EZ-Connect

Manual Transfer Switch

Installation & Operation Manual

SAVE THIS MANUAL FOR FUTURE REFERENCE

Global Power Products
www.globalpowerproducts.com
225 Arnold Road, Lawrenceville, GA 30044 Phone: 800-886-3837 Fax: 770-736-8231

Terms and Conditions of Usage

TERMS AND CONDITIONS. By breaking the seal attached to the installed EZ-Connect®, you expressly agree that usage of EZ-Connect® is restricted by and subject to the following terms and conditions ("Terms and Conditions").

INSTALLATION AND CARE OF PROPERTY. The EZ-Connect® unit must be installed by an approved Installer and may not be removed or modified by anyone other than an approved installer. An approved installer is defined as a licensed electrician or a technician approved by your local electric utility ("Utility"). As a user of EZ-Connect®, you further agree to follow the EZ-Connect® start-up procedure provided in this Operating Manual, the terms of which are incorporated herein by reference. At all times, the EZ-Connect® unit shall be used solely for the purpose intended, as set forth in this Operating Manual, and shall be used only in accordance with the Instructions and "Safety Tips" contained in this Operating Manual. You understand that any installation, removal, or modification of the EZ-Connect® unit by anyone other than an approved installer is dangerous and is expressly prohibited by these Terms and Conditions.

DELIVERY AND ACCEPTANCE OF PROPERTY. Within Thirty (30) days after the installation of the EZ-Connect® unit, you are required to test the EZ-Connect® unit with a generator. Written notice of any defects or concerns with the operation of the EZ-Connect® unit must be received within Forty-Five (45) days after the installation date of the EZ-Connect® unit by Global Power Products, Inc., at 225 Arnold Road, Lawrenceville, GA 30044, specifying any defects with the EZ-Connect® unit, or it shall be conclusively presumed that you have accepted the EZ-Connect® unit and found it to be in good operating condition.

SAFETY. You understand and agree that once the EZ-Connect® unit is installed, it is the only safe and allowable method for connecting a generator to your home. You grant the Utility the right to enter the site where the EZ-Connect® unit is installed to temporarily disconnect the generator and to physically "lock out" the EZ-Connect® unit at any time if the Utility determines that a potential hazard exists and that such temporary action is necessary to protect the Utility's electric system, customers, or employees.

INSPECTION, REMOVAL AND REPAIR. You acknowledge that the EZ-Connect® unit shall not be removed by anyone other than an approved installer. If the EZ-Connect® unit requires inspection, removal, repair, or replacement, you must immediately contact an approved installer. You further agree to contact Global Power Products, Inc., at 225 Arnold Road, Lawrenceville, GA 30044, telephone number 1-800-886-3837, to receive instructions for the inspection, removal, repair, or replacement of the EZ-Connect® unit.

CLAIMS AND EXPENSES. You expressly agree to hold the Utility, any authorized EZ-Connect® Reseller, and Global Power Products, Inc. harmless from and against any and all claims, costs, expenses, damages, and liabilities, including, but not limited to, reasonable attorneys' fees and costs, arising out of or resulting from, or alleged to be caused by, directly or indirectly, the use, operation, or failure of the EZ-Connect® unit.

TERMS TO BE EXCLUSIVE. You acknowledge that the Terms and Conditions constitute the final and entire agreement regarding the use and purchase of the EZ-Connect® unit.

EXCLUSIVE REMEDY. The exclusive remedy for any cause of action under these Terms and Conditions shall be a claim for damages and in no event will damages or any other recovery of any kind against Global Power Products, Inc. exceed the amount paid to Global Power Products, Inc. for the specific goods sold and causing the alleged loss, damage or injury.

GOVERNING LAW; JURISDICTION AND VENUE. It is expressly understood and agreed that the Terms and Conditions are to be governed by, and construed and enforced according to, the laws of Georgia, without regard to any conflicts of laws principles. The parties hereby submit to the personal jurisdiction of any state or federal court in the State of Georgia located in Gwinnett County, Georgia for the purpose of any suit, action, or other legal proceeding arising out or related in any way to these Terms and Conditions and any purchase order issued hereunder or pursuant to which these Terms and Conditions apply. All parties expressly waive any and all objections that such parties may have as to personal jurisdiction or venue, or both, in any such court.

MISCELLANEOUS. The terms and conditions hereof shall constitute the entire agreement between the parties hereto, and no modification, waiver, or discharge of these provisions shall bind Global Power Products, Inc. unless signed by its President. All technical advice recommendations and services rendered by Global Power Products, Inc. are intended for use by persons having skill and know-how, at their own risk. Global Power Products, Inc. assumes no responsibility for results obtained of damages incurred from their use. Nothing in this Operating Manual is intended to create a partnership, agency, or joint venture. If any provision of this contract is held invalid, unenforceable, or in conflict with any law which governs this contract, the offending provision shall be deleted and the remaining provision shall not be affected thereby. Global Power Products, Inc. may change, modify, or amend these Terms and Conditions at any time by attaching such changed, modified, or amended Terms and Conditions to any purchase order, invoice or other document forming part of any agreement. Failure to promptly object in writing to such changed, modified or amended Terms and Conditions shall constitute acceptance of such revised Terms and Conditions. These Terms and Conditions shall be final, irrevocable, and binding upon, and shall inure to the benefit of, all parties their respective successors and assigns. All parties agree that parole or extrinsic evidence shall not be used to vary or contradict these Terms and Conditions and any purchase order issued hereunder or pursuant to which these Terms and Conditions apply and that recourse shall not be had to alleged prior dealings, usage of trade, course of dealing, or course of performance to explain or supplement these Terms and Conditions.

⚠ WARNING!

Read and understand the instructions contained herein-after before attempting to unpack, assemble, operate, or maintain this equipment.

Hazardous voltages are present inside the EZ-Connect enclosure that can cause death or severe personal injury. Follow proper installation, operation, and maintenance procedures to avoid these voltages.

The EZ-Connect transfer switch equipment covered by this instruction book is designed and tested to operate within its nameplate ratings. Operation outside of these ratings may cause the equipment to fail resulting in death, serious bodily harm, and/or property damage. All responsible personnel should locate the door mounted equipment nameplate and be familiar with the information provided on the nameplate.

EZ-Connect® Manufacturer Limited Warranty

Global Power Products, Inc., warrants your EZ-Connect® unit for a period of one (1) year after delivery of the EZ-Connect® unit to an approved location, under normal use and service, to be free from defects in materials and workmanship. If the EZ-Connect® unit provided by Global Power Products, Inc. does not comply with the expressed warranty set forth above, and customer provides Global Power Products, Inc. with written notice of the breach of warranty within the one (1) year warranty period, specifying in reasonable detail the nature of such breach of warranty, then Global Power Products, Inc. shall, at its discretion, either repair or replace the nonconforming EZ-Connect® unit after receipt of the nonconforming EZ-Connect® unit for its inspection. Global Power Products, Inc.'s sole liability to customer for goods not conforming to the express warranty set forth herein is limited to the repair or replacement of the EZ-Connect® unit. Warranty on the repaired or replaced EZ-Connect® unit or any component thereof is limited to the balance of the original one (1) year warranty period.

Surge Protection Manufacturers Limited Warranty (Optional)

Fifteen (15) Year Product Coverage

Global Power Products, Inc. warrants any Surge Protection Device you purchase from Global Power Products, Inc. and install at an approved location, to be free from defects in materials and workmanship if used under normal conditions. Global Power Products, Inc. will repair or replace any Surge Protection Device that breaches the foregoing warranty or that is damaged by an electrical surge (including those caused by lightning) for a period of fifteen (15) years from the date of installation or fifteen years and six (6) months from the date of manufacture, whichever occurs first.

Fifteen (15) Year White Goods Coverage (Optional)

Global Power Products, Inc. agrees to also repair or replace your residential White Goods Appliances (as hereinafter defined) that sustain surge damage within the same warranty period set forth above, provided your Surge Protection Device was fully functional and operating at the time of the event causing damage to your White Goods Appliances, provided such Surge Protection Device is still under warranty and also damaged by the same event. Notwithstanding the foregoing, the limit of liability of Global Power Products, Inc. under this optional White Goods Coverage provision shall be $1,000 per appliance and $10,000 in the aggregate for all White Goods Appliances in the residence. Additionally, Global Power Products, Inc. shall have no liability hereunder if any damage is covered by any applicable product warranties, service contracts and insurance policies with respect to such White Goods Appliances. Global Power Products,, Inc. shall only be liable under this paragraph to the owner and end-user of the White Goods Appliance at the residence where the unit is installed. The provisions of this paragraph shall be the sole and exclusive remedy of the owner and end-user of the damaged White Goods Appliance for the damages contemplated herein, whether such liability is based on contract, tort (including, but not limited to, negligence) or otherwise. Global Power Products, Inc. reserves the right to audit any damage, site or location and/or cost of repairs and may require additional proof of loss.

A "White Goods Appliance" is defined as a washer, dryer, stove, refrigerator, freezer, HVAC unit, dishwasher or garbage disposal.

All claims under these White Goods Appliance coverage provisions must be made in writing within thirty (30) days after the damage occurred. This coverage does not apply to any damage caused by or associated in any way with sustained over voltages, vandalism, theft, normal use, wear and tear, obsolescence, abuse, unauthorized modification, misuse, improper installation, or catastrophic events.

Warranty Limitations

EXCEPT AS SET FORTH HEREIN, GLOBAL POWER PRODUCTS, INC. EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF MERCHANTIBILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NONE SHALL BE IMPELLED BY LAW.

Except as expressed previously herein, Global Power Products, Inc. disclaims any and all liability for delay of delivery, incidental, indirect, special, or consequential damage arising out of the sale, lease, or use of any Global Power Products, Inc. product (including, but not limited to, lost profits, loss of data, and all freight, mileage, travel time, and insurance charges associated with any claims hereunder), whether or not based upon negligence or breach of warranty or strict liability in tort or any other cause of action. The warranty provisions of this Operating Manual are valid in the United States only.

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

FORCE MAJEURE. Global Power Products, Inc. shall not be liable for any claims, costs, expenses, damages, liabilities, non-performance or delay in performance due wholly or partly to any cause either not wholly or exclusively in its control or which it could not by the exercise of reasonable diligence have avoided. The following shall not be considered wholly or exclusively within Global Power Products, Inc.'s control: fires; floods; earthquakes; unusually severe weather; acts of God; epidemics or quarantine restrictions; labor disputes, controversies, or disturbances; wars, riots or insurrections; embargoes or governmental actions; court decrees; inability to use the full capacity of plants or facilities; machinery malfunctions or breakdowns; and inability to obtain fuel, power, raw materials, labor, containers, or transportation facilities without litigation or the payment of penalties or unreasonable prices, or the acceptance of unreasonable terms and conditions.

Surge Protection Warranty Assistance: Call 1-800-886-3837

Important Safety Instructions

Read the following information carefully before attempting to install, operate or service this equipment. Also read the instructions and information on tags, decals, and labels that may be affixed to the EZ-Connect manual transfer switch.

DANGER! Connection of a generator to an electrical system normally supplied by an electric utility shall be by means of suitable transfer equipment so as to isolate the electric system from utility distribution system when the generator is operating (Article 701 Legally Required Standby Systems or Article 702 Optional Standby Systems, as applicable). Failure to isolate electric systems by these means may result in damage to generator and may result in injury or death to utility workers due to back-feeding of the electrical lines.

Global Power Products cannot anticipate every possible circumstance that might involve a hazard. The warnings in this manual, and on tags and decals affixed to the unit are, not all inclusive. If using a procedure, work method or operating technique Global Power Products does not recommend, ensure that it is safe for others. Also make sure the procedure, work method or operating technique utilized does not render the EZ-Connect transfer switch unsafe.

Throughout this manual, and on tags and decals affixed to the EZ-Connect, DANGER, WARNING, CAUTION and NOTICE blocks are used to alert personnel to special instructions about an operation that may be hazardous if performed incorrectly or carelessly. These safety warnings cannot eliminate the hazards that they indicate. Common sense and strict compliance with the special instructions while performing the service are essential to preventing accidents. Please observe them.

DANGER!

After this heading, read instructions that, if not strictly complied with, will result in personal injury or property damage.

WARNING!

After this heading, read instructions that, if not strictly complied with, may result in personal injury or property damage.

CAUTION!

After this heading, read instructions that, if not strictly complied with, could result in damage to equipment and/or property.

NOTICE!

After this heading, read instructions that, if not strictly complied with, could result in damage to equipment and/or property.

Important Safety Instructions

General Hazards

- Any AC generator that is used for backup power if a normal (utility) power source failure occurs, must be isolated from the normal (utility) power source by means of an approved transfer switch. Failure to properly isolate the normal and standby power sources from each other may result in injury or death to electric utility workers, due to back-feed of electrical power.
- Improper or unauthorized installation, operation, service or repair of the equipment is extremely dangerous and may result in death, serious personal injury, or damage to equipment and/or personal property.
- Extremely high and dangerous power voltages are present inside an installed transfer switch. Any contact with high voltage terminals, contacts or wires will result in extremely hazardous, and possibly lethal, electric shock. **DO NOT WORK ON THE EZ-CONNECT TRANSFER SWITCH UNTIL ALL POWER VOLTAGE SUPPLIES TO THE SWITCH HAVE BEEN POSITIVELY TURNED OFF.**
- Competent, qualified personnel should install, operate and service this equipment. Adhere strictly to local, state and national electrical and building codes. When using this equipment, comply with regulations the National Electrical Code (NEC), CSA Standard; C22.1 Canadian Electric Code and Occupational Safety and Health Administration (OSHA) have established.
- Always keep the transfer switch enclosure door closed. Only qualified personnel should be permitted access to the switch interior.
- In case of an accident caused by electric shock, immediately shut down the source of electrical power.

Safety Tips

- Do not wait for an emergency to learn how to connect your generator and select loads to the EZ-Connect. (See Setup Procedures for detailed information.)
- Never connect or disconnect the power cord to/from your portable generator while the generator is operating. Turn off the portable generator and turn off all circuits in your breaker panel before connecting or disconnecting the power cord.
- Keep the power cord stored in a dry, safe location when not in use.
- Never attempt to remove, repair, dismantle, modify, or alter the EZ-Connect once it has been installed.

⚠ CAUTION!

Always locate and operate your generator in accordance with the manufacturer's instructions as outlined in the generator owner's manual.

⚠ CAUTION!

Check the equipment nameplate for rated voltage. It should be the same as the utility and generator line voltages. Operating the equipment on improper voltage can cause equipment damage.

Table of Contents

For Questions Call: 800-886-3837

Global Power Products

Section 1 – General Information

1.1 Introduction

Thank you for purchasing a Global Power Products EZ-Connect manual transfer switch to safely connect a portable generator to your home during a power outage. This manual has been prepared especially for the purpose of familiarizing personnel with the design, application, installation, operation and servicing of the applicable equipment. Carefully read all instructions before using EZ-Connect. This will help to prevent accidents or damage to equipment that might otherwise be caused by carelessness, incorrect application, or improper procedures. Product features include:

- Generator and Utility Mains mechanically interlocked preventing utility or generator power back feed.
- Flexibility of selecting the appliances you want to run from your home's breaker panel, up to the capacity of your generator.
- Mechanical lockout that safely prohibits power from any source when servicing device.
- Type 3R enclosure which is rated for outdoor or indoor installations.
- Rated for up to a 200 Amp service.

1.2 Equipment Description

The EZ-Connect manual transfer switch is used for transferring critical electrical loads from a UTILITY (NORMAL) power source to an ALTERNATE (GENERATOR) power source. The transfer switch prevents electrical back-feeding between the UTLITY and ALTERNATE sources. For that reason, electrical codes require a transfer switch in all standby electric system installations.

1.3 EZ-Connect Enclosure

The standard switch enclosure is National Electrical Manufacturer's Association (NEMA) and UL 3R type enclosure primarily provide a degree of protection against falling rain and sleet; undamaged by the formation of ice on the enclosure.

1.4 Important Installation Information

A model label is permanently affixed to the transfer switch enclosure. Use this transfer switch only with the specific limits shown on model label and on other decals and labels that may be affixed to the switch. This will prevent damage to equipment and property.

You MUST have this information should the unit need repair or replacement. Please complete the information from the model label affixed to EZ-Connect and keep this information for future reference

Installation Date:	
Model Number:	
Serial Number:	

EZ-Connect shall not be removed or uninstalled by anyone other than a licensed electrical contractor. If the EZ-Connect requires inspection, removal, repair, or replacement, immediately contact the licensed electrical contractor to request that the EZ-Connect be removed. Once the unit is removed, contact Global Power Products at 225 Arnold Road, Lawrenceville, GA 30044, or call at 1.800.886.3837 to receive instructions on how to have the EZ-Connect unit repaired and/or replaced.

1.5 Selecting A Portable Generator

What Kind of Generator Do I Need?

There are a wide variety of portable generators available for purchase. Some are more suitable than others for connecting to your house. When selecting a portable generator to connect to your house, you should ensure the generator:

- Will not damage sensitive electronic appliances/equipment
- Provides the capacity to start needed motor loads, such as a well or sump pump
- Has the necessary four-wire 20-amp, 30-amp or 50-amp receptacle required to connect the EZ-Connect
- Required 120/240 outlet can either be the L14-20, L12-40, or the 14-50 straight blade NEMA outlet

The quality of power produced by a portable generator is also an important factor to consider when selecting your generator. If the voltage output is too low, it could cause motors, such as your refrigerator or furnace motor, to overheat. If the voltage output is too high, it could damage sensitive electronic equipment such as the computer of the digital controls on your heating system.
To maximize your generator's power quality, it is recommended that your generator have automatic voltage regulation. Electronic voltage regulation is preferred over capacitor or condenser type regulation in instances where sensitive electronic equipment is being operated.

What Size Generator Do I Need?

During a power outage, the EZ-Connect allows you to select the combination of loads/appliances you want to operate by simply switching breakers in the household breaker panel. This flexibility makes generator sizing easy.

You will want a generator that can run the largest appliances and motors you will need during an outage. You can always run other smaller loads/appliances by rotating them on and off as necessary.

For example, if you have a generator with 9600 continuous watts of capacity, during a power outage, you can run the hot water heater (typically 4800 watts) by simply turning off most other household breakers until the water tank heats up. Once the water is heated, shut off the water heater breaker and switch the other household circuit breakers back on.

To determine what loads your portable generator can support, you must consider both the "running watt" and the "starting watt" requirements of the loads you want to operate.

You can purchase or use a generator of any size provided the generator is equipped with a 4 wire, 120/240-volt receptacle rated at 20-amps, 30-amps and/or 50-amps. The EZ-Connect is designed to be compatible with 20-amp, 30-amp and 50-amp connectors. The EZ-Connect can support up to a 48,000-watt (200-amp x 240 Volt) generator source.

⚠ NOTICE!

The installation must fully comply with all applicable codes, standards, and regulations.

Section 2 – Installation

⚠ DANGER!

Verify both UTILTY and ALTERNATE power supplies are OFF before trying to connect power source and load lines to the EZ-Connect transfer switch. Supply voltages are extremely high and dangerous. Move handle on EZ-Connect into OFF position.

⚠ WARNING!

Power conductors and sending wires may have voltage present that can cause severe personal injury or death. De-energize all power or control circuit conductors before beginning to perform any wiring activity to or within the EZ-Connect transfer switch.

2.1 Introduction to Installation

This EZ-Connect transfer switch has been wired and tested at the factory. Installing the switch includes the following procedure:

- Mounting the enclosure
- Connecting utility and generator power source leads
- Connecting the load leads
- Installing/connecting any options and accessories
- Testing the EZ-connect with portable generator

Carefully remove the EZ-Connect from carton and inspect device before installation. The purchaser must file with carrier any claims for loss or damage incurred while in transit.

Features and Options of the EZ-Connect transfer Switch

- The EZ-Connect transfer switch, housed in a NEMA 3R enclosure **(Standard)**
- Power cord with the specified plug type on the end **(Optional)**
- Surge Safe surge protection **(Optional)**
- 200-amp main breaker **(Optional)**
- Instruction/operation manual

2.2 Tools Required

Flexible conduit, drill, drill bits, hole saw (type and length will be determined by material you will be drilling and cutting), open ended wrenches or adjustable wrenches, socket wrenches, standard and Phillips head screw drivers, sledge hammer, pencil, channel lock pliers, spade shovel, rake, screws, nails, silicon caulk, and safety goggles.

2.3 Additional Equipment (Optional)

Post for mounting, post-hole digger, and cement.

2.4 Mounting

Mounting dimensions for EZ-Connect enclosure are located below. Find a suitable location to mount the EZ-Connect transfer switch. The type 3R Enclosure is outdoor rated but can also be used for indoor installation. Indoor installations however, may require additional wiring expenses. Mount the switch vertically to a rigid supporting structure. To prevent switch distortion, level all mounting points.

Enclosure Dimensions	
EZ-Connect	**23x14.25x3.88**

Section 2 – Installation

2.5 Opening the Door

Pull the padlock-able catch located in the bottom right-hand corner of the door towards the front of the enclosure. At the same time, pull the door downward to unlock the door. Once the door is unlocked, lift the right side of the door to open the enclosure.

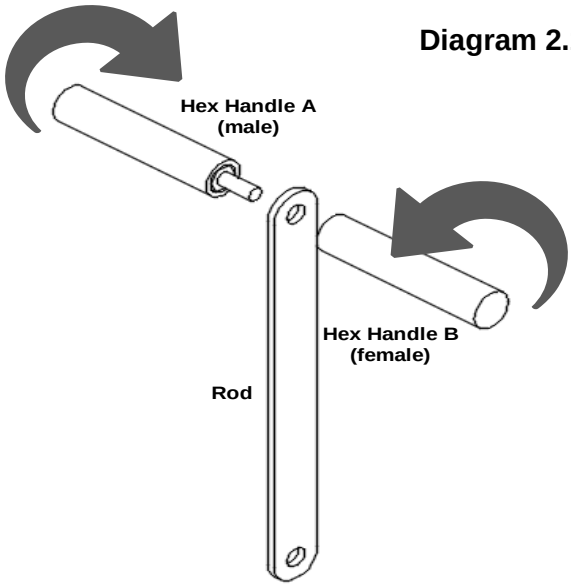
2.6 Removing Inner Cover

This should only be attempted by a certified electrical contractor.

Refer to Diagram 2.1

Once you have opened the door you will gain access to the handle. To remove the handle, twist each side of the handle in opposite directions. This will unscrew the male end of the handle from the threaded female end.

Diagram 2.1



2.7 Connecting Power Source and Load Lines

This should only be attempted by a certified electrical contractor.

Follow the wiring diagrams and electrical schematics provided in this manual to wire the EZ-Connect.
See Diagram 2.2 on the next page. More detailed diagrams can be found on Page 8.

⚠ DANGER!

Verify both UTILITY and ALTERNATE power supplies are OFF before trying to connect power source and load lines to the transfer switch. Supply voltages are extremely high and dangerous. Move handle on EZ-Connect into OFF position.

⚠ CAUTION!

Extreme care should be taken to protect the EZ-Connect from drill chips, filings, and other contaminants when marking the cable entry holes (if applicable) and mounting the enclosure to prevent component damage or a future malfunction.

⚠ WARNING!

Power conductors and sending wires may have voltage present that can cause severe personal injury or death. De-energize all power or control circuit conductors before beginning to perform any wiring activity to or within the transfer switch.

⚠ NOTICE!

The installation must fully comply with all applicable codes, standards, and regulations.

Section 2 – Installation

⚠ DANGER!

Verify both UTILITY and ALTERNATE power supplies are OFF before trying to connect power source and load lines to the transfer switch. Supply voltages are extremely high and dangerous. Move handle on EZ-Connect into OFF position.

⚠ NOTICE!

The installation must fully comply with all applicable codes, standards, and regulations.

Step 1: Locate the load wires **H1** and **H2** that connect the bottom of the meter socket (**Lug 1** and **Lug 2**) to the house load. Disconnect these load wires from the bottom of the meter socket (**Lug 1** and **Lug 2**).

Step 2: Add two double wire lugs to the meter pan, these are represented as **Lugs 3** and **Lug 4**.

Step 3: Connect the existing load wire **H1** to **Lug 3** and connect the existing load wire H**2** to **Lug 4**.

Step 4: Connect a wire from **Lug 3** to the middle left lug of the EZ-Connect. This wire is shown as **L1.**

Step 5: Connect a wire from **Lug 4** to the middle right lug of the EZ-Connect. This wire is shown as **L2.**

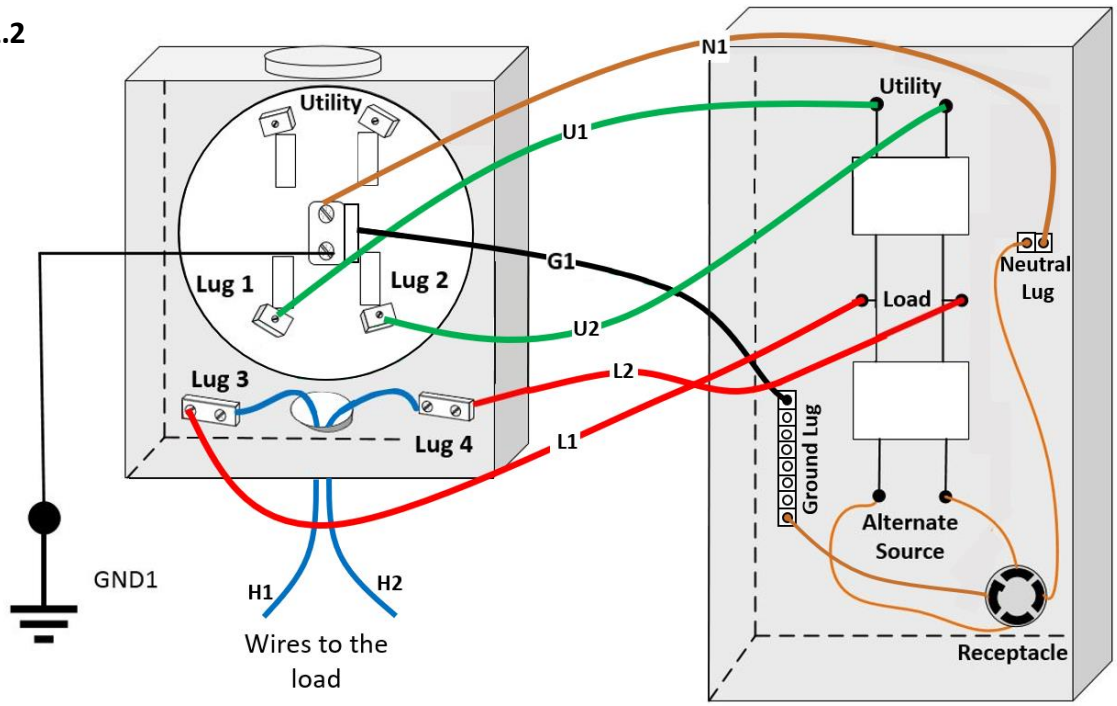
Step 6: Connect a wire from **Lug 1** to the top left lug of the EZ-Connect. This wire is shown as **U1.**

Step 7: Connect a wire from **Lug 2** to the top right lug of the EZ-Connect. This wire is shown as **U2.**

Step 8: Connect a wire from the ground lug in the center of the meter pan to the ground lug of EZ-Connect. This wire is shown as **G1.**

Step 9: Connect a wire from the neutral lug in the center of the meter pan to the neutral lug of the EZ-Connect. This wire is shown as **N1.**

Diagram 2.2



Section 3 – Operation

3.1 Setup Procedures

Carefully read all instructions before using the EZ-Connect. This will help to prevent accidents or damage to equipment that might otherwise be caused by carelessness, incorrect application, or improper procedures. The best time to prepare for a power outage is before there is an actual interruption of utility-supplied power. The following are suggested steps to prepare for an actual power outage using your portable generator with the EZ-Connect.

- Determine which appliances are on each circuit breaker.
  Note: circuit breakers may control more than one appliance. We recommend you affix labels to each circuit breaker listing its appliances.
- Familiarize yourself with the typical power requirements of the appliances you expect to use during an outage, always taking into consideration the capacity (start-up watts and running watts) of your generator. See Sample Worksheets located in the back of this manual.
- To ensure that your generator will work properly when you need it, it is important to start and run your generator under load regularly. Please refer to the generator owner's manual for proper testing and maintenance.

3.2 Manual Operation of the Handle

A manual handle is shipped with the EZ-Connect. Manual operation must be checked BEFORE the transfer switch is operated electrically. Do not use excessive force when operating the EZ-Connect transfer switch, as the handle could be damaged. To check manual operation, proceed as follows:

STEP 1. Turn the generator's AUTO/OFF/MANUAL switch to OFF.

STEP 2. Turn OFF both UTILITY and ALTERNATE power supplies to the transfer switch, with whatever means provided (such as the main line circuit breakers).

3.3 Start-Up Procedures

The following are the start-up procedures for the EZ-Connect. For generator start-up procedures, please refer to the generator manufacturer owner's manual.

⚠ DANGER!

Do NOT manually transfer under load. Disconnect transfer switch from all power sources by approved means, such as a main circuit breaker(s).

Diagram 3.1

STEP 1. Turn off all the circuit breakers in your breaker panel. (See Diagram 3.1)

STEP 2. Move your generator into position to be connected to the EZ-Connect. Remember, generator exhaust gases contain deadly carbon monoxide. The generator should never be operated inside, this includes basements, crawl spaces and/or attached garages. Please consult your generator owner's manual for complete instructions on the safe location for and operation of your generator.

STEP 3. Insert the male plug of the power cord into the correct NEMA 120/240-volt outlet on the generator.

STEP 4. Plug in the female end of the power cord into the side receptacle on the EZ-Connect transfer switch.

STEP 5. Turn off the idle setting (if present) on your generator. This will ensure that your generator will operate at the correct speed and voltage.

STEP 6. Start the generator, following the procedures described in the generator owner's manual furnished by the manufacturer.

STEP 7. Move the handle of the EZ-Connect to the GENERATOR position.

STEP 8. Select the appliances that require emergency power. Note the capacity of your generator, the start-up watts and running watts to know what you can run while using your generator.

Locate the circuit breakers in your home's breaker panel (See Diagram 3.2) for the appliances you can support and turn them on one at a time. Start with large motor loads first, such as refrigerators. Motors require 2 to 3 times more power to start than other electrical appliances. Allow generator operation to stabilize before starting the next load. Next, start smaller motors such as a ceiling or ventilation fan. Then start smaller appliances with no motors such as lights.

Diagram 3.2

Refueling your Generator: When it is time to refuel your generator, turn off all your home's circuit breakers then turn off your generator. Refuel the generator by following the generator's owner's manual. Return to Step 1 of the start-up procedures to reconnect loads/appliances.

If the generator's circuit breaker trips off during operation or setup: Turn off the generator. Turn off all circuit breakers in the breaker panel. Reset the circuit breaker on the generator. Restart the generator. Select and reconnect loads following the procedures summarized in step 8.

3.4 Shut-Down Procedures

To transfer from generator power to utility power proceed as follows:

STEP 1. Shut down the generator, following the procedures in the generator owner's manual.

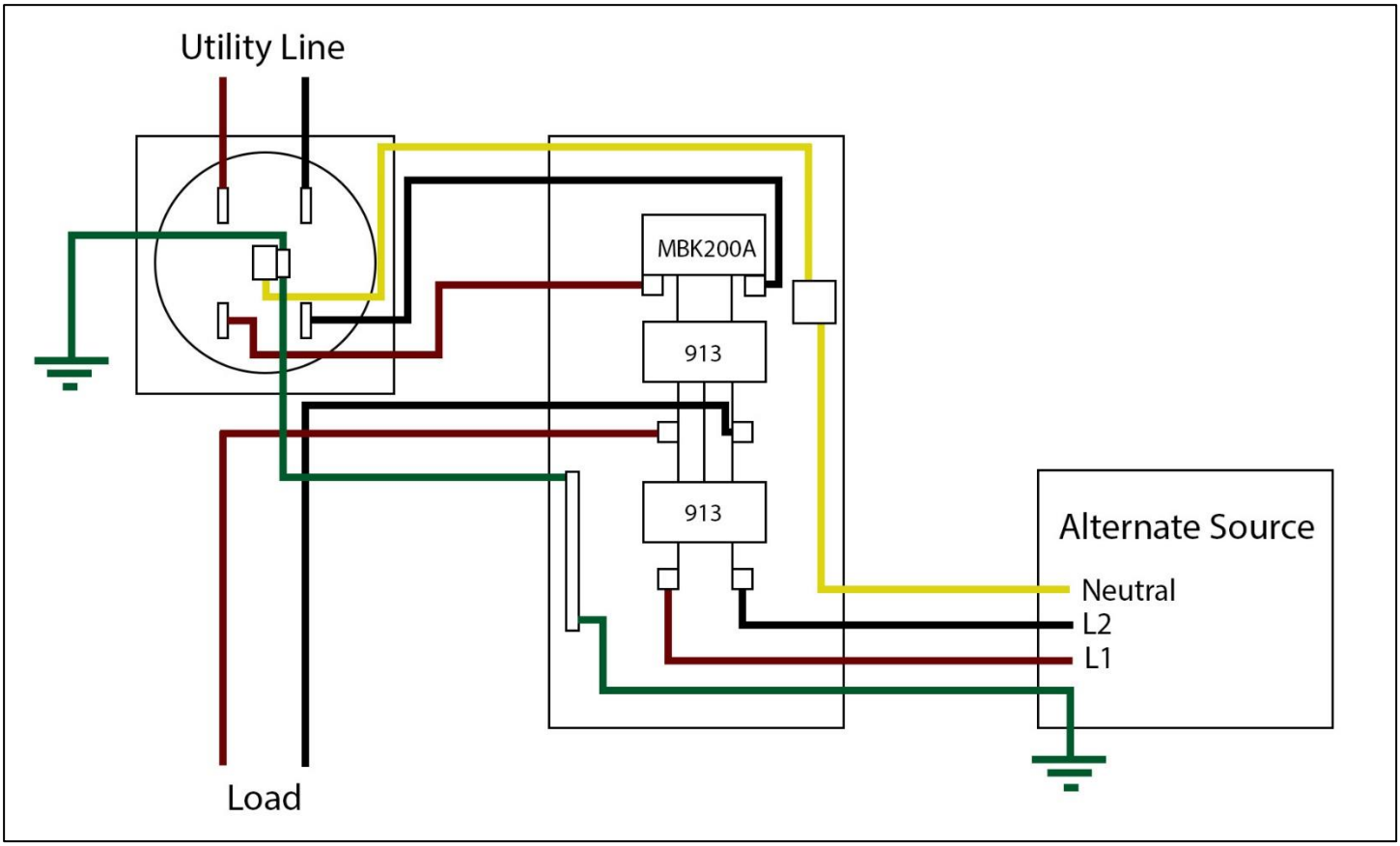
STEP 2. Unplug the generator from the EZ-Connect transfer switch and store the cord in a dry place.

STEP 3. Move the handle of the EZ-Connect to the **UTILITY** position.

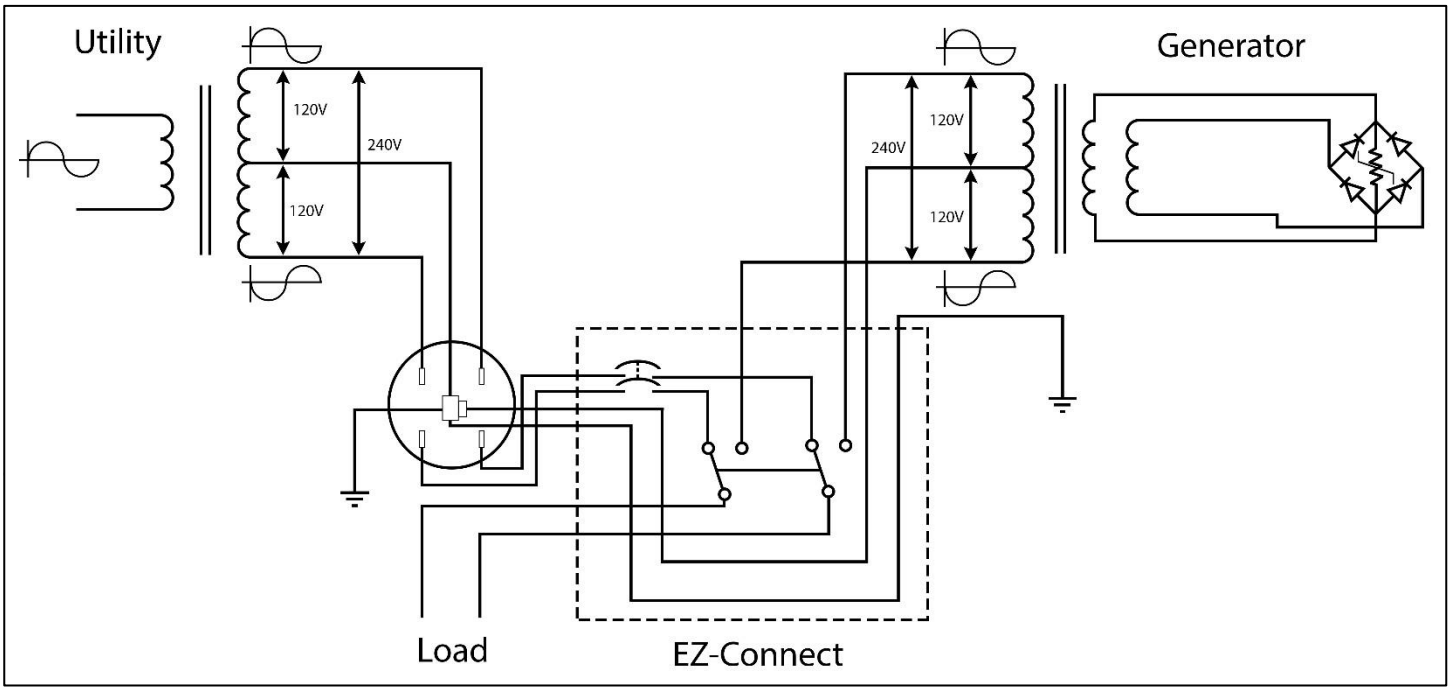
STEP 4. On your breaker panel, set all circuit breakers to the 'ON' position.

Section 4 – Drawings and Diagrams

4.1 Wiring Diagram for EZ-Connect Manual Transfer Switch



4.2 Schematic for EZ-Connect Manual Transfer Switch



Section 5 – Calculating House Load

5.1 Appliance Usage Guide:

Notes to Appliance Usage Guide

The wattages on the Appliance Energy Guide are estimates. The estimated wattage required for your appliances can be easily calculated. *(NOTE: 1 kW=1000 watts; 2 kW=2000 watts and so on*.) The formula for finding wattage is: Volts x Amps = Watts (running). Always use starting factor when calculating electrical load requirements for your generator. Select the appliances you want to operate and add the starting wattages together to determine if they can all be operated at the same time without exceeding the capacity of your generator. NOTE: *individual circuit breakers on your breaker panel may control more than one appliance*. Always determine which appliances/loads are connected to specific breakers.

Worksheet Instructions

Write down the maximum and continuous wattage output ratings for your generator in the boxes marked A. From the Appliance Energy Guide, select the appliances that you wish to operate and write them in column B. For each selected appliance, write its corresponding starting factor and run watts in columns C and D respectively. For each appliance that you have selected, multiply the starting factor by the run watts and write the results or the load watts in column E. NOTE: Only items that start simultaneously should be tallied in column D. Finally, sum up all the load wattages for each appliance and lights in column E. Add each appliance load watts and write the number in box G. The number in box G represents the total amount of load you plan to run on your portable generator. Be sure that the total in box G does not exceed the generator size in box A.

Always select a generator that is as large or larger than the estimates for both running and starting wattages.

Equipment	Starting Factor	Running Wattage (avg.)
Water Heater (50 gallon)	1	4500-5000
Portable Heater with fan	2	500-1500
Furnace Fan (Central) - 1/4 HP	3	400
Computer	1	200
Refrigerator/Freezer	3	750
Lights	1	40-150
Range w/Oven	1	12200
- Small Burner	1	1300
- Large Burner	1	2400
Garage Door Opener - 1/3 HP	3	750
- 1/2 HP	3	1050
Well Pump - 1/3 HP	3	750
1/2 HP	3	1000
Submersible Sump Pump - 1/2 HP	3	1000
Electric Heat Pump	3	6000
Central A/C 3 ton	3	6000
Dishwasher w/o hot water	2	1200
Television	1	150-400
Microwave	1	600-1500
Coffee maker	1	750-1200
Toaster	1	1100
Hair Dryer	2	600-1400
Washing Machine w/o Hot Water	2	1000
Clothes Dryer	2	4850

5.2 Load Calculation:

Generator Size: (Watts) 7200

Load	Start Factor	X	Run Watts	=	Load Watts
Refrigerator	3	X	1000	=	3000
Sump Pump	2	X	1000	=	2000
Computer	1	X	200	=	200
Fan (central) ¼ hp	3	X	400	=	1200

Lights	Wattage	X	Number	=	Load Watts
	60	X	5	=	300
	100	X	1	=	100
			Total:		6800

Generator Size: (Watts)

Load	Start Factor	X	Run Watts	=	Load Watts
		X		=	
		X		=	
		X		=	
		X		=	

Lights	Wattage	X	Number	=	Load Watts
		X		=	
		X		=	
			Total:		