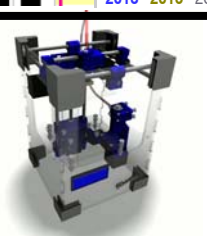
Tantillus

The Portable Open Source 3D Printer



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Mainboard

All kits are now coming with pre-assembled RAMPS boards.

1. Cut four pieces of the aquarium tubing used for the z-motor shaft 5-10mm long to use as standoffs.

Standof

2. Install four of the #4 x 3/4" through the mounting holes of the Arduino Mega.
3. Install four of the pieces of tubing cut in step 1 over the bolts protruding from the Arduino Mega.

4. Secure the Arduino to the left side panel on the inside of the case with four #4 nuts on the outside.

Motors

All kits are now coming with pre-wired motors

1. Install four step stick drivers in the sockets on the RAMPS board for X, Y, Z and E0.
   See the RAMPS wiki page for orientation
2. Route the cables through the case to Mainboard connectors, being sure to stay clear of all moving parts.

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The orientation of these plugs does not matter and will be addressed in the Setup section.

3. Connect the motor attached to the extruder to the connector on the RAMPS board marked E0.
4. Connect the motor attached to the Z_motor_bracket and lead screw to the connector on the RAMPS board marked Z.
5. Connect the motor attached to the Right Panel to the connector on the RAMPS board marked Y.
6. Connect the motor attached to the Rear Panel to the connector on the RAMPS board marked X.

Wiring

Hotend

All kits are now coming with pre-made cables for the thermistor.

1. Thermistor
    1. Cut the 3.5mm dia heat shrink tubing into two pieces 30mm long.

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    2. Taking the pre-made cable marked thermistor and strip the loose ends 10mm.

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    3. Feed one wire through each hole in the Carriage from the top.

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    4. Slide one piece of previously-cut heat shrink tubing on each wire.

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    5. Fold the stripped end of the wire over on itself.

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    6. Fold the end of the thermistor lead over on itself.

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7. Using two 22-gauge non-insulated butt connectors (smaller ones), connect the thermistor leads to the stripped ends of the two-wire cable.

8. Cover with heat shrink tubing and shrink with heat.

2. Heater resistor
    1. Cut the 5mm dia heat shrink tubing into two pieces 30mm long.

    2. Taking the 14g zip-wire, separate one end 100mm.

    3. Strip the ends 10mm.

    4. Thread each wire through separate holes in the carriage.

    5. Slide one piece of heat shrink tubing over each 14g wire.

    6. Using the 14g non-insulated butt connectors, connect the heater resistor to the 14g zip-wire.

    7. Cover with heat shrink tubing and shrink with heat.

    8. Route both cables from the Hotend along the Bowden cable securing them with zip ties.

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    9. Be sure to leave the extra wire near the carriage and Hotend to make cleaning the hotend out and changing the Hotend easier.

Contents

10. Run the wires into the case through the hole below the Bowden cable hole in the back panel.

11. Route the cables through the case to main board connectors, being sure to stay clear of all moving parts.
12. Connect the thermistor connector to the terminal marked T0 on the main board.
13. Strip the ends of the 14g zip-wire 10mm.
14. Connect the 14-gauge zip-wire to the Hotend (D10) screw terminals on the main board.

Wiring

Endstop

All kits are now coming with the endstop pre-wired.

1. Insert the enstop switch into the bracket with the button facing down and nearest to the bolt hole.
2. Using a small dab of hotglue or CA glue attach the enstop to the endstop bracket to make adjustment easier.

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3. Route the cable through the case to Mainboard connector marked Z-min, being sure to stay clear of all moving parts.

Wiring

↑TOP↑ LCD Contents

All kits are now coming with pre-wired LCD panels.

1. Cut four pieces of the aquarium tubing used for the z-motor shaft 5-10mm long to use as standoffs.

   Standof

2. Install four of the #4 x 3/4" with washers through the slots on either side of the LCD opening.

   LCD

3. Install the four pieces of tubing cut in step 1 over the protruding bolts.

   LCD

4. Install the LCD over the four protruding bolts and secure with four #4 nuts (finger tight).

   LCD LCD

5. Route the cable through the case to Mainboard connector, being sure to stay clear of all moving parts.

   LCD LCD

   Wiring

SD card

All kits are now coming with SDramps boards.

1. Plug SDramps board onto connector on RAMPS board marked SDramps.

   SDram SDram

   Wiring

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Encoder

All kits are now coming with pre-wired Encoders.

1. Remove nut from encoder shaft.

   Encode Encode Encode

2. Install encoder in front panel through hole under LCD and secure with the nut.

   Encode

3. Route the cable through the case to Mainboard connector, being sure to stay clear of all moving parts.

   Encode Encode

4. Install encoder knob on encoder shaft.

   Encode Encode

   Wiring

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All kits are now coming with pre-wired Fans.

1. Bolt the fans to the fan mounts with four #8 x 1" bolts and nuts.

Fan 1 Fan 2 Fan 3

2. Route the cables through the case to Mainboard connector marked D9, being sure to stay clear of all moving parts.
3. Strip the ends of the wires 10mm and attach them to the D9 screw terminals being sure the red wire is connected to the + terminal.
4. Snap the fan holder onto the right and left side panels at the top as seen in the video on the right.

Wiring

Power Connector

All kits are now coming with a pre-wired Power connector.

1. Attach wires from Q-type power connector to RAMPS power connector.

2. Feed Q-type connector through the upper hole in the rear bottom corner from the inside.

3. Fit connector adapter over the Q-type connector.

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4. Push connector assembly into upper hole.

5. Connect RAMPS power connector to RAMPS board.

Wiring

Setup

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