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xantrex

Xantrex Back Plate for Sine Wave Plus Power Panel Installations

Installation Instructions

XBP & XBP-DC

973-0030-01-01 A
Revision A

Xantrex Back Plate (XBP)

A two-piece, steel back plate is available for creating a unified power panel using one or two Sine Wave Plus Inverter Chargers. The combined panel is designed to accommodate the following components:

- one or two Sine Wave Plus Inverters, or
- one Sine Wave Plus Inverter and a TX Autotransformer

Plus:

- one AC Conduit Box-Long (ACCB-L), and
- one or two DC Conduit Box-Long (DCCB-L). Two DCCB-L s requires the XBP-DC.

The primary panel comes in two parts and measures 46" (89 cm) wide when assembled. If a second DCCB-L is going to be used, an optional plate (XBP-DC) attaches to the right side of the primary panel to extend it to 60” (152.5 cm).

The back plate comes with mounting hooks that can be attached to the panel to hang the components on as they’re installed. It also has conduit pass-thrus for both the ACCB-L and DCCB-L wiring.

Configurations

The XBP supports the following configurations of Sine Wave Plus Inverter/ Chargers:

- Single-inverter (120 Vac Applications)
- Single-inverter with TX Autotransformer (120 to240 Vac Applications or 240 to 120 Vac Applications)
- Dual-inverter (120 and 240 Vac Applications)
- Dual-inverter with Multiple Renewable Energy Input (120 and 240 Vac Applications)

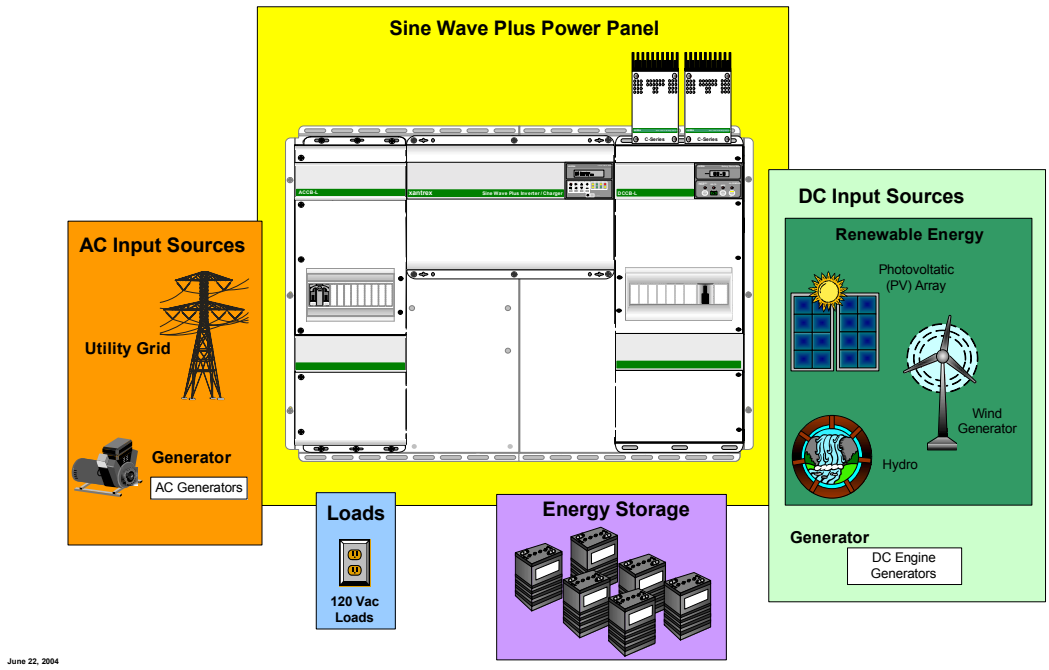


Figure 1-1 Single Inverter Configuration

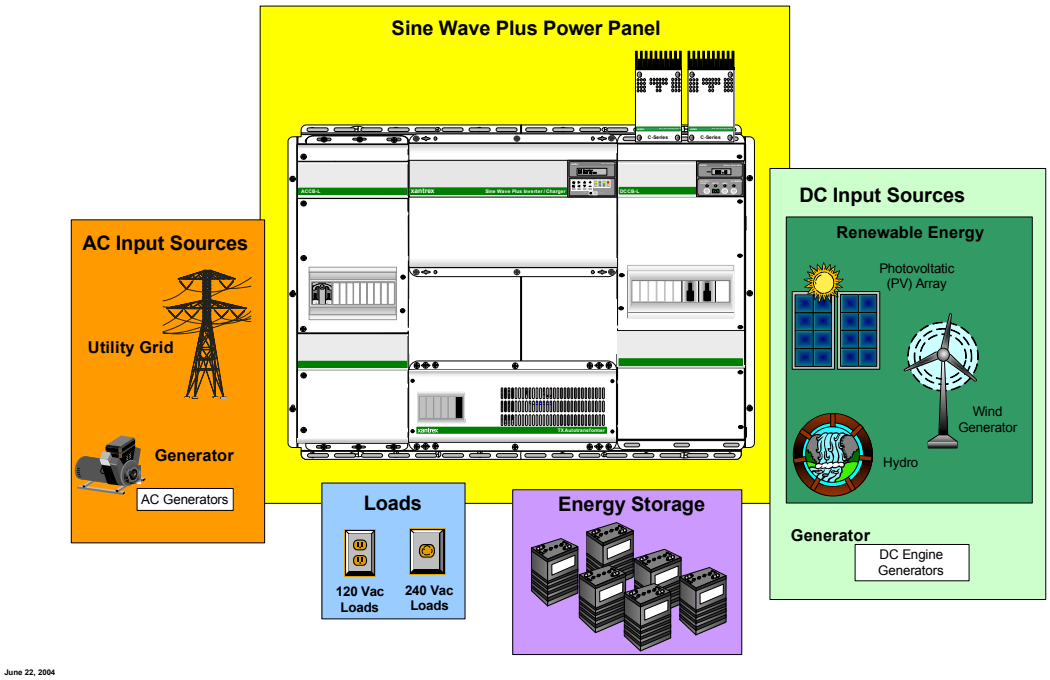


Figure 1-2 Single Inverter Configuration with a TX Autotransformer

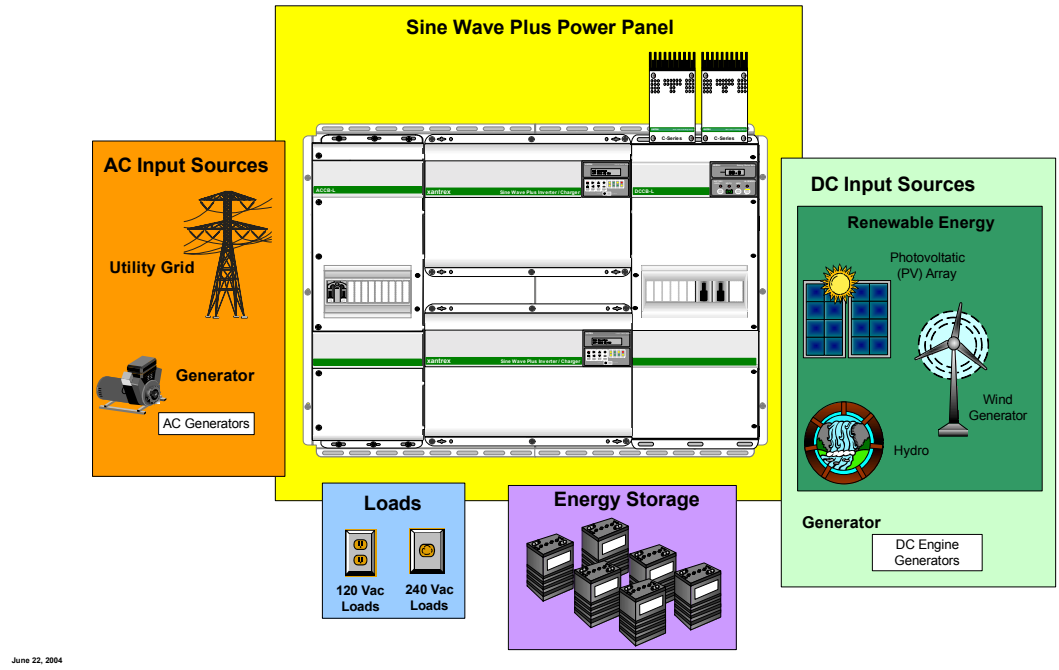


Figure 1-3 Dual Inverter Configuration

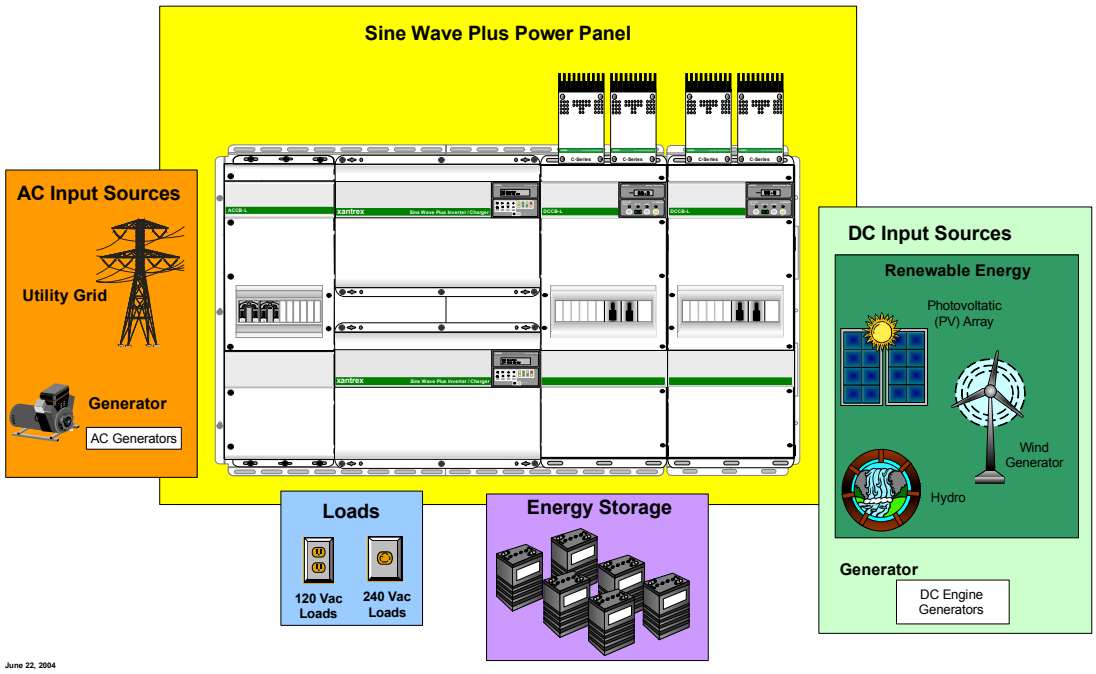
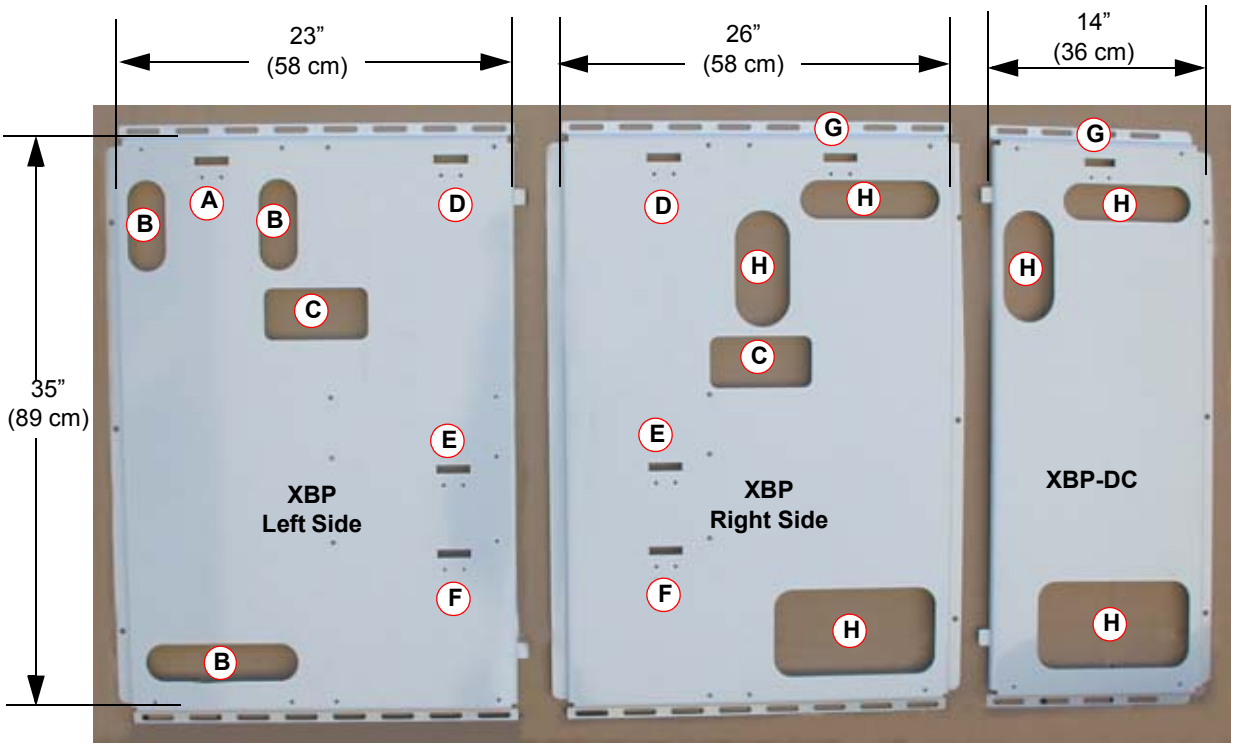


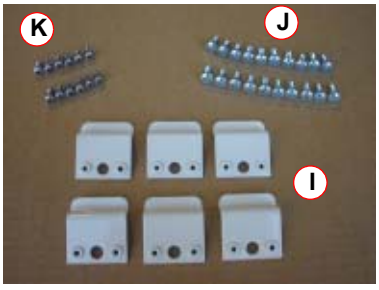
Figure 1-4 Dual Inverter Configurations with Multiple Renewable Energy

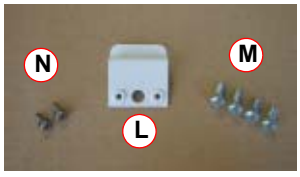
Panel Components

The panel is comprised of two plates that fit together and combine to create a solid support for the power system. If dual DCCB-Ls are to be installed, then an extension plate (XBP-DC) is available to complete the panel.



- **A** Mounting hook position for ACCB-L
- **B** Conduit Pass-thrus for ACCB-L
- **C** Hand Holds for installing
- **D** Mounting hook positions for SW Plus Inverter #1
- **E** Mounting hook positions for SW Plus Inverter #2
- **F** Mounting hook positions for TX Autotransformer
- **G** Mounting hook position for DCCB-L
- **H** Conduit Pass-thrus for DCCB-L
- **I** Mounting Hooks (x6)
- **J** 1/4-20x3/4” phillips screws (x20) for mounting the components (ACCB-L, DCCB-L, SW Plus Inverters, and TX Autotransformer)
- **K** 10-32x1/2” phillips screws (x12) for the mounting holes





- **L** Mounting Hook for XBP-DC (x1)
- **M** 1/4-20x3/4” phillips screws for XBP-DC (x4)
- **N** 10-32x1/2” phillips screws for XBP-DC (x2)

Figure 1-5 Components of the Xantrex Back Plate (XBP and XBP-DC)

Attaching the Mounting Hooks

To attach the mounting hooks on the panel, following the procedure outlined in Figure 1-6.

1. Place the mounting hook into the hole provided so that the back of the hook rests against the panel and the front of the hook protrudes toward the front.

2. Align the mounting hooks with the pre-drilled holes in the panel in the positions required by the components in your installation.

3. Secure the mounting hooks with the two 10-32x½ phillips screws provided.

4. Torque to 32 inch-pounds.

Figure 1-6 Attaching the Mounting Hooks

Mounting the Power Panel

These instructions are for light wood-framed structures such as those commonly found in residential construction. See local building regulations to ensure code compliance.

Determine total weight

Due to the size and weight of power panel systems, it is *extremely* important to consider the strength of the structure to which it will be attached. Use Table 1-1 to determine the weight of all components intended for installation. At a minimum, any basic power panel configuration will weigh approximately 270 pounds.

Component	Approximate Weight
1- XBP Panel (left and right)	54 pounds
1-SW Plus Inverter / Charger	140 pounds
1-ACCB-L	24 pounds
1-DCCB-L	33 pounds
Miscellaneous Hardware/components	~10 pounds
Minimum Weight to Plan For	**~270 pounds**

CAUTION: Structural Damage

If you are not sure if the wall is strong enough where you want to install the Power Panel and it's components, consult a structural engineer for a second opinion and/or recommendation.

Wallboard is not sufficiently strong to support a Power Panel system. Wall studs alone are not sufficiently strong enough to support a Power Panel system that weighs over 300 pounds.

It is recommended that a 3/4-inch sheet of plywood or 3/4-inch APA rated sheathing be attached directly to the wall studs from the floor to approximately 12 inches above the top of the intended height of the panel. If wall studs are placed at 16" on center, then the 3/4-inch plywood or sheathing must cover at least 3 studs. If wall studs are placed at 24-inches on center, then the plywood or sheathing must cover at least 2 studs.

Attach the plywood, or sheathing to the wall studs, using 12d nails to secure the plywood to the studs every 6 inches.

Table 1-1 Approximate Power Panel Weight for a Given Configuration

Component	Approximate Weight	Accessories	Approximate Weight
1-XBP Panel (left and right)	54 lbs (24.5 kg)	ACCB-L2-PCK (2nd Bypass Switch)	2 lbs (0.9 kg)
1-XBP-DC Extention	15 lbs (7 kg)	C-Series Multi-function DC Controller	3 lbs (1.4 kg) each
1-SW Plus Inverter / Charger	140 lbs (63.5 kg)	CC PCK	2 lbs (0.9 kg)
2-SW Plus Inverters / Charger	280 lbs (127 kg)	GJ-250-PCK or GJ-175-PCK	5 lbs (2.3 kg) each
1-TX 4K Autotransformer	42 lbs (19 kg)	PVGVP-CF-1, PVGVP-CF-2 or PVGVP-CF-3 PVGVP-CF-4	1 lbs (0.5 kg) ea. 2 lbs (0.9 kg) ea. 3 lbs (1.4 kg) ea.
1-TX 6K Autotransformer	60 lbs (27 kg)	Battery Status Meter (TM500A and TM500A-NS)	< 1 lbs (0.5 kg)
1-AC Conduit Box - Long (ACCB-L)	19 lbs (9 kg)	CF 60 Circuit Breaker	< 1 lbs (0.5 kg)
1-AC Conduit Box - Long (ACCB-L1)	24 lbs (11 kg)	Xantrex Battery Cables (BC1.5)	Varies up to 40 lbs (18 kg)
1- DC Conduit Box (DCCB-L)	22 lbs (10 kg)	Inverter Control Adapter (ICA)	< 1 lbs (0.5 kg)
1- DC Conduit Box (DCCB-L175)	33 lbs (15 kg)	Inverter Stacking Cable (ISC-S) Series	< 1 lbs (0.5 kg)
1- DC Conduit Box (DCCB-L250)	33 lbs (15 kg)	CF Breaker Mounting Plate	< 1 lbs (0.5 kg)
1-AC Conduit Box (ACCB)	12 lbs (5 kg)	Power Distribution Blocks (6:1 and 12:1)	< 1 lbs (0.5 kg)
1-DC Conduit Box (DCCB)	8 lbs (4 kg)	DC Negative Bus Bar	2 lbs (0.9 kg)

Weight-bearing or non-weight-bearing wall

It is also important to determine whether the power panel will be mounted on a load bearing or non-load bearing wall. In general, a load bearing wall is any wall that carries weight transmitted by other structural members. An example of a load bearing wall is a wall that is carries the weight from an upper floor, a roof, or from both. A wall that does not carry weight from other structural elements is considered a non-load bearing wall.

If in doubt contact a licensed structural engineer to help you make the differentiation.

Mounting the Panel to the Wall Studs

To prepare the mounting surface:

1. Determine what height you want the top of the panel to be at.
2. Place a piece of 3/4" plywood from the floor to 12-inches above the desired height of the panel. If the wall studs are 16" apart, then span the plywood across three studs. If the wall studs are 24" apart, then span the plywood across two studs.
3. Secure the panel to the wall studs using 12 (12d) nails (or equivalent) spaced 6 inches apart.

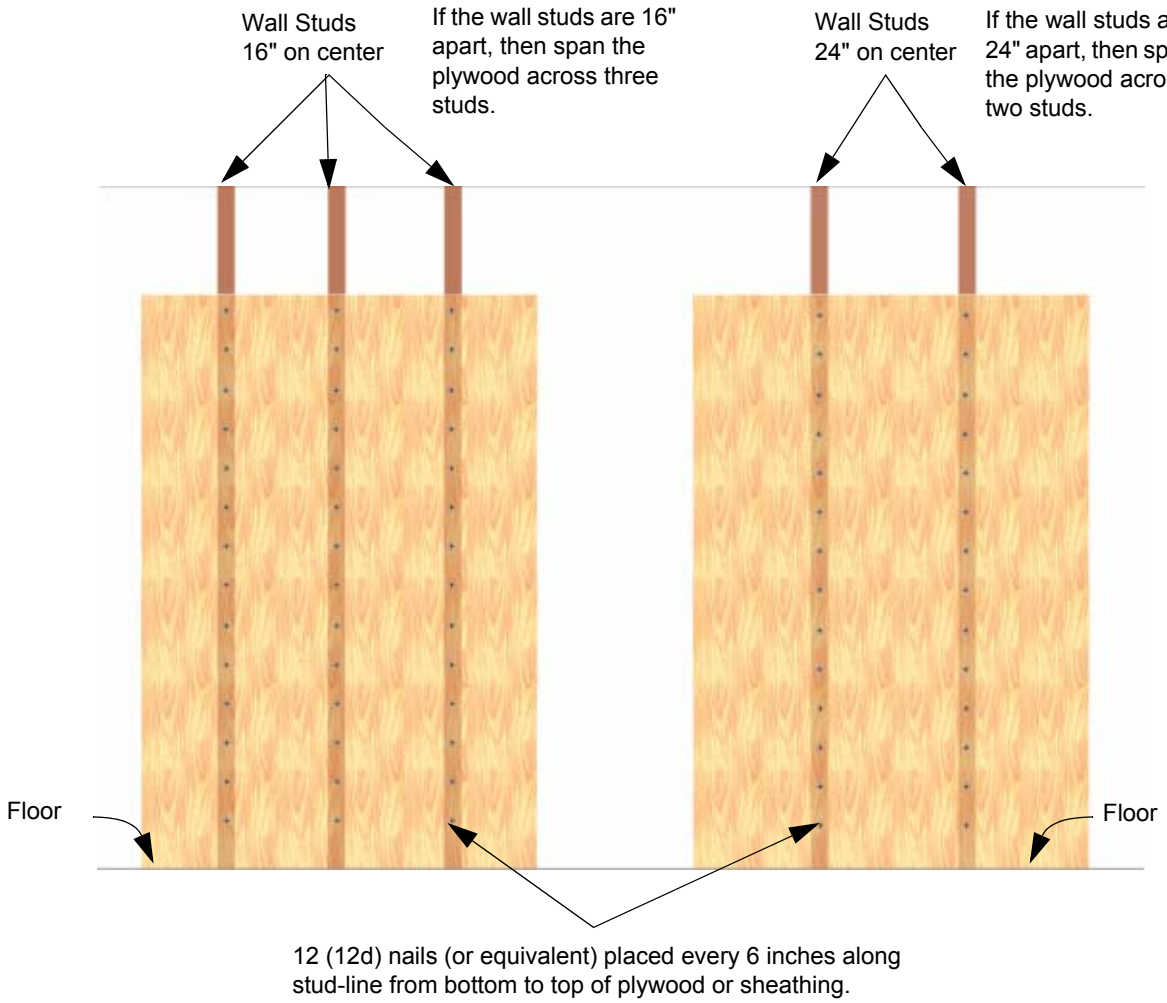


Figure 1-7 Mounting the Plywood

To Mount the Back Plate:

1. Lift the XBP-L panel to the plywood. Ensure it's level.
2. Mark the plywood for a minimum of four pilot holes. Remove the panel.
3. Drill pilot holes through the plywood.
4. Realign the XBP-L over the drilled holes.
5. Insert the minimum four mounting bolts into the pilot holes. More may be used if desired for additional security. Use ¼" (6mm) or larger fasteners.
6. Tighten securely.
7. Lift the XBP-R into place and slide the mounting tabs on the XBP-R into the mounting slots on the XBP-L as close as it will go.
8. Mark the wall where the studs are for the supporting screws. Remove the panel.
9. Drill pilot holes through the plywood.
10. Replace the panel and realign the XBP-R over the drilled holes.
11. Insert the minimum four mounting bolts into the pilot holes. More may be used if desired for additional security. Use ¼" (6mm) or larger fasteners.
12. Tighten securely.
13. Repeat steps 7-12 for the XBP-DC if required.

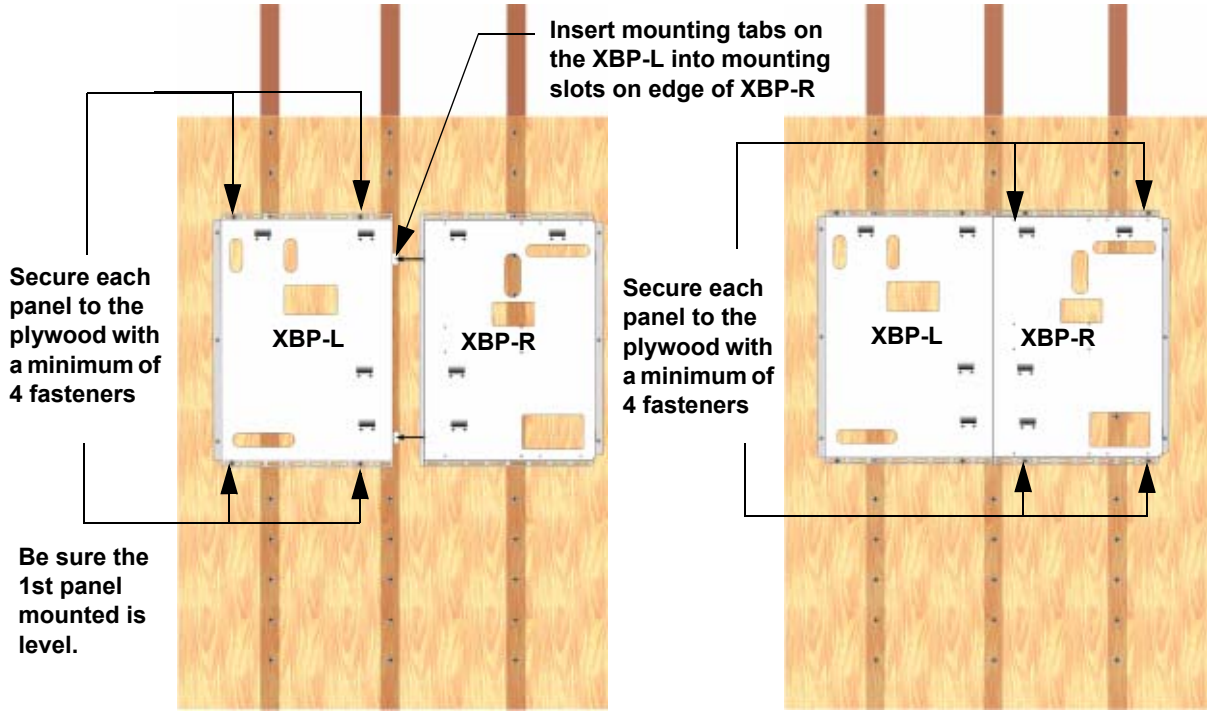


Figure 1-8 Mounting the XBP Back Plate

Mounting the Components

1. Lift the inverter and place the mounting holes in the rail directly over the mounting hooks on the panel and lower into place.
2. Install six ¼-20x¾" phillips screws to hold the inverter to the panel, but do not fully tighten.
3. Lift the second inverter (if used) and place the mounting holes in the rail directly over the mounting hooks on the panel and lower into place.
4. Install six ¼-20x¾" phillips screws to hold the second inverter to the panel, but do not fully tighten.
5. Remove the blockoff plates from the ACCB-L and DCCB-L for the components to be installed.
6. Next, lift the other components, such as the ACCB-L and DCCB-L, and place their mounting hole in the rail directly over the designated mounting hooks on the panel and lower into place.

> **Important:** Ensure the mounting hooks are visible through the holes in the mounting rails. If you can not see the hooks, the unit is not installed properly and will not be secure to the wall.

7. Tighten the inverter(s) to the panel. Torque to 76 in-lbs.
8. Push the ACCB-L as close to the inverter as it will possibly go and secure it to the panel using the four of the 20 ¼-20x¾ phillips screws. Torque to 76 in-lbs.
9. Push the DCCB-L as close to the inverter as it will possibly go and secure it to the panel using the four of the 20 ¼-20x¾ phillips screws. Torque to 76 in-lbs.

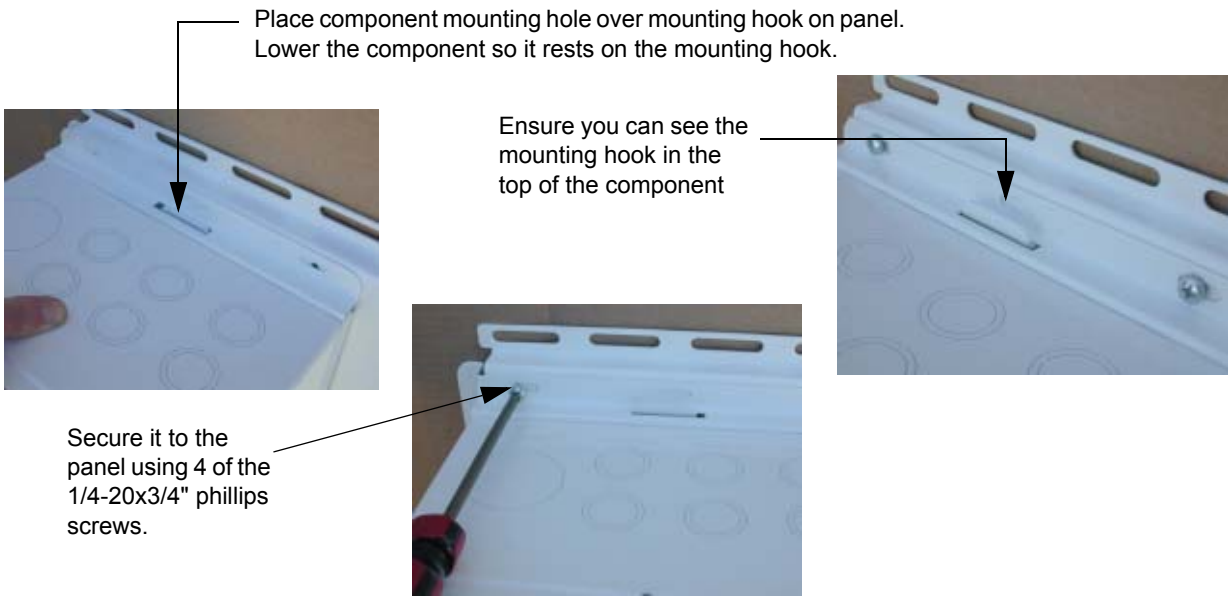


Figure 1-9 Installing the Components on the Backplate

This completes the installation instructions for the back plate.

Consult Owner's Guides for all the installed components for wiring instructions.

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