

CITIZEN™

Ultrasonic Cleaner

SW1500

English

Operation Manual

Two oscillators for powerful cleaning action!

Ultrasonic waves remove microscopic debris.

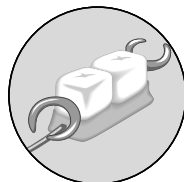


This cleaner uses double power for double cleaning action!

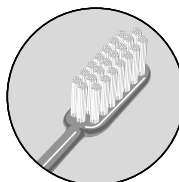
The ultrasonic waves are able to penetrate and clean dirt and debris from tiny grooves and openings that you cannot reach with a sponge or brush.



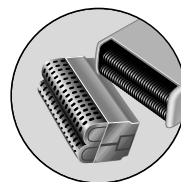
Perfect for: Jewelry



Dentures



Toothbrushes



Shaver blades



Eyeglasses

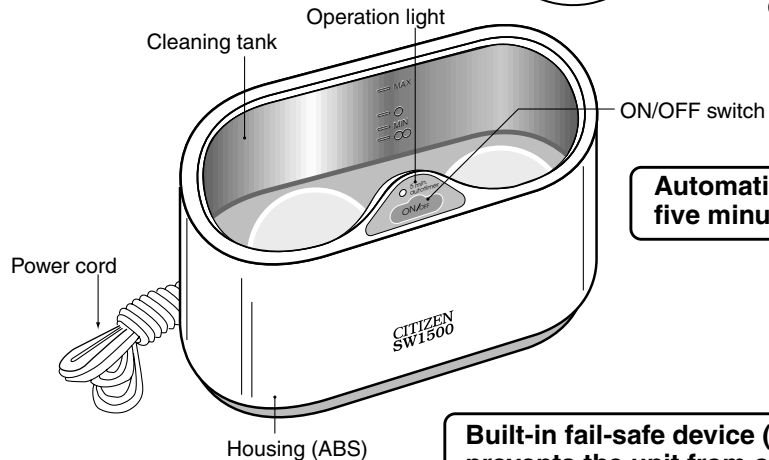
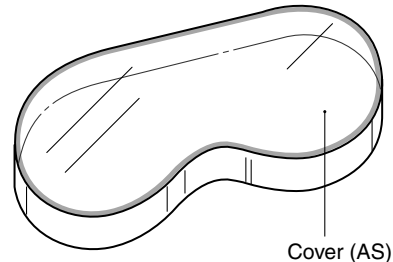
● Be sure to read this "Operation Manual" before operating the unit.

1. PART NAMES

A safe and user-friendly design

The safe design prevents water from entering the internal housing.

Light indicates cleaning in progress.



Automatic timer turns off the unit in five minutes.

Built-in fail-safe device (thermostat) prevents the unit from overheating.

2. SPECIFICATIONS

Model name	SW1500 Citizen Ultrasonic Cleaner (with Auto Timer)
Specifications	PZ2SW1 (2 oscillators, 1 switch)
Rated voltage	AC 230 V (Length of power cord: 1.2 m)
Rated frequency	50 Hz
Ultrasonic output	45 W
Ultrasonic frequency	43 kHz
Ultrasonic oscillators	Two oscillators with attached tank (PZ electrostrictive oscillators)
Cleaning tank material	SUS303 (Thickness = 0.8 mm)
Cleaning tank volume	Maximum fill line: approx. 570 cc; Minimum fill line: approx. 230 cc
Housing dimensions	113 (H) × 217 (W) × 120 (D) mm
Cleaning tank dimensions (inside)	56 (H) × 182 (W) × 86 (D) mm
Weight	Approx. 1,050 g
Power control mechanism	Five-minute auto timer off switch
Supplied parts	Ultrasonic Cleaner housing, cover, power cord, and Operation Manual

Note:

- * These specifications are based on the use of a pair of eyeglasses as the largest item to be cleaned.
- * Specifications, appearance and design are subject to change without notice.

3. OPERATING THE UNIT

Before operating the unit, thoroughly familiarize yourself with the types of items that can and cannot be cleaned with this unit, as described on page 12, and then follow the instructions below.

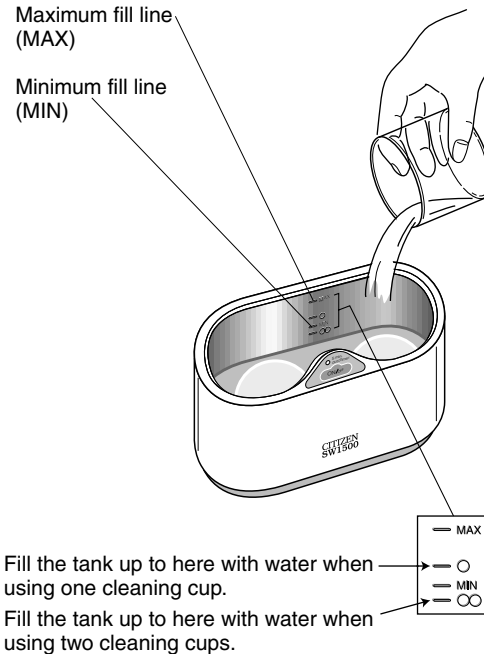
- ① Place the item that you want to clean into the cleaning tank.
- ② Carefully pour **water** from a container into the cleaning tank until the water level reaches the maximum fill line (MAX), as shown to the right.
- ③ Plug the power cord into a wall outlet.
- ④ Turn the power switch on.
- ⑤ When cleaning is finished, turn the power switch off. (You can continue to clean the item until the unit automatically turns off in five minutes.)
- ⑥ Remove the power cord plug from the wall outlet.
- ⑦ Remove the item from the cleaning tank, and dispose of the water.
- ⑧ Rinse the item and the cleaning tank with water.

Note:

The unit produces a sound when it is operating. This is the sound of the ultrasonic vibration, and it does not indicate a malfunction.

Auto Timer Function:

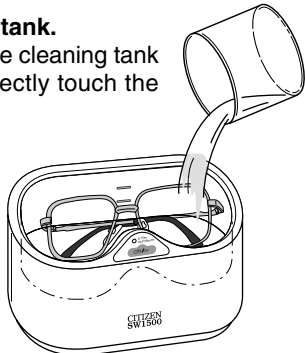
You can continue to clean an item until the unit automatically turns off in five minutes.



4. CLEANING GUIDE

Dirt and debris become difficult to remove over time. That is why you should clean away dirt and debris once it begins to accumulate.

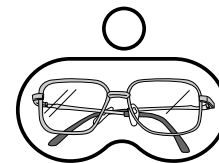
Cleaning Eyeglasses

- 1 **Place them in the cleaning tank.**
 - Place your eyeglasses into the cleaning tank without letting the lenses directly touch the bottom of the tank.
- 
- 2 **Plug the power cord into a wall outlet and turn the power switch on to begin cleaning.**
 - If the dirt or debris is difficult to remove, clean the eyeglasses two or three times.
 - 3 **When cleaning is finished, rinse the eyeglasses.**
 - Use a dry cloth to remove all moisture from the eyeglasses.
 - Dispose of the cleaning tank water and thoroughly rinse.



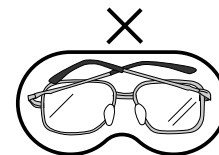
Correct:

Place the eyeglasses into the tank with the lenses facing up.



Incorrect:

Do not place the eyeglasses into the tank with the lenses touching the bottom of the tank, as this may damage the lenses.



Add a drop or two of a mild liquid dishwashing soap to remove oil buildup more efficiently.



CAUTION

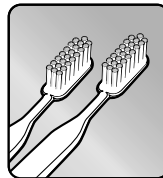
- **Be careful when washing eyeglasses with plastic lenses.**

If your eyeglasses have plastic lenses with cracks or scratches, the lenses may take on a white translucent appearance after cleaning them with this unit and may not return to their original appearance.

- Plastic resin frames may become white and lose their luster after cleaning.
- Do not use this unit to clean tortoiseshell-rimmed eyeglasses or eyeglasses adorned with precious stones.
- Be sure to use water in the cleaning tank when cleaning your eyeglasses.
- Do not use this unit to clean eyeglasses frames that have a damaged coat or paint (scratched, peeling, etc.).
- The vibration from the ultrasonic waves may loosen any screws on the eyeglasses. Be sure to tighten all loose screws before wearing your eyeglasses again.



Cleaning Toothbrush



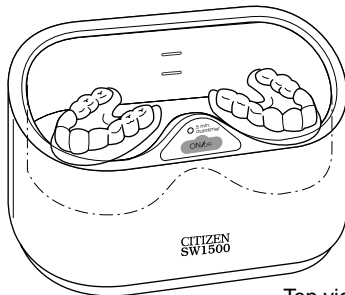
Use ultrasonic waves to get rid of debris between the bristles and around the bristle roots of a toothbrush. You'll enjoy cleaner, more refreshing brushing every day.

Follow steps **1** and **2** on page 4 (3. OPERATING THE UNIT) to prepare the toothbrush for cleaning.

- Clean the toothbrush while making sure that head of the toothbrush is completely immersed in the water.
- After cleaning the toothbrush, thoroughly rinse it with water and allow it to dry before using it.

Cleaning Dentures

- 1 Place them in the cleaning tank.**
 - Place the dentures into the cleaning tank.
 - Pour water from a container into the cleaning tank until the water level reaches the maximum fill line.
 - Use warm water (under 40°C) for best results.
 - An oscillator is located on both the left and right side of the unit, so place the upper and lower dentures on different sides of the cleaning tank for best results.



Top view

- 2 Plug the power cord into a wall outlet and turn the power switch on to begin cleaning.**
 - If the debris or stains are difficult to remove, clean the dentures two or three times.
- 3 When cleaning is finished, rinse the dentures.**



Using a commercially-available effervescent denture cleanser with this unit may reduce the cleaning effect.



- Place the dentures face up into either side of the cleaning tank.
- Make sure the dentures are completely immersed in the water.



To remove stubborn stains, clean the dentures with a toothbrush before cleaning with this unit.



Cleaning Jewelry



- 1 Place it in the cleaning tank.**
 - Place the jewelry into the cleaning tank.
 - Pour water from a container into the cleaning tank until the water level reaches the maximum fill line.
- 2 Plug the power cord into a wall outlet and turn the power switch on to begin cleaning.**
- 3 When cleaning is finished, rinse the jewelry.**
 - Use a dry cloth to remove all moisture from the jewelry.



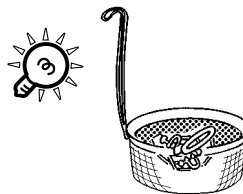
An oscillator is located on both the left and right side of the unit, so you can use both sides of the cleaning tank to clean different pieces of jewelry without worrying about them becoming twisted or catching on each other.



Familiarize yourself once more.

Jewelry items that cannot be cleaned with this unit

- Items that have a relatively soft surface, such as opals, emeralds, tortoiseshell, ivory and pearls. (These items may experience discoloration or a loss of luster.)
- Items that have been bonded or assembled, such as pearls, precious stones, coral, tortoiseshell and ivory. (These items may experience surface peeling, discoloration, or a loss of luster.)
- Items with cracks or scratches. (The cracks or scratches may become more pronounced.)
- Items that can be cleaned include brooches, rings, earrings and bracelets. (Items with precious stones cannot be cleaned.)



You may find it easier to clean the jewelry by placing it into a plastic or stainless steel basket or tea strainer.

Note: Add a drop or two of a mild liquid dishwashing soap for more efficient cleaning.

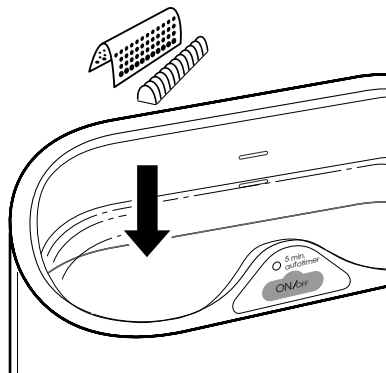
Cleaning a Shaver Blade

Cleaning a shaver blade and foil

- Clean the shaver blade and foil for only one or two minutes to prevent damage from over-cleaning.

1 Place them in the cleaning tank.

- Pour water from a container into the cleaning tank until the water level reaches the maximum fill line.
- Make sure the shaver blade and foil are completely immersed in the water.



- ### 2 Plug the power cord into a wall outlet and turn the power switch on to begin cleaning.

- ### 3 When cleaning is finished, rinse the shaver blade and foil.

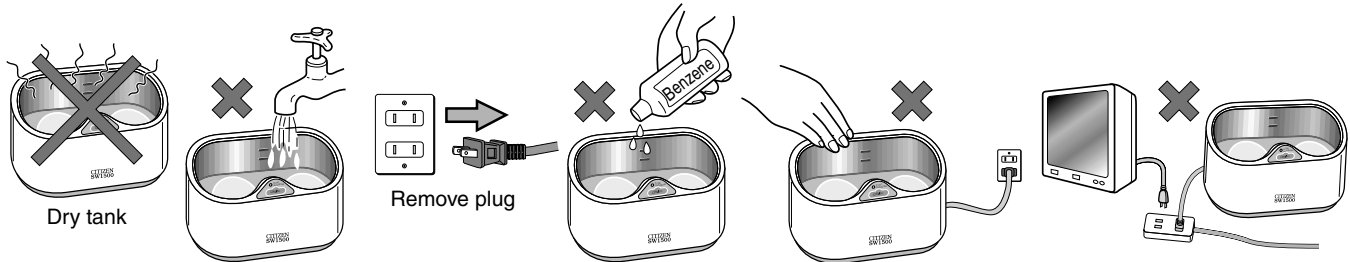
- After rinsing the shaver blade and foil, allow them to completely dry.
- To prevent rusting, apply a shaver cleaner to the blade and foil.

⚠ CAUTION

Prolonged cleaning of the shaver blade and foil may cause chipping or damage to these items. Be careful not to clean these items, especially the shaver foil, for a long period of time.

5. IMPORTANT SAFEGUARDS

- Be sure to always fill the cleaning tank with water before cleaning an item. Using this unit without water may cause a malfunction.
- Continuous use of the unit may trigger the fail-safe device and turn off the unit to prevent overheating. If this happens, remove the power cord plug from the wall outlet and allow the unit to cool down for at least 30 minutes before using again.
- Do not fill the cleaning tank with water directly from a faucet. (Always use a cup or other container.) Spilling water on the unit may cause electrical shock or a malfunction.
- When the unit is not in use, be sure to remove the power cord plug from the wall outlet.
- Do not clean precious stones, pearls or other items that are not intended for use with this unit, as this may cause discoloration or a loss of luster of the item.
- Do not freeze the cleaning tank with water inside, as this may deform and damage the cleaning tank.
- Do not use flammable liquids (such as gasoline or benzene) or organic solvents (such as trichloroethylene or acetone) with this unit.
- Do not use acid solvents in the cleaning tank, as this will damage the stainless steel tank.
- Do not place this unit in direct sunlight or near an open flame, as this may deform and discolor the unit.
- Use this unit only on a flat surface, as the cleaning tank water may spill.
- Do not drop the unit or subject it to strong shocks, as this may damage the unit or cause a malfunction.
- Do not place your hands or fingers inside the cleaning tank or cleaning beaker while the unit is operating.
- Do not use this unit in the vicinity of a personal computer, television or radio, or share the same electrical outlet with these devices, as this may cause electrical interference.
- If the sound from the ultrasonic waves becomes annoying, place the cover over the unit. Remove the cover if you will be using the unit for a prolonged period of time.



SAFETY PRECAUTIONS

Before using the unit, be sure to carefully read and follow these safety precautions.



CAUTION

1. If you are using a pacemaker, consult a physician before operating the unit.
2. Do not use combustible or flammable cleaning liquids in the cleaning tank, as this may result in fire.
3. If you notice an unusual odor or smoke emanating from the unit during operation, immediately remove the power cord plug from the wall outlet and discontinue use of the unit.
4. Do not use or place this unit near a kitchen sink, bathtub, washbasin or other location where it may become wet. This may cause a malfunction or electrical shock.
5. Do not immerse the unit in water or pour water over it, as this may cause electrical shock or a malfunction.



WARNING

1. Do not remove the housing case, as this may cause a malfunction. Refer servicing to qualified service personnel.
2. Do not use this unit with a voltage supply other than 230 volts, as this may cause a malfunction.
3. Do not use this unit to clean lacquered items, wooden items, or items with soft precious stones, such as tortoiseshell, ivory, coral, emeralds and pearls.
4. Do not use this unit to clean watches, including water-resistant watches.
5. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

6. ITEMS FOR CLEANING

Items you can clean		Items you cannot clean
Types of items	<ul style="list-style-type: none"> ■ Precious metal (jewelry) ■ Plastic ■ Glass ■ Porcelain 	<ul style="list-style-type: none"> ■ Precious stones with a relatively soft surface ■ Precious stones that have been bonded or assembled ■ Items with scratches or cracks ■ Items with deteriorating coat or paint
Examples	<ul style="list-style-type: none"> ● Eyeglasses ● Dentures ● Toothbrush ● Comb ● Jewelry ● Clipper blade ● Shaver blade and foil ● Metal wristwatch band ● Cutlery ● Fountain pen tip ● Ink drawing pen ● Filter ● Coins ● Pipe ● Can opener ● Personal seal 	<ul style="list-style-type: none"> ● Tortoiseshell (eyeglasses and other items) ● Ivory and stone (as used in a personal seal) ● Wristwatch (including water-resistant types) ● Precious stones (such as pearls, turquoise, opals, jade, emeralds, coral, and amber) ● Jewelry and eyeglasses with precious stones ● Contact lenses

- Note:**
- * Plastic resin eyeglasses frames may become white and lose their luster after cleaning. If this happens, wipe the frames with a soft cloth, while applying pressure, to return the frames to their original appearance. (If the frames have scratches or cracks, they may not return to their original appearance.)
 - * If your eyeglasses have plastic lenses with cracks or scratches, the lenses may take on a white translucent appearance after cleaning them with this unit and may not return to their original appearance, even when wiped with a cloth.
 - * Do not use this unit to clean eyeglasses frames that have a damaged coat or paint (scratched, peeling, etc.), as this may cause peeling of the coat or paint.
- * Cleaning with this unit will not remove rust from metal items.
 - * Cleaning with this unit will not return discolored metal and precious metal to their original appearance.
 - * Cleaning with this unit may not remove tartar, plaque, yellow stains, black stains, or tobacco stains from dentures.
 - * Cleaning with this unit may not remove denture adhesive cream from dentures.

7. MAINTAINING YOUR ULTRASONIC CLEANER

Maintenance

How to clean the cleaning tank and unit

Cleaning the cleaning tank

- ① Unplug the power cord, dispose of the cleaning tank water, and allow the unit to sufficiently cool before cleaning the cleaning tank. (See figure 1.)
- ② Pour clean water from a container into the cleaning tank until the tank is half full. Use a soft sponge to clean inside the tank, and then rinse with water. (See figure 2.)
 - * If the cleaning tank is very dirty, add a drop or two of mild liquid dishwashing soap for best results.
 - * Be careful not to use a rough sponge, as this may scratch the cleaning tank.
- ③ After cleaning inside the cleaning tank, rinse again with clean water.

Note:

- If you cleaned the tank with a mild liquid dishwashing soap, thoroughly rinse the tank so that no soap remains.
- Be careful not to splash water onto the unit while washing the tank.

Cleaning the unit

- ① After cleaning the cleaning tank, wipe the surface of the unit with a soft towel that has been soaked in water and carefully wrung out.
- ② Wipe the unit with a dry cloth.

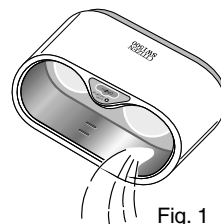


Fig. 1

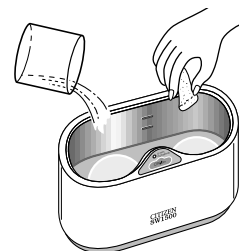
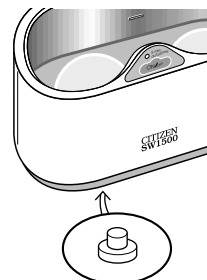


Fig. 2



Moisture collection plug

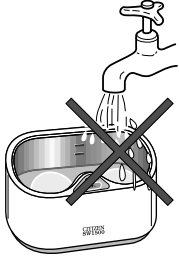
Moisture collection plug maintenance

The moisture collection plug, located on the bottom of the unit, is used to remove moisture that adheres to the outside of the cleaning tank. During operation of the unit, this plug may accumulate some moisture. You should occasionally remove the plug and drain the moisture. Be sure to return the removed plug to its original position.



CAUTION

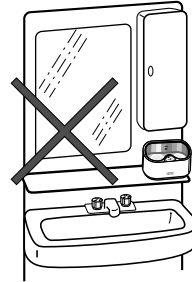
If the unit is exposed to water, the internal circuitry may malfunction, resulting in electrical shock or fire.



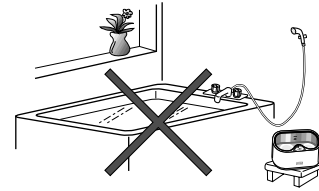
☆ Do not wash the unit under a running faucet.



☆ Do not immerse the unit in water.



Washbasin



Bathtub

☆ Do not store the unit in a location subject to high temperature or humidity.

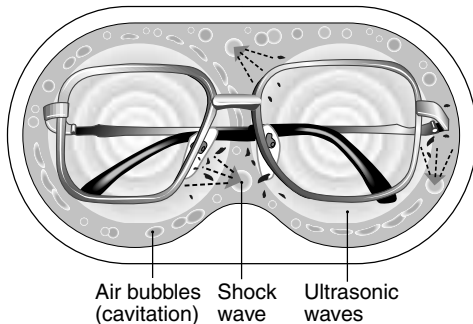
I • N • F • O • R • M • A • T • I • O • N

How does it remove dirt and debris?

Answer

Here is how ultrasonic waves from the two oscillators remove microscopic debris.

The vibration of the ultrasonic waves from the two oscillators creates countless microscopic air bubbles in the water, in a process called "cavitation". A shock wave is created at the moment of cavitation, which breaks down microscopic debris that cannot be reached by hand and cleans away dirt that you cannot normally remove with a cloth, brush or running water.



★Be careful not to over-clean an item.

See for yourself!

Cavitation Effect

1. Carefully pour water into the cleaning tank until the water reaches the maximum fill line.
2. Cut a piece of aluminum foil into a rectangle measuring approximately 15×4 cm. (See the top right picture.)
3. Carefully immerse the aluminum foil into the cleaning tank water.
4. Turn the power switch on and wait five minutes.
5. How interesting! The aluminum foil is now in pieces. This is the power of ultrasonic waves!



Before



After

●CITIZEN is a registered trademark of Citizen Watch Co., Japan.

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