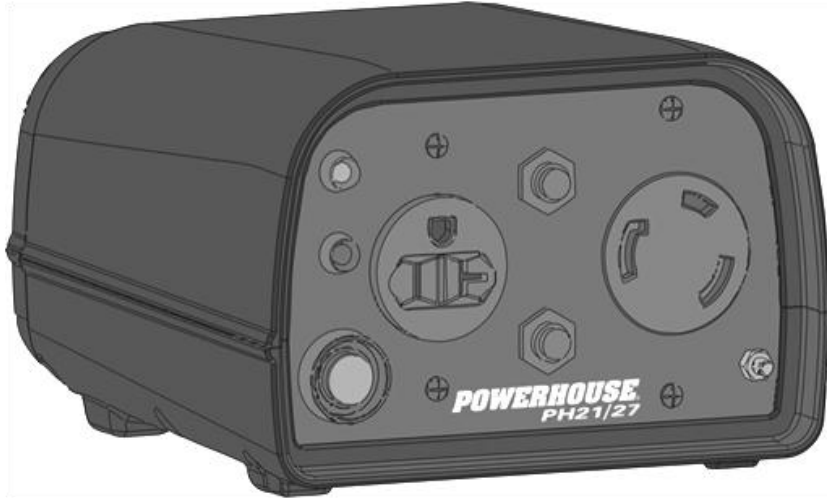


PH21/27 POWERHOUSE® Dual Generator Parallel Kit Operating Instructions



PLEASE READ THIS MANUAL CAREFULLY
BEFORE USING

TABLE OF CONTENTS

1. SAFETY INSTRUCTIONS:.....	2
2. Parallel Operating Features:.....	2
3. Parallel Operation Procedure:	3
3.1 Starting the generators	3
3.2 Parallel Output and Overload Lights	4
3.3 Shutting off the generators:	5
3.4 Air Conditioner Operation	5
4. Troubleshooting Parallel Operation:	6
5. Warranty Information:.....	8

1. SAFETY INSTRUCTIONS:



- Follow all safety and operating instructions for proper use of the generator.
- **Never Connect or Disconnect the parallel kit cables from the generators while running. Doing so will cause permanent damage not covered under warranty.**
- The load requirement of the electrical appliance cannot exceed the combined continual output of the paralleled generators.
- The special parallel cables for the PH2100PRi and PH2700PRi are specific to the parallel operation of two POWERHOUSE® generators. DO NOT use them for other brands of generators or other applications.
- This kit cannot be used for paralleling three or more generators or running two different brands of generators.
- **ONLY the POWERHOUSE® Dual Generator Parallel Kit and cables may be connected to the parallel signal port. DO NOT CONNECT TO OTHER ELECTRONICS OR USE OTHER CABLES. Permanent damage not covered by the warranty will occur.**

2. Parallel Operating Features:

1. Two PH2100PRi or PH2700PRi model generators can run in parallel to increase the total output to a maximum load of.
 - 4200 W (Continual output, 4000 W) with the PH2100PRi.
 - 5200 W (Continual output, 5000 W) with the PH2700PRi.
2. You can also run a PH2100PRi and a PH2700PRi in parallel. The maximum output will be 4200 W (Continual output, 4000 W).

3. Parallel Operation Procedure:

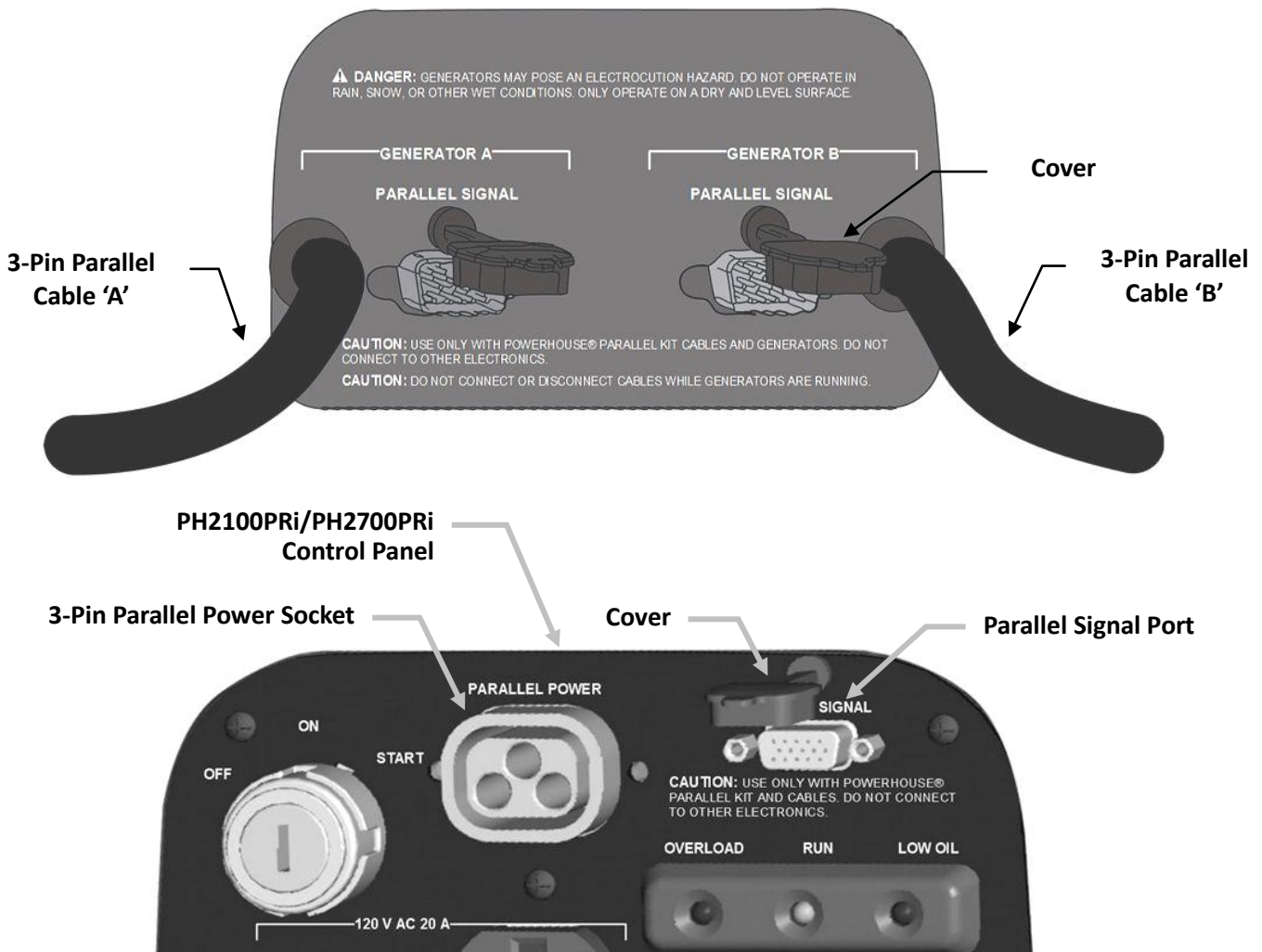
3.1 Starting the generators

1. Prepare two POWERHOUSE® generators for operation.
2. **Parallel power and signal connections MUST be made with the generator engine NOT running. DO NOT connect or disconnect the parallel power or signal cables while the engine is running. Irreparable inverter damage WILL result and is not covered under warranty.**
3. Connect the 15-pin signal cable between the parallel kit and each generator's signal ports and secure with the thumb screws. Do not over tighten.
4. Connect the 3-pin parallel power cable from the parallel kit into each generator's parallel power sockets making sure that the cables for generator 'A' and generator 'B' are not switched.
5. Start both generators using normal procedures and confirm that the green "RUN" lights are illuminated on both generators and on the front panel of the parallel kit.
6. Securely plug the electrical appliance plug into the appropriate receptacles and switch on the electrical appliance.

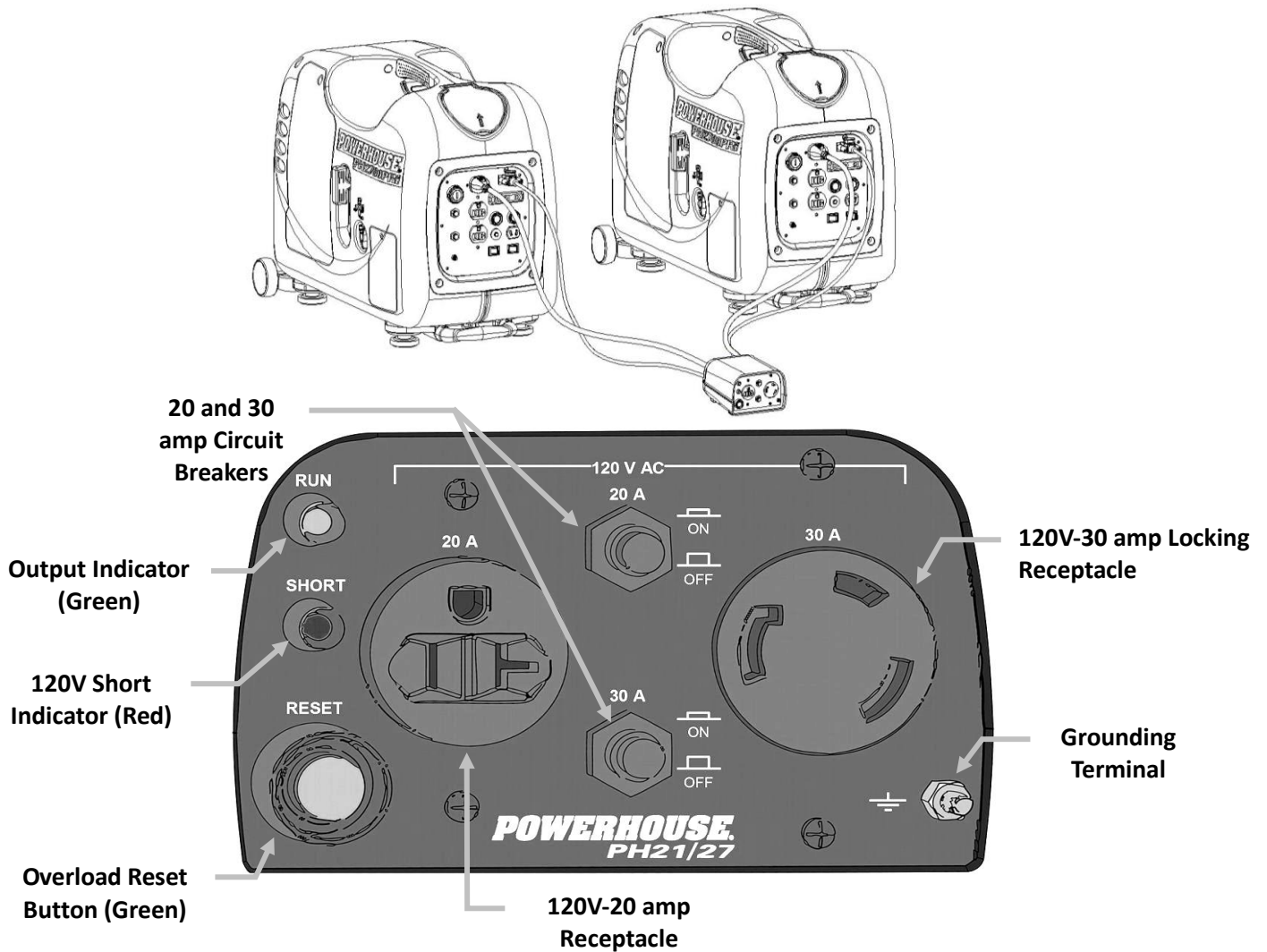


NOTE

- When running the generators in parallel, the economy function will automatically be turned off and both units will be running at the higher engine speed.



3.2 Parallel Output and Overload Lights



WARNING

■ To prevent electrical shock from faulty appliances, the parallel kit should be grounded. Connect a length of heavy cable between the parallel ground terminal and an external ground source.

1. During normal operating conditions, the output indicator lights (Green) will remain illuminated.
2. If the generators are overloaded (in excess of 4200W when using two PH2100PRi units or 5200W when using two PH2700PRi units) the overload indicator light (red) will flash slowly on only one generator. The indicator lights on the other unit and the parallel kit will both be off.
3. In this situation, there will be no electrical output from the parallel panel and the connected appliance or load will be shut off.
4. Remove all electrical loads from the generators and/or parallel kit and then determine and correct the cause of the overload.
5. To reset the overload condition (Red light), press and release the (Green) overload reset button on the parallel panel. The (Green) indicator lights should be illuminated on both generators and on the parallel panel within 15 seconds.
6. If there is a direct electrical short between either of the 120V receptacles on the parallel panel and the connected appliance or load, the output indicator light (green) will go out and the red short indicator will illuminate. The generators will continue to run although the indicator lights on both units and the parallel kit will all be off, and all electrical output will cease.

7. Remove all electrical loads from the 120V 20A and 30A receptacles and then determine and correct the cause of the short.
8. To reset the short light (red) on the parallel panel, press the (green) overload reset button on the parallel panel. The (green) indicator light should be illuminated within 15 seconds.



- The 120 volt receptacles on each of the generator control panels can also be used in conjunction with the 20 and 30 amp receptacles on the parallel kit, as long as the total load on the generator does not exceed the rating of a single unit. PH2100PRi (2000W) / PR2700PRI (2600W). This would include the direct load and the 50% of the load on the parallel kit that is being provided by that generator.

3.3 Shutting off the generators:

1. Turn off all electrical appliances.
2. Unplug the appliance power cords from the receptacles.
3. Turn off both generators.
4. Disconnect the power and signal cables from the parallel power and signal sockets of the two generators. **Make certain that the engines of both generators have been turned off, BEFORE disconnecting these cables.**

3.4 Air Conditioner Operation

1. When running in parallel, two PH2100PRi or PH2700PRi models can start and run most 15,000 BTU Air conditioners.
2. Bring the generators to normal operating temperatures before applying the air conditioning load. Always allow a 2 minute wait period when manually cycling an air conditioner off and on. A longer wait period may be required under unusually hot weather conditions. Additionally, all other loads should be turned off until the air conditioner has started and is performing normally.
3. It is also important to follow the air conditioner manufacturer's instructions for starting and restarting for proper operation. Some air conditioner manufacturers offer a start capacitor or rapid start kit as an extra cost option. The lack of a start capacitor can cause the air conditioner to draw too much starting current and overload the generator.

4. Troubleshooting Parallel Operation:

Problem	Condition	Cause	Correction
<p>Flashing overload light.</p>	<p>The red overload light on one of the generators is flashing slowly. There are no indicator lights on the other generator or parallel panel. There is no AC output from either of the generators or the parallel panel. Both engines are running at a slow idle.</p>	<p>The load (Wattage) has exceeded the capacity of one or both generators.</p>	<p>Remove all loads from the parallel panel and the generators and press the green reset button on the parallel panel. The green indicator light on both generators and the parallel kit should come on within 15 seconds.</p> <p>If the reset is pushed without correcting the cause for the overload, the system will try to reset briefly but the units will again stop producing power.</p> <p>Repeatedly pressing the reset button without correcting the overload condition may cause permanent damage to the generators and/or the parallel kit.</p>
<p>Short indicator light on the parallel panel</p>	<p>The red (Short) indicator light on the parallel panel is on. All of the indicator lights on both generators are off. There is no AC output from either of the generators or the parallel panel. Both engines are running at a slow idle.</p>	<p>The hot and neutral output wires between the parallel kit and appliances are shorted, or there is a short in the appliance.</p>	<p>Remove all loads from the parallel panel and the generators and check the appliances for shorts. Repair or replace shorted appliances as needed.</p> <p>Press the green reset button on the parallel panel. The green indicator light on both generators and the parallel kit should come on within 15 seconds.</p> <p>Repeatedly pressing the reset button without correcting the short circuit may cause permanent damage to the generators and/or the parallel kit.</p>

Problem	Condition	Cause	Correction
<p>No indicator lights (Red or Green)</p>	<p>There is no AC output from either of the generators or parallel panel. Both engines are running at a slow idle.</p>	<p>A loose or disconnected power cord between the parallel kit and parallel power socket on one or both of the generators.</p>	<p>Remove all loads from the parallel panel and the generators.</p> <p>Reconnect or plug in the power cord from the parallel kit to the power socket on the generator. The green indicator light should come back on in approximately 15 seconds. If not, press the green reset button on the parallel panel.</p>
<p>No AC output from parallel panel</p>	<p>The green light on both generators and parallel panel are on. The generators are running at high idle.</p>	<p>An excessive load is connected to either the 20A or 30A receptacle on the parallel panel.</p>	<p>Remove or reduce excessive loads.</p> <p>Check and/or reset the circuit breakers on the parallel kit and both generators as required.</p>

5. Warranty Information:

POWERHOUSE® Parallel Kit WARRANTY

Parallel kits are covered by this warranty from the date of original retail purchase for a period of 1 year for residential use and 6 months for commercial applications. Units used in rental fleets, reconditioned or as demonstration models will be considered commercial usage. The warranty coverage is continual from the original date of purchase, and does not restart upon the replacement of any part or complete unit. Individual parts replaced at any point during the warranty period are only eligible for warranty coverage for the balance of the original warranty period.

Eligibility

To be eligible for warranty replacement, the product must be purchased in the United States or Canada from an authorized Coast Distribution dealer. This warranty applies to the original retail purchaser only, and is not transferable. Proof of purchase is required.

Coverage

Pre-approved parts and labor costs will be covered by POWERHOUSE® for any failure that is proven to be a failure in material or workmanship under normal use during the applicable warranty time period. This coverage is limited to parts, labor and ground shipping of repair parts. It is the responsibility of the end user to return the product to the nearest authorized repair center as directed by the warranty administration center. In the event that the product is deemed to be not repairable or the necessary repair would be economically unfeasible, the warranty department will authorize its prepaid return to the nearest Coast location and Coast will prepay the returned shipping to the dealer, repair center or consumer. Coast Distribution reserves the right to repair or replace any part or unit at its option. Coast Distribution may request defective parts to be returned. Anything replaced under warranty becomes the property of Coast Distribution.

To Obtain Warranty Service

Do not return this product to the store where you purchased it. Contact any authorized dealer or contact our national customer service center at:

Phone: **1-877-544-4449** (8am to 6pm ET)

Fax: **1-800-263-0280**

E-mail: **warranty@powerhouse-products.com**

If contacting us by fax or e-mail, be sure to include a description of the problem as well as all return contact info such as address, phone number, fax number, e-mail, etc. Proof of purchase is required.

Exclusions

THIS WARRANTY DOES NOT EXTEND TO PARTS AFFECTED OR DAMAGED BY ACCIDENT AND/OR COLLISION, NORMAL WEAR, FUEL CONTAMINATION OR DEGRADATION, USE IN AN APPLICATION FOR WHICH THE PRODUCT WAS NOT DESIGNED OR ANY OTHER MISUSE, NEGLIGENCE, INCORPORATION OR USE OF UNSUITABLE ATTACHMENTS OR PARTS, UNAUTHORIZED ALTERATION, OR ANY CAUSES OTHER THAN DEFECTS IN MATERIAL OR WORKMANSHIP OF THE PRODUCT.

Disclaimer of Consequential Damage and Limitation of Implied Warranties

COAST DISTRIBUTION DENIES ANY RESPONSIBILITY FOR LOSS OF TIME OR USE OF THE PRODUCT, TRANSPORTATION, COMMERCIAL LOSS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGE. ANY IMPLIED WARRANTIES ARE LIMITED TO THE DURATION OF THIS WRITTEN LIMITED WARRANTY.

Some states do not allow limitations on how long an implied warranty lasts and/or do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above exclusions and limitations may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Replacement Parts Availability

To purchase replacement parts please refer to the **www.powerhouse-products.com** website