Rapid 829/500CP Multi-Fuel Lantern

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For a video tutorial on how to use your lantern or troubleshooting suggestions visit: www.BriteLyt.com/howto
Welcome to the BriteLyt Family!

Congratulations, on your choice of the new BriteLyt, Multi-Fuel Lantern! Many years of passion and lantern know-how have gone into creating the most functional pressurized liquid-fuel lantern ever! On behalf of all of us at BriteLyt congratulations and we hope you enjoy your new lantern for many years to come!

IMPORTANT:
Read this manual in its entirety. BriteLyt assumes no responsibility for the use of your lantern outside of normal operating conditions. It is very important that you understand all topics covered in this manual before attempting operation or fuel use of any kind.

Some sections of this manual reflect optional accessories that are not shipped standard with every lantern. To purchase accessories, visit your local retailer or www.britelyt.com.

DISCARD SHIPPING SPACER RINGS LOCATED ABOVE AND BELOW THE GLASS CHIMNEY BEFORE USE!
1) Hood/Cover
2) Regulator Screw
3) Hood Inner Casing
4) Non-Ceramic Burner Assembly
5) Handle/Reflector Screws
6) Needle and Spray Nozzle
7) Preheat Cup
8) Carburetor
9) Rapid Pre-Heater
10) Fuel Dial
11) Bleeder Screw
12) Hand Pump
13) Pressure Gauge
14) Fuel Tank

Lantern Master Diagram

BriteLyt Rapid 829/500CP
**Parts Kits**

Your BriteLyt lantern is shipped with a parts/tools kit packet. Be sure to refer to the lantern parts listing on page 5 for parts descriptions. These tools and parts will need to be accessible as you begin to set up your new lantern for its first use. Should you have any questions please call us at (727) 451-7020 or visit www.BriteLyt.com.

**Parts / Tools Packet**

#66 Spanner with Gauge
#11 Washer for Filling
#50 Nipple
#68 Needle
#180 Cleaning Needle for Pre-Heater
#119 Key for Needle

Also included in your lantern box will be an Alcohol Filling Bottle #67, Fuel Filling Funnel #165 and (12) Mantles.
Lantern Parts Diagram

BriteLyt Rapid 829/500CP
**Lantern Parts Listing**

3-34 Stainless Nozzle System 119 Key for Needle
4 Soft Mantle 1 tie hole 121 Frame with Name Tag
6-2-O-Ring Pump Piston Complete 122 Center Bottom Plate
10 Pump Valve Complete 123 Hood with Top
11 Washer for Filling 125 Inner Casing
13 Bleeder Screw for 149 148 Complete Upper System
14 Screw for 122 149 Filling Screw Gauge
17 Check Valve Cone w/ rubber 152 Vaporizer Upper Part
18 Spring for Check Valve 153 Vaporizer Lower Part
20 Clip 165 Plastic Filling Funnel
21 Screw 180 Cleaning Needle for Rapid Pre-Heater Device
33-B Mixing Tube (HP) 187 Sieve for Rapid Pre-Heater Device
35 Alcohol Heater Cup 187 Valve Bar
40 Pump Knob 191 Valve Washer (Check Valve)
41 Fixing Disc 192 Valve Spring
42 Cap for Pump Barrel 194 Vaporizer Valve Complete
43 Pump Piston-Rod 196 O-Ring Pump System 220 Flame Protecting Tube
44 Spring for Pump Piston 196 Pump Piston Nut 221 Nipple for Rapid Pre-Heater
46-2-O-Ring 222 Nut for Nipple
47 Pump Piston Nut 222 Tip Complete
50 Nipple 223 Connecting Piece for Rapid Pre-Heater
66 Spanner with Gauge 224 Connecting Piece for Complete Pre-Heater (224, 90, 187)
67 Alcohol cup filling bottle 225 Rapid Pre-Heating Device Complete
74 Glass Chimney/Globe 225 Disc for Wheel Part 111 (On & Off Knob)
83 Valve Washer for 10 226 Check Packing with Screw for Rapid Pre-Heater
90 Lead Washer for Vaporizer and preheating device 226 Excentre Complete
98 Pump Barrel 229 Nipple for Wheel
100 Complete Sys Pump 229 Graphite Packing
101 Conducting Rod 229 Hand Wheel / On & Off Knob
126s Heat Shield 229 Nut for Wheel
102 Counter Nut for Connecting Rod 229 Sleeve Nut for Excentre
103 Conducting Piece 229 Excentre Complete
104 Conducting Rod Complete 229 Vaporize Complete
105 Excentre 229 Inner Casing Complete
107 Nipple for Wheel 229 Fuel Tank
108 Graphite Packing
111 Hand Wheel / On & Off Knob
112 Nut for Wheel
113 Sleeve Nut for Excentre
114 Excentre Complete
115 Vaporize Complete
117 Inner Casing Complete
118 Fuel Tank

*BriteLyt Rapid 829/500CP*
**BriteLyt Limited Lifetime Warranty**

BriteLyt products are fully warranted to the original owner against defects in materials and workmanship for the lifetime of the product. If a product ever fails due to a manufacturing defect, even after extended use, we will repair the product, without charge, or replace it, at our discretion. This warranty does not cover damage caused by accident, improper care, negligence, normal wear and tear, improper use, maintenance, storage, or the natural breakdown of colors and materials over extended time and use. Damage not covered under warranty will be repaired for a reasonable rate and a fee will be charged for return shipping.

For warranty evaluation, your product must be returned directly to the BriteLyt Warranty Department. All shipping to Warranty must be pre-paid and insured. BriteLyt cannot be liable for lost in-bound packages. Products accepted for repair must be clean. Charges will be assessed if cleaning is necessary. You must obtain authorization in order to have your lantern processed for warranty repairs. Unauthorized returns to our facility will be returned to sender.

**BriteLyt's limited lifetime warranty excludes mantles, glass chimney/globe and if equipped, ceramic nozzles. Springs and attachments are covered for a period of 12 months from the date of purchase.**

Your BriteLyt warranty requires you to register you lantern. Warranties begin from the date of purchase, proof of purchase may be required in addition to the serial number on the base of your fuel tank. Should you have any questions regarding your lantern warranty call Monday - Friday 9am-5pm (EDT) (727) 451-7020.

**WARRANTY RETURN FORM**
For regular online returns
Please visit www.britelyt.com/returns to get started.

**BriteLyt Technical Support**

Should you require assistance or have question about your lantern or it’s operation please feel free to reach out to us!

You can contact our lantern experts by email: customerservice@britelyt.com or by calling us at (727) 451-7020.
Prior to Starting Your BriteLyt

- Be sure to set the control knob to the “off” position (12 O’clock) before operating.
- Look lantern over for loose parts that may have shifted during transport.
- Ensure your mantles are not damaged. Damaged mantles must be replaced prior to starting.
- Make sure that burner and other burning accessories are tightened.
- **DO NOT USE INDOORS.** Light your lantern in a well ventilated area away from combustible or heat sensitive material.
- Your lantern has been designed to use multiple fuels. Burning of any fuel other than kerosene may cause your lantern to burn and/or act differently. Refer to page 15 for multi-fuel operation.
- Do not tip or turn lantern on its side or any other direction other than vertical.
- Be sure not to place your lantern on delicate or flammable surfaces.
- Do not let your lantern burn unattended.
- Keep lantern away from children and never let children play with lantern.
- Do not place anything on top of or over your lantern.
- While lantern is in operation touch only the fuel tank. You risk severely burning and injuring yourself by touching anywhere above the tank.
- Allow lantern to cool for at least 30 minutes after use before attempting to touch, store or repair.
- Use the bleeder screw to release tank pressure after every use.
- Do not open pressure gauge assembly, add or remove fuel while lantern is in operation.
- Do not look directly into the burning mantle.
- Do not inhale any exhaust being given off during lantern burning.
- Do not leave lantern in the “on” position when not in use.
- Always empty the fuel tank before storing your lantern.
- Keep Pre-Heater tube clean and clear at all times
- Never burn old or dirty fuel in your lantern.

**BriteLyt assumes no responsibility or liability due to improper use.**

**Using anything other than BriteLyt brand replacement parts will result in the expiration and cancellation of your lantern’s factory warranty.**
Before lighting your BriteLyt lantern read this manual through in its entirety. Note all warnings and safety cautions. Ensure you comprehend all instructions before beginning. Do not inhale smoke or use lantern indoors. Refer to diagram on page 2 for parts labels.

**Step 1**

Unscrew the pressure gauge and pour fuel in using the provided funnel. Fill until fuel reaches the lower edge of the filler neck.

**Do not overfill the fuel tank!**

**Step 2**

Loosen the handle/reflector screws and remove the hood/cover.

To remove the hood and hood inner casing remove the two screws holding it to the lamp.
Step 3
Place mantle over spray nozzle and tie on using a double knot.

Trim loose threads as short as possible.

Step 4
Re-Install the hood inner casing and the hood/cover.

Ensure that the regulator screw is visible and tightened.

Re-install the two mounting screws and re-tighten the handle/reflectors screws by hand once hood is replaced.

Step 5
Ensure that the pointer on the fuel dial is pointing upright to 12 O’clock (This is the off position).

Screw the pressure gauge back onto the tank by hand.
**Step 6**

Rotate the hand pump knob to unlock it.

Plunge the pump in and out until your pressure gauge reads between the red line and 3 on the indicator.

When finished re-lock the hand pump knob in it’s down position.

*If you are using the EZ-Pump attachment with pressurized air see page 12 and disregard step 6.*

**Step 7**

Open the rapid pre-heater by pushing the lever down opening the flow of fuel.

Immediately light the now flowing fuel just above the open lever using a lighter or match. Lighters are the recommended ignition source.

If needed, unlock hand pump and again plunge repeatedly to maintain pressure in tank.
**Step 8**

Allow pre-heater to run for approximately 30 seconds for Kerosene and Gasoline (time will differ by fuel and ambient temperature).

* See “Multi Fuel Operation on page 15 for additional information.

**Step 9**

After you have pre-heated the carburetor turn the fuel dial nose down (6 O’clock).

The mantle should light and glow.

Once the mantle is lit, flip the pre-heater lever back up to close it.

Bring the lantern to operating pressure, between 2 and 3 on the pressure gauge.

While pumping, do not shake or rock the lantern as you will break the mantle and need to start over.

*If your lantern begins to dim, use the hand pump to increase the tank pressure. Use the fuel dial to control the level of light output.*
Shutdown of your BriteLyt Lantern

Step 1
To extinguish the lantern open up the bleeder valve on the pressure gauge.

Turn the fuel dial to point vertically (12 O’clock) to cut off the flow of fuel.

Storage of your BriteLyt Lantern

- Allow lantern to cool for at least 30 minutes before touching, moving or repairing.
- Do not allow fuel to sit in tank for prolonged periods of time.
- Empty and clean tank before storing your lantern.
- To avoid scratching and damage keep you lantern and reflector stored in the optional tote bags.
- After 10 uses, use a cap full of carburetor cleaner into your tank with fuel to clean your burning system and tank.
- After storage ensure that all parts are properly tightened and cleaned before lighting lantern.
**Tips and Troubleshooting**

- If you notice the lantern flickering or darkening, use your hand pump or EZ-Pump accessory to increase the tank pressure to approximately 2.5 atmosphere bars.
- If the hand pump plunger does not work properly grease the O-Ring and re-install.
- If the pre-heater is not igniting or burning improperly, ensure you have proper pressure in the fuel tank. You should be just below the red line. If pressure is correct clean the nozzle of the pre heater with the cleaning needle which came with your lantern.
- Do not remove the heat shield (Part #126s) when burning lantern.
- To keep bugs away add citronella oil in a 50/50 ratio with your fuel and burn normally.
- If using biodiesel when preheating with the Alcohol cup it may take 6-10 burns before the mantle will light.
- Remove broken mantles as they will break the glass in your lantern.
- Routinely flush and clean your fuel tank with water or gasoline.
- If you are in an extremely cold area or above 5,000 feet in elevation you may need to add 10% mineral spirits to your fuel tank to have lantern light faster.
- If the hand pump plunger does not work properly grease the O-Ring (lightly) and re-install.
- If using biodiesel, when preheating with Alcohol cup, it may take 6-10 burns before the mantle will light (you also need to use the preheater after the Alcohol cup use). Preheat using the cup first, and then, use the preheater, after the alcohol as burned off. This will help to preheat faster.

**Warranty Registration**

*BriteLyt’s limited lifetime warranty requires the lantern be registered to you. In order to register your warranty, visit us online at www.britelyt.com/reg to digitally register your lantern.*

Be sure you have your original purchase receipt available to complete the form. You will also need the serial number which is stamped on the bottom of your lantern.
**EZ-Pump Accessory Instructions**

*(Optional Accessory)*

**Step 1**
Unscrew hand pump assembly from the fuel tank. Expect the plunger to be a little difficult to remove.

**Step 2**
Screw on the EZ-Pump accessory.

Fill the tank with compressed air via a tire pump or hand held CO2 filler. Be sure that incoming pressure does not exceed 30psi. Do not use a CO2 system over 12G.

*For a video tutorial on how to use your lantern or troubleshooting suggestions visit: www.BriteLyt.com/howto*
**EZ-Cook Accessory Instructions**
(Optional Accessory)

**Step 1**
Loosen the handle/reflector screws to remove the hood/cover from the lantern.

Replace the hood/cover with the EZ-Cook adapter using the set grooves as guides.
Multiple Fuel Operation Guidelines

IMPORTANT:
The preheat times listed are approximate. Variables such as altitude, humidity and temperature will have an impact.

DO NOT BURN HOMEMADE/CUSTOM FUELS!

Burning fuels that are not listed in this manual should be done at your own risk. BriteLyt assumes no responsibility for the burning of non listed fuels.

Burning fuels not listed in this manual can cause permanent and irreversible damage to your lantern.

Alcohol based fuels (ethanol or methanol),
or pure oil (vegetable, motor, industrial),
should not be burned on their own.

If using any of the fuels listed above you must mix with another fuel, in a 50/50 ratio for your lantern to run properly.

BriteLyt assumes no responsibility for burning these fuels unmixed.

If you have questions or concerns in regards to burning particular fuels please contact us at (727) 451-7020 or by email at customerservice@britelyt.com
Gasoline Type Fuels
Pre-Heat Time approximately: 10 to 35 seconds
Examples: Coleman Fuel, Gasoline, White Gas, Paint Thinner, Lighter Fluid, Mineral Spirits without Oil.

Oil Based Fuels
Pre-Heat Time approximately: 15 to 45 sec
Examples: Kerosene, Lamp Oil, JP Fuels, Citronella Oil, Mineral Spirits with Oil.

Heavy Oil Base Fuels (50/50 Mixture Recommended)
Pre-Heat Time approximately: 45 sec to 2 min.
Examples: Diesel Fuel or Bio-Diesel.

Below are recommendations for mixing fuels in order to improve efficiency and safety. The recommended mixture is 50/50 but can be adjusted to match your conditions.

Kerosene and Gasoline Type Fuel
Pre-Heat Time approximately: 15 to 30 sec
Total Run Time Approximately: 10 to 12 hours
Examples: Kerosene mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.

Diesel and Gasoline Type Fuel
Pre-Heat Time approximately: 20 to 40 sec.
Total Run Time Approximately: 10 to 15 hours.
Examples: Diesel mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.

Biodiesel and Gasoline Type Fuel
Pre-Heat Time approximately: 45 sec to 2 min
Total Run Time Approximately: 10 to 25 hours.
Examples: Diesel mixed with any of the following fuels: Coleman, Paint Thinner and All Alcohol Fuels.

Motor Oil and Gasoline Type Fuel
Pre-Heat Time approximately: 1 1/2 to 3 min and may have to use Alcohol cup and not preheater (part 35). (Must test preheater if it does not work use heat cup part 35)
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