

1. What is the PowerHub 1800?

The PowerHub 1800 is a modified sine wave inverter/charger, combined with a battery bank, that provides primary power for homes and cottages that are not connected to the utility grid, or backup power for those with unreliable grid power. The PowerHub accepts solar, wind or generator inputs.

2. Can I install the PowerHub 1800 myself?

Yes, you can install the PowerHub 1800 yourself if you read the installation guide, understand the electrical code and are reasonably competent with tools and basic assembly (or you can hire a licensed electrician). To fully comply with your local regulatory agency's safety requirements, an electrical inspector must review and approve the installation.

3. How do I install the PowerHub 1800?

For full installation details please read the Operation/Installation Guide.

4. What are the system requirements for installation?

The PowerHub 1800 is designed to be powered by a single 15-amp small appliance and lighting circuit breaker, or from an 1800 watt continuous minimum rated 120-volt AC generator. It can also be powered by solar and wind energy. Maximum solar panel input is 480 watts and maximum wind turbine input is 1200 watts. Solar panel input requires an external charge controller.

5. What size of solar panels do I need?

You will need two 120 watt solar panels. The typical output of these panels should be 170 watts. The recharge time should typically be two full sunny days with a 200 amp hour (Ah) battery discharged to 50% of its capacity. If you're not using the wind turbine input, additional solar panels can be added; however, the installed battery bank has a recommended maximum charge rate depending on the battery model used. Charging beyond this maximum tends to overheat the batteries and will reduce their life expectancy.

6. What size of wind turbine do I need?

You will need one 400 watt peak output turbine. The typical output should be 380 watts. The recharge time should typically be one day with a 200 amp hour battery discharged to 50% of its capacity. A larger or an additional 400 watt turbine can be connected; however, the installed battery bank size maximum charge rate may be exceeded depending on the battery model used. Charging beyond this maximum tends to overheat the batteries and will reduce their life expectancy.

7. What type of connector do I need to hook up to solar and wind power sources?

The PowerHub 1800 has four stud terminals, two small and two large, located on the rear of the inverter/charger module. The incoming solar array/charge controller cable must have a ring terminal crimped onto the end. A professional crimp tool that ensures the correct crimp pressure must be used to ensure a safe electrical connection. Wind turbine connections must be made to the larger stud terminals located on the rear of the inverter/charger module.

8. What types of applications will I be able to operate?

A PowerHub with one battery enclosure with a fully charged 200 amp hour battery bank can sustain an average load of about 100 watts for approximately fifteen hours. It can power a variety of small to medium sized appliances such as microwaves, cell phones, laptops and coffee makers.

9. Can the PowerHub 1800 be used with solar, wind and generator input?

Yes, see answers to questions 1, 3, 4, 5 and 6.

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10. How do you recharge the PowerHub 1800?

The PowerHub 1800 can be recharged from AC utility electricity, a generator, solar or wind energy.

11. Who should I contact for service?

Please contact Xantrex Customer Service/Technical Support, toll-free at 1-800-670-0707 for support and warranty service information.

12. How does the PowerHub 1800 switch from utility or grid power to PowerHub battery power?

The PowerHub 1800's internal transfer relay will automatically switch the load appliances to battery power when the power goes out or the generator stops. The transfer relay will automatically switch back to utility power when it returns or to the generator when it is re-started.

13. When the power goes out, will there be an interruption in power to the devices plugged into the PowerHub?

No, the PowerHub 1800's internal transfer relay switches power in less than 80 milliseconds. You might notice a brief flicker in a standard light bulb, but it does not interrupt the household appliances intended to run off of the PowerHub.

14. Does the PowerHub 1800 come equipped with a gel battery pack?

No, the batteries must be purchased separately. You'll need two 12-volt 100 amp hour batteries with dimensions of 12.75 L x 8.00 W x 13.00 H" (324 x 203 x 330 mm). We recommend 12-volt Renewable Energy Deep Cycle Gel Batteries. The PowerHub 1800 includes one adjoining battery enclosure that fits two 100 Ah batteries with capacity of 12 volts DC. You can also add a second battery enclosure. (Part number PH1800-BBX)

15. How do I replace the batteries?

The batteries should be replaced in the reverse order of installation as follows:

- A) Turn off the inverter/charger module
- B) Open the front cover on the battery enclosure
- C) Disconnect the battery double-D connector from the inverter/charger module
- D) Remove the battery enclosure top cover
- E) Disconnect the battery cables from the battery terminals
- F) Lift the batteries out
- G) Install new batteries
- H) Reconnect battery cables to terminals (ensure correct polarity)
- I) Re-install the battery enclosure top cover
- J) Connect the double-D connector to the matching inverter/charger module connector
- K) Re-install the battery enclosure front panel
- L) Turn on the inverter/charger module

16. Can I get extra battery packs?

Yes, the modular design of the PowerHub 1800 enables you to add a second battery enclosure. Increasing the battery bank to 400 amp hours will provide a longer runtime, but will also increase the recharge time.

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17. How much power can I get from each battery?

Batteries are rated in amp hour (Ah) by the manufacturer. We recommend two 12-volt Renewable Energy Deep Cycle Batteries, rated at 100 Ah. Two of these batteries connected in parallel comprise a 12-volt / 200 amp hour bank.

18. What tools will I need to install and maintain the PowerHub?

- 1) Screwdriver, Phillips #2
- 2) 3/8" and 1/2" sockets and a ratchet drive
- 3) Crimp tools (use only regulatory approved crimp connectors)

19. What maintenance will the PowerHub 1800 system need over time?

The inverter/charger module vents must be kept clear of dust build-up. The batteries will slowly deteriorate over time and will need to be replaced.

20. How heavy is the system?

One battery enclosure + inverter/charger: 56.3 lb.

Each battery: 70 lb.

Overall weight of system with 200 amp hour battery bank: 196.3 lb.

21. Can the system be moved easily?

No, once the battery is installed and the inverter/charger module is connected to the AC/DC wiring and conduit, the system cannot be moved without dismantling.

22. Does the system require an electrical inspection when installed?

Any alterations done to a cabin, cottage or home wiring system require a permit and inspection according to your local regulatory agency.

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