

Connecting GTR V1.0 with Pi 3B+/4 by 3 wires, 2 wires which are serial connection. With 2 wire serial connections made you no longer need the use of USB cable *1.

Connect **TXD0** from Raspberry Pi 3B+/4 Connector **TO** **RX1** from GTR V1.0 Raspberry Pi connector.

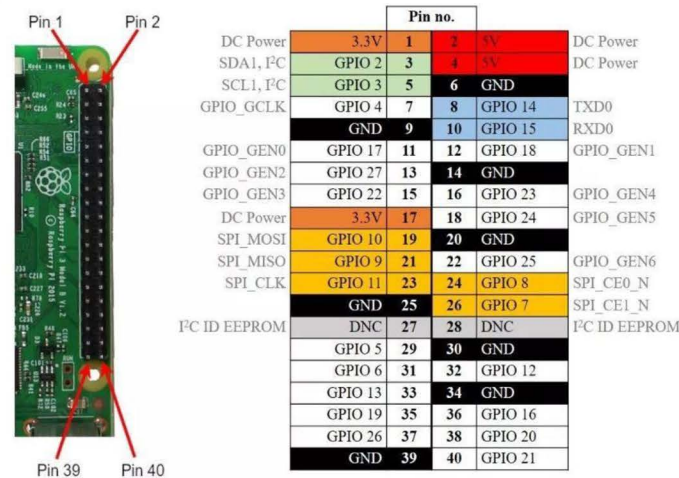
Connect RXD0 from Raspberry Pi 3B+/4 Connector TO TX1 from GTR V1.0 Raspberry Pi connector.

Connect GND from Raspberry Pi 3B+/4 Connector TO GND from GTR V1.0 Raspberry Pi connector.

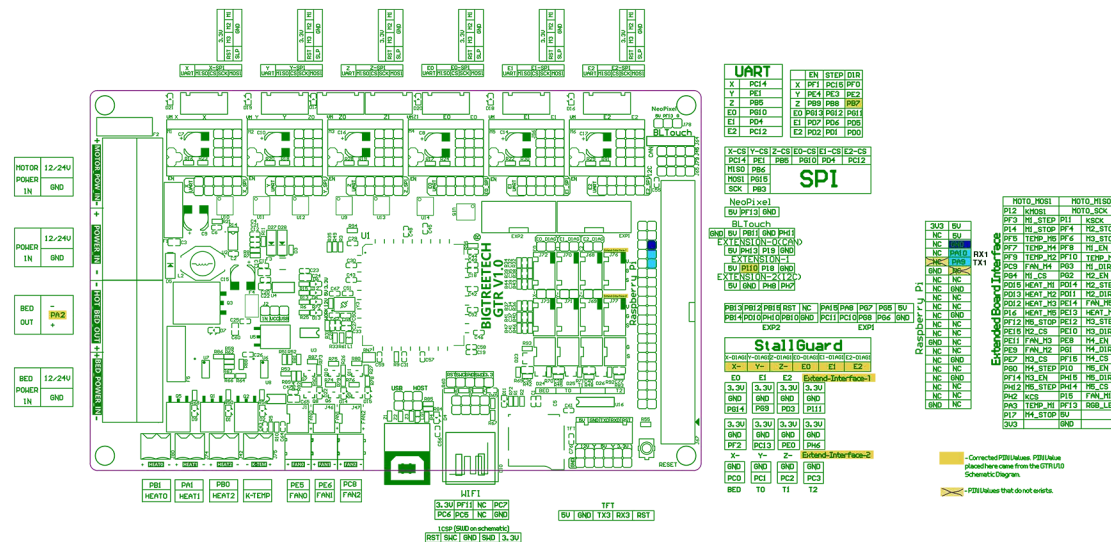
No need to connect V+ from the Raspberry Pi 3B+/4 connector. In fact, I recommend powering the Raspberry pi from a seperate 5V power supply but connect the GND on the Raspberry Pi power supply to the GND on the GTR V1.0 Board.

Raspberry Pi 3B+/4 and GTR V1.0 both use 3.3 V logic.

Pi 3B+ @ GPIO connector: PINS used: TXD0, RXD0 and GND (8-10-6):



GTR V1.0 @ Raspberry pi connector: TX1, RX1 and GND



You also have to change some settings in the Raspberry pi 3B+/4 operating system.

Raspberry Pi 3B+/4 Changes that need to be made:

Login to your Raspberry Pi.

Swapping ports used by GPIO and Bluetooth

The first thing to change in the serial connection is to swap the ports used by the GPIO pins and the internal Bluetooth chip. We need to add a line in the boot config file on the boot partition.

Log in to the Pi3 with SSH on the IP address used.

Type in `sudo nano /boot/config.txt`

Move the cursor to the end of the file by cursor and add:

`dtoverlay=pi3-miniuart-bt`

save the file and exit the editor by control+O and control+X

Disabling the serial console

Moving to another config file, where part of the code must be deleted to disable serial console.

Type in `sudo nano /boot/cmdline.txt`

Look for following string (text) and delete it

`console=serial0,115200`

save the file and exit the editor by control+O and control+X

Rebooting RPi

For all changes to take effect, please reboot your Raspberry Pi 3

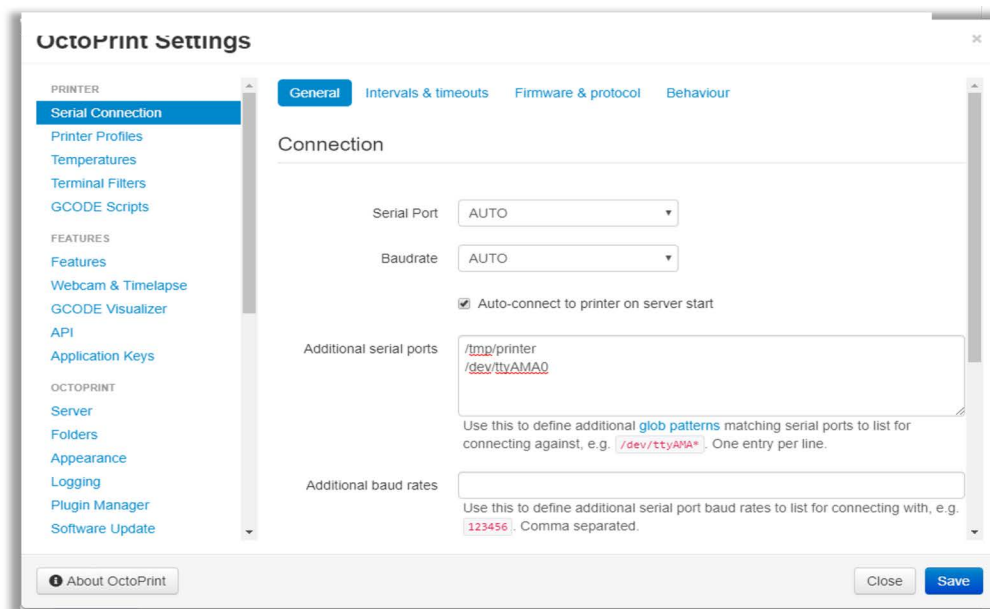
Type in `Sudo reboot`

Adding the serial port in Octoprint

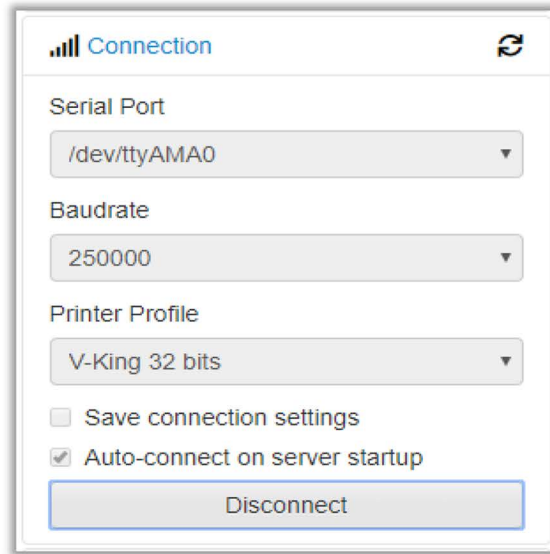
Last part of the configuration is in the Octoprint web interface. Open your browser and type either "octoprint.local" or the IP address of the Pi 3. You might be greeted with the welcome wizard, please go through it first.

As soon as you arrive at the home screen, open "Settings" (top right), head to "Serial Connection", then "Additional serial ports" and insert following:

`/dev/ttyAMA0`



Save the change and reboot OctoPrint. After reboot, select the new port and connect to your printer. Making connection might take a few seconds longer then with USB.



***1 This information was taken from BIGTREE TECH SKRV1.3 Guide 2019 - 6 .PDF and adjusted for the GTR V1.0 Board.**