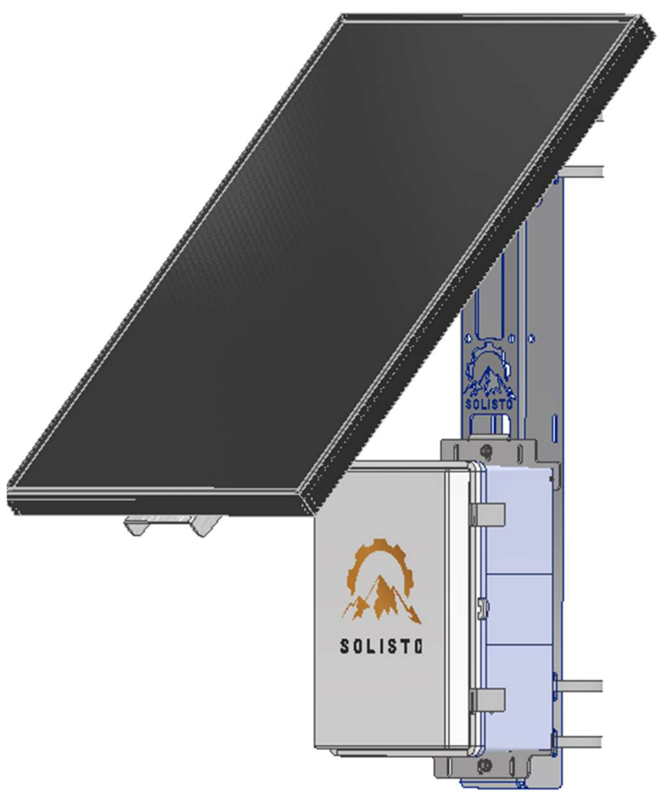
ALL IN ONE (AIO)

POWER SYSTEM MANUAL

310323 - REVISION 2

SEPTEMBER 2024



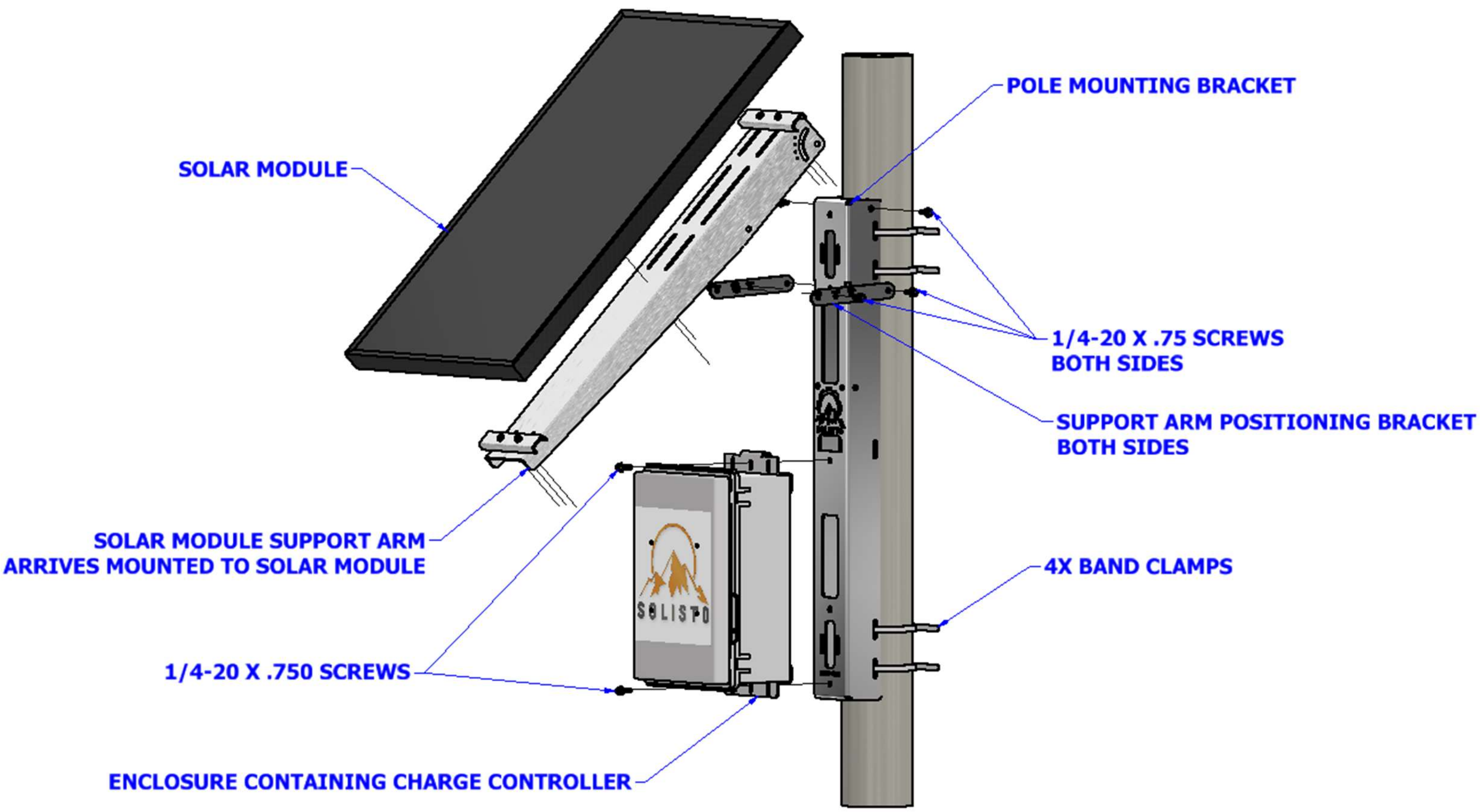
Contents

TOOLS REQUIRED

- Drill
- Drill extension (included)
- 7/16 socket (included)

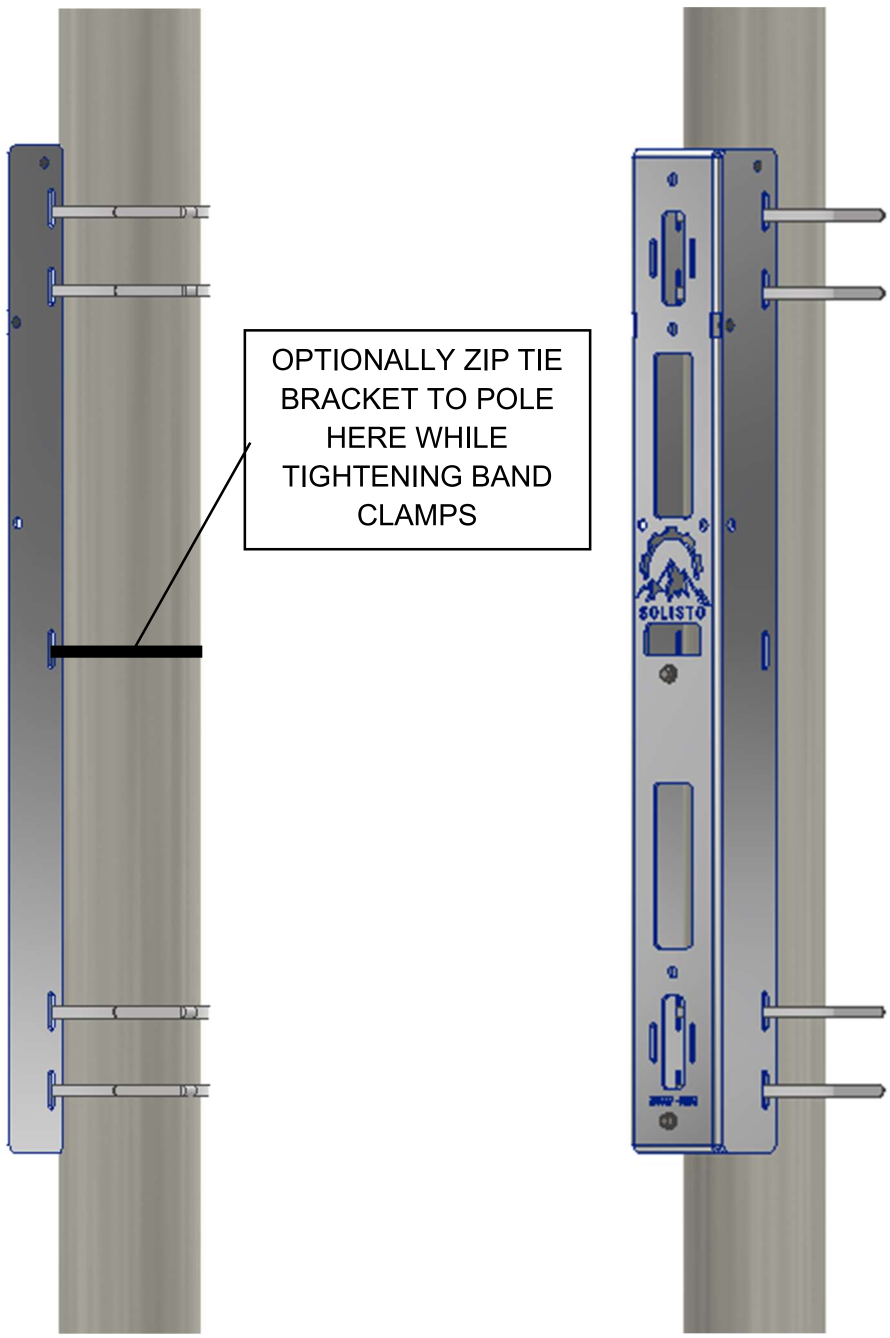
STEP 1: UNBOXING

- Remove and organize all parts
- Confirm mount arm is still securely fastened to the solar panel



STEP 2: ATTACH MOUNT TO POLE

- Put band clamps through slots in pole mount on the ground then attach to pole
- OPTIONALLY put zip tie through middle slot in bracket to hold in place while tightening bands
- Tighten bands with 7/16in socket

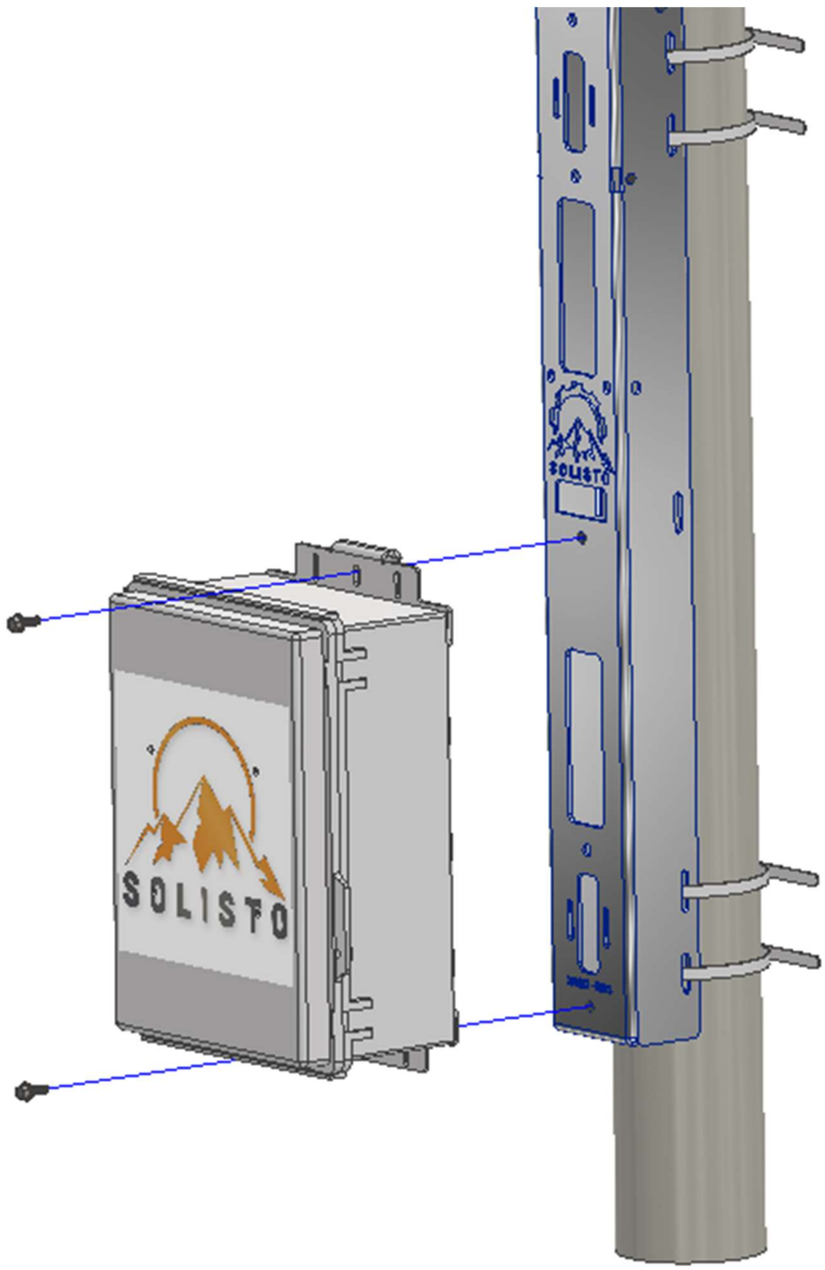


Profile View

Isometric View

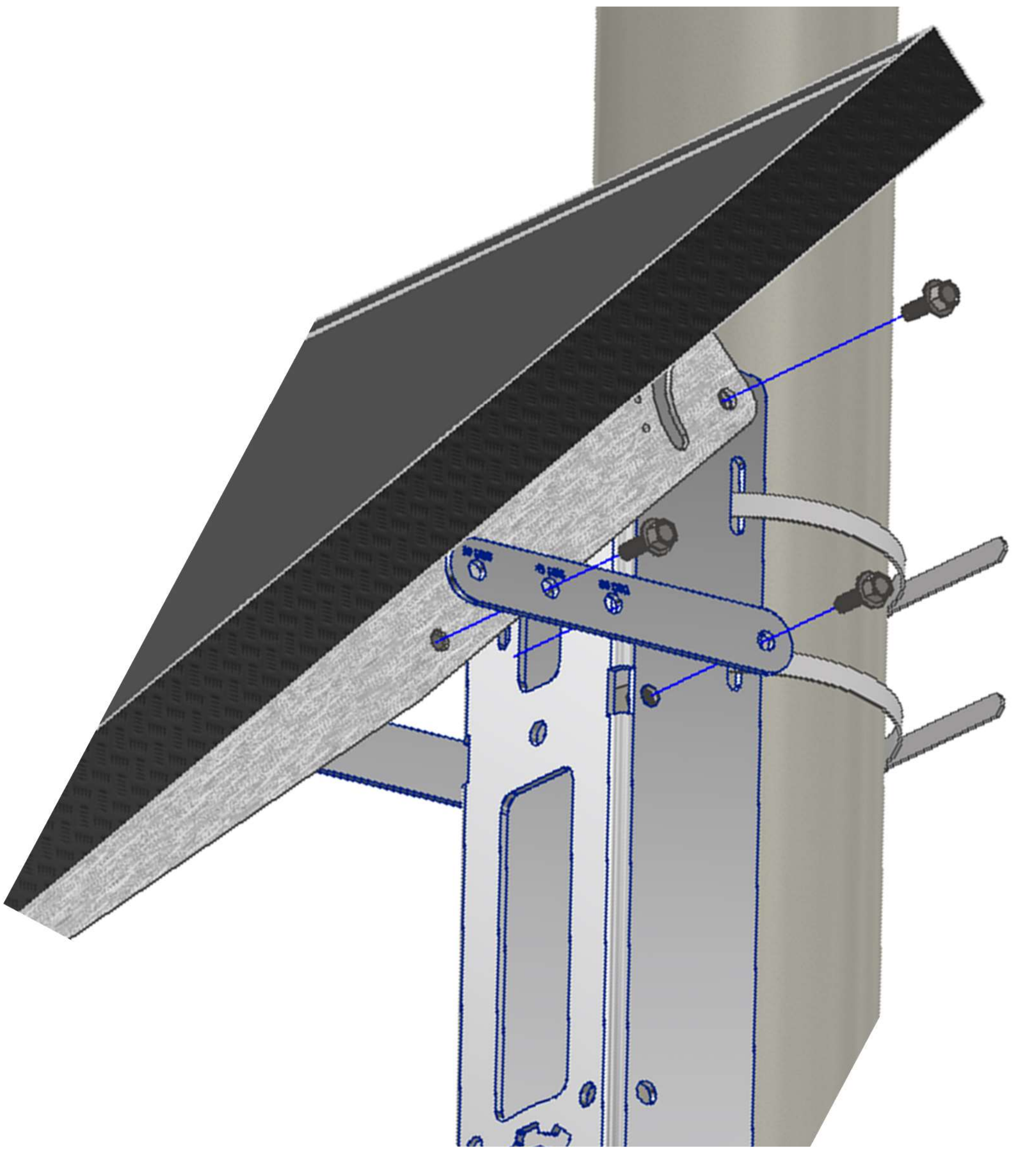
STEP 4: ATTACH ENCLOSURE TO BRACKET

- Hang enclosure on bracket and secure top and bottom with 1/4in screw
- Use 7/16in socket driver to tighten screws



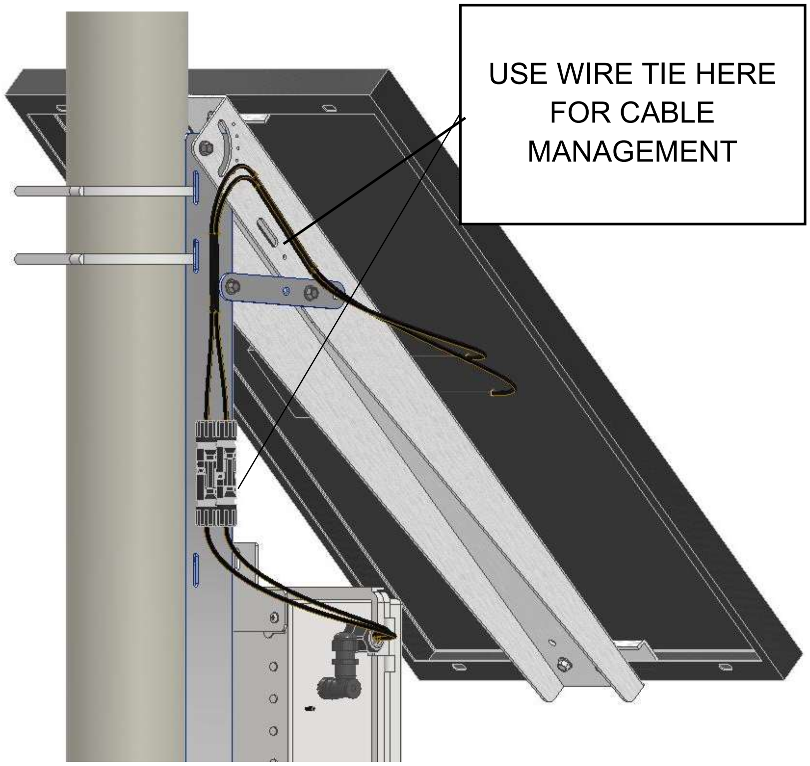
STEP 5: ATTACH SOLAR ARM TO BRACKET

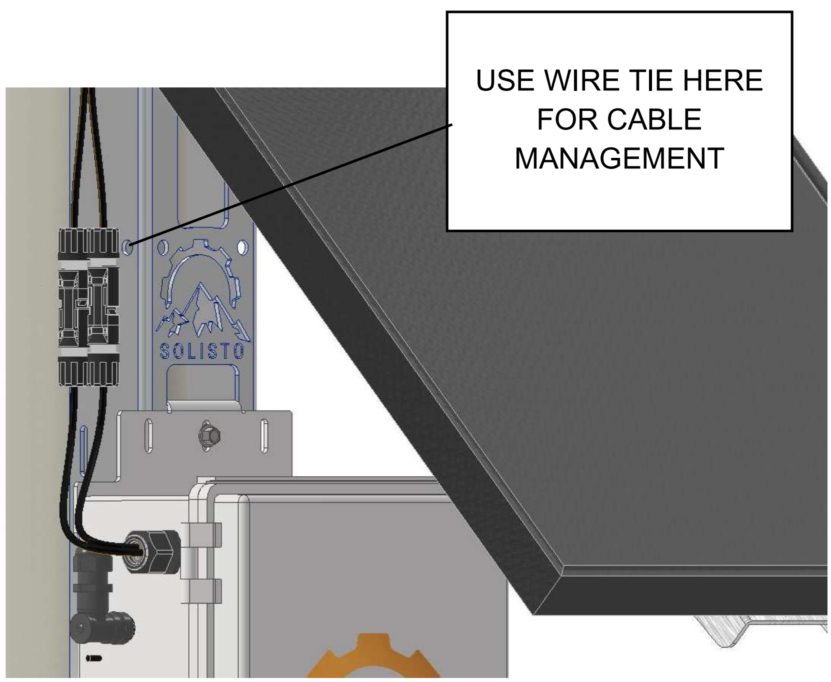
- Mount arm to bracket using 1/4in hardware
- Attach angle pivot bracket to lock solar panel angle
- Use 7/16in socket driver to tighten screws



STEP 6: CONNECT SOLAR CABLES

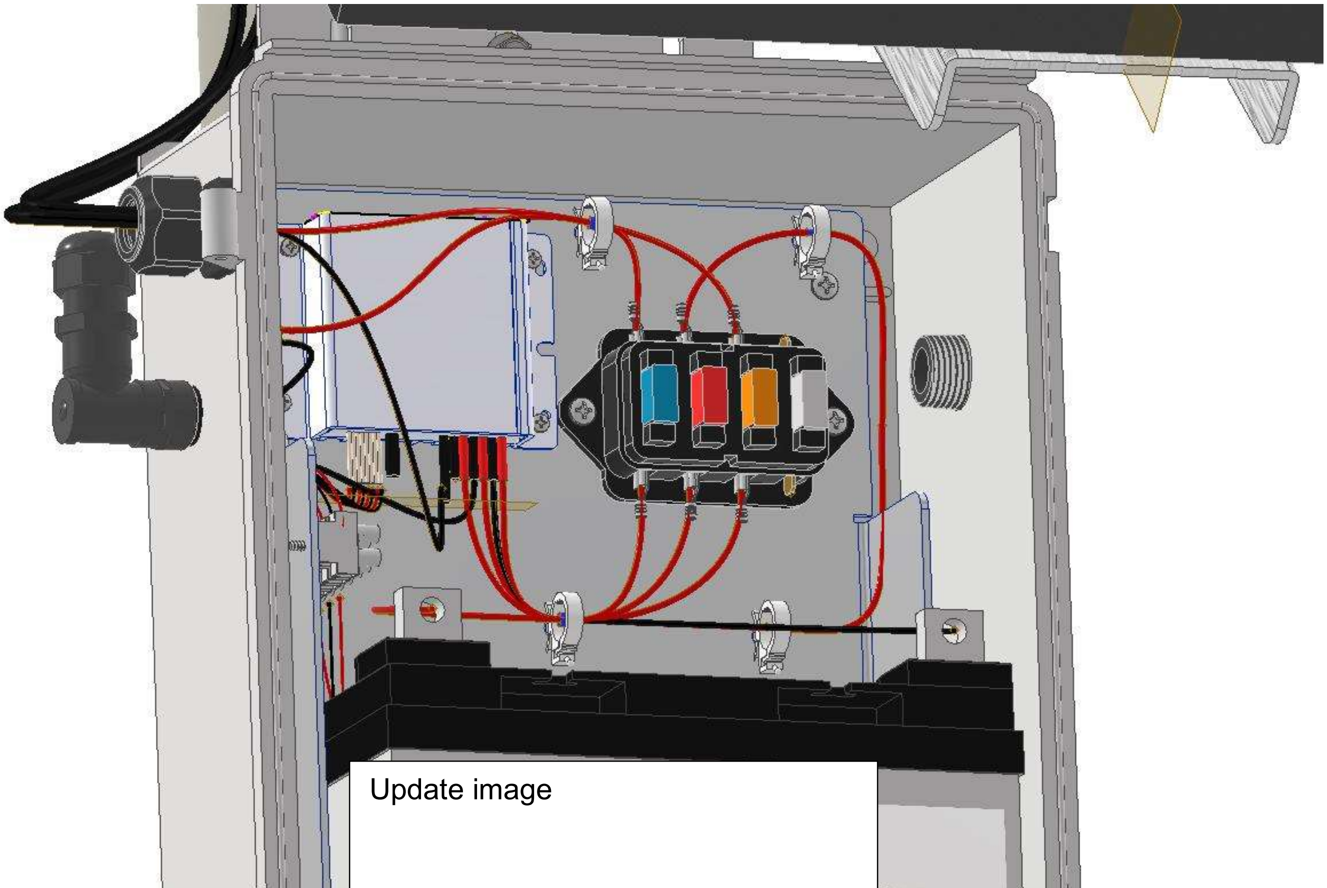
- The cables can only mate one way, no need to worry about reverse polarity
- Zip tie cables along the edge of the tilt arm





STEP 7: TURN ON POWER SYSTEM

- Open the door by releasing latches on the side
- Press the breaker switch with the "10" visible (make flipable switch?)



Update image

LED FLASH CODES

SYSTEM GOOD

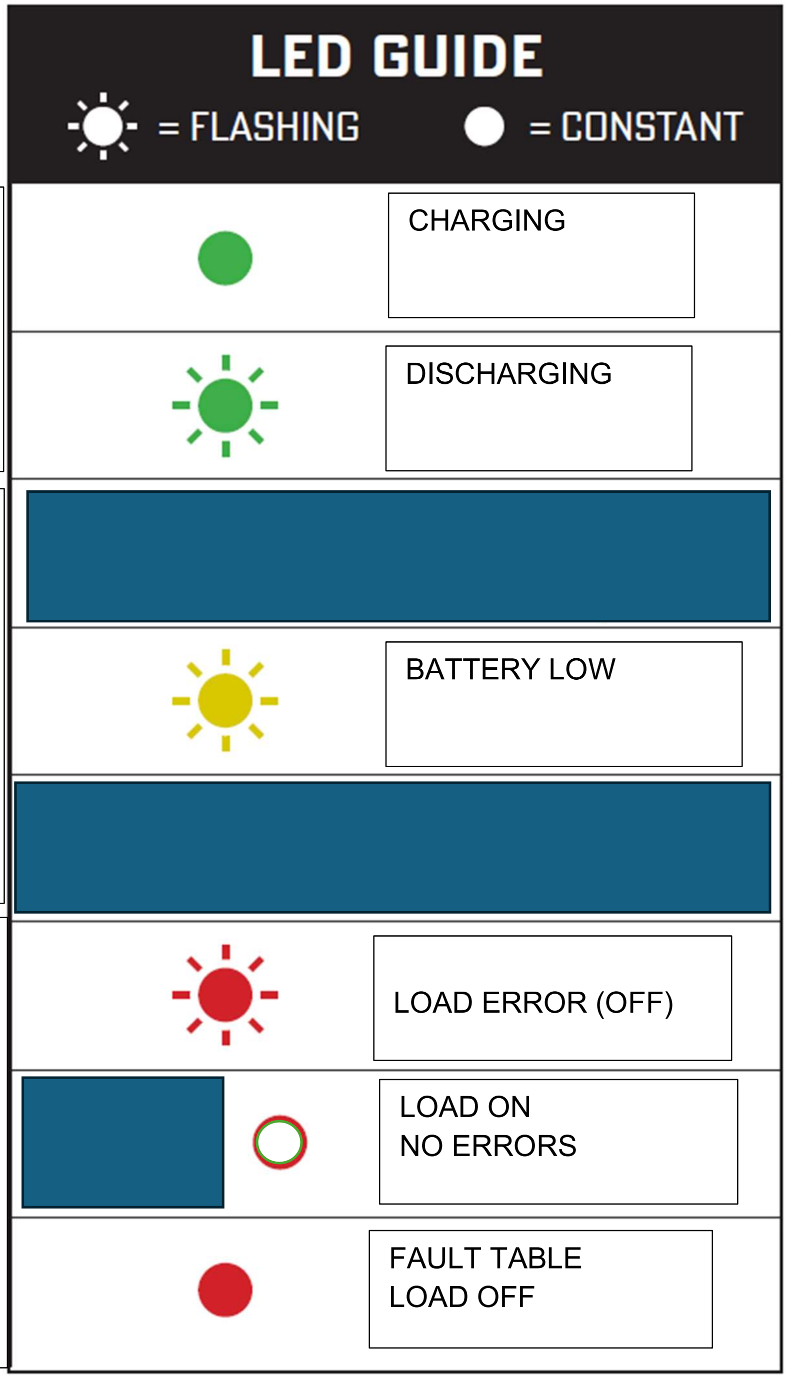
(DISCHARGING IS **ANY** EVEN SELF DISCHARGE)

SYSTEM OK

(LOW MEANS LESS THAN 12V)

SYSTEM BAD

(IF ON OR BLINKING, CHECK LOAD)



YEARLY MAINTENANCE

1. Wash surface of module
2. Check inside junction box for leaks and corrosion
3. Check MC4 connections are tight
4. Check fuses are not blown
5. Check bolted connections and band clamps are tight
6. Replace AGM battery about every 3-5 years
7. Replace zip ties or other wire management as necessary

A copy of this list can be found on the inside of the enclosure door.

TROUBLESHOOTING

ISSUE	SUGGESTED ACTION
Solid red LED	1. Open enclosure and count number of flashes. 1 Flash = Battery voltage too high 2 Flashes = Load short circuit or overcurrent 3 Flashes = Over temperature
Load not turning on	1. Ensure load fuse is seated properly and not blown. 2. Ensure continuity between load block and exterior load connector. 3. Measure voltage out of connector. This should be between 11 and 13V. Load may not accept values outside this range. 4. Ensure mating load connectors fit snugly and can be tightened without excessive force.
Battery not charging or no LED lights	1. Ensure battery voltage is above 10.5V for controller to power on and charge battery. 2. Ensure panel is not shading at any point during the day, especially winter months during low sun angle. 3. Ensure battery and solar fuse are seated properly and not blown. 4. Ensure continuity between solar input and exterior MC4 connector. 5. Check when the battery was last replaced. Replace every 3-5 years. 6. Check for corrosion on battery terminals and clean as necessary.