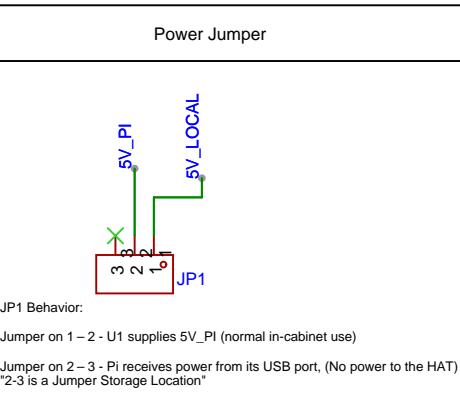
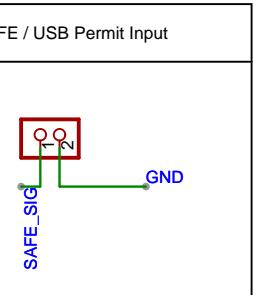
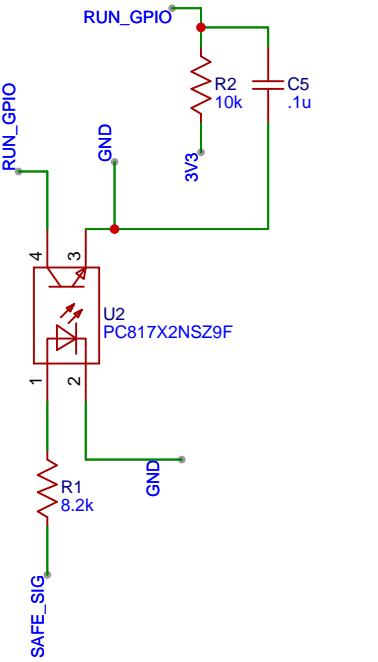


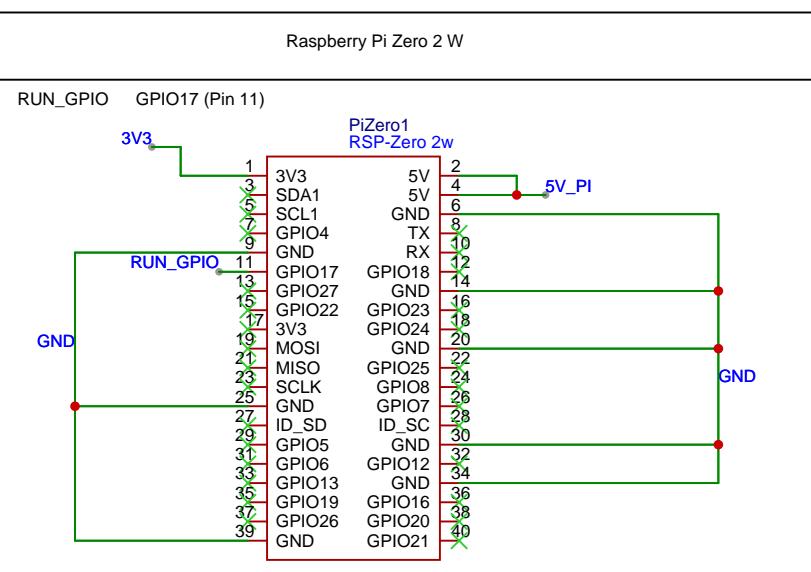
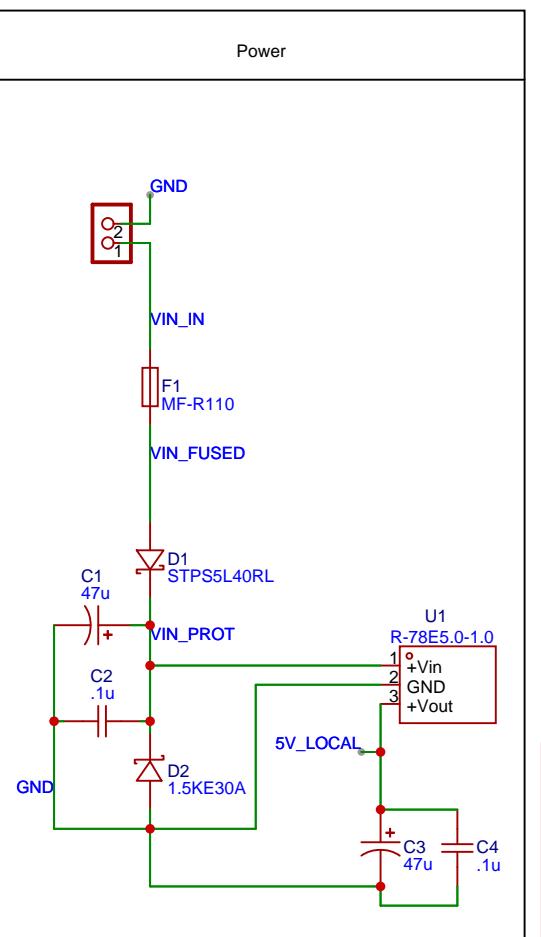
Condition	MASSO Output	Opto	RUN_GPIO	TURBO Behavior
Idle/Safe	ON	LED ON	LOW	UNLOCK
Program running	OFF	LED OFF	HIGH	LOCK
Power loss / Cut Wire	OFF (No Signal)	LED OFF	HIGH	LOCK

Run Signal Input



NET Notes:

- VIN\_IN – Input Power 9 – 30 V MAX (at J1 pin 1)
- VIN\_FUSED – After F1
- VIN\_PROT – After D1 (reverse-polarity protection) = main high-voltage bus
- 5V\_LOCAL – Output of onboard 5 V switching reg
- 5V\_PI – “System” 5 V rail
- 3V3 – Pi’s 3.3 V
- GND – Common ground
- SAFE\_SIG – MASSO SAFE/IDLE permit output (asserted only when USB ops are allowed)
- RUN\_GPIO – Pi GPIO for USB SAFE permit (active LOW) / run-lock input
- NOTE: RUN\_GPIO reads inverted SAFE (LOW = safe/unlocked).



Schematic	TURBO_HAT		Create at	2025-12-12
Board	TURBO Hat		Update at	2025-12-26
Drawn			Page	Turbo_HAT_SCH
Reviewed				
			Version	
			Size	
			Page 1 Total 1	
			V1.2.0 Rev. B	
				FabLab Racing