AND	Page 99 has been ignored for the purposes of this doco . It is an overview or copy of the pic on 98. Also it has way too many parts on it. Normal service to resume	Page ignored
	Directory STLs/Gantry/ X_Axis/X_Carriage	Note: There are two similar shapes. The one displayed and the 9mm one.
	Filename probe_retainer_bracket	probe_retainer_brac ket_9mm.st
Printed?	Page number 100	But which one? See below
	Which probe_retainer_bracket?	
	This all depends on your probe see page 111	My probe from the formbot kit was a
Ind	After putting my X carriage together on page 110, my probe	Omron TL- Q5MMC2-Z
	was flush with the X carriage.	It was flush with the
	I decided to go with the standard probe_retainer_bracket. It seem to work fine.	X carriage when it was assembled

Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage Filename x_carriage_frame_left Page number 100	I had to gently sand the top of this part so it would mate properly
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage Filename x_carriage_frame_right Page number 100	I had to gently sand the top of this part so it would mate properly
Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename [a]_xy_joint_cable_bridge_ 3hole Page number 100	Note: Check directory for 2 hole version if required for cable chain Mine's a 3 hole
Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename xy_joint_right_upper_MGN12 Page number 101	NB if you are using a brim to prevent ABS warping you may have to remove it round the crevice outlined below

	Notes Crevice outlined in blue on Right XY Joint. May need to be "cleaned out" with a craft knife if you have printed with a brim.	
Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename xy_joint_right_lower_MGN12 Page number 102	
Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename xy_joint_left_upper_MGN12 Page number 105	
Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename xy_joint_left_lower_MGN12 Page number 106	

Printed?	Directory STLs/Tools Filename MGN12_rail_guide_x2 Page number 113	x2
	Non printable part. Thermal fuse Page number 129	Please skip. Non printable part.
Printed?	Directory STLs/Z_Assembly Filename nozzle_probe Page number 130	
Printed?	Directory STLs/Z_Assembly Filename z_bed_left Page number 134	

Printed?	Directory STLs/Z_Assembly Filename z_bed_rear Page number 136	
Printed?	Directory STLs/Z_Assembly Filename z_bed_right Page number 138	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/Direct Feed Filename extruder_motor_plate Page number 146	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/ Direct Feed Filename chain_anchor_3hole Page number 146	Check directory for 2 hole version if required

Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/ Direct Feed Filename [a]_latch_shuttle Page number 146	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/ Direct Feed Filename extruder_body Page number 147	
Printed?	Directory STLs/Gantry/X_Axis/X_Carriage/ Toolheads/Dragon Filename printhead_front_dragon Page number 148	DRAGON mount DO YOU HAVE A DRAGON hot end?
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/Toolheads/ Dragon Filename printhead_rear_dragon Page number 149	DRAGON mount DO YOU HAVE A DRAGON hot end?

Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/Direct Feed Filename [a]_latch Page number 161	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/Direct Feed Filename [a]_guidler Page number 161	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage/Direct Feed Filename [a]_connector_cover Page number 163	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage Filename blower_housing_rear Page number 166	

Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage Filename hotend_fan_mount Page number 166	
Printed?	Directory STLs/Gantry/ X_Axis/X_Carriage Filename [a]_blower_housing_front Page number 167	
Printed?	Directory STLs/Z_Assembly Filename z_cable_chain_mount_3hole Page number 173	Check directory for 2 hole version if required
Printed?	Directory STLs/Panels Filename wire_corner_left Page number 175	

Printed?	Directory STLs/Panels Filename wire_corner_right Page number 176	
Printed?	Directory STLs/Panels Filename deck_support_4mm_x8 Page number 178	X 8 NB there are two variants 4mm and 3mm deck_support_3mm _x8
Printed?	Directory STLs/ElectronicsBay Filename DIN_center_support_x2 Page number 181	x2
Printed?	Directory STLs/ElectronicsBay Filename DIN_frame_mount_x4 Page number 181	x4

Printed?	Directory STLs/ElectronicsBay Filename cable_frame_anchor_x6 Page number 185	X6
Printed?	Directory STLs/ElectronicsBay Filename pcb_din_clip_v2_x5 Page number 189	x5
Printed?	Directory STLs/ElectronicsBay Filename raspberrypi_bracket Page number 189	
Printed?	Directory STLs/ElectronicsBay Filename rs25_psu_bracket Page number 191	

Printed?	Directory STLs/ElectronicsBay/ Controller_Mounds Filename Octopus_bracket_2pc Page number 193	Note: do you have a Octopus? Other mounts in this directory include Duet, GTR,SKR,Spider etc
Printed?	Directory STLs/Skirt Filename power_inlet_filtered Page number 195	
Printed?	Directory STLs/ElectronicsBay Filename PSU_stabilizer_50mm Page number 198	
	Not a printed part. Skip Page number 199	Not printed part. Skip

Printed?	Directory STLs/Gantry/ X_Axis/XY_Joints Filename [a]_endstop_pod_microswitch Page number 203	
Printed?	Directory STLs/Gantry/ AB_Drive_Units Filename [a]_y_endstop_housing Page number ????!!!###! (Page not found)	Warning We could not find this part in the official manual but it's in the STLs. Additionally, the Y endstop is held within the [a]_endstop_pod_m icroswitch part
Printed?	Directory STLs/Gantry/ AB_Drive_Units Filename [a]_wire_cover Page number 225	
Printed?	Directory STLs/Skirt Filename side_fan_support_x2 Page number 233	x2

Printed?	Directory STLs/Skirt Filename keystone_panel Page number 233	
Printed?	Directory STLs/Skirt/250 Filename front_skirt_a_250 Page number 233	WARNING 250mm x 250mm do you have this bed size?
Printed?	Directory STLs/Skirt/250 Filename front_skirt_b_250 Page number 233	WARNING 250mm x 250mm do you have this bed size?
Printed?	Directory STLs/Skirt Filename [a]_mini12864_case_ front_insert Page number 234	

Printed?	Directory STLs/Skirt Filename mini12864_case_front Page number 234	
Printed?	Directory STLs/Skirt Filename mini12864_case_rear Page number 235	
Printed?	Warning: Joke detected Can't find the round thing, You make my heart sing, Wild thing. You make everything groovie. ABS mainly.	Not stl part Please skip.
Printed?	Page number 235 Directory STLs/Skirt Filename [a]_mini12864_case_hinge Page number 236	

Printed?	Directory STLs/Skirt Filename [a]_keystone_blank_insert_x2 Page number 237	x2
Printed?	Directory STLs/Skirt Filename [a]_skirt_logo_x2 Page number 237	X2
Printed?	Directory STLs/Skirt Filename rear_center_skirt_250 Page number 241	WARNING 250mm x 250mm do you have this bed size?
Printed?	Directory STLs/Skirt/250 Filename side_skirt_a_250_x2 Page number 242	WARNING 250mm x 250mm do you have this bed size? x2

Printed?	Directory STLs/Skirt/250 Filename side_skirt_b_250_x2 Page number 242	WARNING 250mm x 250mm do you have this bed size? x2
Printed?	Directory STLs/Skirt Filename [a]_60mm_fan_blank_ insert_x2 Page number 244	x2
Printed?	Directory STLs/Panels Filename bottom_panel_clip_x4 Page number 250	x4
Printed?	Directory STLs/Panels Filename bottom_panel_hinge_x2 Page number 250	x2

Printed?	Directory STLs/Panels Filename corner_panel_clip_4mm_x8 Page number 254	Warning 4mm or 6mm part? x8
Printed?	Directory STLs/Panels Filename midspan_panel_clip_4mm_x7 Page number 254	Warning 4mm or 6mm part? x7
Printed?	Directory STLs/Panels/ Front_Doors Filename latch_x2 Page number 263	x2
Printed?	Directory STLs/Panels/ Front_Doors Filename handle_a_x2 Page number 263	x2

Printed?	Directory STLs/Panels/ Front_Doors Filename handle_b_x2 Page number 263	x2
Printed?	Directory STLs/Panels/ Front_Doors Filename door_hinge_x6 Page number 265	x6
Printed?	Directory STLs/Exhaust_Filter Filename exhaust_filter_housing Page number 268	
Printed?	Directory STLs/Exhaust_Filter Filename [a]_filter_access_cover Page number 270	

	Directory STLs/Exhaust_Filter Filename	x 2
	[a]_exhaust_filter_mount_x2	٨٧
Printed?	Page number 272	
	Directory STLs/Exhaust_Filter	
	Filename exhaust_filter_grill	
Printed?	Page number 272	
	Directory STLs/Exhaust_Filter Filename bowen_retainer	
Printed?	Page number 275	
	Directory STLs/Exhaust_Filter Filename spool_holder	
Printed?	Page number 276	

Printed?	Steve (Team member and person who "drove the bus home on Trident project") Page number 280	Man in the red shirt. Well reddish. It's in that spectrum
Printed?	Eddie (Team member) Page number 280	This is not a red shirt.
Printed?	Dunar (Team member) Page number 280	Support structure may be required for the beard.
Printed?	Maks Zolin AKA [a]_Russiancatfood Glorious and fearless leader Page number 281	May require multiple materials to print



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

☐ 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.