

Additional Solar Panel

Installation Manual



24/7 Support

Your purchase of this TrueLook system includes customer and technical support. If you have any questions regarding the equipment or online platform, please don't hesitate to contact us.

Phone 833.878.3566

Email support@truelook.com

Office 575 4th Street E, Winston Salem, NC 27101

Online Resources

Use this QR code or visit truelook.com/install to access:

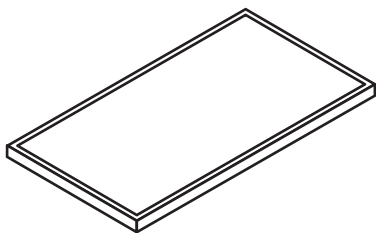
- 1 An admin guide that walks through creating time-lapses and other administrative settings.
- 2 Video demonstrations of installation procedures.
- 3 A digital PDF of this install guide.
- 4 Download links for the TrueLook mobile app.
- 5 Other helpful resources.



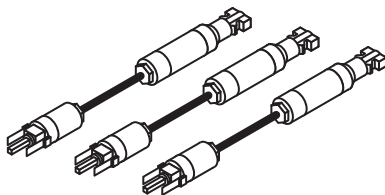
For Terms & Conditions, as well as Warranty information, visit truelook.com/terms-conditions.

Hardware Packing List

Solar Panel

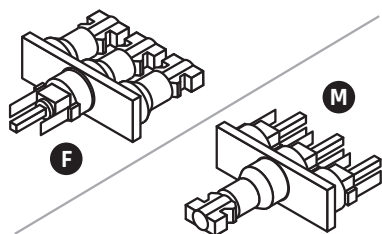


Positive Fuse Connectors



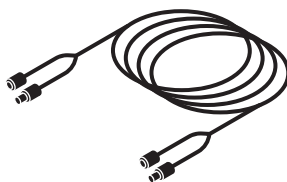
3-to-1 Connectors

Only supplied for solar models that do not already utilize this connector type.



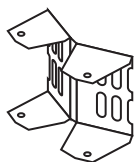
20' Panels to Battery Enclosure Cable

Only supplied for certain solar models.



Hardware Packing List

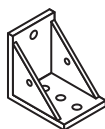
Mounting Hardware



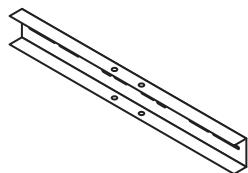
Mount
Brackets (2x)



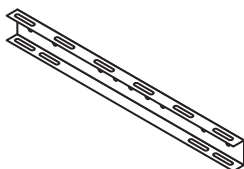
Steel
Straps (4x)



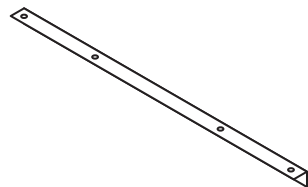
L Brackets (4x)



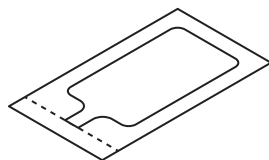
Saddle Brackets (2x)



Side Rails (2x)



Tilt Legs (2x)



Anti-Seize Packet (1x)

Assorted
Hardware:



5/16" bolts



5/16" nuts

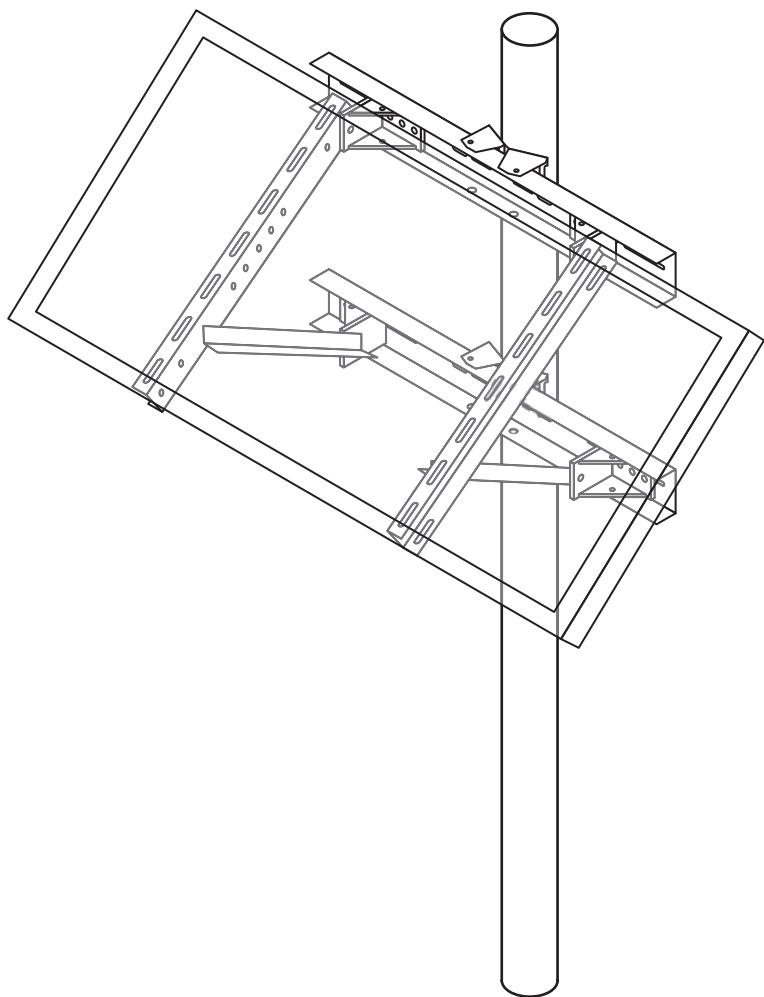


1/4" bolts



1/4" nuts

Assembled Unit



Preparing for Installation

Solar Panel Positioning



FAILURE TO OBSERVE ALL FOLLOWING REQUIREMENTS MAY RESULT IN SYSTEM DOWNTIME. UNITS SELF-RECOVER AUTOMATICALLY ONCE PANEL RECEIVES SUFFICIENT SUNLIGHT.

STEP 01

Ensure panel will face **due south**.

The chosen mounting location should allow the panel to face the equator (**directly south**) in order to capture adequate sunlight and properly charge.

STEP 02

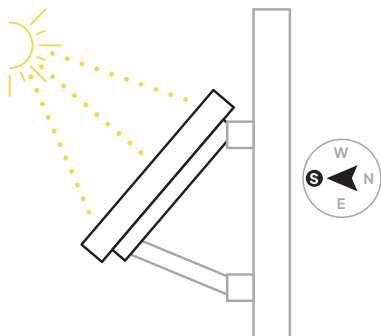
Determine your panel's angle.

Refer to the chart on the following page to find the proper angle for your solar panel based on your state.

STEP 03

Ensure panel remains **unobstructed**.

The panel must receive direct sunlight throughout the day. Do not let trees, equipment, structures, or anything else block the sun.



Panel Angles by State

Alabama	45°	Montana	70°
Alaska	80°	Nebraska	65°
Arizona	45°	Nevada	65°
Arkansas	60°	New Hampshire	65°
California	45°	New Jersey	65°
Colorado	55°	New Mexico	45°
Connecticut	60°	New York	65°
Delaware	65°	North Carolina	60°
District of Col.	60°	North Dakota	70°
Florida	45°	Ohio	60°
Georgia	55°	Oklahoma	50°
Hawaii	40°	Oregon	65°
Idaho	65°	Pennsylvania	65°
Illinois	65°	Rhode Island	65°
Indiana	65°	South Carolina	55°
Iowa	65°	South Dakota	65°
Kansas	65°	Tennessee	60°
Kentucky	60°	Texas	45°
Louisiana	45°	Utah	65°
Maine	65°	Vermont	65°
Maryland	60°	Virginia	60°
Massachusetts	65°	Washington	65°
Michigan	65°	West Virginia	60°
Minnesota	65°	Wisconsin	65°
Mississippi	45°	Wyoming	65°
Missouri	60°		

Determine Mounting Hardware

POLE MOUNTING

Your panel mounting kit includes steel straps for pole mounting. For jobsites that experience extreme wind conditions, we suggest using one of the following hardware options in their place:

- ✓ U bolts
- ✓ Lag bolts
- ✓ Through bolts

When using any of these alternatives, discard the mount brackets and place chosen bolts directly into the saddle brackets.

WALL MOUNTING

Your panel mounting kit **does not include** hardware for wall mounting. Choose appropriate mounting hardware for your surface.

Mounting Hardware

Pole Mounting

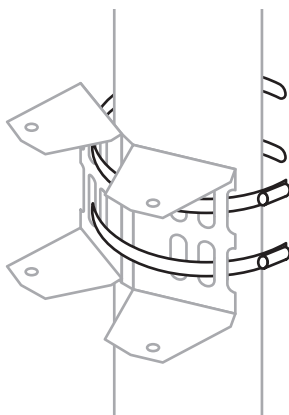


WEAR PROTECTIVE WORK GLOVES THROUGHOUT INSTALLATION PROCESS. THE SOLAR PANEL AND OTHER HARDWARE PIECES HAVE SHARP EDGES.

STEP 01

Secure one mount bracket to pole at maximum desired height using two steel straps.

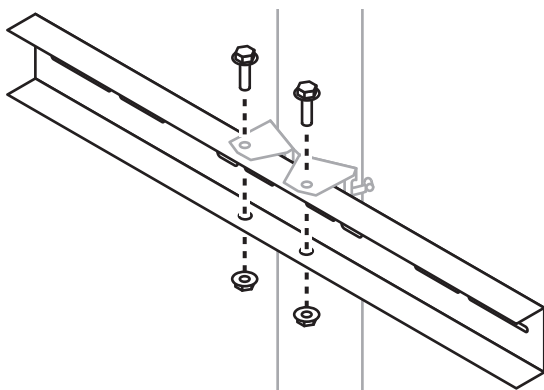
Tighten each strap around pole using a drill with a 5/16" hex head driver bit (not included) and trim steel straps to desired length using tin snips (not included).



INSTALLATION

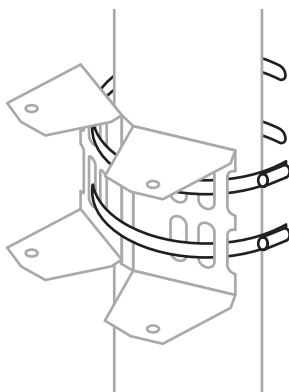
STEP 02

Secure one saddle bracket to mount bracket using 5/16" hardware.



STEP 03

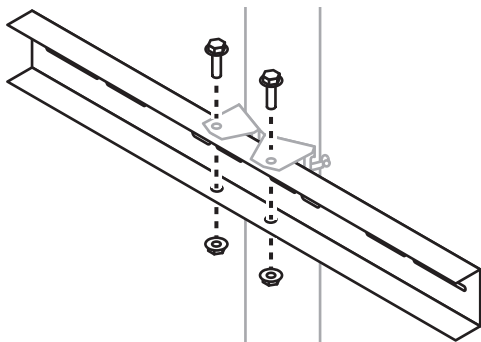
Secure lower mount bracket to pole using previous method. Do not fully tighten bracket to pole.



INSTALLATION

STEP 04

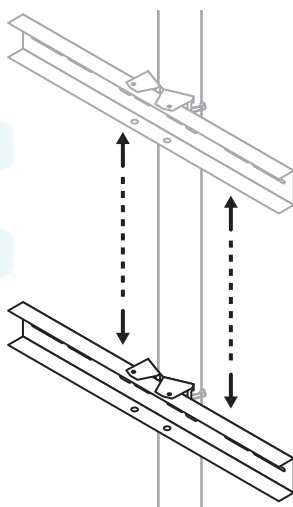
Secure lower saddle bracket to mount bracket using 5/16" hardware.



STEP 05

Adjust lower hardware so saddle brackets are necessary distance apart for needed angle degree (see chart), then fully tighten lower mount bracket to pole.

Angle	Single Panel Rail (28 in)
30°	9.5 in
45°	20 in
60°	27 in

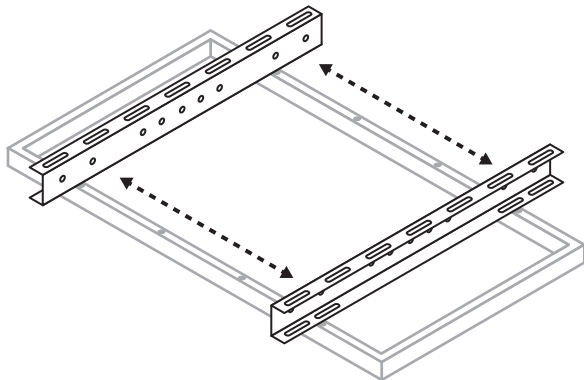


INSTALLATION

STEP 06

Lay side rails on solar panel holes to estimate upper L bracket spacing.

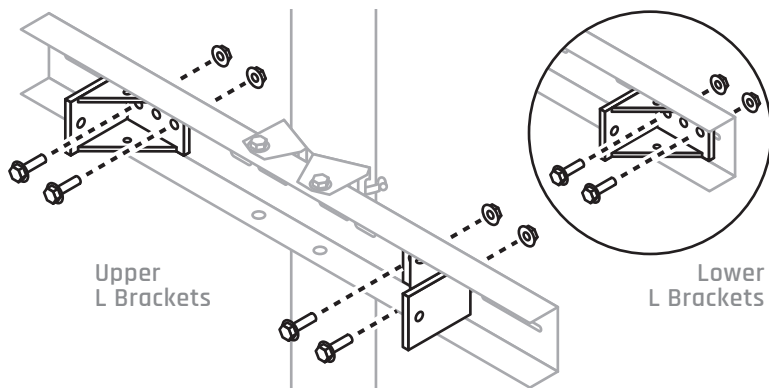
Measure between inside of rails for accuracy.



STEP 07

Attach L brackets to upper and lower saddle brackets using 5/16" hardware.

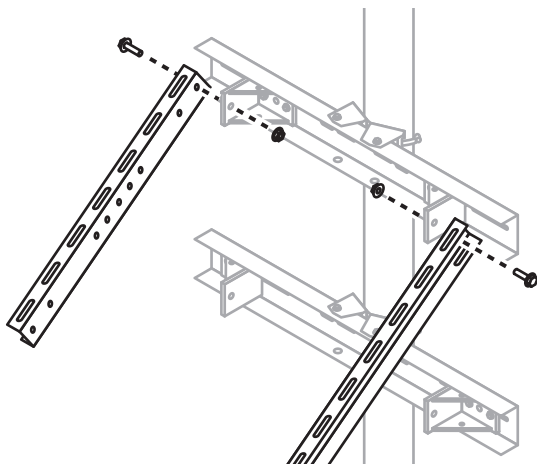
Lower L brackets face outward, and upper L brackets face inward.



INSTALLATION

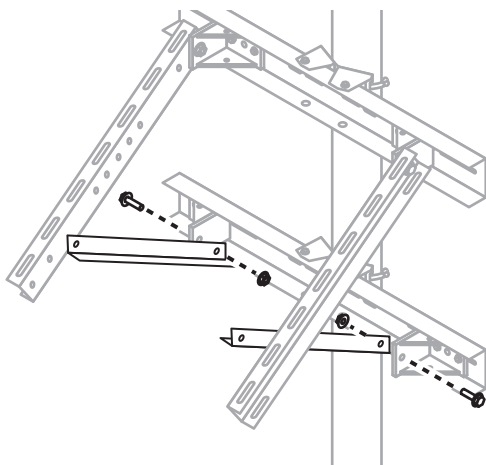
STEP 08

Secure side rails to exterior of L brackets on upper saddle bracket using 5/16" hardware.



STEP 09

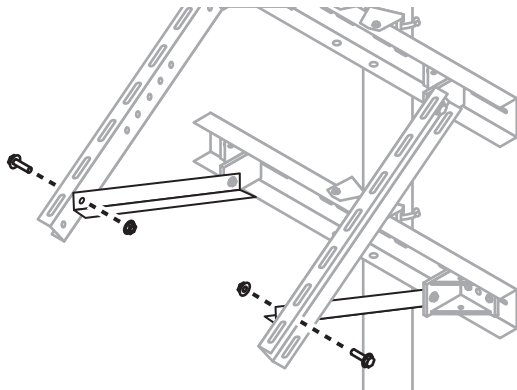
Attach tilt legs to interior of L brackets on lower saddle bracket using 5/16" hardware.



INSTALLATION

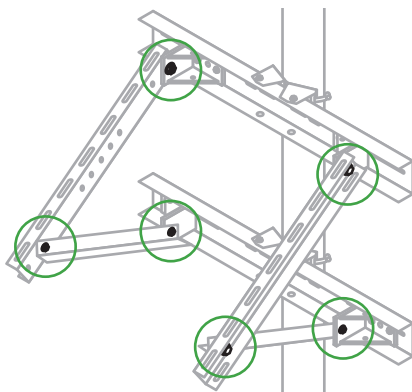
STEP 10

Secure tilt legs to side rails using 5/16" hardware.



STEP 11

Check all bolts are securely tightened.



STEP 12

Using disposable gloves, carefully apply anti-seize to all nuts and bolts.

INSTALLATION

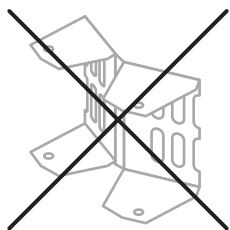
Wall Mounting



WEAR PROTECTIVE WORK GLOVES THROUGHOUT INSTALLATION PROCESS. THE SOLAR PANEL AND OTHER HARDWARE PIECES HAVE SHARP EDGES.

STEP 01

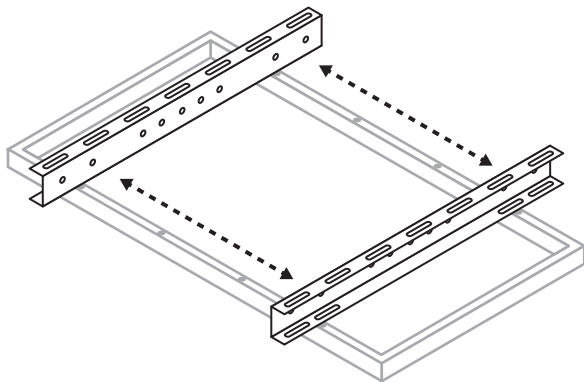
Set aside mount brackets, as these aren't needed for wall mounting.



STEP 02

Lay side rails on solar panel holes to estimate upper L bracket spacing.

Measure between inside of rails for accuracy.

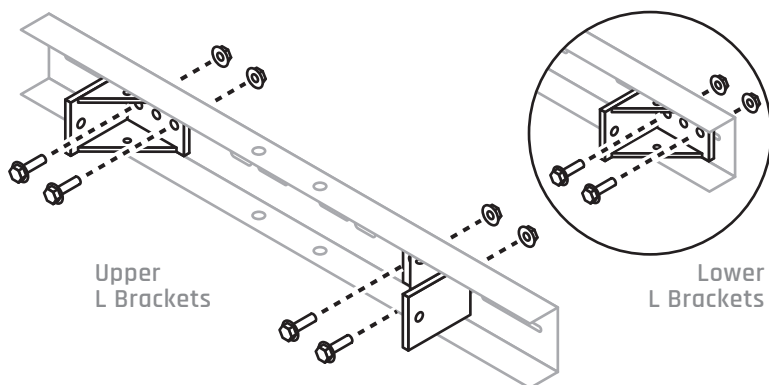


INSTALLATION

STEP 03

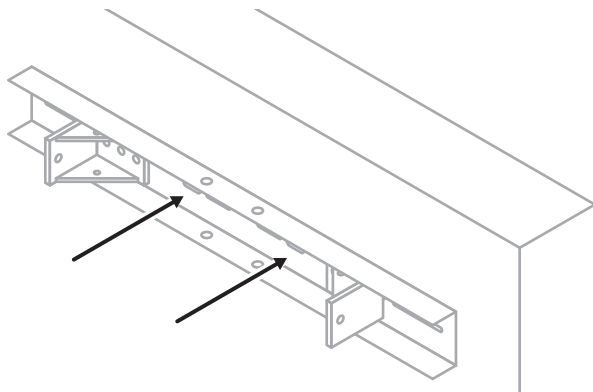
Attach L brackets to upper and lower saddle brackets using 5/16" hardware.

Lower L brackets face outward, and upper L brackets face inward.



STEP 04

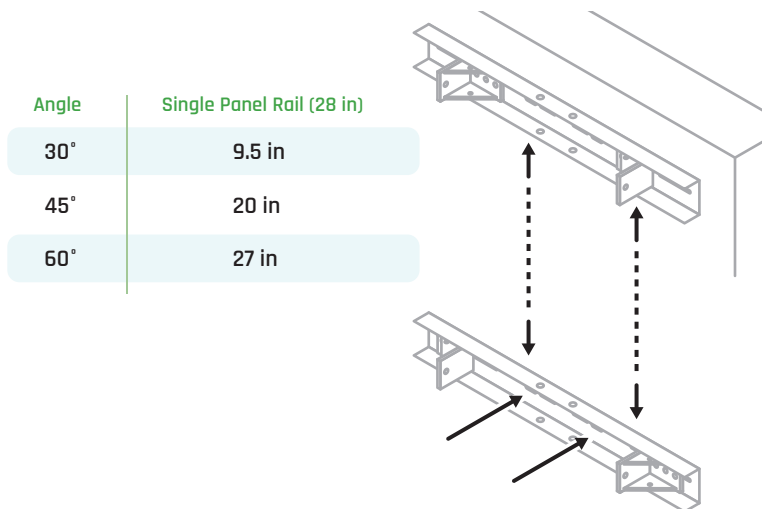
Using appropriate mounting hardware for your surface, secure upper saddle bracket directly to wall at maximum desired height.



INSTALLATION

STEP 05

Measure necessary distance downward for needed angle degree (see chart), then secure lower saddle bracket directly to wall using appropriate mounting hardware for your surface.

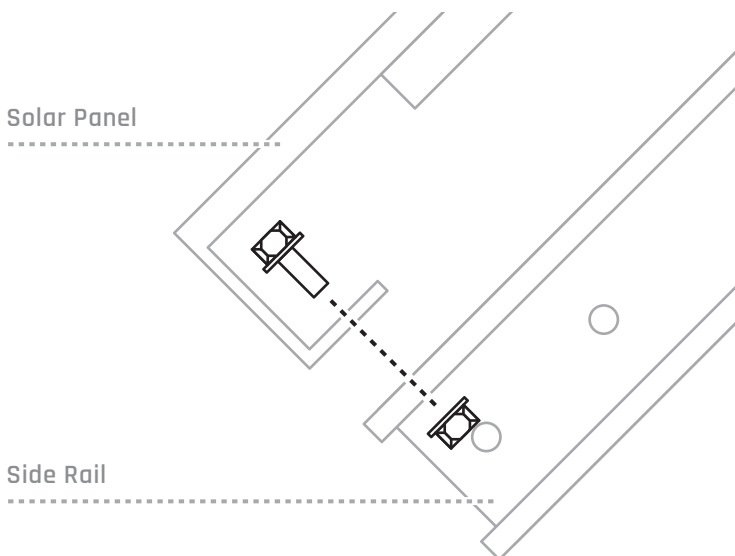


To complete assembly, follow pole mounting steps 8-12.

Solar Panel

STEP 01

Secure solar panel to side rails using 1/4" hardware.



STEP 02

Using disposable gloves, carefully apply anti-seize to nuts and bolts.

Connecting to System

Systems without 3-to-1 Connectors



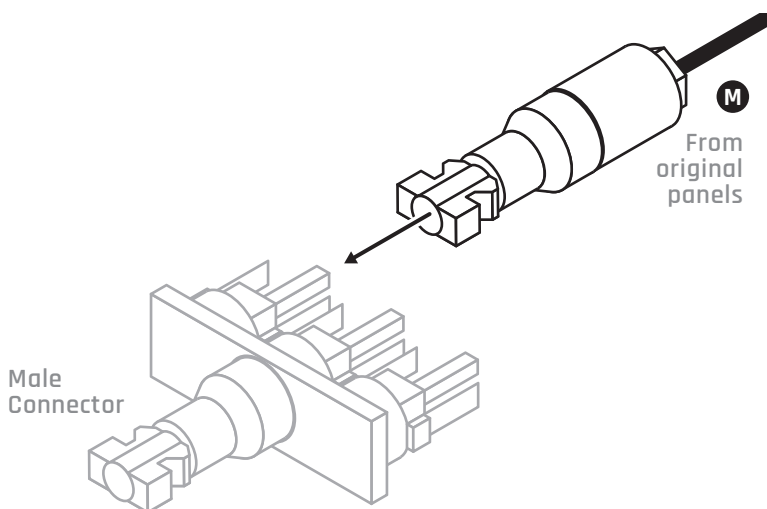
YOU SHOULD NOT NEED TO FORCE CONNECTORS TOGETHER.

STEP 01

Disconnect cables that connect original two solar panels to battery enclosure.

STEP 02

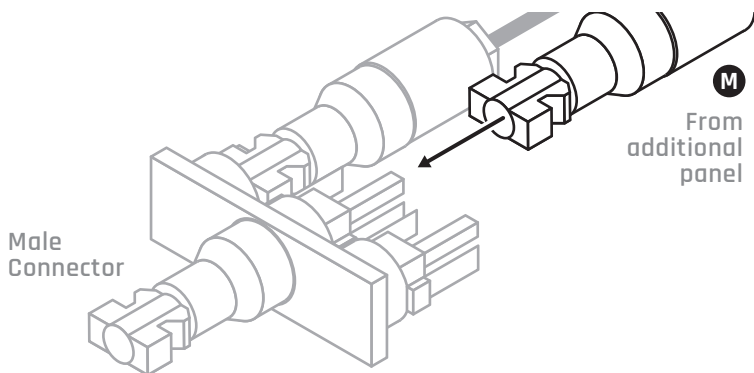
Plug male connector end coming from original two solar panels into open slot on forked end of male 3-to-1 connector.



CONNECTING

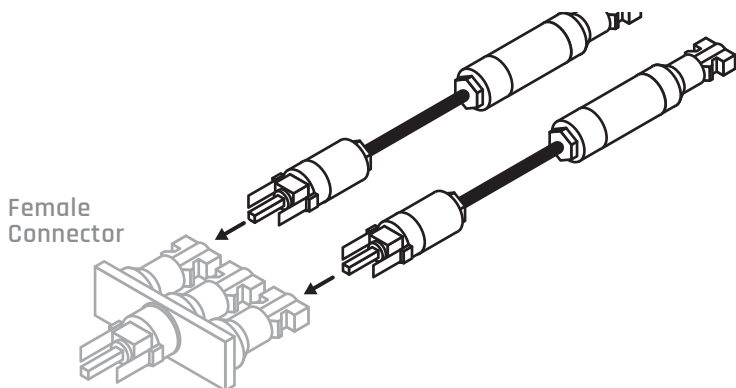
STEP 03

Plug male connector end coming from additional solar panel into open slot on forked end of male 3-to-1 connector. One slot on male 3-to-1 connector will remain unused.



STEP 04

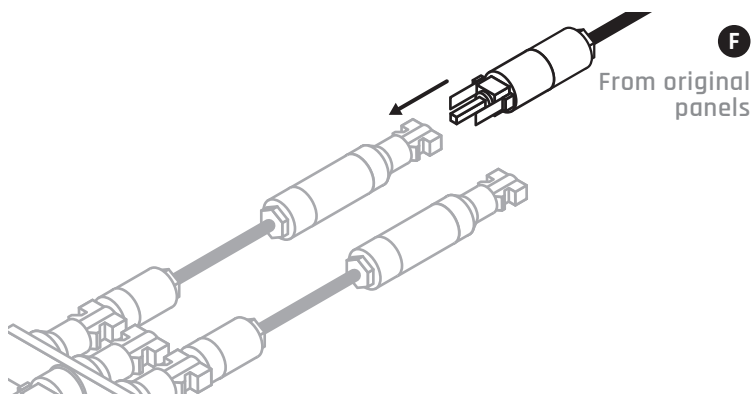
Plug two positive fuse connectors into open slots on forked end of female 3-to-1 connector. One positive fuse connector will remain unused.



CONNECTING

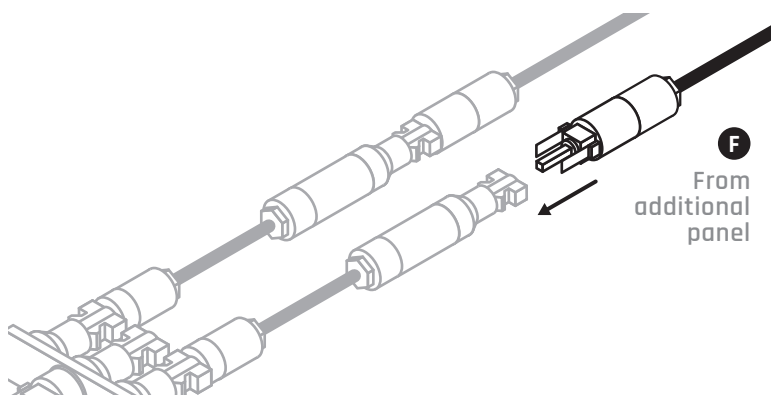
STEP 05

Plug female connector end coming from original two solar panels into a positive fuse connector.



STEP 06

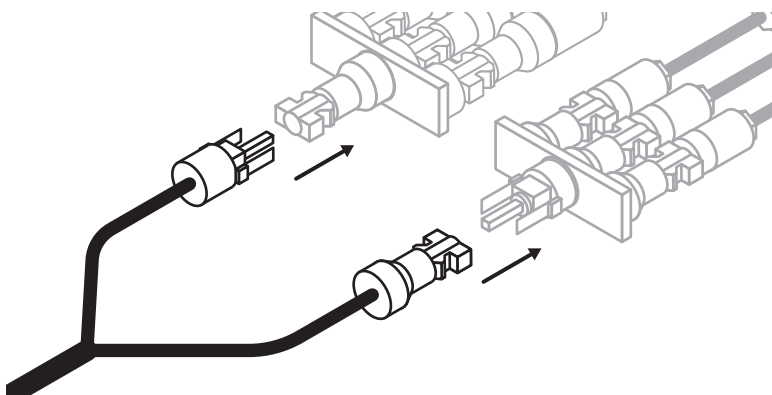
Plug female connector end coming from additional solar panel into other positive fuse connector. One slot on female 3-to-1 connector will remain unused.



CONNECTING

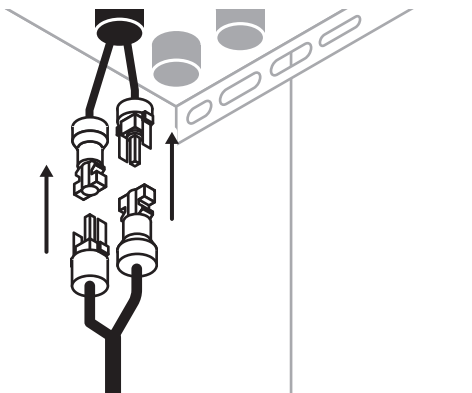
STEP 07

Connect male and female connector ends of 20' cable to singular ends of their respective 3-to-1 connectors.



STEP 08

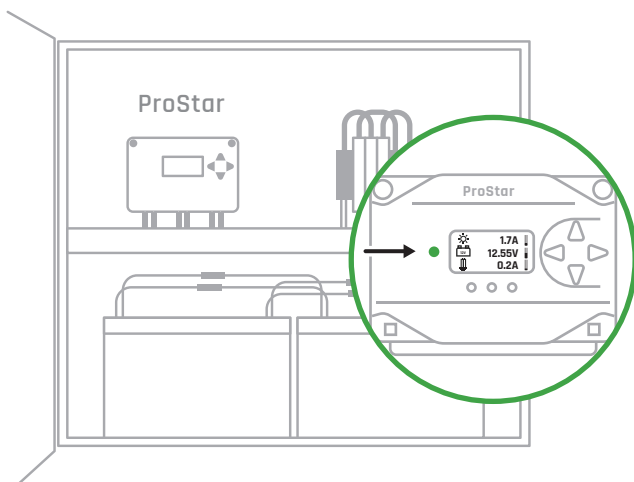
Connect male and female connector ends of 20' cable to respective connectors coming from battery enclosure.



CONNECTING

STEP 09

Check ProStar controller inside battery enclosure to verify power.



Connecting to System

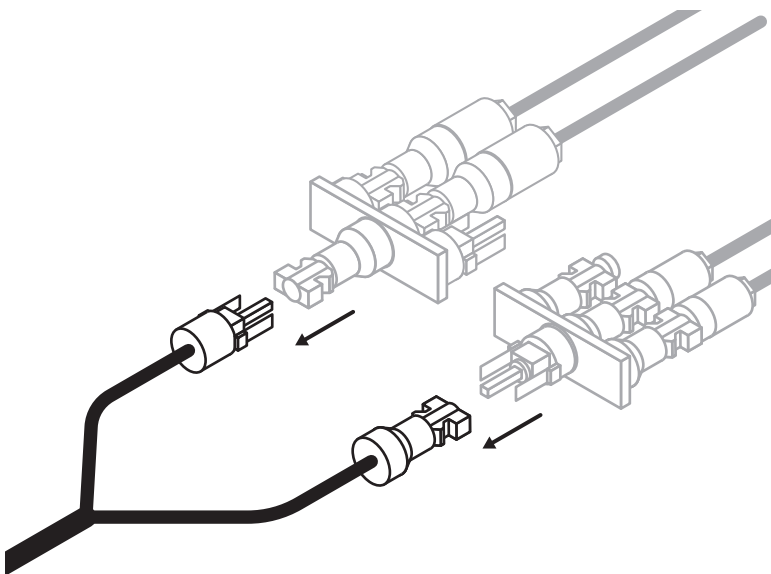
Systems with 3-to-1 Connectors



YOU SHOULD NOT NEED TO FORCE CONNECTORS TOGETHER.

STEP 01

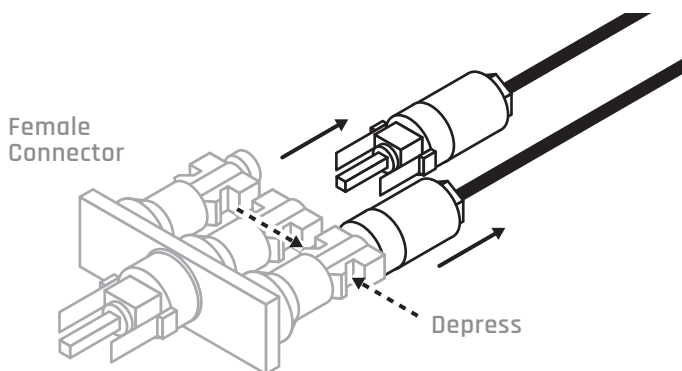
Detach connectors from single side of male and female 3-to-1 connectors to disconnect original two solar panels from battery enclosure.



CONNECTING

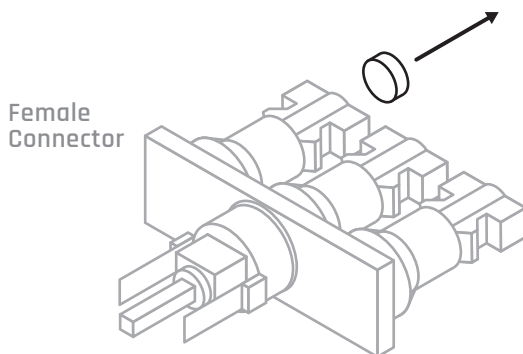
STEP 02

Remove all connectors from female 3-to-1 connector using needle nose pliers (not included) to depress side unlocking buttons.



STEP 03

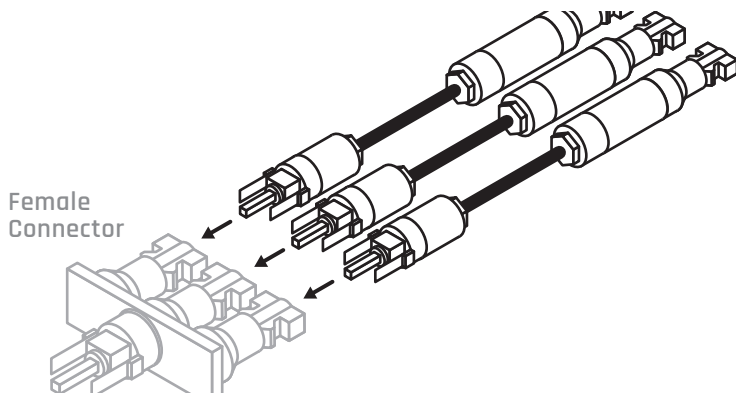
Remove rubber cap from third port on female 3-to-1 connector.



CONNECTING

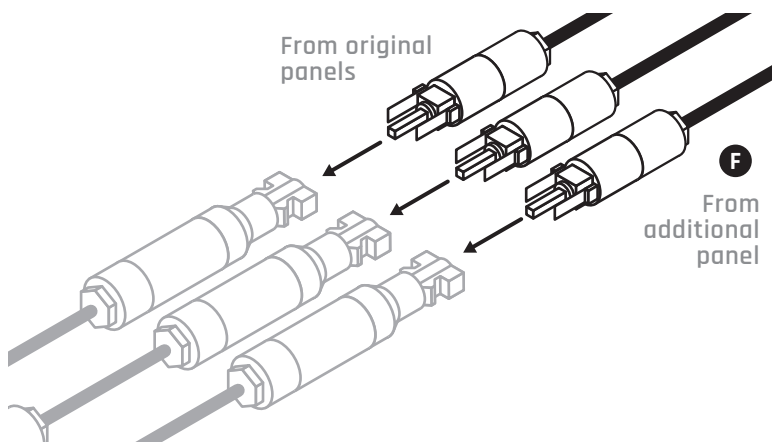
STEP 04

Plug all positive fuse connectors into female 3-to-1 connector.



STEP 05

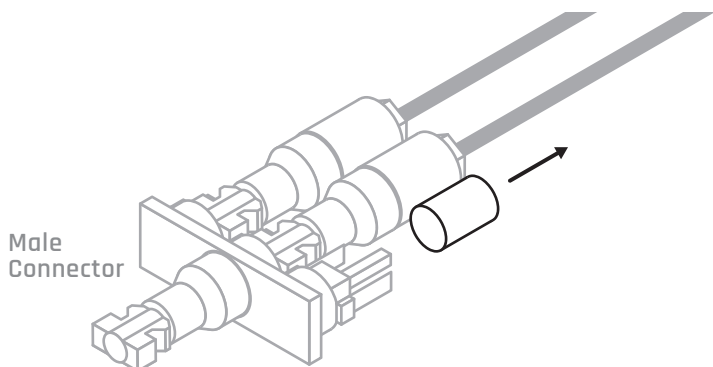
Plug female connector ends coming from two original panels and additional panel into positive fuse connector ports.



CONNECTING

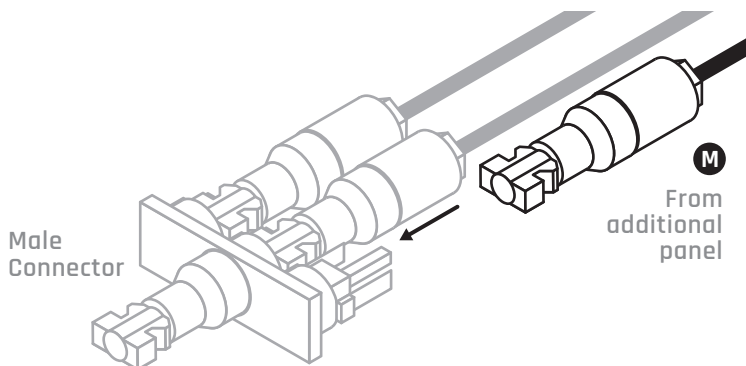
STEP 06

Remove rubber cap from third port on male 3-to-1 connector.



STEP 07

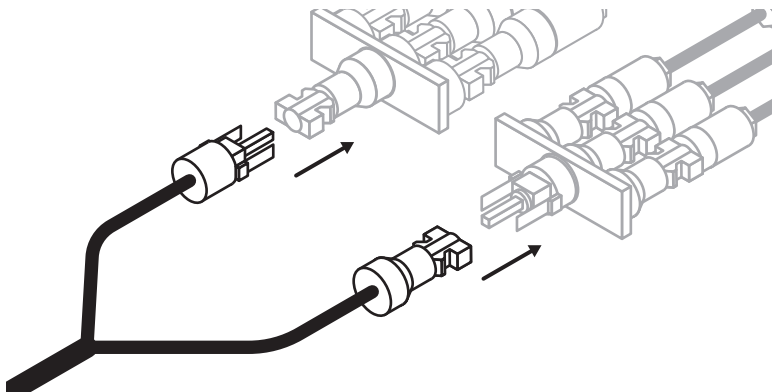
Plug male connector end coming from additional panel into male 3-to-1 connector.



CONNECTING

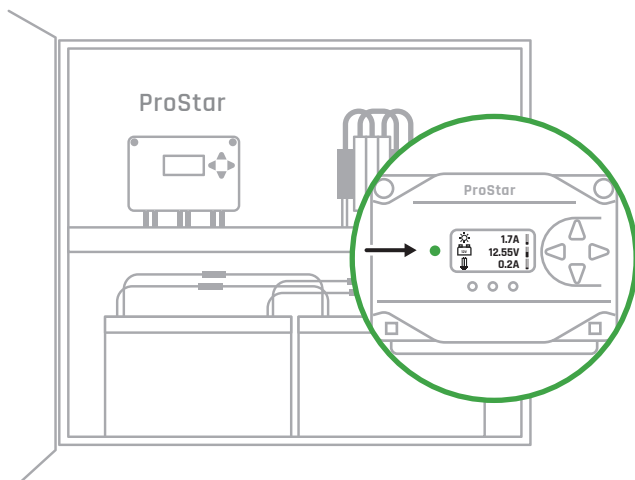
STEP 08

Reattach connectors coming from battery enclosure to single side of their respective 3-to-1 connectors to reconnect panels.



STEP 09

Check ProStar controller inside battery enclosure to verify power.



Troubleshooting

If something seems wrong with the system, it may be necessary to troubleshoot.

CAUTIONS:

- Troubleshooting should be attempted by qualified personnel only.
- A battery can cause serious damage if shorted.
- Do not disassemble the ProStar from its case. There are no user serviceable parts inside the ProStar.

CAMERA NOT OPERATING PROPERLY

- 1 Check that the load breaker is turned on.
- 2 Check that the camera cable connectors are securely fastened.
- 3 If the ProStar internal temperature is above 80°C/176°F, the load will be disconnected, and all LEDs will be flashing in sequence. Check that nothing is obstructing the vents at the top of the case to ensure clear airflow around the ProStar.

BATTERY IS NOT CHARGING

- 1 Check that all wire connections in the system are correct and tight.

**IF YOUR SYSTEM IS STILL NOT FUNCTIONING PROPERLY,
PLEASE CONTACT TRUELOOK SUPPORT FOR FURTHER
ASSISTANCE.**

Maintenance Tips



Do not allow smoking or open flames near the battery enclosure.



If a battery has been unused for a long time, charge it externally with a battery charger prior to using it again for maximum efficiency.



Solar panels are designed to quickly melt snow on their own.

If there is a more urgent need to remove snow, gently use a soft brush. Using too much force may scratch or damage the panels.



If the solar panels need cleaning, use only water and a microfiber cloth.



Do not store any system components on the ground to avoid the intrusion of water or dirt.

Battery Replacement

We recommend the Duracell Ultra Platinum AGM BCI Group 31M Deep Cycle Marine & RV Battery as a replacement.

If you are unable to find this specific battery, the battery should meet the following specifications:

Product Category: Marine/RV

Voltage: 12

Format: BCI Group 31M

Chemistry: Lead Acid

Lead Acid Type: Deep Cycle, Dual Purpose (Starting/Cycling)

Lead Acid Design: AGM

Capacity: 105AH

Capacity 20hr: 105AH

Cranking Amps: 1000

Cold Cranking Amps: 800

Marine Cranking Amps: 1000

Terminal Type: DT, SAE/M8 Stud, SAE/M8 Threaded Post, WNT

One Last Step!

Did you know that our support team offers a free installation review?

Once you're done, snap a few pictures and email them to support@truelook.com. If we notice anything that we can help with, we'll reach out. This will also help our support team quickly view your setup if you run into equipment issues at any point in the future.

THE EMAIL

For the most efficient response from our team, include the following in your email:

- 1 Company Name
- 2 Project Name
- 3 Contact person for installation issues
- 4 The following photographs:
 - a) Your whole TrueLook solution: the camera, what it's mounted to, and any accessories
 - b) Close-ups of mounting
 - c) Close-ups of connections
 - d) Inside battery box