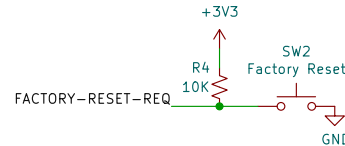
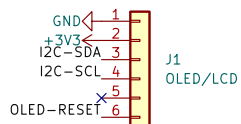
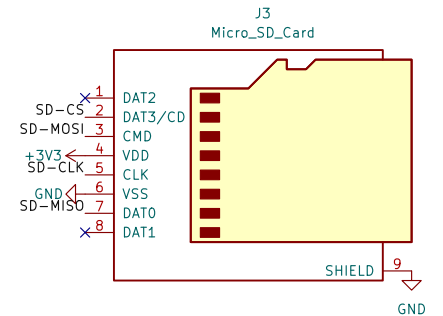
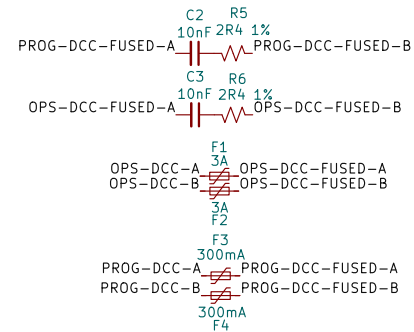
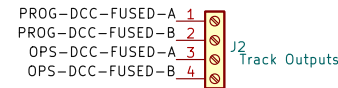


The bootloader button can be pressed on startup to have the node go into the OpenLCB Bootloader.

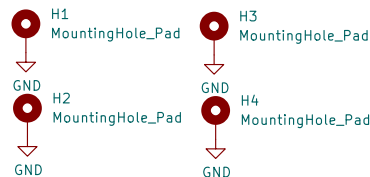


The Factory Reset button be pressed on startup to have the node reset all persistent configuration data.



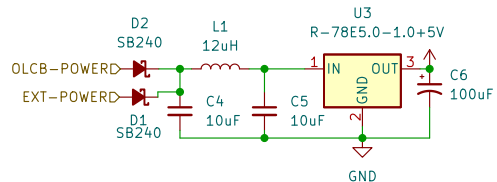
The Status Display connection is for adding an OLED or LCD display to the Command Station. The display shows real-time statistics and status information about the Command Station.

Note: OLED-RESET will be pulsed LOW for approximately 50ms during startup to allow a connected OLED display to reset.

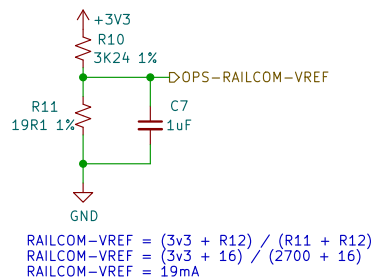


Sheet: /			
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Title: ESP32 Command Station with OpenLCB (LCC) and RailCom			
Size: A4		Date: 2022-10-09	
KiCad E.D.A. kicad 6.0.4		Rev: 2.0	
		Id: 1/7	

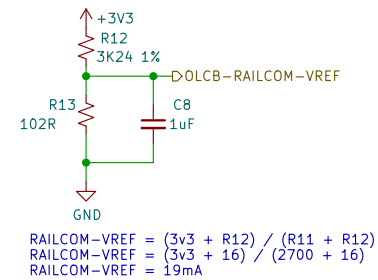
5V 1A voltage regulator



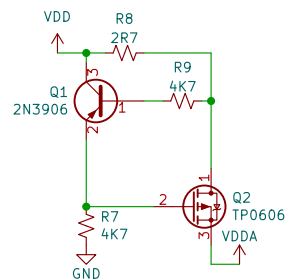
OPS RailCom Reference Voltage



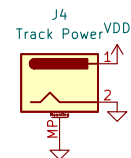
OpenLCB RailCom Reference Voltage



PROG/LCC-DCC Supply



Note: This limits the current to ~250mA.
To increase the current 2R7 can be adjusted.
Or a jumper can be added between the 2N3906
pin 3 to TP0606 pin 3 and all five components
can be omitted to disable current limiting.



Sheet: /Power/
File: power.kicad_sch

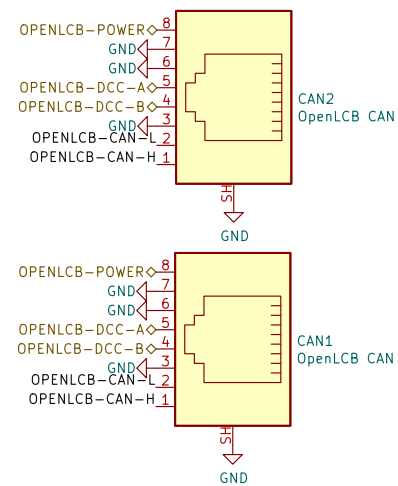
Title: ESP32 Command Station with OpenLCB (LCC) and RailCom

Size: A4 Date: 2022-10-09

KiCad E.D.A. kicad 6.0.4

Rev: 2.0

Id: 2/7



File: openlcb.kicad_sch

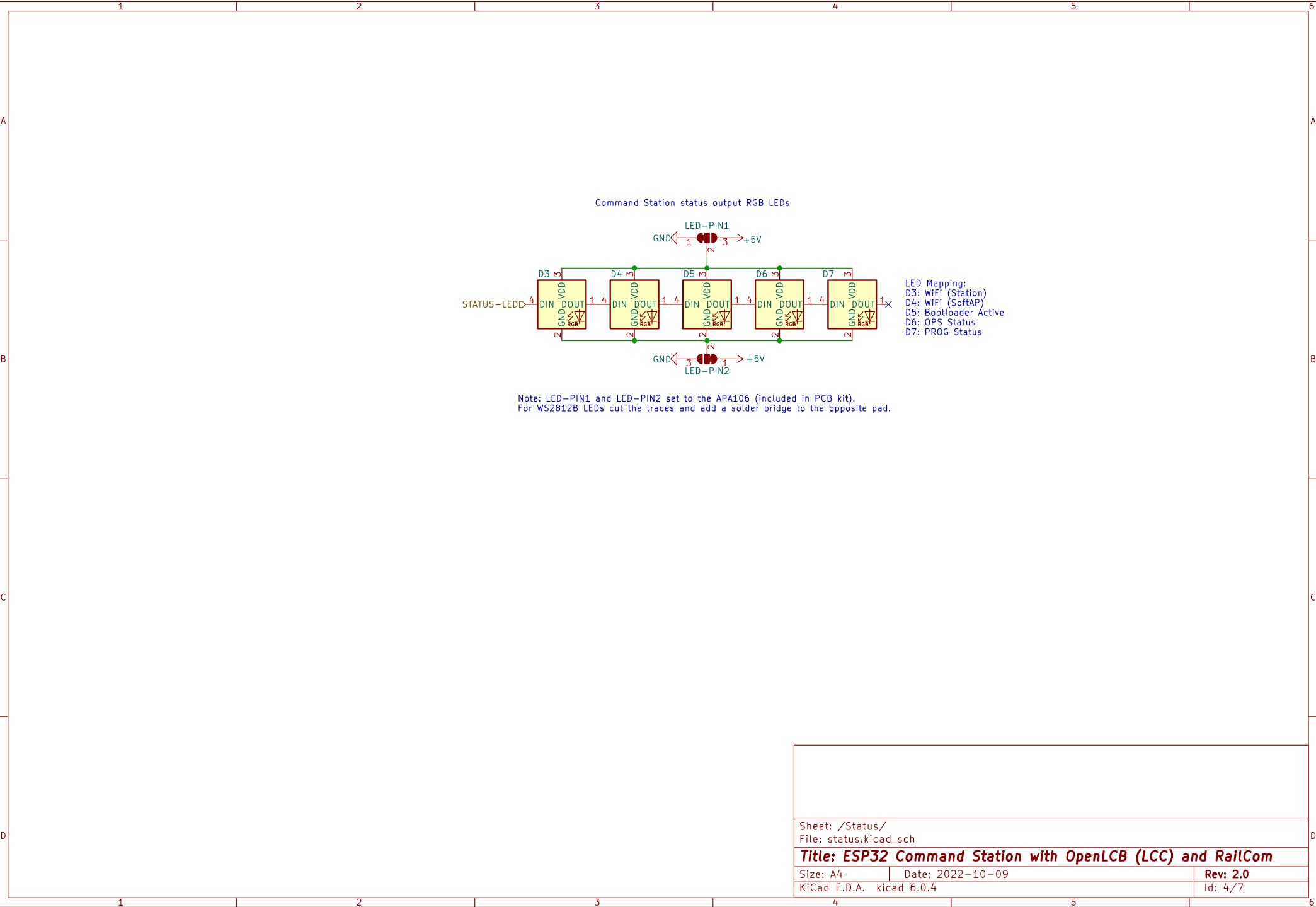
Title: ESP32 Command Station with OpenLCB (LCC) and RailCom

Size: A4	Date: 2022-10-09
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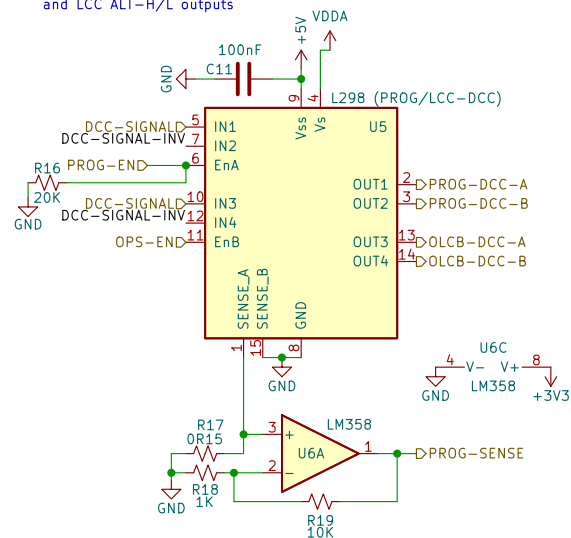
Rev: 2.0

Size: A4	Date: 2
KiCad E.D.A.	kicad 6.0.4

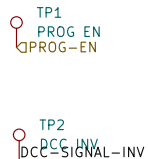
Id: 3/7



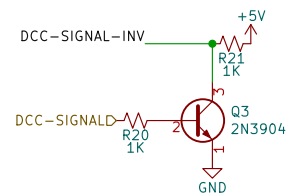
DCC signal generator for PROG track
and LCC ALT-H/L outputs



Note: LOW side current sense is being used for the PROG track output.
OLCB-DCC output is not monitored. PROG-EN has a PD to force the output
to OFF when not actively used.



OPS track signal split for L298 h-bridge



Sheet: /PROG and OpenLCB DCC/
File: prog-olcb-dcc.kicad_sch

Title: ESP32 Command Station with OpenLCB (LCC) and RailCom

Size: A4 Date: 2022-10-09

Rev: 2.0

KiCad E.D.A. kicad 6.0.4

Id: 5/7

