

The Ember Core – Phase 2: Solar Charging Station Launch Blueprint

Powering the foundation of your PSN
Cell

Wiring Gauge Recommendations

- • Panel to Charge Controller: 10 AWG (MC4 to terminal)
- • Charge Controller to Battery: 8–10 AWG (fused)
- • Battery to Load (fused outputs): 12–14 AWG
- • USB/DC Distribution Wiring: 14 AWG recommended
- Notes:
 - - Use marine-grade tinned copper wire when possible
 - - Keep wire runs short and well-secured
 - - Use appropriate ring/fork terminals and heat shrink

Enclosure & Mounting Concepts

- Enclosure:
 - • Use a weatherproof junction box or marine battery box
 - • Mount charge controller, fuse block, and USB outlet inside
 - • Add rubber grommets for cable ingress
 - • Optional clear cover for monitoring status LEDs
- Mounting:
 - • Panel stand from PVC or treated wood at $\sim 33^\circ$ tilt
 - • Enclosure mounted on a post, fence, or plywood backboard
 - • Battery stored below, secured, and shaded

