

VAGABOND MINI™

LITHIUM

QUICK START GUIDE



5/18/2021

1. CHARGE the battery.

We recommend charging the battery as soon as the system is unboxed. You will charge the battery using the provided VMC3A battery charger. First, plug the charger's two-pronged AC power cord into a suitable AC power source (the LED on the battery charger will shine green to indicate the connection). Next, connect the charger to the **Vagabond Mini™ Lithium** using the cord with the red and black Anderson connectors. Insert the connectors red-to-red and black-to-black in the Anderson sockets located on the faceplate of the unit (labeled "CHARGER").

The LED on the battery charger will shine **RED** while the battery is charging and shine **GREEN** to indicate that the battery is fully charged (note: this LED is on the battery charger, NOT on the inverter). *Although the system arrives with the battery connected to the inverter, you may also charge the battery (or an external spare battery) by plugging the charger directly into the connectors on the battery itself. See pages 8 - 11 to learn more.*

2. CONNECT your flash units.

Plug one, or two, flash units into the AC power outlets located on the front panel faceplate, or connect up to four units by using a multi-outlet extension cord or power bar. **Note:** *Always use grounded outlets and extension cords. Depending on the type of flash units and power settings used, you may be able to successfully power up to four flash units.*

3. TURN ON the Vagabond Mini™ Lithium system.

Turn your system ON with the ON / OFF power switch.

4. TURN ON the connected flash units.

Turn on each flash unit / power pack in your setup normally, using the ON / OFF power switch on each individual unit.

5. TURN OFF the MODELING LAMP(S) in your flash units.

Modeling lamps should generally be turned off when used with **Vagabond Mini™ Lithium**, as the continuous current draw of modeling lamps will quickly deplete the battery and will increase recycle times or may cause the inverter to overheat or shut down. See the **WARNINGS** section on the following page for more.

Please be sure to read the entire product manual to ensure safe use of equipment.



Warnings and Safety Information

As with all devices that use lithium batteries, misuse presents a potential risk of fire or other dangerous conditions. Read all warnings before use.

WARNING! Do not operate or charge the Vagabond Mini™ Lithium system inside a carry bag or backpack. *Air circulation around the Vagabond Mini™ Lithium system and charger must be provided.* Do not obstruct the Vagabond Mini™ Lithium system's internal fan or ventilation holes during use or when charging.

WARNING! Do not operate or charge a Vagabond Mini™ Lithium system if the battery gets uncomfortably hot to the touch. Unplug all cords and discontinue use immediately. An excessively hot battery may be damaged.

WARNING! Do not leave your Vagabond Mini™ Lithium system unattended when it is turned on and in use or charging. As with all electric equipment, close supervision is necessary. Do not allow unattended children around this equipment as potentially dangerous conditions may result. Turn the system OFF and unplug the battery charger when not in use.

When storing your Vagabond Mini™ Lithium, verify that it contains more than 25% charge. If the charge status is lower than 25%, apply a partial charge, turn the system OFF, disconnect the battery charger, disconnect the battery and store in a safe, cool, dry place away from flammable materials. While the battery can be stored safely in any state of charge, it should be used and partially recharged every three months for best battery life, and to avoid ruining the battery's components. Do not charge the battery to 100%, and then store it. Also, storing the battery for periods over a few days when it is nearly discharged may result in a dangerous degradation of the battery's internal components, possibly causing overheating and creating a fire hazard when the battery is then charged again. Do not store a battery in a hot environment, such as an attic, or in a cold environment below freezing.

WARNING! Do not attempt to charge a battery that has been stored for a long period of time if it will not power the VML inverter, or show at least a partial charge indication on the LED charge meter when connected to the VML inverter. If the battery does not hold a charge during storage, as indicated by the LED charge status gauge, and it will not allow the inverter to turn ON, the battery may have been damaged by improper storage. Recycle the battery and replace it.

WARNING! Do not operate, store, or charge the Vagabond Mini™ Lithium system on or around flammable materials such as newspaper, carpet, wood sawdust, gasoline, etc. Keep all components away from fire, flames, and heated surfaces.

WARNING! Do not operate, store, or charge the Vagabond Mini Lithium™ system in or around water, rain, ground moisture, salt spray, dew, or any other liquids. Exposure to water (especially salt water) increases the risk of a potential battery fire. In the extremely unlikely event of a lithium battery fire, use a dry powder fire extinguisher.

The system should ONLY be used in dry, moderate conditions where the equipment is protected from rain, dirt, sand, and dust.

When moving the system from one environment to another where condensation can occur due to temperature changes, do not operate or charge until all condensation has fully evaporated. If any components become immersed in water for any reason, DO NOT operate or charge the system.

Discard the battery properly and contact our Customer Service team.

WARNING! Do not insert any foreign objects into any outlets or ventilation holes.

Do not carry or store the system together with necklaces, hair pins, nails, paper clips, or any other small metal objects.

WARNING! Do not use ungrounded power cords, power outlets or power strips.

Always use three-prong, grounded power cords and extension cords when connecting flash units / power packs to the system. Do not use power strips or outlet adapters that defeat the third prong.

WARNING! The Vagabond Mini™ Lithium contains no user-serviceable parts.

Never open, disassemble, or attempt to repair any system components. Only qualified technicians should disassemble and service the system's internal components as incorrect disassembly can create an electric shock hazard. Fingers and other foreign objects must never be inserted or dropped inside any of the outlets. If the system or any internal component has been dropped or damaged, discontinue use and contact our Customer Service team. Likewise, do not attempt to make any changes or modifications to your system. Changes and/or modifications made, outside of those performed or approved by Paul C. Buff, Inc., may present hazardous conditions and void the warranty.

WARNING! Do not put a continuous load higher than 120 Watts on the inverter.

Doing so may cause the unit to overheat and shut down. Also note that attempting to operate a continuous load under 120 watts in conjunction with operating flash units will degrade the ability to recycle the flash units.

WARNING! Do not connect 120V flash units to a 230V Vagabond Mini™ Lithium system or 230V flash units to a 120V Vagabond Mini™ Lithium system.

Do not use adapters to connect flash units of incompatible voltage as this can damage the flash units and/or the inverter.

WARNING! Do not use Paul C. Buff, Inc. equipment without permission in restricted areas.

Do not violently shake any system components or subject the system to severe vibration. Should any component be dropped, stepped on, or crushed, causing enough damage to crack the housing, discontinue use immediately and contact our Customer Service team.

Do not attempt to operate flash units or flash heads / power packs with the modeling lamps turned on. The system is not designed to operate modeling lamps continuously as this would deplete the battery rapidly, cause slow recycle times and could overheat the system's inverter.

WARNING! Do not use the Vagabond Mini™ Lithium system to power medical devices.

continued on the following page...



The Vagabond Mini™ Lithium cannot power a 250W modeling lamp at full power.

For Einstein™ users, we offer 25W modeling lamp for reduced-intensity modeling lamp usage (part # 25W, sold separately on our website), though this lamp should still only be used for brief composition. For AlienBees™ or White Lightning™ users, the supplied modeling lamps can be replaced with lower 40W household bulbs to allow brief usage of modeling lamps for composition. If you choose to use a lower-wattage modeling lamp briefly, the units should be set to extinguish the modeling lamps during recycle to minimize recycle time.

Use care when traveling with or transporting your Vagabond Mini™ Lithium system.

Use appropriate packaging to protect the system against bumps and jolts that may damage the components. Do not, for example, allow the battery or inverter to bounce around unprotected in the backseat of a car or in a truck bed.

Lithium ion batteries are consumable items. Since battery capacity is a function of the number of charge / discharge cycles, batteries are considered exhaustible. Depending on the flash unit load and frequency of use, the battery should deliver 200-300 charge cycles with 2 to 4 years of useful life, if stored properly. The battery should be replaced after 3 years or when its total capacity drops to 50% (when the number of full power flashes, per wattsecond rating, per battery charge is halved), whichever comes first.

Properly recycle an exhausted battery. To discard an exhausted battery in a safe and environmentally friendly way, take the battery to a rechargeable battery recycling center. Many local electronic, tool, and home improvement stores will take your battery: visit the Call2Recycle website (www.call2recycle.org) to learn more and find recycling locations in your area.

The complete Material Safety Data Sheet (MSDS) is available for download on our website (paulcuff.com/Manuals-and-Instructions.html) or we can send you a hard copy by mail. To request a hard copy, contact our Customer Service team.

VAGABOND MINI™ LITHIUM General Description

The **Vagabond Mini™ Lithium (VM120)** system provides reliable, portable, battery power for Paul C. Buff, Inc. flash units. The system includes an internal lithium battery and a power inverter, conveniently connected and enclosed in a high-impact, flame retardant housing. The system gives you the ability to power flash units or power packs (units that normally require a standard AC power line connection) in locations where a suitable power source is unavailable or unreliable. The 230V version (**VM120-230V**) provides portable battery power for 220V / 230V Paul C. Buff, Inc. flash units, including Einstein™ units and 220V AlienBees™ units. This version includes the same battery, battery charger and casing, but it includes the 230VAC inverter with Australian / Chinese Type I outlets.

Your Satisfaction Guarantee and Factory Warranty

The **Vagabond Mini™ Lithium** system arrives with our **60-Day Absolute Satisfaction Guarantee**. If you are not satisfied with the system for any reason, you may return it within 60 days for a complete refund, minus the battery and the cost of shipping. In order to receive your full refund, ensure that all items originally arriving with the system are included in your return (the battery, inverter, two-piece battery charger, shoulder strap, and light stand mounting clamp).

The **Vagabond Mini™ Lithium** system arrives with our **1-Year Factory Warranty**. Paul C. Buff, Inc. guarantees to the original purchaser an individual product factory warranty against manufacturer defects in materials and workmanship, beginning with the date that the product is originally shipped to the customer.

Terms and Conditions of Warranty:

- This warranty is limited to the repair or replacement of a product or component that should become defective under normal use, as outlined in the product description and product manual.
- If, during the applicable warranty period, the product is found to be defective by Paul C. Buff, Inc., we will repair or replace the defective product with an equivalent model without charge for labor or parts.
- This warranty will not cover deterioration or malfunction resulting from accident, act of nature, abuse, misuse, neglect, unauthorized product repair, shipping of the product, opening of or modification or failure to follow instructions supplied with product.
- This warranty does not apply to any flashtubes, modeling lamps, batteries (except the VMB8.6A internal Vagabond Mini™ Lithium battery), or memory cards that may arrive with a product as these become exhausted based on normal use. Specifically with the Vagabond Mini™ Lithium system, as battery capacity is a function of the number of charge / discharge cycles and other factors, batteries are considered exhaustible and no warranty can be offered for batteries that have been depleted from heavy and frequent use or misuse.
- The product must be returned to Paul C. Buff, Inc. for warranty service. For customers in the United States, warranty service includes return shipment via UPS ground to the original destination (where the equipment was sent to the original purchaser). Customers outside of the United States will be responsible for all shipping fees, duties, taxes and brokerage fees to ship the product to and from our offices.
- Paul C. Buff, Inc. IS NOT RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE OR CONSEQUENTIAL DAMAGES, LOST PROFITS, OR PRODUCTS LOST, STOLEN OR DAMAGED DURING SHIPPING, WHETHER ARISING IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE. ALL LIABILITY OF Paul C. Buff, Inc. SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT, AT OUR OPTION, OF ANY DEFECTIVE PRODUCT.
- THIS WARRANTY IS EXPRESSLY MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- This warranty may not be altered other than in writing.

VAGABOND MINI™ LITHIUM Specifications

Battery Type	LiCoxNiyMnzO2 lithium battery
Battery Volts / Amp-Hours	14.8V / 8.6AH
Battery Watt-Hours (Energy)	130 Watt-Hours
Maximum Continuous Current	30ADC
Full Charge Voltage	16.6VDC
Cutoff Voltage	11VDC
Maximum Continuous Output	120 Watts
Battery Charger Input and Battery Charger Output	95VAC to 250VAC, 50/60Hz input 16VDC, 3A output
Charging Time	3 to 4 hours to full charge (<i>with VMC3A charger</i>)
Inverter Fuse (Front Panel)	30A automotive-type fuse
Total Weight and Dimensions	3.5 pounds (with battery) 2.75" x 4.3" x 7.5" (without stand clamp)

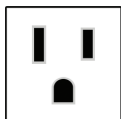
Your VAGABOND MINI™ LITHIUM Arrives With:

1. The Internal CU120 Vagabond Mini™ Lithium Inverter (in VM120 systems, for use with standard Paul C. Buff, Inc. flash units / power packs): The CU120 is a power inverter made exclusively for the **Vagabond Mini™ Lithium** system. The unit converts the power from the internal battery to a 120VAC, 60 Hz current-controlled, pure sine wave power source, specifically engineered for powering Paul C. Buff, Inc. units.

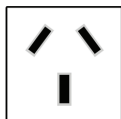
- or -

1. The Internal CU120-230V Vagabond Mini™ Lithium Inverter (in VM120-230V systems, for use with 220V / 230V AlienBees™ and Einstein™ units): The 230V model of the system contains the CU120-230V power inverter. The unit converts the power from the internal battery to a 230 VAC, 50 Hz current-controlled, pure sine wave power source, specifically engineered for powering Paul C. Buff, Inc. units.

The converted power with both systems is similar to the power that you would get from a standard power line when shooting in the studio with your flash units / power packs connected to an AC power outlet.



VM120 system:
two standard 120VAC outlets on the CU120 inverter



VM120-230V system:
two Australian / Chinese Type I 230VAC outlets on the CU120-230V inverter

In order to allow single or multiple flash units to operate from a small inverter, the inverter must act as a 120VAC (or 230VAC) voltage generator when it is not overloaded, but must revert to becoming a continuous current source when the

flash charging current demand exceeds its continuous power rating. To accomplish this, the inverter maintains a sine wave output during current limiting, but drops the AC voltage by whatever amount is required to keep the inverter safely within its power handling capability. When recycling a single Paul C. Buff, Inc. flash unit, the voltage emitted by a 120VAC **Vagabond Mini™ Lithium** system typically drops to about 80VAC during the initial recycle period, then builds back up to 120VAC as the unit charges (typical for other brands of similar studio flash units as well). If more than one flash unit is connected to a single **Vagabond Mini™ Lithium** system, the voltage will drop as low as 35VAC. Recycle time will become correspondingly longer as the limited current is shared between the flash units.

***Note:** Paul C. Buff, Inc. lights are designed to tolerate this voltage drop (“brown out”), as can most purely analog studio flash units, to varying degrees. However, most manufacturers of digitally controlled flash units failed to anticipate operation with current limited inverters and designed the microprocessor power supplies to shut down at about 85VAC input. Thus, many such units will not tolerate operation with small current limited inverters and will simply crash. This is particularly true when multiple units are attached to a single inverter.*



**Vagabond Mini™
Lithium Battery**



Battery Charger



Shoulder Strap



**Light Stand
Mounting Clamp**

2. The VMB8.6A Vagabond Mini™ Lithium Battery: The 14.8V, 8.6AH lithium battery arrives attached to the inverter, ready to charge. It provides 130 watt-hours of energy and may be discharged to approximately 95% of its capacity before the internal protection circuitry causes shut down. Recycle time of attached lights remains constant from the first shot to the battery depletion point.

3. The VMC3A Vagabond Mini™ Lithium Universal Rapid Battery Charger (95-250VAC): The battery charger is a rapid-charging device designed to recharge the battery in approximately three hours from a fully discharged state. The charger is connected to the system on the front panel inverter faceplate or connected directly to a battery (a spare battery), then connected to a suitable AC power source. *See detailed charging instructions on pages 8 -11.*

4. The VMSTRAP Removable Shoulder Strap: Each system arrives with a convenient shoulder strap that loops through strap holes on either side of the faceplate.

5. The Removable Light Stand Mounting Clamp: A clamp arrives with each system allowing it to be clamped to a light stand. The clamp attaches underneath the unit with a 1/4-20 threaded screw. Turning the large black knob counter-clockwise opens the clamp to fit around the pole of your light stand. Turning the knob clockwise tightens the clamp to hold the system in place tightly around the pole.

VAGABOND MINI™ LITHIUM Optional Accessories

These optional accessories are each sold separately - visit us online or contact our Customer Service team to learn more.

The VMBAG Vagabond Mini™ Lithium Carrying Bag is a convenient, soft-side carrying bag designed to carry your complete **Vagabond Mini™ Lithium** system (with the stand clamp attached) along with a spare battery. Front and side pouches additionally allow you to carry small items such as power and sync cords, remote controls and a small power strip for powering more than two flash units.

The VM-UPC3-120V 3-foot Power Cord is a standard 120V power cord for use with the VM120 system. This shorter cord is convenient when the system is clamped to a light stand and less length is needed between the light and the system.

We offer a **230V International Power Cord** for use with 220V AlienBees™ units or the Einstein™ unit (in 230V mode) with the 230V **Vagabond Mini™ Lithium** system. The international cords have Type I (Australia / China) plugs for use with the 230V Type I sockets and are available in standard 15-foot and shorter 3-foot lengths.

Charging Your VAGABOND MINI™ LITHIUM Battery

- 1. Turn the Vagabond Mini™ Lithium system OFF and locate the supplied battery charger. The supplied VMC3A Universal Rapid Charger (95-250VAC input) is used to charge the Vagabond Mini™ Lithium battery.** The charger has two components: (1) the black encased charger with an attached Anderson connection cord and (2) the battery charger's power cord with a standard two-prong male AC plug.
- 2. Plug the battery charger's power cord into the VMC3A charger.** The power cord plugs into the charger with its standard "figure eight" C7 appliance connector.



3. Plug the battery charger's power cord into a suitable AC power source. Plug the cord into a standard 120V AC outlet using the two-pronged male AC plug. The LED on the battery charger housing will shine green to indicate connection to power.

Note: *The battery may be charged globally on 95-250VAC power lines. When traveling to countries with different wall outlet configurations, outlet adapter plugs may be used on the battery charger's power cord for outlet compatibility.*

4. Connect the battery charger to the inverter. Plug the red and black Anderson connectors on the battery charger's Anderson connector cord into the corresponding red and black Anderson sockets (labeled CHARGER) on the front panel of the inverter. Connect red-to-red and black-to-black. The LED on the battery charger housing will shine red to indicate that the battery is charging. **It takes approximately three to four hours to fully charge a depleted battery.** When the battery is fully charged, the LED light on the battery charger will shine green.

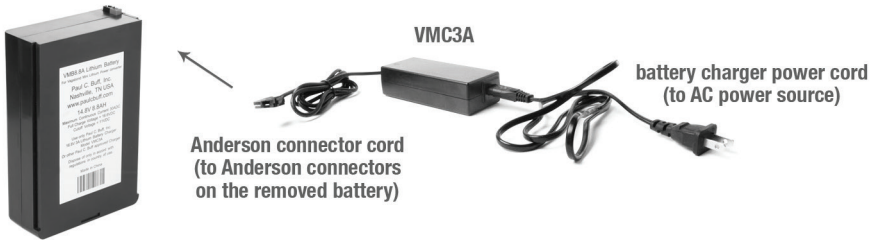


The LED is located on the top side of the battery charger.

- A **Solid Green LED** on the battery charger (when the charger is NOT connected to the inverter or to the battery) indicates that the battery charger has been successfully connected to a suitable AC power source. The LED shines to indicate that the charger is receiving power and ready to charge the battery.
- A **Solid Green LED** on the battery charger (when the charger is connected to the inverter or to the battery) indicates that the battery is fully charged. When first connected to the inverter or battery, the charger's LED will shine red. When the light turns from solid red to solid green, charging is complete. You can disconnect the charger as the system is charged and ready for use.
- A **Solid Red LED** on the battery charger (when the charger is connected to the inverter or to the battery) indicates that the battery is charging.
- A **Blinking Green LED** on the battery charger (when the charger is connected to the inverter or to the battery) may occasionally occur when the charger is first connected to the inverter or battery. This indicates that the battery is already fully charged when the battery charger is first connected. Disconnect the red and black Anderson connectors from the inverter or battery, then disconnect the battery charging cable from the AC outlet.
- A **Blinking Red LED** on the battery charger (when the charger is connected to the inverter or to the battery) indicates an error – most likely the charger has identified a short or a dead cell in the battery. Disconnect the Anderson connectors, unplug the battery charging cable, and contact Customer Service. Keep the **Vagabond Mini™ Lithium** system turned OFF.

Charging Your VAGABOND MINI™ LITHIUM Battery (cont.)

Charging a Battery Directly: The method of charging the battery through the inverter is simply provided for convenience so that you do not have to disconnect the battery from the inverter. A battery can be charged, however, by direct connection with no difference in charging. The direct charging method is most commonly used to charge an additional spare battery. Connect the battery charger to the battery by plugging the red and black Anderson connectors on the battery charger's Anderson connector cord into the corresponding red and black Anderson sockets on the battery, connecting red-to-red and black-to-black. The LED on the battery charger housing will shine red to indicate that the battery is charging.



To charge the battery directly, you will first need to disconnect it from the inverter (if connected) using the small tab on the back of the unit. To remove the battery, press down on the spring-loaded tab and pull the battery backward out of the unit. To reinstall a battery after charging is complete, press down on the tab, position the battery in the slide-in slot, and slide the battery into place. If you encounter any resistance when you reach the position where the battery connector meets the mating connector, you may have to “wiggle” the front end of the battery slightly to engage the connectors. When the battery is fully seated, the spring loaded release tab should snap up into the locked position. **Note: Do not set the unit down directly on the end with the battery tab, as this could cause the tab to break.**



Continuous Charging During Use: For operating 120VAC lights in 230V studios with the VM120 system, the charger may be plugged into an AC outlet so that the unit is charging while in use, allowing continuous operation in most cases. This will replenish the battery as you are using it, but charging can fall behind battery discharging depending on how fast you are shooting and how many strobes you are using. Modeling lamps must still be turned OFF during this type of usage.

To maximize the lifespan of your lithium ion battery, we recommend the following:

1. When not in use, store the battery in a cool place. Do NOT store it in extreme heat (above 86°F) or extreme cold (below 32°F). Leaving a battery in a hot environment, especially when exposed to the sun, speeds up capacity loss. A fully charged battery stored at elevated temperatures is even worse.

2. Partially charge the battery before storage (charge until both the 1/4 and 1/2 LEDs are lit). Turn the system OFF, disconnect the charger and battery, and store it in a safe, cool, dry place away from flammable materials. The battery should be used and partially recharged every three months for best battery life and to avoid ruining the battery's components. For long-term storage, do not allow the battery to be fully discharged then stored. Storing a battery for periods over a few days when it is nearly discharged may result in degradation of internal components.

A battery should deliver approximately 200 to 300 charge / discharge cycles, with a useful life of 2 - 4 years when stored properly. When the battery capacity drops to 50% or lower (when the number of full power flashes, per wattsecond rating, per battery charge is halved), it is recommended that you replace the battery. For safety and best performance, the battery should be replaced after 3 years or when its total capacity drops to 50%, whichever comes first.

General Battery Charging Notes and Reminders

- **The battery must only be charged using the provided VMC3A Vagabond Mini™ Lithium Battery Charger.** Do not use other charging devices or cords.
- **The battery should be recharged within 24 hours when it is fully discharged.** Recharge to 100% if you will be using the system soon, or partially charge for storage.
- **Always charge the battery in a safe environment and do not leave the charger or system unattended.** Do not charge the battery on or around flammable materials. Keep all components away from fire, flames, and heated surfaces. Do not charge the battery in or around water, moisture, salt spray, dew, or any other liquids. Exposure to water (especially salt water) increases the risk of a potential battery fire. The system should only be used in dry, moderate conditions where the equipment is protected from rain, dirt, sand, and dust.
- When charging the battery before use, charge to 100%. Once the battery is fully charged, the charger is still outputting a small current (5W consumption) and charging for an additional 1 to 2 hours will help to balance each cell of the pack and thus help to prolong battery life. **Do not leave the battery charger connected, however, for more than 2 hours once the LED on the battery charger has turned green (indicating 100% charge).** The charger will slowly drain battery power if it is connected to the system when not connected to an AC power source.
- **If any aspect of the charging process is abnormal, discontinue use immediately,** turn the system OFF, and disconnect the battery from the inverter. Contact our Customer Service team for support.

Connecting Flash Units To Your VAGABOND MINI™ LITHIUM

1. Connect your flash unit(s). Plug your Paul C. Buff, Inc. flash unit / power pack into one of the power outlets on the front panel of the inverter.



120V system
two standard
120VAC outlets



230V system
two Australian /
Chinese Type I
230VAC outlets

With the **120V Vagabond Mini™ Lithium** system, you will use the three-prong power cord provided with your standard Paul C. Buff, Inc. flash unit (the UPC15 15-foot power cord). We additionally offer an optional 25-foot cord (UPC25) and an optional 3-foot cord (VM-UPC3-120V). *Optional cords are sold separately, available on our website (paulcbuff.com/Replacement-Cords).*

With the **230V Vagabond Mini™ Lithium** system - to connect an Einstein™ unit or a 220V AlienBees™ unit - we offer a 15-foot power cord (VM-UPC15-230V) and a 3-foot power cord (VM-UPC3-230V), both with standard IEC to three-pronged Australian / Chinese Type I male connections. *All 230V cords are sold separately, available on our website (paulcbuff.com/Replacement-Cords).*

Connecting Multiple Flash Units: The system includes two grounded outlets, but the system can be used to power up to four flash units via a multi-outlet extension cord or power bar. The more flash units / power packs and total true wattseconds that are connected, the longer the recycle times. The practical limits are based more on the total amount of wattseconds being cycled than on the number of units. The largest practical load for the system is dependent on the particular flash units and power settings. Heavy loads can be expected to reduce the efficiency and will likely reduce the recycle rate.

2. Turn off your modeling lamps. Set the modeling lamp(s) on your flash unit(s) to the OFF position. The system is not designed to operate modeling lamps continuously. This would deplete the battery rapidly, cause slow recycle times and could overheat the inverter if modeling lamps over 120 Watts are used. It is permissible to operate modeling briefly to compose the lighting. Once the lighting is composed the modeling lamps should be shut off. *See the complete Warnings section on pages 2 - 4 for more.*

Note for Cyber Commander™ remote users: *When using the Cyber Commander™ remote control and CyberSync™ receivers with flash units that are being powered by the Vagabond Mini™ Lithium system, leave all modeling lamps turned OFF with the model button on the back panel of each light in the “out” position. For each light channel in the Cyber Commander™ remote however, ensure that the MODEL function is set to FULL in the LIGHT SETTING menu.*

3. Turn on the Vagabond Mini™ Lithium. Use the power switch on the front panel of the **Vagabond Mini™ Lithium** inverter to turn the system on. When first turned on, the orange LED located next to the USB voltage outlet and the three green LED battery status indicators should shine. After the system settles, the battery status LED lights (labeled 3/4+, 1/2 and 1/4) will shine to indicate the charge status of the battery.



3/4+

the **3/4+** LED will shine green when the battery is **charged between 75% - 100%**
(the two LEDs below will remain lit as well)



1/2

the **1/2** LED will shine green when the battery is **charged between 50% - 74%**
(the one LED below will remain lit as well)



1/4

the **1/4** LED will shine green when the battery is **charged between 25% - 49%**

BATTERY

When the charge drops below 25%, the three LEDs will be dim/out.

After ensuring that the battery is charged, you are ready to power your flash units or flash heads / power packs with the **Vagabond Mini™ Lithium** system. When you have finished shooting, remember to recharge the battery, turn the system OFF, disconnect the battery charger, disconnect the battery and store in a safe, cool place away from flammable materials.

Typical VAGABOND MINI™ LITHIUM Recycle and Battery Life

AC powered studio flash units with very fast AC recycle times per Ws tend to draw significantly more current than typical flash units (units that recycle 500 to 650 Ws in around two seconds).

Total Ws Connected	Typical Recycle Time	Approximate Battery Life
160 True Ws	approx. 1 sec. to full	1500 - 2000 shots per charge
320 - 330 True Ws	approx. 2 sec. to full	800 - 1000 shots per charge
640 - 660 True Ws	approx. 4 sec. to full	400 - 500 shots per charge
1280 - 1320 True Ws	approx. 8 sec. to full	200 - 250 shots per charge
2560 True Ws	approx. 16 sec. to full	100 - 125 shots per charge
3200 True Ws	approx. 20 sec. to full	50 - 60 shots per charge

*An example of a unit with very fast recycle is the Zeus™ flash head / power pack, recycling 2500 Ws in just 2.4 seconds. These fast-recycling units cause the inverter voltage output on the **Vagabond Mini™ Lithium** system to drop much more than it would with units having more modest AC recycle rates. The physics of the current-limiting parameters cause fast AC recycling units to actually recycle slower from inverters. This relationship applies to all current-limited systems, including Vagabond™ I and Vagabond™ II systems, and inverters from other manufacturers. For example, one AlienBees™ B1600 unit (640 Ws) recycles in 2 seconds from AC power and 3 seconds from the **Vagabond Mini™ Lithium** system (213 Ws/second), while a Zeus™ unit (2500 Ws) recycles in 2.4 seconds from AC power, but takes over 20 seconds (120 Ws/second) from the **Vagabond Mini™ Lithium** system. This relationship causes Einstein™ units, which cycle slightly faster than AlienBees™ and White Lightning™ from AC, to recycle slightly slower from **Vagabond Mini™ Lithium** system.*

The VAGABOND MINI™ LITHIUM Fuse

A single blade-type 30A fuse is located on the front panel of the inverter so that you can check the fuse status and replace it if necessary. *It is extremely unlikely that the fuse will blow unless a fault (requiring factory service) should occur in the inverter unit.* If the fuse has blown and needs replacement, first turn the system off and disconnect any flash units. Unplug the blown fuse and insert a new one in its place. Replacement blade-type 30A fuses are available locally at hardware, electronic and automotive stores. Please contact our Customer Service team if you have any questions about the fuse, or if you experience any problems or need any assistance.



The VAGABOND MINI™ LITHIUM USB Outlet

For your convenience, a 0.5A USB port has been included on the front panel of the inverter. This port can be used for charging devices with a USB cable connection (such as cell phones, mp3 players, etc.). The LED should shine orange when the system is first powered on and it should stay lit unless a USB device that draws more than .5A is connected.

Powering the VAGABOND MINI™ LITHIUM From An External SLA Battery

It is possible to operate the **Vagabond Mini™ Lithium** from an external 12 volt sealed lead acid (SLA) battery such as a car battery. *Such usage is not optimal, but may be practical in some applications. When operated from a 12V battery, the battery fuel gauge will not provide an accurate indication of battery charge.* To connect the **Vagabond Mini™ Lithium** to an external 12V SLA battery, first remove the VMB8.6A **Vagabond Mini™ Lithium** battery pack from the unit. You can then prepare a suitable cable for connection: the cable will need connections for your SLA battery on one end and an Anderson connector on the other end. Proper polarity must be observed, connecting red-to-red and black-to-black. With the VMB8.6A **Vagabond Mini™ Lithium** battery pack removed, plug the Anderson connector end of your cable into the back connector of the **Vagabond Mini™ Lithium** where the VMB8.6A battery pack normally connects. While we do not sell this type of cable, our tech help department can help you to properly configure such a cable, walking you through the components needed. For technical assistance, please call 1.800.443.5542, Monday through Friday, from 9:00am to 4:30pm, CT.

Airline Travel With Your VAGABOND MINI™ LITHIUM System

The battery in the **Vagabond Mini™ Lithium** system is a 14.8V, 8.6AH lithium ion battery rated at 130 watt-hours. Lithium ion batteries such as these are regulated for air travel by both the U.S. Department of Transportation (DOT) and the International Air Transport Association (IATA). Based on the specifications of the battery, the current DOT and IATA regulations indicate that you *should* be able to travel by air with your **Vagabond Mini™ Lithium** system as carry on baggage. However, each individual airline carrier interprets and enforces these regulations as it sees fit, allowing or prohibiting travel on its vessels individually. Unfortunately, this means that there are no standard policies from airline to airline and they are subject to change, without notice, at the discretion of each airline.

You must check with your individual airline carrier before traveling with any Vagabond Mini™ Lithium components each time that you wish to travel by air in order to find out the updated, applicable regulations for your specific flight based on the specific items that you wish to travel with. To determine eligibility for travel, you may be asked for certain specifications of the battery which are both printed on the battery and provided in this manual. If needed, the complete **Material Safety Data Sheet (MSDS)** for the **Vagabond Mini™ Lithium** battery is additionally available for download on our website (paulcbuff.com/Manuals-and-Instructions.html) or we can send you a hard copy by mail. To request a hard copy, please contact our Customer Service team.

Using the VAGABOND MINI™ LITHIUM To Operate Auxiliary Equipment

The **Vagabond Mini™ Lithium** system is specifically designed to provide power for Paul C. Buff, Inc. flash equipment. The system may, however, also be used to power non-flash continuous loads for small electrical appliances such as fans, computers or radios. The maximum continuous power drawn in such applications is 120 Watts. The system is NOT designed to power items such as hairdryers, power tools, heaters, televisions, or other large appliances. **Do not attempt to use the Vagabond Mini™ Lithium system to power items drawing more than 120 Watts.** If a continuous load is used in conjunction with flash unit use, this number should be reduced. It should be noted that when the **Vagabond Mini™ Lithium** is used to recycle flash units, the output voltage will not remain at 120 VAC (or 230VAC on the VM120-230V system); it will drop lower during the recycle period of the lights. Therefore, equipment that requires continuous 120 VAC (or 230 VAC) should not be used in conjunction with flash units. To the best of our knowledge, the momentary low voltage will not affect laptops connected via their battery chargers. However, AC-powered computers will likely crash under the “brown out” conditions and likely draw more than 120 watts. If you plan to power auxiliary equipment, you should consult the product’s manual and / or check with the product manufacturer to determine the power consumption. *It is not generally advisable to operate flash units and continuous power loads at the same time.*

VAGABOND MINI™

L I T H I U M

The VAGABOND MINI™ LITHIUM and Flash Units By Other Manufacturers

The **Vagabond Mini™ Lithium** system is designed specifically for powering Paul C. Buff Inc. products and we cannot make any claim for suitability with products from other manufacturers, nor can we accept any liability for any damage that might be caused to such equipment. We will, however, warranty the **Vagabond Mini™ Lithium** system itself as well as any Paul C. Buff Inc. equipment it powers.

Storing the VAGABOND MINI™ LITHIUM

When storing your **Vagabond Mini™ Lithium** system, verify that it contains more than 25% charge. If the charge status is lower than 25%, apply a partial charge (charge until both the 1/4 and 1/2 LEDs are lit). Turn the system OFF, disconnect the battery from the inverter, and disconnect the battery charger. The system and components should be stored in safe, dry, moderate conditions, away from flammable materials, where the equipment is protected from rain, dirt, sand and dust. While the battery can be stored safely in any state of charge, it should be used and partially recharged every three months for best battery life, and to avoid ruining the battery's components. Do not charge the battery to 100%, and then store it. Also, storing the battery for periods over a few days when it is nearly discharged may result in a dangerous degradation of the battery's internal components, possibly causing overheating and creating a fire hazard when the battery is then charged again. Do not store a battery in a hot environment, such as an attic, or in a cold environment below freezing. *Please read the complete warnings section (pages 2 -5) for more information.*

After storage, note that moving the system from one environment to another can cause condensation to occur due to temperature changes. Do not operate or charge the system until all condensation has fully evaporated.

Do not attempt to charge a battery that has been stored for a long period of time if it will not power the VML inverter, or show at least a partial charge indication on the LED charge meter when connected to the VML inverter. If the battery does not hold a charge during storage, as indicated by the LED charge status gauge, and it will not allow the inverter to turn ON, the battery may have been damaged by improper storage. Recycle the battery and replace it.

Have Questions? Need Assistance? Contact Our Customer Service Team:

PH: 1.800.443.5542 | PH: 615.383.3982 | info@paulcuff.com