New 3.3v Laser Light
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1. Connecting Laser to ESP Limited Machines
1. Mounting the Laser

The Laser can be mounted on top of your machine and be pointed to the right side of your machine.

To mount the laser to the top of the machine follow these steps.

Step 1. Remove the number 1 thread guide from the machine. See figure 1.

Step 2. Place the laser bracket arm under the number 1 thread guide and using the same screw you took out reattach the number 1 thread guide with the laser to the machine. Same place you removed it from. See figure 2.

Note: The thread guide will not have one part in the small hole so you will need to ensure that you keep it as close to the right alignment as possible to ensure the thread path is clear and running smooth.

The Laser can also be connected to the carriage for working on pantograph designs from the back of the machine. To connect to the carriage follow these steps.

Step 1. Carefully remove the nut from the upper carriage encoder.

Step 2. Place the Laser light bracket on the encoder bolt.

Step 3. Replace the nut and tighten the encoder and laser light into place. See figure 3.
2. Connecting the power cord to the machine

Use care when choosing where to place the cable. You need to ensure it will not get caught on something and cause the machine to stop expectantly. Make sure you are not going to pull the cord out of the laser or your machine.

Step 1. Run the cord along the top of your machine if you can to prevent it from falling into your quilting area.

Step 2. If the cord will reach, have it travel over the top of the PCB box on the back of the machine.

Step 3. The 90 degree plug should be plugged in with the bend pointing up.

This should keep the cord away from the Hand Wheel. See figure 4 and figure 5.

The ESP Limited machines will have a clearly marked place for plugging in the Laser light cord.
3. Powering the Laser light on the ESP Limited

For the ESP Limited machines you will need to have the machine turned on and the display on with the current version loaded. (check www.tinlizzie18.com for the latest version)

The on/off control for the laser light is found in the light bulb window.

Step 1. Click on the Light bulb and the light control window will open up.

Figure 6 shows the main screen with lights off
Figure 7 shows the light control window with lights off

Step 2. Tap the icon for the laser light.

Figure 8 shows light control window with the laser light turned on.
Figure 9 shows the main window open with the laser light on.

Step 3. Adjust the laser to point at the location you are working with and follow the design.

When done with the laser light open the light control window by tapping on the laser light icon and tap the laser light icon to turn off the laser.
4. Powering the Laser light on the ESP SE

For the ESP SE machines you will need to do the following.

Step 1. Press the menu button until Laser light is showing in the display.

Step 2. Press the + to turn on the laser light
See figure 10 for light on

Step 3. Press the - to turn off the laser light
See figure 11 for light off