

Carman Design Review 1/28/21
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Purpose: To review the GLV, TSI, and Logic PCB's. This is the boards' first design review.

Diagrams: There is a pdf with the 3 boards in it under the Carman Design Review 1/28/21

Topics Discussed:

- **All boards:**
 - Ground plane on bottoms?
 - Text on boards so know what each connectors do and understand what things are.
 - Don't put via on components pads

GLV PCB

- Edge cuts not closed
- Label GLV connectors
- Evenly space connectors so it doesn't appear they are weird for no reason
- Board is left side favored
- Fix R1 on GLV to U1. Run wires straight to R1, otherwise added resistance in series will screw up sensing
- 24v trace and GLV return both going ccw, 1 should go cw other ccw or put 1 on top and 1 on bottom, or put ground plane in. So magnetic fields oppose one another
- Many unnecessary vias
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Logic PCB

- Move bypass caps so they are so are closer to their respective components (can put on other side of the board if need be): C4,6,7,8,9,10.
- J5.1 and/or J5.2 should be offset a bit so that they can't be interchanged.
- Fix Logic board not being a rectangle
- Missing mounting holes
- Maybe get rid of green traces on logic
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TSI PCB

- Look up rule about distance from GLV section and TSV section through-board and through air and adjust the board cuts accordingly.
- Put distances of the GLV/TSV gaps on the PCB so there is a way to verify how far apart they are.
- Move traces a bit further from the edge so they aren't accidentally cut into
- Many unnecessary vias, can be solved with ground pour.
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Catman

- Should show: wire length, color, connector at both ends, wire gauge.
- Make Catman wire # (ex. W1) to bens cable wire # (ex. W3).
- Could we make cable type in Catman so any 4 signal, 4 pin cable with same gauge/length can be interchanged?
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Action Items:

- 1. Update Catman**
- 2. Update PCBs**