P-51B Mustang 1200mm

PRINT SETTINGS

These settings were created from results obtained from testing using a **Direct drive printer** with **GST3d's PLA+** filament. If using other styles of printer or brands of filament, the results could vary. Adjusting the flow rate and retraction settings may be required.

Settings for PLA parts:

Nozzle temp = 205c
Bed temp = 45c
Nozzle diameter = 0.4mm
Extruder multiplier (**EXT**)r = 1.0 or 100%
Extrusion width = .042
Retraction distance (**RD**) = 8mm
Extra restart distance (**ERD**) = 0.1mm
Retraction speed = 100mm/s
Coast at end (**C**) = 1mm
Wipe nozzle (**W**)= 0mm
Layer height (**LH**) = 0.25mm

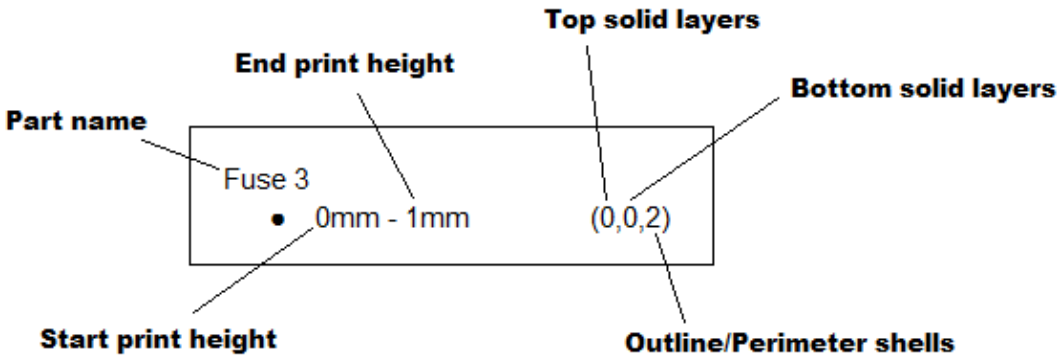
First layer height = 100%
First layer width = 100%
First layer speed = 20%
Print speed = 60mm/s
Outline underspeed = 50%
Solid infill underspeed = 80%
Support structure underspeed = 80%
Cooling fan = 100% for all layers.
Infill percentage (**IF**) is set to 0% unless otherwise stated
Outline direction = outside to inside

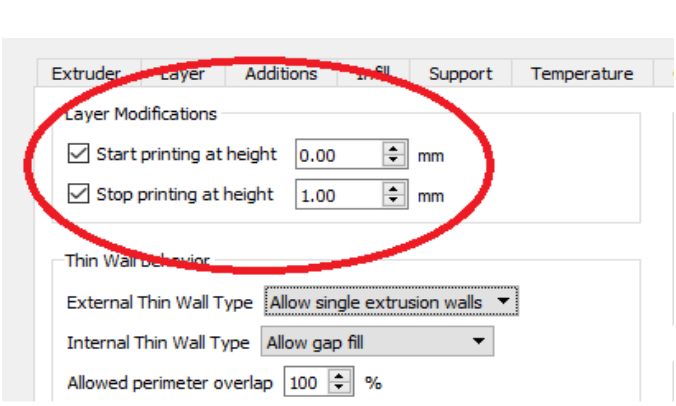
Unless otherwise stated, the start point for each layer is set to Y=0mm and x=100mm.

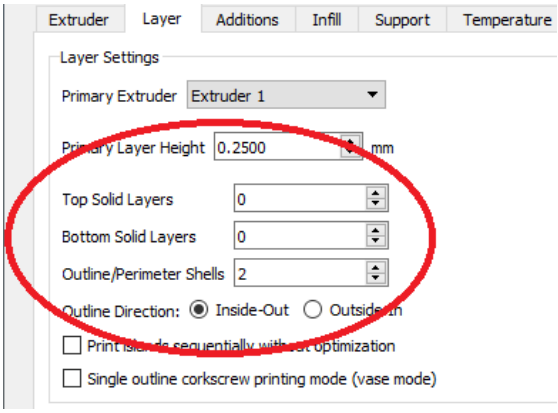
- 100mm on "x" axis for 200mm X 200mm bed (middle of the "x" axis)

Eg **s.p x=100mm** (start point is 100mm along "x" axis)

Key for part layer height settings:







FUSELAGE

Fuse 1

- 0mm - 4mm (0,16,1)
- 4mm - 135mm (0,0,1)
- 135mm - end (0,0,2)

Fuse 2 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 7mm (4,0,1)
- 7mm - 118mm (0,0,1)
- 118mm - end (0,0,2)

Fuse 3 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 116mm (0,0,1)
- 116mm - end (0,0,2)

Fuse 4 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 102mm (0,0,1)
- 102mm - end (0,0,2)

Fuse 5 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 88mm (0,0,1)
- 88mm - end (0,0,2)

Fuse 6

- 0mm - 1mm (0,0,2)
- 1mm - 130mm (0,0,1)
- 130mm - end (0,0,2)

Fuse 7

- 0mm - 1mm (0,0,2)
- 1mm - - end (0,0,1)

Canopy front

- 0mm - 1mm (0,0,2)
- 1mm - end (0,0,1)

Canopy rear (clear pla)

- 0mm - 1mm (0,1,2)
- 1mm - end (0,0,1)

Cowling

- 0mm - end (3,0,2)

Cowling mount plates

- 0mm - end (2,2,1) **infill = 100, EXT= 0.95**

Motor spacers

- 0mm - end (2,2,1) **infill = 100%, EXT= 0.95**

Radiator door and servo mount plate **bed disks required (0,1,1) (refer POI)**

- 0mm - end (2,2,1) **infill = 100%, EXT= 0.95**

Tail wheel mount plate and steering arm **bed disks required (0,1,1) (refer POI)**

- *support material required 80% infill, 0.5mm offset from part*

- 0mm - end (2,2,1) **infill = 100%, EXT= 0.95**

WINGS

Wing 1 **bed disks required (0,1,1) (refer POI)**

support material required 30% infill, 0.5mm offset from part

- 0mm - 1mm (0,1,2)
- 1mm - 158mm (0,0,1)
- 158mm - end (0,0,2)

Wing 2 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 140mm (0,0,1)
- 140mm - end (0,0,2)

Wing 3 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 161mm (0,0,1)
- 161mm - end (0,0,2)

Wing 3 **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 109mm (0,0,1)
- 109mm - end (0,0,2)

Wingtips **bed disks required (refer POI)**

- 0mm - 1mm (0,1,2)
- 1mm - 11mm (0,0,1)
- 11mm - end (2,0,2)

Wing mount blocks

- 0mm - end (2,2,1) **infill = 50%, EXT= 0.95**

Ailerons (inner) **bed disks required (refer POI)**

- 0mm - 2mm (0,8,1)
- 2mm - 70mm (0,0,1)
- 70mm - end (0,0,2)

Ailerons (outer) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - end (0,0,1)

Flaps (inner) **bed disks required (refer POI)**

- 0mm - 1mm (0,4,1)
- 1mm - end (0,0,1)

Flaps (middle) **bed disks required (refer POI)**

- 0mm - 1mm (0,4,1)
- 1mm - 116mm (0,0,1)
- 116mm - end (0,0,2)

Flaps (outer) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - end (0,0,1)

Servo covers and servo tray

- 0mm - end (2,2,1) **infill = 100%, EXT= 0.95**

Main gear mount covers *support material required 50% infill, 0.5mm offset from part*

- 0mm - end (3,3,1) **infill = 100%, EXT= 0.90**

Radiator scoop intake

- 0mm - 1mm (0,0,2)
- 1mm - 129mm (0,0,1)
- 129mm - end (3,0,1)

Gear doors inner
Gear doors outer
Inner gear door hinge mounts

support material required 50% infill, 0.5mm offset from part

- 0mm - end (2,2,2) **RD = 9mm, ERD = 0, infill = 100%, EXT= 0.90**

Gear leg clamp (all variants)

support material required 50% infill, 0.5mm offset from part

- 0mm - end (2,2,2) **RD = 9mm, ERD = 0, infill = 100%, EXT= 0.90, LH = 0.15mm**

Wheel hubs

- 0mm - end (2,2,1) **RD = 6mm, ERD = 0, infill = 30%, EXT= 1.0, LH = 0.15mm**

Tires note - uses gyroid infill

- 0mm - end (4,4,1) **RD = 6mm, ERD = 0.2mm, infill = 30%, EXT= 1.2, LH = 0.2mm**

TAIL PLANE

Elevators (inner)

- 0mm - 2mm (0,8,2)
- 2mm - end (0,0,1)

Rudder lower hinge point

- 0mm - end (2,2,1) **infill = 40%, EXT= 0.95**

SPINNER

Spinner backplate

- 0mm - end (3,3,2) **infill = 50%, EXT= 0.95**

Spinner cone

- 0mm - end (3,3,2) **infill = 50%, EXT= 0.95, LH = 0.15mm**

ACCESSORIES

Scale 250lb bomb *support material required 30% infill, 0.5mm offset from part*

- 0mm - end (0,0,2)

Armament rack

- 0mm - end (2,1,1)

Settings for LW-PLA parts:

Nozzle temp = 250c
Bed temp = 60c
Nozzle diameter = 0.4mm
Extruder multiplier (**EXT**)r = 0.40 or 40%
Extrusion width = .042
Retraction distance (**RD**) = 6mm
Extra restart distance (**ERD**) = 0.45mm
Retraction speed = 150mm/s
Coast at end (**C**) = 3mm
Wipe nozzle (**W**) = 3mm
Layer height (**LH**) = 0.2mm

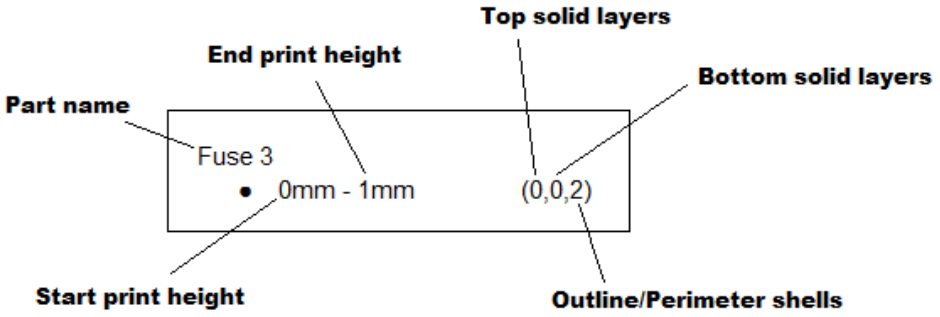
First layer height = 100%
First layer width = 100%
First layer speed = 30%
Print speed = 40mm/s
Outline underspeed = 50%
Solid infill underspeed = 80%
Support structure underspeed = 80%
Cooling fan = 100% for all layers.
Infill percentage (**IF**) is set to 0% unless otherwise stated

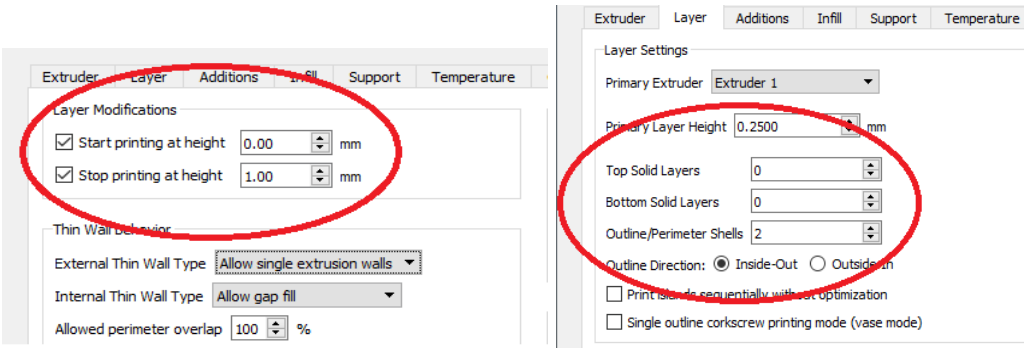
Unless otherwise stated, the start point for each layer is set to Y=0mm and x=100mm.

- 100mm on “x” axis for 200mm X 200mm bed (middle of the “x” axis)

Eg **s.p x=100mm** (start point is 100mm along “x” axis)

Example :





TAIL PLANE

Horizontal stabilizers (outer)

- 0mm - 1mm (0,2,2)
- 1mm - 167mm (0,0,1)
- 167mm - end (0,0,2)

Horizontal stabilizers (inner)

- 0mm - 1mm (0,0,2)
- 1mm - 20mm (0,0,1)
- 20mm - end (3,0,2)

Vertical stabilizers (lower)

- 0mm - 1mm (0,0,2)
- 1mm - 108mm (0,0,1)
- 108mm - end (0,0,2)

Vertical stabilizers (upper)

- 0mm - 1mm (0,0,2)
- 1mm - 10mm (0,0,1)
- 10mm - end (3,0,2)

Elevators (middle) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 135mm (0,0,1)
- 135mm - end (0,0,2)

Elevators (middle) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 35mm (0,0,1)
- 35mm - end (3,0,2)

Rudder (bottom) **bed disks required (0,1,1) (refer POI)**

support material required 30% infill, 0.7mm offset from part

- 0mm - 1mm (0,5,1)
- 1mm - 10mm (0,0,1)
- 10mm - end (3,0,2)

Rudder (middle) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,5,1)
- 1mm - 137mm (0,0,1)
- 137mm - end (0,0,2)

Rudder (top) **bed disks required (0,1,1) (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 25mm (0,0,1)
- 25mm - end (3,0,2)