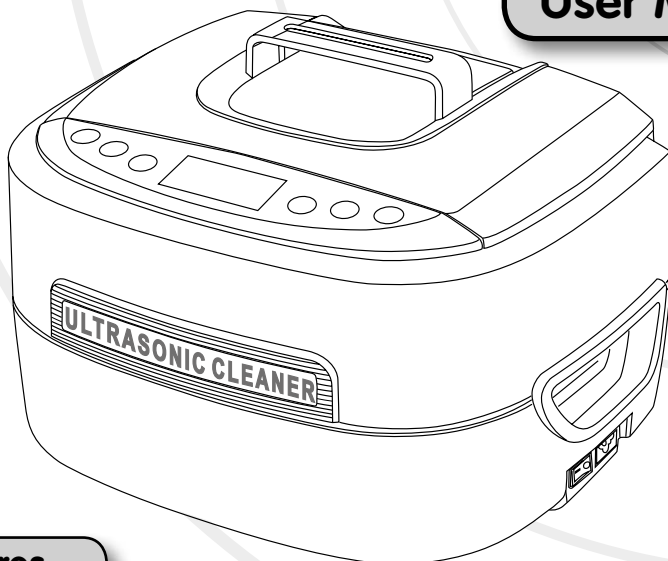


James PRODUCTS

ULTRA BOS1

Professional Ultrasonic Cleaner

User Manual



Features

Lengthened tank

Tank capacity: 2500ml; Size: 24.5 x 15.0 x 7.6 cm / 9.6" x 5.9" x 3.0".
Longest item that can fit inside the tank is 26.0 cm / 10.2"

Control panel with capacitive sensing technology

Durable, reliable, resistant to water and harsh chemicals

Industrial grade ultrasonic transducer

Ø38 industrial transducer (60W), giving 170W cleaning power

2 x colour LED display

1 to 30-minute full range timer

Degas feature

Removes air bubbles quickly

Ceramic heater

Ceramic heater (100W), 65°C temperature limited

Multiple circuit protectors

When overloaded or improperly used, the protectors shut down the power to certain areas to protect the machine

Cooling fan

To protect and keep every part in good condition after working a long time

Detachable power cord

Independent power switch and detachable power cord

Moisture-proofed PCB with industrial IC

Capable for different working environments with better anti-interference performance

Engineering grade plastics

4mm wall thickness with tongue and groove joints for better impact and water-proof performances

SPECIFICATIONS

Description	Professional Ultrasonic Cleaner
Model	ULTRA 8051
Tank Capacity	2500ml (Max. 2100ml - Min. 600ml)
Tank Size	24.5 x 15.0 x 7.6 cm / 9.6" x 5.9" x 3.0"
Longest Item Fits inside Tank	26.0 cm / 10.2"
Power Supply	170 W (AC 220~240V 50/60Hz)
Digital Timer Settings	1 to 30-minute full range timer
Ultrasonic Frequency	35,000 Hz
Tank Material	Stainless Steel SUS304
Housing Material	ABS
Net Weight	2.9 kg / 6.4 lb
Gross Weight	3.5 kg / 7.7 lb
Unit Size	31.4 x 24.3 x 20.4 cm / 12.4" x 9.6" x 8.0"

Use tap water. Special solutions are not necessary in most cases.

Principles of ultrasonic cleaning:

Millions of tiny air bubbles are generated within liquid by high frequency vibration. The air bubbles burst when in contact with object and dislodge the debris to achieve the cleaning effect.



- Using tap water is sufficient. Purified water or distilled water has the same cleaning effect as regular tap water for ultrasonic cleaning.
- When cleaning silver or copper items where oxidation has darkened the items, special solutions such as SeaClean2, needs to be added to the water to remove the oxidation.

Read the Manual First

The manual should be carefully reviewed before starting to use the device.

Warnings should be observed carefully. Please follow the manual for operations.

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SAFETY PRECAUTIONS



Keep it away from children!



This appliance can be used by children aged from 8 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are aged 8 years and above and supervised. Keep the appliance and its cord out of reach of children aged less than 8 years.

- Please store the ultrasonic cleaner where it is inaccessible by children.
- Danger to children! Danger for death through suffocation! Keep packaging material away from children.
- This appliance should not be used by children. Keep the appliance and its cord out of reach of children.



To prevent life-threatening electrical shock, please observe the following:



Danger of electrical shock! Do not use while bathing. Never immerse the device or the power cord in water or other liquid.

- **Danger of electrical shock!** Never touch the power plug with wet hands, especially when inserting or removing the plug.
- **Danger of electrical shock!** If the unit has fallen into water during operation, do not touch the unit. Remove the power plug from the socket first.
- **Danger of electrical shock!** Do not spray water or liquid over the device.
- Never operate the device unattended.
- Follow the manual to operate the device.
- Do not use components unapproved by the manufacturer.
- When removing the power cord from the socket, grab the power plug not the cord.
- To protect the power cord from damage, do not cause it to get caught by things such as cupboard door or a chair leg; do not drag across a hot surface.
- If there is damage to the power plug, cord, housing, or other parts of the device, do not use the device.
- Do not disassemble the device, except by professionals.
- If the unit is damaged, non-operational or has fallen into water, take it to a qualified service provider.
- Remove the power plug from the socket:
 - if malfunction occurs
 - before cleaning the device
 - if the device is not going to be used for prolonged period
 - after each use (recommended)
- The installation of an earth leakage circuit breaker with a rated tripping current of no more than 30 mA provides further protection against an electrical shock. The installation should only be carried out by a trained electrician.



To prevent fire hazards, please observe the following:

- Never block the vents on the device. Keep the vents free from lint, hair and other materials.
- Do not place the device on a soft surface, such as a bed or a couch, where the vents could be blocked.
- Observe the other warnings in the previous section.
- 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.

SAFETY PRECAUTIONS



Other observations:

- Do not operate the product without filling the tank with water. Running dry will damage the unit.
- Do not plug in the power cord before adding water to the tank. To avoid overspill, do not fill the tank above the 'Max' line.
- Do not use solution containing abrasive substances or strong corrosive chemical solution not recommended by the manufacturer or the supplier.
- Place the device on a dry and flat surface for operation.
- When the device is subjected to severe electromagnetic interference, it may malfunction, stop operating or lose control functions. If this happens, unplug the power cord then re-insert it to restart the device.

IMPORTANT SAFETY INSTRUCTIONS



When using electric appliances, basic precautions should always be followed, including the following :

- Read all the instructions before using the appliance.
- To reduce the risk of injury, close supervision is necessary when an appliance is used near children.
- Only use attachments recommended or sold by the manufacturer.
- Do not use outdoors.
- To disconnect, turn all controls to the off (O) position, then remove plug from outlet. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord. Unplug from outlet when not in use and before servicing or cleaning.
- To reduce the risk of electrical shock, do not put the appliance in water or other liquid. Do not place or store appliance where it can fall or be pulled into a tub or sink.
- All servicing of this product, including transducer replacement, is to be conducted by qualified service personnel.
- Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner.
- Return appliance to the nearest authorized service facility for examination, repair, or electrical or mechanical adjustment.



Items Not Suitable for Ultrasonic Cleaning

Soft Jewellery:

Pearls, emerald, ivory, coral, agate, sea turtle shells, etc

These items are not hard, so scratches may occur during cleaning.

Welded, Plated and Glued Items:

Welded or plated metal items, glued items

Ultrasonic cleaning may enlarge the gaps inside the welded joints, plated coating or glued items and may cause separation.

Watches:

Except diver's watches with depth rating over 50 m (150 ft)

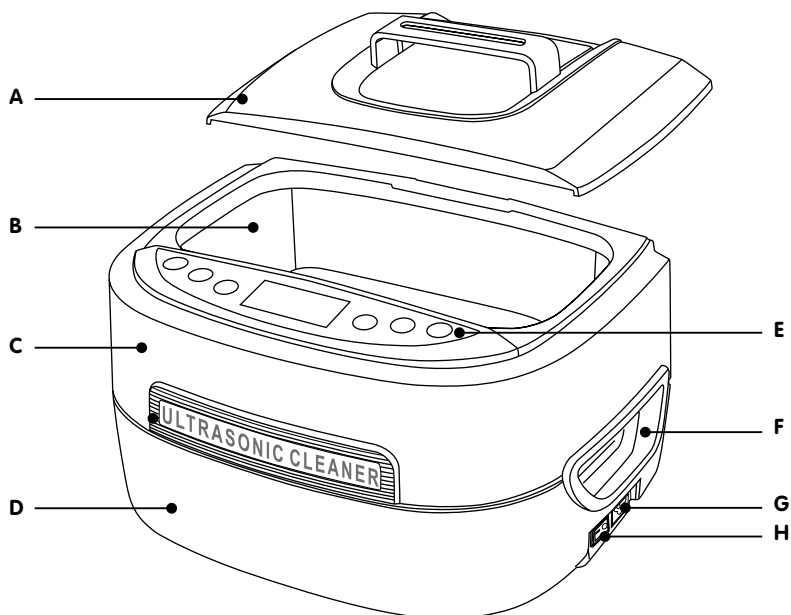
Because the strong penetration capability of the ultrasonic waves, water may get into the watches if they are not truly waterproof. Use the watch stand supplied as a precaution if not sure.

Others:

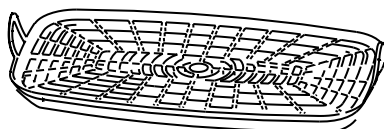
Wood; coated glass, ceramic, camera filters with pre-existing cracks.

Ultrasonic cleaning may enlarge the cracks pre-existed in the coating on the glasses, ceramic, and glass. If the items have no pre-existing cracks, then it is okay.

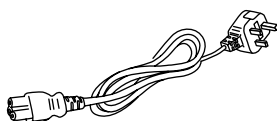
PRODUCT DETAIL



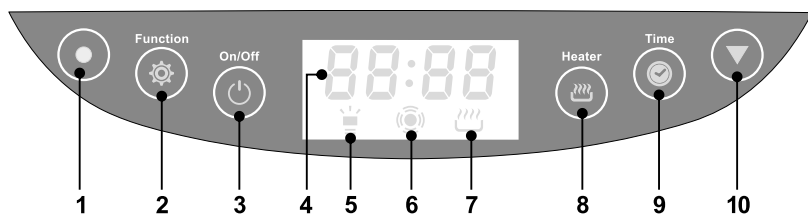
- A.** Top cover
- B.** Stainless steel tank
- C.** Top casing
- D.** Bottom cover
- E.** Control panel
- F.** Handles
- G.** Power socket
- H.** Power switch



Plastic Basket



Power Cord



CONTROL PANEL AND OPERATIONS

1. Indicator Light - Working Status.

Green - Normal working status, ready to use.

Red - Under overheat protection. 15 minutes or more of waiting time is needed for the light to change from red to green. Work can resume afterwards.

2. Function Button - Functions (Degas/Normal).

Press function button,  illuminates, indicating Degas function is selected. Press On/Off button to start degassing.  will flash for 90 seconds, then the unit will return to the normal cleaning function. Pressing Function button before it ends will stop degassing. If additional degassing is needed after it ends, then press Function button again.

Degas: When cleaning heavily soiled or greasy items or silver, copper or brass items, chemical solutions need to be added into the water. The solution may form many small droplets and take a long time to dissolve in the water. Newly added water may generate many air bubbles on the tank walls. These will reduce the cleaning effect in the beginning phase of ultrasonic cleaning. Turning on the degas function will dissipate the droplets and the air bubbles, usually in 90 seconds, and improve cleaning efficiency.

3. On/Off Button.

After powering on, the LED displays **05:00** which is the default time and the unit is ready with the normal working status. Press On/Off button once and the cleaning starts. The cleaning stops when the timer counts down to **00:00**. If the unit needs to be stopped before the timer runs out, press On/Off button.

4. **05:00** - Working Time Display. It counts down after work is started.

5. - Degas Status. Illuminated, the degas function is selected. Flashing, degassing is underway.

6. - Normal Cleaning Status. - Illuminated, normal cleaning is underway.

7. - Heater Status. Press Heater button, flashes, indicating the heater is turned on. Press Heater button again, dims, indicating the heater is turned off.

8. Heater Button. Pressing heater button, flashes, indicating the heater is turned on. To cancel heating, press heater button again, dims, indicating the heater is turned off.

9. Timer Quick Set Button. Press Time button, LED display shows **05:00**. Each pressing increases the time by 5 minutes.

10. ▼ - Decreasing Button. Timer decreasing button. Each pressing reduces the timer by 1 minute.

SAMPLE APPLICATIONS

JEWELLERY



Necklaces, rings, earrings, bracelets, etc.

PERSONAL ITEMS



Shaver heads, watch bands, diver's watches, dentures, etc.

MEDICAL / DENTAL



Surgical instruments, pliers, handpieces, etc.

PRECISION PARTS



Bearings, gears, valves, tools, fuel injectors, etc.

SILVER, COPPER OR BRASS



Silverware, silver, copper or brass decorations, etc.

BABY ITEMS



Toys, baby items, speech therapy tools, etc.

LAB ITEMS



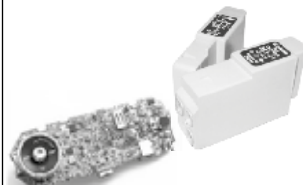
Test tubes, beakers, flasks, etc.

BRASS, GUN PARTS



Reusable brass, gun parts, etc.

PCB, INKJET CARTRIDGES



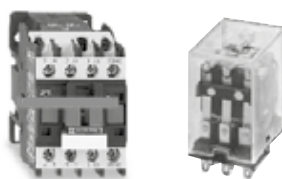
PCBs from mobile phones and MP4, ink cartridges, etc.

GOLF CLUBS



Golf clubs and golf balls

ELECTRICAL PARTS



Terminals for relays and contactors

LENSES, CRYSTALS



Lenses, crystals

APPLICATIONS



1. Metal Processing Manufacturers and Jewellery Makers:

- Ultrasonic cleaning can remove grease or abrasive powder from work-in-process metal items and keep them clean.
- Jewellery made with investment casting often has wax layer in addition to debris. Turning on the heater will raise the water temperature, melt the wax and improve the cleaning.



2. Biology, Chemical Laboratories:

Labs can use ultrasonic cleaners to clean test tubes and other glass or metal containers to remove residual chemicals and debris that can affect the accuracy of the test results.



3. Medical Instrument Disinfection Rooms:

Non-disposable medical instruments may have blood or organic tissues left after use. They need to be removed with ultrasonic cleaners before disinfection.



4. Dental Clinics:

Dental clinics can use ultrasonic cleaners to clean dental instruments and to remove blood and small particles left on the instruments before disinfection.



5. Electrical Component Manufacturers:

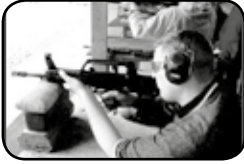
Terminals on AC contactors and relays need to be kept clean to prevent sparking and non-contact. Ultrasonic cleaning is the most effective method to keep these parts clean.



6. Watch and Precision Metal Part Manufacturers:

Machined watch components and other precision metal parts often have coolant and debris left on the surfaces. Ultrasonic cleaning can remove the debris and keep the parts clean.

APPLICATIONS



7. Shooting Clubs

To reuse brass cartridges: Adding special solution such as SeaClean2 solution can make fired brass casings useable and like new again.
Gun cleaning and care: Cleaning guns after shooting is time consuming. Using SeaClean2 solution in the water and using ultrasonic cleaners can complete the cleaning better, quicker and easier than traditional methods.



8. Special Education Institutes / Kindergartens:

Speech therapy tools or small toys that are reused need to be cleaned to prevent the growth and spread of bacteria. Ultrasonic cleaning can perform thorough cleaning by removing debris hidden inside small holes and crevices before disinfection.



9. Golf Clubs:

Cleaning the heads of golf clubs is a time consuming job. Using ultrasonic cleaning with the **Enhanced Cleaning** method can improve the effectiveness and efficiency.



10. Mobile Phone and Electronics Service Shops

PCB renewal: Non-operational electronics, after falling into water, or non-operational key pads can be cleaned with ultrasonic cleaners and pure alcohol to recover the functions. Use the Indirect Cleaning method for small-sized PCBs.



11. Printing Shops

Unblocking dried printer heads or ink cartridges: Large printers and inkjet printers often have dried printer heads or ink cartridge ports. Replacing them with new ones is very costly. Adding acetone or SeaClean2 and using an ultrasonic cleaner with a couple of minutes of cleaning will remove the blockage and make them usable again.

Avoid acetone from contacting the plastic housing to prevent corrosion. Use Indirect Cleaning explained later and a glass or metal container for acetone.

APPLICATIONS



12. Homes:

Silverware, silver, copper or brass decorations: It's difficult to clean debris hidden in the patterns with regular methods. Ultrasonic cleaning with 50ml (3 tablespoons) of dish soap will clean the debris quickly. For silver, copper or brass items with oxidation which has darkened the items, adding small amount of SeaClean2 solution helps to remove oxidation and using ultrasonic cleaning will restore the shine.

Children or baby items: Debris left in the small holes and crevices are difficult to clean. Bacteria and molds can grow. Using an ultrasonic cleaner will deep clean the items before disinfection.

Crystal glasses and decorations, chandeliers: Ultrasonic cleaning can bring back the sparkles and make them look like new again.

Jewellery, eyewear, watch bands, shavers or razors: Ultrasonic cleaning can clean the debris in the crevices. It is quick and convenient.

This model has a large tank. When cleaning small items, the Indirect Cleaning method can be used with satisfactory results. Smaller ultrasonic cleaners can also do the job.



13. Automotive Repair Shops:

The **Enhanced Cleaning** method can be used to clean precision parts such as valves, injectors, gears and bearings. It cleans out debris in tiny holes and crevices effectively.

sea clean2

DOUBLE STRENGTH CONCENTRATE



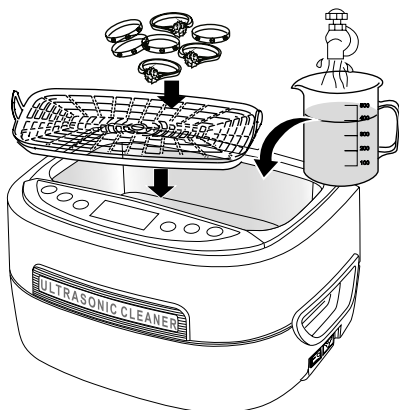
Made from a unique formula containing natural products, mixing carefully balanced quantities of seaweed, coconut oils and fruit extracts to create a powerful cleaning solution.

SeaClean2 will expertly clean tarnished items and assist in the removal of carbon, rust and dirt from most solid metals*, precious stones* and inkjet cartridges to return them to a shiny condition.

Available in 500ml, 1L, 5L and 25L bottles.

* Please refer to our website for exclusions.

COMMON CLEANING METHODS



REGULAR CLEANING

Only tap water is needed.

Suitable Locations:

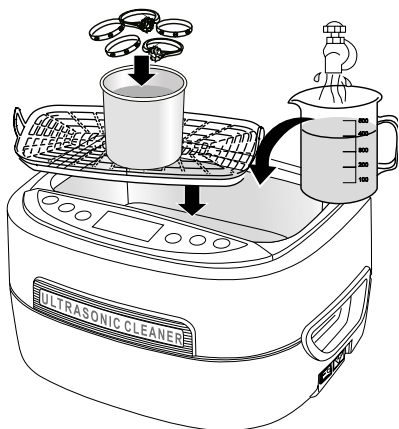
Jewellery makers, optical labs, biology / chemical labs, homes, speech therapy clinics, dental clinics.

Cleaning Method:

1. Put the items to be cleaned inside the basket and put the basket inside the tank.
2. Add water to the cleaning tank to a level between "MIN" and "MAX" lines and above the area to be cleaned.
3. Turn the power switch on. Press Time button to set the timer to 5 - 10 minutes. Press On/Off button to start cleaning.

Notes on using the basket:

1. The basket reduces the friction between the items and the tank, but a plastic basket absorbs about 30% of ultrasonic energy and reduces the cleaning effect.
2. When the items are relatively large and have greasy debris, they can be put in the tank directly.
3. During cleaning, dirt will come off like smoke and the water will become murky over time. When "smoke" stops coming, the cleaning is basically done. Replace the water to wash other items.



INDIRECT CLEANING

Put the items in a separate container. Use ultrasonic waves to penetrate the container to do the cleaning.

Suitable Locations: watch service shops, printing shops, mobile phone and electronics service shops, homes.

Different industries use different fluids inside the container:

1. Watch service shops - Watch oil (to prevent rust)
2. Printing shops - Acetone is often used (to dissolve ink)
3. Mobile phone and electronic service shops - Pure alcohol (to evaporate quickly).
4. Homes - Rubbing alcohol (to remove odor, to clean and to disinfect at the same time).

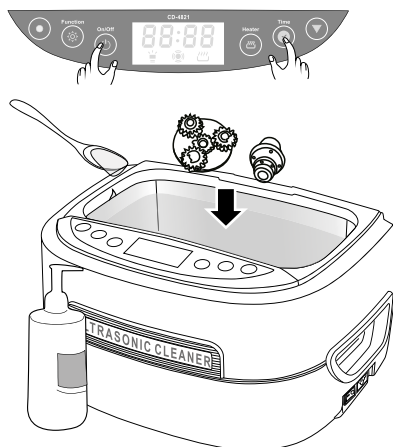
Avoid any acetone from contacting the plastic housing to prevent corrosion. Use Indirect Cleaning and a glass or metal container for acetone.

Cleaning Method:

1. Put the item inside a container. Add proper fluid to submerge the area to be cleaned.
2. Place the container in the tank directly. Add water to a level between "MIN" and "MAX", do not overflow.
3. Press Time button to set the timer to 10 minutes. Press On/Off button to start cleaning. Ultrasonic waves will penetrate the container and clean the items.

Selection of container:

1. Plastic containers - Plastics are soft and will absorb about 30% of ultrasound energy and reduce the cleaning effect. Use thin and stiff container to help reduce energy absorption.
2. Aluminum containers - Absorbs about 20% of ultrasonic energy.
3. Stainless steel containers - Absorbs about 8% of ultrasonic energy.



ENHANCED CLEANING

Debris accumulated over a long period of time, greasy or heavily soiled.

Suitable Locations: jewellery makers, homes, automotive repair shops.

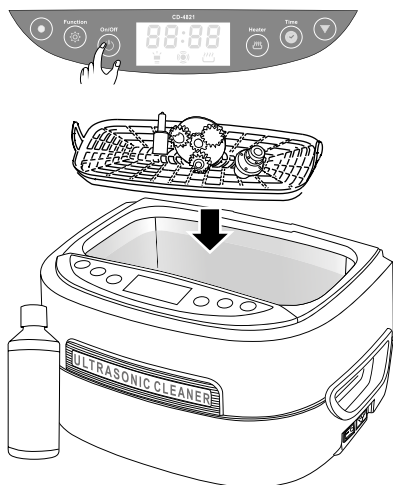
Cleaning Method:

1. Put the items in the cleaning tank directly. Do not put the items on top of each other to avoid rubbing during cleaning.
2. Add water to a level between "MIN" and "MAX" and above the area to be cleaned.
3. Add 20 ml (1 tablespoon) of dishwashing liquid.
4. Turn the power switch on. Press Heater button to turn on the heater,  flashes. Press the Heater button again to cancel the heating when the water temperature reaches 40°C (104°F) after about 20 minutes.

Warm water and dishwashing liquid can soften grease and improve cleaning efficiency.

5. Press Time button to set the timer to 10 minutes. Press On/Off button to start cleaning. Grease will dissipate and appear to be like black smoke in the water.

6. Clean the tank and add fresh water. Wash the items for another 3 minutes to remove the residual debris and any detergent.



SPECIAL CLEANING WITH SEACLEAN2

Silver, copper or brass items with oxidation which has darkened the items will need special cleaning.

Suitable Locations: jewellery stores, homes, shooting clubs.

Cleaning Method: Put the items in the basket and then in the tank, add water to a level between "MIN" and "MAX" and above the area to be cleaned.

2. Add special solution (SeaClean2) that can remove silver or copper oxidation according to the ratio recommended (typically 1:10). Use special solutions according to the instructions for brass cartridges.
3. Turn the power switch on. Press Heater button to turn on the heater,  flashes. Close the lid. Press the Heater button again to cancel heating when the water temperature has reached 50°C (122°F) after 30 minutes.  dims, indicating the heater is turned off.

When the water temperature reaches 60°C (140°F), the heater will turn off automatically. To ensure safety, the heater will also be turned off automatically after being turned on for 45 minutes.

4. Press Time button to set the timer to 15 minutes.

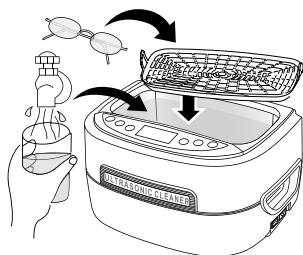
5. Press Function button to select the degas function.  button illuminates. Press On/Off to start degassing. After 90 seconds it changes over to normal cleaning automatically.

6. When cleaning is done, remove the basket and the items. If there are larger quantities of items and some debris remains, add 5 minutes and repeat cleaning.

7. Change the water and wash the items for 3 minutes in plain tap water to remove the residual chemicals.

During cleaning, debris will come off the items like "smoke". Water will become murky. This method will remove silver or copper oxidation and debris in the decorating patterns and crevices and make the items like new again.

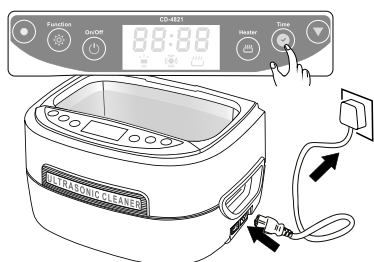
OPERATING GUIDELINES



- 1** Remove the lid, put the items in the basket then put them in the cleaning tank. Add water to a level between "MIN" and "MAX" and above the area to be cleaned.



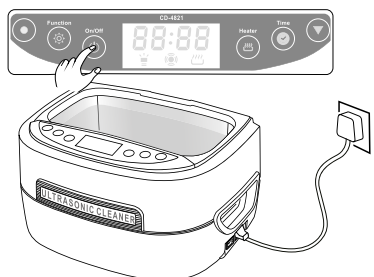
If the unit is turned on without water, ultrasonic energy will not be absorbed. Once on for over 30 seconds, it may damage the unit or severely reduce the life of the unit.



- 2** Connect the power cord to an outlet and turn the switch on. LED display shows **05:00**. This is the most common timer setting and working state. If the timer needs to be adjusted, press Time button and ▼ button. The timer can be set between 1 to 30 minutes. Common cleaning times are 5, 10 or 15 minutes.

Prolonged cleaning time may result in:

- a. Loosening of the screws if used.
- b. Increasing pre-existing cracks.
- c. Peeling of coating which was already separated.



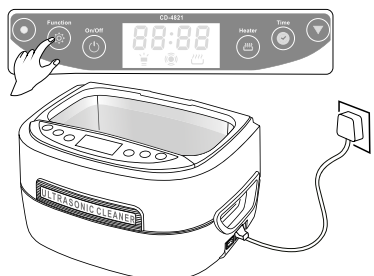
- 3** **Press On/Off button to start cleaning.**

During cleaning, buzzing sound can be heard from the cleaning tank, indicating that the cleaning is underway. Closing the lid will reduce the noise level.

The LED display will count down to show the remaining cleaning time. When it displays **00:00**, the cleaning is done.

To stop cleaning at any time, press On/Off button.

The unit is designed with overheating protection to avoid extended and continuous operation for too long. When the red light is on, the unit will not turn on even if it is forced to. The unit will be idle for about 20 minutes and can be restarted after the green light comes on.



- 4** Select one of the 4 cleaning methods recommended earlier.

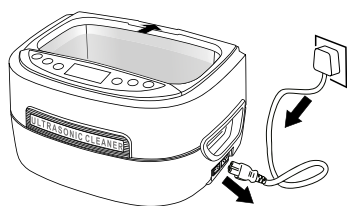
a. When the heater is needed, press the Heater button,  flashes, indicating the heater is turned on. When the water reaches 60°C (140°F),  dims, indicating the heater is turned off.

To ensure safety, the unit is designed with dual protections. The heater will be turned off automatically if it has been running for 45 minutes.

b. To speed up the mixing when solution is used, use degas function. Press TIME button to set the timer. Press Function

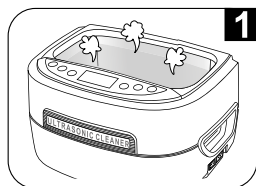
button,  illuminates. Press On/Off to start degassing. It changes over to normal cleaning after 90 seconds.

c. When debris "smoke" is no longer visible, cleaning is done. If additional cleaning is needed, reset the timer and repeat the steps above.



- 5** When cleaning is completed, unplug the power cord, remove the lid and retrieve the items. Pour the water out through the pouring recess. Clean and wipe the tank dry.

CARE AND MAINTENANCE



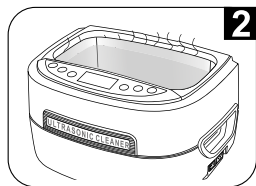
Do not turn on the unit without water in the tank.

Even though the unit is designed with multiple protections, if it is turned on for over 30 seconds without water in the tank, it may damage the unit or severely reduce the life of the unit.

If heating over 3 minutes, it will damage the heater.

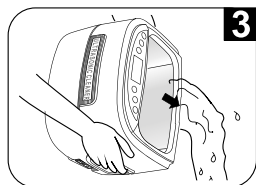


This unit is equipped with a thermal cutoff. If the cleaning function is turned on without water in the tank, the temperature will rise continuously. The thermal cutoff will be activated after approximately 15 minutes to ensure safety. The unit will be disabled until it is repaired.



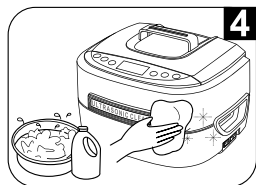
Do not run the unit for extended time or continuously.

The unit is designed with overheat protection. If the unit has been running for 45 minutes, it is recommended to stop the unit for about 20 minutes to prolong the life of the unit.



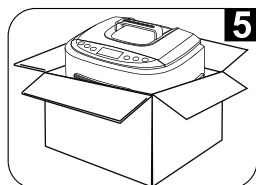
Do not keep water in the cleaning tank for a long time.

After cleaning is completed, unplug the power cord and pour the dirty water out through the pouring recess. Avoid getting the water inside the housing through the vents and causing damage.



Do not spray water over the housing.

Use a towel to wipe the tank and the housing dry.



Do not expose the unit under direct sunshine for a long time.

Keep the unit in a dry, cool and ventilated area.

GUARANTEE

Your Ultrasonic Cleaner has been carefully manufactured and 100% tested using high quality assured components. It is guaranteed against faulty workmanship and materials for a period of 18 months from the date of purchase. In the unlikely event that a failure should occur, the unit will be repaired or replaced* free of charge when returned, postage paid, to the address below within the guarantee period. This guarantee DOES NOT include damage or failure resulting from misuse, damage in transit or failure by the user to comply with the Dos and Don'ts (this list is not exhaustive).

Your statutory rights under common law are in no way affected by this guarantee.

James Products Ltd,
Unit 1, Church Close Business Park,
Todber, Sturminster Newton,
Dorset DT10 1JH,
England

Tel: +44 (0)1258 820100
Fax: +44 (0)1258 820550

When returning your unit please call our Returns Department on +44 (0)1258 822516 for a RMA (Returns Materials Authorisation) number. Please return your unit in its original packaging along with a covering letter stating when and where you purchased the unit and a description of the problem encountered. If the unit is within the guarantee period please enclose proof of purchase.

LIMITED WARRANTY

Consequential and incidental damages, including without limitation, loss of property and those arising from breach of any express or implied warranty, are not the responsibility of James Products Limited and to the extent permitted by law, are excluded.

In accordance with its policy of progressive product design, James Products Ltd reserves the right to change product specifications without prior notice.

*Repair or replacement is at the discretion of the manufacturer.

James
PRODUCTS

www.jamesproducts.co.uk

Registered in England No. 5250754

Registered Office: James Products Ltd, Unit 1, Church Close Business Park, Todber, Sturminster Newton, Dorset DT10 1JH, England