

How to use your
Ultrasonic Laundry Grenade

Manufactured by
Allegheny Munion Works
Bellefonte, Pennsylvania
Laramie, Wyoming

Allegheny Munition Works is pleased that you are using the Ultrasonic Laundry Grenade. It should provide years of service under harsh conditions.

If your Ultrasonic Laundry Grenade ever malfunctions, please call the toll-free number molded into its housing, or go to the Allegheny Munition Works website, hit the Support link, and tell us. Regardless of where you are, we will strive to send a replacement at our cost, unless it was obviously abused or battery corrosion leaked inside it. Depending on your deployment location, you may be able to return your Ultrasonic Laundry Grenade to your AAFES Field Exchange for an immediate replacement.

1 Safety Warnings

Do not hold the Ultrasonic Laundry Grenade in your bare hands when it is vibrating. It is designed to adjust its frequency until it can know that all fluids in contact with it are resonating. It will find the natural frequency of your hand, because it is built to do so. Numbness, tingling, and even mild skin burns can result from handling the Ultrasonic Laundry Grenade while it is operating. Wait until it turns off before handling it. It is safe to have your hands in the water with laundry while the ULG is operating, but avoid handling the ULG itself.

Do not operate two or more Ultrasonic Laundry Grenades in the same container. Each is designed to adjust its frequency until it senses that fluids surrounding it are resonating. One ULG will set up a feedback loop with the other. One or both will be damaged.

The ULG uses 4 “C” batteries of any type, including rechargeables. Do not mix battery types. Replace all batteries at the same time. An exhausted battery among three fresh batteries can catch fire, explode, or leak corrosive substances inside the ULG.

The Ultrasonic Laundry Grenade is safe to use around all electronic equipment. However, it should not be used near military working dogs.

Do not use the Ultrasonic Laundry Grenade with any substances other than common laundry materials and water. It can **ignite** petroleum-based substances.

2 Ultrasonic Laundry Grenade

The Ultrasonic Laundry Grenade is a battery-operated ultrasonic immersion cleaner. It will agitate clothing, laundry detergent, and water together in any container, using ultrasonic waves. You can use it under field conditions to wash and rinse up to 5 kilograms of laundry in 20 liters of water in an improvised container, such as a trash can, bathtub, sink, or other rigid container. It automatically seeks the right ultrasonic frequency to operate, depending on the amount of clothing and water and the dimensions of the container.

The Ultrasonic Laundry Grenade uses 4 C cell batteries for its power. The duration of the batteries depends on how much laundry you will wash with it, how dirty the laundry is, and the kind of container you use.

A waterproof battery compartment cover seals the batteries inside the housing, and also protects the controls from water. On the inside of the battery compartment cover, a switch allows you to select a wash duty, from light to medium to heavy soil, or rinse duty. You set the switch to the desired duty, close the battery compartment cover, then press the activate button on the cover and put it in the container with the water and clothing. The Ultrasonic Laundry Grenade counts down ten seconds before starting.

Light wash duty runs approximately 5 minutes, medium for 8 minutes, and heavy for 12 minutes. Rinse duty runs about 5 minutes. These times vary with size and shape of container and weight of laundry and water.

The Ultrasonic Laundry Grenade weighs 275 grams without batteries. It is 12cm tall and 9 cm in diameter. It will operate at any temperature where water is liquid.

3 Instructions for Using the Ultrasonic Laundry Grenade

3.1 Inspect the ULG before using it.

- Open the battery compartment cover. Remove all batteries. Look at the inside of the battery compartment for any corrosion, or any sign of water leaking into the ULG. If you see any water or corrosion, do not use the ULG.
- Check the rubber-coated battery compartment cover itself. If it is worn, distorted, or not firmly bonded to the cover, do not use the ULG.
- Examine the outside of the ULG. If you see any crack, abrasion, or discoloration of the plastic housing, do not use the ULG.
- Put the batteries back in, all batteries with positive (+) post pointing inward. Screw the battery compartment cover back on the ULG.
- Shake the ULG vigorously, listening for any rattling noise. If you hear anything moving inside the ULG, do not use it.

3.2 Choose a laundry container.

Five-gallon plastic paint buckets work well, rigid metal buckets such as trash cans or empty, steam-cleaned fuel drums work even better. The container can have any capacity, as long as it will contain your laundry, but do not use more water than 20 liters (about 5 1/2 gallons) or wash more than 5 kilos (11 pounds) of clothing. Do not use a cloth, fabric, or rubber container, such as a poncho or water bladder.

3.3 Fill the laundry container.

Fill the container with your laundry and water, up to the maximum mentioned above. Add laundry detergent, in proportion to how much laundry to be washed and how dirty it is. You do not need hot water. The ultrasonic waves generated by the Ultrasonic Laundry Grenade loosen soil and agitate the clothing so well that hot or warm water is not necessary.

3.4 Select duty and start the ULG.

Take the battery compartment cover off the ULG, set the switch to the load setting you want, light, medium, or heavy. Close the cover again. Press the rubberized activate button on the outside of the battery compartment cover, and drop the ULG in the container with the water and laundry.

The ULG will start about ten seconds later. It will seek and lock on to an ultrasonic frequency that is best for that load and container.

3.5 Make sure the ULG is running.

You may hear a buzzing or whining in the container, and the detergent will quickly suds up on top of the water. The ULG will also begin gyrating slowly to transmit ultrasonic waves in all directions through the clothing, and it will adjust its frequency as needed. If no suds form on top of the water within 60 seconds, and the ULG is not slowly twisting in the water, the ULG is not running. Touch the ULG with the tip of a finger to make sure it is not running. If it's running, let it run. If it isn't running, take it out, replace the batteries, and try again.

3.6 Change from wash to rinse duty.

When the ULG has completed its cycle, it beeps twice. It will beep again every minute until you pick it up out of the container. Remove the clothing, wring it out slightly to remove more suds, and discard the water and suds.

Remove the battery compartment cover, set the duty switch to rinse, and put it back on. Put fresh water in the container, put the clothing back in, press the activate button on the ULG and put it back in the container. In ten seconds, it will start a short cycle that is optimized for removing remaining suds from the clothing. When the rinse cycle is complete, it beeps twice. It will beep again every minute until you pick it up.

3.7 You're done.

Remove the clothing, wring it out, and discard the water and suds. Dry the clothing by any method available to you.

You can run multiple wash and rinse cycles if you want. Experiment to find the best settings.