Installation notes for
[tech] versions of Lane Gate product

The DRS Lane Gate products with the [tech] option are designed for hobby users with the proper tools and skill to do their own soldering.

[tech] version pros:

The immediate and obvious benefit is that the [tech] level products cost less than [easy] versions. Doing your own soldering also allow you to make a cleaner installation because you can trim each wire to the ideal length and reduces the number of clips and connectors that have to fit inside the track sections.

[tech] version cons:

There is a little more work involved in the installation process: [tech] versions are not plug-n-play. Read the rest of this document and if you decide that [tech] is more work than you want to tackle, [easy] is for you.

Tools required for any version:

- #0 Philips screwdriver
- T9 Torx driver for security screw (or small flat blade)
- Wire cutter/stripper
- Drill and drill bit (3mm or 7/64”)
- Tape or low-temp hot glue gun

Additional tools required for [tech] version:

- a decent soldering iron
- electronics grade solder
- clamp, spring clothespin, helping-hands or other means to hold materials while soldering

Where [tech] deviates from the normal/[easy] installation instructions

When you reach the step for cutting and stripping the IR sensor wire(s), stop. For [tech] there are no leads on the Lane Gate chip. You'll cut the IR sensor wire and solder the cut ends directly to the pads on the Lane Gate chip.

Before you cut the wire to the sensor(s), determine a cutting point that will allow each end to reach the correct pad. When you strip the ends, remove only about 1/8" of insulation and then tin the ends with solder.

It is not necessary to insert the wires into the holes on the Lane Gate chip. Just set the end flat on the pad and solder in place. Where pad is close to other exposed points on the circuit board, avoid bridging/shorting the adjacent point. Verify that you can still see the white line if there is any doubt about clearance.

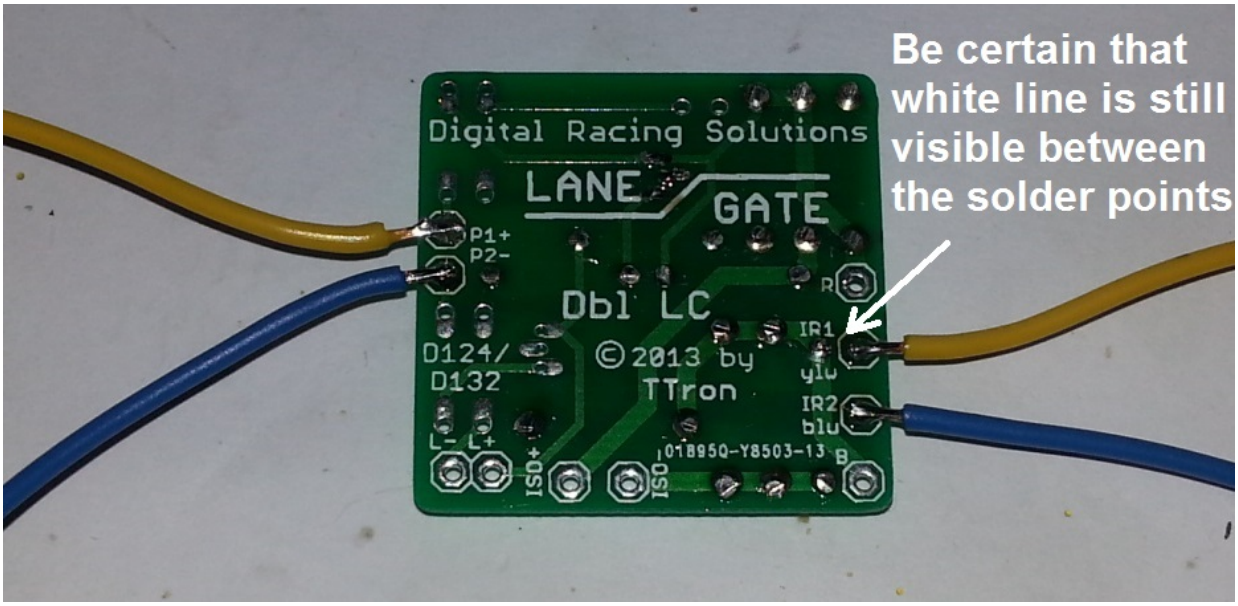

Image shows how IR sensor wires should be soldered. Other wires/components not shown.

After you've finished the IR sensor wires, let's take care of the Lane Gate power leads (red and black wires). These will be soldered onto the same clips that power the lane changer board. Remove the clips from the rails before soldering! This is a great place to use a helping-hands tool or other clamp to hold the clip while soldering. Piggy-back the Lane Gate red wire with the factory red wire, then do the same with the black wires.

The Lane Gate detection lead(s) are white (right) or green (left) or both (double). Take a short red or black jumper that you removed in step 2 or 3 and remove the clips from it. Solder a clip to the end of each detection lead.

All other steps remain essentially the same.