The TrekkerTM PORTABLE WATER PURIFICATION UNIT



OWNERS MANUAL



Congratulations! You have purchased the finest, most technologically advanced Ultraviolet Water Treatment System available anywhere in the world. It has been designed with you, the consumer, in mind. Noah products are durable, lightweight, simple to use and maintain, and most important, they will provide you with safe, clean drinking water for years to come.

WHAT IS ULTRAVIOLET?

Ultraviolet from the sun has long been known for its ability to destroy microorganisms. However, it has only been in recent years that ultraviolet equipment has been manufactured for the consumer.

The UV lamp is similar to a fluorescent lamp in appearance only. The UV lamp operates using a low-pressure mercury vapor to produce the UV energy necessary to kill the microorganisms that can live in water. There is a 3 - 4 minute start-up period for our lamp in order to achieve full intensity and repeated starting of the lamp will shorten its life.

There are five major groups of microorganisms that are destroyed with Noah products: viruses, bacteria, fungi, algae and protozoa. When these microbes are exposed to the UV energy, their nucleic acid absorbs the energy, which scrambles the DNA structure and prohibits reproduction. Since the cell is now sterile or dead, it is no longer a threat.

The U.S. Dept of Health has established that proper UV exposure should be 16,000 micro-watt seconds per centimeter squared to achieve potable standards. All Noah products exceed this standard.

It is recommended that a filter should be used before the UV process to remove any sediment that may inhibit the transmission of UV light. The filter system that Noah has incorporated in your system serves a dual purpose. Its first task is to remove the suspended solids from the water that may provide a shield for the microbes to hide behind, making it difficult to receive sufficient UV exposure. Second, Noah uses carbon filtration for removing harmful chemicals and unpleasant taste/odor problems, assuring safe, good tasting water.

WHAT IS ACTIVATED CARBON?

Activated carbons are created from wood, coal or coconut shells that have been ground up and activated by heating at a controlled temperature and pressure to promote the active sites where pollutants can be adsorbed.

Adsorption is the physical process where certain water pollutants are attracted to the surfaces of the carbon rather than to the water. The pollutants are locked into the carbon and are removed from the water. Activated carbons are also able to filter out sediment through mechanical filtration by trapping particles in the spaces between the carbon granules. Activated carbon has been used for hundreds of years to treat taste, odor and color problems. Major water utilities and water treatment manufactures have found activated carbon to be an excellent media to produce better

tasting water and remove harmful water contaminants at a reasonable cost.

USE OF YOUR NOAH WATER PURIFICATION SYSTEM

Noah Portable Water Purification Systems provide 99.9999% disinfection of bacteria and viruses. Noah systems are designed to provide complete water treatment in a compact, easy-to-use package. Noah products are designed to provide years of trouble-free service with proper maintenance. It is important that you read entire instructions before use.

OPERATING YOUR UNIT

- 1. Situate the unit near your salt-free water source. Open the carrying case, uncoiling and uncapping the hoses.
- 2. Connect power cables to 12-volt power source (RED connector to positive terminal and BLACK connector to negative).
- 3. Turn toggle switch to ON UV indicator light will be illuminated.
- 4. Run the unit for 3 minutes before inserting inlet hose into the water supply. This allows the Ultraviolet lamp to reach maximum operating intensity.
- 5. Place the inlet hose assembly (yellow band) into the water source.
- 6. Remove protector cap from outlet hose (blue band) and place outlet at collection point of your choice.
- 7. To turn off, switch toggle to OFF and remove power cables.
- 8. Drain hoses thoroughly and cap.
- 9. Coil hoses and power cord and stow in carrying case.

CAUTIONS

- ALWAYS allow the unit to run for 3 minutes before drinking
- DO NOT exceed 65 PSI water pressure
- DO NOT use any combustible or corrosive liquids
- DO NOT run salt water through this unit
- DO NOT use unit when UV lamp indicator light if OFF
- DO NOT pour purified water into a contaminated container
- DO NOT reverse water flow through the system
- Never look directly at a lighted UV lamp, Ultraviolet rays can be harmful to your eyes
- DO NOT lengthen the inlet or output hoses by connecting any additional lengths of hose. The pump cannot handle the add'l load
- DO NOT restrict (or block) water flow while pump is running
- Your unit contains delicate glass components please use proper care when handling & transporting

NORMAL MAINTENANCE

The following diagrams and instruction will provide you with all the information needed to properly maintain your Trekker unit so that you may enjoy the benefits of safe, healthy water for years to come. It is important that any water treatment system be **properly maintained** to ensure water quality.

BETWEEN USES: In bucket, mix 3-5 gal sanitizing solution using 1 tsp bleach per gallon of water. Remove carbon filter and immerse in bucket. With both inlet and outlet hoses in bucket, turn unit on and cycle the solution for 8-10 minutes. Drain water from hoses and both canisters, allow unit and filters to air dry for 48 hours before re-assembly and storage. Always protect against freezing.

QUARTZ SLEEVE: The quartz sleeve and filter canisters should be cleaned each time filters are changed. The presence of iron or poor water quality will require frequent cleaning of the quartz sleeve. Clean all parts except the filters and electronic parts with soap and water. DO NOT ATTEMPT TO REMOVE QUARTZ SLEEVE as a part of your normal maintenance. Damage to the system and personal injury may occur. Contact Noah Water Systems if the quartz sleeve is broken or needs replacement.

FILTER REPLACEMENT: Filters life will vary according to water conditions and frequency of use. A reduced flow rate indicates that filters must be changed. Use only Noah filters. Noah filters are specifically designed to work in the ultraviolet disinfection process. Use of non-Noah filters will void your warranty.

TO CHANGE FILTERS:

- 1. Disconnect power and remove entire assembly from carrying case.
- 2. Unscrew sump; remove old filter and discard. (For Carbon Filter slowly remove from over quartz sleeve).
- 3. Remove Teflon sleeve (carbon filter) and gasket (rubber washer) from cartridge and save for reinstallation. (see photos)
- 4. Rinse out sump and fill 1/3 full with water. Add 2-3 teaspoons bleach, scrub thoroughly with brush or sponge. Rinse well.
- 5. Wipe down quartz and Teflon sleeve to remove any film and fingerprints.
- 6. Lubricate the sump O-ring and gasket with petroleum jelly. Wipe groove and O-ring / Gasket clean. Place O-ring / Gasket back in place and press down O-ring into the groove with two fingers (or place gasket on rim of sump). This will ensure a proper seal.
- 7. Re-insert Teflon sleeve into new cartridge (carbon filter only) and place gasket (rubber washer) on top of sleeve. (see photos)
- 8. Twist the sump clockwise and hand tighten into the machine head. DO NOT OVERTIGHTEN.
- 9. Re-connect power supply, turn on the unit and check for leaks. (Depressing the RED button will release trapped air from filter.)
- 10. Re-secure entire assembly back into carrying case.

NOTE: When opening filter housing to change cartridge, it is common for O-ring / Gasket to lift out of sump and stick to the head.

<u>CAUTION:</u> If O-ring / Gasket appears damaged or crimped, it should be replaced. Contact Noah Water Systems for replacement.

<u>CAUTION:</u> Use caution when changing the carbon filter to avoid breaking the quartz sleeve in the UV chamber.

LAMP REPLACEMENT: Lamps must be changed every year or every 9200 hours of use (remember that each time the lamp is turned on, 4 hours of life are expended). Lamps rarely burn out, but they do lose their disinfection power with use. *The UV lamp is removed through the top of the unit, and not by removal of the sump and carbon filter.* To change lamp, remove the unit from the case. Remove the grey electrical cord connected to the UV lamp from the UV chamber (lift lamp straight up to avoid breaking). Unplug the lamp from the cord and discard. Insert a new UV lamp into the hole and re-connect to the 4-pronged plug. Touch only the ends of the lamp, as fingerprints on the glass will reduce the lamp's effectiveness. Slide the lamp completely back into the sleeve so only the grey cord is seen. You're Done!

FILTER CANISTER CARBON FILTER & UV LIGHT



This photo shows your UV light and quartz tube exposed with the blue canister removed. Please note the black "gasket", or rubber washer.



These 2 photos illustrate the CORRECT configuration of the carbon filter, Teflon sleeve and rubber washer. Note the Teflon sleeve is first inserted into the hollow core of the carbon filter. The rubber gasket is then seated on top of the lip of the Teflon sleeve.





This shows the INCORRECT way to re-install your carbon filter assembly. This will prevent the necessary watertight seal, allowing the untreated water to bypass the carbon filter and UV process, rendering the water undrinkable.

WARRANTY INFORMATION

All merchandise designed, manufactured and assembled by Noah Water Systems is warranted to be free from defects in material and workmanship for a period of three years from the time of shipment. Merchandise must be properly installed and maintained and used only for the intended purpose and under normal service conditions as detailed in the Owners Manual. Liability with respect to any such merchandise proved defective is limited to buyer's net purchase price or, at Noah's option, to the repair or replacement thereof upon its return to Noah freight prepaid. In no event shall Noah be liable for any loss or damage, either direct, incidental or consequential.

All merchandise supplied by Noah but designed, manufactured and assembled by others (i.e. pumps, generators, electrical components etc) shall be accepted by Buyer with only those warranties made my such vendors or manufacturers and in lieu of any additional warranties on the part of Noah. Filters are not warranted due to varying water conditions.

This warranty agreement excludes all products or components that, in the opinion of Noah Water Systems, have been subject to negligent use, misuse, alteration, or that have been repaired/replaced/operated with component parts other than those manufactured or supplied by Noah Water Systems.



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Revised January 2010 - Noah Water Systems, Inc.





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