Meeting Notes — Justin Kwarteng — Feb 17, 2026

Field	Details
Team Member	Justin Kwarteng
Progress	**v0.6.01 Hardware Safety Mod:** Implemented the failsafe circuit modification from the Robustness Plan (Task 0). Changed Q1 base pull-up from 10kΩ to 3.3V → 100kΩ to 12V, ensuring the load stays OFF if the ESP32-C6 loses power. Also changed Q1 base series resistor from 1kΩ → 4.7kΩ to reduce unnecessary GPIO current. Verified on bench: disconnecting ESP 3.3V keeps MOSFET gate at ~0V (load OFF). Normal PWM operation confirmed unchanged. Updated circuit schematic in draw.io with new component values. Old hand-drawn schematic preserved as `Old-circuit-diagram.jpeg` for reference.
What's for tomorrow?	Begin firmware safety tasks from the Robustness Plan — ESP32 communications watchdog (Task 1) and gateway persistence (Task 2).
Hours worked since last meeting	3
Hurdles	Had to verify safe current path from 12V through 100kΩ + 4.7kΩ into ESP GPIO protection diodes when ESP is unpowered. Confirmed 0.11mA is well within ESP32 protection diode limits (<1mA). Removed old 10kΩ pull-up path to 3.3V — critical not to leave both pull-ups connected.
Notes	v0.6.01 hardware mod complete. Circuit diagrams updated in `Documentation/v0.6.01-robustness/`. Changelog added. This was a hardware-only change — no firmware or software modifications. The inverting driver now fails safe in all ESP power-loss scenarios.