

DSG-RICH R&D Meeting

Date: November 15, 2021

Time: 11:00 AM – 12:00 PM

Attendees: Mary Ann Antonioli, Aaron Brown, Peter Bonneau, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran

1. Backplane PCBs

Mindy Leffel, Tyler Lemon, and Marc McMullen

1. All parts for PCB received
2. Marc McMullen will compile parts kits to give to Mindy Leffel so she can populate PCBs

2. RMC

Marc McMullen

1. PCA9600 buffer drivers received and shipped to Advanced Circuits for PCB population
2. Advanced Circuits estimates that we will receive populated RMCs around December 7, 2021

3. Safety documentation for RICH-II assembly

Marc McMullen

1. Lift plan submitted to subject-matter-expert, Mark Loewus for reevaluation
 - Previous lift plan was created by someone who has since left JLab
2. Once lift plan is received, Marc McMullen will submit all documents for approval

4. Patch panel fabrication and quotes

Marc McMullen

1. Three quotes requested; two replies received, one quote pending
 - Modern Machine & Tool: rejected request; won't take on project
 - JLab machine shop: quote received
 - G&R: quote pending; requested additional information
2. G&R requested additional information for quote:
 - Aluminum grade: Al6082 or equivalent grade
 - G&R accepts grade specification
 - Machining tolerances: 0.1-mm tolerances
 - G&R will only quote to 0.125" (3.175 mm) tolerances for panel size and dimensions and 0.032" (0.8 mm) tolerances for panel cutouts and holes
 - G&R did state that end product will have tighter tolerances than above, but they cannot give a quote with 0.1-mm tolerances
3. Marc McMullen and Tyler Lemon met with INFN (Marco Mirazita, Sandro Tomassini, and Dario Orecchini) on November 15, 2021 to discuss panels and tolerances
 - Tolerances that G&R will quote are okay
 - Main concern is that PCB mounting holes will not match dimensions on PCB
 - A mitigation step could be to have mounting holes on panel made larger diameter thru-holes to give more allowances for machining inaccuracies
 - Marco Mirazita will get patch panel PCB dimensions from Fast Electronics Group to verify dimensions on patch panel
 - INFN needs G&R's quote in by November 19, 2021
 - After receiving quote, INFN will decide between G&R and JLab machine shop

5. EEL 124 cleanroom floor repairs

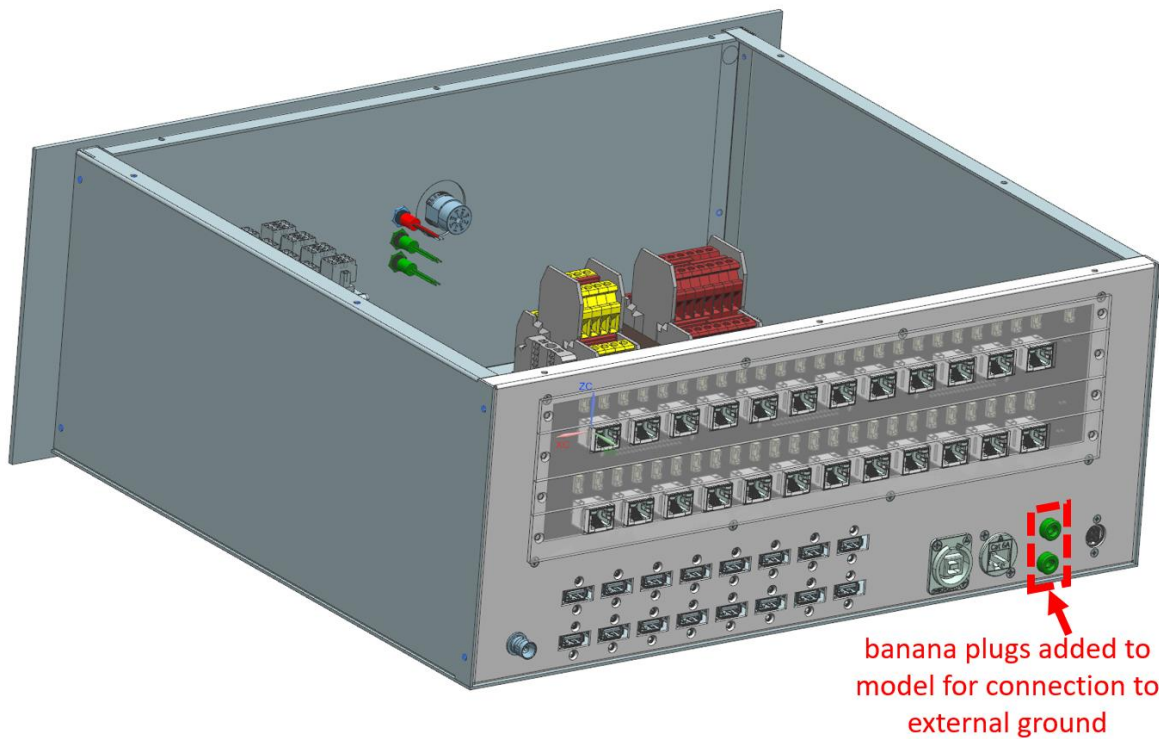
Tyler Lemon and Marc McMullen

1. Cleanroom floor repairs are complete
2. Marc McMullen and Tyler Lemon will prepare room for cleaning by JLab Facilities
3. Starting Wednesday, November 17, 2021, JLab Facilities will clean all walls and surfaces in cleanroom with appropriate equipment
4. After room is cleaned, filtration system's filters will be replaced and system turned on
5. After filter system is turned back on, it will take two to three days for particulate count in room to be reduced to within cleanroom specification

6. Hardware interlock chassis

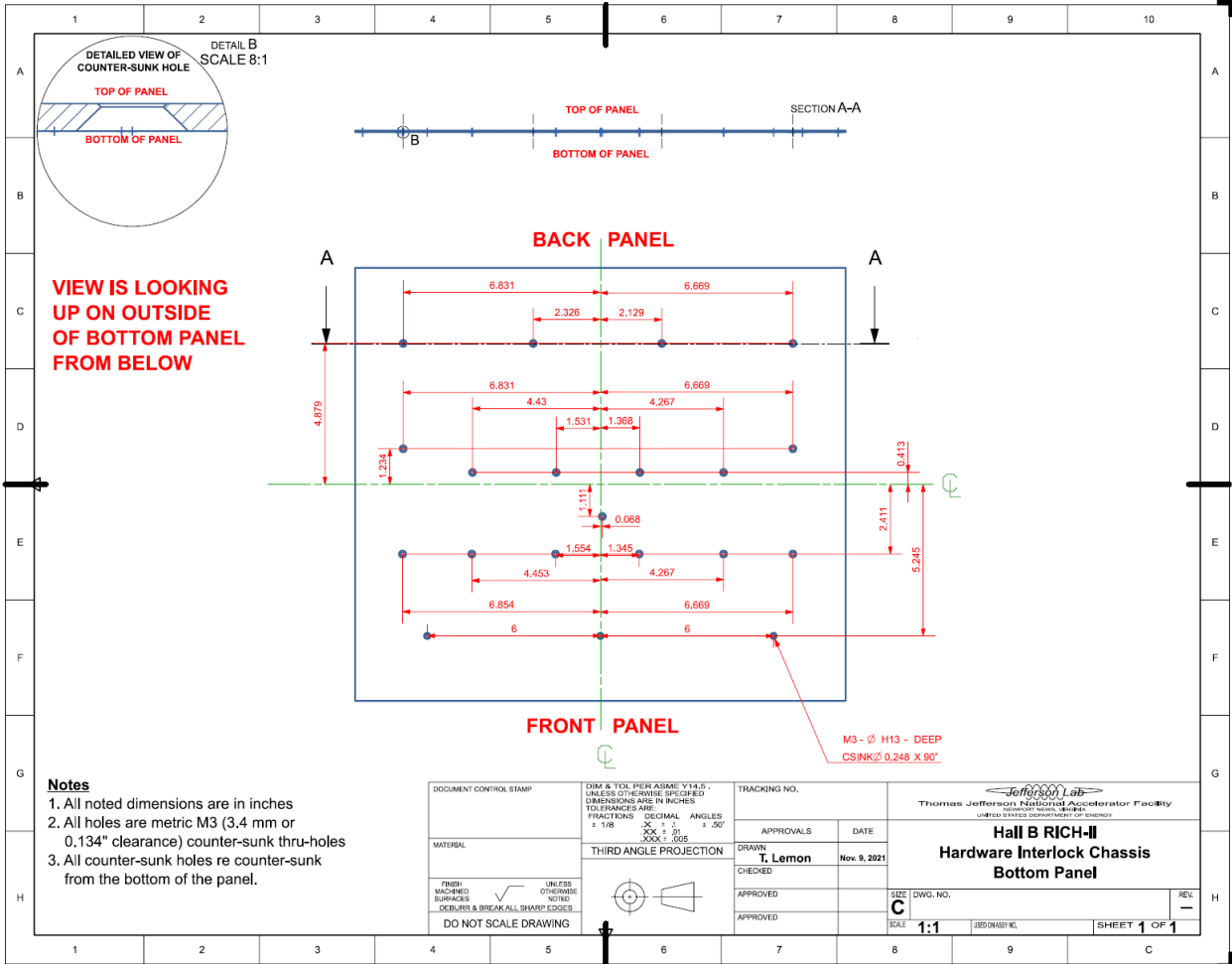
Tyler Lemon

1. Banana plugs added to rear panel of chassis for connecting backplane PCB RJ45 port shields to an external ground



Chassis design with new banana plugs noted.

2. First iteration of fabrication drawings completed
 - Linear dimensions referenced to centerline of panels



Fabrication drawing for bottom panel of chassis