

PackaFeather **XL**

Introduction

Before using your new *PackaFeather XL* stove please be sure to read and understand completely the warnings, operating instructions, disclaimer and warranty detailed below.

By using the stove, you agree to the disclaimer and the warranty. If you have questions, please contact the manufacturer directly. comments@packafeather.com

****Important Note****

Some parts of your stove are made from recycled aluminum food or beverage containers. Because of this fact nearly every stove will have at least a few very minor 'dings' that DO NOT effect the stove's performance or durability. As such, they are NOT considered manufacturing defects.

Follow instructions and warnings to avoid fires, serious injury or death.



WARNING:

1.) **Always light and use your stove outdoors.** Do NOT use it inside a tent or vestibule or other unventilated or enclosed areas. Using your stove under a low-hanging vestibule or tarp can create a potentially fatal fire hazard.

Your stove is NOT a space heater. It consumes air (oxygen). Using it in any confined or otherwise unventilated area may endanger your life.

2.) **Your stove is intended for use with alcohol ONLY.** (Recommended alcohol types are listed at the beginning of the operating instructions below.)

NEVER use any petroleum distillate such as gasoline (including white gas or Coleman Fuel), acetone, lacquer thinner, naphtha, charcoal lighter fluid or any similarly volatile liquid to fuel your stove. Using such fuels may create a hazardous fire condition as well as causing permanent damage to your stove.

3.) **In daylight the flame of an alcohol stove is virtually invisible** and makes little or no sound to alert you to the fact that it is burning. When lighting the stove in daylight it helps to first have a windscreen in place around the stove so that the flame can be seen more easily.

4.) **DO NOT OVER-FILL YOUR STOVE.** The recommended maximum fuel capacity for your stove is 2 US fluid ounces (60 ml). Over-filling your stove will cause fuel to spill over the top of the fuel bowl. If this should happen **do not light the stove.** Remove as much fuel as you can and then allow any spilled fuel to evaporate. You may then re-fill your stove with 2 fluid ounces or less

and proceed with igniting your stove

5.) NEVER attempt to add fuel to your stove while it is lit. Make sure that all flame is extinguished before adding fuel. Failure to do so may result in a hazardous fire and/or serious bodily injury.

6.) NEVER open your fuel container near your stove while it is lit. Be sure to keep your fuel container a safe distance from your stove during operation.

7.) Keep stove away from flammables. Never allow fabric, clothing or any flammable material to come within 4 feet (1.2 meters) of the top of your stove and 1 foot (0.3 meters) of all sides of your stove.

8.) NEVER leave your stove unattended while burning.

9.) During and for several minutes after stove operation, parts of your stove (including the windscreen) will be extremely hot. DO NOT TOUCH!

10.) Keep your stove and fuel out of the reach of children.

PackaFeather **XL**

OPERATING INSTRUCTIONS

Acceptable Fuels for Your Stove:

Denatured Alcohol -- sold in paint and hardware stores (Ethanol/Methanol mixture)

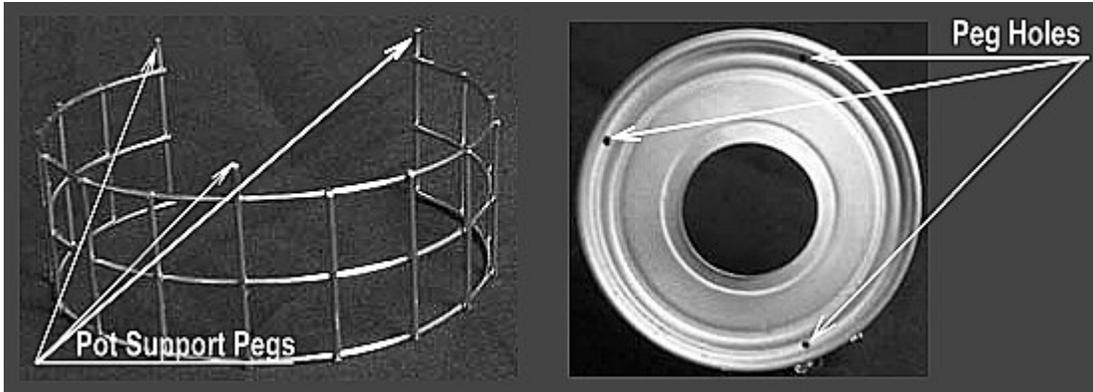
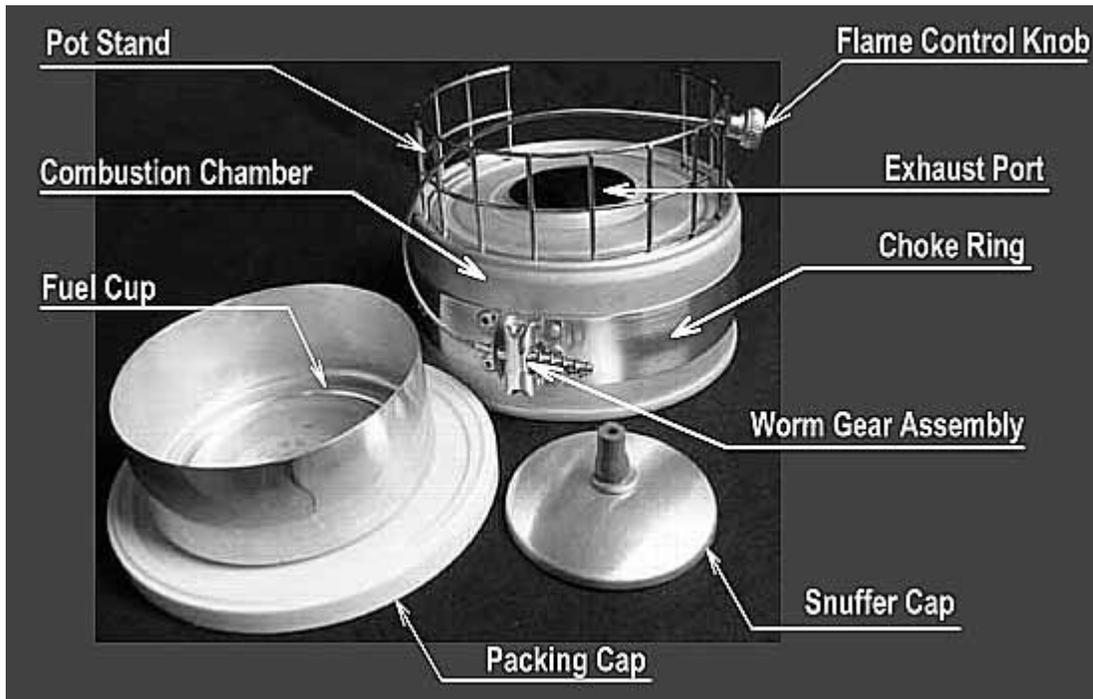
Pure Methanol -- such as HEET brand gas-line anti-freeze (the yellow bottle), or its generic equivalent

Pure Ethanol -- drinkable alcohol sometimes called Ever-Clear or 'White Lightning' (Federal taxes make it very expensive)

Note: Common 90% rubbing alcohol and Isopropyl alcohol (i.e. ISO-HEET in the red bottle) are **NOT** recommended because they don't burn as efficiently and can leave a lot of soot. (However they could be safely used in a 'pinch' if more suitable fuel is unavailable.)

No other fuels are recommended.

The Parts of Your Stove:



Ground Reflector

One more essential part of your stove is a ground reflector. Among other things it serves as a firm base for your stove when the ground may be too soft for adequate support.

You will need to construct this yourself using ordinary aluminum foil. Simply take about 14 inches of foil and fold it over to make it 2 layers thick. Then use scissors to cut about a 7 inch square. Finish by folding all 4 sides over about $\frac{1}{4}$ of an inch. If you wish you could also cut off each corner to make it roughly circular. Finished weight is about 2-3 grams.

(**** NOTE:** We do not supply this part because it is simple to construct, it's easier to just replace it if it becomes soiled and it just makes more sense that you know how to make a new one yourself instead of having to order a replacement part.)

Filling and Igniting Your Stove

****Important**** The plastic packing cap is for storage **ONLY**. Never try to use it as a base while operating your stove!

1.) Locate an area that is level and can be cleared of combustibles for about a 3 foot (1 meter) radius around your stove.

2.) Unfold, smooth and place your ground reflector in the center of the cleared space. Place the fuel cup in the center of the ground reflector.

**** CAUTION:** The rim of the fuel cup has been smoothed as much as possible but it is very thin metal and could cause a cut similar to a paper cut. **Handle with care!**

3.) Put an adequate amount of alcohol into the fuel cup. (After filling be certain to place your fuel bottle well away from the stove area!)

4.) Push the 3 pot support pegs into the holes in the combustion chamber. Then set it down and center it over the fuel cup.

(**** NOTE:** The pot support only fits one way. The center peg goes into the hole next to the worm gear assembly.)

5.) Expand your windscreen** enough to allow for about a 1/2 inch space (10 mm) all around the cook pot you intend to use. Center the windscreen around your stove.

6.) Make certain that the choke ring is all the way open by turning the flame control knob in a counter-clockwise direction.

7.) The easiest and safest way to ignite your stove is to make a “twig match”. Find a small twig that is about the diameter of a wooden match-stick and about as long as your hand. Dip only the very tip of the twig (about 1/8 of an inch) into the alcohol in your stove. No need to soak it, just dip it in and pull it out. Light the end of the twig and quickly use it to light your stove. Then extinguish the twig the same as you would a match. (And just as you would with any match be sure it is completely extinguished and cold before disposal.)

8.) Place your cook pot on the supports.

(**** NOTE:** The windscreen is a separate accessory and is not included with your stove. **All alcohol stoves need a windscreen in order operate properly. We recommend our AW-1 Adjustable Windscreen. You may order one here:**
www.packafeather.com)



Adjusting Your Stove

A unique feature of your *PackaFeather XL* stove is that the heat output can be incrementally regulated or “fine tuned” to give you **exactly** the amount of heat you need which in turn (and more importantly) allows you to **maximize your fuel economy**.

Best of all you can make those adjustments quickly and conveniently from **outside** of your windscreen and without moving anything out of the way or burning your fingers!

Making Adjustments:

****Important**** Your stove is very light. Although the adjustment mechanism works very smoothly it is safest to do all adjustments with your cook pot on the stove to add extra stability.

The main thing to know about adjusting your stove is that you need to let it reach full operating temperature BEFORE making any adjustments. This generally takes somewhere between 30 and 90 seconds depending on conditions. (Temperature, wind etc.)

As soon as your stove has reached full operating temperature you can leave it on full for a quick boil, turn it down to a low simmer or anywhere in between. (The adjustment range is about 5 full turns of the flame control knob.)

To reduce heat output simply turn the flame adjustment knob clockwise until the desired heat output is achieved. (Don't worry, the knob NEVER gets hot.) If you later decide you need more heat then just turn the knob counter-clockwise.



Please note that we emphasize **Heat Control**. That's because you're adjusting air flow NOT air pressure.

The first one or two turns downward will definitely lower the heat output even though the flame size might not visibly seem to get much smaller. The most noticeable change in both heat output and flame size will be from about 3 turns down to fully closed.

Also be aware that as you're turning the stove down, the heat output will decrease almost immediately even though it typically takes about 30 seconds for the flame size to fully decrease to a given setting.

When turning the stove up, heat AND flame size respond almost immediately.



Extinguishing Your Stove



One of the great features of your *PackaFeather XL* stove is that you don't need to try to calculate how much fuel you will need and end up using more than is strictly necessary. Or worse yet, use too little and be forced to let your stove (AND half cooked meal) cool down so you can add more!

In fact our extensive pre-production tests found that it is actually more fuel efficient to start with more fuel than is needed, use only as much as you need and then extinguish the flame. As soon as you **certain that the flame is extinguished**, you can then 'vacuum' out the unused fuel using our exclusive FBK-1 **Fuel Bottle Kit**. (For best fuel economy, remove any unused fuel as soon as possible as it will continue evaporate.)

You may order a fuel bottle kit here: www.packafeather.com

To extinguish the flame, first close the choke ring (remember to leave your cook pot in place while doing this) by turning the flame adjustment knob clockwise until it stops (about 5 turns from full open). **Then wait about 20-30 seconds allowing the flame to shrink**. Then use the included snuffer cap to cover the exhaust port and **firmly hold it down** to extinguish the flame.

****Important**** **ALWAYS** close the air intake ports completely and allow the flame to stabilize and shrink **BEFORE** attempting to extinguish the flame. Failure to do so may cause flames to exit through the air intake ports which in turn may damage the choke ring mechanism.

If while holding the snuffer cap firmly in place you see or feel flames exiting around the snuffer cap, remove the snuffer cap and allow the stove to cool for another 15 seconds. Then try again.

Care and Maintenance of Your Stove

During the extensive research and development phase of the *PackaFeather XL* stove, every effort was made to achieve an ideal balance between weight and durability. It is certainly not fragile but a stove that weighs a less than 2 ounces cannot be made indestructible! Therefore you should take reasonable precautions to avoid damaging your stove.

Packing Your Stove

The best place to pack your stove is inside of your cook pot. If that is not an option for you then

there are two (2) parts of your stove that you should take care with when packing your stove:

1.) The Combustion Chamber. The area around the exhaust port will become soft after you use it. Avoid packing your stove where other objects might press in on that area. (If it does become distorted, hold the combustion chamber with your thumbs on the inside and your fingers around the rim. Hold it at eye level and gently press with your thumbs to work it back into shape.)

2.) The cable between the worm screw and flame adjusting knob. Although it is made from spring-temper stainless steel, you should pack your stove so that the cable doesn't become kinked where it connects to the worm screw. (If it does get bent it's fairly simple to straighten it out but doing so too many times could cause one or more of the tiny wires that make up the cable to fatigue and eventually break.)



To pack your stove first make sure that the choke ring is fully closed. Then place the pot stand around the fuel cup. Turn the combustion chamber upside down and put them inside. Then lean the snuffer cap into the gap between the wires of the pot stand. **(Note how the top of the rubber handle of the snuffer cap rests on the rim.)**

Finish by pressing the plastic packing cap into place. Try to press only on the outer edges of the combustion chamber to avoid denting the area around the exhaust port.

****Important**** The plastic packing cap is for storage **ONLY**. Never try to use it as a base while operating your stove!

**** Note:** Should your fuel cup become damaged or lost you can cut the bottom off of any regular size beverage can to use as a temporary replacement.

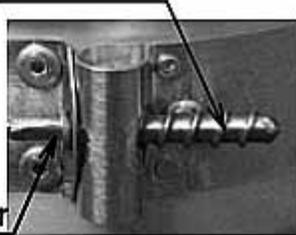


Maintaining Your Stove

Your **PackaFeather XL** stove requires very little maintenance. Other than keeping it clean, about the only maintenance needed is to occasionally lubricate the threads of the worm screw assembly at the 2 points shown below with a light machine oil (3-in-1 oil or similar).

Worm screw threads

Oil point #1



Worm screw retainer

Oil point #2

The choke ring never requires lubrication.

****Important**** Avoid using cooking oil to lubricate your stove. It will leave a sticky residue that is difficult to remove.

DISCLAIMER

Fire is dangerous and **ANY** backpacking stove can create a potentially hazardous situation for the user. Buyer assumes all responsibility for any and all loss, damage and injury caused through the use of the stove. Buyer assumes any and all risk of loss, damage and injury and warrants that he or she will defend, indemnify and hold Seller harmless for any such loss, damage and injury.

If you are not willing to assume ALL responsibility for any and all loss, damage and/or injury that may arise through the use of the stove and any accessories please return it for a refund before using it.

WARRANTY

****Important Note****

Some parts of your stove are made from recycled aluminum beverage containers. Because of this fact nearly every stove will have at least a few very minor 'dings' that DO NOT effect the stove's performance or durability. As such, they are NOT considered manufacturing defects.

Your *PackaFeather XL* stove is constructed mainly of thin aluminum alloys and therefore must be handled with reasonable care. If you do it will last for many years. Your stove was tested at the time of manufacture and before shipping and was in good working order at the time of shipping.

If Buyer detects a manufacturing defect, the Buyer agrees to pay the cost of return shipping charges and Seller agrees to repair or replace and return the stove to Buyer at no additional charge. The decision as to whether to repair or replace the stove is solely at the discretion of Seller.

Punctures, dents or other deformities that occur during use or misuse do not constitute manufacturing defects. Further more it is recommended that the Buyer NOT use the stove if it becomes damaged. Therefore Seller makes no offer to repair any consequential damages incurred by Buyer. No other warranty either express or implied is offered.

Thank you for your purchase!

You are the only reason we are in business and everything we do is about trying to help make your hiking and camping adventures more enjoyable. Your questions and comments are always appreciated. Please feel free to contact us at any time:

comments@packafeather.com